JULY 1 13.H 10.M 41.S EPICENTRE -15.32 -75.07 DEPTH= 59.KM

A= 0.24853 B=-0.93238 C=-0.26249 D=-0.9663 E=-0.2576
G=-0.0676 H= 0.2536 K=-0.9649 HT= 5.7

DEPTH OF FOCUS= 0.004R

SE= 1.88

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
HUANCAYO	3.26	355.6	0	52	2							
AREQUIPA	3.63	108.7	0	53	-2							
LA PAZ	6.78	100.9	1	42	3	2	58	2				
ANTOFAGASTA	9.42	153.0	2	10	-5							
SANTA LUCIA	18.49	168.2	4	14	1							
BOGOTA	19.83	3.0	4	32K	4	8	18	15	4	50	8	27 PCP
CHINCHINA	20.16	358.4	4	30	-2				4	46		
FUQUENE	20.69	3.8	4	36	-1	8	20	0	4	56	8	34 PCP
CARACAS	26.89	17.9	5	37	0							
TRINIDAD	29.14	28.5	5	57	0							
SAN JUAN	34.62	15.1	6	44	-1						9	18 PCP
COLUMBIA	49.37	353.5	8	45	0							
ARGENTINE I.	50.42	174.1	8	52	-1							
CHAPEL HILL	51.09	355.9	8	55	-3							
FAYETTEVILLE	54.23	340.9	9	21	-1				9	32	9	47 *SP
WICHITA MTS.	54.55	336.2	9	23A	-1	16	54	-3			17	13 PS
MORGANTOWN	54.85	355.4	9	25A	-1							
ST. LOUIS 1	55.52	345.6	9	30	-1							
PALISADES	56.05	1.1	9	33	-2	17	21	4				
LAWRENCE	57.20	341.3	9	41	-2							
WESTON	57.51	3.3	9	44A	-1				10	7		
TUCSON	58.39	324.5	9	50	-1				10	2		
TUCSON TELE.	58.40	324.6	9	51	0						39	29 PKPPKP
OTTAWA	60.43	359.5	10	4	-1							
BREBEUF	60.54	1.2	10	5	-1							
HALIFAX	60.55	9.4	10	6K	0							
SHAWINIGAN	61.61	1.8	10	10A	-3							
GLEN CANYON	62.36	327.5	10	19	1							
LARAMIE	63.02	334.6	10	23	0							
BOULDER CITY	63.37	324.5	10	24	-1						39	22 PKPPKP
PASADENA	64.04	320.9	10	30	1							
FLAMING GRGE	64.37	331.7	10	32	1				10	44	39	24 PKPPKP
RAPID CITY	64.45	337.9	10	32	0							
MBOUR	64.58	65.6	10	33	0							
SALT LAKE C.	65.40	330.0	10	29	-9							
FRESNO	66.79	322.1	10	47	0							
VINEYARD	67.73	321.1	10	54	1							
BYRD STATION	67.75	187.6	10	53	0						11	6 PP
STA. CRUZ C.	68.27	321.0	10	57	1							
LICK	68.27	321.5	10	58A	2							
RENO	68.68	324.2	11	0A	1							
BOZEMAN	68.87	333.8	11	0	0							
CONCORD	68.94	321.7	11	2	2							
BERKELEY	68.99	321.5	11	2A	1	20	7	8				
MINERAL	70.24	323.9	11	8K	0							
SHASTA	70.92	323.7	11	12	0							
CORVALLIS	73.99	326.3	11	32	1							
SOUTH POLE	74.78	180.0	11	56	21							
BANFF	75.03	335.0	12	15	38							
PENTICTON	75.43	331.7	11	39A	0							
VICTORIA	76.68	329.3	11	47	1							
SCOTT BASE	80.79	190.9	12	10K	2				12	29		
CAPE HALLETT	82.73	196.3	12	19K	1							
COIMBRA	82.86	45.1	12	21A	2							
SERRA PILAR	83.17	44.2	12	21K	0				13	0	15	31 PP
GRANADA	85.01	49.5	12	33K	3	22	57	4				
TOLEDO	85.77	46.9	12	35A	1	23	4	4	12	49		
BAGNERES	89.90	45.1	12	53A	0							
RESOLUTE	90.67	354.8	12	57	0							
KIMBERLEY	91.11	120.1	13	0K	1							
FOLINIERE	91.56	39.6	13	2	1							
MAWSON	91.85	165.1	13	3A	1							
KEW	92.64	37.2	13	7	1							
CLERMONT-FD.	92.82	43.3	13	7	0							
GARCHY	93.28	41.9	13	9	0							
BANGUI	94.70	86.8	13	17	2						16	19
ISOLA	95.00	45.7	13	12	-5							

MONACO	95.14	46.2	13 18	1						
COLLEGE	96.61	335.8	13 24	0			13 36			
BENSBERG	96.95	39.1	13 25	-1						
BULAWAYO	97.16	113.1	13 29A	2						
STUTTGART	97.70	41.6	13 29	0						
HALLE	100.00	39.3						19 2		
KASPERSKE H.	100.55	41.9	13 43A	1				17 47	PP	
LJUBLJANA	100.58	45.1	13 37	-5				17 45	PP	
COLLMBERG	100.60	39.7	13 43A	1				18 4		
PRUHONICE	101.32	41.2	13 47A	2				18 7	PP	
MOSCOW	115.29	35.3	18 52	18						
CHARTERS TS.	126.25	230.3	18 59	3						
TEHERAN	128.26	56.4	19 3	3						
RABAUL	129.36	251.3	19 5	3						
SHIRAZ	129.91	64.1	19 5	2				22 48		
YAKUTSK	130.14	345.0	19 4	1						
PORT MORESBY	131.49	242.3	19 10	4						
QUETTA	142.18	60.3	19 24	-1				22 49	PP	
ALMATA	143.30	35.0	19 27	0						
MATUSIRO	143.63	311.8	19 27K	-1				19 40	PKP2	
WARSAK DAM	144.64	52.2	19 31	1						
ABUYAMA	146.31	310.9	19 37A	5						
CHANGCHUN	146.69	332.7	19 35A	2						
LAHORE	147.76	54.5	19 39	4						
PEKING	153.49	340.4	19 46	3						
LEMBANG	157.84	187.1	19 53A	4				24 3	PP	
LANCHOW	159.33	2.5	19 54	3						
SIAN	160.81	349.9	19 57A	5						
LHASA	160.85	39.6	19 57A	4						
SHILLONG	164.08	48.1	19 58K	2						

JULY 1 18.H 50.M 59.S EPICENTRE -18.01-178.36 DEPTH= 570.KM

A=-0.95122 B=-0.02720 C=-0.30732 D=-0.0286 E= 0.9996
G= 0.3072 H= 0.0088 K=-0.9516 HT= 5.1

DEPTH OF FOCUS= 0.085R

SE= 1.66

	DELTA DEG.	AZ. DEG.	P M	S	O-C S	S M	S	O-C S	*PP M	S	SUPP. M	S
SUVA	3.05	266.9				2	25	6				
AFIAMALU	7.53	58.2	1	53	-2	3	23	-3				
RAOUL ISLAND	11.19	178.0				4	37	-3				
PORT VILA	12.68	269.2	2	47A	1							
NOUMEA	14.88	250.8	3	10A	2							
KOUMAC	16.58	258.4	2	25A	-59							
ONERAHI	18.83	198.6	3	48	3							
KARAPIRO	20.55	193.8	4	2	1							
CHATEAU	21.77	192.9	4	8	-4							
HONIARA	22.71	289.2	4	21	0							
WELLINGTON	23.93	192.8	4	30	-2							
BRISBANE	28.15	245.4	5	8	-1						10	44
RIVERVIEW	31.47	234.0	5	43A	6							
RABAUL	31.93	291.9	5	40	-1							
CHARTERS TS.	33.47	260.7	5	54	0						13	18
CANBERRA	33.68	232.7	5	56K	0							
PORT MORESBY	34.53	279.7	6	3	0							
MELBOURNE	37.62	230.8	6	28	0							
ADELAIDE	41.61	237.4	7	1K	1							
HONOLULU	43.82	27.8	7	17	-1							
DARWIN	49.23	269.0	7	58	-1						8	57
SCOTT BASE	60.32	183.6	9	17	1						11	14 PP
BYRD STATION	67.14	170.7	9	59	0							
MATUSIRO	68.01	323.3	10	3A	-2						10	25
SOUTH POLE	72.10	180.0	10	29	0							
LEMBANG	72.75	268.3	10	33K	1							
BERKELEY	76.58	42.5	10	54K	0							
LICK	76.67	43.2	10	57A	3							
PASADENA	77.26	47.5	10	57	0							
FRESNO	77.56	44.6	11	0	1							
SHASTA	78.16	40.1	11	2A	0							
MINERAL	78.44	40.7	11	3K	-1							
EUREKA	81.56	43.9	11	20	0							
TUCSON	81.67	52.3	11	21	1							
TUCSON TELE.	81.79	52.3									13	25

VICTORIA	82.31	33.3	11	23	-1						
GLEN CANYON	83.31	47.8	11	30	1						
MAWSON	83.78	199.8	11	29K	-2						
PENTICTON	84.80	34.2	11	36	0						
COLLEGE	85.87	12.6	11	39	-2					11	46 PCP
FLAMING GRGE	86.67	45.1	11	45	0						
WICHITA MTS.	92.01	54.2	12	9	0					29	23 PKKP
QUETTA	119.86	294.9	17	47	1						
SHIRAZ	132.37	293.9								20	44
NURMIJARVI	134.46	344.3	18	13	-1					20	51 SKP
WITTEVEEN	145.04	354.7	18	35	2						
RACIBORZ	145.35	341.2	18	35	1						
COLLMBERG	145.58	347.4	18	35K	1	21	0			18	47 PKP2
KSARA	145.61	304.0	18	37	3						
PRUHONICE	146.46	344.9	18	38K	3						
LWIRO	146.52	235.8	18	40K	5						
JERUSALEM	146.75	300.8	18	40K	4						
BENSBERG	146.83	353.6	18	39	3						
KASPERSKE H.	147.49	345.4	18	41	4					18	37 PKIKP
STUTTGART	148.70	350.3	18	37	-2						
STRASBOURG	149.10	352.1	18	46	7						
LJUBLJANA	150.07	341.9	18	47K	6					20	10
HELWAN	150.50	299.1	18	48K	7						
GARCH	150.79	358.0	18	49	7					18	59 PKP2
ATHENS	152.28	320.3	18	51A	7						

JULY 2 2.H 7.M 6.S EPICENTRE 42.43 143.10 DEPTH= 69.KM

A=-0.59209 B= 0.44451 C= 0.67220 D= 0.6004 E= 0.7997
G=-0.5376 H= 0.4036 K=-0.7404 HT= -2.6

DEPTH OF FOCUS= 0.006R

SE= 3.41

	DELTA DEG.	AZ. DEG.	P M	P S	P O-C S	S M	S S	S O-C S	*PP M	*PP S	SUPP. M	SUPP. S
HIROO	0.22	132.7	0	9A	-3	0	15	-6				
URAKAWA	0.37	220.7	0	11	-3	0	18	-6				
OBIHIRO	0.50	8.3	0	13K	-2	0	24	-2				
KUSIRO	1.10	59.6	0	21A	0	0	36	0				
TOMAKOMAI	1.14	280.6	0	22	0	0	39	2				
SAPPORO	1.44	297.0	0	26K	1	0	44	0				
ASAHIGAWA	1.45	338.6	0	27	1							
MURORAN	1.58	266.7	0	26	-1	0	46	-1				
ABASHIRI	1.81	28.0	0	33	3	0	57	4				
HAKODATE	1.85	251.2	0	31A	0	0	53	-1				
RUMOE	1.87	325.0	0	32	1	0	58	4				
MORI	1.91	260.9	0	32A	0	0	56	1				
NEMURO	2.03	62.9	0	35	2	0	57	-1				
SUTTSU	2.15	280.9	0	35	0	1	11	10				
HATINOHE	2.24	212.4	0	35	-1	0	53	-10				
AOMORI	2.37	228.1	0	38	0	1	2	-4				
MIYAKO	2.91	197.5	0	45	-1	1	11	-9				
MORIOKA	3.09	208.8	0	47	-1	1	19	-5				
AKITA	3.53	221.0	1	8	14							
MIZUSAWA	3.62	205.1	0	54	-2	1	35	-3				
ISINOMAKI	4.22	199.4	1	0	-4	1	43	-9				
SAKATA	4.32	216.3	1	2	-3							
SENDAI	4.48	202.8	1	4	-4	1	51	-8				
YAMAGATA	4.67	207.6	1	8	-2	1	54	-10				
HUKUSIMA	5.09	204.2	1	16	0							
NIIGATA	5.47	215.9	1	30	9	2	27	3				
ONAHAMA	5.73	198.0									2	6
SHIRAKAWA	5.75	203.7	1	22	-3	2	23	-7				
HITO	6.38	199.5	1	29K	-5	2	38	-8				
UTUNOMIYA	6.38	204.1	1	31	-3	2	40	-6				
TAKADA	6.50	216.7	1	37	1	2	47	-2				
KAKIOKA	6.59	201.0	1	30	-7	2	42	-9				
TUKUBASAN	6.62	201.5	1	32A	-5	2	42	-10			4	54
MAEBASI	6.78	208.7	1	51	12	2	58	2				
NAGANO	6.89	215.0	1	43	2							
KUMAGAYA	6.90	205.9	1	40	-1	3	31	32				
MATUSIRO	6.99	214.4	1	39A	-3	2	46	-15			3	37
OIWAKE	7.04	211.5	1	48	5	3	14	12				
TITIBU	7.16	207.2	2	5	20	3	2	-3				

TOKYO C.M.O.	7.23	202.2								2	57
YOKOHAMA	7.49	202.2								3	5
KOHU	7.62	209.1	1	52	1						
HUNATU	7.70	207.4	2	12	20	3	14	-5			
MISIMA	7.99	205.3								2	55
AJIRO	8.00	204.3	1	52	-4	3	14	-12			
OSIMA	8.18	202.1								2	17
GIHU	8.58	217.2	2	11	7						
OMAESAKI	8.70	207.7								3	5
HIKONE	8.92	219.0	2	14	5						
KAMEYAMA	9.17	216.6	2	23	11						
ABUYAMA	9.57	220.4	2	15A	-3						
CHANGCHUN	13.08	282.2	3	3	-2						
PEKING	20.37	272.3	4	30	-4	8	10	-3			
LANCHOW	30.87	271.3	6	12	0						
KUNMING	37.33	255.5	7	7	-1						
LHASA	43.36	270.4	8	7	10						
COLLEGE	43.89	35.1	8	2	0				8	16	9 25 PCP
RESOLUTE	57.06	15.6	9	40A	-2						
SODANKYLA	60.52	336.6	10	4	-2						
QUETTA	60.68	285.4	10	7	0						
TROMSOE	61.05	340.7	10	8	-1						
KIRUNA	61.95	338.8	10	14	-1						
CHARTERS TS.	62.27	176.6	10	31	14						
NURMIJARVI	65.82	331.5	10	39A	-2						
HUNGRY HORSE	67.00	45.0	10	48	0						
TEHERAN	68.11	298.8	10	56	1						
UPPSALA	68.69	333.8	10	57A	-2						
SHIRAZ	71.08	293.0	11	13	0						
EUREKA	71.52	53.2	11	16	0					11	36
GOTEBORG	72.20	334.9	11	17	-3						
CHINA LAKE	72.88	57.0	11	24	4						
COPENHAGEN	73.69	333.4	11	26	-2						
COLLMBERG	77.07	330.5	10	48A	-60					11	28
PRUHONICE	77.56	328.9	11	51A	1					12	14
KASPERSKE H.	78.62	328.9	11	57A	1					12	39
STUTTGART	80.51	331.1	12	6	0						
PARIS	82.76	335.0	12	20	2						
GARCHY	83.92	333.9	12	24	0						
WICHITA MTS.	84.73	46.7	12	29	1						
OTTAWA	85.95	26.3	12	34	0						
FAYETTEVILLE	85.98	43.1	12	35K	1						
WESTON	90.06	24.8	12	55A	1						
MAWSON	124.94	207.4	18	54	1						
SOUTH POLE	132.24	180.0	19	9	2						
BYRD STATION	132.72	166.4	19	9	1					19	33

JULY 4 6.H 10.M 40.S EPICENTRE 18.02 146.71 DEPTH= 65.KM

A=-0.79539 B= 0.52233 C= 0.30746 D= 0.5489 E= 0.8359
G=-0.2570 H= 0.1688 K=-0.9516 HT= 5.1

DEPTH OF FOCUS= 0.005R

SE= 1.95

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
GUAM	4.91	203.0	1	11	-2	2	4	-5	1	32	4	20	
TUKUBASAN	19.05	343.4	4	17	-2	7	44	-2			4	47	PPP
ABUYAMA	19.49	331.6	4	22	-2								
MATUSIRO	19.92	339.6	4	26A	-2	8	6	2			8	15	PCP
MIZUSAWA	21.59	348.1	4	49	4	8	46	10					
RABAUL	22.73	165.8	4	58	1								
MANILA	24.81	266.1	5	18	1	9	18	-14					
ZO-SE	26.54	304.2	5	32	-1								
PORT MORESBY	27.25	179.0	5	39	-1	10	12	0			6	31	PP
VLADIVOSTOK	27.99	336.5	5	50A	4	10	27	3					
NANKING	28.80	304.4	5	58	4								
Y.-SAKHLINSK	29.11	354.4	5	1	-55								
HONG KONG	30.80	283.4	6	19	8	11	15	6	7	13	7	44	PP
CHANGCHUN	31.42	329.6	6	15A	-2	11	13	-5					
DARWIN	34.03	208.5	6	39	0								
PEKING	34.28	316.2	6	40	-1	11	59	-4					
PETROPAVLOVK	36.15	12.2	6	28	-29								
NHATRANG	36.61	266.3	7	4	3						8	35	PP

SIAN	37.33	303.2	7 6	-1	12 46	-4					
CHARTERS TS.	37.87	180.7	7 12	0	12 55	-3					
PAOTOW	38.69	313.3	7 18	-1							
CHENGTU	40.66	296.2	7 35	0	13 35	-5					
KUNMING	41.35	287.7	7 41	0	13 50	0					
MAGADAN	41.58	3.1	7 41	-2							
LANCHOW	41.82	304.2	7 45K	1							
KOUMAC	42.03	155.0	7 48A	2							
ULAN-BATOR	44.01	321.7	8 10	8							
NOUMEA	44.48	153.5	8 5A	-1							
BRISBANE	45.52	172.4	8 16	2	14 52	1					
YAKUTSK	45.55	348.9	8 19	4							
LEMBANG	45.81	240.8	8 16A	-1	14 50	-5					
SHILLONG	51.18	288.6	8 56K	-2							
RIVERVIEW	51.73	175.3	9 2A	0							
CANBERRA	53.09	177.7	9 12	-1			9 35	12	1		
ADELAIDE	53.24	188.2	9 14A	0							
TIKSI	54.63	353.2						10	8		
HAWAII V.OB.	54.74	78.6	9 25	0							
CHATRA	55.31	290.5	9 31A	2							
MELBOURNE	55.57	181.7	9 31	0							
MUNDARING	57.67	210.7	9 44	-2							
KARAPIRO	61.90	154.4	10 13	-2							
CHATEAU	62.99	155.1	10 21	-1							
ALMATA	63.23	309.9	10 22A	-1							
COLLEGE	63.47	25.7	10 23	-2			11 25	13	58	PP	
WELLINGTON	64.48	156.9	10 30	-2							
LAHORE	66.04	297.1	10 40	-2	19 20	-3					
ANDIJAN	66.73	307.2	10 45	-1	19 35	4					
KHEYS	72.12	350.1	11 18	-1	20 35	0					
QUETTA	72.52	296.7	11 21A	0	20 40	1	11 52	11	38	PCP	
SVERDLOVSK	72.99	325.0	11 23	-1							
VICTORIA	76.64	43.1	11 45	0							
CORVALLIS	77.58	47.0	11 52	2							
PENTICTON	78.89	41.7	11 58	1							
SHASTA	79.15	50.7	11 59	0							
MINERAL	79.82	50.9	12 1K	-1							
RESOLUTE	79.86	13.7	12 2	-1							
BERKELEY	79.96	53.5	12 17A	14							
LICK	80.57	53.9	12 7K	1							
VINEYARD	80.93	54.4	11 47	-21							
RENO	81.36	51.3	12 11	0							
FRESNO	82.14	54.0	12 15	0							
HUNGRY HORSE	82.71	41.6	12 20	2							
THULE	83.42	7.8	12 21	0							
TEHERAN	83.85	305.4	12 22	-1							
PASADENA	84.18	56.1	12 24	-1							
SODANKYLA	84.32	340.3	12 24A	-2							
BUTTE	84.42	43.5	12 26	0							
SHIRAZ	84.79	299.3	12 27K	-1	22 37	-12	12 53	15	42	PP	
TROMSOE	85.19	343.9	12 30	0							
MOSCOW	85.55	327.6	12 31	-1				27	58		
KAJAANI	85.79	337.3	12 31A	-2							
KIRUNA	85.94	342.1	12 32A	-2							
SALT LAKE C.	86.75	48.2	12 39	1							
GLEN CANYON	88.31	51.7	12 46	1							
FLAMING GRGE	88.43	47.4	12 46	0							
UMEA	88.59	339.1	12 46A	0							
NURMIJARVI	89.01	335.2	12 47A	-1				16	13	PP	
TUCSON	90.61	55.8	12 57	1				19	36		
LARAMIE	90.91	45.9	12 59	2				16	31		
RAPID CITY	91.29	42.6	13 0	1							
SKALSTUGAN	91.32	341.4	12 58	-1							
CAPE HALLETT	91.49	173.0	13 1K	1							
UPPSALA	92.14	336.9	13 1A	-2							
GOTEBORG	95.75	337.5	13 17	-3							
SCOTT BASE	96.38	175.8	13 24	2							
COPENHAGEN	97.05	335.9	13 24	-1							
WICHITA MTS.	98.82	49.2	13 34	1	24 10	5		17	24	PP	
COLLMBERG	99.99	332.6	13 37K	-2			14 12	17	43	PP	
PRAGUE	100.22	331.0						17	34	PP	
PRUHONICE	100.23	330.9						17	46	PP	
HALLE	100.30	333.2	13 39	-1				17	46	PP	
JENA	100.88	333.0						17	50	PP	
FAYETTEVILLE	101.22	46.2	13 44	0							
KASPERSKE H.	101.27	330.7	13 43	-2				17	50	PP	
MUNSTER	101.73	335.6						17	57		
BENSBERG	102.69	335.1	13 50	-1				18	4	PP	

LJUBLJANA	102.97	328.0	18	7	255							
STUTTGART	103.48	332.6	13	54	0						18	10 PP
MAWSON	104.17	203.1									18	15 PP
STRASBOURG	104.28	333.2	18	16	258							
GARCH	107.25	335.0	15	10	777						18	37 PP
ISOLA	107.96	330.7									18	38 PP
BYRD STATION	108.28	169.4									18	22 PP
PALISADES	110.22	31.7				25	16	20			28	26 PS
BAGNERES	111.88	334.2									19	11
BROKEN HILL	120.82	263.6	18	46A	2							
BANGUI	124.19	288.4	18	52	1						20	33 PP
SAN JUAN	131.53	43.4	19	15	10						22	26 PP
TRINIDAD	140.23	46.4	19	23	2							
ANTOFAGASTA	144.91	105.4	19	32	2							
LA PAZ	146.72	92.8	19	38	6				20	2		

JULY 6 16.H 8.M 19.S EPICENTRE -7.33 -13.24 DEPTH= 0.KM
A= 0.96558 B=-0.22720 C=-0.12666 D=-0.2290 E=-0.9734
G=-0.1233 H= 0.0290 K=-0.9919 HT= 6.8

SE= 2.12

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
MBOUR	21.88	350.3	4	55	-1	8	57	3					
WINDHOEK	32.90	120.7	6	39K	1								
BANGUI	33.85	70.9	6	48	2						7	54	
BROKEN HILL	41.52	103.5	7	45	-6								
LWIRO	42.18	85.3	7	53	-3								
BULAWAYO	42.47	111.8	8	0	2								
GRANADA	45.18	10.9	8	20A	0	16	1	60			10	37	PP
ALICANTE	46.97	13.7	8	38	3	15	31	5			18	51	SS
TOLEDO	47.73	9.6	8	41	0	15	38	1			19	6	SS
BAGNERES	51.61	12.5	9	10	0								
LA PAZ	54.33	255.0	9	35	4								
ROME	54.35	23.5									26	39	
ISOLA	54.45	17.9	9	32	1								
CLERMONT-FD.	54.85	14.0	9	35	1								
FLORENCE X.	55.49	21.4	9	55	16						25	9	
GARCHY	56.26	13.3	9	44	-1						10	41	
CARACAS	56.31	287.7									12	24	
ATHENS	56.71	34.6	9	47	-1								
BESANCON	56.95	15.5	9	48	-2								
FOLINIERE	56.97	10.0	9	49	-1								
AREQUIPA	57.55	255.2	9	51	-3								
PARIS	57.58	12.3	9	55	1	17	48	-3					
TRIESTE	58.01	22.0	9	58	1								
LJUBLJANA	58.64	22.3	10	1	0						12	14	PP
STRASBOURG	58.65	16.2	9	58	-3								
STUTTGART	59.25	17.1	10	4	-2	18	10	-3					
JERUSALEM	60.41	47.1	10	17K	3								
BENSBERG	60.67	14.7	10	15	0						12	13	PP
KASPERSKE H.	60.92	19.8	10	17A	0						13	52	
VIENNA-H.	61.17	22.1	10	19	0								
BRATISLAVA	61.38	22.7	10	21	1						12	34	PP
HURBANOVO	61.56	23.5	10	23	2								
BOGOTA	61.85	279.2	10	25	2	18	45	-1					
KSARA	61.95	45.5	10	29	5	18	50	2					
PRUHONICE	61.98	19.9	10	23	-1	18	48	0			12	51	PP
HALLE	62.47	17.5	10	29	1	18	9	-45					
COLLMBERG	62.61	18.2	10	28	0						12	40	PP
CHINCHINA	63.43	279.3	10	30	-4								
LWOW	65.49	25.5	10	48	1								
GOTEBORG	67.98	14.3	10	59	-4								
UPPSALA	71.31	15.9	11	22	-1								
SKALSTUGAN	73.31	11.6	11	33	-2								
NURMIJARVI	73.91	18.4	11	37	-2								
CHAPEL HILL	75.17	310.0	11	44	-2								
SHAWINIGAN	75.20	322.0	11	45A	-1								
MOSCOW	75.54	26.9	11	49	1								
COLUMBIA	76.05	307.6	11	51	0								
OTTAWA	76.52	320.0	11	52A	-2								
MORGANTOWN	77.15	313.3	11	57K	0								
MAWSON	77.98	157.6	12	1	-1								
SODANKYLA	79.76	14.6	12	11	0								

TROMSOE	79.90	10.9	12 8	-4						
SOUTH POLE	82.72	180.0	12 27	0						
ST. LOUIS 1	84.48	310.0	12 35	-1						
QUETTA	85.24	58.9	12 44	4						
FAYETTEVILLE	87.01	306.8	12 47A	-2						
LAWRENCE	88.39	309.4	12 54	-1						
THULE	89.36	348.8	13 13	13						
WICHITA MTS.	90.32	304.8	13 3	-1	23 31	-26			25 1	PS
RESOLUTE	94.81	344.7	13 24	-1						
CHARTERS TS.	146.10	143.8	19 45	4						

JULY 6 22.H 9.M 32.S EPICENTRE -20.59 169.28 DEPTH= 41.KM

A=-0.92056 B= 0.17426 C=-0.34957 D= 0.1860 E= 0.9826
G= 0.3435 H=-0.0650 K=-0.9369 HT= 4.5

DEPTH OF FOCUS= 0.001R
SE= 2.49

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
PORT VILA	2.98	342.1	0 46A	0				
NOUMEA	3.14	236.6	0 47K	-1				
KOUMAC	4.69	269.5	1 10K	0				
SUVA	8.97	75.9	2 13	3				
HONIARA	14.28	319.6	3 22	1				
RAOUL ISLAND	14.45	129.1	3 37	13				
BRISBANE	16.52	242.6	3 48	-2	7 0	8		
KARAPIRO	18.11	163.9	4 10	0				
AFIAMALU	19.26	72.8	4 20A	-4				
CHATEAU	19.32	165.2	4 26K	2				
TUAI	19.38	161.2	4 25	0	8 14	18		
COBB RIVER	20.64	172.6	4 36	-3	8 34	12		
RIVERVIEW	20.79	226.9	4 42K	2	8 35	10	4 52	5 9 PP
WELLINGTON	21.15	168.5	4 41	-3	8 38	6		
CHARTERS TS.	21.59	267.3	4 50	2	8 48	8		
KAIMATA	21.94	175.8	4 56	4	9 3	17		
CANBERRA	23.09	226.3	5 5K	2	9 10	3	5 14	5 34 PP
GEBBIES PASS	23.22	173.8	5 4	0	9 13	4		
RABAUL	23.29	312.1	5 7	2				
PORT MORESBY	24.06	294.3	5 13	1	9 28	4		
ROXBURGH	24.83	179.9	5 18	-2	9 40	3		
MELBOURNE	27.18	225.5	5 42	0			12 51	
FORT NELSON	28.89	214.6	6 5	8	10 46	3		
ADELAIDE	30.46	235.5	6 12K	1	11 9	1		7 12 PP
DARWIN	37.69	276.4	7 13	0				
GUAM	41.56	322.5	7 46	1	14 0	2	8 7	9 25 PP
MUNDARING	48.50	245.1	8 40	-1				
CAPE HALLETT	51.74	179.6	9 3K	-2	16 17	-6		10 56 PP
HONOLULU	52.44	39.4	9 11	0	16 44	12		21 10 SS
KIPAPA	52.58	39.3	9 10	-2				
HAWAII V.OB.	52.79	43.4	9 12	-1	16 43	6		
SCOTT BASE	57.32	180.6	9 46K	0	17 44	6		11 54 PP
MANILA	58.91	302.6	9 56	-1	17 56	-3		
WILKES	58.94	203.8	10 0K	2	17 57	-2		10 48 PCP
BAGUIO CITY	60.31	303.9	9 58	-9	18 16	-1		
LEMBANG	61.12	273.5	10 11A	-2	18 31	4		
OSIMA	61.95	332.3	10 17A	-1				
DJAKARTA	62.08	273.9	10 15A	-4	18 35	-4		
OMAESAKI	62.32	331.3	10 22	1				
YOKOHAMA	62.40	332.9	10 21A	0	18 45	2		
MISIMA	62.44	332.2	10 20	-1				
TOKYO C.M.O.	62.57	333.1	10 22A	0	18 48	3		
OWASE	62.82	329.4	10 21	-3	18 44	-5		
HUNATU	62.84	332.2	10 23	-1				
KAKIOKA	62.86	333.8	10 24	0	18 53	4		
MITO	62.87	334.1	10 24	0				
TUKUBASAN	62.88	333.7	10 23A	-1	18 51	2	10 33	12 38 PP
KOHU	63.07	332.2	10 25	-1	19 4	12		
TITIBU	63.11	332.8	10 25	-1				
KUMAGAYA	63.12	333.1	10 26	0				
ONAHAMA	63.18	334.7	10 26A	0				
UTUNOMIYA	63.26	333.7	10 27	0				10 56
IIDA	63.27	331.5	10 22	-5				
KAMEYAMA	63.33	330.1	10 28A	1	19 0	5		
SIMIDU	63.41	326.1	10 28	0	19 3	7		

MAEBASI	63.47	333.0	10	26A	-2	18	54	-3		
NARA	63.50	329.5	10	28	0					
MIYAZAKI	63.57	324.3	10	34	5	19	6	8		
SHIRAKAWA	63.60	334.3	10	29	0					
OSAKA	63.62	329.2	10	30A	1				15	35
OIWAKE	63.63	332.6	10	30	1					
GIHU	63.65	330.7								
SUMOTO	63.67	328.6	10	29	0	18	53	-6	10	51
KOTI	63.72	327.0	10	31	1	18	53	-7		
ABUYAMA	63.78	329.4	10	30A	0					
HIKONE	63.78	330.2	10	31A	1	19	5	4		
KYOTO	63.82	329.6	10	41	11				12	4
MATUSIRO	63.96	332.4	10	30A	-1	19	6	3	12	58 PP
TAKAYAMA	64.05	331.5	10	21	-11					
NAGANO	64.07	332.5	10	33	1	19	1	-3		
TAKAMATU	64.07	327.9	10	30	-2					
HWALIEN	64.15	311.3	10	32K	-1					
TSURUGA	64.18	330.3	10	34	1					
ISINOMAKI	64.31	335.9	10	33	-1	19	9	2		
SENDAI	64.33	335.5	10	33A	-1	19	9	2		
MATUYAMA	64.34	326.7	10	34	0	19	12	5		
TAKADA	64.41	332.8	10	34	0	19	9	1		
HUKUI	64.43	330.7	10	40	6					
ALISHAN	64.44	310.4	10	37	3					
OOITA	64.47	325.4	10	35A	0	19	18	9		
YAMAGATA	64.53	335.0	10	35	0					
TOYAMA	64.53	331.8	10	35	0	19	10	0		
ILAN	64.57	312.1	10	37	2					
KUMAMOTO	64.65	324.5	10	35	-1	19	17	6		
TOYOOKA	64.67	329.3	10	36	0	19	16	5		
NIIGATA	64.77	333.9	10	37	0	19	19	6		
TAIPEI	64.90	312.1	10	38A	1	19	18	4		
HIROSIMA	64.93	326.8	10	37	-1					
MIZUSAWA	64.99	336.1	10	37	-1	19	20	5		
NAGASAKI	65.03	323.8	10	38A	0	19	20	4		
MIYAKO	65.13	337.0	10	38	-1	19	20	3		
SAGA	65.19	324.5	10	40	1					
WAZIMA	65.23	332.0	10	39	-1					
SAKATA	65.29	335.0	10	42	2					
HUKUOKA	65.40	324.8	10	39	-2	19	24	4		
MORIOKA	65.47	336.4	10	41A	0	19	17	-4		
AKITA	65.89	335.7	10	43A	-1	19	33	7		
HATINOHE	66.06	337.2	10	46	1					
AOMORI	66.59	336.8	10	50	2	19	39	4		
BYRD STATION	66.62	169.6	10	46	-2	19	34	-1		
URAKAWA	67.06	338.9	10	53	2					
NEMURO	67.23	341.5	10	51	-1					
KUSIRO	67.28	340.4	10	52	-1					
NHATRANG	67.45	293.5	10	49A	-5	19	46	1		
OBIHIRO	67.61	339.6	10	55	0					
MORI	67.79	337.3	10	59	3	19	56	7		
SAPPORO	68.36	338.3	10	50	-9	19	51	-5		
SUTTSU	68.52	337.4	10	58	-2	19	56	-2		
HONG KONG	68.63	305.3	11	1	0	19	58	-1		
ZO-SE	69.08	316.9	11	3A	-1	20	6	1		
SOUTH POLE	69.54	180.0	11	6	-1					
CANTON	69.70	305.6	11	9A	1	20	18	6		
WAKKANAI	70.33	339.7								
NANKING	71.26	316.2	11	17A	0	20	33	3	20	23
Y.-SAKHLINSK	71.43	341.2	11	18	0	20	35	3	11	32 PCP
VLADIVOSTOK	72.12	332.2	11	23	1					
MEDAN	73.21	280.5	11	27A	-2	20	54	2	14	4 PP
PETROPAVLOVK	73.88	353.3	11	32	0	21	2	2	11	41 PP
CHANGCHUN	75.71	328.8	11	44A	1	21	15	-5		
MAWSON	77.20	202.2	11	51A	0	21	38	1	16	44 PPP
PEKING	78.00	321.1	11	56A	0	21	50	5		
KUNMING	79.02	302.1	12	2A	1	22	1	5		
SIAN	79.17	312.9	12	3A	1	22	2	4	15	4 PP
KERGUELEN I.	80.42	220.9	12	10	1	22	7	-4		
CHENGTU	80.77	307.5	12	12A	1	22	18	4		
MAGADAN	81.27	350.6	12	12	-1	22	18	-1		
PORT BLAIR	81.78	285.7	12	17	1	22	23	-2		
PAOTOW	82.05	318.6	12	18A	0	22	33	6		
LANCHOW	83.65	312.1	12	27A	1	22	47	3		
ARGENTINE I.	85.25	160.1	12	31	-3					
TOCKLAI	86.14	300.3	11	57A	-41					
STA. CRUZ C.	86.40	48.4	12	40A	1					
SAN FRANCSCO	86.46	47.5	12	41	1					

BRANNER	86.48	47.9	12	40A	0						
UKIAH	86.61	46.0	12	43	3						
BERKELEY	86.64	47.5	12	41A	1	23	0	-13		16	6 PP
VINEYARD	86.72	48.8	12	41A	0						
CHITTAGONG	86.79	295.2	12	41	0	23	22	8	12 55	23	46 *SS
LICK	86.82	48.2	12	42A	1						
CONCORD	86.82	47.5	12	43A	2						
PASADENA	87.84	52.3	12	45A	-1	23	30	6		16	14 PP
FRESNO	87.85	49.4	12	48A	2						
SHASTA	87.94	45.0	12	47A	0						
SHILLONG	88.03	298.1	12	46A	-1	23	11	-15		16	36 PP
ULAN-BATOR	88.08	323.4	12	48	1					16	14
YAKUTSK	88.14	342.5	12	46	-2					16	7 PP
MINERAL	88.29	45.6	12	48A	0						
RENO	89.12	47.0	12	53A	1						
CORVALLIS	89.28	41.3	12	53A	0						
SITKA	90.11	26.7	12	56	-1	23	48	3			
LHASA	90.33	301.5	13	0A	2	23	54	7		23	28 SKS
ALBERNI	90.78	36.7	13	1	1						
BOULDER CITY	91.10	51.9	13	2	0					38	39 PKPPKP
VICTORIA	91.20	37.9	13	2A	0						
COLLEGE	91.32	16.9	13	0	-3	23	25	-31		15	56 PP
EUREKA	91.76	48.3	13	16	11						
IRKUTSK	91.84	326.1	13	4	-1	23	35	-25		24	1 SKKS
CHATRA	92.41	297.6								24	35
BOKARO	92.47	294.4	13	9A	1	23	39	-27		24	13
VISHAKHAPTNM	92.47	287.9				24	40	34		17	33 PP
TUCSON	92.65	56.6	13	9	0	24	18	10		28	43 PKKP
TUCSON TELE.	92.77	56.6	13	10	1	23	12	-57		17	0 PP
MADRAS	93.66	282.4	13	15A	2	23	48	-28		17	0 PP
GLEN CANYON	93.89	52.0	13	16	2						
CHIHUAHUA	95.15	61.5								22	2
SALT LAKE C.	95.16	48.4	13	18	-2					26	6 PS
KODAIKANAL	95.21	278.9								24	8
HUNGRY HORSE	96.69	40.8	13	26	-1					17	21 PP
BUTTE	96.70	43.4	13	28	1	23	59	0		26	23 PS
HYDERABAD	96.72	286.0	13	18	-9	24	0	0		24	51 PS
BANFF	96.93	37.8	12	15	-73						
FLAMING GRGE	96.96	49.0	13	27	-1					30	11 PKKP
BOZEMAN	97.55	44.1	13	31	0						
TACUBAYA	97.98	72.3				25	0	54		17	20 PP
LARAMIE	99.79	49.6	13	41	0					17	44
LUBBOCK	100.20	58.0	13	42	-1					17	47
VERA CRUZ	100.67	73.5				24	32	12		32	40 SS
DEHRA DUN	101.13	298.2	13	47	0	24	27	5		19	20
POONA	101.22	285.6	13	59	11	24	27	5		18	7 PP
BOMBAY	102.26	285.7				24	28	1		18	10 PP
WICHITA MTS.	103.11	57.7	13	55	-1	24	28	-3		18	5 PP
SEMIPALATNSK	104.98	318.5	14	3	-1	24	42	2		25	55 SCS
FAYETTEVILLE	106.94	57.3	14	15	777	24	49	1		17	49 PP
FRUNSE	107.03	309.9	14	14	777	24	57	8		18	38 PP
WARSAK DAM	107.41	300.4	14	30	777						
HUANCAYO	108.69	111.1	18	28	777					28	17
AREQUIPA	109.91	117.1	14	33	777						
QUETTA	110.37	295.5	18	30	2					14	30 P
TASHKENT	110.64	307.6	14	27	-241					19	5 PP
RESOLUTE	111.24	16.5	18	28	-1					14	32 P
LA PAZ	112.67	118.8	18	37	5	25	14	2			
BALBOA HTS.	112.84	88.7	17	17	-75					19	20 PP
KHEYS	113.61	350.4	18	34	0					19	25 PP
CHINCHINA	115.22	94.3	18	36K	-1	25	23	1		29	22 PS
BOGOTA	116.54	95.2	18	43	3	25	42	15		19	49 PP
FUQUENE	117.15	94.5								19	52 PP
SVERDLOVSK	117.18	324.2	18	41	0	25	31	2		19	44 PP
COLUMBIA	117.18	61.6	18	41	0					29	42 PKKP
THULE	117.28	13.0	18	40	-1					14	6 P
CLEVELAND	117.52	53.1				25	28	-2		29	40 PS
HERMANUS	118.32	208.0								20	11 PP
MORGANTOWN	118.60	55.3	18	44K	0					20	0 PP
ASHKABAD	118.60	302.8	18	45	1	27	8	94		20	1 PP
KIMBERLEY	120.17	216.1	18	47K	0						
PENNSYLVANIA	120.25	54.1	18	51	4					20	17 PP
OTTAWA	121.81	48.7	18	48A	-2						
SHIRAZ	122.63	292.6	18	49	-2	26	0	12	19 11	20	28 PP
PALISADES	123.25	53.9	18	54	1					20	31 PP
SHAWINIGAN	123.78	47.2	18	41	-13						
TEHERAN	124.04	299.8	18	56	2					20	39 PP
BULAWAYO	124.15	226.0	18	40	-14						

WESTON	125.14	52.1	18	54A	-2					20	42 PP
SODANKYLA	127.63	342.8	18	51	-10					21	0 PP
TROMSOE	127.77	347.3	18	59	-2					21	10 PP
SAN JUAN	127.93	82.3	19	1	-1						
GORIS	128.01	304.5	19	3	1					21	9 PP
BROKEN HILL	128.08	231.1	18	57	-5						
TIFLIS	128.96	307.5	19	5	1					22	28 SKP
WINDHOEK	129.24	213.8	19	6	2						
KAJAANI	129.54	339.3	19	1	-4					21	9 PP
MOSCOW	129.83	326.6	19	5	0					21	9 PP
TRINIDAD	130.37	93.4	18	57	-9					22	25
HALIFAX	130.43	48.4	19	6A	0					22	25
GRENADA	130.48	91.6	19	4	-3						
ST. KITTS	130.87	84.5	19	10	3						
ST. VINCENT	131.22	90.3	18	57	-11					22	29
PULKOVO	131.23	333.8	19	7	-1					24	15 PPP
DOMINICA	131.65	87.6	19	10	1						
ANTIGUA	131.66	85.0	19	3	-6					22	32
FORT FRANCE	131.74	88.4	19	13	4					22	41
BARBADOS	132.77	91.0	19	14	3						
NURMIJARVI	132.98	336.9	19	1	-10	26	19	3		21	37 PP
SKALSTUGAN	134.30	345.9	19	4	-10					22	39 PKS
LWIRO	135.12	244.3	19	2	-13					21	52 PP
REYKJAVIK	135.84	7.0	19	18K	1					21	56 PP
SIMFEROPOL	135.88	314.0	19	17	0	26	22	1		21	58 PP
UPPSALA	135.89	339.9	19	2	-15					21	53 PP
SIDA	136.55	4.7	19	19K	1						
KSARA	136.85	297.8	19	16	-2	26	40	17		22	5 PP
JERUSALEM	137.57	294.9	19	16	-4					22	11 PP
IASI	139.21	319.7	19	26	3					23	1
GOTEBORG	139.38	341.4	19	14	-9					22	55 PKS
LWOW	139.90	325.0	19	18	-6					22	18 PP
WARSAW	139.97	329.8	19	25	1					22	24 PP
ISTANBUL KA.	140.63	310.3	19	15	-10	26	25	-4	19 40	22	25 PP
ISTANBUL UN.	140.70	310.3	19	26	0					22	31 PP
COPENHAGEN	140.89	339.3	19	18	-8					22	40 PP
HELWAN	141.03	292.3	19	22	-4					22	28 PP
BUCHAREST	141.38	316.5	19	22	-5					23	16 PKS
KRAKOW	141.89	327.8	19	22	-6					22	30 PP
CHORZOW	142.20	328.8	19	24	-4				19 39	22	35 PP
SKALNATE PL.	142.27	326.5	19	27	-1					22	36 PP
LUANDA	142.44	221.2	19	26K	-3					22	40 PP
RACIBORZ	142.72	329.0	19	26	-3				21 49	21	40 PP
ABERDEEN	142.92	352.2	19	26	-3					22	36 PP
TIMISOARA	143.73	321.2	19	28	-3					24	28
SOFIA	143.95	315.5	19	31	0					23	10 PP
BUDAPEST	143.97	325.1	19	33	2					22	30 PP
COLLMBERG	144.16	334.5	19	30A	-1					22	49 PP
HURBANOVO	144.16	326.2	19	34	3					22	48 PKS
HALLE	144.42	335.5	19	31	-1					22	38 PP
PRAGUE	144.47	331.9	19	31	-1					36	30 PPS
PRUHONICE	144.48	331.7	19	32A	0					22	50 PP
BRATISLAVA	144.53	327.4	19	34K	2					22	54 PKS
BELGRADE	144.70	320.4	19	33A	1					26	33 PPP
VIENNA-H.	144.84	328.1	19	34A	1					23	1 PP
JENA	145.01	335.2	19	33	0	26	16	-20		22	48 PP
WITTEVEEN	145.13	341.5	19	33A	0					23	11 PP
CHEB	145.34	333.6	19	42	8					22	56 PP
KASPERSKE H.	145.54	331.5	19	35A	1					22	48 PP
MUNSTER	145.57	339.9	19	34	0					22	30
ATHENS	145.57	307.8	19	35A	1						
DE BILT	146.20	342.3	19	36	1					23	1 PP
BENSBERG	146.58	339.3	19	36A	0					23	6 PP
ZAGREB	146.64	325.2	19	36	0					20	19 PP
TITOGRAD	146.70	317.6	19	38	2					23	9 PP
BANGUI	147.24	244.5	19	37	0					23	6 PP
LJUBLJANA	147.25	326.7	19	36A	-1					22	59 PP
HEIDELBERG	147.34	336.2	19	37	0						
STUTTGART	147.63	335.0	19	37A	0					23	12 PP
KARLSRUHE	147.77	336.1	19	40	2	26	59	19			
TUBINGEN	147.91	334.9	19	38	0						
TRIESTE	147.92	326.8	19	38A	0					19	43 PKP2
KEW	148.12	347.7	19	38	0					23	11 PP
EBINGEN	148.23	334.6	19	38	0						
RAVENSBURG	148.28	333.5	19	38	0						
STRASBOURG	148.37	336.3	19	38A	-1	26	51	10		23	5 PP
TARANTO	149.01	316.0								20	9
PADOVA	149.03	328.3	19	42	2					30	3 SKKS
CHUR	149.04	332.5	19	45	5						

BASLE	149.30	335.4	19	40A	0					31	27	PCSPKP
PARIS	149.91	342.5	19	48	7					23	22	PP
BOLOGNA	149.95	327.6	19	52	11					21	28	
NEUCHATEL	149.98	335.5	19	41	0							
BESANCON	150.14	336.8	19	41	0					23	24	PP
PAVIA	150.49	330.8	19	40	-2					24	0	
FLORENCE X.	150.50	326.6	19	42A	0	26	56	12				
PRATO	150.51	326.9	19	47	5					24	16	PP
JERSEY	150.65	348.4	19	51A	9					20	33	
FOLINIERE	150.71	346.1	19	42	0							
CHIAVARI	151.07	329.4	19	45	2				20	56	24	26 PP
ROME	151.10	322.5	19	40A	-3						23	13 PP
GARCHY	151.11	340.4	19	50	7	26	48	4			23	26 PP
REGGIO CALA.	151.29	313.2	19	50	7						23	36
MESSINA	151.31	313.4	19	41A	-2				19	49	23	15 PP
ISOLA	152.22	331.9	19	45	1						19	53 PKP2
MONACO	152.40	330.8	19	45	0						23	39 PP
CLERMONT-FD.	152.43	338.8	19	46A	1						23	37 PP
BAGNERES	155.80	340.3	19	49A	0						30	25
TORTOSA	157.68	337.1	19	57	5						24	3 PP
SERRA PILAR	159.44	355.4	19	54K	0	26	55	2			24	13 PP
TOLEDO	159.94	344.9	19	55A	1	26	36	-18			24	20 PP
ALICANTE	160.21	335.6	19	56	1	27	3	9			24	18 PP
COIMBRA	160.35	354.8	19	55A	0						24	17 PP
LISBON	161.88	356.1	19	56K	0						24	31 PP
ALMERIA	162.27	337.8	20	2A	5						24	34 PP
GRANADA	162.34	341.0	19	54K	-3	27	6	10			24	30 PP
MBOUR	171.42	135.0	20	6	2						25	17 PP

JULY 7 13.H 10.M 46.S EPICENTRE -6.02 149.81 DEPTH= 31.KM

A=-0.85963 B= 0.50018 C=-0.10421 D= 0.5029 E= 0.8643
G= 0.0901 H=-0.0524 K=-0.9946 HT= 7.0

SE= 2.80

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
RABAUL	2.97	52.6	0	47	1								
PORT MORESBY	4.27	217.9	1	4	-1	1	55	1					
HONIARA	10.61	109.2	2	32	-1								
CHARTERS TS.	14.40	193.5	3	22	-2	6	15	12					
DARWIN	19.76	250.0	4	30	0	8	13	7					
GUAM	20.00	345.4	4	34	1	8	25	14					
KOUMAC	20.15	137.2	4	32	-3	8	24	10					
BRISBANE	21.44	172.8	4	46	-2	8	40	1					
PORT VILA	21.50	124.4	4	47	-1	8	49	9					
NOUMEA	22.81	136.8	5	0	-1	9	9	5					
RIVERVIEW	27.70	177.6	5	50A	2	10	25	-1	6	3	6	35	PP
CANBERRA	29.17	181.4	5	58	-3	10	52	2	6	15	11	13	*SS
ADELAIDE	30.57	198.1	6	14	1	11	16	4			8	8	
MELBOURNE	31.97	187.2	6	28	2	11	39	5					
MANILA	35.13	306.1	6	52	-1	12	22	-1					
HOORLANDS	36.34	183.3	7	7A	4								
FORT NELSON	36.82	183.0	7	9	2	12	52	3					
AFIAMALU	38.59	104.7	7	19	-3	13	10	-6			8	39	PP
KARAPIRO	39.44	147.3	7	28	-1								
TAWU	39.95	315.8									8	22	
CHATEAU	40.38	148.6	7	42	5								
HWALIEN	40.55	318.3	7	47	9								
MUNDARING	40.62	226.2	7	38	-1	13	48	2					
TAIPEI	41.35	319.4	7	48	3	14	23	26					
WELLINGTON	41.58	151.4	7	50	3	14	3	2			9	42	PP
LEMBANG	41.92	266.5	7	44	-6	13	54	-12					
GEBBIES PASS	42.57	155.4	7	54	-1								
DJAKARTA	42.73	267.4									8	33	
ROXBURGH	42.81	159.8				14	18	-1					
ABUYAMA	42.83	342.7	7	56A	-1								
TUKUBASAN	42.99	348.5	7	56A	-2	14	9	-12			17	47	SCS
MATUSIRO	43.71	346.5	8	2A	-2	14	25	-7			10	0	PP
NHATRANG	44.24	294.2	8	13	5	14	38	-2					
HONG KONG	44.83	310.1	8	14	1	14	46	-2					
MIZUSAWA	45.64	350.6	8	22	2	14	55	-5					
CANTON	45.90	310.4	8	21	-1	15	2	-1					
ZO-SE	45.95	325.1	8	21	-1	15	3	-1					
NAMKING	48.04	323.9	8	38	-1	15	28	-6					

MACQUARIE I.	48.90	172.9	8 56	11							
VLADIVOSTOK	51.54	343.3	9 8	3	16 24	2					
Y.-SAKHLINSK	53.18	353.9	9 17	-1	16 43	-2					
CHANGCHUN	54.33	338.3	9 24	-2	16 52	-8					
KUNMING	55.24	306.1	9 30	-3	17 9	-3					
PEKING	55.32	328.9	9 31	-2	17 9	-4					
SIAN	55.64	318.9	9 33	-2	17 14	-4					
CHENGTU	57.00	312.6	9 43	-2	17 31	-5					
HONOLULU	57.85	60.3	9 47	-4	17 54	7			27 24		
KIPAPA	57.96	60.2	10 6	14							
PAOTOW	59.03	325.4	9 57	-2	17 58	-4					
PETROPAVLOVK	59.29	6.2	10 2	1							
HAWAII V.OB.	59.67	63.5	10 3	-1							
LANCHOW	60.06	317.7	10 5	-2	18 10	-6					
SHILLONG	64.40	301.9	10 36	0	19 28	18					
MAGADAN	65.37	0.6	10 42	0							
ULAN-BATOR	65.61	329.8	10 43	0	19 26	1					
WILKES	66.05	196.2	10 46K	0	19 30	0	11 0		11 18	PCP	
LHASA	66.57	305.8	10 49	0	19 34	-3					
CAPE HALLETT	67.41	173.4	10 59A	4	19 52	5			13 5	PP	
CHATRA	68.80	301.7	11 2A	-1	20 20	16					
YAKUTSK	69.60	350.1	11 10	2	20 10	-2					
IRKUTSK	69.74	332.2	11 7	-2	20 10	-5			20 37	PS	
MADRAS	71.69	285.7							13 54		
SCOTT BASE	72.34	176.3	11 23	-2	20 49	4			25 20	SS	
KODAIKANAL	73.82	282.4							11 51		
BOMBAY	79.72	290.4							22 41		
SEMIPALATNSK	81.82	322.7	12 18	0	22 17	-10			15 30	PP	
MAWSON	83.30	202.7	12 22	-3	22 41	-1	12 39		28 3	SS	
FRUNSE	83.31	314.3	12 26	1	22 42	0			23 4	SCS	
WARSAK DAM	83.68	305.1	12 29	2	22 36	-10					
SOUTH POLE	84.02	180.0	12 26	-3							
COLLEGE	84.10	22.4	12 24	-5	22 49	-1			30 45	PKKP	
BYRD STATION	84.23	169.9	12 27	-3	22 52	0					
KHOROG	84.40	308.5	12 34	3							
ANDIJAN	84.46	311.8	12 33K	2	22 51	-3					
QUETTA	86.85	300.6	12 42	-1	23 14	-3	12 55		16 10	PP	
TASHKENT	86.86	311.9	12 40	-3	23 1	-16			16 10	PP	
SITKA	86.87	31.9	12 44	1	23 2	-15					
BERKELEY	92.02	52.3	13 8A	1	23 55	-9			16 59	PP	
SHASTA	92.22	49.5	13 10	2							
LICK	92.46	52.9	13 14A	5							
MINERAL	92.78	49.9	13 11K	0							
RENO	94.08	50.8							13 38		
SVERDLOVSK	94.54	326.5	13 18	-1					17 9	PP	
ASHKABAD	94.81	307.5	13 23	3					17 15		
PASADENA	95.01	56.3	13 23	2	24 15	22			16 55	PP	
KHEYS	96.19	350.5	13 27	1	24 21	22			17 31	PP	
EUREKA	97.05	51.1	13 30	0					29 11	PKKP	
BOULDER CITY	97.84	54.6	13 6	-28							
HUNGRY HORSE	98.56	42.1	13 39	2					30 8	PKKP	
SHIRAZ	99.27	299.0	13 38	-2	23 14	-61			17 1	PKP	
TANANARIVE	99.57	249.7	13 44	2							
BUTTE	99.59	44.5	16 57	195							
BOZEMAN	100.67	44.8	16 25	158	23 25	-57					
TUCSON TELE.	101.19	58.3	13 57	8							
GORIS	104.20	309.1	14 3	1					18 26	PP	
TIFLIS	105.18	311.5	14 9	777					18 32	PP	
THULE	106.63	8.8	18 32	777							
MOSCOW	107.36	326.7	14 29	777							
SODANKYLA	107.86	340.1	18 30	777							
TROMSOE	109.00	343.7							18 58	PP	
WICHITA MTS.	111.14	55.2	18 30	-1	25 14	5			19 12	PP	
NURMIJARVI	111.95	334.1	18 36	4	25 33	21					
SIMFEROPOL	112.30	316.2	14 38	-235					19 22	PP	
KSARA	113.17	304.1	18 55	20					19 45	PP	
JERUSALEM	114.02	302.0	18 54	18							
FAYETTEVILLE	114.47	53.1	18 36K	-1					29 20	PS	
SKALSTUGAN	114.92	340.5	18 42	4					19 41	PP	
UPPSALA	115.28	335.6							19 42	PP	
BULAWAYO	116.64	244.1	18 40	-1							
KIMBERLEY	116.83	233.7	18 42	0							
ISTANBUL KA.	116.91	313.2			25 32	1			19 58	PP	
WARSAW	117.73	327.2			25 59	25			20 3	PP	
BUCHAREST	117.92	317.6							19 57	PP	
BROKEN HILL	118.38	250.1	18 45	0							
HERMANUS	118.44	225.6			25 50	14			20 12	PP	
KRAKOW	119.39	325.4							20 11	PP	

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	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
COPENHAGEN	120.02	333.7	19	50	62				20	8	PP	
RACIBORZ	120.34	326.1							28	9		
LWIRO	120.52	263.8	15	22	-207							
BELGRADE	121.47	319.8	18	50A	-1				20	24		
BRATISLAVA	121.94	324.6	18	37	-15							
PRUHONICE	122.39	327.4	18	52A	0				30	19	SKSP	
PRAGUE	122.40	327.6							19	52		
COLLMBERG	122.43	329.4	18	51	-2				20	35	PP	
JENA	123.37	329.7	18	56	2				20	38	PP	
ZAGREB	123.79	322.6							20	41		
OTTAWA	124.39	37.5	18	54	-2							
* ABERDEEN	124.43	341.9				26	17	21	20	46	PP	
LJUBLJANA	124.54	323.5	18	56	-1				20	37	PP	
MUNSTER	124.61	332.6	18	51	-6				22	37		
PENNSYLVANIA	125.18	43.4	19	3	5				20	48	PP	
COLUMBIA	125.44	52.2	19	0	2							
BENSBERG	125.50	331.9	19	1	3				20	50	PP	
SHAWINIGAN	125.51	35.0	18	57	-2							
DE BILT	125.61	333.9	19	2	3				21	56	PP	
STUTTGART	125.88	328.7	19	0	1				20	47	PP	
KARLSRUHE	126.17	329.4	19	2	2				31	4	PS	
PADOVA	126.45	324.1							21	4	PP	
STRASBOURG	126.77	329.3	19	3	2				20	56	PP	
FLORENCE X.	127.72	322.7	19	2	-1				20	59	PP	
PALISADES	127.74	41.4	19	7	4				21	3	PP	
ROME	127.97	320.1	19	5	2				21	3	PP	
KEW	128.37	336.6	19	5	1				21	1	PP	
BESANCON	128.55	329.1	19	5	1				22	41		
WESTON	128.69	38.6	19	2K	-3				21	9	PP	
PARIS	129.17	332.6							22	39	PKS	
ISOLA	129.94	325.4	19	10	3				22	28	PP	
GARCHY	129.98	330.8							20	6	PP	
MONACO	130.00	324.7	19	3	-4				21	25		
CLERMONT-FD.	131.01	329.4	19	14	5				21	32	PP	
BANGUI	131.37	270.5	19	11	1	19	24					
HUANCAYO	131.66	111.9	19	12	2				22	40	PP	
HALIFAX	131.75	31.8	19	11	1							
BAGNERES	134.42	328.8	19	19	4				21	6	PP	
CHINCHINA	134.78	89.0	19	19	3				22	49	PKS	
BOGOTA	136.30	89.6	19	24	5				22	11	PP	
LA PAZ	136.31	121.4	19	31	12				23	1	PKS	
FUQUENE	136.69	88.4	19	25	5				22	8	PP	
ALICANTE	138.04	324.4	19	23	1							
TOLEDO	138.90	328.9	19	23	-1	26	46	17	22	19	PP	
SERRA PILAR	140.07	334.3	19	22	-4				22	19	PP	
ALMERIA	140.21	324.3	19	31	5				23	0	PP	
GRANADA	140.63	325.7	19	28K	1	25	49	-43	23	1	PP	
LISBON	142.28	332.7	19	34K	4							
SAN JUAN	142.89	67.4	19	28	-3				23	29	PP	
CARACAS	143.39	80.5	19	28	-4	26	37	1				
ST. KITTS	146.27	67.7	19	38	1							
ANTIGUA	147.15	67.6	19	39	1							
DOMINICA	148.02	70.7	19	42	3							
GRENADA	148.30	76.9	19	41	1							
FORT FRANCE	148.38	71.7							19	47		
ST. VINCENT	148.57	74.6	19	43	3							
TRINIDAD	148.79	79.4	19	44	3				20	0	PKP2	
BARBADOS	150.18	74.1							19	57	PKP2	
MBOUR	164.57	303.6	20	3	2				21	0	PKP2	

JULY 7 22.H 19.M 34.S EPICENTRE -20.11 168.99 DEPTH= 55.KM

A=-0.92247 B= 0.17949 C=-0.34180 D= 0.1910 E= 0.9816
G= 0.3355 H=-0.0653 K=-0.9398 HT= 4.7

DEPTH OF FOCUS= 0.004R

SE= 2.43

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
PORT VILA	2.45	344.9	0	38A	-1	1	10	2				
NOUMEA	3.22	227.0	0	47K	-2							
KOUMAC	4.44	263.4	1	5K	-2							
SUVA	9.13	79.2	2	16	4	4	11	17				
HONIARA	13.75	319.3	3	15	1							

BRISBANE	16.50	240.9	3	46	-3	7	1	11			
KARAPIRO	18.65	163.6	3	46	-29						
AFIAMALU	19.39	74.5	4	24	0	8	20	26			
CHATEAU	19.85	164.9	4	28	-1						
RIVERVIEW	20.92	225.6	4	41K	1	8	32	7	4	50	8 40 PCP
CHARTERS TS.	21.35	266.1	4	47	3	8	40	7			
WELLINGTON	21.67	168.1	4	51	4						
RABAUL	22.77	311.8	4	55	-3						
CANBERRA	23.23	225.1	5	2	-1	9	16	9			5 36
PORT MORESBY	23.62	293.6	5	8	1	9	28	14			
GEBBIES PASS	23.72	173.4	5	7	-1						
ROXBURGH	25.30	179.5				10	3	21			
MELBOURNE	27.32	224.6	5	50	9						
ADELAIDE	30.50	234.6	6	14	4						
GUAM	41.01	322.5	6	26	-73						8 33 PCP
MUNDARING	48.45	244.7	8	40	1						
CAPE HALLETT	52.22	179.5	9	6K	-1	16	24	-2	9	16	
SCOTT BASE	57.79	180.6	9	47K	-1	17	44	3	9	57	12 16 PP
MANILA	58.42	302.5	9	51	-1	17	45	-4			
LEMBANG	60.82	273.4	10	12A	3	18	26	6			
DJAKARTA	61.78	273.8									18 25
MATUSIRO	63.41	332.6	10	25A	-1	18	56	3			
MIRNY	66.15	205.1	10	42	-2	19	27	0			
NHATRANG	67.01	293.4	10	48	-1						
BYRD STATION	67.13	169.7	10	47	-3						
HONG KONG	68.13	305.3				19	58	8			
ZO-SE	68.55	316.9	10	59A	0	20	0	5			
CANTON	69.21	305.6	11	5	2	20	11	8			
SOUTH POLE	70.01	180.0	11	6	-2						
NANKING	70.72	316.3	11	12A	0	20	26	5			
PETROPAVLOVK	73.37	353.5	1	26	-2						
CHANGCHUN	75.17	328.9	11	38A	0	21	16	5			
PEKING	77.46	321.2	11	51A	0	21	43	7			
MAWSON	77.54	202.2	11	51A	0	21	39	2			12 0 PCP
KUNMING	78.53	302.2	11	59A	2	21	56	8			
SIAN	78.64	312.9	11	59A	2	21	55	6			
CHENGTU	80.27	307.6	12	7A	1	22	12	6			
LANCHOW	83.13	312.2	12	23A	2	22	43	8			
ARGENTINE I.	85.79	160.2	12	33	-1						
BERKELEY	86.52	47.6	12	38A	0						
VINEYARD	86.61	49.0	12	39A	1						
LICK	86.71	48.3	12	39A	0						
ULAN-BATOR	87.54	323.5	12	43	0						
SHILLONG	87.56	298.2	12	44A	1						
FRESNO	87.75	49.5	12	44	0						
PASADENA	87.77	52.5	12	43	-1	24	39	79			
SHASTA	87.80	45.1	12	44	0						
RENO	89.00	47.1	12	51	1						
CORVALLIS	89.10	41.4	12	50	0						
LHASA	89.85	301.6	12	56A	2	23	42	3			
COLLEGE	90.94	17.0	12	56	-3				13	6	40 53 PKPPKP
VICTORIA	90.98	37.9	12	59A	0						
BOULDER CITY	91.02	52.0	13	0	1						40 17 PKPPKP
EUREKA	91.64	48.4	13	2	0						40 22 PKPPKP
TUCSON	92.62	56.7	12	57	-10						40 22 PKPPKP
TUCSON TELE.	92.74	56.7	13	8	1						40 24 PKPPKP
PENTICTON	93.57	38.4	13	11	0						
GLEN CANYON	93.81	52.1	13	12	0						40 43 PKPPKP
HUNGRY HORSE	96.51	40.9									40 55 PKPPKP
FLAMING GRGE	96.85	49.0	13	25	-1						40 50 PKPPKP
BOZEMAN	97.40	44.1									40 57 PKPPKP
WICHITA MTS.	103.09	57.7	13	55	1						27 21 PS
SVERDLOVSK	116.63	324.3	18	40	2						
KIMBERLEY	120.39	216.5	18	45	0						
SHIRAZ	122.20	292.9	18	58K	9						20 15 PP
PALISADES	123.19	53.6									20 27 PP
SHAWINIGAN	123.66	46.9	18	50A	-1						
SODANKYLA	127.10	342.8	18	57	-1						
TROMSOE	127.25	347.3	18	58	0						
KAJAANI	129.00	339.3	19	1	-1						
MOSCOW	129.28	326.7	19	14	12						
HALIFAX	130.31	48.1	19	5K	1						
NURMIJARVI	132.44	337.0	19	9	1						22 31 SKP
SKALSTUGAN	133.78	345.8	19	10	-1						
UPPSALA	135.35	339.9	19	15	1						22 44 PKS
KSARA	136.39	298.2	19	18	2						22 4 PP
JERUSALEM	137.12	295.3	19	18A	1						22 6 PP
COPENHAGEN	140.35	339.3	19	30	7						22 23 PP
HELWAN	140.60	292.8	19	35	12						

RACIBORZ	142.17	329.2	19 21	-5		21 35	
SOFIA	143.42	315.8	19 28	0		23 4	PP
COLLMBERG	143.61	334.5	19 27A	-1		24 8	SKP
HALLE	143.87	335.6	19 28	-1		22 29	PP
PRAGUE	143.92	332.0	19 28	-1			
PRUHONICE	143.94	331.8	19 28A	-1		22 47	PP
BRATISLAVA	143.98	327.6	19 29	0			
VIENNA-H.	144.29	328.2	19 29A	-1		22 59	
JENA	144.46	335.3	19 30	0	19 49	21 56	PP
WITTEVEEN	144.59	341.4	19 30	0			
CHEB	144.80	333.7	19 37	6			
KASPERSKE H.	144.99	331.5	19 32A	1		22 51	PP
MUNSTER	145.03	339.8	19 31	0			
ATHENS	145.07	308.2	19 32K	1			
DE BILT	145.66	342.2	19 35	3			
BENSBERG	146.04	339.3	19 33	0	19 58	23 20	PP
ZAGREB	146.09	325.3	19 35A	2			
LJUBLJANA	146.71	326.9	19 34A	0		22 54	PP
HEIDELBERG	146.79	336.3	19 36	2			
STUTTGART	147.08	335.0	19 34	0			
KARLSRUHE	147.23	336.1	19 32	-3			
TUBINGEN	147.36	335.0	19 38A	3			
TRIESTE	147.37	327.0	19 35	0			
KEW	147.60	347.5	19 39	4		19 49	PKP2
EBINGEN	147.68	334.7	19 39	4			
RAVENSBURG	147.73	333.6	19 39	3			
STRASBOURG	147.82	336.3	19 36	0			
PADOVA	148.49	328.4	19 46	9		21 31	
CHUR	148.49	332.6	19 41	4			
BASLE	148.76	335.4	19 42A	5			
PARIS	149.38	342.4	19 44	6			
NEUCHATEL	149.44	335.5	19 44	6			
BESANCON	149.60	336.8	19 44A	6			
FLORENCE X.	149.95	326.8	19 39	0			
FOLINIERE	150.18	345.9	19 46	7			
ROME	150.56	322.7	19 41	1			
GARCHY	150.57	340.3	19 46	6		19 56	PKP2
MESSINA	150.78	313.8	19 45	5			
ISOLA	151.67	332.0	19 49A	7		23 37	PP
MONACO	151.85	330.9	19 49	7			
CLERMONT-FD.	151.88	338.7	19 50	8			
BAGNERES	155.26	340.2	19 48	2			
TOLEDO	159.41	344.6	18 49	-63	20 31	20 41	*PPKP2
GRANADA	161.80	340.7	20 39A	45	27 28 36	24 28	PP

JULY 8 2.H 35.M 21.S EPICENTRE -20.12 168.72 DEPTH= 34.KM

A=-0.92159 B= 0.18384 C=-0.34186 D= 0.1956 E= 0.9807
G= 0.3353 H=-0.0669 K=-0.9397 HT= 4.6

DEPTH OF FOCUS= 0.000R

SE= 2.94

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
PORT VILA	2.40	350.9	0 37A	-1	1 9	3		
NOUMEA	3.03	223.8	0 43K	-4				
KOUMAC	4.19	263.2	1 2K	-1				
SUVA	9.39	79.6	2 20	4	4 29	28		
HONIARA	13.58	320.2	3 18	5				
BRISBANE	16.28	240.6	3 43	-5	6 47	0		
AUCKLAND	17.52	163.6	4 4	1	7 19	4		
KARAPIRO	18.72	163.0	4 18	0				
AFIAMALU	19.63	74.7	4 30	2	7 37	-25		
RIVERVIEW	20.74	225.2	4 39	-1	8 22	-3	8 42	SS
CHARTERS TS.	21.09	266.2	4 44	0	8 41	9		
WELLINGTON	21.72	167.6	4 51	1	8 44	1		
RABAUL	22.59	312.3	5 9	10				
CANBERRA	23.05	224.8	5 5	2	9 15	8	6 3	
PORT MORESBY	23.39	294.0	5 7	1	9 21	8		
GEBBIES PASS	23.75	172.9	5 13	3				
ROXBURGH	25.30	179.0	5 27	2	9 51	5		
MELBOURNE	27.14	224.4	5 46	4	10 7	-9		
FORT NELSON	28.98	213.5			10 54	8		
ADELAIDE	30.29	234.5	6 12	2				

DARWIN	37.11	276.0	7	8	-1					
GUAM	40.86	322.8	6	20	-80					
MUNDARING	48.22	244.7	8	42	3					
CAPE HALLETT	52.21	179.4	9	8	-2	16	36	5	11	10 PP
HONOLULU	52.41	40.1	9	8	-3	16	45	12		
HAWAII V.OB.	52.82	44.1	9	12	-2	17	4	25		
SCOTT BASE	57.79	180.5	9	48	-2	17	50	5	11	56 PP
MANILA	58.21	302.7	10	3	10	17	57	6		
WILKES	59.16	203.5	10	1A	1	18	1	-2	21	57 SS
BAGUIO CITY	59.61	304.0	10	6	3	17	8	-61		
LEMBANG	60.57	273.5	10	10	1	18	22	1		
ABUYAMA	63.10	329.7	10	27A	1					
MATUSIRO	63.29	332.8	10	29A	1	19	1	5		
MIRNY	66.04	205.1	10	43	-2	19	29	0		
NHATRANG	66.78	293.6	10	54	4				11	25
BYRD STATION	67.17	169.6	10	57	4					
ZO-SE	68.38	317.1	11	0	0	19	57	-1		
CANTON	69.00	305.7	11	5	1	20	10	5		
SOUTH POLE	70.01	180.0	11	7	-3					
NANKING	70.55	316.4	11	14A	1	20	28	5		
VLADIVOSTOK	71.46	332.4	10	19	-60					
PETROPAVLOVK	73.35	353.7	11	29	-1	21	0	5		
CHANGCHUN	75.04	329.0	11	40	0	21	20	6		
PEKING	77.30	321.3	11	53A	0	21	47	8		
MAWSON	77.44	202.2	11	51	-2	21	40	0	12	2 PCP
KUNMING	78.32	302.3	11	59A	1	21	57	7		
SIAN	78.46	313.1	11	59A	0	21	59	8		
CHENGTU	80.07	307.7	12	8A	0	22	14	6		
MAGADAN	80.72	350.9	12	10	-1					
PAOTOW	81.35	318.8	12	15A	0	22	29	7		
LANCHOW	82.94	312.3	12	24	1	22	46	8		
ARGENTINE I.	85.87	160.3	12	35	-2					
CHITTAGONG	86.11	295.4	12	49	10					
BERKELEY	86.72	47.7	12	42A	0	23	9	-6	16	5 PP
LICK	86.90	48.4	12	44A	2					
SHILLONG	87.34	298.3	12	44A	-1					
ULAN-BATOR	87.39	323.6	12	44	-1					
FRESNO	87.94	49.6	12	47	0					
PASADENA	87.97	52.6	12	45A	-3	23	3	-24	28	51 SS
SHASTA	87.98	45.2	12	47	-1					
MINERAL	88.34	45.8	12	48A	-1					
RENO	89.19	47.2	12	53	0					
CORVALLIS	89.28	41.5	12	57	3					
LHASA	89.63	301.7	12	56	0	23	49	7	18	26 SKS
COLLEGE	91.02	17.1	12	59	-3					
VICTORIA	91.14	38.0	13	2	-1					
IRKUTSK	91.15	326.3	13	1	-2	23	58	2		
BOULDER CITY	91.23	52.1	13	2	-1					
VISHAKHAPTNM	91.83	288.1							23	39
EUREKA	91.84	48.5	13	4	-2					
TUCSON	92.83	56.8	13	10	0					
TUCSON TELE.	92.95	56.7	13	10	-1					
PENTICTON	93.73	38.5	13	15	1					
GLEN CANYON	94.02	52.2	13	19	3					
KODAIKANAL	94.62	279.1							24	17
FLAMING GRGE	97.05	49.1	13	30	0					
DEHRA DUN	100.44	298.5							25	21
VERA CRUZ	101.04	73.5							24	57 SKKS
WICHITA MTS.	103.31	57.7	13	58	0	24	39	6	18	9 PP
ANDIJAN	107.53	307.6							18	30 PP
QUETTA	109.69	295.8	18	23	777					
STALINABAD	109.85	304.8	19	12	777					
TASHKENT	109.93	307.8	13	19	777					
KHEYS	113.06	350.4							18	48 PP
LA PAZ	113.36	119.0	18	29	-5				21	43 PKS
CHINCHINA	115.78	94.2							29	27 PS
SVERDLOVSK	116.49	324.3							18	37 PCP
THULE	116.94	12.8	18	40	-1					
BOGOTA	117.11	95.2							22	31 PPP
SHIRAZ	121.97	293.0							21	10 PP
PALISADES	123.40	53.6				25	46	-6	20	31 PP
SHAWINIGAN	123.85	46.9	18	55	0					
BULAWAYO	124.09	226.7							18	56
WESTON	125.26	51.8							20	43 PP
CARACAS	125.69	91.4	19	9	11					
MAKHACH-KALA	126.14	309.0	19	11	12					
SODANKYLA	127.02	342.7	18	58	-3					
TROMSOE	127.20	347.2	19	2	1					
GORIS	127.31	304.8	19	17	16					

TIFLIS	128.26	307.7								19	5 PCP
SAN JUAN	128.39	82.1	19	4	1						
KAJAANI	128.91	339.2	19	4	0						
MOSCOW	129.15	326.7								19	13 PP
HALIFAX	130.51	48.0	19	7	0						
PULKOVO	130.58	333.7								21	18 PP
NURMIJARVI	132.34	336.9	19	12	1					22	39 PKS
SKALSTUGAN	133.72	345.7	19	12	-1						
LWIRO	134.84	245.1	19	20	4						
SIMFEROPOL	135.17	314.2	19	17	1						
UPPSALA	135.27	339.7	19	14	-2					21	52 PP
KSARA	136.17	298.2	19	20K	2	26	30	7		22	4 PP
JERUSALEM	136.89	295.3	19	22	3					23	3 PKS
KISHINEV	137.82	319.0	19	20	-1						
LWOW	139.22	325.0	19	56	32					22	19 PP
WARSAW	139.30	329.7	19	27	3					23	3 PKS
ISTANBUL KA.	139.93	310.5								22	23 PP
COPENHAGEN	140.27	339.1	19	20	-5					22	24 PP
HELWAN	140.37	292.8	19	18	-8					40	54
BUCHAREST	140.67	316.6								21	58
RACIBORZ	142.05	329.0	19	22	-7					25	0
ABERDEEN	142.38	351.8	19	43	14	26	51	17		22	43 PP
SOFIA	143.24	315.6	19	30	-1					18	41 PKP2
COLLMBERG	143.50	334.3	19	29	-2					22	46 PP
HALLE	143.77	335.3	19	30	-2				19 43		
PRAGUE	143.81	331.7								20	19
PRUHONICE	143.82	331.5	19	30A	-2					20	24
VIENNA-H.	144.16	328.0	19	23	-9						
JENA	144.36	335.0	19	31	-2					41	54 SS
WITTEVEEN	144.52	341.2	19	34	1						
CHEB	144.69	333.4	19	37	4						
ATHENS	144.87	308.0	19	32A	-2						
KASPERSKE H.	144.87	331.3	19	34A	0					20	3
MUNSTER	144.95	339.6	19	33	-1						
DE BILT	145.59	342.0	19	37	2					42	6 SS
ZAGREB	145.95	325.1	19	39	4						
BENSBERG	145.95	339.1	19	36A	1					19	48 PKP2
LJUBLJANA	146.57	326.6	19	38A	2					22	50 PP
HEIDELBERG	146.69	336.0	19	40	3						
BANGUI	146.95	245.7	19	40	3					20	9 SPKP
STUTTGART	146.98	334.8	19	40	3					42	16 SS
KARLSRUHE	147.13	335.9	19	40	3					19	53 PKP2
TRIESTE	147.24	326.7	19	40	2					23	9
TUBINGEN	147.26	334.7	19	41	3						
KEW	147.55	347.2	19	38	0					43	6 SS
EBINGEN	147.57	334.4	19	41	3						
RAVENSBURG	147.62	333.3	19	40	2						
STRASBOURG	147.72	336.1	19	42	4					23	9 PP
PADOVA	148.36	328.1								20	29
BASLE	148.65	335.1	19	46A	6						
PARIS	149.30	342.0	19	50	9					19	54 PKP2
NEUCHATEL	149.34	335.2	19	41	0						
BESANCON	149.50	336.5	19	45	4						
FLORENCE X.	149.82	326.5	19	47	5					23	25 PP
FOLINIERE	150.12	345.6	19	46	4						
ROME	150.41	322.5	19	45	3					23	26 PP
GARCHY	150.49	340.0	19	53	10					19	58 PKP2
MESSINA	150.60	313.6	19	40	-3						
ISOLA	151.55	331.6	19	52K	8					20	28
MONACO	151.73	330.6	19	50	6					23	51
CLERMONT-FD.	151.80	338.4	19	45	0					23	33 PP
BAGNERES	155.18	339.8	19	50	1					23	51
TORTOSA	157.04	336.6	20	15	23					24	6
TOLEDO	159.35	344.1	20	33	38					24	14 PP
ALICANTE	159.56	335.0	19	59	4					24	21 PP
COIMBRA	159.83	353.7	20	38	43						
GRANADA	161.72	340.1	20	44A	47	28	5	68		24	41 PP
MBOUR	172.12	135.5	20	27	22					25	15 PP

JULY 8 15.H 34.M 35.S EPICENTRE -20.16 168.83 DEPTH= 0.KM

A=-0.92166 B= 0.18207 C=-0.34263 D= 0.1938 E= 0.9810
G= 0.3361 H=-0.0664 K=-0.9395 HT= 4.6

SE= 2.01

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
PORT VILA	2.47	348.7	0	43A	1								
NOUMEA	3.07	225.7	0	49K	-1								
KOUMAC	4.28	263.9	1	5K	-3								
SUVA	9.30	79.2	2	24	6								
HONIARA	13.68	320.0	3	15	-2								
ONERAHI	16.30	163.7	3	56	5	6	55	2					
BRISBANE	16.35	240.8	3	50	-2	6	42	-12					
KARAPIRO	18.64	163.2	4	22K	1								
AFIAMALU	19.55	74.5	4	31	0	8	19	12					
CHATEAU	19.84	164.5	4	36	1								
RIVERVIEW	20.77	225.4	4	47K	2	8	31	-1	4	59	8	48	*SS
CHARTERS TS.	21.19	266.3	4	50K	1	8	47	6					
WELLINGTON	21.65	167.8	4	50	-4	8	54	5					
RABAUL	22.69	312.2	5	2	-2								
CANBERRA	23.08	225.0	5	9K	1	9	21	5			8	49	PCP
PORT MORESBY	23.50	293.9	5	15	3	9	18	-5					
GEBBIES PASS	23.69	173.1	5	13	-1								
ROXBURGH	25.25	179.2	5	28	-1	9	55	2			6	30	
MELBOURNE	27.18	224.5	5	48	1	10	22	-3					
ADELAIDE	30.35	234.6	6	16	1	11	11	-4					
GUAM	40.96	322.7	7	46	0	13	34	-24	7	59			
MUNDARING	48.29	244.8	8	45A	0								
DUMONT	50.05	194.5	8	58	0	16	2	-7					
CAPE HALLETT	52.17	179.5	9	14K	0	16	35	-3			11	18	PP
SCOTT BASE	57.74	180.5	9	54K	-1	17	54	1			10	46	PCP
MANILA	58.32	302.7	9	58	-1								
WILKES	59.16	203.6	10	3A	-2	18	6	-5			12	4	PP
LEMBANG	60.67	273.5	10	18K	3	18	35	4					
DJAKARTA	61.63	273.9	10	24	3	18	41	-2					
TUKUBASAN	62.31	334.0	10	24A	-2	18	48	-4	10	32	24	34	
ABUYAMA	63.19	329.7	10	31A	-1								
MATUSIRO	63.38	332.7	10	32A	-1	19	5	0			20	30	SCS
NHATRANG	66.89	293.5	10	54	-2	19	47	-1					
BYRD STATION	67.11	169.6	10	54	-3								
HONG KONG	68.03	305.5	10	56	-7	19	59	-3			24	33	SS
ZO-SE	68.48	317.0	11	5A	-1	20	6	-1					
CANTON	69.11	305.7	11	10K	0	20	15	0					
SOUTH POLE	69.96	180.0	11	13	-2								
NANKING	70.65	316.4	11	19A	0	20	34	1					
VLADIVOSTOK	71.54	332.4	11	25A	1	20	41	-2					
MEDAN	72.71	280.5	11	32K	1	20	55	-2					
PETROPAVLOVK	73.41	353.6	11	34	-1	21	4	0					
CHANGCHUN	75.13	329.0	11	45A	0	21	24	0					
PEKING	77.40	321.3	11	58A	0	21	52	3					
MAWSON	77.43	202.2	11	58A	0	21	47	-2	12	10	12	15	*SP
SIAN	78.56	313.0	12	6A	1	22	5	4					
CHENGTU	80.17	307.7	12	13A	0	22	19	1					
MAGADAN	80.78	350.8	12	14	-3								
PORT BLAIR	81.25	285.8									22	29	
PAOTOW	81.45	318.8	12	21A	1	22	33	2					
LANCHOW	83.05	312.3	12	30A	2	23	3	15					
ARGENTINE I.	85.80	160.3	12	40	-2								
CHITTAGONG	86.22	295.3	12	50	6	23	25	6					
UKIAH	86.62	46.2	12	47	1								
BERKELEY	86.67	47.7	12	46A	0	23	37	14			28	55	SS
VINEYARD	86.76	49.0	12	47	0								
LICK	86.85	48.4	12	47A	0						13	23	
SHILLONG	87.45	298.3	12	50	0						26	14	
ULAN-BATOR	87.49	323.6	12	50	0	23	18	-13					
FRESNO	87.90	49.6	12	52A	0								
PASADENA	87.92	52.5	12	51A	-1	23	55	20			16	26	PP
SHASTA	87.94	45.2	12	52	-1								
MINERAL	88.30	45.8	12	53A	-1								
RENO	89.15	47.1	12	58	0								
CORVALLIS	89.24	41.5	12	58	-1								
LHASA	89.74	301.7				23	54	2			23	32	SKS
COLLEGE	91.04	17.1	13	3	-4						18	40	PKP
VICTORIA	91.12	38.0	13	6	-1						18	43	
BOULDER CITY	91.18	52.0	13	8	0						18	44	PKP
IRKUTSK	91.25	326.3	13	8	0								
EUREKA	91.79	48.5	13	9	-2						18	45	PKP
CHATRA	91.83	297.8	13	12K	1								
TUCSON	92.78	56.8	13	15	0						18	51	PKP
TUCSON TELE.	92.90	56.7	13	16	0						18	52	PKP
MADRAS	93.15	282.6	13	55K	38	23	52	-30			16	55	PP
PENTICTON	93.70	38.5	13	20	1								

GLEN CANYON	93.97	52.1	13	21	0					
KODAIKANAL	94.72	279.1							24	26
SALT LAKE C.	95.20	48.5	13	24	-2					
HUNGRY HORSE	96.65	40.9	13	31	-2	24	4	-6		
FLAMING GRGE	97.00	49.1	13	33	-1				15	10
BOZEMAN	97.55	44.2	13	35	-2	24	13	-1		
TACUBAYA	98.26	72.4							25	43 PS
DEHRA DUN	100.55	298.4							24	26
WICHITA MTS.	103.25	57.7	13	59	-4	24	43	1	18	10 PP
SEMIPALATNSK	104.38	318.7							19	21
ALMATA	104.86	310.9							18	29 PP
FRUNSE	106.43	310.1							18	41 PP
STALINABAD	109.96	304.8							21	5 PPP
KHEYS	113.12	350.4	18	48	9					
LA PAZ	113.25	118.9	18	41	2					
CHINCHINA	115.67	94.2	18	43	-1				22	34 PPP
BOGOTA	117.01	95.2	18	46	-1	25	46	7	26	56 SKKS
FUQUENE	117.61	94.4	20	1A	73					
WASHINGTON	120.91	56.1	18	53	-1				19	51
OTTAWA	121.85	48.5	18	54	-2					
SHIRAZ	122.08	292.9	18	56	0				21	21 PKS
BREBEUF	123.31	48.3	18	57K	-2				20	37 PP
PALISADES	123.34	53.6	18	58	-1	26	7	6	20	36 PP
TEHERAN	123.46	300.1	19	0	1					
SHAWINIGAN	123.81	46.9	18	58	-2					
BULAWAYO	124.13	226.6	19	1	1					
WESTON	125.21	51.9	19	1A	-1				20	51 PP
CARACAS	125.59	91.4	19	5	2	26	5	-2		
MAKHACH-KALA	126.24	309.0	19	4	0					
SODANKYLA	127.10	342.7	19	5	-1					
TROMSOE	127.27	347.3	19	5	-1					
GORIS	127.41	304.8	19	8	1					
SAN JUAN	128.30	82.1	19	6	-2					
KIRUNA	128.37	345.3	19	7A	-2				20	50 PP
TIFLIS	128.37	307.7	19	10	1					
KAJAANI	128.99	339.2	19	9	-1					
MOSCOW	129.24	326.7	19	23	13					
PULKOVO	130.66	333.8	19	12	-1					
TRINIDAD	130.82	93.3	19	13	0				20	33
UMEA	131.51	342.0	19	16	1				22	39 PKS
SOTCHI	131.76	310.9	19	15	0					
NURMIJARVI	132.42	336.9	19	15	-1				22	42 PKS
SKALSTUGAN	133.79	345.7	19	14	-5				22	46 PKS
LWIRO	134.91	245.0	19	17	-4					
UPPSALA	135.34	339.8	19	22	0				21	49 PP
KSARA	136.28	298.2	19	26K	3	26	36	3	22	10 PP
JERUSALEM	137.00	295.3	19	25	0				22	22 PP
KISHINEV	137.92	319.0	19	25	-1					
GOTEBORG	138.84	341.3	19	27	-1				28	38 SKKS
LWOW	139.31	325.1	19	24	-5				22	24 PP
WARSAW	139.39	329.8	19	25	-4				22	23 PP
FOCSANI	139.52	317.9							23	7
ISTANBUL KA.	140.03	310.5	19	31	1	26	59	20	22	35 PP
COPENHAGEN	140.34	339.2	19	23K	-8				22	25 PP
HELWAN	140.48	292.8	19	32	1				22	30 PP
BUCHAREST	140.78	316.7	19	23	-9				22	31 PKS
KRAKOW	141.31	327.8	19	31	-1				23	12 PKS
RACIBORZ	142.14	329.0	19	30	-4				22	56 PP
ABERDEEN	142.44	351.9	19	37	3				23	13 SKP
SOFIA	143.34	315.6	19	34	-2				19	47 PKP2
HURBANOVO	143.57	326.2	19	28	-8					
COLLMBERG	143.59	334.3	19	34A	-2				22	37 PP
PRAGUE	143.90	331.8	19	35	-2					
PRUHONICE	143.91	331.6	19	35A	-2				23	7 PP
BRATISLAVA	143.94	327.4	19	36	-1				29	43 SKKS
BELGRADE	144.10	320.5	19	37A	0				22	56 PP
VIENNA-H.	144.25	328.1	19	37A	-1				22	57 PP
JENA	144.44	335.1	19	36	-2				22	42 PP
WITTEVEEN	144.59	341.3	19	38A	0					
CHEB	144.77	333.5	19	44	6					
KASPERSKE H.	144.96	331.4	19	39A	0				22	56 PP
ATHENS	144.98	308.0	19	30A	-9					
MUNSTER	145.03	339.7	19	39	0				19	42
DE BILT	145.66	342.1	19	42A	2				23	7 PP
BENSBERG	146.03	339.1	19	41A	0				23	28
ZAGREB	146.05	325.1	19	41A	0					
LJUBLJANA	146.66	326.7	19	41A	-1				25	20
HEIDELBERG	146.78	336.1	19	42	0				21	5
BANGUI	147.03	245.6	19	42	0				21	33

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STUTTGART	147.06	334.8	19	42	0				42	14	SS
KARLSRUHE	147.21	335.9	19	42	-1				23	40	PP
TRIESTE	147.33	326.8	19	41	-2				23	10	PP
TUBINGEN	147.34	334.8	19	43	0						
KEW	147.61	347.3	19	43	0						
EBINGEN	147.66	334.5	19	43	0						
RAVENSBURG	147.71	333.4	19	43	0						
STRASBOURG	147.81	336.1	19	43A	-1				23	42	PP
TARANTO	148.41	316.1							23	5	
PADOVA	148.45	328.2	19	49	4				24	21	PP
CHUR	148.47	332.4	19	49	4						
BASLE	148.74	335.2	19	49	4				27	1	
PARIS	149.38	342.1	19	57	11				23	33	PP
NEUCHATEL	149.42	335.3	19	51	5						
PAVIA	149.91	330.6	19	54	7				31	45	SKKS
FLORENCE X.	149.91	326.6	19	34	-13	26	33	-20			
JERSEY	150.15	348.0	20	58	71						
FOLINIERE	150.19	345.7	19	47	0						
ROME	150.50	322.5	19	48A	0				23	12	PKS
GARCHY	150.57	340.1	19	55	7				20	0	PKP2
REGGIO CALA.	150.69	313.3	19	55	7						
MESSINA	150.71	313.6	19	53	5				24	21	PP
ISOLA	151.64	331.7	19	49	-1				23	36	PP
MONACO	151.82	330.7	19	50	0						
CLERMONT-FD.	151.88	338.5	19	50	0				23	38	PP
BAGNERES	155.26	339.9	19	55A	1				23	57	
TORTOSA	157.13	336.7	19	44	-13				24	9	PP
SERRA PILAR	158.98	354.6	19	57K	-2				24	19	PP
TOLEDO	159.42	344.2	20	2	2	26	40	-24	24	22	PP
ALICANTE	159.64	335.2	20	3	3	27	7	3	24	25	PP
COIMBRA	159.89	353.9	19	59A	-1				24	22	PP
ALMERIA	161.71	337.2	20	4	2				24	30	PP
GRANADA	161.80	340.3	20	24A	22	26	34	-32	24	39	PP
MBOUR	172.02	135.2	20	11	1				25	23	PP

JULY 8 21.H 13.M 58.S EPICENTRE -20.48 168.98 DEPTH= 23.KM

A=-0.92027 B= 0.17917 C=-0.34786 D= 0.1911 E= 0.9816
G= 0.3414 H=-0.0665 K=-0.9375 HT= 4.6

SE= 2.43

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
PORT VILA	2.81	347.0	0	42K	-2	1	16	-2				
NOUMEA	2.97	232.1	0	45K	-2							
KOUMAC	4.41	268.2	1	4K	-3							
SUVA	9.22	77.0	2	17	2							
BRISBANE	16.32	242.0	3	47	-2	6	49	0				
KARAPIRO	18.29	163.3	4	16	2							
CHATEAU	19.49	164.6	4	41	13							
AFIAMALU	19.50	73.5	4	28	0	8	28	27				
RIVERVIEW	20.66	226.3	4	45A	4						8	42 *SS
WELLINGTON	21.31	167.9				8	58	20				
CHARTERS TS.	21.32	267.1	4	48	1	8	49	11				
CANBERRA	22.96	225.7	5	6K	2	9	20	12				
RABAUL	23.02	312.5	5	9	5							
GEBBIES PASS	23.35	173.3	5	8	1							
PORT MORESBY	23.76	294.4	5	15	4	9	36	14				
ADELAIDE	30.29	235.2	6	16	4							
DARWIN	37.40	276.4	7	12	-1							
GUAM	41.30	322.8	7	51	6							
MUNDARING	48.29	245.0	8	44	3							
CAPE HALLETT	51.85	179.5	9	8	0	16	39	11			11	14 PP
HONOLULU	52.53	39.7				17	10	36				
SCOTT BASE	57.42	180.6	9	49K	0							
MANILA	58.62	302.7	10	4	7	17	58	-1				
WILKES	58.92	203.7				18	6	3				
BAGUIO CITY	60.02	304.1	10	2	-5							
LEMBANG	60.84	273.6	10	11	-2							
MATUSIRO	63.73	332.6	10	30A	-2	18	58	-6				
MIRNY	65.82	205.2	10	44	-2	19	32	3				
BYRD STATION	66.77	169.6	10	48	-4							
HONG KONG	68.34	305.5	11	1	0							
ZO-SE	68.81	317.0	11	3	-1	20	5	0				
CANTON	69.42	305.7	11	11	3	20	21	8				

SOUTH POLE	69.64	180.0	11	9	0				
NANKING	70.99	316.4	11	19	1	20	32	1	
VLADIVOSTOK	71.90	332.3	11	23	0				
PETROPAVLOVK	73.74	353.5	11	6	-28				
CHANGCHUN	75.48	328.9	11	43A	-1	21	23	1	
MAWSON	77.20	202.2	11	54	0				
PEKING	77.75	321.2	11	56	-1	21	50	4	
KUNMING	78.72	302.2	12	2	0	22	0	3	
CHENGTU	80.49	307.7	12	10	-2	22	17	2	
PAOTOW	81.79	318.8	12	19	1	22	34	5	
LANCHOW	83.37	312.2	12	27A	0				
ARGENTINE I.	85.45	160.2	12	37	0				
BERKELEY	86.78	47.6	12	43A	0				
LICK	86.96	48.3	12	45A	1				
SHILLONG	87.73	298.2	12	47	-1				
ULAN-BATOR	87.83	323.5	12	48	-1				
FRESNO	87.99	49.5	12	49	0				
SHASTA	88.06	45.1	12	50	0				
WOODY	88.18	50.8	12	50	0				
MINERAL	88.42	45.7	12	50	-1				
RENO	89.26	47.1						12	31
LHASA	90.04	301.6	13	2	3	23	53	4	23 29 SKS
BOULDER CITY	91.26	52.0	13	5	0				
VICTORIA	91.28	37.9	13	5	0				
COLLEGE	91.30	17.0	13	3	-2			13 16	17 37 PP
EUREKA	91.89	48.4	13	7	-1				
TUCSON	92.83	56.7	13	13	1				
TUCSON TELE.	92.95	56.7	13	13	1				
PENTICTON	93.86	38.4	13	19	2				
GLEN CANYON	94.04	52.1	13	20	3				
FLAMING GRGE	97.10	49.1	12	59	-32				
WICHITA MTS.	103.29	57.7	14	14	15	24	42	6	32 57 SS
SHIRAZ	122.34	292.7	18	56	3				
PALISADES	123.41	53.8				25	55	0	20 33 PP
SHAWINIGAN	123.92	47.1	19	2	6				
SODANKYLA	127.45	342.7	18	54	-9				
TROMSOE	127.61	347.3	19	3	0				
SAN JUAN	128.20	82.3	19	5	0				
HALIFAX	130.57	48.3							22 34
TRINIDAD	130.66	93.5	19	11	2				
NURMIJARVI	132.77	336.9	19	6	-7				22 44 PKS
KSARA	136.56	297.9	19	27	7				22 13 PP
LWOW	139.66	324.9	19	10	-16				22 22
COPENHAGEN	140.70	339.1	19	30	2				22 26 PP
SOFIA	143.68	315.4	19	32	-1				20 14
COLLMBERG	143.94	334.3	19	32K	-1				19 35 PKP2
HALLE	144.20	335.4	19	32	-2	19	46		
PRAGUE	144.25	331.7							20 34
PRUHONICE	144.26	331.5	19	33K	-1				20 55
BRATISLAVA	144.29	327.3	19	52	18				
VIENNA-H.	144.60	327.9	19	34	-1				
JENA	144.80	335.1	19	34	-1				
WITTEVEEN	144.94	341.3	19	38	3				
CHEB	145.13	333.4	19	40	4				
ATHENS	145.29	307.7	19	38K	2				
KASPERSKE H.	145.31	331.3	19	37A	1				24 2
MUNSTER	145.38	339.6	19	36	0				
DE BILT	146.01	342.1	19	40	3				
BENSBERG	146.38	339.1	19	39	1				
ZAGREB	146.39	325.0	19	40	2				
LJUBLJANA	147.01	326.5	19	39	0	20	2		
BANGUI	147.03	245.0	19	43	4				40 11 SPKP
STUTTGART	147.42	334.8	19	42	3				
KARLSRUHE	147.56	335.9	19	41	1				
TRIESTE	147.68	326.7	19	42	2				
TUBINGEN	147.69	334.7	19	44	4				
KEW	147.96	347.4	19	42	2				
STRASBOURG	148.16	336.1	19	44	3				
PADOVA	148.80	328.1							20 30
BASLE	149.09	335.1	19	48	6				
PARIS	149.73	342.2	19	49	6				24 27 PP
NEUCHATEL	149.77	335.2	19	51	8				
BESANCON	149.94	336.6	19	48	5				
FOLINIERE	150.54	345.8	19	49	5				
ROME	150.85	322.3	19	49	4				
GARCHY	150.92	340.1	19	55	10				
MESSINA	151.03	313.3	19	55	10				
ISOLA	151.99	331.6	19	53	7				20 8

MONACO	152.17	330.6	19	53	6							
CLERMONT-FD.	152.23	338.5	19	59	12							
TORTOSA	157.48	336.7	20	44	50							
TOLEDO	159.76	344.3									20	38 PKP2
GRANADA	162.15	340.3	20	58K	59						24	33 PP

JULY 8 21.H 48.M 43.S EPICENTRE -20.31 168.93 DEPTH= 25.KM

A=-0.92110 B= 0.18020 C=-0.34511 D= 0.1920 E= 0.9814
G= 0.3387 H=-0.0663 K=-0.9386 HT= 4.6

SE= 2.62

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
PORT VILA	2.63	347.2	0	44A	2	1	18	4				
NOUMEA	3.04	229.1	0	46K	-2							
KOUMAC	4.37	266.0	1	6K	-1							
SUVA	9.23	78.1				2	32	-87				
BRISBANE	16.36	241.4	3	48	-2	6	56	6				
KARAPIRO	18.47	163.3	4	17	1							
AFIAMALU	19.50	74.0	4	27	-1	8	45	44				
CHATEAU	19.66	164.6	4	36	6							
RIVERVIEW	20.74	225.9	4	43K	1						8	43 *SS
CHARTERS TS.	21.28	266.7	4	49	2	8	48	11				
WELLINGTON	21.48	167.9	4	54	5	8	49	8				
RABAUL	22.87	312.3	5	7	4							
CANBERRA	23.05	225.4	5	7K	2	9	15	5			9	25
GEBBIES PASS	23.52	173.2	5	12	3							
PORT MORESBY	23.65	294.1	5	14	4	9	28	8				
ROXBURGH	25.10	179.4				9	55	10				
MELBOURNE	27.14	224.8	5	49	6	10	37	18				
ADELAIDE	30.34	234.9	6	13	1							
DARWIN	37.33	276.2									7	15
GUAM	41.14	322.7	7	46	2	14	2	6				
MUNDARING	48.32	244.9	8	42	0							
CAPE HALLETT	52.01	179.5	9	10	0	16	35	5				
HONOLULU	52.44	39.8				17	7	31				
SCOTT BASE	57.59	180.5	9	51K	1	17	50	5			12	13 PP
MANILA	58.49	302.7	9	58	1							
LEMBANG	60.78	273.5	10	12	1						12	36
DJAKARTA	61.73	273.9									11	48
MATUSIRO	63.56	332.6	10	31A	0	18	53	-9				
MIRNY	65.95	205.2	10	46	0							
BYRD STATION	66.94	169.6	10	51	-2							
NHATRANG	67.04	293.5	10	55	2				11	10		
ZO-SE	68.66	317.0	11	4	1	20	6	3				
CANTON	69.28	305.7	11	9	2	20	19	8				
SOUTH POLE	69.81	180.0	11	10	-1							
NANKING	70.83	316.4	11	17A	0	20	31	2				
VLADIVOSTOK	71.72	332.3	11	23A	1	20	33	-6				
PETROPAVLOVK	73.57	353.5	12	34A	61							
CHANGCHUN	75.31	328.9	11	44A	1	21	21	1				
MAWSON	77.33	202.2	11	55	0							
PEKING	77.58	321.2	11	57A	1	21	51	7				
KUNMING	78.59	302.2	12	5	4	22	4	9				
SIAN	78.74	313.0	12	5A	3	22	3	6				
CHENGTU	80.35	307.7	12	13A	2	22	19	5				
LANCHOW	83.22	312.2	12	29A	3	22	53	10			13	24 PP
ARGENTINE I.	85.62	160.2	12	37	-1							
BERKELEY	86.70	47.7	12	44A	1							
LICK	86.88	48.4	12	46K	2							
SHILLONG	87.61	298.2	12	48A	0							
ULAN-BATOR	87.67	323.5	12	49	1							
FRESNO	87.92	49.5	12	50	1							
PASADENA	87.93	52.5	12	53	4							
SHASTA	87.98	45.1	12	50	1							
MINERAL	88.34	45.7	12	51A	0						13	27
RENO	89.18	47.1	12	56A	1							
CORVALLIS	89.29	41.4	12	57A	1							
LHASA	89.91	301.7	13	1	2	23	53	6			23	30 SKS
COLLEGE	91.15	17.0	13	2	-2							
VICTORIA	91.17	38.0	13	11	7							
BOULDER CITY	91.19	52.0	13	6	2							
EUREKA	91.82	48.4	12	58	-9							
TUCSON	92.78	56.7	13	13	1						13	33

TUCSON TELE.	92.90	56.7	13	14	2					
PENTICTON	93.76	38.4	13	17	1					
GLEN CANYON	93.98	52.1	13	19	2					
FLAMING GRGE	97.03	49.1	13	31	0					
WICHITA MTS.	103.24	57.7	13	59	0				18	25
ANDIJAN	107.81	307.6	18	34	777					
BOGOTA	116.89	95.2							21	38 SKP
SHAWINIGAN	123.84	47.0	18	56	0					
BULAWAYO	124.10	226.4	18	59	2					
CARACAS	125.49	91.4	18	55	-4	26	2	1		
SODANKYLA	127.27	342.7	19	5	2					
TROMSOE	127.44	347.3	19	5	2					
SAN JUAN	128.22	82.2	19	5	0					
KIRUNA	128.54	345.3	19	5	0				21	9 PP
TIFLIS	128.54	307.6	19	7	2					
TRINIDAD	130.72	93.3	19	11	1					
UMEA	131.68	342.0	19	2	-9				22	37 PKS
NURMIJARVI	132.60	336.9	19	15	2				22	40 PKS
SKALSTUGAN	133.96	345.7	19	11	-5					
SIMFEROPOL	135.46	314.1	19	17	-1					
UPPSALA	135.52	339.8							22	46 PKS
KSARA	136.43	298.0	19	24	4				22	15 PP
JERUSALEM	137.16	295.1	19	26	5				22	21 PP
KISHINEV	138.10	318.9	19	27	4					
LWOW	139.49	325.0	19	29	3				22	56
WARSAW	139.57	329.7	19	28	2				23	5 PKS
COPENHAGEN	140.52	339.2	19	25	-3				22	28 PP
HELWAN	140.63	292.6	19	31	3				22	32 PP
BUCHAREST	140.95	316.6							22	24
KRAKOW	141.49	327.8							23	10 PKS
SOFIA	143.52	315.5	19	34	1				20	1
COLLMBERG	143.77	334.3	19	32A	-1				22	50 PP
HALLE	144.03	335.4	19	34	0	19	42			
PRAGUE	144.08	331.8							20	30
PRUHONICE	144.09	331.6	19	34A	0				22	46 PP
VIENNA-H.	144.43	328.0	19	36A	2				21	25
JENA	144.62	335.1	19	36	1				22	53 PP
WITTEVEEN	144.77	341.3	19	37A	2					
CHEB	144.95	333.5	19	42	7					
KASPERSKE H.	145.14	331.4	19	38A	2				21	13
ATHENS	145.15	307.9	19	37K	1					
MUNSTER	145.20	339.7	19	37	1					
DE BILT	145.84	342.1	19	32A	-5				48	17 SS
BENSBERG	146.21	339.2	19	41A	4				21	31
ZAGREB	146.23	325.1	19	41A	3					
LJUBLJANA	146.85	326.6	19	43	4	20	10			
HEIDELBERG	146.95	336.1	19	43	4					
STUTTGART	147.24	334.8	19	40	1				20	4
KARLSRUHE	147.39	336.0	19	45	6					
TRIESTE	147.51	326.8	19	44	4				26	37 PPP
TUBINGEN	147.52	334.8	19	44	4					
KEW	147.78	347.4	20	4	24					
EBINGEN	147.84	334.5	19	44	4					
RAVENSBURG	147.89	333.4	19	45	5					
STRASBOURG	147.99	336.1	19	46	6					
PADOVA	148.63	328.2							21	23
BASLE	148.92	335.2	19	43	1					
PARIS	149.55	342.2	19	56	13				23	25 PP
NEUCHATEL	149.60	335.3	19	49	6					
BESANCON	149.76	336.6	19	52	9					
FLORENCE X.	150.09	326.5	19	39	-5				22	55 PP
FOLINIERE	150.36	345.8	19	51	7					
ROME	150.68	322.5	19	46A	1					
GARCHY	150.74	340.1	20	1	16				20	43
MESSINA	150.88	313.5	19	50	5					
ISOLA	151.82	331.7	19	54	8				23	31 PP
MONACO	152.00	330.7	19	46	-1					
CLERMONT-FD.	152.05	338.5	19	55	8				23	39 PP
BAGNERES	155.43	339.9	19	54K	3					
TORTOSA	157.30	336.8	19	36	-18					
TOLEDO	159.59	344.4	20	38	41					
GRANADA	161.98	340.4	20	14K	15	28	4	64	24	57 PP

JULY 9 6.H 32.M 53.S EPICENTRE 15.42 -87.40 DEPTH= 97.KM

A= 0.04374 B=-0.96346 C= 0.26424 D=-0.9990 E=-0.0454

G= 0.0120 H=-0.2640 K=-0.9645 HT= 5.7

DEPTH OF FOCUS= 0.010R

SE= 3.29

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
SANTIAGO MA.	2.18	208.5	0	30	-5						1	21	SG
SAN SALVADOR	2.46	225.4	0	34	-5						1	21	SG
COMITAN	4.63	280.9	1	18	9	2	18	16					
MERIDA	5.89	339.3	1	26	0	2	46	13					
OAXACA	9.14	281.3				4	22	30					
VERA CRUZ	9.14	295.5	2	19	9	4	17	25					
BALBOA HTS.	10.00	129.1									6	23	
TACUBAYA	11.94	291.0	2	57	9	5	28	29					
CHINCHINA	15.55	130.7	3	40	5	6	51	27					
FUQUENE	16.68	124.9	3	48K	-1								
BOGOTA	16.94	127.9	3	54	2	7	7	11					
DALLAS	19.33	335.5	4	20	0								
COLUMBIA	19.37	16.1	4	17	-3	7	57	8					
CARACAS	20.53	101.3	4	25	-7	8	25	14					
FAYETTEVILLE	21.46	344.8	4	41	-1	8	46	17	4	55			
WICHITA MTS.	21.69	334.4	4	42	-2						8	47	
CHAPEL HILL	21.74	18.6	4	43	-1								
LUBBOCK	22.31	326.7	4	49	-1								
ST. LOUIS 1	23.26	354.4	4	58	-1								
WASHINGTON	25.09	19.3	5	17	0								
PENNSYLVANIA	26.61	16.3	5	35	4	10	25	28					
TUCSON TELE.	27.08	312.6	5	35	0								
TUCSON	27.11	312.3	5	35	0	10	41	36					
PALISADES	28.06	22.0	5	43	-1	10	28	8					
HUANCAYO	29.79	155.7	6	2	2						8	24	PCP
WESTON	30.22	24.1	6	3K	0								
LARAMIE	30.22	332.2	6	4	1						6	48	
OTTAWA	31.47	15.9	6	13	-1								
FLAMING GRGE	31.78	327.4	6	16	-1								
BOULDER CITY	31.91	315.0	6	17	-1								
SALT LAKE C.	33.00	324.7	6	29	1								
SHAWINIGAN	33.36	18.5	6	30	-1								
PASADENA	33.39	309.6	6	30	-1								
EUREKA	34.63	319.4	6	36	-5						11	56	SCP
FRESNO	35.77	312.6	6	51	0								
BUTTE	37.08	330.6	7	4	2								
RENO	37.14	316.6	7	5	2								
LICK	37.34	312.3	7	3	-1								
MINERAL	38.73	316.6	7	16K	0								
SHASTA	39.43	316.7	7	22	0								
BANFF	42.21	333.8	7	40	-5								
PENTICTON	42.80	329.1	7	50	1								
VICTORIA	44.27	325.9	8	1	0								
RESOLUTE	59.41	357.7	9	52	-2								
THULE	61.83	5.0	10	8	-3								
COLLEGE	63.75	335.5	10	21	-3								
GRANADA	75.98	54.9	11	47A	9	22	5	54					
SKALSTUGAN	80.57	26.6	12	2	-1								
BENSBERG	81.02	39.7	12	8	3						12	34	
KIRUNA	82.39	21.4	12	13	1								
STUTTGART	82.88	41.5	12	14	-1								
JENA	83.72	39.0	12	20	1								
UMEA	83.85	25.2	12	18	-2								
UPPSALA	84.15	29.3	12	21	0								
COLLMBERG	84.47	38.3	12	23	0						15	45	PP
SODANKYLA	84.74	20.8	12	24	0								
KASPERSKE H.	85.49	40.3	12	31A	3						13	7	
PRUHONICE	85.82	39.3	12	33	3								
KAJAANI	86.71	23.5	12	35	1								
LJUBLJANA	87.08	43.0	12	38	2								
NURMIJARVI	87.11	27.3	12	35	-1								

JULY 9 8.H 5.M 42.S EPICENTRE 27.55 55.20 DEPTH= 35.KM

A= 0.50674 B= 0.72910 C= 0.46003 D= 0.8212 E=-0.5707
G= 0.2625 H= 0.3778 K=-0.8879 HT= 2.6

DEPTH OF FOCUS= 0.000R

SE= 2.57

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
SHIRAZ	3.15	312.3	0 46A	-3				1 0 PG
TEHERAN	8.79	339.3	2 3	-5	3 32	-15		
QUETTA	10.63	72.9	2 33	0	4 28	-4		
WARSAK DAM	15.45	61.4	3 36	-1				
STALINABAD	15.80	42.5	3 43	1	6 40	5		
TIFLIS	16.51	331.6	3 54	4	6 58	6		
MAKHACH-KALA	16.61	339.9	3 49	-3	6 55	1		
KSARA	17.74	295.3	4 3A	-3	7 11	-9		4 21 PP
JERUSALEM	17.87	288.5	4 6A	-2	7 38	15		
TASHKENT	17.96	36.5	4 9	0	7 34	9		
ANDIJAN	19.33	42.7	4 25	0	8 3	7		
DEHRA DUN	20.18	76.7						4 45
SOTCHI	20.30	326.0	4 33	-3	8 15	-1		
HELWAN	21.06	282.0	4 42	-1	8 42	11		
ALMATA	23.57	42.6	5 11	3				
SIMFEROPOL	24.20	321.4	5 13	-1	9 28	0		
ISTANBUL KA.	25.34	308.9			9 55	8		14 20
ATHENS	28.32	299.5	5 50	-3				
KISHINEV	28.38	320.3	5 51	-2				
BUCHAREST	28.74	313.5	5 59	3				11 30
SVERDLOVSK	29.52	6.1	6 0	-3				
MOSCOW	30.89	340.6	6 14	-2				
LHASA	31.46	77.6	6 23	2	11 29	4		
LWOW	32.59	321.5	6 34	4				11 41
SHILLONG	32.79	84.9	6 22K	-10				
KRAKOW	35.01	319.6	6 50	-1				12 16
BRATISLAVA	35.95	315.3	6 59	0				
RACIBORZ	36.03	318.8	7 2	2				
VIENNA-H.	36.44	315.1	7 2	-1				
PULKOVO	36.45	339.0	7 2	-2				
LJUBLJANA	36.96	311.0	7 7	-1				7 38
TRIESTE	37.37	310.1			12 54	-2		
PRUHONICE	38.17	317.1	7 17	-1				9 28
PRAGUE	38.27	317.2	7 33	14				
KASPERSKE H.	38.48	315.5	7 20A	0	13 20	7		7 56
FLORENCE X.	38.72	306.5	8 28	65				
NURMIJARVI	38.91	336.4	7 21A	-3	13 15	-5		
LWIRO	39.04	224.9	7 26	1				
COLLMBERG	39.55	318.5	7 27	-2	13 23	-7		9 15
HALLE	40.24	318.5	7 35	0	13 38	-2		
KAJAANI	40.59	341.8	7 35	-3				
STUTTGART	41.10	313.7	7 41	-1				8 40
UPPSALA	41.20	332.1	7 40	-3	13 50	-4		
MONACO	41.45	305.8	7 47	2				
COPENHAGEN	41.55	324.6	7 46	0	13 54	-5		
BANGUI	41.77	243.1	7 47	-1				8 29
ISOLA	41.78	306.4	7 48	0				9 40 PP
BASLE	41.94	311.5	7 34	-15				
STRASBOURG	42.03	313.1	7 49	-1				10 20
KUNMING	42.47	82.1	7 54	0	14 11	-2		
CHENGTU	42.50	73.7	7 56	2	14 12	-1		
GOTEBORG	42.65	327.1	8 0	5				
UMEA	42.69	338.0	7 52	-3				
MUNSTER	42.95	317.9	7 59	2				
BENSBERG	42.96	316.4	7 57	0				8 34
BESANCON	42.96	310.8	7 56	-1				
SODANKYLA	43.45	344.4	7 59	-2				9 43 PP
ULAN-BATOR	44.72	48.6	8 12	0				
CLERMONT-FD.	44.73	308.3	8 14	2				
GARCHY	44.92	310.4	8 12	-1				
KIRUNA	45.38	342.3	8 15A	-2	14 55	0		18 24 SSS
SKALSTUGAN	45.39	334.7	8 14	-3				9 55 PP
PARIS	45.51	312.5	8 16	-2				
SIAN	46.14	67.8	8 25	2	15 8	2		
TORTOSA	46.45	301.3						15 8
PAOTOW	46.56	59.0	8 27	1	15 6	-6		
TANANARIVE	46.78	190.0	8 31	3				9 39
TROMSOE	47.03	343.6	8 28	-2				10 22 PP
KEW	47.68	315.8	8 33	-2				
GRANADA	49.90	296.7	8 46K	-6				12 28
TOLEDO	49.97	300.3	8 57	4				
PEKING	51.28	59.4	9 4	1	16 19	1		
KHEYS	53.18	0.6	9 16	-1	16 46	2		
BULAWAYO	53.94	211.3						14 23
NANKING	54.66	68.8	9 33	5				

CHANGCHUN	57.58	53.7	9	47	-2							
SIDA	58.28	330.0	9	53K	-1							
GRAHAMSTOWN	66.36	206.0	10	48	1							
MBOUR	67.85	275.1	10	57	0							
MATUSIRO	68.92	59.0	11	1	-2							
RESOLUTE	76.18	352.2	11	46	0							
COLLEGE	86.16	9.6	12	38	-1							
SHAWINIGAN	92.53	327.0	13	8	-1							
PENTICTON	103.34	356.5										
FLAMING GRGE	110.39	347.6	15	23	-185							
FAYETTEVILLE	110.44	333.9	13	46	-283							
EUREKA	112.81	352.6	15	14	-199							
GLEN CANYON	114.63	348.4	14	30	-247							
SOUTH POLE	117.39	180.0	18	43	1							
BYRD STATION	127.39	181.2	19	3	2							

15 23 PP

16 56

JULY 10 3.H 49.M 59.S EPICENTRE -19.54 -69.10 DEPTH= 105.KM

A= 0.33649 B=-0.88104 C=-0.33249 D=-0.9342 E=-0.3568
G=-0.1186 H= 0.3106 K=-0.9431 HT= 4.8

DEPTH OF FOCUS= 0.011R

SE= 2.02

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
LA PAZ	3.16	17.1	0	54	5	1	29	3					
AREQUIPA	3.82	323.0	0	57	-1								
ANTOFAGASTA	4.32	196.3	1	1	-4								
HUANCAYO	9.56	320.3	2	16	0	4	17	15					
BOGOTA	24.50	348.0	5	13	2	9	22	1					
CHINCHINA	25.19	344.6	5	18	1	9	34	2	5	41	6	38	PPP
FUQUENE	25.27	349.1	5	18	0	9	38	5	5	44			
CARACAS	29.93	4.3	5	52A	-8						11	43	
TRINIDAD	30.94	14.8									15	39	
SAN JUAN	37.80	4.6	7	5	-3								
VERA CRUZ	46.75	323.9				15	25	24					
TACUBAYA	48.67	320.9	8	37	2								
COLUMBIA	54.44	347.8	9	18	-1	16	45	-2	9	46			
WASHINGTON	58.61	352.7	9	48	0				10	14			
MORGANTOWN	59.73	350.3	9	55A	-1				10	23			
FAYETTEVILLE	60.21	336.7	9	57K	-2	18	3	0	10	25	18	24	*SS
PALISADES	60.40	355.8	9	59	-2	17	59	-6	10	26	10	53	PCP
WICHITA MTS.	60.81	332.3	10	1	-2	18	9	-2	10	28	12	18	PP
MBOUR	61.38	60.6	10	4	-3	18	20	2					
WESTON	61.64	358.1	10	7A	-2				10	36			
HALIFAX	64.04	4.4	10	23	-2								
BYRD STATION	64.39	188.6	10	28	1								
BREBEUF	64.86	356.5	10	29	-1	19	3	2					
OTTAWA	64.91	354.9	10	29	-1								
TUCSON	65.18	321.6	10	32	0				11	2	13	6	PP
TUCSON TELE.	65.18	321.7	10	32	0								
SHAWINIGAN	65.86	357.2	10	36	-1								
GLEN CANYON	69.03	324.6	10	57	1				11	25			
LARAMIE	69.35	331.4	10	58	0								
BOULDER CITY	70.16	321.9	11	5	2				11	32			
SOUTH POLE	70.58	180.0	11	7	1								
FLAMING GRGE	70.85	328.8	11	7	0				11	39			
PASADENA	70.94	318.5	11	8	0	20	18	4	11	35	21	6	*SS
SALT LAKE C.	71.96	327.2	11	15	1								
EUREKA	73.24	323.8	11	22	1								
FRESNO	73.65	319.6	11	23	-1								
VINEYARD	74.61	318.8	11	31A	2								
LICK	75.15	319.1	11	33K	1						12	2	
BOZEMAN	75.24	331.0	11	34	1				12	2			
RENO	75.46	321.8	11	36K	2								
BRANNER	75.53	318.9	11	36A	1						12	4	
BERKELEY	75.86	319.2	11	38A	1	21	15	6	12	5			
BUTTE	76.21	330.4	11	39	1				12	6			
MINERAL	77.04	321.5	11	42K	-1						12	11	
SCOTT BASE	77.71	190.3	11	49	2				12	23			
SHASTA	77.72	321.4	11	46	-1						12	15	
CAPE HALLETT	80.25	195.5	12	2A	1	22	1	5	12	37			
CORVALLIS	80.70	324.0	12	4K	1								
PENTICTON	81.90	329.3	12	10	1								

SERRA PILAR	82.36	41.6	12 9	-3					15 16	PP
VICTORIA	83.26	327.1	12 17K	1						
GRANADA	83.55	47.0	12 49K	31	22 36	7			23 36	PS
KIMBERLEY	84.08	118.3	12 20A	0						
ALMERIA	84.17	47.7	12 17	-4	22 33	-2	12 52		24 10	
TOLEDO	84.62	44.5	12 25	2	22 42	2	12 56		23 32	*SS
MAWSON	86.25	163.4	12 33A	2			13 0		13 12	*SP
TORTOSA	88.11	45.4	13 13	33	22 58	-15				
BANGUI	89.30	85.1	12 47	1			13 15			
LWIRO	96.69	94.8	13 25	5						
ROME	96.78	48.0							23 49	
STUTTGART	97.10	40.8	13 21	0			13 55			
JENA	99.25	39.2	17 31	240					18 5	
KASPERSKE H.	99.89	41.4							17 39	PP
COLLMBERG	100.22	39.2	13 36	0			14 8		17 46	PP
PRUHONICE	100.75	40.8							17 44	PP
COPENHAGEN	101.27	34.8			24 11	3				
COLLEGE	102.82	334.6	13 46	-1			14 15			
KSARA	112.77	60.7	18 16	-8					29 42	PPS
MOSCOW	115.32	36.8	19 31	62						
SVERDLOVSK	127.52	32.2	18 53	0						
CHARTERS TS.	127.55	223.3	18 56	3						
QUETTA	138.96	66.2	19 19	5			19 48		22 36	PP
LAHORE	145.06	62.7	19 27	2						
GUAM	147.04	264.7	19 30	2			20 1			
TUKUBASAN	149.47	309.1	19 35	3					20 9	
VLADIVOSTOK	150.59	327.7	19 37	3						
MATUSIRO	150.69	311.0	19 42K	8					23 41	PP
CHANGCHUN	152.94	336.7	19 40	3						
PEKING	159.08	348.6	19 49	4						
LHASA	159.36	57.0	19 52	6						
SHILLONG	161.43	67.7	20 7	19						
SIAN	165.24	6.5	19 57	5						
NANKING	165.67	332.0	19 56	4						
CHENGTU	167.30	28.0	19 57	4						

JULY 11 9.H 31.M 45.S EPICENTRE 7.88 93.07 DEPTH= 51.KM
A=-0.05301 B= 0.98925 C= 0.13627 D= 0.9986 E= 0.0535
G=-0.0073 H= 0.1361 K=-0.9907 HT= 6.8

DEPTH OF FOCUS= 0.003R

SE= 3.09

	DELTA DEG.	AZ. DEG.	P M	S	O-C S	S M	S	O-C S	*PP M	S	SUPP. M	S	
PORT BLAIR	3.78	354.8	0	57	-1	1	34	-7					
MEDAN	7.03	127.1	1	43	0	3	31	28					
VISHAKHAPTNM	13.64	316.7	3	13K	0	6	2	18			3	20	PP
MADRAS	13.65	292.9	3	12A	-1	5	54	10			3	24	PP
CHITTAGONG	14.44	355.4	3	26	3	6	6	3			3	45	PP
CALCUTTA	15.25	343.3	3	25K	-9	6	48	27					
KODAIKANAL	15.58	279.8	3	36K	-2	6	52	23			8	15	PCP
NHATRANG	16.47	73.5	3	54	5	7	5	15					
HYDERABAD	17.12	305.1	4	0K	3	7	20	16			4	5	PP
BOKARO	17.32	337.1	4	8	8	7	30	21			4	34	PPP
SHILLONG	17.62	356.4	4	2K	-2	7	23	7			11	55	PCS
TOCKLAI	18.83	4.7	4	19	1	7	49	6			8	15	SS
KUNMING	19.47	27.2	4	27A	2	8	7	10					
CHATRA	19.66	344.2	4	29K	1	8	10	9			4	50	PP
POONA	21.47	301.4	4	50K	4	8	52	16			5	17	PP
SEHORE	21.60	316.5	4	54	6	8	58	19			5	21	PP
LHASA	21.73	355.2	4	49A	0	8	37	-4					
BOMBAY	22.51	301.1	5	1	4	9	11	16			5	16	PP
CANTON	24.65	49.9	5	20A	3	9	40	7					
HONG KONG	24.86	52.5	5	21	2	9	47	11					
CHENGTU	24.87	22.9	5	19A	0	9	36	0					
DEHRA DUN	26.39	329.7	5	36	2	10	23	22			6	29	PP
BAGUIO CITY	28.17	69.9	5	51	1	11	1	31					
MANILA	28.27	73.7	5	54	3						13	44	
LAHORE	29.32	325.9	5	58	-2								
LANCHOW	29.71	17.8	6	5	1								
SIAN	30.03	26.9	6	6	-1	10	57	-3					
TAINAN	30.10	57.0									16	59	
TAWU	30.39	58.7									18	20	
HWALIEN	31.67	56.4	5	43	-38								

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TAIPEI	32.06	54.5				11	46	14		
WARSAK DAM	32.70	325.7	6	30	0					
QUETTA	33.03	315.6	6	36A	3	11	48	1	7 11	7 52 PP
NANKING	33.91	41.3	6	41A	1	11	56	-4		
ZO-SE	34.96	44.9	6	51	2	12	28	11		
KHOROG	35.35	329.7	7	55	62	12	32	9		
PAOTOW	35.90	22.3	6	57	0	12	30	-1		
ALMATA	37.98	340.8	7	17	2	13	14	11		8 52 PP
PEKING	38.10	29.2	7	18A	2	13	12	7		
TASHKENT	39.43	331.4	7	28	1	13	31	6		
ASHKABAD	43.35	319.0	8	2	3	14	32	9		9 43 PP
SEMIPALATNSK	43.70	348.1	8	1	-1					
SHIRAZ	43.75	305.1	8	5K	3	14	28	-1		
MUNDARING	45.38	152.0	8	18	3					
CHANGCHUN	45.54	32.8	8	18A	1	15	3	9		10 6 PP
TEHERAN	47.06	312.4	8	31	2					15 25
ABUYAMA	47.30	49.1	8	32A	1					
VLADIVOSTOK	48.86	37.6	8	44	1	15	49	8		10 37 PP
MATUSIRO	49.94	48.2	8	53	2	16	0	4		11 3 PP
GUAM	51.01	79.1	9	0	1					9 38 PCP
TUKUBASAN	51.23	49.4	8	58A	-3	16	13	-1		20 36
TANANARIVE	52.18	238.8	9	5K	-3					17 22 *SS
GORIS	52.29	314.6	9	9A	0	16	32	3		11 14 PP
TIFLIS	54.27	316.5	9	26	3	17	6	11		11 34 PP
PORT MORESBY	56.54	106.7	9	41	1	17	38	12		
Y.-SAKHLINSK	57.44	38.2	9	49	3	17	48	10		
KSARA	58.51	304.9	9	56	2	18	3	11		12 16 PP
JERUSALEM	58.64	302.4	9	58A	3					11 56 PP
CHARTERS TS.	59.25	118.9	9	59	0					20 49
RABAUL	60.17	99.4	10	9	4					
YAKUTSK	60.33	18.9	10	6	0	18	17	2		
ADELAIDE	60.60	137.6	10	10K	2					
HELWAN	61.64	299.6	10	19	4	18	39	7		
LWIRO	64.88	263.8	10	40	4	19	32	20		
ISTANBUL KA.	65.32	311.6	10	40	1	19	17	-1		11 1
MAGADAN	67.25	27.8	10	53	2	19	45	4		
BRISBANE	67.55	123.8	8	40	-133	21	2	77		
FOCSANI	67.60	316.2	10	59	5					13 20
IASI	67.68	317.9	10	58	4					18 52
BROKEN HILL	67.80	250.9	10	58	3					
CANBERRA	67.95	133.0	10	58	2	20	0	11		
BUCHAREST	68.11	314.7	11	0	3	19	45	-6		23 47 SS
HONIARA	68.80	103.3	11	3	2					
RIVERVIEW	68.87	130.8	11	4A	2	20	7	7	11 18	20 45 PS
ATHENS	68.92	307.6	11	2K	0					
PETROPAVLOVK	69.15	36.1	11	5	2	20	9	5		13 37 PP
BULAWAYO	69.22	245.1	11	6	2					
PULKOVO	69.69	331.3	11	9	2	20	14	4		13 49 PP
SOFIA	69.82	312.5	11	9	2					
LWOW	70.53	320.1	11	13	1					20 39 PS
BELGRADE	72.16	314.5	11	23K	2	20	48	9		11 43 PCP
NURMIJARVI	72.61	331.2	11	24	0	20	44	0		
TITOGRAD	72.77	311.9	11	37	12					14 15 PP
KRAKOW	73.18	319.9	11	30	3					11 43 PCP
SODANKYLA	73.80	338.3	11	32	1					
HURBANOVO	74.05	317.5	11	39	7					
RACIBORZ	74.29	319.8	11	36	2				12 10	14 16 PP
KHEYS	74.48	354.4	11	36	1	21	4	-1		4 22 PP
BRATISLAVA	74.81	317.7	11	37	0	21	7	-1		
REGGIO CALA.	75.29	307.2	11	36	-4					21 19
VIENNA-H.	75.30	317.7	11	42	2	21	22	8		
MESSINA	75.37	307.3	11	44K	4					
ZAGREB	75.39	315.2	11	42K	2					
UMEA	75.41	334.0	11	41	1					
UPPSALA	75.91	329.8	11	44	1	21	5	-16		21 19 SP
KIRUNA	76.22	338.1	11	45	0					21 30
LJUBLJANA	76.42	315.4	11	47A	1					14 33 PP
PRUHONICE	76.62	319.4	11	50	3	21	35	7		14 37 PP
PRAGUE	76.70	319.5	11	48	0	21	31	2		
TROMSOE	77.15	339.8	11	51	1					
KASPERSKE H.	77.20	318.5	11	53	3	21	54	19		14 44 PP
COLLMBERG	77.68	320.7	11	55K	2	21	45	5		14 55 PP
ROME	77.78	311.1								12 59
COPENHAGEN	78.24	325.2	11	58A	2	21	52	6		22 28 PS
PADOVA	78.26	314.7	12	4	8	22	14	28		14 22 PP
MAWSON	78.33	191.3	12	1	4	21	56	9		22 4 SKS
HALLE	78.35	320.9	12	0	3	21	47	0		
JENA	78.56	320.3	11	58	0	21	51	2	12 38	15 0 PP

GOTEBORG	78.62	327.2	12	2	4							
SKALSTUGAN	78.88	333.3	12	1	1							
STUTTGART	80.03	318.1	12	7	1	22	12	7				
PAVIA	80.16	314.5	12	58	51	22	57	51			15	55
HEIDELBERG	80.39	318.7	12	9	1							
KARLSRUHE	80.60	318.4	12	13	4						17	3 PPP
STRASBOURG	81.04	317.9	12	15	4	22	27	12			17	11 PPP
MUNSTER	81.04	321.4	12	15	4							
BASLE	81.20	316.9	12	15	3							
BENSBERG	81.35	320.4	12	13	0						15	26 PP
MONACO	81.46	313.0	12	17	4							
ISOLA	81.71	313.5									15	30 PP
BESANCON	82.30	316.6	12	22	4							
DE BILT	82.54	321.6	12	22	3	22	39	8			23	33 PS
GARCHY	84.27	316.8	12	30	2				13	15	15	18 PP
CLERMONT-FD.	84.38	315.3	12	34	6						15	51 PP
PARIS	84.51	318.4	12	32	3	22	53	3	13	17	15	50 PP
KEW	86.00	321.2	12	40	4	23	4	-1				
ABERDEEN	86.23	327.1				23	17	10			29	19 SS
BAGNERES	86.80	312.9	12	44	4							
ALICANTE	87.94	308.3	12	42	-4	23	22	-1			29	17 SS
ALMERIA	89.73	307.0	12	58	4				13	34	16	33 PP
TOLEDO	90.43	310.2	13	1	3	23	39	-7			24	20 *SS
GRANADA	90.57	307.5	13	2A	4				14	2	16	58 PP
CAPE HALLETT	93.58	162.6	13	16	4	23	54	-20			31	41 SS
SCOTT BASE	94.26	168.2	13	19	4	23	41	-38			30	30 SS
COLLEGE	94.74	22.0	13	20	3						17	10 PP
RESOLUTE	97.44	2.1	13	32	2							
SOUTH POLE	97.83	180.0									15	54
BYRD STATION	106.25	174.4	14	15	777							
VICTORIA	115.33	25.9	18	41	5							
PENTICTON	116.27	23.2	18	43	5							
HUNGRY HORSE	119.13	20.4	18	48	4							
MINERAL	122.33	31.0	18	53A	3							
BERKELEY	123.80	33.4									20	33
LICK	124.53	33.4	19	5	11							
EUREKA	125.74	27.6	19	2	6							
FLAMING GRGE	127.21	21.3	19	3	4						21	1 PP
WESTON	127.98	345.3									21	5 PP
LARAMIE	128.14	17.8	19	6	5							
PASADENA	128.78	33.5	19	8	6						21	21 PP
BOULDER CITY	129.08	29.3	19	10	7						21	16 PP
GLEN CANYON	129.75	25.8	18	59	-5						21	9 PP
PALISADES	129.89	347.2	17	55	-69	25	55	-12	19	7	21	14 PP
PENNSYLVANIA	130.84	350.9	19	14K	8						21	26 PP
MORGANTOWN	132.29	352.7	19	16A	7						21	38 PP
WASHINGTON	132.56	349.5	19	21	12						21	40 PP
LAWRENCE	132.75	8.8	19	15	5							
TUCSON	134.04	28.5	19	20	8						22	54 PP
FAYETTEVILLE	135.73	8.4	19	20	5						22	34
WICHITA MTS.	136.22	13.9	19	12	-4						21	56 PP
LUBBOCK	136.40	18.2	19	23	6							
COLUMBIA	137.97	352.7									22	11 PP
SAN JUAN	146.79	322.0	19	41	6							
ST. VINCENT	147.03	309.2									19	41 PKP2
TRINIDAD	148.62	305.5									19	46 PKP2
CARACAS	152.98	312.2	19	52K	8	26	55	11				
LA PAZ	159.74	243.2	20	13	20						24	25 PP
FUQUENE	161.31	314.8	20	1	6							
BOGOTA	162.14	313.7	19	58	2						31	27 SKKS
CHINCHINA	162.96	318.2	20	3	7							

JULY 12 2.H 48.M 26.S EPICENTRE 39.11 23.47 DEPTH= 0.KM

A= 0.71362 B= 0.30983 C= 0.62830 D= 0.3983 E=-0.9173
G= 0.5763 H= 0.2502 K=-0.7780 HT= -1.4

SE= 3.24

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
ATHENS	1.16	170.1									0	24 PG
SOFIA	3.58	358.4	0	57	-1	1	31	-11				
TITOGRAD	4.60	317.4	1	32	19	2	27	19			1	50 P*
ISTANBUL UN.	4.65	63.8									1	11
ISTANBUL KA.	4.72	63.8	1	27	13	2	29	18				

			P	O-C	S	O-C	*PP	SUPP.
	DELTA DEG.	AZ. DEG.	M S	S	M S	S	M S	M S
TARANTO	4.98	287.8					2 24	
BUCHAREST	5.65	19.5	2 3	35	3 3	29	3 39	SG
BELGRADE	6.13	339.4	2 2K	28			4 20	
CAMPULUNG	6.26	10.2					3 39	
MESSINA	6.26	264.1	1 39A	3	2 52	2	1 54	P*
TIMISOARA	6.84	346.7					3 42	
FOCSANI	7.14	21.5					3 54	
BACAU	7.87	17.6					4 16	
IASI	8.62	19.0					4 47	
ZAGREB	8.69	322.9	2 7	-3	4 58	68		
KISHINEV	8.82	24.6	2 16	4				
ROME	8.82	291.9	1 55	-17			2 56	
LJUBLJANA	9.57	319.3	2 24	2	4 7	-5	3 14	
TRIESTE	9.71	315.4			4 12	-3	5 22	SGSG
SIMFEROPOL	9.83	50.2	2 38	12	5 10	52		
BRATISLAVA	10.16	335.1	2 30	-1	3 47	-39		
VIENNA-H.	10.47	333.0	2 36	1				
PADOVA	10.65	310.0					5 54	
LWOW	10.71	2.0					2 37	
KRAKOW	11.22	348.2	2 46	1			7 52	
HELWAN	11.27	142.6	2 42	-4			4 42	
KSARA	11.30	114.1	2 44	-2	4 40	-14		
CHIAVARI	11.78	300.7	3 1	8	6 2	56	9 4	
KASPERSKE H.	12.27	327.9	2 58K	-1	5 20	2	3 36	
PRUHONICE	12.58	332.6	3 3	0			7 7	
WARSAW	13.23	353.4					7 59	
STUTTGART	14.04	318.0	3 22	-1				
COLLMBERG	14.23	332.3	3 26	1			8 40	PCP
JENA	14.48	328.6	3 29	0			3 35	PP
HALLE	14.78	330.7					9 43	
CLERMONT-FD.	16.41	300.5					4 18	
TIFLIS	16.45	74.1	3 56	2	7 17	20		
BENSBERG	16.48	321.3	4 26	32				
GARCHY	16.93	305.4	4 0	0			4 45	
PARIS	17.89	309.6	4 15	3				
BAGNERES	18.00	290.2	4 33	19				
DE BILT	18.16	321.6					10 22	
MOSCOW	19.12	25.0	4 23	-4				
FOLINIERE	19.69	307.2					4 33	
KEW	20.69	314.4	4 48	3				
UPPSALA	21.08	351.8	4 46A	-3			5 7	PP
PULKOVO	21.13	9.6	4 44	-5				
NURMIJARVI	21.43	1.6	4 50	-2				
TEHERAN	22.39	89.9	5 2	0	9 3	-1		
UMEA	24.82	356.6	5 30	5				
SKALSTUGAN	25.40	348.3	5 30A	-1				
SHIRAZ	25.68	102.7	5 33	-1				
SODANKYLA	28.36	2.6	5 56	-2				
KIRUNA	28.82	357.6	6 0	-2				
LWIRO	41.45	171.9	7 52	2				
KHEYS	43.54	7.8	7 8	-59				
COLLEGE	76.13	356.2	11 51	-1				
HUNGRY HORSE	85.10	333.1	12 39	0				
FAYETTEVILLE	85.64	314.0	12 42K	0				
LARAMIE	87.48	324.2	12 50	-1				
WICHITA MTS.	89.08	315.7	12 59	0				

JULY 13 21.H 44.M 26.S EPICENTRE 22.68 123.17 DEPTH= 0.KM

A=-0.50538 B= 0.77306 C= 0.38336 D= 0.8370 E= 0.5472
G=-0.2098 H= 0.3209 K=-0.9236 HT= 4.0

SE= 4.04

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
HSINKONG	1.72	284.5	0 31	0	0 44	-10		
TAITUNG	1.87	272.5	0 31	-3	0 53	-5		
HWALIEN	1.92	312.3	0 32K	-2	0 49	-11		
TAWU	2.13	261.6	0 38	1	0 57	-8		
YUSHAN	2.20	291.7	0 34	-4	0 56	-11		
ALISHAN	2.34	291.4	0 39	-1	1 1	-9		
HENGCHUN	2.34	253.7	0 43	3	1 4	-6		
ILAN	2.46	328.2	1 4	22	1 16	3		
KAOHSIUNG	2.68	269.3						
TAICHUNG	2.72	303.1	0 46	0	1 12	-8		

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TAINAN	2.74	277.2										
TAIPEI	2.79	327.4	0	47	0	1	13	-9				
HSINCHU	2.92	316.7	0	51	2	1	20	-5				
MANILA	8.21	194.3	2	10	7	3	42	4				
HONG KONG	8.34	269.1	2	3	-2	3	32	-9				
ZO-SE	8.57	348.4	2	5	-3							
CANTON	9.08	274.5	2	13	-2							
NANKING	10.13	338.3	2	26	-4							
SIAM	17.01	315.8	3	59	-2							
PEKING	18.29	342.6	4	17	0	7	36	-3				
KUNMING	18.84	281.5	4	24	0	8	10	19				
CHENGTU	18.86	299.0	4	21	-3							
MATUSIRO	18.98	40.0	4	29A	4	8	2	7				
TUKUBASAN	19.94	43.7	4	36	0							
PAOTOW	21.02	331.1	4	47	-1							
CHANGCHUN	21.17	4.3	4	48	-1							
MIZUSAWA	22.43	38.9	5	3	1	9	9	5				
GUAM	22.43	110.4	4	12	-50	9	27	23			5	25
ULAN-BATOR	28.35	336.6	5	56	-2							
SHILLONG	28.68	282.1	5	57	-4							
Y.-SAKHLINSK	28.94	28.2	6	7	4	10	53	0				
LEMBANG	33.04	209.2	6	45K	6	12	3	5				
YAKUTSK	39.57	4.8	7	34	-1	13	30	-8				
PORT MORESBY	39.60	141.0	7	50	15							
PETROPAVLOVK	40.55	32.6	7	45A	2	13	4	-49				
DEHRA DUN	40.88	290.6									7	33
LAHORE	44.07	292.4	8	11	0				8	28		
ANDIJAN	46.15	305.3	8	28K	0	15	14	0				
NAMANGAN	46.71	305.5	8	33	1	15	21	-1				
CHARTERS TS.	48.11	150.3	8	50	7							
TASHKENT	48.54	305.7	8	46	-1	15	47	-1				
STALINABAD	48.74	302.0	8	39	-9							
TIKSI	49.08	2.4	8	51	0	15	50	-6				
QUETTA	50.48	291.1	9	2	0	16	22	7			10	58 PP
SVERDLOVSK	56.34	324.1	9	42	-3							
ADELAIDE	59.20	165.2	10	11K	6							
RIVERVIEW	62.19	153.8	10	33	7							
CANBERRA	62.66	156.4	10	35	6				10	54	11	21 PCP
SHIRAZ	62.93	292.7	10	29	-1	18	49	-11				
KHEYS	63.77	350.4	10	38	2	18	57	-13				
MAKHACH-KALA	64.65	308.1	10	41	-1	19	17	-4				
TIFLIS	66.83	307.1	10	56	0	19	45	-3				
MOSCOW	69.10	322.9	10	41	-29	19	17	-58				
COLLEGE	69.30	27.2	11	13	2						14	14 PP
SODANKYLA	71.77	336.1	11	26	0							
PULKOVO	72.10	327.9	11	44	16							
KAJAANI	72.20	332.6	11	31	2							
SIMFEROPOL	73.70	312.3	11	38	1							
TROMSOE	73.77	339.3	11	35	-3						11	53 PCP
KIRUNA	73.90	337.3	11	39	0	21	0	-10			11	55 PCP
NURMIJARVI	74.60	329.5	11	42	-1							
UMEA	75.41	333.5	11	50	3						12	5 PCP
KSARA	75.60	300.8	11	54	6							
JERUSALEM	76.76	299.0	11	56	1				12	11		
UPPSALA	78.11	330.2	12	3	1	21	48	-9			12	17 PCP
LWOW	78.64	319.3	11	5	-60							
SKALSTUGAN	78.73	334.8	12	9	3							
WARSAW	79.48	322.3				21	53	-18				
SOFIA	81.80	312.8	12	39	17							
COPENHAGEN	82.48	327.7				22	40	-2			20	34
PRUHONICE	84.13	322.0	12	46	12							
COLLMBERG	84.35	323.7	12	45	10						16	4 PP
HALLE	84.82	324.2	12	50	12						13	19
KASPERSKE H.	85.09	321.6	12	48	9						13	37
JENA	85.31	323.8	12	40	0						13	1
VICTORIA	87.57	37.6	13	2	11							
BANFF	90.24	32.5	13	13	9							
SHASTA	92.38	43.9	13	13	-1							
HUNGRY HORSE	92.76	34.2	13	19	4							
BUTTE	95.01	35.3	13	45	19							
SCOTT BASE	103.47	171.4									18	23 PP
SHAWINIGAN	109.60	11.6	18	16	777							
WICHITA MTS.	110.49	35.9									19	13 PP
SOUTH POLE	112.54	180.0	18	42	4							
CARACAS	145.57	17.8	19	47	7							

JULY 15 0.H 17.M 53.S EPICENTRE 13.23 120.58 DEPTH= 60.KM

A=-0.49542 B= 0.83836 C= 0.22740 D= 0.8609 E= 0.5088
G=-0.1157 H= 0.1958 K=-0.9738 HT= 6.1

DEPTH OF FOCUS= 0.004R

SE= 2.69

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
MANILA	1.51	18.6	0	26	0								
BAGUIO CITY	3.17	360.0	0	48	-1								
HONG KONG	10.89	326.8	2	25	-11	4	48	11					
NHATRANG	11.14	266.1	2	32K	-7	4	28	-15					
ZO-SE	17.79	1.7	4	4	-1								
NANKING	18.81	355.3	4	18	1	7	47	5					
KUNMING	20.56	307.7	4	40	4	8	28	10					
CHENGTU	23.12	321.3	5	3	1								
SIAN	23.45	335.1	5	5A	0	9	17	7					
LEMBANG	23.73	213.6	5	13	6	9	27	12					
ABUYAMA	25.46	29.7	5	24A	0								
PEKING	26.98	352.5	5	36	-2	10	11	2					
MATUSIRO	28.09	31.2	5	46	-2						9	1	PCP
PAOTOW	28.78	343.2	5	53	-1	10	37	-1					
SHILLONG	29.66	298.7	5	59K	-3								
CHANGCHUN	30.76	6.7	6	16	4								
VLADIVOSTOK	31.35	16.0	6	22	5								
LHASA	31.85	305.6	6	24	2	11	32	5					
CHATRA	34.06	298.5	6	41A	0								
BOKARO	34.53	292.9	7	15	30						12	30	
PORT MORESBY	34.66	129.1	6	45	-1								
ULAN-BATOR	36.42	344.5	6	59	-2	12	39	2					
Y.-SAKHLINSK	38.46	24.5	7	24	6								
CHARTERS TS.	41.65	142.2	7	45	1						11	15	
HONIARA	45.11	117.9									8	44	
MUNDARING	45.14	185.2	8	13K	1								
LAHORE	46.11	301.2	8	20	0								
WARSAK DAM	48.93	303.7	8	44	2								
YAKUTSK	49.16	5.7	8	42	-2								
ANDIJAN	50.14	312.4	8	53	1	16	7	10					
NAMANGAN	50.72	312.5	8	57	1	16	13	8					
ADELAIDE	50.93	160.8	8	57A	-1								
BRISBANE	51.05	142.5	8	59	1						11	36	
QUETTA	52.14	298.0	9	6	-1								
STALINABAD	52.18	308.7	9	10	3	16	33	8					
TASHKENT	52.54	312.2	9	6	-4								
RIVERVIEW	55.11	148.9	9	25A	-4								
CANBERRA	55.28	151.7	9	31	1								
SVERDLOVSK	62.74	327.6	10	20	-1	18	45	1					
SHIRAZ	64.62	296.7	10	33K	-1	19	11	4	10	53	11	9	PCP
MAKHACH-KALA	68.75	311.1	10	49	-11								
TIFLIS	70.74	309.8	11	10	-2								
KARAPIRO	72.37	137.2	11	22	0								
KHEYS	72.66	351.2	11	22	-1	20	50	8					
CHATEAU	73.06	138.3	11	26	0								
MOSCOW	75.22	324.5	11	37	-1						21	11	
SIMFEROPOL	78.30	313.6	11	55	0								
KSARA	78.41	302.2	11	58A	2								
TANANARIVE	78.71	247.4	12	2	4						14	40	PP
COLLEGE	78.81	25.8	11	57	-1				12	9	15	29	PP
PULKOVO	78.82	328.9	11	57	-1								
JERUSALEM	79.27	300.2	12	3A	2								
SODANKYLA	79.41	336.9	12	0	-1								
KAJAANI	79.47	333.5	12	1	-1								
NURMIJARVI	81.49	330.2	12	12	-1	22	19	1					
KISHINEV	81.63	316.3	12	12	-1								
TROMSOE	81.71	339.7	12	14	0						12	45	
UMEA	82.75	333.9	12	17K	-2								
HELWAN	82.89	298.9	12	21	1						13	19	
LWOW	84.19	319.7									13	25	
UPPSALA	85.06	330.4	12	29	-2						15	6	
WARSAW	85.42	322.5	12	35	3								
SKALSTUGAN	86.18	334.8	12	36K	0								
SOFIA	86.39	312.9	12	36	-1						12	57	
KRAKOW	86.69	320.6	12	39K	0				12	46	13	2	
SKALNATE PL.	86.73	319.7	12	41	2						12	51	PCP
CHORZOW	87.19	321.0	12	40	-1						12	59	*SP
ATHENS	87.28	308.2	12	39K	-2								

RACIBORZ	87.74	321.0	12 46	2			12 51	13 9		
BELGRADE	87.83	315.5	12 44K	0				16 23	PP	
BRATISLAVA	89.03	319.4	12 49	-1						
VIENNA-H.	89.46	319.6	12 52	0						
PRUHONICE	90.00	321.6	12 55A	1				16 28	PP	
COLLMBERG	90.44	323.2	12 57A	1				16 32	PP	
MAWSON	90.61	198.9	12 58K	1						
HALLE	90.97	323.7	12 56	-3				13 18		
CAPE HALLETT	91.36	166.5	13 2K	1				16 40	PP	
LJUBLJANA	91.40	318.0	13 1A	0						
JENA	91.41	323.2	13 0	-1						
LWIRO	92.24	268.2						14 56		
MUNSTER	93.23	325.2	13 11	2						
STUTTGART	93.64	321.9	13 11	0						
BENSBERG	93.93	324.4	13 11	-1						
SCOTT BASE	94.55	171.2	13 16	1						
STRASBOURG	94.63	322.1	13 16	0						
ISOLA	97.00	318.3	13 27	1						
WOODY	105.72	46.7	13 19	777						
EUREKA	105.75	42.1	14 8	777				29 42	PKKP	
FLAMING GRGE	109.04	37.9	17 25	777						
TUCSON	113.20	46.1						30 21		
SHAWINIGAN	119.30	10.5	18 44	1						
WICHITA MTS.	119.54	36.7	18 44	1				20 0	PP	
SAN JUAN	147.90	12.0	19 40	4						

JULY 15 13.H 55.M 28.S EPICENTRE -7.00 116.93 DEPTH= 530.KM

A=-0.44960 B= 0.88499 C=-0.12102 D= 0.8915 E= 0.4529
G= 0.0548 H=-0.1079 K=-0.9927 HT= 6.9

DEPTH OF FOCUS= 0.078R

SE= 2.15

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S	
DJAKARTA	10.07	274.0			4 14	-3			
DARWIN	14.70	112.4	3 7	0	5 35	-2			
MUNDARING	24.85	181.5	4 39	-3					
HONG KONG	29.24	354.8			9 40	3			
PORT MORESBY	30.00	96.6	5 27	0	9 47	-1			
CANTON	30.11	353.4	5 26	-2	9 51	1			
CHARTERS TS.	31.27	117.5	5 37	-1	10 3	-5			
ADELAIDE	34.31	147.3	6 4A	1	10 51	-3		7 38	PP
KUNMING	34.78	337.1	6 8	1	11 1	-1			
ZO-SE	38.10	5.9	6 37	2	11 49	-2			
NANKING	38.88	2.5			11 54	-8		8 14	
CHENGTU	39.44	342.3	6 46	1	12 7	-3			
BRISBANE	39.57	125.2	6 48	1	12 15	3			
SHILLONG	40.52	323.9	6 51	-3					
CANBERRA	40.75	138.3	6 56K	0				8 44	PCP
RIVERVIEW	41.38	134.9	7 4	3	12 41	3		7 55	
SIAN	41.72	350.0	7 6	2	12 40	-3			
HONIARA	42.63	96.3	7 10	-1					
LHASA	44.12	326.9	7 26	3	13 17	0			
CHATRA	44.30	320.6	7 27	3				8 57	
LANCHOW	44.55	344.8	7 27	1	13 19	-4		8 58	PP
PEKING	46.80	359.2	7 44	1	13 51	-4			
MATUSIRO	47.69	23.3	7 48K	-2	14 0	-7		9 8	PCP
PAOTOW	47.77	352.9	7 51	0	14 5	-3			
CHANGCHUN	51.15	7.8	8 15	-1	14 46	-8		16 56	
ULAN-BATOR	55.39	351.8						11 28	
LAHORE	55.89	315.7	8 49	0					
Y.-SAKHLINSK	58.45	20.4	9 6	-1	16 28	-1			
WARSAK DAM	59.21	316.5	9 11	-1					
QUETTA	60.52	310.4	9 19	-2	16 53	-2	11 9		
KARAPIRO	61.12	129.6	9 24	-1					
CHATEAU	61.45	131.0	9 27	0					
STALINABAD	63.65	319.3	9 40	-1					
TASHKENT	64.91	322.1	9 50	1	17 50	1			
TANANARIVE	68.29	252.5	10 10A	0					
PETROPAVLOVK	69.44	25.4	10 18	2					
AFIAMALU	70.24	102.2	10 21	0					
MAWSON	70.42	199.2	10 23	1			12 20	10 40	PCP
SHIRAZ	71.72	304.2	10 28A	-2	19 3	-4	12 22		
SCOTT BASE	75.29	170.4	10 50	0					

TIKSI	78.86	3.8	11	7	-2				
TIFLIS	81.50	313.9	11	24	1				
SOUTH POLE	83.05	180.0	11	30	-1				
SOTCHI	85.61	314.7	11	33	-10				
BULAWAYO	86.06	250.3	11	46K	1				
KSARA	86.47	304.5	11	50	3	13	46		
JERUSALEM	86.65	302.4	11	49A	1	13	48		
BROKEN HILL	86.80	255.9	11	49	0			13	49
HELWAN	89.65	300.0						13	3
MOSCOW	89.75	326.2	12	2	-1				
COLLEGE	98.52	25.5	12	42	-1				
KIRUNA	98.89	337.6	12	44	0				
HUNGRY HORSE	120.48	37.0	17	51	0				
WOODY	121.64	52.2	17	55	2				
EUREKA	122.69	47.2	17	51	-4				
BOZEMAN	123.52	38.7	18	0	3				
TUCSON	129.03	53.9	18	10	2				
RAPID CITY	129.11	36.8	18	9	1				
WICHITA MTS.	137.23	44.8	18	17	-6			21	15 SKP
FAYETTEVILLE	139.40	40.0	18	20	-7			20	38 SPKP
SHAWINIGAN	139.72	10.4	18	26	-2				
MORGANTOWN	144.14	22.5	18	36K	0			20	46
WASHINGTON	145.82	19.6	18	54	15			20	58 PP
COLUMBIA	148.41	29.3	18	46	4				

JULY 16 5.H 22.M 37.S EPICENTRE -19.11-175.36 DEPTH= 173.KM

A=-0.94250 B=-0.07646 C=-0.32534 D=-0.0809 E= 0.9967
G= 0.3243 H= 0.0263 K=-0.9456 HT= 4.9

DEPTH OF FOCUS= 0.022R

SE= 1.76

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
SUVA	5.96	278.2				2	48	13				
AFIAMALU	6.20	34.2	1	29	-2	2	32	-9				
RAOUL ISLAND	10.36	192.5				4	18	-2				
PORT VILA	15.55	272.4	3	35K	4							
NOUMEA	17.31	256.3	3	53A	1							
KOUMAC	19.21	262.3	4	12A	-1							
KARAPIRO	20.37	201.1	4	25	0							
TONGARIRO	21.52	199.6	4	33	-3							
WELLINGTON	23.66	198.8	4	54	-3							
BRISBANE	30.34	248.3	5	54	-4							
CANBERRA	35.34	235.5	6	39	-2							
CHARTERS TS.	36.12	261.9	6	46	-1						10	9
ADELAIDE	43.46	239.1	7	45A	-3							
DARWIN	52.06	269.0	8	52	-2							
CAPE HALLETT	53.86	185.4	9	10A	3							
SCOTT BASE	59.43	184.3	9	48	1							
BYRD STATION	65.61	170.9	10	26	-2							
MATUSIRO	70.61	321.8	10	57K	-1							
SOUTH POLE	71.01	180.0	11	1	0							
LICK	75.56	41.6	11	27A	0							
WOODY	76.36	44.3	12	32	60				13	26		
SHASTA	77.20	38.5	11	37	1						12	31
MINERAL	77.44	39.2	11	38A	0							
RENO	78.03	40.7	11	42	1							
TUCSON	80.11	50.9	11	54	2							
TUCSON TELE.	80.23	50.9	11	55	2							
EUREKA	80.41	42.5	11	53	-1							
ARGENTINE I.	81.27	156.6	11	58	0							
GLEN CANYON	81.96	46.5	11	44	-18				12	58		
MAWSON	83.70	199.1	12	9K	-2							
FLAMING GRGE	85.45	44.0	12	19	0				13	14		
COLLEGE	86.34	11.4	12	22	-2				13	14		
WICHITA MTS.	90.36	53.3	12	43	0				13	37	30	11 PKKP
FAYETTEVILLE	94.20	53.4	13	1	1				13	56		
TROMSOE	128.73	353.6	18	46	-1							
KIRUNA	130.27	352.2	18	49	-1							
KAJAANI	132.42	346.5	18	53	-1							
NURMIJARVI	136.25	345.8	19	1	0							
HALLE	147.16	351.6	20	13	52							
COLLMBERG	147.20	350.3	19	23K	2				20	21		

JENA	147.77	351.8	19 24	3								
BENSBERG	148.15	357.0	19 26	4								
PRUHONICE	148.19	347.8	19 26K	4							20	23
KSARA	148.57	304.1	19 27	4								
KASPERSKE H.	149.19	348.5	19 29A	5							20	24
JERUSALEM	149.75	300.7	19 31K	7								
STUTTGART	150.17	353.8	19 31	6								
PARIS	150.32	2.9	19 33	8								
GARCHY	151.87	2.3	19 35	8								
LJUBLJANA	151.92	345.3	19 35K	7								
HELWAN	153.51	299.0	19 52	22								

JULY 16 6.H 47.M 28.S EPICENTRE -18.90-175.39 DEPTH= 216.KM

A=-0.94366 B=-0.07606 C=-0.32205 D=-0.0803 E= 0.9968
G= 0.3210 H= 0.0259 K=-0.9467 HT= 4.9

DEPTH OF FOCUS= 0.029R

SE= 2.26

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
AFIAMALU	6.06	35.4	1	25	-4	2	27	-12					
RAOUL ISLAND	10.55	192.1				4	17	-6					
PORT VILA	15.51	271.7	3	29K	0								
NOUMEA	17.33	255.7	3	49K	-1						4	15	
KOUMAC	19.21	261.7	4	18K	8								
BRISBANE	30.39	248.0	5	50	-4								
RABAUL	34.88	290.7									6	28	
CANBERRA	35.43	235.2	6	34	-4						7	33	*SP
CHARTERS TS.	36.12	261.6	6	41K	-2	12	0	-6					
PORT MORESBY	37.46	279.3	6	52	-3						7	40	
MELBOURNE	39.29	232.9	7	7	-3								
ADELAIDE	43.54	238.9	7	42K	-2								
CAPE HALLETT	54.06	185.4	9	5K	0								
SCOTT BASE	59.63	184.3	9	44	0						10	29	
MUNDARING	62.23	243.3	9	58	-3								
MATUSIRO	70.43	321.8	10	51K	-2								
ABUYAMA	70.91	318.9	10	55K	-1								
SOUTH POLE	71.21	180.0	10	57	-1								
LICK	75.42	41.6	11	21A	-1						12	18	
PASADENA	75.81	46.0	11	24	0								
FRESNO	76.25	43.0							12	22			
SHASTA	77.06	38.5	11	32	1								
MINERAL	77.31	39.2	11	33A	0						12	27	
RENO	77.90	40.7							12	32			
BOULDER CITY	79.10	46.0	11	42	0				12	37			
TUCSON	80.01	51.0	11	49	2				12	45	12	21	
TUCSON TELE.	80.13	51.0	11	49	1				12	46			
EUREKA	80.28	42.5	11	49	0				12	44			
NANKING	80.85	308.3	11	51	-1								
ARGENTINE I.	81.46	156.6	11	53	-2								
GLEN CANYON	81.84	46.5	12	0	3				12	56			
MAWSON	83.88	199.1	11	55K	-12						12	54	*SP
FLAMING GRGE	85.32	44.0	12	14	0				13	12			
COLLEGE	86.15	11.4	12	17	-1				13	14			
HUNGRY HORSE	86.40	35.9	12	19	0								
PEKING	86.51	314.3	12	20K	0								
SIAN	89.23	306.6	12	33K	0								
WICHITA MTS.	90.26	53.3	12	38	0	23	17	7	13	38	30	6	PKKP
KUNMING	90.83	296.2	12	41K	1								
PAOTOW	90.97	312.7	12	41	0								
CHENGTU	91.73	301.7	12	44K	0								
FAYETTEVILLE	94.10	53.4	12	55	0				13	53			
LHASA	102.11	297.3	13	2	-30								
QUETTA	122.79	294.2	18	31	0								
APATITY	128.02	346.4	18	40	-1								
TROMSOE	128.52	353.6	18	41	-1								
SODANKYLA	129.54	349.2	18	42	-2						21	45	SKP
KIRUNA	130.07	352.2	18	44	-1						21	47	PKS
KAJAANI	132.22	346.5	18	47	-2								
UMEA	133.87	350.5	18	52	0						22	0	PKS
SHIRAZ	135.31	293.3	19	5	10						22	2	
NURMIJARVI	136.05	345.9	18	49	-7						22	7	SKP
UPPSALA	138.04	350.2	18	50	-9								
SIMFEROPOL	144.27	323.2	19	9	-2								

KISHINEV	145.65	330.2	19 14	1					
WITTEVEEN	146.11	357.8	19 17A	3					
MUNSTER	146.92	356.6	19 18	3					
COLLMBERG	147.00	350.3	19 19K	4	19 31		22 48	PP	
RACIBORZ	147.05	343.8					19 18	PKP2	
JENA	147.57	351.8	19 18	2			20 39		
BENSBERG	147.95	356.9	19 20K	3	20 2		20 21	*SPKP	
PRUHONICE	147.99	347.9	19 20K	3	20 24				
KSARA	148.44	304.3	19 24	6					
KASPERSKE H.	148.99	348.5	19 23	5			20 17		
VIENNA-H.	149.21	344.6	19 24	5					
JERUSALEM	149.62	301.0	19 37K	18	20 24				
FOLINIERE	149.93	6.7	19 21	1					
STUTTGART	149.97	353.8	19 20	0			19 26	PKP2	
PARIS	150.12	2.8	21 27	6					
GARCHY	151.67	2.2	19 29	7	20 33				
LJUBLJANA	151.72	345.3	19 26	4	20 27				

JULY 16 14.H 1.M 36.S EPICENTRE -23.04 171.38 DEPTH= 21.KM

A=-0.91075 B= 0.13814 C=-0.38918 D= 0.1500 E= 0.9887
G= 0.3848 H=-0.0584 K=-0.9212 HT= 3.9

SE= 1.99

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
NOUMEA	4.61	278.3	1 9K	-1				
PORT VILA	6.01	331.0	1 32	2	2 56	16		
KOUMAC	7.04	289.2	1 46K	1	3 9	4		
AUCKLAND	14.10	168.7	3 17	-4				
KARAPIRO	15.26	167.4	3 38	2				
TONGARIRO	16.49	168.6	3 53	1				
BRISBANE	17.37	251.7	4 2	-1	7 5	-9		
HONIARA	17.41	319.2	4 2	-1				
AFIAMALU	18.36	63.3	4 15	0	8 3	26		
WELLINGTON	18.41	171.9	4 17	1	8 9	31		
GEBBIES PASS	20.63	177.4	4 35	-6				
RIVERVIEW	20.74	234.3	4 45K	3				5 8 PP
ROXBURGH	22.45	183.8			9 18	18		
CANBERRA	22.99	232.8	5 7K	3	9 24	15	5 22	
CHARTERS TS.	23.53	272.4	5 12	2	9 24	5		
RABAUL	26.38	312.4	5 36	-1				
PORT MORESBY	26.87	296.4	5 42	1	10 24	9		6 24
MELBOURNE	27.00	230.9	5 45	2				
ADELAIDE	30.80	239.9	6 17	0				
MUNDARING	49.29	247.0	8 49	0				
CAPE HALLETT	49.30	180.5	8 50	0	16 6	12		10 51 PP
HONOLULU	53.17	36.3	9 59	40	16 56	9		
SCOTT BASE	54.91	181.2	9 33A	1				10 43 PCP
LEMBANG	63.23	274.0	10 34K	5				
MIRNY	64.47	205.7	10 35	-2				
MATUSIRO	67.03	331.4	10 51	-3	19 46	1		
SOUTH POLE	67.10	180.0	10 55	1				
HONG KONG	71.62	304.9			20 45	6		13 39 PP
ZO-SE	72.19	316.2	11 23	-2	20 47	1		
CANTON	72.70	305.1	11 29	1	20 57	6		
NANKING	74.36	315.5	11 37	-1	21 12	2		
Y.-SAKHLINSK	74.38	340.1	11 38	0				
MAWSON	75.67	202.0	11 45K	-1			12 8	
PETROPAVLOVK	76.54	352.1	11 48A	-3	21 27	-7		
CHANGCHUN	78.81	327.9	12 1A	-2	21 58	-1		
PEKING	81.12	320.3	12 15	0	22 26	3		
KUNMING	81.96	301.5	12 22A	2	22 46	15		22 38 SKS
SIAN	82.25	312.2	12 23A	2	22 42	8		
ARGENTINE I.	82.29	159.5	12 21	-1				
CHENGTU	83.80	306.9	12 31	2	22 59	9		22 53 SKS
PAOTOW	85.17	317.9	12 36	0	23 8	5		23 3 SKS
LANCHOW	86.73	311.4	12 44	0	23 20	2		
BERKELEY	86.88	46.6	12 46	1	23 17	-3		
VINEYARD	86.89	47.9	12 46	1				
LICK	87.02	47.3	12 47K	2				
PASADENA	87.82	51.5	12 49	0	23 29	0		
FRESNO	87.98	48.5	12 51	1				
SHASTA	88.31	44.1	12 52	1				
MINERAL	88.64	44.7	12 54K	1				

RENO	89.39	46.1	12	57A	0					
SHILLONG	90.89	297.4	12	58	-6					
BOULDER CITY	91.10	51.2	13	5	0					
ULAN-BATOR	91.20	322.6	13	4	-1					
VICTORIA	91.94	37.2	13	10	2					
EUREKA	91.94	47.7	13	9	1					
TUCSON	92.39	56.0	13	12	2					
TUCSON TELE.	92.51	55.9	13	13	2					
COLLEGE	93.10	16.2	13	11	-3					
LHASA	93.26	300.7	13	17	3	23	51	-27		
GLEN CANYON	93.87	51.5	13	19	2				13	46
FLAMING GRGE	97.10	48.6	12	25	-67					
WICHITA MTS.	102.77	57.6	13	59	1	24	47	12	29	57 PKKP
MORGANTOWN	118.36	56.2	16	10	-156					
PALISADES	123.08	55.1							22	15 PPP
BREBEUF	123.40	49.8	17	50	-66					
BULAWAYO	123.77	223.2	18	57	0					
SHIRAZ	125.35	290.8	18	57	-3					
SAN JUAN	126.30	83.6	19	5	3					
TRINIDAD	128.26	94.6	19	9	4					
APATITY	128.46	340.8	19	8	2					
MAKHACH-KALA	129.88	307.4	19	12	4					
SODANKYLA	130.54	342.9	19	12	2					
KIRUNA	131.73	345.7	19	13	1				22	33 PKS
TIFLIS	131.99	306.0	19	14	2					
MOSCOW	132.94	326.1	19	14	0					
UMEA	134.96	342.4	19	22	4					
NURMIJARVI	135.99	337.0	19	23	3				22	52 PKS
UPPSALA	138.85	340.2	19	27	2					
SIMFEROPOL	138.97	312.8	19	29	4					
KSARA	139.69	295.6	19	33	6				22	22 PP
JERUSALEM	140.33	292.4	19	32	4					
LWOW	143.02	324.5	19	30	-2					
ISTANBUL KA.	143.69	308.7	19	36	2					
ISTANBUL UN.	143.76	308.7	19	33	-1					
COPENHAGEN	143.86	339.8	19	33	-1					
BUCHAREST	144.49	315.4	19	36	1				23	38
KRAKOW	145.00	327.5	19	30	-6			19 52		
CHORZOW	145.30	328.5	19	37	1			19 50		
SKALNATE PL.	145.39	326.1	19	41	4					
RACIBORZ	145.82	328.8	19	40K	3			19 50		
SOFIA	147.05	314.2	19	42	3				21	36
HALLE	147.44	335.9	19	44	4				23	13 PP
PRAGUE	147.54	332.0	19	45	5					
PRUHONICE	147.56	331.7	19	43A	3				20	52
BRATISLAVA	147.63	327.1	19	43	3				19	46 PKP2
BELGRADE	147.82	319.5	19	44	3				20	41
VIENNA-H.	147.94	327.9	19	43	2				19	45 PKP2
JENA	148.04	335.6	19	44	3	20	6		22	45 PP
WITTEVEEN	148.06	342.4	19	43	2					
CHEB	148.39	333.9	19	47	5					
MUNSTER	148.53	340.6	19	46	4					
ATHENS	148.60	305.8	19	47A	5					
KASPERSKE H.	148.61	331.5	19	46	4				21	40
DE BILT	149.20	343.4	19	48	2				23	24 PP
BENSBERG	149.55	340.1	19	50	7				21	24
HEIDELBERG	150.35	336.8	19	50	5					
LJUBLJANA	150.36	326.4	19	47	2					
STUTTGART	150.66	335.5	19	48	3				20	4
TUBINGEN	150.94	335.4	19	52	7					
TRIESTE	151.03	326.5	19	53	7					
STRASBOURG	151.38	337.0	19	56	10					
PARIS	152.82	343.8							23	41 PP
FLORENCE X.	153.61	326.4	20	7	18	27	10	18		
GARCHY	154.06	341.6	20	4	14				20	34
ROME	154.22	321.8	20	6	16	27	12	19	23	32 PKS
ISOLA	155.29	332.3	20	3	11					

JULY 16 21.H 8.M 53.S EPICENTRE 49.26 155.46 DEPTH= 85.KM

A=-0.59591 B= 0.27210 C= 0.75555 D= 0.4154 E= 0.9097
G=-0.6873 H= 0.3138 K=-0.6551 HT= -5.1

DEPTH OF FOCUS= 0.008R

SE= 2.11

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
SEVERO-KUR.	1.47	16.2	0	22	-4	0	39	-6				
PETROPAVLOVK	4.26	26.9	1	1	-3	1	49	-4				
KURILSK	6.55	234.8	1	36	1	2	53	4				
KLYUCHI	7.79	22.8	1	56	4						4	1
UGLEGORSK	8.78	273.9	2	8	2						4	0
Y.-SAKHLINSK	8.81	260.0	2	7	1	3	52	7				
OKHA	8.93	303.5	2	10	2							
MAGADAN	10.65	347.1	2	31	0							
TUKUBASAN	17.19	226.4	3	52	-4						7	1
VLADIVOSTOK	17.39	258.2	3	58	0						6	59
MATUSIRO	17.87	231.1	4	3K	-1	7	23	6				
YAKUTSK	19.17	321.4	4	19	0	7	51	5				
ABUYAMA	20.52	232.9	4	22	-11							
CHANGCHUN	21.35	266.7	4	40	-1	8	28	0				
TIKSI	25.54	340.8	5	19	-3							
PEKING	29.15	266.5	5	55	0	10	41	2				
ZO-SE	31.50	247.6	6	17A	2	11	24	8				
IRKUTSK	31.94	295.2									7	12 PP
NANKING	32.31	251.6	6	24	2	11	40	11				
PAOTOW	32.89	272.2	6	29	1							
COLLEGE	33.21	40.7	6	30	0							
SIAN	37.20	264.0	7	5	1							
LANCHOW	39.45	270.3	7	24A	1							
CHENGTU	42.68	263.8	7	48	-1	14	13	7				
KHEYS	42.99	346.2									9	43
KUNMING	47.26	259.1	8	28	2	15	14	2				
RESOLUTE	47.95	19.7	8	31	0							
VICTORIA	50.83	57.9	8	54	1							
THULE	51.51	12.1	8	57	-2							
LHASA	51.83	272.8	8	56	-5	16	13	-2				
BANFF	53.54	51.5	9	12	-2							
SHILLONG	54.02	268.4	9	17K	0							
SHASTA	56.03	65.3	9	33	1							
SODANKYLA	57.47	339.0	9	40	-2							
TASHKENT	58.00	297.6									10	37 PCP
BUTTE	58.25	55.0	9	47	0							
KIRUNA	58.46	341.7	9	46	-3							
BOZEMAN	59.29	54.5	9	57	2							
EUREKA	60.59	62.6	10	4	0							
WARSAK DAM	61.43	289.8	10	10	1							
UMEA	61.91	339.3	10	10	-2							
PULKOVO	62.55	332.2									10	55 PCP
PASADENA	62.83	68.5	10	19	0				10	33		
MOSCOW	63.25	325.9	10	19	-2							
FLAMING GRGE	63.35	57.6	10	22	0							
NURMIJARVI	63.59	335.3	10	22	-2						10	59 PCP
BOULDER CITY	63.60	64.9	10	22	-2							
SKALSTUGAN	63.82	342.6	10	24	-1							
RAPID CITY	64.47	51.5	10	30	1							
GLEN CANYON	64.82	62.1	10	32	0				10	46		
UPPSALA	65.97	338.2	10	37	-2							
QUETTA	66.88	289.7	10	45	0							
TUCSON	68.57	65.3	10	56	1							
TUCSON TELE.	68.58	65.1	10	56	1							
TIFLIS	70.86	312.1				20	25	9				
GORIS	71.79	309.7	11	18	3							
TEHERAN	71.95	303.9	11	18	2							
LWOW	72.85	329.5	11	23	2							
WICHITA MTS.	73.74	55.6	11	26	0						13	57
COLLMBERG	74.81	336.6	11	33K	1						13	57
FAYETTEVILLE	75.02	51.8	11	33A	0							
MUNSTER	75.49	340.1	11	37	1							
PRUHONICE	75.60	335.1	11	37	0						12	3
SHAWINIGAN	75.78	32.1	11	39K	1							
SHIRAZ	75.87	299.0	11	39K	1							
BREBEUF	76.39	33.1	11	42K	1							
BENSBERG	76.54	340.0	11	43	1						12	7
KASPERSKE H.	76.63	335.4	11	43	0						12	10
STUTTGART	78.08	337.9	11	51	0						12	16
STRASBOURG	78.62	338.8	11	54	0						12	34
LJUBLJANA	79.17	333.5	11	57A	0							
SOFIA	79.25	326.2	11	58	1							
PARIS	79.56	342.2	12	0	1							
PALISADES	80.15	35.7				22	3	5			27	52 SS
GARCHY	80.90	341.4	12	6	0						12	32

KSARA	81.41	312.9	12 11	2	
CLERMONT-FD.	82.33	340.9	12 14	1	
ATHENS	83.21	323.6	12 18K	0	
JERUSALEM	83.40	312.2	12 21A	2	
HELWAN	86.84	313.9	12 38	2	13 4
SCOTT BASE	127.04	177.0	18 56	2	
ARGENTINE I.	153.82	142.4	19 50	9	

JULY 16 23.H 3.M 28.S EPICENTRE -17.88-178.41 DEPTH= 557.KM

A=-0.95196 B=-0.02644 C=-0.30508 D=-0.0278 E= 0.9996
G= 0.3050 H= 0.0085 K=-0.9523 HT= 5.2

DEPTH OF FOCUS= 0.083R

SE= 1.70

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
SUVA	3.02	264.3			2 26	10		
AFIAMALU	7.50	59.2	1 53	0	3 21	-3		
ONERAHI	18.94	198.4	3 49	3				
KARAPIRO	20.67	193.7	4 2K	0				
WELLINGTON	24.05	192.7	4 30	-3				
CHARTERS TS.	33.45	260.5	5 55	1				8 19
CANBERRA	33.72	232.5	5 57A	1				
PORT MORESBY	34.46	279.5	6 5	2				
GUAM	47.87	308.1	7 45	-4				
SCOTT BASE	60.45	183.6	9 19	2				
BYRD STATION	67.28	170.7	9 59	-2				
MATUSIRO	67.88	323.3	10 4K	0				
WOODY	77.55	45.9	10 54	-5				
TUCSON	81.62	52.3	11 22	1				
TUCSON TELE.	81.74	52.3	11 23	2				
GLEN CANYON	83.25	47.8	11 30	1				
ARGENTINE I.	83.52	157.3	11 29	-1				
MAWSON	83.89	199.8	11 31K	-1				
COLLEGE	85.74	12.6	11 40	-1				
FLAMING GRGE	86.60	45.1	11 45	0				
WICHITA MTS.	91.97	54.2	12 10	0				
SHILLONG	97.28	294.4						15 47
TROMSOE	127.16	352.5	18 0	-1				
SODANKYLA	127.97	348.0	18 1	-1				
KIRUNA	128.63	351.0	18 4	0				
SHIRAZ	132.27	294.0						20 42
UMEA	132.35	348.9	18 11	0				
NURMIJARVI	134.32	344.3	18 7	-7				
UPPSALA	136.50	348.3	18 10	-8				
GOTEBORG	139.49	351.4	18 10	-14				
LWOW	143.38	335.5	18 31K	0				
KRAKOW	144.68	339.5	18 34	1				
COLLMBERG	145.44	347.4	18 35A	0				21 51 *SPKP
HALLE	145.46	348.6	18 36	1				
KSARA	145.49	304.1	18 38	3				
JENA	146.07	348.7	18 36	0				
PRUHONICE	146.32	344.9	18 39K	3				19 10
LWIRO	146.55	236.0	18 41K	5				
JERUSALEM	146.64	300.9	18 41K	5				
BENSBERG	146.69	353.6	18 40K	4				
ISTANBUL UN.	147.05	320.2	18 40	3				
KASPERSKE H.	147.35	345.4	18 42	5				
STUTTGART	148.56	350.2	18 39	0				
STRASBOURG	148.96	352.0	18 46	6				
SOFIA	149.12	327.9	18 47	7				
PARIS	149.14	358.8	18 47	7				
FOLINIERE	149.14	2.7	18 40	0				
LJUBLJANA	149.92	341.9	18 48K	7				
HELWAN	150.39	299.3	18 50K	8				
GARCH'	150.65	357.9	18 50	8				18 59 PKP2
ATHENS	152.15	320.4	18 52A	7				

JULY 17 1.H 1.M 15.S EPICENTRE 16.74 -97.82 DEPTH= 95.KM

A=-0.13035 B=-0.94925 C= 0.28623 D=-0.9907 E= 0.1360

G=-0.0389 H=-0.2836 K=-0.9582 HT= 5.4

DEPTH OF FOCUS= 0.010R

SE= 2.62

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
OAXACA	1.04	74.3	0	13	-8	0	35	-2				
PUEBLA	2.31	351.0	0	37	0	1	9	4				
VERA CRUZ	2.93	33.0	0	44	-2	1	41	21				
TACUBAYA	2.96	333.8	0	39	-7	1	20	-1				
COMITAN	5.48	94.3	1	21	0						2	18
LEON	5.68	320.7	1	27	4							
GUADALAJARA	6.52	307.8									2	16
MANZANILLO	6.61	291.3									2	27
MERIDA	8.82	60.4	2	12	6	3	45	0				
SAN SALVADOR	8.86	108.9	2	10	3						4	12
SANTIAGO MA.	9.59	108.4									2	59
CHIHUAHUA	14.07	328.7									5	50
WICHITA MTS.	17.92	357.9	4	2A	-2	7	20	2				
BALBOA HTS.	19.40	111.2	4	16	-5	8	0	11				
TUCSON	19.43	325.0	4	20	-1	8	8	18				
TUCSON TELE.	19.44	325.4	4	21	0				4	26		
FAYETTEVILLE	19.54	8.8	4	20A	-2	8	9	17			10	54 SCP
LAWRENCE	22.26	5.3	4	50	0							
GALERAZAMBA	22.68	102.2				9	14	23				
COLUMBIA	22.87	38.1	4	54	-2	9	15	21				
GLEN CANYON	23.55	331.5	5	4	2	8	7	-59				
BOULDER CITY	24.41	325.0	5	10	-1							
CHINCHINA	24.70	115.8	5	11	-2	9	41	16				
PASADENA	25.18	317.3	5	18A	0	9	48	15			9	59 *SS
CHAPEL HILL	25.37	37.6	5	19	-1						5	47
LARAMIE	25.38	346.3	5	21	1						7	21
FLAMING GRGE	26.10	339.8	5	27	1							
FUQUENE	26.12	112.6	5	26	-1	10	2	13				
BOGOTA	26.22	114.7	5	27	-1	10	3	12			10	19 *SS
SALT LAKE C.	26.85	335.9	5	16	-17							
RAPID CITY	27.63	351.6	5	41	0							
EUREKA	27.64	328.7	5	42	1	8	52	-82				
FRESNO	27.87	320.0	5	41	-2						14	59
CLEVELAND	28.37	26.3	5	45A	-2	10	49	24				
WASHINGTON	28.58	35.3	5	46	-3						7	1 PP
GEORGETOWN	28.58	35.3	5	49	0	10	44	15				
VINEYARD	28.84	318.3	5	51	0							
LICK	29.37	319.0	5	55A	-1							
PENNSYLVANIA	29.53	31.7	5	57	0	11	1	17				
RENO	29.71	324.3	6	0A	1							
BERKELEY	30.08	319.2	5	55	-7	10	57	4				
SAN JUAN	30.25	82.1	6	3	-1							
CARACAS	30.63	97.7	6	2	-5						7	19 PP
BOZEMAN	30.90	341.8	6	12	2	11	25	20				
MINERAL	31.27	323.6	6	12A	-1							
BUTTE	31.68	340.3	6	15	-1							
FORDHAM	31.70	35.9	7	16K	59	12	26	68				
PALISADES	31.79	35.6	6	18	1	11	36	17			7	31 PP
SHASTA	31.96	323.3	6	16	-3							
ARCATA	33.05	322.0	6	39	11							
ST. KITTS	33.53	83.8	6	1	-31							
OTTAWA	34.04	28.3	6	36	-1							
WESTON	34.15	36.1	6	36A	-2	12	17	21				
HUNGRY HORSE	34.21	340.7	6	38	0	12	10	13				
CORVALLIS	35.08	327.7	6	46A	0							
BREBEUF	35.10	30.1	6	45	-1							
TRINIDAD	35.86	94.9	6	48	-4							
SHAWINIGAN	36.27	29.6	6	55	-1							
PENTICTON	37.01	336.2	7	3	1							
BANFF	37.16	341.5	7	2	-1							
VICTORIA	37.97	332.2	7	10A	0							
HALIFAX	39.99	38.7	7	29	2							
LA PAZ	44.13	137.0	8	3	2	14	33	7				
SANTIAGO	56.23	152.7	9	32	0							
RESOLUTE	57.97	0.9	9	43	-2							
COLLEGE	58.55	337.5	9	47	-2							
THULE	61.63	7.6	10	10	0							
DURHAM	80.04	35.8	12	1	1	22	16	21				
KEW	81.66	38.8				22	31	19				
KHEYS	82.02	3.9	12	12A	1							
TOLEDO	82.28	50.8	12	13	1							

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FOLINIERE	82.32	41.5	12 13	1						
TROMSOE	83.27	18.4	12 18	1						
GRANADA	83.34	53.3	12 18A	0	22	48	19		15	22 PP
SKALSTUGAN	83.76	25.0	12 20A	0						
PARIS	84.18	40.8	12 23	1						
ALMERIA	84.30	53.4	12 18	-4						
BAGNERES	84.41	46.8	12 24	1						
KIRUNA	84.68	19.6	12 24	0	22	57	15			
PETROPAVLOVK	84.68	323.9	12 23	-1						
GARCHY	85.04	42.2	12 26	0					13	23
WITTEVEEN	85.30	36.1	12 29	2						
CLERMONT-FD.	85.58	43.6	13 30	61						
GOTEBORG	86.15	30.4	12 32	1					13	5
BENSBERG	86.27	37.7	12 32	0					42	41 PCP
UMEA	86.76	23.1	12 35K	T						
SODANKYLA	86.89	18.6	12 34K	-1						
COPENHAGEN	87.26	32.1	12 38	1	23	21	14		15	57 PP
STRASBOURG	87.54	39.8	12 46	8					13	24
UPPSALA	87.75	27.1	12 38	-1						
STUTTGART	88.38	39.2	12 42	0						
COLLMBERG	89.48	35.9	12 47	0					16	20 PP
NURMIJARVI	90.33	24.7	12 51	0						
KASPERSKE H.	90.79	37.7	12 53	-1					16	29 PP
PRUHONICE	90.96	36.7	12 54	0						
PULKOVO	93.01	23.5							16	48
YAKUTSK	93.02	339.6	13 5	1						
LWOW	96.28	33.6	13 21	2						
ISTANBUL UN.	104.30	38.7	14 10	15						
SIMFEROPOL	104.67	33.1							15	14
SHIRAZ	125.73	32.0	18 51A	1					20	43
MAWSON	127.66	170.8	18 54	0						
WARSAK DAM	128.54	11.3	18 56	0						
BULAWAYO	129.24	102.5	18 57	0						
QUETTA	131.10	17.6	19 3	2					21	20 PP
MUNDARING	145.66	237.5	19 27	0						
TANANARIVE	146.99	99.1	19 37	8					19	44 PKP2

JULY 17 5.H 13.M 34.S EPICENTRE 27.55 55.38 DEPTH= 140.KM
A= 0.50444 B= 0.73063 C= 0.46013 D= 0.8229 E=-0.5682
G= 0.2614 H= 0.3786 K=-0.8879 HT= 2.6

DEPTH OF FOCUS= 0.017R

SE= 3.02

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
SHIRAZ	3.27	310.4	0	35	-16	1	10	-20			0	47 PG
TEHERAN	8.84	338.4	1	52	-13	4	12	29				
QUETTA	10.48	72.8	2	23	-4	4	17	-5				
GORIS	14.09	330.0	3	13	-1							
WARSAK DAM	15.31	61.2	3	16	-13							
TIFLIS	16.58	331.2	3	59	14	7	23	39				
LAHORE	16.96	71.9	3	49	-1							
KSARA	17.88	295.2	3	57	-4	7	19	7			7	59 SS
JERUSALEM	18.01	288.4	3	54	-8	7	18	3				
NAMANGAN	18.95	40.9	4	13	1							
ANDIJAN	19.22	42.4	4	16	1	7	51	11				
DEHRA DUN	20.03	76.7									8	17
SOTCHI	20.39	325.7	4	25	-2							
HELWAN	21.21	282.0	4	31	-4						11	35
SIMFEROPOL	24.28	321.2	5	1	-4						9	16
ISTANBUL KA.	25.46	308.8				9	45	15			14	10
ISTANBUL UN.	25.50	308.7	5	10	-6	10	5	34				
SVERDLOVSK	29.50	5.9	5	53	0							
MOSCOW	30.93	340.4	6	14	9							
SHILLONG	32.63	85.0	6	22A	2							
KRAKOW	35.11	319.5	6	42	1						7	9
LJUBLJANA	37.07	310.9	6	53	-5							
PRUHONICE	38.27	317.0	7	8	0						8	45 PP
KASPERSKE H.	38.58	315.4	7	7K	-3						8	3
NURMIJARVI	38.97	336.3	7	12K	-1	13	12	11			8	46 PP
LWIRO	39.15	225.1	7	17	2						22	38
COLLMBERG	39.65	318.5	7	17K	-2						8	51 PP
HALLE	40.34	318.4	7	24	-1							
JENA	40.38	317.5	7	21	-4							

UPPSALA	41.27	332.1	7 30	-2						
COPENHAGEN	41.63	324.5	7 34	-1	13 49	8				
APATITY	42.17	347.7	7 39	-1	13 55	6				
GOTEBORG	42.73	327.1	7 42	-2						
UMEA	42.74	337.9	7 41	-3						
MUNSTER	43.05	317.9	7 48	1					9 25	PP
SODANKYLA	43.49	344.3	7 49	-1						
GARCHY	45.04	310.4	8 0	-3					9 35	PP
KIRUNA	45.42	342.2	8 4	-2						
SKALSTUGAN	45.45	334.6	8 4	-2					9 56	PP
TROMSOE	47.07	343.5	8 17	-2					10 14	PP
FOLINIERE	47.57	312.1	8 20	-3						
KHEYS	53.17	0.5	9 5	0						
BULAWAYO	54.03	211.5	9 13	2						
YAKUTSK	58.75	32.1	9 44	-1						
Y.-SAKHLINSK	68.67	47.2	10 50	0						
MATUSIRO	68.78	59.0	10 52	2						
COLLEGE	86.12	9.7	12 28	2					15 55	PP
SHAWINIGAN	92.61	327.1	12 57	1						
WICHITA MTS.	113.35	336.8	18 25	4					19 14	PP

JULY 17 14.H 53.M 30.S EPICENTRE 41.22 72.50 DEPTH= 64.KM

A= 0.22680 B= 0.71949 C= 0.65642 D= 0.9537 E=-0.3006
G= 0.1973 H= 0.6261 K=-0.7544 HT= -2.1

DEPTH OF FOCUS= 0.005R

SE= 1.87

	DELTA DEG.	AZ. DEG.	P M	P S	P O-C S	S M	S S	S O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
ANDIJAN	0.48	192.3									0	8	PG
NAMANGAN	0.67	249.5									0	10	PG
FERGANA	1.00	213.5									0	16	PG
DZERGETAL	2.22	206.5									1	6	SG
FRUNSE	2.25	43.7	0	36	0						1	12	SG
TASHKENT	2.43	273.4	0	37	-1						1	16	SG
GARM	2.79	218.0	0	42	-1	1	17	1					
RYBACHE	3.01	64.7	0	47	1	1	19	-3					
FABRICHNAYA	3.49	55.5	0	52	-1						1	44	S*
KHOROG	3.81	191.7	0	58	0						3	4	SG
ALMATA	3.88	56.7	0	58	-1						1	54	S*
DUZHANBE	3.91	228.6	0	59	0	1	46	2			2	6	
KULYAB	3.94	213.6	0	59	0						2	9	SG
PRZHEVALSK	4.58	72.1									1	19	P*
KURMENTY	4.65	65.6	1	9	0								
WARSAK DAM	7.25	186.3	1	42	-3								
LAHORE	9.76	170.8	2	23	3								
SEMIPALATNSK	10.65	27.8	2	27	-5								
ASHKABAD	11.40	258.0	2	42	0						4	37	
DEHRA DUN	11.77	155.8				4	48	-9			6	31	
QUETTA	11.90	204.0	2	47	-2	4	55	-6					
KIZYL-ARVAT	12.58	266.1				5	13	-4			6	0	
TEHERAN	17.40	258.5	3	59	-1	7	20	11					
SHEMAKHA	18.04	276.0	4	9	1								
MAKHACH-KALA	18.62	283.7	4	10	-5						10	57	
CHATRA	18.77	135.3	4	13	-3								
LHASA	18.97	121.7	4	20	1	7	56	12					
KIROVOBAD	19.76	277.0	4	24	-3								
GROZNY	19.88	285.0	4	31	2								
SHIRAZ	19.91	240.9	4	28	-1	8	9	5			8	20	SS
TIFLIS	20.74	280.6	4	35	-2						8	23	
EREVAN	21.23	276.5	4	46	4								
BAKURIANA	21.68	281.0	4	47	0								
PIATIGORSK	21.79	287.3	4	47	-1								
SHILLONG	22.40	128.2	4	52A	-2								
POONA	22.64	176.7									6	30	
SOTCHI	24.24	286.6	5	12	0								
IRKUTSK	24.25	52.1	5	13	1								
BAYANDAI	25.16	50.7	5	20A	-1								
KYAKHTA	25.19	57.2	5	21A	0								
ULAN-BATOR	25.25	63.0	5	23	1								
KABANSK	25.60	53.4	5	26	1								
MOSCOW	26.95	314.5	5	37	0								
SIMFEROPOL	28.10	290.6	5	48	0						11	42	SS
PAOTOW	28.23	78.7									14	58	

SIAN	29.47	91.7					15 32	
KUNMING	29.78	113.2					17 8	
KSARA	29.81	267.6	6 11	8				
PULKOVO	31.89	320.0	6 20	-1				
ISTANBUL UN.	32.52	284.4	6 27	0				
PEKING	32.91	77.4					17 21	
APATITY	33.80	334.2	6 37	-1				
KAJAANI	34.42	326.8	6 43	0				
LWOW	34.51	301.1	6 45	1			8 0	PP
NURMIJARVI	34.82	320.0	6 47K	0				
HELWAN	35.07	264.5	6 49	0				
SODANKYLA	36.05	331.8	6 56K	-1				
UMEA	37.52	324.8	7 8	-1				
UPPSALA	38.21	318.1	7 14K	-1			8 44	PP
KIRUNA	38.44	331.2	7 16	-1				
TROMSOE	39.49	333.7	7 26	0			9 10	PP
KHEYS	39.88	356.3	7 29	0			8 52	PP
SKALSTUGAN	41.00	323.7	7 38	0			9 10	PP
COPENHAGEN	41.04	311.6	7 39K	0				
GOTEBORG	41.14	314.7	7 39K	0			9 9	PP
COLLMBERG	41.30	304.9	7 41	0			9 22	PP
LJUBLJANA	41.44	296.9	7 42A	0				
HALLE	41.91	305.4	7 46	0			9 15	PP
STUTTGART	44.19	302.1	8 5	1				
FLORENCE X.	44.33	294.7	7 50	-15				
BENSBERG	44.96	305.6	8 11	1				
MATUSIRO	50.28	72.6	8 50	-2				
FOLINIERE	50.34	304.7	8 52	0				
COLLEGE	69.64	17.1	11 3	-1	11 13			
PORT MORESBY	84.80	107.2					13 20	
RABAUL	85.00	100.0					13 48	
SHAWINIGAN	87.30	336.8	12 42K	1				
CHARTERS TS.	91.48	115.5	13 1	0				
SCOTT BASE	130.80	163.8					23 2	SKP

JULY 17 16.H 20.M 21.S EPICENTRE 36.01 141.45 DEPTH= 56.KM

A=-0.63408 B= 0.50525 C= 0.58538 D= 0.6232 E= 0.7821
G=-0.4578 H= 0.3648 K=-0.8108 HT= -0.2

DEPTH OF FOCUS= 0.004R

SE= 3.38

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
TYOSI	0.57	239.2	0 6A	-8	0 14	-10		
MITO	0.87	295.0	0 14K	-3	0 25	-5		
ONAHAMA	1.03	334.7	0 17	-2	0 34	1		
KAKIOKA	1.05	282.2	0 15K	-4	0 33	0		
TUKUBASAN	1.11	281.1	0 16	-4				
UTUNOMIYA	1.39	293.2	0 22K	-2	0 45	4		
HONGO	1.40	258.0	0 21	-3				0 41
TOKYO C.M.O.	1.42	257.0	0 21K	-3	0 3€	-6		
SHIRAKAWA	1.48	318.5	0 23K	-2	0 45	1		
YOKOHAMA	1.58	248.9	0 24A	-2	0 48	2		
KUMAGAYA	1.68	275.2	0 25K	-3	0 55	6		
MERA	1.72	231.0	0 24A	-4	0 46	-3		
HUKUSIMA	1.90	335.9	0 29K	-2	0 56	2		
TITIBU	1.92	269.7	0 29	-2	1 0	6		
MAEBASI	1.96	282.0	0 28K	-3	0 57	2		
OSIMA	2.10	234.4	0 29A	-4	0 41	-18		
AJIRO	2.15	244.1	0 30A	-4	1 2	2		
MISIMA	2.23	247.1	0 33A	-2	1 6	4		
HUNATU	2.24	257.6	0 32	-3	1 9	7		
SENDAI	2.30	349.1	0 36K	0	1 7	3		
OIWAKE	2.37	278.5	0 35	-2	1 12	7		
KOHU	2.37	262.5	0 35	-2	1 13	7		
YAMAGATA	2.40	338.8	0 37	-1	1 13	7		
ISINOMAKI	2.41	357.5	0 37	-1	1 9	2		
MATUSIRO	2.67	282.3	0 39K	-2	1 23	10		
SHIZUOKA	2.70	248.2	0 37A	-5	1 16	2		
NIIGATA	2.71	315.4	0 42	0	1 27	13		
NAGANO	2.71	285.0	0 41A	-1	1 20	6		
TAKADA	2.80	293.8	0 42	-1	1 19	3		
MATUMOTO	2.83	275.8	0 45	1	1 21	4		

OMAESAKI	3.00	242.9	0	47	1	1	21	0			
MIZUSAWA	3.12	355.4	0	49	1	1	23	-1			
SAKATA	3.16	336.4	0	52	4	1	29	4			
HATIDYOZIMA	3.21	205.7	0	44	-5	1	21	-6			
AIKAWA	3.25	309.0	0	51	1	1	35	7			
TAKAYAMA	3.41	273.5	0	54	2	1	55	24			
TOYAMA	3.50	282.5	0	54A	1	1	53	19			
IIDA	3.65	262.7	0	45A	-10	1	33	5			
MIYAKO	3.65	6.3	0	53	-2	1	45	7			
MORIOKA	3.69	356.6	0	57	1	1	42	4			
AKITA	3.85	344.3	0	58	0	1	48	5			
GIHU	3.86	262.2	0	56	-2	1	58	15			
WAZIMA	3.90	291.8	1	0	1						
KANAZAWA	3.91	279.0	1	0	1						
KAMEYAMA	4.23	255.5	1	1	-2	1	56	4			
TU	4.24	253.4	1	15	12	2	19	27			
HIKONE	4.30	261.6	1	3	-1	1	53	-1			
TSURUGA	4.39	266.8	1	3	-3						
HATINOHE	4.51	0.8	1	6	-1	2	4	5			
OWASE	4.72	247.3	1	7	-3	2	26	22			
KYOTO	4.77	259.7	1	8	-3	2	23	17			
AOMORI	4.83	353.9	1	15	3	2	13	6			
ABUYAMA	4.94	258.3	1	10A	-3						
MAIZURU	4.96	265.5	1	28	14	2	35	25			
OSAKA	5.03	256.0	1	11	-3					1	41
KOBE	5.30	257.3	1	31	13	2	34	15			
SIOMISAKI	5.33	243.0	1	14	-5	2	33	13			
TOYOOKA	5.41	266.8	1	19	-1	2	39	17			
WAKAYAMA	5.45	252.8	1	17	-3	2	29	7			
SUMOTO	5.61	254.6	1	20	-3	2	56	29		4	53
HAKODATE	5.81	354.9	1	30	5	2	41	9			
TOTTORI	5.93	267.3	1	26	-1						
MORI	6.12	353.8	1	33	3	2	57	18			
URAKAWA	6.21	9.2	1	31	0	2	40	-2			
TAKAMATU	6.29	256.6	1	30	-2	3	15	31			
HIROO	6.42	12.5	1	29	-5					2	45
TSURUGISAN	6.48	252.7	1	30	-5					3	7
MUROTO	6.60	247.4	1	21	-15	2	48	-3			
TOMAKOMAI	6.61	0.8	1	40	4						
YONAGO	6.62	267.3	1	36	-1	3	5	13			
MATSUE	6.84	267.7								1	58
SUTTSU	6.84	352.4	1	42	2	3	9	12			
KOTI	6.97	251.6	1	38	-4	2	59	-1			
OBIHIRO	7.03	10.6	1	47	5						
SAPPORO	7.05	359.4	1	45	2	3	6	4			
KUSIRO	7.32	17.2	1	42	-4	3	1	-8			
MATUYAMA	7.44	255.6	1	46	-2	3	55	43			
HIROSIMA	7.57	260.1	1	48	-2	3	23	8			
SIMIDU	7.72	247.7	1	27	-25						
ASAHIGAWA	7.79	4.9	1	51	-2					3	58
UWAZIMA	7.84	251.8	1	51	-3					4	12
RUMOE	7.93	0.9	1	54	-1	3	36	12			
NEMURO	7.97	22.3	1	49	-6	3	15	-10			
ABASHIRI	8.29	14.3	1	50	-10	3	27	-6			
OOITA	8.57	253.9	2	0	-4	3	44	4			
SIMONOSEKI	8.88	259.6	2	6	-2						
ASOSAN	9.12	253.1	2	17	6	4	51	58			
MIYAZAKI	9.28	246.8	2	10	-3	4	21	24			
WAKKANAI	9.40	1.0								4	4
HUKUOKA	9.42	258.3	2	13	-2	4	20	19			
KUMAMOTO	9.44	253.4	2	14	-2	4	9	8			
SAGA	9.59	256.5	2	29	11	5	22	77			
KAGOSIMA	10.09	247.1	2	21	-4	5	35	78		2	50
NAGASAKI	10.11	254.4	2	21A	-4	4	38	20			
VLADIVOSTOK	10.23	316.8	2	26	0	4	24	3			
KURILSK	10.41	25.9	2	32	3						
YAKUSIMA	10.71	241.9	2	30	-3	5	10	38			
TOMIE	11.02	255.8	2	34	-3	5	56	76			
Y.-SAKHLINSK	11.04	4.5	2	33	-4	4	36	-4			
CHANGCHUN	14.62	307.2	3	23A	-2	6	8	2			
ZO-SE	17.59	259.6	3	57A	-5	7	10	-4			
NANKING	19.19	264.7	4	16	-5	7	41	-9			
PEKING	20.29	289.0	4	28	-5						
TAIPEI	20.32	242.9								7	46
PETROPAVLOVK	20.87	30.1	4	40	1	8	30	6			
GUAM	22.65	171.7	4	58	1					6	5 PP
MAGADAN	24.33	11.6	5	16	3	9	34	8			
PAOTOW	25.00	290.0	5	17	-3					9	35
SIAN	26.60	275.8	5	32	-3	10	2	-1			

YAKUTSK	27.05	347.8	5	39	0	10	16	5		
HONG KONG	27.36	247.5	5	37	-4	10	25	9		6 27 PP
CANTON	27.53	249.8	5	42	-1	10	20	2		
ULAN-BATOR	28.08	305.8	5	46	-2					
LANCHOW	30.30	281.3	6	5A	-3	11	10	7		
IRKUTSK	30.79	313.6	6	12	0	11	20	10		
CHENGTU	31.60	271.2	6	16	-3	11	21	-2		
KUNMING	34.85	262.8	6	44	-3	12	10	-3		
TIKSI	36.29	353.3	6	59	-1					7 38
RABAUL	41.24	163.7	7	36	-5					
LHASA	42.45	276.3	7	50A	-1	14	12	4		
SHILLONG	43.44	270.4	7	50A	-9	14	37	14		
CHITTAGONG	44.97	266.4	8	8	-3					9 53 PP
PORT MORESBY	45.49	172.1	8	12	-3	14	44	-8		15 52 *SS
SEMIPALATNSK	45.59	308.3	8	15	-1					
CHATRA	46.71	274.6	8	25K	0					
BOKARO	49.15	271.8	8	53	9					
COLLEGE	49.94	31.8	8	50	0	16	1	6		11 17 PP
FRUNSE	50.86	299.3	8	57	0	16	15	7		
DEHRA DUN	52.56	283.1	9	13	3	16	36	5		
LEMBANG	53.16	223.7	9	21A	7	16	38	-1		
KHEYS	53.65	348.3	9	18	0	16	54	8		19 6 SCS
HONOLULU	54.25	88.3				17	1	7		
LAHORE	54.98	286.2	9	27A	0	17	7	4		
TASHKENT	55.11	299.0	9	27	-1	17	11	6		
CHARTERS TS.	55.98	174.5	9	30	-5					
WARSAK DAM	56.13	290.0	9	35	-1					
QUETTA	61.29	287.9	10	10A	-2	18	27	1	10 23	12 26 PP
RESOLUTE	63.58	14.3	10	26	-1	19	1	6		20 19 SCS
BRISBANE	63.96	168.8	10	13	-16	19	4	5		
ASHKABAD	64.18	299.3	10	30	-1					
SODANKYLA	65.92	337.4	10	42	0					
TROMSOE	66.69	341.2	10	47	0					
VICTORIA	67.10	46.0	10	51	2					
KIRUNA	67.48	339.4	10	44	-8	19	48	6		13 19 PP
KAJAANI	67.52	334.2	10	53	1					
MOSCOW	68.09	323.7	10	56	0	19	55	6		20 6 PS
PULKOVO	69.08	329.6	11	0	-2	20	5	4		13 38 PP
CORVALLIS	69.12	49.6	11	4	2					
RIVERVIEW	70.07	171.4	11	8	0					
BANFF	70.13	40.7	11	6	-2					
TEHERAN	70.14	300.1	11	8	0	20	9	-5		
UMEA	70.23	336.2	11	3	-6					
ADELAIDE	70.66	182.4	11	9	-2					
NURMIJARVI	70.86	332.1	11	12K	0					13 54 PP
CANBERRA	71.32	173.5	11	15	0					
TIFLIS	71.47	308.3	11	11	-5	20	22	-7		15 26 PPP
GORIS	71.65	305.7	11	18	1	20	38	7		14 6 PP
MUNDARING	71.65	202.4	11	17	0					
SHASTA	71.69	52.8	11	18	1					
MINERAL	72.39	52.7	11	24	2					
SHIRAZ	72.47	294.1	11	22K	0	20	44	3		21 10 *SS
HUNGRY HORSE	72.51	42.6	11	23	1					
SKALSTUGAN	72.88	338.7	11	24	0					14 8 PP
BERKELEY	73.29	55.2	11	27	0					
UPPSALA	73.89	334.1	11	29	-1	21	0	4		
RENO	73.98	52.7	11	33A	2					
LICK	73.99	55.4	11	33K	2					
FRESNO	75.53	55.0	11	41	1					
SIMFEROPOL	76.07	315.7	11	43	0	21	25	4		14 40 PP
EUREKA	76.46	51.0	11	46	1					
GOTEBORG	77.46	334.9	11	50	-1					
WARSAW	77.94	327.2	11	56	3					21 49
PASADENA	78.11	56.5	11	55	1	21	48	5		
IASI	78.21	320.4	11	48	-7					12 31
LWOW	78.22	324.0	11	56	1	21	49	5		15 2 PP
SALT LAKE C.	78.24	48.0	11	55	0					
COPENHAGEN	78.85	333.3	11	59	1	21	56	5		
FLAMING GRGE	79.61	46.7	12	3	1					
KRAKOW	79.97	326.1	12	4	0	22	6	4		15 5 PP
KARAPIRO	80.06	153.3	12	3	-2					
CHORZOW	80.22	326.7	12	5	-1					15 9 PP
SKALNATE PL.	80.44	325.3	12	0	-7					15 19 PP
RACIBORZ	80.72	326.9	12	10	2					12 18 PCP
GLEN CANYON	80.73	50.9	12	11	3					
BUCHAREST	80.82	319.0	12	8	-1					22 19
RAPID CITY	81.05	41.3	12	11	1					
CHATEAU	81.18	153.9	12	8	-3					

ISTANBUL KA.	81.39	315.0	12 19	7	22 23	6				
ISTANBUL UN.	81.46	315.0	12 13	1						
KSARA	81.77	305.9	12 16	2	22 34	13			15 27	PP
COLLMBERG	82.00	330.2	12 15	0					15 26	PP
HALLE	82.27	330.9	12 17	1					15 20	PP
HURBANOVO	82.33	325.4	12 10	-7						
PRAGUE	82.35	328.7							21 19	
PRUHONICE	82.37	328.6	12 18	1					15 36	PP
BRATISLAVA	82.61	326.1	12 19	1					15 34	PP
JENA	82.86	330.7	12 19	0	22 39	7			15 42	PP
VIENNA-H.	82.88	326.5	12 21	1					15 32	PP
WITTEVEEN	83.19	334.3	12 22	1						
CHEB	83.20	329.8	12 29	8						
KASPERSKE H.	83.43	328.5	12 22A	0					15 35	PP
BELGRADE	83.45	322.1	12 24K	2	22 46	8			15 47	PP
SOFIA	83.46	319.1	12 24	1					12 53	
JERUSALEM	83.47	304.6	12 23A	0						
MUNSTER	83.54	333.3	12 23	0						
DURHAM	84.16	339.5	12 37	11	23 18	33			22 48	SKS
TUCSON TELE.	84.17	54.1	12 27	1						
DE BILT	84.30	334.6	12 33	6	22 56	10				
BENSBERG	84.52	332.9	12 28	0					15 45	PP
HEIDELBERG	85.19	331.2	12 31	0						
LJUBLJANA	85.37	326.0	12 31A	-1					15 52	PP
STUTTGART	85.48	330.5	12 33	0	22 58	0				
TRIESTE	86.02	326.2	12 45	10	23 1	-2			15 59	PP
STRASBOURG	86.23	331.2	12 38	2	23 9	4			16 3	PP
KEW	86.65	337.2	12 36	-2	22 53	-16			23 17	
HELWAN	87.26	305.3	12 39	-2						
BESANCON	88.01	331.4	12 45	0						
FLORENCE X.	88.59	326.4	12 46A	-2	23 4	-24				
GARCHY	89.08	333.1	12 50	0					13 0	PCP
WICHITA MTS.	90.09	45.5	12 56	1	23 34	-7			16 34	PP
FAYETTEVILLE	91.57	42.0	13 2K	0						
PALISADES	96.76	26.2			24 43	47			31 25	SS
TOLEDO	98.07	333.9	13 38	7						
LWIRO	109.56	281.9	18 59	777						
SCOTT BASE	114.63	174.3	18 43	9						
BULAWAYO	119.74	265.8	18 44	0						
ARGENTINE I.	146.98	160.4	19 33	-1						
LA PAZ	147.31	61.3	19 52	17						

JULY 18 14.H 3.M 40.S EPICENTRE 29.74 131.73 DEPTH= 39.KM

A=-0.57885 B= 0.64912 C= 0.49354 D= 0.7463 E= 0.6656
G=-0.3285 H= 0.3684 K=-0.8697 HT= 1.9

DEPTH OF FOCUS= 0.001R

SE= 2.22

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
YAKUSIMA	1.28	304.0	0 21A	-1	0 41	2		
KAGOSIMA	2.09	331.3	0 34A	0	1 0	1		
MIYAZAKI	2.19	353.2	0 36A	1	1 5	4		
KUMAMOTO	3.19	344.3	0 49A	-1	1 25	-2		
ASOSAN	3.20	350.1	0 50	0	1 27	0		
SIMIDU	3.21	19.1	0 48A	-2	1 24	-3		
UNZENDAKE	3.24	337.4	0 56A	6	1 35	7		
NAGASAKI	3.37	332.5	0 52A	0	1 34	3		
OOITA	3.48	358.6	0 54	0	1 29	-5		
UWAZIMA	3.55	11.2	0 54	-1	1 32	-4		
SAGA	3.71	341.2	0 57A	0	1 47	7		
TOMIE	3.83	319.3	0 58A	-1	1 46	3		
HUKUOKA	4.00	343.7	1 1A	0	1 46	-1		
MUROTO	4.08	30.3	0 58	-4	1 41	-8		
KOTI	4.10	21.6	1 3A	1	1 46	-4		
MATUYAMA	4.19	12.1	1 4A	0	1 50	-2		
SIMONOSEKI	4.25	351.1	1 6	1	1 51	-3		
HIROSIMA	4.66	7.2	1 10A	0	2 0	-4		
ITUHARA	4.91	335.6	1 13A	-1	2 15	5		
TOKUSIMA	4.95	28.6	1 14A	0	2 11	0		
TAKAMATU	4.98	22.8	1 15A	0	2 11	-1		
SIOMISAKI	5.06	42.0	1 16A	0	2 11	-3		
HIMEJI	5.26	24.9	1 26	7	2 25	6		
OKAYAMA	5.27	20.1	1 20A	1	1 36	-43		

SUMOTO	5.32	29.7	1	20A	0	2	51	30		1	46
WAKAYAMA	5.35	32.3	1	20A	0	2	21	0			
KOBE	5.73	29.8	1	25	0	2	26	-5			
OWASE	5.75	40.2	1	24	-2	2	27	-4			
MATSUE	5.81	10.9	1	27	1	2	33	0			
YONAGO	5.84	13.2	1	29	2	2	32	-1			
OSAKA	5.86	32.4	1	27A	0	2	44	10			
NARA	6.03	34.2	1	31	1	2	12	-26			
ABUYAMA	6.06	31.5	1	29A	-1						
TOTTORI	6.11	19.2	1	28	-3	2	35	-5			
KYOTO	6.26	31.7	1	33	0	2	44	0			
TOYOOKA	6.34	23.5	1	34	0	2	48	2			
TU	6.40	38.2	1	41	6	3	2	15			
KAMEYAMA	6.49	37.0	1	34A	-2	2	29	-21			
MAIZURU	6.50	27.5	1	36	0	2	48	-2			
HIKONE	6.71	33.5	1	38A	-1	2	56	1			
TSURUGA	6.94	30.7	1	42K	0	3	4	3			
GIHU	7.07	35.7	1	44A	0	3	0	-4			
OMAESAKI	7.33	47.0	1	52	4						
TORISIMA	7.47	82.2	1	47	-3					3	37
HATIDYOZIMA	7.66	62.0	2	5	13						
SHIZUOKA	7.68	45.5	1	51A	-2	3	21	2			
IIDA	7.73	40.2	1	53A	0	3	46	26			
TAKAYAMA	7.90	34.5	1	55	-1	4	18	53			
KANAZAWA	7.93	30.1	1	57	1	3	29	3			
MISIMA	8.13	46.8	1	59A	0						
AJIRO	8.18	47.8	1	58A	-2					2	59
OSIMA	8.19	50.3	1	58A	-2	4	0	28			
KOHU	8.25	42.5	1	59A	-2	4	24	50			
HUNATU	8.26	44.1	2	1	0	3	45	11			
TOYAMA	8.32	32.0	2	0K	-1	3	41	6			
MATUMOTO	8.34	37.3	2	3	1	3	51	15			
MERA	8.58	50.9	2	4A	-1						
MATUSIRO	8.69	37.0	2	6A	-1	3	50	6			
OIWAKE	8.72	39.3	2	6	-1	3	52	7			
WAZIMA	8.76	28.2	2	8	0						
YOKOHAMA	8.77	47.6	2	8A	0	4	19	33			
TITIBU	8.77	42.9	2	8	0	4	23	37			
NAGANO	8.78	36.4	2	8A	0	3	39	-8			
TOKYO C.M.O.	8.99	46.7	2	12A	1	4	4	12			
MAEBASI	9.06	40.9	2	12A	0	4	45	51			
KUMAGAYA	9.07	43.2	2	13K	1	4	50	56			
TAKADA	9.14	34.9	2	13A	0	3	53	-3			
ZO-SE	9.21	281.1	2	10A	-4	3	57	0			
TUKUBASAN	9.55	45.2	2	17	-1	4	14	8		2	31 *SP
KAKIOKA	9.60	45.4	2	18A	-1	4	16	9			
UTUNOMIYA	9.63	43.0	2	20A	0	4	3	-5			
TYOSI	9.72	49.8	2	23A	2	4	19	9			
AIKAWA	9.88	31.5	2	22A	-1						
MITO	9.88	45.6	2	23A	0	4	24	10			
ILAN	10.16	243.2	1	48	-39						
NIIGATA	10.18	34.8	2	28	1	3	57	-24			
TAIPEI	10.21	245.1	2	25	-3	5	4	42			
SHIRAKAWA	10.22	41.7	2	28	0	4	22	0			
ONAHAMA	10.51	44.4	2	30A	-2	4	35	6			
HWALIEN	10.69	239.9	2	30	-4	5	16	42			
HSINCHU	10.76	245.3	3	44	69						
HUKUSIMA	10.80	40.0	2	37	1	4	44	8			
YAMAGATA	11.10	37.8	2	40A	0	4	56	12			
TAICHUNG	11.31	243.1	2	46	3						
OSAKATA	11.32	34.1	2	44	1	4	53	4			
NANKING	11.36	285.0	2	41A	-2	4	54	4			
HSINKONG	11.39	236.9	2	41	-3	5	34	43			
SENDAI	11.41	39.4	2	43A	-1	4	56	5			
YUSHAN	11.48	239.6	2	41	-4						
ALISHAN	11.57	240.2	2	42	-4						
ISINOMAKI	11.76	40.0	2	49K	0	5	4	4			
TAITUNG	11.76	236.2	2	55	6	5	0	0			
AKITA	12.10	32.4	2	56A	3	5	8	0			
MIZUSAWA	12.16	37.1	2	54	0	5	9	0			
TAWU	12.19	235.4	3	0	6	5	29	19			
TAINAN	12.30	239.6	3	22	26	5	40	27			
KAOHSIUNG	12.49	238.1	3	26	28						
HENGCHUN	12.52	234.6	3	4	5	5	20	2			
MORIOKA	12.60	35.5	3	1A	1	5	21	1			
MIYAKO	12.98	37.7	3	3	-2	5	23	-6			
AOMORI	13.29	31.3	3	12	3	5	37	1			
VLADIVOSTOK	13.35	0.6	3	12	2						

HATINOHE	13.41	34.0	3	11	0	5	48	9			
HAKODATE	14.09	28.8	3	23K	4	5	55	0			
MORI	14.25	27.7	3	26K	4	6	9	10			
MURORAN	14.60	28.2	3	27	1				4	13	
SUTTSU	14.72	25.4	3	30	2	6	20	10			
CHANGCHUN	14.96	341.8	3	30A	-1	6	20	4			
TOMAKOMAI	15.11	29.0	3	30	-3						
URAKAWA	15.26	32.8	3	31	-4	6	41	18			
SAPPORO	15.38	27.5	3	35	-1	6	28	2			
HIROO	15.62	33.6	3	33	-6						
OBIHIRO	16.06	31.9	3	42	-3						
RUMOE	16.23	26.4	3	48	1						
PEKING	16.36	313.0	3	48	-1	6	54	6			
ASAHIGAWA	16.38	28.3	3	49	0*						
KUSIRO	16.67	34.1	3	48	-5	6	36	-20			
ABASHIRI	17.41	31.6	4	0	-2						
HONG KONG	17.42	248.9	3	59A	-3						
WAKKANAI	17.51	23.9	4	2	-1	7	19	4			
NEMURO	17.51	35.5	4	1	-2	7	22	7			
CANTON	17.74	252.4	4	4A	-2	7	23	3			
MANILA	17.93	215.5	4	8	0	6	58	-26			
Y.-SAKHLINSK	19.25	23.3	4	22	-2				8	11	
SIAN	19.85	289.0	4	28A	-3	8	6	-1			
GUAM	20.19	140.6	4	33	-1	7	29	-45			
PAOTOW	20.72	307.3	4	38A	-2	8	33	9			
CHENGTU	23.95	279.2	5	9A	-3	9	24	1			
LANCHOW	24.21	292.4	5	13A	-1						
KUNMING	26.10	266.8	5	32A	0	10	4	5			
ULAN-BATOR	26.34	320.5	5	38	3				26	40	
KABANSK	28.99	327.3	5	59A	0	10	51	5			
IRKUTSK	30.25	325.8	6	10A	0	11	3	-3	7	15	PP
PETROPAVLOVK	30.49	32.6	6	13	1	11	13	4	12	50	SCP
YAKUTSK	32.31	358.2	6	27	-1				7	39	PP
MAGADAN	32.50	18.0	6	29	-1						
TOCKLAI	32.60	273.9	6	5	-26						
KLYUCHI	33.59	29.4	6	39	0	12	1	3			
LHASA	35.21	280.2	6	53	0	12	24	1			
SHILLONG	35.43	273.1	6	51K	-4	12	20	-6	8	6	PP
RABAUL	39.02	146.4	7	16	-9						
CHATRA	39.16	276.9	7	25K	-1	13	25	2	9	0	PP
CALCUTTA	39.40	270.0	8	44A	76	14	37	70	10	50	PPP
PORT BLAIR	40.43	252.0	7	41	4	13	35	-7	9	11	PP
BOKARO	41.21	273.0	7	44A	1	13	36	-18	9	17	PP
PORT MORESBY	41.65	156.7	7	46	-1	13	50	-10	9	53	PCP
TIKSI	41.97	358.6	7	40	-9	14	10	5			
DJAKARTA	42.98	217.9	7	54K	-4	14	22	2			
LEMBANG	43.11	216.4	7	34	-25	14	27	5			
SEMIPALATNSK	43.45	313.3	7	59	-2						
VISHAKHAPTNM	45.62	266.1	8	20A	1	15	20	22	10	32	PP
DEHRA DUN	46.10	284.8	8	22	-1	15	2	-3	10	28	PP
FRUNSE	47.02	302.4	8	30	0	15	20	2			
HONIARA	47.49	140.7	8	32	-2						
LAHORE	48.92	287.4	8	43	-2	15	45	0			
HYDERABAD	49.95	268.3	8	49A	-4	15	56	-3	11	3	PP
KHOROG	49.99	295.7	8	54	1						
MADRAS	50.39	262.2	8	56A	0	16	5	0	10	54	PP
WARSAK DAM	50.65	291.2	8	56	-2						
TASHKENT	51.12	300.9	9	3	2	16	17	2			
CHARTERS TS.	51.48	162.5	9	7K	3	16	17	-3			
POONA	53.51	271.8	9	19K	0	16	50	2	12	44	PPP
BOMBAY	54.26	272.7	9	27	2	17	1	3	12	39	PPP
QUETTA	55.40	287.9	9	33K	0	17	16	3	12	51	PPP
KHEYS	58.20	349.3	9	53	0	17	49	-1	12	8	PP
COLLEGE	59.48	29.3	10	1	-1	18	14	7			
ASHKABAD	60.07	299.1	10	5	-1	18	15	1	13	58	PPP
BRISBANE	60.27	158.4	10	7	0	18	15	-2			
HONOLULU	63.05	79.8	10	29	3	19	0	8			
KIPAPA	63.07	79.6	10	26	0						
MUNDARING	63.11	194.8	10	26	0						
ADELAIDE	64.70	173.6	10	36K	-1	18	58	-15	19	32	PS
RIVERVIEW	65.84	162.3	10	44K	0	19	33	6	10	55	14 47 PPP
CANBERRA	66.73	164.7	10	50K	0						13 19 PP
SITKA	67.12	36.3	10	52	0	19	27	-15			
SHIRAZ	67.37	292.1	10	53A	-1	19	49	4			12 27 PCP
MOSCOW	68.17	322.6	10	58	-1	19	57	2			
SODANKYLA	68.44	336.3	11	0K	0	20	1	3			39 10 PKPPKP
TIFLIS	68.77	306.7	11	2K	0	20	7	5			20 57 SCS
KAJAANI	69.47	332.9	11	7K	0						

AFIAMALU	69.62	120.3	11	8K	0	19	57	-15			13	32 PP
TROMSOE	69.86	339.9	11	8	-1	20	16	1			39	4 PKPPKP
RESOLUTE	71.52	11.8	11	19K	0	20	36	2			15	46 PPP
NURMIJARVI	72.39	330.2	11	23K	-1	20	45	1			38	53 PKPPKP
UMEA	72.48	334.4	11	26K	1						39	4 PKPPKP
THULE	73.35	4.8	11	30	0							
FORT NELSON	73.72	168.1	11	32	0	21	5	6				
SIMFEROPOL	74.59	313.1	11	37K	0	21	10	1			14	27 PP
SKALSTUGAN	75.51	336.3	11	41K	-2						21	50 SCS
UPPSALA	75.71	331.6	11	43K	-1	21	20	-1				
RAOUL ISLAND	75.82	136.0	11	46	2							
ONERAHI	76.52	145.5	11	53	5							
VICTORIA	77.27	41.2	11	54	2							
IASI	77.53	317.4	11	54	0						14	51
LWOW	78.18	320.9	11	58	0	21	40	-8			15	1 PP
BACAU	78.24	317.1	11	57	-1	21	52	3			13	15
WARSAW	78.46	324.0	11	59	0	21	49	-2			15	0 PP
KSARA	78.48	302.3	11	49K	-10	21	58	7			15	10 PP
FOCSANI	78.51	316.2	11	58	-1	22	10	19			14	44
KARAPIRO	78.80	146.1	12	0A	-1							
PENTICTON	78.98	39.2	12	2	0							
GOTEBORG	79.36	331.7	12	3K	-1	22	1	1			38	47 PKPPKP
CORVALLIS	79.36	44.6	12	5K	1							
ISTANBUL KA.	79.69	311.4	12	6K	0	22	4	0			15	13 PP
ISTANBUL UN.	79.76	311.4	12	6A	0	22	10	5				
CHATEAU	79.81	146.9	12	6	0							
BUCHAREST	79.84	315.5	12	6K	-1	22	11	6			15	0
COBB RIVER	80.03	149.8	12	8	0							
CAMPULUNG	80.04	316.6	12	10	2	22	10	3			12	40
BANFF	80.11	36.1	12	8K	0							
KRAKOW	80.26	322.6	12	9K	0	22	13	3			14	58
TUAI	80.27	145.6	12	7	-2							
COPENHAGEN	80.45	329.9	12	10K	0	22	15	3			15	16 PP
SKALNATE PL.	80.59	321.8	12	12	1	22	20	7			15	27 PP
CHORZOW	80.62	323.2	12	11	0						15	22 PP
KAIMATA	80.65	151.4	12	14	3							
WELLINGTON	81.10	148.6	12	11	-2							
RACIBORZ	81.15	323.3	12	15K	2	22	24	5			15	26 PP
TIMISOARA	82.01	318.5	12	20	2	22	32	4				
BUDAPEST	82.25	320.8	12	21	2	22	38	8			16	29 PPP
UKIAH	82.27	49.3	12	19	0							
HURBANOVO	82.46	321.5	12	23	3	22	43	11			15	37 PP
SOFIA	82.46	315.1	12	21	1	22	41	9				
HUNGRY HORSE	82.56	37.8	12	22	1	22	33	0			15	37 PP
MINERAL	82.67	47.6	12	16K	-5							
BRATISLAVA	82.87	322.2	12	24A	2	22	42	5				
BELGRADE	82.99	318.1	12	24A	1	22	42	4			15	39 PP
COLLMBERG	83.01	326.3	12	23	0	22	43	5			17	41 PPP
PRUHONICE	83.08	324.7	12	24	1	22	44	5			15	32 PP
PRAGUE	83.08	324.8	12	25	2	22	45	6			15	43 PP
VIENNA-H.	83.21	322.5	12	26K	2	22	47	7			15	40 PP
HALLE	83.38	326.9	12	23	-2	22	46	4				
BERKELEY	83.58	50.0	12	26K	0	22	47	3			15	39 PP
SIDA	83.78	347.0	12	29K	2							
HELWAN	83.79	300.8	12	28	1	22	49	3				
JENA	83.93	326.6	12	28	0	22	52	5			15	44 PP
CHEB	84.10	325.6	12	27	-2	22	50	1			15	31 PP
REYKJAVIK	84.17	348.7	12	30K	1							
RENO	84.27	47.5	12	30K	1							
LICK	84.28	50.1	12	30K	0						15	48
VIK	84.29	347.2	12	33	3							
BUTTE	84.77	39.1	12	32	0	22	49	-7				
VINEYARD	84.78	50.5	12	32K	0							
ATHENS	84.84	311.0	12	31K	-1	22	57	1			24	19 PPS
WITTEVEEN	84.89	330.1	12	34	1							
MUNSTER	85.06	329.1	11	34	-59							
ABERDEEN	85.08	336.8	12	36	3	22	59	1			15	41 PP
TITOGRAD	85.08	316.6	12	34	0	23	4	5			12	46 PCP
LJUBLJANA	85.57	321.6	12	36K	0	23	9	6			15	59 PP
BOZEMAN	85.82	38.7	12	39	2	23	1	-5			38	48 PKPPKP
FRESNO	85.82	49.8	12	38K	1							
BENSBERG	85.97	328.5	12	38K	0	23	10	3	12	46	16	1 PP
DE BILT	86.04	330.2	12	40K	2	23	4	-4			16	2 PP
TRIESTE	86.24	321.6	12	39	0	23	15	5			16	10 PP
HEIDELBERG	86.32	326.7	12	40K	0							
EDINBURGH	86.43	336.5	12	42	2	23	28	16			16	11 PP
STUTTGART	86.48	326.0	12	40K	0	23	5	-7			29	8 SS
EUREKA	86.73	45.8	12	42	0	23	21	7				
KARLSRUHE	86.74	326.6	12	43	1	23	21	6				

TUBINGEN	86.75	325.9	12	42K	0							
DURHAM	86.76	335.0	12	48A	6	23	25	10			16	11 PP
RAVENSBURG	86.98	325.1	12	42	-1							
EBINGEN	87.03	325.7	12	43	0							
MACQUARIE I.	87.12	164.5	12	42	-1							
STRASBOURG	87.34	326.5	12	45K	0	23	20	0			16	14 PP
PADOVA	87.40	322.3	12	45	0	23	26	5	12	58	15	58 PP
TARANTO	87.47	316.0	12	46	1	23	16	-5			30	16 SS
CHUR	87.66	324.5	12	46K	0						23	9
BASLE	88.16	325.9	12	48	0						23	34
PASADENA	88.40	51.2	12	49K	-1	23	41	11			16	19 PP
SALT LAKE C.	88.45	42.9	12	51	1	23	36	5			38	38 PKPPKP
FLORENCE X.	88.81	321.4	12	50	-2	23	24	-10				
KEW	88.81	332.3	12	52K	0	23	36	2			16	24 PP
PRATO	88.82	321.5	12	54	2	23	39	5				
NEUCHATEL	88.84	325.8	12	51	-1	23	40	6				
PAVIA	88.97	323.4	12	52	0	23	42	6			29	37 SS
BESANCON	89.13	326.4	12	52K	-1						16	29 PP
ROME	89.36	319.4	12	54K	0	23	21	-18			16	22 PP
CHIAVARI	89.48	322.7	13	6	11	23	48	8	13	36	16	59 PP
BOULDER CITY	89.54	48.1	12	55	0							
PARIS	89.62	329.2	12	55	0	23	46	5			16	28 PP
FLAMING GRGE	89.78	41.6	12	57	1	23	57	14			16	37 PP
MESSINA	89.90	315.0	12	56	-1	24	9	25				
REGGIO CALA.	89.91	314.9	12	55	-2	23	50	6				
GARCHY	90.48	327.9	12	58	-1	23	37	-12			16	38 PP
ISOLA	90.76	323.7	13	0	-1						16	43 PP
MONACO	90.88	323.2	12	59	-2							
FOLINIERE	90.94	330.7	13	1	-1							
GLEN CANYON	90.99	45.7	13	2	0						16	38 PP
RAPID CITY	91.03	36.2	13	3	1							
JERSEY	91.31	331.7	13	5	2	23	53	-4				
CLERMONT-FD.	91.57	326.8	13	4K	0	24	3	4				
LARAMIE	91.68	39.4	12	7	-58						15	52
TANANARIVE	94.33	250.8	13	17K	0						17	12 PP
TUCSON	94.45	49.0	13	18	0	22	56	-88			17	13 PP
TUCSON TELE.	94.46	48.8	13	19	1						17	21 PP
BAGNERES	95.00	326.6	13	18	-2						17	13 PP
TORTOSA	96.52	324.9	13	30	3	24	26	27				
WILKES	97.14	188.5	13	14	-16	24	0	-3			17	24 PP
LAWRENCE	98.83	35.2	13	38	0							
ALICANTE	98.88	323.9	13	39	1	24	17	5			17	37 PP
TOLEDO	99.46	327.0	13	41K	1	24	24	10			17	49 PP
CHIHUAHUA	99.91	49.0				24	47	30			24	54 SKKS
WICHITA MTS.	100.23	40.1	13	44	0	24	20	2			17	48 PP
SERRA PILAR	100.50	330.6	13	45A	0	25	15	55			17	54 PP
SHAWINIGAN	100.90	16.9	13	46K	-1							
ALMERIA	101.05	324.1	13	49	1	24	27	5			17	58 PP
OTTAWA	101.16	19.3	13	47	-1							
COIMBRA	101.20	330.0	13	48K	0	24	24	1			18	0 PP
GRANADA	101.36	325.1	13	53A	4	24	29	5			18	5 PP
FAYETTEVILLE	101.58	36.4	13	50K	0						24	25 SKKS
BREBEUF	101.65	17.9	13	50A	0	25	28	63				
LWIRO	102.34	274.5	13	53	0						18	13
LISBON	102.73	329.6	13	58A	3	24	47	17			18	13 PP
CLEVELAND	102.76	25.0	13	59K	4	25	42	72				
PENNSYLVANIA	104.65	22.8	14	4	0						18	23 PP
HALIFAX	104.69	11.3	14	6	2							
WESTON	105.16	17.5	14	7A	777	26	0	79			18	14 PP
CAPE HALLETT	105.18	168.6	14	6	777	24	44	3			18	29 PP
PALISADES	105.71	19.9	14	9	777	24	46	2	14	22	18	19 PP
WASHINGTON	106.62	23.1	14	12	777						18	42 PP
BROKEN HILL	108.39	263.6	19	50	777						15	21 P
SCOTT BASE	109.36	172.6	18	27	777	24	57	-3			18	56 PP
MAWSON	109.61	202.3	18	27	777						18	59 PP
PONTA DELGDA	109.63	341.1									19	6 PP
BULAWAYO	110.75	258.1	18	31	2						14	30 P
TACUBAYA	110.76	51.6	18	27	-2	25	5	0			19	31 PP
VERA CRUZ	112.97	49.6									19	44 PP
PRETORIA	113.39	252.8	18	36	2							
OAXACA	114.07	51.7									27	52
MERIDA	115.78	43.3									19	52 PP
GRAHAMSTOWN	117.40	245.5									19	43 PP
LOME	120.63	298.5	18	50	2						20	10 PP
MBOUR	126.75	321.1	19	3	3						20	57 PP
SAN JUAN	129.16	22.0	19	5	0						21	13 PP
ANTIGUA	131.59	17.4	19	15	6							
GALERAZAMBA	132.05	36.9									23	49 PKS

ST. VINCENT	135.54	18.2	19	17	0					21	54 PP
BARBADOS	136.01	16.0	19	24	6						
CARACAS	136.14	27.0	19	14	-4	26	28	5			
CHINCHINA	136.65	41.8	19	8	-11					22	57 PKS
FUQUENE	137.31	39.1	19	20	0					23	3 PKS
BOGOTA	137.82	40.2	19	13	-8					23	2 PKS
TRINIDAD	137.90	19.4	19	24	3					22	9 PP
ARGENTINE I.	143.10	168.9	19	27	-3						
HUANCAYO	149.33	60.7	19	44K	3						
LA PAZ	157.53	58.5	19	56	4	27	43	51			

JULY 18 14.H 33.M 58.S EPICENTRE 29.51 131.53 DEPTH= 0.KM

A=-0.57796 B= 0.65257 C= 0.49001 D= 0.7486 E= 0.6630
G=-0.3249 H= 0.3668 K=-0.8717 HT= 2.0

SE= 2.79

	DELTA	AZ.	P		O-C	S		O-C	*PP		SUPP.	
	DEG.	DEG.	M	S	S	M	S	S	M	S	M	S
YAKUSIMA	1.30	316.7	0	25A	0							
KAGOSIMA	2.22	337.9	0	38A	-1	0	59	-8				
MIYAZAKI	2.41	357.8	0	44A	3	1	5	-7				
KUMAMOTO	3.38	348.1	0	55A	0	1	35	-2				
UNZENDAKE	3.40	341.5	0	56A	1	1	33	-4				
ASOSAN	3.41	353.5	0	55	-1	1	31	-6				
SIMIDU	3.49	20.4	0	55K	-2	1	30	-9				
NAGASAKI	3.51	336.6	0	57A	0	1	28	-12				
OOITA	3.71	1.2	0	59	-1	1	26	-19				
UWAZIMA	3.81	13.0	0	59	-2	1	31	-17				
SAGA	3.88	344.6	1	2	0							
TOMIE	3.90	323.3	1	2	-1	1	58	8				
HUKUOKA	4.18	346.7	1	7A	1	2	9	12				
MUROTO	4.37	30.6	1	5	-4	2	49	47				
KOTI	4.38	22.4	1	8	-1	1	52	-10				
MATUYAMA	4.45	13.5	1	10	0	1	55	-9				
HIROSIMA	4.91	8.7	1	15A	-2	2	4	-11				
ITUHARA	5.06	338.3	1	18	-1	1	48	-31				
TOKUSIMA	5.24	28.9	1	21	-1	2	19	-5				
TAKAMATU	5.26	23.4	1	21	-1	2	12	-12				
SIOMISAKI	5.34	41.6	1	23	0							
HIMEJI	5.54	25.3	1	31	5	2	34	3				
SUMOTO	5.61	29.9	1	26	-1	2	55	22			4	29
WAKAYAMA	5.64	32.4	1	37	10	2	30	-3				
KOBE	6.02	30.0	1	33	1	2	40	-3				
OWASE	6.04	40.0	1	31	-2	2	43	-1				
MATSUE	6.07	12.0	1	34	1							
YONAGO	6.10	14.1	1	35	1	2	37	-8				
OSAKA	6.15	32.5	1	32	-2						4	1
NARA	6.32	34.2	1	37	0							
ABUYAMA	6.35	31.6	1	35A	-2							
TOTTORI	6.39	19.8	1	32	-6							
KYOTO	6.55	31.8	1	40	0	2	49	-7				
TOYOOKA	6.62	24.0	1	40	-1							
TU	6.69	38.0	1	44	2							
KAMEYAMA	6.78	36.9	1	52	9	2	43	-19				
MAIZURU	6.78	27.7	1	43	0	2	53	-9				
HIKONE	7.00	33.6	1	46	0							
TSURUGA	7.22	30.8	1	48	-1							
GIHU	7.36	35.6	1	52	1							
OMAESAKI	7.62	46.5	1	56	1							
SHIZUOKA	7.97	45.1	2	0	0							
IIDA	8.01	39.9	1	59	-2							
TAKAYAMA	8.19	34.5	2	1	-2							
KANAZAWA	8.22	30.2	2	0	-3							
MISIMA	8.41	46.4	2	7	1							
AJIRO	8.46	47.3	2	5A	-2	2	34	-70				
OSIMA	8.47	49.7	2	7	0							
HUNATU	8.55	43.8	2	7	-1	3	50	4				
TOYAMA	8.60	32.1	2	11	2						5	16
MATUMOTO	8.63	37.2	2	10	1	3	59	11				
MATUSIRO	8.98	36.9	2	11K	-3							
OIWAKE	9.00	39.1	2	14	0	3	50	-8				
WAZIMA	9.04	28.3	2	15	0							
TITIBU	9.06	42.6	2	18	3							
NAGANO	9.07	36.3	2	16	1	3	45	-14				

ZO-SE	9.09	282.6	2	17A	2	4	10	10		
TOKYO C.M.O.	9.27	46.3	2	22	4					
MAEBASI	9.34	40.7	2	19K	0					
KUMAGAYA	9.35	42.9	2	20K	1	4	30	24		
TAKADA	9.43	34.8	2	19	-1					
TUKUBASAN	9.83	44.9	2	25K	-1					
KAKIOKA	9.89	45.1	2	26	-1				2	51
UTUNOMIYA	9.91	42.7	2	27	0					
MITO	10.16	45.3	2	38	8					
NIIGATA	10.47	34.7	2	33	-1					
SHIRAKAWA	10.51	41.5	2	35	0					
ONAHAMA	10.80	44.1	2	41	2					
YAMAGATA	11.39	37.7	2	47	0					
SAKATA	11.61	34.0	2	50	0					
SENDAI	11.70	39.2	2	50	-1					
ISINOMAKI	12.04	39.8	2	54	-2					
AKITA	12.39	32.4	3	8	7					
MIZUSAWA	12.45	37.0	3	5	4					
MIYAKO	13.27	37.6	3	14	2					
AOMORI	13.58	31.3	3	20	4					
HATINOHE	13.70	34.0	3	17	-1					
HAKODATE	14.37	28.9	3	35	8					
MORI	14.54	27.8	3	33	4					
MURORAN	14.89	28.3	3	33	-1					
SUTTSU	15.00	25.5	3	38	3	6	10	-13		
CHANGCHUN	15.13	342.5	3	41A	4					
TOMAKOMAI	15.39	29.0	3	51	11					
URAKAWA	15.55	32.8	3	41	-1					
SAPPORO	15.66	27.6	3	40	-4	6	16	-23		
OBIHIRO	16.34	31.9	3	49	-3					
RUMOE	16.51	26.4	3	54	-1					
KUSIRO	16.96	34.1	3	56	-4					
HONG KONG	17.18	249.3	4	9	6					
CANTON	17.51	252.8	4	11	4	7	33	12		
MANILA	17.64	215.4	4	15	6	7	25	1		
ABASHIRI	17.69	31.6	4	12	3					
WAKKANAI	17.79	24.0	4	8	-3					
NEMURO	17.80	35.4	4	12	1					
SIAN	19.76	289.6	4	33	-1					
GUAM	20.12	139.7	4	39	1	7	0	-80		
PAOTOW	20.73	307.9	4	49	4					
CHENGTU	23.82	279.7	5	15	0					
LANCHOW	24.14	292.9	5	17A	-1					
PETROPAVLOVK	30.77	32.6	6	20	1					
LHASA	35.09	280.5	6	57	0	12	27	-3		
SHILLONG	35.27	273.3	6	56A	-2					
CHATRA	39.02	277.1	7	31	1					
PORT MORESBY	41.51	156.4	7	52	2					
DJAKARTA	42.69	217.8	8	16	16				10	56
LEMBANG	42.82	216.3	8	3K	2					
HONIARA	47.42	140.4	8	38	0					
LAHORE	48.83	287.6	8	48	-1					
WARSAK DAM	50.58	291.4	9	0	-2					
CHARTERS TS.	51.31	162.2	9	9	1	16	26	-1		
QUETTA	55.31	288.0	9	38	0					
KHEYS	58.40	349.4	9	59	-1					
BRISBANE	60.12	158.2	10	13	1					
ADELAIDE	64.49	173.5	10	42K	1					
RIVERVIEW	65.67	162.1	10	51	3					
TEHERAN	66.02	298.7	10	58	7					
CANBERRA	66.55	164.5	10	56K	2					
SHIRAZ	67.30	292.1	10	55	-4	19	53	-1	11	22 PCP
MELBOURNE	68.16	168.6	11	4	0					
SODANKYLA	68.59	336.3	11	5	-2					
KAJAANI	69.60	332.9	11	13K	0					
AFIAMALU	69.65	120.1	11	14K	1					
TROMSOE	70.02	339.9	11	14	-2					
RESOLUTE	71.78	11.7	11	25K	-1					
NURMIJARVI	72.50	330.2	11	29K	-2	20	51	-4	14	14 PP
UMEA	72.62	334.3	11	32K	1					
THULE	73.60	4.8	11	36	-1					
SIMFEROPOL	74.62	313.1	11	43	0					
UPPSALA	75.84	331.6	11	48K	-2					
VICTORIA	77.55	41.1	11	59K	0				12	10
LWOW	78.26	320.9	12	5	2					
KSARA	78.46	302.3	12	5	1					
PENTICTON	79.27	39.1	12	8	-1					
GOTEBORG	79.48	331.6	12	8K	-2					
CORVALLIS	79.65	44.5	12	12K	1					

ISTANBUL UN.	79.79	311.4	12 12	0				
JERUSALEM	79.91	300.7	12 13K	1				
BANFF	80.39	36.0	12 13K	-2				
COPENHAGEN	80.57	329.9	12 15K	-1				
CHORZOW	80.70	323.1	12 16	0			12 57	SP
RACIBORZ	81.24	323.2	12 21	2			12 32	PCP
SHASTA	82.26	47.5	12 24	-1				
BUDAPEST	82.32	320.8	12 32	7				
SOFIA	82.51	315.1	12 27	1			14 16	
HUNGRY HORSE	82.85	37.7	12 27	-1				
MINERAL	82.95	47.5	12 27K	-1				
BRATISLAVA	82.95	322.1	12 29A	1				
BELGRADE	83.05	318.0	12 30	1			12 40	PCP
COLLMBERG	83.1	326.2	12 29	0			15 50	PP
PRUHONICE	83.17	324.6	12 29K	0				
PRAGUE	83.18	324.7	12 30	1			22 49	
VIENNA-H.	83.29	322.5	12 31K	1				
HELWAN	83.76	300.7	12 33	1				
SAN FRANCSCO	83.79	50.0	12 31	-1				
BERKELEY	83.86	49.8	12 32K	-1				
SIDA	83.97	346.9	12 35	2				
JENA	84.03	326.5	12 34	0	22 57	-1		
CHEB	84.19	325.6	12 34	-1			14 12	
KASPERSKE H.	84.20	324.3	12 34K	-1			12 45	PCP
REYKJAVIK	84.36	348.6	12 45	10				
RENO	84.55	47.4	12 36K	0				
LICK	84.56	50.0	12 36K	0				
PARAISO	84.62	51.2	12 39K	2				
ATHENS	84.87	310.9	12 37A	-1			23 5	SKKS
BUTTE	85.06	39.0	12 37	-2				
TITOGRAD	85.14	316.6	12 51	12			13 10	
MUNSTER	85.17	329.0	12 40	1				
LJUBLJANA	85.65	321.5	12 44	2				
BENSBERG	86.08	328.4	12 44K	0				
FRESNO	86.10	49.7	12 44	0				
BOZEMAN	86.11	38.6	12 45	1				
DE BILT	86.16	330.1	13 39	55				
TRIESTE	86.32	321.5	12 46	1				
HEIDELBERG	86.42	326.6	12 46	0				
STUTTGART	86.58	325.9	12 46	0				
KARLSRUHE	86.84	326.5	12 47	-1			13 23	
TUBINGEN	86.84	325.8	12 47	-1				
DURHAM	86.90	334.9	12 54K	6			16 18	PP
EUREKA	87.01	45.7	12 48	-1				
RAVENSBURG	87.08	325.0	12 53	4				
EBINGEN	87.13	325.6	12 49	0				
STRASBOURG	87.44	326.5	12 50	-1				
PADOVA	87.48	322.2	12 55	4	23 35	4	24 30	PS
BASLE	88.26	325.8	12 54K	0				
PASADENA	88.68	51.1	12 56	-1			16 24	PP
SALT LAKE C.	88.73	42.8	12 57	0				
FLORENCE X.	88.88	321.3	12 47	-10				
NEUCHATEL	88.93	325.7	12 57	-1				
KEW	88.94	332.2	12 57	-1				
BESANCON	89.23	326.3	12 58	-1			16 41	
PARIS	89.73	329.1	13 1	0			13 12	PCP
BOULDER CITY	89.82	48.0	13 0	-2				
FLAMING GRGE	90.07	41.5	13 2	-1				
GARCH	90.59	327.8	13 5	0				
ISOLA	90.85	323.6	13 6	-1			16 39	PP
MONACO	90.96	323.1	13 4K	-3				
FOLINIERE	91.06	330.5	13 7	-1				
GLEN CANYON	91.27	45.6	13 8	-1				
RAPID CITY	91.32	36.1	13 9	0				
CLERMONT-FD.	91.67	326.7	13 11	1			17 0	
TANANARIVE	94.09	250.7	13 23	1				
TOLEDO	99.57	326.9	13 47	1			17 58	PP
WICHITA MTS.	100.52	40.0	13 51	0			17 59	PP
SHAWINIGAN	101.17	16.8	14 0	6				
GRANADA	101.45	324.9					18 7	PP
BREBEUF	101.92	17.8	13 45	-12				
CAPE HALLETT	104.98	168.6					18 33	PP
BROKEN HILL	108.20	263.4	17 52	777				
SCOTT BASE	109.15	172.6	18 33	777			22 35	PKS
BULAWAYO	110.54	258.0	18 36	2				
SAN JUAN	129.44	21.9	19 11	0				
CHINCHINA	136.94	41.7	19 27	2				
TRINIDAD	138.18	19.3	19 29	2				

ARGENTINE I.	142.90	169.0	19 33	-3							
HUANCAYO	149.59	60.8	19 52	5							
LA PAZ	157.79	58.7	20 3	5					31	2	PKKS

JULY 18 15.H 16.M 17.S EPICENTRE 29.83 131.58 DEPTH= 48.KM

A=-0.57669 B= 0.64996 C= 0.49495 D= 0.7480 E= 0.6637
G=-0.3285 H= 0.3702 K=-0.8689 HT= 1.9

DEPTH OF FOCUS= 0.002R

SE= 2.59

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
YAKUSIMA	1.12	303.5	0 18	-2	0 34	-1		
KAGOSIMA	1.95	333.1	0 32A	0	0 55	0		
MIYAZAKI	2.08	356.2	0 34	0	1 1	2		
KUMAMOTO	3.07	346.0	0 47A	-1	0 47	-37		
ASOSAN	3.09	352.0	0 48	0	1 21	-3		
SIMIDU	3.17	21.7	0 47	-2	1 24	-2		
NAGASAKI	3.23	333.7	0 49	-1	1 26	-2		
ODITA	3.39	0.5	0 52K	0	1 13	-19		
UWAZIMA	3.49	13.5	0 53	-1	1 31	-3		
SAGA	3.58	342.5	0 55	0				
TOMIE	3.68	319.8	0 55	-1				
HUKUOKA	3.87	345.0	0 59A	0	1 40	-4		
KOTI	4.06	23.6	1 0	-2	1 49	0		
MUROTO	4.06	32.4	0 59	-3	1 43	-6		
MATUYAMA	4.12	14.0	1 2	-1	1 48	-2		
SIMONOSEKI	4.14	352.5	1 1	-2				
HIROSIMA	4.58	8.8	1 8	-1				
TOKUSIMA	4.93	30.3	1 7	-7	2 4	-7		
TAKAMATU	4.94	24.5	1 12	-2	2 8	-3		
SUMOTO	5.31	31.3	1 17	-2			3	44
MATSUE	5.74	12.2	1 26	1				
OWASE	5.77	41.7	1 25	-1				
YONAGO	5.78	14.5	1 41	15	2 45	13		
OSAKA	5.85	33.8	1 14	-13			3	36
NARA	6.02	35.6	1 28	-1				
ABUYAMA	6.05	32.9	1 28A	-1				
KYOTO	6.25	33.1	1 27	-5	2 45	2		
TU	6.40	39.5	1 36	2				
KAMEYAMA	6.49	38.3	1 37	1			4	9
HIKONE	6.70	34.8	1 39	0				
TSURUGA	6.92	31.9	2 42	60				
GIHU	7.07	36.9	1 45	1				
IIDA	7.74	41.3	1 53	0				
MISIMA	8.15	47.8	1 54	-5				
HUNATU	8.28	45.1	1 59	-2	3 28	-6		
TOYAMA	8.31	33.0	2 48	47	5 18	104		
MATUMOTO	8.35	38.3	2 5	4				
MATUSIRO	8.69	38.0	2 4A	-2				
OIWAKE	8.72	40.2	2 12	5				
WAZIMA	8.73	29.1	2 8	1				
NAGANO	8.78	37.4	2 12	5				
TOKYO C.M.O.	9.01	47.6	2 9	-2				
MAEBASI	9.07	41.8	2 13A	2				
KUMAGAYA	9.08	44.1	2 8	-4				
KAKIOKA	9.63	46.3	2 20	1				
UTUNOMIYA	9.64	43.9	2 20	1				
SHIRAKAWA	10.23	42.5	2 28	1				
YAMAGATA	11.10	38.6	2 39	0				
ISINOMAKI	11.77	40.7	2 49	1				
AKITA	12.09	33.1					3	19
MIZUSAWA	12.16	37.8	2 55	2				
MORI	14.23	28.2	3 33	12				
SUTTSU	14.69	25.9	3 31	4				
CHANGCHUN	14.84	342.0	3 29	0				
SAPPORO	15.35	28.0					3	52
PEKING	16.20	313.0	3 50	4				
HONG KONG	17.34	248.4	4 9	9				
Y.-SAKHLINSK	19.22	23.7	4 52	29				
PAOTOW	20.57	307.2	3 41	-56				
CHENGTU	23.81	279.0	5 8	-2				
LANCHOW	24.06	292.2	5 11A	-1	9 22	-1		

PETROPAVLOVK	30.47	32.8	6 11	0							
SHILLONG	35.30	272.9	6 48K	-5							
CHATRA	39.03	276.8	7 23	-1							
LEMBANG	43.11	216.2	7 57K	-1							
LAHORE	48.78	287.3	8 42	0							
WARSAK DAM	50.50	291.1	8 55	-1							
CHARTERS TS.	51.61	162.3	9 2	-2						11 9	
QUETTA	55.26	287.8	9 29	-2							
SVERDLOVSK	55.30	320.8	9 30	-1							
KHEYS	58.09	349.3	9 51	0							
COLLEGE	59.46	29.3	10 0	-1							
BRISBANE	60.41	158.3	10 6	-1						12 12	
ADELAIDE	64.81	173.5	10 34K	-2							
APATITY	65.82	335.4	10 42	-1							
TEHERAN	65.91	298.6	10 45	2							
RIVERVIEW	65.97	162.2	10 52	8							
CANBERRA	66.85	164.6	10 49K	0							
SHIRAZ	67.22	292.0	10 51K	-1	19 48	7	11	2	24	23 SS	
MOSCOW	68.02	322.5	10 56	-1							
SODANKYLA	68.31	336.3	10 58	0							
TROMSOE	69.73	339.9	11 7	0							
KIRUNA	70.19	337.9	11 8K	-2							
RESOLUTE	71.45	11.7	11 17	-1							
NURMIJARVI	72.24	330.2	11 21	-1							
UMEA	72.34	334.3	11 23K	0							
SIMFEROPOL	74.43	313.0	11 36	1							
SKALSTUGAN	75.38	336.2	11 40	-1							
UPPSALA	75.57	331.6	11 41K	-1							
LWOW	78.03	320.9	11 56	1							
KSARA	78.33	302.2	11 57	0							
KARAPIRO	78.95	146.0	11 59	-2							
GOTEBORG	79.22	331.6	12 1K	-1							
ISTANBUL UN.	79.60	311.4	12 4	0						13 37	
JERUSALEM	79.78	300.7	12 6	1							
CHATEAU	79.95	146.8	12 4	-2							
KRAKOW	80.11	322.5	12 6	-1						12 17 PCP	
COPENHAGEN	80.31	329.9	12 7	-1						12 18 PCP	
RACIBORZ	81.00	323.2								12 26 PCP	
SOFIA	82.31	315.1	12 20	2						12 23	
HUNGRY HORSE	82.57	37.8	12 20	0							
COLLMBERG	82.86	326.2	12 21K	0						12 24 PCP	
PRUHONICE	82.93	324.6	12 23A	2							
PRAGUE	82.94	324.7	12 33	12							
VIENNA-H.	83.06	322.5	12 24	2							
HELWAN	83.63	300.7	12 26	1							
JENA	83.78	326.5	12 27	1	22 51	7					
KASPERSKE H.	83.96	324.3	12 27K	0						12 37 PCP	
LJUBLJANA	85.42	321.5	12 35	1						13 5	
BENSBERG	85.82	328.5	12 36	0							
DE BILT	85.90	330.1	12 32	-4							
TRIESTE	86.09	321.6	12 37	0							
STUTTGART	86.33	325.9	12 38	0							
DURHAM	86.62	335.0	12 48A	8							
EUREKA	86.75	45.8	12 41	1							
CHINA LAKE	87.86	49.5	12 46	0						16 12	
BASLE	88.01	325.8	12 51	4							
PARIS	89.47	329.1	12 53	0							
GARCHY	90.34	327.8	12 57	-1						13 7 PCP	
RAPID CITY	91.03	36.1	13 2	1							
LARAMIE	91.69	39.3	12 6	-58							
WICHITA MTS.	100.24	40.0	13 47	4						17 47 PP	

JULY 18 19.H 29.M 14.S EPICENTRE 29.60 131.30 DEPTH= 65.KM

A=-0.57481 B= 0.65433 C= 0.49137 D= 0.7513 E= 0.6600
G=-0.3243 H= 0.3692 K=-0.8710 HT= 2.0

DEPTH OF FOCUS= 0.005R

SE= 3.69

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
ABUYAMA	6.38	33.4	1	23K	-11							
ZO-SE	8.87	282.2	2	9A	1	4	2	14				
MATUSIRO	9.03	38.1	2	0	-10	3	30	-22			2	53
TUKUBASAN	9.91	45.9	2	13	-10							

NANKING	11.04	286.0	2 38	0						
MIZUSAWA	12.50	37.9	2 58	1						
VLADIVOSTOK	13.51	1.9	3 7	-4					6	5
CHANGCHUN	14.99	343.0	3 29	-1	6	19	5			
PEKING	16.19	314.0	3 45	0	6	51	9			
HONG KONG	17.02	248.7			7	20	19			
Y.-SAKHLINSK	19.53	23.9	4 17	-8					8	10 SS
SIAN	19.54	289.5	4 25	0	8	5	8			
PAOTOW	20.51	308.0	4 33	-3	8	26	10			
UGLEGORSK	21.13	19.9	4 44	2	8	33	5			
CHENGTU	23.61	279.4	5 7	1	9	21	8			
LANCHOW	23.92	292.8	5 7	-2						
KUNMING	25.72	266.9	5 31	5	10	5	17			
ULAN-BATOR	26.22	321.0	5 28	-3						
PETROPAVLOVK	30.81	32.8	6 7	-5	11	5	-5			
LHASA	34.88	280.3	6 50	3	13	10	57			
SHILLONG	35.06	273.1	6 45	-4						
CHATRA	38.81	276.9	7 25	4						
TIKSI	42.10	358.9	7 47	-1					8	35
SEMIPALATNSK	43.28	313.5	7 52	-5						
FRUNSE	46.78	302.5	8 26	1						
LAHORE	48.61	287.4	8 39	0						
CHARTERS TS.	51.46	161.9	9 0	-1						
QUETTA	55.09	287.9	9 28	0						
KHEYS	58.27	349.4	9 50	-1	17	47	1		11	59 PP
COLLEGE	59.78	29.2	10 0	-1						
ADELAIDE	64.60	173.3	10 26	-7				10 39		
SHIRAZ	67.08	292.0	10 48	-1					14	21
MOSCOW	68.06	322.5	10 53	-2						
SODANKYLA	68.42	336.3	10 59	2						
TIFLIS	68.56	306.6	10 57	-1					20	57 SCS
TROMSOE	69.87	339.8	11 6	0						
PULKOVO	70.13	328.1	11 8	0						
KIRUNA	70.32	337.9	11 7	-2						
RESOLUTE	71.74	11.7	11 13	-4					15	55
NURMIJARVI	72.33	330.2	11 19	-2					12	10
UMEA	72.45	334.3	11 16	-6						
SIMFEROPOL	74.41	313.0	11 32	-1						
SKALSTUGAN	75.50	336.2	11 38	-1						
UPPSALA	75.66	331.5	11 37	-3						
KSARA	78.24	302.2	11 56	1						
GOTEBORG	79.31	331.5	11 57	-4						
JERUSALEM	79.69	300.6	12 7	4						
KRAKOW	80.15	322.5	12 3	-2						
COPENHAGEN	80.39	329.8	12 8	2						
SKALNATE PL.	80.47	321.6	12 10	3						
SHASTA	82.35	47.4							13	12
BRATISLAVA	82.76	322.0	12 22	3						
HUNGRY HORSE	82.90	37.7	12 18	-1					13	8
COLLMBERG	82.92	326.1	12 18K	-2					12	22 PCP
PRUHONICE	82.98	324.5	12 20	0					13	11
MINERAL	83.04	47.4							13	17
VIENNA-H.	83.10	322.4	12 20	0						
HELWAN	83.54	300.6	12 26	3						
JENA	83.84	326.4	12 23	-1					13	15
KASPERSKE H.	84.01	324.2	12 23	-2					13	16
BUTTE	85.12	38.9	13 19	48						
LJUBLJANA	85.45	321.4	12 31	-1					13	28
BENSBERG	85.89	328.3	12 36	2						
TRIESTE	86.12	321.4	12 38	3						
STUTTGART	86.39	325.8	12 40	3						
EUREKA	87.09	45.6	12 40	0						
WOODY	87.43	50.0	12 51	9						
GARCHY	90.41	327.7	12 58	2					13	46
RAPID CITY	91.37	35.9							14	6
BROKEN HILL	108.01	263.3	10 12	777						

JULY 18 23.H 42.M 40.S EPICENTRE 29.77 131.74 DEPTH= 46.KM

A=-0.57884 B= 0.64873 C= 0.49406 D= 0.7462 E= 0.6658
G=-0.3289 H= 0.3686 K=-0.8694 HT= 1.9

DEPTH OF FOCUS= 0.002R

SE= 2.77

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
ABUYAMA	6.03	31.5	1	28A	-1							
MATUSIRO	8.65	37.1	2	4A	-2	3	52	9				
ZO-SE	9.21	280.9	2	10A	-3	4	3	6				
CHANGCHUN	14.94	341.7	3	33	3	8	3	108				
PEKING	16.34	312.9	3	50	2	6	59	12				
HONG KONG	17.45	248.8	4	10	8							
Y.-SAKHLINSK	19.21	23.3	3	29	-54							
CHENGTU	23.96	279.1	5	9	-2	9	26	4				
LANCHOW	24.21	292.3	5	11K	-2							
KUNMING	26.12	266.8	5	31	-1	10	4	6				
ULAN-BATOR	26.32	320.4	5	31	-3							
PETROPAVLOVK	30.45	32.7	6	12	1							
LHASA	35.22	280.2	6	51	-1	13	10	48				
SHILLONG	35.44	273.0	6	50A	-4							
CHATRA	39.17	276.9	7	22	-3							
ANDIJAN	48.87	299.8	8	48	5							
NAMANGAN	49.37	300.2	8	51	4							
TASHKENT	51.12	300.9	9	0	0							
CHARTERS TS.	51.51	162.5	9	2	-1							
QUETTA	55.41	287.9	9	31	-1							
SVERDLOVSK	55.43	320.8	9	36	4							
COLLEGE	59.44	29.3	10	0	-1							
BRISBANE	60.30	158.4	10	7	0						20	24
ADELAIDE	64.73	173.7	10	36A	0							
RIVERVIEW	65.87	162.4	10	42	-1							
SHIRAZ	67.37	292.1	10	51A	-2							
MOSCOW	68.15	322.6	10	57	-1	19	41	-12				
SODANKYLA	68.42	336.3	10	58	-1							
KAJAANI	69.44	332.9	11	10	4							
TROMSOE	69.83	339.9	11	6	-2							
PULKOVO	70.18	328.2	11	40	30							
KIRUNA	70.30	337.9	11	10	-1							
RESOLUTE	71.48	11.8	11	18K	0							
NURMIJARVI	72.36	330.2	11	22	-1							
UMEA	72.46	334.4	11	22	-2							
SKALSTUGAN	75.49	336.3	11	39	-2							
UPPSALA	75.69	331.6	11	41K	-1							
LWOW	78.17	320.9	11	57	1							
KSARA	78.48	302.3	11	56	-2							
GOTEBORG	79.33	331.7	12	2	-1							
JERUSALEM	79.93	300.8	12	7	1							
KRAKOW	80.24	322.6	12	7	-1						12	12 PCP
COPENHAGEN	80.43	329.9	12	9	0							
SHASTA	81.94	47.6	12	18	2							
BRATISLAVA	82.86	322.2	12	21	0						12	27 PCP
COLLMBERG	82.99	326.3	12	22K	0						13	37
PRUHONICE	83.06	324.7	12	23	1							
HELWAN	83.78	300.8	12	26	0						20	7
JENA	83.91	326.6	12	26	0						13	6
KASPERSKE H.	84.09	324.4	12	28K	1							
BUTTE	84.74	39.1	12	32	1							
LJUBLJANA	85.55	321.6	12	36	1						13	2
BENSBERG	85.95	328.5	12	37	0						13	10
TRIESTE	86.22	321.6	12	39	1							
STUTTGART	86.46	326.0	12	39	0							
EUREKA	86.69	45.8	12	22	-18							
DURHAM	86.73	335.0	12	50K	10							
STRASBOURG	87.32	326.5	12	44	1							
PARIS	89.60	329.2	12	55	1							
GARCHY	90.46	327.9	13	8	10							
RAPID CITY	91.00	36.2	13	2	1							
TUCSON TELE.	94.43	48.8	13	19	3							

JULY 19 6.H 33.M 19.S EPICENTRE 29.66 131.72 DEPTH= 18.KM

A=-0.57927 B= 0.64969 C= 0.49230 D= 0.7464 E= 0.6655
G=-0.3276 H= 0.3675 K=-0.8704 HT= 1.9

SE= 2.14

	DEL.TA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
YAKUSIMA	1.32	307.0	0	24	0	0	41	-1				
MIYAZAKI	2.27	353.5	0	37	-1	1	2	-4				

KUMAMOTO	3.27	344.8	0	53	1	1	29	-2			
ASOSAN	3.28	350.4	0	53	1	1	30	-1			
SIMIDU	3.29	18.7	0	52	0	1	25	-7			
UNZENDAKE	3.31	338.0	0	54	1	1	32	0			
NAGASAKI	3.44	333.2	0	54A	-1	1	34	-2			
OOITA	3.56	358.6	0	56K	0	1	29	-10			
UWAZIMA	3.63	11.0									
SAGA	3.78	341.6	1	2	3	1	47	3			1 21
TOMIE	3.89	320.2	1	1	0						
HUKUOKA	4.07	344.0	1	4	1	1	45	-6			
KOTI	4.18	21.2	1	4	-1	1	47	-7			
MATUYAMA	4.27	11.9	1	5	-1	1	51	-5			
TSURUGISAN	4.61	24.4	1	12	1						
HIROSIMA	4.74	7.1	1	13	0	2	2	-6			
TOKUSIMA	5.03	28.2	1	16	-1	2	14	-2			
TAKAMATU	5.05	22.5	1	15	-2	2	11	-5			
SIOMISAKI	5.12	41.4	1	21	3						
OKAYAMA	5.34	19.9	1	20	-1	2	17	-6			
SUMOTO	5.40	29.3	1	20	-2	2	34	9			1 51
OWASE	5.82	39.8	1	26	-2	2	45	10			
MATSUE	5.89	10.8	1	30	1						
YONAGO	5.92	13.0									2 29
OSAKA	5.93	32.0	1	35	5						3 27
ABUYAMA	6.13	31.1	1	31A	-2						
TOTTORI	6.19	18.9	1	34	1						
KYOTO	6.33	31.4	1	34	-1	2	56	8			
TOYOOKA	6.41	23.3	1	35	-1	3	21	31			
KAMEYAMA	6.56	36.6	1	42	4						4 37
HIKONE	6.78	33.2	1	41	-1						
TSURUGA	7.01	30.4	1	46	1						
GIHU	7.14	35.4	1	46	-1						9 51
OMAESAKI	7.39	46.5	1	51	1						
SHIZUOKA	7.75	45.1	1	55	0						
IIDA	7.79	39.8	1	55	-1						
MISIMA	8.19	46.4	2	1	0						
AJIRO	8.24	47.4	2	0K	-2						2 23
OSIMA	8.25	49.9	2	0	-2						
HUNATU	8.32	43.8	2	2	-1						
TOYAMA	8.39	31.7	2	4	0						
MATUSIRO	8.76	36.7	2	7K	-2						3 12
OIWAKE	8.78	39.0	2	12	2						
WAZIMA	8.83	27.9	2	9	-1						
TITIBU	8.83	42.6	2	14	4						
TOKYO C.M.O.	9.05	46.3	2	29	16						5 17
MAEBASI	9.12	40.6	2	14	0						
KUMAGAYA	9.13	42.8	2	15A	1	3	53	-5			
ZO-SE	9.22	281.6	2	16A	0	4	4	4			
KAKIOKA	9.66	45.1	2	17	-5						
MITO	9.94	45.3	2	27	1						
NIIGATA	10.25	34.6	2	30	0						
SHIRAKAWA	10.28	41.4	2	30	0						
YAMAGATA	11.16	37.6	2	42	0						
NANKING	11.38	285.4									2 35
SENDAI	11.48	39.1	3	1	14						
AKITA	12.17	32.2	3	9	13						
MIZUSAWA	12.23	36.9	3	1	4						
MORI	14.33	27.6	3	32	8						
SUTTSU	14.79	25.3	3	31	0						
CHANGCHUN	15.04	341.9	3	36	2	6	26	5			
SAPPORO	15.45	27.4	3	45	6						6 23
PEKING	16.41	313.2	3	55	4	7	0	7			
BAGUIO CITY	16.68	220.2	3	57	2	7	13	14			
HONG KONG	17.39	249.2									14 11
Y.-SAKHLINSK	19.33	23.2	4	24	-3						
SIAN	19.87	289.2	4	27	-6	8	0	-11			
PAOTOW	20.77	307.4	4	42	-1	8	38	9			
CHENGTU	23.96	279.4	5	13	-2	9	27	0			
LANCHOW	24.23	292.5	5	15	-2						
KUNMING	26.09	267.0	5	35	0	10	5	2			
PETROPAVLOVK	30.56	32.6	6	15	0						
YAKUTSK	32.39	358.2	6	39	8						
SHILLONG	35.43	273.2	6	55	-2						
ANDIJAN	48.91	299.9	8	51	4						
NAMANGAN	49.41	300.2	8	52	1						
TASHKENT	51.16	301.0	9	4	0						
CHARTERS TS.	51.40	162.4	9	6	0						
STALINABAD	51.98	297.6	9	13	2						
QUETTA	55.42	287.9	9	37	1						

SVERDLOVSK	55.51	320.9	9	36	-1						
KHEYS	58.28	349.3	9	58	2	17	56	0			
COLLEGE	59.55	29.2	10	4	-1						
BRISBANE	60.20	158.4	10	11	1						
ADELAIDE	64.62	173.6	10	40	1						
TEHERAN	66.10	298.7	10	50	1						
CANBERRA	66.65	164.7	10	54	2						
SHIRAZ	67.40	292.2	10	56	-1	18	53	-57		16	15 PCP
MOSCOW	68.23	322.6	11	2	0						
SODANKYLA	68.52	336.3	11	3	-1						
GORIS	68.53	304.0	11	5K	1						
TIFLIS	68.81	306.7	11	2	-4						
TROMSOE	69.94	339.9	11	12	0						
KIRUNA	70.40	338.0	11	15	0	20	26	0			
SOTCHI	71.57	310.0	11	24	2	20	39	0			
RESOLUTE	71.60	11.8	11	21	-2						
NURMIJARVI	72.45	330.3	11	27	-1						
UMEA	72.55	334.4	11	26	-2						
SIMFEROPOL	74.64	313.1	11	42	2	21	19	5			
SKALSTUGAN	75.59	336.3	11	47	1						
UPPSALA	75.78	331.6	11	47	0	21	25	-2			
LWOW	78.24	320.9	12	2	1	21	58	5			
KSARA	78.52	302.3	12	7	5	22	18	22			
GOTEBORG	79.43	331.7	12	6	-1						
JERUSALEM	79.97	300.8	12	12K	2						
COPENHAGEN	80.52	329.9	12	14	1	22	20	3			
RACIBORZ	81.22	323.3	12	29	12						
HUNGRY HORSE	82.63	37.8	12	24	0						
MINERAL	82.73	47.6	12	23	-1						
COLLMBERG	83.07	326.3	12	26	0	22	47	3		16	4
PRUHONICE	83.15	324.7	12	28	1	22	49	5			
VIENNA-H.	83.28	322.5	12	29	2						
HELWAN	83.82	300.8	12	32	2						
JENA	84.00	326.6	12	31	0					13	1
KASPERSKE H.	84.17	324.4	12	32K	0					13	9
RENO	84.32	47.5	12	33	0						
BUTTE	84.84	39.1	12	36	1						
LJUBLJANA	85.63	321.6	12	40	1						
FRESNO	85.88	49.8	12	42	2						
BENSBERG	86.03	328.5	12	43	2						
TRIESTE	86.30	321.6	12	45	3						
STUTTGART	86.55	326.0	12	44	0						
ISABELLA	87.39	50.1	12	47	-1						
STRASBOURG	87.41	326.5								23	27
FLORENCE X.	88.87	321.4	12	51	-4						
BOULDER CITY	89.60	48.1	12	58	0						
RAPID CITY	91.10	36.2	13	5	0						
TUCSON	94.51	49.0	13	22	1						
TUCSON TELE.	94.52	48.8	13	21	0						
WICHITA MTS.	100.30	40.1								17	35 PP
SCOTT BASE	109.28	172.6	18	58	777						
SOUTH POLE	119.49	180.0								18	50
LA PAZ	157.57	58.6	19	58	3						

JULY 19 11.H 58.M 46.S EPICENTRE 29.68 131.58 DEPTH= 32.KM

A=-0.57753 B= 0.65100 C= 0.49260 D= 0.7481 E= 0.6636
G=-0.3269 H= 0.3685 K=-0.8703 HT= 1.9

SE= 1.63

	DELTA DEG.	AZ. DEG.	P M	P S	P O-C S	S M	S S	S O-C S	*PP M	*PP S	SUPP. M	SUPP. S
YAKUSIMA	1.21	309.7	0	22K	1	0	41	4				
KAGOSIMA	2.08	335.1	0	36A	2	0	57	-2				
MIYAZAKI	2.24	356.6	0	39	3	1	3	0				
KUMAMOTO	3.22	346.7	0	51	1	1	27	-1				
ASOSAN	3.24	352.4	0	51	1	1	27	-1				
UNZENDAKE	3.25	339.8	0	52A	2	1	30	2				
NAGASAKI	3.37	334.9	0	52A	0	1	27	-4				
OOITA	3.54	0.6	0	54K	0	1	25	-11				
UWAZIMA	3.64	13.0	0	56	0	1	35	-3				
SAGA	3.72	343.3	0	58	1	2	11	31				
TOMIE	3.79	321.3	0	58	0							
HUKUOKA	4.02	345.6	1	2A	1	1	42	-6				
KOTI	4.20	22.8	1	3	-1	1	46	-7				
MATUYAMA	4.27	13.5	1	5	0	1	51	-3				

SIMONOSEKI	4.29	352.8	1	5	0							
HIROSIMA	4.73	8.6	1	10	-1	2	0	-6				
TOKUSIMA	5.07	29.5	1	16	0	2	13	-1				
TAKAMATU	5.08	23.8	1	17	1	2	14	-1				
SIOMISAKI	5.19	42.5	1	17	-1							
SUMOTO	5.44	30.5	1	20A	-1	3	1	37			2	1
OWASE	5.88	40.7	1	26	-2							
MATSUE	5.89	12.0	1	26	-2							
OSAKA	5.98	33.0	1	52	23						4	7
NARA	6.15	34.8	1	32	1							
ABUYAMA	6.18	32.1	1	30K	-2							
KYOTO	6.38	32.3	1	33	-2	2	55	8				
TOYOOKA	6.44	24.3	1	34	-1	3	5	16				
TU	6.53	38.6	1	37	0							
KAMEYAMA	6.61	37.5	1	40	2							
HIKONE	6.83	34.1	1	42	1							
TSURUGA	7.06	31.3	1	44	0							
GIHU	7.19	36.2	1	45A	-1						8	27
OMAESAKI	7.47	47.2	1	52	2							
SHIZUOKA	7.82	45.8	1	54	-1							
IIDA	7.86	40.5	1	52	-3	3	53	29				
MISIMA	8.26	47.1	1	59	-2							
AJIRO	8.31	48.0	2	0	-2							
HUNATU	8.40	44.4	2	1	-2							
TOYAMA	8.44	32.5	2	4	1							
MATUMOTO	8.47	37.7	2	4	0							
MATUSIRO	8.82	37.4	2	7K	-2	3	45	-3			5	36
OIWAKE	8.84	39.6	2	8	-1						4	30
WAZIMA	8.87	28.6	2	10	1							
YOKOHAMA	8.90	47.8	2	7	-3						6	10
NAGANO	8.91	36.8	2	11	1							
ZO-SE	9.09	281.6	2	12	0	3	56	1				
TOKYO C.M.O.	9.12	46.9	2	29	16						3	10
MAEBASI	9.19	41.2	2	14A	0							
KUMAGAYA	9.20	43.4	2	15A	1	3	36	-21				
TUKUBASAN	9.68	45.4	2	20A	-1							
UTUNOMIYA	9.76	43.2	2	22	0							
MITO	10.01	45.8	2	25	0							
NIIGATA	10.30	35.1	2	15	-14						6	40
SHIRAKAWA	10.35	41.9	2	29	-1							
ONAHAMA	10.64	44.6	2	34	0							
HUKUSIMA	10.93	40.2	2	38	0							
YAMAGATA	11.22	38.1	2	41	-1							
NANKING	11.25	285.4	2	41A	-1	4	54	6				
SENDAI	11.54	39.6									3	45
ISINOMAKI	11.89	40.2	2	50	-1							
AKITA	12.22	32.7	2	58	3							
MIZUSAWA	12.28	37.3	2	56	0						9	56
MORI	14.37	28.0	3	28	5							
SUTTSU	14.83	25.6	3	32	3							
CHANGCHUN	14.98	342.2	3	33	2	6	23	6				
URAKAWA	15.38	33.0	3	35	-2							
SAPPORO	15.49	27.8	3	36	-2							
PEKING	16.30	313.4	3	48	0	6	56	8				
BAGUIO CITY	16.61	219.8	3	54	2	7	7	12				
HONG KONG	17.28	248.9	3	44	-17	6	42	-28				
MANILA	17.80	215.2	4	10	3	7	13	-9				
Y.-SAKHLINSK	19.36	23.5	4	24	-2							
SIAN	19.75	289.2	4	26	-4	8	5	-1				
GUAM	20.22	140.1	4	33	-2						4	57
PAOTOW	20.66	307.5	4	39	-1	8	34	10				
CHENGTU	23.84	279.3	5	11	0	9	26	4				
LANCHOW	24.11	292.5	5	13A	-1						8	9
KUNMING	25.97	266.9	5	30	-2	9	59	1				
ULAN-BATOR	26.31	320.7	5	34	-1							
KYAKHTA	28.01	324.6	5	49A	-1							
KABANSK	28.98	327.5	5	57	-2							
PETROPAVLOVK	30.61	32.7	6	13	-1							
YAKUTSK	32.37	358.4	6	31	2	11	40	0				
MAGADAN	32.60	18.1	6	28	-3							
SHILLONG	35.30	273.1	6	51K	-3							
PORT MORESBY	41.65	156.5	7	47	0	14	14	13				
TIKSI	42.03	358.7	7	50	0						8	19
LEMBANG	42.99	216.3	7	57K	-1	14	18	-3				
SEMIPALATNSK	43.40	313.4	8	0	-2							
FRUNSE	46.94	302.4	8	30	0							
LAHORE	48.82	287.4	8	47	2							
TASHKENT	51.04	300.9	9	0	-2						16	24 PS

CHARTERS TS.	51.46	162.3	9	5	0				9	39
QUETTA	55.30	287.9	9	31	-2					
KHEYS	58.24	349.3	9	54	0				12	5 PP
COLLEGE	59.59	29.2	10	2	-1					
BRISBANE	60.26	158.3	10	8	0	18	23	5		
ADELAIDE	64.65	173.5	10	36K	-1					
RIVERVIEW	65.82	162.2	10	46	1					
TEHERAN	65.98	298.6	10	46	0					
CANBERRA	66.70	164.5	10	51	1					
SHIRAZ	67.28	292.1	10	51	-3	19	42	-3	18	29
MOSCOW	68.14	322.6	10	59	0	19	55	-1		
MELBOURNE	68.31	168.6	11	1	1					
GORIS	68.42	304.0	11	2	1	20	1	2	13	38 PP
SODANKYLA	68.45	336.3	11	1A	0					
TIFLIS	68.70	306.7	11	5	2	20	8	6		
KAJAANI	69.46	332.9	11	9	2					
AFIAMALU	69.70	120.1	10	39	-30					
TROMSOE	69.87	339.9	11	8	-2					
KIRUNA	70.33	337.9	11	11A	-2	20	23	2		
RESOLUTE	71.61	11.7	11	20K	0					
NURMIJARVI	72.38	330.2	11	25A	0					
UMEA	72.48	334.3	11	24A	-2					
THULE	73.43	4.8	11	32	1					
SIMFEROPOL	74.54	313.1	11	38	0	21	11	2		
SKALSTUGAN	75.52	336.2	11	42	-1					
UPPSALA	75.70	331.6	11	43	-1	21	20	-2		
LWOW	78.15	320.9	11	58	0	21	52	3	22	8 SKS
KSARA	78.41	302.3	12	1	2	21	24	-28	14	42 PP
WARSAW	78.44	324.0	12	3	3	21	55	3	12	8 PCP
KARAPIRO	78.82	146.0	12	2	0					
GOTEBORG	79.35	331.6	12	4	-1					
CORVALLIS	79.49	44.6	12	6	1					
ISTANBUL KA.	79.64	311.4	13	2	56	22	10	5		
BUCHAREST	79.80	315.4							22	8
CHATEAU	79.82	146.8	12	7	0					
JERUSALEM	79.86	300.7	12	9K	2					
KRAKOW	80.23	322.6	12	10	1	22	13	2	12	13 PCP
COPENHAGEN	80.44	329.9	12	11	1	22	18	5		
RACIBORZ	81.13	323.2	12	15A	1				12	24 PCP
SHASTA	82.11	47.5	12	20K	1					
HUNGRY HORSE	82.69	37.8	12	23	1				19	3
MINERAL	82.81	47.5	12	22A	-1					
BRATISLAVA	82.84	322.1							12	54
BELGRADE	82.95	318.0	12	26K	3	22	44	5	13	59
COLLMBERG	82.99	326.3	12	24K	0	22	44	5	15	41 PP
PRUHONICE	83.06	324.6	12	25	1	22	45	5		
PRAGUE	83.06	324.7	12	24	0					
VIENNA-H.	83.18	322.5	12	27K	2					
HALLE	83.36	326.8	12	26	0	22	47	4		
HELWAN	83.71	300.7	12	29	2					
BERKELEY	83.72	49.9	12	28A	1					
SIDA	83.81	346.9	12	30	2					
JENA	83.91	326.6	12	29	1	22	50	2	13	36
CHEB	84.07	325.6	12	27	-2				13	40
KASPERSKE H.	84.08	324.3	12	30K	1					
RENO	84.40	47.4	12	31K	0					
LICK	84.42	50.1	12	31K	0					
BUTTE	84.90	39.0	12	35	2					
MUNSTER	85.05	329.0	12	35	1					
LJUBLJANA	85.54	321.5	12	38A	2					
BOZEMAN	85.95	38.6	12	40	2					
BENSBERG	85.95	328.5	12	38	-1				13	10
FRESNO	85.96	49.7	12	40	1					
TRIESTE	86.21	321.6	12	41	1	23	18	7		
STRASBOURG	87.32	326.5	12	37	-8	23	26	5	21	32
PADOVA	87.37	322.2				23	34	12		
PASADENA	88.54	51.1	12	51	0					
KEW	88.81	332.2				23	37	2		
BESANCON	89.11	326.4	12	54	0					
ROME	89.32	319.3				23	42	2	39	52 SS
PARIS	89.61	329.1	12	54	-2					
BOULDER CITY	89.68	48.0	12	57	1				15	25 PP
GARCHY	90.47	327.8	13	0	0				13	9 PCP
MONACO	90.85	323.1	12	58	-4					
GLEN CANYON	91.12	45.6	13	4	1					
RAPID CITY	91.16	36.1	13	4	1					
LARAMIE	91.81	39.3	13	7	1					
TUCSON	94.59	48.9	13	21	2					

TUCSON TELE.	94.60	48.8	13	21	2						
TOLEDO	99.44	326.9	13	38	-3					17	30 PP
WICHITA MTS.	100.36	40.0	13	45	0					17	49 PP
SCOTT BASE	109.31	172.6	18	57	777						
LA PAZ	157.67	58.4	19	59	6						

JULY 19 23.H 0.M 56.S EPICENTRE 37.71 20.12 DEPTH= 0.KM

A= 0.74467 B= 0.27281 C= 0.60914 D= 0.3440 E=-0.9390
G= 0.5720 H= 0.2095 K=-0.7931 HT= -0.8

SE= 3.71

	DELTA DEG.	AZ. DEG.	P M	P S	P O-C S	S M	S S	S O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
ATHENS	2.86	83.8	0	47K	0						1	30	SG
TARANTO	3.54	321.8	0	52	-5	1	28	-12					
REGGIO CALA.	3.56	277.6	0	54	-3	1	37	-4					
MESSINA	3.64	279.0	0	54K	-5	1	34	-9			1	3	PG
SKOPJE	4.37	13.0	1	7	-2						2	33	
TITOGRAD	4.76	352.3	1	12	-2	2	31	20			2	5	
SOFIA	5.55	25.2	1	25	-1	2	40	9					
BELGRADE	7.10	1.9	1	43A	-4	3	9	-1			2	14	PG
ROME	7.21	307.8	1	48	-1	3	14	1			2	31	
ISTANBUL UN.	7.63	61.5	1	55	0	4	29	66					
ISTANBUL KA.	7.70	61.4	1	52	-4	3	22	-3					
TIMISOARA	8.07	5.5	2	17	16						4	48	
BUCHAREST	8.08	32.1	2	0	-1	3	43	9			4	41	SG
CAMPULUNG	8.40	24.4									5	5	
FLORENCE X.	9.05	314.8	2	24	9	4	2	3					
TRIESTE	9.25	331.0	2	23	6	3	53	-10			4	55	SGSG
LJUBLJANA	9.31	335.2	2	12	-6	3	56	-9					
BOLOGNA	9.48	318.4	2	28	7						4	51	
FOCSANI	9.57	31.3									5	17	
BUDAPEST	9.79	355.6	2	46	21	4	31	14			3	35	PG
PADOVA	9.86	323.8				4	9	-9			5	0	
BACAU	10.18	27.5									6	22	
HURBANOVO	10.25	352.7				4	17	-11					
BRATISLAVA	10.68	349.0	2	32	-5	5	44	65					
VIENNA-H.	10.88	346.6	2	33	-7						6	8	SGSG
IASI	10.95	27.7									6	39	
PAVIA	11.09	315.7	3	48	65	5	40	51					
ISOLA	11.80	307.3	2	50	-2						3	8	PPP
CHUR	12.02	322.7	2	56	1	5	5	-6			4	59	
HELWAN	12.16	126.7	2	51	-6						5	1	
KRAKOW	12.33	359.4	2	55	-4						5	2	
KASPERSKE H.	12.35	339.5	2	54K	-6								
LWOW	12.42	11.8	3	0	-1	5	16	-5					
RACIBORZ	12.44	354.2	3	2	1	5	16	-5			3	12	PP
CHORZOW	12.60	356.7	2	59	-4						3	14	PP
SIMFEROPOL	12.76	51.1									6	7	
PRUHONICE	12.90	343.7	3	2	-5	5	23	-10					
PRAGUE	13.01	343.5	3	10	1	5	19	-16					
EBINGEN	13.25	325.6	3	12	0								
KSARA	13.37	102.2	3	11	-2	5	27	-17					
NEUCHATEL	13.44	317.8	3	14	0								
BASLE	13.45	320.8	3	13	-1						7	18	
TUBINGEN	13.47	326.9	3	17	2								
CHEB	13.55	338.3	3	7	-9								
STUTTGART	13.57	328.0	3	14	-2	5	35	-14			3	40	
JERUSALEM	13.75	111.0	3	13	-5	5	38	-15					
STRASBOURG	14.09	324.3	3	19	-4	6	19	18			7	15	
BESANCON	14.11	316.9	3	19	-4	5	55	-7					
HEIDELBERG	14.29	328.5	3	22	-3								
COLLMBERG	14.49	341.9	3	25	-3						3	34	PP
WARSAW	14.53	2.2	3	30	1	6	7	-4			3	39	PP
JENA	14.54	338.0	3	23	-6	6	24	12			3	32	PPP
HALLE	14.95	339.9	3	36	2	6	36	15					
CLERMONT-FD.	15.01	307.8	3	36	1								
TORTOSA	15.51	287.6	3	38	-3	6	43	8					
GARCHY	15.77	312.7	3	42	-3						3	53	PP
SOTCHI	15.98	62.3	3	49	2	6	53	7					
BAGNERES	16.12	295.6	3	50	1								
BENSBERG	16.13	329.3	3	43	-6	6	59	10			7	23	SS
ALICANTE	16.25	278.6	3	52	1	6	54	2			4	4	PP
MUNSTER	16.75	332.3	4	0	3								

PARIS	16.92	316.5	4	2	3					
DE BILT	17.80	328.7	4	12	2	7	39	11		
ALMERIA	18.00	274.2	4	5	-8	7	29	-3	4	26 PP
FOLINIERE	18.58	313.1	4	17	-3					
COPENHAGEN	18.70	346.4	4	20K	-2	7	53	5	4	35 PP
GRANADA	18.84	275.7	4	21K	-2	7	51	0	4	50 PP
TOLEDO	18.95	284.0	4	21	-4	7	55	1	4	43 PP
TIFLIS	19.38	70.4	4	27	-3	8	17	14		
KEW	19.93	320.2	4	33K	-3	8	16	1		
GOTEBORG	20.70	347.6	4	41	-3					
MAKHACH-KALA	21.47	67.2	4	49	-3	8	50	4		
MOSCOW	21.54	27.6	4	51	-2	8	49	2		
UPPSALA	22.21	356.7	4	55	-4	8	59	-1		
COIMBRA	22.30	285.3	4	57	-3					
DURHAM	22.57	326.1	5	13	10	9	15	9		
NURMIJARVI	23.00	5.8	5	4	-3	9	11	-3		
PULKOVO	23.02	13.2	5	4	-3					
ABERDEEN	24.39	330.1	5	23	2	9	42	4	10	56 SS
TEHERAN	25.08	84.9	5	24	-3	9	53	3		
UMEA	26.14	0.1	5	33K	-4					
SKALSTUGAN	26.33	352.1	5	33	-6				6	5 PP
KAJAANI	26.79	7.4	5	40	-3					
SHIRAZ	28.03	97.0	5	51	-3	10	36	-2	11	10 SS
SODANKYLA	29.93	5.0	6	6	-6					
KIRUNA	30.17	0.2	6	10	-4				7	3 PP
TROMSOE	31.98	359.2	6	25	-5					
SVERDLOVSK	32.83	41.2	6	33	-4					
QUETTA	39.24	86.8	7	29	-2					
LWIRO	40.57	166.6	7	42K	0					
KHEYS	45.29	8.2	8	19	-2					
THULE	53.34	342.9	9	20	-3					
BULAWAYO	58.10	170.6	9	54	-3					
HALIFAX	60.77	305.6	10	12	-4					
SHAWINIGAN	65.59	310.8	10	45	-2					
YAKUTSK	65.69	29.2	10	45	-3					
WESTON	66.78	306.3	10	54A	-1					
OTTAWA	67.95	310.9	11	1	-1					
MORGANTOWN	73.75	307.6	11	37	0					
SAN JUAN	76.10	282.5	11	50	-1					
COLLEGE	77.31	354.8	11	55	-3					
RAPID CITY	83.78	322.7	11	55	-37					
HUNGRY HORSE	85.11	331.3	12	34	-5					
WICHITA MTS.	88.19	313.7	12	51	-3				16	17 PP
FLAMING GRGE	89.13	324.2	12	54	-4					
EUREKA	93.24	327.5	13	15	-2					

JULY 20 9.H 2.M 44.S EPICENTRE 29.93 131.71 DEPTH= 44.KM

A=-0.57758 B= 0.64801 C= 0.49647 D= 0.7465 E= 0.6654
G=-0.3303 H= 0.3706 K=-0.8681 HT= 1.8

DEPTH OF FOCUS= 0.002R

SE= 2.52

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
YAKUSIMA	1.17	296.4	0	20	-1	0	36	0				
KAGOSIMA	1.91	328.8	0	32K	1	0	56	2				
MIYAZAKI	2.00	352.9	0	34	2	1	1	5				
KUMAMOTO	3.00	343.5	0	49	2	1	21	-1				
ASOSAN	3.01	349.7	0	47	0	1	15	-7				
SIMIDU	3.03	20.5	0	46	-1	1	21	-2				
UNZENDAKE	3.06	336.2	0	49K	2	1	28	5				
NAGASAKI	3.20	331.1	0	49A	0	1	30	3				
UWAZIMA	3.36	12.1	0	52	0	1	29	-2				
SAGA	3.52	340.3	0	53	-1	1	37	2				
TOMIE	3.68	317.5	0	55	-1							
HUKUOKA	3.81	343.0	0	59	1	1	43	1				
MUROTO	3.92	31.9	1	11	11	1	56	11				
KOTI	3.92	22.8	0	59	-1	1	41	-4				
MATUYAMA	4.00	12.9	1	0	-1	1	44	-3				
SIMONOSEKI	4.06	350.8	1	2	0							
HIROSIMA	4.46	7.7	1	7	0	1	55	-4				
TOKUSIMA	4.79	29.8	1	11	-1	2	8	1				
TAKAMATU	4.80	23.8	1	12	0	2	11	4				
SIOMISAKI	4.92	43.6	1	12	-2	2	18	8				

OKAYAMA	5.09	21.0	1	16	0	2	11	-3			
SUMOTO	5.16	30.9	1	16A	-1	2	15	-1	3	5	
MATSUE	5.62	11.4	1	8	-15						
ABUYAMA	5.90	32.5	1	26A	-1						
KYOTO	6.10	32.8	1	32	2	2	38	-2			
TOYOOKA	6.16	24.3	1	30	-1						
TU	6.26	39.3	1	34	2						
KAMEYAMA	6.34	38.1	1	34	0				3	43	
HIKONE	6.55	34.6	1	37	0						
TSURUGA	6.78	31.6	1	40	0						
GIHU	6.92	36.7	1	41A	-1						
OMAESAKI	7.21	48.1	1	45	-1						
IIDA	7.59	41.2	1	50	-1						
MISIMA	8.00	47.9	1	45	-12						
AJIRO	8.06	48.8	1	55A	-2				2	40	
OSIMA	8.08	51.4	1	58	0						
TOYAMA	8.16	32.8	1	59	0						
MATUMOTO	8.20	38.2	1	58	-1						
MERA	8.47	52.0	2	8	5						
MATUSIRO	8.54	37.8	2	2K	-2	3	36	-4	2	40	
OIWAKE	8.57	40.2	2	5	0						
WAZIMA	8.59	28.8	2	5	0						
NAGANO	8.64	37.2	2	5	0						
TOKYO C.M.O.	8.86	47.6	2	12	3				3	9	
MAEBASI	8.92	41.8	2	10	1						
KUMAGAYA	8.93	44.1	2	10	0						
ZO-SE	9.16	279.9	2	10A	-3	3	56	0			
KAKIOKA	9.48	46.3	2	16	-1						
MITO	9.75	46.5	2	20	-1						
NIIGATA	10.03	35.5	2	29	4						
SHIRAKAWA	10.08	42.5	2	24	-1						
ONAHAMA	10.38	45.2	2	27	-2						
HUKUSIMA	10.66	40.7	2	33	0						
YAMAGATA	10.95	38.5	2	37A	0						
SENDAI	11.27	40.0	2	41	-1						
NANKING	11.30	284.1	2	39A	-3	5	8	20			
AKITA	11.94	32.9	2	59	8						
CHANGCHUN	14.78	341.6	3	32	4	6	23	12			
PEKING	16.22	312.5	3	50	4	6	58	14			
CANTON	17.79	251.8	4	5	-1						
Y.-SAKHLINSK	19.08	23.6	4	19	-3	7	42	-7			
SIAN	19.77	288.5	4	27A	-2	8	19	15			
PAOTOW	20.60	306.9	4	37	-1	8	32	11			
CHENGTU	23.91	278.8	5	10	-1	9	25	4			
LANCHOW	24.12	292.0	5	12	-1	9	32	7			
KUNMING	26.10	266.4	5	29	-3	9	58	0			
ULAN-BATOR	26.19	320.2	5	31	-1						
PETROPAVLOVK	30.33	32.8	6	8	-2						
YAKUTSK	32.12	358.2	6	25	-1						
LHASA	35.17	279.9	6	52	0						
LEMBANG	43.26	216.3	8	7A	8				8	33	
ANDIJAN	48.77	299.7	8	43	0						
NAMANGAN	49.27	300.0	8	49	2						
WARSAK DAM	50.57	291.1	8	56	0						
TASHKENT	51.01	300.8	8	57	-3						
CHARTERS TS.	51.67	162.5	9	1	-4						
STALINABAD	51.84	297.4	9	5	-1						
SVERDLOVSK	55.29	320.8	9	31	-1						
QUETTA	55.33	287.8	9	32	0						
KHEYS	58.01	349.3	9	50	-1						
COLLEGE	59.32	29.3	9	59	-1						
APATITY	65.77	335.4	10	42	-1						
TEHERAN	65.96	298.6	10	43	-1						
CANBERRA	66.92	164.7							10	48	
MOSCOW	68.01	322.5	10	58	1	19	54	3			
SODANKYLA	68.26	336.3	10	58A	-1						
TIFLIS	68.64	306.6	11	4	3						
KAJAANI	69.29	332.9	11	4	-1						
TROMSOE	69.67	339.9	11	6	-1						
PULKOVO	70.03	328.1	11	9	0						
KIRUNA	70.14	337.9	11	10	0	20	22	5			
RESOLUTE	71.33	11.8	11	17	0						
NURMIJARVI	72.21	330.2	11	22A	0						
UMEA	72.30	334.3	11	23	0						
SKALSTUGAN	75.33	336.2	11	39	-2						
UPPSALA	75.54	331.6	11	41	-1	21	19	1			
LWOW	78.03	320.9	11	57	1						
KSARA	78.37	302.3	12	1	3						

KARAPIRO	78.97	146.1	11 59	-2				
GOTEBORG	79.18	331.7	12 2A	0				
CORVALLIS	79.23	44.6	12 4	2				
JERUSALEM	79.83	300.7	12 7	1				
KRAKOW	80.10	322.6					12 7	
RACIBORZ	80.99	323.3					12 13	
SHASTA	81.85	47.6	12 19K	3				
HUNGRY HORSE	82.42	37.8	12 19	0				
MINERAL	82.55	47.6	12 19A	-1				
BRATISLAVA	82.71	322.2	12 23	2			12 33	PCP
PRUHONICE	82.92	324.6	12 23K	1				
VIENNA-H.	83.05	322.5	12 24	2				
HALLE	83.21	326.9	12 24	1	12 40			
JENA	83.76	326.6	12 26	0				
KASPERSKE H.	83.94	324.4	12 28A	1			13 20	
RENO	84.14	47.5	12 27	-1				
BUTTE	84.63	39.1	12 31	1				
LJUBLJANA	85.41	321.6	12 35	1				
BOZEMAN	85.68	38.7	12 36	0				
STUTTGART	86.31	326.0	12 39	0				
EUREKA	86.60	45.8	12 31	-9				
STRASBOURG	87.17	326.5	13 3	20				
CHINA LAKE	87.71	49.5	12 45	0				
CHIAVARI	89.32	322.7					16 36	
BOULDER CITY	89.42	48.1	12 53	-1				
FLAMING GRGE	89.65	41.6	12 55	0				
GARCHY	90.31	327.9	12 58	0			14 17	
GLEN CANYON	90.86	45.7	12 56	-4				
RAPID CITY	90.89	36.1	13 1	1				
TUCSON	94.33	48.9	13 17	1				
TUCSON TELE.	94.35	48.8	13 18	2				
WICHITA MTS.	100.09	40.1	13 44	2			17 45	PP
HUANCAYO	149.24	60.4	19 46	6				

JULY 20 15.H 10.M 32.S EPICENTRE -17.83-179.10 DEPTH= 571.KM

A=-0.95244 B=-0.01491 C=-0.30437 D=-0.0157 E= 0.9999
G= 0.3043 H= 0.0048 K=-0.9526 HT= 5.2

DEPTH OF FOCUS= 0.085R

SE= 3.00

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
AFIAMALU	8.05	62.1	1 47K	-13	3 17	-18		
RAOUL ISLAND	11.42	174.8	2 31	-2	4 43	7		
ONERAHI	18.78	196.7	3 49	4				
KARAPIRO	20.57	192.1	4 2	0				
CHATEAU	21.79	191.3	4 11	-2				
HONIARA	21.99	289.6	4 14	-1				
BRISBANE	27.59	244.8	5 4	0				12 0
RIVERVIEW	31.01	233.3	5 35	2				7 49
CHARTERS TS.	32.80	260.4	5 48	-1				11 10
CANBERRA	33.22	232.1	5 54K	2				
PORT MORESBY	33.80	279.8	5 57	0				
MUNDARING	59.57	243.0	9 10A	-1				
SCOTT BASE	60.45	183.4	9 18K	1				
BYRD STATION	67.43	170.6	10 0	-1				
MATUSIRO	67.45	323.8	9 58K	-3				10 22
LEMBANG	72.05	268.5	10 29K	1				
SOUTH POLE	72.28	180.0	10 29	-1				
LICK	77.03	43.6	10 53A	-3				
ARCATA	77.55	39.5	11 17A	18				
PASADENA	77.66	47.9	10 55	-4				12 51
MINERAL	78.77	41.1	11 0A	-5				
RENO	79.45	42.6	11 5	-4				
EUREKA	81.93	44.2	11 18	-4				
TUCSON TELE.	82.24	52.6	11 21	-2			13 19	
MAWSON	83.71	199.9	11 30A	-1				
GLEN CANYON	83.71	48.1						13 27
ARGENTINE I.	83.82	157.4	11 29	-2				
COLLEGE	85.85	12.8	11 35	-6				
FLAMING GRGE	87.04	45.4	11 53	6				
HUNGRY HORSE	87.65	37.3	11 45	-4				
WICHITA MTS.	92.48	54.4	12 8	-4	21 50	-35		14 20

SKALSTUGAN	133.63	353.0											20	50	SKP
NURMIJARVI	134.10	343.9	18	11	-2								20	52	SKP
COLLMBERG	145.25	346.6	18	33K	-1				20	42					
JENA	145.90	347.9	18	33	-2										
JERUSALEM	146.05	300.7	18	37	2										
PRUHONICE	146.10	344.1	18	36	1										
STUTTGART	148.40	349.4	18	42	4										
LJUBLJANA	149.67	341.0	18	45	5										
HELWAN	149.79	299.0	18	46	6										
GARCHY	150.58	357.0	18	46	5										

JULY 20 19.H 57.M 59.S EPICENTRE -32.10-177.27 DEPTH= 0.KM

A=-0.84778 B=-0.04039 C=-0.52882 D=-0.0476 E= 0.9989
G= 0.5282 H= 0.0252 K=-0.8487 HT= 1.1

SE= 1.80

	DELTA DEG.	AZ. DEG.	P M	P S	P O-C S	S M	S S	S O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
RAOUL ISLAND	2.89	348.7	0	46	-2	1	19	-5					
ONERAHI	7.85	239.9	2	1	3								
TUAI	8.09	212.7				3	26	-9					
KARAPIRO	8.28	223.4	2	1	-3								
CHATEAU	9.18	217.5	2	14	-3								
WELLINGTON	11.16	212.6				4	34	-17					
KAIMATA	13.74	217.6				5	36	-17					
GEBBIES PASS	14.04	211.6	3	23	0	5	41	-19					
AFIAMALU	18.79	16.8	4	21	-2	6	37	-73					
KOUMAC	20.10	300.4	4	38	0								
BRISBANE	26.38	272.5	5	39	-1	10	29	17					
CANBERRA	28.16	254.2	5	58	2								
MELBOURNE	31.32	248.9	6	28	14								
CHARTERS TS.	34.71	281.1	6	53	-1	12	20	-4					
PORT MORESBY	39.92	296.5	8	35	57	14	1	17			17	27	SS
CAPE HALLETT	40.82	185.8	7	47	2	14	1	4					
SCOTT BASE	46.40	184.6	8	31	1						10	16	PP
DARWIN	51.37	280.2	9	8	-1								
BYRD STATION	53.15	169.4	9	21	-1								
SOUTH POLE	58.07	180.0	10	17	19								
ARGENTINE I.	70.12	155.7	11	14	-2								
MAWSON	70.94	200.6	11	20K	-1				11	31			
LEMBANG	73.80	272.1									17	8	
MATUSIRO	79.98	325.0	12	10	-3								
PASADENA	86.22	45.5	12	44	-1								
BERKELEY	86.45	40.5	12	46	0								
BOULDER CITY	89.47	46.0	13	1	1								
TUCSON TELE.	89.75	51.0	13	3	1								
EUREKA	91.11	42.8	13	7	-1								
GLEN CANYON	92.11	46.9	13	14	1								
AREQUIPA	94.16	112.2	13	24	2								
THULE	125.38	15.9	19	5	2								
QUETTA	125.74	286.1	19	5	1								
BROKEN HILL	127.55	212.1	19	9	1								
HALIFAX	127.85	55.9	19	8A	0								
SHIRAZ	137.50	280.3	19	28	2								
SODANKYLA	141.99	345.2	19	28	-6								
KIRUNA	142.76	349.0	19	34	-2								
KAJAANI	144.40	341.4	19	36	-2								
TIFLIS	145.31	298.2	19	49	9								
SIDA	145.72	16.3	19	42K	1								
MOSCOW	146.08	324.5	19	43	2								
UMEA	146.41	346.0	19	40	-2								
PULKOVO	146.80	334.7	19	44	2								
SKALSTUGAN	147.93	352.0	19	46	2						20	13	
NURMIJARVI	148.11	339.5	19	45	0								
UPPSALA	150.52	344.7	19	53	5								
KSARA	152.19	282.6									20	11	PKP2
GOTEBORG	153.63	348.8	20	0	7								
LWOW	156.22	324.3	19	57	1								
COLLMBERG	159.38	341.5	20	0	0						20	38	PKP2
PRUHONICE	160.08	337.2	20	42	41						24	23	
JENA	160.08	343.4	19	58	-3						20	44	
SOFIA	160.56	308.8									20	48	PKP2
VIENNA-H.	160.84	331.3	20	2	0								
BENSBERG	160.87	351.4	20	43	41								

STUTTGART	162.63	345.4	20	4	0								
GARCHY	164.84	359.1	20	6	0							20	37
BAGNERES	168.86	9.8	20	11	2								

JULY 21 4.H 32.M 20.S EPICENTRE 40.28 -29.70 DEPTH= 0.KM

A= 0.66452 B=-0.37911 C= 0.64397 D=-0.4955 E=-0.8686
G= 0.5593 H=-0.3191 K=-0.7651 HT= -1.8

SE= 2.76

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
ANGRA DO HO.	2.51	129.5	0	45	2	1	26	11				
PONTA DELGDA	4.04	127.8	1	1A	-4	1	52	-1				
COIMBRA	16.25	83.4	3	47	-4							
TOLEDO	19.62	82.8	4	32	-1							
GRANADA	20.58	90.2	4	52K	9	8	41	12			5	5 PP
ALMERIA	21.54	90.4	4	55	2						5	11 PP
BAGNERES	22.42	73.0	5	4	2							
ALICANTE	22.65	85.4	5	5	1							
PARIS	24.33	58.7	5	17	-3							
CLERMONT-FD.	24.51	66.2	5	23	1							
GARCHY	24.55	62.5	5	22	0						5	42
HALIFAX	25.27	291.1	5	29	0							
JENA	30.41	55.6	6	14	-2							
PRUHONICE	32.27	57.5	6	32	-1							
PALISADES	33.28	285.9									11	58
ISTANBUL UN.	43.79	69.1	8	9	0							
KSARA	51.68	75.1	9	12	1							
RAPID CITY	52.91	300.0	10	19	59							
WICHITA MTS.	53.69	287.5	9	24	-2							
HUNGRY HORSE	57.98	308.5	9	55	-2							
GLEN CANYON	61.83	295.9	10	23	0							
EUREKA	63.49	300.3	10	33	-1							
TUCSON TELE.	63.64	291.1	10	36	1							
TUCSON	63.77	291.0	10	36	0							
COLLEGE	64.64	335.4	10	47	5							
CHINA LAKE	66.54	297.7	10	53	-1							
BROKEN HILL	76.63	122.2									17	5
BULAWAYO	80.96	125.9									19	55

JULY 21 18.H 50.M 58.S EPICENTRE 30.04 131.48 DEPTH= 48.KM

A=-0.57438 B= 0.64964 C= 0.49805 D= 0.7492 E= 0.6624
G=-0.3299 H= 0.3731 K=-0.8671 HT= 1.8

DEPTH OF FOCUS= 0.002R

SE= 2.90

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
YAKUSIMA	0.94	296.0				0	22	-9				
KAGOSIMA	1.72	332.5	0	22	-7	0	50	0				
MIYAZAKI	1.88	358.4	0	23	-8	0	56	2				
KUMAMOTO	2.85	346.7	0	19	-26	0	53	-25				
ASOSAN	2.87	353.1	0	12	-33	0	47	-32				
UNZENDAKE	2.88	338.9	1	4	19						3	42
NAGASAKI	3.01	333.4	0	47K	0	1	26	4				
SIMIDU	3.01	24.6	0	42	-5	1	15	-7				
OOITA	3.18	2.1	0	49K	0	1	23	-3				
UWAZIMA	3.31	15.7	0	51	0	1	25	-5				
SAGA	3.36	342.8	0	53	1	1	24	-7				
HUKUOKA	3.65	345.4	0	58	2							
KOTI	3.91	26.0	0	57	-2	1	40	-5				
MATUYAMA	3.95	15.9	0	59	-1	1	42	-4				
HIROSIMA	4.39	10.3	1	5	-1	1	53	-4				
TAKAMATU	4.79	26.4	1	8	-4	1	59	-8				
SIOMISAKI	4.99	45.9	1	24	9						4	17
SUMOTO	5.18	33.2	1	13	-4						2	41
MATSUE	5.56	13.5	1	29	6							
KOBE	5.59	33.1				2	24	-3				
OWASE	5.67	43.7	1	16	-8	2	15	-14				
OSAKA	5.73	35.6	1	32	7						4	17

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TOTTORI	5.91	21.9	1	26	-1						
KYOTO	6.13	34.7	1	28	-2	2	37	-3			
TOYOOKA	6.16	26.3	1	28	-3						
KAMEYAMA	6.39	40.0	1	38	4					4	37
HIKONE	6.59	36.4	1	35	-2						
TSURUGA	6.80	33.4	1	38	-2						
GIHU	6.96	38.4	1	40	-2						
OMAESAKI	7.29	49.7	2	12	25						
IIDA	7.64	42.7	1	48	-4						
OSIMA	8.17	52.7	1	55	-4						
KOHU	8.18	44.8	1	56	-3						
TOYAMA	8.18	34.2	2	8	9						
HUNATU	8.20	46.5	1	55	-4						
MATUMOTO	8.24	39.6	1	58	-2						
MATUSIRO	8.59	39.2	2	1A	-4	3	33	-8		2	26
WAZIMA	8.60	30.2	2	4	-1						
OIWAKE	8.63	41.5	2	13	8						
NAGANO	8.68	38.6	1	50	-16						
TOKYO C.M.O.	8.94	48.9	2	22	12						
ZO-SE	8.94	279.4	2	9K	-1	3	57	7			
MAEBASI	8.98	43.1	2	10	0						
KUMAGAYA	9.00	45.3	2	8	-2	4	56	65			
KAKIOKA	9.55	47.5	2	15	-3						
UTUNOMIYA	9.56	45.0	2	19	1						
MITO	9.83	47.6	2	19	-3						
NIIGATA	10.06	36.6	2	22	-3						
HUKUSIMA	10.72	41.8	2	38	4						
NANKING	11.08	283.7	2	38	-1	4	43	1			
SENDAI	11.32	41.0	2	39	-3						
AKITA	11.97	33.9								3	6
VLADIVOSTOK	13.06	1.4	3	5	0						
MORI	14.09	28.9								3	21
CHANGCHUN	14.62	342.0	3	31K	5	6	19	12			
PEKING	16.00	312.6	3	47K	4	6	57	18			
HONG KONG	17.33	247.7	4	0	0	7	42	32			
CANTON	17.63	251.2	4	4A	0	7	30	14			
MANILA	18.05	214.3	4	8	-1	6	39	-47			
Y.-SAKHLINSK	19.06	24.1	4	19	-2						
SIAN	19.55	288.2	4	27A	0						
PAOTOW	20.37	306.9	4	35	0	8	26	10			
GUAM	20.55	140.5	4	30	-7						
UGLEGORSK	20.66	20.0	4	38	0						
CHENGTU	23.70	278.5	5	8	0	9	25	8			
LANCHOW	23.90	291.8	5	10	0						
KUNMING	25.91	266.1	5	30	-1	10	3	9			
ULAN-BATOR	25.98	320.3	5	28	-2						
PETROPAVLOVK	30.35	33.1	6	9	-1						
YAKUTSK	32.01	358.4	6	23	-1						
MAGADAN	32.28	18.4	6	26	-1						
LHASA	34.95	279.7	6	49	-1						
RABAUL	39.39	146.3	7	22	-5						
PORT MORESBY	42.01	156.5				13	59	-5		9	24
LEMBANG	43.23	215.9	7	56K	-2	14	7	-14			
DEHRA DUN	45.82	284.5								10	38
FRUNSE	46.68	302.1	8	26	0						
WARSAK DAM	50.34	291.0	8	55	1						
TASHKENT	50.79	300.7	8	57	-1						
STALINABAD	51.62	297.3	9	6	2	16	5	-15			
CHARTERS TS.	51.83	162.2	9	1	-5						
SVERDLOVSK	55.08	320.7	9	30	0						
QUETTA	55.11	287.6	9	29	-1					11	36 PP
KHEYS	57.87	349.3	9	44	-5						
COLLEGE	59.32	29.3	9	57	-3						
BRISBANE	60.63	158.2	10	6	-2					13	0
APATITY	65.59	335.3	10	40	-1	19	25	4			
TEHERAN	65.73	298.5	10	39	-3						
MAKHACH-KALA	66.11	307.0	10	45	0						
RIVERVIEW	66.19	162.2								12	9
SHIRAZ	67.07	291.9	10	50	-1					17	47
CANBERRA	67.07	164.5	10	48A	-3						
MOSCOW	67.81	322.4	10	54	-1	19	54	6			
SODANKYLA	68.08	336.2	10	56A	-1						
GORIS	68.15	303.8	10	57	0						
KAJAANI	69.11	332.8	11	0	-3						
TROMSOE	69.51	339.8	11	4	-2						
PULKOVO	69.84	328.1	11	8	0						
KIRUNA	69.97	337.9	11	7	-1	20	22	8			
SOTCHI	71.17	309.9	11	15	-1						

RESOLUTE	71.27	11.7	11 15	-1				
NURMIJARVI	72.02	330.1	11 21K	0				
UMEA	72.12	334.3	11 18A	-3				
SIMFEROPOL	74.23	313.0	11 34	0	21 10	8		
SKALSTUGAN	75.16	336.2	11 39	0				
UPPSALA	75.35	331.5	11 39	-1				
KISHINEV	76.51	316.6	11 46	-1				
LWOW	77.82	320.8	11 55	1	21 48	6		
KSARA	78.14	302.2	11 58	2				
GOTEBORG	79.00	331.6	11 59	-2				
ISTANBUL UN.	79.40	311.3	12 3	0				
JERUSALEM	79.60	300.6	12 5K	1				
KRAKOW	79.90	322.5	12 5	0			12 15	PCP
COPENHAGEN	80.09	329.8	12 6	0				
SKALNATE PL.	80.23	321.6	12 12	5				
CHORZOW	80.25	323.0	12 8	1			12 17	PCP
RACIBORZ	80.79	323.2	12 11	1			12 15	PCP
SOFIA	82.10	315.0	12 42	25				
HUNGRY HORSE	82.46	37.8	12 19	0				
BRATISLAVA	82.51	322.1	12 20	1			12 26	PCP
BELGRADE	82.62	317.9	12 21A	1			13 33	
COLLMBERG	82.64	326.2	12 20K	0			12 24	PCP
PRUHONICE	82.72	324.5	12 21K	1				
PRAGUE	82.72	324.7	12 22	2			14 19	
VIENNA-H.	82.85	322.4	12 23K	2				
HALLE	83.02	326.8	12 22	0	22 40	4		
HELWAN	83.45	300.6	12 25	1				
JENA	83.56	326.5	12 23	-1	22 47	6		
KASPERSKE H.	83.74	324.3	12 26K	1			14 57	
RENO	84.22	47.4	12 27	-1				
BUTTE	84.67	39.0	12 29	-1				
MUNSTER	84.70	328.9	12 32	2				
LJUBLJANA	85.21	321.5	12 33	0				
BENSBERG	85.60	328.4	12 35	0			13 30	
BOZEMAN	85.72	38.6	12 35	0				
TRIESTE	85.87	321.5	12 36	0	23 14	10		
HEIDELBERG	85.96	326.6	12 36	0				
STUTTGART	86.12	325.9	12 37	0				
EUREKA	86.67	45.7	12 40	0				
STRASBOURG	86.98	326.4	12 42	1				
CHINA LAKE	87.79	49.4	12 45	0				
FLORENCE X.	88.44	321.2	12 55	7				
BESANCON	88.77	326.3	12 49	-1				
ROME	89.00	319.2	13 13	22				
PARIS	89.25	329.1	12 57	5				
FLAMING GRGE	89.70	41.4	12 53	-1				
GARCHY	90.12	327.8	12 56	0			13 6	PCP
FOLINIERE	90.58	330.5	12 59	1				
RAPID CITY	90.92	36.0	13 0	0				
SCOTT BASE	109.68	172.5	18 54	777				
HUANCAYO	149.36	60.0	19 45	6				

JULY 21 22.H 39.M 51.S EPICENTRE 29.75 131.78 DEPTH= 0.KM

A=-0.57948 B= 0.64847 C= 0.49365 D= 0.7457 E= 0.6663
G=-0.3289 H= 0.3681 K=-0.8697 HT= 1.9

SE= 2.31

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	PP S	SUPP. M	SUPP. S
ABUYAMA	6.03	31.1	1	33A	0							
MATUSIRO	8.65	36.8	2	9K	-1						3	41
ZO-SE	9.26	281.0	2	18A	0	4	8	4				
NANKING	11.41	284.9	2	47	1	5	0	3				
MIZUSAWA	12.12	37.0	3	0	3							
VLADIVOSTOK	13.35	0.4	3	14	0							
CHANGCHUN	14.97	341.6	3	40	5	6	35	12				
PEKING	16.39	312.9	3	57A	4	7	7	11				
HONG KONG	17.47	249.0	4	8	1	7	23	2				
CANTON	17.79	252.5	4	11	0							
Y.-SAKHLINSK	19.22	23.2	4	25	-4							
SIAN	19.89	288.9	4	34A	-2	8	11	-4				
GUAM	20.16	140.7	4	40	1							
PAOTOW	20.76	307.2	4	43	-2	8	33	0				
UGLEGORSK	20.84	19.3	4	47A	1							

CHENGTU	24.00	279.2	5	16	-2	9	35	3			
KUNMING	26.15	266.9	5	38	0	10	12	3			
ULAN-BATOR	26.37	320.4	5	39	-1						
PETROPAVLOVK	30.45	32.6	6	17	0						
YAKUTSK	32.31	358.2	6	31	2	11	42	-5			
LHASA	35.26	280.2	6	59	0						
SHILLONG	35.48	273.1	6	57A	-4						
DEHRA DUN	46.15	284.8							24	0	
FRUNSE	47.06	302.4	8	35A	-1						
LAHORE	48.97	287.4	8	47	-3						
NAMANGAN	49.42	300.2	8	55	1						
WARSAK DAM	50.69	291.3	9	9	5						
TASHKENT	51.16	300.9	9	6	-1	16	30	5			
CHARTERS TS.	51.47	162.5	9	9	-1						
QUETTA	55.45	287.9	9	42	3						
SVERDLOVSK	55.47	320.8	9	38	-1						
COLLEGE	59.45	29.3	10	7	0						12 26 PP
BRISBANE	60.26	158.5	10	14	1						
APATITY	65.97	335.4	10	49	-2	19	35	-3			
SHIRAZ	67.42	292.1	11	0	0						
MOSCOW	68.20	322.6	10	47	-18						
SODANKYLA	68.46	336.3	11	5	-1						
TIFLIS	68.81	306.7	11	15	6						
KAJAANI	69.48	332.9	11	11	-2						
TROMSOE	69.87	339.9	11	13	-2						
KIRUNA	70.33	338.0	11	16K	-2	20	30	0			
RESOLUTE	71.50	11.8	11	24	-1						
SOTCHI	71.56	310.0	11	28	3						
UMEA	72.50	334.4	11	28	-3						
SKALSTUGAN	75.53	336.3	11	46	-2						
UPPSALA	75.73	331.6	11	48	-2						
KISHINEV	76.90	316.8	11	59	3	21	41	-3			
LWOW	78.21	320.9	12	4	1						
KSARA	78.52	302.3	12	7	2						
GOTEBORG	79.38	331.7	12	8	-2						
ISTANBUL UN.	79.79	311.5	12	11	-1						
COPENHAGEN	80.47	330.0				22	15	-7			
ARCATA	80.75	48.2	12	7	-10						
RACIBORZ	81.18	323.3	12	20	1						12 24 PCP
SHASTA	81.93	47.6	12	23	0						
HUNGRY HORSE	82.53	37.9	12	29	3						
BRATISLAVA	82.90	322.2	12	32	4						12 34 PCP
COLLMBERG	83.03	326.3	12	29K	0						12 34 PCP
PRUHONICE	83.10	324.7	12	30K	1						
HALLE	83.40	326.9	12	31	0	22	52	0			
HELWAN	83.83	300.8	12	34	1						13 4
JENA	83.95	326.6	12	33	-1						
KASPERSKE H.	84.13	324.4	12	35K	0						
RENO	84.22	47.5	12	36	1						
BUTTE	84.73	39.1	12	38	0						
ATHENS	84.88	311.0	12	36	-2						
MUNSTER	85.08	329.1	12	39	0						
LJUBLJANA	85.60	321.6	12	43	1						
BENSBERG	85.99	328.5	12	43	-1						
TRIESTE	86.27	321.7	12	46	1	23	21	1			
STUTTGART	86.50	326.0	12	46	0						
EUREKA	86.69	45.9	12	48	1						
STRASBOURG	87.36	326.6									23 21
CHINA LAKE	87.78	49.6	12	53	0						
FLAMING GRGE	89.74	41.6	13	2	0						
GARCHY	90.50	327.9	13	5	0						
RAPID CITY	91.00	36.2	13	8	0						
PALISADES	105.69	19.9									23 19
SOUTH POLE	119.58	180.0	18	52	0						
BYRD STATION	122.32	168.7	18	58	0						

JULY 22 18.H 12.M 24.S EPICENTRE -54.20 140.48 DEPTH= 0.KM

A=-0.45320 B= 0.37389 C=-0.80921 D= 0.6364 E= 0.7714
G= 0.6242 H=-0.5150 K=-0.5875 HT= -6.9

SE= 1.77

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
FORT NELSON	12.16	24.7	2	57A	0							

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MOORLANDS	12.58	23.4	3 3K	0							
MELBOURNE	16.66	12.5	3 54	-2	7 6	4					
WILKES	18.95	218.4	4 24	-1	8 1	7					
CANBERRA	19.80	21.0	4 33	-2	8 15	3					
RIVERVIEW	21.72	24.6	4 59	5	9 2	11					
CAPE HALLETT	22.12	156.2	4 57	-1	9 10	12			5 30	PP	
SCOTT BASE	25.52	167.4	5 31	-1					10 13		
BRISBANE	28.27	23.6	5 57	0	10 40	-2					
PERTH	28.35	311.7							12 35		
CHARTERS TS.	34.34	9.7	6 48	-2	12 16	-2					
SOUTH POLE	35.98	180.0	7 4	0							
MAWSON	37.27	218.2	7 15A	0			7 32		8 44	PP	
PORT MORESBY	45.00	9.3	8 17	-2	14 58	0			18 24	SS	
LEMBANG	54.15	318.3	9 28A	-1							
BULAWAYO	85.91	241.0	12 44	1							
SHILLONG	89.80	317.3	12 59K	-3							
MATUSIRO	90.39	358.2	13 2	-2	24 2	4			36 36		
EUREKA	128.24	73.3	19 8	0							
WICHITA MTS.	135.04	90.8	19 27	6					22 54	SK	
BRATISLAVA	144.84	283.9	19 36	-3							
LJUBLJANA	145.18	279.1	19 39	0							
RACIBORZ	145.19	287.4	19 38	-1							
TRIESTE	145.41	278.0	19 40	0							
NURMIJARVI	146.08	307.0	19 44	3							
SODANKYLA	146.94	319.5	19 46	4							
CHAPEL HILL	147.19	107.6	19 45	2							
PRUHONICE	147.20	285.2	19 46	3							
KASPERSKE H.	147.34	283.3	19 46A	3					20 48		
COLLMBERG	148.68	286.6	19 50A	5					19 56	PKP2	
JENA	149.32	285.2	19 51	5					21 48		
KIRUNA	149.35	319.9	19 55	9							
HALLE	149.36	286.4	19 56	10							
STUTTGART	149.63	280.0	19 51	4							
BAGNERES	151.88	263.1	20 8	18							
TOLEDO	152.25	253.5	20 0	9							
SKALSTUGAN	152.41	310.6	20 3	12							
GARCHY	152.52	273.1	19 59	8							

JULY 23 14.H 3.M 40.S EPICENTRE -18.53 168.08 DEPTH= 28.KM

A=-0.92835 B= 0.19597 C=-0.31586 D= 0.2065 E= 0.9784
G= 0.3091 H=-0.0652 K=-0.9488 HT= 5.0

SE= 2.65

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S	
PORT VILA	0.83	16.0	0 15K	-1					
NOUMEA	4.05	201.9	0 59K	-3	1 46	-3			
KOUMAC	4.11	240.0	1 1	-2					
SUVA	9.84	89.4	2 35	12	4 35	22			
HONIARA	12.00	317.8	2 52	0				4 22	
BRISBANE	16.61	235.2	3 50	-2	7 3	8			
ONERAHI	18.05	163.3	4 12	2					
AUCKLAND	19.20	163.4	4 20	-4	8 5	11			
AFIAMALU	19.87	79.6	4 33	1	8 44	35			
KARAPIRO	20.40	162.9	4 36	-1					
CHARTERS TS.	20.65	262.1	3 48	-52	8 33	9			
RABAUL	21.09	310.6	4 50	6					
RIVERVIEW	21.47	221.5	4 45K	-3			4 55	9 14	SS
CHATEAU	21.59	164.1	4 52	2					
TUAI	21.68	160.5	4 53	3					
PORT MORESBY	22.22	291.3	4 57	1	9 4	10		5 29	
WELLINGTON	23.39	167.2	5 8	1	9 20	5			
CANBERRA	23.78	221.5	5 13	2	9 32	10	5 24	8 46	PCP
GEBBIES PASS	25.39	172.3	5 28	1					
MOORLANDS	29.71	212.2	6 13	7					
DARWIN	36.37	274.2	7 4	0	12 43	0			
MUNDARING	48.37	243.4	8 43K	2					
PERTH	48.69	243.5	8 55	11	15 50	7		10 50	PP
HONOLULU	51.61	41.5	9 7	1	16 44	20			
CAPE HALLETT	53.80	179.2	9 21	-1	16 55	1		10 44	PCP
MANILA	56.85	302.3	10 10	25	17 57	23			
BAGUIO CITY	58.23	303.7	9 54	0	17 56	3			
SCOTT BASE	59.36	180.3	10 0	-2				11 38	PP
LEMBANG	59.88	272.8	10 7	1	18 17	3			
WILKES	60.37	203.1	9 48	-21	18 24	4			

TUKUBASAN	60.54	334.2	10	9	-1	18	24	1			23	0 SS
ABUYAMA	61.44	329.8	10	14A	-2							
MATUSIRO	61.62	332.9	10	17	0	18	36	0			12	36 PP
KURILSK	66.06	344.5	9	45	-61							
HONG KONG	66.52	305.3	10	58	9	19	44	7			24	12 SS
ZO-SE	66.81	317.0	10	50	-1	19	41	1				
MIRNY	67.22	204.8	11	16	22	19	46	1				
CANTON	67.59	305.6	10	57	1	19	55	5				
BYRD STATION	68.83	169.7	11	2	-2							
NANKING	68.99	316.4	11	5	0	20	11	5				
Y.-SAKHLINSK	69.13	341.7	11	4A	-2							
VLADIVOSTOK	69.78	332.6	11	9A	-1							
UGLEGORSK	71.17	342.3	11	18A	0							
PETROPAVLOVK	71.72	354.0	11	20A	-1							
CHANGCHUN	73.38	329.1	11	29A	-2	20	59	2				
PEKING	75.70	321.4	11	43	-2	21	27	4				
SIAN	76.94	313.1	11	53A	1	21	42	5				
KUNMING	76.97	302.3	11	53	1	21	44	7				
CHENGTU	78.62	307.8	12	2	1	21	59	4				
MAWSON	78.67	202.2	12	2K	1	21	56	1	12	18	12	26 *SP
MAGADAN	79.07	351.1	12	0	-3	22	4	5				
PAOTOW	79.76	318.9	12	8A	1	22	12	5				
LANCHOW	81.43	312.4	12	16A	0							
ULAN-BATOR	85.76	323.8	12	33	-5	23	3	-4				
YAKUTSK	85.85	342.9	12	37	-1	23	18	10				
SHILLONG	86.06	298.5	12	40K	1							
BERKELEY	86.11	48.1	12	39A	-1	23	16	5			24	26
LICK	86.31	48.7	12	42A	1						13	4
SHASTA	87.30	45.5	12	44	-1							
FRESNO	87.38	49.9	12	45	-1							
PASADENA	87.50	52.8	12	46	0	23	26	2			16	14 PP
ARGENTINE I.	87.56	160.5	12	47	0							
MINERAL	87.68	46.1	12	46K	-1							
LHASA	88.29	301.9	12	52	2	23	40	9				
RENO	88.56	47.4	12	52	1							
IRKUTSK	89.51	326.5	12	53	-3							
COLLEGE	89.69	17.3	12	54	-3							
BOULDER CITY	90.73	52.2	13	1	-1							
EUREKA	91.25	48.7	13	3	-1							
TUCSON	92.48	56.9	13	10	0							
TUCSON TELE.	92.60	56.9	13	11	1							
GLEN CANYON	93.53	52.3	13	15	1							
FLAMING GRGE	96.47	49.1	13	25	-3							
WICHITA MTS.	102.97	57.6	14	4	7	24	48	14			18	2 PP
FRUNSE	104.84	310.6				24	46	4			18	13 PP
STALINABAD	108.45	305.4	18	32	777							
TASHKENT	108.49	308.3	18	47	777	25	1	3				
KHEYS	111.40	350.5	18	59	28							
SVERDLOVSK	114.85	324.7	18	30	-8							
SHIRAZ	120.78	293.9	18	56	6							
PALISADES	122.93	52.8									20	30
SHAWINIGAN	123.20	46.1	18	54	0							
BULAWAYO	124.71	228.0	19	0A	3							
SODANKYLA	125.34	342.8	18	59	1							
TROMSOE	125.53	347.3	18	59	0							
CARACAS	126.32	90.5	19	7	7	26	11	9				
KIRUNA	126.62	345.3	18	59	-2						20	54 PP
TIFLIS	126.81	308.6	19	2	1						27	36 SKKS
MOSCOW	127.49	327.1	19	2	-1							
BROKEN HILL	128.45	233.3	19	7	3							
PULKOVO	128.89	334.1	19	7	2							
UMEA	129.75	342.1	19	9	2						22	31 PKS
SOTCHI	130.16	311.8	19	9	1						22	33 PKS
NURMIJARVI	130.65	337.1	19	9	0						22	32 PKS
TRINIDAD	131.60	92.1	19	12	2						22	43
SKALSTUGAN	132.04	345.7	19	11	0						22	38 PKS
UPPSALA	133.58	339.9									22	0 PP
SIMFEROPOL	133.64	315.1	19	14	0						22	44 SKP
KSARA	134.88	299.5	19	25	8	26	35	12			22	4 PP
LWIRO	134.93	247.0	19	19	2						21	57
JERUSALEM	135.66	296.7	19	23	5						22	9 PP
KISHINEV	136.23	319.8	19	26	7						22	46 SKP
LWOW	137.57	325.7	19	25	3							
WARSAW	137.63	330.2									18	23
ISTANBUL KA.	138.44	311.6				26	26	-3			22	21 PP
COPENHAGEN	138.58	339.3	19	26	3						23	6 PKS
BUCHAREST	139.11	317.6	19	25	1						22	7
HELWAN	139.18	294.4	19	26	2						22	26 PP

KRAKOW	139.56	328.4	19 34	9					22 27	
RACIBORZ	140.38	329.5	19 28	1					22 27	
ABERDEEN	140.73	351.6	19 35	8					23 10	SKP
SOFIA	141.69	316.7	19 29	0					23 7	
HALLE	142.08	335.7	19 29	-1					22 33	PP
PRAGUE	142.13	332.2							19 59	
PRUHONICE	142.14	332.0	19 32	2					22 52	PP
BRATISLAVA	142.19	328.0	19 31	1					22 48	PKS
VIENNA-H.	142.50	328.6	19 31	1						
JENA	142.67	335.4	19 27	-4					22 31	PP
KASPERSKE H.	143.20	331.8	19 31	-1						
MUNSTER	143.26	339.8	19 31	-1						
DE BILT	143.90	342.1	19 38	5						
LJUBLJANA	144.92	327.3	19 34A	-1					22 55	PP
HEIDELBERG	145.01	336.3	19 34	-1						
STUTTGART	145.30	335.2	19 36	1					41 55	SS
KARLSRUHE	145.44	336.2	19 39	4						
TUBINGEN	145.57	335.1	19 36	0						
TRIESTE	145.59	327.5	19 37	1					23 6	PP
KEW	145.87	347.0	19 37	1						
EBINGEN	145.89	334.8	19 36	0						
RAVENSBURG	145.94	333.8	19 37	1						
STRASBOURG	146.04	336.4	19 38A	2					22 57	PP
PADOVA	146.70	328.8	19 51	13					21 20	
CHUR	146.70	332.8	19 43	5						
BASLE	146.97	335.5	19 40A	2						
BANGUI	147.01	248.5	19 42	4			19 55			
PARIS	147.62	342.1	19 44	5						
NEUCHATEL	147.65	335.6	19 42	3						
PAVIA	148.15	331.2	19 53	13					23 10	
FLORENCE X.	148.17	327.3	19 49	9					23 27	PKS
FOLINIERE	148.44	345.5	19 45	5						
ROME	148.78	323.5	19 45	4					23 14	PKS
GARCHY	148.80	340.1	19 46	5					23 17	PP
MESSINA	149.07	315.0	19 46	5						
ISOLA	149.88	332.2	19 44	1						
MONACO	150.06	331.2	19 49	6						
CLERMONT-FD.	150.11	338.6	19 50	7					20 6	PKP2
BAGNERES	153.49	339.9	19 48	0					23 41	PP
TORTOSA	155.36	337.0	19 59	9					25 32	
TOLEDO	157.66	343.9	19 55	2					23 0	PP
ALICANTE	157.87	335.5	19 58	4	27 3	8			24 12	PP
COIMBRA	158.19	352.8	19 54	0					24 4	PP
ALMERIA	159.94	337.4	19 57K	1					24 27	PP
GRANADA	160.03	340.2	19 55K	-1					24 24	PP
MBOUR	173.64	129.7	20 8	1					21 32	PKP2

JULY 23 14.H 38.M 18.S EPICENTRE 7.00-123.60 DEPTH= 213.KM

A=-0.54938 B=-0.82675 C= 0.12109 D=-0.8329 E= 0.5535
G=-0.0670 H=-0.1009 K=-0.9926 HT= 6.9

DEPTH OF FOCUS= 0.028R

SE= 2.92

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S	
MANZANILLO	22.24	55.6			8 52	27		6 20	
MAZATLAN	23.08	44.0			9 12	33		14 26	
GUADALAJARA	23.89	53.3						12 10	
TACUBAYA	26.72	60.2	5 28	7	9 50	11			
CHIHUAHUA	27.15	35.5	5 40	15	10 26	40			
PASADENA	27.48	9.8	5 28	0	10 16	24		8 41	PCP
TUCSON	27.80	23.7	5 29	-2	10 14	17			
TUCSON TELE.	27.92	23.8	5 31	-1					
OAXACA	28.03	66.8						11 18	
VERA CRUZ	29.32	62.9	5 50	5	10 46	25		7 2	PPP
FRESNO	29.83	6.1	5 47	-2					
LICK	30.25	3.1	5 52K	-1					
BERKELEY	30.75	2.1	5 58	1	11 1	18		12 33	
GLEN CANYON	31.78	18.5	6 5	-1	8 54	-125		7 21	PP
UKIAH	31 99	0.6	6 6	-2					
COMITAN	32.13	70.6	6 25	16				16 22	
RENO	32.57	5.5	6 13K	0					
EUREKA	33.06	10.9	6 47	30	12 5	46		9 0	PP
HAWAII V.OB.	33.14	295.0	6 15	-3					

MINERAL	33.25	2.8	6	19A	0						
SHASTA	33.57	1.7	6	20	-1						
SALT LAKE C.	35.23	15.6	6	35	0						
WICHITA MTS.	35.94	36.4	6	38	-3	12	19	16		8	4 PP
KIPAPA	36.20	296.9	6	42	-2						
HONOLULU	36.23	296.7	6	48	4	12	20	12			
CORVALLIS	37.43	0.4	6	54	0						
LARAMIE	37.75	22.4	6	55	-2					9	11 PP
FAYETTEVILLE	39.52	38.7	7	10A	-1	13	16	19	7 20	16	24 SCS
BUTTE	40.03	12.0	7	15	0						
BOZEMAN	40.03	13.7	7	15	0	13	30	25			
RAPID CITY	41.02	22.5	7	22	-2						
VICTORIA	41.37	0.2	7	25	-1						
HUNGRY HORSE	42.00	9.5	7	28	-4						
BANFF	44.53	7.2	7	53	1						
COLUMBIA	47.57	49.6	8	15	-1	15	12	19		10	12 PP
CHINCHINA	47.75	89.6	8	14A	-3	15	14	18		10	11 PP
GALERAZAMBA	47.86	81.8				15	45	48			
BOGOTA	49.32	89.9	8	29A	0	15	39	21	8 55		
FUQUENE	49.59	88.8	8	32K	1	15	49	28		10	24 PP
CLEVELAND	50.69	40.6	8	39	0	15	55	18			
SITKA	50.76	351.8	8	39	-1	15	58	20			
MORGANTOWN	50.83	43.4	8	38K	-2	15	56	17			
HUANCAYO	51.60	111.3	8	44	-2	16	9	20			
AFIAMALU	52.13	246.4	8	48	-2						
WASHINGTON	52.51	45.5	9	3	10	16	3	2			
PENNSYLVANIA	52.79	43.1	8	53	-2	16	25	20			
PALISADES	55.59	44.4	9	15K	0	17	4	21		12	45 PPP
CARACAS	56.06	82.1	9	14	-5	17	10	21			
OTTAWA	56.29	38.9	9	17	-3						
AREQUIPA	56.58	114.9	9	22	0						
SAN JUAN	57.00	72.7	9	16	-9						
BREBEUF	57.66	39.6	9	28	-2						
WESTON	57.91	43.8	9	29A	-3	17	30	17			
SHAWINIGAN	58.65	38.8	9	34	-1						
LAPAZ	59.63	113.6	9	43	-1	17	59	26			
COLLEGE	60.26	348.4	9	44	-4	18	3	20		12	21 PP
ANTIGUA	61.02	74.4	10	2	9						
GRENADA	61.13	80.1	9	50	-3						
TRINIDAD	61.49	81.7	9	53	-3						
ST. VINCENT	61.55	78.9	9	53	-3						
HALIFAX	63.95	43.5	10	11	-1						
SANTIAGO	64.30	132.2	10	12	-2						
RESOLUTE	69.62	7.8	10	45	-3						
KARAPIRO	72.05	226.6	10	59	-3						
CHATEAU	72.58	225.3	11	4	-1						
THULE	75.45	11.6	11	26	4						
PETROPAVLOVK	77.07	322.7	11	30	-1					37	21
MAGADAN	81.78	329.1	11	56	0	22	7	18			
ARGENTINE I.	84.07	158.6	12	7	-1						
RABAUL	84.79	265.1	12	12	1						
BYRD STATION	86.93	179.3	12	20	-2						
Y.-SAKHLINSK	87.43	316.9	12	24	0						
BRISBANE	87.55	242.2	12	26	1						
UGLEGORSK	87.59	319.0	12	27	2						
CAPE HALLETT	89.58	196.2	12	33	-1	23	16	12			
RIVERVIEW	89.92	236.1	12	38	2						
PORT MORESBY	90.39	260.6	12	41	3						
YAKUTSK	91.58	333.1	12	43	0						
CANBERRA	91.88	234.8	12	47	2						
MATUSIRO	92.41	307.1	12	46	-1						
KHEYS	92.48	359.7	12	48	0	23	59	29			
CHARTERS TS.	92.50	250.2	12	49	1						
SCOTT BASE	92.59	191.5	12	47	-1						
VLADIVOSTOK	95.71	314.6	13	2	0						
SOUTH POLE	96.95	180.0	13	7	-1						
KIRUNA	101.12	13.1	13	26	-1					17	37 PP
SODANKYLA	102.82	11.4	13	35	1					17	52 PKP
COPENHAGEN	107.76	24.4								18	27 PP
NURMIJARVI	108.21	15.9	18	14	777						
GARCHY	108.36	35.1	18	17	777						
BAGNERES	108.77	40.1	18	34	777						
GRANADA	108.88	47.0								18	38 PP
STUTTGART	110.86	31.3	18	11	4					18	41
KASPERSKE H.	112.77	29.0	18	15	4					19	0 PP
MOSCOW	115.58	11.6								19	3 PP
SVERDLOVSK	116.30	357.4	18	20	2						
MAWSON	119.33	182.8	18	25	1					19	45 PP

KISHINEV	120.91	21.7						19 56 PP
SIMFEROPOL	124.54	19.1	18 36	2				
ISTANBUL UN.	125.97	25.5	18 39	3				20 33
LEMBANG	129.17	266.9	18 44	1				
TIFLIS	130.37	11.4	18 49	4				
SHILLONG	132.70	314.5	18 38	-11				
STALINABAD	133.22	346.7	18 55	5				
KSARA	134.98	24.4	18 46	-8				21 27 PP
HELWAN	136.14	32.1	19 0K	4				21 40 PP
JERUSALEM	136.46	26.5	19 10K	14				21 43 PP
WINDHOEK	139.14	116.5	18 55	-6				
BANGUI	140.64	74.4	18 58	-6				
QUETTA	141.67	345.2	19 3	-3				22 3 PP
KIMBERLEY	143.15	129.9	19 7	-1				
SHIRAZ	143.37	5.7	19 7	-2				22 18 PP
PIETERMZBURG	146.77	135.9	19 13	-2				
PRETORIA	147.26	128.0	19 24	9				
POONA	149.34	326.1	19 27	9				
BULAWAYO	150.06	118.6	19 22	2				
BROKEN HILL	151.60	107.4	19 24	2				
TANANARIVE	165.36	144.8	19 43A	5				

JULY 23 15.H 30.M 23.S EPICENTRE -18.51 168.29 DEPTH= 79.KM

A=-0.92915 B= 0.19254 C=-0.31560 D= 0.2029 E= 0.9792
G= 0.3090 H=-0.0640 K=-0.9489 HT= 5.0

DEPTH OF FOCUS= 0.007R

SE= 2.61

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
BRISBANE	16.78	235.4	3 45	-6	6 51	-3		
ONERAHI	18.01	163.8	4 8	2				
AFIAMALU	19.67	79.5	4 24	-1	8 21	24		
KARAPIRO	20.36	163.3	4 31	-1				
CHARTERS TS.	20.85	262.1	4 35	-2	8 30	10		
RABAUL	21.23	310.1	4 40	-1				
CHATEAU	21.55	164.5	4 44	0				
RIVERVIEW	21.62	221.8	4 48	3				8 46 *SS
TUAI	21.63	161.0	4 45	0				
PORT MORESBY	22.41	291.0	4 52	0				
WELLINGTON	23.36	167.6	5 4	2	9 15	10		
CANBERRA	23.93	221.8	5 8A	1	9 28	13		
GEBBIES PASS	25.38	172.6	5 18	-3				
ROXBURGH	26.90	178.4			10 13	9		
MOORLANDS	29.83	212.4	6 11	9			6 35	
MUNDARING	48.56	243.4	8 36K	-1				
PERTH	48.88	243.5						10 11
MANILA	57.02	302.1	9 58	18	17 51	25		
SCOTT BASE	59.38	180.4	9 55K	-1				10 44 PCP
LEMBANG	60.08	272.7	10 0K	-1	18 9	3		
TUKUBASAN	60.62	334.0			18 17	4		25 11 SSS
MATUSIRO	61.69	332.7	10 10K	-2	18 31	4		
ZO-SE	66.94	316.9	10 45	-1	19 35	4		
MIRNY	67.32	204.8	10 47	-1				19 41
CANTON	67.75	305.5	10 52	1	19 49	8		
BYRD STATION	68.81	169.7	10 56	-2				
NANKING	69.12	316.3	11 1	2	20 4	7		
Y.-SAKHLINSK	69.12	341.6	10 58	-1	20 8	11		
VLADIVOSTOK	69.86	332.4	11 12	8				
UGLEGORSK	71.22	342.1	11 6	-6				
PETROPAVLOVK	71.72	353.9	11 13	-2				
CHANGCHUN	73.47	329.0	11 25	0				
PEKING	75.81	321.3	11 39	0	21 22	9		
SIAN	77.08	313.0	11 46	0	21 37	10		
MAWSON	78.76	202.1	11 55	0	21 59	14		12 5 PCP
CHENGTU	78.77	307.7	11 55	0	21 52	7		
MAGADAN	79.09	351.0	11 56	-1				
PAOTOW	79.88	318.9	12 2	1				
LANCHOW	81.57	312.3	12 10	0				
ULAN-BATOR	85.87	323.7	12 32	0				
YAKUTSK	85.89	342.9	12 30	-2				
BERKELEY	85.94	48.0	12 33	1	23 18	20		2 · 24
VINEYARD	86.07	49.3	12 34	1				
LICK	86.15	48.7	12 35K	2				

SHASTA	87.15	45.4	12 39	1			
FRESNO	87.22	49.8	12 40	2			
PASADENA	87.33	52.8	12 36	-3			13 56
MINERAL	87.52	46.0	12 40K	0			
RENO	88.40	47.3	12 45	1			
LHASA	88.45	301.9	12 46	2	23 31	10	23 12 SKS
COLLEGE	89.62	17.2	12 49	-1			16 29 PP
VICTORIA	90.13	38.1	12 49	-3			
CHATRA	90.62	298.0	12 55K	0			
EUREKA	91.08	48.6	12 57	0			
TUCSON	92.30	56.9	13 4	2			
TUCSON TELE.	92.42	56.8	13 5	2			
FLAMING GRGE	96.31	49.1	13 20	-1			
WICHITA MTS.	102.79	57.5	13 50	0			18 9 PP
SHIRAZ	120.96	293.9	18 44	1			
SHAWINIGAN	123.04	46.1	18 47	0			
BULAWAYO	124.87	227.8	18 54	3			
SODANKYLA	125.38	342.9	18 51	-1			
TROMSOE	125.56	347.3	18 52	0			
KIRUNA	126.65	345.4	18 54	0			
MOSCOW	127.59	327.2	18 55	-1			
BROKEN HILL	128.62	233.1	19 0	2			
UMEA	129.79	342.2	19 1	1			22 22 PKS
SOTCHI	130.30	311.8	19 5	4			
NURMIJARVI	130.72	337.2	19 4	2			22 26 PKS
TRINIDAD	131.40	92.0					22 30
SKALSTUGAN	132.07	345.8	19 9K	5			22 30 PKS
UPPSALA	133.63	340.0	19 12	5			22 37 PKS
KSARA	135.04	299.6	19 15	5			21 57 PP
JERUSALEM	135.83	296.8	19 15	4			22 46 PKS
GOTEBORG	137.12	341.5	19 19	5			
LWOW	137.68	325.8	19 20	5			
BUCHAREST	139.23	317.7	19 19	1			21 58
HELWAN	139.36	294.5	19 20	2			22 21 PP
RACIBORZ	140.47	329.7	19 10	-10			22 18
SOFIA	141.81	316.8	19 24	2			22 48
HALLE	142.15	335.9	19 24	1			22 18 PP
PRUHONICE	142.22	332.2	19 21	-2			22 32 PP
BRATISLAVA	142.28	328.2	19 23	0			
VIENNA-H.	142.59	328.8	19 21	-3			
JENA	142.74	335.6	19 22	-2			22 21
KASPERSKE H.	143.28	332.0	19 22	-3			22 37 PP
ATHENS	143.56	309.5					19 24 PKP2
LJUBLJANA	145.01	327.5	19 28A	0			23 37
HEIDELBERG	145.07	336.5	19 28	0			
STUTTGART	145.37	335.4	19 29	0			
TUBINGEN	145.64	335.3	19 30	1			
TRIESTE	145.68	327.7	19 34	5			
KEW	145.90	347.3	19 32	3			
EBINGEN	145.96	335.0	19 31	1			
RAVENSBURG	146.01	334.0	19 31	1			
STRASBOURG	146.10	336.6	19 32	2			
CHUR	146.78	333.0	19 36	5			
PADOVA	146.79	329.0	19 45	14			
BASLE	147.04	335.7	19 33A	2			
PARIS	147.66	342.4	19 36	4			
NEUCHATEL	147.72	335.8	19 37	5			
PAVIA	148.23	331.4	19 33	0			27 19
FLORENCE X.	148.26	327.5	19 40	7			
GARCHY	148.85	340.4	19 35	1			23 24 PP
ROME	148.89	323.7	19 40	6			
ISOLA	149.96	332.5	19 43	7			23 12 PP
MONACO	150.14	331.5	19 43	7			
CLERMONT-FD.	150.17	338.9	19 44	8			23 35 PP
BAGNERES	153.54	340.2	19 41	0			23 37 PP
TOLEDO	157.70	344.3					20 22
COIMBRA	158.20	353.2	20 22	35			
GRANADA	160.09	340.7	20 36A	47			24 23 PP

JULY 23 21.H 51.M 5.S EPICENTRE -18.33 168.18 DEPTH= 0.KM

A=-0.92977 B= 0.19453 C=-0.31255 D= 0.2048 E= 0.9788
G= 0.3059 H=-0.0640 K=-0.9499 HT= 5.1

SE= 2.58

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
PORT VILA	0.61	12.4	0	17K	2								
NOUMEA	4.27	202.1	1	5K	-2								
KOUMAC	4.30	238.3	1	7K	-1								
SUVA	9.74	90.6	2	30	6								
HONIARA	11.92	316.8	3	55	61						4	48	
RAOUL ISLAND	16.71	133.1	4	8	11								
BRISBANE	16.80	234.8	3	55	-3	6	53	-11					
ONERAHI	18.22	163.7	4	16	1								
AFIAMALU	19.74	80.1	4	33	-1	8	43	32					
KARAPIRO	20.56	163.2	4	41K	-1						12	30	SCP
CHARTERS TS.	20.78	261.6	4	44	-1	8	38	6					
RABAUL	21.03	310.0	4	32	-15						4	55	
RIVERVIEW	21.68	221.3	4	54K	0						5	31	PPP
CHATEAU	21.76	164.4	4	17	-38								
PORT MORESBY	22.24	290.7	5	1K	2	9	9	9					
COBB RIVER	23.01	171.2	5	10	3	9	19	5					
WELLINGTON	23.56	167.5	5	10	-2	9	23	-1					
CANBERRA	24.00	221.4	5	18K	1	9	35	4	5	29	9	45	*SS
KAIMATA	24.27	174.2	5	18	-1	9	39	3					
GEBBIES PASS	25.57	172.5	5	30	-2	9	54	-4					
ROXBURGH	27.09	178.2	5	33	-13	10	35	-11					
MELBOURNE	28.10	221.5	5	55	0	11	8	29					
MOORLANDS	29.93	212.1	6	13A	2								
FORT NELSON	30.21	211.3	6	19K	5	11	9	-4					
DARWIN	36.45	273.9	7	8	0						12	48	
MACQUARIE I.	36.80	189.0	7	16	5								
MUNDARING	48.54	243.3	8	47	1								
PERTH	48.87	243.3	8	53	4	15	54	2			22	53	
HONOLULU	51.40	41.5	9	7	-1	16	15	-12					
KIPAPA	51.54	41.4	9	14	5								
HAWAII V.OB.	51.91	45.6	9	11	-1	16	48	13					
CAPE HALLETT	54.00	179.2	9	26K	-1	17	5	2					
MANILA	56.83	302.1	10	7	19	17	49	8					
BAGUIO CITY	58.20	303.5	9	55	-3	18	1	2					
MERA	59.41	333.0	10	5	-1	18	16	1					
SCOTT BASE	59.56	180.4	10	5K	-2	18	16	0			10	50	PCP
AJIRO	59.84	332.5	10	7	-2								
OMAESAKI	59.85	331.5	10	13	4								
YOKOHAMA	59.92	333.2	10	9	-1	18	21	0					
MISIMA	59.96	332.5	10	9	-1								
LEMBANG	59.97	272.7	10	10A	0	18	21	-1					
SIOMISAKI	60.07	328.9	10	10	-1	18	27	4					
SHIZUOKA	60.08	331.9	10	11	0								
TOKYO C.M.O.	60.09	333.4	10	11	0	18	11	-12					
HONGO	60.11	333.5	10	13	2	18	23	-1			12	45	PP
HUNATU	60.36	332.5	10	12	-1	18	25	-2					
KAKIOKA	60.38	334.1	10	13	0	18	16	-11					
MITO	60.39	334.4	10	15	2	18	29	2					
TUKUBASAN	60.41	334.0	10	11A	-2	18	24	-3	10	19	12	15	PP
YAKUSIMA	60.55	322.7	10	14	0								
WILKES	60.59	203.0	10	12K	-2	18	1	-29					
KOHU	60.60	332.5	10	13	-1	18	30	0					
TITIBU	60.63	333.1	10	14	-1	18	27	-3					
KUMAGAYA	60.65	333.4	10	16	1	18	18	-12					
MUROTO	60.70	327.5	10	18	3	18	43	12					
ONAHAMA	60.71	335.1	10	15A	0	18	33	2					
UTUNOMIYA	60.78	334.1	10	16	0						14	42	
IIDA	60.80	331.8	10	16	0								
KAMEYAMA	60.87	330.3	10	16A	0	18	23	-10					
DJAKARTA	60.91	273.1	10	17K	1	18	31	-3					
SIMIDU	60.96	326.2	10	15	-2	18	35	1					
MAEBASI	60.99	333.3	10	16A	-1						12	7	
NARA	61.03	329.7	10	21	4								
SHIRAKAWA	61.13	334.7	10	17	-1								
OSAKA	61.15	329.5	10	18A	0	18	36	-1					
OIWAKE	61.16	332.9	10	17	-1	18	34	-3					
GIHU	61.18	330.9	10	17	-1	18	35	-2					
SUMOTO	61.21	328.8	10	17	-1	18	37	-1			15	4	
KOTI	61.27	327.2	10	19A	0	18	39	1					
ABUYAMA	61.31	329.7	10	18A	-1								
HIKONE	61.32	330.4	10	20	1	18	40	1					
HENGCHUN	61.32	308.8	10	22	3						20	17	
MATUMOTO	61.34	332.4	10	21	2								
KOBE	61.35	329.2	10	21	2								
KAGOSIMA	61.36	323.6	9	59	-20	18	41	1					
TAITUNG	61.48	309.8	10	23	3								

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MATUSIRO	61.48	332.7	10	19A	-1	18	37	-4		22	10 SS
HUKUSIMA	61.57	335.2	10	23	2	18	45	3			
TAKAMATU	61.62	328.1	10	21	0	18	40	-3			
TSURUGA	61.71	330.5	10	24	2						
ISINOMAKI	61.83	336.3	10	23	0	18	44	-1			
SENDAI	61.85	335.8	10	22A	-1	18	43	-3			
MATUYAMA	61.89	326.9	10	23	0	18	46	0			
HWALIEN	61.89	311.1	10	22	-1						
TAKADA	61.94	333.1	10	23	0						
OOITA	62.03	325.6	10	20K	-4	18	45	-3			
YAMAGATA	62.05	335.4	10	23A	-1	18	47	-1			
TOYAMA	62.06	332.1	10	24	0	18	50	2			
TOYOOKA	62.21	329.5	10	25A	0	18	49	-1			
KUMAMOTO	62.22	324.6	10	24	-1	18	51	1			
NIIGATA	62.29	334.2	10	22	-4	18	56	5			
TAINAN	62.31	309.4	10	29	3						
HIROSIMA	62.48	327.0	10	13	-14	18	52	-2			
MIZUSAWA	62.51	336.5	10	28	1	18	54	0			
NAGASAKI	62.60	324.0	10	27A	-1	18	55	0			
TAIPEI	62.62	312.0	10	28A	0	18	57	2			
MIYAKO	62.66	337.4	10	27	-1	18	57	1			
TAICHING	62.67	310.7	10	18	-10						
AIKAWA	62.71	333.7	10	27	-2						
WAZIMA	62.76	332.3	10	29	0	18	57	0			
SAGA	62.76	324.6	10	22	-7						
SAKATA	62.82	335.4	10	30	1	18	53	-5			
SIMONOSEKI	62.95	325.6	10	31	1						
HUKUOKA	62.97	324.9	10	29A	-1	18	59	-1			
MORIOKA	63.00	336.8	10	29K	-1	18	55	-5			
MATSUE	63.00	328.2	10	30	0						
TOMIE	63.15	323.1	10	28	-3	19	0	-2			
AKITA	63.42	336.0	10	33A	0	19	11	6			
SAIGO	63.47	328.9	10	37	4	19	9	3			
HATINOHE	63.59	337.6	10	32	-2	19	6	-2			
AOMORI	64.12	337.2	10	40	2	19	12	-2			
HIROO	64.52	339.8	10	39	-1						
URAKAWA	64.59	339.3	10	42	1	19	17	-3			
NEMURO	64.77	341.9	10	41	-1	19	18	-4			
KUSIRO	64.81	340.9	10	41A	-1	19	20	-3			
HAKODATE	64.99	337.7	10	43A	0	19	26	1			
OBIHIRO	65.14	340.0	10	46	2						
MORI	65.31	337.7	10	45	-1	19	26	-3			
MURORAN	65.36	338.1	10	48	2						
TOMAKOMAI	65.42	338.7	10	45	-1						
ABASHIRI	65.79	341.3	10	51	2						
SAPPORO	65.89	338.8	10	48A	-1	19	34	-2			
SUTTSU	66.05	337.8	10	50	0	19	32	-6			
HONG KONG	66.48	305.2	10	52A	-1						
ZO-SE	66.73	316.9	10	54A	-1	19	45	-1			
CANTON	67.55	305.5	11	1A	1	19	59	3			
WAKKANAI	67.86	340.2	11	5	3	20	11	11			
NANKING	68.91	316.3	11	8A	0	20	12	0			
BYRD STATION	69.01	169.7	11	6	-3	20	14	1			
VLADIVOSTOK	69.65	332.5	11	13	0	20	19	-2			
UGLEGORSK	71.01	342.2	11	21	0	20	35	-2			
PETROPAVLOVK	71.53	353.9	11	23	-1	20	40	-3		15	49 PPP
MEDAN	71.78	280.2	11	25	-1	20	41	-5			
SOUTH POLE	71.79	180.0	11	24	-2	20	35	-11			
CHANGCHUN	73.25	329.1	11	34A	0						
PEKING	75.60	321.3	11	48A	0	21	26	-3			
SIAN	76.88	313.0	11	57A	2	21	45	2			
KUNMING	76.94	302.2	11	57A	2	21	46	3			
CHENGTU	78.58	307.7	12	5A	1	22	2	1			
MAWSON	78.90	202.1	12	5A	-1	22	5	1		15	12 PP
PAOTOW	79.67	318.9	12	11A	1	22	11	-2			
PORT BLAIR	80.17	285.8	12	21	8	22	19	1			
TOCKLAI	84.11	300.5	11	48A	-46						
CHITTAGONG	84.89	295.4	12	40	3	23	5	-1	12 55	15	55 PP
ULAN-BATOR	85.66	323.7	12	41	0					22	58 PS
YAKUTSK	85.69	342.9	12	39	-2						
STA. CRUZ C.	85.69	48.9	12	43	2						
SAN FRANCSCO	85.72	48.0	12	44	2						
BRANNER	85.75	48.5	12	43	1						
UKIAH	85.80	46.6	12	41A	-1						
BERKELEY	85.90	48.0	12	41A	-2	22	49	-27			
VINEYARD	86.03	49.3	12	45	2						
ARCATA	86.04	44.7	12	44A	1						
SHILLONG	86.05	298.4	12	44A	1	23	6	-11		16	40 PP
LICK	86.10	48.7	12	43A	-1					16	11

SHASTA	87.09	45.5	12	58	10					
FRESNO	87.18	49.9	12	48	-1					
PASADENA	87.30	52.8	12	47A	-2	23	24	-5	16 16	PP
MINERAL	87.47	46.0	12	48A	-2					
ARGENTINE I.	87.72	160.5	12	49	-2	23	27	-6		
CALCUTTA	87.92	294.4	12	55	3	23	17	-18	16 7	PP
LHASA	88.27	301.9	12	56A	2	23	42	4	23 23	SKS
CORVALLIS	88.28	41.7	12	53	-1					
RENO	88.35	47.4	12	54A	0					
SITKA	88.58	27.1	12	54	-1	23	15	-26		
IRKUTSK	89.39	326.5	12	59A	0				24 53	PS
COLLEGE	89.47	17.3	12	48A	-12					
VICTORIA	90.05	38.2	13	4K	2					
CHATRA	90.44	298.0	13	6K	2	23	30	-28	16 27	PP
BOKARO	90.59	294.8	13	6A	1	23	53	-6	16 47	PP
VISHAKHAPTNM	90.79	288.3	13	7K	1	23	37	-24	16 34	PP
EUREKA	91.04	48.6	13	4A	-3	23	54	-9	16 54	PP
MADRAS	92.15	282.9	13	12A	0	23	43	-30	16 55	PP
TUCSON	92.29	56.9	13	13K	0	24	1	-13	16 54	PP
TUCSON TELE.	92.40	56.8	13	13K	0	24	22	7	17 2	PP
PENTICTON	92.65	38.6	13	13	-1					
MAZATLAN	93.01	66.7							15 55	PS
GLEN CANYON	93.33	52.2	13	17	-1	24	7	-16		
MANZANILLO	93.56	71.2				24	31	6	22 11	
TIKSI	93.63	348.4	13	14	-5				17 7	PP
SALT LAKE C.	94.45	48.6	13	22	-1	23	59	-34		
GUADALAJARA	94.96	70.0				24	50	13	25 58	PS
CHIHUAHUA	94.99	61.6				25	5	27	30 26	SS
HYDERABAD	95.10	286.6	13	27A	1	24	3	2	30 23	SS
HUNGRY HORSE	95.67	40.9	13	26	-2				17 13	PP
BUTTE	95.78	43.5	13	30A	1					
BANFF	95.79	37.9	13	33	4					
FLAMING GRGE	96.26	49.1	13	29	-2	24	9	2	17 15	PP
BOZEMAN	96.66	44.2	13	33A	0	24	13	3		
SEHORE	98.00	291.7				24	30	14		
TACUBAYA	98.29	72.3				24	10	-8	17 40	PP
DEHRA DUN	99.14	298.9	13	42	-2	24	23	1	16 49	PP
POONA	99.60	286.4	13	46A	0	24	23	-2	17 57	PP
OAXACA	99.84	75.3							17 51	PP
BOMBAY	100.64	286.4	13	53	2	24	33	3	17 1	PP
VERA CRUZ	101.02	73.3	13	59	7	24	19	-13	18 7	PP
RAPID CITY	101.55	47.3	14	2	7					
LAHORE	102.55	299.2	14	0	1					
SEMIPALATNSK	102.60	319.1	13	57	-3				18 9	PP
WICHITA MTS.	102.78	57.5	13	58A	-2	24	30	-10	18 13	PP
COMITAN	103.91	77.3				24	57	12	18 35	PP
FRUNSE	104.78	310.6	14	9	0	24	49	0	18 28	PP
WARSAK DAM	105.37	301.1	14	16	777					
KHOROG	106.08	304.7	13	57	777					
FAYETTEVILLE	106.58	56.9	14	25K	777				18 41	PP
MERIDA	107.38	73.2							18 55	PP
TASHKENT	108.44	308.3	14	26	777				18 56	
QUETTA	108.45	296.4	14	27	777	25	4	-1	14 41	18 53 PP
RESOLUTE	109.37	16.2	18	57	777					
HUANCAYO	110.46	110.8							19 10	PP
TANANARIVE	110.94	240.7	18	41	6				19 18	PP
KHEYS	111.22	350.5	14	37	-238				18 45	PP
AREQUIPA	111.85	116.8	19	18	42					
SVERDLOVSK	114.74	324.8	14	55	-227				19 28	PP
CHINCHINA	116.40	93.6	18	45	0	25	35	-2	19 52	PP
ASHKABAD	116.50	303.8	15	3	-222					
CLEVELAND	116.98	52.3				25	37	-2	19 57	PP
COLUMBIA	117.00	60.7	18	46A	0				19 53	PP
BOGOTA	117.76	94.5				25	41	-1	20 3	PP
MORGANTOWN	118.15	54.4	18	48	-1				19 59	PP
FUQUENE	118.35	93.7	18	51	2				20 6	PP
GALERAZAMBA	118.37	87.4							20 9	PP
HERMANUS	119.80	209.4							20 20	PP
WASHINGTON	120.38	55.2	18	37	-16	26	44	53	20 13	PP
SHIRAZ	120.79	294.0	18	53K	-1	25	50	-2	20 28	PP
OTTAWA	121.08	47.6	18	52	-2					
KIMBERLEY	121.34	217.8	18	55	0					
TEHERAN	122.01	301.1	18	55	-1				19 34	PP
PALISADES	122.74	52.7	18	56	-2				20 30	PP
SHAWINIGAN	122.99	46.0	18	56	-2					
WESTON	124.55	50.8	19	3A	2				20 45	PP
BULAWAYO	124.92	228.0	19	1	-1					
SODANKYLA	125.18	342.9	19	0	-2				20 49	PP

TROMSOE	125.35	347.3	18	58	-5						
GORIS	125.86	305.8	19	5	1	25	57	-11		22	46 PKS
CARACAS	126.22	90.3								29	11
KIRUNA	126.45	345.4	19	2	-3					20	54 PP
TIFLIS	126.76	308.7	19	8	3					23	32 PPP
KAJAANI	127.07	339.5	19	7	1					21	4 PP
MOSCOW	127.38	327.3	19	6	0					21	7 PP
SAN JUAN	128.63	80.8	19	10	1						
BROKEN HILL	128.64	233.3	19	7	-2						
PULKOVO	128.76	334.2	19	8	-1					21	16 PP
UMEA	129.59	342.2	19	8	-3					22	29 PKS
HALIFAX	129.68	46.8	19	13K	2						
NURMIJARVI	130.51	337.2	19	7	-5					21	27 PP
TRINIDAD	131.51	91.9	19	14	0					22	37
ST. KITTS	131.65	82.8	19	15	0					22	46
SKALSTUGAN	131.87	345.8	19	11	-4					22	40 PKS
ANTIGUA	132.46	83.3	19	17	1						
FORT FRANCE	132.68	86.7	19	24	7						
UPPSALA	133.42	340.0	19	15	-3					21	42 PP
SIMFEROPOL	133.56	315.2	19	16	-2	26	23	-5		21	43 PP
REYKJAVIK	133.72	6.1	19	21K	2					22	48 SKP
SIDA	134.39	3.9	19	25	5					22	54 SKP
KSARA	134.86	299.7	19	20	-1					22	6 PP
LWIRO	135.10	247.2	19	6	-15					16	40 P
JERUSALEM	135.66	296.9	19	23A	1					23	2 PKS
IASI	136.82	320.8	19	23	-1					26	0
GOTEBORG	136.91	341.5	19	25	1						
LWOW	137.46	325.9	19	15	-10					22	11 PP
WARSAW	137.50	330.4	18	13	-72					21	7
BACAU	137.53	320.3	19	41	15					24	21
FOCSANI	137.75	319.0	19	27	1					23	33
ISTANBUL KA.	138.38	311.8	19	19	-8	26	27	-9	19 47	22	19 PP
COPENHAGEN	138.42	339.5	19	17K	-10					23	6 PKS
ISTANBUL UN.	138.44	311.8	19	27	0					23	16
BUCHAREST	139.02	317.8	19	19	-9					22	23
HELWAN	139.19	294.7	19	19	-10					22	50 PP
CAMPULUNG	139.30	319.5	19	32	3					24	18
KRAKOW	139.44	328.6	19	19	-10					22	29
CHORZOW	139.74	329.4	19	25	-5					22	29
SKALNATE PL.	139.82	327.3	19	31	1					22	45 PKS
RACIBORZ	140.26	329.7	19	23	-7					22	5
ABERDEEN	140.54	351.7	19	21	-10					22	26 PP
TIMISOARA	141.33	322.3	19	29	-3					23	14
BUDAPEST	141.53	326.0	19	26	-7	26	8	-33		22	13 PP
SOFIA	141.61	316.9	19	29	-4	26	22	-19			
COLLMBERG	141.68	334.9	19	28	-5					22	39 PP
HURBANOVO	141.71	327.1	19	23	-10	26	40	-1		22	11 PP
EDINBURGH	141.91	352.1	19	48	15						
HALLE	141.94	335.9	19	28	-5					22	39 PP
PRAGUE	142.00	332.4	19	25	-9					35	9 PPS
PRUHONICE	142.01	332.2	19	27A	-7					22	42 PP
BRATISLAVA	142.07	328.2	19	31	-3	26	40	-2		22	46 PKS
BELGRADE	142.30	321.6	19	29A	-5					23	15 PKS
VIENNA-H.	142.38	328.9	19	30	-4					22	44 PP
JENA	142.53	335.6	19	27	-7					22	43 PP
WITTEVEEN	142.67	341.5	19	37	2						
CHEB	142.87	334.1	19	29	-6					22	51 PP
KASPERSKE H.	143.07	332.0	19	30	-5					22	37 PP
MUNSTER	143.10	339.9	19	31	-4					19	58
SKOPJE	143.19	317.0	19	21	-15						
ATHENS	143.36	309.7	19	32A	-4					22	46 PP
LUANDA	143.39	224.6	19	35	-1					22	47 PP
DE BILT	143.74	342.2	19	37A	1					22	54 PP
ZAGREB	144.20	326.1	19	36A	-1						
TITOGRAD	144.33	319.0	19	35	-3					26	1 PPP
LJUBLJANA	144.80	327.6	19	38A	0	26	19	-27		22	55 PP
HEIDELBERG	144.86	336.5	19	36	-2						
STUTTGART	145.15	335.4	19	39A	0					23	1 PP
KARLSRUHE	145.30	336.4	19	41	2						
TUBINGEN	145.43	335.3	19	39A	0						
TRIESTE	145.47	327.7	19	40	0					25	39 PPP
KEW	145.70	347.2	19	40	0					23	4 PP
EBINGEN	145.75	335.0	19	39	-1						
RAVENSBURG	145.80	334.0	19	39	-1						
STRASBOURG	145.89	336.6	19	40	0					23	4 PP
CHUR	146.57	333.0	19	42	1					30	33
PADOVA	146.57	329.1	19	43	2					23	13 PP
TARANTO	146.67	317.6	19	44	2					23	44 PP

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BANGUI	147.18	248.7	19	43	1					26	46	
PARIS	147.46	342.3	19	45	2					23	14	PP
BOLOGNA	147.50	328.4	19	50	7			20	51	33	55	PPS
NEUCHATEL	147.51	335.8	19	43	0					30	35	
PAVIA	148.02	331.4	19	44A	0					26	32	PPP
FLORENCE X.	148.05	327.6	19	40	-4					20	0	PKP2
PRATO	148.06	327.8	19	41	-3					29	55	
JERSEY	148.24	347.9	19	49	5							
FOLINIERE	148.27	345.7	19	44	0							
CHIAVARI	148.60	330.2	19	57	12	26	58	7	20 19	24	42	PP
GARCHY	148.65	340.4	19	44	-1					23	26	PP
ROME	148.68	323.8	19	48	3	27	0	8		23	23	PP
REGGIO CALA.	148.98	315.1	19	46	1							
MESSINA	148.99	315.3	19	43	-2					23	22	PP
ISOLA	149.75	332.5	19	47	0					23	31	PP
MONACO	149.93	331.5	19	46	-1					23	28	PP
CLERMONT-FD.	149.96	338.9	19	47	0					23	28	PP
BAGNERES	153.33	340.2	19	51A	-1					23	47	
TORTOSA	155.21	337.3	19	54	0					23	58	PP
ANGRA DO HO.	155.71	30.4	20	6	11					45	49	SS
SERRA PILAR	157.11	353.7	19	56K	-1	26	59	-2		24	8	PP
PONTA DELGDA	157.17	29.3	20	1K	4					20	31	PKP2
TOLEDO	157.50	344.2	19	56A	-1					24	10	PP
ALICANTE	157.73	335.9	20	1	3	27	5	3		24	14	PP
COIMBRA	158.01	353.1	19	55	-3					24	13	PP
LISBON	159.55	354.0	20	0A	0					24	22	PP
ALMERIA	159.80	337.8	20	1A	1	27	10	6		24	23	PP
GRANADA	159.88	340.6	19	59K	-1	26	59	-5		24	26	PP
MBOUR	173.69	127.7	20	11	0					21	45	PKP2

JULY 23 22.H 1.M 52.S EPICENTRE -18.44 168.21 DEPTH= 0.KM

A=-0.92925 B= 0.19390 C=-0.31448 D= 0.2043 E= 0.9789
G= 0.3078 H=-0.0642 K=-0.9493 HT= 5.0

SE= 2.01

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
HONIARA	12.02	317.1	2	58	3								
ONERAHI	18.10	163.7	4	14	0								
AFIAMALU	19.73	79.7	4	32	-2								
KARAPIRO	20.44	163.2	4	41K	0								
RABAUL	21.13	310.1	4	43	-6								
RIVERVIEW	21.62	221.5	4	53A	0								
CHATEAU	21.64	164.4	4	54	0								
WELLINGTON	23.44	167.5	5	11	0								
CANBERRA	23.93	221.6	5	18	2								
GEBBIES PASS	25.45	172.5	5	30	-1								
SCOTT BASE	59.45	180.4	10	6K	-1						39	37	PKPPKP
MATUSIRO	61.60	332.8	10	22A	1						11	43	
MAWSON	78.80	202.1	12	7	1						15	17	PP
UKIAH	85.86	46.5	12	38	-5								
BERKELEY	85.96	48.0	12	43	0								
LICK	86.16	48.7	12	46A	2								
SHASTA	87.15	45.4	12	50	1								
FRESNO	87.23	49.9	12	51	2								
PASADENA	87.34	52.8	12	50	0						14	15	
MINERAL	87.53	46.0	12	52K	1								
CORVALLIS	88.35	41.7	12	32	-23								
RENO	88.41	47.4	12	57K	2								
COLLEGE	89.58	17.2	12	58	-2								
TUCSON TELE.	92.44	56.8	13	16	2								
RAPID CITY	101.60	47.4									19	14	
RESOLUTE	109.48	16.3	18	53	777								
HUANCAYO	110.39	110.9	18	53	19								
LA PAZ	114.58	118.6	18	44	2								
SHIRAZ	120.87	294.0	18	29	-25						19	56	PP
SHAWINIGAN	123.05	46.1	18	59	1								
BULAWAYO	124.86	227.9	19	4	2								
SODANKYLA	125.30	342.9	19	3	0								
TROMSOE	125.47	347.3	19	3	0								
KIRUNA	126.57	345.4	19	5	0								
KAJAANI	127.19	339.5	19	8	2								
BROKEN HILL	128.60	233.2	19	10	1								
UMEA	129.71	342.2	19	9	-2						22	31	PKS

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NURMIJARVI	130.63	337.2	19 13	0	22 37 PKS
SKALSTUGAN	131.99	345.8	19 16	0	22 41 PKS
UPPSALA	133.54	340.0	19 11	-7	20 42
JERUSALEM	135.73	296.8	19 25	3	22 57 PKS
EDINBURGH	142.03	352.1	19 44	10	
HALLE	142.06	335.8	19 27	-7	
KASPERSKE H.	143.18	332.0	19 35	-1	21 57
ATHENS	143.46	309.6	19 34	-2	
BENSBERG	144.23	339.4	19 38	0	
LJUBLJANA	144.92	327.5	19 41	2	
HEIDELBERG	144.98	336.5	19 40A	1	
STUTTGART	145.27	335.3	19 42A	3	20 0
TUBINGEN	145.55	335.3	19 42	2	
TRIESTE	145.58	327.7	19 51	11	
KEW	145.82	347.2	19 43	3	
EBINGEN	145.87	335.0	19 42	2	
RAVENSBURG	145.92	333.9	19 42	1	
STRASBOURG	146.01	336.6	19 44	3	20 32
PADOVA	146.69	329.0	19 58	16	20 48
BANGUI	147.16	248.5	19 47	4	20 0 SPKP
PARIS	147.58	342.3	19 48	5	
FOLINIERE	148.39	345.7	19 50	5	21 14
ISOLA	149.86	332.4	19 45A	-2	20 2
CLERMONT-FD.	150.07	338.8	19 54	7	20 17
BAGNERES	153.45	340.2	19 54	2	

JULY 24 1.H 30.M 59.S EPICENTRE -21.33-179.23 DEPTH= 632.KM

A=-0.93224 B=-0.01246 C=-0.36163 D=-0.0134 E= 0.9999
G= 0.3616 H= 0.0048 K=-0.9323 HT= 4.3

DEPTH OF FOCUS= 0.095R

SE= 1.33

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
SUVA	3.85	324.8	1 31	4				
RAOUL ISLAND	7.97	171.7	2 0	-1	3 37	0		
AFIAMALU	10.24	45.1	2 19	-3	4 8	-7		
ONERAHI	15.44	199.9	3 14	2				
KARAPIRO	17.15	194.1	3 28K	0				6 22
TUAI	17.69	189.3	3 30	-3				
CHATEAU	18.37	193.0	3 37	-2				
WELLINGTON	20.53	193.0	3 57	-2	7 19	9		
HONIARA	23.26	297.4	4 22	-1				
GEBBIES PASS	23.31	195.0	4 47	23	7 48	-7		
BRISBANE	26.17	251.1	4 48	-1				
CANBERRA	31.09	236.5	5 31	0			7 11	10 53 SCP
CHARTERS TS.	32.26	265.9	5 40	-1	10 10	-3		
PORT MORESBY	34.43	285.0	5 58	-1				6 24
MACQUARIE I.	37.00	201.1	6 20	0				
ADELAIDE	39.20	240.5	6 38K	0				
HONOLULU	47.13	27.3	7 39	0				
KIPAPA	47.27	27.3	7 39	-1				
CAPE HALLETT	51.35	184.1	8 11K	1				9 19 PCP
SCOTT BASE	56.97	183.5	8 51K	2			10 46	12 37 SCP
BYRD STATION	64.02	170.4	9 35	0				14 10
SOUTH POLE	68.80	180.0	10 5	1				
MIRNY	69.76	205.2	10 9K	-1				
MATUSIRO	70.20	324.6	10 12K	-1				10 36
PETROPAVLOVK	76.49	346.5	10 47	-1				
CANTON	79.13	300.0			20 17	6		
NANKING	79.58	310.3	11 5	1				
PASADENA	80.09	47.5	11 8	1				
MAWSON	80.39	200.1	11 9A	0			13 22	12 32
ARGENTINE I.	80.66	157.2	11 11	1				
CHANGCHUN	82.35	323.0	11 18K	0	20 49	6		
BOULDER CITY	83.39	47.4	11 24	0				
TUCSON TELE.	84.46	52.3	11 31	2			13 44	
EUREKA	84.51	44.0	11 30	1			13 42	
PEKING	85.67	315.9	11 34	-1				
GLEN CANYON	86.13	47.9	11 38	1			13 52	
PENTICTON	87.99	34.4	11 46	0				
COLLEGE	89.27	12.9	11 50	-2			14 10	
FLAMING GRGE	89.58	45.3	11 53	0			14 7	
CHENGTU	89.97	303.0	11 57	2				

BUTTE	90.12	39.8	11	55	0			14	9		
HUNGRY HORSE	90.49	37.3	11	56	-1					15	42 PP
WICHITA MTS.	94.60	54.6	12	16	0	21	54 -39	14	31	16	10 PP
LHASA	100.02	297.9								22	20
KHEYS	116.07	351.2	17	32K	-1						
APATITY	129.45	344.4	19	4	65						
TROMSOE	130.46	351.8	18	1	1					20	29 PP
BULAWAYO	130.60	215.3								20	30
SODANKYLA	131.16	347.0	17	56	-6					20	31 SKP
KIRUNA	131.90	350.1	18	3	0					20	33 PP
SHIRAZ	132.87	291.1								20	38
KAJAANI	133.64	344.0	18	6	0					20	39 SKP
REYKJAVIK	134.62	13.7						20	44		
BROKEN HILL	135.23	219.8								20	46
UMEA	135.56	347.8								20	43 PP
PULKOVO	136.24	338.8								20	47 PP
SKALSTUGAN	137.06	352.5	18	4	-9					20	49 PP
NURMIJARVI	137.39	342.8	18	3	-10					20	51 SKP
UPPSALA	139.69	346.9	18	10	-8					20	56 PP
GOTEBORG	142.76	350.1	18	20K	-4						
SIMFEROPOL	143.86	318.5	18	26	1						
COPENHAGEN	144.60	348.6	18	27A	0						
LWOW	146.13	332.7	18	32	3					20	56
KSARA	146.64	299.4	18	34	4			20	59		
KRAKOW	147.58	336.7	18	34	3						
JERUSALEM	147.59	296.0	18	37K	6			20	58		
RACIBORZ	148.17	338.5	18	38	6						
WITTEVEEN	148.24	353.2	18	36	4						
COLLMBERG	148.60	345.2	18	39K	7			21	2	18	44 PKP2
HALLE	148.65	346.5	18	38	5					18	44 *PPKP2
MUNSTER	148.96	351.8	18	39	6						
ISTANBUL UN.	149.08	315.9	19	39	66						
JENA	149.26	346.6	18	39	6					22	14
PRUHONICE	149.40	342.4	18	40K	6			21	7		
KEW	149.91	1.4	18	41	7					18	50 PKP2
BENSBERG	150.00	351.9	18	41	6						
BRATISLAVA	150.18	337.8	18	44	9			21	5		
VIENNA-H.	150.36	338.7	18	42	7						
KASPERSKE H.	150.44	342.8	18	43K	8			21	5	22	27 PP
HELWAN	151.22	293.4	18	45	9					21	10
SOFIA	151.53	323.6						21	13		
STUTTGART	151.79	348.0	18	46	9						
STRASBOURG	152.24	350.0	18	47	9						
FOLINIERE	152.60	1.8	18	47A	9					19	1 PKP2
LJUBLJANA	152.90	338.7	18	48K	9						
ATHENS	154.17	315.0	18	48	7						
ISOLA	156.62	348.6	19	18	34					21	20
TOLEDO	161.06	11.5	19	38	49						

JULY 24 8.H 48.M 18.S EPICENTRE 0.13 124.22 DEPTH= 171.KM

A=-0.56232 B= 0.82692 C= 0.00222 D= 0.8269 E= 0.5623
G=-0.0013 H= 0.0018 K=-1.0000 HT= 7.2

DEPTH OF FOCUS= 0.022R

SE= 2.32

	DELTA DEG.	AZ. DEG.	P M	P S	P O-C S	S M	S S	S O-C S	*PP M	*PP S	SUPP. M	SUPP. S
MANILA	14.78	348.0	3	30	9	6	8	7				
BAGUIO CITY	16.58	347.7	3	41	-3	6	53	12				
LEMBANG	17.94	247.0	4	0A	1	7	30	19				
DJAKARTA	18.45	249.8	4	22	17						8	14
NHATRANG	19.13	309.4	4	11	-1	7	47	12				
HONG KONG	24.11	336.7	5	1	0	9	12	9				
PORT MORESBY	24.72	113.1	5	6	0	9	20	7			5	37
CANTON	25.15	335.9	5	11	0	8	45	-35				
MEDAN	25.75	277.9	5	16K	0							
RABAUL	28.26	99.1	5	32	-7							
MUNDARING	32.81	192.6	6	17	-2							
CHENGTU	35.92	329.5	6	45A	0	12	9	-1				
ABUYAMA	36.15	15.9	6	47K	0							
ADELAIDE	37.46	160.2	6	55	-3							
MATUSIRO	38.48	18.2	7	5A	-2	12	52	3			9	18 PCP
BRISBANE	38.75	137.2	7	9	0	13	1	8				

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SHILLONG	40.18	311.5	7	21	0							
PEKING	40.39	350.5	7	23	1							
CANBERRA	42.17	149.3	7	36A	-1							
RIVERVIEW	42.19	145.8	7	36A	-1	13	50	6	8	11	9 28	PCP
LHASA	43.13	315.8	7	47	2	14	7	10				
CHATRA	44.42	309.7	7	56K	1						9 38	
Y.-SAKHLINSK	49.42	16.6	8	32	-2							
LAHORE	56.55	308.5	9	24	-2							
WARSAK DAM	59.66	310.1	9	49	1							
PETROPAVLOVK	60.00	23.2	9	51	1							
KARAPIRO	60.47	134.8	9	53	-1							
CHATEAU	61.04	136.1	10	4	7							
YAKUTSK	61.87	2.9	10	3	0	18	18	7				
TUAI	61.99	135.1	10	2	-2							
QUETTA	62.01	304.4	10	2	-2				10	40		
STALINABAD	63.51	313.8	10	12	-2							
SHIRAZ	74.07	300.7	11	18K	-1	21	7	31			12 2	
SVERDLOVSK	75.74	329.5	11	27A	-1							
CAPE HALLETT	77.86	167.0	11	40	0							
MAWSON	79.53	200.0	11	49A	0				12	33		
HAWAII V.OB.	81.01	70.5	12	0	3							
SCOTT BASE	81.15	171.7	12	58K	61							
TIFLIS	82.01	312.0	12	3	1							
KHEYS	86.07	351.3	12	22	0							
MOSCOW	87.96	325.6	12	31	0							
KSARA	88.54	303.7	12	36	2							
COLLEGE	89.02	25.3	12	36	0				12	58	16 12	PP
JERUSALEM	89.08	301.6	12	38A	2							
APATITY	90.18	337.4	11	21	-81							
KAJAANI	92.74	334.1	12	54	0							
SODANKYLA	92.81	337.4	12	53	-1							
NURMIJARVI	94.60	330.7	13	1	-1							
KIRUNA	95.07	338.3	13	3	-1							
TROMSOE	95.18	340.2	13	4	-1							
BULAWAYO	95.31	249.9	13	6A	1							
BROKEN HILL	95.60	255.6	13	8	1							
UMEA	96.04	334.4	13	6	-2							
SKALSTUGAN	99.51	335.1	13	22	-2							
COLLMBERG	103.03	323.1	13	41	1							
HUNGRY HORSE	110.45	37.3	18	14	3							
PASADENA	112.53	52.7	18	20	5							
EUREKA	112.54	46.6	18	20	5						14 27	P
FLAMING GRGE	116.62	43.0	18	27	4							
GLEN CANYON	116.66	47.8	18	27	4							
TUCSON TELE.	119.02	52.4	18	33	5							
RAPID CITY	119.09	37.4	18	32	4							
LAWRENCE	126.90	38.3	17	47	-56							
WICHITA MTS.	127.09	44.6	18	47	3						20 37	PP
FAYETTEVILLE	129.30	40.6	18	51	3						22 6	PPP
SHAWINIGAN	131.18	15.5	18	55	4						22 12	
OTTAWA	131.36	18.7	18	54	2						22 12	
BREBEUF	131.91	16.8	18	55	2							
MORGANTOWN	134.68	26.4									22 25	
WESTON	135.43	16.4	19	3K	4							
PALISADES	135.87	19.8	19	3	3						22 28	PKS
HUANCAYO	157.27	122.1	19	43	8							
SAN JUAN	158.99	28.4	20	18	41							
LA PAZ	159.68	143.8	20	44	67						21 24	
TRINIDAD	167.92	27.4	19	50	5						20 55	PKP2

JULY 25 2.H 48.M 14.S EPICENTRE -8.92 -71.37 DEPTH= 599.KM

A= 0.31566 B=-0.93629 C=-0.15403 D=-0.9476 E=-0.3195
G=-0.0492 H= 0.1460 K=-0.9881 HT= 6.7

DEPTH OF FOCUS= 0.089R

SE= 1.86

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
AREQUIPA	7.50	180.9	1	54	-1	3	16	-11				
LA PAZ	8.17	157.6	2	2	1	3	39	1				
CARACAS	19.79	13.0	3	56K	3	7	3	3				
TRINIDAD	21.82	27.2	4	13	1	7	47	14				
GRENADA	22.93	24.9	4	21	-1							

DOMINICA	26.01	22.4	4 47	-2				
ST. KITTS	27.45	18.1	5 1	0				
ANTIGUA	27.55	20.0	5 1	-1				
SAN JUAN	27.62	10.6	5 2	-1	7 46	39	6 33	
COLUMBIA	43.66	348.3	7 14	-1				
CHAPEL HILL	45.18	351.2	7 26	0				
MORGANTOWN	48.95	351.2	7 55K	0	14 15	-1		
FAYETTEVILLE	49.66	335.7	7 59K	-1	14 21	-4		
WICHITA MTS.	50.47	330.8	8 5K	-1	14 35	-1	9 55	9 13 PCP
WESTON	51.05	0.0	8 9K	-1				
LAWRENCE	52.57	336.6	8 21	0	15 1	-3		
HALIFAX	53.75	6.9	8 29K	0				
OTTAWA	54.21	356.2	8 31	-1				
SHAWINIGAN	55.23	358.8	8 29K	-11				
TUCSON TELE.	55.61	319.4	8 42	0			10 36	
TUCSON	55.63	319.3	8 42	0			10 36	
MBOUR	58.71	67.2	9 4	1				
LARAMIE	59.05	330.4	9 6	0				9 46
GLEN CANYON	59.20	323.0	9 7	0			11 1	
RAPID CITY	60.12	334.0	9 12	-1	15 42	-59		
BOULDER CITY	60.55	320.2						11 10
FLAMING GRGE	60.71	327.6	9 16	0				11 12
PASADENA	61.65	316.6	9 23	0				9 54
EUREKA	63.45	322.6	9 34	0			11 32	
FRESNO	64.24	318.2	9 40	1				
BOZEMAN	64.95	330.4	9 44	0				
LICK	65.78	317.8	9 48	-1				
RENO	65.85	320.6	9 51K	2				
BERKELEY	66.48	318.0	9 54	1				
MINERAL	67.44	320.5	9 59A	0				
SHASTA	68.13	320.4	10 2K	-1				
HUNGRY HORSE	68.29	330.9	10 4	0			12 0	
PENTICTON	71.70	329.1	10 24K	0				
VICTORIA	73.21	326.8	10 33K	1				
SOUTH POLE	81.14	180.0	11 15	0				
BAGNERES	82.84	44.5	11 24	0				13 30
FOLINIERE	84.35	38.9	11 31	0				13 38
RESOLUTE	84.70	353.9	11 33	0				
KEW	85.38	36.4	11 36	0	21 13	-4		
CLERMONT-FD.	85.70	42.6	11 39	1				13 47
GARCHY	86.12	41.1	11 37	-3			13 45	
SCOTT BASE	87.71	190.4	11 48A	1			13 55	14 49 *SP
ISOLA	87.95	44.9	11 49	1				13 58
MONACO	88.11	45.4	11 49	0				
STRASBOURG	89.51	40.7	11 54	-2				
BENSBERG	89.72	38.3	11 56	0			14 4	
CAPE HALLETT	89.83	195.6	11 57	0			14 6	
STUTTGART	90.53	40.8	12 0	0			14 8	
COLLEGE	92.32	335.5	12 8	0			14 15	15 57 PP
JENA	92.44	38.9	12 8	-1				
HALLE	92.77	38.4						14 15
KASPERSKE H.	93.38	41.0	12 7K	-6			14 17	
COLLMBERG	93.38	38.7	12 13K	0			14 22	14 54
LJUBLJANA	93.51	44.1	12 15	1				
PRUHONICE	94.14	40.2	12 17K	0			14 26	
SKALSTUGAN	95.10	26.5	12 22A	1				14 30
MAWSON	97.01	163.9	12 28	-1				
KIRUNA	98.87	22.6	12 38	0				
CANBERRA	121.80	218.6	17 49	2				
CHARTERS TS.	133.07	231.8	18 10	1				20 27
QUETTA	135.73	55.6	18 16	3				
MATUSIRO	141.57	320.2	18 20	-5				
GUAM	144.32	280.6	18 29	0				
PEKING	148.30	348.9	18 37	2				
CHATRA	152.98	46.0	18 44	2				
SIAN	154.79	359.4	18 48	3				
SHILLONG	157.02	41.8	18 47	-1				
KUNMING	162.94	18.5	18 55	1				

JULY 25 18.H 39.M 27.S EPICENTRE -0.03 124.90 DEPTH= 39.KM

A=-0.57214 B= 0.82015 C=-0.00055 D= 0.8202 E= 0.5721
G= 0.0003 H=-0.0004 K=-1.0000 HT= 7.2

DEPTH OF FOCUS= 0.001R

SE= 2.24

The scanned images of the bulletins of the International Seismological Summary (ISS) have been obtained thanks to funding provided by the US National Science Foundation through grant EAR-9725140 (Villaseñor et al., 1997) and collected by SGA Storia Geofisica Ambiente (Bologna) on behalf of the Istituto Nazionale di Geofisica e Vulcanologia (Rome), in the frame of the EUROSEISMOS project.

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
DARWIN	13.61	154.6	3	12	-1						5	42	
BAGUIO CITY	16.89	345.6	3	56	1	7	12	12					
LEMBANG	18.51	248.3	4	15A	0	7	37	0					
NHATRANG	19.76	308.6	4	31A	1	8	11	6					
PORT MORESBY	24.03	113.4	5	11K	-1	9	23	-1					
HONG KONG	24.54	335.5	5	17	0	9	17	-15					
CANTON	25.58	334.7	5	28A	1	9	49	-1					
RABAUL	27.56	99.0	5	44	-1						10	21	
CHARTERS TS.	28.89	134.9	5	54	-3	10	40	-4					
ZO-SE	31.16	353.8	6	19K	1						7	31	
NANKING	32.44	350.3	6	30K	1								
MUNDARING	32.81	193.7	6	30K	-2								
KUNMING	32.93	321.0	6	34A	1	11	49	2					
ADELAIDE	37.08	161.0	7	8A	0	12	49	-2			8	30	PP
BRISBANE	38.17	137.7	7	20	2	13	7	-1					
MATUSIRO	38.43	17.4	7	19	-1	13	7	-5			9	10	PPP
PEKING	40.66	349.7	7	39	1	13	46	1					
SHILLONG	40.80	311.1	7	35A	-4								
LANCHOW	40.90	333.6	7	41	1						13	32	
RIVERVIEW	41.68	146.4	7	45	-2	14	3	3			17	16	SS
CANBERRA	41.69	149.9	7	47K	0	14	1	1	7	57	9	25	PP
MELBOURNE	41.92	156.0	7	50	1						8	0	
CHANGCHUN	43.67	0.4	8	2A	-1						14	37	
LHASA	43.73	315.4	8	5A	2	13	43	-47					
VISHAKHAPTNM	44.55	295.6	8	10	0						10	11	
CHATRA	45.05	309.4	8	15A	1								
TARRALEAH	46.34	157.9									8	40	
MOORLANDS	46.74	157.3	8	37	10						9	11	
ULAN-BATOR	50.26	344.3	8	52	-3								
LAHORE	57.18	308.3	9	42	-4	17	25	-11					
KARAPIRO	59.88	135.0	10	5	1								
WARSAK DAM	60.29	309.9	10	7	0								
CHATEAU	60.45	136.3	10	12	4								
WELLINGTON	60.91	138.7	10	11	0								
TUAI	61.40	135.3	10	11	-4								
QUETTA	62.66	304.3	10	20	-3	18	46	-1	10	33	12	41	PP
SHIRAZ	74.74	300.7	11	36K	-2	21	7	-3					
TEHERAN	76.67	306.7	11	51	2								
CAPE HALLETT	77.56	167.1	11	54	0								
TANANARIVE	78.02	250.8	11	57A	1	22	43	57			12	49	
MAWSON	79.61	200.1	12	5A	0				12	20	12	26	*SP
HAWAII V.OB	80.42	70.4	12	11	2								
SCOTT BASE	80.89	171.8	12	12	0								
TIFLIS	82.63	312.0	12	0	-21								
COLLEGE	88.87	25.3	12	48	-3						17	46	
KSARA	89.20	303.6	12	55	2								
JERUSALEM	89.74	301.6	12	56A	0								
SOUTH POLE	89.97	180.0	12	57	0								
KAJAANI	93.18	334.1	13	12	0								
SODANKYLA	93.22	337.4	13	10	-2								
NURMIJARVI	95.07	330.7	13	19	-1								
KIRUNA	95.47	338.3	13	20	-2								
TROMSOE	95.56	340.2	13	21	-1								
BULAWAYO	95.90	249.9	13	24A	0						24	5	
UMEA	96.47	334.4	13	26	0								
SKALSTUGAN	99.94	335.2	13	40	-2								
RACIBORZ	100.69	321.1	13	46	0								
BRATISLAVA	101.83	319.4	13	30	-21						18	6	PP
PRUHONICE	103.00	321.6	13	55	-1						15	15	PP
COLLMBERG	103.57	323.2	13	58	0						18	17	PP
KASPERSKE H.	103.84	320.9	14	0	0						18	20	PP
LJUBLJANA	104.06	317.7	13	47	-14						18	20	PP
JENA	104.53	323.1	14	2	-1						18	24	PP
STUTTGART	106.65	321.5	13	47	777								
BENSBERG	107.14	324.1	13	41	777						18	41	PP
ISOLA	109.66	317.5	14	22	777						19	8	PP
HUNGRY HORSE	110.16	37.5	18	30	3								
EUREKA	112.15	46.9	18	34	3								
BOZEMAN	113.14	39.2	18	36	3								
FLAMING GRGE	116.27	43.3	18	42	3								
TUCSON TELE.	118.57	52.7	18	47	3								
RAPID CITY	118.80	37.7	18	46	2								
LAWRENCE	126.60	38.8	19	0	1								
WICHITA MTS.	126.72	45.0	19	1	1						20	55	PP
FAYETTEVILLE	128.98	41.1	19	5K	1								

SHAWINIGAN	131.15	16.2	19	10	2						
OTTAWA	131.28	19.3	19	9	1						
MORGANTOWN	134.52	27.1	19	8	-6					22 41	PKS
PALISADES	135.78	20.5	18	21	-56					38 3	SS
CHAPEL HILL	137.91	29.4	19	25	4					22 52	
COLUMBIA	138.37	33.2	19	23	1						
SAN JUAN	158.79	30.1	19	57	4					20 31	
LA PAZ	159.14	142.6	19	59	5						

JULY 26 9.H 19.M 6.S EPICENTRE -37.42 177.04 DEPTH= 149.KM

A=-0.79512 B= 0.04112 C=-0.60505 D= 0.0516 E= 0.9987
G= 0.6042 H=-0.0312 K=-0.7962 HT= -0.7

DEPTH OF FOCUS= 0.018R

SE= 2.77

	DELTA DEG.	AZ. DEG.	P M	S	O-C S	S M	S	O-C S	*PP M	S	SUPP. M	S	
KARAPIRO	1.29	246.3	0	29	1								
TUAI	1.38	176.4	0	30	1	0	51	0					
AUCKLAND	1.87	286.3	0	37	3	1	4	4					
CHATEAU	2.13	213.1	0	38K	1	1	2	-4					
ONERAHI	2.71	306.6	0	44	0	1	24	6					
WELLINGTON	4.24	203.8	0	59K	-5	1	48	-6					
COBB RIVER	4.96	221.1	1	11	-3	2	9	-2					
KAIMATA	6.68	218.5	1	34	-3	2	46	-6					
GEBBIES PASS	7.11	206.7	1	38	-4	2	54	-8					
RAOUL ISLAND	9.20	29.0	2	5	-5	3	39	-13					
ROXBURGH	9.92	213.3				4	8	-1					
MACQUARIE I.	21.11	210.2	4	35	1								
RIVERVIEW	21.33	271.9	4	38K	2	8	43	24			5	8	PP
CANBERRA	22.65	266.8	4	51K	2	8	57	15			5	23	PP
BRISBANE	22.74	289.0	4	50	0	8	48	5					
FORT NELSON	23.28	247.0	4	56	1						5	29	*SP
MOORLANDS	23.37	248.3	4	57A	1						5	29	SP
TARRALEAH	23.90	248.7	5	2	1						5	40	PP
MELBOURNE	25.34	259.2	5	15	1						5	50	
AFIAMALU	25.45	26.0	5	19	4	9	51	22					
ADELAIDE	30.88	262.8	6	4K	0						14	9	
CAPE HALLETT	35.14	183.6	6	42	1								
PORT MORESBY	38.80	308.3	7	12K	0	12	56	-2			7	58	
RABAUL	40.14	319.4	7	20	-3								
SCOTT BASE	40.78	183.3	7	30A	2	13	28	1			9	5	PP
DARWIN	48.15	288.8	8	26	-1								
BYRD STATION	48.86	168.0	8	43	11						9	48	PP
MUNDARING	49.56	257.2	8	36A	-1								
SOUTH POLE	52.77	180.0	9	3	1	16	23	7					
HONOLULU	62.92	26.1	10	10	-3								
KIPAPA	63.06	26.1	10	11	-2								
MAWSON	64.28	202.8	10	19K	-2						10	55	PCP
ARGENTINE I.	67.18	156.4	10	39	-1								
LEMBANG	69.55	277.2	10	53A	-1								
MATUSIRO	81.90	329.3	12	2	-2	21	57	-6			27	24	SS
PASADENA	93.26	48.7	12	57	-2								
LICK	93.49	44.5	12	58A	-2								
MINERAL	95.66	42.4	13	8	-1								
BOULDER CITY	96.51	49.3	13	13	0						17	6	PKP
TUCSON	96.56	54.3	13	14	0								
EUREKA	98.18	46.0	13	18	-3						29	1	PKKP
FLAMING GRGE	102.96	48.2	17	3	201								
COLLEGE	105.61	14.8	14	1	777	24	1	-17					
WICHITA MTS.	106.18	58.6	14	2	777						18	19	PP
QUETTA	122.65	285.0	18	37	-1								
PALISADES	126.31	62.6									21	11	PP
OTTAWA	126.56	56.9	18	44A	-1								
SHAWINIGAN	128.87	56.3	18	49A	-1								
TIFLIS	143.30	292.0	19	12	-4								
APATITY	143.59	337.4	20	12	55								
TROMSOE	145.63	346.6	19	18	-3								
SODANKYLA	145.67	340.2	19	19A	-2								
KIRUNA	146.84	344.0	19	22A	-1								
MOSCOW	147.24	317.1	19	21	-2								
KAJAANI	147.61	335.3	19	24	0								
JERUSALEM	148.23	271.3	19	27	2								
KSARA	148.37	275.3	19	29	4								

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PULKOVO	149.17	327.2	19 29	3	
UMEA	150.10	339.5	19 28	1	19 50
HELWAN	150.60	265.4	19 32	4	20 15
NURMIJARVI	151.03	331.7	19 33A	4	
SKALSTUGAN	152.23	345.4	19 35A	4	
UPPSALA	153.97	336.1	19 48K	15	
COLLMBERG	162.09	325.9			20 29
VIENNA-H.	162.21	313.6	20 33	50	
PRUHONICE	162.22	320.5	20 31	48	21 8
JENA	162.98	327.1	20 33	49	
KASPERSKE H.	163.25	319.6	20 36	52	21 13
BENSBERG	164.66	335.1	20 41	56	
STUTTGART	165.58	325.7	20 46	60	21 27 PKP2
BESANCON	168.17	328.9	20 57	69	

JULY 27 18.H 35.M 39.S EPICENTRE 34.63 25.14 DEPTH= 0.KM
A= 0.74651 B= 0.35039 C= 0.56564 D= 0.4249 E=-0.9052
G= 0.5120 H= 0.2403 K=-0.8247 HT= 0.3

SE= 2.73

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
ATHENS	3.53	341.4	0 57A	0	1 35	-5		1 47 SG
HELWAN	7.07	130.5	1 46A	-1	3 1	-8		
ISTANBUL UN.	7.09	24.3	1 47	0				2 57
ISTANBUL KA.	7.14	24.6						3 10 PG
SOFIA	8.18	350.6	2 1	-1				4 4
MESSINA	8.51	297.5	2 5	-2				3 35
TARANTO	8.56	315.3						3 50
JERUSALEM	8.91	105.8	2 8	-4	3 46	-9		
KSARA	8.93	92.1	2 10	-3	3 42	-13		4 41 SG
TITOGRAD	9.05	331.1			3 48	-11		4 25
BUCHAREST	9.81	4.0	2 24	-1				5 49
BELGRADE	10.80	341.9						5 16
ROME	12.31	309.9						5 36
SIMFEROPOL	12.40	31.1	3 1	1				
TRIESTE	14.02	325.1						5 44
FLORENCE X.	14.11	314.5						5 41
SOTCHI	14.40	47.3	3 34	7				
PADOVA	14.79	320.7						6 11
LWOW	15.20	357.2	3 43	6				
MONACO	16.44	308.8	3 52	-1				
KASPERSKE H.	16.83	332.9	3 59A	1				5 32
ISOLA	16.90	309.8	3 58	-1				4 13 PP
CHUR	16.96	320.7	4 3	3				
TIFLIS	16.98	59.6	3 58	-2				
PRUHONICE	17.20	336.3	4 4A	1				5 50
PRAGUE	17.32	336.3						4 23
STUTTGART	18.38	325.0	4 16	-1				
COLLMBERG	18.84	335.9	4 24	1	8 5	14		5 36
STRASBOURG	18.99	322.5	4 25	0				
JENA	19.04	332.9	4 25	-1	7 54	-1		5 34
BESANCON	19.14	317.0	4 26	-1				
MAKHACH-KALA	19.27	57.8			8 5	4		
HALLE	19.37	334.5	4 28	-1	7 56	-7		
GARCHY	20.84	314.0	4 44	-1				
BENSBERG	20.89	326.8	4 43	-3				5 32
BAGNERES	21.16	300.9	4 49	0				5 15
MUNSTER	21.42	329.3	4 50	-1				
TEHERAN	21.46	79.5	4 52	0	8 49	3		
PARIS	21.95	317.1	4 57	0				
ALMERIA	22.50	283.7	5 3	1				6 18
MOSCOW	22.79	18.4	5 3	-2				
GRANADA	23.39	284.6	5 13K	2	9 46	25		
FOLINIERE	23.64	314.5	5 12	-1				
SHIRAZ	23.67	94.5	5 16	3	9 25	-1		5 48 PP
TOLEDO	23.76	291.3	5 14	0				5 46 PP
PULKOVO	25.38	6.1	5 30	0	9 47	-8		
UPPSALA	25.71	351.2	5 31	-2				
NURMIJARVI	25.90	359.5	5 30	-5				
UMEA	29.38	355.6	6 3	-3				
SKALSTUGAN	30.06	348.5	6 8	-5				
SVERDLOVSK	32.69	36.2	6 33	-3				
SODANKYLA	32.80	1.1	6 32	-5				

APATITY	33.31	5.8	6 36	-5
KIRUNA	33.36	356.7	6 37	-4
QUETTA	35.39	85.3	6 58	-1
LAHORE	41.00	80.0	7 51	5
KIMBERLEY	63.04	180.4	10 31	0
YAKUTSK	66.37	29.9	10 59	7
SHAWINIGAN	70.67	313.6	11 21	2
WESTON	71.88	309.2	11 27K	1
COLLEGE	80.68	357.0	12 16	0
MATUSIRO	85.69	48.0	12 45	3
RAPID CITY	88.66	325.6	12 15	-41
HUNGRY HORSE	89.71	334.1	13 0	-1
WICHITA MTS.	93.24	316.7	13 19	2
SOUTH POLE	124.45	180.0	18 59	-2

JULY 28 0.H 34.M 22.S EPICENTRE 27.11 126.59 DEPTH= 169.KM
A=-0.53139 B= 0.71571 C= 0.45320 D= 0.8029 E= 0.5961
G=-0.2702 H= 0.3639 K=-0.8914 HT= 2.7

DEPTH OF FOCUS= 0.022R

SE= 1.71

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
ILAN	4.94	243.0	0 40	-34	1 22	-49		
TAIPEI	5.01	246.8	1 18	3	2 14	1		
HWALIEN	5.47	236.3	1 19	-2	2 2	-21		
TAICHUNG	6.09	242.4	1 30	1				
ZO-SE	6.19	311.3	1 30A	0				
HSINKONG	6.19	231.0	1 27	-3				
ALISHAN	6.34	237.0	1 29	-3				
NANKING	8.40	307.8	2 1A	1				
HONG KONG	12.26	249.7	2 49	-1	5 16	12		
CANTON	12.66	254.5	3 0	5				
MANILA	13.40	203.7	3 10	6	5 38	8		
MATUSIRO	13.63	43.5	3 4	-3	5 42	7		3 43
TUKUBASAN	14.65	48.3	3 19	-1				
PEKING	15.53	328.7	3 33	2	6 32	14		
SIAN	16.78	299.4	3 48K	2	6 56	10		4 19 *SP
MIZUSAWA	17.06	41.7	4 17	27	7 14	22		
CHENGTU	20.08	285.5	4 21K	-1	7 55	2		4 49 *SP
LANCHOW	21.31	300.4	4 35K	1	8 23	7		5 7 *SP
KUNMING	21.50	270.1	4 38	2	8 29	10		5 9 *SP
GUAM	21.73	125.1	4 38	0			5 8	6 3 PP
ULAN-BATOR	25.86	328.7	5 16	-2				
LHASA	31.31	283.1	6 7	1				
YAKUTSK	34.97	2.6	6 40	2				
PETROPAVLOVK	35.16	33.8	6 38	-1				
RABAUL	39.74	137.7	7 17	-1				
PORT MORESBY	41.41	148.4	7 30	-1				
LAHORE	45.43	288.6	8 3	-1				
WARSAK DAM	47.42	292.4	8 20	1				
TASHKENT	48.65	302.4	8 29	0				
STALINABAD	49.19	298.8	8 35	2				
CHARTERS TS.	50.64	155.8	7 44	-60				
QUETTA	51.92	288.3	8 53	0	16 3	2		10 3 PCP
SVERDLOVSK	54.68	322.0	9 13	-1				
ADELAIDE	62.80	168.8	10 10K	0				
COLLEGE	63.95	28.3	10 16	-1				13 48 PP
SHIRAZ	64.15	291.5	10 17A	-2	19 51	71	10 36	
CANBERRA	65.60	160.0	10 28	0				
APATITY	66.45	335.3	10 32	-1				
MOSCOW	67.49	322.2	10 39	-1				
SODANKYLA	69.01	335.9	10 48	-1				
SOTCHI	69.72	309.3	10 53	0				
KAJAANI	69.72	332.4	10 52	-1				
PULKOVO	70.02	327.6	10 54A	-1				
TROMSOE	70.74	339.3	10 58	-2				
KIRUNA	71.03	337.3	11 0	-1				
SITKA	71.88	34.7	11 7	1				
NURMIJARVI	72.38	329.5	11 9A	0				
UMEA	72.85	333.5	11 10	-2				
SIMFEROPOL	73.03	312.1	11 11	-2				
RESOLUTE	74.97	10.5	11 24	0				

UPPSALA	75.82	330.5	11	28A	-1			12	7		
SKALSTUGAN	76.05	335.2	11	29	-1						
RACIBORZ	80.48	321.7								11	57
SOFIA	81.06	313.4	11	58	0						
HELWAN	81.17	298.9	11	58	0						
VICTORIA	82.19	39.1	12	5	2						
PRUHONICE	82.52	322.9	12	6	1					12	46
COLLMBERG	82.60	324.5	12	6	0			12	45	13	40
ATHENS	83.07	309.1	12	7	-1						
KASPERSKE H.	83.52	322.5	12	10K	0					13	2
JENA	83.55	324.8	12	11	1			12	51		
PENTICTON	83.83	37.0	12	12	0						
CORVALLIS	84.38	42.4	12	17	3						
MUNSTER	84.90	327.1	12	18	1						
TRIESTE	85.40	319.6	12	18	-1						
STUTTGART	86.03	323.9	12	23	0			13	3		
SHASTA	87.06	45.3	12	30	2						
HUNGRY HORSE	87.37	35.6	12	31	2						
MINERAL	87.75	45.2	12	32A	1						
LICK	89.41	47.8	12	40A	1						
FOLINIERE	90.90	328.1	12	46	0						
EUREKA	91.77	43.4	12	52	2						
WOODY	92.19	47.8	12	51	-1					13	30
WICHITA MTS.	105.11	37.2	13	53	777					18	9 PP
TRINIDAD	141.68	12.7	19	9	-3						

JULY 28 1.H 5.M 34.S EPICENTRE -2.10 -77.15 DEPTH= 165.KM

A= 0.22228 B=-0.97430 C=-0.03641 D=-0.9749 E=-0.2224
G=-0.0081 H= 0.0355 K=-0.9993 HT= 7.2

DEPTH OF FOCUS= 0.021R

SE= 1.58

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
CHINCHINA	7.19	12.3	1	44	1	3	18	14					
BOGOTA	7.35	24.7	1	46	1	3	15	7					
FUQUENE	8.26	24.4	1	56A	-1								
HUANCAYO	10.05	169.8	2	16	-5	3	59	-13					
BALBOA HTS.	11.25	347.7	2	37	0	4	43	3					
GALERAZAMBA	12.93	8.3	3	3	5	5	28	9	5	14			
AREQUIPA	15.32	159.0	3	28	0				3	55			
CARACAS	16.13	38.9	3	39	1	6	46	14					
LA PAZ	16.84	148.7	3	42	-5	6	40	-7					
TRINIDAD	20.15	50.8	4	21	-2	8	6	12					
GRENADA	20.79	47.1	4	27	-2	8	17	11					
ST. VINCENT	21.87	45.7	4	35	-5	8	34	8					
ANTOFAGASTA	22.44	163.7	4	44	-1	9	2	26					
FORT FRANCE	23.04	43.0	4	51	0						5	20	
BARBADOS	23.06	48.6	4	51	0								
SAN JUAN	23.07	27.6	4	50	-1	8	54	8					
DOMINICA	23.27	41.5	4	52	-1								
COMITAN	23.49	321.5	5	8	13	9	6	13			15	54	SCS
ANTIGUA	24.36	37.7	5	4	0	9	17	9					
VERA CRUZ	28.22	319.4				10	22	11	6	6	11	26	*SS
TACUBAYA	30.43	315.6	5	59	0	10	55	9			16	21	SCS
SANTIAGO	31.76	169.6	6	8	-2								
COLUMBIA	36.09	354.5	6	47	0	12	16	2	7	20	8	16	PP
CHAPEL HILL	37.86	357.5	7	0	-2								
WASHINGTON	40.80	0.1	7	26	0	13	3	-21	8	0	9	4	PP
CHIHUAHUA	41.28	319.9									14	4	
MORGANTOWN	41.61	356.7	7	33K	0	13	44	8					
WICHITA MTS.	41.79	333.1	7	34A	0	13	44	5	8	6	9	36	PP
PENNSYLVANIA	42.70	359.2	7	42	0	13	57	5	8	16	9	24	PP
PALISADES	43.01	3.6	7	44A	0	13	59	2	8	18	9	30	PP
CLEVELAND	43.56	355.2	7	48	-1	14	6	1			17	33	SS
WESTON	44.59	6.2	7	56A	-1	14	27	8			17	38	SS
TUCSON	46.74	319.8	8	14	0	14	39	-11	8	37	10	3	PP
OTTAWA	47.31	1.4	8	18	0								
BREBEUF	47.50	3.4	8	19	-1								
HALIFAX	48.06	13.0	8	24	0								
SHAWINIGAN	48.60	4.0	8	27	-1								
GLEN CANYON	50.34	324.0	8	42	0	15	46	6	9	14	11	25	PP
LARAMIE	50.35	332.2	8	42	0								
RAPID CITY	51.55	336.2	8	50	-1				9	24			

The scanned images of the bulletins of the International Seismological Summary (ISS) have been obtained thanks to funding provided by the US National Science Foundation through grant EAR-9725140 (Villaseñor et al., 1997) and collected by SGA Storia Geofisica Ambiente (Bologna) on behalf of the Istituto Nazionale di Geofisica e Vulcanologia (Rome), in the frame of the EUROSEISMOS project.

PASADENA	52.78	316.9	9	OK	0	16	21	8	9	32	11	24 PP
SALT LAKE C	53.11	327.3	9	4	2	16	22	4	13	55		
EUREKA	54.58	323.5	9	12	-1				9	41	13	59
FRESNO	55.36	318.6	9	19	0							
BOZEMAN	56.24	331.9	9	26	1	17	6	6				
VINEYARD	56.40	317.7	9	25	-1							
LICK	56.89	318.2	9	24K	-6				9	56	14	11
RENO	56.96	321.3	9	32	2							
BUTTE	57.22	331.3	9	31	-1	17	15	2				
BERKELEY	57.60	318.4	9	34	0	17	23	6	10	3	18	23 *SS
MINERAL	58.55	321.1	9	40A	-1						14	17
UKIAH	58.91	319.1	9	46	2							
SHASTA	59.25	321.1	9	48	2				10	18		
HUNGRY HORSE	59.60	332.3	9	47	-1	17	46	3				
MBOUR	61.80	72.6	10	2	-1	18	17	6				
PONTA DELGDA	61.87	44.7	10	3A	-1				10	40	10	42 PCP
CORVALLIS	62.01	324.3	10	4	-1							
BANFF	62.30	333.8	10	5	-2							
PENTICTON	62.95	330.3	10	10	-1							
VICTORIA	64.40	327.8	10	20A	0						18	53
LISBON	74.32	48.9	11	21	0	20	44	4				
SITKA	75.08	331.3	11	26	1							
COIMBRA	75.26	47.6	10	26	-60	20	52	2	12	0		
SERRA PILAR	75.39	46.6	11	26K	-1						11	36 PCP
RESOLUTE	77.41	355.2	11	37	-1							
REYKJAVIK	77.46	21.7	11	39A	1				12	15		
GRANADA	78.22	51.5	11	44K	2	21	27	5			14	39 PP
TOLEDO	78.44	48.7	11	44A	0	21	27	3	12	19	14	43 PP
SIDA	78.73	22.9	11	46	1							
ALMERIA	79.04	52.0	11	46A	-1	21	32	2	12	10	14	48 PP
BYRD STATION	80.52	186.8	11	53	-2				12	30		
ALICANTE	80.87	50.8	11	52	-5	21	48	-1			15	0 PP
JERSEY	81.85	39.8	11	59	-3	22	4	4				
TORTOSA	82.04	48.5	12	6	3	22	5	4				
BAGNERES	82.17	46.2	12	3	0						15	13 PP
KIPAPA	82.27	291.8	12	4	0							
HONOLULU	82.33	291.7	12	2	-2	22	15	11				
FOLINIERE	82.81	40.5	12	6	-1							
DURHAM	83.42	34.4	12	11K	1	22	18	3	12	47	15	24 PP
KEW	83.45	37.8	12	10A	0	22	17	1	12	44	15	22 PP
ABERDEEN	83.69	32.0	12	25A	14	22	24	6			27	10 SS
COLLEGE	83.78	336.1	12	10	-2	22	19	0	12	39	12	17 PCP
CLERMONT-FD.	84.71	43.9	12	18A	2	22	37	9				
PARIS	84.75	40.8	12	17	1	22	32	4	12	52	15	27 PP
GARCHY	84.90	42.3	12	19	2	22	26	-4	12	49	15	23 PP
BESANCON	86.86	42.6	12	28	1						15	51 PP
DE BILT	86.93	37.8	12	31	4	22	43	-6			29	26 SS
ISOLA	87.28	45.8	12	29	0	22	50	-3				
NEUCHATEL	87.49	43.0	12	30	0	22	45	-10				
MONACO	87.51	46.3	12	30	0							
SOUTH POLE	87.91	180.0	11	53	-39				12	30		
WITTEVEEN	87.92	37.1	12	32	0						13	10
BASLE	87.97	42.5	12	32	0	22	48	-11				
BENSBERG	88.03	39.0	12	33A	1	23	5	5	13	5	16	0 PP
CUGLIERI	88.07	49.9									13	56
STRASBOURG	88.19	41.4	12	33	0	22	43	-18	13	45	16	3 PP
MUNSTER	88.41	38.0	12	35	1							
KARLSRUHE	88.65	41.0	12	36	1	22	52	-13				
PAVIA	88.87	44.9	12	36	0	22	52	-15			18	36 PPP
HEIDELBERG	88.88	40.7	12	36	0							
TUBINGEN	89.05	41.6	12	37	0							
STUTTGART	89.20	41.3	12	38A	0	23	13	3	13	12	16	10 PP
CHUR	89.24	43.3	12	39	1	22	56	-15				
RAVENSBURG	89.36	42.3	12	39	0							
PRATO	90.18	46.3	12	40	-2	22	58	-21				
FLORENCE X.	90.28	46.4	12	41A	-2	22	56	-24				
PADOVA	90.79	44.8	12	46	1	23	33	8	13	22	16	22 PP
JENA	90.81	39.3	12	47	2	23	5	-20	13	21	16	19 PP
ROME	91.11	48.3	12	47A	0	23	32	5	13	23	16	21 PP
CHEB	91.29	40.1	12	47	-1	23	36	7			16	23 PP
GOTEBORG	91.29	32.5	12	49	1				13	25		
COPENHAGEN	91.49	34.5	12	50A	2	23	40	9	13	26	16	27 PP
SKALSTUGAN	91.61	26.6	12	50	1				13	26	16	26 PP
COLLMBERG	91.72	38.9	12	50A	1	23	40	7	13	26	16	28 PP
KASPERSKE H.	92.05	41.1	12	51A	0	23	12	-24			16	31 PP
TRIESTE	92.12	44.6	12	51	0	23	12	-24	13	28	16	32 PP
PRAGUE	92.61	40.2	12	55	1	23	15	-26			16	37 PP
PRUHONICE	92.69	40.2	12	54	0	24	2	21	13	30	16	37 PP

SCOTT BASE	93.30	191.0	12	57	0	23	57	10	13	37	16	32	PP
VIENNA-H.	93.90	42.0	13	0	1	23	52	0					
TROMSOE	94.08	20.4	13	1	1	23	24	-29	13	38			
HERMANUS	94.09	124.5									23	59	
UPPSALA	94.21	30.3	13	0	-1	23	18	-36	13	38	16	44	PP
BRATISLAVA	94.39	42.0	13	3	1				13	38			
CAPE HALLETT	94.76	196.4	13	4	1	23	29	-30	13	52	16	52	PP
KIRUŇA	94.80	22.2	13	4	0	23	27	-32	13	41	17	26	*PPP
RACIBORZ	95.04	40.1	13	7	2				13	50	15	26	
UMEA	95.14	26.2	13	0	-5				13	40	17	22	*PPP
TITOGRAD	96.15	47.7	13	12	2	23	35	6			17	4	PP
KRAKOW	96.16	40.1	13	12	2	23	34	5	14	5	17	6	PP
SKALNATE PL.	96.43	40.9	13	11	0				13	33			
WARSAW	96.66	37.8	13	13	1	23	37	5	13	49	17	7	PP
BELGRADE	96.87	45.3	13	14K	1	24	48	75			17	13	PP
SODANKYLA	97.22	22.3	13	15	0	23	39	4	13	52	17	7	PP
TIMISOARA	97.34	44.3	14	8	53	23	42	7					
NURMIJARVI	97.63	29.3	13	16	0	23	38	1			17	13	PP
KAJAANI	98.36	25.4	13	21	1				13	57			
KHEYS	98.76	6.7	13	23	1	23	48	6	13	43	17	23	PP
LWOW	98.81	40.0	13	24	2	23	46	3	13	59	17	25	PP
SOFIA	99.12	47.2	13	25	2	23	52	8					
KIMBERLEY	99.44	119.4	13	23	-2								
APATITY	99.70	21.4									17	18	
ATHENS	99.86	52.0	13	27	0								
PULKOVO	100.56	29.4							14	5	17	57	PP
BUCHAREST	100.92	45.3	13	32	1	23	54	1			19	6	PPP
IASI	101.52	42.3				23	59	3			24	53	
ISTANBUL UN.	103.53	48.4	17	56	253								
ISTANBUL KA.	103.58	48.3	13	42	-1	24	2	-4	14	21	17	53	PP
BULAWAYO	104.04	111.2	13	48	3								
BROKEN HILL	104.57	105.4	13	50	3								
MAWSON	105.06	165.2	13	50	777	24	15	3			18	12	PP
MOSCOW	105.48	32.2				24	19	5			25	4	SKKS
LWIRO	105.84	92.9	14	11	777	25	47	91					
SIMFEROPOL	106.44	43.6				24	23	5			18	21	PP
HELWAN	107.05	59.5	18	19	777						18	38	PP
TIKSI	108.62	351.6									18	30	PP
JERUSALEM	110.06	57.0	18	54	43								
KSARA	110.22	54.7	17	50	-22	25	13	39			18	44	PP
PETROPAVLOVK	111.62	327.5									19	6	PP
MAGADAN	111.85	336.0									19	4	PP
TIFLIS	114.84	44.4	18	26	5	25	2	9	19	1	19	34	PP
SVERDLOVSK	115.93	24.3				25	3	6	19	2	26	16	SKKS
GORIS	116.72	46.3									19	33	PP
YAKUTSK	116.91	346.2				25	3	3	19	3	19	34	PP
TANANARIVE	121.79	113.7	18	41	7								
TEHERAN	121.85	48.5	19	14	40						20	9	PKP2
RIVERVIEW	122.22	227.3	18	40	5						37	14	SS
UGLEGORSK	122.45	330.5				25	28	9			26	58	SKKS
CANBERRA	123.04	224.7	18	38A	2						28	31	SKSP
SHIRAZ	124.98	54.9	18	41	1	25	33	6	19	20	20	29	PP
ASHKABAD	125.86	43.1	18	45	3				19	22	20	49	PP
SEMIPALATNSK	128.20	18.2	18	46	0				19	26	20	46	PP
IRKUTSK	129.99	358.8	18	52	2	25	49	8			21	2	PP
ADELAIDE	130.11	219.0	18	51K	1						22	15	PKS
RABAUL	130.32	262.7	18	47	-3								
TASHKENT	130.63	33.3	18	56	5				19	31	21	8	PP
VLADIVOSTOK	131.64	331.6									27	56	SKKS
TUKUBASAN	131.66	319.1	18	43	-10						38	46	SS
CHARTERS TS.	132.06	240.5	18	55	1						22	24	
FRUNSE	132.25	28.0	18	59	5				19	36	21	18	PP
MATUSIRO	132.68	320.7	18	56	1				19	34			
CHANGCHUN	133.91	337.4	18	59	2								
ULAN-BATOR	134.22	356.2	19	2	4						22	9	PP
PORT MORESBY	134.42	254.8	19	2	4						22	33	
KHOROG	134.52	35.5	19	2	4				19	39	21	32	PP
ABUYAMA	135.40	320.7	19	3K	3								
QUETTA	135.99	47.0	19	1	0				19	42	21	48	PP
WARSAK DAM	136.86	39.1	19	7	4								
GUAM	137.07	287.5	19	3	0				19	42	21	48	PP
LAHORE	140.23	39.6	19	11	2								
PEKING	140.36	343.9	19	11	2								
PAOTOW	141.15	351.3	19	13	2								
DEHRA DUN	143.39	37.5	19	13	-2						29	8	
MUNDARING	143.82	199.4	19	13A	-2								
LANCHOW	146.21	358.6	19	22	3								
NANKING	146.64	334.9	19	21	1								

POONA	147.22	58.2	19	24A	3						
SIAN	147.52	350.6	19	24	2						
LHASA	150.40	21.1	19	31	5						
CHATRA	151.17	30.1	18	32K	-55				19	15	
CHENGTU	151.57	357.9	19	32	4						
BOKARO	152.82	36.0	19	41	12				30	0	
CANTON	156.79	334.8	19	39	4						
KUNMING	157.11	0.3	19	38	3						
NHATRANG	168.14	328.2	19	48	2				20	26	
LEMBANG	169.93	208.2	19	48K	1				24	50	
MEDAN	175.58	70.5							21	41	

JULY 28 6.H 11.M 37.S EPICENTRE -18.92 167.76 DEPTH= 0.KM

A=-0.92513 B= 0.20062 C=-0.32232 D= 0.2119 E= 0.9773
G= 0.3150 H=-0.0683 K=-0.9466 HT= 4.9

SE= 2.90

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
NOUMEA	3.58	199.9	0	56K	-2	1	39	-3					
KOUMAC	3.66	243.0	0	57K	-2								
SUVA	10.15	87.4	2	30	0								
HONIARA	12.10	320.2	2	54	-3								
BRISBANE	16.14	235.8	3	48	-2	7	29	39					
RAOUL ISLAND	16.61	130.9	4	10	14								
KARAPIRO	20.12	161.9	4	41	3								
AFIAMALU	20.24	78.8	4	35	-4								
CHARTERS TS.	20.30	263.2	4	39	-1	8	29	6					
RIVERVIEW	20.98	221.7	4	42A	-5						8	51	*SS
RABAUL	21.12	311.9	4	50	1								
CHATEAU	21.30	163.2	4	55	5								
TUAI	21.42	159.6	4	54	2								
PORT MORESBY	22.09	292.5	4	59	1	9	0	2					
WELLINGTON	23.08	166.4	5	11	3	9	24	8			5	53	PP
CANBERRA	23.29	221.7	5	11	1	9	27	8					
GEBBIES PASS	25.04	171.6	5	31	4								
ROXBURGH	26.52	177.5				10	18	4					
MELBOURNE	27.39	221.8	5	48	-1								
TARRALEAH	29.49	213.2	6	9	1								
ADELAIDE	30.28	232.3	6	13	-2	10	59	-16					
DARWIN	36.10	274.9	7	4	-1								
GUAM	39.37	323.1	7	32	-1								
MUNDARING	47.93	243.7	8	40	-2								
PERTH	48.25	243.8									19	33	
HONOLULU	52.10	41.5	9	13	-1	16	35	-3					
HAWAII V.OB.	52.61	45.6	9	26	8	17	16	32					
CAPE HALLETT	53.41	179.1	9	22	-2	16	59	4			19	18	SCS
SCOTT BASE	58.97	180.3	10	2	-2	18	11	2			10	42	PCP
WILKES	59.89	203.1				18	21	0					
DJAKARTA	60.55	273.6				18	15	-15			11	47	
TUKUBASAN	60.77	334.5	10	13	-3								
ABUYAMA	61.62	330.1	10	19A	-3								
MATUSIRO	61.83	333.2	10	19	-4	18	40	-6			20	20	SCS
NHATRANG	65.48	293.5	10	48	1						11	19	PCP
HONG KONG	66.50	305.6	10	51	-3	19	38	-6					
MIRNY	66.74	204.9	10	54	-1	19	48	1					
ZO-SE	66.89	317.4	10	55	-1	19	46	-3					
CANTON	67.58	305.9	11	3	3	20	0	3					
BYRD STATION	68.50	169.7	11	4	-2								
NANKING	69.07	316.7	11	10	0	20	15	0					
Y.-SAKHLINSK	69.41	342.0	11	10	-2	20	20	1					
VLADIVOSTOK	69.99	332.8	11	25	10	20	29	4					
SOUTH POLE	71.20	180.0	11	21	-2								
UGLEGORSK	71.46	342.5	11	25	1	20	43	1					
MEDAN	71.50	280.5	11	32A	8								
PETROPAVLOVK	72.07	354.2	11	25	-3	20	43	-7					
CHANGCHUN	73.56	329.4	11	37K	0	21	8	2					
PEKING	75.81	321.6	11	51	1	21	34	3					
KUNMING	76.92	302.5	11	58	2	21	45	1					
SIAN	76.99	313.3	11	58K	2	21	48	4					
MAWSON	78.20	202.2	12	2A	-1	21	59	2	12	15	22	14	SKS
CHENGTU	78.63	308.0	12	6	1	22	1	-1					
MAGADAN	79.41	351.3	12	8	-1	22	10	0					
PAOTOW	79.86	319.1	12	14K	2	22	19	4					

LANCHOW	81.48	312.6	12	19	-1	22	36	4		
ULAN-BATOR	85.90	323.9	12	43	0	23	2	-14		
SHILLONG	85.99	298.6	12	43A	0	23	12	-5	16	14 PP
YAKUTSK	86.14	343.1	12	40	-4	23	10	-8		
BERKELEY	86.59	48.1	12	44A	-2	23	9	-14	24	24 PPS
LICK	86.79	48.8	12	44A	-3				13	16
SHASTA	87.79	45.6	12	51	-1					
FRESNO	87.86	50.0	12	52	0					
PASADENA	87.97	52.9	12	50	-3	23	42	6	23	20 SKS
MINERAL	88.17	46.2	12	51A	-3					
LHASA	88.24	302.0	12	57	3	23	42	4	23	24 SKS
RENO	89.05	47.5	12	59	1					
COLLEGE	90.16	17.4	12	58	-5					
VISHAKHAPTNM	90.60	288.4	13	7A	2	23	41	-19	16	37 PP
BOULDER CITY	91.21	52.4	14	7	59					
EUREKA	91.73	48.8	13	7	-4					
TUCSON	92.94	57.0	13	15	-1					
GLEN CANYON	94.00	52.4	13	19	-2					
DEHRA DUN	99.08	298.9							18	8
BOMBAY	100.43	286.4							20	30
WICHITA MTS.	103.43	57.7	14	2	-2	24	40	-3	18	21 PP
FRUNSE	104.86	310.5							17	39
ANDIJAN	106.09	308.1							17	46
STALINABAD	108.43	305.3							18	23
TASHKENT	108.49	308.2	19	0	777					
KHEYS	111.74	350.4							19	17 PP
LA PAZ	114.72	119.0							19	50 PP
SVERDLOVSK	115.00	324.6	18	47	4					
SHIRAZ	120.67	293.7	18	55	1	25	56	4	23	29 PKS
OTTAWA	121.77	47.9	18	53	-3					
BREBEUF	123.23	47.6	18	59	0					
PALISADES	123.41	52.9				25	59	-2	20	34 PP
APATITY	123.48	340.8	19	8	9					
SHAWINIGAN	123.68	46.2	18	59	-1					
BULAWAYO	124.23	228.0	19	4	3					
MAKHACH-KALA	124.69	309.6							21	10 PP
SODANKYLA	125.62	342.6	19	3	-1					
TROMSOE	125.84	347.1	18	59	-5					
GORIS	125.89	305.4							20	56
CARACAS	126.61	90.8	19	11	6	26	13	2		
TIFLIS	126.82	308.3	19	10	4					
KIRUNA	126.92	345.2	19	3	-3				21	0 PP
MOSCOW	127.66	326.9	19	11	4					
PULKOVO	129.11	333.8	19	10	0					
SAN JUAN	129.11	81.4	19	11	1					
SOTCHI	130.19	311.5	19	19	7					
NURMIJARVI	130.90	336.9	19	8	-6				22	38 PKS
SKALSTUGAN	132.34	345.5	19	17	1					
SIMFEROPOL	133.70	314.7	19	28	9					
UPPSALA	133.84	339.6							22	48 PKS
LWIRO	134.50	246.9	19	24	4					
KSARA	134.81	299.1	19	27	6				22	7 PP
LWOW	137.73	325.3							19	30
ISTANBUL KA.	138.47	311.2							22	33 PP
COPENHAGEN	138.83	338.9	19	39	11	27	3	26	22	59 PKS
HELWAN	139.07	294.0	19	36	7				22	59
BUCHAREST	139.19	317.1	19	43	14				24	41
KRAKOW	139.73	327.9							22	48
ABERDEEN	141.07	351.2	19	43K	11				29	18 SKKS
COLLMBERG	142.04	334.2	19	42	8				27	48 PP
PRAGUE	142.34	331.8							19	54
PRUHONICE	142.35	331.6	19	34	-1				22	58 PP
BRATISLAVA	142.36	327.5	19	35	0					
BELGRADE	142.51	320.8	19	34K	-1				23	49 PKS
VIENNA-H.	142.68	328.1	19	35	0				23	23 PKS
JENA	142.90	334.9	19	30	-5				22	36 PP
DURHAM	143.30	349.7	19	46	10				22	50 PP
KASPERSKE H.	143.40	331.3	19	35	-1				22	35 PP
DE BILT	144.18	341.6	19	48	10				43	23 SS
BENSBERG	144.52	338.8	19	35K	-3				23	2 PP
LJUBLJANA	145.08	326.8	19	38	-1				22	58 PP
HEIDELBERG	145.24	335.8	19	38	-2					
STUTTGART	145.52	334.6	19	39	-1				20	46
KARLSRUHE	145.68	335.7	19	43	3					
TRIESTE	145.75	326.9	19	41	1				42	5 SS
KEW	146.18	346.6	19	41	0				23	1 PP
STRASBOURG	146.27	335.8	19	44	3				42	12 SS
PADOVA	146.87	328.2							20	3
BASLE	147.20	334.9	19	46	3					

PARIS	147.90	341.6	20	4	20	20	55
BESANCON	148.05	336.3	19	49	5		
FLORENCE X.	148.33	326.6	19	41	-4		
PRATO	148.34	326.9	20	0	15		
PAVIA	148.34	330.5				20	19
ROME	148.92	322.8	19	53	7		
GARCH	149.06	339.5	19	54	8	20	20 PKP2
MESSINA	149.13	314.3	19	50	4		
ISOLA	150.08	331.5	19	52	5	22	15
MONACO	150.25	330.5	19	54	6		
CLERMONT-FD.	150.36	338.0	20	3	15	23	48
TOLEDO	157.95	343.0				20	33 PKP2
ALMERIA	160.19	336.3	20	11	10	20	35 PKP2
MBOUR	173.60	134.2	20	11	0	40	5 PPS

JULY 28 10.H 14.M 5.S EPICENTRE 20.35-109.32 DEPTH= 151.KM
A=-0.31046 B=-0.88552 C= 0.34566 D=-0.9437 E= 0.3308
G=-0.1144 H=-0.3262 K=-0.9384 HT= 4.6

DEPTH OF FOCUS= 0.019R

SE= 2.60

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
GUADALAJARA	5.63	85.6				2	31	4					
LEON	7.20	82.5									4	4	
CHIHUAHUA	8.76	19.0	2	14	10								
TACUBAYA	9.57	93.9	2	13	-2						3	53	
TUCSON	11.93	353.8	2	42	-4	4	51	-5					
TUCSON TELE.	12.01	354.3	2	43	-4				2	57	3	31	PP
OAXACA	12.34	103.5									5	35	SS
VERA CRUZ	12.47	93.0				5	11	2			3	43	
PASADENA	15.83	332.1	3	32K	-3								
BOULDER CITY	16.31	343.9	4	39	58						10	38	
GLEN CANYON	16.68	353.7	3	45	-1						5	38	PP
COMITAN	16.82	101.2	3	47	-1						7	19	SS
WICHITA MTS.	17.17	31.3	3	48	-4	7	7	11			6	18	
FRESNO	18.75	333.0	3	7	-62								
VINEYARD	19.45	329.7	4	15	-2								
EUREKA	19.91	344.7	4	21	0						5	18	PP
LICK	20.04	330.3	4	21K	-2						4	49	
SALT LAKE C.	20.47	354.5	4	26	-1	8	34	32					
SAN FRANCSCO	20.71	329.6	4	28	-1								
BERKELEY	20.76	330.0	4	29K	-1	8	33	25					
LARAMIE	21.14	7.8	4	35	1								
RENO	21.15	337.0	4	37	3								
LAWRENCE	22.17	30.1	4	44	0								
UKIAH	22.22	330.4	4	47	3								
MINERAL	22.53	334.9	4	48K	1						5	53	
SHASTA	23.15	334.1	4	53	0								
RAPID CITY	24.21	10.8	4	5	-58								
BOZEMAN	25.30	357.2	5	15	1	9	53	27					
BUTTE	25.74	354.8	5	18	0	10	2	29					
HUNGRY HORSE	28.19	353.3	5	40	0								
COLUMBIA	28.50	55.6	5	40	-3	10	33	15					
PENTICTON	30.06	346.5	5	56	-1								
VICTORIA	30.31	341.3	5	58	-1								
BANFF	31.15	352.4	6	5	-1								
MORGANTOWN	31.67	46.2	6	9K	-2								
WASHINGTON	33.34	49.3	6	23	-2	11	36	2					
PENNSYLVANIA	33.62	45.7	6	25	-3	11	53	15			7	45	PP
CHINCHINA	36.15	110.4	6	44	-5	12	34	17					
PALISADES	36.42	47.6	6	51	0	12	35	14			8	1	PP
OTTAWA	37.25	40.1	6	58	0								
FUQUENE	37.59	108.2	6	58	-3	12	54	15			13	12	*SS
BOGOTA	37.67	109.7	6	59	-3	12	54	14					
WESTON	38.74	46.8	7	9K	-2								
SHAWINIGAN	39.61	40.1	7	22	4								
SAN JUAN	40.72	85.2	7	25	-2								
CARACAS	41.91	97.0	7	33	-4	13	55	12					
HALIFAX	44.78	46.5	7	57	-3								
HONOLULU	45.46	280.2				14	59	25					
COLLEGE	51.23	340.1	8	49	-1						10	9	PCP
AREQUIPA	52.13	131.8	8	55	-2								

LA PAZ	54.56	129.2	9	12	-2	16	47	7			
RESOLUTE	54.91	4.6	9	21	4	16	58	13			
SANTIAGO	64.97	144.8	10	23	-2						
PETROPAVLOVK	75.20	321.4	11	28	1	21	14	22			
MAGADAN	77.56	329.1	11	42	2						
KHEYS	79.00	2.1	11	29	-19	21	51	18			
TROMSOE	83.09	16.1	12	12	2						
DURHAM	83.34	33.8	12	10	-1	22	40	23			
KIRUNA	84.72	17.0	12	17	-1	22	50	19			
KEW	85.49	36.4				22	45	7			
YAKUTSK	85.58	336.1	12	23	1						
SODANKYLA	86.69	15.6	12	27	0						
GRANADA	89.72	50.2				23	56	38			24 56 PS
HALLE	91.99	32.3									17 37
MATUSIRO	94.81	311.7	13	8	3	23	43	-19			30 38 SS
ROME	98.00	39.8									40 55
STALINABAD	121.37	1.8									20 27 PP

JULY 28 15.H 19.M 45.S EPICENTRE 43.54 146.40 DEPTH= 55.KM

A=-0.60566 B= 0.40245 C= 0.68645 D= 0.5534 E= 0.8329
G=-0.5717 H= 0.3799 K=-0.7272 HT= -3.0

DEPTH OF FOCUS= 0.004R

SE= 3.29

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
NEMURO	0.63	250.6	0	12K	-3	0	22	-4				
KUSIRO	1.56	249.6	0	24K	-2	0	46	0				
ABASHIRI	1.61	288.0	0	30	3	0	51	4				
KURILSK	1.99	31.5	0	32	0	0	58	2				
OBIHIRO	2.42	256.2	0	37	-1						0	43 *SP
HIROO	2.59	241.9	0	39	-2	1	12	1				
ASAHIGAWA	2.93	276.0	0	48	3							
URAKAWA	3.00	243.6	0	45	-1	1	27	5				
RUMOE	3.49	278.4	0	55	2	1	35	1				
TOMAKOMAI	3.64	257.2	1	0	5							
SAPPORO	3.71	264.4	0	57K	1	1	42	3				
WAKKANAI	3.86	300.7	1	1	3							
MURORAN	4.16	254.8	1	3	0	1	50	-1			1	19
Y.-SAKHLINSK	4.34	324.6	1	6	1						1	18 *SP
HAKODATE	4.50	249.3	1	7	0	2	7	8				
MORI	4.52	253.4	1	9	1	2	3	3				
SUTTSU	4.57	262.8	1	8	0	2	10	9				
HATINOHE	4.71	231.9	1	6	-4	1	58	-6				
AOMORI	4.98	238.8	1	12	-2	2	24	13				
MIYAKO	5.11	222.0	1	11	-5	2	46	31				
MORIOKA	5.48	227.3	1	20	-1	2	16	-8				
MIZUSAWA	5.93	223.7	1	25	-2	2	27	-8				
AKITA	6.07	233.1	1	29	0	2	45	7				
UGLEGORSK	6.30	333.1	1	34	2	2	52	8				
ISINOMAKI	6.39	218.6	1	28	-6	2	36	-10				
SENDAI	6.71	220.2	1	34	-4	2	55	1				
SAKATA	6.78	229.1	1	36	-3							
YAMAGATA	6.99	222.9	1	37	-5	2	51	-10				
HUKUSIMA	7.33	219.9	1	42	-5	3	6	-4				
ONAHAMA	7.81	214.4	2	4	10							
NIIGATA	7.91	227.3	1	53	-2	3	37	13				
SHIRAKAWA	7.96	218.4	1	49	-7							
MITO	8.48	214.4	1	58A	-5	3	25	-13				
UTUNOMIYA	8.59	217.8	2	0	-4	3	27	-14				
KAKIOKA	8.72	215.3	2	1	-5	3	31	-13				
TUKUBASAN	8.77	215.6	1	59	-8						3	24
TYOSI	8.90	210.5	2	7	-2	3	33	-16				
TAKADA	8.95	226.8	2	1	-8							
MAEBASI	9.08	220.7	2	4	-7	3	44	-9				
KUMAGAYA	9.14	218.5	2	7	-5	3	44	-10				
NAGANO	9.30	225.2	2	17	3							
TOKYO C.M.O.	9.37	215.3	2	5	-10	3	45	-15				
OIWAKE	9.39	222.5	2	21	6	4	15	15				
MATUSIRO	9.39	224.6	2	10A	-5	4	1	0			2	51
WAZIMA	9.50	232.8	2	16	-1	4	1	-2				
YOKOHAMA	9.63	215.0									3	57
SEVERO-KUR.	9.72	39.4	2	22	2						4	13
KOHU	9.91	220.2	2	20	-2	4	6	-7				

HUNATU	9.96	218.8	2 37	14	4 5	-9		
MERA	10.00	212.8						4 2
MISIMA	10.19	216.9	2 32	6				
OKHA	10.27	348.3	2 29	2	4 27	5		
OSIMA	10.31	214.2						4 6
VLADIVOSTOK	10.57	272.7	2 26	-5	4 25	-4		
OMAESAKI	10.95	218.1						3 1
GIHU	11.01	225.6	2 29	-8				
TSURUGA	11.20	228.7	2 39	-1				
HIKONE	11.39	226.9	2 41	-1				
KAMEYAMA	11.60	224.9						3 8
KYOTO	11.85	227.7	2 42	-7	4 48	-12		
ABUYAMA	12.05	227.7	2 46	-5				
OSAKA	12.24	227.1	3 2	8	5 6	-4		
PETROPAVLOVK	12.49	36.3	2 56	-1				5 9
CHANGCHUN	15.26	278.4	3 32	-1	6 23	2		
OOITA	15.48	233.2	3 40	4				
MAGADAN	16.26	8.0	3 45	-1				
MIYAZAKI	16.55	230.5	3 58	8				
YAKUTSK	20.96	337.8	4 38	-2	8 34	8		
PEKING	22.75	271.5	4 57A	-1	8 59	0		
ZO-SE	23.49	246.5	5 5A	0	9 17	5		
NANKING	24.54	251.4	5 16A	0	9 36	6		
PAOTOW	27.03	276.3	5 41A	2	10 19	8		
SIAN	30.39	265.0	6 9A	0	11 8	4		
CANTON	34.01	243.9	6 52	11				
HONG KONG	34.04	241.9			12 6	5		
CHENGTU	35.79	263.3	6 55	-1	12 29	1		
KUNMING	39.94	257.1	7 29A	-1	13 33	2		
COLLEGE	41.58	35.9	7 44	0	13 57	1		8 10
SEMIPALATNSK	44.30	303.1	8 5	-1				
NHATRANG	44.71	237.1	8 9A	0			8 21	
LHASA	45.76	271.4	8 20A	2	15 4	8		
KHEYS	47.11	347.1						9 58 PCP
SHILLONG	47.48	266.3	8 30A	-1				
RABAUL	47.81	172.2	8 31	-3				
SITKA	49.04	45.1	8 44	1				
CHATRA	50.16	270.9	8 53A	1				
FRUNSE	50.78	295.6	8 57	0	16 11	4		
SVERDLOVSK	52.92	316.6	9 11	-2				
TASHKENT	55.00	296.3	9 27	-1	17 10	6		9 44 *SP
RESOLUTE	55.33	16.5	9 29	-1				
KHOROG	55.46	291.2	9 32	1				
LAHORE	56.73	283.7	9 39A	-1				9 55 *SP
THULE	58.28	9.1	9 49	-2				10 22 PCP
VICTORIA	59.26	50.7	9 58	0				
SODANKYLA	60.45	337.3	10 4	-2				10 50 PCP
TROMSOE	60.78	341.4	10 6	-3				
PENTICTON	60.92	48.3	10 8	-1				
KIRUNA	61.77	339.6	10 13A	-2				
BANFF	62.02	44.9	10 26	9				
KAJAANI	62.41	334.2	10 17	-2				10 42
QUETTA	62.70	286.7	10 20A	-1			10 32	
CHARTERS TS.	63.32	180.1	10 23	-2				
SHASTA	64.27	57.5	10 31	-1				
MOSCOW	64.30	323.5	10 29	-3			10 40	
HUNGRY HORSE	64.49	46.8	10 33	0				
UMEA	64.86	336.7	10 33A	-2				
MINERAL	64.96	57.5	10 36A	0				
NURMIJARVI	65.97	332.6	10 41	-2				
RENO	66.54	57.3	10 50	4				
LICK	66.75	60.1	10 52K	4				
SKALSTUGAN	67.20	339.6	10 49	-1				
BOZEMAN	67.75	47.7	10 53	-1				
FRESNO	68.26	59.6	10 56	-1				
UPPSALA	68.73	335.0	10 58	-2				
EUREKA	68.90	55.3	11 1	0				
TEHERAN	69.66	300.2	11 6	0				
TIFLIS	69.78	308.6	11 8	2	20 17	7	11 19	
GORIS	70.33	306.0	11 11K	1				
SALT LAKE C.	70.49	52.1	11 11	0				
PASADENA	70.95	60.9	11 13	0				
BOULDER CITY	71.85	57.5	12 18	59				
GOTEBORG	72.19	336.2	11 20	-1				
REYKJAVIK	72.27	354.6	11 22K	1				
SIDA	72.31	352.8	11 24A	2			11 34	
SHIRAZ	72.84	294.6	11 25K	0	20 39	-6	11 40	11 47 *SP
RAPID CITY	72.95	45.0	11 25	0				

GLEN CANYON	73.15	54.9	11 26	0							
SIMFEROPOL	73.29	316.7	11 27	0	20	51	1				
LARAMIE	73.63	48.3	11 30	1							
COPENHAGEN	73.75	334.9	11 29	-1							
LWOW	74.29	325.4	11 33	0	21	4	3			11 50	PCP
IASI	74.75	321.7	11 40	4						12 2	
KRAKOW	75.75	327.7	11 42	1						12 27	
CHORZOW	75.92	328.3	11 42	0							
RACIBORZ	76.39	328.6	11 46A	1						13 8	
COLLMBERG	77.25	332.1	11 50A	0						12 1	PCP
HALLE	77.44	332.8	11 51	0						14 40	PP
BUCHAREST	77.53	320.7	11 51	0						15 3	
PRUHONICE	77.82	330.5	11 49A	-4							
JENA	78.04	332.7	11 54	0						12 27	
MUNSTER	78.41	335.4	11 57	1							
ADELAIDE	78.45	186.4	11 56K	-1							
CANBERRA	78.52	177.8	11 57	0							
VIENNA-H.	78.58	328.5	11 57	0							
BENSBERG	79.43	335.2	12 1A	-1				12	13	12 17	*SP
SOFIA	80.13	321.2	12 7	1						18 55	
KSARA	80.32	307.7	12 9	2							
STUTTGART	80.66	332.9	12 9	1							
KEW	81.06	339.7	12 11	0							
LJUBLJANA	81.11	328.3	12 11	0							
STRASBOURG	81.32	333.6	12 13	1							
JERUSALEM	82.18	306.7	12 18A	2							
WICHITA MTS.	82.19	48.9	12 16	0						17 9	
PARIS	82.73	336.9	12 20	1						12 28	PCP
BESANCON	83.07	334.1	12 21	0							
ATHENS	83.67	318.0	12 19K	-5							
OTTAWA	83.85	28.4	12 24	-1							
GARCHY	83.94	335.9	12 21	-4						12 33	PCP
FLORENCE X.	84.27	329.1	12 28	1							
BREBEUF	84.47	27.0	12 28	0							
ISOLA	85.42	332.0	12 33	0							
MONACO	85.69	331.5	12 34	0							
HELWAN	85.84	307.9	12 36	1						12 50	
MORGANTOWN	87.22	34.0	12 42K	0							
BANGUI	113.09	301.0	16 50	-101						17 18	
SCOTT BASE	121.77	175.0	18 48	0						20 56	
MAWSON	127.05	208.5	18 58K	0				19	11		
BYRD STATION	133.23	166.2	19 10	0							
SOUTH POLE	133.35	180.0	19 9	-1							

JULY 29 16.H 27.M 18.S EPICENTRE -23.82-176.07 DEPTH= 0.KM

A=-0.91369 B=-0.06272 C=-0.40154 D=-0.0685 E= 0.9977
G= 0.4006 H= 0.0275 K=-0.9158 HT= 3.7

SE= 2.62

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
RAOUL ISLAND	5.66	196.6	1	21	-6						5	11	
AFIAMALU	10.66	23.1	2	35	-2	4	29	-9					
KARAPIRO	15.79	205.1	3	44	-1								
TUAI	16.01	199.5	3	44	-4	6	24	-23					
CHATEAU	16.91	202.9	3	54	-5								
GEBBIES PASS	21.90	202.4				8	27	-27					
HONIARA	27.00	298.0	5	45	0								
BRISBANE	28.28	256.1	5	53	-4	10	54	11					
CANBERRA	32.31	241.2	6	29	-4						9	20	PCP
CHARTERS TS.	35.07	268.6	6	56	-1	12	24	-5					
MOORLANDS	35.58	229.5	7	4	3						9	26	PCP
MELBOURNE	35.99	237.9	7	0	-4				7	11			
PORT MORESBY	37.91	285.9	7	19	-2	13	1	-12					
ADELAIDE	40.62	243.5	7	39K	-4								
HONOLULU	48.14	22.7				15	57	15					
KIPAPA	48.28	22.8	8	46	1								
CAPE HALLETT	49.13	185.5	8	48K	-3	15	48	-8	8	53			
DARWIN	51.48	273.0	9	6	-3								
SCOTT BASE	54.71	184.4	9	30K	-3	17	9	-4			10	33	PCP
PERTH	59.88	245.8									10	27	
BYRD STATION	61.09	170.4	11	13	55								
MATUSIRO	73.92	323.1	11	38K	-1	21	2	-8			25	58	SS
LEMBANG	74.77	269.2	11	19	-25								
ARGENTINE I.	77.23	156.4	11	52	-5								

MAWSON	79.06	199.5	12	4A	-4			12	15	12 9	PCP
BERKELEY	79.49	40.5	12	9	-1	22	18 7			26 54	SS
LICK	79.51	41.2	12	19A	9						
PETROPAVLOVK	79.61	344.8	12	10	-1	22	13 1				
PASADENA	79.68	45.6	12	9	-2	22	19 6			27 12	SS
Y.-SAKHLINSK	79.71	332.7	12	11	0	22	18 5				
FRESNO	80.27	42.7	12	15	1						
ZO-SE	81.18	309.5								12 14	
SHASTA	81.28	38.3	12	20	1						
MINERAL	81.50	39.0	12	20A	-1						
HONG KONG	81.84	298.6	12	22	0	22	40 5				
VLADIVOSTOK	82.00	324.3	12	24A	1						
RENO	82.03	40.5	12	29	6						
CANTON	82.89	298.9	12	29A	1						
BOULDER CITY	82.96	45.8	12	29	1						
NANKING	83.41	309.1	12	30A	0						
TUCSON	83.58	50.7	12	33	2						
TUCSON TELE.	83.71	50.7	12	33	1						
EUREKA	84.32	42.4	12	31	-4						
GLEN CANYON	85.67	46.5	12	43	1						
CHANGCHUN	86.10	321.7	12	43A	-1	23	19 1				
MAGADAN	87.42	343.8	12	51	1						
SALT LAKE C.	87.63	43.2	12	53	2						
PENTICTON	88.42	33.1	11	19	-96						
FLAMING GRGE	89.28	44.1	12	59	0						
PEKING	89.49	314.7	13	0A	0	23	44 -6				
BUTTE	90.19	38.6	13	3	0						
HUNGRY HORSE	90.73	36.1	13	5	-1						
COLLEGE	91.07	11.7	13	7	-1					17 11	PP
SIAN	91.64	306.8	13	11A	1						
LARAMIE	91.93	45.3	13	13	1						
KUNMING	92.43	296.3	13	14K	0						
WICHITA MTS.	93.68	53.7	13	19	-1	24	32 5			23 55	SKS
CHENGTU	93.76	301.8	13	20A	0	24	31 3				
PAOTOW	93.83	312.8	13	21A	1						
RAPID CITY	94.82	43.7	13	26	1						
LANCHOW	96.18	306.6	13	31A	0						
SHILLONG	101.66	292.8	13	53	-3						
PALISADES	114.11	54.1	15	8	-213	25	28 -1			19 54	PP
STALINABAD	123.68	301.5	19	11	11						
KIMBERLEY	124.01	202.2	18	59	-1						
QUETTA	124.10	291.3	19	0	-1						
SVERDLOVSK	127.72	324.5	19	6	-2						
BULAWAYO	130.13	210.9	19	12K	0						
SODANKYLA	134.20	348.0	19	12	-8						
KIRUNA	134.81	351.3	19	21	0					22 52	PKS
BROKEN HILL	135.03	214.7	19	21K	0						
SHIRAZ	136.46	288.6	19	23	-1					22 48	
UMEA	138.57	349.1	19	21	-7						
PULKOVO	139.59	339.7	19	28	-2						
MOSCOW	139.65	331.0	19	29	-1						
SKALSTUGAN	139.86	354.2	19	23	-7						
NURMIJARVI	140.60	344.0	19	23	-9						
UPPSALA	142.73	348.6	19	30	-5						
LWIRO	144.55	226.4	19	36	-2						
GOTEBORG	145.65	352.3	19	40	0						
COPENHAGEN	147.56	351.0	19	43	0						
SIMFEROPOL	147.65	318.1	19	52A	8						
WARSAW	148.76	339.6	19	49	4						
DURHAM	148.81	6.2	19	52A	7					20 7	PKP2
KSARA	150.39	296.9	19	46	-2					23 32	PP
KRAKOW	150.99	338.5	19	54	5					20 36	
CHORZOW	151.08	339.8	19	55	6					20 23	
JERUSALEM	151.28	293.0	20	6A	17						
RACIBORZ	151.51	340.5	19	57K	7					21 11	
HALLE	151.68	349.4	19	49	-1					19 56	PKP2
COLLMBERG	151.68	348.0	19	50	0					23 35	PP
MUNSTER	151.75	355.2	19	57	7						
KEW	152.20	5.7	19	57	6					20 7	PKP2
JENA	152.29	349.6	19	50	-1					23 38	PP
PRUHONICE	152.60	345.0	19	58A	7						
BUCHAREST	152.60	324.0	20	9	18					22 52	
BENSBERG	152.79	355.5	19	58	7					20 20	
ISTANBUL KA.	152.83	315.3	19	53	2						
ISTANBUL UN.	152.90	315.3	19	57	5					20 46	
BRATISLAVA	153.54	340.0	19	52	0					20 1	PKP2
KASPERSKE H.	153.62	345.6	19	52A	-1					20 11	PKP2
VIENNA-H.	153.69	341.0	19	53	0						

STUTTGART	154.74	351.7	19	53	-1						20	18	
HELWAN	154.85	289.8	19	54	0						20	20	
FOLINIERE	154.85	6.9									20	17	PKP2
PARIS	155.03	2.3	19	53	-1								
SOFIA	155.25	324.2	19	54	-1						20	23	
GARCHY	156.58	1.5	20	27	30								
ATHENS	157.98	314.4	20	12A	14								
FLORENCE X.	159.20	344.9	20	2	2						20	12	PKP2
TOLEDO	162.62	21.0	20	5	2						24	39	PP
GRANADA	165.19	24.2	21	36K	90						24	54	PP

JULY 31 0.H 16.M 1.S EPICENTRE -6.28 107.21 DEPTH= 236.KM

A=-0.29405 B= 0.94959 C=-0.10871 D= 0.9552 E= 0.2958
G= 0.0322 H=-0.1038 K=-0.9941 HT= 6.9

DEPTH OF FOCUS= 0.032R

SE= 2.19

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
LEMBANG	0.68	142.9	0	33K	0						14	45	SCS
MEDAN	12.98	318.8	2	56K	-1								
NHATRANG	18.49	6.2	4	2	1	7	24	9					
DARWIN	24.07	106.3	4	55	-1	9	1	8					
MUNDARING	26.91	162.9	5	21	-1								
KUNMING	31.51	352.2				10	58	6			6	53	
SHILLONG	35.00	335.4	5	35K	-57								
LHASA	38.95	337.3									7	57	
ZO-SE	39.50	19.0									8	0	
PORT MORESBY	39.68	97.1	7	10	-1						9	14	
NANKING	39.69	15.5				12	55	-2			7	59	
CHARTERS TS.	40.30	113.7	7	17K	1	13	3	-3					
SIAN	40.34	2.2				13	9	3			8	6	
ADELAIDE	40.71	138.8	7	21K	1	13	12	0			12	44	SCP
MELBOURNE	46.48	138.0	8	7	1				9	37			
PEKING	46.82	9.4				14	40	1			8	59	
CANBERRA	48.04	132.9	8	19K	1						9	42	PCP
BRISBANE	48.05	121.4	7	46	-32						10	41	
TARRALEAH	49.91	142.1	8	32	0								
MOORLANDS	50.44	141.9	8	35	-1								
FORT NELSON	50.81	142.3	8	36	-3								
WARSAK DAM	52.37	322.3	8	49	-1	15	53	-3					
CHANGCHUN	52.50	16.5	8	50	-1								
QUETTA	52.95	315.5	8	53	-1								
MIRNY	60.97	186.4	9	50	-1								
MAWSON	68.10	196.8	10	37K	1						10	59	PCP
WELLINGTON	69.06	131.8	10	40	-2								
KARAPIRO	69.10	128.1	10	43	0								
CHATEAU	69.29	129.5	10	44A	0						12	24	
CAPE HALLETT	76.03	163.7	11	25A	2				12	35			
BULAWAYO	77.18	250.8									11	31	PKP2
PRETORIA	77.43	245.1									30	51	
BROKEN HILL	77.58	256.6									11	32	PKP2
SCOTT BASE	77.70	169.2	11	34A	2								
JERUSALEM	78.18	304.2	11	26	-9								
AFIAMALU	79.82	103.0	11	45	1								
KIMBERLEY	80.38	242.0									30	2	
SOUTH POLE	83.76	180.0	12	5	1								
BANGUI	89.07	274.5									13	29	
BYRD STATION	90.68	172.7	12	34	-3						13	36	
NURMIJARVI	91.76	330.6	13	36	54								
KIRUNA	94.55	337.7							13	48			
COLLEGE	102.00	24.9	18	33	304								
EUREKA	129.04	43.0	18	43	3								
FLAMING GRGE	132.51	37.8	18	38	-9								
GLEN CANYON	133.28	43.6	18	50	2						21	55	PP
WICHITA MTS.	143.02	36.6	19	3	-3						20	0	
FAYETTEVILLE	144.43	30.5	19	0	-9				32	7			
MORGANTOWN	146.18	10.0	19	14K	2								
COLUMBIA	151.38	14.4	19	22	3				20	27			
LA PAZ	156.90	191.5	19	31	4						23	41	PP

AUGUST 1 5.H 39.M 53.S EPICENTRE -9.96 160.73 DEPTH= 17.KM

A=-0.92990 B= 0.32518 C=-0.17190 D= 0.3301 E= 0.9439
G= 0.1623 H=-0.0567 K=-0.9851 HT= 6.5

SE= 2.82

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
HONIARA	0.93	304.7	0	15	-3							
RABAUL	10.24	303.4	2	29	0							
PORT VILA	10.67	137.1	2	33A	-2	4	36	0				
KOUMAC	11.08	162.4	2	39K	-2	4	45	-1				
PORT MORESBY	13.40	271.2	3	11	-1	5	51	9				
NOUMEA	13.44	156.6	3	12A	0	5	43	0				
CHARTERS TS.	17.21	232.5	3	59K	-2	7	19	8				
BRISBANE	18.88	202.3	4	20	-2	7	54	5				
RIVERVIEW	25.33	198.9	5	26A	-1	9	48	-2	5	34	6	6 PP
AFIAMALU	27.17	101.0	5	43A	-2	10	7	-14				
CANBERRA	27.41	201.2	5	46A	-1	10	24	-1	5	51	6	24
RAOUL ISLAND	27.71	136.8	5	52	3							
GUAM	28.17	325.4	5	53	0							
DARWIN	29.42	262.5	6	3	-2	10	5	-52				
KARAPIRO	30.87	156.8	6	16	-2						9	14
MELBOURNE	31.16	204.6	6	20	0				6	26		
CHATEAU	31.98	158.0	6	26	-1							
ADELAIDE	31.99	215.5	6	25A	-2	11	35	-2				
TUAI	32.26	155.5	6	28	-2							
COBB RIVER	32.76	163.1	6	37	3							
WELLINGTON	33.56	160.7	6	39K	-2	11	59	-3			7	55
KAIMATA	33.76	165.7	6	50	7							
MOORLANDS	34.46	197.8	6	48A	-1	12	22	6				
TARRALEAH	34.56	198.8	6	49A	-1	12	24	7				
FORT NELSON	34.86	197.3	6	52K	0	12	26	4				
GEBBIES PASS	35.17	164.9	6	53	-2							
ROXBURGH	36.15	169.8	7	0	-6						12	29
MACQUARIE I.	44.44	181.5	8	11	-1							
MANILA	46.30	301.3	8	28	1	14	54	-18				
MUNDARING	46.56	235.2	8	27	-2	15	9	-7				
PERTH	46.86	235.3	8	40	9	15	30	10			10	29 PP
BAGUIO CITY	47.59	303.1	8	34	-3	14	58	-32				
MERA	48.83	337.1	8	40	-6							
OMAESAKI	49.19	335.3	8	50	1							
AJIRO	49.23	336.5	8	50	1						10	46
SIOMISAKI	49.28	332.3									9	12
MISIMA	49.35	336.4	8	48	-2							
YOKOHAMA	49.35	337.2	8	50	0						22	41
SHIZUOKA	49.43	335.8	8	52	1						3	20
TOKYO C.M.O.	49.53	337.5	8	52	0	15	55	-3				
HONGO	49.55	337.5	8	29	-23						24	3
OWASE	49.60	333.1	8	52	0							
HUNATU	49.75	336.4	8	51	-2						11	1
KAKIOKA	49.86	338.2	8	51	-3							
TUKUBASAN	49.88	338.1	8	50A	-4	15	59	-3	9	5	11	42 PPP
MITO	49.89	338.6	8	53	-1							
KOHU	49.98	336.4	8	54	-1							
TITIBU	50.05	337.0	8	59	3							
KUMAGAYA	50.08	337.4	8	54	-2						11	0
KAMEYAMA	50.14	333.9	8	56	0	16	3	-3				
IIDA	50.14	335.6	8	51	-5							
NAGOYA	50.20	334.6	9	0	3	16	5	-2				
UTUNOMIYA	50.26	338.1	9	2	5	16	3	-5				
SUMOTO	50.41	332.1	9	0	2						17	33
KOTI	50.42	330.3	8	59K	0	16	4	-6				
MAEBASI	50.42	337.3	8	53	-6							
GIHU	50.48	334.5	9	0	1							
TAWU	50.55	309.8	9	5	5							
ABUYAMA	50.55	333.1	8	55A	-5							
OIWAKE	50.56	336.8	9	3	3	16	13	1				
KOBE	50.57	332.6	9	1	1							
HIKONE	50.59	334.0	8	58	-2	16	11	-1				
KYOTO	50.61	333.3	9	1	1						11	30
SHIRAKAWA	50.64	338.8	9	1	1							
MATUMOTO	50.72	336.2	9	3	2							
MATUSIRO	50.88	336.6	8	57A	-5	16	11	-5			10	52 PP
HWALIEN	50.96	312.0	9	4	1						9	52
TSURUGA	50.99	334.1	9	4	1							
NAGANO	50.99	336.6	9	3	0							
HONOLULU	51.00	52.2	9	1	-2	16	14	-4				

MATUYAMA	51.02	329.9	9	5	2						
KIPAPA	51.12	52.1	9	3	-1						
KUMAMOTO	51.28	327.3	9	5	0						
ALISHAN	51.30	311.0	9	9	4						
TAKADA	51.35	337.0	9	6	0						
SENDAI	51.43	340.0	9	2	-4	16	15	-9			
ISINOMAKI	51.44	340.5	9	4	-2	16	14	-10			
TOYOOKA	51.44	332.9	9	8	2	16	34	10			
YAMAGATA	51.60	339.5	9	4	-4						
NIIGATA	51.77	338.2	9	8	-1					15	8
HUKUOKA	52.04	327.?	9	12	1	16	29	-3			
MIZUSAWA	52.14	340.?	9	11	-1	16	36	2			
AIKAWA	52.16	337.5	9	9	-3						
MATSUE	52.18	331.3	9	14	2						
TOMIE	52.18	325.6	9	9	-3						
HAWAII V.OB.	52.27	56.0	9	11	-2	16	38	2			
MIYAKO	52.34	341.7	9	12	-1						
SAKATA	52.37	339.4	9	12	-1						
LEMBANG	52.59	269.0	9	12	-3	16	36	-4			
MORIOKA	52.64	341.0	9	16	1						
AKITA	53.01	340.1	9	20	2	16	41	-5			
HATINOHE	53.28	341.8	9	18	-2						
DJAKARTA	53.45	269.7	9	13	-8						
AOMORI	53.78	341.3	9	21	-3						
URAKAWA	54.41	343.6	9	29	1						
HAKODATE	54.69	341.8	9	27	-3						
OBIHIRO	55.01	344.3	9	34	1						
MORI	55.01	341.8	9	33	0	17	12	-1			
SAPPORO	55.66	342.9	9	36	-1	17	14	-7			
ZO-SE	55.72	318.6	9	35	-3	17	19	-3			
SUTTSU	55.75	341.8	9	40	2	17	24	2			
HONG KONG	55.77	305.6	9	37	-1	17	17	-6		13	23 PPP
CANTON	56.83	305.9	9	43	-3	17	36	-1			
WAKKANAI	57.74	344.2	9	50	-2						
NANKING	57.90	317.9	9	51	-2						
Y.-SAKHLINSK	58.96	345.7	9	57	-4					12	1 PP
VLADIVOSTOK	59.01	335.7	9	58	-3					12	7 PP
CHANGCHUN	62.46	331.8	10	20A	-5	18	49	0			
CAPE HALLETT	62.57	176.7	10	24K	-1	19	1	10	10 29	19	38 SCS
PETROPAVLOVK	62.76	358.6	10	23	-4					12	47 PP
MEDAN	63.24	279.1	10	26	-4					19	4
PEKING	64.60	323.4	10	36	-3	19	12	-4			
WILKES	65.69	199.9	10	41K	-5	19	30	1		14	35 PPP
SIAN	65.90	314.5	10	43A	-4	19	24	-8			
KUNMING	66.37	303.0	10	47	-3	19	36	-2			
CHENGTU	67.75	308.9	10	53	-6	19	46	-8			
SCOTT BASE	67.94	178.6	10	59K	-1	19	40	-17		13	20 PP
PAOTOW	68.66	320.7	11	2A	-2	20	4	-1			
MAGADAN	69.74	354.6	11	7	-4						
LANCHOW	70.41	313.9	11	12A	-3	20	24	-2			
TOCKLAI	73.62	301.7	11	40A	6						
ULAN-BATOR	74.70	325.7	11	38	-2	21	5	-10			
SHILLONG	75.69	299.6	11	42A	-4	21	18	-8		16	22 PPP
YAKUTSK	75.72	345.5	11	43	-3					14	36 PP
LHASA	77.69	303.3	11	55A	-2	21	45	-2			
CALCUTTA	77.84	295.7	12	15	17	22	48	59		13	20
BYRD STATION	78.47	169.9	12	0	-2						
IRKUTSK	78.50	328.5	11	58A	-4	21	54	-2		22	33 PS
CHATRA	80.09	299.5	12	9	-1	22	10	-3		15	11 PP
SOUTH POLE	80.10	180.0	12	9	-1					17	45
BOKARO	80.47	296.3	12	13K	1	22	17	0			
VISHAKHAPTNM	81.23	289.7	12	20K	4	22	27	2		15	38 PP
MADRAS	83.15	284.4	12	29K	3	22	41	-3		14	43
MAWSON	83.84	202.5				22	53	2		15	47 PP
COLLEGE	83.88	19.6	12	27	-3					31	34 SS
TIKSI	84.13	350.3	12	28	-3					15	36 PP
SITKA	84.70	29.5	12	32	-2	22	55	-5			
KODAIKANAL	85.21	281.2				23	0	-5			
UKIAH	85.61	49.2	12	37	-2						
SAN FRANCSCO	85.81	50.7	12	40	0						
BRANNER	85.92	51.1	12	39	-1						
BERKELEY	85.98	50.6	12	39A	-2	23	8	-4			
LICK	86.31	51.3	12	41A	-1						
VINEYARD	86.36	51.9	12	39	-3						
SHASTA	86.66	47.9	12	43A	-1						
CORVALLIS	87.11	44.0	12	45A	-1						
MINERAL	87.14	48.4	12	45A	-1						
FRESNO	87.59	52.2	12	47	-1						

VICTORIA	88.19	40.2	12	51	0					
RENO	88.26	49.5	13	1A	9					
PASADENA	88.26	55.1	12	50A	-2	23	40	6	16	30 PP
NEW DELHI	89.09	299.1	12	54K	-2	23	18	-23	16	12 PP
POONA	90.19	288.7	13	2A	1					
PENTICTON	90.81	40.1	13	1	-3					
EUREKA	91.14	50.2	13	4	-1	23	44	-16	16	36 PP
BOMBAY	91.22	288.9	13	7	1	23	36	-25	16	48 PPP
BOULDER CITY	91.33	53.9	13	5	-1				16	41 PP
SEMIPALATNSK	91.59	320.8	13	3	-4				16	43 PP
BANFF	93.78	38.8	13	15	-2					
FRUNSE	93.85	312.6	13	14	-4	23	47	-37	17	1 PP
TUCSON	93.93	58.1	13	18	0	24	1	-23	17	11 PP
GLEN CANYON	94.07	53.3	13	17	-2				17	2 PP
HUNGRY HORSE	94.22	41.8	13	17	-2	23	54	-33		
SALT LAKE C.	94.48	49.6	13	19	-1	23	57	-32		
BUTTE	94.81	44.3	13	21	-1	23	59	-33		
BOZEMAN	95.81	44.8	13	25	-2	23	59	-2		
FLAMING GRGE	96.35	49.7	13	28	-1					
CHIHUAHUA	97.48	62.3							24	21
TASHKENT	97.57	310.6	13	31	-4				19	36 PPP
ARGENTINE I.	97.89	162.5	13	36	0				17	32 PP
QUETTA	98.17	299.2	13	31	-6	24	10	-3		
RAPID CITY	101.20	46.9	13	50	-1				18	19 PP
TACUBAYA	102.67	72.3	14	1	3	24	44	9	14	0
RESOLUTE	103.34	15.3	13	59	-1				18	7 PP
SVERDLOVSK	103.80	326.1	13	58	-4				18	13 PP
WICHITA MTS.	104.35	56.7	14	5	0	24	45	2	18	20 PP
VERA CRUZ	105.54	72.8							18	43 PP
ASHKABAD	105.79	306.6	14	11	777	24	51	2	25	30 SKKS
FAYETTEVILLE	107.97	55.3	18	48	777				26	20 SKKS
COMITAN	109.07	76.2				26	51	108		
TEHERAN	111.43	304.4	19	5	32					
APATITY	112.83	340.6	18	45	9					
GORIS	115.07	308.9							19	43 PP
SODANKYLA	115.07	342.1	18	41	1					
TROMSOE	115.60	346.1	18	40	-1					
TIFLIS	115.87	311.6							19	43 PP
MOSCOW	116.49	328.0	18	48	5				19	48 PP
KIRUNA	116.53	344.3	18	42	-1	25	35	2	19	48 PP
KAJAANI	116.73	338.9	18	42	-1					
MORGANTOWN	118.80	50.2	18	55	7				20	16 PP
COLUMBIA	118.88	56.7	18	57	9				29	10 PKKP
UMEA	119.42	341.1	18	49	0					
NURMIJARVI	120.03	336.6	18	49	-1					
HUANCAYO	120.16	110.2							20	19 PP
WASHINGTON	121.14	50.5	18	52	0				20	30 PP
SKALSTUGAN	121.96	344.0	18	53	-1					
SIMFEROPOL	122.56	317.4	18	53	-2	25	59	5	20	32 PP
HERMANUS	122.72	217.7							30	20 PS
PALISADES	122.95	47.3	18	54	-1				20	30 PP
UPPSALA	123.10	338.8	18	55	-1				20	37 PP
CHINCHINA	123.97	90.7	19	0	2				20	42 PP
BULAWAYO	124.19	237.4	18	56	-2					
KSARA	124.32	304.2	18	58	0				20	48 PP
LA PAZ	124.98	118.2	19	0	1				20	50 PP
BOGOTA	125.44	91.4	19	6	6				20	51 PP
REYKJAVIK	125.89	1.4	19	2	1					
FUQUENE	125.90	90.4	19	9	8				20	56 PP
SIDA	126.26	359.3	19	13	11					
LWOW	126.54	326.4	18	51	-11				21	1 PP
GOTEBORG	126.67	339.7	19	1	-2					
WARSAW	126.70	330.3	19	2	-1	26	1	-5	21	2 PP
ISTANBUL KA.	127.41	314.7	19	3	-1				21	3 PP
ISTANBUL UN.	127.48	314.7							19	35
BUCHAREST	128.01	319.7							21	39
COPENHAGEN	128.04	337.8	19	11	6				21	8 PP
KRAKOW	128.57	328.6	19	17	11				21	13 PP
HALIFAX	128.58	39.7	19	6	0					
CHORZOW	128.90	329.3	19	16	9				21	17 PP
HELWAN	128.92	300.4	19	5	-2				21	16
RACIBORZ	129.43	329.5	19	13	5				21	16 PP
SOFIA	130.59	318.9	19	16	6				21	28 PP
BUDAPEST	130.60	326.4							21	35 PP
COLLMBERG	131.05	333.6							21	30 PP
ABERDEEN	131.06	347.7							21	29 PP
BRATISLAVA	131.20	328.2	19	11	0				21	35 PP
PRAGUE	131.27	331.6	19	34	22				21	21 PP

PRUHONICE	131.27	331.4	19	12	0						21	23 PP
BELGRADE	131.30	322.7	18	53K	-19						22	37 PKS
HALLE	131.36	334.4	19	11	-1						21	30 PP
VIENNA-H.	131.52	328.7	19	22	10	26	21	2				
JENA	131.93	334.1	19	19	6	26	13	-7			21	30 PP
CHEB	132.20	332.8	19	23	10						21	47 PP
KASPERSKE H.	132.31	331.2	19	11	-2						21	34 PP
WITTEVEEN	132.40	338.9	19	10	-4							
MUNSTER	132.73	337.6	19	12	-2							
CARACAS	133.13	84.9	19	16	1						21	41 PP
DURHAM	133.15	346.0	19	16	1	26	7	-16	19	33	21	44 PP
DE BILT	133.51	339.4	19	22	6						21	48 PP
BENSBERG	133.71	337.1	19	17	1						21	47 PP
LJUBLJANA	133.91	327.5	19	14	-2	26	22	-2			21	51 PP
SAN JUAN	133.92	74.1	19	17	1						23	16
STUTTGART	134.54	333.7	19	15	-3						22	0 PP
TRIESTE	134.58	327.5	19	15	-3						21	54 PP
KARLSRUHE	134.73	334.5	19	19	1						21	59 PP
STRASBOURG	135.33	334.6	19	19	0	26	28	2			21	57 PP
PADOVA	135.72	328.5				27	52	85			21	56 PP
KEW	135.80	343.1	19	20	0						21	52 PP
BASLE	136.22	333.7	19	36	15						26	4
NEUCHATEL	136.90	333.7	19	21	-1							
BESANCON	137.12	334.7	19	22	0						23	2 PP
FLORENCE X.	137.15	327.2	19	33	11						22	12 PP
PRATO	137.17	327.5	19	41	19						23	17 PKS
PARIS	137.21	338.9	19	25	3						23	5 SKP
ST. KITTS	137.22	75.3									20	17
PAVIA	137.24	330.3				26	37	7			22	27 PP
ROME	137.71	324.3	19	22K	-1	26	27	-4			22	12 PP
ROSELEND	137.74	331.7	19	20	-4							
ANTIGUA	138.08	75.5	19	19	-5							
FOLINIERE	138.24	341.3	19	20	-4							
GARCHY	138.27	337.1	19	29	5						23	1 PP
TRINIDAD	138.57	85.2	19	23	-2						23	1
ST. VINCENT	138.77	81.4	19	26	1							
ISOLA	139.00	330.9	19	22	-4						22	21
MONACO	139.15	330.1	19	26	0							
CLERMONT-FD.	139.49	335.8	19	29	2						21	53 PP
BANGUI	142.02	264.4	19	26	-5						22	36 PP
LUANDA	142.63	241.0	19	47K	15						22	45 PP
BAGNERES	142.92	336.2	18	27	-66							
ALICANTE	147.09	332.2	19	42	2	26	49	4			23	10 PP
TOLEDO	147.27	338.1	19	42	2						23	13 PP
SERRA PILAR	147.56	344.9	19	43A	2						23	11 PP
COIMBRA	148.38	344.0	19	45	3						19	53 PKP2
ALMERIA	149.22	333.1									23	35 PP
GRANADA	149.43	334.9	20	3A	19						23	31 PP
LISBON	149.96	344.1	19	57	13	26	33	-16			23	25 PP

AUGUST 1 7.H 21.M 8.S EPICENTRE -57.00 -24.51 DEPTH= 0.KM

A= 0.49789 B=-0.22703 C=-0.83700 D=-0.4149 E=-0.9099
G=-0.7616 H= 0.3473 K=-0.5472 HT= -7.9

SE= 2.97

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
ARGENTINE I.	20.56	230.1	4	40	-3	8	32	4			16	10	SCS
SOUTH POLE	33.18	180.0	6	39	-1				7	9			
BYRD STATION	35.33	197.5	6	58	-1	12	35	2					
HERMANUS	37.08	71.4	7	17	4	12	54	-6			8	30	PP
MAWSON	38.50	142.0	7	16	-9	13	24	2	7	38	9	2	PP
SANTIAGO	39.10	287.1	7	27	-3								
KIMBERLEY	44.45	71.9	8	14	0								
SCOTT BASE	45.23	183.3	8	22K	2	14	59	-2			10	14	PP
WINDHOEK	45.77	59.1	8	24	-1								
PRETORIA	48.64	72.9	8	27	-20								
CAPE HALLETT	50.57	185.8	9	4K	2	16	22	6	9	14	11	2	PP
LA PAZ	51.95	302.8	9	10	-3	16	33	-2					
BULAWAYO	53.48	69.3	9	22A	-2								
AREQUIPA	53.56	299.3	9	22	-3								
LUANDA	56.25	46.7	10	0A	16								
BROKEN HILL	58.22	65.5	9	57A	-1								
HUANCAYO	59.22	298.0	10	5	0								

TANANARIVE	64.58	85.7						9 45
BANGUI	70.45	46.3	11 16	-2	20 32	1		
FUQUENE	73.94	308.3	11 36K	-3	21 30	19		
TRINIDAD	73.95	322.1	11 39	0	21 9	-2		
CHINCHINA	74.32	306.3	11 39K	-2	21 39	24		29 40 SSS
GRENADA	75.36	322.3	11 48	1				
CARACAS	75.77	316.8	11 50	1	21 26	-5		
ST. VINCENT	76.26	323.1	11 55	3				
ROXBURGH	77.23	189.9			21 52	5		
DOMINICA	78.30	323.7	12 5	2				
GALERAZAMBA	79.36	309.3	12 22	13				
BALBOA HTS.	79.62	304.6	12 20	10				
ANTIGUA	80.16	324.0	12 15	2				
FORT NELSON	80.20	173.9			22 18	0		
ST. KITTS	80.64	323.2	12 17	1				
MOORLANDS	80.68	173.8	12 18K	2				12 40
WELLINGTON	80.75	194.6	12 14	-2	22 29	5		
SAN JUAN	82.75	320.5	12 26	-1	22 43	-2		15 33 PP
TUAI	82.82	196.9	12 41	14				
KARAPIRO	83.92	195.8	12 32	-1				
MELBOURNE	85.11	171.7	12 41	2	23 9	1		
MUNDARING	85.35	147.3	12 42	2				
ADELAIDE	87.29	166.3	12 51	1	23 30	1		
CANBERRA	87.87	174.7	12 55	3	23 38	3	13 5	
RIVERVIEW	89.45	176.4	13 1A	1	23 56	7	13 11	23 33 SKS
ALMERIA	95.33	17.6	13 30	3				17 22 PP
GRANADA	95.47	16.6			24 10	6		17 31
HELWAN	98.50	46.6	13 37	-4	24 16	-3		
CHARTERS TS.	102.82	171.1						18 15 PP
ROME	103.33	27.5			24 45	2		18 21 PP
KSARA	103.80	48.2	14 19	14	24 53	8		18 24 PP
ISOLA	104.23	22.9						18 27
FLORENCE X.	104.80	26.0			24 50	1		18 23
PALISADES	106.12	323.3	17 58	777				
GARCHY	106.43	19.2	19 20	777				
TRIESTE	107.17	27.0			25 0	0		18 41 PP
LJUBLJANA	107.73	27.4						18 49 PP
BELGRADE	108.20	32.0	19 11K	777				24 10 PKS
MADRAS	108.81	95.1			25 10	3		28 33
BOMBAY	109.61	85.4	18 52	777	25 13	3		28 35
KEW	109.93	15.8						19 13 PP
KASPERSKE H.	110.38	25.6						19 20 PP
WICHITA MTS.	110.54	302.2	18 26	-8				19 3 PP
PRUHONICE	111.40	25.9						19 28
JENA	111.61	23.6						19 19 PP
COLLMBERG	112.27	24.4						19 30
SIMFEROPOL	112.77	41.1			25 24	1		29 8 PS
DURHAM	112.96	14.2						19 31 PP
PORT MORESBY	113.48	171.0						19 35
TIFLIS	114.22	50.2						19 42 PP
TUCSON	114.50	291.7	18 44	2				
ABERDEEN	115.24	13.3	16 12	-151				29 2
COPENHAGEN	116.24	22.3						19 54 PP
GLEN CANYON	118.61	294.3	18 52	2				
BOULDER CITY	119.47	291.3	18 53	2				
NEW DELHI	119.74	82.7	18 55K	3				
PASADENA	119.78	287.5	18 55	3				20 39
RAPID CITY	120.19	305.2	18 54	1				
FLAMING GRGE	120.61	298.7	18 54	0				20 21 PP
EUREKA	122.74	293.1	19 1	3	26 12	13		20 41 PP
MOSCOW	123.06	36.6	19 1	3				20 43 PP
NURMIJARVI	123.39	26.6	19 0	1				
SKALSTUGAN	123.54	18.8	19 17	18				
CHATRA	123.81	92.1	19 2	2				30 52 PS
LICK	124.03	287.4	19 3K	3				
RENO	124.73	290.5	18 4	-58				
BERKELEY	124.75	287.4	19 5	3				
BOZEMAN	125.00	301.3	19 3	1				
UMEA	125.29	22.5	19 14	11				
TASHKENT	125.30	67.1	19 6	3				20 58 PP
SHILLONG	125.37	97.1	19 5A	2				
BUTTE	125.97	300.6	19 6	2				
MINERAL	126.26	289.9	19 4	-1				
SHASTA	126.92	289.6	19 5	-1				
KAJAANI	127.19	25.9	19 4	-2				
LHASA	128.12	93.3	19 5	-3				
HUNGRY HORSE	128.35	301.7	19 9	0				
KIRUNA	128.86	20.1	19 10	0				22 29 SKP

FRUNSE	129.11	69.4	19	13	3					21	23	PP
SODANKYLA	129.71	23.1	19	12	1					21	34	PP
CORVALLIS	130.18	292.4	19	14	2							
KUNMING	130.82	107.6	19	22	9					22	40	PP
BANFF	131.03	303.4								22	34	
PENTICTON	131.67	299.3	19	15	0							
SVERDLOVSK	132.35	47.8	19	21	5							
VICTORIA	132.96	296.2	19	20	3					22	43	
HONG KONG	134.14	121.6								22	58	PKS
CANTON	134.42	120.1	19	32A	12							
CHENGTU	135.92	104.3	19	36	13					22	54	
SEMIPALATNSK	137.09	65.4	19	29	4							
LANCHOW	139.95	99.0	19	27	-3							
SIAN	141.31	105.8								20	36	
KHEYS	144.49	16.3	19	39	1					25	48	PPP
NANKING	144.55	118.9	19	39	1							
ZO-SE	144.88	122.8	19	41	2							
PAOTOW	146.58	99.7	19	46	4							
PEKING	149.46	106.8	19	49	3							
ULAN-BATOR	149.63	86.3	19	57	10							
IRKUTSK	150.59	77.2	19	51	3					23	22	PKS
COLLEGE	152.27	309.9	19	47	-4					21	48	
MATUSIRO	156.49	143.2	20	8	12					43	57	SS
TUKUBASAN	156.79	147.0	20	22	25	27	1	0		24	7	PP
CHANGCHUN	156.92	111.9	19	56	-1							
VLADIVOSTOK	159.59	122.8	20	2	2							
PETROPAVLOVK	175.61	205.8	20	13	2					25	41	PP

AUGUST 1 9.H 34.M 34.S EPICENTRE -56.99 -25.10 DEPTH= 0.KM

A= 0.49571 B=-0.23220 C=-0.83687 D=-0.4242 E=-0.9056
G=-0.7579 H= 0.3550 K=-0.5474 HT= -7.9

SE= 1.53

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
ARGENTINE I.	20.32	230.0	4	40	-1						16	9	SCS
SOUTH POLE	33.19	180.0	6	40	-1				7	18			
BYRD STATION	35.25	197.5	6	58	0						12	5	
HERMANUS	37.38	72.1	7	20	4	13	2	-3			8	40	PP
MAWSON	38.71	142.2	7	27	-1	13	24	-1	7	39	9	4	PP
SANTIAGO	38.79	287.6	7	27	-1								
KIMBERLEY	44.75	72.5									8	45	
SCOTT BASE	45.22	183.5	8	21	0	15	1	0			10	3	PP
WINDHOEK	46.04	59.6	8	27	0								
PRETORIA	48.95	73.5	8	50	0								
CAPE HALLETT	50.55	186.0	9	3A	1	16	26	10			11	0	PP
LA PAZ	51.68	303.4	9	10	-1	16	32	0					
AREQUIPA	53.28	299.9	9	25	2								
BULAWAYO	53.78	69.8	9	26A	-1								
BROKEN HILL	58.50	66.1	9	59A	-2								
HUANCAYO	58.93	298.6	10	4	0						19	46	
BANGUI	70.67	46.9	10	19	-61				11	29			
MBOUR	71.42	8.3				20	14	-28			21	2	SKS
BOGOTA	73.07	308.2	11	34	0	21	6	5			14	22	PP
FUQUENE	73.69	308.9	11	37	-1						14	22	PP
TRINIDAD	73.74	322.7	11	40	2								
CHINCHINA	74.05	306.9	11	39K	-1	21	16	4			14	35	PP
GRENADA	75.16	322.9	11	48	2								
CARACAS	75.55	317.4	11	48A	0	22	5	36					
ST. VINCENT	76.06	323.7	11	47	-4								
ROXBURGH	77.19	190.4				21	54	7					
DOMINICA	78.10	324.3	12	0	-3								
GALERAZAMBA	79.11	309.8	12	34	26								
BALBOA HTS.	79.35	305.1	12	11	2								
ST. KITTS	80.43	323.7	12	18	3								
WELLINGTON	80.68	195.0	12	17	0								
MOORLANDS	80.73	174.2	12	17A	0								
SAN JUAN	82.54	321.1	12	26	0	22	39	-4	12	37	16	23	
CHATEAU	82.60	196.0	12	27	0								
TUAI	82.74	197.4	12	29	2								
KARAPIRO	83.85	196.3	12	32	-1								
MELBOURNE	85.17	172.1	12	41	1	23	11	2					
MUNDARING	85.54	147.8	12	41K	0								
ADELAIDE	87.38	166.8	12	51K	1	23	30	0					
CANBERRA	87.91	175.2	12	54	1	23	36	1	13	4	13	8	*SP

RIVERVIEW	89.48	176.9	12	58A	-2	23	50	0	23	27	SKS
GRANADA	95.55	17.1	13	32K	4	24	56	52			
ALICANTE	97.23	19.3	13	46	10	24	24	11	25	10	S
TOLEDO	98.12	16.2				24	13	-5	31	48	SS
HELWAN	98.73	47.1				24	23	2	17	53	PP
COLUMBIA	102.18	315.2	18	8	250						
CHARTERS TS.	102.88	171.7							18	14	PP
CHAPEL HILL	103.14	317.6							18	11	
ROME	103.47	27.9				24	43	-1	18	17	PP
MORGANTOWN	106.75	318.7							18	46	PP
TRIESTE	107.30	27.4							18	59	PP
ISTANBUL KA.	107.78	40.1	18	53	777	25	1	-2	19	57	PP
LJUBLJANA	107.87	27.8							19	1	PP
BREBEUF	109.87	325.9							19	8	PP
KEW	110.00	16.2				26	57	105	34	43	SS
WICHITA MTS.	110.26	302.7	14	43	-231				19	7	PP
KASPERSKE H.	110.51	26.0							19	14	PP
PRUHONICE	111.53	26.3	18	52	16				19	22	
SIMFEROPOL	112.97	41.5							19	39	PP
PORT MORESBY	113.54	171.7	19	32	52						
LWOW	113.93	32.4							19	39	
TUCSON	114.20	292.1	18	45	3						
TIFLIS	114.46	50.6				25	24	-6	21	16	PP
QUETTA	115.82	74.0	18	48	3						
GLEN CANYON	118.31	294.8	18	51	1				20	14	PP
LARAMIE	118.83	302.0	18	26	-25				20	8	
BOULDER CITY	119.17	291.7	18	53	2				20	13	PP
PASADENA	119.47	288.0	18	55	3				20	22	
RAPID CITY	119.92	305.5	18	52	-1						
NEW DELHI	120.05	83.1	18	54K	1						
FLAMING GRGE	120.32	299.1	18	16	-38				20	23	PP
UPPSALA	121.29	23.6							30	19	PS
SALT LAKE C.	121.39	297.3	18	58	2				20	32	PP
EUREKA	122.44	293.5	19	0	2	26	0	2	20	37	PP
VINEYARD	123.14	287.6	19	3	4						
MOSCOW	123.24	37.0							19	38	
STALINABAD	123.27	69.3	19	1	2						
NURMIJARVI	123.52	26.9	19	2	2						
SKALSTUGAN	123.63	19.0	19	2	2						
LICK	123.72	287.8	19	5A	5				20	38	
CHATRA	124.13	92.6	19	1	0						
RENO	124.43	290.9	19	15	13						
BERKELEY	124.44	287.8	19	4	2						
BOZEMAN	124.72	301.7	19	5	3						
UMEA	125.40	22.8	19	2	-1						
TASHKENT	125.59	67.4	19	5	1	26	4	-4			
BUTTE	125.69	301.0	19	6	2						
SHILLONG	125.69	97.6	19	3K	-1						
MINERAL	125.95	290.3	19	5K	1						
NAMANGAN	126.55	69.4	19	8	2						
SHASTA	126.61	290.0	19	6	0						
KAJAANI	127.32	26.1	19	7	0						
HUNGRY HORSE	128.07	302.1	19	9	0				21	7	PP
LHASA	128.44	93.8	19	12	3						
KIRUNA	128.95	20.4	19	10	0				19	34	
FRUNSE	129.41	69.8	19	13K	2						
SODANKYLA	129.83	23.3	19	12	0						
CORVALLIS	129.88	292.8	19	14	2						
BANFF	130.76	303.8	19	15	1						
KUNMING	131.13	108.1							22	39	
PENTICTON	131.38	299.6	19	25	10						
SVERDLOVSK	132.58	48.1	19	18	1						
VICTORIA	132.67	296.5							21	43	
CANTON	134.71	120.7							21	50	
CHENGTU	136.23	104.8	19	25	1				22	54	
LANCHOW	140.27	99.5	19	25	-6						
SIAN	141.62	106.4	19	33	-1						
NANKING	144.84	119.6	19	39	0				23	15	PP
ZO-SE	145.15	123.5	19	41	1						
PAOTOW	146.90	100.2	19	47	4						
PEKING	149.77	107.4	19	49	2						
ULAN-BATOR	149.95	86.7	19	49	1						
IRKUTSK	150.90	77.5	19	54	5						
COLLEGE	152.02	310.0	19	48	-3	26	17	-40			
MATUSIRO	156.69	144.2	19	58	1				43	56	SS
CHANGCHUN	157.22	112.6	19	57	-1						
YAKUTSK	166.31	58.0	20	2	-5						
Y.-SAKHLINSK	167.53	138.0	20	10	2						

PETROPAVLOVK	175.48	210.1	20	13K	1									

AUGUST 2 2.H 31.M 37.S EPICENTRE -56.86 -24.78 DEPTH= 108.KM

A= 0.49863 B=-0.23021 C=-0.83569 D=-0.4192 E=-0.9079
G=-0.7587 H= 0.3503 K=-0.5492 HT= -7.9

DEPTH OF FOCUS= 0.012R

SE= 1.99

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
ARGENTINE I.	20.53	229.7	4	25	-6								
SOUTH POLE	33.31	180.0	6	29	0				7	2			
BYRD STATION	35.42	197.5	6	44	-3								
HERMANUS	37.18	71.9				12	49	9			13	10	PCS
MAWSON	38.70	142.2	7	15	0				7	26	8	48	PP
KIMBERLEY	44.55	72.3	8	1A	-1								
SCOTT BASE	45.35	183.4	8	8	-1	14	38	-3			9	44	PCP
CAPE HALLETT	50.69	185.9	8	49	-1	15	33	-22			10	23	PP
LA PAZ	51.76	303.0	8	59	1	16	15	5					
AREQUIPA	53.37	299.5	9	10	0								
BROKEN HILL	58.30	65.8	9	45A	0								
LWIRO	69.00	59.5	10	58	3								
BANGUI	70.46	46.6	11	4	0						15	16	
BOGOTA	73.13	307.9	11	22	2	20	49	11			14	10	PP
FUQUENE	73.74	308.6	11	24	0								
CHINCHINA	74.12	306.6	11	25	-1						14	19	PP
CARACAS	75.57	317.0	11	30	-4	21	18	13					
MOORLANDS	80.83	174.0	12	5	2								
COBB RIVER	81.31	193.3	11	53	-13								
SAN JUAN	82.55	320.8	12	14	2						15	52	
CHATEAU	82.77	195.8	12	15	2						15	53	
TUAI	82.91	197.1	12	16	2								
KARAPIRO	84.01	196.0	12	18	-1								
MUNDARING	85.55	147.5	12	28	1								
ADELAIDE	87.46	166.5	12	31	-5						16	17	PP
CANBERRA	88.02	174.9	12	40	1						16	19	PP
KSARA	103.82	48.4									21	26	
PALISADES	105.92	323.5									26	1	SKKS
WICHITA MTS.	110.34	302.5	18	28	9						37	57	PKPPKP
TUCSON	114.31	291.9	18	30	3								
GLEN CANYON	118.42	294.6	18	6	-29								
NEW DELHI	119.87	82.8	18	41K	4								
FLAMING GRGE	120.42	299.0	18	35	-3						20	8	PP
CHINA LAKE	120.59	289.4	18	42	3								
LICK	123.85	287.7	18	48	3						22	27	
BERKELEY	124.57	287.6	18	49	2								
SHILLONG	125.54	97.3	18	51	3								
MINERAL	126.07	290.1	19	4A	15						22	32	
ARCATA	127.74	288.9									18	19	
HUNGRY HORSE	128.15	302.0	18	55	2						20	57	PP
KIRUNA	128.78	20.2	18	57	2						40	57	PKPPKS
SODANKYLA	129.64	23.1	18	57	1						22	36	SKP
KUNMING	131.00	107.7									22	23	
PENTICTON	131.47	299.5	19	1	1								
VICTORIA	132.77	296.4									22	27	
RESOLUTE	139.11	337.5									23	3	
KHEYS	144.40	16.2	19	24	1								
NANKING	144.75	119.1	19	26	2								
PAOTOW	146.75	99.7	19	32	5								
PEKING	149.64	106.8	19	39	7								
COLLEGE	152.07	310.2	19	42	7								
MATUSIRO	156.69	143.5	20	5	23						29	57	
PETROPAVLOVK	175.67	208.6	19	57	0								

AUGUST 2 12.H 12.M 6.S EPICENTRE 44.71 148.88 DEPTH= 65.KM

A=-0.61045 B= 0.36847 C= 0.70113 D= 0.5168 E= 0.8561
G=-0.6003 H= 0.3623 K=-0.7130 HT= -3.4

DEPTH OF FOCUS= 0.005R

SE= 2.09

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
KURILSK	0.89	306.1	0	20	2	0	36	4				
Y.-SAKHLINSK	4.89	300.4	1	16	3						1	39
UGLEGORSK	6.39	315.5	1	38	4	2	54	8				
SEVERO-KUR.	7.69	36.7	1	54	2						3	26
MIZUSAWA	8.03	228.7	1	53	-4	3	13	-14				
OKHA	9.67	338.4	2	21	2							
PETROPAVLOVK	10.50	34.2	2	12	-18						4	20
TUKUBASAN	10.80	221.2	2	28	-6	4	4	-30				
MATUSIRO	11.50	228.5	2	39A	-5	4	38	-13				
VLADIVOSTOK	12.35	268.6	2	56	1	5	12	0				
MAGADAN	14.91	3.8	3	28	-1						6	30 SS
CHANGCHUN	16.90	275.3	3	53	-1	6	54	-4				
YAKUTSK	20.63	333.9	4	34	-2	8	17	-1				
PEKING	24.52	270.5	5	16	1	9	35	7				
PAOTOW	28.69	275.5	5	55	2	10	37	1				
ULAN-BATOR	28.92	291.5	5	56	1							
LANCHOW	35.02	271.6	6	49A	1	12	13	-2				
COLLEGE	39.57	36.8	7	27	0							
KUNMING	41.94	258.0	7	46	0	14	0	0				
LHASA	47.52	272.0				15	23	3				
RABAUL	48.78	175.6	9	0	19							
SHILLONG	49.34	267.1	8	43A	-2							
ALMATA	50.18	295.3	8	52	1							
FRUNSE	51.89	295.9	9	5	1							
RESOLUTE	53.69	17.2	9	16	-2							
TASHKENT	56.08	296.8	9	35	0						17	19
KHOROG	56.70	291.8	9	41	2							
THULE	56.84	9.8	9	39	-1							
VICTORIA	57.13	52.3	9	41	-1							
NEW DELHI	57.95	279.9	9	50K	2							
APATITY	58.02	335.9	9	46	-3							
LAHORE	58.18	284.4	9	43	-7							
PENTICTON	58.80	49.9	9	52	-2							
BANFF	59.93	46.4	10	1	-1							
SODANKYLA	60.05	337.8	10	1	-2							
TROMSOE	60.24	342.0	10	3	-1							
KIRUNA	61.29	340.2	10	9K	-2							
HUNGRY HORSE	62.38	48.3	10	18	0							
MINERAL	62.82	59.2	10	20A	-1							
LEMBANG	63.30	227.1	10	40K	15							
QUETTA	64.07	287.6	10	29	-1				10	46		
MOSCOW	64.41	324.2	10	31	-1							
UMEA	64.48	337.4	10	30K	-2							
CHARTERS TS.	64.53	182.7	10	30	-3						10	51
BUTTE	64.59	49.7	10	33	0							
BOZEMAN	65.64	49.3	10	40	0							
NURMIJARVI	65.74	333.3	10	38K	-2						11	4
SKALSTUGAN	66.72	340.5	10	44K	-3							
EUREKA	66.77	57.0	10	46	-1						11	24
CHINA LAKE	68.10	61.0	10	54	-1							
SALT LAKE C.	68.35	53.8	10	57	0							
UPPSALA	68.41	335.9	10	56K	-1							
FLAMING GRGE	69.65	52.3	11	4	-1							
BOULDER CITY	69.71	59.3	11	4	-1							
TIFLIS	70.43	309.6	11	11	2							
TEHERAN	70.61	301.2	11	12	1							
RAPID CITY	70.85	46.5	11	11	-1							
REYKJAVIK	71.26	355.7	11	15	1							
SIDA	71.36	353.9	11	17K	2							
LARAMIE	71.51	49.9	11	17	1							
GOTEBORG	71.82	337.3	11	17	-1							
COPENHAGEN	73.43	336.0	11	28K	1							
SIMFEROPOL	73.65	317.8	11	30	1							
LWOW	74.32	326.5	11	33	1							
TUCSON	74.67	59.8	11	35	1						11	57
RACIBORZ	76.30	329.8	11	45A	1						11	56 PCP
COLLMBERG	77.04	333.4	11	48A	0						12	4 PCP
HALLE	77.19	334.0	11	49	0	21	31	-1				
WITTEVEEN	77.57	337.6	11	52	1							
PRAGUE	77.62	331.9	11	52	1							
PRUHONICE	77.66	331.8	11	52A	1						12	22
DURHAM	77.76	343.0	11	51K	-1							
JENA	77.81	334.0	11	52	0						12	58
MUNSTER	78.07	336.7	11	55	1							
BRATISLAVA	78.30	329.4	11	55A	0						12	20 PCP

VIENNA-H.	78.50	329.8	11 56	0		
KASPERSKE H.	78.71	331.9	11 57A	0		
BENSBERG	79.10	336.5	12 0	1	12 18	
WICHITA MTS.	80.07	50.6	12 3	-1		12 24
STUTTGART	80.42	334.2	12 6	0		
KEW	80.57	341.1	12 8A	1		
LJUBLJANA	81.03	329.7	12 9A	-1		
STRASBOURG	81.05	335.0	12 10	0		
FAYETTEVILLE	81.39	46.9	12 11A	0		
TRIESTE	81.65	330.0	12 13	0		
BASLE	82.04	334.7	12 15A	0		
PARIS	82.33	338.3	12 17	1		
BREBEUF	82.60	28.6	12 17	-1		
BESANCON	82.77	335.5	12 19	0		
FOLINIERE	83.12	340.1	12 21	1		
GARCHY	83.58	337.4	12 25	2		
ROSELEND	83.85	333.7	12 26	2		
ISOLA	85.21	333.5	12 31	0		
MORGANTOWN	85.24	35.7	12 42K	11		
MONACO	85.49	333.1	12 31	-1		
BAGNERES	88.26	337.6	12 46	0		
SOUTH POLE	134.52	180.0	19 12	1		

AUGUST 3 3.H 8.M 6.S EPICENTRE 18.49 -66.40 DEPTH= 133.KM

A= 0.37994 B=-0.86962 C= 0.31528 D=-0.9164 E=-0.4004
G= 0.1262 H=-0.2889 K=-0.9490 HT= 5.0

DEPTH OF FOCUS= 0.016R

SE= 1.44

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S	
SAN JUAN	0.29	113.1	0 19	-1	0 29	-6			
ST. KITTS	3.68	107.6	0 55	-2					
ANTIGUA	4.55	106.5	1 8	0					
DOMINICA	5.74	122.8	1 25	1					
FORT FRANCE	6.27	125.9	1 33	1	2 40	-2			
GRENADA	7.83	144.2	1 50	-3	3 15	-5		9 5	
CARACAS	7.96	183.8	1 58	4	3 15	-8			
BARBADOS	8.45	128.3	2 4	3					
TRINIDAD	9.18	147.5	2 11	0	3 49	-3			
GALERAZAMBA	11.51	229.4	2 45	4					
BERMUDA	13.91	6.1	3 11	-2	5 28	-16			
FUQUENE	14.79	209.8	3 22A	-2	6 6	2			
BOGOTA	15.69	209.5	3 36A	1	6 26	1	3 59	7 7	*SS
BALBOA HTS.	15.90	235.2	3 37	-1					
CHINCHINA	16.18	215.0	3 39K	-2	6 41	5	4 0		
COLUMBIA	20.23	322.6	4 26	-1					
WASHINGTON	22.35	337.7	4 48	0	8 51	12	5 9		
PALISADES	23.35	345.5	4 57K	0	9 8	11	5 21	5 28	*SP
MORGANTOWN	24.11	333.7	5 7K	2				12 11	
PENNSYLVANIA	24.32	338.5	5 5	-2	9 28	15		9 48	
HALIFAX	26.15	4.5	5 25K	1					
CLEVELAND	26.31	333.7	6 27K	62				11 31	S.
BREBEUF	27.59	349.0	5 37	0					
OTTAWA	27.93	345.9	5 39K	-1					
FAYETTEVILLE	30.13	311.2	5 59K	-1				12 28	SCP
HUANCAYO	31.60	196.8	6 12	0				12 36	
WICHITA MTS.	32.83	306.0	6 22K	-1	11 30	1		13 50	SS
LA PAZ	34.81	182.9	6 40	0	11 20	-40			
AREQUIPA	35.09	188.5	6 39	-3					
RAPID CITY	39.98	317.8	7 23	0					
TUCSON TELE.	42.05	298.0	7 42	2			8 5	13 13	SCP
ANTOFAGASTA	42.12	185.5	7 38	-3					
TUCSON	42.13	297.8	7 42	1	13 53	3	8 3	9 5	PP
FLAMING GRGE	42.97	310.7	7 47	-1				9 36	PCP
GLEN CANYON	43.58	304.5	7 54	1				9 40	PCP
SALT LAKE C.	44.71	309.7	8 1	-1				13 22	SCP
BOZEMAN	45.72	316.5	8 11	1				13 28	SCP
BUTTE	46.84	316.4	8 19	1					
EUREKA	47.47	306.9	8 24	1			8 49	9 56	PP
PASADENA	48.46	299.5	8 32K	1	15 27	7		10 31	
HUNGRY HORSE	48.59	318.9	8 32	0				13 39	SCP
RENO	50.41	306.3	8 0K	-46					
BANFF	50.52	321.9	8 46K	-1					

VINEYARD	51.30	302.6	8	54K	1				10	7				
LICK	51.56	303.3	8	55K	0						10	8		
MINERAL	51.88	307.1	8	56K	-1						10	9		
BRANNER	52.00	303.3	8	58K	0				10	9				
BERKELEY	52.10	303.9	8	59K	0				10	10				
PENTICTON	52.39	318.6	9	0K	-1									
SHASTA	52.53	307.4	9	0K	-2									
CORVALLIS	53.78	312.1	9	10K	-1									
ARCATA	53.82	307.5	9	12	1						10	11		
SERRA PILAR	53.94	52.3	9	6A	-6									
REYKJAVIK	54.53	22.2	9	18	1									
VICTORIA	54.62	316.8	9	16	-1									
SIDA	55.76	23.7	9	27K	2									
GRANADA	57.58	57.3	9	41K	3									
THULE	57.96	359.5	9	41	0									
RESOLUTE	58.29	351.4	9	42	-1									
ALMERIA	58.48	57.7	9	45K	0	17	43	7						
FOLINIERE	60.49	44.0	9	58	0									
BAGNERES	60.57	50.5	9	59	0									
DURHAM	60.60	37.0	10	0K	1	18	8	5			19	42	SKS	
KEW	60.88	40.9	10	1K	0	18	9	3			19	37		
PARIS	62.45	44.1	10	11	-1									
CLERMONT-FD.	62.77	47.5	10	14	0									
BESANCON	64.75	45.9	10	26	-1									
WITTEVEEN	65.27	39.7	10	30	0									
BENSBERG	65.54	41.8	10	31K	-1									
ISOLA	65.58	49.2	10	32	0									
MUNSTER	65.84	40.7	10	34K	0									
MONACO	65.87	49.7	10	34	0									
ROSELEND	65.94	47.8	10	30	-4									
STRASBOURG	65.94	44.4	10	34K	0	19	14	5			20	17		
KARLSRUHE	66.36	43.9	10	36	-1						20	20		
HEIDELBERG	66.55	43.5	10	37	-1									
EBINGEN	66.75	44.8	10	38	-1									
TUBINGEN	66.81	44.4	10	39	-1									
STUTTGART	66.94	44.2	10	40	0									
JENA	68.33	41.8	10	48	-1									
GOTEBORG	68.37	34.5	10	50	1									
HALLE	68.54	41.1	10	50	0	19	44	4						
SKALSTUGAN	68.57	28.1	10	51K	0									
FLORENCE X.	68.63	49.4	10	49	-2						11	12		
COPENHAGEN	68.67	36.6	10	52A	1	19	47	5			20	45	SCS	
COLLMBERG	69.21	41.3	10	54K	0						13	33	PP	
ROME	69.73	51.3	10	57K	-1	19	57	3	11	27	13	35	PP	
KASPERSKE H.	69.75	43.6	10	58K	0						13	38		
COLLEGE	69.79	333.3	10	57	-1									
TRIESTE	70.21	47.3	11	1	0	20	3	3						
PRAGUE	70.21	42.5	11	1	0									
PRUHONICE	70.30	42.6	11	2K	1						13	38		
LJUBLJANA	70.70	46.8	11	4K	1						11	26		
TROMSOE	71.19	21.6	11	7	1									
UPPSALA	71.22	32.0	11	6K	-1									
VIENNA-H.	71.68	44.3	11	9K	0									
KIRUNA	71.84	23.5	11	10K	0	20	22	3			21	4	SP	
UMEA	72.11	27.7	11	11K	-1									
BRATISLAVA	72.17	44.3	11	13K	1									
RACIBORZ	72.62	42.2	11	15	0									
SODANKYLA	74.26	23.7	11	26K	2									
NURMIJARVI	74.61	30.9	11	25	-1									
BELGRADE	75.01	47.4	11	30A	1						14	19	PP	
KAJAANI	75.33	26.9	11	31	1									
LWOW	76.37	41.8	11	38K	2	21	15	6						
APATITY	76.77	22.9	11	38	-1									
KHEYS	77.12	8.0	11	42	1						21	16		
PULKOVO	77.54	31.0	11	43	0	21	23	1						
ATHENS	78.95	53.6	11	52K	1									
KISHINEV	80.17	43.7	11	57	0	21	51	2						
ISTANBUL UN.	82.02	49.5	12	8A	1									
ISTANBUL KA.	82.07	49.5	12	8	1	22	14	5						
MOSCOW	82.54	33.6	12	11K	2	22	18	4						
ARGENTINE I.	83.50	179.1	12	13	-1									
BANGUI	83.91	87.4	12	17	1									
SIMFEROPOL	84.32	44.6	12	21	3	22	42	11						
HELWAN	87.40	59.5	12	36K	2									
TIFLIS	92.74	44.3									16	1		
YAKUTSK	98.74	352.4	13	23	-3									
SCOTT BASE	115.38	190.8	18	28	2									
MAWSON	121.43	159.7	18	38	0									

SHILLONG	131.37	26.5	18 57	0							
CANBERRA	144.49	234.6	19 21	0						22 50	PKS
CHARTERS TS.	149.16	261.6	19 32	3							
NHATRANG	149.18	8.4	19 37	8							
ADELAIDE	152.32	228.6	19 36K	3						21 43	

AUGUST 3 6.H 51.M 43.S EPICENTRE -3.67 131.05 DEPTH= 0.KM

A=-0.65544 B= 0.75256 C=-0.06360 D= 0.7541 E= 0.6568
G= 0.0418 H=-0.0480 K=-0.9980 HT= 7.1

SE= 2.92

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
DARWIN	8.66	181.5	2	8	-2	3	41	-8				
PORT MORESBY	16.97	110.4	3	59	-2							
MANILA	20.73	331.7	4	46	1	8	17	-15				
RABAUL	21.07	92.1	4	49	1							
CHARTERS TS.	22.05	138.9	4	47	-11	9	2	5				
LEMBANG	23.54	261.4	5	12K	-1	9	25	1				
NHATRANG	26.85	306.3	5	48	4	10	32	12				
HONG KONG	30.64	328.1				11	20	-1			6	47 PP
BRISBANE	31.41	140.8	6	32	7	11	38	5				
MUNDARING	31.42	204.7	6	22K	-3	11	27	-6				
ADELAIDE	31.94	168.1	6	29K	-1	12	32	51				
MEDAN	33.14	282.2	6	41	1						12	52
RIVERVIEW	35.37	150.4	7	1A	1	12	41	7				
CANBERRA	35.61	154.4	7	1A	-1	12	42	4				
ZO-SE	35.84	345.4	7	3	-1	12	41	-1				
MELBOURNE	36.30	161.2	7	10	3				7	18		
NANKING	37.40	342.7	7	18	1	13	7	2				
KUNMING	39.68	317.7	7	36	0	13	42	2				
MATUSIRO	40.56	8.9	7	40K	-3	13	43	-10			9	46
CHENGTU	42.81	324.8	8	2	1							
SIAN	43.10	332.8	8	2	-2	14	27	-4				
PEKING	45.59	344.0	8	25	1						14	3
VLADIVOSTOK	46.58	0.9	8	29	-3							
LANCHOW	47.01	329.5	8	34	-1							
CHANGCHUN	47.57	354.4	8	39	-1	15	33	-2				
SHILLONG	47.83	309.6	8	37K	-5						16	3
PAOTOW	48.06	338.4	8	42	-1	15	43	1				
Y.-SAKHLINSK	51.51	10.2	9	7	-3							
CHATRA	52.11	308.3	9	14	0							
KARAPIRO	52.99	136.1	9	19	-2							
CHATEAU	53.61	137.4	9	27	2							
TUAI	54.52	136.3	9	32	0							
ULAN-BATOR	55.57	340.5	9	40	0							
IRKUTSK	60.16	341.4	10	12	0							
DEHRA DUN	60.83	307.7	10	28	11	18	50	16				
PETROPAVLOVK	61.08	18.6	10	18	0							
MAGADAN	64.93	11.0	10	43	-1							
YAKUTSK	65.51	359.3	10	54	6							
WARSAK DAM	67.34	309.1	11	1	2							
FRUNSE	68.73	318.9	11	8A	0							
ANDIJAN	69.35	316.1	11	13	1	20	27	9				
QUETTA	69.78	303.9	11	13	-1						24	55 SS
NAMANGAN	69.92	316.1	11	16	1							
STALINABAD	71.07	312.8	11	22	0							
TASHKENT	71.72	315.7	11	25	-1							
CAPE HALLETT	72.72	168.3	11	33A	1	21	9	12			29	12 SSS
HONOLULU	73.60	66.7	11	37	0							
KIPAPA	73.69	66.6	11	39	1							
HAWAII V.OB.	75.90	69.0	11	52	2							
SCOTT BASE	76.48	172.7	11	52	-2						12	5 PCP
MAWSON	78.41	201.3	12	4	0				12	14		
SVERDLOVSK	82.49	328.5	12	27	1							
TANANARIVE	82.68	251.5	12	27	0							
TEHERAN	83.76	306.4	12	33	0	23	14	19				
SOUTH POLE	86.35	180.0	12	24	-22							
GORIS	88.24	309.6	12	58	3							
COLLEGE	89.53	25.0	12	59	-2						18	2
TIFLIS	89.62	311.7	13	3	2							
KHEYS	90.85	351.0	13	5	-2							
KSARA	96.32	303.5	13	33	1						15	57
SIMFEROPOL	97.49	314.7									17	40 PP

LWOW	103.75	320.4							18	27
MINERAL	105.57	49.2	17	55A	777					
CHINA LAKE	109.41	53.4	18	0	777					
EUREKA	109.98	49.3	18	12	777				19	5 PP
COLLMBERG	110.13	323.8	18	14	-20				19	57
KASPERSKE H.	110.51	321.5	18	37	2				19	17
LJUBLJANA	110.86	318.2	19	47	72					
TUCSON	115.61	56.0	18	20	-25					
RAPID CITY	117.66	41.3	18	50	2					
WICHITA MTS.	124.64	49.7	19	4	2				20	50 PP
PALISADES	136.57	27.7	19	17	-8	26	29	-5	22	5 PP
ANTOFAGASTA	145.68	143.5	19	43	2					
HUANCAYO	149.47	121.1	19	53	6					
AREQUIPA	150.05	132.5	19	53	5					
LA PAZ	152.41	137.1	19	57	6					
SAN JUAN	157.72	47.7	19	48	-10				20	33

AUGUST 3 23.H 33.M 35.S EPICENTRE 12.36 144.21 DEPTH= 0.KM

A=-0.79256 B= 0.57148 C= 0.21275 D= 0.5849 E= 0.8111
G=-0.1726 H= 0.1244 K=-0.9771 HT= 6.2

SE= 2.37

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
RABAUL	18.26	153.8	4	17	0								
MANILA	22.60	278.5	5	7	3	9	3	-4					
ABUYAMA	23.74	342.1	5	16K	1								
TUKUBASAN	24.04	351.8	5	12	-6	9	35	2			5	35	
MATUSIRO	24.67	348.4	5	24A	0	9	40	-4					
ZO-SE	28.27	314.9	5	57	0	10	38	-5					
HONG KONG	30.27	293.1	7	9	54	11	5	-10			10	0	
NANKING	30.49	314.1	7	12	55						12	59	
CANTON	31.21	294.3	7	21	58								
CHARTERS TS.	32.31	176.4	6	30	-3						7	33	
VLADIVOSTOK	32.44	343.1									7	42	PPP
Y.-SAKHLINSK	34.57	358.2									8	15	PPP
CHANGCHUN	35.33	336.1	7	0	1	12	33	-1					
PEKING	37.01	323.2	7	13	0	12	56	-3					
KOUMAC	38.21	148.7	7	23K	0								
SIAN	38.75	310.1	7	28	0	13	20	-6					
BRISBANE	40.38	168.2	7	41	-1	13	37	-14					
NOUMEA	40.77	147.5	7	44K	-1								
LEMBANG	41.07	244.3	7	46	-1								
KUNMING	41.10	294.1	7	48	1	14	0	-1					
CHENGTU	41.32	302.6	7	50	1	13	58	-6					
PETROPAVLOVK	42.17	13.0	7	58	2	13	57	-20					
LANCHOW	43.29	310.0	8	6A	1								
MEDAN	45.86	262.9	8	24	-2								
RIVERVIEW	46.41	172.0	8	35	5								
ULAN-BATOR	47.14	326.2	8	36	0								
MAGADAN	47.35	4.6	8	28	-10								
ADELAIDE	47.36	186.1	8	36A	-2								
CANBERRA	47.64	174.7	8	39	-1								
YAKUTSK	50.67	351.2									9	25	
AFIAMALU	50.84	119.5	9	7	2								
SHILLONG	50.91	292.9	9	2A	-3	16	18	-3					
IRKUTSK	51.05	329.6	8	26	-40								
MUNDARING	51.60	210.6	9	8A	-2								
PERTH	51.77	211.0									11	15	
LHASA	52.07	298.0	9	14	0	16	33	-5					
CHATRA	55.21	294.1	9	36K	-1								
KARAPIRO	58.01	151.0	9	56	-1								
HAWAII V.OB.	58.39	74.7	10	1	1	18	13	11					
CHATEAU	59.03	151.9	10	4A	0								
TUAI	59.47	150.4	10	5	-2								
DEHRA DUN	63.36	297.8	10	36	2						19	2	
SEMIPALATNSK	64.02	320.2	10	37	-1								
LAHORE	66.56	299.1	10	53	-1	19	45	0					
FRUNSE	66.74	311.4	10	55	0								
ANDIJAN	68.30	309.0	11	6	1								
NAMANGAN	68.84	309.2	11	9A	0								
WARSAK DAM	68.88	301.8	11	10	1								
COLLEGE	69.58	25.0	11	13	0						14	3	PP
TASHKENT	70.65	309.6	11	19	-1								

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
STALINABAD	71.05	306.7	11	23	1								
QUETTA	72.96	297.9	11	32	-1	20	56	-4					
SVERDLOVSK	76.24	325.8	11	52	0								
KHEYS	77.25	350.3	12	3	5								
VICTORIA	82.41	42.1	12	28	2								
SHASTA	84.60	49.7	12	40	3						13	9	
PENTICTON	84.71	40.8	12	40	3								
TEHERAN	85.14	305.4	12	40	0	23	5	-4					
MINERAL	85.26	49.9	11	43K	-57								
BERKELEY	85.27	52.4	12	40	0	23	15	5					
LICK	85.87	52.8	12	46K	3								
RESOLUTE	85.89	13.2	12	44	1								
RENO	86.78	50.4	12	6	-42								
BANFF	86.80	38.4	12	50	2								
FRESNO	87.43	53.1	11	54	-57								
GORIS	88.21	309.9	12	54	-1	23	19	-19					
HUNGRY HORSE	88.53	40.8	12	58	2	23	44	3	13	7			
TIFLIS	88.77	312.4	12	57A	0								
SODANKYLA	88.79	339.9	12	56A	-1								
MOSCOW	88.98	327.2	12	58A	0	23	24	-21					
PASADENA	89.35	55.3	13	2	2	23	54	5			33	25	SSS
EUREKA	89.67	49.7	12	54	-7						16	25	PP
KAJAANI	90.03	336.8	13	2	-1								
BUTTE	90.18	42.7	13	5	1								
KIRUNA	90.54	341.6				23	34	-26					
PULKOVO	90.96	332.4									18	10	
SCOTT BASE	90.96	175.3	13	8	1								
BOZEMAN	91.30	42.7	13	12	3								
BOULDER CITY	91.51	52.8	13	12	2								
UMEA	92.95	338.4	13	17	0								
NURMIJARVI	93.07	334.5	13	16A	-1								
GLEN CANYON	93.70	51.1	13	23	3								
FLAMING GRGE	94.03	46.8	13	23	1								
SIMFEROPOL	95.08	318.0	13	24	-2	24	1	-1					
TUCSON	95.79	55.4	13	34	4								
KSARA	97.93	307.1									23	1	
ISTANBUL UN.	100.12	316.0									13	24	
COLLMBERG	103.80	330.9	14	5	-1						18	29	PP
WICHITA MTS.	104.32	49.1	14	14	6						18	25	PP
ROME	110.12	323.6				25	19	6			28	30	PS
PALISADES	116.28	31.4									29	35	PS
BROKEN HILL	117.63	260.1									20	0	
BANGUI	123.42	283.7	19	0	0								
CARACAS	141.63	55.0	19	35	1						43	7	SS
ST. VINCENT	144.20	45.7	19	41	3								
TRINIDAD	145.80	49.1	19	44	3								
LA PAZ	148.44	101.4	19	52	7								

AUGUST 4 18.H 35.M 20.S EPICENTRE 33.68 -38.72 DEPTH= 50.KM

A= 0.65062 B=-0.52161 C= 0.55192 D=-0.6255 E=-0.7802
G= 0.4306 H=-0.3452 K=-0.8339 HT= 0.6

DEPTH OF FOCUS= 0.003R

SE= 3.40

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
PONTA DELGDA	11.34	65.4	2	43K	1								
HALIFAX	22.09	307.0	4	52K	0								
SERRA PILAR	24.97	63.9	5	19A	-1								
COIMBRA	24.99	66.1	5	20	-1	9	43	5			5	54	PP
MBOUR	27.53	129.0									10	35	PCP
TOLEDO	28.33	67.3	5	51	0	10	40	7					
GRANADA	28.73	72.9	6	15	20	10	54	15					
PALISADES	28.78	295.0	5	57	2	11	17	37					
SHAWINIGAN	28.81	306.7	5	55	-1								
OTTAWA	30.58	303.6	6	11	0								
ALICANTE	31.13	70.3	6	19	3	11	21	4			13	2	SS
BAGNERES	31.64	61.2	6	20	-1								
*PENNSYLVANIA	31.77	294.4				11	38	11					
TORTOSA	31.82	65.5	6	20	-2						9	51	
FOLINIERE	32.09	50.4	6	24	-1								
KEW	32.92	45.6	6	34	2	11	44	-1					
DURHAM	33.38	39.5	6	23	-13								
CLERMONT-FD.	34.00	56.6	6	42	1	12	12	10					

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PARIS	34.02	51.1	6 22	-19	12 10	8				
GARCHY	34.15	53.9	6 42	0						
ABERDEEN	34.16	35.4							13 36	
CARACAS	34.65	234.8	6 40	-7	12 21	9				
BESANCON	36.11	54.4	6 59	0						
MONACO	36.97	60.4	7 6	0						
ROSELEND	37.14	57.5	7 3	-5						
STRASBOURG	37.45	52.4			13 3	8				
STUTTGART	38.46	52.2	7 16	-3	13 15	5				
PADOVA	40.12	57.6							9 3	
JENA	40.14	49.0	7 32	-1	13 40	4			9 16	PPP
ROME	40.77	63.0	7 39	1	13 50	5			9 19	PP
COLLMBERG	41.07	48.6	7 40A	0	13 51	2				
KASPERSKE H.	41.31	51.9	7 43A	1					9 53	
TRIESTE	41.44	57.2	7 44	1	14 3	8				
PRAGUE	41.90	50.5			14 11	9			7 58	
LJUBLJANA	41.96	56.6	7 49	1					9 49	
PRUHONICE	41.97	50.7	7 48A	0	14 6	3			9 30	PP
SKALSTUGAN	43.25	30.5	8 8	10						
RACIBORZ	44.33	50.6	8 8	1						
UPPSALA	44.79	36.6							18 7	SS
KIRUNA	47.71	26.1	8 33	-1	15 27	2				
SOFIA	48.62	60.2	8 45	4						
WICHITA MTS.	48.87	288.9	8 45	2	15 49	7			10 53	PP
RESOLUTE	49.05	343.0	8 48	4	15 52	8				
SODANKYLA	49.95	27.4	8 52	1						
PULKOVO	51.17	37.3	8 37	-23						
APATITY	52.57	27.4	9 12	1	16 37	4				
ISTANBUL UN.	53.11	61.1							9 14	
ISTANBUL KA.	53.16	61.0	9 17	2	16 42	1				
FLAMING GRGE	55.30	299.6	9 30	-1						
HUNGRY HORSE	56.48	309.3	9 38	-1						
LA PAZ	57.24	214.1	9 50	5	17 47	12				
KHEYS	58.11	11.1	9 53	2	17 59	13				
GLEN CANYON	58.18	295.7	9 43	-8						
HELWAN	58.63	73.0	9 53	-1						
EUREKA	60.53	299.9	10 10	2					11 18	
BANGUI	60.62	105.6	10 6	-2			10 12			
KSARA	60.65	67.0	10 12	4						
BOULDER CITY	60.98	295.8	10 14	3						
WOODY	64.10	296.9	10 32	1						
COLLEGE	67.51	334.1	10 47	-6						
ANDIJAN	82.48	45.6	12 30	11						
PORT MORESBY	155.24	346.1	19 11	-36						

AUGUST 4 22.H 52.M 55.S EPICENTRE 45.49 151.29 DEPTH= 40.KM

A=-0.61695 B= 0.33786 C= 0.71079 D= 0.4803 E= 0.8771
G=-0.6234 H= 0.3414 K=-0.7034 HT= -3.7

DEPTH OF FOCUS= 0.001R

SE= 3.36

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
KURILSK	2.43	265.0	0 26	-12	1 5	-2		
NEMURO	4.63	244.2	1 6	-3	1 56	-6		
ABASHIRI	5.21	256.1	1 17	0				
KUSIRO	5.55	245.5	1 18	-4	2 18	-8		
SEVERO-KUR.	6.10	30.1	1 29	-1	2 43	4		
Y.-SAKHLINSK	6.14	287.5	1 32	2	2 46	6		
OBIHIRO	6.36	249.0	1 33	0				
HIROO	6.60	243.7	1 33	-4	2 44	-7		
WAKKANAI	6.76	272.8	1 40	1	3 8	12		
URAKAWA	7.01	244.5	1 40	-2	2 58	-4		
RUMOE	7.06	260.8	1 44	1	3 11	8		
SAPPORO	7.54	254.8	1 50	0	3 13	-2		
TOMAKOMAI	7.56	251.2	1 56	6				
MURORAN	8.09	250.6	1 57	0	3 30	1		
SUTTSU	8.40	255.2	2 4	2	3 37	1		
MORI	8.46	250.2	2 3	0	3 9	-29		
HAKODATE	8.48	248.0	1 58	-5	3 30	-8		
HATINOHE	8.70	238.7	2 5	-1	3 32	-12		
PETROPAVLOVK	8.93	29.9	2 7	-2	3 47	-3		
AOMORI	8.99	242.4	2 19	9	4 1	10		

MIYAKO	9.02	232.9	2	13	3						
MORIOKA	9.44	235.8	2	10	-6	3	48	-14			
OKHA	9.72	329.1	2	22	2	4	19	10			
MIZUSAWA	9.85	233.4	2	16	-6	4	0	-12			
AKITA	10.06	239.0	2	49	24	4	32	15			
ISINOMAKI	10.24	229.9	2	20	-7	4	9	-13			
SENDAI	10.58	230.6	2	29	-3	4	18	-12			
SAKATA	10.75	236.2									
YAMAGATA	10.90	232.2	2	29	-7	4	23	-15			
HUKUSIMA	11.19	230.1	2	36	-4						
ONAHAMA	11.57	226.1				4	29	-25			
SHIRAKAWA	11.79	228.7	2	46	-2	4	46	-13			
NIIGATA	11.86	234.7				4	46	-15			
MITO	12.23	225.7	2	45	-9	4	54	-16			
UTUNOMIYA	12.41	227.9	2	47	-9						
KAKIOKA	12.49	226.1	2	51	-7	5	8	-8			
TUKUBASAN	12.54	226.3	2	50A	-8	4	59	-19			
TAKADA	12.89	234.0	2	55	-8						
MAEBASI	12.94	229.7	3	2	-2	5	16	-11			
KUMAGAYA	12.97	228.1	3	0	-4	5	15	-13			
NAGANO	13.22	232.8	3	20	13						
TITIBU	13.25	228.5	3	23	15						
OIWAKE	13.28	230.9	3	18	10	5	49	14			
MATUSIRO	13.31	232.4	3	1	-7	5	23	-13			
YOKOHAMA	13.39	225.4									6 20
TOYAMA	13.77	235.3									
HUNATU	13.78	228.0	3	16	1	5	36	-11			2 42
MISIMA	13.98	226.5									
MAGADAN	14.08	359.0	3	19	0						3 42
VLADIVOSTOK	14.09	267.2	3	16	-3	5	49	-5			6 33
IIDA	14.27	230.4	3	17	-4						
OMAESAKI	14.76	227.1									
GIHU	14.94	232.6	3	26	-4						6 26
NAGOYA	15.00	231.6	3	37	7	6	31	15			
HIKONE	15.33	233.5	3	32	-3						
TOYOOKA	15.97	237.2	3	39	-4	6	49	10			8 43
ABUYAMA	16.00	233.9	3	38A	-5						
OSAKA	16.18	233.5	3	56	10						
SUMOTO	16.76	234.0	3	57	4	7	6	9			10 48
KOTI	18.12	235.0	4	16	6	7	31	3			
HIROSIMA	18.19	238.9	4	11	0	7	36	7			
MATUYAMA	18.35	237.1	4	13	0						
CHANGCHUN	18.54	274.1	4	12A	-3	7	31	-6			
OOITA	19.47	237.9	4	25A	-1	8	5	7			
HUKUOKA	19.98	240.7	4	32	1	8	19	10			
KUMAMOTO	20.31	238.6	4	36	1	8	27	12			
YAKUTSK	20.73	330.7	4	39	0	8	25	2			5 10 PP
KAGOSIMA	21.28	236.4	4	43	-2	8	43	9			
PEKING	26.22	270.5	5	32	-1	9	59	-1			
ZO-SE	27.47	248.9	5	42K	-2	10	22	2			
TIKSI	28.32	345.2	5	55	3						6 47 PP
NANKING	28.46	253.2	5	50K	-3	10	33	-3			
ULAN-BATOR	30.23	290.8	6	8	-1	11	8	4			
PAOTOW	30.31	275.6	6	9	0	11	15	10			
SIAN	34.04	265.8	6	42	0	12	4	0			
LANCHOW	36.70	272.2	7	4	-1	12	44	-1			
COLLEGE	37.92	37.4	7	16	1	13	8	5			9 26 PCP
CANTON	38.01	246.9									8 5
HONG KONG	38.04	245.1	7	19	3	13	7	2			
CHENGTU	39.48	264.7	7	28	0	13	26	-1			
KUNMING	43.77	259.2	8	3K	0	14	30	0			
SITKA	45.16	47.6	8	16	2						
KHEYS	46.00	346.8	8	18	-3	15	0	-2			12 20 PP
SEMIPALATNSK	46.18	303.0	8	22	0						
LHASA	49.19	273.0	8	47A	1	15	50	3			
SHILLONG	51.08	268.2	8	58K	-2						
RESOLUTE	52.43	17.9	9	11	1	16	35	3			
FRUNSE	53.08	296.4	9	14	-1	16	45	4			10 22 PCP
CHATRA	53.60	272.7	9	20A	1	16	47	-1			
SVERDLOVSK	53.89	317.1									19 13 SCS
VICTORIA	55.29	53.7	9	30	-1						
THULE	55.77	10.5	9	34	-1				9	45	
BOKARO	56.44	270.9	9	39K	-1	17	28	2			
PENTICTON	56.99	51.3	9	43	-1						
TASHKENT	57.24	297.5	9	44	-1	17	38	2			10 35 PCP
CORVALLIS	57.49	57.6	9	47	0						
DEHRA DUN	57.83	282.0	9	49	-1	17	45	1			
KHOROG	57.99	292.6	9	51	0	17	48	2			
BANFF	58.14	47.7	9	51	-1						

The scanned images of the bulletins of the International Seismological Summary (ISS) have been obtained thanks to funding provided by the US National Science Foundation through grant EAR-9725140 (Villaseñor et al., 1997) and collected by SGA Storia Geofisica Ambiente (Bologna) on behalf of the Istituto Nazionale di Geofisica e Vulcanologia (Rome), in the frame of the EUROSEISMOS project.

NEW DELHI	59.48	280.9	9	58K	-3	18	4	-2			12	11	PP
LAHORE	59.63	285.4	10	0	-2	18	6	-2					
SODANKYLA	59.96	338.4	10	4	0								
TROMSOE	60.01	342.6	10	4	-1								
WARSAK DAM	60.02	289.3	10	4	-1								
SHASTA	60.26	60.9	10	7	1								
HUNGRY HORSE	60.58	49.8	10	8	0	18	29	9					
MINERAL	60.95	60.8	10	11A	0								
KIRUNA	61.12	340.9	10	11	-1	18	21	-6					
MEDAN	61.94	244.0									10	21	
BERKELEY	62.03	63.4	10	18	0						26	11	
RENO	62.54	60.6	10	39	17								
LICK	62.74	63.6	10	22K	-1								
BUTTE	62.78	51.2	10	24	1								
BOZEMAN	63.83	50.7	10	32	2								
FRESNO	64.25	63.0	10	32	-1								
UMEA	64.40	338.2	10	32	-2								
PULKOVO	64.54	331.3	10	34	-1	19	6	-4			23	17	SS
MOSCOW	64.76	325.1	10	33	-3						20	24	SCS
EUREKA	64.90	58.6	10	37	0				10	52	11	16	
LEMBANG	65.09	229.1	10	36K	-2								
CHARTERS TS.	65.43	185.2	10	38	-2								
QUETTA	65.45	288.7	10	40K	-1	19	24	3	10	58			
NURMIJARVI	65.79	334.2	10	42	-1								
ASHKABAD	66.00	300.2	10	44	0	19	35	8					
SKALSTUGAN	66.54	341.3	10	46	-2								
PASADENA	66.94	64.3	10	50	0	19	46	7					
FLAMING GRGE	67.82	53.8	10	56	0								
BOULDER CITY	67.84	60.9	10	46	-10								
UPPSALA	68.38	336.9	10	58	-1								
RAPID CITY	69.07	48.0	11	3	0								
GLEN CANYON	69.16	58.3	11	4	0								
SIDA	70.75	355.0	11	17A	3								
TIFLIS	71.23	310.7	11	17K	0	20	34	5					
TEHERAN	71.64	302.4	11	20	1	20	42	8					
GORIS	71.95	308.2	11	22K	1						14	5	PP
BRISBANE	72.54	178.6	11	25	1						21	27	
WARSAW	73.69	330.7	11	31	0	21	2	4					
SIMFEROPOL	74.20	319.0	11	34K	0	21	8	5			21	43	PS
LWOW	74.59	327.7	11	37	1	21	11	3			21	45	SCS
IASI	75.31	324.1	11	41	1								
KRAKOW	75.89	330.1	11	45	1						21	27	
RACIBORZ	76.47	331.1	11	48	1						12	35	
SKALNATE PL.	76.51	329.4	11	47	0								
COLLMBERG	77.08	334.6	11	50K	0						12	3	PCP
WITTEVEEN	77.48	338.9	11	54	1								
DURHAM	77.49	344.3	11	52K	-1	21	45	6					
PRUHONICE	77.76	333.1	11	54K	0	21	45	3			14	43	PP
JENA	77.83	335.3	11	55	0	21	44	1			13	11	
MUNSTER	78.00	338.0	11	57	1								
BUCHAREST	78.15	323.2	11	56A	0						21	51	
WICHITA MTS.	78.25	52.2	11	56	-1	21	51	4			14	56	PP
CHEB	78.34	334.4	11	57	0								
BRATISLAVA	78.47	330.7	11	59K	1								
VIENNA-H.	78.66	331.1	12	0K	1								
KASPERSKE H.	78.81	333.2	12	1K	1						14	53	PP
BENSBERG	79.04	337.8	12	1K	0						13	55	
ISTANBUL KA.	79.54	319.4	12	4	0	22	7	6			15	33	PP
ISTANBUL UN.	79.60	319.5	12	4	0								
FAYETTEVILLE	79.60	48.5	12	16	12								
HEIDELBERG	80.03	336.2	12	7	0								
BELGRADE	80.10	326.9	12	7A	0	22	29	22			27	16	SS
KEW	80.36	342.4	12	9	1	22	13	3					
OTTAWA	80.41	31.5	12	7	-2								
STUTTGART	80.43	335.6	12	9	0	22	24	14					
CANBERRA	80.46	181.9	12	9A	0				12	23			
KARLSRUHE	80.47	336.2	12	8	-1	22	29	18					
SHAWINIGAN	80.47	29.1	12	8	-1								
SOFIA	80.72	323.9	12	11	1	22	21	8					
ADELAIDE	80.89	190.4	12	11A	0				12	23			
STRASBOURG	81.04	336.4	12	13K	1	22	23	6			12	39	
BREBEUF	81.09	30.2	12	12	0								
LJUBLJANA	81.19	331.1	12	13K	0						12	45	
TRIESTE	81.80	331.4	12	15	-1	22	32	7					
KSARA	81.81	310.6	12	18	2	22	37	12			24	18	PPS
BASLE	82.04	336.1	12	7	-10	22	18	-9					
PARIS	82.21	339.8	12	19	1						13	18	
BESANCON	82.74	337.0	12	21	0								

FOLINIERE	82.94	341.6	12 32	10				
PENNSYLVANIA	83.48	35.3	12 24	0	22 45	3		
GARCHY	83.49	338.8	12 25	1				12 49
MORGANTOWN	83.60	37.3	12 26A	1				
FLORENCE X.	84.29	332.1	12 26K	-3	22 49	-1		
ATHENS	84.46	321.0	12 29A	0				
PALISADES	84.86	32.6	12 32	1	22 52	-3		16 8 PP
CLERMONT-FD.	84.88	338.2	12 33	2				
ROME	85.54	330.5	12 35	0	23 16	14	12 47	16 11 PP
CHAPEL HILL	87.09	38.7	12 42	0				
HELWAN	87.30	311.1	12 44	1	23 23	4		
COLUMBIA	87.80	41.1	12 46	0				
BAGNERES	88.16	339.3	12 48	1				
TOLEDO	92.18	341.3	13 7	1	23 43	-20		25 27 PS
SCOTT BASE	123.44	176.1	19 3	10				
BULAWAYO	126.88	278.6	18 59	0				
MAWSON	130.47	210.2	19 18	12				
SOUTH POLE	135.30	180.0	19 10	-5				
LA PAZ	136.21	61.7	19 33	16				

AUGUST 4 23.H 32.M 23.S EPICENTRE -25.40-179.72 DEPTH= 442.KM

A=-0.90442 B=-0.00443 C=-0.42662 D=-0.0049 E= 1.0000
G= 0.4266 H= 0.0021 K=-0.9044 HT= 3.2

DEPTH OF FOCUS= 0.065R

SE= 2.57

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
RAOUL ISLAND	4.15	157.7	1 23	6	2 24	7		
SUVA	7.42	346.2	1 50	0	3 22	5		
KARAPIRO	13.12	196.7	2 53A	0				
TUAI	13.62	190.4	2 56	-2	5 25	4		
AFIAMALU	13.65	34.6	2 57	-2	5 16	-6		
WELLINGTON	16.48	194.8			6 13	-2		
COBB RIVER	16.85	200.0	3 32	1	6 24	2		
KAIMATA	18.57	201.0			6 53	0		
GEBBIES PASS	19.29	197.0			7 4	-1		
BRISBANE	24.70	259.3	4 45	0				6 57
CANBERRA	28.64	242.4	5 21K	1				8 19 PCP
CHARTERS TS.	31.76	272.6	5 48	1				
MOORLANDS	32.03	229.6	5 50A	0			8 27	
TARRALEAH	32.49	230.2	5 54	1			6 29	
ADELAIDE	36.95	245.0	6 30K	-1				
CAPE HALLETT	47.28	184.2	7 54	1				
SCOTT BASE	52.90	183.6	8 36A	1				9 38
MUNDARING	55.88	247.4	8 54K	-2				
SOUTH POLE	64.75	180.0	9 55	0				
MAWSON	76.44	200.5	11 3K	-1				
ARGENTINE I.	77.09	157.0	12 9	61				
WOODY	83.64	45.1	11 44	3			13 25	
EUREKA	87.74	44.0	12 3	2			13 47	
GLEN CANYON	89.18	48.0	12 11	3			13 56	
FLAMING GRGE	92.74	45.6	12 17	-7				
COLLEGE	93.32	13.1					14 14	
WICHITA MTS.	97.30	55.1	12 46	1	22 40	1	14 33	
SODANKYLA	134.99	345.9						21 16 SKP
KAJAANI	137.39	342.6	18 35	3				21 25 SKP
NURMIJARVI	141.11	341.0	18 34	-6				21 34 SKP
KSARA	148.06	293.7	18 57	7				
NIEDZIKA	151.40	332.1	19 4	9				20 57
HELWAN	152.18	286.3	19 6	9				
COLLMBERG	152.37	342.7	19 7	10				
BANGUI	152.67	223.1	18 59	2				
KASPERSKE H.	154.14	339.7	19 0	1				21 2

AUGUST 5 2.H 26.M 19.S EPICENTRE 60.93-148.41 DEPTH= 39.KM

A=-0.41602 B=-0.25579 C= 0.87264 D=-0.5238 E= 0.8519
G=-0.7434 H=-0.4571 K=-0.4884 HT= -9.2

DEPTH OF FOCUS= 0.001R

SE= 1.64

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
COLLEGE	3.96	3.7	1	3	3	1	48	2					
SITKA	7.80	114.1	1	48	-6								
VICTORIA	18.89	119.8	4	19	-1								
PENTICTON	19.96	112.6	4	32	0								
BANFF	20.57	103.5	4	38	0								
CORVALLIS	22.12	126.3	4	56	2								
HUNGRY HORSE	23.23	107.2	5	6	1	9	17	7	5	21	8	53	PCP
RESOLUTE	23.30	32.7	5	7	1	9	20	9					
BUTTE	25.61	109.3	5	28	0	9	54	3					
SHASTA	25.78	129.9	5	31	2								
MINERAL	26.38	129.1	5	36K	1								
BOZEMAN	26.58	108.0	5	38	1	10	16	9			15	8	
RENO	27.77	127.4	5	6	-42								
BERKELEY	28.31	132.7	5	54A	2								
LICK	29.01	132.2	5	59K	0								
PETROPAVLOVK	29.17	278.4	5	54	-6	10	50	2					
EUREKA	29.36	122.1	6	2	0				6	17	6	56	PP
PARAISO	29.65	134.2	6	8	4								
SALT LAKE C.	30.05	115.4	6	9	1								
FRESNO	30.19	130.1	6	10	1								
FLAMING GRGE	31.02	112.2	6	16	-1						9	11	PCP
RAPID CITY	31.47	101.5	6	21	0								
BOULDER CITY	32.82	124.1	6	33	1								
PASADENA	33.12	130.1	6	36	1	11	54	4					
GLEN CANYON	33.32	119.1	6	37	0						9	18	PCP
YAKUTSK	36.67	308.6	7	8	3								
KHEYS	37.90	353.2	7	17	1								
WICHITA MTS.	41.04	106.5	7	41	-1	13	56	5			9	41	PCP
FAYETTEVILLE	42.01	100.9	7	49A	-1						22	16	
OTTAWA	43.81	76.3	8	3K	-1								
SHAWINIGAN	44.35	73.0	8	8	-1								
BREBEUF	44.73	74.7	8	11	-1								
MORGANTOWN	46.15	85.0	8	22A	-1						24	4	
PENNSYLVANIA	46.25	82.3	8	23	-1	15	10	3					
PALISADES	48.00	78.9	8	37	0	15	32	0	8	51	9	42	PCP
WASHINGTON	48.11	83.2	8	34	-4								
CHAPEL HILL	49.51	87.3	8	48	-1								
HALIFAX	50.03	68.1	8	53K	0								
COLUMBIA	50.08	90.5	8	53	0								
MATUSIRO	50.96	276.5	9	0	0								
KIRUNA	51.28	5.4	9	2	-1								
SODANKYLA	51.95	2.4	9	8A	0								
SKALSTUGAN	54.95	10.4	9	30	0								
KAJAANI	55.27	2.1	9	32	0								
UMEA	55.27	6.1	9	31	-1								
ULAN-BATOR	55.78	308.1	9	37	1								
NURMIJARVI	58.77	4.0	9	57A	0								
UPPSALA	59.07	8.2	9	58A	-1								
PULKOVO	59.63	0.7	10	2	-1								
SVERDLOVSK	60.38	342.1	10	7	-1								
GOTEBORG	60.71	11.9	10	10A	0								
MOSCOW	63.59	356.2	10	28	-1								
BENSBERG	66.75	16.5	10	49	-1								
HALLE	66.82	13.2	10	50	0								
COLLMBERG	67.13	12.5	10	53A	1				11	23	11	52	
JENA	67.34	13.6	10	53	0				11	23	11	53	
FOLINIERE	67.63	22.3	10	55	0								
PARIS	68.12	20.3	10	59	1						11	36	
PRUHONICE	68.59	11.7	11	2	1						11	24	
RACIBORZ	68.82	9.2	11	3	0								
STRASBOURG	69.16	16.7	11	5	0						12	26	
STUTTGART	69.18	15.6	11	5	0								
KASPERSKE H.	69.34	12.5	11	7	1				11	29			
GARCHY	69.70	20.3	11	9	1								
SAN JUAN	70.39	87.4	11	11	-1								
BRATISLAVA	70.63	10.2	11	14	0								
ROSELEND	72.16	17.5	11	22	-1								
LJUBLJANA	72.48	12.4	11	24K	-1						12	9	
ANDIJAN	73.35	328.8	11	32	2								
MONACO	73.86	18.0	11	33	0								
FLORENCE X.	74.34	15.2	11	35	-1								
SIMFEROPOL	74.46	358.1	11	36	0	21	11	4					
STALINABAD	76.30	330.8	11	49	2	21	34	7					
TIFLIS	77.14	349.9	11	53	1								

GRANADA	78.09	28.1		22 28
SHILLONG	81.03	307.4	12 8	-5
CHATRA	81.66	311.8	12 16	0
NEW DELHI	83.41	320.7	12 24A	-1
HELWAN	89.53	0.2	12 57	2
LA PAZ	99.63	106.4	13 20	-21
BROKEN HILL	133.54	4.2	19 15	2
SCOTT BASE	141.21	193.8	19 23	-4
KIMBERLEY	147.50	11.2	19 9	-29
SOUTH POLE	150.77	180.0	19 49	6
MAWSON	165.00	230.3	20 57	57

AUGUST 5 9.H 27.M 51.S EPICENTRE -19.02 -69.24 DEPTH= 114.KM

A= 0.33533 B=-0.88468 C=-0.32386 D=-0.9351 E=-0.3544
G=-0.1148 H= 0.3028 K=-0.9461 HT= 4.9

DEPTH OF FOCUS= 0.013R

SE= 2.36

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
LA PAZ	2.72	23.1	0 46K	3				0 58 PP
AREQUIPA	3.32	319.5	0 52	1				
ANTOFAGASTA	4.79	193.1	1 8	-3	1 44	-22		
HUANCAYO	9.07	318.9	2 8	-1	4 9	19		
SANTIAGO	14.41	184.7	3 17	-2				
BOGOTA	23.96	348.1	5 8	4	9 11	1		
CHINCHINA	24.65	344.6	5 12	1	9 19	-2		
FUQUENE	24.73	349.3	5 7	-5				
CARACAS	29.42	4.6	5 53K	-1	10 38	0		
TRINIDAD	30.47	15.3	6 3	-1				
GRENADA	31.74	14.1	6 13	-2				
ST. VINCENT	32.93	14.4	6 24	-1				
SAN JUAN	37.29	4.9	6 58	-4	12 31	-9	7 25	
ARGENTINE I.	46.32	177.1	8 15	-1				
TACUBAYA	48.18	320.8	8 34	4	15 38	19		
COLUMBIA	53.90	347.9	9 12	-1				
CHAPEL HILL	55.42	350.3	9 21	-3				9 51
MORGANTOWN	59.19	350.4	9 50A	-1				10 19
FAYETTEVILLE	59.68	336.7	9 53	-1				17 53 SS
PALISADES	59.87	355.9	9 58	3	17 54	-2	10 24	12 32 PP
PENNSYLVANIA	60.04	352.4	9 55	-2	17 58	-1	10 24	10 47 PCP
WICHITA MTS.	60.28	332.3	9 57A	-1	18 1	-1	10 27	12 12 PP
MBOUR	61.24	61.0	10 3	-2	18 11	-3		
HALIFAX	63.53	4.5	10 19K	-1				
OTTAWA	64.37	354.9	10 24	-1				10 52
BYRD STATION	64.89	188.5	10 39	10			10 59	
SHAWINIGAN	65.33	357.3	10 31	-1				11 0
GLEN CANYON	68.53	324.6	10 53	1				
BOULDER CITY	69.66	321.8	11 0	1				
RAPID CITY	70.06	334.6	11 1	0				
FLAMING GRGE	70.33	328.7	11 2	-1			11 31	
PASADENA	70.46	318.4	11 5K	2	20 16	10		11 34
SOUTH POLE	71.10	180.0	11 7	0				
SALT LAKE C.	71.45	327.2	11 10	1				
EUREKA	72.73	323.8	11 18	1			11 47	12 19
FRESNO	73.17	319.6	11 20	1				
PARAISO	74.49	317.9	11 25K	-2				
LICK	74.66	319.1	11 29K	1				12 1
STA. CRUZ C.	74.67	318.6	11 30	2				
BOZEMAN	74.72	331.0	11 29	1				
RENO	74.97	321.8	10 49	-41				
BRANNER	75.05	318.9	11 32	2				
BERKELEY	75.38	319.2	11 34	2				
BUTTE	75.68	330.4	11 34	0				
MINERAL	76.54	321.5	11 39K	0				
SHASTA	77.23	321.4	11 42	-1				
HUNGRY HORSE	78.07	331.3	11 48	1			12 17	
SCOTT BASE	78.20	190.3	11 47A	-1			12 18	22 43 SCS
CORVALLIS	80.19	324.0	12 0K	1				
CAPE HALLETT	80.71	195.5	12 2A	1				
BANFF	80.80	332.5	12 2K	0				
PENTICTON	81.38	329.3	12 1	-4				
SERRA PILAR	82.06	41.7	12 9A	1				12 39

VICTORIA	82.75	327.1	12	12K	0							
GRANADA	83.29	47.1	12	34	19	22	31	6			15	23 PP
ALMERIA	83.92	47.8	12	48K	30	22	9	-22			13	36
TOLEDO	84.34	44.6	12	21K	1	22	35	0	12	52	15	14 PP
KIMBERLEY	84.45	118.4	12	28	7							
MAWSON	86.79	163.5	12	31K	-1	22	56	-2	13	4		
TORTOSA	87.84	45.4				23	13	5				
BAGNERES	88.64	43.3	12	41	0							
BULAWAYO	90.61	111.4	12	50K	0							
FOLINIERE	90.92	38.1	12	50	-2							
BROKEN HILL	92.45	106.1	13	0	1							
MONACO	93.73	45.0	13	4	0						13	36
FLORENCE X.	96.32	46.0	12	29	-47	23	21	-20				
ROME	96.53	48.0				23	46	4			25	59 PS
STUTTGART	96.79	40.8	13	17	-1							
LWIRO	96.87	94.7									23	57
COLLMBERG	99.90	39.2	13	32	-1						17	35 PP
PRUHONICE	100.44	40.7	13	37	2						17	36 PP
COLLEGE	102.29	334.6	13	42	-1						17	49 PP
ISTANBUL KA.	108.38	52.0									27	55
SIMFEROPOL	112.54	48.4									28	33
KSARA	112.64	60.5									19	13 PP
CHARTERS TS.	127.83	223.7	18	54	2						19	26
YAKUTSK	135.04	347.5									21	32
STALINABAD	138.79	52.8									22	8
FRUNSE	141.39	44.1	19	20	3							
POONA	145.09	84.7	19	24K	0							
IRKUTSK	146.43	7.2	19	28K	2							
GUAM	146.95	265.5	19	29	2				19	56		
MATUSIRO	150.24	311.6	19	39K	7						43	5 *SSS
LEMBANG	154.13	172.8	19	42A	5						23	38

AUGUST 7 4.H 2.M 19.S EPICENTRE 42.47 142.22 DEPTH= 79.KM

A=-0.58475 B= 0.45329 C= 0.67276 D= 0.6127 E= 0.7903
G=-0.5317 H= 0.4122 K=-0.7399 HT= -2.6

DEPTH OF FOCUS= 0.007R

SE= 4.56

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
TOMAKOMAI	0.50	288.7	0	15	-1	0	28	1				
URAKAWA	0.53	127.5	0	10A	-6	0	19	-9				
HIROO	0.84	102.9	0	14A	-4	0	26	-6				
OBIHIRO	0.85	58.0	0	20A	1	0	36	4				
SAPPORO	0.87	313.4	0	19K	0	0	35	2				
MURORAN	0.93	261.0	0	15K	-4	0	30	-4				
HAKODATE	1.27	239.1	0	18K	-5	0	32	-9				
MORI	1.28	253.6	0	20K	-3	0	35	-6				
ASAHIGAWA	1.31	4.8	0	27	3	0	49	7				
SUTTSU	1.50	283.2	0	25	-1	0	50	4				
RUMOE	1.54	343.7	0	29	2	0	54	7				
KUSIRO	1.69	71.8	0	28K	-1	0	50	0				
AOMORI	1.97	213.6	0	27	-5	0	44	-12				
HATINOHE	2.01	195.1	0	23	-10	0	42	-15				
ABASHIRI	2.16	43.6	0	40	5	1	4	3				
NEMURO	2.61	69.7	0	40	-1	1	9	-3				
MIYAKO	2.83	183.9	0	34	-10	0	58	-20				
MORIOKA	2.88	196.3	0	37	-8	1	3	-16				
WAKKANAI	2.97	352.7	0	54	8							
AKITA	3.18	210.9	0	46	-3	1	9	-17				
MIZUSAWA	3.44	194.2	0	47	-6	1	21	-12				
SAKATA	4.00	207.7	1	6	5							
ISINOMAKI	4.10	189.9	0	52	-10	1	33	-16				
SENDAI	4.32	193.9	0	59	-6	1	41	-14				
YAMAGATA	4.45	199.3	1	1	-6	1	49	-9				
HUKUSIMA	4.90	196.4	1	6	-7	1	58	-11				
SHIRAKAWA	5.56	196.7	1	12	-10	2	15	-10				
ONAHAMA	5.61	190.9				2	11	-6			2	11
UTUNOMIYA	6.19	197.8	1	4	-27	2	23	-18				
KAKIOKA	6.43	194.9	1	14	-20	2	30	-17				
TUKUBASAN	6.46	195.4	1	21A	-14	2	28	-20				
MAEBASI	6.53	202.9	1	58	22	2	53	4				
NAGANO	6.57	209.5	1	39	3							
MATUSIRO	6.69	208.9	1	29	-9	2	36	-17				

KUMAGAYA	6.69	200.1	1	36	-2	2	59	6			
OIWAKE	6.76	206.0	1	37	-2						
TYOSI	6.83	189.4	2	36	56	3	0	3			
TITIBU	6.93	201.6	2	45	64						
TOKYO C.M.O.	7.05	196.6									
KOHU	7.36	203.9									
HUNATU	7.46	202.2				3	3	-10			
IIDA	7.74	207.6	2	3	11						
AJIRO	7.80	199.2	1	51	-2						
ABUYAMA	9.20	216.6	2	4A	-8						
COLLEGE	44.23	35.1	8	3	0						
SHILLONG	44.34	264.2	8	1K	-3						
CHATRA	47.10	269.0	8	25K	-1						
NEW DELHI	53.49	277.3	9	12A	-3						
RESOLUTE	57.20	15.4	9	40	-1						
THULE	59.80	8.0	9	58	-1						
QUETTA	59.96	284.8	9	59	-1				10	5	
SODANKYLA	60.22	336.3	10	1	-1						
TROMSOE	60.79	340.4	10	6	0						
KIRUNA	61.67	338.5	10	11	-1						
KAJAANI	62.00	333.1	10	14	0						
PENTICTON	63.90	46.2	10	23	-4						
UMEA	64.59	335.4	10	25	-6						
NURMIJARVI	65.46	331.2	10	35A	-2						
SKALSTUGAN	67.09	338.1	10	45	-2						10 57
HUNGRY HORSE	67.43	44.6	10	49	0						
UPPSALA	68.36	333.4	10	54	-1						
BRISBANE	70.19	170.0	11	24	18						
GOTEBORG	71.88	334.5	11	16	-1						
EUREKA	72.01	52.8	11	17	0				11	33	
CHINA LAKE	73.40	56.6	11	25	0						
FLAMING GRGE	74.80	48.2	11	39	5						12 35
NIEDZIKA	75.27	325.0	11	36	0						11 54
PRUHONICE	77.18	328.4	11	47A	0						
JENA	77.53	330.5	11	47	-2						
KASPERSKE H.	78.24	328.4	11	53	0						
KSARA	78.50	305.4	11	55	1						
JERUSALEM	80.31	304.3	12	5	1						
LJUBLJANA	80.35	326.0	12	4A	0						
PARIS	82.44	334.5	12	16	1						
FOLINIERE	83.39	336.2	12	20	0						
GARCHY	83.59	333.4	12	27	6						12 52 PCP
WICHITA MTS.	85.17	46.2	12	28	-1						12 51
CARACAS	120.91	33.9	18	25	-19						
SOUTH POLE	132.28	180.0	19	4	-1						

AUGUST 7 4.H 22.M 27.S EPICENTRE -2.64 122.18 DEPTH= 63.KM

A=-0.53208 B= 0.84546 C=-0.04574 D= 0.8463 E= 0.5326
G= 0.0244 H=-0.0387 K=-0.9990 HT= 7.1

DEPTH OF FOCUS= 0.005R

SE= 1.98

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
DARWIN	12.92	138.9	2	57	-5	5	24	-1				
LEMBANG	15.10	253.5	3	29	-2						8	50
DJAKARTA	15.71	256.5	3	39K	1						7	57
MANILA	17.23	356.4	4	0	3	7	25	20				
BAGUIO CITY	19.00	355.3	4	17	-2	7	41	-4				
NHATRANG	19.60	319.1	4	26	1	8	14	16				
MEDAN	24.29	284.6	5	12A	0	9	15	-9				
HONG KONG	25.99	342.9	5	30	2	9	45	-7				
CANTON	26.99	341.8	5	36A	-2	10	16	8				
CHARTERS TS.	29.21	128.2	5	57	0							
MUNDARING	29.71	190.3	6	1	-1							
PERTH	29.76	190.9				12	26	93			6	53
RABAUL	29.97	93.8	6	6	2							
KUNMING	33.42	326.8	6	36A	2	12	1	11				
ZO-SE	33.56	358.4	6	36A	0	11	58	6				
NANKING	34.66	354.9	6	46A	1	12	17	8				
ADELAIDE	35.65	156.4	6	52A	-2							
CHENGTU	37.38	333.7	7	7	-1	12	56	5				
HONIARA	38.13	101.9	7	15	1							
BRISBANE	38.23	133.0	7	19	4	12	51	-13				

SIAN	38.76	342.3	7	20A	0	13	21	9				
SHILLONG	40.60	315.5	7	38A	3	13	54	14			9	24 PP
MELBOURNE	40.78	152.0	7	36	0							
CANBERRA	40.94	145.7	7	37	-1	13	52	7	7	41	9	20 PP
RIVERVIEW	41.16	142.2	7	41A	2	13	55	7			10	13 PP
MATUSIRO	41.74	19.5	7	43A	-1	14	0	4			12	12
LANCHOW	42.14	337.6	7	48A	1							
PEKING	42.82	353.2	7	52A	-1	14	15	3				
VISHAKHAPTNM	43.34	299.3	7	58	1	14	24	4			9	47
LHASA	43.80	319.4	8	2A	1	14	34	8				
BOKARO	44.10	308.7	8	2	-1							
PAOTOW	44.42	346.8	8	0	-6							
MADRAS	44.49	291.5	8	6	-1	14	58	21			18	28
CHATRA	44.72	313.2	8	10	2	14	45	5				
TARRALEAH	45.07	154.5	8	12	1							
MOORLANDS	45.50	154.0	8	17	2							
FORT NELSON	45.96	154.2									18	35 SS
CHANGCHUN	46.34	3.1	8	20	-1	15	13	10				
VLADIVOSTOK	46.39	9.8	8	24	2							
ULAN-BATOR	52.10	347.0	9	4	-1	16	19	-4				
Y.-SAKHLINSK	52.65	17.6	9	9	-1	16	35	4				
NEW DELHI	53.15	309.0	9	11	-2	16	41	3			11	13 PP
LAHORE	56.74	310.8	9	38	-1							
IRKUTSK	56.76	347.0	9	38	-1	17	30	4				
WARSAK DAM	59.94	312.1	10	7	5							
KARAPIRO	60.04	132.9	10	0	-2							
TUAI	61.53	133.3	10	11	-1							
QUETTA	61.88	306.3	10	12	-3	18	41	9				
FRUNSE	62.30	322.2	10	17A	-1	18	44	7				
ANDIJAN	62.61	319.2	10	18	-2	18	50	9				
NAMANGAN	63.18	319.1	10	23	-1	18	57	9				
PETROPAVLOVK	63.33	23.7	10	25	1	19	1	11				
SEMIPALATNSK	63.87	331.6	10	26	-2							
STALINABAD	64.00	315.5	10	27	-2	19	2	4				
YAKUTSK	64.74	3.9	10	30	-4	19	11	3				
TASHKENT	64.93	318.4	10	33	-2	19	15	5				
MAGADAN	65.97	15.5	10	41	0							
AFIAMALU	66.11	104.0	10	45	3							
MIRNY	66.99	192.2	10	46	-2	19	40	5				
TANANARIVE	74.61	251.2	11	34K	0						12	23
CAPE HALLETT	75.65	166.4	11	40	0	21	21	6				
MAWSON	76.25	199.8	11	41A	-2	21	27	6	12	0	11	50 PCP
SCOTT BASE	78.73	171.3	11	56A	-1	21	50	2				
MAKHACH-KALA	80.64	314.2	12	6	-1	22	14	6				
GORIS	80.80	310.5	11	8A	-60							
TIFLIS	82.36	312.5	12	17	1							
SOUTH POLE	87.38	180.0	12	41	0							
KSARA	88.38	303.8	12	47	1	23	45	21			16	20 PP
KHEYS	88.49	351.5	12	47	1							
JERUSALEM	88.79	301.7	12	50	2							
MOSCOW	89.09	325.7	12	49	0	23	38	7				
APATITY	91.94	337.4	12	59	-4							
HELWAN	92.04	299.7	13	3	0	24	15	18				
BYRD STATION	92.15	171.2	13	3	-1							
COLLEGE	92.37	25.3	13	6	2	23	49	-11			17	3 PP
BULAWAYO	92.46	249.8	13	6A	1						22	14
BROKEN HILL	92.94	255.5	13	7A	0							
PULKOVO	93.20	329.6	13	7	-1	24	13	6				
LWIRO	93.28	267.6	13	10	1							
ISTANBUL KA.	94.07	310.8	13	18	6	23	47	-28			16	57 PP
KISHINEV	94.21	316.8									17	3 PP
KAJAANI	94.32	333.9	13	13	0							
SODANKYLA	94.57	337.3	13	13	-1							
NURMIJARVI	96.00	330.4	13	20	-1							
KIRUNA	96.87	338.0	13	24	-1	24	1	6			24	44 S
LWOW	97.27	319.7									17	27 PP
UMEA	97.63	334.0	13	23	-5							
UPPSALA	99.57	330.3	13	37	0	24	13	4				
SKALSTUGAN	101.13	334.6	13	43	-1							
COPENHAGEN	103.22	326.8				25	39	73			18	3 PP
PRUHONICE	103.31	320.8	17	30	216	25	36	69			18	12 PP
KASPERSKE H.	104.11	320.1	17	29	212						18	14 PP
JENA	104.94	322.2				24	39	5			17	41 PP
ROME	106.37	312.9				25	34	53			18	3 PP
STUTTGART	106.95	320.4				24	46	3			18	42 PP
EUREKA	115.91	47.0	18	38	3							
GLEN CANYON	120.01	48.3	18	32	-11							
FLAMING GRGE	120.02	43.3	18	47	4							

TUCSON	122.24	53.2	18	52	4					
RAPID CITY	122.50	37.5	18	51	3					
WICHITA MTS.	130.47	45.0	19	7	4				21	19 PP
PALISADES	139.14	18.7	19	40	21	26	4	-17	21	40 PP
LA PAZ	158.43	152.2	19	54	4				24	9 PP
CHINCHINA	162.09	82.0	19	55	2				31	18 SKKS
BOGOTA	163.66	82.6							31	22 SKKS
CARACAS	168.05	48.8	21	11	72				45	56 SS

AUGUST 7 12.H 22.M 20.S EPICENTRE -28.27-176.45 DEPTH= 0.KM

A=-0.88040 B=-0.05463 C=-0.47108 D=-0.0619 E= 0.9981
G= 0.4702 H= 0.0292 K=-0.8821 HT= 2.4

SE= 2.75

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
RAOUL ISLAND	1.62	232.4	0	31	1	1	1	9				
SUVA	11.11	333.9	2	47	4	4	48	-1				
KARAPIRO	11.74	212.8	2	45	-7						3	9
TUAI	11.78	205.3	2	47	-5	4	54	-12				
WELLINGTON	14.84	206.7	3	37	4	6	1	-18				
AFIAMALU	14.93	17.9	3	26	-8	6	2	-19				
COBB RIVER	15.56	211.9				6	19	-17				
NOUMEA	16.56	287.2	3	58K	3	7	25	26				
KAIMATA	17.30	211.5	4	2	-2	7	4	-12				
PORT VILA	17.49	303.6	4	10K	3							
GEBBIES PASS	17.72	206.8	4	9	-1	7	8	-18				
KOUMAC	19.14	289.4	4	20K	-7							
BRISBANE	27.19	264.5	5	45	-2	9	34	-51				
RIVERVIEW	28.24	250.5									6	42 PP
CANBERRA	30.09	247.7	6	12	-1	11	7	-5				
MOORLANDS	32.59	234.6	6	42	7							
MELBOURNE	33.52	243.4	6	42	-1							
CHARTERS TS.	34.87	275.1	6	53	-2						14	23
ADELAIDE	38.51	248.4	7	24K	-2							
CAPE HALLETT	44.69	185.8	8	18	2	15	12	19			18	21 SS
SCOTT BASE	50.26	184.6	9	1	1	16	6	-6			11	0 PP
BYRD STATION	56.78	169.9	9	47	-1							
SOUTH POLE	61.90	180.0	10	23	-1							
MIRNY	64.64	206.3	10	40	-2	19	23	2				
ARGENTINE I.	73.31	156.0	11	34	-1							
LEMBANG	74.42	270.6	11	40K	-2							
MAWSON	74.77	200.0	11	43K	-1				11	56		
MATUSIRO	77.29	324.0	11	55A	-3	21	44	-4			26	48 SS
PASADENA	83.03	45.3	12	28	-1	22	55	7			34	4 SSS
LICK	83.07	41.0	12	29K	0							
BERKELEY	83.08	40.3	12	30	1	22	54	6				
HONG KONG	83.69	299.3	12	31	-1	22	56	2				
FRESNO	83.76	42.4	12	32	0							
PETROPAVLOVK	83.80	345.2	12	30	-3	22	57	2				
CANTON	84.76	299.5	12	37A	0							
SHASTA	84.97	38.2	12	37	-1							
MINERAL	85.16	38.8	12	39A	0							
VLADIVOSTOK	85.42	324.8	12	40	-1							
RENO	85.62	40.4	12	3	-39							
TUCSON	86.65	50.6	12	48	1				13	0		
NANKING	86.96	309.8	12	43A	-5	23	25	-2			23	13 SKS
EUREKA	87.82	42.4	12	51	-1							
GLEN CANYON	88.97	46.5	12	59	1							
CHANGCHUN	89.37	322.0	12	58A	-2	23	55	6				
VICTORIA	89.95	32.1	13	1	-2							
SALT LAKE C.	91.09	43.3	13	8	0							
PENTICTON	92.32	33.2	12	59	-14							
PEKING	92.37	314.8	13	12A	-2	24	21	5			23	45 SKS
FLAMING GRGE	92.69	44.3	13	14	-1							
BUTTE	93.86	38.8	13	20	0							
SIAN	94.03	306.8	13	22A	1	24	41	11				
KUNMING	94.08	296.2	13	22	0	24	43	13			24	0 SKS
AREQUIPA	94.92	111.5	13	28	3							
COLLEGE	95.47	11.9	13	26	-2						17	21 PP
CHENGTU	95.80	301.6	13	27	-2	24	5	0			24	49 S
WICHITA MTS.	96.56	54.2	13	32	-1							
LA PAZ	97.64	113.2									17	38 PP
RAPID CITY	98.24	44.2	13	40	0							

LANCHOW	98.54	306.3	13	41	-1						
YAKUTSK	99.78	337.3								17	25 PP
PALISADES	116.93	56.0				25	43	4		29	47 PS
KHEYS	123.28	350.8	18	56	-3						
BULAWAYO	126.13	209.5	19	6	1						
SVERDLOVSK	131.08	322.3								22	36 PP
BROKEN HILL	131.16	212.8	18	44	-30						
KIRUNA	139.13	350.3	19	26	-3						
UMEA	142.84	347.8	19	33	-2						
MOSCOW	143.30	328.0	19	30	-6						
PULKOVO	143.59	337.4	19	32	-5						
TIFLIS	143.98	302.9	19	36	-1						
SKALSTUGAN	144.23	353.3	19	34	-4						
NURMIJARVI	144.74	342.0	19	36	-3						
UPPSALA	146.99	347.0	19	43	0						
SOTCHI	147.26	307.5	19	44	1						
GOTEBORG	149.99	350.9	19	52	5						
SIMFEROPOL	150.58	312.7	19	53	5						
KSARA	151.82	289.5	19	57	7						
COPENHAGEN	151.86	349.3	20	28	38					43	12 SS
BANGUI	152.26	213.8	19	58	7				20	8	
KISHINEV	152.78	320.3	19	48	-4						
LWOW	153.40	329.6	19	53	1					23	46
RACIBORZ	155.52	336.8	20	22	27					20	46
HELWAN	155.69	280.5								20	15
JENA	156.56	347.2	20	7	10					20	43
PRUHONICE	156.75	341.8	20	6	9					20	27 PKP2
BENSBERG	157.17	354.1	20	28	31					20	53
BRATISLAVA	157.52	335.8	19	54	-4						
KASPERSKE H.	157.78	342.4	20	22	24					20	42
SOFIA	158.47	317.2								20	33
STUTTGART	159.05	349.4	19	57	-3					24	13 PP
PARIS	159.47	2.0								24	16
LJUBLJANA	160.25	336.9	19	59	-2						
TARANTO	163.41	320.7	20	46	42					24	48 PP
ROME	164.57	334.2	20	4	-1					24	46 PP
GRANADA	169.27	32.3	21	43A	94					25	12 PP

AUGUST 8 0.H 18.M 47.S EPICENTRE -28.32-176.29 DEPTH= 0.KM

A=-0.87978 B=-0.05707 C=-0.47194 D=-0.0647 E= 0.9979
G= 0.4710 H= 0.0306 K=-0.8816 HT= 2.4

SE= 2.24

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
RAOUL ISLAND	1.70	236.8	0	32	1								
SUVA	11.23	333.3	2	44	-1								
KARAPIRO	11.77	213.4	2	48	-4								
TUAI	11.79	205.9	2	47	-6	4	54	-12					
WELLINGTON	14.86	207.2				6	2	-18					
AFIAMALU	14.94	17.2	3	28	-6	6	4	-18					
COBB RIVER	15.59	212.4				6	24	-13					
NOUMEA	16.71	287.1	4	OK	3	7	29	26					
KAIMATA	17.32	211.9				6	51	-26					
KOUMAC	19.29	289.3	4	29A	0						5	24	
BRISBANE	27.33	264.6	5	48	-1								
RIVERVIEW	28.35	250.6				10	44	0					
CANBERRA	30.20	247.8	6	13	-1								
MOORLANDS	32.67	234.7									11	7	
MELBOURNE	33.62	243.5	6	43	-1								
CHARTERS TS.	35.02	275.1	6	55	-1						8	28	
CAPE HALLETT	44.65	185.8	8	17	1	15	0	7			18	22	SCS
SCOTT BASE	50.22	184.6	8	58	-2	16	4	-8	9	5			
BYRD STATION	56.70	169.9	9	47	-1								
SOUTH POLE	61.84	180.0	10	24	1								
MIRNY	64.65	206.3	10	41	-1								
ARGENTINE I.	73.21	155.9	11	34	-1								
MAWSON	74.77	199.9	11	44	0				12	1	11	56	PCP
MATUSIRO	77.42	323.9	11	57K	-2	21	44	-5			27	6	SS
HONG KONG	83.84	299.2				22	57	1					
PETROPAVLOVK	83.89	345.1	12	31	-2	22	53	-3					
CHINA LAKE	84.41	44.2	12	36	0								
CANTON	84.91	299.5				23	6	-1					
VLADIVOSTOK	85.54	324.7	12	41	0								

NANKING	86.11	309.6	12	44	0	23	17	-1			
BOULDER CITY	86.24	45.6	12	47	2						
TUCSON	86.58	50.5	12	49	2						
GLEN CANYON	88.90	46.4	13	59	61						
CHANGCHUN	89.51	321.9	13	2A	1	23	56	6			
FLAMING GRGE	92.63	44.2	13	16	1						
COLLEGE	95.50	11.8	13	27	-1				14	39	
CHENGTU	95.95	301.5	13	32	2	24	9	3	24	54	S
WICHITA MTS.	96.48	54.1	13	33	0	24	13	4	24	59	S
PAOTOW	96.73	312.6				24	9	-2	25	5	S
PALISADES	116.84	55.9							29	48	PS
SVERDLOVSK	131.21	322.2							22	39	PP
KIRUNA	139.21	350.4							40	40	PKPPKS
MOSCOW	143.42	328.0	19	34	-3						
PULKOVO	143.70	337.5	19	33	-4						
TIFLIS	144.13	302.9	19	37	-1						
SKALSTUGAN	144.30	353.4	19	36	-2						
NURMIJARVI	144.84	342.1	19	38	-1						
UPPSALA	147.07	347.1	19	44	1						
GOTEBORG	150.07	351.1	19	52	4						
SIMFEROPOL	150.72	312.7	19	55	6						
COPENHAGEN	151.95	349.5	19	38	-12						
KSARA	151.98	289.4	19	53	2				23	33	PP
BANGUI	152.29	213.5	19	58	7				20	21	
KISHINEV	152.92	320.4	20	6	14						
LWOW	153.52	329.7							20	11	
KASPERSKE H.	157.88	342.6	20	10	11						
ROME	164.68	334.5				26	59	-9	20	59	PKP2

AUGUST 8 12.H 18.M 19.S EPICENTRE 51.15-170.63 DEPTH= 0.KM

A=-0.62141 B=-0.10249 C= 0.77675 D=-0.1627 E= 0.9867
G=-0.7664 H=-0.1264 K=-0.6298 HT= -5.8

SE= 2.06

	DELTA DEG.	AZ. DEG.	P M	P S	P O-C S	S M	S S	S O-C S	*PP M	*PP S	SUPP. M	SUPP. S
COLLEGE	18.14	32.1	4	11	-4	7	31	-4				
PETROPAVLOVK	18.90	287.7	4	23	-1						4	35 PP
SITKA	21.35	60.2	4	51	0	9	1	17				
MAGADAN	23.18	306.2	5	9	0							
VICTORIA	30.16	76.2	6	14K	0							
NEMURO	30.36	272.4	6	20	5							
Y.-SAKHLINSK	30.42	280.8	6	15	-1						7	9 PP
SEATTLE	31.20	77.2	6	25	2	11	49	20				
KIPAPA	31.28	156.9	6	25	2							
KUSIRO	31.28	272.7	6	23	-1	11	28	-2				
HONOLULU	31.37	157.1	6	25	1	11	30	-2				
WAKKANAI	31.79	278.6	6	1	-27	11	40	2				
PENTICTON	32.15	72.9	6	31	0							
URAKAWA	32.73	272.6	6	38	2							
SAPPORO	33.15	275.0	6	13	-27	11	53	-6				
YAKUTSK	33.38	312.3	6	38	-4						7	58 PPP
TIKSI	33.38	329.9	6	40	-2						8	41
BANFF	33.86	67.9	6	47K	1							
HAWAII V.OB.	33.90	153.4	6	46	0	12	16	5				
SUTTSU	33.99	275.4	6	50	3	12	8	-4				
MORI	34.15	274.1	6	49	0							
HAKODATE	34.19	273.5	6	54	5							
HATINOHE	34.41	271.0	6	52	1	12	16	-3				
SHASTA	34.57	88.4	6	53K	1							
MIYAKO	34.63	269.4	6	51	-2	12	45	23				
AOMORI	34.72	272.0	6	51	-2	12	29	5				
UKIAH	34.95	91.3	6	55	0							
MORIOKA	35.11	270.1	6	43	-14	12	36	6				
MINERAL	35.26	88.3	6	59	1						7	28
MIZUSAWA	35.46	269.4	7	0	0	12	22	-13				
ISINOMAKI	35.76	268.2	7	1	-1							
AKITA	35.77	271.0	7	0	-2	12	37	-3				
HUNGRY HORSE	35.91	71.7	7	4	0	12	45	3				
SENDAI	36.12	268.4	7	1	-4	12	41	-4				
SAN FRANCSCO	36.24	92.5	7	7	1							
BERKELEY	36.30	92.3	7	7K	0	12	51	3				
YAMAGATA	36.48	268.8	7	8	0							
BRANNER	36.63	92.8	7	9K	-1							

HUKUSIMA	36.70	268.0	7 11	1	12 51	-3				
RENO	36.85	88.1	6 33	-39						
ONAHAMA	36.92	266.6	7 11	-1						
STA. CRUZ C.	37.00	93.2	7 13K	0						
LICK	37.01	92.5	7 13K	0					7 36	
PARAISO	37.18	94.4	7 20A	6						
SHIRAKAWA	37.24	267.4	7 16	1						
NIIGATA	37.49	269.4	7 18	1					11 39	
VINEYARD	37.54	93.0	7 18K	1						
MITO	37.55	266.2	7 19	2	13 11	4				
RESOLUTE	37.81	24.9	7 20	0	13 5	-6			8 49	PP
UTUNOMIYA	37.82	266.9	7 17	-3	13 10	-1				
KAKIOKA	37.82	266.3	7 21	1						
TUKUBASAN	37.88	266.3	7 18	-2	13 7	-5	7 27		9 24	PCP
BUTTE	37.88	74.4	7 20	0	13 8	-4				
KUMAGAYA	38.38	266.8	7 25	1					9 27	
HONGO	38.41	266.0	7 0	-25					13 36	
MAEBASI	38.42	267.4	7 24	-1	13 27	7				
TOKYO C.M.O.	38.44	265.9	7 30	5	13 25	4				
TAKADA	38.50	268.9	7 24	-1						
FRESNO	38.52	91.7	7 27K	1						
YOKOHAMA	38.66	265.7	7 29	2						
OIWAKE	38.79	267.7	7 23	-5	13 28	2				
NAGANO	38.79	268.4	7 29	1	13 27	1				
MATUSIRO	38.87	268.3	7 27K	-1	13 25	-2			9 0	PP
HERA	38.88	264.9	7 29	0	13 27	0				
BOZEMAN	38.98	74.0	7 29	0	13 27	-2				
VLADIVOSTOK	39.01	281.3	7 29	-1					9 49	PCP
HUNATU	39.17	266.5	7 45	14						
KOHU	39.20	266.9	7 37	6						
MATUMOTO	39.20	268.1	7 33	2						
OSIMA	39.26	265.1	7 34	2						
MISIMA	39.30	265.9	7 35	3						
EUREKA	39.30	85.4	7 33	1					8 54	PP
TOYAMA	39.41	269.3	7 38	5						
IIDA	39.75	267.3	7 37	1						
OMAESAKI	40.09	265.9	7 52	13						
HUKUI	40.42	269.2	7 39	-2						
GIHU	40.49	268.0	7 44	2						
NAGOYA	40.51	267.6	7 45	3	14 0	8				
TSURUGA	40.78	268.9	7 46	2						
HIKONE	40.90	268.3	7 50	5						
KAMEYAMA	41.03	267.6	7 56	10	13 59	-1				
SALT LAKE C.	41.13	80.9	7 48	1					17 1	SCS
PASADENA	41.21	93.5	7 48K	0	14 6	4			9 32	PP
KYOTO	41.39	268.4	7 48	-1						
ABUYAMA	41.59	268.4	7 47	-4						
OWASE	41.71	267.0	7 55	3						
BOULDER CITY	42.15	88.8	7 56	1						
FLAMING GRGE	42.57	79.1	7 59	0	14 10	-12			9 20	PP
CHANGCHUN	42.66	286.2	7 58K	-2	14 15	-9				
GLEN CANYON	43.57	85.2	8 7	0					10 3	
KOTI	43.73	268.5	8 9	1	14 37	-2				
RAPID CITY	44.55	71.6	8 14	-1			8 25		11 46	
LARAMIE	44.69	76.2	8 14	-2					9 57	
SIMONOSEKI	45.10	271.0	8 22	3						
OOITA	45.14	269.7	8 21	1	14 54	-6				
KHEYS	45.73	350.1	8 24	0					10 8	PP
KUMAMOTO	45.99	270.0	8 29	3	15 9	-3				
MIYAZAKI	46.14	268.5	8 30	2	15 15	1				
KAGOSIMA	46.92	268.8	8 35	1	15 37	12				
TUCSON	47.09	89.7	8 35	0					10 8	PCP
IRKUTSK	49.74	306.7	8 55K	-1	15 58	-7			10 56	PP
PEKING	50.40	287.4	8 59K	-2	16 7	-7				
ULAN-BATOR	50.93	300.8	9 3	-2	16 20	-1				
LUBBOCK	51.84	81.8	9 11	-1						
GUAM	51.99	240.2	9 8	-5	16 29	-7	9 21			
CHIHUAHUA	52.55	89.5							13 11	PP
WICHITA MTS.	53.11	78.5	9 20K	-1	16 48	-3			11 37	PP
ZO-SE	53.13	275.5	9 20A	-1						
PAOTOW	53.69	291.7	9 25K	-1	16 52	-7				
NANKING	53.98	278.1	9 26K	-2	16 59	-4				
FAYETTEVILLE	54.89	74.3	9 32K	-2	17 14	-1				
DALLAS	55.48	78.9	9 38	-1						
SIAN	58.55	286.8	9 59K	-1	18 3	-1				
OTTAWA	59.12	54.9	10 2	-2						
TROMSOE	59.33	356.1	10 4	-2	18 13	-1			39 43	PKPPKP
SHAWINIGAN	59.83	52.3	10 10	1						

GUADALAJARA	59.99	93.9							15	53	
APATITY	60.24	349.6	10	11	-1	18	23	-3			
LANCHOW	60.34	291.6	10	12K	-1						
MORGANTOWN	60.81	62.2	10	14K	-2				12	28	PP
KIRUNA	61.05	355.2	10	16K	-2	18	31	-5	12	37	PP
SODANKYLA	61.09	352.5	10	16	-2	18	36	0	39	33	PKPPKP
PENNSYLVANIA	61.15	60.0	10	16	-2	18	37	0	39	37	PKPPKP
SEMIPALATNSK	62.30	316.9	10	23	-3				18	49	
REYKJAVIK	62.49	14.9	10	28A	1						
GEORGETOWN	62.92	61.0	10	29	-1	18	59	0			
WASHINGTON	62.92	61.0	10	29	-1	18	59	0	12	41	PP
PALISADES	63.13	57.4	10	30K	-2	19	2	0	12	56	PP
SIDA	63.41	13.2	10	33K	0						
TACUBAYA	63.53	91.6	10	32K	-2						
RABAUL	63.65	222.3	10	33	-2						
CANTON	63.71	274.7	10	35K	0	19	6	-3			
HONG KONG	63.76	273.4	10	34	-2	18	56	-14			
CHAPEL HILL	63.93	64.6	10	35	-2				11	0	
CHENGTU	64.02	287.2				19	11	-2			
COLUMBIA	64.15	67.4	10	37	-1	19	11	-4			
KAJAANI	64.22	351.2	10	38	-1						
SVERDLOVSK	64.39	331.6	10	40	0				13	6	PP
AFIAMALU	64.79	181.2	10	43	1	19	21	-2			
MANILA	65.10	262.4	10	43	-1	19	15	-12			
SKALSTUGAN	65.59	358.6	10	46K	-2						
VERA CRUZ	65.61	89.4							13	13	PP
HALIFAX	65.67	48.5	10	47K	-1						
NURMIJARVI	68.01	351.9	11	2K	-1	19	59	-3	39	17	PKPPKP
PULKOVO	68.14	348.8	11	3	-1	19	55	-8	13	39	PP
KUNMING	68.81	283.9	11	6K	-2	20	10	-1			
UPPSALA	69.15	355.5	11	9K	-1	20	8	-7	39	14	PKPPKP
SUVA	69.67	191.1				20	24	3	17	39	
PORT MORESBY	70.47	224.7	11	17	-1	20	31	0			
FRUNSE	70.60	314.9	11	18	-1				14	0	PP
MOSCOW	70.93	343.5	11	20	-1				14	0	PP
GOTEBORG	71.49	358.5	11	24K	0				11	48	PCP
ABERDEEN	71.63	6.6	11	25A	0	20	43	-1	14	4	PP
LHASA	72.37	295.3	11	30K	1	20	48	-5			
TOCKLAI	72.39	290.7	11	32K	2	20	58	5			
COPENHAGEN	73.51	358.2	11	37K	1	21	9	3	25	41	SS
DURHAM	74.05	6.6	11	42K	3	21	15	3	21	52	SKS
TASHKENT	74.15	317.4	11	39	-1				14	26	PP
NHATRANG	74.42	270.2	11	42	1	21	11	-5			
BERMUDA	74.48	57.6	11	38	-4	21	16	-1			
KOUMAC	74.73	204.3	11	43	0						
SHILLONG	74.98	292.0	11	42K	-3	21	18	-4	21	47	SKS
NOUMEA	75.87	201.8	11	50	0						
KHOROG	76.31	313.6	11	53	1				21	37	
WITTEVEEN	76.38	1.7	11	55	2						
CHATRA	76.71	296.2	11	54K	0	21	40	-1	14	48	PP
DE BILT	77.06	2.6	12	0	4	21	44	-1			
MUNSTER	77.24	1.1	11	58	1						
KEW	77.43	6.2	11	59K	1	21	50	1	15	3	PP
CHITTAGONG	77.45	289.9	11	38	-21	21	11	-38			
HALLE	77.70	358.3	12	0	0	21	53	1			
COLLMBERG	77.88	357.7	11	59	-2	21	55	1	27	12	SS
BENSBERG	78.25	1.4	12	3K	0				12 17	15	3 PP
JENA	78.28	358.6	12	4	1	21	58	0		15	18 PP
CHORZOW	78.60	353.7	12	5K	0					12	26 PCP
LWOW	78.63	350.4	12	5	0					15	0 PP
KRAKOW	78.77	353.1	12	6K	0	22	0	-3		22	10 SKS
RACIBORZ	78.87	354.2	12	7	1	22	5	1		15	1 PP
DEHRA DUN	78.92	304.8	12	2	-5	22	4	-1		14	55 PP
PRAGUE	79.06	356.7	12	7	0	22	7	1			
CHEB	79.11	358.0	12	6	-2	22	5	-2		27	41 SS
PRUHONICE	79.15	356.6	12	9K	1	22	8	1		23	5 PS
WARSAK DAM	79.15	311.6	12	7	-1						
JERSEY	79.57	7.6				22	19	7		12	50
SKALNATE PL.	79.61	352.8	12	9	-1	22	15	3			
LAHORE	79.81	308.2	12	11K	0	22	11	-3			
BOKARO	79.82	295.3	12	10K	-1	22	12	-2		15	15 PP
HEIDELBERG	79.83	0.4	12	13	1						
KASPERSKE H.	80.03	357.2	12	13	0	22	19	2		13	10
FOLINIERE	80.10	6.6	12	13	0					17	43
KARLSRUHE	80.21	0.6	12	15	1	22	23	5			
PARIS	80.24	4.6	12	15	1	22	19	0		23	5 SP
CHARTERS TS.	80.39	220.6	12	13	-2	22	19	-1			
STUTTGART	80.46	0.1	12	16K	1	22	23	2		27	47 SS
STRASBOURG	80.64	1.1	12	16	0	22	23	0		15	29 PP

TUBINGEN	80.70	0.2	12	17K	1							
NEW DELHI	80.75	304.4	12	17K	1	22	17	-7			15	22 PP
IASI	80.78	347.5	12	15	-2	22	23	-1				
VIENNA-H.	80.80	355.3	12	17K	0	22	25	0			15	24 PP
BRATISLAVA	80.84	354.8	12	18	1	22	27	2			15	23 PP
EBINGEN	81.05	0.3	12	20K	2							
HURBANOVO	81.07	354.0	12	15	-3	22	33	6			15	13 PP
BUDAPEST	81.40	353.4	12	24	4	22	36	5			16	1 PP
ASHKABAD	81.44	322.9	12	21	1						22	34
RAVENSBURG	81.45	359.8	12	21	1							
BASLE	81.69	1.2	12	23K	2						22	35
GARCHY	81.80	4.3	12	25	3						12	34 PCP
SIMFEROPOL	81.91	342.5	12	23K	1						15	19 PP
BESANCON	81.94	2.3	12	23	0						12	51
NEUCHATEL	82.21	1.7	12	25	1							
CHUR	82.38	359.9	12	26	1						22	47
TIFLIS	82.48	334.0	12	27K	2						15	44 PP
TIMISOARA	82.94	351.7	12	30A	2	22	50	3			12	35 PP
LJUBLJANA	83.08	356.4	12	28	-1	22	50	2			15	54 PP
CLERMONT-FD.	83.31	4.4	12	31K	1	22	59	9				
TRIESTE	83.50	356.9	12	31	0	22	53	1			32	7 SSS
BUCHAREST	83.71	348.0	12	31K	-1	22	54	0			23	38 PS
PADOVA	83.79	358.2	12	35	3	22	58	3			24	27 PPS
BELGRADE	83.93	352.1	12	33K	0	22	58	2			24	6 PPS
GORIS	84.10	332.1	12	34K	0						15	52 PP
QUETTA	84.48	312.7	12	36K	0	22	59	-3			15	50 PP
BRISBANE	84.59	212.2	12	35	-1	23	0	-3				
SAN JUAN	84.63	67.4	12	35	-1				12	50	15	54 PP
CHIAVARI	84.91	0.0	12	36	-2						16	21 PP
SEHORE	85.18	301.3	12	40	1							
PRATO	85.34	358.7	12	46	6	23	13	3				
FLORENCE X.	85.43	358.6	12	41	1	23	17	6				
MONACO	85.48	1.4	12	42	1							
SOFIA	85.74	349.7	12	43	1						16	8 PP
BAGNERES	85.82	6.8	12	42	0							
TEHERAN	85.92	326.9	12	43K	0	23	15	-1				
VISHAKHAPTNM	86.05	293.3	12	46K	2	23	27	10			24	36 PS
TITOGRAD	86.40	352.7	12	46	1	23	21	0			24	17 PS
ISTANBUL KA.	86.56	345.2	12	46	0	23	21	-1			16	13 PP
ISTANBUL UN.	86.60	345.3	12	47	1							
SERRA PILAR	86.77	13.5	12	46A	-1				12	55	16	9 PP
ROME	87.29	357.7	12	49K	-1	23	27	-2	13	9	16	19 PP
COIMBRA	87.70	13.5	12	52A	0	24	31	58				
TORTOSA	88.08	6.7	12	56	3	23	38	1				
ANTIGUA	88.08	64.9	12	54	1							
TOLEDO	88.59	10.3	12	55K	-1	23	25	-16			16	9 PP
LISBON	89.04	14.4	13	2K	4	23	48	3				
HYDERABAD	89.05	296.9				23	39	-7			24	56 PPS
CHINCHINA	89.31	83.0	12	58	-1	23	51	3				
KARAPIRO	89.53	190.9	12	57	-3							
FUQUENE	90.10	81.2	13	3K	0	23	54	-1			16	48 PP
LEMBANG	90.11	259.3	13	3K	0							
TUAI	90.21	189.5	13	4	1							
CARACAS	90.35	72.8	13	4A	0	23	39	-18				
ATHENS	90.36	348.7	12	19K	-45						13	6
ALICANTE	90.46	7.7	13	4	-1	23	57	-1			16	41 PP
BOGOTA	90.55	82.0	13	7	2	24	3	4			16	50 PP
POONA	90.69	301.1	13	6K	0	24	1	1			23	50 SKKS
TONGARIRO	90.79	190.7	13	4	-2							
BOMBAY	90.94	302.1	13	8	1	24	4	1			16	47 PP
RIVERVIEW	91.06	211.0	13	6K	-1	23	40	-24			25	10 PS
GRANADA	91.31	10.3	13	12K	4	24	12	6			17	18 PP
ST. VINCENT	91.58	66.8	13	12	2							
MADRAS	91.61	292.9									22	15
ALMERIA	91.76	9.5	13	1	-10	23	46	-24			16	50 PP
KSARA	92.23	338.2	13	11	-2	23	57	-17			16	53 PP
COBB RIVER	93.00	192.5	13	17	1							
CANBERRA	93.13	212.0	13	17	0	24	24	2			23	49 SKS
TRINIDAD	93.52	68.4	13	18	-1							
KODAIKANAL	95.40	293.5									25	38
ADELAIDE	96.61	219.7	13	4	-29						13	34
HELWAN	97.03	340.9	13	35K	0						26	8
ROXBURGH	97.80	194.1				24	13	-3			26	24 SP
LA PAZ	110.49	91.0	19	0	26							
MBOUR	110.81	27.4				25	25	10			19	16 PP
CAPE HALLETT	123.89	186.9	18	59A	-1						30	37 PS
BANGUI	124.12	348.8	19	0	0				19	12		
LWIRO	128.59	334.8	19	11	2						31	15 SKKS

SCOTT BASE	129.49	186.1	19 10	-1			21 23 PP
BROKEN HILL	140.28	330.3	19 27	-4			
SOUTH POLE	140.96	180.0	19 23	-9	19 50		
ARGENTINE I.	141.19	139.9	19 27	-5			
BULAWAYO	145.54	326.8	19 40K	0			
MAWSON	149.43	217.3	19 45A	-1			23 29 PP
PRETORIA	150.84	323.4					20 23 PKP2
WINDHOEK	150.84	345.2	19 49	1			
PIETERMZBURG	153.36	315.8	19 54	2			
KIMBERLEY	154.80	326.8	19 55A	1			
GRAHAMSTOWN	158.19	318.2	19 24	-34			
HERMANUS	161.81	333.0					24 37 PP

AUGUST 9 4.H 2.M 38.S EPICENTRE 41.40 142.57 DEPTH= 111.KM

A=-0.59742 B= 0.45731 C= 0.65876 D= 0.6078 E= 0.7941
G=-0.5231 H= 0.4004 K=-0.7524 HT= -2.2

DEPTH OF FOCUS= 0.012R

SE= 4.77

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
URAKAWA	0.77	11.9	0 14A	-6	0 33	-2		
HIROO	1.05	32.3	0 15	-7	0 35	-4		
HATINOHE	1.17	222.5	0 9	-14	0 23	-18		
HAKODATE	1.42	287.5	0 22A	-4	0 50	4		
TOMAKOMAI	1.43	329.5	0 28	1	0 57	10		
AOMORI	1.47	247.5	0 17	-10	0 40	-8		
MURORAN	1.50	308.4	0 25	-2	0 50	2		
MORI	1.65	295.8	0 28	-1	0 56	5		
MIYAKO	1.80	194.8	0 12	-19	0 28	-26		
SAPPORO	1.90	332.0	0 31	-1	0 59	3		
MORIOKA	2.00	212.6	0 19A	-14	0 39	-20		
KUSIRO	2.09	40.1	0 26	-9	0 54	-7		
MIZUSAWA	2.52	206.4	0 25	-15	0 51	-20		
AKITA	2.52	229.1	0 32	-8	1 0	-11		
YAMAGATA	3.58	209.2	0 38	-17	1 20	-16		
HUKUSIMA	3.99	204.7	0 44	-16	1 30	-16		
NIIGATA	4.41	219.1	1 17	11	2 1	4		
ONAHAMA	4.63	196.8	1 15	6	1 37	-25		
SHIRAKAWA	4.64	203.8	0 53	-16	1 35	-27		
MITO	5.27	198.8	1 1A	-17	2 25	7		
TUKUBASAN	5.52	201.2	1 2K	-19	1 56	-28		
Y.-SAKHLINSK	5.62	1.1	1 19	-3				
NAGANO	5.82	217.2	1 18	-7	2 23	-8		
MATUSIRO	5.92	216.4	1 13A	-13	2 31	-2		
OIWAKE	5.95	213.1	1 24	-3	2 28	-6		
TITIBU	6.06	207.9	1 14	-14				
TOKYO C.M.O.	6.12	202.0	1 19	-10	2 34	-4		
MATUMOTO	6.27	216.4	1 18	-13				
TOYAMA	6.28	223.4						2 15
KOHU	6.52	210.1	1 27	-8	2 31	-17		
HUNATU	6.60	208.0	1 30	-6	2 32	-18		
MERA	6.82	199.3			2 38	-18		
MISIMA	6.88	205.6	1 33	-7				
AJIRO	6.90	204.4	1 22	-18	2 35	-22		
IIDA	6.94	213.9	1 29	-11	2 58	0		
OSIMA	7.08	201.8	1 26	-16				
GIHU	7.52	219.1	1 47	-1				
OMAESAKI	7.60	208.2	1 56	7				
NAGOYA	7.61	217.1	1 49	-1	3 27	12		
TSURUGA	7.67	223.7	1 44	-6				
HIKONE	7.88	221.1	1 41	-12	3 23	2		
VLADIVOSTOK	8.10	285.8	1 56	0				
KAMEYAMA	8.11	218.3	1 48	-8	3 21	-6		
KYOTO	8.33	222.4	1 56	-3	3 32	0		
OSAKA	8.73	221.7			3 47	5		
CHANGCHUN	12.94	286.6	2 59	-2				
PETROPAVLOVK	15.91	37.6						4 2
MAGADAN	18.89	13.0	4 12	-2				
PEKING	20.03	274.8	4 22	-4	8 5	5		
NANKING	21.17	251.5	4 31	-6				
YAKUTSK	22.05	343.8	4 46	0				
ULAN-BATOR	26.03	296.6	5 25	1				

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SIAN	27.40	265.9	5 36	-1					
LANCHOW	30.51	272.8	6 2	-2					
KUNMING	36.69	256.3	6 56	-1					
LHASA	42.98	271.1	7 46	-3					
SHILLONG	44.50	265.6	8 0	-2					
COLLEGE	44.96	34.5	8 5	0			8 16		
KHEYS	48.58	347.4	8 35	1					
NEW DELHI	53.89	278.3	9 12A	-2					
QUETTA	60.57	285.6	10 1	0					
SODANKYLA	61.31	336.6	10 6	0					
TROMSOE	61.89	340.7	10 10	0					
KIRUNA	62.77	338.8	10 16	1					
KAJAANI	63.08	333.4	10 18	0					
NURMIJARVI	66.53	331.5	10 40	0					
SKALSTUGAN	68.19	338.4	10 43	-7					
UPPSALA	69.43	333.8	10 58	0					
EUREKA	72.46	52.7	11 14	-2					
NIEDZIKA	76.31	325.4	11 40	2					12 5
RAPID CITY	76.46	42.5	11 39	0					
PRUHONICE	78.23	328.7	11 50	1					
KASPERSKE H.	79.29	328.7	11 56	2					
STUTTGART	81.22	330.8	12 6	1					
LJUBLJANA	81.38	326.3	12 7	1					
PARIS	83.52	334.7	12 19	3					
WICHITA MTS.	85.72	46.4	12 26	-1					
SOUTH POLE	131.21	180.0							19 23

AUGUST 9 16.H 2.M 37.S EPICENTRE -19.15 168.62 DEPTH= 51.KM

A=-0.92677 B= 0.18652 C=-0.32606 D= 0.1973 E= 0.9803
G= 0.3196 H=-0.0643 K=-0.9453 HT= 4.9

DEPTH OF FOCUS= 0.003R

SE= 1.67

	DELTA DEG.	AZ. DEG.	P M	P S	P O-C S	S M	S S	S O-C S	*PP M	*PP S	SUPP. M	SUPP. S
PORT VILA	1.44	348.5	0	25K	0							
NOUMEA	3.74	212.6	0	55K	-2	1	40	0				
KOUMAC	4.32	250.3	1	3K	-2							
SUVA	9.35	85.5	2	17	2	4	8	8				
HONIARA	12.80	317.8	3	2	0							
RAOUL ISLAND	15.86	131.9	3	46	5							
BRISBANE	16.69	237.7	3	50	-2	7	2	7				
AUCKLAND	18.47	164.2	4	16	2	7	48	13				
AFIAMALU	19.49	77.5	4	23A	-3	8	13	16				
CHATEAU	20.86	164.8	4	39	-1							
TUAI	20.93	161.1	4	40	-1	8	36	10				
CHARTERS TS.	21.08	263.7	4	44	2	8	38	9				
RIVERVIEW	21.36	223.3	4	48A	3	8	40	6	4	58	5	15 PP
RABAUL	21.88	310.7	4	49	-1							
COBB RIVER	22.14	171.7	4	54	1	8	58	10				
WELLINGTON	22.68	167.9	4	55	-3						9	59
PORT MORESBY	22.93	292.0	5	3	2	9	13	10				
KAIMATA	23.42	174.8	5	6	1							
CANBERRA	23.67	223.1	5	10A	2	9	24	8	5	21	5	27 *SP
GEBBIES PASS	24.71	173.0	5	14	-4							
ROXBURGH	26.26	178.9				10	1	2			5	29
MELBOURNE	27.77	223.0	5	46	0							
MOORLANDS	29.47	213.4	6	1K	0						6	57 PP
FORT NELSON	29.74	212.5	6	5A	1							
TARRALEAH	29.75	214.3	6	7K	3						9	7 PCP
ADELAIDE	30.79	233.1	6	13K	0						7	11 PP
GUAM	40.04	322.3	7	30	-2							
MUNDARING	48.55	244.0	8	39A	-1							
PERTH	48.88	244.0				15	52	11			9	11
HONOLULU	51.74	40.7	9	4	0	16	39	18				
KIPAPA	51.88	40.6	9	4	-1							
CAPE HALLETT	53.18	179.4	9	14K	-1	16	44	3	9	34		
MANILA	57.62	302.3	9	46	-1	17	39	-1				
SCOTT BASE	58.75	180.5	9	54K	-1	17	54	-1	10	6	12	17 PP
BAGUIO CITY	59.00	303.6	9	56	-1	18	4	6				
TUKUBASAN	61.32	333.9	10	12A	-1							
DJAKARTA	61.37	273.4	10	15	2	18	29	1				
ABUYAMA	62.23	329.5	10	6A	-13							
MATUSIRO	62.40	332.6	10	19A	-1	18	34	-7				

NHATRANG	66.31	293.2	10	41	-4					13 34 PP
HONG KONG	67.29	305.2	10	53A	1	19	49	8	11 4	
ZO-SE	67.61	316.9	10	53A	-1	19	48	3		
CANTON	68.37	305.5	11	0A	2	20	0	6		
NANKING	69.79	316.3	11	7A	0	20	16	5		
Y.-SAKHLINSK	69.88	341.4	11	8	0	20	14	2		
VLADIVOSTOK	70.56	332.3	11	13	1	20	23	3		
SOUTH POLE	70.97	180.0	11	13	-1					
MEDAN	72.34	280.3	11	21A	-1					12 2
PETROPAVLOVK	72.38	353.7	11	22A	-1	20	45	4		
CHANGCHUN	74.17	328.9	11	33A	0	21	4	3		
PEKING	76.50	321.2	11	47A	1	21	32	5		
KUNMING	77.73	302.1	11	55A	2	21	46	6		
SIAN	77.74	313.0	11	55A	2	21	46	6		
MAWSON	78.30	202.1	11	56A	0	21	50	4		12 52
CHENGTU	79.41	307.6	12	3	1	22	2	4		
MAGADAN	79.76	350.9	12	3	-1	22	1	-1		
PAOTOW	80.56	318.8	12	10A	1	22	16	6		
LANCHOW	82.23	312.3	12	19A	2	22	33	6		
TOCKLAI	84.89	300.4	12	33A	2					
PARAISO	85.35	49.2	12	37	4					
STA. CRUZ C.	85.92	48.7	12	36	0					
BRANNER	85.99	48.3	12	36	0					
BERKELEY	86.14	47.8	12	37A	0	23	21	15		
LICK	86.33	48.5	13	37A	59					14 11
ULAN-BATOR	86.56	323.6	12	40	1					
YAKUTSK	86.59	342.7	12	38	-1	22	50	-20		
SHILLONG	86.81	298.3	12	40	0	23	16	4		22 45 SKS
ARGENTINE I.	86.81	160.4	12	38	-2					
SHASTA	87.37	45.3	12	43A	0					
FRESNO	87.39	49.7	12	42A	-1					
PASADENA	87.46	52.6	12	43A	0					
MINERAL	87.74	45.9	12	45K	0					
RENO	88.60	47.2	13	10	21					
CORVALLIS	88.62	41.5	12	49	0					
LHASA	89.05	301.8	12	52A	1	23	36	3		23 18 SKS
COLLEGE	90.13	17.1	12	53	-3	22	55	-48		16 26 PP
IRKUTSK	90.30	326.4	12	56A	-1					
VICTORIA	90.44	38.0	12	57A	0					
BOULDER CITY	90.71	52.1	12	59	0					
EUREKA	91.27	48.5	13	1	0					16 29 PP
TUCSON	92.39	56.8	13	7	1				13 22	
PENTICTON	93.03	38.5	13	8A	-1					
GLEN CANYON	93.50	52.2	13	12	1					
SALT LAKE C.	94.68	48.5	13	16	-1					
HUNGRY HORSE	96.02	40.9	13	22	-1					30 11 PKKP
FLAMING GRGE	96.49	49.0	13	24	-1					30 9 PKKP
NEW DELHI	100.12	296.7	13	38	-4					24 14
WICHITA MTS.	102.87	57.6	13	53	-1					18 0 PP
SEMIPALATNSK	103.49	318.9	13	55	-2					
QUETTA	109.19	296.1	14	21	777					18 45 PP
STALINABAD	109.22	305.1								18 21 PP
TASHKENT	109.27	308.1	18	48	777					
KHEYS	112.09	350.5	14	17	-253					
SVERDLOVSK	115.65	324.6	18	37	0					
OTTAWA	121.32	48.0	18	46A	-2					
TEHERAN	122.79	300.6	18	52	1					
PALISADES	122.90	53.1								20 27 PP
SHAWINIGAN	123.26	46.4	18	50A	-1					
APATITY	123.96	341.0	18	51	-2					
BULAWAYO	124.68	227.2	19	56	62					
CARACAS	125.80	90.7	18	57	1					22 11 SKP
SODANKYLA	126.08	342.9	18	46	-11					20 46 PP
TROMSOE	126.24	347.3	18	56	-1					
KIRUNA	127.34	345.4	18	58A	-1					
TIFLIS	127.60	308.3	19	1	1					
KAJAANI	127.98	339.4	19	1	0					
MOSCOW	128.29	327.0	19	9	8					
SAN JUAN	128.35	81.4	19	0	-1					
BROKEN HILL	128.48	232.5	19	3A	1					
PULKOVO	129.67	334.1	19	3	-1					
HALIFAX	129.93	47.4	19	3A	-1					
SOTCHI	130.95	311.5								21 24
TRINIDAD	131.07	92.5	19	5	-1					22 28
NURMIJARVI	131.42	337.2	18	54	-13					21 23 PP
SKALSTUGAN	132.76	345.8	18	58	-12					21 47 PP
UPPSALA	134.33	340.0	19	8	-5					21 41 PP
SIMFEROPOL	134.43	314.8	19	13	0					

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LWIRO	135.15	246.1	19	18	4						
KSARA	135.62	299.0	19	18	3				21	59	PP
KISHINEV	137.03	319.6	19	17	0						
LWOW	138.37	325.6	19	21A	1				22	56	
ISTANBUL KA.	139.23	311.3	19	21	-1				22	11	PP
HELWAN	139.90	293.8	19	23	0				22	59	PKS
SKALNATE PL.	140.74	327.1	19	26	2				22	28	PP
RACIBORZ	141.17	329.5	19	20	-5				22	23	
SOFIA	142.49	316.4	19	25	-2				22	36	PP
COLLMBERG	142.60	334.7	19	23K	-5				22	28	PP
HURBANOVO	142.62	326.8	19	27	-1						
HALLE	142.86	335.8	19	25	-3				22	30	PP
PRUHONICE	142.93	332.1	19	25	-3				22	42	PP
BRATISLAVA	142.98	328.0	19	24K	-4				22	33	PP
VIENNA-H.	143.29	328.6	19	27A	-2				22	41	PP
JENA	143.45	335.5	19	26	-3				22	43	PP
WITTEVEEN	143.58	341.5	19	29	0						
DURHAM	143.66	350.4	19	26	-3						
CHEB	143.78	333.9	19	26	-4						
KASPERSKE H.	143.98	331.9	19	28A	-2				22	45	PP
MUNSTER	144.01	340.0	19	29	-1						
ATHENS	144.20	309.0	19	26A	-4						
BENSBERG	145.02	339.5	19	32A	0			19 43	22	10	PP
LJUBLJANA	145.71	327.3	19	33	0			19 47	23	12	PP
HEIDELBERG	145.78	336.5	19	33	0						
STUTTGART	146.07	335.3	19	33	-1				22	58	PP
KARLSRUHE	146.21	336.4	19	35	1				22	49	
TUBINGEN	146.35	335.2	19	33	-1						
TRIESTE	146.38	327.5	19	34	0			19 48	22	59	PP
KEW	146.59	347.4	19	37	3						
EBINGEN	146.67	334.9	19	34	-1						
RAVENSBURG	146.72	333.9	19	34	-1						
STRASBOURG	146.81	336.6	19	35	0				24	0	
BANGUI	147.25	247.2	19	36	0			20 9			
CHUR	147.49	332.9	19	39A	3						
PADOVA	147.49	328.8	19	43	7				22	28	
BASLE	147.74	335.6	19	40	4				23	45	
PARIS	148.36	342.4	19	43	6				23	15	PP
NEUCHATEL	148.42	335.7	19	42	5						
BESANCON	148.58	337.0	19	38	0						
FLORENCE X.	148.96	327.3	19	36A	-2				19	44	PKP2
PRATO	148.97	327.6	19	42	4						
FOLINIERE	149.17	345.9	19	38	-1				21	28	
GARCH	149.55	340.4	19	43	4				21	38	
ROME	149.58	323.4	19	39A	0	26 47	7	19 48	23	17	PP
REGGIO CALA.	149.85	314.5	19	44	4						
MESSINA	149.87	314.7	19	45K	5				23	30	
MONACO	150.85	331.3	19	41	0						
BAGNERES	154.24	340.3	19	49	3						
SERRA PILAR	157.96	354.4	19	52	1				24	9	PP
TOLEDO	158.40	344.5	19	55	4				24	6	PP

AUGUST 10 12.H 3.M 26.S EPICENTRE 37.33 137.15 DEPTH= 60.KM

A=-0.58436 B= 0.54214 C= 0.60383 D= 0.6801 E= 0.7331
G=-0.4427 H= 0.4107 K=-0.7971 HT= -0.7

DEPTH OF FOCUS= 0.004R

SE= 3.87

	DELTA DEG.	AZ. DEG.	P M	P S	P O-C S	S M	S S	S O-C S	*PP M	*PP S	SUPP. M	SUPP. S
WAZIMA	0.20	284.1	0	1K	-10	0	18	-1				
TOYAMA	0.63	176.1	0	6K	-9	0	13	-13				
KANAZAWA	0.89	206.6	0	11A	-7	0	23	-8				
TAKADA	0.91	104.3	0	11K	-7	0	23	-8				
NAGANO	1.07	127.7	0	14K	-6	0	28	-7				
AIKAWA	1.11	51.5	0	15K	-5	0	31	-5				
MATUSIRO	1.16	132.5	0	14K	-7	0	29	-8				
MATUMOTO	1.27	148.2	0	16	-6	0	32	-7				
HUKUI	1.48	210.2	0	17	-8	0	36	-8				
OIWAKE	1.51	131.1	0	20	-6	0	37	-8				
NIIGATA	1.62	68.2	0	23	-4	0	45	-3				
MAEBASI	1.80	120.5	0	24K	-6	0	47	-5				
TSURUGA	1.89	207.7	0	25K	-6	0	48	-6				
IIDA	1.89	162.8	0	27	-4	0	51	-3				

GIHU	1.95	189.1	0	25	-7	0	51	-4			
KOHU	2.01	145.1	0	29	-4	0	58	1			
TITIBU	2.06	130.3	0	31	-2	0	56	-2			
KUMAGAYA	2.15	122.6	0	34	0	1	3	3			
NAGOYA	2.16	183.8	0	32	-3	0	58	-3			
HIKONE	2.18	199.7	0	30	-5	0	58	-3			
HUNATU	2.25	143.9	0	33	-3	1	4	1			
UTUNOMIYA	2.32	108.8	0	35	-2	1	0	-5			
SHIRAKAWA	2.46	94.0	0	36	-3	1	11	3			
KAMEYAMA	2.54	192.7	0	41	1	1	14	4			
SHIZUOKA	2.56	156.3	0	40	0						
KYOTO	2.57	206.8	0	36	-5	1	5	-6			
TOYOOKA	2.60	226.9	0	35	-6	1	13	1			
TUKUBASAN	2.62	114.2	0	35	-6				1	2	
SAKATA	2.63	52.7	0	39	-2	1	26	14			
MISIMA	2.64	146.0	0	41	-1						
HONGO	2.66	126.6	0	45	3				1	10	
TOKYO C.M.O.	2.67	127.4	0	43	1	1	13	0			
KAKIOKA	2.67	113.4	0	39	-3						
TU	2.67	191.1	0	41	-1	1	15	2			
HUKUSIMA	2.67	80.0	0	39	-3						
YAMAGATA	2.70	69.1	0	38A	-4	1	27	13			
ABUYAMA	2.77	207.9	0	38A	-5	1	18	2			
AJIRO	2.77	144.6	0	41	-2	1	23	7			
YOKOHAMA	2.77	132.4	0	45	2	1	31	15			
MITO	2.83	108.6	0	42	-2	1	23	6			
NARA	2.85	202.4	0	47	3	1	6	-12			
OMAESAKI	2.86	162.0	0	50	5	1	19	1			
OSAKA	2.98	206.6	0	47A	1	1	26	5			
TOTTORI	3.00	233.7	0	39	-8	1	16	-6			
ONAHAMA	3.02	96.1	0	51	4	1	27	5			
KOBE	3.09	211.7	0	50	2	1	28	4			
SENDAI	3.12	71.4	0	48	0	1	25	0			
OSIMA	3.13	144.0	0	52	4						
MERA	3.24	137.1	0	54	4						
SAIGO	3.27	250.9	0	59	9	1	41	13			
AKITA	3.33	43.3	0	58	7	1	45	15			
OWASE	3.34	193.6	1	50	59	2	35	65			
TYOSI	3.39	117.2	0	54	2	1	37	6			
ISINOMAKI	3.48	70.4	0	50	-3	1	48	14			
SUMOTO	3.49	212.0	0	53	0	1	40	6			
HIMEJI	3.60	219.1	0	53	-2	1	34	-3			
YONAGO	3.60	239.4	1	4	9	1	51	14			
MIZUSAWA	3.61	59.0	0	54	-1						
MATSUE	3.79	241.5	0	55	-3						
TOKUSIMA	3.87	213.5	1	6	7	1	58	15			
TAKAMATU	3.92	220.9	0	53	-6	1	47	2			
MORIOKA	3.94	51.9	0	57	-3						
SIOMISAKI	4.03	196.6	1	9	8	1	57	9			
TSURUGISAN	4.31	217.3	1	34	29				1	54	
MIYAKO	4.44	57.1	1	3	-4						
AOMORI	4.49	37.9	1	12	5	2	10	11			
KOTI	4.79	219.1	1	9	-3	1	58	-8			
HIROSIMA	4.84	233.8	1	10	-2	2	11	3			
MATUYAMA	4.98	226.9	1	11	-3	2	14	3			
MORI	5.45	27.9	1	20	-1						
ODITA	6.10	229.5	1	24A	-6	3	4	25			
URAKAWA	6.48	40.3	1	32	-3						
SAPPORO	6.57	28.0	1	38	2						
HUKUOKA	6.67	237.9	1	56	18	3	25	32			
KUMAMOTO	6.94	231.5	1	39	-2	3	34	34			
VLADIVOSTOK	7.04	326.9	1	47	4						
RUMOE	7.43	25.8	1	50	2	2	43	-29			
YAKUSIMA	8.81	220.8	2	3	-4						
Y.-SAKHLINSK	10.52	21.3	2	28	-3						
CHANGCHUN	11.09	309.5	2	38	0						
ZO-SE	14.59	249.5	3	23	-2	6	20	15	3	23	
NANKING	15.99	256.2	3	47	5						
PEKING	16.60	285.8	3	54	4	7	5	13			
PETROPAVLOVK	21.69	36.8	4	48	1						
SIAN	23.07	270.9	5	6	5						
MAGADAN	23.91	17.3	5	8	-1						
ULAN-BATOR	24.49	305.2	5	14	-1						
HONG KONG	24.84	239.4	5	17	-1	9	51	17			
YAKUTSK	25.14	351.8	5	20	-1						
LANCHOW	26.67	277.4	5	33K	-2	10	20	16			
SHILLONG	40.02	266.3	7	26	-5						
NEW DELHI	50.32	278.5	8	52K	-1						

COLLEGE	50.66	32.2	8	54	-1						
KHEYS	51.66	348.1	9	1	-2						
WARSAK DAM	52.43	287.4	9	2	-7						
STALINABAD	52.76	293.7	8	51	-20						
QUETTA	57.60	285.2	9	47	1						
CHARTERS TS.	57.75	169.9	9	44	-3					12	34
APATITY	60.99	334.7	10	12	2						
SODANKYLA	63.34	336.1	10	24	-1						
MOSCOW	64.95	322.0	10	34	-2						
NURMIJARVI	68.04	330.5	10	53	-2						
VICTORIA	68.64	44.8	10	57	-2						
PENTICTON	70.29	42.6	11	8	-1						
SKALSTUGAN	70.36	337.1	11	7	-2						
CORVALLIS	70.86	48.2	11	13	1						
UPPSALA	71.16	332.3	11	15	1						
CANBERRA	73.12	169.9	11	24	-2						
HUNGRY HORSE	73.84	41.1	11	29	-1						
MINERAL	74.30	51.1	11	32A	-1						
RENO	75.89	51.0	11	2	-40						
BUTTE	76.08	42.3	11	43	0						
BOZEMAN	77.12	41.9	11	50	1						
EUREKA	78.28	49.1	11	55	0						
COLLMBERG	79.10	328.1	11	57A	-3					14	43 PP
HALLE	79.39	328.7	11	59	-2						
PRUHONICE	79.40	326.4	12	0	-1					14	40
CHINA LAKE	79.55	52.9	12	2	0	13	17				
SALT LAKE C.	79.88	46.1	12	4	0						
FLAMING GRGE	81.17	44.7	12	10	-1						
BOULDER CITY	81.19	51.3	12	11	0						
BENSBERG	81.73	330.7	12	13	-1						
RAPID CITY	82.28	39.2	12	17	1						
GLEN CANYON	82.53	48.8	12	18	0						
STUTTGART	82.58	328.2	12	17	-1						
TARANTO	84.99	318.4	11	50	-40					12	17
TUCSON	86.14	51.9	12	37	1						
WICHITA MTS.	91.57	42.9	13	1	-1						
FAYETTEVILLE	92.82	39.3	13	7K	0						
MORGANTOWN	96.17	27.9								14	44
PALISADES	97.01	23.2								33	18 PKKS
SOUTH POLE	127.14	180.0	18	57	-1						

AUGUST 10 12.H 5.M 31.S EPICENTRE 43.54 145.00 DEPTH= 70.KM

A=-0.59575 B= 0.41713 C= 0.68636 D= 0.5736 E= 0.8192
G=-0.5622 H= 0.3937 K=-0.7273 HT= -3.0

DEPTH OF FOCUS= 0.006R

SE= 4.62

	DELTA DEG.	AZ. DEG.	P M	P S	P O-C S	S M	S S	S O-C S	*PP M	*PP S	SUPP. M	SUPP. S
NEMURO	0.47	115.8	0	9A	-5	0	17	-8				
KUSIRO	0.71	218.6	0	6A	-10	0	14	-15				
ABASHIRI	0.71	313.1	0	19	3	0	26	-3				
OBIHIRO	1.45	245.6	0	18K	-7	0	34	-10				
HIROO	1.76	225.1	0	19A	-10	0	35	-16				
ASAHIGAWA	1.93	278.2	0	32	1	1	3	8				
URAKAWA	2.14	230.5	0	26	-8	0	49	-11				
TOMAKOMAI	2.66	251.3	0	38	-4	1	6	-7				
SAPPORO	2.71	261.4	0	37K	-5	1	7	-7				
MURORAN	3.19	249.0	0	44	-5	1	17	-9				
MORI	3.56	247.8	0	47K	-7	1	25	-10				
SUTTSU	3.57	259.7	0	49	-5	1	31	-5				
HAKODATE	3.57	242.6	0	46	-8	1	25	-11				
HATINOHE	3.96	221.9	0	47	-13	1	23	-22				
AOMORI	4.15	230.6	0	59	-3	1	33	-17				
MORIOKA	4.79	218.1	0	59	-12	1	43	-23				
AKITA	5.29	225.6	1	30	12	2	16	-2				
MIZUSAWA	5.30	224.2									1	54
SENDAI	6.11	211.9	1	16	-13						2	24
YAMAGATA	6.35	215.3	1	18	-15	2	19	-26				
HUKUSIMA	6.73	212.3	1	29	-9							
NIIGATA	7.20	220.9									2	2
ONAHAMA	7.29	206.9				20	40	-29				
SHIRAKAWA	7.37	211.3	1	33	-14	2	50	-20				
AIKAWA	7.52	225.2	1	36	-13							

MITO	7.95	207.5	2	17	22	2	58	-26			
UTUNOMIYA	8.01	211.1								2	43
KAKIOKA	8.18	208.5	1	49	-9	3	1	-29			
TUKUBASAN	8.22	208.9	1	41K	-18	3	1	-30		2	33
TYOSI	8.44	203.7	1	44	-17	3	4	-32			
MAEBASI	8.45	214.5				3	38	1		3	15
MATUSIRO	8.71	219.0	1	51	-14						
TOKYO C.M.O.	8.83	209.0								3	17
YOKOHAMA	9.09	208.8								3	25
MISIMA	9.62	211.1	2	8	-10						
AJIRO	9.63	210.3	2	2	-16	3	36	-29			
OSIMA	9.78	208.3								3	38
COLLEGE	42.18	35.9	7	49	2						
SEMIPALATNSK	43.46	302.7	7	55	-2						
SHILLONG	46.47	265.3	8	21A	0						
CHATRA	49.15	270.0	8	43	1						
SVERDLOVSK	52.23	316.2	9	5	0						
ANDIJAN	52.32	293.6	9	5	-1						
SITKA	49.76	44.8	8	49	2						
NEW DELHI	55.36	278.4	9	23	-6						
RESOLUTE	55.62	16.2	9	30	-1						
SODANKYLA	60.06	336.9	10	2	0						
QUETTA	61.73	285.9	10	10	-3	18	27	-2			
KAJAANI	61.97	333.7	10	15	0						
BANFF	62.74	44.3	10	20	0						
SHASTA	65.12	56.8	10	35	0						
HUNGRY HORSE	65.23	46.2	10	36	0						
NURMI JARVI	65.50	332.0	10	37	-1						
MINERAL	65.81	56.8	10	39A	-1						
RENO	67.40	56.5	10	10	-40						
BUTTE	67.47	47.5	10	50	0						
UPPSALA	68.31	334.4	10	54	-1					11	26
TIFLIS	68.98	307.9	10	59	-1						
EUREKA	69.74	54.6	11	4	0					11	35
SALT LAKE C.	71.29	51.3	11	14	1						
PASADENA	71.83	60.1	11	15	-2						
FLAMING GRGE	72.56	49.9	11	21	0						
BOULDER CITY	72.70	56.7	11	20	-2						
RAPID CITY	73.67	44.2	11	28	0						
GLEN CANYON	73.98	54.1	11	29	0						
LARAMIE	74.38	47.5	11	31	-1						
COLLMBERG	76.78	331.4	11	46	1						
TUCSON	77.66	57.2	11	51	1						
STUTTGART	80.20	332.0	12	4	0						
WICHITA MTS.	82.95	48.0	12	18	0						
FAYETTEVILLE	84.21	44.4	12	24K	-1						
SHAWINIGAN	84.27	25.1	12	25	0						

AUGUST 11 6.H 8.M 31.S EPICENTRE 32.32 130.91 DEPTH= 113.KM

A=-0.55452 B= 0.63983 C= 0.53209 D= 0.7557 E= 0.6549
G=-0.3485 H= 0.4021 K=-0.8467 HT= 1.0

DEPTH OF FOCUS= 0.013R

SE= 5.53

	DELTA DEG.	AZ. DEG.	P M	P S	P O-C S	S M	S S	S O-C S	*PP M	*PP S	SUPP. M	SUPP. S
KUMAMOTO	0.53	340.0	0	12A	-7	0	32	-1				
MIYAZAKI	0.59	132.9				0	5	-29				
ASOSAN	0.59	12.7	0	8	-11	0	27	-7				
UNZENDAKE	0.69	306.1	0	15	-5	0	39	4				
KAGOSIMA	0.81	202.6	0	5A	-15	0	25	-11				
NAGASAKI	0.96	295.3	0	19A	-2	0	50	12				
SAGA	1.06	330.9	0	21	-1	0	48	8				
ODITA	1.08	33.1	0	10A	-13	0	29	-11				
HUKUOKA	1.33	340.4	0	21A	-5	0	51	6				
SIMONOSEKI	1.62	0.4	0	22A	-7	0	53	2				
UWAZIMA	1.65	56.2	0	9	-20	0	26	-26				
SIMIDU	1.79	74.7	0	6	-25	0	20	-35				
TOMIE	1.84	279.9	0	30	-2	1	35	40				
YAKUSIMA	1.90	190.9	0	19	-13	0	58	1				
MATUYAMA	2.18	45.5	0	19	-17	0	51	-12				
ITUHARA	2.32	324.3	0	39	1	1	18	12				
HIROSIMA	2.40	31.4	0	24	-15	1	6	-2				

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KOTI	2.52	60.2	0	24	-16	0	52	-19				
TSURUGISAN	3.01	58.8	0	43	-4	1	14	-9				
TAKAMATU	3.30	51.9	0	42	-9	1	13	-17				
OKAYAMA	3.44	46.1	0	37	-16	1	17	-16				
TOKUSIMA	3.53	59.4	1	0	6	1	24	-11				
MATSUE	3.60	29.3	0	46	-9	1	35	-2				
YONAGO	3.70	32.5	0	49	-7	1	38	-2				
SUMOTO	3.90	57.9	0	52	-7	1	42	-2				
WAKAYAMA	4.04	60.7	1	4	3							
TOTTORI	4.18	39.6	0	48	-15							
SIOMISAKI	4.24	73.3	1	10	6	1	59	6				
KOBE	4.27	55.4	0	57	-7	1	48	-5				
SAIGO	4.35	26.7	1	6	1	2	3	8				
OSAKA	4.50	57.7	1	9	2	2	4	5				
TOYOOKA	4.56	44.3	1	5	-3	1	58	-2				
ABUYAMA	4.64	55.5	0	49	-20							
OWASE	4.76	67.1	1	0	-11	1	30	-35				
KYOTO	4.83	54.9	0	37	-35	1	54	-13				
MAIZURU	4.87	48.6	1	13	1	2	10	2				
TU	5.25	61.6	1	1	-16							
KAMEYAMA	5.28	60.0	1	4	-14	2	19	1				
HIKONE	5.33	55.0	1	0	-18	2	26	7				
TSURUGA	5.42	50.8	1	0	-20							
GIHU	5.76	56.2	1	7	-17							
NAGOYA	5.79	59.0	1	6	-19	2	2	-28				
OMAESAKI	6.51	67.6				2	20	-28				
IIDA	6.57	59.1	1	20	-15							
SHIZUOKA	6.78	65.0				2	33	-21				
MATUMOTO	7.03	54.2				3	5	4				
WAZIMA	7.05	42.6	1	37	-5							
MISIMA	7.25	65.2									2	17
HUKUI	7.26	62.0				3	29	23				
AJIRO	7.34	66.0	1	25	-21							
MATUSIRO	7.35	53.1	1	27K	-19	2	46	-22			3	22
NAGANO	7.41	52.2	2	0	13	3	26	16				
OIWAKE	7.47	55.6	1	39	-9	3	34	23				
OSIMA	7.48	68.6	1	24	-24							
MAEBASI	7.87	56.7	2	45	52						3	42
YOKOHAMA	7.90	64.5				3	55	33				
KUMAGAYA	7.98	59.1									2	46
TOKYO C.M.O.	8.06	63.1				3	33	7				
ZO-SE	8.38	264.2	2	4	4							
UTUNOMIYA	8.51	57.9	2	14	12							
TUKUBASAN	8.54	60.4	1	43	-19	3	19	-18				
KAKIOKA	8.60	60.5	1	49	-14							
NIIGATA	8.69	47.8	3	3	59	4	10	29				
MITO	8.88	60.3									4	26
NANKING	10.29	271.8	2	28	3							
VLADIVOSTOK	10.81	3.8	2	25	-7	4	29	-3				
CHANGCHUN	12.30	340.6	2	53A	1	6	23	76				
PEKING	14.17	307.0	3	20A	4	6	14	23				
Y.-SAKHLINSK	17.23	28.2	3	43	-12							
HONG KONG	17.90	240.3	4	1	-2	7	47	32				
CANTON	18.06	243.8	4	9	4	7	46	27				
SIAN	18.49	281.9	4	13	4							
PAOTOW	18.68	302.0	4	14	2							
UGLEGORSK	18.72	23.4	4	5	-7						7	27
MANILA	19.73	209.3	4	33	10							
GUAM	22.64	142.9	4	51	-1							
LANCHOW	22.68	286.9	4	54	2	9	7	19				
CHENGTU	22.98	273.0	4	58	3	9	17	24				
ULAN-BATOR	23.94	317.6	5	5	1	9	33	23				
KUNMING	25.68	261.0	5	30	9	10	13	34				
PETROPAVLOVK	28.75	35.8	5	35	-14							
TIKSI	39.38	359.0									8	51 PP
MEDAN	41.60	233.3	7	47	9							
PORT MORESBY	44.29	156.7	8	0	0	14	20	-4				
FRUNSE	45.08	300.2	8	7	1							
NEW DELHI	46.06	280.1	8	9K	-5							
QUETTA	53.99	285.9	9	14	0							
CHARTERS TS.	54.14	162.1	9	5	-10							
KHEYS	55.54	349.0	9	22	-4	17	7	7			12	33 PPP
COLLEGE	57.59	30.0	9	35	-5							
BRISBANE	62.92	158.2	10	18	2							
ADELAIDE	67.34	173.1	10	37	-8				10	47		
NURMIJARVI	69.81	329.6	10	57	-3							
VICTORIA	75.79	41.3	11	30	-5							
FORT NELSON	76.39	167.7	11	42A	4							

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PENTICTON	77.42	39.2	11 39	-5						12 11	PCP
COLLMBERG	80.48	325.8	11 59A	-2							
HUNGRY HORSE	80.95	37.7	11 59	-4			12 8				
KARAPIRO	81.33	145.8	11 58	-7							
LJUBLJANA	83.13	321.1	12 13	-1						12 47	
BENSBERG	83.41	328.0	12 16	0							
STUTTGART	83.96	325.5	12 17	-1							
EUREKA	85.43	45.6	12 20	-6			12 30				
WOODY	85.94	50.0	12 23	-5							
ROME	86.96	318.9								23 33	PS
FLAMING GRGE	88.31	41.2	12 36	-4							
RAPID CITY	89.36	35.7	12 31	-14							
GLEN CANYON	89.68	45.3	12 40	-6							
WICHITA MTS.	98.70	39.3	13 24	-3							
PALISADES	103.52	19.1			25 48	91				33 2	SS
SOUTH POLE	122.15	180.0	18 38	-3							
HUANCAYO	148.57	56.0	19 30	0							

AUGUST 11 10.H 25.M 15.S EPICENTRE -18.82 168.01 DEPTH= 169.KM

A=-0.92652 B= 0.19680 C=-0.32067 D= 0.2078 E= 0.9782
G= 0.3137 H=-0.0666 K=-0.9472 HT= 5.0

DEPTH OF FOCUS= 0.021R

SE= 2.37

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
PORT VILA	1.12	15.3	0	1K	-27	0	13	-37					
NOUMEA	3.76	202.6	0	44K	-14	1	28	-15					
KOUMAC	3.92	243.2	0	58K	-2	1	35	-12					
SUVA	9.91	87.8	2	17	-2	3	55	-13			2	51	
HONIARA	12.17	319.0	2	39	-10								
BRISBANE	16.39	235.9	3	36	-5	6	48	11					
RAOUL ISLAND	16.51	131.6	3	46	3								
ONERAHI	17.80	162.9	3	56	-2						9	30	
AFIAMALU	19.99	78.9	4	15	-6								
KARAPIRO	20.14	162.5	4	20	-3								
CHARTERS TS.	20.55	262.9	4	26	-1	8	18	17					
RIVERVIEW	21.21	221.9	4	34	1	8	37	24					
RABAUL	21.23	311.3	4	33	0								
CHATEAU	21.33	163.7	4	33	-1								
TUAI	21.43	160.1	4	34	-1	8	35	17					
PORT MORESBY	22.27	292.0	4	43	0	8	51	19					
COBB RIVER	22.55	170.7	4	48	2								
WELLINGTON	23.12	166.9	4	52	0								
CANBERRA	23.52	221.9	4	57K	1	9	20	26	5	5	5	15	*SP
KAIMATA	23.80	173.7	4	59	1								
GEBBIES PASS	25.11	172.0	5	9	-2								
MELBOURNE	27.62	221.9	5	33	-1								
MOORLANDS	29.43	212.4	5	50A	0						9	1	PCP
FORT NELSON	29.71	211.5	5	52A	0						9	1	PCP
ADELAIDE	30.52	232.3	5	59K	0								
DARWIN	36.32	274.6	6	49	0								
MUNDARING	48.18	243.7	8	25K	0								
CAPE HALLETT	53.51	179.2	9	5A	0						14	50	
MANILA	56.95	302.5	9	32	2								
SCOTT BASE	59.07	180.3	9	45	1	17	49	13			12	3	PP
LEMBANG	59.83	273.0	9	50	0								
MATUSIRO	61.84	333.0	10	2K	-1	18	25	14					
SOUTH POLE	71.30	180.0	11	4	1				11	9			
MAWSON	78.38	202.2	11	45K	2				11	52	11	57	PCP
BERKELEY	86.35	48.1				23	1	18					
LICK	86.55	48.8	12	24A	-1								
ARGENTINE I.	87.31	160.5	12	28	-1								
SHASTA	87.55	45.5	12	29	-1								
FRESNO	87.62	49.9	12	30A	0								
PASADENA	87.73	52.9	12	31	0	23	11	15					
RENO	88.81	47.4	11	57	-39								
COLLEGE	89.99	17.3	12	39	-2								
VICTORIA	90.54	38.2	12	46	2								
BOULDER CITY	90.97	52.3	12	46	0								
EUREKA	91.49	48.7	12	47	-1						16	25	
TUCSON	92.69	57.0	12	54	0								
PENTICTON	93.14	38.7	12	54	-2								
GLEN CANYON	93.76	52.3	13	1	2								

FLAMING GRGE	96.71	49.2	13 12	0				
WICHITA MTS.	103.19	57.6	13 42	1			29 59	PKKP
KIMBERLEY	120.85	217.8					23 46	
PALISADES	123.16	52.9					30 8	PS
SHAWINIGAN	123.45	46.2	18 39	2				
BULAWAYO	124.47	227.9	18 43A	4				
KIRUNA	126.88	345.3	18 45	1				
KAJAANI	127.47	339.3	18 44	-1				
NURMIJARVI	130.89	337.0	18 54	3			22 15	SKP
SKALSTUGAN	132.30	345.6					22 20	PKS
UPPSALA	133.83	339.8					22 23	PKS
COLLMBERG	142.05	334.4	19 15	3			22 2	PP
PRUHONICE	142.37	331.8	19 12	-1			22 51	PKS
JENA	142.91	335.2	19 13	0			22 52	
KASPERSKE H.	143.42	331.6	19 14	0			22 54	PKS
MUNSTER	143.51	339.6	19 16	2				
BENSBERG	144.51	339.0	19 18	2				
LJUBLJANA	145.13	327.1	19 20A	3			22 58	PP
HEIDELBERG	145.24	336.1	19 20	2				
STUTTGART	145.53	334.9	19 21	3				
TRIESTE	145.79	327.2	19 22	4			19 52	
TUBINGEN	145.81	334.8	19 22	4				
EBINGEN	146.12	334.6	19 23	4				
STRASBOURG	146.28	336.1	19 24	5			20 25	
BASLE	147.20	335.2	19 27	6				
BESANCON	148.05	336.6	19 29	7				
FLORENCE X.	148.37	327.0	19 23	0				
FOLINIERE	148.71	345.3	19 29	6				
ROME	148.98	323.1	19 32	8			20 28	
GARCHY	149.05	339.9	19 39	15				
ISOLA	150.10	331.9	19 33	8				
MONACO	150.28	330.9	19 29	4				
CLERMONT-FD.	150.35	338.4					24 35	

AUGUST 11 11.H 4.M 46.S EPICENTRE 0.13 124.18 DEPTH= 203.KM

A=-0.56178 B= 0.82728 C= 0.00224 D= 0.8273 E= 0.5618
G=-0.0013 H= 0.0019 K=-1.0000 HT= 7.2

DEPTH OF FOCUS= 0.027R

SE= 1.59

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
MANILA	14.77	348.2	3	22	2								
LEMBANG	17.91	247.0	3	54	-3						10	20	
NHATRANG	19.10	309.5	4	9	0	7	40	10					
HONG KONG	24.10	336.8	4	59	1	9	5	7			5	42	PP
PORT MORESBY	24.75	113.1	5	5	1	9	16	7			6	6	
CANTON	25.14	335.9	5	10	2	9	20	4					
MEDAN	25.71	278.0	5	13K	0								
RABAUL	28.30	99.1	5	24	-13								
CHARTERS TS.	29.52	134.2	5	46	-2	10	30	4					
NANKING	32.17	351.4	6	11	0	11	12	5					
KUNMING	32.36	321.7	6	13	1	11	17	7					
MUNDARING	32.80	192.6	6	14A	-2								
CHENGTU	35.90	329.6	6	42	0	12	6	1					
SIAN	36.83	338.7	6	51K	1	12	24	5					
ADELAIDE	37.47	160.2	6	55	-1	12	32	3	7	26	8	20	PP
MATUSIRO	38.50	18.3	7	2A	-2	12	44	0			9	13	PCP
BRISBANE	38.77	137.2	7	7	1	12	52	4					
PEKING	40.38	350.5	7	19	-1								
LANCHOW	40.44	334.2	7	20A	0	13	16	3					
CANBERRA	42.19	149.3	7	36K	2	13	46	7	8	9	9	17	PP
RIVERVIEW	42.21	145.8	7	36	1	13	36	-3			17	11	SCS
PAOTOW	42.27	343.9	8	6	31	14	36	56					
LHASA	43.11	315.9	7	43	1	13	56	4					
VLADIVOSTOK	43.36	8.2	7	59	15								
CHANGCHUN	43.52	1.2	7	45	0								
CHATRA	44.39	309.7	7	51	-1								
MOORLANDS	47.17	156.8	8	17	3								
Y.-SAKHLINSK	49.43	16.6	8	28	-3	15	21	0					
NEW DELHI	53.05	306.4	8	56A	-2	16	10	-1					
WARSAK DAM	59.64	310.1	9	49	4								
PETROPAVLOVK	60.01	23.3	9	48	1								

KARAPIRO	60.50	134.8	9	51	0					10	31
CHATEAU	61.07	136.1	9	38	-16						
FRUNSE	61.40	320.4	9	58K	1	18	9	9			
WELLINGTON	61.51	138.5	9	56	-1						
YAKUTSK	61.87	3.0	10	1	1						
ANDIJAN	61.89	317.4	9	59	-1	18	12	6			
QUETTA	61.98	304.4	9	58	-3	18	7	0			
TUAI	62.02	135.1	10	0	-1						
MAGADAN	62.79	14.9	9	50	-16						
STALINABAD	63.49	313.8	10	13	3	18	32	6			
TASHKENT	64.24	316.8	10	14	-1	18	43	8			
TEHERAN	75.99	306.8	11	27	1						
TANANARIVE	77.40	250.7	11	36A	2						
CAPE HALLETT	77.87	167.0	11	38	1						
MAWSON	79.51	200.0	11	46A	0	21	35	7	12 23	11	52 PCP
SCOTT BASE	81.15	171.7	11	55	1				12 32		
TIFLIS	81.98	312.0	11	59	1	22	3	9			
KHEYS	86.07	351.4	12	19	0	22	31	-3			
MOSCOW	87.94	325.6	12	26	-2	22	54	2			
KSARA	88.51	303.7	12	32	1						
COLLEGE	89.03	25.3	12	32	-1				13 7		
KAJAANI	92.72	334.1	12	50	0						
SODANKYLA	92.80	337.4	12	49	-1						
NURMIJARVI	94.58	330.7	12	56	-3					16	51 PP
KIRUNA	95.06	338.3	12	59	-2	23	23	8			
BULAWAYO	95.28	249.9	13	1	-1						
BROKEN HILL	95.56	255.6	13	3	0						
UPPSALA	98.16	330.7	13	13	-2					17	7 PP
SKALSTUGAN	99.49	335.1	13	19	-2						
GOTEBORG	101.59	329.5	13	30	0						
PRUHONICE	102.43	321.5								17	50 PP
COLLMBERG	103.01	323.1	13	38	1						
VICTORIA	104.58	39.4	18	1	258						
PENTICTON	106.69	37.8	13	54	777					18	4
BANFF	108.40	35.0	18	7	777						
EUREKA	112.57	46.6	18	15	3					19	29 PP
FLAMING GRGE	116.65	43.0	18	23	3					19	30 PP
GLEN CANYON	116.69	47.8	18	24	4						
TUCSON	118.99	52.5	18	29	5						
WICHITA MTS.	127.12	44.5	18	43	3					28	11 PKKP
FAYETTEVILLE	129.33	40.5	18	47	3					21	56 PKS
SHAWINIGAN	131.19	15.5	18	51	3						
ANTOFAGASTA	152.62	149.8	19	37	12						
HUANCAYO	157.30	122.2	19	48	17					20	54 *PPKP2
SAN JUAN	159.01	28.3	20	14	41						
LA PAZ	159.70	143.9	19	41	7						

AUGUST 11 15.H 51.M 34.S EPICENTRE 42.94 145.21 DEPTH= 37.KM

A=-0.60310 B= 0.41900 C= 0.67876 D= 0.5706 E= 0.8213
G=-0.5574 H= 0.3873 K=-0.7344 HT= -2.8

DEPTH OF FOCUS= 0.001R

SE= 2.41

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
NEMURO	0.48	34.6	0	12A	0							
KUSIRO	0.60	274.2	0	15K	2	0	23	0				
ABASHIRI	1.27	328.2	0	25K	3	0	38	0				
OBIHIRO	1.48	269.9	0	27K	2	0	45	2				
HIROO	1.54	245.4	0	29K	4	0	48	3				
URAKAWA	1.96	247.1	0	34K	3	1	1	6				
ASAHIGAWA	2.24	293.1	0	38K	3	1	7	5				
TOMAKOMAI	2.69	264.6	0	46	4	1	19	5				
RUMOE	2.80	292.4	0	48K	5	1	20	4				
SAPPORO	2.83	274.0	0	47K	3	1	20	3				
MURORAN	3.18	260.2	0	51K	2	1	26	0				
HAKODATE	3.48	252.6	0	56K	3	1	36	2				
MORI	3.53	257.8	0	57K	3	1	38	3				
WAKKANAI	3.55	315.5	0	57K	3	1	38	3				
HATINOHE	3.66	230.1	0	56A	0	1	28	-10				
SUTTSU	3.66	269.5	0	58	2	1	45	7				
AOMORI	3.93	238.9	1	1K	2	1	43	-2				
MIYAKO	4.09	217.7	1	2A	0	1	46	-3				
MORIOKA	4.44	224.6	1	7A	0	1	53	-5				

Y.-SAKHLINSK	4.45	337.5	1	6	-1				2	13
MIZUSAWA	4.90	220.4	1	14	1	2	9	0		
AKITA	5.01	231.8	1	17A	2	2	14	2		
ISINOMAKI	5.39	214.6	1	20A	0	2	18	-4		
SENDAI	5.70	216.5	1	24A	0	2	25	-5		
SAKATA	5.73	227.1	1	27A	2	2	31	1		
YAMAGATA	5.97	219.9	1	28A	0	2	33	-3		
HUKUSIMA	6.32	216.5	1	33A	0	2	40	-5		
UGLEGORSK	6.52	341.5	1	37	1					
ONAHAMA	6.84	210.4	1	37A	-3	2	51	-7		
NIIGATA	6.87	225.2	1	42A	1	2	55	-4	3	37
SHIRAKAWA	6.96	215.0	1	41	-1	2	58	-3		
AIKAWA	7.23	229.5	1	47A	1	3	52	44		
MITO	7.50	210.7	1	48A	-2	3	6	-8		
UTUNOMIYA	7.59	214.6	1	49	-2	3	11	-6		
KAKIOKA	7.74	211.7	1	49	-4	3	13	-7		
TUKUBASAN	7.78	212.1	1	50	-3	3	11	-10	2	14 *SP
TAKADA	7.91	224.8	1	56A	1	3	17	-7		
TYOSI	7.96	206.5	1	55	-1	3	20	-6		
MAEBASI	8.06	218.0	1	57A	0	3	24	-4		
KUMAGAYA	8.14	215.5	1	53A	-5	3	19	-11		
NAGANO	8.26	223.1	2	1A	1				3	5
HONGO	8.36	212.1	1	56	-5					
MATUSIRO	8.36	222.5	2	1A	0	3	28	-8		
OIWAKE	8.36	220.1	2	1	-1	3	28	-8		
TOKYO C.M.O.	8.39	212.1	1	59A	-3	3	28	-8		
TITIBU	8.41	216.3	2	0	-2	3	35	-2		
WAZIMA	8.44	231.7	2	3	0	3	32	-6		
YOKOHAMA	8.65	211.7	2	3	-3	3	40	-3		
MATUMOTO	8.71	222.3	2	6	0	3	40	-4		
TOYAMA	8.76	227.3	2	8	1	3	16	-30		
KOHU	8.90	217.6	2	7A	-2	3	37	-12		
HUNATU	8.95	216.0	2	7	-3				2	54
MERA	9.04	209.4	2	8A	-3	4	9	17		
TAKAYAMA	9.15	224.8	2	13	1				2	51
AJIRO	9.20	213.1	2	11	-2	3	48	-9		
MISIMA	9.20	214.0	2	13	0	3	50	-7		
IIDA	9.36	220.1	2	15A	0	4	16	16		
SHIZUOKA	9.56	215.9	2	15	-3	4	20	15		
NAGATURO	9.69	212.9	2	31	11				3	51
VLADIVOSTOK	9.75	275.6	2	22	1	4	12	2		
HUKUI	9.77	228.2	2	22	1				5	52
OMAESAKI	9.95	215.5	2	26	3					
GIHU	9.98	223.8	2	25	1	4	14	-2		
TSURUGA	10.15	227.2	2	26	0					
HIKONE	10.34	225.2	2	30A	1	4	21	-4		
KAMEYAMA	10.56	223.0	2	31	-1	4	33	3		
MAIZURU	10.66	228.8	2	33A	0	4	29	-3		
KYOTO	10.81	226.1	2	35	0	4	34	-2		
TOYOOKA	10.93	230.9	2	37A	0	4	34	-5		
ABUYAMA	11.01	226.1	2	36	-2					
NARA	11.02	224.7	2	37	-1				2	56
OSAKA	11.20	225.5	2	39A	-2	4	57	12		
TOTTORI	11.32	232.7	2	43	1	4	47	-1		
OWASE	11.32	221.5	2	39A	-3	5	11	23		
KOBE	11.36	226.8	2	41A	-2	4	38	-11		
SAIGO	11.37	237.7	2	43	0	4	49	-1		
WAKAYAMA	11.71	225.4	2	46A	-1	5	5	7		
SUMOTO	11.76	226.5	2	46A	-2	5	9	10	10	26
YONAGO	11.86	234.7	2	49	0	5	2	0		
HIMEJI	11.92	228.6	2	45	-5					
MATSUE	12.02	235.6	2	52	0	5	3	-2		
SIOMISAKI	12.03	221.2	2	48	-4	5	5	-1		
OKAYAMA	12.06	230.6	2	51	-1	5	7	1		
TOKUSIMA	12.15	226.7	2	13	-40					
TAKAMATU	12.25	229.0	2	54	-1	5	39	28		
TSURUGISAN	12.62	227.7	3	44	44				6	34
TORISIMA	13.04	199.1	2	58	-7	5	13	-17		
KOTI	13.11	228.2	3	5A	-1	5	24	-8		
HIROSIMA	13.14	233.6	3	5A	-2	5	30	-2		
MATUYAMA	13.31	231.1	3	7	-2	5	48	12		
PETROPAVLOVK	13.49	37.0	3	9	-2				3	17 PP
UWAZIMA	13.89	229.9	3	15	-1	6	15	25		
SIMIDU	14.00	227.6	3	17A	-1	6	4	11		
SIMONOSEKI	14.33	235.9	3	21	-1					
OOITA	14.42	232.3	3	22A	-1	5	59	-4		
CHANGCHUN	14.50	280.3	3	23A	-1	6	3	-2		
HUKUOKA	14.92	236.1	3	26	-4	6	12	-2		

ASOSAN	14.98	232.7	3 31	0	6 21	5		
SAGA	15.19	235.4	3 32	-1				
KUMAMOTO	15.25	233.3	3 33A	-1	6 45	23		
MIYAZAKI	15.50	229.3	4 37A	60	7 49	81		
UNZENDAKE	15.58	234.1	3 40A	2	5 44	-46		
NAGASAKI	15.80	234.9	3 40A	-1	7 6	31		
KAGOSIMA	16.25	230.5	3 42A	-5	7 9	23		
TOMIE	16.56	236.9	3 50A	-1	6 45	-8		
KLYUCHI	16.74	31.5	3 50	-3				4 13 PP
MAGADAN	16.99	9.8	3 54	-2				
YAKUSIMA	17.13	228.1	3 56A	-2	7 0	-6		
YAKUTSK	21.20	339.6	4 40	-4				
PEKING	21.90	272.3	4 50A	-1	8 45	-1		
ZO-SE	22.45	246.2	4 57A	0	8 58	2		
NANKING	23.52	251.3	5 8A	1	9 21	6		
ISIGAKIZIMA	25.40	229.8	5 23	-2	9 59	12		
PAOTOW	26.24	276.9	5 34A	1	10 1	0		
TAIPEI	26.41	235.0	5 36	1	10 23	19		
ILAN	26.47	234.3	5 39	4	10 37	32		
ULAN-BATOR	27.15	293.9	5 41	-1	10 12	-4		
HWALIEN	27.15	233.4	5 44	2				8 45
TAICHUNG	27.57	235.0	5 47	2				
HSINKONG	27.96	232.5	5 51	2				
ALISHAN	27.97	234.0	5 50	1	10 51	22		
TAITUNG	28.36	232.4	5 54	1	10 29	-6		
TAINAN	28.71	234.1	5 55	-1				
IRKUTSK	28.76	303.3	5 55A	-1	10 37	-5		
TAWU	28.81	232.3	5 57A	0	11 11	29		
KAOHSIUNG	28.97	233.5	6 0	2				
HENGCHUN	29.17	232.0	6 3A	3				15 47
SIAN	29.48	265.1	6 3A	0	10 52	-1		
LANCHOW	32.41	271.9	6 29A	1	11 37	-2		
CANTON	32.97	243.3	6 34A	1	11 47	-1		
HONG KONG	32.99	241.3	6 36A	3				9 4 PCP
CHENGTU	34.86	263.2	6 49	-1	12 16	-1		
MANILA	34.97	223.7	6 55	4	12 14	-5		
KUNMING	38.96	256.8	7 25A	1	13 15	-5		
COLLEGE	42.57	35.5	7 54A	0	14 11	-3		9 56 PCP
NHATRANG	43.65	236.4	8 5	2	14 32	3		
TOCKLAI	43.77	265.2	8 8A	4	14 36	5		9 49 PP
SEMIPALATNSK	43.91	303.3	8 4	-1	14 28	-5		
LHASA	44.91	271.3	8 15A	2	14 47	0		
SHILLONG	46.58	266.0	8 25A	-1	15 17	6		10 12 PP
RABAUL	47.34	170.5	8 33	1				
KHEYS	47.50	347.2	8 30	-3	15 19	-5		10 20 PP
CHITTAGONG	48.54	262.6	8 39	-2	15 34	-5	8 58	
CHATRA	49.30	270.7	8 51A	4	15 45	-5		10 40 PP
SITKA	50.08	44.5	8 54A	1	16 2	2		
FRUNSE	50.26	295.5	8 54	-1	16 2	-1		11 45 PPP
CALCUTTA	50.95	265.3	9 4A	4	15 57	-16		11 1 PP
KIPAPA	51.58	95.9	9 5K	1				
HONOLULU	51.60	96.0	9 6A	1	16 28	7		
BOKARO	52.05	268.5	9 18A	10	16 38	10		11 18 PP
PORT MORESBY	52.11	177.6	9 6	-3				16 29
SVERDLOVSK	52.76	316.6	9 13	0				14 21 PCS
HONIARA	53.83	161.9	9 24	3				
DEHRA DUN	54.03	280.0	9 23	0	16 53	-2		11 23 PP
TASHKENT	54.48	296.2	9 26	0	16 59	-2		11 31 PP
HAWAII V.OB.	54.83	95.8	9 30	1	17 8	3		
KHOROG	54.87	291.0	9 28	-1	17 5	-1		11 33 PP
PORT BLAIR	54.94	251.7	9 35	6	17 27	20		10 19 PCP
NEW DELHI	55.61	278.8	9 34A	0	17 10	-6	9 56	11 39 PP
LAHORE	56.03	283.4	9 35	-2	17 19	-2		
RESOLUTE	56.15	16.1	9 36	-2	17 18	-5		
WARSAK DAM	56.67	287.4	9 41	-1	17 28	-2		
MEDAN	56.88	239.9	9 43A	0	17 34	1		
VISHAKHAPTNM	57.66	264.4	9 50K	1	17 57	14		12 1 PP
APATITY	58.53	335.3	9 52	-3	17 49	-5		
THULE	59.01	8.8	9 55K	-3			10 8	11 0
DJAKARTA	60.01	225.5	10 2A	-3	18 3	-10		
LEMBANG	60.16	224.3	10 5	-1	18 15	0		
VICTORIA	60.31	49.9	10 6A	-1				
SODANKYLA	60.67	337.1	10 7A	-3	18 19	-3		19 51 SCS
HYDERABAD	61.40	267.6	10 16A	1	18 50	19		12 31 PP
PENTICTON	61.97	47.6	10 17A	-1				
KIRUNA	62.03	339.3	10 16A	-3	18 28	-11		39 32 PKPPKP
QUETTA	62.04	286.3	10 18A	-1	18 38	-1	10 33	12 29 PP
CORVALLIS	62.54	53.6	10 22	0				

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KAJAANI	62.57	333.9	10	21A	-1	18	44	-2			39	31 PKPPKP
CHARTERS TS.	62.72	178.9	10	22A	-1	18	43	-5				
MADRAS	63.01	262.6	10	26A	1	18	52	1			12	43 PP
BANFF	63.06	44.2	10	24A	-2							
ASHKABAD	63.42	298.0	10	27	-1						23	8 SS
PORT VILA	64.00	155.4	10	32	0							
POONA	64.08	271.7	10	31A	-1	19	1	-4			12	49 PP
MOSCOW	64.26	323.2	10	31	-3	18	59	-8			14	28 PPP
PULKOVO	64.59	329.5	10	34	-2	19	6	-5			14	34 PPP
BOMBAY	64.60	272.7	10	35	-1	19	7	-4			12	58 PP
SHASTA	65.32	56.7	10	40A	0							
HUNGRY HORSE	65.53	46.1	10	41A	-1	19	20	-3			13	6 PP
KOUMAC	65.58	160.4	10	46	4							
UKIAH	65.73	58.5	10	42A	-1	19	28	3				
MINERAL	66.01	56.6	10	45A	0				11	19		
NURMIJARVI	66.10	332.2	10	43A	-2	19	26	-3			20	30 SCS
KODAIKANAL	66.82	262.3	10	54K	4	20	3	25			13	30 PP
BERKELEY	67.09	59.1	10	51A	-1	19	38	-3	11	4	15	15 PPP
BRANNER	67.41	59.5	10	53	-1							
SKALSTUGAN	67.46	339.2	10	52A	-2							
RENO	67.60	56.4	11	18A	23	19	11	-37	11	30		
BUTTE	67.76	47.4	10	55A	-1	19	47	-2				
STA. CRUZ C.	67.78	59.7	10	54A	-2							
NOUMEA	67.80	158.8	11	1K	5						11	43
LICK	67.80	59.3	10	55A	-1							
SUVA	68.04	145.8	11	1	3	19	56	3			15	22 PPP
VINEYARD	68.33	59.6	10	59	0							
BOZEMAN	68.80	46.9	11	2A	0	20	1	-1			39	12 PKPPKP
UPPSALA	68.91	334.6	11	1A	-2	19	56	-7			39	5 PKPPKP
AFIAMALU	68.94	134.8	11	16	13	20	6	2			24	2 SS
TEHERAN	69.21	299.7	11	5	0						13	34 PP
FRESNO	69.31	58.8	11	5	0							
TIFLIS	69.47	308.2	11	7A	1	20	11	1			15	27 PPP
EUREKA	69.96	54.5	11	7A	-2						13	25 PP
GORIS	69.98	305.6	11	9A	-1	20	16	0			13	52 PP
BRISBANE	70.33	172.9	11	13	1	20	22	2				
SALT LAKE C.	71.54	51.3	11	18A	-1	20	34	0				
BERGEN	71.92	340.3	11	20	-1	20	37	-1			20	46 PS
PASADENA	72.00	60.0	11	21A	-1	20	34	-5	11	32	25	26 SS
GOTEBORG	72.39	335.8	11	22A	-2	20	39	-5				
REYKJAVIK	72.79	354.1	11	27A	1	20	55	7				
SIDA	72.80	352.3	11	26A	0							
FLAMING GRGE	72.83	49.9	11	26A	-1							
BOULDER CITY	72.90	56.7	11	27A	0							
SIMFEROPOL	73.13	316.2	11	28A	0	20	51	-1			14	11 PP
VIK	73.25	352.7	11	30	1							
WARSAW	73.66	328.0	11	31	0	20	54	-4			14	16 PP
COPENHAGEN	73.92	334.4	11	32A	-1	21	0	-1			14	6 PP
RAPID CITY	73.99	44.2	11	33A	0	21	2	0	11	45		
GLEN CANYON	74.21	54.1	11	34A	-1	21	6	2			15	43
KISHINEV	74.23	320.4	11	34	-1	21	2	-2			16	4 PPP
LWOW	74.28	324.9	11	35	0	21	3	-2			16	5 PPP
IASI	74.68	321.2	11	37	0	21	7	-2				
BACAU	75.46	321.1	11	50	8						22	10
KRAKOW	75.79	327.1	11	44A	0	21	16	-6			14	18 PCP
CHORZOW	75.97	327.8	11	44	-1	21	21	-3			14	14 PP
SKALNATE PL.	76.35	326.4	11	48	1	21	26	-2			14	37 PP
RACIBORZ	76.45	328.0	11	48	1	21	27	-2	11	54	14	35 PP
ABERDEEN	76.55	342.4	11	46A	-2	21	29	-1			14	52 PP
RIVERVIEW	76.59	174.9	11	48A	0	21	33	3	11	59	14	46 PP
CAMPULUNG	77.30	321.3	11	53	1	21	40	2				
COLLMBERG	77.37	331.5	11	52A	-1	21	34	-5			16	26 PPP
BUCHAREST	77.44	320.1	11	52A	-1	21	38	-2			14	44 PP
HALLE	77.57	332.2	11	54	0	21	37	-4				
ADELAIDE	77.76	185.5	11	55A	0	21	42	-1				
TUCSON	77.86	57.3	11	56A	1	21	43	-1			15	2 PP
TUCSON TELE.	77.86	57.1	11	56A	1							
PRAGUE	77.88	330.1	11	56	1	21	45	1			22	8 PS
PRUHONICE	77.91	329.9	11	56A	0	21	39	-6			14	58 PP
EDINBURGH	77.94	342.4	11	57	1	21	46	1	12	22	15	5 PP
CANBERRA	77.96	176.8	11	56A	0	21	46	1	12	12	26	58 SS
WITTEVEEN	78.14	335.8	11	57A	0							
JENA	78.18	332.1	11	56	-1	21	34	-14			14	56 PP
BUDAPEST	78.19	326.0	11	58	1	22	1	13			21	48 SKS
HURBANOVO	78.22	326.7	12	0	3	21	52	4			14	58 PP
BRATISLAVA	78.41	327.5	11	58A	0	21	50	0			14	59 PP
ISTANBUL KA.	78.49	316.2	11	59A	0	21	49	-2	12	28	14	55 PP
ISTANBUL UN.	78.55	316.2	11	57	-2	21	50	-2				
MUNSTER	78.59	334.8	11	59	0	21	50	-2				

CHEB	78.61	331.2	11	57	-2	21	49	-3			14	47 PP
DURHAM	78.63	341.1	11	58K	-2	21	51	-1	12	18	22	13 SKS
TIMISOARA	78.63	323.7	11	59	-1	21	48	-4				
VIENNA-H.	78.64	327.9	11	59A	-1	21	53	1			41	59 PP
KASPERSKE H.	78.97	330.0	12	1A	0	21	52	-4			13	17
MUNDARING	79.15	204.8	12	2	0	21	58	0				
DE BILT	79.22	336.2	12	2A	-1	21	59	0			15	3 PP
PERTH	79.25	205.1	12	6	3	22	3	4			15	19 PP
BENSBERG	79.61	334.5	12	4A	-1	22	0	-3			14	57 PP
BELGRADE	79.70	323.5	12	5A	0	22	2	-2			14	52 PP
KSARA	80.00	307.1	12	8A	1	22	8	1			15	9 PP
SOFIA	80.05	320.5	12	8	1	22	8	1				
HEIDELBERG	80.45	332.9	12	9A	0							
STUTTGART	80.80	332.2	12	10A	-1	22	12	-3			15	11 PP
KARLSRUHE	80.89	332.8	12	12	0	22	30	14				
TUBINGEN	81.08	332.2	12	13A	0							
LJUBLJANA	81.16	327.7	12	12A	-1	22	15	-4			15	19 PP
KEW	81.32	339.0	12	14A	0	22	19	-1	12	33	15	20 PP
EBINGEN	81.41	332.1	12	14A	0							
STRASBOURG	81.47	333.0	12	14A	-1	22	18	-4			15	21 PP
SKOPJE	81.50	321.2	12	16	1	22	23	1				
RAVENSBURG	81.53	331.5	12	15A	0							
TRIESTE	81.80	327.9	12	15	-1	22	22	-3			28	1 SS
TITOGRAD	82.12	322.8	12	18	0	22	27	-2			22	50 SCS
CHUR	82.36	331.1	12	19	0	22	30	-1				
BASLE	82.45	332.6	12	20A	0	22	34	2				
PADOVA	82.72	328.9	12	20A	-1	22	36	1			15	51 PP
ONERAHI	82.73	156.5	12	32	11	22	40	5				
PARIS	82.93	336.2	12	23	1	22	35	-2			15	32 PP
NEUCHATEL	83.12	332.7	12	22	-1	22	38	-1				
BESANCON	83.22	333.4	12	24	0						16	33 PPP
WICHITA MTS.	83.24	48.1	12	24A	0	22	41	1			15	24 PP
CHIHUAHUA	83.31	57.0	12	32	8	23	6	25			18	36
ATHENS	83.53	317.3	12	24A	-1	22	40	-3				
BOLOGNA	83.69	328.7	12	16	-10						23	46 PS
FOLINIERE	83.82	338.0	12	25	-2							
AUCKLAND	83.88	156.5	12	31	4	22	49	3			28	32 SS
JERSEY	83.88	339.1	12	28A	1	22	45	-1				
GARCHY	84.13	335.2	12	33	5						12	38 PCP
PRATO	84.31	328.5	12	30	1	22	45	-6				
FLORENCE X.	84.33	328.4	12	27A	-2	22	53	2				
FAYETTEVILLE	84.53	44.5	12	29A	-1	22	45	-8			42	6 SKPP
TARANTO	84.59	322.8	12	27	-4	22	47	-6			26	47
CHIAVARI	84.60	329.9	12	28	-3	21	53	-61			16	52 PP
SHAWINIGAN	84.74	25.2	12	31A	0							
OTTAWA	84.79	27.6	12	30A	-2							
TARRALEAH	84.86	179.1	12	34A	2						12	39 PCP
MOORLANDS	85.01	178.5	12	34A	1						12	39 PCP
KARAPIRO	85.08	156.4	12	35	2						15	51 PP
ROME	85.43	326.6	12	33A	-2	22	59	-3	13	16	24	24 PS
FORT NELSON	85.51	178.4	12	36A	1	23	5	3				
HELWAN	85.52	307.2	12	36	1	22	55	-8				
ISOLA	85.54	331.2	12	35	0	22	59	-4				
MONACO	85.80	330.8	12	36	-1	23	9	4				
CLEVELAND	86.00	33.3	12	38A	0	22	56	-11				
CHATEAU	86.26	156.8	12	39	0						16	1 PP
TUAI	86.37	155.5	12	39	0							
MESSINA	87.21	322.6	12	41A	-2	23	16	-3	13	6	16	8 PP
REGGIO CALA.	87.24	322.5	12	44	0	23	17	-2				
COBB RIVER	87.25	159.5	12	50	6	23	24	5			23	4 SKS
WELLINGTON	87.97	158.2	12	48	1	23	26	0			23	7 SKS
PENNSYLVANIA	88.02	31.3	12	49	2	23	10	-16	13	48	14	5 *SP
MORGANTOWN	88.21	33.2	12	53A	5	23	9	-19				
KAIMATA	88.28	160.9	12	52	3	23	10	-19				
CUGLIERI	88.45	328.2				23	56	26			33	16 SSS
BAGNERES	88.81	335.2	12	52	1	23	38	4	13	8	16	20 PP
HALIFAX	89.11	20.1	12	52A	-1							
PALISADES	89.28	28.5	12	52	-1	23	40	2	13	5	16	18 PP
GEBBIES PASS	89.69	160.5	12	57	2	23	21	-21				
WASHINGTON	89.97	31.7	12	57K	0	23	15	-29			16	35 PP
ROXBURGH	90.62	163.3	13	12	12	23	56	6			23	58 SKS
TORTOSA	90.74	334.0	13	0	0	23	26	-25				
GUADALAJARA	90.77	60.6	13	6	6	23	54	3			23	36 SKS
TOLEDO	92.99	336.8	13	11A	0	24	4	-7			16	55 PP
SERRA PILAR	93.04	340.5	13	8K	-3	24	4	-8			16	54 PP
ALICANTE	93.30	333.6	13	15	3	23	59	-15			16	51 PP
COIMBRA	93.88	340.1	13	13A	-2	24	5	-14			16	54 PP
TACUBAYA	94.32	58.6	13	25	8	23	47	-35			17	11 PP

ALMERIA	95.31	334.5	13	20A	-1	24	13	20	17 11	PP
GRANADA	95.35	335.5	13	24A	3	23	51	-2	17 7	PP
LISBON	95.46	340.1	13	21A	-1	24	16	23	17 14	PP
VERA CRUZ	96.37	56.6	13	38	12	24	2	4	26 42	PPS
OAXACA	97.62	58.4				24	8	3	26 2	PS
COMITAN	101.06	55.5				24	22	0	32 26	SS
TANANARIVE	108.15	260.9	18	5	777	25	1	7	18 52	PP
LWIRO	110.66	287.0	18	31	3				14 30	P
SAN JUAN	112.52	32.3	19	22K	50	26	2	50	20 25	PP
BANGUI	112.64	299.8	18	32	0				18 46	SPKP
BALBOA HTS.	114.21	49.7				24	45	-34	26 26	S
GALERAZAMBA	115.01	44.7				26	35	73	19 59	PP
CAPE HALLETT	116.28	171.7	18	41	2	25	28	2	19 52	PP
BROKEN HILL	119.24	277.5	18	47A	2					
CARACAS	119.25	36.8	18	49A	4				27 48	
CHINCHINA	119.68	48.6	18	47	1	25	39	0	20 11	PP
FUQUENE	120.29	46.4	18	49	2				20 17	PP
MBOUR	120.66	339.8				26	14	32	20 30	PP
BOGOTA	120.82	47.3	18	55	7	25	44	2	20 21	PP
SCOTT BASE	121.24	174.8	18	51	2	25	50	6	20 33	PP
BULAWAYO	122.77	272.3	18	53A	1					
LUANDA	126.10	294.6	18	59A	1	26	6	7	20 54	PP
MAWSON	126.11	208.0	18	59A	1	26	2	3	19 11 21 13	PP
PRETORIA	126.46	267.2	19	0	1					
PIETERMZBURG	127.02	261.9	18	58K	-2					
GRAHAMSTOWN	131.74	260.0	18	55	-14					
WINDHOEK	132.68	278.4	19	1	-10					
SOUTH POLE	132.75	180.0	19	23	12				26 56	
HUANCAYO	133.37	61.0	19	15	3				22 38	PKS
HERMANUS	137.61	262.9							22 8	PP
LA PAZ	141.27	57.4	19	32	5				23 7	PKS
ANTOFAGASTA	144.93	68.3	19	35	2					
ARGENTINE I.	152.23	153.6	19	51	6					

AUGUST 11 22.H 37.M 26.S EPICENTRE -2.85 122.11 DEPTH= 47.KM

A=-0.53088 B= 0.84600 C=-0.04945 D= 0.8470 E= 0.5315
G= 0.0263 H=-0.0419 K=-0.9988 HT= 7.1

DEPTH OF FOCUS= 0.002R

SE= 2.32

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
DARWIN	12.81	138.1	2	58	-4						5	44	
LEMBANG	14.97	254.2	3	31	1						9	42	
DJAKARTA	15.58	257.2	3	37K	-1						8	4	
MANILA	17.44	356.7	4	6	4						4	33	PP
BAGUIO CITY	19.21	355.5	4	19	-4	7	55	3					
NHATRANG	19.71	319.7	4	28	0	8	11	8					
MEDAN	24.27	285.1	5	15	1	9	47	20					
PORT MORESBY	25.72	105.8	5	28	0	9	51	0			7	17	
HONG KONG	26.18	343.1	5	33	1	9	54	-5					
CHARTERS TS.	29.14	127.8	5	59	0	10	45	-1					
MUNDARING	29.49	190.2	6	1A	-1								
PERTH	29.54	190.9				12	10	17			6	53	
RABAUL	30.03	93.4	6	2	-5								
KUNMING	33.56	327.1	6	39A	1	12	3	7					
ZO-SE	33.78	358.6	6	45	5	12	2	3					
NANKING	34.86	355.1	6	53	4	12	17	1					
ADELAIDE	35.49	156.1	6	54K	0	12	28	2					
CHENGTU	37.54	333.9	7	11	-1	12	46	-11					
BRISBANE	38.14	132.7	7	18	1	13	15	9					
HONIARA	38.16	101.6	7	17	0								
CHITTAGONG	38.77	311.8	7	18	-4	13	10	-6					
SIAN	38.94	342.5	7	24	1	13	12	-6					
TOCKLAI	39.54	319.8	7	32	4								
MELBOURNE	40.63	151.8	7	38	1								
SHILLONG	40.70	315.8									22	38	
CANBERRA	40.81	145.5	7	40K	1	13	52	6	7	45	9	18	PP
RIVERVIEW	41.04	142.0	7	40A	-1	13	52	2			9	19	PP
MATUSIRO	41.97	19.5	7	48K	0	13	57	-6			10	5	
LANCHOW	42.30	337.8	7	52A	1	14	9	1					
PEKING	43.02	353.3	7	57	0	14	13	-6					
VISHAKHAPTNM	43.38	299.6	8	1K	1	14	29	5					

LHASA	43.91	319.6	8	5A	1							
BOKARO	44.18	308.9	7	42	-24	14	24	-12			10	9
PAOTOW	44.62	346.9	8	9	-1	14	35	-7				
KOUMAC	44.69	116.5	9	11A	61							
CHATRA	44.81	313.4	8	13K	2	14	44	-1			9	57 PP
TARRALEAH	44.91	154.3	8	14K	2							
MIZUSAWA	45.30	20.9									12	23
MOORLANDS	45.34	153.8	8	17K	1							
FORT NELSON	45.81	154.1	8	20K	1	15	7	8				
VLADIVOSTOK	46.61	9.9	8	23	-3							
NOUMEA	47.14	118.0	8	30K	0							
PORT VILA	47.65	111.4	8	35K	1							
POONA	52.03	296.1	9	6	-1							
ULAN-BATOR	52.29	347.1	9	7	-2	16	31	2				
Y.-SAKHLINSK	52.87	17.6	9	8	-6							
BOMBAY	53.07	296.1									16	42
NEW DELHI	53.23	309.2	9	14A	-2	16	44	2			10	20 PCP
DEHRA DUN	53.43	311.5	9	19	1	17	54	69			12	28 PPP
LAHORE	56.82	310.9	9	42	0							
IRKUTSK	56.95	347.1	9	46	3	17	35	3				
SUVA	57.18	109.7				17	45	9			11	0
MACQUARIE I.	59.57	156.1	10	2	0							
KARAPIRO	59.95	132.8	10	4	0						10	52
WARSAK DAM	60.03	312.2	10	7	2							
CHATEAU	60.43	134.1	10	7	0							
WELLINGTON	60.72	136.6	10	8	-1						11	4
ALMATA	61.27	323.8	10	13	0	18	26	-2				
TUAI	61.44	133.2	10	13	-1							
QUETTA	62.01	306.4	10	16A	-2	18	33	-4			12	38 PP
FRUNSE	62.42	322.3	10	19A	-2							
ANDIJAN	62.73	319.3	10	22	-1	18	50	4				
NAMANGAN	63.30	319.2	10	26	-1	18	59	5				
PETROPAVLOVK	63.55	23.7	10	18	-10							
SEMIPALATNSK	64.02	331.6	10	31	0							
STALINABAD	64.10	315.7	10	30	-2							
YAKUTSK	64.96	4.0	10	38	1							
TASHKENT	65.04	318.5	10	37	-1							
AFIAMALU	66.14	103.9	10	46K	1							
MAGADAN	66.19	15.5	10	48	3	19	38	9				
MIRNY	66.76	192.2	10	48	-1	19	39	3				
TANANARIVE	74.47	251.3	11	37K	2							
CAPE HALLETT	75.47	166.4	11	41A	0	21	21	4			26	14 SS
MAWSON	76.02	199.8	11	45K	1	21	28	5	11	51		
TEHERAN	76.14	307.7	11	45	0	21	25	1				
SVERDLOVSK	77.24	330.3	11	50	-1							
SCOTT BASE	78.53	171.3	11	59A	1							
MAKHACH-KALA	80.74	314.2	12	7	-3							
GORIS	80.88	310.6	12	10	-1							
TIFLIS	82.44	312.5	12	20A	1							
HAWAII V.OB.	83.99	70.2	12	30	3							
SOTCHI	86.44	313.8	12	39	0							
SOUTH POLE	87.17	180.0	12	39	-4							
KSARA	88.44	303.8	12	50	1	23	48	19			16	26 PP
KHEYS	88.69	351.5	12	50	0	23	36	5				
MOSCOW	89.22	325.7	12	59	7	23	37	1				
SIMFEROPOL	90.57	314.8	12	59	0							
HELWAN	92.08	299.6	13	7	1	23	40	-21				
APATITY	92.11	337.4	13	4	-2							
BULAWAYO	92.31	249.8	13	7A	0							
COLLEGE	92.59	25.3	13	8	0							
BROKEN HILL	92.82	255.5	13	10	1							
LWIRO	93.19	267.6	13	12	1							
PULKOVO	93.35	329.6	13	10	-2							
ISTANBUL KA.	94.15	310.8	13	15	0	23	51	-28			16	56 PP
KISHINEV	94.31	316.8	13	11	-5							
KAJAANI	94.48	333.9	13	17	0							
SODANKYLA	94.73	337.3	13	19A	1							
NURMIJARVI	96.15	330.4	13	23	-1							
BUCHAREST	96.28	314.2									17	20
KIRUNA	97.04	338.0	13	28	0	24	4	3			24	47 S
LWOW	97.39	319.7	13	31	1	24	54	52				
UPPSALA	99.72	330.3	13	34	-6	24	17	3			25	5 S
NIEDZIKA	99.83	319.5	13	41	0						14	47
SKALSTUGAN	101.29	334.6	13	51	3							
COPENHAGEN	103.36	326.8	14	9	12	24	39	8			18	11 PP
PRUHONICE	103.43	320.7									18	16 PP
COLLMBERG	104.11	322.3	14	1	1						18	23 PP
LJUBLJANA	104.22	316.8									18	19 PP
KASPERSKE H.	104.23	320.0									18	29 PP

MESSINA	104.76	308.7						18	25	
TRIESTE	104.83	316.5				24	43	5		
ROME	106.46	312.8				24	53	8	19	5 PP
STUTTGART	107.07	320.4	14	15	777				18	43 PP
STRASBOURG	108.08	320.5				24	52	0	18	53 PP
DE BILT	108.54	324.5				25	0	6	28	22 PS
DURHAM	111.18	328.9	14	41	-228				18	41
KEW	111.94	325.3							19	3 PP
EUREKA	116.11	47.0	18	19	-19					
TOLEDO	119.02	314.7							36	17 SS
FLAMING GRGE	120.22	43.3	18	48	2					
WICHITA MTS.	130.68	45.1	19	7	1				21	21 PP
FAYETTEVILLE	132.92	40.9				25	54	-21	23	50 PKS
PALISADES	139.36	18.7							22	59 PKS
HUANCAYO	157.20	130.8	20	18	27					
LA PAZ	158.27	152.6							24	10 PP
CHINCHINA	162.19	82.7	20	0	4				24	30 PP
BOGOTA	163.76	83.3							31	31 SKKS
FUQUENE	163.99	80.1	20	9	11				24	43 PP

AUGUST 11 23.H 11.M 46.S EPICENTRE 41.66 142.18 DEPTH= 71.KM

A=-0.59190 B= 0.45953 C= 0.66218 D= 0.6132 E= 0.7899
G=-0.5230 H= 0.4061 K=-0.7493 HT= -2.3

DEPTH OF FOCUS= 0.006R

SE= 3.21

	DELTA DEG.	AZ. DEG.	P M	S	O-C S	S M	S	O-C S	*PP M	S	SUPP. M	S
URAKAWA	0.67	42.3	0	10	-6	0	22	-6				
HIROO	1.06	53.6	0	20	0	0	36	1				
TOMAKOMAI	1.07	335.7	0	20	0	0	38	3				
HAKODATE	1.07	278.6	0	19K	-1	0	34	-1				
MURORAN	1.11	307.0	0	19K	-1	0	33	-3				
HATINOHE	1.23	203.6	0	21	-1	0	35	-4				
MORI	1.28	290.8	0	23K	0	0	37	-3				
AOMORI	1.34	232.0	0	20	-4	0	38	-3				
OBIHIRO	1.47	30.7	0	28	3	0	49	5				
SAPPORO	1.54	336.8	0	26K	0	0	45	-1				
SUTTSU	1.84	309.0	0	31	1	0	52	-1				
MIYAKO	2.01	184.5	0	30	-2	0	54	-3				
MORIOKA	2.10	201.7	0	33	-1	0	55	-4				
KUSIRO	2.11	50.6	0	33	-1	1	0	1				
ASAHIGAWA	2.13	3.8	0	39	5	1	2	2				
RUMOE	2.33	350.1	0	38	1	1	5	0				
AKITA	2.50	219.9	0	40	1	1	10	1				
MIZUSAWA	2.65	197.9	0	44	3	1	16	3				
ABASHIRI	2.82	32.5	0	48	4							
NEMURO	3.02	55.3	0	45	-2	1	19	-3				
SAKATA	3.29	213.8	0	51	1							
ISINOMAKI	3.29	191.8	0	48	-2	1	29	0				
SENDAI	3.52	196.6	0	53	0	1	41	7				
YAMAGATA	3.68	203.0	0	55	-1	1	37	-1				
HUKUSIMA	4.12	199.2				2	5	15				
NIIGATA	4.44	213.8				1	54	-4				
AIKAWA	4.73	221.0	1	42	32							
SHIRAKAWA	4.78	199.1	1	10	-1							
ONAHAMA	4.80	192.3	1	24	13							
Y.-SAKHLINSK	5.38	4.0	1	19	0	2	16	-4				
UTUNOMIYA	5.41	200.1				2	28	7	1	44		
MITO	5.44	194.7	1	19	-1	2	32	10				
KAKIOKA	5.64	196.7	1	15	-8	2	30	3				
TUKUBASAN	5.67	197.3	1	20	-3				2	34		
MAEBASI	5.78	205.7	1	43	18							
NAGANO	5.86	213.1	1	30	4							
WAZIMA	5.91	225.4	1	32	6							
KUMAGAYA	5.92	202.5	1	29	2	2	32	-2				
MATUSIRO	5.97	212.4	1	26	-1	2	38	3				
TYOSI	6.02	190.3	1	45	17							
OIWAKE	6.02	209.1	1	37	9	2	43	6				
TITIBU	6.16	204.1				2	45	7				
TOKYO C.M.O.	6.26	198.4				2	45	2				
YOKOHAMA	6.53	198.5				2	56	6				
KOHU	6.61	206.5	1	48	12							

HUNATU	6.70	204.5								2	20
MISIMA	7.00	202.2				2	57	-4			
IIDA	7.01	210.4	1	48	6						
NAGOYA	7.66	213.9	1	51	0	3	23	6			
OMAESAKI	7.70	205.1				3	3	-16			
VLADIVOSTOK	7.75	284.3	1	51	-1						
HIKONE	7.89	218.0	2	14	20						
MAGADAN	18.70	13.8	4	31	16						
YAKUTSK	21.72	344.0	4	44	-2						
SEMIPALATNSK	42.73	303.7	7	50A	-1						
SHILLONG	44.23	265.0	8	2K	-2						
COLLEGE	44.91	34.6	8	10	1						
KHEYS	48.26	347.4	8	36	1						
SVERDLOVSK	52.14	316.5	9	4	-1						
LAHORE	54.12	282.6	9	21	1						
RESOLUTE	57.99	15.3	9	46	-1						
QUETTA	60.22	285.3	10	1	-2						
SODANKYLA	60.95	336.5	10	7A	-1				10	31	
KIRUNA	62.42	338.6	10	16	-1						
KAJAANI	62.72	333.2	10	19A	0						
PENTICTON	64.48	45.9	10	30	-1						
NURMIJARVI	66.16	331.3	10	40A	-2				11	5	
SKALSTUGAN	67.84	338.2	10	51	-1						
HUNGRY HORSE	68.03	44.3	10	55	2						
UPPSALA	69.08	333.6	10	58	-2				11	21	
EUREKA	72.53	52.6	11	10	-11						11 29
WOODY	73.16	57.1	11	25	1				11	43	
COPENHAGEN	74.07	333.1	11	29	-1						
FLAMING GRGE	75.37	48.0	11	38	1						
NIEDZIKA	75.92	325.1	11	42	2						12 21
ABERDEEN	77.06	341.0									28 24
COLLMBERG	77.39	330.1	11	49	0						14 44 PP
PRUHONICE	77.86	328.5	11	52A	1						12 12
KASPERSKE H.	78.92	328.5	11	57	0						12 17
STUTTGART	80.85	330.6	12	7	0						
WICHITA MTS.	85.76	46.1	12	34	2						12 54

AUGUST 11 23.H 33.M 51.S EPICENTRE 42.91 145.47 DEPTH= 45.KM
A=-0.60530 B= 0.41643 C= 0.67838 D= 0.5668 E= 0.8239
G=-0.5589 H= 0.3845 K=-0.7347 HT= -2.8

DEPTH OF FOCUS= 0.002R

SE= 2.17

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
NEMURO	0.43	10.5	0	12K	1	0	18	-2				
KUSIRO	1.07	273.7	0	15K	-5	0	25	-8				
ABASHIRI	1.41	322.4	0	24	0	0	41	0				
OBIHIRO	1.67	271.1	0	28K	1	0	48	0				
HIROO	1.71	249.1	0	29	1	0	50	1				
URAKAWA	2.13	250.0	0	33	-1	1	2	3				
ASAHIGAWA	2.42	292.1	0	40	2	1	16	9				
TOMAKOMAI	2.88	265.7	0	46	2	1	19	1				
KURILSK	2.89	35.9	0	47	2	1	19	0				
RUMOE	2.99	291.6	0	48K	2	1	23	2				
SAPPORO	3.03	274.4	0	48K	1	1	21	-1				
MURORAN	3.37	261.4	0	53K	2	1	29	-2				
HAKODATE	3.66	254.1	0	57A	2	1	38	0				
WAKKANAI	3.71	313.9	0	57	1	1	43	4				
MORI	3.71	259.1	0	57K	1							
HATINOHE	3.79	232.5	0	58	1	1	40	-1				
SUTTSU	3.86	270.1	0	59	1	1	33	-10				
AOMORI	4.08	240.8	1	2	1	1	43	-6				
MIYAKO	4.19	220.2	1	2A	-1	1	44	-7				
Y.-SAKHLINSK	4.55	335.5	1	7	-1	2	7	7				
MORIOKA	4.56	226.7	1	8A	0	1	55	-6				
MIZUSAWA	5.00	222.5	1	15	1	2	6	-6				
AKITA	5.15	233.6	1	19	3	2	16	1				
ISINOMAKI	5.48	216.6	1	20A	-1	2	17	-7				
SENDAI	5.80	218.4	1	25	0							
SAKATA	5.86	228.7	1	27	1							
YAMAGATA	6.07	221.7	1	28A	-1	2	33	-5				
HUKUSIMA	6.42	218.2	1	34K	0	2	43	-4				
UGLEGORSK	6.61	340.2	1	37	0	2	59	7				

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ONAHAMA	6.91	212.1	1	35	-6	2	53	-6			
NIIGATA	6.99	226.7	1	43	1	3	1	0			3 54
SHIRAKAWA	7.05	216.6	1	43	0	2	56	-7			
AIKAWA	7.36	230.8	1	48	1						
MITO	7.58	212.3	1	48K	-2	3	8	-8			
UTUNOMIYA	7.68	216.0	1	49	-3	3	9	-9			
KAKIOKA	7.82	213.2	1	50	-4	3	10	-12			
TUKUBASAN	7.86	213.6	1	51	-3	3	14	-9			
TAKADA	8.02	226.1	1	57	1						
TYOSI	8.02	208.0	1	53	-3	3	18	-9			
MAEBASI	8.16	219.3	1	58	0	3	27	-3			
KUMAGAYA	8.23	216.9	1	57K	-2	3	27	-5			
NAGANO	8.37	224.3	2	3	2						
HONGO	8.44	213.4	1	58	-4						3 29
OIWAKE	8.47	221.4	2	5	2	3	42	4			
MATUSIRO	8.47	223.7	2	2A	-1	3	35	-3			
TOKYO C.M.O.	8.47	213.4				3	30	-8			2 20
TITIBU	8.50	217.6	2	5	2	3	32	-7			
WAZIMA	8.58	232.8	2	4	0						
YOKOHAMA	8.73	213.1	2	19	13	3	37	-7			
TOYAMA	8.88	228.5	2	7	-1						
KOHU	9.00	218.8	2	12	2	3	48	-3			
HUNATU	9.04	217.3	2	24	13	3	49	-3			
AJIRO	9.28	214.4	2	11	-3	3	48	-10			
MISIMA	9.28	215.3	2	13	-1	3	47	-11			
OSIMA	9.41	212.3	2	11	-5	3	51	-10			
IIDA	9.46	221.3	2	10	-6						
SHIZUOKA	9.65	217.1				4	2	-5			
VLADIVOSTOK	9.95	275.8	2	23	0	4	17	3			
OMAESAKI	10.04	216.7									2 50
NAGOYA	10.17	223.3	2	24	-2	4	16	-4			
TSURUGA	10.27	228.2	2	27	0						
HIKONE	10.46	226.2	2	30	0	4	23	-4			
SEVERO-KUR.	10.64	39.5	2	33	1						4 46
KAMEYAMA	10.67	224.0	2	46	13						
OKHA	10.78	351.9	2	35	1						4 43
KYOTO	10.93	227.1	2	36	0	4	31	-7			
TOYOOKA	11.07	231.8	2	38	0	4	35	-7			
ABUYAMA	11.13	227.1	2	38	-1						
NARA	11.13	225.6	2	46	7						
OSAKA	11.32	226.5	2	37	-5						
TAKAMATU	12.37	229.9	2	54	-2						
PETROPAVLOVK	13.40	36.5	3	10	1						5 50
OOITA	14.56	233.0	3	24	-1						
CHANGCHUN	14.70	280.5	3	24A	-2						
KUMAMOTO	15.39	234.0	3	43	8						
UNZENDAKE	15.72	234.8									3 1
MAGADAN	16.98	9.3	3	53	-3						7 15 SS
YAKUSIMA	17.25	228.8	4	1	2						
YAKUTSK	21.30	339.4	4	41	-4	8	29	-5			
PEKING	22.10	272.5	4	52A	-1	8	49	1			
ZO-SE	22.62	246.6	4	58	0	9	11	13			
NANKING	23.69	251.6	5	8	0	9	26	9			
PAOTOW	26.43	277.1	5	33A	-1	10	11	8			
ULAN-BATOR	27.33	294.0	5	40	-2	10	16	-1			
SIAN	29.67	265.4	6	4A	1	11	10	15			
LANCHOW	32.61	272.1	6	30A	1	11	39	-2			
HONG KONG	33.14	241.7	6	36	2	12	9	20	6	53	
CHENGTU	35.05	263.5	6	50A	0						
MANILA	35.08	224.1	6	56	5	12	15	-4			
KUNMING	39.14	257.0	7	25A	0	13	30	9			
COLLEGE	42.48	35.5	7	53	1						
NHATRANG	43.79	236.7	8	5	2	14	35	5			
TOCKLAI	43.96	265.4	8	14	10						
SEMIPALATNSK	44.08	303.4	8	5	0						
SHILLONG	46.77	266.2	8	25K	-2						
CHITTAGONG	48.72	262.8	8	39	-3	15	39	-1			
CHATRA	49.50	270.9	8	48A	0						
FRUNSE	50.45	295.7	8	55	0						
SVERDLOVSK	52.92	316.7	9	12	-2						
DEHRA DUN	54.22	280.2	9	23	0						
TASHKENT	54.67	296.3	9	26	0	17	1	-1			
KHOROG	55.06	291.2	9	29	0						
PORT BLAIR	55.11	251.9									11 13
RESOLUTE	56.12	16.2	9	36	-1						
LAHORE	56.22	283.6	9	38	0						
WARSAK DAM	56.86	287.6	9	41	-1						
APATITY	58.64	335.4	9	52	-3						

THULE	59.01	8.8	9	55	-2						
VICTORIA	60.18	50.0	10	6K	1						
SODANKYLA	60.77	337.1	10	8A	-1						
PENTICTON	61.85	47.7	10	15	-2						
KIRUNA	62.13	339.4	10	17A	-2					10	42
QUETTA	62.23	286.5	10	18A	-1						
CORVALLIS	62.40	53.7	10	21	1						
KAJAANI	62.68	334.0	10	21A	-1						
POONA	64.27	271.9	10	32A	-1						
MOSCOW	64.40	323.3	10	32	-1	19	2	-5			
PULKOVO	64.72	329.6	10	35	0						
SHASTA	65.18	56.8	10	40	2						
HUNGRY HORSE	65.41	46.2	10	40	0						
MINERAL	65.87	56.8	10	44K	1						
NURMIJARVI	66.21	332.3	10	43A	-2	19	25	-4			
BERKELEY	66.94	59.3	11	3A	13						
RENO	67.45	56.6	10	18	-35						
SKALSTUGAN	67.56	339.3	10	52A	-2					11	17
LICK	67.65	59.4	10	55	1						
BOZEMAN	68.68	47.1	12	2	61						
UPPSALA	69.02	334.7	11	1A	-2						
FRESNO	69.16	58.9	11	17	13						
TEHERAN	69.39	299.9	11	6	1						
TIFLIS	69.64	308.3	11	7A	1	20	12	2			
EUREKA	69.82	54.6	10	57	-11					11	56
GORIS	70.16	305.7	11	10A	0	20	19	3		15	23 PPP
PASADENA	71.84	60.2	11	20	0						
BERGEN	72.02	340.5	11	20	-1						
GOTEBORG	72.49	335.9	11	22A	-2						
FLAMING GRGE	72.70	50.0	11	26	1						
BOULDER CITY	72.76	56.8	11	27	2						
REYKJAVIK	72.84	354.2	11	27A	1						
SIMFEROPOL	73.28	316.3	11	28A	0	20	52	0			
RAPID CITY	73.88	44.3	11	34	2						
COPENHAGEN	74.03	334.5	11	32A	-1					11	56 PCP
GLEN CANYON	74.07	54.3	11	34	1						
KISHINEV	74.38	320.6	11	35	0						
LWOW	74.42	325.0	11	35	0	21	5	0		11	54 PCP
IASI	74.83	321.4	11	37	0						
KRAKOW	75.92	327.3	11	43	0					12	2 PCP
CHORZOW	76.10	327.9	11	43	-1					11	56 PCP
RACIBORZ	76.58	328.2	11	47	0				11 52	11	59 PCP
COLLMBERG	77.49	331.7	11	52A	0					12	4 PCP
BUCHAREST	77.59	320.3	11	51	-2						
HALLE	77.69	332.4	11	53	0	21	40	-1			
TUCSON	77.71	57.4	11	56	3						
ADELAIDE	77.75	185.7	11	55K	1						
CANBERRA	77.92	177.1	11	57A	2						
PRUHONICE	78.03	330.1	11	55A	0						
JENA	78.29	332.2	11	56	-1					13	36
MUNSTER	78.70	335.0	11	59	0						
ISTANBUL UN.	78.70	316.3	11	59	0						
DURHAM	78.72	341.3	11	57K	-2				12 15		
VIENNA-H.	78.76	328.1	12	1A	2						
KASPERSKE H.	79.09	330.1	12	2A	1					14	28
MUNDARING	79.20	205.0	12	3	1						
BENSBERG	79.71	334.7	12	4A	0						
SOFIA	80.20	320.7	13	7	60				13 32		
HEIDELBERG	80.56	333.0	12	9	0						
STUTTGART	80.92	332.4	12	11A	0						
TUBINGEN	81.19	332.4	12	12	0						
LJUBLJANA	81.29	327.9	12	13A	0					12	46
KEW	81.42	339.2	12	14	1					12	39
EBINGEN	81.53	332.2	12	14	0						
EBINGEN	81.53	332.2	11	14	-60						
STRASBOURG	81.59	333.1	12	15	1					12	26 PCP
RAVENSBURG	81.65	331.7	12	14	-1						
TRIESTE	81.92	328.1	12	16	0						
BASLE	82.56	332.7	12	20A	1						
PARIS	83.04	336.4	12	23	1					12	34 PCP
WICHITA MTS.	83.11	48.3	12	23	1					15	43 PP
ATHENS	83.68	317.5	12	23	-2						
GARCHY	84.23	335.3	12	27	-1					12	38 PCP
FAYETTEVILLE	84.42	44.6	12	29	0						
FLORENCE X.	84.46	328.6	12	29	0						
SHAWINIGAN	84.68	25.4	12	33A	3						
OTTAWA	84.73	27.8	12	30	0						
TARRALEAH	84.83	179.3	12	34	3						

KARAPIRO	84.98	156.6	12 35	3			
MOORLANDS	84.98	178.7	12 34K	2			
FORT NELSON	85.47	178.6	12 36K	2		12 50	
CLERMONT-FD.	85.57	334.6	12 36	2			
ISOLA	85.66	331.4	12 35	0			
HELWAN	85.69	307.4	12 36	1			
BAGNERES	88.92	335.4	12 53	2			
CARACAS	119.16	37.1	18 40	-4			
BROKEN HILL	119.43	277.7	18 48	4			
SCOTT BASE	121.20	174.8	18 54	6			
BULAWAYO	122.96	272.5	18 53A	2			
MAWSON	126.18	208.1	18 59A	1		19 12	
SOUTH POLE	132.72	180.0	19 11	1			

AUGUST 13 6.H 0.M 58.S EPICENTRE 24.44 121.84 DEPTH= 0.KM

A=-0.48080 B= 0.77429 C= 0.41148 D= 0.8495 E= 0.5275
G=-0.2171 H= 0.3496 K=-0.9114 HT= 3.5
SE= 2.27

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
HWALIEN	0.51	203.0	0 13K	-1	0 18	-6		
TAIPEI	0.65	333.7	0 17A	1	0 28	1		
HSINCHU	0.87	294.4	0 17	-2	0 29	-4		
TAICHUNG	1.10	254.8	0 23	0	0 39	0		
YUSHAN	1.26	220.5	0 22	-3	0 47	4		
ALISHAN	1.32	226.2	0 24	-2	0 31	-13		
HSINKONG	1.40	197.9	0 28	1	0 47	1		
TAITUNG	1.80	200.7	0 30	-3	0 57	0		
TAINAN	2.06	226.2	0 38	2	0 46	-17		
TAWU	2.25	202.7	0 43	4	1 15	7		
PENGHU	2.28	247.0	0 38	-2	0 53	-16		
HENGCHUN	2.63	202.6	0 48K	3	1 24	6		
ZO-SE	6.66	355.1	1 38	-4				
HONG KONG	7.36	254.7	1 49	-2	3 31	14		
CANTON	7.90	261.9	1 57	-2	3 28	-2		
NANKING	8.05	341.1	1 57	-4	3 25	-9		
BAGUIO CITY	8.07	188.6	2 1	0	3 27	-7		
MANILA	9.75	184.3	2 25	0	4 22	6		
SIAN	14.90	313.9	3 37	3	6 35	14		
PEKING	16.26	344.3	3 52	1	7 3	11		
CHENGTU	16.97	295.3	3 59	-1	7 20	11		
KUNMING	17.36	276.2	4 7A	2	7 31	13		
MATUSIRO	18.53	45.6	4 22	2	7 51	7		
PAOTOW	18.89	331.2	4 26K	2	8 8	15		
CHANGCHUN	19.55	7.5	4 33K	1	8 15	8		
VLADIVOSTOK	20.39	21.5	4 43	2				
GUAM	24.22	112.6	5 19	0				
TOCKLAI	24.50	281.2						6 26
ULAN-BATOR	26.26	336.9	5 40	1	10 7	-3		
SHILLONG	27.16	278.7	5 47A	0	10 27	2		
LHASA	27.87	287.5	5 56	3				
Y.-SAKHLINSK	28.03	31.3	5 57	2				12 44 SSS
IRKUTSK	30.83	338.8	6 21	1	11 25	2		
LEMBANG	34.03	205.8	6 45	-3				
DEHRA DUN	39.14	288.6						21 25
NEW DELHI	39.99	285.9	7 37K	-1				
PORT MORESBY	41.73	140.7	7 52	0	13 54	-16	8 6	
FRUNSE	42.77	307.3	8 4	3	14 28	2		
KHOROG	44.57	299.3	8 19	3				
TASHKENT	46.53	304.5	8 33	2				
TIKSI	47.39	3.0	8 35	-3				
QUETTA	48.72	289.5	8 48	0	15 52	1		
CHARTERS TS.	50.25	149.6	8 58	-2				
SVERDLOVSK	54.19	323.6	9 28	-2				
ASHKABAD	55.00	300.3	9 36	0				
ADELAIDE	61.22	164.2	10 16K	-3				11 4 PCP
KHEYS	61.84	350.4	10 20	-3				12 42 PP
CANBERRA	64.77	155.6	10 44	1				
TIFLIS	64.80	306.3	10 45	2				
MELBOURNE	65.65	160.0	10 53	5				
MOSCOW	66.96	322.3	10 54	-3				
APATITY	67.07	335.4	10 55	-2				
COLLEGE	68.30	27.4	11 3	-2				
SODANKYLA	69.67	335.7	11 11	-3				

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KAJAANI	70.08	332.2	11 17	1								
TARRALEAH	70.20	160.8	11 32	15								
MOORLANDS	70.55	160.4	11 33K	14								
FORT NELSON	71.04	160.5	11 25K	3					11 36			
SIMFEROPOL	71.61	311.6	11 30	5	20 49	5						
KIRUNA	71.80	336.9	11 24	-2								
NURMIJARVI	72.47	329.0	11 26	-4								
UPPSALA	75.98	329.7	11 53	2								
SKALSTUGAN	76.61	334.3	11 59	5								
HELWAN	78.65	297.6	12 6	1								
NIEDZIKA	78.89	319.3	12 6	-1							12 34	
KARAPIRO	79.93	139.7	12 11	-1								
CHATEAU	80.78	140.6	12 16	-1								
COLLMBERG	82.21	323.2	12 28	4							13 31	
KASPERSKE H.	82.95	321.1	12 29	1								
VICTORIA	86.92	37.2	12 47	-1								
PENTICTON	88.50	35.1	12 54	-2								
CORVALLIS	89.20	40.4	12 58	-1								
BANFF	89.41	32.0	12 59	-1								
SHASTA	91.95	43.2	13 11	-1								
HUNGRY HORSE	91.98	33.5	13 11	-1								
MINERAL	92.64	43.2	13 14K	-1								
RENO	94.23	43.0	13 50	28								
BUTTE	94.27	34.6	13 22	0								
BOZEMAN	95.29	34.2	13 27	0								
EUREKA	96.62	41.3	13 31	-2							17 33	PP
WOODY	97.12	45.7	13 33	-2								
FLAMING GRGE	99.43	36.8	13 44	-2								
SOUTH POLE	114.30	180.0	18 47	5								
TRINIDAD	144.98	5.6	19 38	-1								
HUANCAYO	159.59	55.9	20 41	41								

AUGUST 14 18.H 50.M 51.S EPICENTRE -24.29-175.77 DEPTH= 21.KM

A=-0.91001 B=-0.06733 C=-0.40909 D=-0.0738 E= 0.9973
G= 0.4080 H= 0.0302 K=-0.9125 HT= 3.6

SE= 2.93

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S	
RAOUL ISLAND	5.30	200.8	1 19	-1	2 19	-3			
SUVA	8.16	317.4							
ONERAHI	14.26	214.4	3 33	10					
KARAPIRO	15.49	206.6	3 33	-6					
TUAI	15.66	200.9	3 41	0	6 22	-13			
PORT VILA	16.22	290.7	3 52A	4					
NOUMEA	16.46	273.3	3 55	4	7 12	19			
CHATEAU	16.58	204.3	3 52	-1	6 54	-2			
TONGARIRO	16.59	204.3	3 52	-1				6 49	
WELLINGTON	18.69	202.7	4 15	-4	7 29	-15			
KOUMAC	18.81	277.4	4 23K	2	7 49	2			
COBB RIVER	19.31	207.1			7 43	-15			
KAIMATA	21.05	207.2	4 55	10	8 18	-16			
GEBBIES PASS	21.57	203.3	4 51	1	8 29	-14			
HONIARA	27.47	298.4	5 44	-3					
BRISBANE	28.44	257.0	5 53	-2	10 31	-9			
RIVERVIEW	30.33	244.1	6 11	-1				7 10	PP
CANBERRA	32.33	241.9	6 29	-1				7 43	PP
CHARTERS TS.	35.33	269.2	6 55	-1	12 27	-1			
MOORLANDS	35.49	230.2	6 57K	0			7 10		
TARRALEAH	35.96	230.7	7 3K	2					
MELBOURNE	35.97	238.5	7 1	0			7 15		
PORT MORESBY	38.31	286.3	7 20	-1				9 35	
ADELAIDE	40.66	244.0	7 39A	-1					
HAWAII V.OB.	47.83	26.5	8 37	-1	15 46	13			
KIPAPA	48.61	22.2	8 43	-1					
CAPE HALLETT	48.69	185.7	8 47A	2	15 54	9			
DARWIN	51.78	273.2	9 6	-2					
SCOTT BASE	54.26	184.5	9 28A	1			9 46	11 46	PP
MUNDARING	59.62	246.0	10 4	-1					
MIRNY	68.47	205.5	11 2	-1	20 6	4			
MANILA	72.79	295.3	11 30	1				22 30	
TUKUBASAN	73.20	324.0	11 30	-1	20 57	0		21 45	SCS
MATUSIRO	74.47	323.0	11 37A	-2	21 11	0		26 2	SS
ABUYAMA	74.77	320.2	11 40A	0					

MAWSON	78.70	199.5	12	4K	2				12	43	
BRANNER	79.41	40.7	12	7	1						
BERKELEY	79.67	40.3	12	8K	0	22	14	7	27	18	SS
LICK	79.68	41.0	12	8K	0						
PASADENA	79.81	45.4	12	7	-1	22	14	5	27	15	SS
UKIAH	79.95	38.8	12	9	0						
PETROPAVLOVK	80.14	344.6	12	9	-1	22	13	1			
Y.-SAKHLINSK	80.26	332.6	12	11	0	22	18	4			
FRESNO	80.43	42.4	12	12K	0						
SHASTA	81.48	38.1	11	59K	-18						
ZO-SE	81.69	309.4	12	18A	0	22	29	0			
MINERAL	81.70	38.8									
RENO	82.21	40.3	11	45K	-36						
HONG KONG	82.31	298.5	12	23A	1	22	37	2			
VLADIVOSTOK	82.55	324.2	12	24	1						
BOULDER CITY	83.09	45.6	12	27	1						
CORVALLIS	83.62	34.8	12	31	3						
TUCSON	83.67	50.6	12	30	2						
NANKING	83.93	309.0	12	30A	0	22	53	2			
VICTORIA	86.27	31.8	12	40	-1						
TACUBAYA	86.27	66.9	12	40	-1				13	9	
CHANGCHUN	86.64	321.6	12	33A	-10						
MEDAN	87.41	275.1	12	47A	0				16	25	
SALT LAKE C.	87.79	43.1	12	50	1						
PENTICTON	88.67	32.9	12	52K	-1				21	48	
FLAMING GRGE	89.42	44.0	12	50	-7						
PEKING	90.02	314.6	13	0A	1	23	58	9	23	28	SKS
BUTTE	90.38	38.5	13	1	0						
HUNGRY HORSE	90.95	36.0	13	3	-1						
BOZEMAN	91.05	39.4	13	5	1						
COLLEGE	91.47	11.5	13	5	-1	24	2	0			
BANFF	91.87	33.1	13	7	-1						
LARAMIE	92.07	45.2	13	16	7						
SIAN	92.15	306.7	13	11A	2	24	18	10	23	43	SKS
KUNMING	92.88	296.1	13	15A	2	24	21	7	23	46	SKS
WICHITA MTS.	93.73	53.6	13	16K	-1	23	51	-31	17	6	PP
CHENGTU	94.25	301.6	13	21	2	24	34	8	23	52	SKS
PAOTOW	94.35	312.7	12	41	-38						
RAPID CITY	94.97	43.6	13	22	0						
LANCHOW	96.68	306.4	13	32	2	24	59	55			
FAYETTEVILLE	97.57	53.9	13	33K	-1						
SHILLONG	102.10	292.6	13	54	0						
LHASA	104.21	296.3	14	11	7						
PALISADES	114.16	54.3									
NEW DELHI	115.45	291.4							18	40	
KHEYS	119.47	351.3							20	34	PP
TASHKENT	123.99	304.5							20	40	PP
STALINABAD	124.16	301.2							19	0	PCP
QUETTA	124.53	290.9	19	1	3						
SVERDLOVSK	128.27	324.3	19	4	-1						
BULAWAYO	129.86	210.3	19	11	3						
APATITY	133.13	345.1									
TROMSOE	133.81	352.9	19	15	-1						
SODANKYLA	134.72	348.0	19	11	-6						
BROKEN HILL	134.80	214.1	19	20	2						
KIRUNA	135.32	351.3	19	17	-2				22	52	PKS
MAKHACH-KALA	139.95	308.6	19	34	7						
MOSCOW	140.20	330.9	19	34	7						
SKALSTUGAN	140.36	354.4	19	24	-4						
NURMIJARVI	141.13	344.0	19	23	-6						
GORIS	141.54	303.5	18	34	-56						
TIFLIS	142.20	307.4	19	29	-2						
UPPSALA	143.25	348.7	19	30	-3						
LWIRO	144.42	225.6	19	37K	2						
SOTCHI	145.18	312.4	19	36	0						
GOTEBORG	146.16	352.5	19	39	1						
COPENHAGEN	148.07	351.2	19	44	3						
SIMFEROPOL	148.19	317.8	19	46	5						
DURHAM	149.25	6.6	19	49K	6				20	4	PKP2
KISHINEV	150.00	325.3	19	53	9						
LWOW	150.20	333.8									
KSARA	150.85	296.3	19	56K	11				23	36	PP
WITTEVEEN	151.45	356.9	19	57	11						
KRAKOW	151.53	338.5	19	48	2				23	31	PKS
VRANCIOAIA	151.85	325.5	19	57	10				20	2	PKP2
RACIBORZ	152.05	340.6	19	49	2				20	2	PKP2
HALLE	152.19	349.6									
COLLMBERG	152.20	348.2									

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MUNSTER	152.24	355.5							
KEW	152.64	6.2	19	56	8				
JENA	152.81	349.8	19	53	5		23	45	PP
PRUHONICE	153.12	345.2	19	57	8		23	39	PP
BENSBERG	153.28	355.9							
ISTANBUL KA.	153.36	314.9	19	53	4		23	55	PP
BRATISLAVA	154.08	340.1	19	56	6		20	5	PKP2
KASPERSKE H.	154.14	345.8	19	50	0		23	45	PP
VIENNA-H.	154.23	341.1	19	51	1		23	56	PP
STUTTGART	155.25	352.0	19	52	1		20	22	
HELWAN	155.27	288.9							
FOLINIERE	155.29	7.5	20	18	27				
PARIS	155.49	2.8	19	11	-41				
STRASBOURG	155.60	354.3	20	21	29				
BANGUI	155.83	217.2	19	55	3		20	9	SPKP
LJUBLJANA	156.76	341.6	19	55	2		20	46	
BESANCON	157.05	356.9	20	9	15				
TRIESTE	157.34	342.5	19	55	1		20	27	PKP2
FLORENCE X.	159.73	345.2	20	13	16				
MONACO	160.43	353.1							
BAGNERES	160.97	9.2	19	55	-3		20	16	
ROME	161.15	340.6	20	12	14		24	43	PP
TOLEDO	162.96	22.2	19	56	-4		24	31	PP
GRANADA	165.51	25.8	21	8A	65		24	56	PP

AUGUST 14 22.H 5.M 6.S EPICENTRE 31.59 131.44 DEPTH= 70.KM

A=-0.56485 B= 0.63975 C= 0.52121 D= 0.7496 E= 0.6619
G=-0.3450 H= 0.3907 K=-0.8534 HT= 1.3

DEPTH OF FOCUS= 0.006R

SE= 4.36

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
MIYAZAKI	0.33	356.8	0	7K	-7	0	14	-9				
KAGOSIMA	0.76	269.1	0	11A	-6	0	31	1				
ASOSAN	1.35	346.6	0	22	-2	0	42	0				
KUMAMOTO	1.38	333.1	0	23A	-2	0	44	1				
YAKUSIMA	1.39	215.8	0	23	-2	0	43	0				
UNZENDAKE	1.52	318.8	0	26A	-1	0	48	2				
OOITA	1.65	5.2	0	25A	-3	0	44	-5				
NAGASAKI	1.75	311.1	0	28A	-2	0	54	3				
SIMIDU	1.76	47.0	0	29	-1	0	41	-11				
UWAZIMA	1.89	29.5	0	26	-5							
SAGA	1.92	330.1	0	31A	-1	0	59	4				
HUKUOKA	2.18	336.0	0	34A	-1	1	4	2				
SIMONOSEKI	2.40	349.8	0	34	-4	1	4	-3				
TOMIE	2.49	295.2	0	39	-1	1	25	16				
MATUYAMA	2.52	26.3	0	39	-1	1	14	4				
KOTI	2.64	41.4	0	43	1	1	24	11				
HIROSIMA	2.90	16.4	0	51	6	1	25	5				
ITUHARA	3.18	325.7	0	47	-2	1	27	0				
TAKAMATU	3.50	38.1	0	53	-1	1	41	7				
OKAYAMA	3.72	33.3	0	49	-8	1	29	-11				
SUMOTO	4.01	45.8	0	54	-7	1	50	3				
MATSUE	4.09	19.0	1	10	8	2	22	33				
WAKAYAMA	4.10	48.9									1	34
YONAGO	4.15	22.1	1	2	-1	2	2	11				
TOTTORI	4.53	29.5	1	6	-2	2	10	10				
OSAKA	4.59	47.2	1	14	5	2	28	26				
ABUYAMA	4.76	45.5	1	4A	-7							
NARA	4.80	48.9	1	22	10							
TOYOOKA	4.84	34.7	1	11	-1	2	19	11				
SAIGO	4.86	18.3	1	26	13	2	23	15				
KYOTO	4.96	45.2	1	4	-10	2	47	36				
KAMEYAMA	5.32	51.0	1	18	-1	2	21	1				
HIKONE	5.45	46.3	1	15	-6	2	58	35				
TSURUGA	5.60	42.4	1	22	-1							
NAGOYA	5.84	50.8	1	20	-6	2	22	-11				
GIHU	5.85	48.0	1	21	-5	2	23	-10				
HUKUI	5.97	40.5	1	27	-1						2	56
OMAESAKI	6.43	60.3	1	41	6							
IIDA	6.62	51.9	1	34	-3	3	34	42				
TAKAYAMA	6.64	45.1	1	25	-12							

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SHIZUOKA	6.73	58.1							2	35
TOYAMA	6.99	41.5	2	3	21	3	8	7		
MATUMOTO	7.15	47.6	1	42	-2					
KOHU	7.20	53.6	1	48	3	3	4	-2		
MISIMA	7.20	58.7	1	46	1					
HUNATU	7.26	55.5	1	46	0	3	7	-1		
AJIRO	7.28	59.6	1	39	-7					
MATUSIRO	7.48	46.8	1	41K	-8	3	11	-2	4	19
NAGANO	7.56	46.0	1	57	7				4	4
OIWAKE	7.57	49.4	1	47	-3				3	53
TITIBU	7.72	53.4	2	8	16					
TAKADA	7.87	43.8	2	7	13					
MAEBASI	7.95	50.8	1	44	-11				4	20
KUMAGAYA	8.02	53.3	2	12	16				3	58
TUKUBASAN	8.55	55.0	1	56	-8				5	10
UTUNOMIYA	8.57	52.4	2	6	2					
KAKIOKA	8.61	55.1	1	45	-20					
ZO-SE	8.79	269.5	2	6A	-1					
MITO	8.89	55.0	2	3	-5					
NIIGATA	8.89	42.6	2	17	9	4	55	67		
ONAHAMA	9.48	53.1	2	13	-3					
HUKUSIMA	9.64	47.9	2	19	0					
AKITA	10.74	38.5	2	14	-20					
NANKING	10.78	275.8	2	35A	1	4	47	13		
MIZUSAWA	10.91	43.7	2	42	6					
VLADIVOSTOK	11.52	1.7	2	41	-3	5	2	10		
MORI	12.78	32.3							3	7
CHANGCHUN	13.15	340.1	3	5A	-1	5	45	14		
PEKING	14.97	308.5	3	29A	0	6	27	13		
Y.-SAKHLINSK	17.68	26.1	3	56	-7	7	10	-5		
HONG KONG	17.94	243.2	4	4	-3	7	9	-12		
CANTON	18.16	246.7	3	10	-59					
SIAN	19.09	284.0	4	20A	0	8	11	24		
UGLEGORSK	19.23	21.6				7	48	-2		
MANILA	19.32	211.7	4	28	6	8	8	16		
PAOTOW	19.46	303.4	4	24	0	8	15	21		
LANCHOW	23.33	288.5	5	4A	1	9	20	13		
CHENGTU	23.48	275.0	5	5	1	9	26	17		
KUNMING	26.02	262.9	5	31	2	10	11	19		
KABANSK	27.33	325.7	5	43	2					
SHILLONG	35.13	270.3	6	47A	-2					
SEMIPALATNSK	42.03	311.9	7	45	-1					
PORT MORESBY	43.44	157.1	7	57	-1					
DEHRA DUN	45.42	283.0							25	31
FRUNSE	45.84	300.9	8	18	1					
NEW DELHI	46.63	281.0	8	23K	0				15	29
WARSAK DAM	49.78	289.7	8	50	2					
TASHKENT	49.98	299.6	8	49	0					
SVERDLOVSK	53.87	320.0	9	17	-2					
QUETTA	54.62	286.6	9	24A	0					
KHEYS	56.35	349.1				17	19	-1		
COLLEGE	58.00	29.8	9	46	-2				10	18
APATITY	64.17	335.0	10	38	9					
MOSCOW	66.57	322.0	10	43	-2					
SODANKYLA	66.66	336.0	10	43	-3					
GORIS	67.27	303.3	10	51A	1					
TIFLIS	67.48	306.0	10	51	0					
KIRUNA	68.53	337.6	11	3	6	20	3	10		
RESOLUTE	69.77	11.8	11	4	-1					
NURMIJARVI	70.67	329.9	11	9	-2					
SKALSTUGAN	73.73	336.0	11	35	6					
UPPSALA	73.98	331.3	11	37	7					
GOTEBORG	77.62	331.4	11	59	8					
PENTICTON	77.71	39.3	11	50	-1					
ISTANBUL KA.	78.30	311.0	11	52	-2					
KARAPIRO	80.47	146.1	12	7	1					
SHASTA	80.92	47.7	12	9	0					
HUNGRY HORSE	81.26	37.9	12	11	1					
COLLMBERG	81.34	326.1	12	11K	0				12	20 PCP
PRUHONICE	81.44	324.4	12	15	4					
CHATEAU	81.48	146.9	12	20	9					
MINERAL	81.61	47.6	12	3	-9					
JENA	82.26	326.4	12	15	-1				12	42
KASPERSKE H.	82.47	324.1	12	16	-1					
BUTTE	83.50	39.1	12	21	-1					
LJUBLJANA	83.98	321.4	12	24	0					
BOZEMAN	84.54	38.7	12	27	0					
STUTTGART	84.82	325.8	12	28	0					
STRASBOURG	85.67	326.3				22	57	-1		

WOODY	86.06	50.2	12	34	-1							
ROME	87.81	319.2								22	8	
FLAMING GRGE	88.57	41.4	12	48	1							
RAPID CITY	89.69	36.0	12	53	1							
GLEN CANYON	89.88	45.5	13	4	11							
GRANADA	99.71	325.1	13	26	-12							

AUGUST 14 23.H 28.M 45.S EPICENTRE -20.36 169.32 DEPTH= 51.KM

A=-0.92204 B= 0.17385 C=-0.34587 D= 0.1853 E= 0.9827
G= 0.3399 H=-0.0641 K=-0.9383 HT= 4.6

DEPTH OF FOCUS= 0.003R

SE= 2.15

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
PORT VILA	2.78	339.9	0	45	2	1	21	5					
NOUMEA	3.30	233.7	0	47K	-4								
KOUMAC	4.73	266.7	1	7K	-4	1	58	-7					
SUVA	8.88	77.2	2	12	4								
HONIARA	14.14	318.9	3	21	2								
RAOUL ISLAND	14.57	129.9	3	45	20								
ONERAHI	15.98	164.9	3	48	5								
BRISBANE	16.66	242.0	3	50	-1	6	56	2					
KARAPIRO	18.32	164.2	4	11	-1						11	55	
AFIAMALU	19.16	73.4	4	20	-2	7	50	0					
CHATEAU	19.53	165.4	4	26	0	8	25	27					
TUAI	19.58	161.5	4	26	0	8	16	17					
COBB RIVER	20.86	172.7	4	41	1								
RIVERVIEW	20.97	226.5	4	42K	1						9	0	*SS
WELLINGTON	21.36	168.7	4	45K	0	8	40	6	5	7			
CHARTERS TS.	21.64	266.7	4	49	1	8	46	7					
KAIMATA	22.16	175.9	4	55	2								
RABAUL	23.17	311.6	5	3	0								
CANBERRA	23.28	225.9	5	5	1	9	17	8	5	22	6	41	
GEBBIES PASS	23.44	173.9	5	6	1								
PORT MORESBY	24.01	293.7	5	12	1	9	35	14					
MELBOURNE	27.37	225.3	5	43	1	10	23	6					
MOORLANDS	28.85	215.3	5	56K	0						9	6	PCP
FORT NELSON	29.10	214.4	5	57K	-1	10	47	2					
TARRALEAH	29.15	216.3	6	0	2						9	7	PCP
ADELAIDE	30.62	235.2	6	12A	0	11	11	2					
DARWIN	37.70	276.1	7	2	-10						14	10	
MUNDARING	48.63	244.9	8	40A	-1								
PERTH	48.95	245.0									9	1	
CAPE HALLETT	51.97	179.7	9	5K	-1	16	27	3	9	19	11	7	PP
HONOLULU	52.24	39.4	9	8	0	16	35	7					
KIPAPA	52.38	39.4	9	10	1								
HAWAII V.OB.	52.60	43.5	9	11	0	17	19	46					
SCOTT BASE	57.55	180.6	9	45A	-2						10	34	PCP
MANILA	58.82	302.4	9	59	3	17	59	4					
WILKES	59.16	203.7	9	55	-3	17	47	-13	10	19			
BAGUIO CITY	60.22	303.8	10	4	-1	18	16	2					
DJAKARTA	62.10	273.8	10	23	5	18	43	6					
TUKUBASAN	62.70	333.6	10	20	-2	18	46	1	10	45	11	0	PCP
ABUYAMA	63.60	329.3	11	27A	59								
MATUSIRO	63.77	332.4	10	27A	-2	19	1	3			23	4	SS
MIZUSAWA	64.80	336.0	10	38	2								
BYRD STATION	66.83	169.7	10	45	-4								
NHATRANG	67.40	293.3	10	54	2	19	36	-7					
HONG KONG	68.53	305.2	10	59	0	19	59	3					
ZO-SE	68.94	316.8	11	0A	-2	20	1	0					
NANKING	71.12	316.1	11	15A	0	20	28	2					
Y.-SAKHLINSK	71.23	341.1	11	15	-1	20	30	2					
VLADIVOSTOK	71.94	332.1	11	19	-1								
MEDAN	73.20	280.4	11	28A	1						12	35	
UGLEGORSK	73.27	341.7	11	27	-1	20	58	7					
PETROPAVLOVK	73.66	353.3	11	29	-1				11	51	16	3	PPP
CHANGCHUN	75.54	328.7	11	38A	-3								
KLYUCHI	76.71	355.2	11	47	-1								
HAWSON	77.43	202.1	11	50A	-2				12	4	13	11	
PEKING	77.85	321.1	11	53A	-1	21	47	6					
KUNMING	78.93	302.0	12	1A	1	21	58	5					
SIAN	79.04	312.8	12	1A	1	21	55	1					

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CHENGTU	80.67	307.5	12	9	0	22	15	4		
LANCHOW	83.52	312.1	12	25A	1	22	45	5		
ARGENTINE I.	85.45	160.1	12	33	0					
PARAISO	85.64	48.8	12	38	4					
STA. CRUZ C.	86.22	48.4	12	39	2					
BRANNER	86.30	47.9	12	40	2					
UKIAH	86.42	46.0	12	39	1					
BERKELEY	86.46	47.5	12	38A	0	22	58	-11	12 54	16 18 PP
LICK	86.64	48.2	12	39A	0					
CONCORD	86.64	47.5	12	41	2					
FRESNO	87.67	49.4	12	45	1					
PASADENA	87.67	52.3	12	43	-1	23	34	14		16 10 PP
SHASTA	87.75	45.0	12	44	-1					
YAKUTSK	87.94	342.5	12	43K	-3					
SHILLONG	87.96	298.1	12	45A	-1	23	26	3		
MINERAL	88.11	45.6	12	46A	0					
RENO	88.94	46.9	12	15	-35					
CORVALLIS	89.08	41.3	12	56	5					
BOULDER CITY	90.93	51.9	13	0	0					
VICTORIA	90.98	37.8	13	0K	0					
COLLEGE	91.09	16.9	12	40	-20	23	21	-31		
EUREKA	91.58	48.3	13	3	0				13 32	16 43 PP
IRKUTSK	91.67	326.1	13	2A	-1	23	52	-5		23 32 SKKS
CHATRA	92.34	297.6								14 8
VISHAKHAPTNM	92.44	287.9	13	19	12	24	13	10		17 4 PP
TUCSON	92.49	56.6	13	8	1					
PENTICTON	93.57	38.3	13	11	-1					27 23
GLEN CANYON	93.72	52.0	13	14	2					30 38 PKKP
TIKSI	95.83	348.1							17 37	
HUNGRY HORSE	96.50	40.8	13	25	0					17 21 PP
FLAMING GRGE	96.78	49.0	13	27	1					
BOZEMAN	97.36	44.1	13	31	2					
LARAMIE	99.62	49.6	17	44	245					
DEHRA DUN	101.05	298.3								18 3
NEW DELHI	101.25	296.3	13	47A	0					17 56
BOMBAY	102.24	285.7								24 25
WICHITA MTS.	102.96	57.6	13	55	1	24	22	-6		17 50 PP
FRUNSE	106.91	310.0								18 37 PP
QUETTA	110.31	295.6	18	25	-1					25 36 SKKS
LA PAZ	112.75	118.7	18	35	4				19 21	
KHEYS	113.39	350.4	18	33	1					19 25 PP
CHINCHINA	115.19	94.1	18	38	2	25	24	4		29 24 PS
BOGOTA	116.52	95.1								29 50 PS
SVERDLOVSK	117.02	324.2	18	40	1					29 38 PS
FUQUENE	117.13	94.3								19 49 PP
ASHKABAD	118.51	302.9	18	45	3					20 3 PP
HERMANUS	118.54	208.0								28 48 PKKP
OTTAWA	121.63	48.6	18	49	1					
PALISADES	123.08	53.7								20 36 PP
BREBEUF	123.10	48.4	18	51	0					
SHAWINIGAN	123.60	47.1	18	52	0					
BULAWAYO	124.33	226.1	17	54	-60					
CARACAS	125.12	91.3	18	56	1					20 45 PP
APATITY	125.32	340.9	18	56	1					
SODANKYLA	127.43	342.8	18	56	-3					
TROMSOE	127.56	347.4	18	59	-1					
SAN JUAN	127.87	82.2	19	1	1					
GORIS	127.91	304.7	19	3	3	26	1	0		22 33 PKS
BROKEN HILL	128.26	231.2	18	4	-57					
KIRUNA	128.67	345.5	19	2	0					21 1 PP
TIFLIS	128.86	307.6	19	4	2					21 13 PP
MOSCOW	129.66	326.7	19	4	0					21 16 PP
HALIFAX	130.25	48.3	19	5	0					
TRINIDAD	130.35	93.2	19	6	1					
PULKOVO	131.05	333.9	19	6	0					22 30 PKS
NURMIJARVI	132.79	337.0	19	1	-9				19 23	22 38 PKS
SKALSTUGAN	134.09	345.9	19	5	-7					
LWIRO	135.25	244.5	19	13	-1					
REYKJAVIK	135.61	7.0	19	17K	2					
UPPSALA	135.69	340.0	19	15	0					21 53 PP
SIDA	136.32	4.7	19	19	3					
KSARA	136.78	298.0	19	17	0					21 45 PP
GOTEBORG	139.17	341.6	19	21	0					
WARSAW	139.79	330.0								29 19 SKKS
ISTANBUL KA.	140.52	310.5	19	14	-10					22 23 PP
COPENHAGEN	140.69	339.4	19	17	-7					22 21 PP
HELWAN	140.98	292.6	19	21	-4					22 30 PP
BUCHAREST	141.24	316.7								22 5 PP

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KRAKOW	141.72	328.0	19 25	-1				23 6	PKS
CHORZOW	142.03	328.9	19 23	-4					
RACIBORZ	142.55	329.2	19 27	0				21 38	
TIMISOARA	143.58	321.4	19 29	0					
SOFIA	143.81	315.7	19 29	-1				22 46	PP
COLLMBERG	143.97	334.6	19 28A	-2	26 25	-7		23 12	PKS
HALLE	144.23	335.7	19 30	0				23 8	PKS
PRAGUE	144.29	332.1	19 31	1					
PRUHONICE	144.30	331.9	19 30A	0				22 47	PP
BRATISLAVA	144.36	327.6	19 31	0				19 42	PKP2
BELGRADE	144.55	320.6	19 31A	0				24 6	PKS
VIENNA-H.	144.67	328.3	19 31A	0				23 1	PP
JENA	144.82	335.4	19 32	1				22 50	PP
WITTEVEEN	144.93	341.6	19 37	5					
DURHAM	144.96	350.8	19 31A	-1	26 16	-18	20 17	21 40	PP
CHEB	145.16	333.8	19 31	-1				19 58	
KASPERSKE H.	145.36	331.7	19 32A	0				20 29	
MUNSTER	145.37	340.0	19 32	0					
ATHENS	145.47	308.0	19 32A	-1			19 44		
DE BILT	145.99	342.5	19 36A	3				22 59	PP
BENSBERG	146.38	339.5	19 35	1				23 1	PP
LJUBLJANA	147.09	326.9	19 36A	1				22 57	PP
HEIDELBERG	147.14	336.4	19 37	2					
BANGUI	147.37	244.8	19 39	3			20 59		
STUTTGART	147.44	335.2	19 36	0				23 8	PP
KARLSRUHE	147.58	336.3	19 36	0					
TUBINGEN	147.72	335.1	19 37	1					
TRIESTE	147.75	327.1	19 38	2				21 35	
KEW	147.91	347.8	19 38	1					
EBINGEN	148.04	334.8	19 38	1				20 3	
RAVENSBURG	148.09	333.7	19 38	1					
STRASBOURG	148.18	336.5	19 41K	4				23 8	PP
CHUR	148.86	332.7	19 43	5					
PADOVA	148.86	328.5	19 46	8				23 15	PP
PARIS	149.71	342.6	19 46	7			20 35	23 21	PP
NEUCHATEL	149.79	335.7	19 41	2					
BESANCON	149.95	337.0	18 46	-54					
FLORENCE X.	150.33	326.9	19 40	0				23 17	PKS
FOLINIERE	150.49	346.2	19 42	1					
ROME	150.94	322.8	19 33	-8				23 15	PP
MESSINA	151.18	313.8	19 49	7	26 48	6	19 55	23 29	PP
ISOLA	152.04	332.1	19 41	-2				23 30	PP
MONACO	152.22	331.1	19 45	2					
CLERMONT-FD.	152.23	339.0	19 45	2					
BAGNERES	155.60	340.5	19 41	-7					
TOLEDO	159.73	345.1	19 55	2				24 17	PP
GRANADA	162.14	341.3	20 29K	34	27 50	57		24 51	PP
MBOUR	171.55	133.7	19 56	-7				25 10	PP

AUGUST 15 19.H 3.M 52.S EPICENTRE 32.9B 142.54 DEPTH= 0.KM

A=-0.66724 B= 0.51122 C= 0.54171 D= 0.6082 E= 0.7938
G=-0.4300 H= 0.3295 K=-0.8406 HT= 0.8

SE= 2.1'

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
MERA	2.97	311.4	0	48A	-1	1	18	-8				
TYOSI	3.07	333.4	0	51K	0	1	27	-2				
TORISIMA	3.14	218.1	0	51	-1	1	29	-1				
OSIMA	3.18	305.1	0	51A	-1	1	25	-7				
YOKOHAMA	3.43	316.4	0	55	-1	1	35	-3				
AJIRO	3.53	306.8	0	56	-1	1	35	-5				
TOKYO C.M.O.	3.55	320.2	0	58K	0	1	39	-2				
HONGO	3.56	320.7	0	59	1							
MISIMA	3.67	306.6	0	59A	0	1	39	-5				
KAKIOKA	3.79	329.7	1	1	0	1	41	-6				
MITO	3.80	333.9	1	1A	0	1	44	-3				
TUKUBASAN	3.81	328.8	1	0	-1							
OMAESAKI	3.95	295.4	1	5	2	1	54	3				
SHIZUOKA	3.97	301.2	1	9A	5	1	57	5				
HUNATU	4.01	309.9	1	3	-1	1	47	-6				
KUMAGAYA	4.10	321.4	1	7	2	1	53	-2				
TITIBU	4.14	317.3	1	6	0	1	52	-4				

ONAHAMA	4.19	341.7	1	7A	0	1	51	-6			
UTUNOMIYA	4.19	329.1	1	5K	-2	1	52	-5			
KOHU	4.25	310.3	1	8A	0	2	0	1			
MAEBASI	4.45	321.0	1	10A	0	1	59	-5			
SHIRAKAWA	4.55	335.9	1	13	1	2	1	-5			
IIDA	4.65	304.3	1	14	1	2	9	0			
OIWAKE	4.69	316.6	1	14	0	2	7	-3			
MATUMOTO	4.99	312.2	1	19	1	2	20	3			
MATUSIRO	5.03	316.1	1	18A	-1	2	13	-5			
HUKUSIMA	5.05	341.0	1	19	0	2	13	-6			
NAGOYA	5.12	296.9	1	19A	-1	2	18	-2			
NAGANO	5.13	317.1	1	20K	0	2	20	-1			
GIHU	5.36	298.4	1	24	1	2	23	-4			
KAMEYAMA	5.38	292.0	1	24A	0	2	25	-2			
TAKAYAMA	5.39	307.4	1	25	1	2	26	-1			
OWASE	5.41	283.4	1	21	-3						
TAKADA	5.41	320.6	1	25	1	2	26	-2			
SENDAI	5.45	346.3	1	24K	-1	2	21	-8			
ISINOMAKI	5.53	350.0	1	24	-2	2	24	-7			
YAMAGATA	5.56	341.9	1	26K	0	2	26	-6			
SIOMISAKI	5.70	276.6	1	28	0	2	29	-6			
NIIGATA	5.70	331.0	1	29K	1	2	30	-5	2	3	
HIKONE	5.70	295.4	1	31	3	2	34	-1			
TOYAMA	5.75	311.7	1	32	3	2	36	0			
NARA	5.84	288.8	1	33	3	2	20	-19			
TSURUGA	5.98	298.3	1	32	0						
KANAZAWA	6.01	307.8	1	34	2						
KYOTO	6.01	291.7	1	32	0	2	39	-4			
HUKUI	6.05	302.2	1	34	1	2	38	-6			
OSAKA	6.07	287.9	1	35	2	2	50	6			
ABUYAMA	6.10	290.0	1	33A	-1						
AIKAWA	6.13	326.4	1	35A	1						
MIZUSAWA	6.25	349.9	1	35	-1	2	42	-7			
WAKAYAMA	6.28	283.5	1	37	1						
SAKATA	6.31	340.4	1	36	-1	2	46	-4			
KOBE	6.36	287.5	1	50	13				2	47	
WAZIMA	6.37	315.1	1	41	3						
SUMOTO	6.51	284.2	1	39	0	2	52	-3	3	52	
MIYAKO	6.68	356.2	1	39	-3	2	47	-13			
MORIOKA	6.80	351.0	1	42	-2	2	53	-10			
TOYOOKA	6.88	293.9	1	44	-1				3	37	
AKITA	7.01	344.4	1	48	1	3	3	-5			
MUROTO	7.02	274.5	1	45	-2	3	1	-7			
TAKAMATU	7.21	283.0	1	49	0	3	12	-1			
TOTTORI	7.37	292.4	1	52	0						
KOTI	7.57	276.8	1	53	-1	3	17	-5			
HATINOHE	7.58	354.1	1	52	-3	3	10	-12			
SIMIDU	8.05	271.2	1	49	-12	3	35	1			
MATUYAMA	8.21	278.7	2	3	0	3	46	8			
MATSUE	8.22	290.1	2	4	0	3	41	3			
UWAZIMA	8.39	274.4	2	6	0						
HIROSIMA	8.54	282.1	2	7	-1	3	43	-3			
HAKODATE	8.93	351.4	2	13	0	3	49	-7			
URAKAWA	9.16	1.1	2	26	9	3	50	-12			
OOITA	9.17	274.6	2	16	-1	4	2	0			
MORI	9.24	350.8	2	19	1	3	56	-8			
HIROO	9.31	3.6	2	16	-3	3	53	-12			
MURORAN	9.41	352.9				3	57	-10			
MIYAZAKI	9.46	266.6	2	23	2	4	13	4			
TOMAKOMAI	9.67	355.8	2	28	4						
OBIHIRO	9.94	2.8	2	27	0	4	10	-11			
KUMAMOTO	9.96	272.3	2	28	0	4	21	0			
SUTTSU	9.98	350.1	2	26	-2						
KUSIRO	10.09	7.8	2	27	-2	4	11	-14			
SAPPORO	10.12	355.0	2	27	-3	4	13	-12			
KAGOSIMA	10.25	265.4	2	35	3	4	39	11			
SAGA	10.27	274.9	2	35	3						
UNZENDAKE	10.34	272.0	2	35	2						
YAKUSIMA	10.56	259.4	2	34	-2	4	33	-3			
NEMURO	10.61	12.1	2	33	-3	4	19	-18			
NAGASAKI	10.65	272.1	2	36A	-1	4	48	10			
ABASHIRI	11.11	6.5	2	46	3						
TOMIE	11.60	272.0	3	21	31				5	5	
WAKKANAI	12.44	357.2	2	59	-2						
VLADIVOSTOK	13.14	323.5	3	9	-2						
Y.-SAKHLINSK	14.03	0.5	3	18	-4	5	44	-16			
CHANGCHUN	17.28	313.8	4	0A	-4						
ZO-SE	18.21	269.9	4	12A	-4						

GUAM	19.53	173.6	4	30	-2	8	15	8	4	52	
ILAN	19.94	251.2	4	8	-28						
TAIPEI	20.00	252.1	4	38	1	8	16	-1			
NANKING	20.05	273.9	4	35K	-3	8	14	-4			
HWALIEN	20.44	249.3	4	43	1	8	22	-4			
TAWU	21.86	246.5	6	0	64	8	56	2			
HENGCHUN	22.17	246.0	5	9	10						
PEKING	22.29	295.9	4	56	-4	8	53	-9			
PETROPAVLOVK	23.14	25.2	5	10K	1	9	19	2			
PAOTOW	27.01	295.7	5	46	0						
MAGADAN	27.14	9.2	5	47	0	10	27	2			
HONG KONG	27.21	254.2	4	46	-61	10	18	-8			
CANTON	27.52	256.5	5	51	1	10	22	-8			
SIAN	27.96	282.0	5	51	-3	10	25	-13			
YAKUTSK	30.21	348.0	6	14	0	11	18	4			
LANCHOW	31.91	286.5	6	26	-3	11	33	-7			
CHENGTU	32.70	276.5	6	34	-2	11	44	-9			
IRKUTSK	33.57	316.6	6	44	0	12	7	1			
KUNMING	35.50	267.8	7	0	0	12	28	-8			
NHATRANG	36.82	243.7	7	13	1	12	49	-7			
TOCKLAI	41.61	274.4								8	56
PORT MORESBY	42.37	173.2	7	56	-2	14	9	-11	8	28	9 43 PP
LHASA	43.77	280.0	8	10A	1						
SHILLONG	44.47	274.2	8	15A	0	14	38	-12			
HONIARA	45.32	155.5	8	18	-3						
CHATRA	47.93	277.9	8	42K	0	15	33	-7			10 29 PP
CALCUTTA	48.60	272.1				15	47	-2			9 4
BOKARO	50.23	274.9	8	59K	-1	16	7	-5			
ALMATA	51.41	301.7	9	9K	0	16	28	0			
DJAKARTA	51.63	227.7				16	29	-2			
LEMBANG	51.66	226.5	9	8K	-3						16 36
COLLEGE	52.07	30.5	9	13	-1						
CHARTERS TS.	52.89	175.6	9	19	-1						13 24
FRUNSE	53.18	301.6	9	22K	0	16	52	0			
KIPAPA	53.49	86.5	9	26	2						
DEHRA DUN	54.19	285.8	9	38	8	17	8	2			11 22 PP
ANDIJAN	55.33	299.7	9	38	0	17	22	1			
NEW DELHI	55.51	284.1	9	35A	-4	17	16	-8			11 39 PP
NAMANGAN	55.78	300.1	9	42K	1	17	30	3			
LAHORE	56.74	288.5	9	47	-1	17	38	-2			
KHEYS	56.80	348.7	10	39K	51						
TASHKENT	57.41	301.1	9	52	-1	17	47	-2			
WARSAK DAM	58.06	292.2	9	57	0	17	56	-2			
STALINABAD	58.64	298.2	10	1	0	18	5	0			
SVERDLOVSK	58.83	320.5	10	1	-2	18	5	-3			
SAMARKAND	59.59	299.9	10	8	0	18	14	-3			
BRISBANE	60.82	169.6	10	16	0						20 46
POONA	62.55	275.1	10	26A	-2	18	48	-7			
QUETTA	63.12	289.9	10	31	-1	19	1	-1			12 50 PP
BOMBAY	63.24	276.0	10	38	5	19	2	-2			
RESOLUTE	66.30	14.2	10	52	0						
APATITY	66.77	336.7	10	54	-1	19	46	-1			
RIVERVIEW	66.94	172.2	10	56	-1						11 22 PCP
ADELAIDE	7.68	183.4	11	1A	0						
CANBERRA	68.21	174.3	11	4	0						
VICTORIA	68.58	45.4	11	7	0						
SODANKYLA	69.06	338.1	11	9	-1						
THULE	69.16	7.4	11	9	-1						
MUNDARING	69.21	203.8	11	10	-1						
TROMSOE	69.85	341.9	11	14	-1						13 56 PP
CORVALLIS	70.41	49.2	11	22	4						
PENTICTON	70.45	43.5	11	18	0						
KIRUNA	70.64	340.1	11	19K	0	20	31	-2			
KAJAANI	70.64	335.0	11	19	0						
MOSCOW	71.07	324.7	11	20	-2	20	35	-3			
MAKHACH-KALA	71.72	309.6	11	25	-1	20	41	-5			
BANFF	71.85	40.4	11	30	3						
PULKOVO	72.16	330.5	11	26	-3	20	46	-5			
TEHERAN	72.47	301.5	11	31	1	20	56	2			
SHASTA	72.82	52.4	11	33	1						
UKIAH	73.01	54.2	11	26	-8						
MINERAL	73.51	52.5	11	37A	1						
NURMIJARVI	73.96	332.9	11	39K	0						14 10
TIFLIS	74.08	309.5	11	40	0	21	11	-1			
HUNGRY HORSE	74.14	42.4	11	41	1						
GORIS	74.17	306.9	11	40K	0	21	11	-2			
BERKELEY	74.28	55.0	11	42K	1	21	15	0	11	56	26 12 SS
BRANNER	74.56	55.3	11	44	1						
STA. CRUZ C.	74.89	55.6	11	46	2						

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PARAISO	74.97	56.4	11	50	5						
LICK	74.97	55.2	11	47A	2						
TARRALEAH	74.99	177.0	11	45K	0						
RENO	75.11	52.5	11	12	-34						
MOORLANDS	75.17	176.4	11	45K	-1						
VINEYARD	75.45	55.6	11	49	1						
FORT NELSON	75.67	176.4	11	48	-1					12 3	PCP
SKALSTUGAN	76.03	339.4	11	51	0						
BUTTE	76.23	43.9	11	53	1						
SOTCHI	76.32	313.2	11	52	-1	21 31	-6				
FRESNO	76.53	54.9	11	54	0						
KARAPIRO	76.95	153.8	11	56K	0						
UPPSALA	77.01	334.9	11	56K	0	21 40	-5			14 49	PP
BOZEMAN	77.31	43.6	12	0	2						
EUREKA	77.67	50.9	12	1	1			12 11		12 53	
CHATEAU	78.07	154.4	12	2	0						
TUAI	78.31	153.1	12	2	-2						
COBB RIVER	78.77	157.2	12	9	3						
SIMFEROPOL	78.88	316.6	12	6K	-1	22 1	-4				
PASADENA	79.04	56.5	12	7	-1	22 8	2			22 53	
SALT LAKE C.	79.60	48.1	12	13	2						
WELLINGTON	79.64	155.9	12	11	0						
BOULDER CITY	80.34	53.4	12	15	0						
BERGEN	80.57	340.0	12	27	11						
KISHINEV	80.57	320.6	12	15	-1	22 19	-4				
GOTEBORG	80.59	335.6	12	14	-2					15 18	PP
WARSAW	80.98	327.9	12	19	1	22 25	-2			15 29	PP
FLAMING GRGE	81.03	46.8	12	19	1						
IASI	81.13	321.3	12	20	1	22 26	-2				
LWOW	81.21	324.8	12	19K	0	22 28	-1				
GLEN CANYON	81.93	51.1	12	24	1						
COPENHAGEN	81.96	334.0	12	24K	1	22 35	-2			27 51	SS
SIDA	82.35	351.4	12	28	3						
RAPID CITY	82.72	41.5	12	28	1						
KRAKOW	82.99	326.8	12	28	0	22 45	-2			15 39	PP
CHORZOW	83.25	327.4	12	30	0					16 44	
BUCHAREST	83.71	319.8	12	32	0	22 53	-2				
RACIBORZ	83.75	327.6	12	33	1					12 47	PCP
ISTANBUL KA.	84.18	315.8	12	34	-1	22 56	-3			15 48	PP
ISTANBUL UN.	84.25	315.8	12	35	0					15 57	
KSARA	84.29	306.7	12	35K	0	23 13	13			16 2	PP
COLLMBERG	85.08	330.9	12	39K	0					15 56	PP
TUCSON	85.19	54.6	12	40	0						
HURBANOVO	85.34	326.1	12	43	3						
HALLE	85.36	331.6	12	40	0	23 4	-7				
PRUHONICE	85.43	329.3	12	40K	-1	23 9	-3			16 0	PP
BRATISLAVA	85.63	326.8	12	45	3					16 0	PP
VIENNA-H.	85.91	327.3	12	43K	0	23 12	-4				
JENA	85.94	331.4	12	43	0	23 11	-6			16 2	PP
CHEB	86.27	330.4	12	44	-1					16 1	PP
WITTEVEEN	86.31	334.9	12	46	1						
SOFIA	86.35	319.9	12	46	1						
BELGRADE	86.40	322.8	12	48A	2	23 21	0			13 32	
KASPERSKE H.	86.49	329.2	12	45K	-1					16 8	PP
MUNSTER	86.65	334.0	12	47	0						
DURHAM	87.32	340.1	12	49K	-1	23 28	-2				
DE BILT	87.43	335.3	12	51	0	23 32	1				
BENSBERG	87.63	333.6	12	51	-1					16 16	PP
HEIDELBERG	88.29	331.9	12	54	-						
LJUBLJANA	88.39	326.7	12	54K	-1					16 25	PP
STUTTGART	88.56	331.2	12	56	0	23 37	-4			16 21	PP
TUBINGEN	88.84	331.2	12	58	1						
TRIESTE	89.04	326.9	12	58	0	23 23	-23			16 32	PP
EBINGEN	89.16	331.0	13	0	1						
STRASBOURG	89.32	331.9	13	0	0	23 46	-2				
HELWAN	89.76	305.9	13	0	-2	23 38	-14				
KEW	89.80	337.8	13	1	-1	23 50	-3				
PADOVA	90.08	327.7								23 38	
BESANCON	91.10	332.1	12	8	-60						
PARIS	91.12	334.9	13	9	1					13 22	PCP
TARANTO	91.16	321.5								16 45	PP
WICHITA MTS.	91.56	46.2	13	9	-1	23 33	-35			16 44	PP
FLORENCE X.	91.62	327.0	13	33	23	23 53	-16				
ROSELEND	91.86	330.1	13	12	1					16 45	PP
FOLINIERE	92.18	336.5	13	13	0						
GARCH	92.19	333.7	13	13	0					13 24	PCP
ROME	92.49	325.1	13	14	0	23 49	-28			16 57	PP
ISOLA	93.16	329.7	13	17	0						

FAYETTEVILLE	93.20	42.7	13	17K	-1					13	32 PCP
MONACO	93.36	329.2	13	18	0						
MESSINA	93.72	320.9	13	18	-2					17	11 PP
OTTAWA	94.62	26.0	13	24	0						
SHAWINIGAN	94.67	23.6	13	25	1						
PENNSYLVANIA	97.66	29.8				24	18	3		17	40 PP
MORGANTOWN	97.73	31.8	13	40A	2						
PALISADES	99.07	27.1	13	45	1					17	47 PP
TOLEDO	101.19	334.4	13	49	-5	24	26	-7		18	3 PP
MIRNY	106.15	198.5	18	47	777						
LWIRO	111.06	281.4								19	15
SCOTT BASE	111.53	174.6	18	37	1	25	25	6		19	20 PP
BANGUI	115.25	293.8	18	45	1					19	37 PP
BROKEN HILL	117.81	270.4	18	50	1						
BULAWAYO	120.38	264.6	18	54	0						
ANTIGUA	124.99	28.8	19	3	1						
KIMBERLEY	127.09	256.9	19	4	-2						
CHINCHINA	127.72	51.1	19	8	0					21	18 PP
CARACAS	128.44	38.1	19	11	2					21	26 PP
BOGOTA	128.99	49.9	19	13	3					22	36 PKS
TRINIDAD	130.97	31.9	19	16	2						
ARGENTINE I.	143.82	161.2	19	35	-2						
LA PAZ	147.83	66.8	19	47	3						

AUGUST 16 3.H 33.M 46.S EPICENTRE -31.94-178.07 DEPTH= 0.KM

A=-0.84969 B=-0.02865 C=-0.52651 D=-0.0337 E= 0.9994
G= 0.5262 H= 0.0177 K=-0.8502 HT= 1.2

SE= 2.66

	DELTA DEG.	AZ. DEG.	P M	S	O-C S	S M	S	O-C S	*PP M	S	SUPP. M	S	
RAOUL ISLAND	2.69	2.8	0	44	-1	1	5	-13					
ONERAHI	7.36	236.7	1	56	5								
TUAI	7.88	208.4	1	55	-3	3	22	-7					
KARAPIRO	7.95	219.5	1	58	-1								
CHATEAU	8.92	213.9	2	9	-4						2	21	
											4	1	
WELLINGTON	10.95	209.7				4	31	-14					
COBB RIVER	11.74	216.5				4	50	-14					
KAIMATA	13.46	215.4				5	31	-15					
GEBBIES PASS	13.83	209.3				5	36	-19					
NOUMEA	16.78	301.1	4	3	6								
APIA	18.96	19.1	4	24	0								
KOUMAC	19.44	301.4	3	33	-57								
BRISBANE	25.69	272.6	5	33	0	10	20	20					
RIVERVIEW	25.87	257.5	5	36A	1								
CANBERRA	27.56	253.9	5	52K	2						9	8	
FORT NELSON	29.38	238.2	6	6A	0						6	31	SP
MOORLANDS	29.41	239.2	6	7	0						9	20	
MELBOURNE	30.74	248.7	6	19	0								
CHARTERS TS.	34.01	281.5	6	49	2	12	15	3					
ADELAIDE	35.97	253.2	7	5	1								
PORT MORESBY	39.24	297.2	7	34	3								
CAPE HALLETT	40.90	185.4	7	47	2						18	17	
SCOTT BASE	46.50	184.4	8	32	2				8	49	10	6	PCP
DARWIN	50.67	280.6	9	3	0								
SOUTH POLE	58.23	180.0	9	57	-1				10	7			
MAWSON	70.85	200.8	11	19	-1				11	38	11	50	*SP
MATUSIRO	79.47	325.5	12	8	-1								
HONG KONG	84.30	300.5	12	25	-10								
PASADENA	86.59	46.0	12	47	1								
FRESNO	87.41	43.1	12	51	1								
SHASTA	88.71	38.9	12	56	0								
MINERAL	88.89	39.6	12	57A	0								
RENO	89.31	41.1									12	26	
TUCSON	90.05	51.4	13	4	2								
EUREKA	91.46	43.2	13	9	0				13	28			
GLEN CANYON	92.50	47.3	13	16	2								
COLLEGE	99.35	12.6	13	45	0								
WICHITA MTS.	99.82	55.3	13	45	-2	24	28	2			29	59	PKKP
SODANKYLA	141.66	344.9	19	31	-2								
SKALSTUGAN	147.68	351.4	19	46	3								
NURMIJARVI	147.73	339.0	19	46K	3								
BANGUI	148.42	213.2	19	49	5								
UPPSALA	150.19	344.1	19	51	4						20	13	

GOTEBORG	153.34	347.9	20	1	9						
HELWAN	154.72	273.1	20	4	10						
NIEDZIKA	157.76	327.0	20	31	33					20	53
COLLMBERG	159.01	340.3								20	36 PKP2
PRUHONICE	159.67	336.1	20	40	40						
JENA	159.73	342.2	20	29	29					20	59
KASPERSKE H.	160.72	336.3	20	43	42						
LJUBLJANA	162.88	329.0	20	17	14					20	52
ROSELEND	165.77	343.5	21	6	60						
FLORENCE X.	166.09	330.8	21	4	58						

AUGUST 16 15.H 53.M 46.S EPICENTRE 34.05 137.94 DEPTH= 380.KM

A=-0.61644 B= 0.55622 C= 0.55734 D= 0.6699 E= 0.7424
G=-0.4138 H= 0.3734 K=-0.8303 HT= 0.5

DEPTH OF FOCUS= 0.055R

SE= 3.07

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
OMAESAKI	0.59	22.9	0	46	-2							
SHIZUOKA	0.99	22.4	0	48	-1	1	26	-2				
TU	1.34	299.3	0	47	-4							
MISIMA	1.35	37.7	0	48	-3	1	39	8				
NAGOYA	1.37	324.7	0	47	-4	1	26	-5				
AJIRO	1.38	43.5	0	49K	-2	1	29	-2				
OSIMA	1.39	58.5	0	49K	-2	1	28	-3				
OWASE	1.44	271.2	0	45	-6	1	21	-11				
KAMEYAMA	1.45	303.7	0	46	-6	1	25	-7				
HUNATU	1.60	25.1	0	51	-1	1	31	-2				
GIHU	1.65	324.7	0	49	-4							
KOHU	1.69	17.4	0	51	-2	1	32	-2				
MERA	1.79	60.4	0	50K	-3	1	31	-4				
HIKONE	1.85	311.6	0	55	1	1	34	-2				
NARA	1.85	290.4	1	3	9							
SIOMISAKI	1.90	252.3	1	25	31							
YOKOHAMA	1.97	45.2	0	52	-2	1	35	-2				
KYOTO	2.06	298.5	0	49	-6	1	30	-8				
OSAKA	2.08	287.4	0	50	-5							
ABUYAMA	2.12	293.3	0	50	-5							
TITIBU	2.14	25.6	0	56	0	1	38	-1				
MATUMOTO	2.19	0.6	0	55	-1	1	39	-1				
TOKYO C.M.O.	2.20	42.0	0	55A	-1	1	37	-3				
TSURUGA	2.22	316.6	0	52	-4							
HONGO	2.24	41.8	0	56	0						1	39
OIWAKE	2.33	12.2	0	56	-1	1	41	-1				
KUMAGAYA	2.40	29.0	0	56	-2	1	40	-3				
MATUSIRO	2.49	5.0	0	56	-2	1	42	-2				
MAEBASI	2.52	21.2	0	57A	-1	1	43	-1				
NAGANO	2.62	4.6	0	59	0	1	47	1				
TOYAMA	2.71	347.3	0	58	-2	1	46	-1				
TUKUBASAN	2.80	38.7	0	58	-2	1	45	-3				
KAKIOKA	2.85	39.5	1	1	0	1	46	-3				
TYOSI	2.91	54.3	1	2	1	1	49	-1				
UTUNOMIYA	2.95	31.8	0	56	-6	1	40	-10				
TOYOOKA	2.96	300.8	0	57	-5	1	42	-8				
TAKADA	3.05	4.7	1	2	-1	1	52	0				
MITO	3.11	41.0	1	2K	-1	1	51	-2				
TAKAMATU	3.24	275.8	0	57	-7	1	44	-11				
WAZIMA	3.43	346.0	1	6	0							
SHIRAKAWA	3.58	30.6	1	7	0	2	0	0				
KOTI	3.71	263.5	1	3	-6	1	51	-11				
ONAHAMA	3.77	39.	1	40	31							
NIIGATA	3.96	12.8	1	12	1	2	9	2			2	4
HUKUSIMA	4.22	28.4	1	14A	0	3	12	61				
YAMAGATA	4.62	24.3	1	17A	-1	2	20	1				
SENDAI	4.84	28.8	1	21	1	2	23	0				
SAKATA	5.07	16.9	1	24	2							
ISINOMAKI	5.15	31.0	1	23A	0	2	30	1				
OOITA	5.33	262.9				2	22	-11				
MIZUSAWA	5.68	25.9	1	30	1	2	41	2				
AKITA	5.92	16.4	1	33	1	2	45	1				
KUMAMOTO	6.18	260.5										
MORIOKA	6.20	23.7	1	36	1	2	52	3			2	38
MIYAKO	6.45	28.9	1	38	0	2	57	3				

HATINOHE	7.07	22.8	1	45	0	3	7	0				
AOMORI	7.12	17.	1	47	2	3	12	4				
MORI	8.30	13.7	2	0	1							
URAKAWA	8.94	23.8									2	22
HIROO	9.24	25.7	2	12	2	3	58	5				
OBIHIRO	9.77	23.4	2	22	6	4	9	5				
VLADIVOSTOK	10.21	334.2	2	18A	-3							
KUSIRO	10.25	27.7	2	24	2	4	18	4				
YAKUTSK	28.47	351.9									6	28
SHILLONG	40.58	270.6	7	0A	-5							
SEMIPALATNSK	44.58	309.6	7	35	-2							
LAHORE	52.75	286.1	8	37	-2							
COLLEGE	53.11	30.9	8	45	3				10	4		
KHEYS	54.99	348.6									10	16
QUETTA	59.14	287.5	9	20K	-4							
SODANKYLA	66.60	336.9	10	12	0							
TROMSOE	67.60	340.7	10	15	-3							
KIRUNA	68.28	338.8	10	23	0							
NURMIJARVI	71.22	331.3	10	40K	0							
SKALSTUGAN	73.62	337.7	10	54	0							
UPPSALA	74.36	333.1	10	58	0							
HUNGRY HORSE	75.89	40.8	11	11	4				12	31		
FORT NELSON	77.09	172.9	11	12A	-2							
KARAPIRO	79.69	150.6	11	25	-3							
EUREKA	79.93	49.0	11	34	5							
COLLMBERG	82.23	328.7	11	40K	-1							
PRUHONICE	82.49	327.1	11	42	0							
KASPERSKE H.	83.54	326.9	11	47	0							

AUGUST 16 16.H 15.M 55.S EPICENTRE -14.16 -14.33 DEPTH= 0.KM

A= 0.93982 B=-0.24012 C=-0.24307 D=-0.2475 E=-0.9689
G=-0.2355 H= 0.0602 K=-0.9700 HT= 5.9

SE= 2.05

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
MBOUR	28.48	354.6				10	35	-11					
BANGUI	37.52	62.9	7	15	-3						8	40	PP
BULAWAYO	41.38	104.4	7	48A	-2								
BROKEN HILL	41.43	95.9	7	50	0								
LWIRO	44.21	78.5	8	14	1						21	48	
GRANADA	52.05	10.9									15	43	
ALICANTE	53.82	13.5	9	27	0	16	59	-2					
TOLEDO	54.60	9.7	9	35	2						22	51	SS
AREQUIPA	55.02	259.7	9	35	-1								
BAGNERES	58.48	12.4	9	59	-1								
MESSINA	59.14	27.2									13	46	
SAN JUAN	60.42	300.9	10	14	0								
ROME	61.02	22.6									13	49	
ISOLA	61.24	17.4	10	20	0								
HELWAN	62.07	44.7	10	23	-2								
GARCHY	63.11	13.2	10	33	1						11	8	
CHINCHINA	63.68	282.9	10	34	-2	19	12	2					
BESANCON	63.78	15.3	10	19	-17								
LJUBLJANA	65.34	21.7	10	45	-2						11	8	
STRASBOURG	65.47	15.9									19	53	
STUTTGART	66.06	16.9	10	49	-2								
BELGRADE	66.66	26.2	11	21	26						23	46	PP
KSARA	67.53	43.8	11	45	44								
KASPERSKE H.	67.68	19.4	10	58	-3						13	24	
ISTANBUL KA.	68.05	34.1	11	9	5	20	7	4					
PRUHONICE	68.73	19.5	11	8	0						13	28	
COLLMBERG	69.40	17.9	11	14	2						13	42	PP
NIEDZIKA	70.31	23.2	11	16	-2								
LWOW	72.09	25.0	11	28	0								
MAWSON	72.13	156.9	11	32	3				11	40			
COPENHAGEN	73.14	15.4				21	7	6			25	47	SS
SIMFEROPOL	73.40	33.7									21	3	
GOTEBORG	74.82	14.3	11	43	-1								
SOUTH POLE	75.93	180.0	11	50	-1								
PALISADES	77.71	318.1	11	39	-22	21	51	-2			22	31	PS
TIFLIS	77.79	41.1	12	1	0								
UPPSALA	78.14	15.8	12	2	-1								
CHAPEL HILL	78.80	311.6	12	4	-3								

SKALSTUGAN	80.18	11.7	12	17	3						
NURMIJARVI	80.69	18.4	12	16	-1						
MOSCOW	82.09	26.7	12	23	-1						
MIRNY	83.85	157.4	12	32	-1						
KIRUNA	85.55	12.5	12	42	0	23	16	3			
SODANKYLA	86.60	14.7	12	46	-1						
QUETTA	89.67	58.9	13	2	0	23	59	7			
FAYETTEVILLE	90.24	307.1	13	10K	6						
WICHITA MTS.	93.32	304.8	13	19	1						
CHARTERS TS.	140.98	150.3	19	39	6						
MATUSIRO	146.86	42.8	19	44	1						
PORT MORESBY	150.25	140.8	20	6	18						

AUGUST 17 21.H 16.M 30.S EPICENTRE 46.36 149.61 DEPTH= 152.KM

A=-0.59746 B= 0.35036 C= 0.72131 D= 0.5059 E= 0.8626
G=-0.6222 H= 0.3649 K=-0.6926 HT= -4.1

DEPTH OF FOCUS= 0.019R

SE= 2.02

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
NEMURO	4.17	224.9	1	1K	-2	1	47	-5					
ABASHIRI	4.43	240.1	1	8	1	2	1	3					
Y.-SAKHLINSK	4.79	280.5	1	14	3	2	8	1					
KUSIRO	5.02	229.6	1	14	0	2	9	-3					
WAKKANAI	5.62	263.3	1	26	4	2	35	9					
OBIHIRO	5.72	235.4	1	25	1								
UGLEGORSK	5.77	300.9	1	28	4								
HIROO	6.08	230.2	1	26	-2	2	32	-5					
RUMOE	6.14	249.8	1	32K	3	2	45	6					
URAKAWA	6.46	231.8	1	34	0	2	43	-3					
SAPPORO	6.74	243.8	1	39K	2	2	51	-2			15	5	SCS
TOMAKOMAI	6.84	239.9	1	42	3	2	54	-2					
MURORAN	7.39	240.0	1	46	0	3	2	-7					
MORI	7.76	240.0	1	52	1	3	15	-3					
HAKODATE	7.83	237.7	1	50	-2	3	11	-8					
HATINOHE	8.27	228.1	1	56	-2	3	19	-11					
OKHA	8.39	331.6	2	2	3	3	38	5					
AOMORI	8.46	232.3	1	57	-3	3	25	-9					
MIYAKO	8.73	222.6	2	1	-3	3	29	-12					
PETROPAVLOVK	8.87	38.0	2	6	0	3	42	-2			2	51	
MORIOKA	9.08	225.9	2	5A	-3	3	39	-10					
MIZUSAWA	9.54	223.8	2	13	-1	3	50	-10					
AKITA	9.61	229.8	2	16	1	3	55	-7					
ISINOMAKI	10.01	220.7	2	17	-4	4	1	-10					
SENDAI	10.33	221.7	2	24	-1	4	8	-11					
SAKATA	10.36	227.5	2	25	0	4	13	-6					
YAMAGATA	10.61	223.5	2	26	-3	4	16	-9					
HUKUSIMA	10.95	221.5	2	32	-1	4	26	-7					
ONAHAMA	11.43	217.8	2	43K	4	4	34	-10					
NIIGATA	11.50	226.6	2	40	0	4	56	10			3	32	
SHIRAKAWA	11.58	220.5	2	42	1	4	36	-12					
AIKAWA	11.84	229.3	2	44	-1								
KLYUCHI	12.19	31.0	2	50	1				3	16	8	1	PCP
UTUNOMIYA	12.21	220.1	2	53	4	4	54	-9			15	1	SCS
KAKIOKA	12.34	218.3	2	48	-3	4	57	-9					
TUKUBASAN	12.39	218.5	2	47K	-5	5	6	-1			15	12	SCS
TYOSI	12.51	214.9	2	52	-1	5	1	-9			15	16	
TAKADA	12.54	226.5	2	51	-3	4	59	-11					
MAEBASI	12.70	222.2	2	56K	0	5	27	13			4	36	
KUMAGAYA	12.76	220.6	2	55	-2	5	5	-11					
NAGANO	12.90	225.4	3	1	3	5	24	5					
HONGO	12.96	218.3	2	53	-6						6	11	
TOKYO C.M.O.	12.99	218.3	3	1	1	5	14	-7					
MATUSIRO	13.00	225.1	2	57K	-3	5	1	-20			11	40	SCP
VLADIVOSTOK	13.00	262.0	3	0	0						5	19	
OIWAKE	13.00	223.5	3	1	1	5	30	9					
WAZIMA	13.03	231.0	2	58	-2	5	5	-17			15	16	
TITIBU	13.04	221.1	3	0	0	5	16	-6					
MAGADAN	13.24	2.6	3	5	2						5	37	
YOKOHAMA	13.25	218.1	3	5	2	5	19	-8					
MATUMOTO	13.35	225.0	3	3	-1	5	48	19					
TOYAMA	13.38	228.3	3	5	0	5	41	11					

KOHU	13.53	221.8	3	8	2	5	31	-3		15	19 SCS
HUNATU	13.58	220.8	3	11	4	5	28	-7		15	18 SCS
MERA	13.61	216.4	3	9	2						
TAKAYAMA	13.78	226.7	3	10	0						
AJIRO	13.81	218.8	3	8	-2					3	32
MISIMA	13.82	219.4	3	9	-1	5	31	-9			
OSIMA	13.93	217.4	3	11A	0	5	31	-12		15	16 SCS
IIDA	14.00	223.5	3	12	0	3	46	-118			
SHIZUOKA	14.19	220.7	3	16	1	5	39	-10			
HUKUI	14.38	229.0	3	19	2					3	57
OMAESAKI	14.58	220.3	3	25	5						
GIHU	14.61	226.0	3	19	-1	6	1	3			
NAGOYA	14.70	225.0	3	20K	-1	6	6	6			
TSURUGA	14.77	228.4	3	21	-1						
HIKONE	14.98	227.0	3	25	0	6	12	5			
KAMEYAMA	15.20	225.5	3	26	-1	6	22	10			
MAIZURU	15.27	229.6	3	27	-1	6	23	10			
KYOTO	15.44	227.7	3	27	-3	6	17	0			
TOYOOKA	15.52	231.1	3	30	-2	6	11	-8		15	23 SCS
ABUYAMA	15.64	227.8	3	31K	-2						
NARA	15.65	226.7	3	34	1						
OSAKA	15.83	227.3	3	35	0	6	32	6			
TOTTORI	15.89	232.5	3	35	-1						
OWASE	15.96	224.5	3	35	-2	6	34	5			
WAKAYAMA	16.34	227.3	3	40	-2						
SUMOTO	16.39	228.1	3	44	2	6	41	3		15	25
MATSUE	16.55	234.7	3	46	2	6	39	-3			
SIOMISAKI	16.67	224.2	3	47	1	6	50	5			
TAKAMATU	16.85	230.0	3	46	-2	6	47	-2			
CHANGCHUN	17.33	270.4	3	51K	-3				4 22	4	46 *SP
TORISIMA	17.43	207.8	3	57	2	7	9	8			
MUROTO	17.62	227.5	3	59	2	7	14	8			
HIROSIMA	17.70	233.5	3	57K	-1	6	55	-12			
KOTI	17.72	229.5	3	58K	0	7	11	3		15	29 SCS
MATUYAMA	17.90	231.6	4	1	1	7	18	6			
UWAZIMA	18.49	230.9	4	6	-1	7	27	3			
SIMIDU	18.61	229.1	4	8	0	7	30	3			
SIMONOSEKI	18.85	235.5	4	10	0						
OOITA	18.99	232.7	4	14	2	7	36	1			
YAKUTSK	19.40	331.1	4	13	-3						
HUKUOKA	19.43	235.7	4	16	0	7	48	5			
ASOSAN	19.55	233.1	4	19	1	8	4	19			
SAGA	19.72	235.2	4	22	3	8	0	12			
KUMAMOTO	19.81	233.6	4	20K	0	7	58	8			
MIYAZAKI	20.10	230.6	4	32	9	8	2	7			
UNZENDAKE	20.13	234.3	4	25K	1	8	9	13			
NAGASAKI	20.34	235.0	4	26K	0	8	4	4			
KAGOSIMA	20.84	231.6	4	32	1	8	16	7			
YAKUSIMA	21.74	229.8	4	41	1	8	32	7			
PEKING	25.06	267.5	5	11K	0	9	24	2	5 43	10	23 *SS
MAWASHI	26.60	228.5	5	5	-20	9	51	-5			
ZO-SE	26.72	245.3	5	27K	0	9	51	2	5 43	10	51 *SS
TIKSI	27.19	345.8	5	29	-2					7	30
NANKING	27.62	249.8	5	35K	0	9	6	-58	6 7	6	28 *SP
PAOTOW	29.08	273.0	5	48	0	10	25	-2	6 22	6	48 *SP
IRKUTSK	29.72	298.2	5	52K	-2	10	33	-4	6 33		
TAIPEI	30.93	236.2	5	54	-10						
HWALIEN	31.70	234.8	6	13	2					16	27
HSINKONG	32.52	234.1	6	24	6	11	27	6			
SIAN	32.96	263.1	6	23K	1	11	31	3	6 54		
TAWU	33.38	233.9	6	27	2						
HENGCHUN	33.74	233.8	6	33	4						
LANCHOW	35.51	269.8	6	44K	0	12	5	-2			
CANTON	37.30	244.0	7	0K	1	12	34	0			
HONG KONG	37.37	242.2	7	0K	1	13	14	39	7 46	8	33 PP
COLLEGE	37.96	38.0	7	5	1					9	10 PP
CHENGTU	38.41	262.3	7	8	0	12	49	-2	7 40	13	44 *SS
MANILA	39.61	226.5	7	18	0	13	16	7			
KUNMING	42.80	256.8	7	44K	0	13	58	2		14	59 *SS
SEMIPALATNSI	44.73	301.7	7	57	-2					9	40 PP
SITKA	45.44	47.8	8	7	2	14	42	8	8 42		
TOCKLAI	47.19	265.2	8	16K	-3						
LHASA	47.99	271.0	8	27K	2	15	13	3	9 2	16	15 *SS
NHATRANG	48.14	238.3	8	27	1	15	17	5			
KIPAPA	49.01	102.2	8	34	1						
HONOLULU	49.04	102.3	8	33	0	15	26	1			
SHILLONG	49.95	266.2	8	40K	0	15	36	-1		10	29 PP
RABAUL	50.39	176.7	8	43	0					15	46
FRUNSE	51.65	295.0	8	52	-1				9 27	10	52 PP

RESOLUTE	51.97	17.7	8	54	-1	16	5	0			19	34	SS
CHITTAGONG	52.08	263.2	8	55	-1	16	9	3					
HAWAII V.OB.	52.24	101.7	8	58	1	16	13	4					
CHATRA	52.40	270.9	9	5	7	16	22	11			11	4	PP
SVERDLOVSK	52.46	316.1	8	57	-2								
CALCUTTA	54.35	266.0	9	15	2	15	56	-45			10	46	
ALBERNI	54.54	53.3	9	14	0								
BOKARO	55.27	269.1	9	20	1	16	53	4			20	4	SS
PORT MORESBY	55.54	182.9	9	21	0	16	55	2			9	57	
VICTORIA	55.73	53.5	9	22	-1								
TASHKENT	55.80	296.1	9	22	-1	16	57	1			10	24	PCP
HONIARA	56.30	167.7	9	26	-1								
DEHRA DUN	56.51	280.4	9	30	2	17	7	1			12	47	PPP
KHOROG	56.58	291.2	9	29	0						13	59	
APATITY	56.73	335.7	9	27	-3	17	5	-3					
PENTICTON	57.36	51.0	9	34A	0								
CORVALLIS	58.01	57.3	9	12	-27				9	42			
NEW DELHI	58.17	279.3	9	39K	-1	17	26	-1	10	1	11	48	PP
LAHORE	58.28	283.9	9	41K	0								
BANFF	58.43	47.4	9	42	0								
WARSAK DAM	58.63	287.8	9	42	-1								
SODANKYLA	58.72	337.7	9	41K	-3	17	33	-2			19	15	SCS
TROMSOE	58.83	341.9	9	41	-3	17	32	-4			19	15	
PORT BLAIR	58.97	253.3	9	42	-3	17	37	-1					
ARCATA	59.73	61.2	9	53	2	17	53	6					
KIRUNA	59.92	340.1	9	49K	-3	17	47	-3			10	30	PCP
KAJAANI	60.85	334.7	9	58K	0	18	2	0			19	31	SCS
DARWIN	60.85	201.1	9	57	-1						12	7	
SHASTA	60.86	60.5	9	41	-17				10	35			
HUNGRY HORSE	60.91	49.3	9	59	0	18	4	2	10	36	12	46	PP
VISHAKHAPTNM	61.09	265.6	10	1K	1	18	7	2			12	13	PP
MEDAN	61.29	242.1	10	1K	0	18	14	7					
UKIAH	61.32	62.3	10	2	1				10	38			
MINERAL	61.55	60.3	10	2	-1								
SEHORE	61.74	274.7	10	3	-1								
SAN FRANCSCO	62.63	63.1	10	10	0								
BERKELEY	62.69	62.9	10	10A	0	18	24	-1	10	46			
BRANNER	63.02	63.2	10	12	-1								
RENO	63.13	60.1	9	41	-32								
BUTTE	63.15	50.7	10	13	-1	18	27	-4					
PULKOVO	63.21	330.4	10	11	-3	18	27	-4			19	49	SCS
MOSCOW	63.38	324.1	10	13	-2	18	29	-4			10	50	PCP
LICK	63.40	63.0	10	15	0						10	51	
VINEYARD	63.94	63.4	10	18	-1								
QUETTA	64.06	287.2	10	19K	0	18	39	-3	10	49	10	39	PCP
BOZEMAN	64.18	50.2	10	20	0	18	45	2	10	57			
NURMIJARVI	64.50	333.3	10	19K	-3	18	42	-5			19	56	SCS
ASHKABAD	64.55	298.9	10	23	0						14	23	PPP
DJAKARTA	64.64	228.4				18	50	1					
HYDERABAD	64.64	269.0	10	25K	2	18	50	1			12	48	PP
LEMBANG	64.79	227.2	10	23	-1	18	53	2					
FRESNO	64.90	62.5	10	25	0								
SKALSTUGAN	65.34	340.5	10	25K	-3						10	57	PCP
EUREKA	65.45	58.0	10	29	1	19	1	2	11	5	13	2	PP
PORT VILA	65.99	160.4	10	30K	-2	19	13	7					
CHARTERS TS.	66.20	183.4	10	32	-1	19	4	-4					
MADRAS	66.52	264.2	10	36K	1	19	18	6			13	3	PP
SALT LAKE C.	66.98	54.7	10	39	1	19	22	5	11	16	20	24	SCS
POONA	67.08	273.1	10	38K	-1	19	20	1			10	59	PCP
UPPSALA	67.12	336.0	10	36K	-3	19	13	-6			11	6	PCP
KARACHI	67.51	282.8	11	11K	30								
BOMBAY	67.54	274.2	10	40	-2	19	25	1			20	16	PS
PASADENA	67.62	63.7	10	41A	-1	19	26	1	11	18	11	37	*SP
KOUMAC	67.91	165.2	10	43A	-1	19	34	5					
FLAMING GRGE	68.25	53.2	10	45	-1	19	34	2					
BOULDER CITY	68.44	60.2	10	48	1	19	38	3			23	59	SS
APIA	69.22	139.6	10	51	-1								
SUVA	69.29	150.7	10	50	-2	19	48	3			11	24	PCP
RAPID CITY	69.36	47.4	10	53	0	19	49	3					
REYKJAVIK	69.66	356.0	10	56	1								
GLEN CANYON	69.69	57.6	10	55	0	19	50	1			13	51	PP
BERGEN	69.71	342.0	11	2	7	19	56	6			15	11	PPP
TIFLIS	69.78	309.5	10	56K	1				11	38	19	53	
NOUMEA	70.01	163.4	10	58A	1	20	0	7					
LARAMIE	70.06	50.8	10	57	0	19	55	1					
TEHERAN	70.19	301.2	10	59	1	19	58	3					
KODAIKANAL	70.35	264.2									20	47	
GORIS	70.50	307.0	10	59K	-1						20	59	PS
GOTEBORG	70.50	337.4	10	58K	-2						11	21	

COPENHAGEN	72.13	336.1	11	8K	-1	20	14	-4	11	47	13 40	PP
WARSAW	72.36	329.7	11	11	0	20	15	-5			13 52	PP
SIMFEROPOL	72.77	317.8	11	12K	-1	20	23	-2	11	54	13 56	PP
LWOW	73.23	326.6	11	16	0	20	26	-4			15 48	PPP
TUCSON	73.41	60.7	11	17	0	20	35	3	11	54	13 58	PP
TUCSON TELE.	73.41	60.5	11	18	1							
BRISBANE	73.45	177.1	11	18	1	20	37	5				
KISHINEV	73.53	322.2	11	16	-2	20	27	-6			15 45	PPP
IASI	73.92	323.0	11	19	-1							
ABERDEEN	74.18	344.4	11	20K	-1	20	39	-1			14 1	PP
KRAKOW	74.56	329.0	11	23K	0	20	41	-4	12	4	14 11	PP
RACIBORZ	75.14	330.0	11	27	0				12	3	14 22	PP
SKALNATE PL.	75.17	328.3	11	26	-1						14 16	PP
COLLMBERG	75.79	333.6	11	29K	-1	20	53	-5	12	13	11 38	PCP
HALLE	75.94	334.3	11	29	-2	20	55	-5				
WITTEVEEN	76.24	337.9	11	33	0							
DURHAM	76.34	343.3	11	34A	1	21	3	-1	12	25	14 25	PP
PRAGUE	76.41	332.1	11	36	2	21	8	3	12	14	21 35	PS
PRUHONICE	76.45	332.0	11	34K	0	21	7	2	12	15	21 37	PS
CAMPULUNG	76.52	323.3	11	36	1						21 38	PS
JENA	76.55	334.2	11	34	-1	21	0	-6	12	14	14 28	PP
MUNSTER	76.76	337.0	11	35	-1							
BUCHAREST	76.76	322.1	11	35K	-1	21	8	-1	12	16	21 34	PS
HURBANOVO	77.01	328.8	11	40	3	21	42	31				
BUDAPEST	77.04	328.1	11	38	1	21	10	-2	12	14	14 56	PP
CHEB	77.05	333.3	11	36	-1	21	8	-4				
BRATISLAVA	77.14	329.6	11	38K	0	21	11	-2	11	53		
LAWRENCE	77.15	46.4	11	33	-5							
DE BILT	77.28	338.4	11	38	-1	21	14	0			14 35	PP
VIENNA-H.	77.33	330.1	11	39K	0	21	11	-4	12	23	14 34	PP
KASPERSKE H.	77.50	332.2	11	39K	-1						17 6	
TIMISOARA	77.66	325.8	11	42	1							
BENSBERG	77.79	336.8	11	41K	-1	21	17	-3	12	22	14 21	PP
ISTANBUL KA.	78.12	318.3	11	43K	0				12	31	14 36	PP
ISTANBUL UN.	78.18	318.3	11	43A	-1	21	25	1				
WICHITA MTS.	78.63	51.3	11	46A	0	21	29	0	12	24	14 41	PP
BELGRADE	78.73	325.8	11	46	-1	21	35	5			14 35	PP
HEIDELBERG	78.76	335.2	11	46	-1							
CHIHUAHUA	78.85	60.3				22	44	63	13	36	23 2	S
STUTTGART	79.15	334.5	11	48	-1	21	31	-3	12	29	14 51	PP
KEW	79.17	341.4	12	19K	30	22	3	29	13	1	15 20	PP
KARLSRUHE	79.20	335.2	11	50	1	21	47	12				
SOFIA	79.33	322.8	11	51	1	21	58	22				
TUBINGEN	79.43	334.5	11	50K	0						11 55	PCP
STRASBOURG	79.77	335.4	11	52K	0	21	38	-3	12	16	14 55	PP
EBINGEN	79.78	334.5	11	52	0							
RIVERVIEW	79.83	178.7	11	54K	1	21	47	6	12	30	12 46	*SP
LJUBLJANA	79.86	330.0	11	52K	-1	21	35	-7	12	15	14 56	PP
FAYETTEVILLE	79.90	47.6	11	53A	0	21	38	-4	12	31		
RAVENSBURG	79.94	333.9	11	52	-1							
SHAWINIGAN	80.28	28.2	11	55	0						12 35	
OTTAWA	80.28	30.6	11	54	-1							
KSARA	80.36	309.4	11	55K	0	21	29	-18	12	33	14 58	PP
TRIESTE	80.48	330.3	11	56K	0	21	43	-5			16 45	PPP
SKOPJE	80.71	323.6	11	57	0	21	46	-5				
BASLE	80.77	335.0	11	58K	0	22	3	12				
CHUR	80.79	333.5	11	57K	-1	21	53	2				
BREBEUF	80.92	29.2	11	58	0							
PARIS	80.99	338.7	12	0	1	21	53	0	12	40	15 4	PP
DALLAS	81.03	51.3	11	59	0							
TITOGRAD	81.21	325.2	12	0	0	21	57	1			15 10	PP
CANBERRA	81.30	180.5	12	1	1	22	1	4	12	38	12 54	*SP
PADOVA	81.32	331.4	12	1	1	22	6	9			17 2	PPP
CLEVELAND	81.41	36.3	12	1K	0	21	56	-2				
NEUCHATEL	81.43	335.2	12	1	0	21	57	-1				
BESANCON	81.48	335.9	12	0	-1				12	18		
ADELAIDE	81.55	189.0	12	2K	0	22	0	1				
JERSEY	81.72	341.7	12	4	1	21	59	-2				
FOLINIERE	81.74	340.5	12	2	-1						15 12	PP
GARCHY	82.25	337.7	12	5	0				12	47	13 18	*SP
PAVIA	82.40	333.0	12	6K	0	22	20	12			17 1	PPP
ROSELEND	82.60	334.1	12	8	1							
PRATO	82.93	331.1	12	10	1	21	54	-19				
FLORENCE X.	82.97	331.0	12	9K	0	22	12	-1				
ATHENS	83.05	319.8	12	8K	-1	22	14	0			23 22	*SS
PENNSYLVANIA	83.45	34.3	12	12	1	22	15	-3	12	50	15 22	PP
MUNDARING	83.61	208.1	12	12K	0							
MORGANTOWN	83.61	36.3	12	13K	1	22	16	-4				
CLERMONT-FD.	83.63	337.1	12	13K	1							

TARANTO	83.67	325.4	12	18	6	22	13	-2				
PERTH	83.71	208.4	12	15	2	22	25	4			12	56
MELBOURNE	83.91	183.7	12	14	0				12	52		
ISOLA	83.96	333.9	12	14K	0	22	20	-3				
ROME	84.21	329.3	12	16K	1	22	26	0			15	28 PP
MONACO	84.25	333.5	12	16	1							
PALISADES	84.75	31.6	12	20K	2	22	26	-5	13	0	14	12 PP
HALIFAX	84.77	23.1	12	18	0							
FORDHAM	84.91	31.6	12	19	0	23	11	38				
WASHINGTON	85.39	34.7	12	21	0	22	27	-10	13	1	16	9
GEORGETOWN	85.39	34.7	12	20	-1				12	29		
HELWAN	85.85	309.9	12	24K	1	22	30	-12				
MESSINA	86.29	325.4	12	23K	-2	22	35	-11	12	58	23	52 PS
GUADALAJARA	86.39	63.8									13	6
BAGNERES	86.92	338.1	12	30	2				12	56		
KARAPIRO	87.07	159.7	12	30	1							
CHAPEL HILL	87.14	37.6	12	29	0							
COLUMBIA	87.90	40.0	12	34	1	23	2	1	13	13		
TUAI	88.29	158.8	12	34	-1							
TARRALEAH	88.31	182.3	12	38	3				13	20		
MOORLANDS	88.44	181.8	12	38A	2							
FORT NELSON	88.92	181.7	12	39A	1	22	53	-17				
TORTOSA	88.94	337.1	12	38	0	23	10	-1				
TACUBAYA	89.89	61.7	12	50K	7	23	20	1	13	21	16	18 PP
WELLINGTON	90.09	161.3	12	43	0	22	54	-27	13	22	24	35 PS
KAIMATA	90.59	164.1	12	43	-3	23	30	4				
SERRA PILAR	90.76	343.7	12	46K	-1				13	27	16	26 PP
TOLEDO	90.97	340.0	12	48K	0	23	31	2	13	30	16	22 PP
ALICANTE	91.51	336.9	12	42	-8	23	28	-6			16	24 PP
COIMBRA	91.62	343.4	12	49K	-2	23	29	-6			16	28 PP
VERA CRUZ	91.90	59.6	13	10	18	23	10	-27				
ROXBURGH	93.09	166.3	13	34	37	23	58	11			23	15 SKS
OAXACA	93.19	61.4	13	15	17	23	21	-27	13	40	25	32 PS
LISBON	93.19	343.5	12	57K	-1	23	46	-2				
GRANADA	93.43	338.9	13	3	4	23	52	2			17	12 PP
ALMERIA	93.45	337.9	12	57K	-2	23	38	-13	13	53	16	44 PP
COMITAN	96.57	58.4				23	40	6				
SAN JUAN	107.93	35.7	18	35	777							
TANANARIVE	111.68	265.0	18	20	4						18	58 PP
LWIRO	112.50	291.7	14	26	-232	24	52	6				
BANGUI	113.47	304.9	18	23	3						19	5 PP
CARACAS	114.62	40.1	19	6	44						20	17 PP
CHINCHINA	115.08	51.3	18	22	-1						20	0 PP
WILKES	116.30	196.5				27	6	125			20	6 PP
TRINIDAD	116.81	34.6	18	29	3						19	37
MBOUR	118.35	345.2									29	58 PS
CAPE HALLETT	119.25	172.9	17	48	-43	26	21	70			19	53 PP
BROKEN HILL	121.73	282.9	18	37	1						20	14 PP
SCOTT BASE	124.38	175.7	18	42	1	25	28	0	19	23	20	23 PP
BULAWAYO	125.60	277.9	18	44K	1						20	37 PP
LUANDA	127.28	301.0	18	48K	2						20	50 PP
HUANCAYO	128.99	62.8	18	52	2							
MAWSON	130.62	210.3	18	52K	-1				19	33	21	11 PP
KIMBERLEY	133.83	272.4	18	45	-14							
LA PAZ	136.80	59.1	19	7	3						22	24 PKS
ARGENTINE I.	153.68	148.0	19	41	9						20	39 PKP2

AUGUST 18 11.H 1.M 28.S EPICENTRE -24.27-179.65 DEPTH= 512.KM
A=-0.91264 B=-0.00563 C=-0.40872 D=-0.0062 E= 1.0000
G= 0.4087 H= 0.0025 K=-0.9127 HT= 3.6

DEPTH OF FOCUS= 0.076R

SE= 2.81

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
RAOUL ISLAND	5.20	163.1	1	30	0	2	44	3				
ONERAHI	12.58	202.9	2	47	2	5	5	7				
APIA	12.79	36.9	2	44	-3	4	59	-3				
NOUMEA	12.93	275.9	2	50K	2	5	10	6				
PORT VILA	12.98	297.8	2	48K	-1	5	11	6				
KARAPIRO	14.22	195.7	3	3A	1	5	38	9				
TUAI	14.74	189.9	3	8	1	5	40	2				
KOUMAC	15.31	280.8	3	15A	2	5	59	10				

CHATEAU	15.43	194.2	3 13	-1	5 51	0		
TONGARIRO	15.44	194.2	3 6	-8				
WELLINGTON	17.59	194.0	3 34	-1	6 30	1		
COBB RIVER	17.94	199.0	3 39	1	6 34	-1		
KAIMATA	19.65	200.0	3 54	-1	7 3	-1		
GEBBIES PASS	20.39	196.2	4 1	-1	7 13	-4		
HONIARA	24.42	303.7	4 37	-1				
BRISBANE	24.99	256.9	4 42	-2	8 28	-3		
CHARTERS TS.	31.80	270.7	5 45	2	10 15	-2		
MOORLANDS	32.82	228.3	5 52K	1				
FORT NELSON	32.91	227.4	5 51K	-1				
TARRALEAH	33.27	229.0	5 56	1				
RABAUL	33.69	301.9	5 58	-1				
MACQUARIE I.	34.14	202.3	6 2	0				
PORT MORESBY	34.93	289.3	6 9	0	11 2	-3		
ADELAIDE	37.50	243.7	6 30A	0	11 39	-4		
CAPE HALLETT	48.41	184.1	7 58K	2			9 40	
SCOTT BASE	54.03	183.5	8 39K	2	15 41	7	10 21	10 46 PP
MUNDARING	56.38	246.7	8 52A	-1				
SOUTH POLE	65.88	180.0	9 57	1				
MIRNY	66.96	205.8	10 1	-1				
LEMBANG	71.50	270.8	10 30	1	19 7	0		
MATUSIRO	72.38	325.5	10 34K	0	19 18	1		
MAWSON	77.52	200.4	11 3A	0				
ARGENTINE I.	78.11	157.1	11 7	1			13 1	
VLADIVOSTOK	80.51	326.2	11 18K	-1				
LICK	82.04	43.0	11 19	-8				13 14
PASADENA	82.35	47.3	13 20	112				
FRESNO	82.85	44.4	13 22	111				
SHASTA	83.69	40.0	13 28	113				
MINERAL	83.94	40.7	11 37A	1				13 32
RENO	84.52	42.2	13 33	114				
BOULDER CITY	85.65	47.4	13 40	116				19 5 PP
TUCSON	86.42	52.3	11 51	3			13 44	
TUCSON TELE.	86.55	52.3	11 52	3			13 44	
EUREKA	86.88	44.0	11 52	2			13 45	15 23 PP
GLEN CANYON	88.37	48.0	12 0	3			13 53	
PENTICTON	90.61	34.5	12 8	0				
FLAMING GRGE	91.90	45.5	12 25	11			14 5	12 54
COLLEGE	92.20	13.0	12 15	0			14 9	14 45 *SP
HUNGRY HORSE	93.05	37.5					14 13	
YAKUTSK	95.01	338.5	12 27	-1				
WICHITA MTS.	96.60	55.0	12 36	1			14 33	16 37 PP
KIRUNA	134.71	349.4						20 47 PP
KAJAANI	136.33	343.0	18 15	-7				21 9 SKP
MOSCOW	138.40	328.9						17 1
SKALSTUGAN	139.91	351.7						21 2 PP
NURMIJARVI	140.06	341.5						21 19 SKP
LWIRO	141.81	230.3	18 32K	-1				
UPPSALA	142.44	345.8	18 31	-3				
GOTEBORG	145.57	349.0	18 41	2				
LWOW	148.52	330.1	18 50	7				
RACIBORZ	150.73	336.2	18 55	8				19 3 PKP2
COLLMBERG	151.31	343.4	18 58K	10			21 0	22 6 PP
PRUHONICE	152.05	340.3	18 58	9			21 2	
KASPERSKE H.	153.10	340.6	19 0A	10			21 4	
STUTTGART	154.55	346.2	19 20	28				
LJUBLJANA	155.45	335.8	19 24	31				
GARCHY	156.93	355.3	19 30	35				

AUGUST 19 2.H 43.M 5.S EPICENTRE 43.16 144.98 DEPTH= 76.KM

A=-0.59923 B= 0.41993 C= 0.68160 D= 0.5739 E= 0.8189
G=-0.5582 H= 0.3912 K=-0.7317 HT= -2.9

DEPTH OF FOCUS= 0.007R

SE= 4.88

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
KUSIRO	0.46	246.9	0 9K	-6	0 18	-8		
NEMURO	0.47	68.9	0 8A	-7	0 15	-11		
ABASHIRI	1.00	329.7	0 19	-1	0 37	3		
OBIHIRO	1.33	260.1	0 22	-2	0 27	-15		
HIROO	1.51	234.7	0 23	-4	0 42	-4		

URAKAWA	1.91	238.8	0 28	-4	0 57	2
ASAHIGAWA	2.00	288.9	0 34	1		
TOMAKOMAI	2.55	259.1	0 40	-1	1 13	2
RUMOE	2.56	289.0	0 41	0	1 26	15
SAPPORO	2.66	269.3	0 41K	-1	1 14	0
MURORAN	3.06	255.4	0 45	-3	1 23	-1
WAKKANAI	3.27	314.8	0 52	1	1 46	17
HAKODATE	3.40	248.0	0 51A	-1	1 30	-2
MORI	3.42	253.4	0 51	-2	1 31	-2
SUTTSU	3.50	265.7	0 52	-2	1 44	9
HATINOHE	3.68	225.6	0 50	-6	1 29	-10
AOMORI	3.91	234.6	0 53	-6	1 29	-16
MIYAKO	4.17	213.8	0 56	-7	1 40	-11
Y.-SAKHLINSK	4.18	338.3	1 3	0		
MORIOKA	4.49	220.9	1 1A	-7	1 47	-12
MIZUSAWA	4.97	217.1	1 8	-6	2 0	-11
AKITA	5.03	228.5	1 13	-2	2 13	1
ISINOMAKI	5.48	211.6	1 14A	-7	2 10	-14
SAKATA	5.77	224.2	1 18	-7		
SENDAI	5.79	213.7	1 18	-7	2 18	-13
UGLEGORSK	6.25	342.2	1 32	0	2 46	3
HUKUSIMA	6.41	213.9	1 26	-8	2 34	-13
NIIGATA	6.91	222.7				
ONAHAMA	6.95	208.1	1 51	9	2 44	-16
SHIRAKAWA	7.05	212.7	1 38	-5	2 50	-12
AIKAWA	7.25	227.2	1 40	-6		
MITO	7.61	208.6	1 40K	-11	2 59	-17
UTUNOMIYA	7.68	212.4	1 33	-19	3 6	-12
KAKIOKA	7.85	209.7	1 42	-12	3 6	-16
TUKUBASAN	7.89	210.1	1 44A	-10	3 4	-19
TAKADA	7.95	222.6	1 50	-5		
TYOSI	8.09	204.6	1 53	-4	3 9	-19
MAEBASI	8.14	215.9	2 16	18	3 23	-6
KUMAGAYA	8.22	213.5	1 49	-10	3 14	-17
NAGANO	8.31	221.0	1 51	-9		
MATUSIRO	8.41	220.4	1 55A	-7	3 37	1
OIWAKE	8.43	218.1	2 1	-1		
WAZIMA	8.45	229.6	1 59	-3		
TOKYO C.M.O.	8.49	210.1	1 57	-6	3 23	-15
YOKOHAMA	8.75	209.9			3 30	-14
TOYAMA	8.79	225.4	1 59	-8		
HUNATU	9.03	214.2	3 16	66	3 40	-11
MERA	9.15	207.6			3 38	-16
TAKAYAMA	9.19	222.9	1 47	-25		
MISIMA	9.29	212.2	2 17	3	3 42	-15
AJIRO	9.30	211.3	2 5	-9		
VLADIVOSTOK	9.56	274.2	2 16	-1	4 9	5
SHIZUOKA	9.64	214.2			3 50	-16
HUKUI	9.79	226.4	2 19	-1		
OMAESAKI	10.04	213.8			4 10	-6
NAGOYA	10.11	220.5	2 7	-18	4 12	-5
KAMEYAMA	10.61	221.4				
ABUYAMA	11.04	224.6	2 29A	-8		
OSAKA	11.24	224.0	2 53	13		
PETROPAVLOVK	13.42	38.0	3 11	2		
YAKUTSK	20.94	339.7	4 43	4	8 25	2
PEKING	21.72	271.6	4 46A	-1		
ZO-SE	22.39	245.3	4 48	-5		
NANKING	23.43	250.5	5 2	-1	9 21	13
PAOTOW	26.04	276.4	5 28	0		
SIAN	29.33	264.5	5 59A	1		
LANCHOW	32.23	271.4	6 24A	0		
CHENGTU	34.72	262.7	6 44	-1		
MANILA	35.02	223.1	6 47	0		
KUNMING	38.84	256.3	7 20	0	13 35	23
COLLEGE	42.49	35.6	7 50	0		
SEMIPALATNSK	43.64	303.0	8 0	1		
LHASA	44.74	270.9	8 8	0		
SHILLONG	46.42	265.6	8 20A	-1		
CHATRA	49.13	270.3				
FRUNSE	50.01	295.3	8 50	1		
SVERDLOVSK	52.48	316.4	9 7	-1		
TASHKENT	54.23	295.9	9 21	0	16 59	9
KHOROG	54.63	290.7	9 26	3		
LAHORE	55.81	283.1	9 30	-2		
RESOLUTE	55.98	16.1	9 32	-1		
VICTORIA	60.30	49.9	10 14	11		
SODANKYLA	60.39	336.9	10 3	-1		
TROMSOE	60.81	341.1	10 5	-2		

	2 1
	2 11
	3 40
	2 57
	4 39
	7 31
	10 16
	9 48

QUETTA	61.81	286.0	10	13A	-1						
PENTICTON	61.94	47.6	10	10	-4						
KAJAANI	62.30	333.8	10	17	0						
BANFF	63.02	44.2	10	33	11						
MOSCOW	63.98	323.1	10	27	-1						
SHASTA	65.34	56.7	10	32	-5						
NURMIJARVI	65.82	332.1	10	39A	-1						
MINERAL	66.03	56.6	10	33	-8						
BERKELEY	67.12	59.1	10	59A	11						
SKALSTUGAN	67.19	339.1	10	47A	-1						
RENO	67.62	56.4	10	32	-19						
LICK	67.84	59.2	11	3A	11						
UPPSALA	68.64	334.5	10	56A	-1						
FRESNO	69.34	58.7	11	13	11						
GORIS	69.72	305.4	11	4A	0	20 12	6			15 16	PPP
EUREKA	69.97	54.4	11	5	-1			11 17		11 27	*SP
WOODY	70.61	59.1	11	6	-3			11 19			
SALT LAKE C.	71.53	51.2	11	26	11						
GOTEBORG	72.12	335.6	11	18A	0						
FLAMING GRGE	72.82	49.8	11	22	-1			11 34			
BOULDER CITY	72.92	56.6	11	37	14						
COPENHAGEN	73.65	334.2	11	28	1						
GLEN CANYON	74.22	54.0	11	26	-5					11 47	
LARAMIE	74.65	47.4	11	34	1						
KRAKOW	75.51	327.0	11	39	1					12 8	
RACIBORZ	76.17	327.9	11	43	1					12 27	
COLLMBERG	77.10	331.4	11	47A	0					14 41	PP
PRUHONICE	77.63	329.8	11	50A	0						
TUCSON	77.88	57.2	11	51	0			12 4			
TUCSON TELE.	77.89	57.0	11	52	1			12 4			
JENA	77.90	331.9	11	48	-4					12 58	
MUNSTER	78.32	334.7	11	55	1						
KASPERSKE H.	78.69	329.8	11	56A	0					12 42	
BENSBERG	79.33	334.4	12	16	17						
STUTTGART	80.52	332.1	12	6	0					13 24	
JERUSALEM	81.57	305.9	12	13	2						
WICHITA MTS.	83.22	48.0	12	19	-1					15 23	PP
GARCHY	83.85	335.0	12	23	0					12 19	PCP
FAYETTEVILLE	84.49	44.3	12	25A	-1						
SHAWINIGAN	84.61	25.1	12	27	0						
OTTAWA	84.67	27.5	12	26	-1						
HELWAN	85.25	307.0	12	31	1						
BREBEUF	85.28	26.1	12	29	-1						
KARAPIRO	85.35	156.2	12	37	7						
PALISADES	89.17	28.4				23 31	2			30 3	SS
SOUTH POLE	132.97	180.0	19	5	-2						

AUGUST 19 5.H 9.M 52.S EPICENTRE -10.82 -70.87 DEPTH= 629.KM

A= 0.32190 B=-0.92823 C=-0.18646 D=-0.9448 E=-0.3276
G=-0.0611 H= 0.1762 K=-0.9825 HT= 6.4

DEPTH OF FOCUS= 0.094R

SE= 1.75

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
LA PAZ	6.25	155.0	1	44K	-1	3	1	-7					
ANTOFAGASTA	12.82	178.1	2	45	-1	5	2	2					
CHINCHINA	16.38	343.0	3	22A	2	6	1	0					
FUQUENE	16.43	349.9	3	22K	1	5	44	-18					
BALBOA HTS.	21.46	335.9	4	8	1	7	27	2					
CARACAS	21.54	10.6	4	8K	1	7	28	2					
SANTIAGO	22.51	179.5	4	15	-1								
TRINIDAD	23.31	24.1	4	23	0						12	5	
GRENADA	24.47	22.0	4	32K	-1						8	13	
ST. VINCENT	25.67	22.0	4	45	1						14	10	
BARBADOS	26.28	25.5	4	51A	2						16	33	
DOMINICA	27.59	20.1	4	59A	-2								
ST. KITTS	29.11	16.1	5	13K	-1								
ANTIGUA	29.18	17.9	5	13	-1								
SAN JUAN	29.39	9.2	5	14K	-2	9	24	-5	6	43	8	2	PCP
SANTIAGO MA.	29.80	323.7	5	24	5						7	2	PP
SAN SALVADOR	30.38	322.8	5	27	3						7	10	PP
COMITAN	34.14	321.6	5	56	0	10	36	-5					

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VERA CRUZ	38.85	320.0	6	36	2	11	48	-3	8	18	8	28 PP
PUEBLA	40.07	317.6	6	44	0	12	4	-4				
TACUBAYA	41.00	316.9	6	53K	1	12	23	2	8	28	8	42 PP
PORT STANLEY	42.12	167.9	7	2	2							
MANZANILLO	44.37	311.8	7	21	3	13	12	3				
COLUMBIA	45.60	348.2	7	26K	-1	13	21	-5			15	13
CHAPEL HILL	47.12	350.9	7	37	-2							
WASHINGTON	49.79	353.7	7	56A	-3	13	52	-31	9	47	8	25 PCP
MORGANTOWN	50.89	351.0	8	6K	-1	14	24	-14				
FAYETTEVILLE	51.58	335.8	8	10	-1	14	35	-12				
PALISADES	51.64	357.1	8	10K	-2	14	39	-9	9	55	9	11 PCP
PENNSYLVANIA	51.76	353.2	8	11	-2	14	49	0	10	2	9	14 PCP
CHIHUAHUA	51.92	319.9	8	18	4	14	56	5			10	18 PP
WICHITA MTS.	52.36	331.1	8	15K	-2	14	52	-5	10	8	17	1 SCS
CLEVELAND	52.95	350.0	8	20	-1	15	1	-4				
LUBBOCK	53.09	327.5	8	20	-2							
ARGENTINE I.	54.55	176.6	8	30	-2						12	24 SCP
HALIFAX	55.57	6.3	8	39K	0							
OTTAWA	56.12	355.9	8	41K	-2							
SHAWINIGAN	57.13	358.4	8	49K	-1							
TUCSON TELE.	57.37	319.9	8	51K	-1							
TUCSON	57.38	319.8	8	51K	-1	15	59	-3	10	49	12	26 PP
MBOUR	59.01	66.0	9	4	1						12	4 PP
LARAMIE	60.93	330.6	9	15	0						16	49
GLEN CANYON	61.00	323.3	9	16K	0	16	50	2	11	21	22	16
RAPID CITY	62.03	334.1	9	22K	0	17	12	12	11	20		
BOULDER CITY	62.32	320.5	8	25K	-59							
FLAMING GRGE	62.56	327.9	9	25	-1	17	6	-1	11	26	9	45 PCP
PASADENA	63.36	317.0	9	30K	-1	17	11	-5	11	26	18	21 SCS
SALT LAKE C.	63.76	326.3	9	33K	0	17	12	-9				
ANGRA DO HO.	63.85	37.0	9	37	3	17	36	14			20	43
PONTA DELGDA	64.19	38.7	9	37K	1	17	18	-8	11	36	12	6 PP
EUREKA	65.25	322.9	9	43A	0	17	17	-22	11	37	12	12 PP
FRESNO	65.97	318.5	9	46K	-1							
BOZEMAN	66.83	330.5	9	52K	0	17	53	-4	11	53	19	29
VINEYARD	67.00	317.7	9	52K	-1							
LICK	67.50	318.1	9	57K	1	18	8	3	12	1		
RENO	67.61	320.9	9	27K	-30							
BUTTE	67.82	330.0	9	53K	-5	18	1	-8				
BRANNER	67.90	317.9	9	59K	0							
BERKELEY	68.21	318.2	10	1K	0	18	15	2	12	1		
SAN FRANCSCO	68.28	318.1	10	1	0				10	4		
MINERAL	69.20	320.7	10	5K	-2							
UKIAH	69.54	318.9	10	10K	2	18	32	4	12	14		
SHASTA	69.90	320.7	10	9K	-2							
HUNGRY HORSE	70.17	331.0	10	12K	0	18	40	5	12	17	14	8 SCP
ARCATA	71.06	320.1	10	18	1							
CORVALLIS	72.68	323.6	10	30K	3							
BANFF	72.84	332.4	10	28K	0							
PENTICTON	73.57	329.1	10	31K	-1							
VICTORIA	75.05	326.9	10	40K	0							
LISBON	75.65	45.3	10	45K	2	19	25	-10			13	52 PP
ALBERNI	76.24	327.0	10	46K	0							
COIMBRA	76.81	44.2	10	50K	1	19	47	0	12	59	15	38 PP
SERRA PILAR	77.11	43.3	10	50K	-1				12	58	13	56 PP
GRANADA	78.99	48.6	10	13	-48	20	14	4			24	32 SS
SOUTH POLE	79.25	180.0	11	2	0	18	37	-96				
ALMERIA	79.71	49.3	11	5K	0	20	19	2	13	14	14	17 PP
TOLEDO	79.72	46.0	10	57K	-8	20	53	36	13	16	24	53 SS
ALICANTE	81.72	48.5	11	15	0	20	35	-2			14	35 PP
LUANDA	82.63	97.6	11	21K	1	20	48	2	13	34	14	48 PP
TORTOSA	83.30	46.4	11	22	-1	20	47	-5				
REYKJAVIK	83.38	19.5	11	25K	2	20	59	6	13	34	19	12
BAGNERES	83.84	44.2	10	26	-60				12	36	13	25 PP
VIK	83.89	20.8	11	26	0	21	2	4				
HERMANUS	84.06	123.8	11	27	0	20	53	-7			14	43 PP
WINDHOEK	84.07	111.8	11	27K	0							
SIDA	84.45	20.8	11	30K	1	21	18	15	13	42	19	11
JERSEY	84.68	37.9	10	50	-40	20	55	-11				
FOLINIERE	85.51	38.7	11	33	-1						20	59
SITKA	85.67	330.4	11	34K	0	20	56	-19			22	20 SP
SCOTT BASE	85.94	190.3	11	36A	0	21	18	1	13	52	15	13 PP
KEW	86.61	36.2	11	38K	-1	21	16	-7	13	48	14	58 PP
RESOLUTE	86.63	353.8	11	39	0	21	5	-19			13	49
CLERMONT-FD.	86.76	42.4	11	40K	0						24	57 SS
EDINBURGH	86.80	31.4	11	41	1	21	29	4			15	23 PP
DURHAM	87.17	32.9	11	43A	1	21	31	2	13	52	15	0 PP
GARCH	87.22	40.9	12	41	59						13	52

PARIS	87.36	39.4	11	44	2	21	8	-22	13	54	25	20	SS
ABERDEEN	87.86	30.5	11	45K	0	21	38	3			15	48	PP
CAPE HALLETT	88.15	195.5	11	46A	0	21	16	-21	14	1	15	23	PP
ISOLA	88.95	44.7	11	50	0				14	5			
MONACO	89.09	45.2	11	50	0				14	3			
BESANCON	89.10	41.6	11	50	-1						13	58	
NEUCHATEL	89.66	42.0	11	53	0	21	26	-25					
KIMBERLEY	89.76	119.1	11	53A	-1								
DE BILT	90.04	36.8	11	55K	0	21	26	-28	14	4	25	49	PS
BASLE	90.22	41.6	11	56K	0	21	30	-26					
GRAHAMSTOWN	90.27	123.9	11	58	2								
BANGUI	90.31	85.6	11	54	-2	22	26	29					
CHIAVARI	90.56	45.0	12	1	4	21	35	-24			21	8	SKS
STRASBOURG	90.63	40.6	11	56K	-2	21	27	-32	14	4	15	58	PP
BENSBERG	90.90	38.2	11	58K	-1	21	31	-31	14	11			
WITTEVEEN	91.12	36.4	12	1K	1				14	21			
KARLSRUHE	91.15	40.3	11	58	-2	22	0	-4					
KIPAPA	91.27	291.4	12	1K	1	21	58	-7	14	14	19	49	
EBINGEN	91.29	41.2	12	0	-1								
HONOLULU	91.32	291.3	12	1K	0	21	35	-30	14	12			
CHUR	91.33	42.6	12	0K	-1	21	34	-31					
HEIDELBERG	91.45	40.0	12	1	0								
MUNSTER	91.45	37.3	12	3	2	21	53	-13					
TUBINGEN	91.45	40.9	12	0	-1								
RAVENSBURG	91.62	41.7	12	2	0								
STUTTGART	91.64	40.7	12	2K	0	21	36	-32	14	11	18	50	*SPP
PRATO	91.70	45.8	13	2	60	23	6	57					
FLORENCE X.	91.78	45.9	11	59K	-4	22	17	8					
BOLOGNA	92.00	45.2	12	8	4						21	38	
ROME	92.25	47.9	12	5K	0	22	16	3	14	17	16	7	PP
PADOVA	92.58	44.4	12	7K	1	22	16	0	14	18	16	3	PP
BERGEN	92.60	28.9	12	8	1	22	27	11			14	34	
PRETORIA	93.37	116.9	12	10	0						21	49	
JENA	93.60	38.9	12	11	0	21	48	-37	14	23	16	15	PP
MESSINA	93.82	52.0	12	19K	7	22	31	4	14	19	15	47	PP
CHEB	93.91	39.9	12	12	-1	22	27	0			23	47	SP
TRIESTE	93.92	44.4	12	13K	0	21	49	-39	14	26	16	12	PP
HALLE	93.95	38.4	12	12	-1	22	27	-1					
COLLEGE	94.23	335.3	12	13K	-1	21	37	-53					
KASPERSKE H.	94.49	41.0	12	14	-1				14	28			
LJUBLJANA	94.52	44.1	12	16K	1	22	36	3	14	25	16	15	PP
COLLMBERG	94.55	38.8	12	16K	1	22	35	2	14	28	16	13	PP
MAWSON	95.06	163.9				21	52	-2			22	32	S
BULAWAYO	95.07	111.5	12	18K	0								
COPENHAGEN	95.10	34.4	12	18K	0	21	56	2	14	30	16	16	PP
PRAGUE	95.21	40.2	12	21	3	21	57	3	14	33	22	57	S
GOTEBORG	95.26	32.3	12	18K	-1	22	10	15	14	30	29	8	PKKP
PRUHONICE	95.27	40.3	12	19K	0	21	58	3	14	32	16	22	PP
TARANTO	95.51	50.0	12	22	2	21	27	-29			25	8	PS
VIENNA-H.	96.15	42.2	12	22K	-1	22	0	1	14	33	24	10	SP
BROKEN HILL	96.22	105.9	12	24K	1								
SKALSTUGAN	96.57	26.6	12	24K	-1	22	2	0	14	39	29	4	PKKP
BRATISLAVA	96.62	42.3	12	25	0	22	50	48			15	32	*SP
TITOGRAD	97.30	48.3	12	34	6	22	9	4			15	47	PP
HURBANOVO	97.31	42.7	12	18	-10								
RACIBORZ	97.61	40.5	12	30	1				14	48	16	34	PP
BUDAPEST	97.80	43.2	12	26	-4	22	4	-4	14	41	16	17	PP
AFIAMALU	97.81	254.2	12	34	4	22	14	6	14	50	29	5	PKKP
CHORZOW	98.14	40.4	12	32	0				14	45	16	37	PP
BELGRADE	98.46	46.0	12	32K	-1	22	12	1			15	40	PP
UPPSALA	98.51	30.7	12	32K	-1	22	6	-5	14	44	16	42	PP
KRAKOW	98.71	40.7	12	35K	1	22	13	1	14	46	16	44	PP
SKALNATE PL.	98.82	41.6	12	35	0				14	46			
SKOPJE	98.85	48.9	11	44	-51	21	12	-61					
LWIRO	99.07	94.0	12	37	1						19	46	
TIMISOARA	99.11	45.1	12	38	2	22	15	1			23	45	SP
WARSAW	99.61	38.6	12	35	-3	22	6	-11	15	1	16	50	PP
TUAI	99.84	227.3	12	42	3	22	28	10	15	1			
TROMSOE	99.99	20.8	12	39	-1	22	18	0			24	35	SP
ATHENS	100.16	53.2	12	42A	1	22	19	0					
SOFIA	100.32	48.4	12	41	0						16	55	PP
KIRUNA	100.43	22.7	12	42K	0	22	22	1	14	53	16	54	PP
WELLINGTON	100.53	224.3	12	44	2	22	21	0	15	11	28	48	SS
CHATEAU	100.84	226.5	12	45	1	22	24	1	15	2			
TONGARIRO	100.85	226.5	12	45	1						29	21	
GEBBIES PASS	100.91	221.4				22	22	-1			17	5	PP
COBB RIVER	102.01	223.8				22	21	-7			26	31	PS
NURMIJARVI	102.06	30.2	12	49	0	22	27	-1	15	3	16	59	PP
ROXBURGH	102.19	218.6				22	30	1			15	6	PP

The scanned images of the bulletins of the International Seismological Summary (ISS) have been obtained thanks to funding provided by the US National Science Foundation through grant EAR-9725140 (Villaseñor et al., 1997) and collected by SGA Storia Geofisica Ambiente (Bologna) on behalf of the Istituto Nazionale di Geofisica e Vulcanologia (Rome), in the frame of the EUROSEISMOS project.

KAIMATA	102.25	222.1				22	25	6		23	41 S
BUCHAREST	102.45	46.8	12	50	-1	22	29	-1		25	16 S
SODANKYLA	102.80	23.2	12	52	0	22	30	-2		29	9 PKKP
WILKES	103.05	180.6	12	53A	0	22	32	-1	15 8	17	16 PP
ONERAHI	103.07	229.3				22	34	1		23	15
KAJAANI	103.41	26.5	12	56	1	22	35	1		23	51
IASI	103.58	43.9	17	23	267	22	33	-2			
ISTANBUL UN.	104.43	50.3	13	0	0						
ISTANBUL KA.	104.50	50.3	12	49K	-11	22	40	1	15 11	17	20 PP
PULKOVO	104.91	30.9				22	41	0		17	32 PP
APATITY	105.39	22.7	13	4	777	24	6	83			
SUVA	105.81	247.6	17	35	777	22	51	6		20	19 PPP
HELWAN	105.83	61.9	13	7	777					15	26
SIMFEROPOL	10R.17	46.2	17	19	777	22	56	1		17	50 PP
MOSCOW	109.28	34.6	17	19	777	22	59	-1		18	0 PP
KSARA	109.82	57.9	13	24	777				15 35	18	9 PP
TANANARIVE	112.49	115.7	13	44	-221	23	44	31	16 7	18	28 PP
NOUMEA	1 4.89	239.2	17	33	3	23	27	5			
PORT VILA	115.03	244.6								17	29 PP
TIFLIS	116.25	48.8	17	35	2					24	46 SKKS
MOORLANDS	116.57	210.7	17	35	2				20 3		
TARRALEAH	117.03	210.3	17	36	2					18	55 PP
KOUMAC	117.45	240.1	17	38	3	23	44	13			
GORIS	117.75	51.0	17	36	0					21	11 PKS
TIKSI	118.04	353.0	17	36	0					22	4
RIVERVIEW	120.28	220.2	17	42K	1	23	43	2	20 5	19	18 PP
CANBERRA	120.62	217.5	17	42K	1	23	40	-2		19	23 PP
SVERDLOVSK	120.91	28.7	17	43	1					19	18 PP
PETROPAVLOVK	122.27	327.1	17	44	0	23	48	1		19	24 PP
MAGADAN	122 29	336.4	17	44	-1					19	31 PP
TEHERAN	122.35	54.5	17	46	1					19	25 PP
BRISBANE	123.14	227.1	17	41	-5						
HONIARA	125.59	250.1	17	53	2						
ADELAIDE	126.53	210.3	17	54K	1	23	52	-8		20	12 PP
YAKUTSK	126.74	348.1	17	39	-14				19 57	21	9 PKS
ASHKABAD	127.25	50.3	17	55	1						
CHARTERS TS.	132.26	230.1	17	47	-17	23	52	-23			
TASHKENT	133.69	41.9								20	43 PP
Y.-SAKHLINSK	134.10	328.2	17	54	-13						
RABAUL	134.63	253.1	17	56	-12						
KUSIRO	135.67	322.7	18	7	-3						
WAKKANAI	135.69	327.1	18	10	0						
FRUNSE	136.21	37.0	17	58	-13					21	46 PKS
ASAHIGAWA	136.36	324.9	18	9	-2					20	49
QUETTA	136.36	57.4	18	14K	3				20 50	21	50 PKS
OBIHIRO	136.41	323.3	18	13	2						
HIROO	136.72	322.5	18	14	2						
MUNDARING	136.92	188.8	18	0K	-12					20	35
PERTH	136.99	188.4	18	4	-8					20	51 PP
URAKAWA	137.12	322.7	18	12	-1						
PORT MORESBY	137.17	243.4	18	4	-9					20	52
SAPPORO	137.39	324.7	18	13	0					20	47
KARACHI	137.76	65.0	18	30	16				21 4		
MURORAN	138.07	324.1	18	11	-3					20	54
SUTTSU	138.19	325.2	18	18	3					21	52
MORI	138.45	324.2	18	8	-7						
IRKUTSK	138.48	4.5								21	13 PP
HATINOHE	138.85	321.6	18	14	-2					20	54 PP
MIYAKO	139.09	320 2	18	20	4						
MORIOKA	139.56	320.9	18	13	-4						
MIZUSAWA	139.93	320.2	18	12	-6					21	21
AKITA	140.21	321.7	18	14	-5					20	58
ISINOMAKI	140.21	319.2	18	12	-7					20	58
SENDAI	140.57	319.3	18	14	-6					20	57
SAKATA	140.87	320.8	18	18	-3						
YAMAGATA	140.94	319.6	18	15	-6					20	50
HUKUSIMA	141.15	318.9	18	19	-2					21	0
ONAHAMA	141.32	317.5	18	17A	-5						
SHIRAKAWA	141.68	318.3	18	19	-3						
LAHORE	141.80	52.0	18	18	-4						
MITO	141.93	317.1	18	18	-5						
NIIGATA	141.96	320.2	18	19	-4						
KAKIOKA	142.21	317.1	18	21	-2					20	50
VLADIVOSTOK	142.21	332.4	18	18	-5						
UTUNOMIYA	142.23	317.8	18	21	-2						
TUKUBASAN	142.27	317.2	18	14K	-9					21	37 PP
AIKAWA	142.39	321.0	18	19	-4						
KUMAGAYA	142.79	317.6	18	21	-3						

TOKYO C.M.O.	142.80	316.7	18	22K	-2			19 21
MAEBASI	142.85	318.2	18	22K	-2			19 35
TAKADA	142.96	319.8	18	22	-2			
YOKOHAMA	143.01	316.4	18	23	-1			
TITIBU	143.08	317.6	18	23	1			
MERA	143.17	315.6	18	23	-1			
OIWAKE	143.23	318.5	18	23	-1			
NAGANO	143.25	319.2	18	25K	1			
MATUSIRO	143.32	319.1	18	22	-2	20 43		
OSIMA	143.56	315.7	18	24K	-1			
HUNATU	143.56	317.2	18	26	1			18 48
AJIRO	143.60	316.3	18	24	-1			
KOHU	143.61	317.6	18	14K	-11			
WAZIMA	143.63	321.2	18	25A	0			
MATUMOTO	143.65	318.9	18	26A	1			
MISIMA	143.66	316.5	18	23K	-2			21 1
TOYAMA	143.87	320.1	18	26	1			
BOMBAY	144.06	72.8	18	22A	-4			21 57 PP
SHIZUOKA	144.12	316.8	18	26	0			
TAKAYAMA	144.17	319.3	18	26	0			
IIDA	144.18	318.0	18	26	0			
KANAZAWA	144.32	320.3	18	28	2			
OMAESAKI	144.45	316.4	18	28	2			
HUKUI	144.88	320.1	18	31	4			
GIHU	144.94	318.7	18	29	2			
NAGOYA	144.95	318.2	18	29K	2			
TORISIMA	145.06	308.7	18	31	4			25 27
POONA	145.07	73.2	18	29K	2			27 44
GUAM	145.10	278.0	18	26K	-1	21 49		26 5
DEHRA DUN	145.21	51.5	18	32K	5			22 3
TSURUGA	145.24	319.7	18	33	6			
NEW DELHI	145.30	54.8	18	29K	1	20 47		21 49 PP
HIKONE	145.35	319.0	18	29K	1			20 51
KAMEYAMA	145.47	318.2	18	37A	9			
TU	145.53	318.0	18	30	2			
MAIZURU	145.78	320.0	18	32	4			
KYOTO	145.84	319.1	18	25	-3			
NARA	145.99	318.5	18	33	4			
ABUYAMA	146.04	319.0	18	30K	1			
TOYOOKA	146.10	320.7	18	31	2			23 25
OWASE	146.11	317.3	18	34	5			
OSAKA	146.20	318.8	18	35	6			
KOBE	146.41	319.1	18	35	6			
WAKAYAMA	146.70	318.5	18	34	4			
SUMOTO	146.80	318.9	18	32	2			19 15
YONAGO	147.07	322.0	18	36	6			
SEHORE	147.07	63.9	18	33	3	20 43		27 54
TOKUSIMA	147.18	318.8	18	53	23			
MATSUE	147.22	322.3	18	36	6			
TAKAMATU	147.36	319.7	18	38	8			
MUROTO	147.95	318.0	18	35	4			20 58
KOTI	148.18	319.1	18	34	2			20 45 PP
HIROSIMA	148.34	321.4	18	34	2			20 46
MATUYAMA	148.47	320.3	18	39	7			
KODAIKANAL	148.88	88.1	18	41	8			
UWAZIMA	149.01	319.7	18	40	7			
SIMIDU	149.03	318.6	18	29	-4			
SIMONOSEKI	149.53	322.5	18	35	1			
OOITA	149.60	320.7	18	37	3			
HUKUOKA	150.12	322.6	18	38	3			
ASOSAN	150.16	320.8	18	39	4			
SAGA	150.39	322.2	18	37	2			
KUMAMOTO	150.45	321.1	18	38	3			
MIYAZAKI	150.59	318.9	18	43	8			
UNZENDAKE	150.78	321.5	18	37	1			
NAGASAKI	151.01	322.0	18	39K	3			
KAGOSIMA	151.38	319.4	18	39	3			
MADRAS	151.60	82.7	18	40K	3	20 55		22 52
TOMIE	151.75	323.2	18	39	2			
YAKUSIMA	152.14	317.7	18	39	1			
CHATRA	153.89	49.4	18	43K	3			22 22
VISHAKHAPTNM	154.07	71.7	18	46K	6			22 21
BOKARO	154.30	56.7	18	44K	3			28 32
SHILLONG	158.04	45.8	18	47K	2			22 58
CHITTAGONG	159.86	53.1	18	53	6	21 15		
TAIPEI	161.61	321.9	18	51	2			27 43
ILAN	161.66	320.8	18	56	7			27 44
HSINCHU	162.12	322.6	18	54	4			

HWALIEN	162.32	319.3	18 55K	5			27 59	
LEMBANG	162.41	175.0	18 53	3			29 11	
TAICHUNG	162.78	321.8	18 54	4				
DJAKARTA	162.96	172.2	18 52K	1				
HSINKONG	163.09	317.8	19 1	10			28 7	
YUSHAN	163.10	319.7	18 53	2			28 9	
ALISHAN	163.16	320.1	18 55	4			27 57	
TAITUNG	163.48	317.4	18 54	3			27 58	
TAINAN	163.91	320.2	18 50	-2				
TAWU	163.92	317.0	18 52	0			28 11	
HENGCHUN	164.27	316.4	18 56	4			28 15	
HONG KONG	167.60	337.7	18 57	2	25 22 23		22 18	*SPKP
MANILA	167.73	289.4	18 58	3			22 28	

AUGUST 19 5.H 33.M 35.S EPICENTRE 36.13 136.66 DEPTH= 30.KM

A=-0.58883 B= 0.55560 C= 0.58702 D= 0.6863 E= 0.7273
G=-0.4270 H= 0.4029 K=-0.8096 HT= -0.3
SE= 2.30

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
HUKUI	0.36	257.3	0 6	4	0 14	-4		1 12
KANAZAWA	0.40	358.5	0 7A	-4	0 15	-3		
TAKAYAMA	0.48	87.4	0 5K	-7	0 13	-7		
TSURUGA	0.68	225.4	0 13	-1	0 22	-3		
TOYAMA	0.72	37.1	0 12K	-3	0 25	0		
GIHU	0.73	173.2	0 11K	4	0 21	-5		
HIKONE	0.92	201.5	0 14K	-3	0 25	-5		
NAGOYA	0.99	165.3	0 16K	-2	0 27	-4		
MATUMOTO	1.06	83.1	0 16	-3				
IIDA	1.13	122.3	0 14K	-6	0 30	-5		
MAIZURU	1.23	237.9	0 20K	-2	0 37	0		
WAZIMA	1.26	8.6	0 22A	0	0 38	0		
KAMEYAMA	1.29	187.1	0 23A	1	0 39	0		
MATUSIRO	1.31	71.4	0 21K	-2				
KYOTO	1.34	214.3	0 22K	-1	0 45	5		
NAGANO	1.35	66.0	0 24K	1	0 44	4		
TU	1.43	184.7	0 20A	-4	0 37	-5		
OIWAKE	1.54	82.0	0 26	0	0 37	-8		
ABUYAMA	1.54	215.7	0 25K	-1				
NARA	1.60	205.4	0 27A	0	0 49	2		
TAKADA	1.60	52.4	0 26K	-1	0 48	1		
KOHU	1.61	106.0	0 26K	-1	0 53	6		
TOYOOKA	1.61	248.8	0 26K	-1	0 49	2		
HAMAMATU	1.65	148.2	0 26K	-2	0 44	-4		
OSAKA	1.74	212.4	0 29K	0	0 51	1		
HUNATU	1.82	109.5	0 30K	0	0 50	-2		
SHIZUOKA	1.83	128.7	0 29K	-1	0 55	2		
KOBE	1.89	220.4	0 32K	1	0 57	3		
MAEBASI	1.96	81.4	0 33K	1	0 54	-2		
TITIBU	1.96	93.7	0 33	1	0 58	2		
OMAESAKI	1.99	139.7	0 33K	1	0 56	-1		
OWASE	2.09	190.6	0 33A	-1	0 59	0		
MISIMA	2.12	117.7	0 34K	0	1 3	3		
KUMAGAYA	2.20	88.7	0 37K	2	1 5	3		
WAKAYAMA	2.26	213.3	0 37K	1	1 7	4		
AJIRO	2.26	117.8	0 37	1	1 6	3		
AIKAWA	2.27	33.5	0 36	-1	1 8	4		
SUMOTO	2.29	219.3	0 37K	0	1 7	3		
NAGATURO	2.35	129.9	0 53K	15	1 32	26		
HIMEJI	2.46	229.4	0 34K	-5	1 2	-7		
YOKOHAMA	2.53	105.2	0 42K	2	1 20	10		
TOKYO C.M.O.	2.55	99.3	0 41K	1	1 10	-1		
HONGO	2.56	98.5	0 42K	1				
OSIMA	2.60	120.7	0 41K	0	1 15	3		
NIIGATA	2.62	46.2	0 43K	2	1 17	5		
UTUNOMIYA	2.62	79.9	0 43K	1	1 12	-1		
OKAYAMA	2.67	238.0	0 39K	-3	0 42	-32		
TOKUSIMA	2.67	220.3	0 52K	10	1 36	22		
SAIGO	2.70	272.5	0 42	-1	1 30	15		
SIOMISAKI	2.77	195.6	0 43A	-1	1 19	3		
TUKUBASAN	2.78	87.1	0 41K	-3				
YONAGO	2.78	256.4	0 44	0	1 31	14		
TAKAMATU	2.80	230.6	0 44K	0	1 25	8		
KAKIOKA	2.85	87.0	0 44K	-1	1 20	2		

MERA	2.85	114.1	0	44K	-1	1	19	1		
MATSUE	3.00	258.0	0	47	0	1	33	1		
SHIRAKAWA	3.03	69.9	0	48K	1	1	25	2		
MITO	3.09	84.2	0	46	-2	1	25	1		
TSURUGISAN	3.15	224.5	0	46	-3	1	24	-2		
TYOSI	3.42	95.6	0	52K	-1	1	35	2		
HUKUSIMA	3.45	60.9	0	54K	1	1	39	5		
ONAHAMA	3.51	75.3	0	54K	0	1	40	5		
MUROTO	3.53	216.2	0	57K	3	1	47	11		
YAMAGATA	3.63	53.2	0	56K	0	1	56	18		
KOTI	3.64	225.9	0	56K	0	1	39	0		
SAKATA	3.74	41.4	0	58K	1	1	44	3		
HIROSIMA	3.88	244.4	0	58K	-1	1	43	-2		
MATUYAMA	3.92	235.5	1	1K	1	1	51	5		
SENDAI	4.00	56.5	1	1K	0	2	12	24		
ISINOMAKI	4.37	56.9	1	6K	0	2	3	6		
UWAZIMA	4.46	230.7	1	7	-1	2	1	2		
AKITA	4.50	36.1	1	10K	2	2	1	1		
SIMIDU	4.52	223.5	1	9K	0	2	13	12		
MIZUSAWA	4.64	48.5	1	12	2	2	22	18		
MORIOKA	5.04	43.6	1	16K	0	2	22	8		
OOITA	5.06	236.6	1	17K	1	2	27	13		
SIMONOSEKI	5.18	246.8	1	17K	-1	2	25	8		
MIYAKO	5.47	48.5	1	24K	2	2	32	7		
ASOSAN	5.63	236.7	1	25	1	2	33	4		
AOMORI	5.69	33.3	1	27	2	2	42	12		
HUKUOKA	5.76	245.6	1	29A	3	2	43	11		
HATINOHE	5.82	39.6	1	27	0	2	45	11		
KUMAMOTO	5.93	237.9	1	28K	0	3	0	24		
SAGA	5.98	243.1	1	31K	2	3	2	25		
MIYAZAKI	6.05	227.5	1	31K	1	2	48	9		
UNZENDAKE	6.29	239.2	1	32K	-1	2	43	-2		
ITUHARA	6.35	254.5	1	33K	-1	2	51	4		
HAKODATE	6.51	28.1	1	37	1	2	51	0		
NAGASAKI	6.55	240.8	1	38K	1	3	17	25		
MORI	6.69	25.8	1	42	3	3	11	16	2	0 PP
KAGOSIMA	6.82	229.9	1	42K	1	3	11	13		
MURORAN	7.03	27.1	1	47	3	3	17	13		
SUTTSU	7.21	21.4	1	47	1	3	23	15		
TOMIE	7.40	244.1	1	51K	2	3	22	9		
TOMAKOMAI	7.52	28.9	1	23	-28					
YAKUSIMA	7.66	224.1	1	52K	-1	3	30	11		
URAKAWA	7.66	36.5	1	54	1	3	29	10		
SAPPORO	7.82	26.1	1	57K	2	3	28	5		
VLADIVOSTOK	7.89	333.7	1	53	-3					
HIROO	8.02	38.0	1	58	0				3	49
OBIHIRO	8.45	34.7	2	5	1					
RUMOE	8.68	24.4	2	10K	3	3	54	9		
ASAHIGAWA	8.81	28.1	2	10	1					
KUSIRO	9.08	38.8	2	9	-3	3	52	-3		
ABASHIRI	9.80	34.2	2	17	-5					
NEMURO	9.94	40.9	2	25	1				4	59
WAKKANAI	10.03	20.7	2	26	1	4	29	11		
CHANGCHUN	11.61	314.9	2	37	-10					
Y.-SAKHLINSK	11.78	20.7	2	48	-1	4	55	-6		
ZO-SE	13.84	253.2	3	18K	1	6	5	15		
NANKING	15.36	259.8	3	38K	2	6	37	11		
PEKING	16.59	289.7	3	53K	1	7	6	11		
PAOTOW	21.32	290.1	4	47K	0	8	45	8		
SIAN	22.72	273.4	5	2	1	9	11	8		
PETROPAVLOVK	22.88	35.6	5	4	2				5	58 PPP
GUAM	23.71	160.1	4	44A	-26					
HONG KONG	23.91	240.9	5	13	1					
CANTON	24.01	243.6	5	15A	2	9	34	9		
MANILA	25.52	217.1	5	29	1	9	57	6		
LANCHOW	26.47	279.6	5	37	0					
CHENGTU	27.72	268.1	5	57	9					
IRKUTSK	27.94	315.4	5	48A	-2				6	47 PP
KUNMING	31.04	258.8	6	22	4	11	29	9		
SHILLONG	39.57	267.4	7	27	-3	13	25	-6	16	17 SS
CHITTAGONG	41.11	263.1	7	43	0	13	54	0		
CHATRA	42.83	271.9	7	56	-1	14	23	4	9	40 PP
BOKARO	45.27	268.9	8	20	3					
PORT BLAIR	46.45	249.7	8	31	5					
FRUNSE	47.40	298.0	8	31	-3					
MEDAN	47.68	236.2							13	13
DEHRA DUN	48.74	280.9	8	46	2	15	47	3	10	33 PP
NEW DELHI	50.12	279.2	8	54	-1					

DJAKARTA	50.54	219.8	8	56	-2	15	55	-14			
COLLEGE	51.88	31.7	9	8A	0						
KHEYS	52.75	348.3	9	15	0				10	22	PCP
SVERDLOVSK	53.29	318.3	9	17	-2						
MADRAS	55.46	260.6	8	39	-55						
CHARTERS TS.	56.65	169.2	9	40	-3	17	33	2			
QUETTA	57.54	285.7	9	44	-5						
POONA	57.56	270.1	9	45	-4						
HONOLULU	58.12	85.7	9	53	0	17	57	6			
KIPAPA	58.12	85.6	9	53A	0						
BOMBAY	58.21	271.1	9	45	-9						
SITKA	59.54	39.3	10	3A	0	18	17	8			
HAWAII V.OB.	61.35	86.0	10	17	1	18	43	11			
APATITY	61.91	334.9	10	17	-2						
SODANKYLA	64.28	336.2	10	33	-2	19	10	1	39	21	PKPPKP
BRISBANE	64.98	164.2	10	40	0				19	21	
TROMSOE	65.30	340.1	10	39	-3				15	17	
MOSCOW	65.66	322.2	10	42	-2				13	12	PP
KAJAANI	65.69	332.9	10	43	-1						
KIRUNA	65.97	338.1	10	44	-2	19	33	3	23	37	SS
TEHERAN	66.69	298.0	10	50	0	19	45	6			
SIUVA	66.90	136.5				19	52	11			
PULKOVO	66.98	328.2	10	51	-1				13	16	PP
ALBERNI	68.59	44.1	11	1	-1						
NURMIJARVI	68.90	330.5	11	2	-2	20	8	3	11	21	PP
AFIAMALU	69.60	125.8	11	7	-2	20	18	5	28	31	SSS
PERTH	70.48	198.7	11	19	5				15	4	
ADELAIDE	70.76	178.2	11	14K	-2	20	31	4			
SEATTLE	70.87	44.6	11	17	1	20	38	10			
RIVERVIEW	70.90	167.3	11	15A	-1				11	48	
SKALSTUGAN	71.31	337.1	11	17	-2				30	42	PKKP
PENTICTON	71.44	42.1	11	19A	-1						
CORVALLIS	71.95	47.7	11	26A	3						
CANBERRA	72.01	169.4	11	21A	-2				14	4	PP
UPPSALA	72.04	332.4	11	21A	-2	20	41	-1	13	31	
SIMFEROPOL	73.23	313.6	11	29	-1				14	17	PP
SHASTA	74.67	50.7	11	39K	0				26	23	
HUNGRY HORSE	75.00	40.7	11	42A	1				14	21	
UKIAH	75.03	52.4	11	42A	1				14	25	
MINERAL	75.36	50.7	11	43K	0				14	24	
GOTEBORG	75.65	332.9	11	42A	-2						
SAN FRANCSCO	76.30	53.2	11	48	0						
BERKELEY	76.36	53.1	11	49A	1				14	27	
BRANNER	76.68	53.4	11	50A	0						
COPENHAGEN	76.94	331.3	11	51A	-1	21	40	4			
RENO	76.95	50.5	11	22A	-30						
LICK	77.07	53.2	11	52A	0				14	32	
BUTTE	77.23	41.9	11	53A	0						
VINEYARD	77.58	53.6	11	55A	0						
CHORZOW	77.93	324.5	11	57	0				15	59	
BOZEMAN	78.27	41.5	11	59A	0						
RACIBORZ	78.44	324.7	11	55	-5				12	11	PCP
KSARA	78.52	303.4	12	0	0	21	44	-9	14	52	PP
TARRALEAH	78.57	172.6	11	58K	-3						
FRESNO	78.60	52.8	12	1	0						
REYKJAVIK	78.64	350.6	12	3	2						
MOORLANDS	78.78	172.1	12	3K	1						
FORT NELSON	79.29	172.0	12	3K	-1	21	46	-15			
EUREKA	79.36	48.7	12	10A	5						
BUDAPEST	79.83	322.4	12	7	0						
WOODY	79.85	53.2	11	2	-66						
TIMISOARA	79.89	320.0	12	14	6	22	14	6			
COLLMBERG	79.91	327.9	12	7A	-1	22	12	4	15	10	PP
HURBANOVO	79.97	323.1	12	2	-6	22	25	17			
PRUHONICE	80.19	326.3	12	9A	0	22	15	4	13	59	
HALLE	80.21	328.6	12	9	0	22	10	-1			
BRATISLAVA	80.29	323.8	11	55A	-15	22	18	6			
VIENNA-H.	80.58	324.2	12	12A	1	22	23	8	15	12	PP
ABERDEEN	80.76	338.7	12	14	2	22	20	3	23	5	PS
SOFIA	80.78	316.7	12	14	2				15	20	PP
JENA	80.79	328.4	12	11	-2	22	19	2	14	40	
BELGRADE	80.92	319.7	12	13A	0	22	28	10	12	51	
SALT LAKE C.	80.99	45.7	12	13A	-1						
CHEB	81.07	327.4	12	12	-2						
PASADENA	81.24	54.1	12	14A	-1	22	30	8			
KASPERSKE H.	81.24	326.2	12	14A	-1						
WITTEVEEN	81.33	331.9	12	15	0						
MUNSTER	81.62	330.9	12	18	1						

KARAPIRO	82.01	149.9	12 17A	-2			
EDINBURGH	82.13	338.5	12 19	-1			
FLAMING GRGE	82.29	44.3	12 20A	0	22 3	-29	24 21
BENSBERG	82.58	330.5	12 21A	-1			
DURHAM	82.62	337.1	12 24K	2	22 45	9	16 11 PP
LJUBLJANA	83.03	323.6	12 23A	-1			15 39 PP
TONGARIRO	83.09	150.6	12 23	-1			
CHATEAU	83.10	150.6	12 23	-1			12 46
HEIDELBERG	83.15	328.7	12 25	0			
TITOGRAD	83.18	318.5	12 24	-1	22 47	6	19 28
STUTTGART	83.40	328.0	12 26	0			
TUAI	83.41	149.3	12 25	-1			
RAPID CITY	83.45	38.9	12 27A	1	22 5	-39	
KARLSRUHE	83.58	328.6	12 26	-1			
GLEN CANYON	83.61	48.5	12 25K	-2	22 10	-36	24 31
TUBINGEN	83.67	328.0	12 27A	0			
ATHENS	83.67	312.9	12 27	0			
TRIESTE	83.70	323.7	12 26A	-1	22 52	5	15 43 PP
EBINGEN	83.98	327.8	12 28	-1			
RAVENSBURG	84.00	327.2	12 29	0			
STRASBOURG	84.18	328.7	12 30A	0	22 51	0	
PADOVA	84.77	324.5	12 32	-1	22 58	1	17 17 PPP
KEW	84.96	334.6	12 33A	1	23 1	2	15 53 PP
BASLE	85.08	328.1	12 34	0	23 8	8	
BESANCON	85.98	328.8	12 37	-2			
PARIS	86.13	331.6	12 39	-1			15 6
PRATO	86.27	323.9	13 40	60			
FLORENCE X.	86.28	323.7	12 38A	-2	22 50	-22	
ROXBURGH	86.42	157.6	12 44	3			
CHIAVARI	86.78	325.1	12 56	13	22 55	-22	30 30 SSS
ROME	87.08	321.8	12 43	-1			15 50 PP
ROSELEND	87.16	327.5	12 40	4			
TUCSON	87.18	51.6	12 45A	0			
TUCSON TELE.	87.19	51.5	12 46A	1			
FOLINIERE	87.27	333.2	12 44	-1			13 43
MESSINA	88.17	317.6	12 48	-1			16 18 PP
CLERMONT-FD.	88.35	329.5	12 51	1			
BAGNERES	91.78	329.7	12 6	-60			
CHIHUAHUA	92.64	51.5					27 9
WICHITA MTS.	92.71	42.7	13 11	0			16 54 PP
SHAWINIGAN	93.54	19.9	13 15A	0			22 10
FAYETTEVILLE	94.00	39.0	13 17A	0			15 39 PP
SERRA PILAR	96.77	334.3	13 30A	1	23 35	-28	17 27 PP
PENNSYLVANIA	97.14	25.7	13 32	1			
LISBON	99.10	333.6					16 51
WASHINGTON	99.10	26.0	14 44	64			
TANANARIVE	100.21	254.1	13 44	-1			17 56 PP
TACUBAYA	103.59	53.5	13 56	-4	25 51	75	18 25 PP
BANGUI	109.57	290.9	13 45	777			18 54 PP
CAPE HALLETT	1 0.65	169.6					19 5 PP
BROKEN HILL	112.98	268.6	18 32	-2			
SCOTT BASE	115.17	173.3	13 45	-294	25 35	10	19 34 PP
BULAWAYO	115.89	263.2	18 45	5			
MAWSON	117.10	204.4	18 32	-10			19 53 PP
SAN JUAN	121.66	25.6	18 52K	1			20 22 PP
KIMBERLEY	123.08	256.5	18 55	1			
CARACAS	128.56	30.2	19 6K	1			22 40
ARGENTINE I.	148.30	163.4	19 41	1			
LA PAZ	150.55	54.9	19 46K	2			

AUGUST 19 8.H 7.M 21.S EPICENTRE 36.06 136.82 DEPTH= 0.KM

A=-0.59081 B= 0.55448 C= 0.58609 D= 0.6843 E= 0.7292
G=-0.4274 H= 0.4011 K=-0.8102 HT= -0.3

SE= 4.71

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
TAKAYAMA	0.36	76.0	0 7K	-5	0 13	-7		
HUKUI	0.48	268.6			0 8	-15		
KANAZAWA	0.48	343.9	0 12	-2	0 20	-3		
GIHU	0.66	183.3	0 9K	-7	0 20	-7		
TOYAMA	0.71	25.8	0 17K	0	0 27	-1		
TSURUGA	0.73	236.0	0 7A	-10	0 15	-14		
NAGOYA	0.90	172.0	0 13K	-6	0 26	-7		
HIKONE	0.92	210.4	0 8K	-12	0 18	-16		

MATUMOTO	0.95	78.4	0	15	-5	0	32	-3			
IIDA	0.99	123.1	0	17K	-4	0	33	-3			
MATUSIRO	1.22	66.7	0	23	-1	0	41	-1			
KAMEYAMA	1.24	193.3	0	20	-4	0	35	-7			
NAGANO	1.27	61.1	0	24A	-1	0	37	-6			
MAIZURU	1.30	243.4	0	18K	-7	0	34	-10			
WAZIMA	1.32	2.9	0	24A	-1	0	40	-4			
KYOTO	1.37	220.7	0	20K	-6	0	36	-9			
TU	1.38	190.2	0	23	-3	0	40	-6			
OIWAKE	1.43	78.7	0	27	0						
KOHU	1.47	105.0	0	26K	-2	0	47	-1			
TAKADA	1.55	47.7	0	29	0	0	54	4			
ABUYAMA	1.57	220.9	0	23K	-6	0	43	-7			
NARA	1.60	210.6	0	25K	-4	0	44	-7			
HUNATU	1.68	108.9	0	31	0	0	53	0			
SHIZUOKA	1.69	129.7	0	27K	-4	0	51	-2			
TOYOOKA	1.71	252.4	0	25K	-6	0	47	-7			
OSAKA	1.76	217.1	0	28	-4	0	50	-5			
TITIBU	1.84	91.9	0	34	1	0	59	2			
MAEBASI	1.85	78.9	0	33A	0	0	53	-5			
OMAESAKI	1.86	141.4	0	33	0	0	56	-2			
KOBE	1.92	224.6	0	30	-4	0	55	-4			
MISIMA	1.98	117.8	0	34	-1	0	59	-2			
OWASE	2.05	194.5	0	33	-3	0	58	-5			
KUMAGAYA	2.08	86.9	0	37K	1	1	9	6			
AJIRO	2.12	117.8	0	36A	-1	1	5	1			
TOTTORI	2.21	256.3	0	30	-8	0	56	-11			
AIKAWA	2.26	30.0	0	43	4	1	12	4			
WAKAYAMA	2.27	216.9	0	34	-5	1	3	-5			
SUMOTO	2.32	222.8	0	36	-4	1	4	-6			
YOKOHAMA	2.39	104.5	0	42	1	1	19	8			
TOKYO C.M.O.	2.41	98.3	0	46	5	1	17	5			
HONGO	2.42	97.5	0	44	3				1	18	
OSIMA	2.46	120.9	0	43	1	1	7	-6			
UTUNOMIYA	2.51	78.0	0	48	5	1	20	6			
NIIGATA	2.57	43.3	0	46	3	1	26	10			
TUKUBASAN	2.66	85.7	0	43A	-2						
MERA	2.71	114.0	0	47	2	1	25	6			
KAKIOKA	2.73	85.5	0	46	0	1	20	0			
OKAYAMA	2.74	240.6	0	37	-9	1	10	-10			
SIOMISAKI	2.75	198.6	0	41	-5	1	16	-4			
SAIGO	2.83	273.8	0	41	-6	1	25	3			
TAKAMATU	2.86	233.3	0	44	-3						
YONAGO	2.89	258.4	0	49	1	1	21	-3			
SHIRAKAWA	2.93	67.9	0	49	0						
MITO	2.97	82.8	0	54	5	1	34	8			
MATSUE	3.11	259.7	0	50	-1	1	36	7			
TSURUGISAN	3.19	227.0	0	49	-3	1	29	-3			
TYOSI	3.29	94.8	0	59	5	1	39	5			
HUKUSIMA	3.38	59.0							2	5	
ONAHAMA	3.41	73.7	0	57	2	1	43	6			
MUROTO	3.55	218.5	0	55	-2	1	48	7			
YAMAGATA	3.57	51.2	0	57	-1	1	58	17			
KOTI	3.69	228.1	1	4	5	1	48	4			
SAKATA	3.71	39.3	1	10	10						
SENDAI	3.93	54.8	1	4	1	2	0	10			
HIROSIMA	3.97	246.1	0	59	-4	1	44	-7			
MATUYAMA	3.99	237.4	1	1	-3	2	0	8			
ISINOMAKI	4.30	55.3	1	9	1	2	10	10			
AKITA	4.48	34.4				1	57	-7			
UWAZIMA	4.51	232.4	1	19	8						
SIMIDU	4.56	225.3	1	14	2	2	8	2			
MIZUSAWA	4.59	46.9	1	20	8	2	23	16			
OOITA	5.13	238.1	1	34	14	2	29	8			
MIYAKO	5.43	47.2	1	32	8						
HUKUOKA	5.85	246.8							2	27	
KUMAMOTO	6.00	239.1	1	43	11	3	3	21			
SAGA	6.06	244.3	2	22	49	3	3	19			
MIYAZAKI	6.10	228.9							1	55	
NAGASAKI	6.63	241.9	1	38	-3	3	9	11			
MORI	6.70	24.7	1	43	1						
KAGOSIMA	6.88	231.1							3	50	
TOMIE	7.49	245.0							3	43	
SAPPORO	7.82	25.2	1	58	0						
COLLEGE	51.87	31.7	9	8	-4				10	21	
CHARTERS TS.	56.56	169.4	9	40	-6						
KOUMAC	62.02	150.7	10	45	21						
KIRUNA	66.07	338.2	10	45	-6						

PENTICTON	71.41	42.2	11	19	-5
CORVALLIS	71.91	47.8	11	11	-16
HUNGRY HORSE	74.97	40.7	11	41	-4
MINERAL	75.31	50.7	11	42A	-5
RENO	76.90	50.6	11	22	-34
EUREKA	79.31	48.8	12	5	-4
WOODY	79.79	53.3	12	6	-5
COLLMBERG	80.03	328.0	12	7	-6
STUTTGART	83.52	328.1	12	24	-7
WICHITA MTS.	92.67	42.8	13	11	-4
SHAWINIGAN	93.56	20.0	13	15	-4
SCOTT BASE	1'5.09	173.3	18	42	-1
SOUTH POLE	125.88	180.0	18	59	-5
BYRD STATION	127.62	167.6	19	3	-4
LA PAZ	150.48	55.2	19	50	2

AUGUST 19 14.H 52.M 30.S EPICENTRE 18.11 -68.73 DEPTH= 102.KM
A= 0.34498 B=-0.88628 C= 0.30902 D=-0.9319 E=-0.3627
G= 0.1'21 H=-0.2880 K=-0.951 HT= 5.1

DEPTH OF FOCUS= 0.011R

SE= 2.82

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
SAN JUAN	2.50	83.5	0	40	0	1	9	-1				
ANTIGUA	6.64	97.3	1	38	1							
DOMINICA	7.56	110.6	1	51	1	3	14	0				
CARACAS	7.77	166.8	1	52K	0	3	9	-10				
ST. VINCENT	8.71	123.3	2	2	-3							
GRENADA	9.06	130.8	2	8	-2	3	42	-9				
BARBADOS	10.10	118.2	2	29	5	4	12	-4				
TRINIDAD	10.27	135.3	2	26	0	4	13	-7				
FUQUENE	13.48	201.8	3	8	0							
BALBOA HTS.	13.91	230.6	3	12	-2	5	59	13				
CHINCHINA	14.70	208.1	3	24A	0	6	12	7				
COLUMBIA	19.27	327.6	4	18	-1	7	40	-7				
CHAPEL HILL	19.95	334.8	4	26	-1						4	48
WASHINGTON	21.95	342.4	4	46	-1	8	45	8				
FORDHAM	23.09	350.0									6	29
PALISADES	23.25	350.0	4	59K	0	9	10	10			5	19 PP
MORGANTOWN	23.54	337.9	5	1A	-1	9	23	18				
PENNSYLVANIA	23.94	342.7	5	7	1	9	18	6				
CLEVELAND	25.74	337.5	5	23K	0	9	44	2				
TERRE HAUTE	26.64	326.5									8	30
HALIFAX	26.77	8.2	5	34	2							
OTTAWA	27.82	349.4	5	42	0							
FAYETTEVILLE	28.75	313.6	5	51A	1	10	32	1			6	25 *SP
TACUBAYA	28.86	277.5	5	59	8	10	30	-3				
HUANCAYO	30.67	192.7	6	8	1						6	51 SP
WICHITA MTS.	31.28	307.8	6	12	-1	11	12	1	6	46	12	38 SCP
LA PAZ	34.40	179.0	6	40A	0	11	56	-3				
RAPID CITY	38.80	319.4	7	16	-1							
LARAMIE	39.05	314.2	7	21	2							
TUCSON TELE.	40.28	298.8	7	30	1							
TUCSON	40.35	298.7	7	29	0							
FLAMING GRGE	41.55	311.9	7	19	-20							
ANTOFAGASTA	41.59	182.3	7	38	-2							
GLEN CANYON	41.98	305.5	7	44	1							
SALT LAKE C.	43.26	310.8	7	54	1							
BOULDER CITY	44.30	303.2	9	5	63							
BOZEMAN	44.49	317.6	8	3	0							
BUTTE	45.60	317.5	8	12	0	14	47	1				
EUREKA	45.94	307.7	8	5	-10							
PASADENA	46.72	300.1	8	20	-1						8	57
RENO	48.85	307.0	8	47	10							
BANFF	49.47	322.8	8	42	0							
VINEYARD	49.64	303.1	9	12A	29							
MBOUR	49.71	86.3				15	47	3			16	29 *SS
LICK	49.93	303.8	8	46	0						9	10
MINERAL	50.35	307.7	8	49K	0							
BRANNER	50.36	303.8									9	50
BERKELEY	50.48	304.4	8	50	0	16	0	6			16	43
SHASTA	51.01	308.0	8	52	-2						9	29
PENTICTON	51.22	319.4	8	27	-28							

UKIAH	51.40	305.9	8 58	1				
CORVALLIS	52.40	312.7	8 53	-11				
VICTORIA	53.39	317.5	8 42K	-30				
ALBERNI	54.48	318.1	8 29	-51				
REYKJAVIK	55.73	22.8	9 30	1				
SIDA	57.00	24.2	9 28	-10				
RESOLUTE	58.34	352.1	9 45	-2				
TOLEDO	59.31	54.0	9 54	0	18 0 8	10 30	10 20	
DURHAM	62.24	37.1	9 55K	-19	17 55 -34			
FOLINIERE	62.30	44.0	10 14	0		10 38		
PARIS	64.26	44.0	10 27	0			10 53	PCP
GARCHY	64.62	45.7	10 29	0			10 53	PCP
CLERMONT-FD.	64.66	47.4	10 55A	26				
BESANCON	66.61	45.7	10 40	-2				
WITTEVEEN	66.98	39.7	10 45	1				
BENSBERG	67.30	41.7	10 34	-12			11 23	
ISOLA	67.50	49.0	10 49	2			12 13	
MUNSTER	67.57	40.6	10 50	2				
STRASBOURG	67.76	44.2	10 50	1			11 14	PCP
MONACO	67.80	49.5	10 42	-7				
ROSELEND	67.83	47.6	10 45	-5				
STUTTGART	68.75	44.0	10 54	-1			11 20	
COLLEGE	69.13	333.3	10 56	-2		11 23		
GOTEBORG	69.93	34.3	11 2	0				
SKALSTUGAN	69.95	28.1	11 2	-1		11 28		
JENA	70.09	41.6	11 2	-1		11 27	13 57	PP
HALLE	70.28	40.9	11 5	0			11 29	PCP
COPENHAGEN	70.29	36.5	11 4K	-1	20 12 5			
FLORENCE X.	70.56	49.2	11 10	4				
PADOVA	70.81	47.4					11 30	
COLLMBERG	70.95	41.1	11 8	-1			11 33	
KASPERSKE H.	71.54	43.3	11 12K	0			13 25	
ROME	71.69	51.0	11 14	1	20 57 34	11 38	21 33	
PRUHONICE	72.07	42.4	11 16K	1		11 40	12 18	
TRIESTE	72.09	47.0	11 16	1			11 40	
TROMSOE	72.36	21.5	11 16	-1		11 42		
LJUBLJANA	72.57	46.5						
UPPSALA	72.71	31.8	11 19K	0		11 44		
KIRUNA	73.07	23.4	11 21K	0	20 43 4	11 47		
VIENNA-H.	73.49	44.0	11 25	1			11 48	
BRATISLAVA	73.99	44.0	11 28K	2		11 52		
RACIBORZ	74.39	41.9	11 30	1			11 42	PCP
SODANKYLA	75.49	23.5	11 35	0			12 1	
NURMIJARVI	76.07	30.6	11 39	1				
KAJAANI	76.66	26.7	11 44	2			12 10	
KHEYS	77.79	7.7					12 13	
APATITY	77.97	22.6	11 48	-1	21 36 4			
ARGENTINE I.	83.17	178.1	12 15	-1				
MOSCOW	84.07	33.1	12 21	0	22 31 -4			
BANGUI	86.14	86.7	12 31	0		13 8		
HELWAN	89.50	58.8	12 49	2			13 16	
SVERDLOVSK	94.21	25.2					13 11	
MATUSIRO	119.98	335.1	18 39	0				
MAWSON	121.84	160.3	18 42A	-1			19 21	
SHILLONG	132.65	24.1	19 4	1			22 18	
BRISBANE	140.77	248.7	19 13	-5				
PORT MORESBY	144.15	279.1	19 24	0				
CHARTERS TS.	146.91	260.9	19 31	2			23 45	
ADELAIDE	150.39	230.0	19 41K	7				

AUGUST 19 16.H 1.M 27.S EPICENTRE -11.40 -70.68 DEPTH= 610.KM

A= 0.32433 B=-0.92535 C=-0.19632 D=-0.9437 E=-0.3308
G=-0.0649 H= 0.1853 K=-0.9805 HT= 6.4

DEPTH OF FOCUS= 0.091R

SE= 1.80

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
LA PAZ	5.65	154.2	1	38A	-1	2	55	-3				
ANTOFAGASTA	12.24	178.9	3	29	48	5	10	20				
CHINCHINA	16.98	342.9	3	28	2	6	16	4				
CARACAS	22.07	9.9	4	13K	0	7	38	2				
TRINIDAD	23.77	23.2	4	29	1							

GRENADA	24.93	21.2	4 39	1							
ST. VINCENT	26.13	21.2	4 48K	-1							
SAN JUAN	29.93	8.7	6 50	89						8 11	
PORT STANLEY	41.52	168.0	6 58	1							
FAYETTEVILLE	52.18	335.9	8 15K	-2						9 18	PCP
WICHITA MTS.	52.95	331.1	8 21K	-1	15	6	-1	10 10		9 21	PCP
ARGENTINE I.	53.96	176.7	7 54	-35							
SHAWINIGAN	57.71	358.3	8 55A	0							
TUCSON TELE.	57.93	320.0	8 57	0				10 49		9 41	
TUCSON	57.94	319.9	8 56	-1				10 49			
GLEN CANYON	61.58	323.4	9 21	0				11 16			
RAPID CITY	62.63	334.1	9 27	0				11 21			
BOULDER CITY	62.88	320.6	9 31	2				11 27			
FLAMING GRGE	63.15	327.9	9 30	-1				11 24		10 20	
PASADENA	63.91	317.1	9 36	0				10 4			
SALT LAKE C.	64.35	326.3	9 38	0							
WOODY	65.28	318.1	11 40	116							
EUREKA	65.82	322.9	9 48	0				11 39		12 17	PP
LICK	68.05	318.1	10 2K	1						11 59	
RENO	68.18	321.0	9 33	-29							
BERKELEY	68.76	318.3	10 6	1							
MINERAL	69.77	320.8	10 10K	-1							
SHASTA	70.46	320.7	10 14K	-1							
HUNGRY HORSE	70.77	331.0	10 17	0				12 14			
CORVALLIS	73.25	323.6	10 22	-9							
BANFF	73.44	332.4	10 33	1							
PENTICTON	74.16	329.1	10 37K	1						12 28	
VICTORIA	75.64	326.9	10 45K	0							
SOUTH POLE	78.68	180.0	11 1	0							
SCOTT BASE	85.41	190.3	11 35A	0							
RESOLUTE	87.22	353.7	11 44	1							
CAPE HALLETT	87.64	195.5	11 45	0							
BANGUI	90.17	85.6	11 56	-1							
MAWSON	94.45	163.8	12 16K	-1							
COLLEGE	94.84	335.3	12 18	0				14 24			
COLLMBERG	94.88	38.8	12 20	2							
ADELAIDE	126.12	209.9	17 55A	1							
CHARTERS TS.	132.03	229.5	18 7	2						20 38	
RABAUL	134.64	252.4								20 29	
QUETTA	136.51	58.0	18 17K	4				20 55			
MATUSIRO	143.88	318.7	18 27K	0							
NEW DELHI	145.47	55.6	18 40K	10						20 44	
SHILLONG	158.30	47.1	18 50K	2							
LEMBANG	161.81	174.6								19 44	

AUGUST 19 20.H 26.M 22.S EPICENTRE 2.34 97.15 DEPTH= 45.KM

A=-0.12443 B= 0.99140 C= 0.04062 D= 0.9922 E= 0.1245
G=-0.0051 H= 0.0403 K=-0.9992 HT= 7.2

DEPTH OF FOCUS= 0.002R

SE= 2.00

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
MEDAN	1.96	51.1	0 35	3				
LEMBANG	13.86	131.2	3 14A	-2				8 5
VISHAKHAPTNM	20.46	319.2	4 41A	5	8 27	9		4 59 PP
KUNMING	23.28	12.9	5 4	-1	9 10	0		
SHILLONG	23.65	348.0	5 7	-1				
TOCKLAI	24.37	354.8						9 15
CHATRA	26.16	339.4	5 31A	-1				
LHASA	27.76	348.5	5 48	1	10 25	0		
NEW DELHI	32.29	325.8	6 23A	-4				
LANCHOW	34.10	9.7	6 39	-4	11 59	-5		
DARWIN	36.51	114.4	7 4	1				
MUNDARING	38.62	153.6	7 23	2				
WARSAK DAM	39.54	325.7	7 28	0				
QUETTA	39.82	317.1	7 31K	0				16 30 SS
PEKING	41.29	22.3	7 43	0	13 52	-2		
ANDIJAN	44.31	332.9	8 8	1				
STALINABAD	44.41	327.8	8 8	0	14 36	-3		
FRUNSE	45.05	336.5	8 14A	1				
TASHKENT	46.21	330.8	8 23	0	15 1	-4		
SEMIPALATNSK	49.98	345.9	8 51A	-1	15 58	0		
MATUSIRO	50.89	43.0			16 22	11		19 50

			P	O-C	S	O-C	*PP	SUPP.
	DELTA DEG.	AZ. DEG.	M S	S	M S	S	M S	M S
CHARTERS TS.	53.06	117.3	9 16	1	16 53	13		
ADELAIDE	53.79	137.5	9 21	1				
TIFLIS	61.07	317.4	10 11	-1				
YAKUTSK	64.34	16.4	10 30	-4	19 3	-4		
HELWAN	67.94	301.2	10 55	-1				23 54
LWIRO	68.49	266.7						22 47
SIMFEROPOL	69.49	317.5	11 6	0				
BROKEN HILL	70.01	253.8	11 9	0				
BULAWAYO	70.76	247.9	11 14	0				
MOSCOW	71.33	329.0	11 15	-2				
ISTANBUL UN.	72.08	312.4	11 21	-1				
MAWSON	73.80	193.0	11 32	0				11 56
KIMBERLEY	75.75	239.7	11 42K	-1				
BANGUI	78.40	274.0	11 59	1			12 7	
KAJAANI	79.01	335.2	12 2	1				
NURMIJARVI	79.40	331.3	12 2	-1				
KHEYS	80.37	354.0	11 8	-60				
SODANKYLA	80.42	338.3	12 8	-1				
BRATISLAVA	81.62	318.2	12 15	0				
VIENNA-H.	82.12	318.2	12 18	0				
KARAPIRO	82.29	128.6	12 32	14				
CHATEAU	82.49	129.9	12 20	1				
UPPSALA	82.72	330.0	12 21	0				
KIRUNA	82.84	338.1	12 21	0				
LJUBLJANA	83.20	315.9	12 23K	0				
TROMSOE	83.72	339.8	12 24	-2				
KASPERSKE H.	84.03	319.0	12 27	0				13 4
COLLMBERG	84.52	321.1	12 30	0				13 9
GOTEBORG	85.45	327.5	12 34	0				
SKALSTUGAN	85.63	333.5	12 34	-1				
STUTTGART	86.85	318.5	12 41	0				
CAPE HALLETT	87.12	163.0	12 44	2				
ROSELEND	88.01	315.3	12 51	4				
SCOTT BASE	88.05	168.5	12 48	1				
BENSBERG	88.19	320.7	12 46	-2				
GARCHY	91.07	317.2	13 2	1				
PARIS	91.33	318.8	13 4	2				
SOUTH POLE	92.33	180.0	12 58	-9				
HUNGRY HORSE	122.68	24.2	18 52	1				
EUREKA	128.46	32.7	19 5	3				22 16 PP
WOODY	129.36	38.2	19 5	1				
RAPID CITY	130.32	19.2	19 8	2				
FLAMING GRGE	130.60	26.5	19 7	1				
BOULDER CITY	131.58	35.1	19 14	6				22 35 PP
PALISADES	136.09	350.2						40 7 SS
TUCSON	136.56	35.3						22 50 PP
WICHITA MTS.	140.28	20.5	19 18	-6				22 21 PP

AUGUST 20 5.H 4.M 14.S EPICENTRE -17.96-178.50 DEPTH= 538.KM

A=-0.95156 B=-0.02489 C=-0.30646 D=-0.0262 E= 0.9997
G= 0.3064 H= 0.0080 K=-0.9519 HT= 5.1

DEPTH OF FOCUS= 0.080R

SE= 2.02

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
SUVA	2.93	265.8	1 16	2	2 21	8		
AFIAMALU	7.62	59.0	1 54K	-1	3 28	2		
RAOUL ISLAND	11.25	177.4	2 31	-1	4 26	-7		
PORT VILA	12.55	269.0	2 45	0	5 12	15		
NOUMEA	14.78	250.5	3 7K	0	5 47	9		
KOUMAC	16.46	258.2	3 24K	0	6 13	5		
ONERAHI	18.83	198.2	3 50	3				
CHATEAU	21.79	192.6	4 13	-1				
TONGARIRO	21.79	192.6	4 13	-1				
HONIARA	22.57	289.2	4 20	-1				
WELLINGTON	23.95	192.6	4 32	-2	8 11	-2		14 31 SCS
KAIMATA	25.94	197.2	4 50	-1	8 47	3		14 34 SCS
GEBBIES PASS	26.73	194.4	4 56	-2	8 56	-1		14 43 SCS
BRISBANE	28.05	245.3	5 8	-2	9 14	-3		
ROXBURGH	29.26	197.7						14 58 SCS
RIVERVIEW	31.39	233.8	5 38K	0	10 8	-1	7 3	15 10 SCS
RABAUL	31.79	292.0	5 39	-3				15 10
CHARTERS TS.	33.35	260.6	5 54	-1	10 31	-8		

CANBERRA	33.60	232.6	5	57K	0	10	42	-1			8	12 PPP
PORT MORESBY	34.39	279.7	6	3	-1	10	54	-1			8	25 PCP
MOORLANDS	37.99	222.7	6	33	0				8	11		
FORT NELSON	38.13	221.9	6	34K	0						8	37 PCP
TARRALEAH	38.40	223.3	6	38K	2						8	38 PCP
MACQUARIE I.	40.38	200.2	6	52	0							
ADELAIDE	41.53	237.3	7	4K	2	12	26	-13			8	52 PP
HONOLULU	43.84	28.0	7	20	0	13	17	5			10	4
KIPAPA	43.98	28.0	7	21	0							
GUAM	47.85	308.3	7	52	1							
CAPE HALLETT	54.75	184.2	8	42A	1	15	42	2	10	31	11	30 PP
MUNDARING	60.02	243.0	9	15	-2							
SCOTT BASE	60.36	183.6	9	20A	1	16	58	6	11	13	11	52 PP
MANILA	67.81	294.6	10	6	0							
MATUSIRO	67.89	323.4	10	4A	-2	18	21	-2			23	4 SS
ABUYAMA	68.28	320.5	10	7A	-2							
HWALIEN	71.75	303.6	10	31	2	19	7	1				
PETROPAVLOVK	73.40	345.8	10	36	-3				12	32		
ZO-SE	75.71	309.7	10	51A	-1	19	46	-3			13	48 *SP
VLADIVOSTOK	75.93	324.9	10	52	-1	19	53	1				
BRANNER	76.42	43.0	10	56	1						12	59
SAN FRANCSCO	76.45	42.5	10	55	-1						12	56
VINEYARD	76.56	43.9	10	57A	1							
BERKELEY	76.63	42.6	10	56A	-1	20	3	4	12	57		
LICK	76.72	43.3	10	57A	0				12	58		
UKIAH	76.76	41.1	11	0	3				13	0		
PASADENA	77.32	47.6	11	2A	2	20	8	2	13	0	13	59 *SP
FRESNO	77.62	44.6	11	2	0							
NANKING	77.96	309.5	11	5A	1	20	15	2				
CANTON	78.08	299.1	11	6A	2	20	17	3				
SHASTA	78.20	40.1	11	5A	0				13	7		
MINERAL	78.49	40.8	11	16A	9				13	8		
RENO	79.15	42.3	10	42A	-28						12	44 51
CORVALLIS	79.99	36.6	11	8A	-6							
CHANGCHUN	80.10	322.4	11	13A	-2	20	37	2	13	18	14	14 *SP
BOULDER CITY	80.61	47.5	11	19	1							
MAGADAN	81.19	344.7	11	19	-2	20	43	-3				
TUCSON	81.74	52.4	11	25	2	20	57	5	13	26	14	22 PP
TUCSON TELE.	81.86	52.3	11	25	1							
ALBERNI	82.08	32.2	11	24	-1							
VICTORIA	82.34	33.4	11	25	-1							
GLEN CANYON	83.37	47.9	11	32	0	21	0	-8	13	34		
ARGENTINE I.	83.48	157.3	11	33	1	21	10	1	13	35		
PEKING	83.76	315.4	11	34A	1	21	11	0			14	34 *SP
MAWSON	83.78	199.8	11	32	-2	21	9	-3	13	33	21	3 SKS
PENTICTON	84.83	34.2	11	38A	-1							
SALT LAKE C.	85.00	44.4	11	40	0							
COLLEGE	85.84	12.6	11	41	-3	21	9	-22	13	45		
TACUBAYA	86.24	68.4									11	50
SIAN	86.31	307.6	11	46	0	21	41	6	13	55	14	49 *SP
FLAMING GRGE	86.72	45.2	11	48	0				13	52	15	19
BUTTE	87.09	39.6	11	49	-1	21	29	-14				
HUNGRY HORSE	87.40	37.1	11	50	-1	21	27	-18				
KUNMING	87.77	297.2	11	55A	2	21	52	3				
BOZEMAN	87.85	40.4	11	53	0							
BANFF	88.03	34.1	11	54A	0							
PAOTOW	88.17	313.7	11	57A	2	22	0	8	14	0	14	56 *SP
CHENGTU	88.73	302.7	11	59	2	22	0	3	14	10	15	4 *SP
YAKUTSK	89.57	338.3	12	8	7							
LANCHOW	90.85	307.6	12	8A	1	22	20	4				
WICHITA MTS.	92.09	54.2	12	12A	-1	21	54	-33	14	23	25	53 PPS
RAPID CITY	92.20	44.2	12	12	-1						16	1 PP
FAYETTEVILLE	95.93	54.1	12	30K	0						22	17 SKKS
SHILLONG	97.24	294.4									14	36
NEW DELHI	110.65	294.4	17	29K	-2							
PALISADES	112.45	52.4	13	45	-230	25	25	116	15	37	18	31 PP
KHEYS	112.85	351.5	17	37	2							
SHAWINIGAN	113.57	46.5	17	38	1							
STALINABAD	118.59	304.6	17	5	-42						19	25 PP
QUETTA	119.72	294.9	17	51A	2						19	21 PP
SVERDLOVSK	121.63	326.3	17	54	1							
APATITY	126.39	345.4	18	2	0							
TROMSOE	127.23	352.4	18	1	-2							
SODANKYLA	128.03	348.0	18	5	0						20	33 SKP
KIMBERLEY	128.40	206.3	18	7A	1							
KIRUNA	128.70	350.9	17	55	-11						20	37 SKP
PRETORIA	129.39	211.6									20	38
KAJAANI	130.59	345.2	18	10	0						20	31 SKP

TEHERAN	132.62	302.3	18	13	-1							
PULKOVO	133.34	340.4	18	15	0			20	45			
MOSCOW	133.44	332.7	18	15	0			20	45			
BULAWAYO	133.73	216.3	18	0	-16					19	59	PP
SKALSTUGAN	133.82	353.3	18	4	-12					20	54	SKP
NURMIJARVI	134.37	344.2	18	17	0					20	57	SKP
TIFLIS	136.20	312.1	18	21	1					21	57	PKS
UPPSALA	136.56	348.2	18	10K	-11							
BROKEN HILL	138.23	221.3	18	18	-6					21	8	PP
GOTEBORG	139.56	351.3	18	18	-8					21	37	PP
COPENHAGEN	141.43	350.1	18	26A	-5							
SIMFEROPOL	141.73	321.8	18	27	-4					22	11	PKS
DURHAM	143.18	3.0	18	28K	-6							
LWOW	143.42	335.4	17	31A	-63							
KRAKOW	144.73	339.3	18	37A	1					19	28	
CHORZOW	144.83	340.4	18	35	-1					19	23	
WITTEVEEN	144.98	354.5	18	37	1							
RACIBORZ	145.26	341.0	18	37	0					20	32	
KSARA	145.47	304.0	18	39	2			20	52	22	6	*SPKP
COLLMBERG	145.50	347.2	18	37K	0			20	48	22	8	PP
HALLE	145.52	348.4	18	37	0					22	0	PP
MUNSTER	145.72	353.3	18	40	2							
DE BILT	145.81	356.0	18	42	4							
JENA	146.14	348.5	18	37	-1			20	50	22	3	PP
PRUHONICE	146.38	344.7	18	39A	1			20	48	22	5	PP
LWIRO	146.43	236.0	18	41	3							
KEW	146.53	2.1	19	41A	62			20	51			
BENSBERG	146.77	353.5	18	39	0			20	47			
CHEB	146.78	347.2	18	44	5					19	25	
ISTANBUL KA.	146.99	320.0	18	40	1			20	54	22	9	PP
ISTANBUL UN.	147.05	320.1	18	40	1			21	9			
BRATISLAVA	147.29	340.5	18	41	2			19	56			
KASPERSKE H.	147.40	345.2	18	40K	0					21	56	PP
VIENNA-H.	147.44	341.4	18	40	0					18	46	PKP2
HEIDELBERG	148.10	351.1	18	42	1							
STUTTGART	148.62	350.1	18	42	0					21	51	*SPKP
BELGRADE	148.87	333.4	18	50A	8					20	56	
TUBINGEN	148.89	350.2	18	44	2							
STRASBOURG	149.03	351.9	18	42	0			20	57	18	49	PKP2
PONTA DELGDA	149.11	44.9	18	46K	4							
SOFIA	149.14	327.7	18	42	0							
PARIS	149.22	358.7	18	51	9			21	5	18	57	PKP2
FOLINIERE	149.23	2.6	18	43	1			20	47			
EBINGEN	149.25	350.2	18	44	2							
RAVENSBURG	149.52	349.2	18	44	1							
LJUBLJANA	149.98	341.7	18	46	2			21	4	18	58	PKP2
BASLE	150.09	351.7	18	44	0					19	17	
CHUR	150.44	348.8	18	46	2							
BESANCON	150.56	353.8	18	46	1					18	54	PKP2
TRIESTE	150.56	342.4										
NEUCHATEL	150.69	352.4	18	48	3					18	58	PKP2
GARCHY	150.73	357.8	18	53	8			21	9	22	38	PP
PADOVA	151.29	344.7	19	7	21							
ATHENS	152.15	320.2	18	47	0							
CLERMONT-FD.	152.24	357.6	18	48	1					18	56	PKP2
FLORENCE X.	152.97	344.3	18	41	-7					18	50	PKP2
ISOLA	153.44	351.0	18	51	2					23	2	PP
MONACO	153.83	350.2	18	50	1					18	59	PKP2
ROME	154.36	340.8						21	1	19	19	PKP2
SERRA PILAR	155.33	18.5	18	51K	0	24	58 -7			22	59	PP
COIMBRA	156.23	19.1	18	55K	3							
LISBON	157.33	22.0	20	44K	110							
TOLEDO	157.63	11.3	18	58	4					23	10	PP
BANGUI	158.49	233.2	18	58	3					23	17	PP

AUGUST 21 2.H 6.M 43.S EPICENTRE -22.59-179.48 DEPTH= 493.KM

A=-0.92417 B=-0.00836 C=-0.38189 D=-0.0091 E= 1.0000
G= 0.3819 H= 0.0035 K=-0.9242 HT= 4.0

DEPTH OF FOCUS= 0.073R

SE= 2.51

DELTA DEG.	AZ. DEG.	P M	P S	P O-C S	S M	S S	S O-C S	*PP M	*PP S	SUPP. M	SUPP. S

SUVA	4.83	335.7	1	32	7	2	43	10				
RAOUL ISLAND	6.78	168.4	1	45	1	3	8	1				
AFIAMALU	11.31	41.6	2	30	-2	4	32	-2				
PORT VILA	12.43	290.7	2	47A	3	5	14	18				
NOUMEA	13.01	268.6	2	53K	3	5	25	18				
KARAPIRO	15.88	194.5	3	22	3							
TUAI	16.42	189.4	3	24	0	6	12	2			6	20
TONGARIRO	17.10	193.3	3	31	0	6	30	8				
WELLINGTON	19.26	193.2	3	50	-2	7	0	1				
KAIMATA	21.28	198.8	4	10	-1	7	38	5				
GEBBIES PASS	22.04	195.3	4	15	-3	7	51	5				
BRISBANE	25.57	253.5	4	50	0							
RIVERVIEW.	28.11	240.1	5	5A	-7							
CANBERRA	30.22	238.1	5	32	2	9	54	-1	7	1		
CHARTERS TS.	31.97	268.0	5	47	2	10	19	-3				
RABAUL	32.97	299.5	5	54	0							
PORT MORESBY	34.55	286.9	6	8	1				6	44	7	44 PCP
ADELAIDE	38.40	241.8	6	39K	0							
SOUTH POLE	67.55	180.0	10	6	-2							
MAWSON	79.14	200.2	11	12A	-1				13	10		
ARGENTINE I.	79.59	157.2	10	31	-45							
LICK	80.71	43.1	11	21A	-1							
PASADENA	81.11	47.4	11	23	-1							
FRESNO	81.55	44.5	11	26	0							
SHASTA	82.32	40.1	11	30	0							
MINERAL	82.57	40.7	11	31	0							
CORVALLIS	84.23	36.6	11	43	4							
TUCSON	85.28	52.4	11	45	1							
TUCSON TELE.	85.41	52.3	11	46	1							
EUREKA	85.57	44.0	11	46	0				13	43		
GLEN CANYON	87.14	48.0	11	54	1							
TACUBAYA	88.79	68.5									18	23
SALT LAKE C.	88.93	44.6	12	1	-1							
PENTICTON	89.15	34.5	11	57A	-6							
OAXACA	89.94	71.6									17	17
COLLEGE	90.54	13.0	12	7	-2							
FLAMING GRGE	90.62	45.4	12	9	0							
VERA CRUZ	91.36	69.9									17	47
WICHITA MTS.	95.51	54.8	12	30	-2							
BULAWAYO	129.45	215.0									20	45
LWIRO	142.98	231.8									20	36
GOTEBORG	143.95	349.6	18	36A	-3							
NIEDZIKA	148.99	334.6	18	51	5							
RACIBORZ	149.25	337.5	18	52	6							
ISTANBUL KA.	149.74	314.2	18	53	6							
COLLMBERG	149.74	344.4	18	53A	6				21	2		
PRUHONICE	150.52	341.5	18	54A	6							
BENSBERG	151.21	351.3	18	55	6							
KASPERSKE H.	151.56	341.8	18	57A	7							
STUTTGART	152.96	347.2	18	51	-1						19	13

AUGUST 21 16.H 6.M 57.S EPICENTRE -18.01-174.03 DEPTH= 62.KM

A=-0.94644 B=-0.09901 C=-0.30732 D=-0.1041 E= 0.9946
G= 0.3057 H= 0.0320 K=-0.9516 HT= 5.1

DEPTH OF FOCUS= 0.005R

SE= 2.37

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
AFIAMALU	4.62	28.2	1	3	-6	1	51	-11				
SUVA	7.18	267.7	1	48	4							
RAOUL ISLAND	11.74	197.0	2	52	5	4	46	-11				
PORT VILA	16.81	268.2	3	56	4	7	28	32				
KOUMAC	20.63	259.4	4	36	0	8	31	13				
AUCKLAND	21.21	205.4				8	30	1				
KARAPIRO	21.85	202.6	4	51	2							
TUAI	22.09	198.6	4	48	-3	8	48	2				
CHATEAU	22.98	201.1	5	0	0							
TONGARIRO	22.98	201.1	4	58	-2	9	14	12				
WELLINGTON	25.10	200.2	5	17	-3	9	40	2			5	42
HONIARA	26.65	285.2	5	38	3							
KAIMATA	27.39	203.8	5	44	3							
GEBBIES PASS	27.97	200.9	5	47	0	10	43	18				
BRISBANE	31.93	247.0	6	18	-4						10	24

RIVERVIEW	34.86	236.3	6	45	-2					11	21	
RABAUL	35.81	288.5	6	55	0					9	20	
CANBERRA	37.00	234.8	7	3K	-2					7	29	*SP
CHARTERS TS.	37.54	260.3	7	9	-1	12	52	-2				
PORT MORESBY	38.61	277.5	7	17	-2	13	9	-1	7 37	8	57	PP
MACQUARIE I.	41.92	203.4	7	45	-1							
ADELAIDE	45.10	238.4	8	9K	-3					9	51	PCP
CAPE HALLETT	55.07	185.8	9	28	0	17	10	6				
SCOTT BASE	60.61	184.6	10	6A	-1	18	22	6	10 25	12	38	PP
MUNDARING	63.79	242.7	10	25	-3							
MATUSIRO	70.55	320.8	11	9K	-1	20	15	-2		20	50	
SOUTH POLE	72.10	180.0	11	19	0							
STA. CRUZ C.	73.47	41.2	11	28K	1							
SAN FRANCSCO	73.67	40.3	11	28	-1							
VINEYARD	73.70	41.7	11	30K	1							
BERKELEY	73.85	40.3	11	30K	0	20	59	4				
LICK	73.90	41.1	11	31A	1					12	45	
CONCORD	74.03	40.3	11	32K	1							
UKIAH	74.06	38.8	11	17	-14							
PASADENA	74.26	45.5	11	31A	-1	22	5	65	11 52			
PETROPAVLOVK	74.58	343.3	11	33	-1	21	5	2				
FRESNO	74.72	42.5	11	35	0							
MIRNY	74.82	204.5	11	34	-1	21	6	0				
Y.-SAKHLINSK	75.52	331.0	11	38	-1							
SHASTA	75.56	38.0	11	40	1							
MINERAL	75.80	38.7	11	40A	-1					12	7	
RENO	76.38	40.2	11	19	-25							
LEMBANG	76.87	267.0	11	46	-1							
UGLEGORSK	77.33	332.1	11	49	-1	21	39	6				
CORVALLIS	77.55	34.5	12	0	9							
BOULDER CITY	77.56	45.5	11	51	0							
TUCSON	78.44	50.5	11	57	1				12 15			
VLADIVOSTOK	78.49	322.8	11	56	0	21	45	-1				
TUCSON TELE.	78.57	50.5	11	57	1				12 16			
EUREKA	78.75	42.0	11	57	0				12 17	14	48	PP
ZO-SE	79.06	307.8	11	57	-2	21	52	0				
VICTORIA	80.10	31.4	12	5	0							
GLEN CANYON	80.29	46.1	12	7	1							
HONG KONG	80.84	297.0	12	9	1	22	11	1				
NANKING	81.32	307.6	12	11	0	22	27	12		22	29	SKS
ARGENTINE I.	81.76	156.4	12	12	-1							
CANTON	81.85	297.4	12	15	1	22	38	17		22	32	SKS
SALT LAKE C.	82.10	42.7	12	15	0							
TACUBAYA	82.32	66.8	12	26	10							
MAGADAN	82.43	342.8	12	15	-2	22	26	-1				
CHANGCHUN	82.80	320.5	12	19K	0	22	34	4				
FLAMING GRGE	83.78	43.5	12	24	0				12 43	15	20	PP
BUTTE	84.47	38.0	12	27	0	22	49	2				
COLLEGE	85.03	10.9	12	29	-1							
MAWSON	85.14	198.8	12	29K	-1				12 47	13	11	
BOZEMAN	85.18	38.8	12	32	1							
PEKING	86.82	313.8	12	39	0	23	22	12		23	1	SKS
WICHITA MTS.	88.69	52.9	12	47	-1	23	14	-13		30	29	PKKP
RAPID CITY	89.30	42.9	12	51	1							
SIAN	89.75	306.2	12	54K	1	23	48	11		23	21	SKS
YAKUTSK	91.24	336.9	12	59	-1	23	21	-29				
KUNMING	91.61	295.8	13	3K	2	24	6	12		23	31	SKS
CHENGTU	92.37	301.4	13	6	1	24	7	7		23	34	SKS
FAYETTEVILLE	92.54	52.9	13	6K	0	24	5	3	13 26			
LANCHOW	94.28	306.4	13	15	2							
HUANCAYO	94.42	104.1	13	17	3							
IRKUTSK	99.06	322.0								17	33	PP
PALISADES	109.11	52.0				25	32	39		28	36	PS
CARACAS	109.32	84.9				24	57	3		19	21	PP
WARSAK DAM	119.86	299.3	18	48	5							
STALINABAD	122.13	304.6	18	49	1							
SAMARKAND	123.46	306.0	18	51	1							
QUETTA	123.61	294.6	18	52	1							
KAJAANI	131.65	347.4	19	5	-1					22	28	PKS
MOSCOW	135.37	335.0	19	35	22							
NURMIJARVI	135.49	346.9	19	14K	1					22	47	PKS
BULAWAYO	136.06	211.4	19	15A	1							
GORIS	139.09	310.1	19	25	5							
TIFLIS	139.35	313.9	19	23	3							
GOTEBORG	140.12	355.0	19	23	1							
BROKEN HILL	140.85	216.0	19	18	-5							
DURHAM	142.85	7.2	19	20K	-6							
SIMFEROPOL	144.31	325.0	19	30	1							

LWOW	145.10	339.5	19 30K	0			19 50		
WITTEVEEN	145.26	359.3	20 1	30					
KISHINEV	145.50	332.0	19 32	1					
PONTA DELGDA	146.05	48.2	19 36	4					
MUNSTER	146.09	358.2	19 35	3					
KRAKOW	146.13	343.8	19 35	3			22 55		
CHORZOW	146.15	345.0	19 33	1			20 9		
KEW	146.24	7.1	19 35	3					
HALLE	146.25	353.3	19 34	2	19 53				
COLLMBERG	146.32	352.0	19 34K	2	19 53		23 1	PKS	
RACIBORZ	146.53	345.7	19 35	2			20 37		
SKALNATE PL.	146.83	342.8	19 23	-10			19 37	PKP2	
JENA	146.85	353.5	19 35	2	19 57		22 49	PP	
BENSBERG	147.11	358.6	19 37	3	19 55		20 41		
PRUHONICE	147.37	349.7	19 38	4	19 58		23 1	PP	
CHEB	147.60	352.3	19 42	8					
KASPERSKE H.	148.35	350.5	19 37	1			23 21		
BRATISLAVA	148.58	345.7	19 40	4			19 44	PKP2	
HEIDELBERG	148.61	356.6	19 41	5			20 3		
VIENNA-H.	148.67	346.6	19 39	3			20 5	PKP2	
FOLINIERE	148.87	8.3	19 39	2					
KSARA	148.98	306.3	19 42	5	20 3				
KARLSRUHE	149.02	356.9	19 43	6					
PARIS	149.15	4.5	19 47	10	20 15		20 4	PKP2	
STUTTGART	149.20	355.7	19 38	1					
TUBINGEN	149.46	355.9	19 43	6					
STRASBOURG	149.47	357.6	19 44	7	20 7		20 58		
ISTANBUL KA.	149.65	324.1	19 43	5			23 26	PP	
ISTANBUL UN.	149.72	324.1	19 44	6					
EBINGEN	149.81	356.0	19 44	6					
LWIRO	149.82	230.4	19 45K	7					
RAVENSBURG	150.16	355.1	19 43	5					
BASLE	150.53	357.8	19 38	-1					
BELGRADE	150.65	338.7	19 46K	7			21 13		
GARCHY	150.71	4.0	19 45	6			23 27	PP	
BESANCON	150.84	360.0	19 47	8	20 9				
LJUBLJANA	151.15	347.6	19 42	2	20 10				
SOFIA	151.31	332.7	19 47	7			23 6	PP	
TRIESTE	151.69	348.5	19 43	2			20 12	PKP2	
CLERMONT-FD.	152.22	4.3	19 46	4					
PADOVA	152.24	351.1	19 52	10			20 33	PKP2	
ROSELEND	152.57	357.5					19 48		
SERRA PILAR	153.78	25.5	19 40	-4			20 3	PKP2	
ISOLA	153.90	358.2	19 54	10			23 40	PP	
FLORENCE X.	153.93	351.3	19 50	6	20 5				
HELWAN	154.05	301.8	19 46	2			23 43	PP	
MONACO	154.33	357.6	19 59	15					
BAGNERES	154.54	10.0	19 53	8					
COIMBRA	154.63	26.4	19 48	3			20 10	PKP2	
LISBON	155.52	29.5	20 16	30					
ROME	155.55	348.2	19 51A	5			25 22		
BANGUI	161.65	223.9	19 55	2	20 10				

AUGUST 21 17.H 0.M 41.S EPICENTRE 41.00 139.42 DEPTH= 55.KM

A=-0.57480 B= 0.49236 C= 0.65359 D= 0.6505 E= 0.7595
G=-0.4964 H= 0.4252 K=-0.7568 HT= -2.1

DEPTH OF FOCUS= 0.004R

SE= 3.02

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
AOMORI	1.05	99.7	0 16K	-3	0 29	-5		
HAKODATE	1.29	51.0	0 20K	-3	0 39	0		
AKITA	1.38	157.7	0 20A	-4	0 37	-5		
MORI	1.40	37.9	0 23	-1	0 42	0		
HATINOHE	1.67	105.8	0 24K	-4	0 44	-5		
MURORAN	1.76	41.2	0 27	-2	0 49	-2		
MORIOKA	1.87	133.6	0 27K	-3	0 50	-3		
SUTTSU	1.89	18.4	0 29	-2	0 52	-2		
MIZUSAWA	2.29	144.4	0 32	-4	1 5	1		
TOMAKOMAI	2.29	44.1	0 44	8	1 12	8		
MIYAKO	2.37	123.9	0 35	-3	1 6	0		
SAPPORO	2.52	34.2	0 39	-1	1 15	6		

URAKAWA	2.77	64.5	0	42	-1	1	11	-5			
YAMAGATA	2.84	165.0	0	40A	-4	1	12	-6			
ISINOMAKI	2.96	149.7	0	42	-4	1	17	-4			
SENDAI	2.96	156.8	0	42	-4	1	16	-5			
NIIGATA	3.09	185.4	0	44	-4	1	21	-3			
AIKAWA	3.11	197.2	0	44	-4	1	15	-9			
HIROO	3.19	65.2	0	46	-3						
HUKUSIMA	3.35	165.6	0	48	-3						
RUMOE	3.36	28.2	0	57	6	1	42	11			
OBIHIRO	3.41	54.6	0	53	1						
ASAHIGAWA	3.53	37.3	0	59	5						
SHIRAKAWA	3.93	170.6	1	1	2						
TAKADA	4.00	193.5	0	55	-5	1	40	-7			
WAZIMA	4.11	209.2	1	4	2	1	42	-8			
KUSIRO	4.21	60.4	1	3	0	2	0	8			
ONAHAMA	4.21	163.6	1	3	0	1	52	0			
NAGANO	4.43	192.8	1	5	-1	2	13	16			
UTUNOMIYA	4.46	175.3	1	11	4	2	26	28			
MATUSIRO	4.56	192.3	1	4A	-4	1	54	-7			
MAEBASI	4.61	183.5	1	5	-4	2	24	22			
TOYAMA	4.63	202.6	1	12	3	1	55	-8			
MITO	4.69	169.6	1	10K	0	2	26	22			
WAKKANAI	4.71	19.8	1	15	5	2	22	17			
OIWAKE	4.72	188.6	1	16	6	2	21	16			
KAKIOKA	4.80	172.6	1	10	-2						
TUKUBASAN	4.81	173.4	1	7K	-5	2	7	0			2 45
KUMAGAYA	4.85	180.4	1	15	3	2	31	23			
MATUMOTO	4.88	193.9	1	10	-3	2	5	-4			
KANAZAWA	4.96	206.7	1	9	-5						
TITIBU	5.02	183.1	1	17	2						
NEMURO	5.14	61.1	1	18	2						2 7
TAKAYAMA	5.14	200.0	1	16	0						
HONGO	5.29	176.9	1	30	12						
TOKYO C.M.O.	5.32	177.1	1	18	-1	2	20	0			
KOHU	5.37	187.5	1	22	2						
TYOSI	5.39	167.5	1	17	-3	2	21	-1			
HUNATU	5.52	185.5	1	22	0	2	30	5			
HUKUI	5.54	207.8	1	25	3						
YOKOHAMA	5.57	178.0	1	24	2	2	30	4			
IIDA	5.62	193.4	1	23	0	2	52	25			
MISIMA	5.89	183.7	1	30	3						
AJIRO	5.95	182.5	1	26	-2	2	25	-10			
TSURUGA	5.96	207.3	1	27	-1						
GIHU	5.97	201.3	1	30	2						
VLADIVOSTOK	5.98	293.2	1	23	-5						2 29
SHIZUOKA	6.08	187.9	1	29	0	3	7	28			
MERA	6.08	176.8	1	45	16						
NAGOYA	6.14	199.1	1	35	5	2	49	9			
OSIMA	6.22	180.3	1	32	1						
HIKONE	6.24	204.6	1	32	0	3	18	35			
OMAESAKI	6.46	188.8	1	43	8						
Y.-SAKHLINSK	6.47	20.5	1	36	1						2 55
TOYOOKA	6.55	215.0	1	33	-3	2	41	-9			
KAMEYAMA	6.57	201.7	1	36	0	2	55	4			
KYOTO	6.64	207.1	1	37	0	3	32	39			
ABUYAMA	6.84	207.6	1	39A	-1						
TOTTORI	6.86	218.6	1	34	-6						
NARA	6.92	205.3	1	52	11						
OSAKA	7.05	207.1	1	51	8	3	31	28			
OWASE	7.38	201.3	1	40	-8						
SUMOTO	7.55	209.7	1	52	2	3	45	30			4 50
TAKAMATU	7.91	214.2	1	53	-2						
UGLEGORSK	8.29	12.2	2	3	3						3 49
HIROSIMA	8.63	222.1	2	8	3						
KOTI	8.79	214.1	2	10	3	4	52	66			
MATUYAMA	8.89	218.5	2	8	0	3	44	-4			4 40
SIMIDU	9.69	214.2	2	28	9	4	38	30			
OOITA	9.94	221.2	2	24	1						
HUKUOKA	10.33	227.0	2	35A	7	4	31	8			
CHANGCHUN	10.81	289.8	2	33	-2						
UNZENDAKE	11.04	224.5	2	38	0						
MIYAZAKI	11.11	217.9	2	45	6	5	49	67			
KAGOSIMA	11.82	220.0	2	49	1						3 12
YAKUSIMA	12.77	217.3	2	43	-18						
OKHA	12.77	9.5	3	3	2						
SEVERO-KUR.	15.09	44.6	3	35	4						
PEKING	17.70	274.5	4	4A	0	7	31	14			
PETROPAVLOVK	17.72	40.8	4	13	9	7	33	16			

ZO-SE	17.72	241.9	4 4A	0	7 27	10	
NANKING	18.80	248.2	4 16	-1	7 50	9	
MAGADAN	19.89	17.2	4 29	0			
YAKUTSK	21.85	347.7	4 45	-4			
PAOTOW	22.21	278.6	4 51	-2	9 1	12	
KYAKHTA	24.68	303.4	5 15A	-2			
SIAN	24.99	264.2	5 17	-3	9 47	10	
IRKUTSK	26.34	307.2	5 29	-4			
LANCHOW	28.15	271.5	5 47	-2			
HONG KONG	28.29	236.5	5 49	-1	10 15	-16	
CHENGTU	30.32	261.5			10 57	-6	
LHASA	40.60	269.5	7 35	-1			
SEMIPALATNSK	41.37	303.7	7 39	-3			
SHILLONG	42.10	263.7	7 44A	-4			
CHATRA	44.97	268.6	8 12A	1			9 53
RABAUL	46.47	162.3	8 23	0			
COLLEGE	46.62	34.1	8 25	1			8 57
FRUNSE	47.17	294.8	8 27	-2			10 0 PCP
PORT MORESBY	50.66	170.1	8 54	-2			9 16
TASHKENT	51.42	295.0	8 59	-2			16 16 PS
KHOROG	51.49	289.6	9 0	-2			
NEW DELHI	51.59	276.8	9 0A	-3			10 15
WARSAK DAM	53.08	285.7	9 13	-1			
LEMBANG	55.84	219.2	9 33K	-1			
QUETTA	58.38	284.1	9 50A	-2	9 57		
RESOLUTE	59.16	14.6	9 55	-2			
ASHKABAD	60.45	296.2	10 5	-1			
SODANKYLA	60.71	335.9	10 7A	-1			
CHARTERS TS.	61.11	172.7	10 10	-1			
KAJAANI	62.35	332.5	10 17A	-2			
MOSCOW	63.16	321.6	10 23	-1			
PULKOVO	64.00	327.9	10 28	-2			
VICTORIA	64.82	46.8	10 35A	0			
NURMIJARVI	65.72	330.5	10 40A	-1			
TEHERAN	66.34	297.4	10 45	0			
PENTICTON	66.42	44.5	10 45A	0			
CORVALLIS	67.13	50.3	11 1	11			
BANFF	67.41	41.2	10 53A	1			
SKALSTUGAN	67.66	337.3	10 52A	-1			9 56
UPPSALA	68.72	332.6	10 58A	-2			11 23 PCP
BRISBANE	69.17	167.3	11 3	0			
SHASTA	69.97	53.2	11 8	1			
MINERAL	70.66	53.1	11 11A	-1			
SIMFEROPOL	71.43	313.7	11 16A	0	20 34	5	
BERKELEY	71.77	55.5	11 19A	1			
BERGEN	72.19	338.0	11 20	-1			
BUTTE	72.20	44.1	11 21	0			
RENO	72.24	52.9	10 57	-24			
GOTEBORG	72.28	333.4	11 20	-1			
LICK	72.48	55.7	11 23	0			
BOZEMAN	73.23	43.6	11 28	1			
LWOW	73.28	322.3	11 27	0			
COPENHAGEN	73.69	331.9	11 29	-1			
FRESNO	73.99	55.1	11 32	1			
SIDA	74.04	349.8	11 33A	1			
REYKJAVIK	74.17	351.6	11 33A	1			
EUREKA	74.57	51.0	11 36	1			
KRAKOW	74.96	324.5	11 37	0			
NIEDZIKA	75.25	323.8	11 39A	0			
ADELAIDE	75.60	180.6	11 41A	0			
RACIBORZ	75.69	325.3	11 41A	0			12 31
MUNDARING	75.71	200.2	11 40A	-1			
CANBERRA	76.46	172.0	11 46A	1			
PASADENA	76.69	56.3	11 47	0			
COLLMBERG	76.90	328.8	11 48A	0			14 37 PP
HALLE	77.15	329.4	11 49	0			13 25
PRUHONICE	77.30	327.1	11 51A	1			14 43 PP
FLAMING GRGE	77.34	46.4	11 51	1			
BOULDER CITY	77.55	53.1	11 53	1			
BRATISLAVA	77.60	324.6	11 54	2			12 2 PCP
JENA	77.74	329.2	11 53	0			12 51
VIENNA-H.	77.86	325.0	11 54	1			
WITTEVEEN	78.01	332.9	11 54	0			
CHEB	78.10	328.3	11 54	-1			12 27
KASPERSKE H.	78.36	327.1	11 56A	0			14 52
MUNSTER	78.38	331.9	11 57	1			
BELGRADE	78.56	320.6	11 57	0			
SOFIA	78.68	317.5	11 58	0			
GLEN CANYON	78.81	50.5	11 58	0			

DURHAM	78.94	338.2	11 55	-4				
BENSBERG	79.37	331.6	12 1	-1				
HEIDELBERG	80.07	329.8	12 5	0				
LJUBLJANA	80.36	324.6	12 7A	0				
STUTTGART	80.37	329.1	12 7A	0				
KARLSRUHE	80.51	329.7	12 11	3				
TUBINGEN	80.64	329.1	12 9	1				
TRIESTE	81.01	324.8	12 9	-1				
STRASBOURG	81.10	329.8	12 11	0				
KEW	81.45	335.9	12 13	0				
BASLE	82.04	329.3	12 17A	1				
TUCSON TELE.	82.51	53.4	12 20	2				
PARIS	82.82	332.9	12 20	0			12 29	PCP
BESANCON	82.88	330.1	12 7	-13				
HELWAN	83.12	303.7	12 19	-2				
TARRALEAH	83.17	174.7	12 23A	2				
MOORLANDS	83.36	174.2	12 23A	1				
ROSELEND	83.70	328.2	12 26	2				
FOLINIERE	83.85	334.6	12 25	0				
FORT NELSON	83.86	174.1	12 25A	0				
GARCHY	83.93	331.8	12 25	0			12 41	PCP
ISOLA	85.01	327.8	12 31	0			12 40	
KARAPIRO	85.22	152.1	12 34	2				
MONACO	85.23	327.3	12 31	-1				
TUAI	86.57	151.4	12 38	0				
WICHITA MTS.	87.69	44.4	12 45	1				
WELLINGTON	87.95	154.1	12 45	0				
SHAWINIGAN	88.23	21.6	12 47	1				
OTTAWA	88.41	23.9	12 47	0				
FAYETTEVILLE	88.88	40.7	12 50	1				
SCOTT BASE	119.76	173.6	18 44	0			20 9	PP
SOUTH POLE	130.81	180.0	19 5	0				
ARGENTINE I.	152.21	158.7	19 50	8				

AUGUST 22 8.H 59.M 32.S EPICENTRE -13.49 166.46 DEPTH= 79.KM

A=-0.94572 B= 0.22770 C=-0.23186 D= 0.2341 E= 0.9722
G= 0.2254 H=-0.0543 K=-0.9727 HT= 6.0

DEPTH OF FOCUS= 0.007R

SE= 1.39

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
PORT VILA	4.58	157.2	1 9	1	2 3	2		
KOUMAC	7.33	196.2	1 44A	-2	3 5	-4		
NOUMEA	8.76	180.1	2 5	-1	3 40	-4		
SUVA	12.41	113.4	2 57	2				
RABAUL	16.86	301.9	3 55	3				
BRISBANE	18.83	220.7	4 14	-2	7 45	6		
PORT MORESBY	19.36	280.1	4 22	0	8 3	12		
CHARTERS TS.	20.41	248.5	4 30	-3	8 24	12		
AFIAMALU	21.14	93.7	4 41	1	8 33	7		
RIVERVIEW	24.57	211.9	5 14	0				9 55
KARAPIRO	25.64	163.2	5 22	-2				
CANBERRA	26.84	212.9	5 36	1				
MELBOURNE	30.87	214.4	6 12	1				
ADELAIDE	32.93	224.7	6 30	1				
MOORLANDS	33.32	206.4	6 33	1				
FORT NELSON	33.65	205.7	6 35	0				
DARWIN	34.73	267.7	6 46	2				
MUNDARING	49.40	239.4	8 43K	0				
PERTH	49.71	239.5						16 14
MATUSIRO	56.45	332.8	9 34A	-2	17 24	5		
LEMBANG	58.19	270.3	9 50K	2	17 52	10		
CAPE HALLETT	58.83	178.7	9 53	1	18 8	18		
ZO-SE	62.10	316.4	10 14	-1	18 39	7		
HONG KONG	62.39	304.2	10 14	-3				13 36
NANKING	64.30	315.8	10 28	-1	19 5	6		
SCOTT BASE	64.36	179.9	10 30A	0				
VLADIVOSTOK	64.62	332.6	10 31	0				
UGLEGORSK	65.93	342.7	10 39	-1				
PETROPAVLOVK	66.58	354.9	10 41	-3				
CHANGCHUN	68.28	329.2	10 54A	0	19 57	10		
PEKING	70.81	321.3	11 10	0	20 24	7		

MIRNY	71.14	203.9	11	12	0						
SIAN	72.39	312.8	11	20	1						
KUNMING	72.99	301.8	11	25	2	20	54	12			
CHENGTU	74.33	307.5	11	31	0	21	4	7			
SOUTH POLE	76.59	180.0	11	44	1						
LANCHOW	76.91	312.4	11	47A	2	21	35	10			
YAKUTSK	80.61	343.4	12	4	-1						
SHILLONG	82.31	298.5	12	15A	1						
MAWSON	82.73	202.1	12	16A	0				12	30	
BERKELEY	83.95	48.9	12	21	-2	23	55	77			
LICK	84.21	49.6	12	26A	2						
SHASTA	84.93	46.2	12	28	1						
COLLEGE	85.39	17.9	12	28	-2						12 51
PASADENA	85.74	53.6	12	30	-1	22	52	-4			
CHATRA	86.71	298.4	12	37	1						
EUREKA	89.13	49.1	12	48	0				13	4	30 28 PKKP
PENTICTON	89.94	39.0	12	51	-1						
TUCSON	91.06	57.2	13	11	14						
WICHITA MTS.	101.57	56.9									27 3 PS
PALISADES	121.03	50.1									30 5 PS
NURMIJARVI	125.43	337.9	18	49	-3						
BULAWAYO	126.75	231.9	18	55	1						
SKALSTUGAN	126.81	345.9	18	55	0						
BROKEN HILL	130.00	237.8	18	32	-29						
COLLMBERG	136.62	335.9	19	16	3						21 58 PP
KASPERSKE H.	138.03	333.4	19	18	2						22 52
STUTTGART	140.09	336.4	19	21	2						
GARCHY	143.56	340.9	19	30	4						
ISOLA	144.71	334.0	19	29	1						
MONACO	144.90	333.2	19	28	0						
LUANDA	145.37	231.6	19	31A	2						21 26
BANGUI	147.01	257.1	19	35	4				20	3	
BAGNERES	148.25	340.8	19	39	6						20 11
TOLEDO	152.42	344.1	19	43	3						24 44
GRANADA	154.80	341.1									34 28 SKSP

AUGUST 23 4.H 12.M 39.S EPICENTRE 38.59 68.55 DEPTH= 41.KM
A= 0.28655 B= 0.72936 C= 0.62123 D= 0.9307 E=-0.3657
G= 0.2272 H= 0.5782 K=-0.7836 HT= -1.2

DEPTH OF FOCUS= 0.001R

SE= 2.51

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
DUZHANBE	0.17	97.9									0	5	PG
KULYAB	1.17	125.9									0	22	PG
GARM	1.43	72.9									0	26	PG
SAMARKAND	1.63	311.8	0	29	2						0	50	S*
DZERGETAL	2.18	72.5	0	36	1						1	8	SG
TASHKENT	2.78	11.4	0	45	2	1	35	19			1	16	
FERGANA	3.07	53.5	0	50	3	1	26	3					
ANDIJAN	3.65	52.6	0	57	1	1	40	2			1	17	
TCHIMKENT	3.79	11.9	0	58	0						1	50	S*
WARSAK DAM	5.18	151.2	1	15	-2								
FRUNSE	6.26	45.5	1	32	0						2	43	S*
RYBACHE	6.97	54.1	1	43	1	3	2	1			2	7	
FABRICHNAYA	7.49	50.3	1	49	-1								
ALMATA	7.89	51.0	1	56	1						3	49	S*
ASHKABAD	8.05	268.6	1	53	-4						3	36	
PRZHEVALSK	8.44	59.5	2	2	-1						2	45	
LAHORE	8.47	144.3	2	1	-2								
QUETTA	8.50	189.4	2	2	-2	3	35	-4			2	11	*SP
KURMENTY	8.59	56.1	2	4	-1								
KIZYL-ARVAT	9.60	277.4	2	15	-4	4	3	-3			5	13	
DEHRA DUN	11.38	133.7	2	58	15	4	45	-5			4	57	SS
KARACHI	13.78	185.8	3	12	-3								
TEHERAN	13.98	263.5	3	17	-1								
SEMIPALATNSK	14.43	31.4	3	19	-5								
SHEMAKHA	15.49	283.8	3	42	5						6	51	
MAKHACH-KALA	16.52	292.0	3	50	0						7	3	SS
KIROVOBAD	17.24	283.8	3	56	-3	7	4	-4					
GORIS	17.28	280.0	3	58A	-2	7	6	-3			4	14	PPP
GROZNY	17.84	292.6	4	9	2						7	33	SS
EREVAN	18.65	282.5	4	16	-1						4	28	PP

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BAKURIANA	19.37	287.2	4	25	0					
CHATRA	19.53	121.4	4	24A	-3	8	1	2	4 40	PP
PIATIGORSK	19.86	294.0	4	47	17	8	2	-5	10 15	
BOMBAY	19.97	168.1	4	39	7	8	18	9	5 14	
POONA	20.52	165.5	4	40A	3	8	31	11		
LHASA	20.61	108.9	4	37	-1	8	24	3		
HYDERABAD	22.79	154.9				9	10	8	9 37	
CALCUTTA	23.32	127.6				9	23	12	9 52	
SHILLONG	23.56	116.6	5	6A	-2	9	18	2	10 2	SS
VISHAKHAPTNM	24.46	144.1	5	26	10	9	48	17		
TOCKLAI	24.94	110.5	5	23	2					
KSARA	26.71	269.8	5	39	2	10	20	12	12 36	PCS
MOSCOW	26.80	319.9	5	37	-1					
MADRAS	27.50	154.8							11 12	
LANCHOW	28.07	84.1	5	50A	0	10	35	5		
IRKUTSK	28.26	49.3	5	51A	-1					
BAYANDAI	29.17	48.1	5	58A	-2					
KYAKHTA	29.18	53.8	5	59A	-1					
ULAN-BATOR	29.18	58.9	6	0	0					
KISHINEV	30.07	299.2	6	6	-2	11	3	1	7 23	PPP
CHENGTU	30.09	94.4				11	6	4		
ISTANBUL KA.	30.24	287.4	6	10	1	11	4	-1		
KUNMING	31.80	104.8	6	22	-1	11	28	-1		
HELWAN	31.81	265.5	6	21	-2					
BUCHAREST	32.04	294.3	6	25	0				7 43	
PULKOVO	32.10	323.9	6	25	1	11	35	-2	7 37	PP
SIAN	32.59	85.0	6	30A	0	11	46	4		
LWOW	33.36	304.3	6	36	-1				7 52	PP
SOFIA	34.24	291.6	6	45	1				7 7	PP
ATHENS	34.93	283.3	6	50A	0					
APATITY	34.94	337.3	6	49	-1					
NURMIJARVI	34.99	323.3	6	49A	-2				8 9	PP
KAJAANI	35.06	330.0	6	46A	-5					
SKALNATE PL.	35.82	303.2	6	54	-4					
KRAKOW	36.02	304.7	6	59	0				15 46	
PEKING	36.53	72.3	7	4	0					
CHORZOW	36.62	305.1	7	3	-1				8 58	
SODANKYLA	37.02	334.6	7	7A	-1				8 22	PP
RACIBORZ	37.13	304.7	7	9	0				8 32	
BRATISLAVA	37.96	301.7	7	18	2				8 45	PP
UPPSALA	38.22	320.7	7	16	-2				8 45	PP
VIENNA-H.	38.44	301.9	7	21	1				9 0	PP
KIRUNA	39.35	333.5	7	26	-1				9 11	PP
PRUHONICE	39.49	304.8	7	29A	1				9 0	PP
PRAGUE	39.56	304.9	7	27	-2				9 0	PP
LJUBLJANA	39.97	298.7	7	33A	1				9 10	PP
KASPERSKE H.	40.19	303.5	7	34A	0				9 3	PP
COLLMBERG	40.37	306.9	7	35A	-1	13	28	-13	9 11	PP
TROMSOE	40.57	335.8	7	37	0					
COPENHAGEN	40.58	313.7	7	39A	2					
CHEB	40.87	305.1	7	46	6				9 45	
GOTEBORG	40.90	316.8	7	40	0				9 7	PP
HALLE	41.01	307.3	7	41	0	13	53	3		
CANTON	41.03	98.8	7	41	0	13	52	2		
MESSINA	41.05	286.6	7	40	-1					
JENA	41.30	306.5	7	43	0	13	41	-13	9 22	PP
SKALSTUGAN	41.39	325.8	7	43	-1				9 28	PP
HONG KONG	42.10	99.2	7	50	0	14	9	3		
ROME	42.28	293.0	7	51A	0				9 34	PP
CHANGCHUN	42.30	64.1	7	52	0	14	13	4		
KHEYS	42.34	357.5	7	53	1				9 46	PCP
FLORENCE X.	42.70	296.0	7	56A	1	14	41	26		
STUTTGART	43.05	303.6	7	58	0				9 47	PCP
TUBINGEN	43.23	303.3	7	59	0					
HEIDELBERG	43.31	304.6	7	59	-1					
ZO-SE	43.34	83.4	8	0	0	14	28	4		
YAKUTSK	43.45	36.9	7	59	-2	14	23	-3		
MUNSTER	43.65	308.4	7	54	-8					
BENSBERG	44.06	307.0	8	5	-1				8 33	
STRASBOURG	44.07	303.6	8	7	1				9 49	PP
BASLE	44.40	302.1	8	9K	0					
BERGEN	44.41	320.7	8	8	-1					
TIKSI	44.59	23.1	8	7	-3	14	39	-3	9 51	PP
ROSELEND	44.81	299.3	8	19	7				9 56	PP
DEBILT	45.12	308.9				14	57	7	10 9	
MONACO	45.39	296.9	7	57	-19					
BESANCON	45.52	302.1	8	17	0				9 54	PP
ISOLA	45.54	297.6	8	21	3				10 5	PP

GARCHY	47.44	302.7	8	32	-1				10	2	PP
PARIS	47.44	304.9	8	33	0	15	39	16	18	38	SCS
KEW	48.59	308.9	8	41A	-1	15	42	3			
DURHAM	48.65	313.5	8	51	9	15	39	-1			
FOLINIERE	49.36	305.5	8	47	0				10	8	
BAGNERES	50.65	298.2	8	56	-1				10	27	
ABUYAMA	52.76	72.0	9	12A	-1						
MATUSIRO	54.01	69.0	9	21K	-1				15	27	
LWIRO	54.70	231.5	9	27A	-1						
TOLEDO	54.76	296.0	9	27	-1				10	27	PCP
ALMERIA	54.87	292.0	9	28A	-1				11	25	PP
GRANADA	55.55	292.8	9	42	8				19	57	
BANGUI	56.63	246.0	9	42	1				10	49	PP
COIMBRA	57.68	298.0	9	49K	0						
TANANARIVE	60.51	202.9	10	7	-1						
BROKEN HILL	64.73	223.6	10	36A	0						
RESOLUTE	66.47	355.3	10	47	-1						
BULAWAYO	69.40	220.1	11	4A	-2						
COLLEGE	73.00	15.4	11	27	0				12	51	
DARWIN	77.07	117.4	11	51	0						
MBOUR	77.72	278.6	11	50	-4						
KIMBERLEY	78.48	218.3	11	57	-2						
HALIFAX	86.60	328.0	12	42	2						
PORT MORESBY	87.02	104.4	12	42	0						
SHAWINIGAN	88.43	334.4	12	51K	2						
BANFF	90.54	2.6	13	2K	3						
PENTICTON	92.17	5.3	13	7	0						
VICTORIA	92.62	7.9	13	10K	1						
CHARTERS TS.	93.17	113.1	13	12	1				16	50	
PALISADES	93.68	332.5	13	16	2				17	2	PP
BUTTE	95.76	0.8	13	24	1						
BOZEMAN	96.12	359.7	13	27	2						
RAPID CITY	97.37	354.0	13	32	2						
FLAMING GRGE	100.83	358.4	13	47	1						
EUREKA	102.19	3.6	13	55	3				17	57	PP
FAYETTEVILLE	103.99	345.7	14	0K	0				18	16	PP
GLEN CANYON	104.81	0.1	17	29	205						
MAWSON	105.96	182.3	14	10	777	14	18		18	21	PP
WICHITA MTS.	106.09	349.0	14	11	777				17	31	PP
SOUTH POLE	128.41	180.0	19	3	0						
SCOTT BASE	129.11	164.3	19	5	1						
BYRD STATION	138.34	177.9	19	9	-12						

AUGUST 24 4.H 52.M 32.S EPICENTRE 43.65 144.69 DEPTH= 86.KM

A=-0.59236 B= 0.41957 C= 0.68780 D= 0.5780 E= 0.8160
G=-0.5613 H= 0.3976 K=-0.7259 HT= -3.0

DEPTH OF FOCUS= 0.008R

SE= 5.18

	DELTA DEG.	AZ. DEG.	P M	P S	P O-C S	S M	S S	S O-C S	*PP M	*PP S	SUPP. M	SUPP. S
ABASHIRI	0.47	321.4				0	14	-14				
KUSIRO	0.70	197.7	0	7K	-11	0	17	-14				
NEMURO	0.72	115.9	0	2K	-16	0	8	-23				
OBIHIRO	1.31	236.7	0	18	-6	0	39	-3				
ASAHIGAWA	1.69	275.2	0	30	1							
HIROO	1.70	216.8	0	20	-9	0	42	-8				
URAKAWA	2.05	223.8	0	26	-7	0	56	-2				
RUMOE	2.24	278.8	0	38	2							
TOMAKOMAI	2.49	247.0	0	43	3	1	15	6				
SAPPORO	2.50	257.8	0	38K	-2	1	12	3				
WAKKANAI	2.79	310.5	0	47	3							
MURORAN	3.03	245.3	0	43	-4	1	24	2				
SUTTSU	3.37	256.9	0	50	-2	1	44	13				
MORI	3.40	244.3	0	49	-3	1	32	0				
HAKODATE	3.43	238.9	0	48A	-5	1	29	-3				
Y.-SAKHLINSK	3.65	338.3	0	57	1							
HATINOHE	3.90	218.1	0	49	-10	1	30	-14				
AOMORI	4.05	227.1	0	56	-5	1	40	-8				
MIYAKO	4.49	207.9	0	52	-15	1	36	-23				
MORIOKA	4.75	214.9	0	59	-12	1	49	-16				
AKITA	5.22	222.7	1	28	11	2	30	13				
MIZUSAWA	5.25	211.9	1	5	-13	1	57	-20				

UGLEGORSK	5.73	342.5	1	27	3	2	50	21															
ISINOMAKI	5.80	207.2	1	11K	-14	2	9	-22															
SAKATA	5.99	219.3	2	21	53																		
SENDAI	6.09	209.4	1	21	-8	2	18	-20															
YAMAGATA	6.31	212.8	1	19	-13	2	24	-20															
HUKUSIMA	6.71	210.0	1	26	-12	2	32	-21															
NIIGATA	7.14	218.7	1	57	13	3	5	1															
ONAHAMA	7.29	204.7	2	5	19	2	44	-24															
SHIRAKAWA	7.36	209.1	1	36	-11	2	48	-21															
AIKAWA	7.45	223.1	1	38	-10																		
MITO	7.95	205.4	1	39	-16	2	59	-25															
UTUNOMIYA	7.99	209.1	2	1	6	3	7	-18															
KAKIOKA	8.18	206.5	1	44	-14	3	3	-26															
TUKUBASAN	8.21	206.9	1	42A	-16	3	4	-26															
MAEBASI	8.42	212.6	1	50	-11	3	17	-18															
KUMAGAYA	8.53	210.3	1	49	-14	3	20	-18															
NAGANO	8.56	217.6	1	59	-4																		
MATUSIRO	8.66	217.1	1	52A	-12	3	27	-14															
OIWAKE	8.69	214.8	2	11	6																		
TITIBU	8.79	211.3	3	22	76																		
TOKYO C.M.O.	8.82	207.2	1	59	-8	3	22	-23															
TOYAMA	9.00	222.1	2	0	-9																		
YOKOHAMA	9.08	207.0																			3	29	
KOHU	9.26	212.7	2	41	28	3	39	-17															
VLADIVOSTOK	9.33	271.2	2	14	0	4	9	11															
HUNATU	9.33	211.3	3	9	55	3	40	-18															
MERA	9.49	205.0																			3	39	
MISIMA	9.60	209.4																			3	40	
AJIRO	9.61	208.6	2	4	-13	3	40	-24															
IIDA	9.69	215.4	2	8	-10	3	59	-7															
HUKUI	9.99	223.4	2	31	9																		
NAGOYA	10.36	217.7	2	28	1																		
HIKONE	10.60	220.7	2	22	-9																		
KAMEYAMA	10.85	218.7	1	25	-69																		
KYOTO	11.06	221.8	2	24	-13	2	45	-114															
PETROPAVLOVK	13.17	39.8	3	6	1																		
CHANGCHUN	14.02	277.4	3	18	2																		
MAGADAN	16.36	11.1	4	1	15																		
YAKUTSK	20.41	339.5	4	38	6																		
PEKING	21.51	270.2	4	41	-2	8	42	11															
ZO-SE	22.41	243.9	4	52	0	8	53	5															
ULAN-BATOR	26.52	292.6	5	31	0																		
SIAN	29.17	263.4	5	54	-1																		
LANCHOW	32.02	270.4	6	19A	-1																		
KUNMING	38.76	255.5	7	16	-1																		
COLLEGE	42.22	36.0	7	43	-3																8	5	
SHILLONG	46.26	264.9	8	16	-2																		
CHATRA	48.92	269.7	8	50	11																		
ANDIJAN	52.07	293.4	9	4	1																		
TASHKENT	53.83	295.5	9	16	0																		
STALINABAD	55.56	292.8	9	30	1																		
RESOLUTE	55.57	16.1	9	26K	-3																		
APATITY	57.73	335.0	9	44	0																		
SODANKYLA	59.86	336.7	9	58K	-1																10	22	
TROMSOE	60.28	340.9	10	1	-1																		
KIRUNA	61.23	339.0	10	7	-1	10	32																
QUETTA	61.48	285.6	10	9	-1																		
KAJAANI	61.77	333.6	10	8	-4																		
PENTICTON	61.77	47.6																			12	6	
CHARTERS TS.	63.44	178.4	11	13	50																		
MOSCOW	63.47	322.8	10	22	-1																		
SHASTA	65.25	56.7	10	30	-5																		
NURMIJARVI	65.29	331.9	10	34K	-1																		
MINERAL	65.94	56.6	10	14K	-25																10	46	
SKALSTUGAN	66.66	338.9	10	43	-1																		
RENO	67.52	56.4	10	57	8																		
LICK	67.77	59.2	10	42K	-9																		
UPPSALA	68.11	334.3	10	52K	-1				11	15													
EUREKA	69.86	54.4	11	0	-3	11	12																
PASADENA	71.97	59.9	11	22	6																		
FLAMING GRGE	72.66	49.8	11	16	-4																		
BOULDER CITY	72.83	56.6	11	15	-6																		
RAPID CITY	73.75	44.1	11	35	8																		
GLEN CANYON	74.10	54.0	11	24	-5																		
NIEDZIKA	75.33	326.1	11	37K	1																12	1	
RACIBORZ	75.65	327.7	11	33	-4																12	1	
COLLMBERG	76.57	331.2	11	43	0																11	59	PP
HALLE	76.77	331.9	11	44	0																		

PRUHONICE	77.11	329.6	11	46A	0			12	11	
JENA	77.37	331.7	11	46	-1			12	10	
MUNSTER	77.79	334.5	11	51	2					
TUCSON	77.79	57.1	11	46	-3	11	58			
KASPERSKE H.	78.16	329.6	11	52A	1			12	16	
CANBERRA	78.69	176.4	11	48	-6					
BENSBERG	78.80	334.2	11	54	-1	12	11	12	19	*SP
STUTTGART	79.99	331.9	12	1	0			12	25	
LJUBLJANA	80.36	327.3	12	3	0					
WICHITA MTS.	83.04	47.8	12	14	-3			13	26	
GARCHY	83.32	334.8	12	19	0			13	19	
ROSELEND	83.39	331.2	12	18	-1					
FLORENCE X.	83.53	328.0	12	19	-1					
SHAWINIGAN	84.26	25.0	12	21	-2					
FAYETTEVILLE	84.29	44.2	12	20K	-4					
OTTAWA	84.34	27.3	12	21	-3					
ISOLA	84.74	330.9	12	26	0					
HELWAN	84.79	306.8	12	26	0			12	46	
KARAPIRO	85.88	156.0	12	44	13					
MORGANTOWN	87.82	32.9	12	39K	-2					
PALISADES	88.84	28.2						30	43	SS
TACUBAYA	94.27	58.2						4	27	
SCOTT BASE	121.98	174.6	18	41	-4	18	54			
MAWSON	126.56	208.2	18	49	-4	19	2			

AUGUST 24 22.H 40.M 55.S EPICENTRE 43.25 145.78 DEPTH= 54.KM

A=-0.60419 B= 0.41098 C= 0.68268 D= 0.5624 E= 0.8268
G=-0.5645 H= 0.3840 K=-0.7307 HT= -2.9

DEPTH OF FOCUS= 0.003R

SE= 4.40

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
NEMURO	0.17	300.4	0	10	0	0	15	-2				
KUSIRO	1.04	255.7	0	15K	-4	0	26	-8				
ABASHIRI	1.33	306.0	0	24	1	0	42	1				
OBIHIRO	1.91	261.1	0	28K	-3	0	49	-6				
HIROO	2.05	242.7	0	29	-4	0	51	-7				
URAKAWA	2.47	244.6	0	36	-3	1	3	-5				
KURILSK	2.49	36.5	0	45	6	1	18	9				
ASAHIGAWA	2.53	283.3	0	40	0							
TOMAKOMAI	3.14	260.1	0	53	4							
SAPPORO	3.24	268.4	0	47K	-3	1	22	-6				
WAKKANAI	3.65	307.9	1	3	7	1	51	13				
HAKODATE	3.97	250.5	0	57A	-3	1	37	-9				
MORI	4.01	255.2	0	59	-2	1	42	-5				
SUTTSU	4.09	265.6	0	59	-3	1	47	-2				
HATINOHE	4.17	230.9	0	57	-6	1	38	-13				
Y.-SAKHLINSK	4.35	331.3	1	7	1	2	0	4				
AOMORI	4.44	238.6	1	3	-4	1	51	-7				
MIYAKO	4.59	219.8	1	2	-7	1	46	-16				
MORIOKA	4.95	225.9	1	7	-7	1	57	-14				
MIZUSAWA	5.40	222.0	1	13	-7	2	7	-15				
AKITA	5.53	232.3	1	19	-3	2	19	-6				
ISINOMAKI	5.88	216.6	1	20A	-7	2	18	-16				
SENDAI	6.20	218.3	1	28	-3	2	27	-15				
SAKATA	6.25	228.0	1	27	-5							
UGLEGORSK	6.38	337.5	1	37	3	2	56	10				
YAMAGATA	6.47	221.3	1	28	-7	2	32	-17				
HUKUSIMA	6.82	218.1	1	33	-7	2	42	-15				
ONAHAMA	7.31	212.3	1	44	-3	2	53	-16				
NIIGATA	7.38	226.1	1	57	9							
SHIRAKAWA	7.45	216.6	1	42	-7	2	57	-16				
AIKAWA	7.74	230.1	1	46	-7							
MITO	7.98	212.5	1	47	-9	3	9	-17				
UTUNOMIYA	8.08	216.1	1	52	-5	3	12	-16				
KAKIOKA	8.22	213.4	1	52	-7	3	16	-16				
TUKUBASAN	8.27	213.8	1	50A	-10	3	14	-19				
TAKADA	8.42	225.7	1	48	-14							
TYOSI	8.42	208.5	2	4	2	3	18	-19				
MAEBASI	8.56	219.3	1	58	-6	3	28	-12				
KUMAGAYA	8.63	216.9	1	57	-8	3	26	-16				
NAGANO	8.77	224.0	2	9	2							
OIWAKE	8.86	221.2	2	15	7	3	38	-10				

MATUSIRO	8.87	223.5	2	1A	-7	3	35	-13			
TOKYO C.M.O.	8.87	213.6	2	0	-8	3	31	-17			
WAZIMA	8.96	232.1	2	5	-5						
YOKOHAMA	9.13	213.3				3	39	-14			
MATUMOTO	9.21	223.3	2	23	10						
KOHU	9.40	218.8	2	14	-2	3	50	-11			
HUNATU	9.44	217.3	2	29	13	3	50	-12			
MERA	9.51	211.0									
AJIRO	9.68	214.5	2	11	-9					3	36
										2	49
MISIMA	9.69	215.4								3	17
OSIMA	9.81	212.5								3	50
IIDA	9.86	221.2	2	13	-9	3	59	-13			
VLADIVOSTOK	10.14	274.0	2	24	-2	4	18	-1			
SEVERO-KUR.	10.24	39.9	2	35	8						
HUKUI	10.28	228.8	2	32	4						
OMAESAKI	10.44	216.8								4	7
GIHU	10.48	224.6	2	33	3						
NAGOYA	10.56	223.2	2	34	2	4	23	-6			
TSURUGA	10.66	227.9	2	44	11						
HIKONE	10.85	226.0	2	30	-5						
KYOTO	11.32	226.8	2	36	-6						
ABUYAMA	11.52	226.8	2	36A	-8						
TAKAMATU	12.76	229.6	2	53	-8						
PETROPAVLOVK	13.00	36.8	3	15	11					5	30
CHANGCHUN	14.86	279.3	3	25	-3	6	18	6			
KUMAMOTO	15.77	233.7	3	16	-24						
MAGADAN	16.62	9.0	3	59	8						
YAKUTSK	21.07	338.7	4	47	5	8	30	2			
PEKING	22.30	271.9	4	50A	-4	8	50	-1			
ZO-SE	22.95	246.3				9	8	5			
SIAN	29.91	265.0	6	4	-1						
LANCHOW	32.82	271.8	6	29A	-2						
COLLEGE	42.08	35.7	7	52	4						
TOCKLAI	44.21	265.3	8	31	25						
SHILLONG	47.01	266.1	8	24A	-4						
FRUNSE	50.50	295.5	8	54	-1						
SVERDLOVSK	52.82	316.6	9	12	0						
TASHKENT	54.72	296.2	9	24	-2						
RESOLUTE	55.74	16.3	9	35A	1						
NEW DELHI	55.97	278.9	9	32A	-3						
APATITY	58.42	335.4	9	51	-2						
VICTORIA	59.79	50.3	10	4	2						
SODANKYLA	60.54	337.2	10	7	0						
LEMBANG	60.66	224.7	10	6K	-2						
TROMSOE	60.92	341.3	10	10	0						
KIRUNA	61.89	339.5	10	16	0						
QUETTA	62.35	286.5	10	17	-2						
KAJAANI	62.48	334.1	10	15	-5						
BANFF	62.55	44.5	10	24	3						
ASHKABAD	63.64	298.2	10	27	-1						
MOSCOW	64.26	323.4	10	30	-2						
PULKOVO	64.54	329.6	10	33	-1						
SHASTA	64.81	57.1	10	39	3						
MINERAL	65.50	57.0	10	17A	-23						
NURMIJARVI	66.02	332.4	10	43A	0						
BERKELEY	66.58	59.5	10	49	2						
RENO	67.08	56.8	11	5	15						
STA. CRUZ C.	67.27	60.2	11	6	15						
LICK	67.29	59.7	11	6A	15						
SKALSTUGAN	67.32	339.4	10	51	0						
BOZEMAN	68.29	47.3	11	1	3						
UPPSALA	68.81	334.8	11	0A	-1						
EUREKA	69.44	54.9	11	8	3				11	20	13 48 PP
PASADENA	71.49	60.4	11	21	4				11	33	
BERGEN	71.77	340.6	11	19	0						
GOTEBORG	72.28	336.0	11	21A	-1						
FLAMING GRGE	72.32	50.2	11	25	3				11	37	
BOULDER CITY	72.39	57.1	11	25	3						
SIDA	72.55	352.6	11	27K	4						
SIMFEROPOL	73.19	316.4	11	28A	1						11 43 PCP
RAPID CITY	73.48	44.6	11	31	2						
GLEN CANYON	73.69	54.5	11	33	3				11	45	
COPENHAGEN	73.82	334.6	11	31	0						
LARAMIE	74.16	47.9	11	36	3						
KISHINEV	74.26	320.7	11	34	1						
LWOW	74.27	325.1	11	34	1						
KRAKOW	75.76	327.4	11	43K	1						
NIEDZIKA	76.10	326.8	11	45	1						12 10
SKALNATE PL.	76.32	326.7	11	41	-4						

RACIBORZ	76.41	328.3	11	47	1						
COLLMBERG	77.30	331.8	11	51A	0				14	49	PP
TUCSON	77.34	57.7	11	55	4	12	7				
TUCSON TELE.	77.35	57.5	11	55	4						
HALLE	77.49	332.5	11	51	-1						
PRUHONICE	77.85	330.2	11	55A	1						
JENA	78.10	332.4	11	54	-1				12	31	
CANBERRA	78.25	177.3	11	56	0						
BRATISLAVA	78.38	327.8	11	58	1				12	10	PCP
MUNSTER	78.49	335.1	11	59	2						
KASPERSKE H.	78.91	330.3	12	1A	2				12	46	
BENSBERG	79.51	334.8	12	3	0	12	15		12	20	*SP
SOFIA	80.08	320.8	12	8	2				12	32	
STUTTGART	80.72	332.5	12	10	1				12	33	
LJUBLJANA	81.12	328.0	12	12A	1						
KEW	81.18	339.3	12	12	0						
STRASBOURG	81.39	333.3	12	13	0						
WICHITA MTS.	82.72	48.5	12	22	2				27	45	SS
PARIS	82.82	336.5	12	22	2				12	34	PCP
ATHENS	83.58	317.6	12	24K	0				14	14	
FOLINIERE	83.69	338.3	12	26	2						
GARCHY	84.02	335.5	12	27	1				12	39	PCP
FAYETTEVILLE	84.02	44.8	12	28K	2						
ROSELEND	84.12	331.8	12	29	2						
SHAWINIGAN	84.28	25.6	12	29	2						
FLORENCE X.	84.29	328.7	12	29K	2						
OTTAWA	84.33	28.0	12	29	1						
KARAPIRO	85.20	156.8	12	42	10						
ISOLA	85.47	331.6	12	34	1						
HELWAN	85.66	307.5	12	34	0				12	59	
MONACO	85.73	331.1	12	34	-1						
HALIFAX	88.67	20.5	12	51	2						
BAGNERES	88.71	335.6	12	50	1				13	23	
TOLEDO	92.87	337.2	13	9	1						
SCOTT BASE	121.51	174.9	18	49	1						
MAWSON	126.58	208.3	19	11A	13						
LA PAZ	140.76	57.8	18	6	-78						

AUGUST 25 6.H 59.M 27.S EPICENTRE 53.48-161.41 DEPTH= 0.KM

A=-0.56658 B=-0.19052 C= 0.80168 D=-0.3187 E= 0.9478
G=-0.7599 H=-0.2555 K=-0.5978 HT= -6.7

SE= 2.50

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
COLLEGE	13.34	25.8	3	10	-3	6	13	30					
PETROPAVLOVK	23.69	285.1	5	14	0	9	19	-7					
VICTORIA	24.21	86.3	5	18	-1								
CORVALLIS	26.25	94.2	6	27	49								
BANFF	27.76	76.0	5	53	1								
SHASTA	29.09	100.1	6	5	1								
MINERAL	29.78	99.9	5	44K	-26								
BERKELEY	31.03	104.2	6	21	0								
RENO	31.36	99.3	6	25	1								
LICK	31.75	104.3	6	28A	1								
BUTTE	31.88	83.4	6	27	-2								
BOZEMAN	32.97	82.9	6	39	1								
FRESNO	33.21	103.2	6	41	1								
RESOLUTE	33.26	26.4	6	42	1								
EUREKA	33.67	95.9	6	44	0						7	52	PP
SALT LAKE C.	35.32	90.6	6	49	-9								
PASADENA	36.00	104.8	7	3	-1	12	45	2					
YAKUTSK	36.04	311.6	7	3	-2								
BOULDER CITY	36.67	99.4	7	10	0								
FLAMING GRGE	36.69	88.4	7	10	0						9	31	PCP
GLEN CANYON	37.92	95.3	7	21	1						8	44	
RAPID CITY	38.49	79.8	7	26	1								
LARAMIE	38.73	85.1	7	28	1								
TUCSON	41.64	99.9	7	52	1								
TUCSON TELE.	41.64	99.7	7	52	1								
VLADIVOSTOK	44.01	284.6	8	13	3								
MATUSIRO	44.50	272.9	8	14	0	14	50	0			9	57	PCP
WICHITA MTS.	47.20	87.1	8	35	-1	15	29	0			10	6	PCP
FAYETTEVILLE	48.88	82.4	8	47A	-2						10	12	PCP

IRKUTSK	52.76	309.7	9	19	1	16	50	4			
OTTAWA	53.09	61.5	9	19	-2						
SHAWINIGAN	53.85	58.7	9	26A	0						
ULAN-BATOR	54.45	304.3	9	31	0						
TROMSOE	57.21	359.9	9	52	1						
APATITY	58.78	353.4	10	2	0						
KIRUNA	59.01	359.2	9	59	-4						
SODANKYLA	59.33	356.4	10	6	0						
HALIFAX	59.79	55.0	10	7	-2						
KAJAANI	62.57	355.5	10	24	-4						
SKALSTUGAN	63.18	3.2	10	33	1						
NURMIJARVI	66.26	356.7	10	51	-1						
MOSCOW	70.04	348.7	11	16	1						
HALLE	75.25	4.3	11	47	1						
COLLMBERG	75.49	3.6	11	48K	1						
BENSBERG	75.50	7.4	11	49	2					14	38 PP
JENA	75.80	4.6	11	49	0					13	13
TASHKENT	75.99	323.1	11	50A	0						
PORT MORESBY	76.25	232.6	11	51	-1						
FOLINIERE	76.86	12.8	11	56	1						
PRUHONICE	76.86	2.7	11	56	1					13	6
NIEDZIKA	77.47	358.8	12	1	3						
KASPERSKE H.	77.68	3.4	12	1K	1					15	6
STUTTGART	77.83	6.3	12	1	1						
SAMARKAND	78.27	323.9	11	52	-11						
SAN JUAN	78.53	74.8	12	4	0						
STALINABAD	78.60	322.1	12	6	1						
GARCHY	78.76	10.7	12	7	1					12	33
SHILLONG	79.12	298.3	12	6	-2						
CHATRA	80.51	302.5	12	8A	-7						
ISOLA	82.22	8.4	12	26	2						
TIFLIS	82.53	340.5	12	29	3						
MONACO	82.70	8.1	12	28	2						
NEW DELHI	83.82	311.0	12	29A	-3						
TEHERAN	86.71	333.8	12	49	2	23	32	9			
QUETTA	86.73	319.6	12	49	2					16	9 PP
TRINIDAD	87.42	75.7	12	48	-2						
SOUTH POLE	143.29	180.0	19	38	2						
BULAWAYO	145.84	343.1	19	42A	2						
MAWSON	154.75	218.9	20	1	7				20	16	

AUGUST 27 1.H 51.M 54.S EPICENTRE -15.56 -13.26 DEPTH= 50.KM

A= 0.93813 B=-0.22104 C=-0.26655 D=-0.2293 E=-0.9733
G=-0.2594 H= 0.0611 K=-0.9638 HT= 5.6

DEPTH OF FOCUS= 0.003R

SE= 2.36

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
MBOUR	29.97	352.8	6	5	-1	11	9	10				
BANGUI	37.26	60.4	7	10	1	13	4	12				
KIMBERLEY	37.43	117.1	7	9	-1							
PRETORIA	39.93	111.6	7	32	1							
BULAWAYO	40.04	102.9	7	33K	1							
BROKEN HILL	40.28	94.1	6	45	-49							
LA PAZ	52.61	261.0	9	11	0	16	40	7				
ALMERIA	53.11	10.8	9	6K	-9						11	14 PP
GRANADA	53.24	9.6	9	17K	1	16	31	-11			12	11 PPP
LISBON	54.13	4.0	9	24	2							
COIMBRA	55.65	4.5	9	33K	0							
TOLEDO	55.81	8.6	9	34	-1						11	35 PP
SERRA PILAR	56.56	4.2	9	39K	-1							
TORTOSA	57.53	12.4	9	46	-1							
TANANARIVE	57.93	102.8	9	52	2							
BAGNERES	59.62	11.4	10	8	7						12	38
MESSINA	59.92	26.0	10	4	1							
ARGENTINE I.	60.19	202.2	10	3	-2							
HUANCAYO	60.21	264.9	10	6	1							
ROME	61.91	21.6	10	17A	0	18	52	16			14	38 PPP
MONACO	61.96	16.9	10	17	0							
SAN JUAN	62.03	301.0	10	18	0							
ISOLA	62.27	16.4	11	20	61							
HELWAN	62.35	43.5	10	20	0						12	33
CLERMONT-FD.	62.81	12.8	10	25	2							

FLORENCE X.	63.16	19.7	10	18A	-7	18	56	5			
FUQUENE	63.41	284.4	10	29A	2						
ATHENS	63.56	32.1	10	25	-3						
GARCHY	64.24	12.3	10	32	0				11	23	
PADOVA	64.82	19.3	10	41	5				11	48	
BESANCON	64.86	14.4	10	35	-1						
CHINCHINA	65.01	283.1	10	37A	0						
FOLINIERE	65.04	9.3	10	38	1						
BASLE	65.52	15.4	10	40K	-1						
PARIS	65.59	11.4	10	41	0						
TRIESTE	65.65	20.5	10	42	1	19	36	14			
LJUBLJANA	66.26	20.8	10	45K	0				13	12	PP
STRASBOURG	66.54	15.1	10	46	-1				13	13	PP
GALERAZAMBA	66.74	289.2	10	48	0	19	51	16			
SOFIA	67.02	28.5	10	51	1				11	20	
KARLSRUHE	67.10	15.3	10	49	-2				11	10	
STUTTGART	67.10	16.0	10	49	-2						
BELGRADE	67.46	25.3	10	56	3				13	39	PP
HEIDELBERG	67.54	15.3	10	53	0						
KEW	67.69	8.7	10	55	1						
KSARA	67.83	42.8	10	57A	2	20	8	20	13	30	PP
ISTANBUL UN.	68.57	33.1	10	58	-2						
BENSBERG	68.61	13.7	11	0	0						
KASPERSKE H.	68.66	18.6	11	59K	59				13	28	PP
VIENNA-H.	68.80	20.8	11	1	0				11	38	PCP
CHEB	69.15	17.4	11	10	7				13	38	PP
BUCHAREST	69.63	29.0	11	6	0				12	26	
MUNSTER	69.65	13.6	11	8	2						
JENA	69.69	16.5	11	4	-3	20	21	11	13	40	PP
PRUHONICE	69.71	18.7	11	6	-1						
PRAGUE	69.75	18.6	11	11	4						
WITTEVEEN	70.24	12.7	11	6	-4						
HALLE	70.30	16.4	11	9	-1				13	52	PP
MAWSON	70.45	156.7	11	10K	-1						
RACIBORZ	70.98	20.8	11	14	0						
CHORZOW	71.43	21.2	11	16	-1						
KRAKOW	71.57	21.8	11	17	-1				11	57	
LWOW	72.93	24.2	11	25	-1				14	16	
WARSAW	73.76	21.2	11	30	-1						
SIMFEROPOL	73.99	32.9	11	32	0	21	9	10			
COPENHAGEN	74.20	14.8	11	35	2						
SOUTH POLE	74.54	180.0	11	36	1						
HALIFAX	75.36	325.4	11	40	0						
GOTEBORG	75.92	13.7	11	44	1						
SOTCHI	76.19	36.7	10	45	-60						
GORIS	77.96	43.0	11	57	2						
TIFLIS	78.17	40.5	11	57	1				21	59	
UPPSALA	79.20	15.3	12	1	-1						
PALISADES	79.44	317.9	12	2	-1	22	6	7	15	4	PP
WASHINGTON	80.49	314.8	12	6	-2						
CHAPEL HILL	80.50	311.4	12	10	2						
MAKHACH-KALA	80.53	40.5	12	9	0						
SKALSTUGAN	81.34	11.2	12	13	0						
BREBEUF	81.62	321.8	12	14	0						
SHAWINIGAN	81.69	323.1	12	15	0						
NURMIJARVI	81.69	17.9	12	14	-1						
PENNSYLVANIA	81.94	316.2	12	25	9						
MIRNY	82.17	157.2	12	16	-1						
MORGANTOWN	82.81	314.4	12	21A	1						
OTTAWA	82.83	321.0	12	20	-1						
MOSCOW	82.87	26.3	12	21	0						
PULKOVO	82.91	20.6	12	20	-1						
KAJAANI	85.39	16.8	12	29	-4						
KIRUNA	86.69	12.2	12	40	0	23	25	14			
SCOTT BASE	86.77	180.0	12	42A	2						
SODANKYLA	87.68	14.4	12	44	-1						
QUETTA	89.51	58.6	12	56K	3	23	55	17			
APATITY	89.55	16.2	12	24	-29						
FAYETTEVILLE	91.91	306.8	13	4	0						
SAMARKAND	92.48	49.6	13	3	-4						
SVERDLOVSK	94.34	32.0	13	17	1						
TASHKENT	94.65	48.5	13	16	-1						
WICHITA MTS.	94.96	304.5	13	18	0				25	51	PS
KHEYS	102.26	9.2							18	5	PP
TUCSON	104.43	299.9	18	26	265						
EUREKA	109.45	306.8	17	40	777						
COLLEGE	121.99	339.0	18	49	0						
CHARTERS TS.	139.25	149.7	19	26	4				22	17	

PETROPAVLOVK	142.08	8.0	19 26	-1	
ABUYAMA	146.08	49.7	19 36K	2	
MATUSIRO	147.14	45.1	19 39K	3	23 16 PP
PORT MORESBY	148.51	140.7	19 45	7	

AUGUST 27 16.H 22.M 16.S EPICENTRE 47.47 154.05 DEPTH= 53.KM

A=-0.61010 B= 0.29688 C= 0.73460 D= 0.4375 E= 0.8992
G=-0.6606 H= 0.3214 K=-0.6785 HT= -4.5

DEPTH OF FOCUS= 0.003R

SE= 4.33

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
KURILSK	4.83	244.7	1 6	-6	2 5	-3		
PETROPAVLOVK	6.29	26.2	1 32	-1	2 46	2		
NEMURO	7.26	238.3	1 37	-9	2 57	-11		
ABASHIRI	7.65	246.8	1 50	-2				
Y.-SAKHLINSK	7.73	270.9	1 51	-2	3 26	6		
KUSIRO	8.16	240.2	1 49	-10	3 22	-8		
UGLEGORSK	8.16	285.8	1 59	0			3 47	
WAKKANAI	8.79	261.1	2 7	0	3 45	-1		
OBIHIRO	8.91	243.3	2 2	-7	4 10	21		
ASAHIGAWA	8.98	250.0	2 17	7				
HIROO	9.21	239.7	2 5	-8	3 48	-8		
OKHA	9.34	314.8	2 17	2			4 24	
RUMOE	9.38	252.5	2 14	-1	4 8	7		
URAKAWA	9.61	240.5	2 11	-8	4 11	5		
KLYUCHI	9.81	22.8	2 22	1	4 33	22		
SAPPORO	9.97	248.5	2 18	-6	4 11	-4	4 36	
TOMAKOMAI	10.06	245.8	2 30	5				
MURORAN	10.60	245.7	2 25	-7	4 25	-5		
SUTTSU	10.82	249.5	2 26	-9	4 41	5		
MORI	10.98	245.7	2 29	-8	4 34	-5		
HAKODATE	11.03	244.0	2 29	-9	4 30	-11		
HATINOHE	11.37	237.0	2 24	-18	4 28	-21		
AOMORI	11.61	239.9	2 41	-5	4 51	-4		
MIYAKO	11.73	232.6	2 47	0	4 41	-17		
MORIOKA	12.13	234.9	2 44	-9	4 42	-25		
MAGADAN	12.26	352.2	2 54	0			5 24	
MIZUSAWA	12.56	233.1	2 52	-6	5 2	-16		
ISINOMAKI	12.97	230.5	2 51	-13	5 31	4		
SENDAI	13.31	231.1	2 58	-10	5 29	-6		
SAKATA	13.44	235.6			5 27	-11		
YAMAGATA	13.61	232.4	3 13	1	5 29	-14		
HUKUSIMA	13.92	230.7	3 5	-11	6 37	47		
ONAHAMA	14.31	227.5	3 34	13	5 53	-6		
SHIRAKAWA	14.53	229.6	3 22	-2	5 51	-13		
NIIGATA	14.56	234.5					5 46	
MITO	14.97	227.2	3 20	-10	6 1	-14		
UTUNOMIYA	15.14	229.0	3 37	5	6 10	-9		
KAKIOKA	15.23	227.5	3 25	-8	6 8	-13		
TUKUBASAN	15.28	227.7	3 22A	-12	6 8	-14	3 51	PPP
TAKADA	15.59	234.1	3 26	-12				
MAEBASI	15.67	230.5	3 33K	-6	6 48	17		
KUMAGAYA	15.70	229.2	3 29	-10	6 19	-13		
HONGO	15.85	227.3			6 27	-8	8 18	
TOKYO C.M.O.	15.88	227.3	3 32	-10				
NAGANO	15.93	233.1	3 40	-2				
TITIBU	15.99	229.5	3 36	-7				
OIWAKE	16.00	231.5	3 36	-7	6 39	0		
MATUSIRO	16.02	232.8	3 33A	-10	6 30	-9		
YOKOHAMA	16.13	227.0	3 39	-6				
WAZIMA	16.15	237.6			6 44	2		
VLADIVOSTOK	16.17	262.6	3 42	-3	6 34	-9		
MATUMOTO	16.37	232.6	3 47	-1				
MERA	16.45	225.5	3 49	0				
TOYAMA	16.46	235.3					4 44	
KOHU	16.50	230.0	3 43	-6	6 59	9		
HUNATU	16.52	229.2	3 44	-6	6 46	-5		
AJIRO	16.70	227.4	3 49	-3				
MISIMA	16.72	227.9	3 35	-17	6 47	-8		
OSIMA	16.79	226.2	4 5	12				
IIDA	16.99	231.2	3 50	-6				

SHIZUOKA	17.12	228.8	3	55	-2						
HUKUI	17.47	235.7	3	55	-7					7	19
OMAESAKI	17.50	228.4								4	22
GIHU	17.65	233.2	4	0	-4						
NAGOYA	17.72	232.3	3	57	-8	7	3	-15			
TSURUGA	17.85	235.1	3	59	-7						
HIKONE	18.03	233.9	4	3	-6	7	26	1			
KAMEYAMA	18.23	232.6	4	4	-7					7	53
TU	18.31	232.2	4	12	0						
KYOTO	18.50	234.4	4	6	-8	7	32	-3			
TOYOOKA	18.64	237.2	4	9	-7	7	30	-9			
ABUYAMA	18.70	234.4	4	9A	-8						
OSAKA	18.89	234.0								4	41
OWASE	18.96	231.5	4	15	-5						
SIOMISAKI	19.67	231.2	4	24	-3	8	2	1			
YAKUTSK	20.06	325.5	4	30	-2					4	56 PP
CHANGCHUN	20.37	270.3	4	28A	-7	8	11	-4			
KOTI	20.81	235.5	4	35	-4	8	25	1			
HIROSIMA	20.84	238.9	4	35A	-5	8	26	2			
MATUYAMA	21.02	237.3	4	38	-4	8	41	13			
SIMIDU	21.70	235.0	4	31	-17	8	45	5			
OOITA	22.13	238.1	4	49	-4					8	13
HUKUOKA	22.61	240.7	4	56	-1	9	8	11			
ASOSAN	22.69	238.4	4	48	-10	9	17	19			
KUMAMOTO	22.96	238.8	4	59	-2	9	18	15			
MIYAZAKI	23.21	236.1	5	2	-1	9	22	15			
UNZENDAKE	23.29	239.4	5	3	-1						
NAGASAKI	23.50	239.9	5	3A	-3	9	23	11			
KAGOSIMA	23.96	236.9	5	10A	0	10	34	74			
TOMIE	24.24	241.4	5	16	3	9	37	12			
YAKUSIMA	24.83	235.2	5	14	-5					8	26
TIKSI	26.95	342.7	5	37	-2					6	20 PP
PEKING	28.14	268.7	5	47A	-2						
ZO-SE	29.96	248.8	6	3A	-3	11	1	3			
NANKING	30.86	252.9	6	11A	-3	11	15	3			
ULAN-BATOR	31.36	288.6	6	14	-4	11	35	15			
IRKUTSK	31.89	297.4	6	20A	-3	11	30	1		7	21 PP
COLLEGE	35.19	39.0	6	51	0	12	26	6			
SIAN	36.10	265.2	6	57A	-2	12	21	-13			
LANCHOW	38.54	271.5	7	18A	-1						
CANTON	40.53	247.6	7	34A	-2	13	36	-5			
HONG KONG	40.60	245.9	7	27	-9	13	41	-1		9	15
BAGUIO CITY	41.45	233.1	7	39	-4	13	50	-4			
CHENGTU	41.56	264.6	7	42	-2	13	54	-2			
SITKA	42.42	49.8	7	52	1						
MANILA	42.63	231.1	7	50	-3					10	6
KHEYS	44.52	346.5								9	58 PP
KUNMING	46.01	259.6	8	19A	-1	15	3	2			
KIPAPA	46.34	107.1	8	20	-3						
HONOLULU	46.38	107.3				15	12	6			
SEMIPALATNSK	46.72	302.4								15	12 PS
HAWAII V.OB.	49.56	106.4	8	40	-8					13	57
RESOLUTE	49.96	18.9	8	52K	1	16	7	11			
TOCKLAI	50.30	267.6	8	59	6						
LHASA	50.99	273.2	9	0A	1	16	25	15			
RABAUL	51.47	182.4	8	56	-6						
ALMATA	52.24	295.8	9	8	0					12	18 PPP
SHILLONG	53.04	268.7	9	14A	0	16	39	1			
SVERDLOVSK	53.74	317.1	9	19	0	16	51	3			
FRUNSE	53.90	296.5	9	20	0						
PENTICTON	54.27	53.6	9	21	-2						
CORVALLIS	54.84	60.1	9	44	17						
CHITTAGONG	55.22	265.8	9	29	-1	17	6	-2	9 41	11	31 PP
CHATRA	55.40	273.3	9	31A	0	17	10	0			
BANFF	55.41	49.9	9	34	3						
PORT MORESBY	56.94	188.1	9	48	6	17	29	-2		13	57
SHASTA	57.65	63.4	9	47	0						
TASHKENT	58.01	297.8	9	48	-2					13	18 PPP
MINERAL	58.34	63.3	10	27A	35						
TROMSOE	58.68	343.2	9	54	-1						
SODANKYLA	58.82	338.9	9	54A	-2	18	11	16			
KHOROG	58.98	293.0	9	56	-1						
DEHRA DUN	59.28	282.6	9	58	-1	18	11	10		13	38 PPP
BERKELEY	59.46	66.0	9	59	-1	18	11	7			
KIRUNA	59.87	341.5	10	2A	-1	18	18	9		13	44
RENO	59.93	63.1	10	2	-1						
BUTTE	60.06	53.4	10	5	1	18	20	9			
STA. CRUZ C.	60.17	66.6	10	5	0						
LICK	60.18	66.1	10	3K	-2						

VINEYARD	60.71	66.5	10	8	-1							
NEW DELHI	60.97	281.6	10	9A	-1	18	23	0			18	43 PS
KAJAANI	61.11	336.2	10	8	-3	18	31	6				
BOZEMAN	61.11	52.9	10	12	1	18	33	8				
WARSAK DAM	61.16	289.9	10	12	0	18	27	2				
FRESNO	61.68	65.5	10	14	-1							
EUREKA	62.26	61.0	10	17	-2				10	29	12	50 PP
PULKOVO	63.71	332.0	10	28	-1	19	5	8			12	47 PP
SALT LAKE C.	63.83	57.6	10	25	-4							
VISHAKHAPTNM	64.19	268.4	10	30K	-2	19	8	5			13	2 PP
MOSCOW	64.22	325.8	10	31	-1	19	9	5				
PASADENA	64.39	66.8	10	32	-1	19	11	5				
MEDAN	64.51	245.5									14	32
NURMIJARVI	64.83	335.0	10	35A	-1	19	17	6			20	27 SCS
FLAMING GRGE	65.12	56.1	10	36	-2							
SKALSTUGAN	65.26	342.3	10	38A	-1						10	58
RAPID CITY	66.34	50.1	10	45	0							
GLEN CANYON	66.51	60.5	10	45	-2							
QUETTA	66.60	289.6	10	46A	-1	19	39	6			11	21 PCP
ASHKABAD	66.64	301.0	10	47	0						13	18 PP
LARAMIE	66.98	53.6	10	50	1							
UPPSALA	67.29	337.8	10	51A	0	19	46	5			15	44
CHARTERS TS.	67.60	187.9	10	47	-6						12	43
LEMBANG	67.82	231.0	10	51A	-4							
AFIAMALU	68.31	144.1	11	6	8							
REYKJAVIK	68.70	358.1	11	2	2							
SIDA	68.92	356.3	11	4K	2							
BERGEN	69.53	344.0	11	6	1							
POONA	70.03	275.8	11	8K	0							
TUCSON	70.19	63.8	11	9	0						18	1
TUCSON TELE.	70.20	63.6	11	9	0							
BOMBAY	70.46	276.9	11	12	1	20	27	8			21	20
GOTEBORG	70.59	339.5	11	11A	-1							
GORIS	72.21	309.3	11	23	2	20	45	6			14	4 PP
COPENHAGEN	72.29	338.3	11	22A	0	20	46	6			21	25 PS
WARSAW	72.88	331.9	11	25	0	20	58	12			14	13 PP
LWOW	73.92	328.9	11	30	-1	21	4	6			15	58 PPP
SIMFEROPOL	73.93	320.2	11	32	0	21	6	8			14	16 PP
BRISBANE	74.51	181.2	11	31	-4	21	5	0				
IASI	74.80	325.4	11	36	-1							
KRAKOW	75.10	331.4	11	38	0	21	17	6			11	57 PCP
CHORZOW	75.20	332.1	11	38	-1						12	1 PCP
WICHITA MTS.	75.54	54.3	11	39	-2	21	21	5			25	54 SS
RACIBORZ	75.63	332.4	11	41	0						11	58 PCP
DURHAM	76.08	345.7	11	45K	1							
HALLE	76.19	336.7	11	44	0	21	29	6				
WITTEVEEN	76.29	340.3	11	47	2							
PRAGUE	76.78	334.6	11	49	1							
JENA	76.80	336.7	11	48	0	21	28	-2			14	44 PP
PRUHONICE	76.83	334.5	11	48A	0						12	55
MUNSTER	76.86	339.4	11	50	2							
FAYETTEVILLE	76.87	50.6	11	47K	-1	21	29	-2			11	59 PCP
DE BILT	77.30	340.9	11	55	4	21	50	15				
CHEB	77.36	335.8	11	54	3						13	14
BUDAPEST	77.64	330.6	11	54	1							
BUCHAREST	77.68	324.7	11	52	-1						14	6
OTTAWA	77.73	33.4	11	51	-2							
SHAWINIGAN	77.81	31.0	11	53	-1							
VIENNA-H.	77.81	332.6	11	54	0	21	36	-5				
KASPERSKE H.	77.87	334.7	11	54A	0						16	14
BENSBERG	77.90	339.3	11	54A	0	21	49	7	12	6	12	0 PCP
HEIDELBERG	78.95	337.8	12	0	0							
KEW	79.02	344.0	12	1	1	22	3	9				
ISTANBUL KA.	79.24	320.9	12	2	1	22	5	9				
ISTANBUL UN.	79.30	320.9	12	3	1							
STUTTGART	79.39	337.2	12	3	1	22	5	8			16	56 PP
KARLSRUHE	79.39	337.8	12	5	3						12	52
BELGRADE	79.45	328.4	12	4K	1						22	59 PS
TUBINGEN	79.66	337.2	12	4	0							
STRASBOURG	79.95	338.0	12	6	1						22	26
EBINGEN	80.01	337.1	12	6	0							
RAVENSBURG	80.21	336.5	12	7	0							
SOFIA	80.21	325.5	12	7	0	21	51	-15				
LJUBLJANA	80.35	332.7	12	7A	0							
PENNSYLVANIA	80.77	37.3	12	10	0	22	15	3				
TRIESTE	80.95	333.0	12	12	1	22	19	5				
RIVERVIEW	80.97	182.4				22	14	0				
PARIS	80.98	341.4	12	12	1	22	41	27	12	25	24	16

CHUR	81.08	336.2	12 13	2							
NEUCHATEL	81.63	337.9	12 15	1							
FOLINIERE	81.63	343.3	12 15	1							
BESANCON	81.64	338.6	12 13	-1							
PADOVA	81.73	334.1	12 24	9						22 14	
KSARA	81.94	312.2	12 15A	-1	22 16	-8				15 22	PP
PALISADES	82.16	34.6	12 18	1	22 29	3	12 27			15 45	PP
GARCHY	82.30	340.5	12 18	1			12 31			12 38	*SP
HALIFAX	82.50	26.1	12 31	12							
WASHINGTON	82.70	37.8	12 20	0						13 12	
ROSELEND	82.85	336.9	12 22	2							
PRATO	83.35	334.0	12 25	2	22 54	16					
FLORENCE X.	83.40	333.8	12 25	2	23 56	77					
CHIAVARI	83.46	335.3	13 10	47	24 8	89					
CLERMONT-FD.	83.71	340.0	12 29K	4							
ISOLA	84.22	336.8	12 28	1	22 56	9					
MONACO	84.53	336.4	12 29	0							
ROME	84.72	332.2	12 30A	1	23 6	13				24 5	PS
TACUBAYA	86.68	64.9	12 43	4	23 19	8					
BAGNERES	86.94	341.2	12 57	16							
MESSINA	87.02	328.5	12 39	-2							
KARAPIRO	87.16	163.1	12 39	-3							
HELWAN	87.40	313.0	12 42	-1	23 8	-10					
MOORLANDS	89.73	185.1	13 3	9							
FORT NELSON	90.21	184.9	13 6	10							
SERRA PILAR	90.45	347.0	12 55A	-2			13 8				
TOLEDO	90.88	343.3	12 59	0	23 39	-10				23 32	SKS
GRANADA	93.39	342.3								19 19	
CARACAS	111.76	44.0	19 24	55						20 34	PP
LWIRO	114.83	296.0								19 23	PP
BROKEN HILL	124.38	287.3	18 54	0							
SCOTT BASE	125.29	176.7	18 52	-3						32 29	SKKP
BULAWAYO	128.40	282.4	19 1	0							
MAWSON	133.14	211.7	19 7	-3						19 35	
LA PAZ	133.60	62.8	19 14	3						20 47	PP

AUGUST 27 16.H 47.M 51.S EPICENTRE 17.95 146.65 DEPTH= 60.KM
A=-0.79516 B= 0.52339 C= 0.30624 D= 0.5498 E= 0.8353
G=-0.2558 H= 0.1684 K=-0.9520 HT= 5.2

DEPTH OF FOCUS= 0.004R

SE= 2.91

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
GUAM	4.82	202.6	1	10	-2	1	54	-13				
MERA	17.96	341.6	4	4K	-3	7	33	11				
OSIMA	17.96	340.3	4	6	-1	7	34	12				
SIOMISAKI	18.27	329.8	4	9	-1							
AJIRO	18.31	339.9	4	7	-4	7	38	8				
MISIMA	18.43	339.7	4	11	-1	7	39	7				
SHIZUOKA	18.48	338.2	4	14	1							
YOKOHAMA	18.49	341.7	4	11	-2	7	56	22				
OWASE	18.58	331.8	4	13	-1							
TOKYO C.M.O.	18.69	342.2	4	21	6							
HUNATU	18.83	339.7	4	16	-1	7	53	12				
TU	18.97	333.5	4	26	7							
KOHU	19.06	339.5	4	18	-2	7	57	11				
KAKIOKA	19.09	343.8	4	21	1	7	58	11				
TUKUBASAN	19.10	343.6	4	17A	-3						6	55
KAMEYAMA	19.12	333.7	4	40	20							
MITO	19.16	344.7	4	19	-2	7	55	7				
TITIBU	19.17	341.0	4	20	-1	8	5	16				
IIDA	19.18	337.6	4	20	-1							
NAGOYA	19.19	335.2	4	17	-4	7	36	-13				
SIMIDU	19.23	322.8	4	58	37						7	50
KUMAGAYA	19.24	341.9	4	21	-1	8	0	10				
OSAKA	19.37	331.4	4	38	15							
SUMOTO	19.40	329.6	4	21	-2						6	11
GIHU	19.47	335.1	4	25	1							
UTUNOMIYA	19.47	343.4	4	26	2	8	8	13				
KOTI	19.49	325.4	4	23	-1	7	54	-1				
MAEBASI	19.56	341.5	4	22	-3	8	17	20				
HIKONE	19.57	333.8	4	25	0	8	12	15				
KYOTO	19.59	332.4	4	31	6	8	7	9				

ONAHAMA	19.60	346.2	4	25A	0	8	15	17		
OIWAKE	19.66	340.2	4	25	-1	8	6	7		
MATUMOTO	19.78	338.9	4	34	7					
KAGOSIMA	19.91	316.0	4	32	3				5	13
SHIRAKAWA	19.92	344.8	4	27	-2					
MATUSIRO	19.96	339.8	4	26	-3	8	9	3		
TSURUGA	19.98	334.0	4	35	5					
NAGANO	20.09	339.9	4	32	1	8	17	9		
MATUYAMA	20.12	324.6	4	40	9	8	11	2		
HUKUI	20.25	335.0	4	29	-3					
OOITA	20.34	321.3	4	31	-2	8	21	8		
TOYOOKA	20.42	331.4	4	29	-5	8	4	-10		
TOYAMA	20.46	337.8	4	34	-1	8	30	15		
HUKUSIMA	20.46	345.9	4	33	-2	8	23	8		
TAKADA	20.46	340.5	4	44	9					
KUMAMOTO	20.62	318.9	4	33	-3	9	11	53		
HIROSIMA	20.71	324.9	4	29	-8	8	18	-2		
UNZENDAKE	20.85	318.0	4	41	2					
SENDAI	20.86	347.2	4	38	-1	8	17	-6		
ISINOMAKI	20.93	348.2	4	39	0	8	23	-1		
YAMAGATA	20.97	346.0	4	39A	-1	8	43	18		
WAZIMA	21.17	338.1	4	57	15					
HUKUOKA	21.33	320.0	5	7	24	8	45	13		
MIZUSAWA	21.65	348.3	4	47	0	8	47	9		
SAKATA	21.71	345.5							5	6
MIYAKO	22.00	350.3	4	49	-1					
MORIOKA	22.19	348.8	4	51	-1	8	52	5		
AKITA	22.43	346.7	4	54A	0	9	2	10		
RABAUL	22.67	165.6	4	57	0				9	9
HATINOHE	22.94	350.0	4	58	-1	9	7	6		
AOMORI	23.35	348.7	5	4	1	9	20	12		
HWALIEN	24.11	288.7	5	24	13					
HAKODATE	24.31	349.3	5	13	0					
URAKAWA	24.35	353.0	5	16	3					
HIROO	24.42	354.0	5	16	2					
TAWU	24.55	284.6	5	24	9					
MORI	24.63	349.1	5	17	1					
MANILA	24.75	266.2	5	21	4	9	45	13		
MURORAN	24.77	349.9	5	17	0					
BAGUIO CITY	24.94	270.5	5	18	-1	9	11	-24		
TOMAKOMAI	24.98	351.1	5	19	0					
KUSIRO	25.03	356.1	5	19	0					
OBIHIRO	25.07	354.0	5	21	1					
NEMURO	25.32	358.2	5	22	0					
SUTTSU	25.37	348.9	5	23	0					
SAPPORO	25.44	350.9	5	23	0					
RUMOE	26.27	351.8	5	33	2					
PORT MORESBY	27.18	178.9	5	39K	0	10	10	-2	6	17
HONIARA	30.21	153.2	6	8	1					
CHARTERS TS.	37.80	180.6	7	12	0	12	53	-5		
KOUMAC	41.99	154.9	7	46K	0	14	1	0		
NOUMEA	44.44	153.4	8	6K	0	14	38	2		
BRISBANE	45.46	172.3	8	10	-4	14	35	-16		
LEMBANG	45.72	240.9	8	15A	-2	14	56	1		
SUVA	47.58	137.3	9	36	65					
MEDAN	49.07	258.9	8	43A	0				15	43
SHILLONG	51.14	288.7	8	57	-2					
CHITTAGONG	51.43	284.6	9	1	0	16	24	9		
RIVERVIEW	51.66	175.2	9	2K	0	16	20	2	10	17 PCP
AFIAMALU	51.80	124.9	9	2	-1	16	2	-18	18	27 SS
HONOLULU	51.94	76.7	9	4	0				14	35
KIPAPA	52.00	76.5	9	3	-2					
CANBERRA	53.02	177.6	9	12A	-1	16	37	1	9 21	11 18 PP
ADELAIDE	53.16	188.1	9	13A	-1	16	40	2		12 5
HAWAII V.OB.	54.81	78.6	9	25	-1	17	2	2		
CHATRA	55.28	290.5	9	30	1					
MUNDARING	57.57	210.7	9	43A	-2					
MOORLANDS	60.08	179.5	10	2A	-1				14	21
FORT NELSON	60.57	179.4	10	7A	1	18	17	1		
KARAPIRO	61.86	154.3	10	17	2					
TONGARIRO	62.94	155.1	10	22	0					
TUAI	63.27	153.6	10	14	-10					
COBB RIVER	63.52	158.2	10	28	2					
COLLEGE	63.56	25.7	10	24	-2	18	53	0		
KAIMATA	64.35	159.9	10	43	12					
WELLINGTON	64.44	156.8	10	30	-2	19	2	-2		
GEBBIES PASS	65.81	159.6	10	40	-1					
ROXBURGH	66.40	162.8				19	29	1		

WARSAK DAM	68.05	300.0	10	54	-1	19	50	2		
SITKA	68.63	35.0	10	57	-1					
QUETTA	72.51	296.7	11	21	-1	20	38	-2		
VICTORIA	76.73	43.1	11	46	0					
CORVALLIS	77.67	47.0	11	57	6					
PENTICTON	78.99	41.7	11	58	-1					
SHASTA	79.24	50.7	12	0	0					
MINERAL	79.91	50.9	11	39A	-25					
SAN FRANCSCO	79.93	53.6	12	5	1					
RESOLUTE	79.94	13.7	12	3A	-1	22	4	3		
BERKELEY	80.05	53.5	12	4A	0	22	28	26		
CONCORD	80.17	53.3	12	7	2					
BRANNER	80.23	53.9	12	5A	0					
STA. CRUZ C.	80.47	54.2	12	8A	1					
LICK	80.66	53.8	12	8A	0					12 34
BANFF	81.00	39.2	12	22	13					
VINEYARD	81.02	54.4	12	10	1					
RENO	81.45	51.3	12	13	1					
FRESNO	82.23	54.0	12	16	0					
HUNGRY HORSE	82.80	41.6	12	19	0					
TEHERAN	83.85	305.4	12	23	-1					
PASADENA	84.27	56.1	12	25	-1	22	46	1		
EUREKA	84.30	50.5	12	26	0				12 41	15 57 PP
SODANKYLA	84.37	340.3	12	24A	-3	22	38	-8		
BUTTE	84.52	43.4	12	27	0	22	42	-6		
TROMSOE	85.24	343.9	12	29	-2	22	50	-5		16 17
BOZEMAN	85.64	43.4	12	33	0	23	2	3		
KAJAANI	85.83	337.3	12	29	-5	22	55	-6		
KIRUNA	85.99	342.1	12	32A	-3	22	57	-5		13 15
BOULDER CITY	86.29	53.5	12	37	1					
SALT LAKE C.	86.85	48.2	12	40	1					
GLEN CANYON	88.40	51.7	12	47	1					
FLAMING GRGE	88.52	47.4	12	46	-1					16 31 PP
NURMIJARVI	89.05	335.2	12	46K	-3	23	9	-22		
TUCSON	90.70	55.8	12	59	2	23	57	11		16 32 PP
TUCSON TELE.	90.76	55.7	12	59	2					
LARAMIE	91.00	45.8	13	0	2					16 52
SKALSTUGAN	91.37	341.3	12	58	-2					16 44 PP
RAPID CITY	91.38	42.6	13	0	0					
CAPE HALLETT	91.42	173.0	13	0	0					
UPPSALA	92.19	336.9	13	1A	-3	23	27	-32		13 27
GOTEBORG	95.79	337.4	13	17	-3					
SCOTT BASE	96.31	175.8	13	23	0	23	57	4		17 24 PP
WICHITA MTS.	98.91	49.2	13	34	0	24	9	3		17 44 PP
PRUHONICE	100.26	330.9	13	38	-3					17 46 PP
HALLE	100.34	333.1				24	15	2		17 44 PP
VIENNA-H.	100.58	328.8								17 4
ABERDEEN	100.75	343.3								18 23 PP
JENA	100.92	332.9	13	39	-5					17 48 PP
KASPERSKE H.	101.31	330.7	13	44	-1					17 57 PP
FAYETTEVILLE	101.31	46.2	13	44K	-1	24	20	2		
MUNSTER	101.77	335.5								17 57
DURHAM	102.67	341.8	13	47A	-4					
BENSBERG	102.73	335.1								18 3 PP
LJUBLJANA	103.00	328.0								18 3 PP
STUTTGART	103.52	332.6	13	54	-1					17 23 PKP
TRIESTE	103.67	328.1								18 13 PP
MAWSON	104.08	203.1								18 14 PP
KEW	105.08	339.3								18 21 PP
PARIS	106.28	336.2	18	35	777					
CHIAVARI	106.81	329.5				26	3	80		16 56 PP
GARCHY	107.29	334.9	18	37	777					
WASHINGTON	110.20	35.1	19	29	65					
BAGNERES	111.92	334.1								19 17
TOLEDO	116.31	335.2	18	37	1					19 39 PP
SERRA PILAR	116.90	339.2	18	34K	-3					
BROKEN HILL	120.76	263.6	17	47	-58					
BULAWAYO	121.68	257.1	18	47	0					
GALERAZAMBA	129.73	58.6	19	7	5					22 21 SKP
SAN JUAN	131.62	43.4								22 28 PP
CHINCHINA	132.49	65.3	19	9K	1					22 33 PSKS
BOGOTA	134.00	64.7	19	24	14					
CARACAS	136.43	52.1	19	8	-7					40 15 SS
HUANCAYO	139.10	87.8	19	25	5					22 56
TRINIDAD	140.32	46.4	19	23	1					
MBOUR	144.04	332.3	19	28	0					
LA PAZ	146.78	92.9	19	36A	3					19 41 PKP2

AUGUST 27 20.H 56.M 18.S EPICENTRE 47.03 154.16 DEPTH= 13.KM

A=-0.61565 B= 0.29811 C= 0.72946 D= 0.4358 E= 0.9000
G=-0.6565 H= 0.3179 K=-0.6840 HT= -4.3

SE= 2.51

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
SEVERO-KUR.	3.86	18.6	0	59	-1	1	44	-2				
KURILSK	4.73	249.9	1	13	0	2	13	5				
PETROPAVLOVK	6.65	24.1	1	38	-2							
Y.-SAKHLINSK	7.82	274.1	1	57	1							
UGLEGORSK	8.36	288.6	2	7	4							
OKHA	9.70	316.4	2	23	1							
MAGADAN	12.70	352.2	3	1	-2							
TUKUBASAN	15.05	229.2	3	28K	-6							
MATUSIRO	15.83	234.2	3	40K	-4	6	53	14				
VLADIVOSTOK	16.19	264.1	3	49	1	6	49	1				
CHANGCHUN	20.45	271.6	4	39	0	8	41	18				
YAKUTSK	20.46	326.1	4	36	-4	8	22	-1				
PEKING	28.21	269.6	5	54	0							
COLLEGE	35.48	38.6	6	57	-1							
SIAN	36.14	265.9	7	3A	0							
LANCHOW	38.63	272.2	7	24A	0							
CHENGTU	41.60	265.2	7	48	-1							
KHEYS	44.96	346.7	8	8	-8							
KUNMING	46.00	260.1	8	24	0							
RESOLUTE	50.34	18.8	8	58K	0							
ALMATA	52.50	296.1	9	14	-1							
SHILLONG	53.10	269.1	9	17A	-2							
SVERDLOVSK	54.11	317.4	9	22	-4							
FRUNSE	54.17	296.8	9	25	-2							
PENTICTON	54.47	53.4	9	27	-2							
APATITY	57.37	336.9	9	47	-3							
SODANKYLA	59.25	339.1	10	0A	-3							
BUTTE	60.26	53.2	10	9	-1							
KIRUNA	60.30	341.6	10	8	-2							
BOZEMAN	61.31	52.8	10	15	-2							
WARSAK DAM	61.37	290.2	10	6	-12							
KAJAANI	61.54	336.3	10	12	-7							
EUREKA	62.41	60.8	10	25	0						11	5
MOSCOW	64.62	325.9	10	35	-4							
NURMIJARVI	65.25	335.1	10	41A	-2						11	13 PCP
FLAMING GRGE	65.30	56.0	10	42	-1							
BOULDER CITY	65.36	63.2	10	44	0							
SKALSTUGAN	65.69	342.4	10	44A	-2							
RAPID CITY	66.56	50.0	10	51	0							
GLEN CANYON	66.66	60.4	10	51	-1							
QUETTA	66.82	289.8	10	52A	-1							
CHARTERS TS.	67.19	188.1	10	53	-2							
LEMBANG	67.60	231.2	10	57K	-1							
UPPSALA	67.72	338.0	10	57A	-2							
REYKJAVIK	69.14	358.2	10	55	-13							
BERGEN	69.97	344.1	11	13	0							
TUCSON	70.32	63.7	11	15	0							
GOTEBORG	71.02	339.6	11	18	-1							
TEHERAN	72.47	303.7	11	28	0							
COPENHAGEN	72.72	338.4	11	28A	-1							
SIMFEROPOL	74.31	320.3	11	37	-2							
KISHINEV	74.85	324.7	11	39	-3							
WICHITA MTS.	75.73	54.3	11	46	-1	21	30	3			15	11
RACIBORZ	76.05	332.5	11	47	-1						11	59 PCP
HALLE	76.62	336.8	11	50	-2						12	2 PCP
FAYETTEVILLE	77.09	50.6	11	54K	0							
JENA	77.23	336.8	11	54	-1						12	46
PRUHONICE	77.25	334.6	11	54	-1						15	20
SHAWINIGAN	78.14	31.0	12	0	0							
VIENNA-H.	78.23	332.7	12	0	-1							
KASPERSKE H.	78.29	334.8	12	0	-1						15	25
BENSBERG	78.33	339.4	12	0	-1						12	28
HEIDELBERG	79.38	337.9	12	6	-1							
STUTTGART	79.82	337.3	12	8	-1							
KARLSRUHE	79.82	337.9	12	11	2						12	59
STRASBOURG	80.38	338.1	12	12	0							
LJUBLJANA	80.77	332.8	12	13	-1							

TRIESTE	81.37	333.1	12 18	1				
PARIS	81.41	341.5	12 19	1				
FOLINIERE	82.07	343.4	12 21	0				
BESANCON	82.07	338.7	12 20	-1				
PALISADES	82.48	34.6					30 22	
GARCHY	82.73	340.6	12 24	-1			12 51	
ROSELEND	83.28	337.0	12 28	1				
FLORENCE X.	83.82	333.9	12 30	0				
ATHENS	84.48	322.8	12 5	-28				
ISOLA	84.65	336.9	12 35	1	12 46			
MONACO	84.96	336.5	12 35	-1				
SCOTT BASE	124.85	176.8	18 58	-2	19 12			

AUGUST 27 22.H 8.M 48.S EPICENTRE 35.59 23.41 DEPTH= 62.KM

A= 0.74801 B= 0.32378 C= 0.57936 D= 0.3972 E=-0.9177
G= 0.5317 H= 0.2301 K=-0.8151 HT= -0.1

DEPTH OF FOCUS= 0.005R

SE= 3.13

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
ATHENS	2.39	6.0	0 40A	2	1 10	3		1 18 SG
REGGIO CALA.	6.70	294.2	1 45	7				2 45
MESSINA	6.81	294.8	1 35	-5	2 48	-9		1 47 P*
TARANTO	6.88	316.9	1 47	6				3 38 S*
ISTANBUL UN.	6.99	37.2	1 44K	2	3 51	50		
ISTANBUL KA.	7.05	37.4	1 44	1	3 13	10		1 59 P*
SOFIA	7.10	359.5	1 46	2	3 11	7		
TITOGRAD	7.55	336.0	1 53	3				2 24 PG
HELWAN	8.78	128.3	2 1	-6	3 30	-15		
BUCHAREST	9.06	12.4	2 10	-1				4 6
BELGRADE	9.49	347.1	2 38K	21				5 29 SG
TIMISOARA	10.29	351.4						6 1
KSARA	10.42	96.2	2 35	6	4 30	4		
JERUSALEM	10.55	107.7	2 25	-6	4 15	-14		
ROME	10.60	309.7	2 50	18	4 57	27		3 49
IASI	12.01	13.8	2 50	-1				
BUDAPEST	12.32	345.9	3 22	27	5 33	22		3 35 PPP
SIMFEROPOL	12.41	37.9	2 56	0	5 26	12		
LJUBLJANA	12.42	330.0	2 52	-4	5 13	-1		6 57 SGSG
FLORENCE X.	12.42	314.8	2 51	-5	5 16	2		
TRIESTE	12.43	326.9	2 58	2	5 23	9		7 1 SGSGSG
PADOVA	13.15	321.7	3 28	22	5 56	25		4 36
VIENNA-H.	13.68	339.8	3 10	-3	5 44	0		
CHIAVARI	13.87	313.2	2 32	-43				
NIEDZIKA	14.01	351.6	3 16	-1				
LWOW	14.23	1.6	3 26	6				
KRAKOW	14.67	351.1	3 23	-3				6 38
MONACO	14.73	308.3	3 24	-2				
SOTCHI	14.88	52.6						3 28 PP
RACIBORZ	14.97	346.9						3 30 PP
CHORZOW	15.04	349.0						3 35 PPP
ISOLA	15.19	309.3	3 14	-18				3 59 SP
CHUR	15.32	321.5	3 37	3	6 28	6		
KASPERSKE H.	15.34	334.9	3 31	-3	6 49	26		9 14
ROSELEND	15.52	314.4	3 49	12				6 48
PRUHONICE	15.77	338.5	3 38A	-2	6 43	10		
PRAGUE	15.88	338.4	3 40	-1				
CHEB	16.56	334.4	3 54	4				4 37
WARSAW	16.72	354.9	3 44	-8				4 0 PP
BASLE	16.77	320.2	3 52K	0				7 8
NEUCHATEL	16.78	317.8	3 54	1				
STUTTGART	16.79	326.0	3 52	-1	7 7	11		4 2 PP
KARLSRUHE	17.36	325.2	3 56	-4	7 20	11		
STRASBOURG	17.37	323.2	3 57	-3	7 12	3		5 39
BESANCON	17.46	317.2	4 3	2				
JENA	17.55	334.5	4 1	-1	7 22	9		4 13 PP
TIFLIS	17.78	63.4	4 10	5				
HALLE	17.91	336.2	4 7	1	7 29	8		
CLERMONT-FD.	18.40	309.7	4 13	1				
GORIS	18.58	71.0	4 15	0				
TORTOSA	18.73	293.1						4 35
GARCHY	19.14	313.8	4 21	0				6 12
BENSBERG	19.32	327.7	4 22A	-1	8 6	14		4 36 PP

BAGNERES	19.44	299.6	4 23	-1					4 45	
MUNSTER	19.88	330.3	4 30	1						
MAKHACH-KALA	20.01	61.1	4 31	1	8 22	15				
PARIS	20.28	317.1	4 33	0					6 24	
ALMERIA	20.90	281.1	4 37	-3	8 35	11			4 56	PP
WITTEVEEN	20.90	330.7	4 41	1						
DE BILT	21.00	327.4	4 43	2	8 36	10				
COPENHAGEN	21.45	342.9	4 45K	0	8 39	5			9 4	SS
GRANADA	21.78	282.2	5 12	24	8 50	10				
FOLINIERE	21.95	314.2	4 50	0						
TOLEDO	22.09	289.4	4 52	0	8 48	2			5 17	PP
MOSCOW	22.38	21.4	4 55	1	8 53	2				
TEHERAN	22.71	81.4	4 59	1	9 4	7				
KEW	23.25	320.4	5 5	2	9 13	6				
GOTEBORG	23.40	344.5	5 4	0					5 30	PP
UPPSALA	24.57	353.0	5 15K	-1	9 32	3			5 39	PP
PULKOVO	24.61	8.4	5 15	-1	9 30	0				
NURMIJARVI	24.95	1.5	5 18K	-1	9 40	4				
SERRA PILAR	25.61	292.1	5 25A	0			5 46		6 9	PP
BERGEN	27.44	340.4	6 0	18						
KAJAANI	28.64	3.9	5 48	-5						
SKALSTUGAN	28.85	349.7	5 54K	-1						
SODANKYLA	31.88	2.4	6 20	-2						
KIRUNA	32.33	357.9	6 24K	-2					13 52	SSS
SVERDLOVSK	32.78	37.9	6 29	-1						
TROMSOE	34.19	357.2	6 40	-2						
TASHKENT	36.05	66.8	6 56	-2	12 35	3				
QUETTA	36.74	85.8	7 4A	1	12 45	3				
WARSAK DAM	39.26	77.9	7 25	1	13 19	-1				
FRUNSE	39.82	63.6	7 30A	1						
ALMATA	41.46	62.5	7 45	2						
SEMIPALATNSK	43.08	51.7	7 55	-1						
NEW DELHI	45.64	83.0	8 19	3					14 54	
KHEYS	47.04	7.3	8 16	-11						
BROKEN HILL	49.99	173.6	8 51	1						
CHATRA	54.40	80.3	9 23A	0						
BULAWAYO	55.64	174.1	9 33	1						
IRKUTSK	57.58	46.0	9 35	-11						
SHILLONG	58.74	79.4	9 52A	-2						
CHITTAGONG	60.22	82.7	9 18	-46						
ULAN-BATOR	60.61	50.1	10 7	0						
LANCHOW	63.30	63.4	10 25A	0	18 54	3				
HALIFAX	64.15	307.6	10 31	0						
SIAN	67.83	63.1	10 55A	1						
SHAWINIGAN	68.98	312.7	11 2K	1						
BREBEUF	70.02	312.0	11 9	2						
PEKING	70.06	54.7	11 7	-1						
OTTAWA	71.33	312.8	11 17K	2						
PALISADES	72.53	308.1			20 44	3				
CHANGCHUN	73.85	47.5	11 34	4						
VLADIVOSTOK	78.16	45.2	11 54	0						
SAN JUAN	79.16	284.8	12 13	13						
COLLEGE	79.64	356.2	12 3	0						
MATUSIRO	86.10	47.1	12 36	0						
RAPID CITY	87.06	324.6	12 41	1						
HUNGRY HORSE	88.21	333.2	12 48	2						
BOZEMAN	89.27	330.0	12 53	2						
PENTICTON	89.31	336.8	12 52	1						
BUTTE	89.59	331.0	12 39	-13						
LARAMIE	90.30	324.2	12 58	2						
WICHITA MTS.	91.56	315.7	13 3	1					15 20	
FLAMING GRGE	92.38	326.2	12 57	-8						
SOUTH POLE	125.41	180.0	18 55	1						
CHARTERS TS.	127.84	88.8	19 2	3						
CANBERRA	136.17	106.2	19 18	3					22 45	PKS
NOUMEA	145.26	77.7	19 34	3						

AUGUST 28 6.H 28.M 23.S EPICENTRE -15.20 -70.52 DEPTH= 181.KM

A= 0.32202 B=-0.91016 C=-0.26059 D=-0.9427 E=-0.3335
G=-0.0869 H= 0.2457 K=-0.9655 HT= 5.7

DEPTH OF FOCUS= 0.023R

SE= 1.92

	DELTA	AZ.	P	O-C	S	O-C	*PP	SUPP.

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	DEG.	DEG.	M	S	S	M	S	S	M	S	M	S	
LA PAZ	2.63	119.6	0	49K	4	2	55	95					
ANTOFAGASTA	8.45	179.4	1	55	-5	4	19	45					
BOGOTA	20.01	349.6	4	20	0	7	50	0			5	22	PPP
CHINCHINA	20.67	345.5	4	25K	-2	8	8	6			5	40	PPP
FUQUENE	20.78	351.0	4	26	-2						5	32	PPP
BALBOA HTS.	25.62	339.0	5	17	3								
CARACAS	25.78	8.1	5	15A	-1	9	30	1					
GALERAZAMBA	26.24	349.4	5	19	-1	9	43	6					
TRINIDAD	27.23	19.9	5	29	0						12	10	
GRENADA	28.44	18.3	5	40	0						10	19	
ST. VINCENT	29.64	18.5	5	51A	0								
BARBADOS	30.14	21.6	5	57	2								
DOMINICA	31.62	17.0	6	6	-2								
ANTIGUA	33.26	15.2	6	21	-1								
SAN JUAN	33.65	7.5	6	22	-3	11	29	-5			7	49	PP
PORT STANLEY	37.79	167.2	7	0	0								
TACUBAYA	44.48	319.7	7	58	3								
ARGENTINE I.	50.18	176.6	8	37	-2								
FAYETTEVILLE	55.71	336.8	9	19	-1						18	49	SCS
PALISADES	56.01	356.9	9	21	-1	16	53	-1			18	19	PPS
WICHITA MTS.	56.36	332.2	9	23A	-1	16	59	0			18	53	SCS
HALIFAX	59.86	5.7	9	47A	-2								
OTTAWA	60.50	355.8	9	50	-3								
TUCSON TELE.	60.96	321.3	9	55	-1								
TUCSON	60.96	321.2	9	56	0								
SHAWINIGAN	61.50	358.2	9	58A	-2								
GLEN CANYON	64.73	324.4	10	22	1								
BOULDER CITY	65.93	321.6	10	29	0				11	14			
RAPID CITY	66.11	334.8	10	29	-1	19	4	2					
FLAMING GRGE	66.46	328.8	10	31	-1	19	7	1	12	14	12	58	
PASADENA	66.81	318.2	10	34	0	19	12	2	11	19			
SALT LAKE C.	67.60	327.1	10	39	0								
EUREKA	68.95	323.8	10	47	0				11	32	11	4	PCP
BOZEMAN	70.81	331.1	10	59	0								
RENO	71.24	321.7	11	3	2								
CONCORD	71.65	319.3	11	5	1								
BERKELEY	71.71	319.1	11	5	1								
BUTTE	71.78	330.6	11	4	0				11	50			
MINERAL	72.82	321.5	10	48	-22								
SHASTA	73.51	321.4	11	14	-1								
HUNGRY HORSE	74.16	331.5	11	18	0								
SOUTH POLE	74.90	180.0	11	22	0								
CORVALLIS	76.41	324.2	11	38	7								
PENTICTON	77.49	329.6	11	38	1								
VICTORIA	78.90	327.3	11	47	2								
SCOTT BASE	81.72	190.4	12	1K	2	22	0	5	12	45	12	15	PCP
CAPE HALLETT	84.04	195.6	12	11A	0				12	58			
KIMBERLEY	87.34	118.9	12	28A	1								
FOLINIERE	88.70	38.5	12	35	1								
MAWSON	90.78	163.8	12	44	0								
RESOLUTE	91.00	353.7	12	45	0								
BULAWAYO	93.14	111.7	12	56K	2								
TRIESTE	96.78	44.7									17	5	PP
LJUBLJANA	97.40	44.4									17	11	PP
KASPERSKE H.	97.54	41.2									17	12	PP
COLLEGE	98.34	335.1	13	17	-1						17	19	PP
KARAPIRO	98.65	227.0	13	2	-18								
MUNDARING	132.66	187.8	18	51K	-2								
QUETTA	138.28	61.6	19	7	3								
ALMATA	140.58	38.2	19	12	4								
POONA	145.77	79.3	19	20A	3								
GUAM	145.82	271.7	19	19	2								
VLADIVOSTOK	146.20	329.9	19	20	2								
MATUSIRO	146.75	315.1	19	20K	1				20	11	22	44	
CHATRA	156.22	57.3	19	36	4								
SHILLONG	160.55	55.2	19	40K	3								

AUGUST 28 7.H 41.M 27.S EPICENTRE -12.83 169.46 DEPTH= 644.KM

A=-0.95891 B= 0.17837 C=-0.22061 D= 0.1829 E= 0.9831
G= 0.2169 H=-0.0403 K=-0.9754 HT= 6.1

DEPTH OF FOCUS= 0.096R

SE= 1.34

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
HONIARA	9.93	288.9	2 20	1	4 14	4		
SUVA	10.13	122.6	2 21	0	4 16	2		
AFIAMALU	18.28	95.5	3 37A	-1				
RABAUL	19.12	295.1	3 44	-1				
RAOUL ISLAND	20.11	146.3	3 53	-1				
PORT MORESBY	22.15	276.6	4 14K	1	7 36	1		
CHARTERS TS.	23.38	249.0	4 24K	0	7 52	-3		
KARAPIRO	25.58	168.8	4 43A	0				
RIVERVIEW	26.74	215.5	4 53K	0				
TUAI	26.75	166.6	4 51A	-2				
CHATEAU	26.81	169.5	4 54	0				
COBB RIVER	28.29	174.8	5 8	2	9 10	-1		
WELLINGTON	28.72	171.7	5 9A	-1	9 13	-5		
CANBERRA	29.04	216.1	5 13K	0				7 59 PCP
KAIMATA	29.63	177.1	5 20	2	9 30	-2		
GEBBIES PASS	30.88	175.5	5 27	-1	9 47	-4		
MOORLANDS	35.27	209.1	6 6A	1				
ADELAIDE	35.48	226.3	6 8K	1				11 55
FORT NELSON	35.57	208.4	6 8K	1				8 17 PCP
GUAM	35.81	315.9	6 9	0			7 52	
MUNDARING	52.25	239.5	8 11K	-5				
MATUSIRO	57.27	330.2	8 49A	-1			10 43	
CAPE HALLETT	59.45	179.7	9 5	0				
LEMBANG	61.11	269.2	9 17	1				
SCOTT BASE	65.04	180.6	9 41A	0			11 47	10 8 PCP
SOUTH POLE	77.26	180.0	10 51	0				
BERKELEY	81.32	48.0	11 13	1				
SHASTA	82.37	45.4	11 18K	0				
MINERAL	82.78	46.0	10 56A	-24				
PASADENA	83.01	52.8	11 20	-1				
RENO	83.74	47.3	11 25	1				
COLLEGE	83.88	16.9	11 22	-3				12 1
MAWSON	84.43	201.7	11 27	-1				
BOULDER CITY	86.20	52.0	11 37	1			13 53	
EUREKA	86.49	48.4	11 38	1			13 54	29 30 PKKP
PENTICTON	87.60	38.2	11 43	0				
TUCSON	88.25	56.5	11 48	2			14 4	
TUCSON TELE.	88.37	56.5	11 47	1			14 4	
GLEN CANYON	88.99	51.8	11 50	1			14 6	
HUNGRY HORSE	90.72	40.4	11 57	0			14 13	29 5 PKKP
FLAMING GRGE	91.73	48.5	12 1	-1			14 18	29 5 PKKP
WICHITA MTS.	98.76	56.4	12 33	-1			14 52	28 59 PKKP
KIRUNA	121.43	346.8	17 41	-1				
KAJAANI	122.33	341.2	17 39	-5				
NURMIJARVI	125.88	339.4	17 51	1				
SAN JUAN	126.35	76.6	17 51	0				
KIMBERLEY	126.39	219.1	17 52K	1				
SKALSTUGAN	126.83	347.5	17 52	0				
UPPSALA	128.65	342.2						20 18 SKP
BULAWAYO	129.44	230.2						20 23 PP
TRINIDAD	130.22	86.8						20 24
GOTEBORG	132.06	343.9						20 30 SKP
NIEDZIKA	135.55	331.4						20 42
KASPERSKE H.	138.69	336.0	18 15	0				20 51
STUTTGART	140.58	339.3	18 18	-1				
LJUBLJANA	140.68	332.3	17 21	-58				20 57 PP
FOLINIERE	143.21	348.9	18 22	-1				
GARCHY	143.81	344.3	18 24	0				
MONACO	145.54	336.7	18 26	-1				
BAGNERES	148.48	344.9	18 36	5				

AUGUST 28 9.H 44.M 13.S EPICENTRE -18.92-177.90 DEPTH= 521.KM

A=-0.94599 B=-0.03475 C=-0.32232 D=-0.0367 E= 0.9993
G= 0.3221 H= 0.0118 K=-0.9466 HT= 4.9

DEPTH OF FOCUS= 0.077R

SE= 1.81

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
AFIAMALU	7.70	50.6	1 53K	-2	3 20	-6		

RAOUL ISLAND	10.28	180.1				4	18	4											
PORT VILA	13.14	273.0	2	52	1	6	22	74											
NOUMEA	15.04	254.4	3	15	5	5	53	10											
BRISBANE	28.19	247.2	5	10	-2														
RIVERVIEW	31.31	235.5	5	39	1														
RABAUL	32.69	292.9				10	28	-3											
CANBERRA	33.49	234.0	5	57K	0												8	23	PCP
CHARTERS TS.	33.77	262.0	5	59	0	10	44	-3											
PORT MORESBY	35.13	280.7	6	11K	1	11	7	0											
MOORLANDS	37.69	223.9	6	31A	0														
FORT NELSON	37.82	223.1	6	32A	0														
ADELAIDE	41.50	238.4	7	2K	0	12	39	-2											
HONOLULU	44.42	26.8	7	25	0														
KIPAPA	44.56	26.8	7	26	0														
GUAM	48.90	308.4	7	58	-1														
SCOTT BASE	59.44	183.7	9	15K	1							11	2						
MUNDARING	60.10	243.5	9	13K	-5														
MATUSIRO	69.00	323.3	10	13K	-1							12	9						
SOUTH POLE	71.20	180.0	10	27	0														
LEMBANG	73.17	268.4	10	39K	0														
SAN FRANCSCO	76.77	42.1	10	58K	0														
BERKELEY	76.95	42.1	10	59K	0														
PASADENA	77.55	47.2	11	3K	0														
FRESNO	77.90	44.2	11	5K	0														
SHASTA	78.57	39.7	11	8K	0														
MINERAL	78.84	40.4	10	46K	-24														
RENO	79.48	41.9	11	13	0														
CORVALLIS	80.42	36.2	11	25	7														
BOULDER CITY	80.84	47.1	11	21	1														
TUCSON	81.87	52.0	11	27	2												29	53	PKKP
EUREKA	81.91	43.6	11	25	0												29	52	PKKP
TUCSON TELE.	82.00	52.0	11	28	2							13	25						
ARGENTINE I.	82.38	157.1	11	28	0														
VICTORIA	82.82	33.1	11	29K	-1														
MAWSON	83.07	199.7	11	30	-1							13	31						
GLEN CANYON	83.59	47.6	11	35	1							13	32						
SALT LAKE C.	85.28	44.1	11	43	1														
PENTICTON	85.30	34.0	11	41K	-1														
COLLEGE	86.65	12.4	11	46	-3							13	44				19	13	
FLAMING GRGE	86.99	44.9	11	49	-1							13	50						
BUTTE	87.47	39.3	11	52	0														
HUNGRY HORSE	87.82	36.8	11	53	-1														
BOZEMAN	88.21	40.2	11	56	0														
BANFF	88.50	33.9	11	58K	1														
WICHITA MTS.	92.18	54.1	12	14K	0							14	18				29	26	PKKP
RAPID CITY	92.49	44.1	12	15	-1														
SHILLONG	98.15	294.2	12	40K	-1														
QUETTA	120.64	294.4	17	53	1														
KIMBERLEY	127.79	205.4	18	7K	1														
SODANKYLA	129.09	348.1	18	7	-1														
KIRUNA	129.74	351.1	18	8	-2														
KAJAANI	131.66	345.3	18	4	-9														
BULAWAYO	133.29	215.2	18	16K	0														
SKALSTUGAN	134.84	353.6	18	20	1														
NURMIJARVI	135.45	344.3	18	19	-1														
UPPSALA	137.62	348.4	18	16	-8														
BROKEN HILL	137.88	219.9	18	40	15														
GOTEBORG	140.59	351.7	18	23	-7														
DURHAM	144.10	3.6	18	34A	-2														
KRAKOW	145.83	339.4	18	39	0														
WITTEVEEN	145.98	355.0	18	41	2														
NIEDZIKA	146.23	338.5	18	42K	2												19	5	
RACIBORZ	146.35	341.2	18	41	1												19	3	
LWIRO	146.36	234.1	18	44K	4														
SKALNATE PL.	146.46	338.3	18	42	2														
HALLE	146.57	348.8	18	42	2												21	55	PP
MUNSTER	146.74	353.8	18	43	3														
JENA	147.19	348.9	18	47	6												19	17	
PRUHONICE	147.45	345.0	18	45K	4							20	54						
KEW	147.47	2.8	18	44	3							20	54						
BENSBERG	147.78	354.0	18	45	3														
BRATISLAVA	148.38	340.7	18	45	2														
KASPERSKE H.	148.47	345.5	18	43K	0							20	52						
HEIDELBERG	149.13	351.6	18	49	5														
STUTTGART	149.66	350.6	18	45	0							20	57						
TUBINGEN	149.93	350.7	18	51	6														
STRASBOURG	150.06	352.5	18	46	1														
FOLINIERE	150.15	3.4	18	46	1														
SOFIA	150.26	327.4	18	52	7														

EBINGEN	150.29	350.7	18 51	6							
LJUBLJANA	151.06	342.0	18 47K	0						20 59	
HELWAN	151.32	297.9	18 54	7							
BESANCON	151.57	354.4	18 55	8							
TRIESTE	151.65	342.7								18 55	PKP2
GARCHY	151.71	358.6	18 55	7				19 18		22 43	PP
ROSELEND	153.11	351.4	18 51	1							
CLERMONT-FD.	153.21	358.4	19 0	10							
FLORENCE X.	154.05	344.7	18 43	-8							
MONACO	154.86	350.9	18 52	0							
BAGNERES	155.87	3.5	19 22	29							

AUGUST 28 20.H 26.M 2.S EPICENTRE -23.00-113.75 DEPTH= 33.KM

A=-0.37106 B=-0.84343 C=-0.38851 D=-0.9153 E= 0.4027
G= 0.1565 H= 0.3556 K=-0.9214 HT= 3.9

SE= 1.65

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
HUANCAYO	38.11	80.0	7	19	1						17	11	SSS
OAXACA	43.10	24.1									21	28	
LA PAZ	43.28	89.9	8	0	0	14	34	9					
TACUBAYA	44.47	19.8									21	38	
GUADALAJARA	44.59	14.0									21	10	
VERA CRUZ	45.33	23.7									22	2	
CHINCHINA	46.47	58.0	8	23	-3	15	16	5			18	27	SS
BOGOTA	47.48	59.7	8	36	2	15	31	6					
FUQUENE	48.26	59.1	8	38	-2								
GALERAZAMBA	50.46	52.4				16	19	12			16	55	PPS
ARGENTINE I.	52.81	156.3	9	13	-1								
TUCSON	55.01	3.0	9	33	2	17	22	13					
TUCSON TELE.	55.10	3.1	9	31	0								
AFIAMALU	55.49	268.6	9	35	1								
CARACAS	56.65	59.2				17	34	3			23	58	SSS
PASADENA	56.99	355.6	9	45	0	17	44	9					
BYRD STATION	57.15	181.2	9	44	-2						10	40	
BOULDER CITY	58.67	359.0	9	57	0								
WICHITA MTS.	59.18	14.5	9	57	-3	18	11	7			22	8	SS
GLEN CANYON	59.68	2.0	10	4	0								
FRESNO	59.72	354.4	10	4	0								
LICK	60.47	352.8	10	9K	0								
FAYETTEVILLE	61.61	18.0	10	14A	-3								
EUREKA	62.19	358.1	10	20	-1						12	47	PP
MINERAL	63.45	353.3	10	7A	-22								
SALT LAKE C.	63.47	1.6	10	28	-1								
FLAMING GRGE	63.73	3.7	10	28	-3								
SHASTA	63.88	352.7	10	30	-2								
CAPE HALLETT	64.03	199.3	10	32K	-1	19	10	5					
COLUMBIA	64.67	29.8	10	34	-3								
SCOTT BASE	65.46	193.2	10	41A	-1						13	23	PP
RAPID CITY	67.45	8.2	10	53	-2								
BOZEMAN	68.38	2.0	10	59	-1								
BUTTE	68.70	0.9	11	3	1								
HUNGRY HORSE	71.02	359.8	12	28	71								
PENNSYLVANIA	71.70	27.9									20	43	*SS
VICTORIA	71.72	353.2	11	20	-1								
PENTICTON	72.18	356.0	11	23	0								
PALISADES	73.65	30.3	11	30	-2	21	4	5			16	8	PP
BANFF	73.86	358.8	11	32	-1								
SHAWINIGAN	78.52	27.5	11	58A	-2								
RIVERVIEW	81.54	237.0	12	16	0								
CANBERRA	82.62	234.9	12	22A	1								
BRISBANE	82.64	243.5	12	22	1	22	48	13					
MIRNY	88.47	190.4	12	55	5								
MAWSON	89.64	178.7	12	55	-1								
COLLEGE	91.45	346.2	13	3	-1								
RABAUL	92.13	264.6	13	8	1								
MATUSIRO	117.40	300.4	18	54	12						29	49	PS
STUTTGART	128.58	45.2	19	3	-1								
SODANKYLA	129.26	18.6	19	0	-5								
LEMBANG	129.85	238.7	19	7A	1								
COLLMBERG	130.43	41.4	19	8	0								
KASPERSKE H.	131.30	44.0	19	10	1								
ROME	131.68	53.7									22	40	

PRUHONICE	131.71	42.7	19	12	2					22	42	PKS
LJUBLJANA	132.55	47.9	19	14	2							
NURMIJARVI	132.73	26.6	19	11	-1							
NIEDZIKA	135.46	42.0	19	18	1					19	40	
LWIRO	135.71	119.5	19	22K	5							
ULAN-BATOR	139.27	317.8	19	26	2							
MOSCOW	141.07	25.5	19	28	1							
MEDAN	143.17	243.2	19	30	-1							
SIMFEROPOL	145.86	42.3	19	37K	2							
SVERDLOVSK	145.96	5.5	19	36	0							
HELWAN	148.08	70.1	19	43	4					21	10	
KSARA	151.29	61.2	19	0	-44							
TIFLIS	154.11	38.8	19	52	4							
SHILLONG	156.52	281.5	20	23K	32							
FRUNSE	159.04	342.6	19	57	3							
CHATRA	160.65	285.7	20	41	45							
ANDIJAN	161.57	345.2	20	0	3							
TEHERAN	161.89	42.2	20	1	4							
STALINABAD	164.33	352.7	20	3	3							
WARSAK DAM	168.10	338.2	20	4	1							
QUETTA	172.82	355.2	20	8	2					25	23	PP

AUGUST 28 21.H 27.M 6.S EPICENTRE -14.45 -74.85 DEPTH= 0.KM

A= 0.25324 B=-0.93508 C=-0.24800 D=-0.9652 E=-0.2614
G=-0.0648 H= 0.2394 K=-0.9688 HT= 5.9

SE= 3.17

	DELTA DEG.	AZ. DEG.	P M	S	O-C S	S M	S	O-C S	*PP M	S	SUPP. M	S	
LA PAZ	6.79	108.3	1	40A	-3	2	30	-32					
BOGOTA	18.96	2.4	4	28	3	7	57	3			4	53	PP
CHINCHINA	19.31	357.7	4	29A	0	8	3	2			5	1	PP
FUQUENE	19.82	3.3	4	34A	-1						5	7	PP
BALBOA HTS.	23.72	348.4	5	16	2								
GALERAZAMBA	25.07	359.0	5	35	8	9	50	0			6	7	PP
CARACAS	26.00	18.0	5	33	-3	10	6	1					
TRINIDAD	28.28	28.8									11	37	
SAN JUAN	33.74	15.0	6	39	-6								
PORT STANLEY	39.58	163.4	7	35	1						7	59	
COLUMBIA	48.54	353.1	8	44	-2								
ARGENTINE I.	51.25	174.3	9	8	1								
FAYETTEVILLE	53.49	340.5	9	22K	-2	16	50	-6	9	46			
WICHITA MTS.	53.85	335.7	9	24	-3	16	54	-7			10	29	PCP
PENNSYLVANIA	55.04	357.2	9	32	-3	17	9	-8			9	52	
PALISADES	55.18	0.9	9	32	-4	17	9	-10			9	58	PCP
TUCSON	57.82	324.0	9	54	-1								
TUCSON TELE.	57.83	324.1	9	56	1				10	21			
OTTAWA	59.57	359.3	10	3	-4								
HALIFAX	59.67	9.3	10	4A	-4								
SHAWINIGAN	60.74	1.6	10	12	-3								
GLEN CANYON	61.76	327.1	10	23	1								
BOULDER CITY	62.81	324.1	10	30	1								
PASADENA	63.52	320.5	10	35	1				11	0			
FLAMING GRGE	63.72	331.4	10	34	-1								
RAPID CITY	63.74	337.6	10	34	-1								
MBOUR	64.02	65.9	10	50	13						18	58	
SALT LAKE C.	64.77	329.6	10	42	0								
EUREKA	65.94	326.1	10	50	0				11	15			
FRESNO	66.25	321.7	10	51	-1								
LICK	67.74	321.1	11	2A	1						11	29	
RENO	68.11	323.9	11	4	1								
BOZEMAN	68.20	333.5	11	4	0								
CONCORD	68.41	321.4	11	7	2								
BERKELEY	68.46	321.2	11	6	0								
BUTTE	69.14	332.9	11	9	-1								
MINERAL	69.68	323.6	10	50K	-23								
SHASTA	70.36	323.4	11	16	-1								
CORVALLIS	73.40	326.1	11	43	8								
BANFF	74.35	334.8	11	40	-1								
PENTICTON	74.78	331.5	11	43K	0								
SOUTH POLE	75.64	180.0	11	48	0				12	17			
VICTORIA	76.06	329.1	11	51	0								
SCOTT BASE	81.68	190.9	12	23A	2						12	59	*SP
SERRA PILAR	82.40	44.2	12	20A	-5								

CAPE HALLETT	83.61	196.2	12	33A	2							
BAGNERES	89.14	45.1	12	53	-5							
FOLINIERE	90.76	39.6	13	1	-5							
KIMBERLEY	91.35	120.0	13	3	-6							
CLERMONT-FD.	92.05	43.2	13	8	-4							
GARCHY	92.50	41.8	13	9	-5							
MAWSON	92.62	165.0	13	12	-2	13	38		15	54	PP	
ISOLA	94.24	45.6	13	17	-5							
MONACO	94.38	46.1	13	17	-6							
COLLEGE	95.92	335.8	13	27	-3	13	53		14	9	*SP	
BENSBERG	96.14	39.0	13	26	-5							
STUTTGART	96.91	41.5	13	29	-5				14	13		
BULAWAYO	97.29	112.9	13	32K	-4							
KASPERSKE H.	99.76	41.8	13	42	-5				14	7		
COLLMBERG	99.80	39.5	13	43	-4	14	8					
CHARTERS TS.	126.97	230.7	19	7	1							
PORT MORESBY	132.08	242.8	19	18	2				19	46		
QUETTA	141.56	59.5	19	32	-1				22	31	PP	
MATUSIRO	143.22	312.8	19	32	-4							
WARSAK DAM	143.94	51.4	19	30	-7							
CHANGCHUN	146.03	333.5	19	39K	-2							
ULAN-BATOR	146.60	357.9	19	42	0							
POONA	149.73	78.0	19	49K	2							
NEW DELHI	150.53	56.9	19	47K	-1							
LEMBANG	158.72	186.8	20	1A	2							
SHILLONG	163.34	46.4	20	3A	-1							
CHENGTU	163.83	3.5	20	4	0							
MEDAN	167.45	148.8							20	35		
KUNMING	169.15	11.7	20	8	0							

AUGUST 29 14.H 51.M 20.S EPICENTRE 52.39-170.83 DEPTH= 72.KM

A=-0.60504 B=-0.09769 C= 0.79018 D=-0.1594 E= 0.9872
G=-0.7801 H=-0.1259 K=-0.6129 HT= -6.3

DEPTH OF FOCUS= 0.006R

SE= 1.96

	DELTA DEG.	AZ. DEG.	P M	S	O-C S	S M	S	O-C S	*PP M	S	SUPP. M	S	
COLLEGE	17.18	34.4	3	55	-2	7	11	7			6	36	
PETROPAVLOVK	18.44	284.1	4	14	2	7	30	-2					
MAGADAN	22.37	303.8									9	3	
VICTORIA	30.00	78.2	6	5K	1								
PENTICTON	31.92	74.7	6	21	0								
CORVALLIS	31.95	84.9	6	22	1								
BANFF	33.53	69.6	6	34K	-1								
SHASTA	34.67	90.0	6	46	1								
MINERAL	35.37	89.9	6	27A	-23								
HUNGRY HORSE	35.65	73.3	6	52	-1						13	4	SCP
BERKELEY	36.49	93.8	7	3	3								
RENO	36.95	89.6	7	4	0								
LICK	37.20	93.9	7	6A	0								
BUTTE	37.68	75.8	7	10	0								
VINEYARD	37.74	94.5	7	14	4								
FRESNO	38.70	93.1	7	19	1								
BOZEMAN	38.77	75.4	7	21	2								
MATUSIRO	38.80	266.6	7	19A	0	13	5	-6			9	0	PP
EUREKA	39.34	86.7	7	25	1						13	17	SCP
SALT LAKE C.	41.07	82.2	7	39	1								
PASADENA	41.42	94.8	7	41	0								
ABUYAMA	41.52	266.8	7	42A	0								
CHANGCHUN	42.21	284.7	7	47	0								
BOULDER CITY	42.25	90.0	7	49	1								
FLAMING GRGE	42.46	80.3	7	49	0						9	30	PCP
GLEN CANYON	43.60	86.4	8	0	1								
RAPID CITY	44.28	72.7	8	5	1								
KHEYS	44.49	349.8	8	9	3								
LARAMIE	44.52	77.3	8	7	1								
TUCSON	47.21	90.7	8	28	1								
TUCSON TELE.	47.22	90.6	8	28	1								
IRKUTSK	48.92	305.7	8	39	-2								
PEKING	49.92	286.3	8	48	0								
ULAN-BATOR	50.20	299.8	8	48	-2								
ZO-SE	52.90	274.4	9	10	-1								

WICHITA MTS.	52.99	79.3	9	10	-1	16	41	7		11	34
NANKING	53.70	277.0	9	17	0						
FAYETTEVILLE	54.68	75.0	9	23K	-1						
TROMSOE	58.09	356.0	9	47	-1						
SIAN	58.09	285.9	9	48	0						
OTTAWA	58.51	55.4	9	50K	-1						
SHAWINIGAN	59.16	52.8	9	54	-2						
LANCHOW	59.78	290.8	9	59A	-1						
SODANKYLA	59.84	352.3	10	0	0						
MORGANTOWN	60.35	62.7	10	3K	-1					12	20 PP
PENNSYLVANIA	60.64	60.4	10	8	2	18	23	8			
PALISADES	62.57	57.8	10	17	-2	18	47	8		12	41 PP
FORDHAM	62.70	57.9	10	9	-11	18	47	6			
KAJAANI	62.97	351.0	10	18	-3						
SVERDLOVSK	63.25	331.2	10	23	0						
CHAPEL HILL	63.51	65.0	10	25	0						
HONG KONG	63.58	272.7	10	26	1	19	5	13		12	16 PP
SKALSTUGAN	64.35	358.5	10	31	1					10	57
RABAUL	64.49	221.7	10	30	-1						
HALIFAX	64.95	48.8	10	33	-1						
NURMIJARVI	66.77	351.7	10	45	-1						
UPPSALA	67.91	355.4	10	52	-1						
KUNMING	68.40	283.3	10	56	0						
FRUNSE	69.64	314.5	11	4K	0						
MOSCOW	69.71	343.3	11	4	0						
GOTEBORG	70.25	358.4	11	7	0						
PORT MORESBY	71.27	224.2	11	7	-6	20	27	3		21	8 PS
LHASA	71.74	294.8	11	18	2						
COPENHAGEN	72.26	358.1	11	19	0						
ANDIJAN	72.31	314.6	11	20	0						
NAMANGAN	72.43	315.2	11	21	1						
SHILLONG	74.41	291.5	11	31K	-1						
STALINABAD	75.67	315.7	11	41	2						
DE BILT	75.83	2.5	11	37	-3						
CHATRA	76.06	295.8	11	44K	3	21	15	-3			
COLLMBERG	76.64	357.5	11	45	0					12	22
BENSBERG	77.01	1.3	11	46	-1						
LWOW	77.39	350.2	11	48	-1						
PRUHONICE	77.91	356.5	11	53	1					12	22
NIEDZIKA	78.13	352.6	11	53	0						
KASPERSKE H.	78.79	357.0	11	56	0					13	29
LAHORE	78.95	307.9	11	56	-1						
STUTTGART	79.22	359.9	11	59	0						
MAKHACH-KALA	79.41	332.4				21	46	-8			
NEW DELHI	79.96	304.1	12	2K	-1						
GARCHY	80.57	4.2	12	7	1					12	13 PCP
SIMFEROPOL	80.69	342.3	12	7	0						
CHARTERS TS.	81.25	220.4	12	8	-2						
TIFLIS	81.32	333.8	12	12	2						
GORIS	82.95	331.9	12	21	3						
QUETTA	83.55	312.5	12	22	1	22	43	7			
SAN JUAN	84.27	67.4	12	26	1					13	8
TEHERAN	84.82	326.7	12	30	2	22	53	4			
ISTANBUL KA.	85.33	345.0	12	31	1	23	4	10			
BRISBANE	85.58	211.9	12	34	2	22	56	0			
MEDAN	87.49	272.6	12	45A	4						
CARACAS	90.10	72.7	12	54K	1	23	34	-4			
KARAPIRO	90.73	190.7	12	56	0					13	17
KSARA	91.03	338.0	12	54	-4						
LWIRO	127.42	335.0	19	0K	3						
SCOTT BASE	130.71	186.1	19	4	1					21	7 PP
BROKEN HILL	139.14	330.7	19	19	0						
BULAWAYO	144.44	327.5	19	28	0						
MAWSON	150.33	218.6	19	42	4				19 57	20	13 PKP2
KIMBERLEY	153.69	327.8								19	52 PKP2

AUGUST 30 3.H 35.M 6.S EPICENTRE 6.58 -34.47 DEPTH= 0.KM

A= 0.81902 B=-0.56235 C= 0.11389 D=-0.5660 E=-0.8244
G= 0.0939 H=-0.0645 K=-0.9935 HT= 6.9

SE= 4.20

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
MBOUR	18.86	64.4	4	19	-5	7	33	-19				

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
CARACAS	32.32	279.2	7 36	63	12 34	47		
LA PAZ	40.43	235.1	7 49	7	14 17	26		
CHINCHINA	40.96	270.0	7 48	2				
GRANADA	41.45	38.3			14 23	17		9 44
TOLEDO	42.95	34.9	7 58	-5				
HALIFAX	45.61	330.9	8 22	-2				
BAGNERES	47.42	34.4	8 33	-5				9 9
PALISADES	49.07	320.5	8 47	-4	15 53	-3		10 55 PP
CLERMONT-FD.	50.78	33.5	9 14	10				
PENNSYLVANIA	51.52	318.2	9 11	1	16 30	0		
SHAWINIGAN	51.64	326.9	9 6	-5				
GARCHY	51.70	31.9	9 17	6				
MONACO	52.09	37.9	9 12	-2				
ISOLA	52.10	37.2	9 13	-1				9 38
PARIS	52.39	30.1	9 14	-3				
OTTAWA	52.62	324.2	9 14	-4				
KEW	52.91	26.1			16 45	-4		
ROME	54.41	42.1			17 11	2		
STUTTGART	55.93	33.5	9 39	-4	17 23	-7		21 20 SS
BENSBERG	56.10	30.4	9 47	3				
LJUBLJANA	57.61	38.5	9 50	-5				10 16
KASPERSKE H.	58.53	34.9	10 4	3				
COLLMBERG	59.32	32.5	10 14	8				10 59
GOTEBORG	62.38	26.1	10 28	1				
LWIRO	63.77	95.8	10 37	1				
WICHITA MTS.	65.05	305.2	10 41	-4	19 24	-3		23 42 SS
BROKEN HILL	65.82	109.0	10 39	-11				
SKALSTUGAN	66.02	20.9	10 55	4				
UPPSALA	66.02	25.8	10 46	-5				
NURMIJARVI	69.44	27.0	11 9	-3				
RAPID CITY	70.20	314.5	11 17	0				
KIRUNA	71.21	19.1	11 23	0	20 28	-12		
SODANKYLA	73.09	20.7	11 21	-13				
FLAMING GRGE	74.32	310.5	11 38	-4				
TUCSON	74.99	301.5	11 46	1				
GLEN CANYON	75.78	306.4	11 51	1				
BOZEMAN	75.94	315.3	11 49	-2				
EUREKA	79.29	308.8	12 9	0				13 8
CHINA LAKE	80.62	305.1	12 18	2				
PENTICTON	81.89	318.8	12 24	1				
COLLEGE	93.73	336.9	13 22	2				15 58
BYRD STATION	95.58	190.1	12 57	-32				
SOUTH POLE	96.54	180.0	13 42	9				
CANBERRA	151.22	185.9	20 4	14				
RIVERVIEW	152.39	190.1	19 23	-28				31 17

AUGUST 31 0.H 22.M 51.S EPICENTRE -28.69-176.70 DEPTH= 71.KM

A=-0.87715 B=-0.05061 C=-0.47755 D=-0.0576 E= 0.9983
G= 0.4768 H= 0.0275 K=-0.8786 HT= 2.2

DEPTH OF FOCUS= 0.006R

SE= 2.11

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
RAOUL ISLAND	1.21	242.1	0 23	1				
KARAPIRO	11.27	213.1	2 37	-3				
TUAI	11.31	205.3	2 36	-5	4 47	1		4 31
SUVA	11.40	335.9	2 46	4				
CHATEAU	12.30	209.5	2 54	0	5 8	-2		
WELLINGTON	14.37	206.8	3 24	3	5 51	-8		
COBB RIVER	15.09	212.2			6 9	-7		
AFIAMALU	15.40	18.3	3 17	-17	5 56	-27		
NOUMEA	16.48	288.9	3 49K	1	7 26	38		
KAIMATA	16.82	211.7	3 52	0				
GEBBIES PASS	17.25	206.9	3 54	-3	6 56	-9		
PORT VILA	17.55	305.2	4 0K	-1				4 37
BRISBANE	26.94	265.4	5 33	-4	10 23	16		
RIVERVIEW	27.89	251.3	5 49	4				11 15
HONIARA	29.12	306.5						6 51
CANBERRA	29.73	248.3	6 2A	0				
FORT NELSON	32.17	234.1	6 24K	1				
MELBOURNE	33.13	244.0	6 32	1				
CHARTERS TS.	34.69	275.9	6 44	-1				9 19
ADELAIDE	38.15	248.9	7 14K	0			7 25	

CAPE HALLETT	44.25	185.7	8	8	4	14	53	21	18	9	SCS
SCOTT BASE	49.83	184.5	8	51	3				10	15	PCP
DARWIN	51.34	277.1	8	58	-1				13	10	
BYRD STATION	56.41	169.9	9	37	1						
SOUTH POLE	61.47	180.0	10	13	2						
MIRNY	64.16	206.4	10	30	1	19	17	18			
ARGENTINE I.	73.02	156.0	11	24	0						
MAWSON	74.30	200.1	11	33	2				11	45	PCP
MATUSIRO	77.50	324.3	11	47A	-3	21	40	7			
ABUYAMA	77.64	321.5	11	48A	-2						
NHATRANG	82.24	288.4	12	15	0						
LICK	83.53	41.1	12	21K	0						
FRESNO	84.22	42.5	12	23	-2						
FERNDALE	84.35	37.4							13	19	
CHINA LAKE	84.92	44.4	12	27	-1						
SHASTA	85.44	38.3	11	29	-62						
RENO	86.08	40.5	12	52	18						
BOULDER CITY	86.75	45.8	12	38	1						
TUCSON	87.09	50.7	12	40	1						
EUREKA	88.28	42.5	12	43	-2						
GLEN CANYON	89.41	46.6	12	50	0						
PENTICTON	92.79	33.4	13	4	-2						
FLAMING GRGE	93.14	44.4	13	35	28						
COLLEGE	95.93	12.0	13	17	-3						
WICHITA MTS.	96.99	54.3	13	24	-1	24	2	8	31	26	SS
SHILLONG	102.99	292.1	13	51	-1						
QUETTA	125.21	288.3	18	55	2						
BULAWAYO	125.65	209.6							17	46	
SODANKYLA	138.81	346.5	19	20	2						
KAJAANI	141.31	343.1	19	13	-10						
SKALSTUGAN	144.62	353.1	19	26K	-2						
NURMIJARVI	145.07	341.7	19	27A	-2						
UPPSALA	147.35	346.6	19	34A	1				31	16	PCPPKP
GOTEBORG	150.37	350.6	19	42A	4						
KSARA	151.75	288.7	19	47	7						
COPENHAGEN	152.24	348.9	19	47K	6						
COLLMBERG	156.27	344.8	19	56	10				20	25	PKP2
PRUHONICE	157.08	341.1							20	17	PKP2
BENSBERG	157.56	353.6	20	5	17						
KASPERSKE H.	158.12	341.7	20	22	34						
STUTTGART	159.43	348.7	19	57	7				20	27	PKP2
FOLINIERE	159.74	7.2	20	29	39						
LJUBLJANA	160.55	336.0	20	32	41						
GARCHY	161.44	0.5	20	48	56						
ROSELEND	162.88	349.6	20	46	53						

AUGUST 31 1.H 48.M 39.S EPICENTRE -10.75 -70.78 DEPTH= 605.KM

A= 0.32352 B=-0.92791 C=-0.18523 D=-0.9443 E=-0.3292
G=-0.0610 H= 0.1749 K=-0.9827 HT= 6.4

DEPTH OF FOCUS= 0.090R

SE= 2.20

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
AREQUIPA	5.72	186.9	1	37	-2								
LA PAZ	6.27	156.1	1	44	0	2	56	-11					
ANTOFAGASTA	12.89	178.5	2	47	0	5	4	3					
BOGOTA	15.61	347.7	3	18	4						5	22	
CHINCHINA	16.34	342.6	3	21	1	6	7	5			5	31	
BALBOA HTS.	21.44	335.6	4	7K	-1	6	43	-43					
CARACAS	21.45	10.4	4	8K	0	7	26	-1					
GALERAZAMBA	21.85	348.1	4	11	0						6	40	
TRINIDAD	23.21	24.0	4	25	2						7	3	
GRENADA	24.36	21.9	4	33	-1								
ST. VINCENT	25.57	21.9	4	43K	-1								
BARBADOS	26.18	25.3	4	52K	2	8	42	1			7	37	
DOMINICA	27.49	19.9	4	57	-4								
ST. KITTS	29.02	16.0	5	13K	-1								
ANTIGUA	29.08	17.8	5	14	-1								
SAN JUAN	29.30	9.1	5	15K	-2	9	23	-7			8	1	PCP
SANTIAGO MA.	29.80	323.5	5	21	0						9	35	SCP
SAN SALVADOR	30.38	322.6	5	24	-2						6	58	PP
COMITAN	34.14	321.5	6	1	4	10	45	1					

MERIDA	36.54	329.5	6	14	-3	11	12	-7			8	0	PP
OAXACA	37.70	316.7	6	29	2	11	36	0					
VERA CRUZ	38.86	319.8	6	37	1	11	49	-4					
PUEBLA	40.08	317.4	6	51	5	12	17	6					
TACUBAYA	41.01	316.8	6	54K	1	12	20	-4			8	36	PP
PORT STANLEY	42.17	168.0	7	2	0								
BERMUDA	43.28	7.5	7	13	2								
LEON	43.86	316.2				13	5	0			8	8	
MANZANILLO	44.39	311.6	7	24	4	13	16	4			11	52	PP
GUADALAJARA	44.71	314.3	7	23	1	13	18	2					
COLUMBIA	45.55	348.0	7	27K	-1	13	11	-17					
CHAPEL HILL	47.06	350.8	7	38	-2						13	47	
MAZATLAN	48.50	314.3				13	58	-11					
WASHINGTON	49.73	353.6	7	57A	-3						16	28	SCS
FORDHAM	51.41	357.0	8	10	-2						16	37	
FAYETTEVILLE	51.55	335.7	8	10K	-3	14	33	-17			45	30	SKPPKP
PALISADES	51.57	357.0	8	11K	-2	14	47	-3	9	16	11	1	PPP
PENNSYLVANIA	51.70	353.1	8	12	-2	14	45	-7	9	55	9	15	PCP
CHIHUAHUA	51.92	319.8	8	21	5	14	57	3					
TERRE HAUTE	52.18	343.7	7	46	-31	14	21	-37					
WICHITA MTS.	52.34	331.0	8	17K	-2	14	57	-3	10	8			
CLEVELAND	52.90	349.9	8	22	-1	15	4	-3					
LUBBOCK	53.08	327.4	8	22	-2	14	58	-12					
ARGENTINE I.	54.62	176.6	8	34	-1	15	33	3			12	28	SCP
HALIFAX	55.49	6.2	8	40K	-1								
BREBEUF	56.04	357.6	8	43	-1								
OTTAWA	56.06	355.8	8	42K	-3								
SHAWINIGAN	57.06	358.4	8	50K	-1								
TUCSON TELE.	57.37	319.8	8	52K	-2								
TUCSON	57.38	319.7	8	53K	-1	16	4	-1	10	48			
MBOUR	58.90	66.0	9	6	2	16	31	7					
LARAMIE	60.92	330.5	9	16	-1						10	15	
GLEN CANYON	61.00	323.2	9	18K	0	16	52	1					
RAPID CITY	62.00	334.0	9	23K	-1				11	15			
BOULDER CITY	62.32	320.4	9	26K	0								
FLAMING GRGE	62.55	327.8	9	26K	-2	17	8	-2	11	21	14	51	
PASADENA	63.37	316.9	9	32K	-1	17	19	-1			10	1	
ANGRA DO HO.	63.74	37.0	9	41K	6	17	35	11	11	36	12	5	PP
SALT LAKE C.	63.76	326.2	9	32K	-3	17	20	-4					
EUREKA	65.25	322.8	9	52K	7				11	55	10	15	PCP
FRESNO	65.98	318.4	9	47K	-2								
BOZEMAN	66.82	330.5	9	53K	-1	17	54	-6					
VINEYARD	67.01	317.6	9	55K	0								
PARAISO	67.43	316.7	9	53	-5								
LICK	67.51	318.0	9	59K	1	18	10	2	11	59			
STA. CRUZ C.	67.56	317.5	9	58K	-1								
RENO	67.62	320.8	9	59K	0								
BUTTE	67.81	329.9	9	59K	-1	18	13	1					
BRANNER	67.91	317.8	10	2K	1								
CONCORD	68.15	318.4	10	2	0								
BERKELEY	68.22	318.2	10	2K	-1	18	17	1	12	2	12	54	PP
SAN FRANCSCO	68.29	318.0	10	3K	0								
UKIAH	69.54	318.8	10	9K	-2								
SHASTA	69.90	320.6	10	8K	-5								
HUNGRY HORSE	70.16	330.9	10	14K	0	18	39	0					
FERNDALE	71.01	319.7	10	23	4								
ARCATA	71.06	320.0	10	19	0								
CORVALLIS	72.68	323.6	10	29K	0								
BYRD STATION	72.82	187.9	10	29	-1						12	37	
BANFF	72.82	332.4	10	28K	-2								
PENTICTON	73.55	329.1	10	33K	-1								
SEATTLE	73.92	326.6	10	36	0	19	5	-15					
VICTORIA	75.04	326.8	10	42K	0								
LISBON	75.53	45.3	10	46K	1	19	22	-15			12	49	PP
COIMBRA	76.69	44.2				20	51	61	13	55	14	55	PP
SERRA PILAR	76.99	43.3	10	54A	1				12	57	14	4	PP
GRANADA	78.87	48.6	10	51	-12	19	20	-52	12	58	14	34	PP
SOUTH POLE	79.33	180.0	11	5	0						13	12	
ALMERIA	79.59	49.3	11	6K	0	20	20	0	13	11	21	25	SP
TOLEDO	79.60	45.9	11	8	2	20	26	6	13	12	13	53	
ALICANTE	81.60	48.4	11	15	-2	20	43	3			14	36	PP
LUANDA	82.55	97.6	11	25K	4				13	31			
TORTOSA	83.18	46.4	11	28	3	20	51	-4					
REYKJAVIK	83.28	19.4	11	26K	1	21	3	7	13	37			
BAGNERES	83.73	44.2	11	28	1	21	5	5	13	33	14	35	*SP
VIK	83.79	20.8	11	29	1	21	5	4					
WINDHOEK	84.01	111.8	11	29	0								
HERMANUS	84.02	123.8				20	51	-12					

The scanned images of the bulletins of the International Seismological Summary (ISS) have been obtained thanks to funding provided by the US National Science Foundation through grant EAR-9725140 (Villaseñor et al., 1997) and collected by SGA Storia Geofisica Ambiente (Bologna) on behalf of the Istituto Nazionale di Geofisica e Vulcanologia (Rome), in the frame of the EUROSEISMOS project.

SIDA	84.35	20.8	11	31K	1				13	38			
FOLINIERE	85.40	38.7	11	36	1						13	36	
SCOTT BASE	86.03	190.3	11	39A	1	21	9	-13	13	49	15	7	PP
KEW	86.50	36.2	11	40K	-1	21	24	-2	13	48	25	7	*SS
RESOLUTE	86.57	353.8	11	41K	0	20	11	-76	13	45	21	27	
THULE	87.02	0.6	12	26A	43								
DURHAM	87.06	32.8	11	44	1	21	30	-1	13	54	21	11	SKS
GARCH	87.11	40.9	11	43	0	21	8	-24	13	53			
PARIS	87.25	39.3	11	45	1	21	15	-18	13	52	37	31	PKPPKP
ABERDEEN	87.75	30.5	11	43	-3	21	15	-23	13	50	21	36	
CAPE HALLETT	88.24	195.5	11	49A	0	21	21	-21	14	1	15	27	PP
HAWAII V.OB.	88.41	290.0	11	49	-1	20	20	-84					
ISOLA	88.83	44.7	11	52	0	21	26	-21					
MONACO	88.97	45.2	11	51	-1	21	21	-28					
BESANCON	88.98	41.5	11	51	-1				13	51	15	24	PP
NEUCHATEL	89.55	42.0	11	55	0								
ROSELEND	89.59	43.6	11	53	-2				14	3			
KIMBERLEY	89.71	119.1	11	55A	-1								
DE BILT	89.93	36.8	11	59K	2	22	0	3	14	4			
BASLE	90.11	41.6	11	56K	-1								
BANGUI	90.22	85.6	11	58	0						15	31	PP
GRAHAMSTOWN	90.23	123.9	11	57	-1								
CHIAVARI	90.44	45.0	11	54	-5	22	10	8			21	5	SKS
STRASBOURG	90.51	40.6	12	0	1	22	3	1	14	8	15	31	PP
PAVIA	90.55	44.1	12	0	1						28	7	
BENSBERG	90.79	38.2	12	1K	0	22	6	1	14	9			
WITTEVEEN	91.01	36.3	12	1	-1								
KARLSRUHE	91.03	40.3	12	2	0	22	4	-3					
EBINGEN	91.18	41.2	12	2	0								
CHUR	91.21	42.6	12	2	-1								
KIPAPA	91.33	291.4	12	3K	0				14	4			
HEIDELBERG	91.33	40.0	12	3	0								
TUBINGEN	91.33	40.9	12	3	0								
MUNSTER	91.33	37.3	12	4	1								
HONOLULU	91.38	291.3	12	3K	0	22	29	19	14	4	29	24	SS
RAVENSBURG	91.50	41.7	12	3	-1								
STUTTGART	91.53	40.7	12	4K	0				14	13	18	40	
PRATO	91.58	45.7	12	3	-1						16	5	PP
FLORENCE X.	91.66	45.9	12	1K	-4				14	19			
ROME	92.13	47.9	12	7K	0	22	20	4	14	16	15	26	PP
PADOVA	92.46	44.4	12	11	3	22	23	4			21	53	SKS
BERGEN	92.49	28.8	12	9	1								
JENA	93.48	38.9	12	13	0	22	30	2	14	22	16	7	PP
MESSINA	93.70	52.0	12	13	-1	22	44	14			22	13	SKS
CHEB	93.80	39.9	12	18	4	22	50	20	14	30	22	0	SKS
TRIESTE	93.80	44.4	12	14	0	21	53	-37	14	26	16	5	PP
HALLE	93.83	38.4	12	15	1	22	32	1					
COLLEGE	94.21	335.3	12	15K	-1	21	50	-44	14	24	16	31	PP
KASPERSKE H.	94.37	41.0	12	17K	0	22	37	2	14	27	16	12	PP
LJUBLJANA	94.41	44.1	12	17K	0	22	37	1	14	27	16	12	PP
COLLMBERG	94.43	38.8	12	18K	1	22	38	2	14	28	21	57	SKS
COPENHAGEN	94.99	34.4	12	20K	0	22	43	2	14	29	16	19	PP
BULAWAYO	95.00	111.5	12	21	1								
PRAGUE	95.09	40.1	12	26	6								
MAWSON	95.10	163.8	12	19K	-1	21	57	-1	14	31	16	26	PP
GOTEBORG	95.15	32.3	12	20A	0				14	30	16	20	PP
PRUHONICE	95.15	40.2	12	21K	1	22	1	3	14	36	24	8	SP
ZAGREB	95.37	44.5	12	21	0						20	53	
VIENNA-H.	96.03	42.2	12	25K	1	22	5	2	14	34	24	19	SP
BROKEN HILL	96.15	105.9	12	27	2								
SKALSTUGAN	96.46	26.5	12	26K	0	23	7	62	14	36	15	33	*SP
BRATISLAVA	96.50	42.3	12	29	3	20	56	-70					
TITOGRAD	97.18	48.3	12	31	2	23	7	58	14	41	18	25	PPP
RACIBORZ	97.49	40.5	12	27	-4						14	28	
AFIAMALU	97.92	254.2	13	0	27						24	43	SP
CHORZOW	98.02	40.4	12	34	1						16	35	
BELGRADE	98.34	46.0	12	36A	1						16	45	PP
UPPSALA	98.40	30.7	12	34	-1	22	12	-3	14	45	16	43	PP
KRAKOW	98.59	40.7	12	37K	1				14	47	22	16	
SKALNATE PL.	98.71	41.6	12	39	3	21	7	-70					
LWIRO	98.99	94.0	12	44K	6						19	45	
TIMISOARA	98.99	45.1	12	41	3	22	21	3			30	51	SS
WARSAW	99.50	38.6	12	40	0				14	50	22	21	
TROMSO	99.90	20.8	12	41	-1	22	20	-2	14	55			
TUAI	99.96	227.3	12	45	3								
ATHENS	100.04	53.1	12	44A	2				14	52	15	29	
WELLINGTON	100.65	224.3	12	45	0								
CHATEAU	100.96	226.5	12	48	2						14	56	

LWOW	101.21	41.1	12	49	1	22	28	-1	14	59	17 5	PP
KARAPIRO	101.46	227.6	12	50	1							
NURMIJARVI	101.95	30.2	12	50	-1	22	29	-3	15	0	17 10	PP
BUCHAREST	102.33	46.7	12	52	-1						15 1	
SODANKYLA	102.70	23.2	12	55	1	22	36	0			17 18	PP
WILKES	103.12	179.3	12	55A	0	22	31	-7	15	5	23 53	S
KAJAANI	103.31	26.5	12	55	-2							
ISTANBUL UN.	104.32	50.3				22	34	-9				
ISTANBUL KA.	104.38	50.3	13	2	0				15	11	17 36	PP
PULKOVO	104.80	30.9	13	3	0	22	45	0			17 31	PP
APATITY	105.29	22.7	13	6	777							
HELWAN	105.71	61.9	12	58	777						32 9	
SUVA	105.92	247.6									23 41	SKKS
SIMFEROPOL	108.05	46.2	13	18	777	23	0	1			17 54	PP
JERUSALEM	109.13	60.1									17 24	
MOSCOW	109.17	34.6	17	12	777	23	4	0			18 2	PP
KSARA	109.70	57.9	17	23	777						18 5	PP
TANANARIVE	112.44	115.6	17	31	3						28 32	PP
NOUMEA	115.01	239.2	17	35	2							
FORT NELSON	116.23	210.4	17	36K	1	23	33	2				
MOORLANDS	116.68	210.6	17	37	1						20 18	SKP
GORIS	117.63	51.0							19	49	18 55	PP
TIKSI	117.98	353.1	17	39	0						19 2	PP
RIVERVIEW	120.39	220.2	17	44K	1	23	49	4			19 22	PP
CANBERRA	120.73	217.5	17	45	1	23	46	0	20	5	19 20	PP
SVERDLOVSK	120.80	28.7	17	45	1	23	50	3			19 18	PP
MELBOURNE	121.22	212.8	17	46	1						21 24	
TEHERAN	122.23	54.5	17	49	2						19 33	PP
MAGADAN	122.26	336.4	17	48	1						19 18	PP
BRISBANE	123.26	227.1	17	50	1	24	10	15				
HONIARA	125.70	250.2	17	54	0							
YAKUTSK	126.69	348.1	17	56	1							
ASHKABAD	127.13	50.3	17	59	3						20 0	PP
TASHKENT	133.58	41.9	18	10	1						26 39	SKKS
SEMIPALATNSK	133.83	25.4	18	11	2						20 45	PP
RABAUL	134.74	253.1	17	49	-22				20	23		
NEMURO	134.76	322.5									20 21	
KUSIRO	135.67	322.8	18	13	1							
FRUNSE	136.10	37.0	18	4	-9				20	33	20 53	PP
QUETTA	136.25	57.4	18	17	4				20	53	21 50	PKS
OBIHIRO	136.41	323.5	18	23	9						21 38	
RUMOE	136.67	325.7	18	16	2						29 20	
MUNDARING	137.00	188.7	18	1A	-14						26 36	
URAKAWA	137.12	322.8	18	11	-4							
SAPPORO	137.38	324.9	18	5	-11						21 7	
KARACHI	137.65	64.9	18	18	2				20	55		
SUTTSU	138.19	325.3	18	18	1						21 54	
IRKUTSK	138.40	4.5	18	9	-8				20	34	21 15	PP
MORI	138.44	324.3	18	18	0							
HAKODATE	138.52	323.8	18	17	-1							
WARSAK DAM	138.53	50.1	18	11	-7							
HATINOHE	138.85	321.7	18	16	-2							
MIYAKO	139.10	320.4	18	12	-7						21 58	
AOMORI	139.12	322.6	18	21	2						21 53	
MORIOKA	139.57	321.0	18	12	-8						21 27	
MIZUSAWA	139.93	320.3	18	18	-2							
AKITA	140.21	321.8	18	22	1							
ISINOMAKI	140.22	319.3	18	14	-7							
SENDAI	140.58	319.4	18	17	-5						21 31	
SAKATA	140.88	321.0	18	18	-5							
YAMAGATA	140.94	319.8	18	18A	-5							
HUKUSIMA	141.16	319.0	18	17A	-7							
ONAHAMA	141.33	317.7	18	19A	-5							
LAHORE	141.68	52.0	18	21	-4							
SHIRAKAWA	141.69	318.4	18	21	-4							
MITO	141.94	317.2	18	21	-4							
NIIGATA	141.96	320.3	18	23	-2							
VLADIVOSTOK	142.19	332.6	18	21	-4							
KAKIOKA	142.22	317.2	18	23	-2							
UTUNOMIYA	142.24	317.9	18	38	13							
TUKUBASAN	142.28	317.3	18	18K	-7	24	18	-18			21 47	PP
AIKAWA	142.40	321.1	18	23A	-3							
HONGO	142.79	316.8	18	27	1						27 59	
KUMAGAYA	142.80	317.7	18	24A	-2							
TOKYO C.M.O.	142.82	316.8	18	25	-1						20 11	
MAEBASI	142.85	318.3	18	22K	-4							
ULAN-BATOR	142.90	2.6	18	25	-1							
TAKADA	142.96	319.9	18	15	-11							
YOKOHAMA	143.02	316.6	18	25K	-1							

TITIBU	143.09	317.7	18	26	0			
HERA	143.18	315.7	18	25K	-2			
OIWAKE	143.23	318.6	18	29	2			
NAGANO	143.26	319.4	18	26	-1		21 53	
MATUSIRO	143.33	319.2	18	24K	-3	20 41	21 50	PP
HUNATU	143.57	317.3	18	27	0		18 49	
OSIMA	143.58	315.8	18	26	-1			
AJIRO	143.61	316.5	18	26	-1			
KOHU	143.62	317.7	18	28	1			
WAZIMA	143.63	321.4	18	28	1			
MATUMOTO	143.66	319.0	18	28	1			
MISIMA	143.67	316.7	18	26K	-1			
TOYAMA	143.87	320.2	18	28	0			
BOMBAY	143.95	72.7	18	28	0		22 10	PP
SHIZUOKA	144.13	316.9	18	18	-10			
TAKAYAMA	144.18	319.5	18	29	1			
IIDA	144.18	318.1	18	29	1			
HATIDYOZIMA	144.18	313.2	18	29	1			
CHANGCHUN	144.21	339.9	18	27K	-1		21 48	PP
KANAZAWA	144.32	320.5	18	30	2			
OMAESAKI	144.46	316.5	18	30	1			
GIHU	144.95	318.9	18	32K	3			
NAGOYA	144.96	318.4	18	31K	2			
POONA	144.96	73.1	18	31K	2	20 46		
TORISIMA	145.09	308.9	18	31	1			
DEHRA DUN	145.09	51.5	18	33	3			
NEW DELHI	145.18	54.8	18	35K	5	20 59	22 29	
GUAM	145.18	278.1	18	31K	1		26 2	
TSURUGA	145.24	319.8	18	32	2			
HIKONE	145.36	319.1	18	32	2			
KAMEYAMA	145.48	318.4	18	33	3			
TU	145.53	318.1	18	35	5			
KYOTO	145.85	319.3	18	33	2			
NARA	146.00	318.7	18	37	6			
ABUYAMA	146.05	319.2	18	33K	2			
TOYOOKA	146.10	320.8	18	33	2			
OWASE	146.12	317.5	18	33	2		19 30	
OSAKA	146.21	318.9	18	33K	2			
KOBE	146.42	319.3	18	35	3			
TOTTORI	146.51	321.4	18	33	1			
SAIGO	146.56	323.2	18	36	4			
WAKAYAMA	146.70	318.7	18	38	6			
SIOMISAKI	146.78	317.0	18	37	5			
SUMOTO	146.80	319.1	18	34K	2		21 52	
SEHORE	146.95	63.9	18	37	5			
YONAGO	147.07	322.1	18	34	1			
TOKUSIMA	147.18	319.0	18	40	7			
MATSUE	147.22	322.4	18	37	4			
TAKAMATU	147.36	319.9	18	38	5			
TSURUGISAN	147.69	319.2	18	39	5			
MUROTO	147.96	318.2	18	36	2			
KOTI	148.19	319.3	18	35	1			
HIROSIMA	148.34	321.6	18	35	0			
MATUYAMA	148.48	320.5	18	40	5			
KODAIKANAL	148.78	88.0					19 23	
UWAZIMA	149.02	319.8	18	43	8			
SIMIDU	149.04	318.7	18	41	5			
HYDERABAD	149.45	73.9	18	42K	6			
SIMONOSEKI	149.53	322.7	18	42	6			
OOITA	149.60	320.9	18	38	2		21 0	
HUKUOKA	150.12	322.8	18	39	2			
ASOSAN	150.17	321.0	18	40	3			
PEKING	150.19	349.2	18	39	2			
SAGA	150.40	322.4	18	42	5			
KUMAMOTO	150.45	321.3	18	38	0			
MIYAZAKI	150.60	319.1	18	48	10			
UNZENDAKE	150.79	321.7	18	41	3			
NAGASAKI	151.01	322.2	18	40K	2			
KAGOSIMA	151.38	319.6	18	41K	2			
MADRAS	151.50	82.6	18	40A	1	21 3	22 35	
TOMIE	151.75	323.4	18	42K	3			
YAKUSIMA	152.15	317.9	18	42	2			
CHATRA	153.77	49.4	18	47K	5	21 17	22 52	
VISHAKHAPTNM	153.96	71.6	18	51	8	21 12	22 48	
LHASA	154.68	39.4	18	47K	3		22 52	PP
SIAN	156.60	0.6	18	47K	1		22 58	PP
ZO-SE	156.91	333.1	18	48K	1		22 57	PP
NANKING	157.02	338.8	18	49K	2		23 1	PP

SHILLONG	157.92	45.8	18	49K	1					19	35	PKP2
CHENGTU	159.60	13.0	18	52	2					22	32	PKS
CHITTAGONG	159.74	53.1	18	55	5	21	33					
TAIPEI	161.61	322.2	18	24	-28							
ILAN	161.67	321.2	18	50	-2					26	43	
HWALIEN	162.33	319.7	18	54	1							
LEMBANG	162.47	174.7	18	56	3							
TAICHUNG	162.78	322.2								26	43	
DJAKARTA	163.02	171.8	18	54	1							
HSINKONG	163.10	318.2	18	56	3							
ALISHAN	163.17	320.5	19	0	7							
TAWU	163.94	317.4	18	59	5							
HENGCHUN	164.28	316.8	19	1	6							
KUNMING	164.44	22.4	18	57K	2					23	42	PP
CANTON	167.11	342.8	19	0K	3					23	53	PP
MEDAN	167.35	123.5	18	58K	1					24	16	
BAGUIO CITY	167.60	298.3	19	0	3					23	48	

AUGUST 31 1.H 57.M 10.S EPICENTRE -10.29 -70.94 DEPTH= 614.KM

A= 0.32131 B=-0.93018 C=-0.17755 D=-0.9452 E=-0.3265
G=-0.0580 H= 0.1678 K=-0.9841 HT= 6.5

DEPTH OF FOCUS= 0.092R

SE= 3.42

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
AREQUIPA	6.15	184.9	1	39	-5							
LA PAZ	6.75	156.4	1	50	1	3	20	4				
ANTOFAGASTA	13.34	177.9	2	55	3	4	52	-18				
BALBOA HTS.	20.96	335.6	4	5K	2	6	29	-50				
TRINIDAD	22.87	24.8	4	20	0							
SANTIAGO	23.03	179.4	4	16	-6							
GRENADA	24.01	22.6	4	31	0	8	13	6				
ST. VINCENT	25.21	22.6	4	41	0							
BARBADOS	25.84	26.1	4	48	1	8	46	10				
DOMINICA	27.13	20.5	5	2	4							
ST. KITTS	28.63	16.5	5	9	-2							
ANTIGUA	28.71	18.4	5	10	-1							
SAN JUAN	28.89	9.5	5	10K	-3	9	18	-5			11	46 PCS
SANTIAGO MA.	29.34	323.3	5	10	-7							
SAN SALVADOR	29.92	322.4	5	22	0						10	40
COMITAN	33.69	321.3	6	2	9	10	38	2				
MERIDA	36.07	329.4	6	12	-1	11	5	-7				
OAXACA	37.26	316.5	6	26	3	11	26	-3			15	26 SCS
VERA CRUZ	38.41	319.7				11	46	0			6	50
PUEBLA	39.64	317.2	6	48	6	12	8	4			15	46 SS
TACUBAYA	40.57	316.6	6	51K	1	12	5	-12			15	46 SCS
PORT STANLEY	42.64	168.0	7	1	-5							
LEON	43.43	316.1	7	16	4	12	55	-3				
MANZANILLO	43.97	311.4				13	12	7			16	13 SCS
GUADALAJARA	44.28	314.1	7	22	3	13	8	-2			16	14 SCS
COLUMBIA	45.08	348.1	7	22K	-3							
CHAPEL HILL	46.60	350.9	7	34	-2							
MAZATLAN	48.07	314.2				13	47	-15			16	19 SCS
PALISADES	51.12	357.1	8	6K	-4	14	36	-7	9	5	17	56 SS
PENNSYLVANIA	51.24	353.3	8	7	-4	14	41	-4	10	2	9	13 PCP
CHIHUAHUA	51.48	319.7	8	18	6	14	52	4			17	4 SCS
WICHITA MTS.	51.87	330.9	8	13	-2	14	50	-3				
LUBBOCK	52.62	327.3	8	18	-2	14	50	-13				
HALIFAX	55.06	6.4	8	35K	-2							
ARGENTINE I.	55.07	176.6	8	34	-4	15	38	3			17	26 SCS
BREBEUF	55.59	357.7	8	39	-2							
OTTAWA	55.60	355.9	8	39K	-2							
SHAWINIGAN	56.61	358.5	8	46K	-2							
TUCSON	56.94	319.6	8	54K	4	15	59	0	10	50	9	39
GLEN CANYON	60.55	323.2	9	16K	2	16	44	0			37	37 PKPPKP
RAPID CITY	61.53	334.1	8	26K	-55							
BOULDER CITY	61.87	320.4	9	33K	10							
FLAMING GRGE	62.09	327.8	9	21K	-3	17	2	-1			37	50 PKPPKP
PASADENA	62.93	316.9	9	31	1	17	16	3			10	5
SALT LAKE C.	63.29	326.2	9	31K	-1	17	9	-9				
ANGRA DO HO.	63.48	37.2	9	37K	4	17	32	12			12	0 PP
EUREKA	64.79	322.8	9	51	10						12	57 SCP
BOZEMAN	66.35	330.5	9	50K	-1							

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VINEYARD	66.57	317.6	9	53	1								
LICK	67.07	318.0	9	55K	0	18	7	5					
STA. CRUZ C.	67.12	317.5	9	55	-1								
RENO	67.17	320.8	9	37	-19								
BUTTE	67.34	329.9	9	53	-4	18	6	0					
BRANNER	67.47	317.8	9	58K	0								
BERKELEY	67.77	318.1	10	0	0	18	13	2	12	1			
SAN FRANCSCO	67.84	318.0	9	50	-10								
UKIAH	69.10	318.8	10	7K	-1								
SHASTA	69.45	320.6	10	1	-9								
FERNDALE	70.57	319.6	10	20	4	18	44	2					
ARCATA	70.62	320.0	10	17	1	18	45	2					
CORVALLIS	72.22	323.5				19	3	2					
BYRD STATION	73.24	187.9	10	28	-4						12	46	
LOME	73.68	80.5	10	36	2	19	20	3					
LISBON	75.33	45.4	10	43K	0	19	17	-17			19	39	SKS
COIMBRA	76.48	44.3	10	50K	1	19	50	3	12	54	21	1	SPP
SERRA PILAR	76.78	43.4	10	55A	4	19	50	0	12	54	13	54	PP
GRANADA	78.70	48.7	10	57	-4	20	3	-7					
TOLEDO	79.41	46.1	11	5K	0	20	22	5	13	12	25	47	SS
ALMERIA	79.42	49.4	11	3K	-2	20	20	3	13	14	14	18	PP
ALICANTE	81.43	48.5	11	18	3	20	34	-3			14	36	PP
LUANDA	82.77	97.7	11	22A	0	20	50	0	13	16	14	48	PP
REYKJAVIK	82.91	19.5	11	23	0	20	59	8	13	36			
TORTOSA	82.99	46.5	11	23	0	20	49	-3					
VIK	83.43	20.9	11	29	4	20	53	-3					
BAGNERES	83.52	44.2	11	26	0	21	2	5	13	31	21	58	SP
SIDA	83.99	20.9	11	28K	0	21	10	8	13	41			
JERSEY	84.31	38.0	11	30	0	20	53	-12					
WINDHOEK	84.33	111.8	11	29	-1								
HERMANUS	84.41	123.8	11	37	7	21	0	-6			11	56	
FOLINIERE	85.15	38.7	11	32	-2						21	16	
SITKA	85.19	330.4				21	0	-13			12	50	
KEW	86.23	36.3	11	38K	-1	21	7	-16	13	50	22	26	SP
EDINBURGH	86.39	31.5	11	21	-19				13	38	11	28	PCP
SCOTT BASE	86.44	190.3	11	37	-3	21	0	-25	13	46	17	10	PPP
THULE	86.57	0.6	12	22A	41								
DURHAM	86.77	32.9	11	40	-1	21	29	1	13	48	14	54	PP
GARCHY	86.88	41.0	11	46	4	21	10	-19			21	35	SKS
PARIS	87.00	39.4	11	41	-2	21	8	-22			37	33	PKPPKP
ABERDEEN	87.44	30.6	11	45	0	21	38	4	13	55	21	15	SKS
ISOLA	88.63	44.7	11	52	2	21	23	-21					
CAPE HALLETT	88.63	195.5	11	48A	-2	21	25	-20	14	4	15	30	PP
BESANCON	88.76	41.6	11	50	-1				14	6			
MONACO	88.77	45.3	11	47	-4				14	6			
NEUCHATEL	89.32	42.0	11	52	-1	21	29	-22					
ROSELEND	89.37	43.6	11	49	-5								
DE BILT	89.67	36.8	11	58	3	22	0	6	14	10	21	31	SKS
BASLE	89.88	41.6	11	57	1	21	33	-23			23	16	
KIMBERLEY	90.07	119.1	12	53	56								
CHIAVARI	90.24	45.0	11	42K	-16	21	58	-1	13	58	15	18	PP
STRASBOURG	90.28	40.6	11	58	0	22	10	11	14	15	21	34	SKS
BANGUI	90.34	85.6	12	3	5						21	32	
PAVIA	90.34	44.2	11	58	0						22	27	
BENSBERG	90.54	38.2	11	58	-1	22	5	4	14	9	21	33	SKS
GRAHAMSTOWN	90.61	123.9	11	56	-3								
WITTEVEEN	90.74	36.4	11	59	-1				14	15			
KARLSRUHE	90.80	40.3	12	3	3	22	11	7					
EBINGEN	90.95	41.2	12	0	-1	21	39	-26			12	5	PCP
CHUR	90.99	42.6	12	0	-1	21	37	-28			12	4	PCP
KIPAPA	91.01	291.5	12	1A	0				14	17			
HONOLULU	91.07	291.3	12	3A	2				14	12			
MUNSTER	91.08	37.3	12	0	-1								
HEIDELBERG	91.09	40.0	11	59	-3						12	5	PCP
TUBINGEN	91.10	40.9	12	0	-2	21	37	-29			12	5	PCP
RAVENSBURG	91.28	41.7	12	0	-2						12	5	PCP
STUTTGART	91.29	40.7	11	59	-3	20	55	-73	14	20	12	6	PCP
PRATO	91.38	45.8	12	1	-2	22	9	0					
FLORENCE X.	91.47	45.9	12	13	10				14	25			
BOLOGNA	91.68	45.2	12	14	10	21	46	-25	14	30	26	50	*SS
ROME	91.95	47.9	12	8K	3	21	44	-30	14	21	15	45	PP
BERGEN	92.17	28.9	12	8	2	22	26	10			21	44	SKS
PADOVA	92.25	44.4	12	10	3	21	44	-32			16	34	PP
JENA	93.24	38.9	12	10	-1	22	27	2	14	22	16	6	PP
MESSINA	93.55	52.0	12	13	0	22	21	-6			22	0	SKS
CHEB	93.56	39.9	12	16	3	22	33	6			15	24	*SP
HALLE	93.58	38.4	12	13	0	22	31	3					
TRIESTE	93.60	44.4	12	15K	2	22	32	4	14	30	16	9	PP

PRETORIA	93.67	116.8								14	16	
KASPERSKE H.	94.14	41.0	12	15	0							
COLLMBERG	94.19	38.8	12	14	-2	22	26	-7	14 29	16	14	PP
LJUBLJANA	94.20	44.1	12	17	1	22	39	6	14 33	16	14	PP
COPENHAGEN	94.71	34.4	12	17A	-1	22	45	8	14 34	16	12	PP
PRAGUE	94.85	40.1	12	22	3	22	0	-38		24	4	SP
GOTEBORG	94.86	32.3	12	17	-2	21	59	-39	14 36	29	12	PKKP
PRUHONICE	94.91	40.2	12	18K	-1	22	0	-39		24	5	SP
TARANTO	95.23	50.0	12	29	9	22	19	21		28	19	SS
BULAWAYO	95.32	111.5	12	31	10							
MAWSON	95.58	163.9	12	18K	-4	21	59	0		22	24	S
VIENNA-H.	95.81	42.2	12	24K	1	22	0	-1	14 37	16	26	PP
SKALSTUGAN	96.13	26.5	12	23	-1					29	9	PKKP
BROKEN HILL	96.43	105.9	12	26	0							
HURBANOVO	96.97	42.7	12	35	7							
TITOGRAD	97.00	48.2	12	33	5	23	6	59		16	15	PP
RACIBORZ	97.26	40.5	12	26	-3				14 38	16	12	
BUDAPEST	97.47	43.2	12	34	4	22	11	2		15	57	PPP
CHORZOW	97.79	40.3	12	30	-2				14 44	22	12	
AFIAMALU	97.89	254.3	12	36	4	22	18	7	14 36	16	33	PP
UPPSALA	98.10	30.6	12	34	1	23	7	55	14 51	29	1	PKKP
BELGRADE	98.15	46.0	12	35K	2	22	15	2		16	17	PP
KRAKOW	98.36	40.7	12	37	3				14 44	22	15	
WARSAW	99.25	38.5	12	38	0				14 49	22	20	
TROMSOE	99.53	20.8	12	41	1	22	20	1		23	28	S
ATHENS	99.91	53.1	12	43K	2				15 1	15	6	PPS
SOFIA	100.02	48.3								13	53	
TUAI	100.14	227.4	12	48	6	22	32	10		25	0	SP
WELLINGTON	100.86	224.4	12	48	2	22	27	1	14 59	25	9	SP
LWOW	100.98	41.1	12	48	2	22	22	-4		23	7	SKKS
CHATEAU	101.15	226.6	12	51	4	22	38	11	15 4	17	13	PP
GEBBIES PASS	101.26	221.5	12	51	4	22	27	-1		17	14	PP
KARAPIRO	101.64	227.8	12	51	2	22	56	27	15 5	17	10	PP
NURMIJARVI	101.64	30.2	12	48	-1	22	28	-1	15 6	17	9	PP
BUCHAREST	102.14	46.7	12	51	0	22	30	-2		25	22	
COBB RIVER	102.34	223.9				22	40	7		26	38	PS
SODANKYLA	102.35	23.1	12	53	1	22	34	1		17	6	PP
ROXBURGH	102.55	218.7	12	58	5	22	35	1	15 12	16	54	PP
KAIMATA	102.59	222.2				22	25	1		23	49	S
KAJAANI	102.98	26.5	12	55	0							
WILKES	103.57	180.6	13	0A	2	23	35	-3	15 14	23	58	S
ISTANBUL UN.	104.16	50.2	12	14	-46							
ISTANBUL KA.	104.22	50.2	12	59	-1	22	34	-7	15 15	17	12	PP
APATITY	104.94	22.6	13	5	1							
SUVA	105.94	247.7	17	37	777	22	40	-9		26	30	*SP
KHEYS	106.07	7.6								17	27	PP
SIMFEROPOL	107.86	46.1				22	59	2		17	54	PP
MOSCOW	108.89	34.5	17	10	777	23	5	4		18	0	PP
KSARA	109.60	57.8	17	22	777					18	4	PP
TANANARIVE	112.78	115.5	17	32	4					18	34	PP
NOUMEA	115.10	239.5	17	37	4	23	32	7				
PORT VILA	115.19	244.9	17	36	3					18	47	
FORT NELSON	116.54	210.6	17	35	0	23	33	2				
MOORLANDS	116.98	210.9	17	35K	-1					20	20	SKP
RIVERVIEW	120.63	220.4	17	45	2	23	45	0		19	23	PP
CANBERRA	120.98	217.8	17	43	-1	23	49	3	20 10	19	26	PP
MELBOURNE	121.51	213.0	17	46	1							
TEHERAN	122.10	54.2	17	49	3					19	33	PP
BRISBANE	123.44	227.4	17	47	-2					28	43	
CHARTERS TS.	132.54	230.5	17	53	-13					29	28	
RABAUL	134.71	253.6	18	3	-7				20 26			
FRUNSE	135.84	36.7	18	19	7				20 35	21	3	PP
QUETTA	136.14	56.9	18	15	2				20 55	21	56	PKS
PERTH	137.50	188.5								21	6	
KARACHI	137.60	64.4	18	18	-2				20 57	22	1	PKS
IRKUTSK	137.97	4.3	18	9	-7				20 31			
WARSAK DAM	138.37	49.6	18	14	-3							
MIZUSAWA	139.49	320.6	18	13	-6							
LAHORE	141.53	51.4	18	21	-3							
VLADIVOSTOK	141.72	332.7	18	19	-5							
TUKUBASAN	141.84	317.6	18	16	-8	24	26	-8		21	29	PP
ULAN-BATOR	142.46	2.4	18	25	0							
MATUSIRO	142.88	319.4	18	22K	-4					22	9	PKS
CHANGCHUN	143.73	340.0	18	24K	-3					21	48	PP
BOMBAY	143.97	72.1	18	29	2					21	53	PP
GUAM	144.96	278.7	18	27K	-2				20 42	27	30	SKKS
POONA	144.99	72.4	18	33K	4					22	7	PP
NEW DELHI	145.05	54.1	18	35	6					21	51	PP
ABUYAMA	145.60	319.5	18	29K	-1							

PEKING	149.72	349.1	18	39K	3						
CHATRA	153.60	48.5	18	46	4				27	36	
LHASA	154.44	38.6	18	48K	5				22	51	PP
SIAN	156.16	0.3	18	48K	3				22	59	PP
ZO-SE	156.43	333.2	18	48K	3				22	55	PP
NANKING	156.55	338.9	18	49K	4				23	0	PP
SHILLONG	157.72	44.7	18	50K	3						
CHENGTU	159.20	12.3	18	52	3				23	15	PP
CHITTAGONG	159.59	51.9	18	55	6	21	17		22	35	PKS
TAIPEI	161.16	322.8							19	12	
HSINKONG	162.67	318.8	18	57	5						
ALISHAN	162.69	321.0	18	57	5						
LEMBANG	162.91	174.7	19	0	8						
DJAKARTA	163.48	172.2	18	53K	0				28	25	
TAWU	163.50	318.0							19	56	
KUNMING	164.08	21.3	18	57K	3				23	38	PP
CANTON	166.63	342.7	19	0A	4				23	54	PP
MEDAN	162.73	122.2	18	58	1				24	17	

SEPTEMBER 1 0.H 9.M 41.S EPICENTRE -59.28 -26.69 DEPTH= 158.KM

A= 0.45867 B=-0.23063 C=-0.85816 D=-0.4492 E=-0.8934
G=-0.7667 H= 0.3855 K=-0.5134 HT= -8.7

DEPTH OF FOCUS= 0.020R

SE= 2.14

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
ARGENTINE I.	18.25	235.1	4	1	-3						8	33	PCP
PORT STANLEY	19.08	279.7	4	12	-1	7	42	6					
SOUTH POLE	30.89	180.0	6	3	-1								
LA PLATA	31.83	306.1	6	12	0	11	10	0					
BYRD STATION	32.80	198.8	6	20	-1						6	50	
MAWSON	37.43	140.9	6	58	-2	12	35	-1			8	29	PP
SANTIAGO	38.77	292.1	7	9	-2	13	0	4					
HERMANUS	38.92	71.0	7	12	0	13	0	2			8	47	PP
SCOTT BASE	42.87	184.2	7	44	-1	14	2	5	8	13	9	18	PP
KIMBERLEY	46.26	72.0	8	10	-2								
ANTOFAGASTA	46.92	299.8	8	16	-1	14	57	3					
WINDHOEK	47.93	59.5	7	56K	-29								
CAPE HALLETT	48.17	186.9	8	27A	1	15	6	-6	8	56	10	22	PP
PIETERMZBURG	48.33	78.1	7	57	-31								
PRETORIA	50.42	73.1	8	40	-4								
WILKES	50.72	159.3	8	45K	-1	15	51	4	9	18	10	43	PP
LA PAZ	52.31	306.6	8	58K	0	16	13	4					
KERGUELEN I.	52.43	125.0	8	58	-1	16	17	6					
AREQUIPA	53.76	303.0	9	9	1								
LUANDA	58.65	48.0	9	44A	1	17	41	8	9	53	10	34	PCP
HUANCAYO	59.34	301.4	9	49	1								
TANANARIVE	65.89	86.5	10	33A	2	19	13	9			11	57	PP
MACQUARIE I.	66.48	183.6	10	35	0				11	8			
LOME	68.89	29.9	10	50	0	19	49	9					
BANGUI	72.85	47.9	11	13	-1	20	27	2					
MBOUR	73.82	9.8	11	19	0	20	43	7					
BOGOTA	73.87	310.2	11	16	-4	20	25	-12					
FUQUENE	74.51	310.9	11	18	-5						14	2	PP
ROXBURGH	74.77	191.6	11	25	0	20	48	1	11	55	14	41	PP
CHINCHINA	74.80	308.9	11	23A	-2	20	46	-1			14	10	PP
TRINIDAD	75.09	324.6	11	25	-2								
GEBBIES PASS	76.15	194.3	11	32	0				12	6			
GRENADA	76.51	324.7	11	33A	-2								
CARACAS	76.70	319.2	11	34A	-2						17	48	
BARBADOS	76.92	327.1	11	33	-4								
ST. VINCENT	77.44	325.5	11	39	-1								
KAIMATA	77.46	193.6	11	42	2	21	20	4	12	14			
FORT NELSON	78.03	175.5	11	41A	-2	21	20	-2					
WELLINGTON	78.23	196.4	11	43	-1	21	24	0	12	12			
MOORLANDS	78.52	175.4	11	45K	-1				12	20			
COBB RIVER	78.71	194.9	11	45	-2	21	26	-3	12	21			
DOMINICA	79.50	326.0	11	50	-1								
GALERAZAMBA	79.96	311.6	11	53	0	21	47	5			22	54	*SS
BALBOA HTS.	80.01	306.9	11	52A	-2								
CHATEAU	80.16	197.4	11	55A	1	21	44	0	12	28			
TUAI	80.29	198.7	11	54	-1				12	29			

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ANTIGUA	81.37	326.2	12	1	0						
KARAPIRO	81.40	197.6	11	59	-2	21	54	-3	12 34	38 31	PKPPKP
ST. KITTS	81.82	325.4	12	3	0						
MELBOURNE	83.00	173.4	12	8	-1	22	13	0			
SAN JUAN	83.82	322.7	12	11A	-2					15 27	PP
MUNDARING	84.02	149.0	12	10A	-4	22	17	-6			
ADELAIDE	85.32	168.0	12	21A	0	22	37	1	12 51	15 41	PP
CANBERRA	85.68	176.5	12	23A	1	22	43	3	12 55	15 45	PP
RIVERVIEW	87.22	178.2	12	29A	-1	22	58	4	13 0	15 59	PP
SANTIAGO MA.	87.86	300.9	12	33	0						
SAN SALVADOR	88.35	300.4	12	34	-1						
RAOUL ISLAND	88.63	204.9	12	33	-4						
COMITAN	91.93	299.1	13	1	9				13 21	23 23	SKKS
BRISBANE	93.66	179.5	12	58	-2	23	51	-1			
OAXACA	94.72	295.5	13	21	16				13 43	17 1	PP
MERIDA	94.97	303.3	13	10	4				13 28	16 58	PP
PUEBLA	97.13	295.3								17 27	PP
ALMERIA	97.87	19.4	13	21	2	23	45	5	14 28	17 25	PP
TACUBAYA	97.91	294.6	13	18A	-1	23	44	4		17 18	PP
GRANADA	98.00	18.4	13	39	19	24	52	71		17 28	PP
NOUMEA	98.00	192.3	13	19	-1	23	47	6			
LISBON	98.72	13.8	13	29K	6	24	48	63		17 25	PP
ALICANTE	99.68	20.6	13	19	-8	24	55	66		17 29	PP
KOUMAC	99.94	190.4	13	27A	-1	24	6	15			
SUVA	100.15	204.2				23	57	5		24 59	S
COIMBRA	100.27	14.1	13	30A	0	23	50	-2		17 39	PP
TOLEDO	100.57	17.5	13	33A	2	23	58	4	14 4	17 41	PP
HELWAN	100.90	48.6	13	34	1	24	34	39			
GUADALAJARA	100.96	291.9				24	9	13		17 49	PP
SERRA PILAR	101.17	13.8	13	35K	1	23	49	-8		17 43	PP
AFIAMALU	101.76	214.6	13	41	4	24	3	4		17 39	PP
TORTOSA	102.25	20.8	13	41	2	25	21	79			
COLUMBIA	103.24	316.1	17	49K	246	23	59	-7			
MESSINA	103.24	33.0	13	45	2	24	9	3	14 27	17 57	PP
JERUSALEM	104.12	50.8	13	57	10					17 50	PP
CHAPEL HILL	104.28	318.5	13	49	1					17 35	
BAGNERES	104.37	20.0	13	51	3						
LEMBANG	104.76	132.7	14	0K	10					18 23	
DJAKARTA	105.06	131.7	14	50	777						
ATHENS	105.50	39.2	14	3	777	24	51	35		17 59	PP
ROME	105.89	29.4	17	35	777	24	20	2		18 19	PP
KODAIKANAL	105.97	96.9								18 46	
KSARA	106.17	50.3	13	59	777	25	30	71	14 40	18 18	PP
DARWIN	106.30	157.1	13	57	777					18 4	
WASHINGTON	106.33	321.2	13	51K	777					18 19	PP
MONACO	106.44	25.1	13	59	777					18 25	
ISOLA	106.79	24.7	14	5	777					18 32	PP
FORDHAM	107.12	324.4	14	4	777						
PALISADES	107.28	324.4	17	15	777	24	23	-1		18 31	PP
FLORENCE X.	107.36	27.8	14	23	777	24	57	32			
PRATO	107.42	27.7	17	51	777	26	39	134			
CHIAVARI	107.42	26.3	13	40	777					18 49	PP
CLERMONT-FD.	107.52	21.4	14	8	777					18 28	
HALIFAX	107.91	333.2	14	10	777						
ROSELEND	108.16	24.7	14	15	777					18 33	PP
PAVIA	108.20	25.9	18	5	777					21 10	PPP
TITOGRAD	108.22	34.1	13	33	777					17 49	PP
PENNSYLVANIA	108.31	321.5	18	4	777	24	26	-3		18 38	PP
GARCHY	108.97	20.9	18	16	777					18 37	PP
CHIHUAHUA	109.02	293.9	14	13	777	26	9	97		27 1	*SS
PADOVA	109.05	27.7	17	59	777	24	36	4		18 46	PP
NEUCHATEL	109.46	23.7	18	13	777						
SOFIA	109.68	36.9	18	43	777					19 10	SP
MADRAS	109.70	97.8	18	52	777					19 17	
TRIESTE	109.73	28.9	18	12	777	24	40	5		18 43	PP
FOLINIERE	109.80	18.1	14	17	777						
CHUR	109.87	25.5	17	24	777					24 36	
JERSEY	109.95	16.9	14	13	777						
ISTANBUL UN.	110.02	41.7	18	52	39						
ISTANBUL KA.	110.07	41.7	14	15	-238	24	36	0	14 56	18 46	PP
BASLE	110.09	24.0	17	39	-34					26 25	SKKS
CLEVELAND	110.13	319.1								18 50	PP
FAYETTEVILLE	110.13	307.2	14	4	-249	24	39	3		17 31	PP
LJUBLJANA	110.29	29.3	18	16	3	24	47	10		18 45	PP
PARIS	110.34	20.1	14	16	-237	24	34	-3		18 44	PP
ZAGREB	110.45	30.4								18 40	PP
MEDAN	110.48	119.7	18	51K	37					25 40	
BELGRADE	110.75	33.9	18	16K	2					28 30	PS
WICHITA MTS.	110.80	303.1	14	15	-239	24	44	5		18 52	PP

BOMBAY	110.89	88.1				25	8	29		18	56 PP
EBINGEN	111.01	24.7	17	38	-37					18	55 PP
POONA	111.11	89.2	18	15	0					28	18 PS
STRASBOURG	111.13	23.8	14	20	-235	24	36	-4		18	46 PP
LUBBOCK	111.26	300.0	14	19	-236						
BREBEUF	111.31	326.5	14	18	-237						
TUBINGEN	111.36	24.7	17	47	-28						
PORT MORESBY	111.37	173.5	18	17	2					19	32
STUTTGART	111.63	24.7	14	23	-233				14 42	18	52 PP
KARLSRUHE	111.67	24.0	14	22	-234					21	11 PPP
SHAWINIGAN	112.04	327.6	14	37	-220					18	29 PKP
BUCHAREST	112.09	38.0	14	25	-222	24	48	4		20	0 PP
HEIDELBERG	112.11	24.1	14	25	-232					18	17
KEW	112.45	17.5	14	25	-232	26	47	121		19	5 PP
CAMPULUNG	112.52	36.9								19	10
BUDAPEST	112.79	31.8				26	45	118	18 42	22	37 PPP
VIENNA-H.	112.81	29.7	14	36	-222	25	12	25			
BRATISLAVA	112.92	30.2	14	36	-222					28	45 PS
HURBANOVO	112.93	31.1	14	36	-222						
KASPERSKE H.	112.94	27.5	14	32	-226					19	8 PP
LAWRENCE	113.03	308.0	14	25	-234						
BENSBERG	113.28	22.6	17	58	-21	24	53	4		19	9 PP
CHEB	113.55	26.3	14	46	-214	24	55	5		19	6 PP
PRUHONICE	113.96	27.8	18	21	1	26	57	125		19	16 PP
DE BILT	113.98	20.9	18	19	-2	24	53	1		19	13 PP
JENA	114.17	25.4	18	21	0	24	49	-3		29	13 PP
TUCSON	114.28	292.4	18	22A	1					19	23 PP
MUNSTER	114.32	22.5	18	21	0						
SKALNATE PL.	114.68	31.8	18	24	2						
HALLE	114.78	25.5	18	6	-16	24	56	1			
COLLMBERG	114.83	26.2	18	22	0	27	9	134	18 53	19	41 PP
WITTEVEEN	114.95	21.6								18	24 PP
SIMFEROPOL	115.24	43.3	18	22	-1	24	55	-1		19	25 PP
CHORZOW	115.36	30.5	18	23	0				18 51	19	30 PP
KRAKOW	115.39	31.2	18	23	0	27	3	126		26	16 SKKS
DURHAM	115.47	15.8	18	26K	3	27	15	138		19	32 PP
LWOW	116.31	34.0	18	26	1	25	1	1		19	33 PP
TIFLIS	116.55	52.5	18	27	2					19	35 PP
RABAUL	116.71	178.7	18	25	-1						
QUETTA	117.23	76.4	18	28A	1	25	9	5	19 6	19	41 PP
WARSAW	117.66	30.9	18	29	1	25	14	9		19	43 PP
ABERDEEN	117.73	14.8				25	11	6		19	45 PP
GLEN CANYON	118.51	294.8	18	30	1					19	53 PP
COPENHAGEN	118.80	24.1	18	30A	0	25	10	1		19	42 PP
BOULDER CITY	119.24	291.7	18	31	0					19	50 PP
LARAMIE	119.33	302.0	18	30	-1						
ASHKABAD	119.37	64.7	18	32	1	25	14	3		19	56 PS
PASADENA	119.37	287.9	18	31	0	25	15	4		19	56 PP
RAPID CITY	120.57	305.5	18	32	-1					28	40 PKKP
GOTEBORG	120.58	22.9	18	32	-1					20	6 PP
FLAMING GRGE	120.70	299.1	18	32	-2					20	1 PP
SALT LAKE C.	121.69	297.2	18	36A	1					20	9 PP
CALCUTTA	121.87	99.5								20	7
BERGEN	121.92	18.1	18	37	1					30	21 PS
FRESNO	122.26	288.5	18	37	0						
EUREKA	122.58	293.3	18	35	-2					20	18 PP
WARSAK DAM	122.60	77.4	18	37	0						
SIDA	122.91	4.6	18	38	0						
DEHRA DUN	122.96	85.3	18	40	2					28	12
VINEYARD	123.02	287.3	18	39	1						
REYKJAVIK	123.14	2.5	18	39A	1						
CHITTAGONG	123.47	102.8				25	28	3		20	19 PP
STA. CRUZ C.	123.52	287.0	18	40	1						
LICK	123.61	287.5	18	41	2						
UPPSALA	123.74	25.1	18	38A	-1	28	8	163	19 14	20	20 PP
BRANNER	123.94	287.2	18	41K	1						
CONCORD	124.32	287.7	18	42	1						
BERKELEY	124.33	287.5	18	41	0	25	43	16		20	32 PP
RENO	124.45	290.5	18	41	0					20	30 PP
CHATRA	124.81	95.6	18	44A	3	25	32	3		20	36
BOZEMAN	125.20	301.4	18	42A	0					20	36 PP
MOSCOW	125.58	38.8	18	42	-1				19 22	20	30 PP
UKIAH	125.79	287.7	18	43A	0					20	39 PP
HAWAII V.OB.	125.86	245.6	18	44	1					30	46
NURMIJARVI	125.95	28.5	18	32	-12	25	33	1		20	40 PP
SKALSTUGAN	126.08	20.4	18	43A	-1					20	38 PP
BUTTE	126.14	300.6	18	44A	0					20	35 PP
SHILLONG	126.16	100.7	18	43A	-1					20	39

SHASTA	126.60	289.6	18	44	-1					
PULKOVO	126.78	32.0	18	44	-1	25	27	-8	19 20	20 45 PP
TASHKENT	127.21	70.2	18	46	0	25	39	3		20 48 PP
ARCATA	127.55	288.5	19	51K	64					21 59
HUNGRY HORSE	128.56	301.5	18	48	-1					20 57 PP
HONOLULU	128.80	243.8	18	51K	2					
KIPAPA	128.86	244.0	18	51	2					
KAJAANI	129.75	27.7	18	33	-18					21 4 PP
CORVALLIS	129.98	292.1	18	51	0					21 59
FRUNSE	130.95	72.8								21 14 PP
BAGUIO CITY	130.96	136.6	19	3	10					21 43
KUNMING	131.14	111.6	18	54A	0					21 13 PP
BANFF	131.32	303.1	18	52	-2					
PENTICTON	131.76	298.8	18	37	-18					
SODANKYLA	132.27	24.8	18	37	-19	25	54	5		21 17 PP
TROMSOE	132.70	19.9	18	46	-11					
VICTORIA	132.92	295.6	18	57	0					
GUAM	133.82	168.4	18	59	0					22 19
HONG KONG	133.83	125.9	18	57	-2					21 32 PP
APATITY	133.96	27.6	18	46	-13					
SVERDLOVSK	134.72	50.6	19	2	2				19 35	21 34 PP
HENGCHUN	136.15	133.9								22 15
CHENGTU	136.38	108.8	19	3A	0					21 46 PP
TAINAN	136.87	132.6								21 43
HWALIEN	138.27	133.8								15 11
TAIPEI	139.20	133.0								20 22
LANCHOW	140.64	103.8	19	2	-9					28 45 SKKS
RESOLUTE	140.95	336.9	19	3	-9					22 15
SITKA	143.93	298.4	19	14K	-3					
NANKING	144.34	124.4	19	17A	-1					22 36 PP
ZO-SE	144.49	128.2	19	17A	-1					22 37 PP
YAKUSIMA	147.29	141.7	19	21	-2					
KAGOSIMA	148.34	141.0	19	29K	5					20 10
MIYAZAKI	148.94	142.1	19	35	10					20 14
NAGASAKI	149.19	139.1	19	25	-1					20 11
KUMAMOTO	149.54	140.3	19	32	6					
PEKING	149.77	113.0	19	27A	1					22 51 PP
SAGA	149.80	139.4	19	34	7					
HUKUOKA	150.13	139.2	19	28	1					20 15
OOITA	150.22	141.4	19	30	3					20 12
ULAN-BATOR	150.82	92.1	19	28	0					29 48 PS
KOTI	151.10	144.2	19	34	6					29 35
MATUYAMA	151.14	142.8	19	37	9					23 11
HIROSIMA	151.52	141.8	19	30	1					23 48
TOKUSIMA	151.90	145.5	19	39	9					
TAKAMATU	151.98	144.5	19	36	6					
IRKUTSK	152.13	82.8	19	30	0					29 56 SKKS
SUMOTO	152.25	145.9	19	30	0					20 19
OWASE	152.35	148.3	19	34	4					23 22
COLLEGE	152.79	306.9	19	26A	-5					
ABUYAMA	152.93	146.6	19	32A	1					
KAMEYAMA	153.16	148.2	19	32A	1					23 29
TOYOOKA	153.33	144.8	19	43	11					30 3
OMAESAKI	153.38	151.4	19	36	4					
HIKONE	153.50	147.5	19	42	10					24 1
NAGOYA	153.60	148.8	19	33	1					
GIHU	153.76	148.3	19	39	7					
SHIZUOKA	153.77	151.4	19	37	5					
OSIMA	153.82	153.3	19	37	5					
MISIMA	154.05	152.3	19	33	0					
MERA	154.06	154.0	19	32	-1					
IIDA	154.15	150.0	19	34	1					
HUNATU	154.37	151.7	19	37	4					20 27
KOHU	154.48	151.2	19	37	4					
YOKOHAMA	154.51	153.4	19	34	1					
TOKYO C.M.O.	154.77	153.4	19	47	13					
TITIBU	154.90	152.0	19	38	4					
OIWAKE	155.10	150.8	19	38	4					
KUMAGAYA	155.14	152.4	19	33	-1					
MATUSIRO	155.22	150.0	19	34A	0					23 38 PP
MAEBASI	155.30	151.7	19	34A	0					23 59
NAGANO	155.34	149.9	19	36	2					24 15
TUKUBASAN	155.37	153.7	19	32	-2					27 41 PPP
KAKIOKA	155.40	153.8								19 51
MITO	155.61	154.3								20 3
UTUNOMIYA	155.63	153.0	19	43	8					
WAZIMA	155.65	146.9	19	40	5					
ONAHAMA	156.25	154.7	19	37	2					

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SHIRAKAWA	156.26	153.3	19	36	0						
HUKUSIMA	156.92	153.3	19	44	8					24	20
CHANGCHUN	156.97	119.7	19	35A	-1					23	47 PP
YAMAGATA	157.37	152.7	19	37	0					23	51
ISINOMAKI	157.76	154.5	19	38	0						
MIZUSAWA	158.39	153.6	19	41	3					28	9
MORIOKA	158.94	153.2	19	38	-1						
AOMORI	159.91	151.4	19	48	8					24	45
HAKODATE	160.84	150.3								20	21
MORI	161.06	149.6	19	53	12						
SUTTSU	161.62	148.1	19	48	6						
URAKAWA	161.64	154.5	19	59	17						
SAPPORO	162.17	150.3	19	43	1					24	12
OBIHIRO	162.47	154.7								20	43
TIKSI	164.17	28.7	19	41	-3	26	35	4		24	27 PP
Y.-SAKHLINSK	166.20	148.2	19	46	0					31	8 SKKS
YAKUTSK	168.13	66.6	19	44	-3					24	46 PP
PETROPAVLOVK	173.05	207.7	19	48	-2					31	51 SKKS
KLYUCHI	174.98	237.0	21	28	97					25	19 PP
MAGADAN	178.69	77.0	19	49	-2					25	35 PP

SEPTEMBER 1 18.H 41.M 34.S EPICENTRE -17.97-178.47 DEPTH= 590.KM

A=-0.95146 B=-0.02541 C=-0.30672 D=-0.0267 E= 0.9996
G= 0.3066 H= 0.0082 K=-0.9518 HT= 5.1

DEPTH OF FOCUS= 0.088R

SE= 2.30

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
SUVA	2.95	266.1				2	26	5				
AFIAMALU	7.60	58.8	1	54	-1	3	26	-2				
RAOUL ISLAND	11.23	177.5				4	33	1			4	18
PORT VILA	12.58	269.1	2	45A	1	5	6	10				
KOUMAC	16.49	258.3	4	24K	62	7	15	70				
KARAPIRO	20.56	193.6	4	1	1							
CHATEAU	21.78	192.6	4	9	-2							
BRISBANE	28.08	245.3	5	5	-2							
RABAUL	31.83	292.0	5	37	-2						6	39
CHARTERS TS.	33.37	260.6	5	52	0						8	31
CANBERRA	33.62	232.6	5	55	1							
PORT MORESBY	34.42	279.7	6	2A	2	10	50	1				
MELBOURNE	37.56	230.7	6	27	1							
MOORLANDS	38.00	222.7	6	31K	1						8	30 PCP
FORT NELSON	38.14	221.9	6	32K	1						8	31 PCP
ADELAIDE	41.54	237.3	6	58K	0							
GUAM	47.88	308.2	7	46	-1							
DARWIN	49.13	269.0	7	57	1	14	18	-1				
CAPE HALLETT	54.73	184.2	8	43	7							
MUNDARING	60.04	243.0	9	8A	-4							
SCOTT BASE	60.35	183.6	9	14K	0				11	13		
BYRD STATION	67.19	170.7	9	57	-1							
MATUSIRO	67.92	323.4	10	1A	-1						10	25 PCP
SOUTH POLE	72.14	180.0	10	28	1							
LEMBANG	72.65	268.3	10	31A	1							
MIRNY	73.09	204.7	10	31	-1							
VLADIVOSTOK	75.96	324.9									21	18
BERKELEY	76.62	42.5	10	53	1							
LICK	76.71	43.3	10	54K	2							
NANKING	77.99	309.5	10	59	0							
CHANGCHUN	80.13	322.4	11	10A	0							
EUREKA	81.61	43.9	11	19	1							
TUCSON	81.72	52.4	11	20	2							
TUCSON TELE.	81.85	52.3	11	21	2							
GLEN CANYON	83.36	47.9	11	28	1							
ARGENTINE I.	83.46	157.3	11	27	0							
MAWSON	83.78	199.8	11	28A	-1							
PEKING	83.79	315.4	11	29A	0				13	36		
PENTICTON	84.82	34.2	11	34A	0							
COLLEGE	85.85	12.6	11	37	-2				13	47	12	7
SIAN	86.34	307.6	11	42A	1							
FLAMING GRGE	86.71	45.1	11	33	-10							
KUNMING	87.81	297.1	11	50	2							
CHENGTU	88.76	302.7	11	53	1							
WICHITA MTS.	92.07	54.2	12	8	0							

SHILLONG	97.27	294.4	12 30	-1				
BOMBAY	112.82	283.4					21 50	
SAN JUAN	116.09	77.9	18 0	24				
KAJAANI	130.61	345.2	18 1	-3				
SHIRAZ	132.26	293.9	17 58	-10				
NURMIJARVI	134.40	344.2	18 11	0			20 48	SKP
HELSINKI	134.61	343.8	18 10	-2				
KRAKOW	144.76	339.4	18 31	0			18 54	
RACIBORZ	145.29	341.1	18 35	4			19 12	
SKALNATE PL.	145.38	338.2	18 34	2				
KSARA	145.50	304.0	18 37	5				
COLLMBERG	145.52	347.3	18 32A	0	20 54			
HALLE	145.54	348.5	18 34	2			25 15	
JENA	146.16	348.6	18 36	3				
PRUHONICE	146.40	344.8	18 36A	3				
KEW	146.55	2.1	18 36	3				
JERUSALEM	146.64	300.8	18 38A	5				
BENSBERG	146.78	353.5	18 37A	4				
HURBANOVO	147.21	339.1	19 29	55				
BRATISLAVA	147.31	340.6	18 39A	5				
KASPERSKE H.	147.43	345.2	18 34A	0				
HEIDELBERG	148.12	351.1	18 40	4				
STUTTGART	148.64	350.1	18 36	0				
TUBINGEN	148.91	350.3	18 42	5				
STRASBOURG	149.05	351.9	18 44	7				
PARIS	149.23	358.8	18 45	8				
FOLINIERE	149.24	2.6	18 42	5				
LJUBLJANA	150.00	341.8	18 44A	6				
BASLE	150.11	351.8	18 45A	7				
HELWAN	150.39	299.1	18 45	6				
BESANCON	150.58	353.8	18 46	7				
GARCHY	150.75	357.9	18 47	8			18 56	PKP2
ROSELEND	152.10	350.8	18 50	9				
ATHENS	152.18	320.2	18 49A	8				
CLERMONT-FD.	152.25	357.6	18 50	8				
ISOLA	153.46	351.1	18 43	0			19 8	
TARANTO	153.80	332.1	19 21	37	21 10			
BAGNERES	154.96	2.4					20 24	PKP2
LISBON	157.33	22.1	18 50	2			44 32	SS
BANGUI	158.50	233.1	18 51	1			19 30	

SEPTEMBER 1 18.H 50.M 32.S EPICENTRE 13.87 -92.40 DEPTH= 0.KM

A=-0.04070 B=-0.97036 C= 0.23820 D=-0.9991 E= 0.0419
G=-0.0100 H=-0.2380 K=-0.9712 HT= 6.0

SE= 2.50

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
COMITAN	2.38	6.3	0	36	-5	1	8	-3					
SAN SALVADOR	3.12	93.1	0	52	1	1	31	1					
SANTIAGO MA.	3.84	95.2	1	3	1	1	36	-12					
OAXACA	5.25	307.2	1	28	6	2	49	25			1	55	
MERIDA	7.52	20.3	1	52	-2	3	19	-2			2	16	
PUEBLA	7.57	313.5	2	0	6	3	26	4					
TACUBAYA	8.52	311.1	2	9	2	4	1	15			2	33	
LEON	11.41	310.5	2	48	1						5	49	
GUADALAJARA	12.43	304.5	3	1	0						6	12	
MANZANILLO	12.55	295.8	3	8	5						5	28	
BALBOA HTS.	13.50	109.8	3	13	-2						7	56	PCP
CHINCHINA	18.75	116.5	4	24A	2	7	53	4			8	6	*SS
CHIHUAHUA	19.42	321.5	4	34	4	8	16	12			5	34	
FUQUENE	20.20	112.6	4	39A	0	8	17	-4					
BOGOTA	20.28	115.2	4	40A	0								
LUBBOCK	21.42	338.0	4	53	1								
WICHITA MTS.	21.50	346.0	4	53	1						8	46	
FAYETTEVILLE	22.18	356.2	5	0	1	8	56	-3					
COLUMBIA	22.54	25.3	5	3	0	9	12	6					
ST. LOUIS 1	24.75	4.1	5	24K	0	9	38	-6	5	35			
TUCSON TELE.	24.87	320.7	5	27	2								
TUCSON	24.87	320.4	5	27	2	10	8	21					
CHAPEL HILL	25.02	26.3	5	27	0								
CARACAS	25.12	94.8	5	28A	0	9	55	4					
LAWRENCE	25.13	354.8	5	28	0	10	2	11					

SAN JUAN	25.63	76.4	5 33	0						
BLOOMINGTON	25.75	10.6	5 33	-1	10	5	4			
WASHINGTON	28.38	25.7	5 50	-8						
GLEN CANYON	28.69	326.7	6 2	1					24	45
CLEVELAND	29.09	16.9	6 4A	0	10	54	-2			
LARAMIE	29.65	339.7	6 10	1					9	8
PENNSYLVANIA	29.68	22.6	6 10	0	11	4	-1		7	11 PP
BOULDER CITY	29.83	321.5	6 14	3						
TRINIDAD	30.45	92.5	6 13	-3					9	14 PCP
FLAMING GRGE	30.77	334.4	6 19	0	11	30	8		24	20
HUANCAYO	30.82	145.9	6 18	-2	11	18	-5			
PASADENA	30.86	315.3	6 21K	1	11	35	11		9	16 PCP
FORDHAM	31.37	27.6	6 23	-1	12	33	61			
PALISADES	31.49	27.4	6 24	-1	11	26	-8		7	18 PP
RAPID CITY	31.49	345.0	6 28	2						
SALT LAKE C.	31.73	331.3	6 28	0					9	18 PCP
EUREKA	32.88	325.2	6 36	-2	12	4	9	6 47	8	5 PP
FRESNO	33.45	317.9	6 42	-1						
OTTAWA	34.46	20.9	6 50A	-1						
VINEYARD	34.48	316.6	6 52K	0						
LICK	34.98	317.2	6 57K	1						
STA. CRUZ C.	35.03	316.5	6 57K	1					9	28
RENO	35.14	321.8	6 58	1					8	39
BREBEUF	35.31	23.1	6 58	-1						
BRANNER	35.39	316.9	7 0K	1						
BOZEMAN	35.40	337.2	7 2	3	12	41	7			
CONCORD	35.62	317.8	7 2K	1						
BERKELEY	35.69	317.5	7 2K	0	12	53	14		8	29 PP
SAN FRANCSCO	35.76	317.2	7 3	1						
BUTTE	36.28	336.0	7 8	1	13	16	28			
SHAWINIGAN	36.51	22.9	7 8A	-1						
UKIAH	37.02	318.6	7 17	4						
SHASTA	37.41	321.3	7 15	-1					9	34
FERNDALE	38.50	319.8	6 34	-51						
LA PAZ	38.54	140.7	7 23	-3	13	33	11			
ARCATA	38.56	320.3	7 26	0						
HUNGRY HORSE	38.77	336.9	7 30	2						
HALIFAX	39.24	33.0	7 32A	0						
CORVALLIS	40.34	325.5	7 42	1						
BANFF	41.64	338.1	7 52K	1						
PENTICTON	41.82	333.3	7 54K	1						
HAWAII V.OB.	60.21	284.6	10 10	-2						
RESOLUTE	60.82	359.2	10 16K	0	18	34	1		20	7 SCS
KIPAPA	62.61	287.1	10 26	-2						
HONOLULU	62.69	287.0	10 26	-3	19	4	7			
COLLEGE	63.21	336.8	10 31	-1	19	16	13	10 43	18	6
MBOUR	72.81	79.0	11 33A	1	21	4	6			
SERRA PILAR	76.39	50.6	11 51K	-2					14	47 PP
COIMBRA	76.63	51.5	11 53K	-1						
ABERDEEN	78.64	33.8			21	58	-4		22	58 PS
DURHAM	79.28	36.1	12 11K	2	22	6	-3			
JERSEY	79.84	41.8	12 14	2						
TOLEDO	80.00	51.4	12 12K	-1	22	32	16		15	21 PP
KEW	80.57	39.3	12 15	-1	22	35	13		15	21 PP
GRANADA	80.82	54.0	12 14	-3	22	20	-5		28	26 SS
FOLINIERE	80.96	42.0	12 17	-1						
G. G. VIDELA	81.59	167.7	12 17	-4	22	18	-15			
ARGENTINE I.	81.69	168.4	12 22	1						
ALMERIA	81.77	54.1	12 23A	1	22	39	4		18	49
PARIS	82.88	41.6	12 42	14	22	41	-5		15	56 PP
ALICANTE	83.02	52.3	12 30	2	22	48	1		15	42 PP
TORTOSA	83.24	49.8	12 33	4	22	47	-3			
AFIAMALU	83.28	253.9	12 26	-4						
GARCHY	83.60	43.0	12 31	0					15	48 PP
DE BILT	83.78	38.0	12 36K	4	22	56	1			
CLERMONT-FD.	83.99	44.5	12 33K	0	22	57	0			
SKALSTUGAN	84.09	25.8	12 36A	2						
WITTEVEEN	84.47	37.0	12 38	2						
KHEYS	84.47	4.7							12	37 PCP
MUNSTER	85.26	37.7	12 42	2						
BENSBERG	85.27	38.7	12 40	0	23	6	-4	12 52	13	40
BESANCON	85.53	42.5	12 41	0						
GOTEBORG	85.90	31.4	12 44A	1						
NEUCHATEL	86.24	42.6	12 45	0						
STRASBOURG	86.32	40.9	12 46	1	23	9	-11		13	33
BASLE	86.50	42.0	12 46	0						
KARLSRUHE	86.60	40.4	12 43	-3					23	13 SKP
HEIDELBERG	86.68	39.9	12 47	0						
COPENHAGEN	86.83	33.3	12 48	1	23	16	-9			

ISOLA	87.10	45.3	12	29	-20				16	14 PP
ROSELEND	87.12	43.9	12	45	-4					
TUBINGEN	87.16	40.7	12	49	0					
EBINGEN	87.20	41.1	12	47	-2					
STUTTGART	87.22	40.4	12	49	0	23	29	0	16	14 PP
MONACO	87.49	45.6	12	50	-1					
RAVENSBURG	87.74	41.3	12	52	0					
UPPSALA	87.84	28.3	12	52	0	23	21	-13		
SODANKYLA	87.87	19.8	12	52	0				16	17 PP
JENA	87.94	37.9	12	52	-1	23	40	5	16	20 PP
PAVIA	88.25	43.9	13	16	22				18	14 PPP
COLLMBERG	88.66	37.3	12	56K	0	22	38	-64	16	23 PP
CHEB	88.71	38.5	12	57	1				13	35
PRAGUE	89.95	38.1	13	4	2	23	36	-18		
PRATO	89.97	44.7	12	56	-6	24	0	6		
PADOVA	89.98	43.1	13	5	3	23	40	-14	26	58 SKKS
KAJAANI	90.01	22.3	13	1	-2				16	31 PP
PETROPAVLOVK	90.04	325.2	13	2	-1	23	45	-10	16	37 PP
PRUHONICE	90.05	38.1	13	4	1	23	35	-20	16	36 PP
FLORENCE X.	90.10	44.7	13	8	5	24	3	8		
TIKSI	90.32	347.9				23	36	-21	16	21 PP
NURMIJARVI	90.67	26.1	13	6	0				16	41 PP
HELSINKI	90.97	26.4	13	6	-1					
MAGADAN	91.03	333.0	13	6	-1					
TRIESTE	91.13	42.4	13	8	0			13 20	16	50 PP
LJUBLJANA	91.49	41.8	13	10K	1			13 20	16	50 PP
ROME	91.59	46.2	13	9K	-1	24	1	-8 13 21	16	50 PP
VIENNA-H.	91.82	39.3	13	11	0					
BRATISLAVA	92.30	39.2	13	13	0				16	51 PP
WARSAW	92.85	34.4	13	24	8	23	49	-31	16	57 PP
KRAKOW	93.20	36.7	13	18	1				16	58 PP
PULKOVO	93.45	25.2	13	18	0					
SKALNATE PL.	93.77	37.4	13	28	8				13	36 PCP
BYRD STATION	94.80	184.6	13	22	-3					
MESSINA	95.12	48.8	13	27	1	23	59	-3	17	23 PP
TARANTO	95.46	46.2				24	18	15	37	23
BELGRADE	95.80	41.2	13	33K	4	24	0	-5	17	24 PP
TITOGRAD	96.04	43.8	13	32	2	24	10	3	17	30 PP
YAKUTSK	97.45	341.4	13	35	-2				17	33 PP
MOSCOW	99.03	26.0	13	44	0				24	30
Y.-SAKHLINSK	101.90	325.0							18	6 PP
ISTANBUL KA.	103.15	41.5	13	54	-8	24	32	-10	18	6 PP
SOUTH POLE	103.78	180.0	14	6	1					
CAPE HALLETT	105.36	198.3	14	10	777	23	52	-60	18	26 PP
SCOTT BASE	105.75	192.5	14	20	777				18	27 PP
SVERDLOVSK	106.07	15.0				24	58	3	18	36 PP
TUKUBASAN	109.75	317.0							19	20 PP
KSARA	111.65	44.7	14	43	-233	26	58	99	19	20 PP
IRKUTSK	112.56	349.0	14	43	-235				19	26 PP
GORIS	114.45	34.1	18	42	0				19	38 PP
RABAUL	115.67	272.0	18	44	0				19	40
ULAN-BATOR	116.12	345.7	18	41	-4				19	52 PP
TEHERAN	119.93	33.7	18	53	1	25	59	9		
PEKING	120.15	334.9	18	52	-1				20	15 PP
ASHKABAD	121.60	27.0	18	57	1					
PORT MORESBY	121.62	267.4	18	55	-1					
FRUNSE	122.34	11.3	18	59	2				20	36
TASHKENT	122.53	16.3	18	58	0				20	35 PP
BROKEN HILL	122.81	98.4	18	59A	1					
BULAWAYO	123.48	105.1	18	59	0					
MAWSON	123.93	168.9	18	57	-3			19 9	20	34 PP
ZO-SE	124.86	324.7	19	2K	0				20	48 PP
SHIRAZ	125.07	37.7	19	3K	1				21	49 PP
NANKING	125.43	327.3	19	2K	-1				20	38 PP
SIAN	128.02	337.5	19	8K	0				21	10 PP
LANCHOW	128.03	343.3	19	8K	0					
ADELAIDE	129.53	236.0	19	10A	-1					
QUETTA	131.90	24.2	19	16	0				22	46 PKS
CHENGTU	133.00	340.6	19	18K	0				21	45 PP
LAHORE	133.08	15.6	19	17	-1				22	46 PKS
DEHRA DUN	135.12	11.7	19	18	-4				19	50
CANTON	135.46	325.2	19	24	2				22	1 PP
LHASA	136.62	355.6	19	27K	3				22	3 PP
NEW DELHI	136.62	13.4	19	24	0				22	4 PP
KUNMING	138.53	339.0	19	28K	0				22	19 PP
TANANARIVE	141.31	103.0	19	29	-4					
CHITTAGONG	143.76	353.4	19	36	-1					
NHATRANG	146.37	319.4	19	44	3				23	26 PP

MUNDARING	148.23	230.6	19	41A	-3								
LEMBANG	159.11	287.5	20	3	3								
MEDAN	159.47	326.8										21	6

SEPTEMBER 1 18.H 59.M 35.S EPICENTRE 35.38 139.42 DEPTH= 48.KM

A=-0.62067 B= 0.53157 C= 0.57636 D= 0.6505 E= 0.7595
G=-0.4378 H= 0.3749 K=-0.8172 HT= -0.0

DEPTH OF FOCUS= 0.002R

SE= 3.65

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
YOKOHAMA	0.19	74.2	0	7A	-2	0	15	-1				
TOKYO C.M.O.	0.40	41.5	0	9A	-2	0	18	-2				
AJIRO	0.42	219.0	0	6A	-6	0	12	-8				
HONGO	0.44	40.4	0	9	-3	0	18	-3				
MISIMA	0.46	236.5	0	7K	-5	0	12	-9				
HUNATU	0.55	283.1	0	4	-9	0	9	-14				
MERA	0.57	143.7	0	13K	0	0	24	1				
OSIMA	0.61	183.3	0	11K	-3	0	21	-3				
TITIBU	0.66	335.2	0	9	-5	0	16	-9				
KOHU	0.76	292.8	0	10K	-5	0	17	-10				
KUMAGAYA	0.77	357.5	0	13K	-3	0	24	-3				
SHIZUOKA	0.93	244.4	0	13	-4	0	24	-6				
TUKUBASAN	1.01	33.1	0	17K	-1							
KAKIOKA	1.05	35.7	0	18K	-1	0	32	-1				
MAEBASI	1.06	344.5	0	15A	-4	0	28	-5				
OIWAKE	1.19	323.6	0	19	-2	0	33	-3				
TYOSI	1.21	73.2	0	22K	1	0	41	4				
UTUNOMIYA	1.23	17.1	0	21	0	0	37	0				
OMAESAKI	1.26	232.2	0	20	-2	0	37	-1				
IIDA	1.31	276.7	0	19	-3	0	32	-7				
MITO	1.31	40.1	0	22A	0	0	41	2				
MATUMOTO	1.47	306.8	0	22	-3	0	42	-1				
MATUSIRO	1.52	320.1	0	22	-3	0	40	-4				
MATUSIRO	1.52	320.1	6	21	356							
NAGANO	1.63	322.8	0	24A	-3	0	45	-2				
SHIRAKAWA	1.85	20.1	0	29	-1	0	52	-1				
TAKAYAMA	1.93	294.2	0	29	-2	0	51	-3				
TAKADA	1.96	331.5	0	29	-2	0	57	2				
ONAHAMA	1.97	36.9	0	35	3	0	54	-1				
NAGOYA	2.02	264.8	0	30A	-2	0	53	-4				
GIHU	2.17	271.4	0	32	-2	1	1	1				
TOYAMA	2.23	306.9	0	34	-1	0	58	-4				
HATIDYOZIMA	2.29	172.3	0	37	1	1	7	4				
TU	2.48	255.0	0	41	2	1	7	-1				
KAMEYAMA	2.48	258.6	0	39	0	1	9	1				
HUKUSIMA	2.51	19.3	0	39A	0	1	10	1				
KANAZAWA	2.53	297.9	0	39	0							
NIIGATA	2.56	353.4	0	41	1	1	17	7				
HIKONE	2.60	268.5	0	38	-2	1	9	-2				
TSURUGA	2.75	276.6	0	40	-3	1	13	-2				
AIKAWA	2.80	340.7	0	47	4	1	21	5				
WAZIMA	2.85	315.2	0	43	-1	1	23	5				
OWASE	2.96	244.7	0	49	3	1	25	5				
YAMAGATA	2.96	14.3	0	42	-4	1	26	6				
NARA	3.03	257.7	0	47	0	1	17	-5				
KYOTO	3.04	264.3	0	43	-4	1	26	4				
SENDAI	3.12	21.9	0	47	-1	1	26	2				
ABUYAMA	3.20	262.0	0	46A	-3							
OSAKA	3.28	258.3	0	56	6	1	36	8				
MAIZURU	3.29	272.8	0	51	1	1	34	5				
ISINOMAKI	3.41	26.0	0	51	-1	1	30	-2				
SAKATA	3.53	5.2	0	56	2							
KOBE	3.55	259.9	0	57	3	1	45	10				
SIOMISAKI	3.58	238.5	1	6	12	1	33	-3				
WAKAYAMA	3.68	253.1	0	57	1							
TOYOOKA	3.76	273.6	1	3	6	1	46	6				
SUMOTO	3.85	255.7	1	2	4	1	52	9				
MIZUSAWA	3.99	19.5	1	1	1	1	47	1				
TOKUSIMA	4.20	253.3	0	42	-21							
TOTTORI	4.28	273.3	1	7	3	1	52	-2			2	19
TAKAMATU	4.50	259.3	1	14	6	2	7	8				

MORIOKA	4.53	17.3	1 10	2	2 2	2			
OKAYAMA	4.57	262.8	1 9	1	2 3	2			
MIYAKO	4.72	24.6	1 27	17			2 7		
MUROTO	4.83	245.4	1 27	15	2 27	20			
YONAGO	4.96	272.4	1 27	13	2 27	16			
MATSUE	5.19	272.6	1 29	12	2 42	26			
KOTI	5.20	251.1	1 22	5	2 22	5			
HATINOHE	5.41	17.3	1 25	5	2 42	20			
AOMORI	5.54	10.7	1 27	5	2 44	19			
MATUYAMA	5.69	256.3	1 31	7	2 56	27			
HIROSIMA	5.83	262.1	1 42	16	2 52	20			
MORI	6.77	7.3	1 51	12					
OOITA	6.80	253.9					3 30		
KUMAMOTO	7.67	253.1					2 55		
HUKUOKA	7.68	259.1					3 31		
SAPPORO	7.83	10.4	1 56	2			3 39		
SAGA	7.84	256.9	2 32	38	3 18	-4			
OBIHIRO	8.08	20.1					3 27		
KUSIRO	8.52	25.5					3 30		
CHANGCHUN	13.76	312.1	3 16	2					
ZO-SE	15.85	259.5	3 37	-4	6 47	12			
NANKING	17.49	265.0	3 59	-3	7 24	11			
PEKING	18.96	291.1	4 18	-2	7 51	5			
GUAM	22.34	166.3	4 53	-2			5 17		
CHATRA	45.11	274.2					10 28		
VISHAKHAPTNM	52.52	265.7					10 48		
LAHORE	53.56	285.7	9 14	-4					
MADRAS	57.58	262.9					11 4		
POONA	59.82	272.1					10 37		
QUETTA	59.91	287.4	10 0	-3					
BRISBANE	63.69	166.8					16 58		
SODANKYLA	65.86	337.0	10 40K	-2					
KAJAANI	67.37	333.7	10 47	-5					
NURMIJARVI	70.64	331.6	11 10K	-2					
HELSINKI	70.73	331.2	11 10	-3					
SHIRAZ	71.21	293.3	11 11K	-5	20 0	-28	12 46		
UPPSALA	73.73	333.5	11 28	-2					
EUREKA	78.14	49.9	11 57	2					
KARAPIRO	80.26	151.8	12 8	1					
COLLMBERG	81.72	329.3	12 13	-2			15 21	PP	
KASPERSKE H.	83.09	327.6	12 20	-2					
STUTTGART	85.20	329.5	12 37	5					
WICHITA MTS.	91.71	44.3	12 47	-16			13 20		
WILKES	103.80	191.6					23 23		
SCOTT BASE	114.17	173.9					20 33	PP	
BYRD STATION	126.50	167.7	18 58	0			21 53		

SEPTEMBER 2 0.H 26.M 3.S EPICENTRE 52.18-171.05 DEPTH= 0.KM

A=-0.60820 B=-0.09582 C= 0.78798 D=-0.1556 E= 0.9878
G=-0.7784 H=-0.1226 K=-0.6157 HT= -6.2

SE= 1.68

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S	
COLLEGE	17.42	34.2	4 6	0	7 23	3		5 38	
PETROPAVLOVK	18.36	284.6	4 6	-12	7 43	2			
SITKA	21.08	62.5	4 50	1					
MAGADAN	22.37	304.3	5 5	3					
VICTORIA	30.18	77.7	6 16	1					
PENTICTON	32.11	74.3	6 32A	1					
KIPAPA	32.33	156.9	6 33	0					
YAKUTSK	32.50	311.0	6 34	-1					
BANFF	33.72	69.2	6 51A	5					
SHASTA	34.81	89.6	6 55	0					
HAWAII V.OB.	34.94	153.4	6 56	0	12 27	-1			
MINERAL	35.50	89.5	6 40A	-21				7 21	
HUNGRY HORSE	35.84	72.9	7 5	1				9 32	PCP
BERKELEY	36.61	93.3	7 11	1					
RESOLUTE	36.98	25.4	7 13	0					
RENO	37.09	89.2	7 16	2					
LICK	37.32	93.5	7 17K	1					
BUTTE	37.86	75.4	7 18	-3					
MATUSIRO	38.66	266.6	7 27K	0	13 25	0		9 39	PPP
FRESNO	38.82	92.7	7 30	1					

BOZEMAN	38.95	75.0	7	30	0					
EUREKA	39.49	86.3	7	34	0				9	43 PCP
ABUYAMA	41.37	266.9	7	51A	1					
PASADENA	41.54	94.4	7	47	-4	14	8	0	8	23
CHANGCHUN	42.13	284.8	7	56A	0					
BOULDER CITY	42.39	89.6	8	1	3					
FLAMING GRGE	42.63	79.9	8	0	0				13	39 SCP
GLEN CANYON	43.74	86.0	7	9	-60				12	44
RAPID CITY	44.47	72.3	8	15	0					
LARAMIE	44.70	77.0	8	17	0					
TUCSON	47.34	90.4	8	38	0					
TUCSON TELE.	47.35	90.2	8	39	1					
PEKING	49.85	286.4	8	57	0	16	6	-1		
ULAN-BATOR	50.18	299.9	9	0	0					
LAWRENCE	52.32	72.7	9	31	15					
ZO-SE	52.79	274.4	9	20A	0	16	47	0		
WICHITA MTS.	53.16	78.9	9	22	0	16	53	1	20	48 SS
NANKING	53.59	277.0	9	24A	-1	16	54	-4		
FAYETTEVILLE	54.86	74.7	9	33A	-2					
ROLLA	54.99	71.5	9	32	-4	17	11	-6		
ST. LOUIS 1	55.46	69.8	9	37A	-2	17	19	-4	9	52
BLOOMINGTON	57.22	66.9	9	50A	-2					
SIAN	58.01	285.9	9	58A	1					
OTTAWA	58.74	55.1	10	1	-1					
SHAWINIGAN	59.40	52.5	10	6A	-1					
LANCHOW	59.73	290.8	10	9A	0					
SODANKYLA	60.03	352.2	10	11A	0				10	58 PCP
PENNSYLVANIA	60.86	60.2	10	15	-2	18	31	-3		
SEMIPALATNSK	61.37	316.3	10	18	-2					
REYKJAVIK	61.56	14.8	10	21A	-1					
SIDA	62.46	13.2	10	29K	1					
PALISADES	62.79	57.6	10	29	-1	18	57	-2	12	45 PP
FORDHAM	62.93	57.7	10	29	-2	18	54	-6		
KAJAANI	63.16	350.9	10	28	-4				11	37
SVERDLOVSK	63.36	331.2	10	34	0					
CANTON	63.38	273.8	10	34	0	19	7	1		
HONG KONG	63.45	272.6	10	34	0					
CHAPEL HILL	63.72	64.8	10	35	-1					
COLUMBIA	64.00	67.6	10	37	-1					
SKALSTUGAN	64.55	358.4	10	40A	-2				11	15 PCP
HALIFAX	65.18	48.6	10	44	-2					
NURMIJARVI	66.95	351.6	10	56A	-1					
PULKOVO	67.08	348.5	10	53	-5					
HELSINKI	67.26	351.4	10	57	-2					
UPPSALA	68.10	355.3	11	3	-1				11	29 PCP
KUNMING	68.31	283.2	11	4A	-1	20	6	0		
FRUNSE	69.69	314.4	11	14A	0					
MOSCOW	69.87	343.2	11	14	-1					
GOTEBORG	70.45	358.3	11	18A	-1					
PORT MORESBY	71.03	224.1	11	35	13	20	35	-3		
LHASA	71.70	294.7	11	29A	3					
ANDIJAN	72.36	314.5	11	30	0					
COPENHAGEN	72.46	357.9	11	31A	0					
NAMANGAN	72.48	315.1	11	31	0					
DURHAM	73.06	6.4	11	35A	1					
TASHKENT	73.22	316.9	11	34	-1					
SHILLONG	74.36	291.4	11	41A	-1					
WITTEVEEN	75.35	1.4	11	48A	1					
SAMARKAND	75.56	317.5	11	48A	-1					
CHATRA	76.03	295.7	11	52A	1					
MUNSTER	76.21	0.8	11	54	2					
KEW	76.42	6.0	11	53A	-1					
HALLE	76.66	358.1	11	58	3				14	3
COLLMBERG	76.83	357.4	11	55A	-1				12	57
CHITTAGONG	76.86	289.4				21	39	-4	15	2 *PPP
JENA	77.24	358.3	11	58	0				14	3
KRAKOW	77.72	352.8	12	0	-1				12	21 PCP
RACIBORZ	77.81	353.9	12	3	2				12	9 PCP
CHEB	78.07	357.7	12	3	0				12	41
PRUHONICE	78.10	356.3	12	3A	0				12	46
SKALNATE PL.	78.56	352.5	12	7A	2					
HEIDELBERG	78.79	0.2	12	7	0					
LAHORE	78.97	307.7	12	7	-1					
KASPERSKE H.	78.99	356.9	12	7A	-1					
FOLINIERE	79.10	6.3	12	8	0					
PARIS	79.23	4.3	12	11	2					
STUTTGART	79.42	359.8	12	9	-1					
STRASBOURG	79.61	0.8	12	12	1					
TUBINGEN	79.66	359.9	12	11	0					

VIENNA-H.	79.74	355.0	12 16	4					
BRATISLAVA	79.78	354.5	12 12K	0					
NEW DELHI	79.96	303.9	12 11A	-2					
EBINGEN	80.01	360.0	12 13	0					
RAVENSBURG	80.41	359.5	12 16	1					
BASLE	80.66	0.9	12 24	7					
GARCHY	80.79	4.1	12 19	2					12 28 PCP
SIMFEROPOL	80.84	342.2	12 18A	0					
BESANCON	80.91	2.1	12 18	0					
CHARTERS TS.	81.01	220.2	12 19	1					
NEUCHATEL	81.18	1.4	12 20	1					
TIFLIS	81.44	333.7	12 23	2					
LJUBLJANA	82.03	356.1	12 24A	0					
CLERMONT-FD.	82.30	4.1	12 25A	0					
ROSELEND	82.70	0.9	12 27	0					
QUETTA	83.59	312.4	12 32A	0	22 51	-3	12 43		15 42 PP
ISOLA	84.00	1.4	12 35	1					12 42 PCP
MONACO	84.46	1.1	12 36	0					
SAN JUAN	84.47	67.2	12 36	0					
TEHERAN	84.92	326.6	12 40	1					
BRISBANE	85.33	211.8							23 4
SERRA PILAR	85.82	13.2	12 42K	-1					
ROME	86.24	357.4							24 41
COIMBRA	86.76	13.2	12 47A	-1					
TOLEDO	87.62	10.0	12 52A	0					16 3 PP
CHINCHINA	89.44	82.7	13 2K	1					
POONA	89.94	300.8	13 2	-1					
SHIRAZ	90.03	323.1	13 2A	-1	24 7	12			23 30 SKS
FUQUENE	90.20	80.9	13 5K	1					
CARACAS	90.29	72.5	13 5A	1	24 56	58			
GRANADA	90.34	10.0							28 44 SS
KARAPIRO	90.50	190.6	13 5	0					
KSARA	91.17	337.8	13 12	3					
JERUSALEM	93.28	337.8	13 18A	0					
SCOTT BASE	130.49	186.0	19 11	-2					22 31 SKP
BROKEN HILL	139.25	330.3	19 22	-8					
SOUTH POLE	142.00	180.0	19 29	-5					
ARGENTINE I.	142.15	138.9	19 28	-7					
BULAWAYO	144.54	327.0	19 38	-1					
MAWSON	150.08	218.4	19 53	5					37 0 PPS
PIETERMZBURG	152.43	316.5	20 0	9					
KIMBERLEY	153.79	327.2	19 54	1					

SEPTEMBER 2 10.H 50.M 46.S EPICENTRE -1.90 67.76 DEPTH= 210.KM

A= 0.37834 B= 0.92508 C=-0.03293 D= 0.9256 E=-0.3785
G=-0.0125 H=-0.0305 K=-0.9995 HT= 7.2

DEPTH OF FOCUS= 0.028R

SE= 2.27

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
KODAIKANAL	15.45	38.6									5	17
MADRAS	19.27	39.5	4	5	-5							
POONA	21.17	16.2	4	28	-1							
BOMBAY	21.26	13.3	4	43	13	8	33	24				
TANANARIVE	26.04	228.1	5	13A	-2						6	20
MEDAN	31.38	80.0	6	3A	0							
QUETTA	31.91	358.7	6	7A	-1	11	20	18	6	33	7	43 PPP
LAHORE	33.85	10.1	6	24A	0							
SHIRAZ	34.59	336.2	6	28A	-2	11	59	16			7	45 PP
LHASA	38.46	33.6	7	3	0	12	58	16				
LEMBANG	40.03	98.3	7	17K	1						11	12
STALINABAD	40.28	1.2	7	16	-2							
TEHERAN	40.45	339.3	7	19	0	13	41	29				
BROKEN HILL	40.75	250.0	7	20A	-2							
SAMARKAND	41.37	359.1	7	25	-2							
BULAWAYO	42.31	241.8	7	33A	-1							
ANDIJAN	42.65	5.2	7	37	0							
TASHKENT	43.04	1.7	7	39	-1	14	11	22				
KUNMING	43.25	49.3	7	42K	0	14	10	18				
FRUNSE	44.95	7.1	7	56A	0							
JERUSALEM	45.55	320.1	8	0A	0							
GORIS	45.65	336.7	8	1K	0	14	54	27				

KSARA	46.50	322.7	8 8	0						10 2	PP
CHENGTU	47.33	43.9	8 13K	-1	15	7	16			8 36	
TIFLIS	48.15	336.9	8 21	1							
MAKHACH-KALA	48.25	340.1	7 22	-59							
KIMBERLEY	48.86	232.6	8 33K	7							
BANGUI	49.49	277.4	8 28	-3						10 26	
LANCHOW	50.55	38.2	8 38	-1	15	57	22				
SIAN	52.78	43.2	8 56K	1	16	24	18				
SEMIPALATNSK	53.19	10.0	8 56A	-2							
SIMFEROPOL	55.41	331.5	10 14	60							
NANKING	58.91	50.4	9 39	0	17	45	19			10 2	
ULAN-BATOR	60.20	29.3	9 48	0							
ZO-SE	60.40	52.4	9 49K	0	18	5	19			10 11	
PEKING	60.77	41.2	9 52K	0	18	11	21			10 17	
IRKUTSK	62.14	24.5	10 0	-1							
MOSCOW	62.49	341.3	10 2	-1							
BELGRADE	62.66	323.9	10 14	10						10 41	
DARWIN	63.31	102.8	10 8	0							
LWOW	63.72	330.0	10 12	1							
SKALNATE PL.	65.28	327.8	10 22	1							
NIEDZIKA	65.38	328.1	10 20	-2						10 53	
HURBANOVO	65.66	325.8								11 20	
MAWSON	65.66	182.0	10 22	-2							
BRATISLAVA	66.44	325.6	10 27	-1						10 40	PCP
LJUBLJANA	66.86	322.6	10 30	-1							
MIRNY	66.92	169.3	10 30	-1							
TRIESTE	67.14	322.0	10 33	0							
CHANGCHUN	68.57	41.0	10 42K	0	19	55	29			11 55	
PRUHONICE	68.82	326.3	10 42	-1				11	10		
KASPERSKE H.	68.94	325.2	10 43	-1							
COLLMBERG	70.34	327.0	10 52	0				11	25	13 33	PP
NURMIJARVI	70.58	339.0	10 55	1							
ROSELEND	70.93	319.8	11 1	5							
JENA	70.94	326.2	10 55	-1							
HALLE	71.01	326.9	10 56	0							
STUTTGART	71.27	323.5	10 58	0							
STRASBOURG	72.10	322.8	11 3	0							
KAJAANI	72.14	342.7	10 58	-5							
BESANCON	72.67	321.0	11 8	2							
UPPSALA	72.84	336.1	11 7	0							
MUNSTER	73.62	326.0	11 13	1							
WITTEVEEN	74.51	326.5	11 18K	1							
GARCHY	74.52	320.3	11 17	0							
PARIS	75.42	321.7	11 24	2							
MATUSIRO	75.54	51.6	11 20	-3	21	8	24			11 42	
GRANADA	76.39	308.9	11 31K	4						13 53	
TOLEDO	77.34	311.5	11 36	3							
CHARTERS TS.	78.55	110.0	11 41	2							
PORT MORESBY	79.23	99.1	11 45K	2						15 27	
SERRA PILAR	81.00	312.0	11 49A	-3							
SOUTH POLE	88.11	180.0	12 29	1							
BYRD STATION	98.08	178.7								17 7	
PALISADES	127.94	323.5								38 2	SS
LA PAZ	132.77	245.5	18 56	6							
HUNGRY HORSE	133.70	1.6								21 23	
LARAMIE	140.31	352.1	19 8	4							
FLAMING GRGE	141.06	356.6	19 16	11							
EUREKA	142.44	4.7	19 9	1						22 14	PP
WICHITA MTS.	144.95	340.2	19 16A	4						41 31	SS
BOULDER CITY	146.01	3.8	19 21	7							
PASADENA	147.44	9.2	19 22	6							
TUCSON TELE.	149.69	357.4	19 25	6							
TUCSON	149.78	357.6	19 26	6							

SEPTEMBER 4 3.H 17.M 25.S EPICENTRE 30.27 138.70 DEPTH= 455.KM

A=-0.64996 B= 0.57096 C= 0.50155 D= 0.6600 E= 0.7513
G=-0.3768 H= 0.3310 K=-0.8651 HT= 1.7

DEPTH OF FOCUS= 0.067R

SE= 2.15

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
TORISIMA	1.40	81.0	0	59	1	1	44	-1				

HATIDYOZIMA	2.97	17.9	1	9	2	1 59	-2
OMAESAKI	4.34	354.7	1	21	2		
OSIMA	4.52	7.1	1	20	-1		
SHIZUOKA	4.69	357.0				2 27	0
MERA	4.73	11.3	1	21	-2	2 24	-4
AJIRO	4.78	3.9	1	22A	-1	2 28	-1
TU	4.79	337.9	1	25	2		
MISIMA	4.84	2.4	1	23	-1	2 27	-3
KAMEYAMA	4.94	338.2	1	26	2	2 32	1
NARA	5.02	331.8	1	27	2		
NAGOYA	5.10	343.8	1	27A	1	2 36	2
YOKOHAMA	5.21	8.6	1	29	2	2 34	-2
HUNATU	5.21	0.6	1	28	1	2 37	1
IIDA	5.29	352.3	1	28	0		
ABUYAMA	5.29	330.9	1	28	0		
KYOTO	5.36	332.9	1	30	1		
GIHU	5.37	342.9	1	29	0		
KOHU	5.39	358.8	1	29	0	2 39	0
HIKONE	5.40	338.1	1	33	4	2 45	6
TOKYO C.M.O.	5.47	9.0	1	29	-1	2 38	-3
TITIBU	5.70	3.1	1	31	-1	2 43	-2
TYOSI	5.73	17.8	1	31K	-1	2 44	-1
TSURUGA	5.80	338.3	1	33	0		
KUMAGAYA	5.89	5.4	1	33A	-1	2 47	-1
MATUMOTO	5.99	354.3	1	35	0		
OIWAKE	6.04	358.8	1	36	1	2 50	-1
TUKUBASAN	6.05	10.8	1	33	-3	2 47	-4
KAKIOKA	6.07	11.4	1	33	-3	3 19	27
MAEBASI	6.12	2.8	1	34	-2	2 51	-2
MATUYAMA	6.16	306.8	1	38	1	2 55	2
MATUSIRO	6.27	356.4	1	37A	-1	2 54	-1
MITO	6.27	13.2	1	36A	-2	2 52	-3
UTUNOMIYA	6.34	8.5	1	36	-3	2 50	-7
NAGANO	6.40	356.4	1	39K	0	2 55	-3
ONAHAMA	6.91	14.8	1	44K	-1	3 5	-3
HUKUSIMA	7.60	10.6	1	51	-1	3 15	-6
YAMAGATA	8.08	9.3	1	56A	-1	3 27	-3
SENDAI	8.18	12.2	1	57A	-1	3 27	-5
ISINOMAKI	8.42	14.2	2	0A	-1	3 34	-3
MIZUSAWA	9.06	12.1	2	9	1	3 59	9
AKITA	9.50	6.5	2	14	1		
MORIOKA	9.62	11.5	2	13	-1	4 2	1
AOMORI	10.66	8.6	2	36	10		
HAKODATE	11.63	7.6	2	36	0		
MORI	11.90	6.8	2	41	2		
URAKAWA	12.30	14.4	2	46	3		
KUSIRO	13.48	18.2					
ZO-SE	15.10	277.6	3	10	-3		
NANKING	17.15	281.1	3	32K	-1	6 26	0
CHANGCHUN	17.21	325.5	3	36	2	6 29	2
PEKING	20.79	304.0	4	8	-1	7 28	-1
SIAN	25.45	286.8	5	31K	40		
LANCHOW	29.65	290.5	5	28K	0	9 53	2
CHENGTU	29.84	279.7	5	29K	-1	9 49	-5
KUNMING	32.17	269.7	5	49K	-1		
SHILLONG	41.42	275.3	7	5K	-1		
DARWIN	43.07	191.3	7	19	0	13 7	-5
CHATRA	45.09	278.9	7	35K	0		
CHARTERS TS.	50.59	170.8	7	17	0		
LAHORE	54.51	289.0	8	44	-1		
COLLEGE	56.04	29.6	8	56	0		
QUETTA	60.96	289.8	9	29K	0		
SODANKYLA	70.33	337.6	10	30K	2		
KAJAANI	71.68	334.4	10	33K	-3		
KIRUNA	72.03	339.4	10	37	-1		
SHIRAZ	72.72	294.5	10	41	-1		
NURMIJARVI	74.84	332.1	10	54K	0		
HELSINKI	74.91	331.7	10	55	1		
KARAPIRO	76.08	150.8	11	1	0		
SKALSTUGAN	77.36	338.4	11	7K	-1		
UPPSALA	78.02	333.8	11	10K	-1		
HUNGRY HORSE	78.33	40.6	11	15	2		
GOTEBORG	81.64	334.2	11	29	-1		
EUREKA	81.92	48.9	11	33	2		
WOODY	81.97	53.4	11	34	2		
COPENHAGEN	82.90	332.6	11	36	0		
KSARA	83.22	305.2	11	39	1		
NIEDZIKA	83.61	324.7	11	41	1		
JERUSALEM	84.77	303.7	11	46	0		

	2 48	
	5 29	
	5 48	
	10 56	
	14 16	
	12 17	

FLAMING GRGE	85.25	44.9	11	59	11						13	30
COLLMBERG	85.79	329.3	11	51K	0			13	37			
PRUHONICE	86.02	327.6	11	52	0							
KASPERSKE H.	87.06	327.5	11	56K	-1							
LJUBLJANA	88.77	324.8	12	4K	-1							
STUTTGART	89.28	329.3	12	7	0							
FOLINIERE	93.27	334.3	12	25	0							
WICHITA MTS.	95.78	44.2	12	39	2						13	36
SOUTH POLE	120.10	180.0	17	58	0							
BYRD STATION	121.65	168.4	17	57	-4						20	39

SEPTEMBER 4 9.H 49.M 15.S EPICENTRE 51.58-178.25 DEPTH= 52.KM

A=-0.62366 B=-0.01900 C= 0.78146 D=-0.0305 E= 0.9995
G=-0.7811 H=-0.0238 K=-0.6239 HT= -6.0

DEPTH OF FOCUS= 0.003R

SE= 1.42

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
PETROPAVLOVK	14.19	284.9	3	20A	0								
MAGADAN	19.08	306.8	4	21	0								
COLLEGE	20.55	38.0	4	34	-3	8	31	12			12	16	SCP
YAKUTSK	29.52	311.0	6	0	-2								
KIPAPA	33.98	144.8	6	40	-1								
HONOLULU	34.06	145.0	6	41	-1								
MATUSIRO	34.15	261.1	6	43A	1	12	7	3			7	53	PP
VICTORIA	34.65	72.9	6	47A	0								
PENTICTON	36.54	69.8	7	3A	0								
CORVALLIS	36.61	78.8	7	5A	2								
ABUYAMA	36.87	261.4	7	6A	1								
CHANGCHUN	37.91	281.1	7	14A	0	13	2	0			8	45	PP
BANFF	38.07	65.1	7	15A	-1								
SHASTA	39.30	83.5	7	27A	1								
RESOLUTE	39.42	24.6	7	28	1								
UKIAH	39.71	86.1	7	29	0								
HUNGRY HORSE	40.26	68.4	7	33	-1						9	38	PCP
SAN FRANCSCO	41.02	87.2	7	41	1								
BERKELEY	41.07	86.9	7	40A	0	13	49	0					
CONCORD	41.13	86.6	7	41A	0								
RENO	41.58	83.1	7	45	0								
LICK	41.79	87.1	7	46A	0						8	8	
BUTTE	42.31	70.6	7	50	-1						13	29	SCP
VINEYARD	42.32	87.6	7	50	-1								
FRESNO	43.29	86.4	7	59	0								
BOZEMAN	43.39	70.2	8	0	1	14	26	3					
EUREKA	43.99	80.6	8	5	1	14	42	10			10	9	PP
KHEYS	44.43	348.8	8	9	1	14	43	5					
IRKUTSK	45.58	302.9	8	17A	0								
PEKING	45.67	282.2	8	19A	1	15	1	5			10	3	PP
SALT LAKE C.	45.73	76.4	8	19	1								
PASADENA	45.99	88.0	8	20A	0	15	3	2	8	34	13	55	SCP
ULAN-BATOR	46.53	296.5	8	27	3								
BOULDER CITY	46.88	83.6	8	29	2								
FLAMING GRGE	47.12	74.7	8	27	-2	15	19	2			13	47	SCP
GLEN CANYON	48.25	80.3	8	37	-1						13	40	SCP
GUAM	48.28	231.7	8	34	-4								
ZO-SE	48.34	269.3	8	40	1	15	38	4					
RAPID CITY	48.87	67.6	8	42	-1								
NANKING	49.19	272.1	8	45A	0	15	46	0			10	42	PP
TUCSON	51.83	84.4	9	5	0	16	27	5			11	6	PP
TUCSON TELE.	51.84	84.2	9	5	0								
SIAN	53.81	281.3	9	21A	1	16	54	5			11	25	PP
LANCHOW	55.69	286.4	9	34A	0	17	18	4			10	0	
LUBBOCK	56.45	76.8	9	40	1								
WICHITA MTS.	57.64	73.6	9	46A	-2	17	44	4			21	29	SS
SEMIPALATNSK	58.61	312.7	9	51A	-3								
APATITY	58.83	346.4	9	54	-2								
CANTON	58.92	268.6	9	57A	1	18	0	3					
HONG KONG	58.99	267.3	9	57A	0	18	3	5					
CHENGTU	59.29	281.6	9	59	0	18	5	3			12	11	PP
FAYETTEVILLE	59.30	69.5	9	57A	-2	18	4	2			10	46	PCP
ROLLA	59.38	66.6	9	57A	-3	17	59	-4					
ST. LOUIS 1	59.82	64.9	10	1A	-2	18	8	1					

SODANKYLA	59.90	349.2	10	5A	2						10	51 PCP
MANILA	60.49	255.8	10	6	-1	18	28	11				
BLOOMINGTON	61.51	62.1	10	13A	-1	18	29	-1				
SVERDLOVSK	61.60	327.7	10	14A	-1							
CLEVELAND	62.56	57.2	10	20K	-1							
OTTAWA	62.67	50.7	10	19	-3							
KAJAANI	62.91	347.5	10	22A	-2						11	13 PCP
SHAWINIGAN	63.22	48.2	10	22	-4							
KUNMING	64.04	278.2	10	31	0	19	5	3				
SKALSTUGAN	64.88	354.8	10	35	-1						11	8 PCP
PENNSYLVANIA	64.96	55.5	10	35	-2	19	15	2			11	8 PCP
PULKOVO	66.62	344.7	10	51	4							
NURMIJARVI	66.75	347.9	10	47	-1						11	16 PCP
WASHINGTON	66.78	56.4	10	42	-6							
FRUNSE	66.79	310.1	10	49	1							
PALISADES	66.81	52.9	10	46	-3	19	35	-1			13	15 PP
FORDHAM	66.94	53.0	10	48	-1	19	38	1				
HELSINKI	67.04	347.6	10	49	-1						11	17 PCP
PORT MORESBY	67.67	217.3	10	53A	-1	19	49	3	11	3	11	13 PCP
LHASA	67.80	289.9	10	58A	3	19	54	6				
CHAPEL HILL	67.95	59.8	10	54	-2						19	51
UPPSALA	68.18	351.4	10	56A	-1						11	19 PCP
TACUBAYA	68.29	85.9	10	56	-2							
COLUMBIA	68.30	62.5	10	57	-1	19	55	2				
HALIFAX	68.83	44.1	10	58	-3							
MOSCOW	69.00	339.2	11	2	0							
ANDIJAN	69.47	310.1	11	5	0	20	6	-1				
NAMANGAN	69.61	310.7	11	7	1							
SHILLONG	70.33	286.4	11	10A	0							
TASHKENT	70.46	312.4	11	11	0							
GOTEBORG	70.76	354.2	11	12A	-1						11	33 PCP
CHATRA	72.16	290.7	11	24	3							
COPENHAGEN	72.74	353.7	11	24	-1							
CHITTAGONG	72.76	284.2	11	22	-3	20	46	1			11	45 PCP
SAMARKAND	72.84	312.8	11	25A	0							
STALINABAD	72.88	311.0	11	28	2	20	57	10				
KOUMAC	73.45	197.1	11	28	-1							
DURHAM	73.98	2.0	11	31A	-1							
NOUMEA	74.78	194.7	11	35	-2							
LAHORE	75.67	302.8	11	44	2							
WITTEVEEN	75.89	356.9	11	45	2							
NEW DELHI	76.46	298.9	11	43K	-3							
DE BILT	76.65	357.8	11	49	2	21	35	6				
MUNSTER	76.70	356.3	11	48	0							
HALLE	76.93	353.5	11	49	0							
COLLMBERG	77.05	352.8	11	49A	-1						14	44 PP
LWOW	77.21	345.4	11	50	0							
KEW	77.31	1.3	11	51	0							
DARWIN	77.42	231.0	11	52	0							
JENA	77.52	353.6	11	52	0	21	33	-5			27	18 SS
KRAKOW	77.57	348.1	11	52	0						11	59 PCP
BENSBERG	77.73	356.5	11	53	0						13	38
RACIBORZ	77.75	349.2	11	54	1						12	1 PCP
MAKHACH-KALA	77.81	327.5	11	53	-1							
PRUHONICE	78.23	351.6	11	56A	0						13	55
CHEB	78.31	353.0	11	57	0							
SKALNATE PL.	78.38	347.7	11	58	1						12	6 PCP
KASPERSKE H.	79.16	352.1	12	0A	-1						14	44 PP
HEIDELBERG	79.22	355.4	12	1	0							
SOTCHI	79.67	333.0	12	3	-1							
BRATISLAVA	79.76	349.6	12	5	1						12	21 PCP
VIENNA-H.	79.76	350.1	12	5	1							
TIFLIS	79.82	328.7	12	6	1	22	7	5				
STUTTGART	79.82	354.9	12	5	0						12	46
SIMFEROPOL	79.86	337.3	12	5A	0	22	8	5				
PARIS	79.98	359.5	12	5	-1						18	41
FOLINIERE	80.01	1.5	12	6	0							
TUBINGEN	80.07	355.1	12	6	0							
STRASBOURG	80.08	355.9	12	6	0							
EBINGEN	80.42	355.1	12	7	-1							
QUETTA	80.54	307.2	12	10A	1	22	10	0	12	22	17	8 PPP
RAVENSBURG	80.79	354.6	12	9	-1							
GORIS	81.30	326.7	12	13A	0							
BESANCON	81.48	357.1	12	13	-1							
GARCH	81.51	359.1	12	13	-1						12	56
NEUCHATEL	81.70	356.4	12	15	0							
LJUBLJANA	82.13	351.1	12	16A	-1						12	45
BELGRADE	82.63	346.7	12	21	2	22	28	-3			23	10 PS

BRISBANE	82.66	205.7	12	19	-1							
TEHERAN	82.78	321.3	12	22	2	22	40	7				
MEDAN	82.90	266.8	12	20A	-1							
CLERMONT-FD.	83.02	359.0	12	22A	1							
SOFIA	84.24	344.2	12	27	-1						16	48
ISOLA	84.51	356.2	12	30	1				12	42		
ISTANBUL KA.	84.70	339.6	12	29	-1	22	56	4			15	47 PP
ISTANBUL UN.	84.75	339.7	12	30K	0							
MONACO	84.94	355.9	12	30	-1							
BAGNERES	85.72	1.2	12	35	0							
ROME	86.43	352.0	12	38A	0	23	0	-9			24	28 PS
SERRA PILAR	87.23	7.8	12	42K	0							
TARANTO	87.33	348.2	12	25	-18						21	45
SHIRAZ	87.64	317.6	12	45	1	23	22	2				
COIMBRA	88.16	7.8	12	47	0							
SAN JUAN	88.76	61.6	12	50	0				13	1		
ATHENS	88.77	342.8	12	49	-1							
TOLEDO	88.77	4.5	12	50A	0						23	17
RIVERVIEW	89.20	205.1	12	52K	0	23	38	3				
KARAPIRO	89.30	184.9	12	50	-2							
MESSINA	89.78	349.2	12	53	-1							
KSARA	89.83	332.1	12	54A	-1						16	31 PP
CANBERRA	91.18	206.3	13	1A	0							
ST. KITTS	91.45	59.6	13	3	1							
JERUSALEM	91.93	332.0	13	4A	0							
CHINCHINA	93.94	77.0	13	14	0	23	41	-36				
CARACAS	94.68	66.8	13	19K	2	23	46	-37				
HELWAN	94.82	334.5	13	17	-1							
BOGOTA	95.16	76.0	13	22	3	23	51	2				
ST. VINCENT	95.67	60.7	13	22K	1							
TRINIDAD	97.68	62.2	13	30	-1							
LA PAZ	115.25	84.8	19	0	24							
BANGUI	122.42	339.9	18	51	1				19	1		
CAPE HALLETT	123.86	184.2	18	52K	-1							
SCOTT BASE	129.50	184.1	19	3	-1						21	18 PP
BROKEN HILL	137.19	320.1	19	9	-9							
SOUTH POLE	141.39	180.0	19	20	-6							
BULAWAYO	142.23	316.1	19	24	-3							
PORT STANLEY	143.91	114.3	19	29	-1							
MAWSON	146.85	217.9	19	35A	0				19	45	23	22 PP
PRETORIA	147.30	312.0	19	40	4							
WINDHOEK	148.69	331.9	19	40A	2							
PIETERMZBURG	149.43	304.8	19	30K	-9							
KIMBERLEY	151.42	314.1	19	43A	1							

SEPTEMBER 5 2.H 37.M 33.S EPICENTRE 80.43 -0.96 DEPTH= 0.KM

A= 0.16734 B=-0.00281 C= 0.98589 D=-0.0168 E=-0.9999
G= 0.9858 H=-0.0166 K=-0.1674 HT=-13.7

SE= 3.09

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
KHEYS	9.36	59.8	3	19	60							
TROMSOE	11.88	144.6	2	51	-3							
KIRUNA	13.77	144.4	3	21	2	6	1	7			3	57
SODANKYLA	14.88	135.7	3	36	2	6	39	19				
APATITY	15.57	126.1	3	37	-6							
SKALSTUGAN	17.33	159.9	4	7A	2						4	20 PP
KAJAANI	18.18	137.5	4	12	-4							
RESOLUTE	18.67	304.1	4	16	-6						7	31
NURMIJARVI	21.34	144.0	4	50	-1							
UPPSALA	21.39	153.8	4	49A	-3	8	50	5				
HELSINKI	21.71	143.8	4	54	-1							
PULKOVO	22.67	137.0	5	4K	0	9	11	2				
GOTEBORG	23.17	162.2	5	9	0							
ABERDEEN	23.37	181.6	5	12	1	9	25	4			8	7
COPENHAGEN	25.22	162.0	5	27	-2	10	0	7				
MOSCOW	27.50	130.2	5	50	0							
HALLE	29.36	163.4	6	8	1							
COLLMBERG	29.62	162.1	6	8	-1						7	11 PP
SVERDLOVSK	29.85	103.7	6	11	0							
JENA	29.92	164.0	6	10	-2						8	7
PRUHONICE	31.02	160.4	6	21	-1						7	0
RACIBORZ	31.14	155.9	6	21	-2						6	31 PP

KRAKOW	31.30	153.7	6 24	0					6 30	PP
PARIS	31.77	175.7	6 28	0						
FOLINIERE	31.79	179.4	6 34	6						
KASPERSKE H.	31.81	161.8	6 27	-2						
LWOW	31.86	148.8	6 29	0						
STUTTGART	31.98	167.2	6 29	-1					11 48	
STRASBOURG	32.12	169.1							16 30	
GARCHY	33.31	175.0	6 40	-2					9 29	
COLLEGE	33.73	335.1	6 46	1					7 11	
CLERMONT-FD.	34.82	175.0	6 58	3					8 18	
LJUBLJANA	34.93	161.1	6 55	-1						
YAKUTSK	35.12	38.4	6 58	1	12 32	2				
TRIESTE	35.29	162.0	7 3	4						
BUCHAREST	37.40	147.5							15 37	
BAGNERES	37.49	178.7	7 23	6						
SIMFEROPOL	37.68	138.1							9 30	
ISTANBUL KA.	40.99	144.8	7 46	0					9 20	
MAKHACH-KALA	41.32	123.7	7 43	-6	13 56	-8				
IRKUTSK	41.35	63.8	7 50	1						
TIFLIS	42.18	127.0	7 58	2						
BREBEUF	42.61	262.6	7 59	-1						
ATHENS	43.60	151.4	8 7	-1						
FRUNSE	45.70	95.4	8 27A	2						
ULAN-BATOR	45.97	62.9	8 30	3						
TASHKENT	46.28	101.2	8 31	2	15 25	9				
PALISADES	47.03	261.4	8 14	-21	15 30	3			19 2	SS
ANDIJAN	47.35	98.3	8 40	2						
BUTTE	48.38	299.9	8 45	-1						
RAPID CITY	48.86	290.7	8 42	-7						
KSARA	48.88	138.5	8 47	-3						
STALINABAD	48.88	102.6	8 27	-23						
BLOOMINGTON	50.91	273.4	9 4	-1						
ST. LOUIS 1	52.07	276.9	9 19	5						
LAWRENCE	52.57	281.8	9 16	-2						
CHAPEL HILL	52.85	265.1	9 21	1						
FLAMING GRGE	52.89	295.7	9 18	-2						
ROLLA	53.06	278.3	9 18K	-3	16 31	-20				
SHASTA	54.97	307.6	9 50	15						
SHIRAZ	55.11	121.5	9 37	1						
FAYETTEVILLE	55.21	280.0	9 34A	-3						
EUREKA	55.28	301.4	9 37	-1					11 58	PP
RENO	55.76	305.0	9 55	14						
QUETTA	56.80	106.5	9 50	1						
GLEN CANYON	57.10	296.8	9 49	-2						
WICHITA MTS.	57.27	283.9	9 51	-1	17 46	-1			21 36	SS
LICK	58.17	306.2	10 8A	10						
FRESNO	58.48	304.4	10 10	10						
BOULDER CITY	58.55	299.6	10 2	1						
PASADENA	60.83	302.4	10 16	-1						
TRINIDAD	74.80	242.4	11 47	3						
MEDAN	88.10	79.9							14 20	
MAWSON	151.92	133.0	20 2	12						

SEPTEMBER 5 6.H 13.M 0.S EPICENTRE 38.51 73.17 DEPTH= 104.KM

A= 0.22719 B= 0.75095 C= 0.62005 D= 0.9572 E=-0.2896
G= 0.1795 H= 0.5935 K=-0.7846 HT= -1.1

DEPTH OF FOCUS= 0.011R

SE= 2.09

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
KHOROG	1.65	232.1	0	32	3	0	56	6				
DZERGETAL	1.67	295.8	0	31	2	0	54	3				
FERGANA	2.16	330.5	0	36	1	1	2	1				
GARM	2.30	283.3	0	38	1	1	7	2				
ANDIJAN	2.32	344.9	0	39	2	1	7	2				
OBI-GARM	2.72	275.1	0	42	-1							
NAMANGAN	2.73	335.4	0	44	1	1	17	2				
DUZHANBE	3.45	272.4	0	53	0	1	33	0				
TASHKENT	4.10	314.4	1	1	-1	1	46	-3				
FRUNSE	4.46	13.9	1	7	1	1	57	-1				
RYBACHE	4.56	29.3	1	8	0						1	45
TCHIMKENT	4.66	325.4	1	8	-1						1	44
WARSAK DAM	4.68	196.7	1	9	-1							

SAMARKAND	4.95	285.5	1	12	-1						
FABRICHNAYA	5.24	27.1	1	17	0						
ALMATA	5.55	29.9	1	22	1	2	27	3	2	4	
PRZHEVALSK	5.63	43.5	1	23	1				1	48	
KURMENTY	5.93	39.2	1	26	0						
LAHORE	7.01	171.8	1	39	-2						
DEHRA DUN	9.11	152.3	2	10	0	3	54	3	2	18	PP
QUETTA	9.77	213.6	2	16A	-3	4	5	-2	2	50	*SP
NEW DELHI	10.46	160.1	2	17K	-11	4	0	-23	2	24	PP
ASHKABAD	11.67	271.9	2	40	-4	4	46	-7			
SEMIPALATNSK	12.91	20.7	2	58	-2	5	15	-7			
KIZYL-ARVAT	13.19	278.3	3	0	-4	5	28	-1	3	41	*SP
SEHORE	15.65	166.5	3	31	-4	6	11	-15	3	42	PP
CHATRA	16.55	130.6	3	40K	-7	6	33	-13	3	52	PP
LHASA	17.23	115.6	3	53K	-2	6	59	-2			
TEHERAN	17.58	267.7	4	2	3	7	17	8			
SHIRAZ	19.22	248.8	4	18	0	7	52	7			
BOMBAY	19.54	181.0	4	25	4	7	57	6	8	28	SS
POONA	19.91	178.1	4	25	0	8	2	3	4	52	PPP
MAKHACH-KALA	19.92	291.1	4	24	-1				8	47	PCP
SVERDLOVSK	20.12	339.7	4	26	-1						
SHILLONG	20.39	123.8	4	28	-2	8	5	-3			
HOWRAH	20.53	136.4	4	34	2	8	11	1			
CALCUTTA	20.57	136.4	4	33	1	8	11	0			
GORIS	20.86	281.2	4	33K	-2				4	58	5 8 *SP
TOCKLAI	21.59	116.5	4	35K	-7	8	15	-15			4 50 PP
TIFLIS	21.89	287.4	4	47K	2						8 44
EREVAN	22.20	283.4	4	50	2						8 48 PCP
VISHAKHAPTNM	22.53	154.0	4	54K	3	8	53	7			5 19 PP
CHITTAGONG	22.68	129.8	4	55	2	8	55	6			9 38
LANCHOW	24.47	86.2	5	29	19	9	56	36			
IRKUTSK	25.61	47.3	5	21	0	9	43	4	5	47	
ULAN-BATOR	26.14	58.0	5	26	0	9	52	4			
MADRAS	26.16	164.3	5	31	5	10	5	17			6 14 PP
KYAKHTA	26.33	52.4	5	27	-1				5	56	
CHENGTU	26.48	97.8	5	29	0	9	56	3			5 58
KABANSK	26.90	48.9	5	33	0	10	5	5	5	57	
KUNMING	28.32	109.4	5	45	-1	10	22	-1			10 52
KODAIKANAL	28.42	171.1									11 13
SIAN	28.98	87.3	5	51	-1	10	45	12			7 8
MOSCOW	29.25	317.7	5	53	-1				6	24	6 41 PP
SIMFEROPOL	29.63	295.2	5	57K	0				6	28	10 46
KSARA	30.33	272.7	6	2	-1	10	52	-3			7 8 PP
JERUSALEM	31.58	269.4	6	16	2	11	16	2			
PORT BLAIR	31.91	141.7	6	19	2						
PEKING	33.09	73.6	6	28A	0	11	41	3			6 54
ISTANBUL KA.	33.71	288.6	6	32	-1						
ISTANBUL UN.	33.78	288.5	6	34A	1						7 7
PULKOVO	34.32	322.4	6	37	-1	11	55	-2			7 54 PP
HELWAN	35.42	268.8	6	48	1	12	15	1			
LWOW	36.40	304.4	6	56	0	12	27	-2	7	27	8 16 PP
APATITY	36.47	335.6	6	55	-1	12	28	-2			
KAJAANI	36.98	328.6	6	59	-2						
HELSINKI	37.02	321.8	7	1	0						
NURMIJARVI	37.25	322.2	7	2	-1	12	44	2			8 24 PP
CANTON	37.46	102.4	7	3	-2	12	42	-3			
NANKING	37.48	85.7	7	5	0	12	47	2			
SOFIA	37.63	292.7	7	7	1						
WARSAW	38.28	308.4	7	11	0	13	1	4			8 38 PP
ATHENS	38.46	285.1	7	14K	1						7 44
HONG KONG	38.53	102.7	7	15	2	13	1	0			
TIMISOARA	38.62	297.9	7	12	-2						16 30
SODANKYLA	38.69	333.3	7	14	-1						
SKALNATE PL.	38.89	303.5	7	18	2						
KRAKOW	39.04	304.9	7	18	0	13	5	-4			8 47
CHANGCHUN	39.07	65.0	7	18A	0	13	10	1			7 48
CHORZOW	39.63	305.4	7	23	0						9 23 PPP
ZO-SE	39.74	85.7	7	24A	0	13	22	3			7 52
RACIBORZ	40.15	305.1	7	54	27						9 3 PP
HURBANOVO	40.39	301.7									9 55 PPP
UPPSALA	40.59	320.2	7	30K	0	13	37	5			9 3 PCP
KIRUNA	41.07	332.6	7	34	0	13	41	2			9 10 PCP
BRATISLAVA	41.08	302.3	7	34	0						9 12 PP
YAKUTSK	41.35	36.6	7	36	-1	13	40	-3			
VIENNA-H.	41.55	302.5	8	44	66	13	53	7			
MEDAN	41.83	139.9	7	57	16						
PRUHONICE	42.50	305.3	7	48	2						9 31 PP
KHEYS	42.62	356.4				14	5	3			17 0 SS

LJUBLJANA	43.18	299.6	7	52K	0					9	32	PP
KASPERSKE H.	43.25	304.2	7	53K	1							
COPENHAGEN	43.25	313.9	7	52K	0	14	12	1	8 23	9	40	PP
TIKSI	43.26	22.5	7	56	4	14	11	0		17	24	SS
COLLMBERG	43.31	307.4	7	53K	0	14	29	17		10	25	PP
GOTEBORG	43.44	316.8	7	52K	-2							
SKALSTUGAN	43.51	325.4	7	54K	0					9	35	PP
TRIESTE	43.79	299.2	7	56	-1	14	23	4	8 28	9	41	PP
HALLE	43.94	307.9	7	58	0	14	27	6				
JENA	44.25	307.1	8	0	0	14	30	5		9	25	PP
MESSINA	44.53	288.4	8	2	-1	14	30	1	8 8	8	44	PP
PADOVA	45.13	299.3	8	8	1	14	46	8		9	43	PP
ROME	45.63	294.4	8	8	-3	14	48	3		10	2	PP
FLORENCE X.	45.97	297.3	8	8	-6	14	55	5				
STUTTGART	46.10	304.5	8	15	0	14	57	5		10	5	PP
TUBINGEN	46.29	304.2	8	16	0							
HEIDELBERG	46.33	305.4	8	17	0							
EBINGEN	46.43	303.7	8	18	0							
MUNSTER	46.52	309.1	8	19	1							
WITTEVEEN	46.95	310.4	8	22	0							
BENSBERG	46.99	307.8	8	22	0					10	4	PP
STRASBOURG	47.12	304.5	8	23	0	15	11	5		10	15	PP
BASLE	47.49	303.2							8 32			
DE BILT	47.98	309.7	8	32	2	15	20	2		10	23	PP
ROSELEND	47.99	300.5	8	34	4							
NEUCHATEL	48.04	302.6							8 30			
MANILA	48.32	105.9								11	46	PP
BESANCON	48.61	303.2	8	34	-1							
MONACO	48.64	298.3	8	35	0					9	5	
OKHA	48.74	48.1				15	32	3	9 2			
ISOLA	48.76	299.0	8	36	0					9	7	
ABUYAMA	49.33	73.9	8	39A	-1							
Y.-SAKHLINSK	50.23	56.5	8	47	0	15	47	-3				
PARIS	50.44	306.0	8	49	0					9	18	PP
GARCHY	50.51	303.9	8	48	-1					9	18	PP
MATUSIRO	50.64	70.8	8	48A	-2	15	46	-9		9	28	
CLERMONT-FD.	50.93	302.1	8	52	0							
ABERDEEN	51.05	317.4				16	3	2		20	15	
DURHAM	51.32	314.3	8	54K	-1	16	4	-1	9 25	12	39	
KEW	51.45	309.9	8	56	0	16	9	3		9	27	
MAGADAN	51.74	39.3	9	0	2	16	10	-1				
TUKUBASAN	52.17	70.4	8	58A	-4							
FOLINIERE	52.33	306.7	9	2	-1							
BAGNERES	53.86	299.8	9	16	2							
PETROPAVLOVK	57.90	45.3	9	48	5							
TOLEDO	58.02	297.8	9	45	1					10	16	
ALMERIA	58.24	293.9	9	44K	-1	17	44	7		10	36	PCP
GRANADA	58.90	294.8	9	50K	0	17	49	3		13	35	PPP
BANGUI	59.95	249.8	9	57	0					11	55	PP
SERRA PILAR	60.58	300.9	10	5A	3					12	29	PP
COIMBRA	60.89	299.9	10	3K	-1							
LISBON	62.08	298.7	10	46A	34							
BROKEN HILL	67.26	227.6	10	59	14							
BULAWAYO	71.76	224.0	11	11	-1							
COLLEGE	72.07	17.1	11	13	-1					12	23	
DARWIN	73.86	120.8	11	27	2					13	52	
KIMBERLEY	80.75	221.7	12	20	17					12	40	
PORT MORESBY	83.51	107.3	12	19	2	22	31	2		23	21	PS
SHAWINIGAN	89.99	337.3	12	49A	0							
BANFF	90.37	5.5	12	50	0							
PENTICTON	91.82	8.3	12	58	1							
HUNGRY HORSE	93.29	4.8	13	4	0							
PALISADES	95.34	335.6	13	59	46					17	3	PP
FLAMING GRGE	100.91	2.0	13	44	6							
EUREKA	101.94	7.2	13	44	1					17	52	PP
GLEN CANYON	104.77	3.9	14	6	11							
WOODY	105.33	10.1	18	19	777							
WICHITA MTS.	106.74	352.9	14	12	777	24	32	-1		27	30	PS
SCOTT BASE	128.05	164.4	18	54	0							
LA PAZ	139.68	292.0	19	18	3							

SEPTEMBER 5 11.H 34.M 32.S EPICENTRE 59.82-150.83 DEPTH= 0.KM

A=-0.44117 B=-0.24623 C= 0.86298 D=-0.4874 E= 0.8732
G=-0.7536 H=-0.4206 K=-0.5052 HT= -8.9

SE= 3.37

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
COLLEGE	5.26	14.2	1	23	2	2	38	14					
SITKA	8.60	102.1	2	4	-4								
VICTORIA	19.47	113.3	4	26A	-5								
SEATTLE	20.62	113.5	4	45	2	8	46	17					
PENTICTON	20.72	106.6	4	39A	-5								
BANFF	21.55	98.0	4	52A	-1								
CORVALLIS	22.51	120.4	5	3	1								
HUNGRY HORSE	24.11	101.9	5	18	0								
RESOLUTE	24.88	31.6	5	27K	2						9	5	PCP
ARCATA	25.22	126.8	5	43	15	9	51	4					
KLYUCHI	25.32	283.5	5	31	2								
FERNDALE	25.40	127.4	6	0	30						10	40	
SHASTA	26.06	124.5	5	38	2								
BUTTE	26.44	104.3	5	40	0								
UKIAH	27.05	127.6	5	48	3	10	12	-1					
BOZEMAN	27.44	103.1	5	49	0	10	29	0					
RENO	28.12	122.3	5	56	1						7	24	
PETROPAVLOVK	28.14	278.7	5	54	-1	10	30	-10			6	42	PP
CONCORD	28.51	127.2	5	59	0								
BERKELEY	28.52	127.5	5	59K	0	10	48	2	6	16			
SAN FRANCSCO	28.53	127.9	5	58	-1								
MAGADAN	28.64	295.2	6	1	1	10	48	0					
LICK	29.22	127.2	6	6K	1				6	23	7	24	
VINEYARD	29.84	127.5	6	11	0								
EUREKA	29.85	117.3	6	11	0	11	0	-7	6	25	7	10	PP
FRESNO	30.46	125.3	6	17	1								
SALT LAKE C.	30.72	110.7	6	19	1	11	21	0					
FLAMING GRGE	31.77	107.7	6	26	-2				6	38			
TIKSI	32.28	324.2	6	30	-2	11	39	-7			7	49	PPP
BOULDER CITY	33.25	119.6	6	43	2								
LARAMIE	33.34	103.2	6	41	0								
PASADENA	33.39	125.6	6	42K	0	12	4	1	7	1	8	6	PP
GLEN CANYON	33.89	114.7	6	47	1				6	59	11	27	
YAKUTSK	36.43	308.7	7	7	-1	12	37	-13			8	33	PCP
TUCSON TELE.	38.14	118.0	7	23	1								
TUCSON	38.17	118.2	7	23	1						9	5	PP
KIPAPA	38.70	190.7	7	29	2						7	53	
UGLEGORSK	38.79	284.8	7	28	0	13	26	0			9	29	PP
HONOLULU	38.83	190.8	7	30	2	13	30	4					
KHEYS	38.86	352.7	7	28	0	13	23	-4			9	16	PPP
Y.-SAKHLINSK	39.87	281.9	7	37	0	13	37	-5			9	14	PP
LAWRENCE	40.26	95.7	7	38	-2								
HAWAII V.OB.	40.47	186.5	7	43	1	13	46	-5					
LUBBOCK	41.25	107.2	7	48	0								
WICHITA MTS.	41.92	102.9	7	53	0	13	59	-14			9	37	PP
ROLLA	42.77	93.7	7	58A	-2	14	14	-11	8	10			
FAYETTEVILLE	43.02	97.4	8	0A	-2						9	48	PCP
ST. LOUIS 1	43.04	91.5	8	0	-3	14	20	-9					
CHIHUAHUA	43.38	115.7	8	11	6	14	25	-9			9	51	PP
BLOOMINGTON	44.51	87.8	8	13A	-2	14	42	-8	8	25			
OTTAWA	45.26	73.5	8	18A	-3								
CLEVELAND	45.28	81.6	8	9A	-12								
SHAWINIGAN	45.84	70.3	8	23A	-2								
BREBEUF	46.20	71.9	8	26	-2								
PENNSYLVANIA	47.62	79.3	8	38	-1	15	28	-7	8	56	10	28	PP
TUKUBASAN	49.18	273.6	8	50A	-1	15	52	-5	9	0	11	48	PPP
PALISADES	49.41	76.1	8	51	-2	15	55	-5	9	8	11	5	PP
WASHINGTON	49.46	80.3	8	53	-1	15	57	-4			10	57	PP
FORDHAM	49.55	76.2	8	52	-2	15	56	-6					
MATUSIRO	49.88	275.5	8	56A	-1	16	4	-3			10	58	PP
REYKJAVIK	50.49	26.3	9	14	13								
CHANGCHUN	50.60	291.4	9	1A	-1	16	9	-8	9	15			
TROMSOE	50.63	4.6	9	1	-1								
COLUMBIA	51.30	87.5	9	6	-2	16	18	-8					
HALIFAX	51.57	65.6	9	8	-2								
SIDA	51.63	24.6	9	22	12								
ABUYAMA	52.52	276.3	9	16A	-1								
APATITY	52.89	357.9	9	17	-3	16	42	-6					
IRKUTSK	53.04	312.0	9	20	-1	16	45	-5	9	32			
SODANKYLA	53.10	1.2	9	19	-2	16	44	-7			17	14	
TACUBAYA	54.48	114.6	9	35	4	17	5	-5			12	34	
ULAN-BATOR	55.50	307.1	9	38	-1	17	23	0					
VERA CRUZ	56.08	111.6	9	48	5	17	36	5			12	4	PP
SKALSTUGAN	56.25	9.0	9	42K	-2						10	24	
KAJAANI	56.41	0.8	9	43	-2						19	50	SCS

OAXACA	57.67	113.5				17	52	0				
MERIDA	57.71	104.3	9	54	0							
PEKING	57.82	295.0	9	54A	-1	17	48	-6	10	8	19 40	SCS
BERGEN	58.69	13.6	9	58	-3							
NURMIJARVI	59.95	2.6	10	7	-3	18	16	-6			18 42	PS
HELSINKI	60.30	2.4	10	11	-1							
UPPSALA	60.33	6.7	10	10K	-3	18	19	-7			20 0	SCS
PULKOVO	60.74	359.3	10	13	-2	18	27	-5	10	26	14 4	PPP
ABERDEEN	60.76	18.9	10	31	15	18	38	6			10 46	PCP
SVERDLOVSK	61.05	340.9	10	16	-1	18	31	-5	10	28	18 51	PS
GOTEBORG	62.04	10.3	10	25	1						39 44	PKPPKP
SEMIPALATNSK	62.61	325.9	10	26	-2	18	50	-5				
ZO-SE	62.69	285.2	10	28A	-1	18	52	-4	10	42	19 22	*SS
NANKING	63.07	287.8	10	30A	-1	18	58	-3	10	44	12 53	PP
DURHAM	63.15	19.4	10	30	-1	19	3	1			13 9	PP
COPENHAGEN	64.08	10.4	10	48	10	19	12	-2			13 7	PP
MOSCOW	64.60	354.7	10	40	-1	19	17	-3	10	53	13 5	PP
GUAM	65.68	254.4	10	46	-2							
SIAN	65.86	296.7	10	49A	0	19	33	-3				
WITTEVEEN	66.26	14.7	10	54	2							
KEW	66.53	19.6	10	55	2	19	43	-1			13 29	PP
LANCHOW	66.59	301.6	10	52A	-2	19	38	-7				
DE BILT	66.77	15.8	11	10	15	19	58	11			12 34	
MUNSTER	67.21	14.3	10	58	0							
WARSAW	68.11	5.4	11	3	0	19	56	-7			13 26	PP
BENSBERG	68.15	14.8	11	3	-1	19	54	-9			13 36	PP
HALLE	68.16	11.5	11	3	-1	20	0	-3				
JERSEY	68.42	21.5	11	15	10	20	27	20				
COLLMBERG	68.46	10.8	11	4K	-2						13 44	PP
JENA	68.69	11.8	11	5	-2	20	4	-6	11	17	13 52	PP
FOLINIERE	69.11	20.5	11	8	-2							
PARIS	69.57	18.5	11	16	4						14 2	PP
CHEB	69.61	11.4	11	24	11						13 39	
PRAGUE	69.81	10.1	11	25	11	20	38	15				
HEIDELBERG	69.87	14.1	11	13	-1						11 26	PCP
PRUHONICE	69.91	10.0	11	13	-2	20	46	22			14 3	PP
CHORZOW	69.94	6.9	11	14	-1						11 34	PCP
ALMATA	70.04	324.9	11	16	1	20	23	-3			15 24	PPP
RACIBORZ	70.10	7.5	11	15	-1	20	23	-3	11	28	13 51	PP
KARLSRUHE	70.22	14.4	11	21	5	20	49	21				
KRAKOW	70.23	6.3	11	16	0	20	24	-4	11	28	11 41	PCP
STRASBOURG	70.56	14.9	11	18	0	20	47	15			14 6	PP
STUTTGART	70.56	13.8	11	18	0	20	29	-3			14 5	PP
LWOW	70.64	3.5	11	19	0	20	30	-3			11 31	PCP
KASPERSKE H.	70.67	10.8	11	19A	0						14 14	PP
TUBINGEN	70.77	14.0	11	19	-1						11 32	PCP
CHENGTU	71.09	298.5	11	21A	-1	20	33	-5				
EBINGEN	71.10	14.1	11	22	0						11 34	PCP
FRUNSE	71.11	326.3	11	21	-1	20	35	-3			11 41	PCP
SKALNATE PL.	71.12	6.2	11	27A	5						14 16	PP
GARCHY	71.15	18.5	11	17	-5						14 13	PP
ANGRA DO HO.	71.47	43.5	11	34A	10				11	45	11 53	PCP
BASLE	71.56	15.2	11	25A	0	20	39	-4				
RAVENSBURG	71.58	13.8	11	24	-1						11 36	PCP
BESANCON	71.62	16.4	11	25	0							
SAN JUAN	71.66	85.0	11	22	-3				11	34		
VIENNA-H.	71.78	9.0	11	14	-12	21	5	19				
BRATISLAVA	71.92	8.5	11	27A	0	21	0	12			14 25	PP
NEUCHATEL	72.00	15.8	11	38	11						21 11	
HURBANOVO	72.30	7.7				21	10	18			11 44	PCP
CHUR	72.48	14.0	11	31	1				11	43		
CLERMONT-FD.	72.63	18.8	11	43A	12	21	14	18				
BUDAPEST	72.74	7.2	11	35	4	20	50	-7				
CANTON	73.19	286.9	11	34A	0	20	57	-5			21 29	*SS
HONG KONG	73.45	285.8	11	35A	-1	21	1	-4				
GALERAZAMBA	73.49	97.0	11	46	10	21	7	2				
ROSELEND	73.57	15.6	11	33	-3							
LJUBLJANA	73.81	10.6	11	37	-1				11	55	14 29	PP
TASHKENT	73.94	329.7	11	38	-1	21	5	-5			14 31	PP
PAVIA	74.08	14.6	11	43	4	20	48	-24			17 8	
TRIESTE	74.13	11.2	11	41	1	21	7	-6	11	57	14 36	PP
ZAGREB	74.17	9.5	11	39	-1							
PADOVA	74.17	12.6	11	52	12	21	28	15			14 43	PP
ST. KITTS	74.24	82.7	11	38	-2							
TIMISOARA	74.59	5.8	11	57	15	21	36	18				
SERRA PILAR	74.71	28.7	11	43A	0	21	19	0	11	55	14 33	PP
BAGNERES	74.73	21.6	11	43	0							
ISOLA	74.78	16.3	11	44	1							

MONACO	75.27	16.1	11	47	1	21	30	5			
AFIAMALU	75.40	201.0	11	46	-1						
BELGRADE	75.47	6.4	11	49K	2	21	23	-4		21	44 SKS
SIMFEROPOL	75.51	356.4	11	46A	-2	21	23	-5		14	50 PP
COIMBRA	75.63	28.8	11	49	1	21	26	-3		12	1 PCP
FLORENCE X.	75.71	13.3	11	48	-1	22	7	37			
BUCHAREST	76.09	2.3	11	50A	-1	21	30	-4		12	2 PCP
KUNMING	76.42	296.6	12	0	7	21	33	-5		21	59 *SS
MANILA	76.50	275.9	11	50	-3						
LISBON	76.85	29.9	11	55A	0	21	31	-12		12	7 PCP
TOLEDO	76.95	25.6	11	56	0	21	42	-2		14	56 PP
TORTOSA	76.97	21.9	12	9	13	21	58	14			
LHASA	77.45	308.1	12	0A	2	21	47	-2		14	51 PP
ROME	77.71	12.7	12	0A	0	21	51	-1	12 13	15	9 PP
SOFIA	77.73	4.4	12	2	2	21	47	-5			
RABAUL	77.78	238.8	12	0	0						
TITOGRAD	77.78	7.5	12	13	13	21	49	-4		22	28 PS
CARACAS	77.94	89.9	11	59K	-2	22	8	14			
TIFLIS	78.00	348.1	12	2	1	21	52	-3		22	7 SKS
CHINCHINA	78.30	100.4	12	2	-1	21	50	-8		15	11 PP
TOCKLAI	78.48	303.8	12	4	0						
ST. VINCENT	78.51	83.7	12	2	-2						
FUQUENE	78.82	98.4	12	3	-3					15	20 PP
KIZYL-ARVAT	78.83	338.8	12	7	1	22	3	-1		12	20 PCP
ALICANTE	79.16	23.3	12	18	10	22	26	19		15	14 PP
HONIARA	79.33	229.5	12	9	0						
BOGOTA	79.38	99.2	12	9	0	22	4	-6		27	9 SS
ISTANBUL KA.	79.47	0.1	12	8	-1	22	8	-3		15	17 PP
ISTANBUL UN.	79.50	0.1	12	9K	-1	22	8	-3			
GRANADA	79.63	26.1	12	17K	7	22	38	26		15	20 PP
ASHKABAD	79.64	336.9				22	13	1		15	3 PP
GORIS	80.03	346.6	12	12	0	22	12	-4		12	28 PCP
WARSAK DAM	80.19	325.4	12	11	-2						
ALMERIA	80.20	25.3	12	14	1	22	33	15		15	29 PP
TRINIDAD	80.60	85.1	12	13	-3						
SHILLONG	80.73	305.6	12	15A	-1						
CHATRA	81.48	310.0	12	20A	0	22	28	-3		15	25 PP
DEHRA DUN	81.59	318.8	12	30	9	22	27	-6		15	27 PP
LAHORE	81.65	322.3	12	20	-1						
MESSINA	81.69	10.8	12	31	10	22	32	-2		15	39 PP
ATHENS	82.46	4.3	12	25	0						
TEHERAN	83.03	341.9	12	28	0	22	48	1			
NEW DELHI	83.48	318.8	12	25A	-5	22	39	-13		15	33 PP
PORT MORESBY	84.61	241.1	12	37	1	22	59	-4		16	5 PP
QUETTA	85.07	327.8	12	38A	-1	22	59	-9	12 51	15	55 PP
KSARA	86.54	354.4	12	45	-1	23	17	-5	12 58	16	11 PP
JERUSALEM	88.60	354.8	12	56K	0					16	24 PP
SHIRAZ	88.80	339.8	12	56A	-1	23	14	-29	13 16	24	27 SP
HELWAN	90.63	358.1	13	4	-1	23	49	-11			
VISHAKHAPTNM	91.21	309.4								23	35
PORT BLAIR	92.69	298.6	13	27	12						
POONA	93.91	318.0	13	20	0						
BOMBAY	93.91	319.1	17	20	240						
CHARTERS TS.	94.50	237.1	13	23	0	23	56	-38			
MEDAN	97.06	289.6									
BRISBANE	98.41	228.5	13	35	-6	24	42	23		25	29
LA PAZ	100.49	104.6	14	8	18					24	48 SKKS
LEMBANG	101.68	276.6	18	5A	249						
RIVERVIEW	104.80	226.9	14	15	6	25	15	26		26	10
CANBERRA	106.93	227.9	18	58	777						
SANTIAGO	113.65	115.9								16	25
BANGUI	115.45	11.7	18	56	12					19	11 SPKP
CAPE HALLETT	134.55	195.6	19	14	-6					22	45 PKS
BROKEN HILL	134.70	0.9	19	6	-14						
SCOTT BASE	139.85	192.8	19	20	-10					22	30 PP
ARGENTINE I.	140.36	138.8	19	23	-8						
BULAWAYO	140.36	0.8	19	29	-2						
WINDHOEK	141.81	18.2	19	28	-5						
WILKES	145.11	224.2	19	38	-1					41	48 SS
PRETORIA	145.94	1.6	19	41	1						
KIMBERLEY	148.79	7.4	19	48	3						
SOUTH POLE	149.65	180.0	19	43	-3						
PIETERMZBURG	149.79	357.9	19	52	5						
GRAHAMSTOWN	153.43	4.9	19	27	-25						
MAWSON	163.37	228.0	20	2	-2				20 16	24	46 PP

SEPTEMBER 6 8.H 14.M 14.S EPICENTRE 2.97 126.05 DEPTH= 0.KM

A=-0.58765 B= 0.80748 C= 0.05145 D= 0.8086 E= 0.5884
G=-0.0303 H= 0.0416 K=-0.9987 HT= 7.1

SE= 3.12

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
MANILA	12.62	337.4	3	23	19	5	54	28					
DARWIN	15.97	162.8	3	46	-2								
NHATRANG	19.04	299.8	4	27	1	8	20	24					
LEMBANG	20.81	242.1	4	49K	3	8	36	2					
GUAM	21.21	59.5	4	36	-14								
HONG KONG	22.41	330.0	5	3	1	8	53	-11					
CANTON	23.49	329.5	5	13A	1	9	18	-5					
PORT MORESBY	24.36	120.5	5	13	-8	9	34	-4					
MEDAN	27.33	272.0	5	46	-3	10	14	-14			9	44	
CHARTERS TS.	30.31	140.0	6	14	-1						12	49	
KUNMING	31.44	316.6	6	26	1								
CHENGTU	34.53	325.2	6	50	-2	12	11	-10					
SIAN	34.98	334.8	6	55A	-1	12	22	-6					
MATUSIRO	35.24	17.1	6	58A	0	12	26	-6			9	28	PCP
MUNDARING	35.98	194.3	7	0	-5								
PEKING	37.96	347.6	7	21	0	12	53	-21					
LANCHOW	38.80	330.7	7	28A	0	13	27	0					
ADELAIDE	39.57	163.6	7	34K	-1	13	27	-11			9	39	PCP
BRISBANE	39.69	141.2	7	36	0	13	32	-8					
SHILLONG	39.80	307.6	7	34K	-3								
CHANGCHUN	40.69	359.2				13	43	-12					
LHASA	42.48	312.3	7	59A	0								
CANBERRA	43.75	152.5	8	8A	-1						9	54	PP
CHATRA	44.12	306.3	8	11K	-1						9	55	
MELBOURNE	44.22	158.4	8	12	-1								
FORT NELSON	49.57	159.5	8	54	-1								
NEW DELHI	52.95	303.9	9	11K	-10						10	21	
LAHORE	56.29	306.3	9	41	-4								
YAKUTSK	58.98	2.0	10	0	-4	18	0	-10					
MAGADAN	59.59	14.3	10	7	-1								
ANDIJAN	61.13	315.7	10	16	-3								
KARAPIRO	61.22	136.7	10	17	-2								
QUETTA	61.97	302.7	10	20	-4								
STALINABAD	62.93	312.2	10	26	-5								
TASHKENT	63.51	315.3	10	31	-3						23	56	
SAMARKAND	64.60	312.9	10	38	-4								
SHIRAZ	74.23	299.8	11	36A	-5								
HAWAII V.OB.	78.35	70.9	12	6	2								
CAPE HALLETT	80.21	167.5	12	12K	-2								
TIFLIS	81.49	311.6	12	19	-2								
MAWSON	82.80	200.2	12	23A	-5								
KHEYS	83.56	351.2	12	31A	0								
SCOTT BASE	83.68	172.0	12	29K	-3								
COLLEGE	85.68	25.3	12	41	-1						13	39	
MOSCOW	86.67	325.5	12	43	-4								
PULKOVO	90.35	329.8	13	1	-3								
SODANKYLA	90.90	337.6	13	5	-2								
KAJAANI	91.00	334.2	13	5	-2								
HELSINKI	92.94	330.6	13	13	-3								
SOUTH POLE	92.95	180.0	13	13	-3								
NURMIJARVI	93.03	330.9	13	14	-3								
TROMSOE	93.14	340.4	13	14	-3								
UPPSALA	96.59	331.2	13	30A	-3								
BYRD STATION	97.05	170.8	13	32	-3								
SKALSTUGAN	97.70	335.6	13	35	-3								
BULAWAYO	97.99	250.2	13	35	-4								
PRUHONICE	101.36	322.2	13	53K	-2								
COLLMBERG	101.85	323.8	13	54	-3								
KASPERSKE H.	102.23	321.6	13	55K	-4								
HUNGRY HORSE	107.10	37.2	18	27	777								
EUREKA	109.27	46.4	18	33	777						19	9	PP
WICHITA MTS.	123.79	44.1	19	0	0						22	50	SKP
FAYETTEVILLE	125.97	40.3	19	4A	0								
ROLLA	126.27	37.1	19	4K	-1								
SHAWINIGAN	127.97	16.4	19	8K	0								
OTTAWA	128.09	19.4	19	7	-2								
BLOOMINGTON	128.45	32.3	19	8K	-1								
PALISADES	132.59	20.5									22	45	PP
SAN JUAN	155.64	29.0	19	56	0						20	24	
LA PAZ	160.63	134.9	20	3	1								

SEPTEMBER 8 4.H 52.M 10.S EPICENTRE 51.70-131.07 DEPTH= 26.KM

A=-0.40891 B=-0.46925 C= 0.78268 D=-0.7539 E= 0.6570
G=-0.5142 H=-0.5901 K=-0.6224 HT= -6.0

SE= 2.02

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
VICTORIA	5.86	119.9	1	26	-2							
SITKA	5.91	336.8	1	28	-1							
SEATTLE	6.98	122.0	1	45	1							
PENTICTON	7.68	103.5	1	52	-1							
CORVALLIS	8.81	140.9	2	9	0							
BANFF	9.72	87.0	2	22	0							
HUNGRY HORSE	11.46	100.3	2	45	0							
FERNDALE	12.07	154.4				5	8	-1				
SHASTA	12.52	148.0	3	1	1							
MINERAL	13.10	146.3	3	8A	1							
BUTTE	13.42	107.8	3	13	1							
UKIAH	13.71	153.4	3	18	3							
RENO	14.46	142.8	3	26A	1							
BOZEMAN	14.51	106.7	3	27	1							
BERKELEY	15.15	152.4	3	34A	0	6	34	12				
COLLEGE	15.79	333.1	3	40	-3	6	52	15			4	11
LICK	15.83	151.4	3	44K	1							
EUREKA	16.11	133.4	3	46	-1	6	53	9			10	1
VINEYARD	16.45	151.5	3	51	0							
FRESNO	16.93	147.4	3	58A	1							
SALT LAKE C.	17.15	122.0	3	53	-7							
BOULDER CITY	19.52	137.3	4	28	0							
PASADENA	19.86	147.0	4	31A	-1							
RAPID CITY	20.09	101.3	4	34	-1							
GLEN CANYON	20.18	129.3	4	36	0							
LARAMIE	20.29	110.8	4	37	0							
TUCSON TELE.	24.40	134.6	5	19	1							
TUCSON	24.43	134.9	5	19	1	9	30	-3				
MANHATTEN	26.96	104.0	5	42	0							
RESOLUTE	27.36	20.0	5	49	4						14	38
WICHITA MTS.	28.80	113.4	5	58A	0	10	57	12			12	32 PCS
FAYETTEVILLE	30.43	106.3	6	12K	-1						16	21 SCS
ROLLA	30.63	101.2	6	13	-2	11	20	6				
C. GIRARDEAU	32.45	99.8	6	28	-3							
BLOOMINGTON	33.16	94.4	6	36	-1	11	56	2	6	43		
CLEVELAND	34.92	87.1	6	53K	1							
OTTAWA	36.41	77.5	7	5	0							
SHAWINIGAN	37.62	74.2	7	14	-1							
BREBEUF	37.63	76.1	7	21	6							
WASHINGTON	39.20	87.3	7	32	4						20	58
CHAPEL HILL	39.82	92.5	7	33	0						8	10
COLUMBIA	39.85	96.4	7	33	0							
PALISADES	39.91	82.3									16	20 SS
FORDHAM	40.02	82.5	7	37	2							
PETROPAVLOVK	41.36	300.6	7	32	-14							
MAGADAN	42.37	312.3	7	52	-2							
KIRUNA	58.90	12.2	10	2	3							
SODANKYLA	60.08	9.8	10	6	-2							
SAN JUAN	60.29	97.9	10	8	-1							
SKALSTUGAN	61.54	17.7	10	15A	-2							
MATUSIRO	62.76	295.1	10	20	-6	18	56	5				
KAJAANI	63.38	10.3	10	27	-3							
CARACAS	65.88	104.1	10	44K	-2	19	30	0				
UPPSALA	65.97	16.7	10	46	0							
IRKUTSK	66.41	326.5	10	46A	-3							
NURMIJARVI	66.46	12.8	10	46	-4							
HELSINKI	66.83	12.8	10	50	-2							
FOLINIERE	71.40	32.0	11	23	3							
BENSBERG	71.78	26.3	11	24	2							
PARIS	72.32	30.2	11	27	1							
MOSCOW	72.53	6.7	11	23	-4							
HALLE	72.53	23.2	11	26	-1						12	21
COLLMBERG	72.97	22.7	11	28K	-1						12	50
GARCHY	73.85	30.6	11	35	0						12	10
STRASBOURG	74.10	27.0	11	36	0						12	14

STUTTGART	74.34	26.0	11	39	2					12	41
PRUHONICE	74.57	22.2	11	40	1						
KASPERSKE H.	75.13	23.2	11	43	1						
VIENNA-H.	76.61	21.7	11	54	4						
LWOW	76.67	16.3	11	51	0						
TOLEDO	77.79	38.9	11	57	0						
HUANCAYO	79.61	124.7	12	8	1						
SIMFEROPOL	82.89	10.5	12	25	1						
FRUNSE	83.25	341.3	12	25	-1						
ANDIJAN	85.69	342.4	12	38	0						
ISTANBUL UN.	86.02	15.0	12	5	-35	22	43	-28			
TIFLIS	86.90	3.1	12	44	0						
LA PAZ	87.09	121.2	12	45	0	23	30	9			
STALINABAD	88.45	344.6	12	51	0						
SHIRAZ	98.95	356.8	13	44	4						
BULAWAYO	144.72	34.4	19	33	-2						

SEPTEMBER 8 11.H 26.M 31.S EPICENTRE -56.44 -27.15 DEPTH= 103.KM

A= 0.49421 B=-0.25345 C=-0.83158 D=-0.4563 E=-0.8898
G=-0.7399 H= 0.3795 K=-0.5554 HT= -7.7

DEPTH OF FOCUS= 0.011R

SE= 3.11

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
G. G. VIDELA	19.17	229.5	4	19	1								
ARGENTINE I.	19.82	228.5	4	26	1						8	37	PCP
BUENOS AIRES	30.52	302.4	5	59	-7								
SOUTH POLE	33.74	180.0	6	35	2	12	45	57					
BYRD STATION	35.43	197.5	6	49	1						8	16	PP
SANTIAGO	37.54	289.2	7	13	7								
HERMANUS	38.31	74.9	7	13	1	12	55	-3			8	43	PP
MAWSON	39.83	143.2	7	25A	0	13	18	-3			8	57	PP
GRAHAMSTOWN	43.13	80.9	6	17K	-95								
ANTOFAGASTA	45.33	297.9	8	7	-2						9	49	
KIMBERLEY	45.68	75.1	8	10K	-2								
SCOTT BASE	45.69	184.1	8	4K	-8	14	49	2	8	43	10	0	PP
PIETERMZBURG	48.06	81.1	8	41	10								
PRETORIA	49.89	75.9									9	43	
LA PAZ	50.43	305.3	8	48	-1	15	52	-1					
CAPE HALLETT	50.97	186.7	8	54K	1	16	39	38			10	48	PP
AREQUIPA	52.02	301.7	9	0	-1								
WILKES	53.48	160.2	9	12	0	16	33	-2	9	40	11	9	PP
KERGUELEN I.	54.31	127.0	9	19	1	16	56	10					
BULAWAYO	54.67	72.2	9	19K	-1	16	50	-1					
LUANDA	56.96	49.8	9	36K	-1	17	22	1	9	59	11	56	PP
HUANCAYO	57.67	300.4	9	42	0	17	19	-11					
BROKEN HILL	59.33	68.4	9	52K	-1	17	54	2					
TANANARIVE	66.00	88.2	10	39K	1	19	23	8			13	0	PP
MACQUARIE I.	69.31	183.8	10	57	-1								
MBOUR	71.06	10.4	11	11	2	20	6	-9					
BANGUI	71.14	49.0	11	12	3	20	16	0					
BOGOTA	71.84	310.0	11	13K	0								
TRINIDAD	72.63	324.6	11	17	-1								
CHINCHINA	72.82	308.7	11	17A	-2	20	32	-3			13	57	PP
CARACAS	74.38	319.2	11	27A	-1	20	50	-3					
BARBADOS	74.39	327.1	11	32	4								
ST. VINCENT	74.95	325.5	11	31	0								
ROXBURGH	77.51	191.8	11	47A	1	21	35	8			14	43	PP
GALERAZAMBA	77.89	311.6	11	53	5	21	33	2					
BALBOA HTS.	78.11	306.9	11	47	-2	21	21	-12					
GEBBIES PASS	78.84	194.5	11	52	-1								
ST. KITTS	79.33	325.6	11	54A	-2								
KAIMATA	80.17	193.8	12	1	1								
FORT NELSON	80.89	175.9	12	2K	-2								
WELLINGTON	80.90	196.6	12	4K	0	22	4	1			15	14	PP
MOORLANDS	81.38	175.8	12	7K	0						15	18	PP
COBB RIVER	81.40	195.1	12	5	-2	22	3	-5					
SAN JUAN	81.41	322.8	12	4A	-3	22	4	-4			15	14	PP
CHATEAU	82.80	197.6	12	14A	0	22	27	5					
TUAI	82.91	198.9	12	13	-2								
KARAPIRO	84.04	197.9	12	20K	0						38	30	PKPPKP
SANTIAGO MA.	86.18	301.2	12	37	6						13	13	
ONERAHI	86.35	197.4	12	31	-1								

PERTH	86.51	149.2	12	34	2	23	3	5		15	55 PP
MUNDARING	86.60	149.5	12	33A	0					22	47
SAN SALVADOR	86.70	300.7	12	29	-4					13	7
ADELAIDE	88.16	168.4	12	41A	1	23	15	1		16	7 PP
CANBERRA	88.54	176.9	12	43A	1	23	22	5		16	15 PP
RIVERVIEW	90.08	178.6	12	49A	0	23	35	3	13 16	16	25 PP
OAXACA	93.26	296.1	13	13	9	23	40	-19		25	22 SP
ANGRA DO HO.	94.72	359.9	13	11A	0				13 37		
ALMERIA	95.26	19.7	13	15A	2	23	37	-1	13 42	17	19 PP
GRANADA	95.38	18.7	13	14K	0	23	38	-1		17	25 PP
LISBON	96.02	14.1	13	16A	-1	23	41	-1	13 42	17	17 PP
TACUBAYA	96.49	295.3	13	20K	1	23	44	-1		17	10 PP
BRISBANE	96.51	179.9	13	18	-1	23	45	0			
ALICANTE	97.10	20.8	13	26	4	23	42	-6		17	22 PP
COIMBRA	97.57	14.4	13	25A	1	23	48	-2	13 51	24	44 S
TOLEDO	97.93	17.7	13	26A	1	23	55	3	13 50	17	24 PP
SERRA PILAR	98.46	14.1	13	29K	1	24	8	13	14 0	17	32 PP
HELWAN	99.20	48.6	13	32	1					25	47
GUADALAJARA	99.65	292.7	13	38	5	24	5	4		17	41 PP
TORTOSA	99.68	20.9	13	36	3	24	2	1			
NOUMEA	100.73	192.8	13	37K	-1	17	47	-379			
REGGIO CALA.	100.92	33.1	13	45	6	24	10	3		17	46 PP
MESSINA	100.98	33.0	13	29	-10	23	56	-11	14 8	17	48 PP
COLUMBIA	101.00	316.9	13	39A	0						
BAGNERES	101.78	20.1	13	39	-4					26	45
CHAPEL HILL	101.98	319.2	13	44	1						
JERUSALEM	102.50	50.6	13	49	3	24	20	6			
SUVA	102.64	204.9	13	42	-4	24	37	22		27	12 PS
KOUMAC	102.70	191.0	13	46	-1					18	0
ATHENS	103.44	39.1	13	56	6	24	19	0		18	5 PP
ROME	103.53	29.3	13	51A	1	24	19	0	14 15	18	7 PP
CHARTERS TS.	103.57	173.6	13	50	-1	24	18	-1			
TARANTO	103.59	33.3	13	57	6	24	22	3		17	57 PP
WASHINGTON	103.95	322.0	13	52A	0					18	10 PP
AFIAMALU	103.95	215.4	13	51	-1	24	29	8		17	58 PP
MONACO	103.96	25.1	13	54	2						
ISOLA	104.30	24.7	13	56	2					18	15 PP
KSARA	104.54	50.0	13	56	1	24	32	8		18	24 PP
FORDHAM	104.66	325.2	13	50	-5						
PALISADES	104.81	325.2	13	52	-4	24	21	-4	14 21	18	43 PP
FLORENCE X.	104.95	27.8	14	4	7	24	36	10			
CLERMONT-FD.	104.96	21.4	13	49	-8						
CHIAVARI	104.97	26.2	14	13K	16	24	13	-13		18	13 PP
PORT VILA	104.98	195.3	13	59K	2					18	19
PRATO	105.01	27.6	14	16	777	25	14	48			
HALIFAX	105.25	333.9	13	59	777						
BOLOGNA	105.65	27.5								17	59 PP
ROSELEND	105.67	24.6	14	11	777					18	32 PP
PAVIA	105.75	25.8	18	24	777					36	52 SSS
PENNSYLVANIA	105.92	322.3	18	3	777	24	27	-3		18	21 PP
TITOGRAD	105.99	33.9	14	8	777	24	31	1		18	27 PP
GARCHY	106.40	20.9	14	5	777	25	22	50		18	27 PP
KODAIKANAL	106.54	96.5								19	27
PADOVA	106.63	27.6				24	35	2		20	44 PPP
LEMBANG	106.87	132.6	17	8A	777					24	38
NEUCHATEL	106.95	23.7								18	5
DJAKARTA	107.13	131.5				24	34	-1		17	21
FOLINIERE	107.17	18.1	14	12	777					18	20 PP
C. GIRARDEAU	107.26	312.3	14	5	777						
JERSEY	107.30	16.9	14	1	777						
CHUR	107.40	25.4								18	34 PP
SOFIA	107.54	36.6	14	12	777	25	28	51			
BASLE	107.59	23.9	14	11	777					25	35
CHIHUAHUA	107.62	295.2	14	12	777					18	8 PP
BLOOMINGTON	107.66	315.4	14	6	777	24	34	-4			
ROCHESTER	107.73	323.9	17	29	777						
PARIS	107.75	20.1	14	10	777					18	40 PP
CLEVELAND	107.80	320.1	14	10K	777					18	31 PP
LJUBLJANA	107.93	29.1	14	17	777					18	41 PP
ISTANBUL UN.	108.05	41.4	14	9	777					18	33 PP
ISTANBUL KA.	108.10	41.4	14	12	777	24	31	-9	14 35	20	43 PPP
ZAGREB	108.12	30.2	14	35	777					18	41 PKS
FAYETTEVILLE	108.19	308.3	14	10	777	24	37	-3	14 33	18	40 PP
RAVENSBURG	108.29	25.2								18	39
EBINGEN	108.52	24.6								18	43
BELGRADE	108.52	33.7	17	52	777	24	41	0		18	42 PP
STRASBOURG	108.62	23.7	14	15	777	24	44	2		28	1
ROLLA	108.74	310.9	14	11	777	24	39	-3			

BREBEUF	108.79	327.4	14	13	777						
SHIRAZ	108.82	64.8	13	50	777					17	59
TUBINGEN	108.87	24.5								18	41
WICHITA MTS.	109.02	304.3	14	13	777	24	42	-1		28	0 PS
STUTTGART	109.14	24.6	14	17	777	24	46	2	14 42	19	0 PP
KARLSRUHE	109.17	23.9	14	17	777	24	50	6			
OTTAWA	109.34	326.0	14	18	777						
SHAWINIGAN	109.49	328.4	14	21	777						
TIMISOARA	109.59	33.7	18	53	777	25	35	49		29	12
HEIDELBERG	109.61	24.0	14	20	777					18	46
KEW	109.80	17.5	14	19	777	24	46	-1		18	55 PP
BUCHAREST	109.99	37.7	14	22K	777	24	48	1	14 42	18	54 PP
MADRAS	110.31	97.2	18	11	-9					24	52
CAMPULUNG	110.38	36.5								19	1 PP
VIENNA-H.	110.45	29.4	14	32	-228	25	49	60		18	57 PP
BUDAPEST	110.49	31.5	18	39	19	25	46	57		19	45 PP
KASPERSKE H.	110.52	27.2	14	33	-227					19	17 PP
BRATISLAVA	110.58	29.9	18	4	-16					28	28 PS
HURBANOVO	110.61	30.8								19	7 PP
BENSBERG	110.74	22.4	17	57	-23	24	49	-1		18	57 PP
BOMBAY	111.03	87.4	18	46	25	24	52	0		19	12 PP
CHEB	111.10	26.1	18	15	-6	24	55	3		18	58 PP
POONA	111.30	88.5	18	29	7					28	28
DE BILT	111.41	20.8	14	53	-209					19	9 PP
FOCSANI	111.49	37.7								19	10 PP
PRUHONICE	111.55	27.5	18	20	-2	24	55	1		19	0 PP
PRAGUE	111.60	27.4	18	3	-19	24	55	1		19	3 PP
JENA	111.70	25.2	17	50	-32	24	51	-3		19	5 PP
MUNSTER	111.78	22.3	17	47	-35						
MANHATTEN	111.83	308.4	14	27	-236	24	51	-4			
BACAU	112.15	37.1				24	56	0		19	6 PP
HALLE	112.31	25.2	17	56	-27	24	56	-1			
COLLMBERG	112.38	26.0	18	28	4	24	48	-9		19	33 PP
SKALNATE PL.	112.38	31.5	14	33	-231	26	54	117		19	13 PP
WITTEVEEN	112.39	21.4								28	29 PS
RACIBORZ	112.61	29.8	14	34	-230				14 58	19	18 PP
DURHAM	112.79	15.7	18	20K	-4	25	0	1	18 49	19	20 PP
TUCSON	112.94	293.9	14	37K	-228	25	3	4	15 11	19	21 PP
TUCSON TELE.	112.96	294.0	14	38	-227					18	25 PKP
HYDERABAD	112.96	93.0								19	18
CHORZOW	113.02	30.2								17	57
KRAKOW	113.07	30.9	18	32	7	24	58	-2		19	12 PP
TEHERAN	113.19	60.2	14	35	-230	25	2	2			
SIMFEROPOL	113.32	42.7	18	23	-3	25	1	0		19	21 PP
EDINBURGH	113.68	14.5								26	12
GORIS	113.87	54.2	18	23	-4	25	3	0		19	21 PP
LWOW	114.08	33.6	14	41	-226	25	3	-1		19	22 PP
HONIARA	114.11	187.7	14	33	-234					18	28
PORT MORESBY	114.23	173.8	18	6	-21				18 28	19	21 PP
TIFLIS	114.99	51.8	14	45	-224	25	8	1		19	23 PP
ABERDEEN	115.04	14.7	14	56	-213	25	7	0		19	21 PP
WARSAW	115.33	30.5	18	46	17	25	7	-1		19	29 PP
PORT BLAIR	115.98	109.1								19	24
COPENHAGEN	116.29	23.7	18	36K	5	25	13	1	19 3	19	39 PP
QUETTA	116.77	75.3	14	54	-218	25	16	2		19	38 PP
GLEN CANYON	117.06	296.5	18	33	0	25	19	4		14	53 P
LARAMIE	117.58	303.6	18	33	-1						
BOULDER CITY	117.91	293.5	18	36A	2					28	58 PKKP
GOTEBORG	118.05	22.6	18	34	-1					20	14 PP
PASADENA	118.22	289.8	18	34	-1	25	21	2		19	51 PP
ASHKABAD	118.35	63.6	18	45	10						
RAPID CITY	118.68	307.1	18	33	-3						
BERGEN	119.29	17.8	18	44	7	25	23	0		19	56 PP
RABAUL	119.56	179.2	18	37	-1						
SIDA	120.09	4.7	18	40	1						
SALT LAKE C.	120.13	299.0	18	39A	0	25	2	-23		20	6 PP
REYKJAVIK	120.31	2.7	18	41K	2					20	24 PP
FRESNO	121.08	290.5	18	41	0						
NEW DELHI	121.12	84.4	18	23	-18					20	22
EUREKA	121.18	295.3	18	38	-3				15 34	20	9 PP
UPPSALA	121.25	24.6	18	39	-2	25	25	-4	19 8	20	9 PP
LAHORE	121.83	80.0	18	43	1						
VINEYARD	121.89	289.4	18	43A	1						
PARAISO	122.09	288.3	18	43	0						
WARSAK DAM	122.19	76.0	18	44	1					15	4 P
LICK	122.47	289.6	18	45A	2					20	28 PP
CALCUTTA	122.55	98.2	18	41	-2					20	16 PP
BRANNER	122.81	289.3	18	45	1						

DEHRA DUN	122.93	83.8	18	47	3					30	20	
CONCORD	123.17	289.8	18	46	1							
RENO	123.17	292.7	18	44A	-1							
BERKELEY	123.19	289.6	18	46	1	25	38	3		20	25	PP
SAN FRANCSCO	123.22	289.4	18	46	1							
HELSINKI	123.35	28.2	18	43	-2					22	9	SKP
BOZEMAN	123.47	303.3	18	46A	1							
SKALSTUGAN	123.49	19.9	18	44	-1				19 14	28	36	PKKP
MOSCOW	123.49	37.9	18	44	-1	25	35	-1		23	7	PPP
NURMIJARVI	123.56	27.8	18	44A	-1	25	33	-4	19 12	20	51	PP
CHITTAGONG	124.28	101.4				25	36	-4	19 31	21	31	*SPP
BUTTE	124.44	302.6	18	48A	1							
PULKOVO	124.48	31.2	18	47	0	25	37	-2		20	30	PP
NHATRANG	124.60	125.0	18	47	0					20	35	PP
UKIAH	124.63	289.9	18	49A	2							
MINERAL	124.70	292.1	18	49A	1					20	50	
CHATRA	125.29	94.0	18	50A	1					20	41	PP
SHASTA	125.36	291.8	18	49	0							
TASHKENT	126.43	68.5	18	51	0	25	47	2		20	53	PP
HAWAII V.OB.	126.77	247.9	18	52	0	26	3	17				
HUNGRY HORSE	126.82	303.7	18	35A	-17					20	49	PP
SHILLONG	126.89	99.1	18	51A	-1					29	31	
KAJAANI	127.33	26.9	18	48	-5					22	1	SKP
CORVALLIS	128.62	294.6	18	55	0							
KIRUNA	128.84	21.1	18	54A	-2				19 20	21	0	PP
TOCKLAI	129.41	100.8	18	46	-11							
BANFF	129.51	305.3	18	56A	-1							
HONOLULU	129.77	246.4	18	59K	2					31	29	SKKP
SODANKYLA	129.78	24.0	18	37	-20					21	29	PP
KIPAPA	129.83	246.6	18	59	2							
TROMSOE	130.09	19.3	18	57	-1							
PENTICTON	130.13	301.2	18	36	-22							
SEATTLE	130.27	298.0	19	1	3							
FRUNSE	130.29	70.8	18	58	0					21	17	PP
VICTORIA	131.41	298.2	18	44	-16							
ALMATA	131.82	71.9	19	3	2	26	5	5		22	25	SKP
KUNMING	132.37	109.7	19	3A	1				19 28	21	27	PP
SVERDLOVSK	133.07	48.8	19	5	1					21	33	PP
CANTON	135.96	122.6	19	11A	2				19 37	21	51	PP
GUAM	136.66	168.5	19	2A	-8					21	52	PP
CHENGTU	137.47	106.3	19	12K	0				19 35	21	58	PP
SEMIPALATNSK	138.18	66.3	19	13	0					22	9	PP
RESOLUTE	138.22	338.3	19	1	-12					22	2	
HENGCHUN	138.28	132.2								22	5	
TAWU	138.65	132.1	18	31	-43							
HWALIEN	140.39	131.9	19	34	17							
TAIPEI	141.29	131.0	19	26	7							
SITKA	142.28	301.9	19	16	-4							
SIAN	142.86	107.8	19	16A	-5				19 41	22	26	PP
KHEYS	144.36	16.3	19	21	-3					25	52	PPP
NANKING	146.09	121.5	19	28A	1				19 45	22	53	PP
ZO-SE	146.40	125.5	19	28A	0				19 52	22	53	PP
YAKUSIMA	149.65	139.5	19	33	0							
KAGOSIMA	150.68	138.6	19	43	9							
COLLEGE	150.80	311.2	19	29	-5	27	23	53		37	13	
TOMIE	150.93	134.9	19	34	-1					29	58	
PEKING	151.02	108.8	19	35A	0					23	29	PP
ULAN-BATOR	151.06	87.4	19	34	-1							
MIYAZAKI	151.31	139.7	19	42	7					30	2	
NAGASAKI	151.46	136.5	19	36A	1					42	46	
UNZENDAKE	151.60	137.1	19	41	5							
KUMAMOTO	151.85	137.7	19	36	0							
ASOSAN	152.06	138.2	19	47	11							
SAGA	152.08	136.7	19	46	10							
HUKUOKA	152.41	136.5	19	38A	1					23	23	
OOITA	152.56	138.8	19	39	2					23	27	
TORISIMA	152.59	156.0	19	33	-4							
SIMIDU	152.63	141.5	19	29	-8					23	25	
UWAZIMA	152.88	140.3	19	48	11					42	50	
SIMONOSEKI	152.95	137.0	19	42	5							
MUROTO	153.47	143.1	19	40	2					23	42	
MATUYAMA	153.53	140.2	19	38	0					43	7	
KOTI	153.53	141.7	19	40	2					43	7	SS
HIROSIMA	153.88	139.0	19	36	-3					20	1	
SIOMISAKI	154.17	145.7	19	44	5					23	17	
TOKUSIMA	154.36	143.0	19	58	19							
TAKAMATU	154.40	141.9	19	55	16					34	6	
SUMOTO	154.71	143.4	19	41A	1					30	22	
OWASE	154.88	145.9	19	51	11							

OSAKA	155.20	144.2	19	42A	1			23 42	
ABUYAMA	155.42	144.1	19	42A	1				
TOTTORI	155.53	140.9	19	40	-1				
KYOTO	155.60	144.2	19	36	-5				
KAMEYAMA	155.68	145.7	19	43	2			23 35	
TOYOOKA	155.77	142.0	19	43	2			23 45	
OMAESAKI	155.97	149.2	19	42	0				
HIKONE	156.00	144.9	19	41	-1			23 42	
NAGOYA	156.13	146.4	19	43A	1			23 47	
GIHU	156.29	145.8	19	47	5				
TSURUGA	156.29	144.2	19	59	17				
SHIZUOKA	156.37	149.3	19	46	4			23 48	
OSIMA	156.45	151.3	19	44	2				
AJIRO	156.64	150.5	19	42	0				
MISIMA	156.67	150.2	19	42	0				
MERA	156.71	152.1	19	43A	0				
IIDA	156.72	147.7	19	47	4				
HUNATU	156.97	149.5	19	45	2			23 52	
KOHU	157.07	148.9	19	46	3				
YOKOHAMA	157.15	151.3	19	45A	2				
TOKYO C.M.O.	157.41	151.3	19	42A	-1				
MATUMOTO	157.44	147.2	19	47	3				
HONGO	157.44	151.3	19	44	0				
TITIBU	157.51	149.7	19	45	1				
TOYAMA	157.62	145.3	19	44	0			23 55	
OIWAKE	157.68	148.3	19	49	5			24 17	
KUMAGAYA	157.75	150.1	19	45	1			23 56	
MATUSIRO	157.78	147.4	19	44A	0			23 49	PP
NAGANO	157.90	147.3	19	46	2			24 7	
MAEBASI	157.90	149.3	19	45A	1			23 59	
TUKUBASAN	158.01	151.5	19	43A	-1			23 51	PP
KAKIOKA	158.04	151.7	19	46	2				
WAZIMA	158.14	144.0	19	47	3				
MITO	158.26	152.2	19	46	1				
UTUNOMIYA	158.26	150.8	19	51	6			23 58	
TAKADA	158.31	147.0	19	53	8				
CHANGCHUN	158.48	114.2	19	45A	0	20	10	23 57	PP
SHIRAKAWA	158.89	151.0	19	46	1				
ONAHAMA	158.91	152.6	19	46A	1				
NIIGATA	159.31	147.7	19	48	2				
HUKUSIMA	159.55	150.9	19	47	1				
YAMAGATA	159.99	150.1	19	47	0			24 8	
SENDAI	160.16	151.3	19	47	0				
ISINOMAKI	160.42	152.1	19	47	0			24 9	
MIZUSAWA	161.02	150.9	19	51	3			24 11	
VLADIVOSTOK	161.11	126.0	19	46	-2			24 16	
AKITA	161.28	148.0	19	49	1			24 17	
MORIOKA	161.57	150.4	19	49A	1			20 36	
TIKSI	161.73	24.3	20	35	47	26 56	15	24 16	PP
MIYAKO	161.73	152.3	19	49	1				
AOMORI	162.50	148.2	19	48	-1				
HAKODATE	163.40	146.8						20 41	
MORI	163.60	145.9	19	56	6				
SUTTSU	164.13	144.0	19	50	-1				
URAKAWA	164.29	151.3	19	53	2				
SAPPORO	164.72	146.3	19	51	0			24 31	PP
OBIHIRO	165.12	151.4	19	53	1			24 38	
KUSIRO	165.48	154.5	19	51K	-1			24 36	PP
NEMURO	166.08	157.4	19	54	1			31 3	
WAKKANAI	166.93	142.9						20 14	
YAKUTSK	166.95	55.1	19	51	-2			31 15	SKKS
Y.-SAKHLINSK	168.68	142.2	19	55	1			24 49	PP
MAGADAN	176.70	18.4	19	55	-3			25 37	PP

SEPTEMBER 10 4.H 45.M 28.S EPICENTRE -22.90 -63.45 DEPTH= 526.KM

A= 0.41221 B=-0.82489 C=-0.38683 D=-0.8945 E=-0.4470
G=-0.1729 H= 0.3460 K=-0.9222 HT= 3.9

DEPTH OF FOCUS= 0.078R

SE= 2.23

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	PP S	SUPP. M	SUPP. S
ANTOFAGASTA	6.46	261.5	1	41	-2	2	59	-5				

LA PAZ	7.74	324.4	1	57	2	3	26	-1				
AREQUIPA	9.92	308.8	2	19	1							
SANTIAGO	12.26	209.6	2	41	-1							
HUANCAYO	15.63	311.6	3	19	3	6	4	10				
BOGOTA	29.25	337.9	5	21	0	9	34	-3				
CHINCHINA	30.14	335.3	5	26	-2	9	45	-6				
CARACAS	33.36	353.8	5	55K	-1	10	50	10				
TRINIDAD	33.40	3.7	5	57	1						8	24
GRENADA	34.77	2.9	6	6K	-1						11	5
GALERAZAMBA	35.41	339.7				11	1	-10				
ST. VINCENT	35.91	3.6	6	15K	-2						11	18
BARBADOS	35.99	6.4	6	21	4							
ANTIGUA	39.82	2.4	6	46	-3							
ST. KITTS	39.99	1.1	6	48	-2							
SAN JUAN	41.10	356.1	6	57	-2				8	46	7	16
ARGENTINE I.	42.35	180.5	7	10	1	12	54	1				
MBOUR	58.67	55.3	9	11	3	16	34	2				
CHAPEL HILL	60.33	345.4	9	18	-1							
BYRD STATION	61.92	189.4	9	21	-9							
FORDHAM	64.15	351.2	9	43	-1						17	39
PALISADES	64.32	351.2	9	44	-1	17	41	-1	9	50	21	9 SS
C. GIRARDEAU	64.74	337.2	9	45K	-3	17	38	-9	11	34		
PENNSYLVANIA	64.77	347.9	9	49	1	17	49	2				
BLOOMINGTON	65.42	340.5	9	51K	-1	17	48	-7	11	39		
FAYETTEVILLE	65.47	332.9	9	52K	0				11	43	10	17 PCP
ROLLA	66.12	335.7	9	54K	-2	17	58	-5	11	45		
CLEVELAND	66.21	345.2	9	56K	-1							
WICHITA MTS.	66.31	328.8	9	57	-1	18	2	-4	11	48	12	24 PP
HALIFAX	67.18	359.9	10	3K	0							
SOUTH POLE	67.24	180.0	10	4	1						11	52 PP
BREBEUF	68.69	352.3	10	12	0				12	4		
OTTAWA	68.88	350.8	10	12K	-1							
MANHATTEN	69.11	333.0	10	14K	-1				12	5	18	35
SHAWINIGAN	69.63	353.2	10	16	-2							
TUCSON TELE.	71.11	318.9	10	27	1				12	20		
TUCSON	71.12	318.8	10	28	2							
GLEN CANYON	74.86	321.8	10	50	2				12	43		
LARAMIE	74.88	328.4	10	49	1						12	43
SCOTT BASE	75.34	189.7	10	51K	1				12	39		
BOULDER CITY	76.08	319.2	10	56	2				12	47		
PASADENA	76.97	316.0	11	1	2						12	56
KIMBERLEY	77.87	116.1	11	5	1							
CAPE HALLETT	78.39	194.6	11	8	1				13	3		
EUREKA	79.09	321.3	11	2	-9	20	28	1			29	54 PKKP
LISBON	79.63	40.2	11	12K	-1							
COIMBRA	81.01	39.4	11	22K	1				13	19		
LICK	81.16	316.7	11	23K	2						13	20
RENO	81.39	319.4	11	21	-2							
MAWSON	81.49	161.8	11	24K	1	20	50	-1	13	19	11	31 PCP
SERRA PILAR	81.51	38.6	11	24A	1							
BUTTE	81.77	327.8	11	25	1				13	22		
GRANADA	82.11	44.2	11	29A	3						26	55 SS
ALMERIA	82.65	45.0	11	30K	1	21	11	9				
MINERAL	82.97	319.1	11	30A	-1						13	28 PP
TOLEDO	83.44	41.8	11	35K	2				13	40	14	31 *SP
HUNGRY HORSE	84.12	328.8	11	36	0	21	16	-1	13	34	29	46 PKKP
BULAWAYO	84.19	109.3	11	38K	1							
BANGUI	84.40	82.9	11	40	2						15	1
ALICANTE	84.81	44.7	11	37	-3	21	12	-11			17	7 PPP
BROKEN HILL	86.21	104.0	11	49K	3							
CORVALLIS	86.54	321.7	11	50A	2						13	32
PENTICTON	87.51	327.0	11	53	1							
BAGNERES	87.86	41.1	11	56	2							
VICTORIA	88.98	324.8	11	59	0							
FOLINIERE	90.73	36.1	12	9	2							
CLERMONT-FD.	91.12	40.0	12	9	0							
GARCHY	91.90	38.7	12	13	0						16	0 PP
KEW	92.36	33.9	12	14	-1							
PARIS	92.39	37.2	12	16	1						12	57
ISOLA	92.70	42.8	12	18	2						16	5 PP
MONACO	92.72	43.3	12	18	1							
DURHAM	93.63	30.8	12	26K	5							
ROSELEND	93.70	41.8	12	20	-1							
BASLE	94.66	40.0	12	28	3							
STRASBOURG	95.28	39.2	12	28	0							
EBINGEN	95.80	39.9									13	32
RAVENSBURG	96.00	40.4	12	34	3							
TUBINGEN	96.02	39.6	12	32	1							
BENSBERG	96.09	36.9									15	41

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HEIDELBERG	96.22	38.7	12 33	1							
STUTTGART	96.25	39.5	12 33	0							
JENA	98.55	38.2	12 43	0						16 48	PP
CHEB	98.65	39.2	12 47	4							
KASPERSKE H.	98.96	40.4	12 46K	1							
HALLE	99.01	37.8	12 46	1						13 6	
COLLMBERG	99.52	38.2	12 48K	1			14 51			16 54	PP
PRUHONICE	99.88	39.9	12 51K	2			14 59			16 58	PP
GOTEBORG	101.64	32.0	12 58A	1						17 12	PKP
HELWAN	104.97	63.6								17 41	
KIRUNA	108.70	23.5	17 30	777							
NURMIJARVI	108.73	31.5	17 29	777							
KSARA	109.80	60.8	17 34	777							
KAJAANI	110.83	28.0	17 11	-22							
SHIRAZ	122.81	68.6	17 58K	2						19 41	PP
CHARTERS TS.	128.37	216.4	18 9	2							
QUETTA	135.32	69.7	18 9	-11							
PORT MORESBY	136.09	226.4			24 46	6				21 6	
WARSAK DAM	139.20	64.0	18 17	-10							
LAHORE	141.67	67.7	18 29	-3							
NEW DELHI	144.22	72.5	18 41	5							
DEHRA DUN	144.92	69.5	18 42	5							
VISHAKHAPTNM	148.44	93.2	18 52	10							
LEMBANG	149.19	162.5	18 43K	0						20 54	PKS
CHATRA	153.08	75.6	18 53K	4							
MEDAN	154.15	135.4	18 54A	3						19 19	PKP2
MATUSIRO	156.86	310.9	18 57A	3			21 31			19 29	PKP2
SHILLONG	157.34	78.3	18 58K	3							

SEPTEMBER 11 2.H 46.M 49.S EPICENTRE 51.61 180.00 DEPTH= 43.KM

A=-0.62365 B= 0.00002 C= 0.78171 D= 0.0000 E= 1.0000
G=-0.7817 H= 0.0000 K=-0.6236 HT= -6.0

DEPTH OF FOCUS= 0.002R

SE= 2.14

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
PETROPAVLOVK	13.13	284.6	3	8	2	5	34	2					
COLLEGE	21.21	38.9	4	45	1	8	50	17			5	18	
UGLEGORSK	24.16	279.1	5	16K	3	9	41	16					
Y.-SAKHLINSK	24.55	274.0	5	13	-4	9	36	4					
YAKUTSK	28.68	310.9	6	9	14								
MATUSIRO	33.08	259.5	6	33A	-1	11	51	2					
VICTORIA	35.68	72.1	6	56A	0								
CHANGCHUN	36.84	279.9	7	5	-1								
PENTICTON	37.55	69.0	7	13	1						12	35	
CORVALLIS	37.68	77.8	7	13	0								
BANFF	39.05	64.4	7	25	1								
RESOLUTE	39.85	24.4	7	33	2								
SHASTA	40.38	82.3	7	37	2								
MINERAL	41.07	82.2	7	43A	2								
HUNGRY HORSE	41.26	67.5	7	43	0						13	31	SCP
CALISTOGA	41.49	85.0	7	46	1								
BERKELEY	42.16	85.6	7	54K	4								
RENO	42.66	81.9	7	58K	4								
LICK	42.87	85.8	7	58K	2								
BUTTE	43.33	69.7	7	57	-3	14	57	33			13	40	SCP
FRESNO	44.38	85.1	8	12	4								
BOZEMAN	44.41	69.3	8	9	1								
PEKING	44.60	281.1	8	11	1	14	46	4					
EUREKA	45.06	79.4	8	14	0	15	3	14	8	27	10	1	PCP
ULAN-BATOR	45.54	295.6	8	14	-3	15	3	7					
SALT LAKE C.	46.78	75.3	8	31	4								
PASADENA	47.08	86.7	8	35	5	15	29	11					
BOULDER CITY	47.96	82.4	8	36	0								
GLEN CANYON	49.32	79.1	8	38	-9								
RAPID CITY	49.87	66.6	8	51	0								
LARAMIE	50.20	109.2	8	53	-1						15	49	
TUCSON	52.91	83.1	9	14	0								
TUCSON TELE.	52.92	83.0	9	14	0				9	28	9	51	
LANCHOW	54.63	285.2	9	28A	1								
MANHATTEN	56.80	67.3	9	42A	0								
DUBUQUE	57.88	60.8	9	49	-1								

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TROMSOE	58.29	352.3	9	53	0						
WICHITA MTS.	58.67	72.5	9	56	0				11	6	
SODANKYLA	59.66	348.4	10	2A	0						
KIRUNA	59.91	351.2	10	4A	0						
FAYETTEVILLE	60.31	68.4	10	6A	-1						
ST. LOUIS 1	60.79	63.8	10	11	1						
SVERDLOVSK	61.00	326.8	10	13	1						
C. GIRARDEAU	62.11	64.4	10	20	1						
BLOOMINGTON	62.46	61.0	10	21	0						
KAJAANI	62.64	346.7	10	24A	1						
OTTAWA	63.49	49.7	10	27	-1						
SHAWINIGAN	64.01	47.2	10	31	-1						
BREBEUF	64.41	48.4	10	33	-1						
NURMIJARVI	66.49	347.0	10	48A	1						
LHASA	66.77	288.7	10	53A	4	19	44	7			
HELSINKI	66.77	346.7	10	50	1						
PORT MORESBY	67.04	215.5	10	47	-4						
PALISADES	67.66	51.8	10	54	-1	19	50	3	25	10	SS
UPPSALA	67.99	350.5	10	57A	0						
MOSCOW	68.58	338.2	11	1K	0						
ANDIJAN	68.60	309.0	11	3A	2						
COLUMBIA	69.25	61.3	11	5	0						
SHILLONG	69.27	285.2	11	5A	0						
TASHKENT	69.63	311.3	11	9	2	20	17	6			
GOTEBORG	70.62	353.2	11	13A	0						
COPENHAGEN	72.58	352.6	11	26K	1						
DURHAM	73.99	1.0	11	39K	6						
LAHORE	74.74	301.6	11	37	0						
DE BILT	76.58	356.7	11	47	-1						
MUNSTER	76.60	355.2	11	50	2						
HALLE	76.77	352.4	11	49	0						
COLLMBERG	76.88	351.7	11	49A	-1				12	4	PCP
LWOW	76.90	344.3	11	51	1						
KEW	77.30	0.2	11	53	1						
JENA	77.37	352.5	11	51	-1				12	55	
BENSBERG	77.63	355.4	11	55A	1				12	36	
NIEDZIKA	77.87	346.6	11	57	2						
PRUHONICE	78.04	350.5	11	57	1						
KASPERSKE H.	78.98	351.0	12	3A	2						
TIFLIS	79.22	327.5	12	5	3						
VIENNA-H.	79.54	349.0	12	8	4						
QUETTA	79.66	305.9	12	6	1	22	9	7	12	14	*SP
STUTTGART	79.69	353.8	12	6	1						
PARIS	79.94	358.3	12	9	3						
STRASBOURG	79.97	354.8	12	9	3				13	28	
FOLINIERE	80.00	0.3	12	8	1						
GARCHY	81.46	357.9	12	16	2						
LJUBLJANA	81.92	349.8	12	17	0						
CLERMONT-FD.	82.97	357.8	12	24	2						
ROSELEND	83.06	354.6	12	24	2						
ISOLA	84.40	354.9	12	32	3						
FLORENCE X.	84.50	351.8	12	31A	1						
MONACO	84.83	354.6	12	33	2						
SHIRAZ	86.88	316.2	12	43A	2	23	19	4	16	3	PP
SAN JUAN	89.70	60.3	12	56	1						
CANBERRA	90.73	204.9	12	59	-1						
SCOTT BASE	129.45	183.6							22	16	SKP
MAWSON	146.20	217.8	19	34K	-1						
KIMBERLEY	150.60	311.4	19	49K	7						

SEPTEMBER 11 22.H 15.M 4.S EPICENTRE 11.26 -62.30 DEPTH= 124.KM

A= 0.45609 B=-0.86855 C= 0.19394 D=-0.8854 E=-0.4649
G= 0.0902 H=-0.1717 K=-0.9810 HT= 6.4

DEPTH OF FOCUS= 0.014R

SE= 2.00

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
GRENADA	0.96	35.0	0	21K	-2							
TRINIDAD	1.09	124.1	0	20A	-4							
ST. VINCENT	2.15	27.7	0	34	-2	0	55	-9				
BARBADOS	3.22	54.6	0	50K	0	1	20	-9			1	41
CARACAS	4.61	261.1	1	10K	1	2	10	8				

The scanned images of the bulletins of the International Seismological Summary (ISS) have been obtained thanks to funding provided by the US National Science Foundation through grant EAR-9725140 (Villaseñor et al., 1997) and collected by SGA Storia Geofisica Ambiente (Bologna) on behalf of the Istituto Nazionale di Geofisica e Vulcanologia (Rome), in the frame of the EUROSEISMOS project.

ST. KITTS	6.06	356.1	1 31	3					2 8		
SAN JUAN	7.99	332.9	1 57	2	3 21	-3					
GALERAZAMBA	12.75	269.1			5 27	10					
BOGOTA	13.39	241.4	3 6	0	5 26	-6			3 17	PP	
CHINCHINA	14.59	245.7	3 22	1	6 3	3			3 35	PP	
HUANCAYO	26.53	209.6	5 28	0					6 3	SP	
LA PAZ	28.18	191.9	5 44	1					6 10		
COLUMBIA	28.39	325.9	5 45	0							
CHAPEL HILL	28.86	331.0	5 50	1							
HALIFAX	33.26	358.3	6 29K	2							
BLOOMINGTON	35.17	326.4	6 45	1							
BREBEUF	35.47	346.2							6 47		
C. GIRARDEAU	35.66	321.3	6 49K	1			7 19				
OTTAWA	35.91	343.8	6 49	-1					9 12		
SHAWINIGAN	36.28	347.8	6 54A	1							
ST. LOUIS 1	36.93	322.4	6 58	0							
ROLLA	37.50	320.1	7 3	0							
FAYETTEVILLE	37.97	315.9	7 7K	0					9 19	PCP	
WICHITA MTS.	40.42	311.2	7 26	-1					9 4	PP	
MANHATTEN	41.24	318.4	7 33	-1							
TUCSON TELE.	49.13	303.1	8 37	0							
GLEN CANYON	51.06	308.7	8 52	0							
SALT LAKE C.	52.45	313.2	9 1	-1							
BOULDER CITY	53.31	306.6	9 8	0							
BOZEMAN	53.72	319.2	9 10	-1							
BUTTE	54.83	319.0	9 19	0							
EUREKA	55.10	310.5	9 20	-1					10 19	PCP	
WOODY	56.45	305.4	9 30	-1					10 25		
HUNGRY HORSE	56.65	321.2	9 31	-1			10 1		10 25	PCP	
LICK	58.95	306.8	9 48A	0							
MINERAL	59.48	310.3	9 50A	-2							
BERKELEY	59.53	307.3	9 52A	0							
REYKJAVIK	59.86	19.2	9 55A	0							
CALISTOGA	59.91	308.2	9 54	-1							
SHASTA	60.14	310.5	9 54	-3							
PENTICTON	60.45	320.7	9 57	-2							
SIDA	60.92	20.8	10 3	1							
CORVALLIS	61.61	314.7	10 6	-1							
BAGNERES	62.32	47.2	10 11	0			10 40				
VICTORIA	62.62	319.0	10 7A	-6							
FOLINIERE	63.13	40.8	10 17	0					10 46		
PARIS	65.05	41.3	10 30	1			10 59				
RESOLUTE	66.00	351.0	10 33	-2							
MONACO	67.66	47.3	10 45	-1							
ROSELEND	67.99	45.4	10 45	-3							
BENSBERG	68.42	39.6	11 0	10					11 22		
STRASBOURG	68.46	42.2	10 50	-1					11 16		
MUNSTER	68.85	38.5	10 54	1							
STUTTGART	69.48	42.1	10 56	-1			11 26				
COLLMBERG	72.10	39.7	11 12A	-1			11 43		14 11		
KASPERSKE H.	72.33	42.0	11 12A	-2							
LJUBLJANA	72.84	45.2	11 17A	0			11 48				
PRUHONICE	73.01	41.1	11 18A	0			11 48				
UPPSALA	75.28	30.9	11 31A	0							
TROMSOE	76.46	20.9	11 38	0			12 8				
KIRUNA	76.90	22.7	11 40A	0			12 10				
COLLEGE	77.99	334.2	11 40	-6					14 43	PP	
NURMIJARVI	78.80	30.2	11 50A	0							
HELSINKI	78.97	30.6	11 51A	0							
SOFIA	79.27	48.4	12 25	32							
SODANKYLA	79.28	23.2	11 53A	0							
KAJAANI	79.97	26.5	11 58A	1							
ATHENS	80.06	53.2	12 20A	23							
BANGUI	80.26	87.4	11 59	1			12 28				
BROKEN HILL	93.48	104.0							25 9		
SOUTH POLE	101.18	180.0	13 39	1							
MAWSON	113.31	160.1	18 24	1							
MATUSIRO	128.69	338.8	18 53A	0							
SHILLONG	135.58	34.2	18 53	-13							
CANBERRA	142.86	224.7	19 18	-1							
RABAUL	145.16	278.9	19 24	1							
HONG KONG	146.47	5.9	19 26	1					20 7	*SPKP	
ADELAIDE	149.62	215.6	19 36A	6							
PORT MORESBY	150.98	270.9	19 40	8							
CHARTERS TS.	151.18	248.7	19 35	3							

SEPTEMBER 11 23.H 47.M 35.S EPICENTRE 43.95 145.03 DEPTH= 111.KM

A=-0.59186 B= 0.41402 C= 0.69158 D= 0.5732 E= 0.8194
G=-0.5667 H= 0.3964 K=-0.7223 HT= -3.2

DEPTH OF FOCUS= 0.012R

SE= 4.19

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
ABASHIRI	0.54	277.8	0 12	-7	0 30	-3		
NEMURO	0.74	146.8			0 5	-30		
KUSIRO	1.07	205.4	0 4K	-19	0 14	-26		
OBIHIRO	1.68	232.9	0 16	-14	0 36	-16		
ASAHIGAWA	1.93	265.9	0 28	-5				
HIROO	2.08	217.4	0 17	-18	0 39	-22		
KURILSK	2.40	56.8	0 34K	-5	1 9	0		
URAKAWA	2.44	223.3	0 23	-17	0 54	-16		
WAKKANAI	2.80	302.8	0 45	0	1 47	29		
SAPPORO	2.82	253.1	0 36K	-9	1 11	-8		
TOMAKOMAI	2.84	243.5	0 37	-8	1 10	-9		
MURORAN	3.38	242.6	0 40	-13	1 18	-14		
Y.-SAKHLINSK	3.47	333.0	0 55	1				
SUTTSU	3.68	253.5	0 56	-1	1 43	4		
MORI	3.75	242.0	0 47A	-11	1 30	-11		
HAKODATE	3.79	237.2	0 45	-13	1 26	-16		
HATINOHE	4.29	218.4	0 46	-19	1 27	-27		
AOMORI	4.43	226.6	0 52	-15	1 41	-17		
MIYAKO	4.86	209.0	0 50	-23	1 34	-34		
MORIOKA	5.13	215.5	0 58K	-18	1 46	-29		
UGLEGORSK	5.52	339.4	1 25	3				
AKITA	5.60	222.7	1 1	-22	2 0	-26		
MIZUSAWA	5.63	212.6	0 50	-33	1 53	-34		
ISINOMAKI	6.18	208.1	1 8	-23	2 6	-34		
SAKATA	6.38	219.5	1 17	-16				
SENDAI	6.47	210.2	1 14	-21	2 15	-33		
YAMAGATA	6.70	213.4	1 16	-22	2 21	-32		
HUKUSIMA	7.09	210.7	1 24	-19	2 31	-32		
NIIGATA	7.53	218.9	2 2	13	3 13	0		
ONAHAMA	7.67	205.6	2 1	10				2 41
SHIRAKAWA	7.74	209.8	1 30	-22	2 45	-33		
MITO	8.32	206.3	1 43A	-17	2 57	-36		
JTUNOMIYA	8.37	209.8	1 47	-13				
TAKADA	8.57	219.3	2 4	1				
TUKUBASAN	8.59	207.7	1 38A	-25	3 2	-37		
MAEBASI	8.81	213.1	1 49	-17	3 18	-26		
TYOSI	8.82	202.7	1 34	-32	3 8	-37		
KUMAGAYA	8.91	210.9	1 51	-17	3 17	-30		
NAGANO	8.94	217.9	1 55	-13				3 47
WAZIMA	9.01	226.0	1 54	-15				
MATUSIRO	9.05	217.4	1 49A	-20	3 23	-27		
OIWAKE	9.08	215.3	1 56	-14				
TOKYO C.M.O.	9.20	207.9						3 18
YOKOHAMA	9.46	207.7						3 25
VLADIVOSTOK	9.57	269.6	2 11	-5	4 6	3		
KOHU	9.65	213.2	2 16	-1	3 35	-30		
MISIMA	9.98	210.0						3 36
AJIRO	9.99	209.2	2 0	-22	3 38	-35		
IIDA	10.07	215.8	2 11	-12				
OSIMA	10.15	207.4						3 39
GIHU	10.64	219.4	2 16	-15				
NAGOYA	10.74	218.0	2 48	16				4 50
HIKONE	10.99	220.9	2 16	-19				
KYOTO	11.44	221.9	2 24	-17				3 7
PETROPAVLOVK	12.79	40.0	3 6	7				
CHANGCHUN	14.22	276.4	3 12	-6				6 44
YAKUTSK	20.21	338.9	4 34	6	8 18	14		
PEKING	21.75	269.6	4 39A	-5	8 40	8		
ULAN-BATOR	26.63	292.1	5 29	-1				
LANCHOW	32.26	270.2	6 17A	-3				
CANTON	33.32	241.7						7 12
MANILA	35.62	222.4	6 43	-6				
COLLEGE	41.83	36.2	7 41	0			7 53	8 15
SEMIPALATNSK	43.25	302.3	7 52	0				
SHILLONG	46.52	264.9	8 14A	-4				
CHATRA	49.17	269.7	8 37A	-2				
SVERDLOVSK	51.94	316.0	9 1	1				
RESOLUTE	55.22	16.3	9 23	-1				

LAHORE	55.67	282.7	9	24A	-3					
STALINABAD	55.67	292.8	9	26	-1					
APATITY	57.56	335.0	9	41	0					
SODANKYLA	59.68	336.8	9	56K	1					
VICTORIA	59.76	50.3	9	49	-7					
TROMSOE	60.08	340.9	10	9	11					
KIRUNA	61.04	339.1	10	5K	0					
PENTICTON	61.39	47.9	10	4	-3					
QUETTA	61.63	285.7	10	6A	-3					
PULKOVO	63.66	329.1	10	22	0					
CHARTERS TS.	63.73	178.7	10	11	-11					
SHASTA	64.88	57.0	10	28	-2					
HUNGRY HORSE	64.93	46.3	10	27	-3	10	39			
NURMIJARVI	65.14	331.9	10	31K	-1			11	2	PCP
HELSINKI	65.29	331.6	10	33K	0			11	3	PCP
RENO	67.15	56.7	10	54	10					
UPPSALA	67.94	334.4	10	49A	0					
TIFLIS	68.75	307.8	10	56	2					
EUREKA	69.48	54.7	10	56	-3	11	9	13	37	PP
WOODY	70.17	59.4	10	59	-4					
GOTEBORG	71.41	335.5	11	10	0					
SHIRAZ	71.77	293.7	11	11A	-1					
COPENHAGEN	72.95	334.1	11	17	-2					
KRAKOW	74.87	326.9	11	31	0			11	47	PCP
RACIBORZ	75.52	327.8	10	57	-37			12	12	
COLLMBERG	76.42	331.3	11	40A	1			11	51	PCP
HALLE	76.62	332.0	11	40	0					
PRUHONICE	76.97	329.7	11	43A	1			12	8	
JENA	77.22	331.9	11	44	0					
MUNSTER	77.62	334.6	11	47	1					
VIENNA-H.	77.71	327.7	11	48	2					
KASPERSKE H.	78.03	329.8	11	49A	1					
BENSBERG	78.64	334.4	11	51	-1	12	3	12	9	*SP
SOFIA	79.19	320.3	11	56	1					
STUTTGART	79.84	332.0	11	59	1					
LJUBLJANA	80.24	327.5	11	59A	-1					
STRASBOURG	80.51	332.8	12	2	0					
JERUSALEM	81.14	305.8	12	6A	1					
PARIS	81.96	336.0	12	21	12					
BESANCON	82.26	333.2	12	11	0					
WICHITA MTS.	82.66	48.1	12	11	-2			14	48	
FOLINIERE	82.83	337.8	12	15	1					
ROSELEND	83.25	331.3	12	19	3					
SHAWINIGAN	83.88	25.2	12	18K	-1					
FAYETTEVILLE	83.91	44.4	12	17K	-2					
OTTAWA	83.96	27.5	12	18K	-1					
BREBEUF	84.56	26.2	11	56	-26					
ISOLA	84.59	331.1	12	23	1					
MONACO	84.85	330.6	12	24	0					
BAGNERES	87.84	335.0	12	40	2					
MAWSON	126.94	208.4	18	47	-4					
SOUTH POLE	133.76	180.0	19	4	0					

SEPTEMBER 12 12.H 27.M 7.S EPICENTRE 43.93 147.99 DEPTH= 43.KM

A=-0.61274 B= 0.38296 C= 0.69130 D= 0.5300 E= 0.8480
G=-0.5862 H= 0.3664 K=-0.7226 HT= -3.1

DEPTH OF FOCUS= 0.002R

SE= 1.63

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
KURILSK	1.31	356.1	0	23	1	0	40	1					
Y.-SAKHLINSK	4.83	311.7	1	13	1	2	5	-2					
UGLEGORSK	6.58	323.7	1	38	2						2	52	
MIZUSAWA	7.03	229.4	1	49	6	2	56	-6					
SEVERO-KUR.	8.70	36.4	2	5	-1						3	52	
TUKUBASAN	9.79	220.8	2	17	-4	3	59	-12					
OKHA	10.19	342.7	2	28	2						4	37	
MATUSIRO	10.50	228.7	2	29K	-2	4	17	-11					
PETROPAVLOVK	11.51	34.0	2	42	-2	4	48	-5			2	50	PP
VLADIVOSTOK	11.72	271.6	2	49	2						4	37	
ABUYAMA	13.18	230.9	3	4A	-3								
KLYUCHI	14.87	28.9	3	30	1								

MAGADAN	15.74	5.3	3	39	-1							
CHANGCHUN	16.35	277.6	3	46	-2	6	43	-4				
YAKUTSK	21.06	335.7	4	39	-3	8	30	1			16	3 SCS
PEKING	23.90	271.7	5	12	2	9	22	1				
LANCHOW	34.40	272.2	6	45A	0	12	8	-1				
HONG KONG	35.24	243.3									19	13
COLLEGE	40.58	36.2	7	38	1				7	50	8	16
SHILLONG	48.66	267.1	8	40A	-2							
CHATRA	51.31	271.7	9	3	1							
FRUNSE	51.66	296.0	9	5	1							
SVERDLOVSK	53.43	316.9	9	17	-1							
RESOLUTE	54.63	16.9	9	25	-1							
TASHKENT	55.86	296.8	9	35	0	17	18	0				
NEW DELHI	57.45	279.8	9	42A	-5						10	5
LAHORE	57.76	284.4	9	47	-2							
WARSAK DAM	58.30	288.3	9	52	-1							
PENTICTON	59.80	49.2	10	4	1							
CORVALLIS	60.32	55.3	10	4	-3							
SODANKYLA	60.54	337.7	10	5	-3							
TROMSOE	60.78	341.9	10	7	-3							
KIRUNA	61.81	340.0	10	14	-3							
SHASTA	63.08	58.5	10	25	0							
HUNGRY HORSE	63.38	47.6	10	27	0						10	51
QUETTA	63.69	287.4	10	29A	0						12	50 PP
CHARTERS TS.	63.72	181.8	10	30	1							
MINERAL	63.77	58.4	10	29A	-1							
MOSCOW	64.67	324.1	10	36	1							
BERKELEY	64.84	61.0	10	37A	0							
RENO	65.36	58.2	10	41	1							
LICK	65.55	61.1	10	41A	0							
BUTTE	65.59	49.0	10	42	1							
NURMIJARVI	66.15	333.1	10	44	-1							
HELSINKI	66.31	332.8	10	42	-4							
FRESNO	67.06	60.6	10	51	0							
EUREKA	67.73	56.3	10	56	1				11	7	12	0
UPPSALA	68.87	335.6	11	1K	-1							
SALT LAKE C.	69.33	53.0	11	5	0							
PASADENA	69.75	61.9	11	7	0							
TIFLIS	70.44	309.3	11	13	1							
BOULDER CITY	70.66	58.5	11	14	1							
GORIS	71.04	306.8	11	16	1							
RAPID CITY	71.86	45.9	11	20	0						13	51 PP
REYKJAVIK	71.99	355.4	11	21	0							
SIDA	72.07	353.5	11	23A	2							
GOTEBORG	72.30	337.0	11	22K	-1							
LARAMIE	72.50	49.3	11	24	0							
SHIRAZ	73.73	295.5	11	31A	0	20	51	-6				
SIMFEROPOL	73.80	317.5	11	32	1							
COPENHAGEN	73.88	335.6	11	32K	0							
TUCSON	75.61	59.1	11	43	1							
TUCSON TELE.	75.62	59.0	11	43	1							
KRAKOW	76.04	328.5	11	44	0				12	6		
RACIBORZ	76.66	329.4	11	48	0				12	6		
COLLMBERG	77.45	332.9	11	52A	0						12	4 PCP
HALLE	77.62	333.6	11	53	0						12	31
PRUHONICE	78.04	331.4	11	56A	0				12	22	12	58
JENA	78.23	333.5	11	57	0						13	3
DURHAM	78.32	342.6	11	56K	-1							
MUNSTER	78.53	336.3	11	59	1							
MANHATTEN	78.81	45.7	12	19	19							
VIENNA-H.	78.85	329.4	12	1A	1							
KASPERSKE H.	79.10	331.5	12	2A	1						12	24
BENSBERG	79.56	336.0	12	3A	-1							
HEIDELBERG	80.47	334.4	12	9	0							
SOFIA	80.55	322.1	12	13	4							
STUTTGART	80.84	333.8	12	11	0							
WICHITA MTS.	81.06	49.9	12	12	0						15	47
KEW	81.10	340.6	12	12	0							
TUBINGEN	81.12	333.8	12	13	1							
LJUBLJANA	81.38	329.3	12	13A	-1							
EBINGEN	81.46	333.7	12	13	-1							
STRASBOURG	81.49	334.6	12	14	0						12	51
RAVENSBURG	81.60	333.1	12	15	0							
TRIESTE	82.01	329.5	12	16	-1							
ROLLA	82.17	43.7	12	17A	-1	22	27	-1				
FAYETTEVILLE	82.40	46.3	12	19A	0							
BASLE	82.47	334.2	12	13	-6							
PARIS	82.82	337.8	12	22	1				12	32		

JERUSALEM	82.87	307.7	12	23A	2							
OTTAWA	82.96	29.4	12	21	-1							
SHAWINIGAN	82.96	27.0	12	22	0							
BESANCON	83.22	335.0	12	26	3							
FOLINIERE	83.63	339.6	12	26	1							
BLOOMINGTON	83.75	39.5	12	25	-1							
C. GIRARDEAU	83.80	42.6	12	26	0							
ROSELEND	84.27	333.2	12	29	1							
CLERMONT-FD.	85.41	336.2	12	36	2							
ISOLA	85.62	333.0	12	37K	2							
MONACO	85.89	332.5	12	36	0							
PALISADES	87.43	30.4				23	13	-6				
BAGNERES	88.73	337.0	12	52	2							
SOUTH POLE	133.73	180.0	19	13	1							

SEPTEMBER 12 19.H 18.M 40.S EPICENTRE 32.18-115.25 DEPTH= 0.KM

A=-0.36167 B=-0.76701 C= 0.52999 D=-0.9045 E= 0.4265
G=-0.2260 H=-0.4794 K=-0.8480 HT= 1.1

SE= 2.72

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
BARRETT	1.30	292.9	0	24	-1	0	38	-6				
HAYFIELD	1.56	348.1	0	26	-3							
RIVERSIDE	2.54	315.8	0	40	-3							
PASADENA	3.14	309.5	0	53A	2	1	35	5				
TUCSON	3.74	87.7	0	56	-4	1	41	-4				
BOULDER CITY	3.81	5.1	0	58	-3						6	5
TUCSON TELE.	3.84	86.4	0	58	-3							
GLEN CANYON	5.65	31.2	1	25	-2							
FRESNO	5.93	321.9	1	30	-1						2	11
EUREKA	7.31	355.6	1	48	-2							
LICK	7.36	316.1	1	50A	-1						4	3
BERKELEY	8.08	316.6	1	58	-3	3	52	18				
RENO	8.23	334.5	2	7	4							
CHIHUAHUA	8.67	111.7	2	8	-1	3	48	-1			2	28
SALT LAKE C.	9.00	16.7	2	13	-1							
MINERAL	9.63	329.6	2	25K	2						5	12
SHASTA	10.26	327.9	2	36	5							
ARCATA	11.21	323.2									6	1
LUBBOCK	11.35	79.3	2	48	2							
MAZATLAN	11.90	136.7									4	36
LARAMIE	11.96	37.6	3	12	18							
BOZEMAN	13.86	12.4	3	22	2							
CORVALLIS	13.89	335.3	3	22	2							
BUTTE	13.98	7.7	3	23	2							
WICHITA MTS.	14.14	75.2	3	23	0						5	50
RAPID CITY	15.18	35.1	3	43	6							
HUNGRY HORSE	16.18	2.9	3	50	0							
SEATTLE	16.36	342.9	3	57	5	7	3	9				
MANHATTEN	16.69	60.0	3	58	2	7	18	16				
PENTICTON	17.44	350.4	4	6	0							
VICTORIA	17.45	341.6	4	8K	2							
FAYETTEVILLE	17.86	71.6	4	10	-1							
BANFF	18.98	359.4	4	24	-1							
TACUBAYA	19.22	127.6									4	40 PPP
ROLLA	19.93	66.9	4	36	0	8	10	-5				
ST. LOUIS 1	21.35	65.5	4	50	-1	8	48	4				
C. GIRARDEAU	21.71	69.2	4	53	-1	8	58	7				
DUBUQUE	22.01	55.1	4	55	-2	9	0	4				
PALISADES	34.08	63.1				12	51	37				
FORDHAM	34.09	63.4									17	34
BREBEUF	34.66	55.2	6	52	-1							
SHAWINIGAN	35.39	53.6	6	59	0							
COLLEGE	38.34	338.2	7	25	1							
SAN JUAN	46.13	95.1	8	33	6							
LA PAZ	66.17	129.8	10	50	-1							
KIRUNA	74.93	15.9	11	47	3							
MATUSIRO	83.13	309.0	12	34	5							
COLLMBERG	85.24	29.7	12	45	6							
SHIRAZ	117.42	12.0	14	57	-230							
SCOTT BASE	118.73	193.7	18	55	5	25	46	1			20	35 PP
BROKEN HILL	142.53	70.4									20	49
BULAWAYO	145.57	78.6	19	42	2						20	15 PKP2

SEPTEMBER 13 21.H 19.M 15.S EPICENTRE -41.73 -75.13 DEPTH= 0.KM

A= 0.19214 B=-0.72341 C=-0.66315 D=-0.9665 E=-0.2567
G=-0.1702 H= 0.6409 K=-0.7485 HT= -2.3

SE= 2.09

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
SANTIAGO	9.01	24.6	2	11	-3	4	1	3					
ARGENTINE I.	24.36	168.9	5	21	0								
LA PAZ	25.86	15.5	5	36K	1	10	7	4					
HUANCAYO	29.57	359.6	6	9	0						9	15	PCP
BYRD STATION	41.73	190.6	7	51	-1				8	1			
BOGOTA	46.14	1.5	8	29	1	15	15	1					
CHINCHINA	46.48	359.3	8	30K	-1	15	21	2					
SOUTH POLE	48.46	180.0	8	46	0								
CARACAS	52.52	10.2	9	15	-2	16	41	-2					
GRENADA	54.92	16.1	9	34	-1								
SCOTT BASE	55.02	193.2	9	33A	-3	17	20	3			11	51	PP
ST. VINCENT	56.10	16.3	9	41	-2								
CAPE HALLETT	57.59	199.2	9	52A	-2	18	0	9			21	52	SS
SAN JUAN	60.38	9.8	10	8	-5				10	17			
MAWSON	66.47	163.8	10	51	-2						39	24	PKPPKP
HERMANUS	70.97	119.3									20	51	SCS
MIRNY	71.66	175.0	11	23	-3								
WILKES	72.17	182.4	11	27K	-2	20	55	4			25	53	SS
COLUMBIA	75.56	354.9	11	45	-3								
GRAHAMSTOWN	76.38	122.5	11	53	0								
WINDHOEK	76.93	108.5	11	58A	2								
CHATEAU	77.00	228.8	11	55	-1								
MBOUR	77.35	57.5	12	1	3	20	51	-57					
KARAPIRO	77.88	229.7	11	59	-2								
KIMBERLEY	78.21	117.9	11	32	-31								
LUBBOCK	78.87	337.5	12	5	-2								
WICHITA MTS.	79.07	340.5	12	4	-4	22	1	-6			14	36	
FAYETTEVILLE	79.39	344.4	12	7A	-2								
C. GIRARDEAU	79.77	348.4	12	7	-4								
WASHINGTON	80.27	358.5	12	19	5						15	19	PP
TUCSON	80.63	329.9	12	14	-2								
TUCSON TELE.	80.67	330.0	12	15	-1				12	33	12	47	
ROLLA	80.72	346.6	12	13K	-4	22	21	-3					
ST. LOUIS 1	81.17	348.1	12	17K	-2	22	26	-3					
BLOOMINGTON	81.20	351.1	12	16K	-3								
PENNSYLVANIA	82.19	357.9	12	23	-1	22	32	-7					
PALISADES	82.37	0.9	12	24K	-1	22	36	-5			15	30	PP
PRETORIA	82.46	117.7	12	26	0								
MANHATTEN	82.88	343.4				23	6	20					
LUANDA	82.96	95.5	12	31A	3								
DUBUQUE	85.02	348.5	12	37	-2	22	58	-10					
GLEN CANYON	85.12	331.5	12	38	-1								
PASADENA	85.23	325.4	12	39	-1	24	15	65			23	6	SKS
BOULDER CITY	85.46	328.7	12	40	-1								
BULAWAYO	86.56	113.9	12	47K	1								
HALIFAX	86.59	8.2	12	46K	0								
OTTAWA	86.75	359.6	12	45	-2								
BREBEUF	86.86	1.1	12	45K	-3								
FORT NELSON	87.45	209.8	12	49K	-2								
SHAWINIGAN	87.92	1.6	12	51K	-2								
MOORLANDS	87.93	209.9	12	53K	0								
FLAMING GRGE	87.94	334.7	12	51	-2						30	38	PKKP
FRESNO	88.16	325.6	12	53	-1								
VINEYARD	88.82	324.5	12	58	1								
EUREKA	88.95	329.6	12	57	-1				13	7	30	28	PKKP
RAPID CITY	89.07	340.2	12	55	-3								
LICK	89.43	324.7	13	0A	0								
BERKELEY	90.14	324.5	13	3K	0								
BROKEN HILL	90.34	109.7	13	6A	2								
RENO	90.51	327.1	13	4	-1								
CALISTOGA	90.92	324.8	13	7A	0								
UKIAH	91.60	324.6	13	11	1								
MINERAL	91.93	326.3	13	11	-1								
SHASTA	92.55	326.0	13	13	-1								
BOZEMAN	92.74	335.7	13	1	-14								
CANBERRA	93.31	214.8	13	17	-1								

BUTTE	93.53	334.9	13 19	0			
RIVERVIEW	93.62	217.1	13 17	-2			
BANGUI	95.69	89.2	13 30	1		17 22	PP
HUNGRY HORSE	96.05	335.1	13 28	-3		30 49	PKKP
CORVALLIS	96.15	327.6	13 29K	-2			
MESSINA	114.54	60.0				29 26	PS
ROME	114.70	55.2				19 43	PP
STUTTGART	116.68	47.5	18 47	1			
TRIESTE	117.54	52.3				20 15	PP
LJUBLJANA	118.21	52.2	18 50	1		19 55	PP
KASPERSKE H.	119.27	48.8	18 51	0			
COLLMBERG	120.05	46.5	18 53A	0		20 18	
PRUHONICE	120.24	48.4	18 54	1		20 9	
COLLEGE	120.30	331.8	18 51	-2		20 20	PP
HELWAN	120.85	76.0	19 9	15		20 21	PP
JERUSALEM	124.69	76.2	19 3A	1		20 50	PP
ISTANBUL KA.	124.94	63.4				20 51	
UPPSALA	126.20	38.7	19 3	-2			
KSARA	126.21	74.4	19 4	-1		21 4	PP
NURMIJARVI	129.73	39.3	19 11A	-1			
TROMSOE	129.77	27.0	19 11	-1		22 34	PKS
KIRUNA	129.87	29.5	19 11K	-1		21 23	PP
SIMFEROPOL	129.95	61.0	19 12	0			
LEMBANG	131.61	183.6	19 15A	0		22 44	PP
KAJAANI	131.97	35.2	19 16	0			
SODANKYLA	132.10	30.7	19 15A	-1		22 42	PKS
PULKOVO	132.29	41.2	19 15	-1			
SOTCHI	133.16	64.7	19 19	1			
APATITY	134.73	30.8	19 21	0			
MOSCOW	135.29	47.9	19 21	-1			
TIFLIS	135.99	69.0	19 23	0			
GORIS	136.25	72.6	19 25	1			
SHIRAZ	136.41	88.7	19 16	-8		22 58	PKS
MAKHACH-KALA	138.29	68.3	19 28	1			
TEHERAN	138.41	80.1	19 15	-13	25 30 -67		
PETROPAVLOVK	142.72	306.4	19 29	-6			
MADRAS	144.20	135.9	19 37	-1			
BOMBAY	144.50	120.1	19 40	2			
POONA	144.89	121.8	19 39	0			
MAGADAN	146.71	318.2	19 42	0			
QUETTA	147.45	98.4	19 45	2		23 30	PKS
SVERDLOVSK	148.07	46.5	19 44	0			
SAMARKAND	151.35	81.4	19 50	1			
TUKUBASAN	152.20	270.3	19 56	5		44 4	PSS
STALINABAD	152.35	84.5	19 52	1			
Y.-SAKHLINSK	152.63	294.1	19 49	-2			
WARSAK DAM	152.71	95.5				20 0	PKP2
TASHKENT	153.46	78.9	19 54	2			
LAHORE	153.59	102.7	19 55	2			
MATUSIRO	153.73	269.7	19 51	-2		43 21	SS
YAKUTSK	154.84	332.2	20 0	6			
NAMANGAN	155.15	80.6	19 56	1			
DEHRA DUN	155.60	109.2	20 11	16			
ANDIJAN	155.61	81.4	19 57	2			
FRUNSE	157.64	77.0	19 59K	1			
HONG KONG	159.11	204.8	19 58	-2		24 12	PP
CHATRA	159.20	130.1	20 1K	1			
SHILLONG	160.62	142.2	20 2K	1		20 45	
SEMIPALATNSK	160.91	54.6	20 1K	-1			
IRKUTSK	169.45	1.9	20 7	-2			

SEPTEMBER 14 8.H 3.M 12.S EPICENTRE 32.83 47.54 DEPTH= 90.KM

A= 0.56837 B= 0.62113 C= 0.53959 D= 0.7377 E=-0.6751
G= 0.3643 H= 0.3981 K=-0.8419 HT= 0.9

DEPTH OF FOCUS= 0.009R

SE= 2.52

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
TEHERAN	4.31	46.6	1	2	-3	2	6	11					
SHIRAZ	5.31	125.3	1	19A	0	2	19	0			1	42	PG
TIFLIS	9.14	347.0	2	8	-3								
KSARA	9.81	278.9	2	22	2	4	17	8			5	22	SG
MAKHACH-KALA	10.12	359.8	3	27	62								

JERUSALEM	10.48	267.6	2 32	3		
HELWAN	14.16	262.3	3 18	0		7 42
SIMFEROPOL	15.96	323.2	3 41	0		
QUETTA	16.76	93.9	3 53	2		
ISTANBUL UN.	16.92	304.2	3 49	-4		
SAMARKAND	17.09	61.0	3 56	1		
STALINABAD	18.15	65.6	4 9	1		
ATHENS	20.06	291.5	4 28A	-1		
WARSAK DAM	20.07	80.1	4 28	-1		
NAMANGAN	20.93	60.3	4 39	2		
ANDIJAN	21.35	61.2	4 43A	1		
SOFIA	21.46	304.3	4 42	-1		
FRUNSE	23.51	57.1	5 6A	3		
MOSCOW	23.92	346.1	5 6	-1	9 26 12	
LWOW	24.33	321.2	5 16	5		9 43
SVERDLOVSK	25.64	16.7	5 23	0		
NEW DELHI	25.81	91.5	5 25K	0		8 53
DEHRA DUN	26.07	87.3				9 4
SKALNATE PL.	26.08	316.8	5 28	1		
MESSINA	26.50	290.7	5 32K	1		
KRAKOW	26.69	318.3	5 32	-1		
BRATISLAVA	27.53	312.8	5 39	-2		
RACIBORZ	27.68	317.2	5 41	-1		
VIENNA-H.	28.01	312.6	5 45A	0		
LJUBLJANA	28.49	307.3	5 48	-1		
TRIESTE	28.91	306.2	5 57	4		
SEMIPALATNSK	29.78	44.2	6 2K	1		
KASPERSKE H.	30.05	312.9	6 1A	-2		
COLLMBERG	31.20	316.6	6 12A	-1		
NURMIJARVI	31.49	338.4	6 14	-2		
HALLE	31.88	316.5	6 12	-7		7 10 PP
STUTTGART	32.65	310.6	6 24	-2		
MONACO	33.02	301.0	6 28	-1		
ISOLA	33.34	301.8	6 32	0		
COPENHAGEN	33.39	323.7	6 32A	0		
UPPSALA	33.47	332.8	6 31A	-2		
BASLE	33.48	307.9	6 33	0		
KAJAANI	33.62	344.4	6 33A	-1		
NEUCHATEL	33.80	306.8	6 35	-1		
BESANCON	34.49	307.1	6 34	-8		
BENSBERG	34.55	313.8	6 42	0		
MUNSTER	34.57	315.6	6 45	3		
GOTEBORG	34.62	326.7	6 41A	-2		
CHATRA	34.75	89.3	6 47A	3		
GARCHY	36.46	306.6	6 58	0		
SODANKYLA	36.69	346.6	7 0A	0		
PARIS	37.05	309.1	7 4	1		
KIRUNA	38.40	343.8	7 19A	4		
FOLINIERE	39.00	308.6	7 18	-1		
BANGUI	39.13	229.8	7 21	0		
SHILLONG	39.14	88.8	7 17A	-4		
KEW	39.25	312.9	7 21	-1		
TROMSOE	40.16	344.9	7 28	-1		
DURHAM	40.62	317.7	7 37K	4		
KHEYS	48.08	2.3	8 33	0		
BROKEN HILL	50.43	204.2	8 45	-6		
TANANARIVE	51.46	180.0	8 53K	-6		9 17
BULAWAYO	55.69	201.7	9 32A	2		
PRETORIA	61.11	200.0	10 10	3		
MATUSIRO	71.82	58.0	11 16	1		
HALIFAX	80.74	317.6	12 7	2		
COLLEGE	81.88	6.6	12 13	2	12 24	
SHAWINIGAN	84.42	323.2	12 26K	2		
BREBEUF	85.57	322.9	12 32	2		
HUNGRY HORSE	97.52	347.7	13 26	1		
WICHITA MTS.	105.66	331.5	18 18	777		

SEPTEMBER 14 18.H 44.M 48.S EPICENTRE -23.55-179.90 DEPTH= 536.KM

A=-0.91772 B=-0.00159 C=-0.39723 D=-0.0017 E= 1.0000
G= 0.3972 H= 0.0007 K=-0.9177 HT= 3.8

DEPTH OF FOCUS= 0.079R

SE= 1.59

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
SUVA	5.59	343.5			2 42	-8		
RAOUL ISLAND	5.95	163.1	1 38	0	2 53	-3		
AFIAMALU	12.28	40.1	2 39	-3	4 48	-4		
NOUMEA	12.64	272.9	2 47A	2	5 16	17		
KARAPIRO	14.86	194.2	3 9	1				
KOUMAC	14.96	278.4	3 12	3	5 45	4		
CHATEAU	16.08	192.9	3 19	-1				
WELLINGTON	18.24	192.9			6 39	0		
GEBBIES PASS	21.02	195.2			7 35	10		
HONIARA	23.83	302.7	4 31	-1				
BRISBANE	24.94	255.4	4 41	-1				7 48
CANBERRA	29.40	239.4	5 22	1				
CHARTERS TS.	31.56	269.6	5 38	-2	10 9	-2		
FORT NELSON	33.23	226.5	5 53A	-1				
PORT MORESBY	34.48	288.5	6 5A	1				
ADELAIDE	37.61	242.8	6 30A	0				
DARWIN	47.96	274.5	7 50	-1				
MUNDARING	56.46	246.3	8 51	-1				
BYRD STATION	61.95	170.1	9 28	-1				
SOUTH POLE	66.59	180.0	9 59	1				
LEMBANG	71.26	270.6	10 25A	-1				
MATUSIRO	71.65	325.5	10 28	0				
MAWSON	78.11	200.4	11 4	0				
ARGENTINE I.	78.86	157.2	11 9	1				
VINEYARD	81.47	43.8	11 25	3				
BERKELEY	81.61	42.5	11 25K	2				
LICK	81.67	43.2	11 25K	2				
CALISTOGA	81.89	41.7	11 25	1				
WOODY	82.48	45.9	11 28	1			13 29	
FRESNO	82.50	44.6	11 29	2				
SHASTA	83.29	40.2	11 34	3				
MINERAL	83.55	40.9	11 34K	2				
EUREKA	86.53	44.1	11 48	1				
PENTICTON	90.15	34.6	12 2	-2				
COLLEGE	91.56	13.1	12 9	-1			14 11	
FLAMING GRGE	91.56	45.6	12 11	1				
WICHITA MTS.	96.37	55.0	12 33	1				
SHIRAZ	133.06	289.2						20 57
COLLMBERG	150.55	343.4	18 52	8				19 12 PKP2

SEPTEMBER 14 21.H 50.M 44.S EPICENTRE 37.46 141.67 DEPTH= 61.KM

A=-0.62425 B= 0.49348 C= 0.60564 D= 0.6201 E= 0.7845
G=-0.4751 H= 0.3756 K=-0.7957 HT= -0.8

DEPTH OF FOCUS= 0.004R

SE= 2.43

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
ONAHAMA	0.80	230.6	0 14A	-3	0 23	-7		
HUKUSIMA	1.00	287.2	0 17K	-2	0 26	-7		
ISINOMAKI	1.01	344.0	0 17K	-2	0 28	-5		
SENDAI	1.01	323.1	0 16K	-3	0 27	-6		
SHIRAKAWA	1.21	254.1	0 19K	-3	0 32	-6		
YAMAGATA	1.31	307.3	0 18K	-5	0 32	-8		
MITO	1.45	222.1	0 24K	-1	0 40	-4		
KAKIOKA	1.72	224.7	0 26K	-3	0 42	-8		
MIZUSAWA	1.72	345.8	0 26	-3	0 41	-9		
TUKUBASAN	1.77	226.0	0 26	-3				
SAKATA	2.04	315.2	0 32	-1				
NIIGATA	2.13	283.2	0 32	-2	0 57	-3		
MIYAKO	2.20	6.0	0 34	-1	0 57	-4		
KUMAGAYA	2.26	235.3	0 36	0	1 5	2		
MORIOKA	2.27	350.2	0 34K	-2	0 59	-4		
HONGO	2.32	221.8	0 36	-1				1 0
MAEBASI	2.34	243.9	0 35K	-2	1 2	-3		
TOKYO C.M.O.	2.36	221.6	0 35	-2	1 1	-4		
TITIBU	2.55	235.4	0 38	-2	1 4	-6		
AKITA	2.57	331.8	0 45	5	1 12	1		
TAKADA	2.75	263.5	0 44	1	1 14	-1		
NAGANO	2.89	255.2	0 45	0				1 31
MATUSIRO	2.92	252.7	0 43K	-2				1 29
MERA	2.94	211.0	0 48	2				

HUNATU	3.05	231.0	0	49	2	1	20	-3				
HATINOHE	3.07	358.0	0	48	1	1	29	6				
KOHU	3.08	235.4	0	46	-2	1	21	-3				
AJIRO	3.18	221.6	0	48	-1	1	23	-3				
MATUMOTO	3.21	249.0	0	53	4	1	31	4				
MISIMA	3.21	224.1	0	49	0							
OSIMA	3.26	215.3	0	51	1	1	24	-4				
AOMORI	3.43	348.6	0	55	3	1	33	1				
IIDA	3.65	239.1	0	56	0	1	39	1				
TOYAMA	3.66	259.4	1	1	5	1	41	3				
TAKAYAMA	3.78	251.1	0	54	-3							
WAZIMA	3.80	270.2	1	2	4							
OMAESAKI	4.00	225.5	1	0	0							
HAKODATE	4.40	351.1	1	9	3	2	4	7				
NAGOYA	4.43	240.4	1	10	4	2	0	3				
GIHU	4.46	244.0	1	8	1							
HATIDYOZIMA	4.62	200.0				1	59	-3				
MORI	4.71	350.0	1	12	2	2	8	4				
URAKAWA	4.76	10.0	1	13	2	2	7	1				
TSURUGA	4.86	249.8	1	13	1							
MURORAN	4.88	353.9	1	15	2	2	14	5				
HIKONE	4.89	245.1	1	14	1	2	6	-3				
KAMEYAMA	4.95	239.8	1	35	21	2	32	22				
HIROO	4.98	14.2	1	20	6	2	6	-5				
TOMAKOMAI	5.16	359.2									1	38
SUTTSU	5.45	348.7				2	17	-6				
NARA	5.49	241.4	1	36	15							
ABUYAMA	5.57	244.2	1	22K	0							
SAPPORO	5.61	357.6	1	25	2	2	28	1				
OSAKA	5.71	242.4				2	23	-6				
KUSIRO	5.89	19.9	1	24	-3	2	28	-6				
NEMURO	6.58	25.7				2	41	-9				
SHILLONG	43.63	269.0	7	57A	-3							
CHATRA	46.78	273.4	8	24A	-1							
COLLEGE	48.62	32.4	8	40	1							
DARWIN	50.61	193.8	8	54	-1							
NEW DELHI	53.86	280.6	9	12A	-7							
CHARTERS TS.	57.40	174.9	9	45	1							
QUETTA	61.02	287.3	10	7	-2							
SODANKYLA	64.65	337.2	10	32A	-1							
KIRUNA	66.19	339.2	10	41	-2							
KAJAANI	66.30	334.0	10	42A	-2							
NURMIJARVI	69.67	332.0	11	2	-3							
HUNGRY HORSE	71.33	43.0	11	16	1						14	49
SHIRAZ	72.04	293.8	11	21A	2							
EUREKA	75.42	51.4	11	40	1	11	55					
WOODY	75.80	55.9	11	41	0							
FLAMING GRGE	78.49	47.0	11	58	2							
COLLMBERG	80.84	330.2	12	7	-2						12	27
KASPERSKE H.	82.29	328.6	12	15	-1							
STUTTGART	84.31	330.6	12	25	-1							
PARIS	86.77	334.4	12	38	-1							
WICHITA MTS.	88.95	45.7	12	50	1							
SOUTH POLE	127.27	180.0	18	58	0							

SEPTEMBER 15 1.H 46.M 10.S EPICENTRE 34.98 33.83 DEPTH= 33.KM

A= 0.68215 B= 0.45717 C= 0.57067 D= 0.5567 E=-0.8307
G= 0.4741 H= 0.3177 K=-0.8212 HT= 0.1

DEPTH OF FOCUS= 0.000R

SE= 1.76

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
KSARA	2.05	123.7	0	30	-3	0	49	-8			8	37	PCP
JERUSALEM	3.40	159.6	0	51K	-1								
HELWAN	5.51	203.2	1	20K	-2	2	20	-5					
ISTANBUL KA.	7.15	329.7	1	47	2	3	16	10			2	27	PG
ISTANBUL UN.	7.16	329.2	1	46K	1						3	59	SG
ATHENS	8.67	293.1	2	6A	0						2	23	PPP
SIMFEROPOL	9.96	1.2	2	27K	3	4	18	2					
TIFLIS	10.93	48.7	2	40	3						4	52	
GORIS	10.94	62.0	2	41	4						5	1	
BUCHAREST	11.15	330.1				4	45	0			2	40	PP

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SKOPJE	11.95	309.4	2	49	-2					7	21	
CAMPULUNG	12.28	329.5								2	57	PP
TITOGRAD	13.58	307.5	3	15	2	5	49	6		3	49	
BELGRADE	14.20	317.8	3	21K	0	5	4	-54		3	28	PP
TARANTO	14.22	297.6	3	18	-3					5	53	
TEHERAN	14.35	81.9	3	25	2	6	26	24				
TIMISOARA	14.41	322.1	3	36	12	6	28	25				
REGGIO CALA.	14.94	287.3	3	30	-1	6	1	-15				
MESSINA	15.03	287.7	3	30	-2	6	12	-6	3	37	3	45 PP
LWOW	16.48	337.1	3	53	3	6	59	8			4	9 PP
SHIRAZ	16.66	103.4	3	54A	1	6	59	3			7	8 SS
BUDAPEST	16.70	322.9	3	51	-2	6	44	-12			4	27 PPP
ZAGREB	17.34	314.0	4	1	0							
SKALNATE PL.	17.37	328.9	4	3	2	7	25	13				
HURBANOVO	17.37	322.6	4	2	1	7	24	12				
ROME	18.07	298.8	4	11A	1	7	33	5	4	23		
BRATISLAVA	18.12	321.7	4	11K	0	7	30	1				
KRAKOW	18.17	330.2	4	12	1						4	37 PPP
LJUBLJANA	18.33	312.9	4	13A	0	7	39	5			4	32 PP
VIENNA-H.	18.55	320.9	4	17A	1	7	49	11			4	36 PP
TRIESTE	18.61	311.0	4	15A	-2	7	44	4			8	18 *SS
CHORZOW	18.74	329.2	4	18	0						4	30 PP
RACIBORZ	18.93	327.6	4	20	-1						4	38 PP
FLORENCE X.	19.50	303.6	4	23A	-4	8	2	2				
WARSAW	19.53	335.9	4	25	-2	8	1	1			4	47 PP
PRATO	19.63	303.7	4	27	-2	8	6	3				
PADOVA	19.69	308.6	4	28A	-1	8	7	3			4	51 PP
BOLOGNA	19.69	305.6	4	31	2	8	14	10				
ASHKABAD	19.93	74.3	4	32	0	8	18	9				
KASPERSKE H.	20.55	319.6	4	38A	0	8	32	11				
PRUHONICE	20.57	322.7	4	39A	0	8	25	3			5	4 PP
CUGLIERI	20.65	292.0									10	50
PRAGUE	20.69	322.7	4	40	0	8	34	10			5	1 PP
MOSCOW	20.92	6.0	4	42	0	8	29	1			8	44 PCP
CHIAVARI	20.99	303.8	4	44	1						7	42 SS
PAVIA	21.37	305.9	4	47	0						9	42 PP
CHUR	21.76	310.4	4	50	-1	8	49	5				
RAVENSBURG	22.11	312.7	4	52	-2							
MONACO	22.13	301.2	4	53	-1	8	53	2				
COLLMBERG	22.17	323.7	4	54A	-1	8	51	-1			5	16 PP
ROSELEND	22.50	305.7	5	7	9	9	14	16				
ISOLA	22.51	302.1	4	58	0						9	7
JENA	22.66	321.5	4	59	0	9	8	7			5	38 PPP
EBINGEN	22.68	313.1	4	59	-1							
STUTTGART	22.77	314.7	5	0A	-1	9	5	2				
TUBINGEN	22.78	314.0	5	0A	-1	9	8	5				
HALLE	22.81	323.1	5	1	0	9	7	4				
BASLE	23.26	310.6	5	5	0						9	15
KARLSRUHE	23.39	314.6	5	8	1	9	24	10				
HEIDELBERG	23.39	315.7	5	6	-1	9	19	5				
NEUCHATEL	23.45	309.0	5	7	0							
STRASBOURG	23.57	313.2	5	8A	0	9	24	7			5	48
BESANCON	24.16	309.0	5	14	0							
PULKOVO	24.91	355.8	5	22	1	9	40	0			6	17 PPP
BENSBERG	25.02	317.9	5	22A	0	9	50	8			6	0 PP
MUNSTER	25.29	320.2	5	25	0							
COPENHAGEN	25.39	331.2	5	26A	0	9	48	0	5	35	10	16
CLERMONT-FD.	25.61	304.2	5	28	0	10	12	21				
HELSINKI	25.86	349.8	5	30	0						8	59 PCP
GARCHY	26.05	307.5	5	[illegible]	-1						6	8
NURMIJARVI	26.23	349.7	5	33A	-1	10	0	-2			8	57 PCP
DE BILT	26.66	318.8	5	40	2	10	17	8				
PARIS	26.89	310.5	5	38	-2						5	59
UPPSALA	27.04	342.0	5	40	-1	10	15	0			9	1 PCP
GOTEBORG	27.04	333.9	5	40A	-1						9	2 PCP
BAGNERES	27.24	297.4	5	42	-1							
ALICANTE	27.63	287.2	5	47	0	10	27	3			6	34 PP
QUETTA	28.24	90.4	5	52	0	10	38	4	6	1	6	39 PP
SVERDLOVSK	28.40	31.4	5	53	-1	10	32	-5				
TASHKENT	28.45	66.5	5	54	0	10	41	3			6	46 PP
FOLINIERE	28.76	309.2	5	56	-1							
ALMERIA	29.35	284.3	6	1A	-1	10	36	-16			6	52 PP
KAJAANI	29.37	354.5	6	1A	-1						9	7 PCP
KEW	29.50	314.5	6	1A	-2	10	52	-2	6	16		
GRANADA	30.21	285.2	6	18K	8	11	24	19			8	54 PCP
TOLEDO	30.32	290.6	6	11A	0						7	16 PP
WARSAK DAM	30.99	80.8	6	15	-2							
DURHAM	31.47	320.0	6	20K	-1	11	21	-4				
FRUNSE	32.44	63.6	6	29	0	11	46	5				

APATITY	32.62	359.7	6	29	-2					
SODANKYLA	32.70	354.8	6	31A	-1				9	17 PCP
ABERDEEN	32.78	323.8				11	53	7		
BANGUI	33.55	208.3	6	39	0	11	58	0		
COIMBRA	33.65	291.6	6	41A	1					
SERRA PILAR	33.72	293.3	6	40K	0	11	59	-1	7	53 PP
KIRUNA	33.78	350.9	6	40A	-1	12	1	0	9	19 PCP
LAHORE	33.88	84.1	6	41	-1	12	0	-3		
ALMATA	34.15	62.8	6	44	0	12	12	5	14	26 SS
LISBON	34.37	289.1	6	46A	0				7	1
TROMSOE	35.67	351.1	6	56	-1					
SEMIPALATNSK	36.79	50.7	7	7	0	12	50	2		
NEW DELHI	37.19	87.5	7	7A	-3	12	50	-4	8	30 PP
BOMBAY	38.00	104.6	7	19	2	13	13	7	8	50 PPP
POONA	39.02	104.3	7	27	2				9	0 PP
HYDERABAD	43.29	102.1	8	3	3	14	25	0	9	44 PCP
REYKJAVIK	44.30	328.7	8	10	2					
CHATRA	46.03	84.9	8	24	2	15	5	1		
MADRAS	47.15	105.9	8	32	1					
LUANDA	47.75	208.0	8	36A	0	15	32	3		
LHASA	48.09	79.5	8	39A	1	15	34	0		
CALCUTTA	48.86	89.5				15	53	9	17	54
BROKEN HILL	49.42	186.8	8	49A	0				11	12
MBOUR	49.93	258.9	8	54	1	16	4	5		
SHILLONG	50.39	84.1	8	54A	-2	16	4	-2		
IRKUTSK	51.78	47.5	9	6A	-1	16	24	-1	10	53 PP
ULAN-BATOR	54.33	52.4	9	42	16	17	3	3		
BULAWAYO	55.04	186.0	9	31A	0				10	33 PCP
TANANARIVE	55.16	164.1	9	31A	-1				10	33 PCP
LANCHOW	55.81	67.0	9	35A	-1	17	21	2		
CHENGTU	58.03	72.9	9	14	-38	17	56	7		
TIKSI	58.78	21.7	9	57	0	17	55	-3	12	13 PP
WINDHOEK	59.39	198.0	10	32K	30					
KUNMING	59.42	79.3	10	1	-1	18	7	0		
PRETORIA	60.63	185.8	10	10	0					
YAKUTSK	62.39	32.0	10	20	-2	18	42	-3		
PEKING	63.28	58.4	10	27	-1	18	55	-1		
KIMBERLEY	63.96	188.8	10	31K	-1					
RESOLUTE	65.57	346.8	10	39	-4					
MEDAN	67.44	101.9	10	53K	-1				12	41
CHANGCHUN	67.76	51.4	11	21A	25					
GRAHAMSTOWN	68.28	186.5	11	0A	0					
CANTON	68.89	76.1	11	3A	0	19	56	-8		
HONG KONG	69.95	76.4	11	7	-3	20	16	0	11	29
HERMANUS	70.38	192.8				20	29	8	20	45 PS
HALIFAX	71.12	311.5	11	18A	1					
NHATRANG	71.18	88.1	11	18	1				11	43 PCP
VLADIVOSTOK	72.29	49.6	11	19	-5					
MAGADAN	72.46	28.4	11	24	-1	20	49	4		
SHAWINIGAN	75.46	316.9	11	43A	1					
Y.-SAKHLINSK	76.45	41.8	11	48	0	21	32	2		
BREBEUF	76.56	316.4	11	49A	0					
OTTAWA	77.80	317.2	11	56	0					
PALISADES	79.42	312.8	12	4	0	22	11	9	23	1 PS
FORDHAM	79.49	312.7	12	6	1	22	9	6		
MATUSIRO	79.98	52.4	12	7	-1	22	10	2		
PETROPAVLOVK	80.13	30.2	12	6	-2	22	5	-4	15	12 PP
COLLEGE	80.47	0.7	12	10	0	22	12	-1	38	46 PKPPKP
LEMBANG	80.78	105.0	12	13	1	22	25	9		
TUKUBASAN	81.39	51.7	12	15	0	22	21	-1		
PENNSYLVANIA	81.90	314.6	12	20	2					
ST. KITTS	85.44	287.8	12	37	1					
ST. VINCENT	86.67	283.6	12	44	2					
SAN JUAN	87.47	290.6	12	47	2				12	59
GRENADA	87.68	283.0	12	49	3					
DUBUQUE	87.70	322.4	12	47A	1	23	19	-5		
BLOOMINGTON	87.89	317.8	12	48	1	23	20	-6		
TRINIDAD	88.21	281.7	12	53	4					
COLUMBIA	88.23	311.0	12	50	1					
BANFF	90.09	341.3	12	58A	0					
ST. LOUIS 1	90.30	319.5	12	59A	0	23	39	-9		
C. GIRARDEAU	90.89	318.2	13	1	-1	23	46	-8		
ROLLA	91.73	320.0	13	6	0	23	45	-16		
HUNGRY HORSE	92.22	339.2	13	8	0					
CARACAS	92.72	284.7	13	13K	3	24	0	-10		
PENTICTON	92.82	343.0	13	10	-1					
BUTTE	93.86	337.3	13	16	1				17	4 PP
FAYETTEVILLE	94.30	320.2	13	17A	0					

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VICTORIA	94.43	345.1	13	17	-1						
LARAMIE	95.42	330.5	13	22	0						
FLAMING GRGE	97.23	332.8	13	31	0				30	8	PKKP
WICHITA MTS.	97.63	322.2	13	32	0	24	20	14	17	32	PP
SALT LAKE C.	98.27	334.4	13	37	2						
EUREKA	100.83	336.6	13	48	1				29	59	PKKP
SHASTA	101.57	341.8	13	51	1						
MINERAL	101.70	341.1	13	52K	1				17	32	
BOGOTA	101.88	284.2				24	38	11	18	9	PP
CHINCHINA	102.90	285.5				24	43	11	18	12	PP
CALISTOGA	103.56	341.2							18	16	PP
BERKELEY	104.20	340.7							18	19	PP
LICK	104.52	340.0	14	5K	2				18	15	PKP
VINEYARD	105.00	339.6	14	8	3						
TUCSON TELE.	105.22	329.4	14	7	777				29	46	PKKP
TUCSON	105.34	329.5	14	8	777				29	46	PKKP
PASADENA	106.41	336.1	14	5	777	25	1	13	18	30	PP
LA PAZ	108.92	262.8	17	43	777				19	3	PP
CHARTERS TS.	119.30	95.0	18	47	1				29	2	
ARGENTINE I.	124.50	210.4	18	56	0						
CANBERRA	127.88	110.3	19	5A	2						
BRISBANE	127.92	99.5	19	5	2				43	13	
MOORLANDS	128.66	119.5	19	7K	3						
RIVERVIEW	129.05	107.8	19	2	-3				31	37	PS
SCOTT BASE	132.55	167.8	19	12A	1				21	35	PP
CAPE HALLETT	136.48	162.2	19	14	-5				21	56	PP
NOUMEA	136.91	86.0	19	16	-3						
KAIMATA	146.36	115.8	19	43	7						
GEBBIES PASS	147.26	118.0	19	42	4						
COBB RIVER	147.28	113.1	19	41	3						
ONERAHI	147.96	103.0	19	48	9						
AFIAMALU	148.80	54.1	19	43	3				19	47	PKP2
WELLINGTON	148.83	113.4	19	45	5						
KARAPIRO	149.20	106.9	19	46	5						
CHATEAU	149.32	109.3	19	46	5				20	15	
TUAI	150.54	108.4	19	49	6						

SEPTEMBER 17 8.H 41.M 56.S EPICENTRE 24.07 122.25 DEPTH= 36.KM
A=-0.48771 B= 0.77305 C= 0.40563 D= 0.8457 E= 0.5336
G=-0.2164 H= 0.3431 K=-0.9140 HT= 3.6

DEPTH OF FOCUS= 0.000R

SE= 2.08

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
HWALIEN	0.58	259.9	0	13	0							
ILAN	0.83	326.9	0	17	1							
TAIPEI	1.16	325.3	0	24A	4	0	41	6				
HSINKONG	1.26	219.9	0	20	-2							
YUSHAN	1.33	243.8	0	14	-9							
HSINCHU	1.37	302.1	0	29	6	0	48	7				
TAICHUNG	1.43	273.3	0	27	3	0	47	5				
ALISHAN	1.44	247.7	0	24A	0	0	41	-1				
TAITUNG	1.66	217.6	0	26	-2	0	46	-2				
TAWU	2.12	216.1	0	32K	-2	0	56	-3				
TAINAN	2.15	240.5	0	40	6	1	0	0				
KAOHSIUNG	2.32	231.9	0	49	12	1	14	9				
HENGCHUN	2.48	214.1	0	40A	1	1	24	15				
PENGHU	2.53	258.2	0	35	-5	1	4	-6				
ZO-SE	7.06	352.5	1	42A	-2	3	9	5				
CANTON	8.23	265.0	1	58	-2							
NANKING	8.52	339.7	2	1A	-3	3	44	4				
MANILA	9.42	186.9	2	15	-2	4	30	28				
SIAN	15.42	314.1	3	38A	1							
PEKING	16.71	343.6	3	55A	2	7	8	11				
CHENGTU	17.47	296.0	4	1	-2	7	21	7				
KUNMING	17.77	277.4	4	7A	1	7	31	10				
MATUSIRO	18.52	44.2	4	16	0	7	44	6				
TUKUBASAN	19.58	47.7	4	24	-4						5	34
CHANGCHUN	19.87	6.5	4	30A	-1	8	18	10				
LANCHOW	19.87	311.1	4	33A	2	8	17	9				
VLADIVOSTOK	20.60	20.4	4	42	3	8	32	10				
TOCKLAI	24.94	282.0	5	28	6						7	8
ULAN-BATOR	26.74	336.7	5	37	-1							

SHILLONG	27.59	279.5	5	44A	-2	10	24	1				
Y.-SAKHLINSK	28.15	30.5				10	34	2				
LHASA	28.34	288.1	5	54A	1	11	11	36				
MEDAN	30.53	231.8	6	12K	0	11	11	1	6	18		
IRKUTSK	31.30	338.6	6	18A	-1	11	29	7			7	15 PP
CHATRA	31.73	282.5	6	25A	2	11	33	4			7	27 PP
LEMBANG	33.87	206.7	6	42K	0	12	6	4	6	54		
VISHAKHAPTNM	36.84	267.7	7	8	1						13	56
YAKUTSK	38.27	5.7	7	16	-3						8	53 PP
DEHRA DUN	39.61	289.0	7	34	4	13	33	3			9	7 PP
NEW DELHI	40.45	286.4	7	21A	-16	13	25	-18			9	22 PPP
RABAUL	40.48	130.0	7	39	2							
MAGADAN	40.71	21.9									16	58 SSS
PORT MORESBY	41.21	140.9	7	43K	0	13	55	1	7	55	8	45
MADRAS	41.23	262.2	7	46	3						14	23
HYDERABAD	41.36	269.4									17	52
SEMIPALATNSK	41.72	320.0	7	47	0							
LAHORE	42.76	291.0	7	55A	-1							
FRUNSE	43.29	307.6	8	2	2						18	9 SCS
WARSAK DAM	45.03	294.7	8	15	1							
POONA	45.26	272.7	8	16	0							
BOMBAY	46.10	273.5									10	13
TASHKENT	47.04	304.8	8	31	1	15	21	2			10	26 PP
TIKSI	47.73	2.8	8	33	-3	15	25	-3			10	28 PP
QUETTA	49.19	289.9	8	46A	-1	15	52	3	8	56	10	43 PP
CHARTERS TS.	49.74	149.9	8	50	-1	16	1	5				
KARACHI	49.96	282.9	8	49	-4							
SVERDLOVSK	54.71	323.7	9	27	-1	17	14	10				
ASHKABAD	55.51	300.5	9	35	1	17	24	9				
MUNDARING	56.03	186.2	9	36A	-2							
BRISBANE	59.04	148.2	9	59	0	18	3	1				
KOUMAC	60.36	133.8	10	8K	0							
ADELAIDE	60.76	164.5	10	10A	-1	18	28	4	10	20		
TEHERAN	61.33	298.8	10	15	0	18	40	9				
SHIRAZ	61.62	291.9	10	16A	-1	18	52	17	10	28	12	42 PP
NOUMEA	63.01	133.6	10	26K	0							
RIVERVIEW	63.81	153.4	10	31	0						20	24
CANBERRA	64.28	155.9	10	34	0							
GORIS	64.59	303.8	10	37A	1	19	19	7			13	6 PP
TIFLIS	65.31	306.5	10	41A	0						19	38 PS
MOSCOW	67.48	322.4	10	53	-2	19	46	-1			11	6 PCP
COLLEGE	68.45	27.3	11	0	-1	19	59	1			11	37
KEVO	69.44	338.3	11	6K	-1							
MOORLANDS	70.07	160.6	11	16	5							
SODANKYLA	70.16	335.8	11	10K	-1							
PULKOVO	70.47	327.5	11	12	-1	20	31	9			15	41 PPP
FORT NELSON	70.57	160.7	11	15K	1				11	24		
KAJAANI	70.58	332.3	11	14	0							
SIMFEROPOL	72.13	311.8	11	22A	-1	20	44	3			21	32 SCS
TROMSOE	72.17	339.0	11	22	-1							
KIRUNA	72.29	337.0	11	23A	-1							
HELSINKI	72.94	328.8	11	27K	-1							
NURMIJARVI	72.98	329.1	11	27K	-1						14	16 PP
KSARA	74.16	300.3	11	36	1	21	12	8			14	27 PP
JERUSALEM	75.35	298.5	11	43A	1							
UPPSALA	76.48	329.8	11	47A	-1							
ISTANBUL KA.	76.87	309.2				20	55	-39			14	20 PP
BUCHAREST	77.71	313.2	11	54A	-1							
WARSAW	77.86	321.9	11	56	0	22	8	23			12	7 PCP
RESOLUTE	78.62	9.4	11	59	-1							
HELWAN	79.15	297.8	12	3A	0							
KRAKOW	79.37	320.1	12	3	-1						22	30 SCS
KARAPIRO	79.41	139.8	12	9	5							
SKALNATE PL.	79.55	319.3	12	5	0							
CHORZOW	79.82	320.6	12	6	-1						12	17 PCP
GOTEBORG	80.08	329.2	12	7A	-1							
SOFIA	80.23	312.4	12	9	0						12	44
CHATEAU	80.26	140.8	12	10	1							
RACIBORZ	80.37	320.7	12	10	0						12	17 PCP
COPENHAGEN	80.85	327.3	12	12A	0							
TUAI	80.94	139.7	12	14	1							
BELGRADE	81.26	315.2	12	13A	-1						13	20
ATHENS	81.87	307.9	12	16	-1							
VIENNA-H.	82.27	319.6	12	21	2						15	28 PP
PRUHONICE	82.51	321.7	12	21A	0						15	31 PP
COLLMBERG	82.73	323.3	12	21A	-1						15	31 PP
HALLE	83.20	323.8	12	23	-1				12	34		
KASPERSKE H.	83.47	321.2	12	26A	0						15	34 PP

ZAGREB	83.63	317.5	12 26	0						
JENA	83.69	323.4	12 26	-1					15 40	PP
TANANARIVE	84.40	246.6	12 31	1						
LJUBLJANA	84.42	318.2	12 30	0					15 45	PP
TRIESTE	85.08	318.1	12 32	-2						
MUNSTER	85.24	325.6	12 36	2						
WITTEVEEN	85.25	326.7	12 36	2						
BENSBERG	86.03	325.0	12 38A	0				12 51		
STUTTGART	86.09	322.4	12 40	1	23 17	8			15 59	PP
VICTORIA	86.99	37.3	12 43A	0						
STRASBOURG	87.03	322.8	12 44	1	23 34	16			13 24	
MESSINA	87.54	310.9	12 45	-1	23 24	1	12 56		16 11	PP
FLORENCE X.	87.57	317.4	12 44A	-2	23 32	9				
BASLE	87.72	322.0							13 44	
ROME	87.76	315.3	12 46	-1					24 34	PS
DURHAM	87.95	331.2	12 40K	-8						
PENTICTON	88.58	35.3	12 52A	1						
ROSELEND	88.83	320.2	12 52	0						
CORVALLIS	89.23	40.6	12 56A	2						
KEW	89.50	328.2	12 55	0						
BANFF	89.52	32.2	12 56A	1						
PARIS	89.75	325.0	12 57	1						
ISOLA	89.90	319.4	12 57	0					16 46	PPP
MONACO	89.93	318.9	12 56	-1						
GARCHY	90.36	323.5	12 57	-2					16 47	PP
CLERMONT-FD.	91.24	322.3	13 3	0						
SHASTA	91.96	43.4	13 8	2						
HUNGRY HORSE	92.08	33.7	13 9	2					13 35	
MINERAL	92.65	43.4	13 10A	0						
BERKELEY	93.63	45.7	13 13	-1						
RENO	94.24	43.2	13 19	2						
LICK	94.34	45.9	13 18A	1						
EUREKA	96.65	41.5	13 29	1					17 26	PP
PASADENA	98.49	46.8	12 57	-39	24 16	6			26 10	S
FLAMING GRGE	99.50	37.0	13 42	1					17 55	PP
CAPE HALLETT	101.49	166.6			24 30	5			18 0	PP
SCOTT BASE	104.97	171.2							18 26	PP
WICHITA MTS.	109.86	34.9	14 32	777	25 5	3			19 16	PP
PALISADES	113.53	13.3							22 12	PPP
SAN JUAN	137.02	11.7	19 19	-1						
CARACAS	144.49	15.7	19 37	4					20 14	
CHINCHINA	146.29	33.4	19 38	2						
BOGOTA	147.35	31.3	19 44	6						
HUANCAYO	159.48	57.4	20 1	6						
LA PAZ	167.69	54.2	20 6	4					21 12	PKP2

SEPTEMBER 17 23.H 22.M 8.S EPICENTRE -6.01 147.50 DEPTH= 63.KM

A=-0.83880 B= 0.53442 C=-0.10392 D= 0.5373 E= 0.8434
G= 0.0876 H=-0.0558 K=-0.9946 HT= 7.0

DEPTH OF FOCUS= 0.005R

SE= 2.39

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
PORT MORESBY	3.39	185.8	0	53K	1	1	29	-2					
RABAUL	4.99	69.1	1	13	-1								
HONIARA	12.80	106.2	3	1	0								
DARWIN	17.62	247.8	4	3	0	7	16	2					
KOUMAC	21.78	133.2	4	48	0	8	48	8					
BRISBANE	21.85	167.3	4	50K	1	8	42	1					
PORT VILA	23.44	121.6	5	4	0	9	17	8					
NOUMEA	24.44	133.4	5	12	-2	9	22	-5					
RIVERVIEW	27.89	173.5	5	49	3	10	27	4	5	58	12	9	SCP
CANBERRA	29.21	177.5	5	58	0				6	10			
ADELAIDE	29.94	194.5	6	4A	0	10	59	3			12	44	SCP
MELBOURNE	31.76	183.8	6	21	1	11	29	4					
SUVA	32.50	114.5				11	52	16			12	42	PCS
MANILA	33.29	308.3	6	35	1	11	45	-3					
MOORLANDS	36.28	180.4	7	0K	1						9	24	PCP
FORT NELSON	36.77	180.2	7	0	-3						9	24	PCP
MUNDARING	39.00	224.5	7	23K	1								
LEMBANG	39.63	266.6	7	27A	0	13	27	2			10	39	
RAOUL ISLAND	39.99	129.5	7	22	-8								
AFIAMALU	40.82	104.3	7	38A	1								

MATUSIRO	43.21	349.1	7	58A	2	14	19	1			13	32	
CANTON	44.16	312.1	8	32	28								
ZO-SE	44.66	327.2	8	9A	1	14	42	3	8	24	15	4	*SS
NANKING	46.71	325.9	8	25A	1	15	13	5	8	42	15	37	*SS
MACQUARIE I.	49.23	171.2	8	44	0								
KUNMING	53.39	307.3	9	16	1								
CHANGCHUN	53.50	340.1	9	16A	0				9	32			
SIAN	54.14	320.4	9	21	0						9	44	*SP
PEKING	54.14	330.5	9	21A	0				9	37	9	45	*SP
CHENGTU	55.31	313.8	9	29	0						9	51	*SP
HONOLULU	59.85	61.3	10	3	2	18	16	10					
KIPAPA	59.96	61.2	10	3	1								
SHILLONG	62.45	302.8	10	17A	-2								
WILKES	65.43	195.5				19	17	1					
CHATRA	66.84	302.4	10	40	-7								
CAPE HALLETT	67.70	172.7	10	53K	0	19	43	-1			20	53	SCS
SCOTT BASE	72.51	175.8	11	22K	0	20	43	3	11	36	14	1	PP
NEW DELHI	75.79	301.3	11	33K	-8						11	55	
LAHORE	78.94	303.6	11	58A	0								
WARSAK DAM	81.79	305.5	12	14	1								
MAWSON	82.43	202.6	12	16A	-1				12	30	12	30	*SP
BYRD STATION	84.65	169.9	12	29	1								
QUETTA	84.87	301.0	12	30	1	22	55	4	12	40	23	15	*SS
COLLEGE	84.97	22.8	12	28	-2				12	43	30	35	PKKP
BERKELEY	93.83	52.5									26	28	
SHASTA	93.96	49.7	13	13	1								
LICK	94.28	53.0	13	18K	5								
MINERAL	94.53	50.0	13	15K	0								
FRESNO	95.72	53.7	13	21	1								
RENO	95.86	50.9	13	22	1								
PENTICTON	96.39	41.1	13	24	1								
PASADENA	96.91	56.4	13	27	2						26	22	SS
SHIRAZ	97.25	299.0	13	26	-1						17	20	
TANANARIVE	97.42	250.1	13	28	0								
EUREKA	98.82	51.1	13	35	1						29	51	PKKP
HUNGRY HORSE	100.09	42.1	13	40	0						14	17	
LARAMIE	106.64	48.8	18	21	777								
WICHITA MTS.	113.02	54.9	14	50	-220						19	40	PP
BULAWAYO	114.58	244.8	18	36	3								
KIMBERLEY	114.98	234.6	18	37	3								
FAYETTEVILLE	116.30	52.7	18	37	1								
DUBUQUE	117.24	45.0	18	37	-1								
ROLLA	117.65	50.2	18	42	3						29	41	PS
ST. LOUIS 1	118.72	49.0									19	58	PP
PRUHONICE	121.12	326.5	18	47	1								
COLLMBERG	121.23	328.4	18	47	1						20	10	PP
BLOOMINGTON	121.32	47.4	18	47	1								
KASPERSKE H.	122.11	326.0	18	47	-1						20	23	
LJUBLJANA	123.15	322.6	18	50	1								
WINDHOEK	123.79	237.9	18	51	0								
BENSBERG	124.38	330.7	18	54	2								
STUTTGART	124.65	327.6	18	54	1								
SHAWINIGAN	126.80	33.9	18	58	1								
GARCHY	128.82	329.4	19	2	1								
BANGUI	129.08	270.8	19	3	2						21	10	PP
PALISADES	129.23	40.3									21	34	PP
FOLINIERE	129.48	333.0	19	3	1								
HALIFAX	132.92	30.2	19	10	2								
HUANCAYO	133.79	112.9	19	15	5						22	42	PP
LA PAZ	138.26	122.9	19	12	-6								
BOGOTA	138.59	89.8	19	15	-4						22	54	PKS
SAN JUAN	144.99	66.4	19	31	1								
CARACAS	145.65	80.2	19	38A	7								
ST. KITTS	148.38	66.5	19	42	6								
ANTIGUA	149.25	66.4	19	45	8								
ST. VINCENT	150.78	73.8	19	47K	8								

SEPTEMBER 18 5.H 8.M 35.S EPICENTRE 34.39 25.96 DEPTH= 62.KM

A= 0.74349 B= 0.36201 C= 0.56229 D= 0.4378 E=-0.8991
G= 0.5056 H= 0.2462 K=-0.8269 HT= 0.3

DEPTH OF FOCUS= 0.004R

SE= 2.98

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
ATHENS	4.00	333.7									1	1	P*
HELWAN	6.41	133.3	1	30	-4	2	42	-4					
ISTANBUL UN.	7.05	19.0									3	53	SG
ISTANBUL KA.	7.10	19.4	1	40	-3	3	0	-3			2	28	PG
JERUSALEM	8.19	106.0	1	52K	-6	3	14	-16					
SOFIA	8.54	346.8	2	8	5						2	41	
REGGIO CALA.	9.11	296.9									3	39	
MESSINA	9.22	297.3	2	7	-5	3	42	-14			2	35	
TITOGRAD	9.59	328.8				4	10	5			2	55	PG
BUCHAREST	10.01	0.6				4	37	22			5	30	
BELGRADE	11.24	339.5	2	58	18						3	33	PG
SIMFEROPOL	12.26	28.3	3	6	13								
ZAGREB	13.72	329.3									5	57	
LJUBLJANA	14.54	326.6	3	22	-1	6	17	14					
TRIESTE	14.61	324.0	3	27	3	6	16	11			6	35	*SS
LWOW	15.48	355.3	3	35	0								
TIFLIS	16.52	58.2	3	49	0								
GORIS	17.05	66.7	3	56	1	7	18	17					
MONACO	17.12	308.5	3	56	0								
KASPERSKE H.	17.35	331.8	3	57	-2								
ISOLA	17.57	309.4	4	0	-2								
PRUHONICE	17.69	335.1	4	3	0						4	54	
ROSELEND	17.86	313.8	4	13	8								
STUTTGART	18.97	324.2	4	17	-1								
BASLE	19.04	319.1	4	17	-2								
COLLMBERG	19.33	334.8	4	19	-3						4	43	PPP
JENA	19.56	332.0	4	22	-3	8	10	13			5	7	
STRASBOURG	19.59	321.8	4	23	-2								
HALLE	19.88	333.6				8	11	8			4	51	PP
TEHERAN	20.84	79.0	4	40	2	8	40	18					
BENSBERG	21.46	326.2	4	43	-2								
GARCHY	21.48	313.7	4	43	-2						6	0	
BAGNERES	21.85	301.0	5	4	16								
MUNSTER	21.97	328.6	4	33	-17								
PARIS	22.58	316.7	4	53	-3								
MOSCOW	22.81	17.2	4	58	0								
SHIRAZ	22.98	94.5	5	2A	2						5	23	
FOLINIERE	24.29	314.3	5	11	-1								
PULKOVO	25.55	5.1	6	23	59								
HELSINKI	25.80	358.9	5	24	-2								
UPPSALA	26.05	350.4	5	26	-3						5	47	
NURMIJARVI	26.14	358.5	5	26	-4								
KAJAANI	29.73	1.5	6	0	-2								
SKALSTUGAN	30.42	347.9	6	5	-3								
BANGUI	30.63	194.5	6	18	8								
SODANKYLA	33.02	0.5	6	29	-2								
KIRUNA	33.63	356.2	6	34	-2								
NEW DELHI	43.70	83.0	8	OK	0								
SHAWINIGAN	71.32	313.9	11	16	1								
COLLEGE	80.94	357.3	12	8	-1						12	33	
BLOOMINGTON	83.78	313.7	12	OA	-23								
MATUSIRO	85.34	48.4	12	33	2								
ST. LOUIS 1	86.34	315.2	12	31	-5								
C. GIRARDEAU	86.81	313.9	12	39A	1								
ROLLA	87.81	315.6	12	45	2								
MANHATTEN	89.52	319.1	12	53	2								
HUNGRY HORSE	90.21	334.6	12	56	1								
LARAMIE	92.49	325.6	13	7	2								
WICHITA MTS.	93.87	317.2	13	13	2				13	31			

SEPTEMBER 18 11.H 1.M 4.S EPICENTRE 41.05 50.27 DEPTH= 46.KM

A= 0.48349 B= 0.58166 C= 0.65414 D= 0.7690 E=-0.6392
G= 0.4181 H= 0.5030 K=-0.7564 HT= -2.1

DEPTH OF FOCUS= 0.002R

SE= 2.54

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
BAKU	0.72	202.8	0	16	1							
SHEMAKHA	1.31	252.0	0	24A	2	0	40	1				
LENKORAN	2.53	206.4	0	41	2	1	8	-1				
MAKHACH-KALA	2.82	313.9	0	47K	3							

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KIROVOBAD	3.01	263.7	0	44A	-2	1	16	-6		2	38
GORIS	3.38	244.1	0	50	-2					1	19
GROZNY	4.05	305.6	1	3K	2					1	22
NAKHICHEVAN	4.16	245.3	1	3A	1	1	47	-4		1	25
TIFLIS	4.17	281.1	1	3A	0	1	47	-4			
DUZHETI	4.30	285.7	1	6A	2	1	51	-3			
STEPANAVAN	4.45	271.3	1	6A	-1						
EREVAN	4.47	260.7	1	6A	-1					1	26
GORI	4.71	283.4	1	10	0	1	59	-5			
LENINAKAN	4.87	269.0	1	23	11						
KIZYL-ARVAT	4.96	109.9	1	15	1						
BOGDANOVKA	5.04	274.7	1	15	0						
BAKURIANA	5.12	279.9	1	16	0						
AKHALKALAKI	5.13	276.2	1	16	0					2	10
BORZHOMI	5.23	280.9	1	17K	-1					1	37
TEHERAN	5.37	170.2	1	20	1	2	17	-4			
ABASTUMANJ	5.64	279.6	1	23A	0						
GEGECHKORI	6.05	285.0	1	32A	3						
PIATIGORSK	6.09	301.7	1	28K	-2					2	28
ZUGDIDI	6.44	286.0	1	33	-1						
ASHKABAD	6.97	113.7	1	36	-6	3	3	2			
KRASNAYA	7.90	292.7	1	56	1						
SOTCHI	8.21	291.4	2	3	4						
SHIRAZ	11.52	170.1	2	44	0	4	53	1			
SIMFEROPOL	12.45	293.6	2	56	-1						
SAMARKAND	12.83	90.7	3	0	-2						
KSARA	13.51	242.3	3	10	-1	5	45	5		8	32 PCP
TASHKENT	14.33	82.6	3	21	0	5	58	-2			
DUZHANBE	14.44	93.8	3	22	-1	6	2	0			
JERUSALEM	15.22	237.4	3	33A	0	6	15	-6			
ISTANBUL KA.	15.99	277.1	3	43	0	6	46	7			
ISTANBUL UN.	16.05	277.0	3	43	-1						
NAMANGAN	16.16	83.2	3	46A	1						
ANDIJAN	16.71	83.7	3	54A	2						
MOSCOW	16.88	334.8	3	51	-3					4	5 PP
SVERDLOVSK	17.17	19.6	3	55	-3						
QUETTA	17.33	123.1	4	3K	3	7	16	6		4	15 PP
FOCSANI	17.38	293.2				7	18	8			
IASI	17.39	298.3	4	1	1	7	11	0			
BACAU	17.72	296.0				7	18	0			
BUCHAREST	18.05	288.8	4	9A	0	7	29	3			
FRUNSE	18.19	76.3	4	13A	3	7	33	4			
WARSAK DAM	18.27	105.8	4	11	0						
HELWAN	18.99	240.0	4	18A	-2	7	46	-1			
ALMATA	19.88	74.7	4	33	3					4	59 PP
SOFIA	20.10	283.7	4	28	-4	8	18	8			
LWOW	20.31	304.4	4	32K	-2	8	14	0		8	45
ATHENS	20.68	270.1	4	37K	-1						
KARACHI	21.38	134.0	4	41	-4	8	22	-13			
LAHORE	21.53	108.4	4	48K	1	8	45	7			
TIMISOARA	21.56	292.3	4	50	3	8	39	1			
BELGRADE	22.09	289.8	4	51K	-1	8	48	0		12	16 PCS
SKALNATE PL.	22.58	301.2	4	55	-2					5	11 PP
SEMIPALATNSK	22.79	55.7	5	2	3					9	7
WARSAW	22.82	309.2	5	0	0	9	3	2		5	37 PPP
KRAKOW	22.94	303.3	4	55	-6	9	10	7		8	44 PCP
TITOGRAD	23.12	283.8	5	3	1	9	7	1		5	34 PPP
BUDAPEST	23.18	296.6	5	5	2	9	12	5		5	22 PP
CHORZOW	23.58	303.6	5	6	-1	9	17	3		10	16 SSS
HURBANOVO	23.76	297.5	5	7	-2						
RACIBORZ	24.04	302.9	5	12	1					5	45 PP
BRATISLAVA	24.52	298.1	5	14	-2	9	37	6			
HELSINKI	24.71	329.3	5	19	1						
DEHRA DUN	24.88	106.6	5	24	4	9	52	15		10	52 SS
TARANTO	24.94	279.6	4	28	-52					10	28
VIENNA-H.	25.02	298.2	5	21K	0					8	55 PCP
NURMIJARVI	25.05	329.7	5	21K	0	9	32	-8			
ZAGREB	25.23	292.4	5	22K	-1						
NEW DELHI	25.26	111.0	5	21K	-2	9	43	0		5	58 PP
LJUBLJANA	26.24	293.0	5	32K	0					6	15 PP
PRUHONICE	26.36	301.9	5	35	2	10	15	14			
KAJAANI	26.55	337.8	5	35K	0	10	37	33			
REGGIO CALA.	26.74	275.1	5	27	-10					10	14
MESSINA	26.79	275.4	5	35	-2	10	6	-2		6	11 PP
TRIESTE	26.80	292.2	5	36	-1	10	7	-1		6	20 PP
KASPERSKE H.	26.92	299.9								8	26
COLLMBERG	27.49	304.6	5	43	-1	10	21	1		6	43 PPP
UPPSALA	27.60	324.0	5	43K	-2					6	31 PP

APATITY	28.11	346.3	5	54	5						
PADOVA	28.13	291.9				10	27	-3	6	22	PP
HALLE	28.17	304.8	5	49	-1	10	31	0			
ROME	28.18	284.4	5	49	-1	10	31	0	12	36	SS
JENA	28.34	303.6	5	49	-2	10	35	2	6	29	PP
COPENHAGEN	28.65	313.6	5	54	0				16	31	SCS
BOMBAY	29.32	132.1				11	14	25			
SODANKYLA	29.39	341.6	6	1K	0	11	6	16	6	25	
GOTEBORG	29.47	317.4	6	0K	-1				11	34	
STUTTGART	29.74	299.0	6	3	-1	10	53	-3	6	59	PP
HEIDELBERG	30.11	300.3	6	5	-2						
POONA	30.19	131.0	6	9	!						
KARLSRUHE	30.31	299.5	6	3	-6				7	10	PP
STRASBOURG	30.75	298.7	6	26	13				9	8	
MUNSTER	30.89	305.3	6	12	-2						
ROSELEND	31.09	292.7	6	24	8				11	21	
BENSBERG	31.13	303.3	6	15	-1				7	18	PP
KEVO	31.23	344.6	6	17	0						
KIRUNA	31.33	338.7	6	18K	0				6	56	
MONACO	31.50	289.4	6	18	-1						
WITTEVEEN	31.53	306.8	6	19	-1						
SKALSTUGAN	31.60	328.3	6	19K	-1				7	9	PP
ISOLA	31.69	290.3	6	30	9						
BESANCON	32.03	296.3							7	38	
DE BILT	32.40	305.4							13	8	
TROMSOE	32.97	340.5	6	32	0						
CHATRA	33.48	103.4	6	39K	2				11	56	
BERGEN	33.54	320.6	6	36	-1						
GARCHY	34.00	296.7	6	40	-1				8	18	
CLERMONT-FD.	34.18	294.0	7	42	59						
KEW	35.83	304.4	7	2	5						
FOLINIERE	36.18	299.8	6	58	-2				7	13	
VISHAKHAPTNM	36.65	119.5	7	4	0						
TORTOSA	37.20	286.6	7	9	0						
SHILLONG	37.66	101.0	7	11A	-1						
TOCKLAI	39.18	97.1	7	20	-5						
ULAN-BATOR	40.19	60.5	7	36	3						
ALMERIA	40.71	281.8	7	37A	-1	13	41	-3	9	5	PP
TOLEDO	40.78	286.9	7	36K	-2				9	35	
GRANADA	41.42	282.8							12	14	
CHENGTU	44.16	85.8	8	8	2				14	21	
KUNMING	46.07	93.3	8	23K	2	15	5	3			
SIAN	46.18	78.7	8	24K	2	15	10	6			
BANGUI	46.24	226.4	8	21	-1	15	1	-4			
TIKSI	48.10	24.7	8	37	0	15	31	0	10	33	PP
PEKING	48.99	68.3	8	46K	2	15	50	6			
CHANGCHUN	53.65	60.2	9	20K	1	16	50	2			
NANKING	54.50	76.1	9	26K	1	17	3	4			
CANTON	55.22	88.5				17	12	3			
HONG KONG	56.30	88.7							10	40	PCP
ZO-SE	56.74	75.8	9	42K	1	17	33	4			
NHATRANG	58.73	101.5	9	56	1				33	59	PKKP
BROKEN HILL	58.79	204.9	9	56	0						
TANANARIVE	59.71	183.0	10	2K	0				10	55	
RESOLUTE	62.25	350.1	10	19	0						
Y.-SAKHLINSK	62.94	50.1	10	22	-2						
MBOUR	63.57	266.2	10	28	0				10	45	PCP
BULAWAYO	64.11	202.7	10	36	5						
MATUSIRO	65.82	61.9	10	42K	0	19	42	18			
PRETORIA	69.55	201.2	11	6	0						
WINDHOEK	70.39	212.5	11	12A	1						
KIMBERLEY	73.35	203.2	11	29A	1						
COLLEGE	73.47	7.9	11	30	1				11	45	11 54 *SP
HALIFAX	76.15	317.8	11	46K	1						
GRAHAMSTOWN	77.16	200.2	11	50K	0						
SHAWINIGAN	79.12	323.9	12	2K	1						
BREBEUF	80.30	323.7	12	15	8						
OTTAWA	81.31	324.8	12	14K	1						
PALISADES	83.91	321.0	12	25	-1	22	46	1	12	36	24 20 PS
BANFF	87.33	351.1	12	44K	1						
PENTICTON	89.58	353.4	12	54	0						
DUBUQUE	89.65	332.2	12	56K	2						
HUNGRY HORSE	89.91	349.6	12	56	1				13	13	14 43
VICTORIA	90.64	355.8	13	0	1						
BLOOMINGTON	90.95	327.8	13	1K	1						
RAPID CITY	91.96	341.2	13	6	1						
BUTTE	91.97	348.1	13	6	1						
BOZEMAN	92.06	347.0	13	8	3						

ST. LOUIS 1	92.88	330.1	13	8	-1							
C. GIRARDEAU	93.76	329.0	13	14K	1	24	20	4				
ROLLA	94.15	330.9	13	16K	1							
CORVALLIS	94.56	355.4	13	19K	2							
MANHATTEN	94.60	334.8	13	18	1							
LARAMIE	95.15	342.0	13	20	1							
FLAMING GRGE	96.34	344.6	13	26	1							
SALT LAKE C.	96.96	346.4	13	32	5							
SHASTA	98.36	354.4	13	35	1							
MINERAL	98.65	353.7	13	31K	-4							
EUREKA	98.88	349.3	13	38	2				13	55	29 59	PKKP
WICHITA MTS.	99.34	334.4	13	39	1						24 41	SKKS
BOULDER CITY	102.14	347.7	18	14	263						29 36	PKKP
CHARTERS TS.	107.31	101.7									14 14	
SCOTT BASE	135.30	164.4	19	9	-6						21 50	PP

SEPTEMBER 18 15.H 37.M 32.S EPICENTRE -21.12 173.41 DEPTH= 0.KM
A=-0.92749 B= 0.10710 C=-0.35819 D= 0.1147 E= 0.9934
G= 0.3558 H=-0.0411 K=-0.9336 HT= 4.4

SE= 2.83

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
SUVA	5.57	58.9	1	21	-5								
PORT VILA	5.87	304.2	1	32	1	2	52	13					
NOUMEA	6.58	258.4	1	38	-3								
KOUMAC	8.56	272.1	2	7A	-1								
ONERAHI	14.62	176.9	3	34	4								
AFIAMALU	15.83	65.5	3	43	-3	6	46	3					
KARAPIRO	16.85	174.2	4	0	1								
TUAI	17.91	170.5	4	13	1								
TONGARIRO	18.11	174.7	4	16	1								
BRISBANE	19.81	247.6	4	33	-2	8	18	5					
WELLINGTON	20.13	177.0	4	37	-2	8	38	18					
KAIMATA	21.40	184.0	4	57	5								
GEBBIES PASS	22.53	181.4	5	3	0						5	30	
RIVERVIEW	23.40	232.6	5	10	-1	8	57	-25			8	47	PCP
ROXBURGH	24.53	186.9				9	58	17					
CHARTERS TS.	25.43	267.4	5	29	-2	9	55	-1					
CANBERRA	25.66	231.3	5	34	1	10	3	3			11	13	SS
PORT MORESBY	27.84	290.8	5	57	4	10	34	-2			12	33	
MELBOURNE	29.68	229.6	6	9	-1								
MOORLANDS	30.59	220.0	6	18K	0								
FORT NELSON	30.79	219.1	6	20K	0						13	10	SS
ADELAIDE	33.40	238.1	6	41K	-1						11	29	
CAPE HALLETT	51.24	181.3	9	6A	-2	16	29	3					
MUNDARING	51.79	245.4	8	59	-13								
SCOTT BASE	56.87	181.7	9	48A	-1								
BYRD STATION	65.41	169.8	10	44	-3								
MATUSIRO	66.29	329.5	10	51	-1	19	42	1			11	37	
SOUTH POLE	69.01	180.0	10	57	-13	20	12	-2					
HONG KONG	72.12	303.3				21	16	26					
ZO-SE	72.16	314.6				20	53	2					
CANTON	73.19	303.5				21	22	20					
NANKING	74.36	314.0									17	27	
MAWSON	78.15	201.5	12	2	-1								
PEKING	80.88	319.2	12	24	6	22	34	8					
SIAN	82.39	311.0				22	36	-5					
KUNMING	82.59	300.4				22	46	3					
ARGENTINE I.	83.41	159.0	12	29	-2								
CHENGTU	84.19	305.8				23	3	4					
LICK	84.33	46.5	12	36A	1								
FRESNO	85.30	47.8	12	46	6								
SHASTA	85.62	43.4	12	46	4								
MINERAL	85.95	44.0	12	50A	7								
CHINA LAKE	86.37	49.5	12	44	-1								
BOULDER CITY	88.42	50.4	12	54	1								
EUREKA	89.26	46.9	12	58	-1						13	20	
TUCSON TELE.	89.87	55.2	13	3	1								
COLLEGE	90.75	15.5	13	3	-3								
WICHITA MTS.	100.15	56.8									27	3	SP
SHIRAZ	126.41	291.8	19	11	6						22	10	
SKALNATE PL.	144.78	329.1	19	39	0								
RACIBORZ	145.09	331.8	19	40	1								

COLLMBERG	146.21	337.8	19 41	0	19 48 PKP2
HALLE	146.40	339.0	19 44	2	19 50 PKP2
PRUHONICE	146.69	334.9	19 43	1	
BRATISLAVA	146.98	330.4	19 45	2	20 3 PKP2
SOFIA	146.99	317.6	19 47	4	
JENA	147.01	338.8	19 46	3	20 41
VIENNA-H.	147.25	331.2	19 44	1	
MUNSTER	147.28	343.7	19 47	4	
KASPERSKE H.	147.75	334.9	19 45	1	
BENSBERG	148.32	343.4	19 46	1	20 7
STUTTGART	149.63	339.0	19 51	4	
LJUBLJANA	149.73	330.2	19 52	5	
STRASBOURG	150.28	340.6	19 56	8	
TRIESTE	150.39	330.4	19 53	5	20 8 PKP2
PARIS	151.43	347.4			28 28
BESANCON	152.01	341.6	20 16	25	
GARCHY	152.75	345.6	20 15	23	20 39 PKP2
FLORENCE X.	152.96	330.8	20 17	25	

SEPTEMBER 19 2.H 25.M 51.S EPICENTRE -20.37 -63.25 DEPTH= 580.KM

A= 0.42226 B=-0.83781 C=-0.34609 D=-0.8930 E=-0.4501
G=-0.1558 H= 0.3091 K=-0.9382 HT= 4.6

DEPTH OF FOCUS= 0.086R

SE= 2.29

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S	
LA PAZ	6.02	309.0	1 42K	1	2 58	-3			
HUANCAYO	14.24	303.7	3 5	4	5 41	14			
BOGOTA	27.02	335.7	4 58	-1	8 53	-4	6 44		
FUQUENE	27.67	337.1	5 5K	1	9 7	0	6 45		
CHINCHINA	27.96	332.9	5 7	0	9 12	0	6 46	11 51	*SS
CARACAS	30.89	352.9	5 31K	-1	9 57	0			
GRENADA	32.25	2.8	5 43K	0					
GALERAZAMBA	33.14	338.0	5 51K	0	10 32	0	7 29		
BALBOA HTS.	33.27	329.6	5 51	-1					
ST. VINCENT	33.39	3.5	5 53	0				11 24	
BARBADOS	33.48	6.5	5 57	3					
FORT FRANCE	34.94	3.6	6 5	-1	10 56	-3			
ANTIGUA	37.31	2.2	6 23	-2				11 32	
ST. KITTS	37.48	0.8	6 24	-3				11 30	
SAN JUAN	38.62	355.6	6 34	-2	11 47	-6	8 24	6 58	
SAN SALVADOR	42.38	320.9	7 8	2	12 53	6			
ARGENTINE I.	44.86	180.6	7 24	-1	13 22	0		16 21	SCS
COMITAN	46.14	320.0			13 37	-3			
MERIDA	48.50	326.3			14 6	-6		9 3	PCP
OAXACA	49.63	316.1			14 56	29		10 18	PP
VERA CRUZ	50.84	318.6			14 49	5		9 17	PCP
TACUBAYA	52.94	316.0	8 14	-11	15 12	0		10 36	PP
GUADALAJARA	56.58	313.8	8 54	4					
COLUMBIA	56.66	342.3	8 50	-1	15 59	-1			
MBOUR	57.12	56.5	8 52	-2	16 4	-2			
CHAPEL HILL	57.95	344.9	8 59	-1					
WASHINGTON	60.37	347.6	9 18	2	16 39	-8		11 37	PP
LITTLE ROCK	61.43	332.9			16 56	-4		18 18	SCS
FORDHAM	61.70	350.9	9 24	-1	17 3	0			
PALISADES	61.87	350.9	9 25	-1	17 6	1	11 18	13 26	PPP
PENNSYLVANIA	62.36	347.5	9 27	-2	17 13	2		10 3	PCP
C. GIRARDEAU	62.50	336.6	9 27A	-3	17 9	-4	11 24		
BLOOMINGTON	63.12	339.9	9 31	-3	17 17	-3	11 29		
FAYETTEVILLE	63.33	332.2	9 34A	-1	17 20	-3	11 32	18 30	SCS
CLEVELAND	63.83	344.8	9 39	1	17 30	1			
CHIHUAHUA	63.90	318.3						13 53	PP
ROLLA	63.92	335.0	9 37	-2	17 30	0	11 30	18 36	SCS
ST. LOUIS 1	63.92	336.7	9 36	-3	17 27	-3	11 32	18 35	SCS
WICHITA MTS.	64.26	328.1	9 40A	-1	17 35	1	11 35	12 5	PP
HALIFAX	64.68	359.7	9 42K	-1					
LUBBOCK	65.06	324.9	9 46	0					
BREBEUF	66.23	352.0	9 51	-2	17 57	0			
OTTAWA	66.43	350.4	9 52K	-2					
MANHATTEN	66.97	332.4	9 57	-1	18 58	52	11 48		
SHAWINIGAN	67.16	352.9	9 59	0					
DUBUQUE	67.50	338.4	10 0	-1	18 10	-2		19 4	SS
TUCSON TELE.	69.35	318.2	10 13	1			12 11	17 36	

TUCSON	69.36	318.1	10	13	1	18	47	13	12	16	13	0	PP
SOUTH POLE	69.75	180.0	10	11	-3						12	9	PP
HERMANUS	72.77	120.9				19	9	-3			13	29	PP
LARAMIE	72.85	327.9	10	32	0	19	18	5					
RAPID CITY	73.83	331.2	10	37	-1								
BOULDER CITY	74.31	318.7	10	41	1	19	37	9					
LUANDA	74.36	93.8	10	39K	-2	19	33	4	12	37	13	35	PP
FLAMING GRGE	74.53	325.5	10	42	0	19	35	4	12	48			
PASADENA	75.30	315.4	10	47A	1	19	46	7	12	47	25	9	SS
SALT LAKE C.	75.75	324.0	10	49	1	19	55	11					
EUREKA	77.25	320.8	10	58	1	20	8	8	13	6	14	13	PP
LISBON	77.60	40.5	10	59A	1				13	0	11	12	PCP
SCOTT BASE	77.85	189.6	10	57K	-3	19	58	-8			12	56	PP
FRESNO	77.94	316.8	11	1	1						13	5	
VINEYARD	78.95	316.0	11	7	1								
COIMBRA	78.96	39.6	11	5K	-1	21	16	59	13	8			
PARAISO	79.36	315.2	11	5	-3								
SERRA PILAR	79.44	38.8	11	5K	-3	20	15	-7	13	10	14	16	PP
LICK	79.46	316.3	11	9A	1				13	13			
STA. CRUZ C.	79.50	315.9	11	10	2								
RENO	79.61	319.0				20	34	10					
BUTTE	79.75	327.5	11	10	0	20	28	2					
BRANNER	79.86	316.2	11	11A	1								
BERKELEY	80.17	316.5	11	13	1	20	35	5	13	15	14	15	PP
SAN FRANCSCO	80.23	316.3	11	14	2								
PT. REYES	80.68	316.4	11	15	0								
ALMERIA	80.76	45.2	11	19	4	20	35	-1	13	21			
CALISTOGA	80.82	317.0	11	16	1								
CAPE HALLETT	80.86	194.4	11	13K	-3	20	36	-1	13	14	14	7	PP
MINERAL	81.20	318.8	11	17A	0				13	21			
TOLEDO	81.45	41.9	11	18K	-1	20	44	1	13	22	14	12	PP
SHASTA	81.89	318.8	11	20A	-1	20	40	-7			12	57	
HUNGRY HORSE	82.07	328.5	11	21	-1	20	48	-1	13	39	14	47	PP
ALICANTE	82.90	44.8	11	16	-10	20	30	-27			14	44	PP
FERNDALE	82.99	317.8				21	9	11					
ARCATA	83.04	318.2	11	29	2	20	56	-2					
MAWSON	83.82	161.9	11	26A	-4	21	2	-4	13	28	14	44	PP
CORVALLIS	84.68	321.5	11	35A	0				13	42			
BANFF	84.70	330.0	11	32	-3								
BULAWAYO	84.85	109.5	11	32A	-3								
TORTOSA	84.86	43.1	11	39	4	21	15	0					
PENTICTON	85.51	326.9	11	38	-1								
BAGNERES	85.85	41.1	11	38	-2	21	30	5	11	43			
BROKEN HILL	86.65	104.1	11	42K	-2								
VICTORIA	87.03	324.7	11	46	0								
FOLINIERE	88.60	36.0	11	51	-2								
CLERMONT-FD.	89.08	39.9	11	56A	1	21	34	-20					
GARCHY	89.82	38.6	11	57	-2				14	2	15	39	PP
REYKJAVIK	90.12	16.8	12	1K	1								
KEW	90.17	33.8	12	0	0	21	36	-28	14	3	15	41	PP
PARIS	90.28	37.1	11	59	-2	21	37	-28	14	5	15	41	PP
ISOLA	90.73	42.6	12	2	-1	21	45	-24					
MONACO	90.77	43.2	12	6	3						15	46	PP
SIDA	90.94	18.4	12	5	1								
MIRNY	91.52	170.7	13	24	77								
BESANCON	91.53	39.6	12	7	0						15	53	
ROSELEND	91.71	41.7	12	5	-2	21	43	-34					
NEUCHATEL	91.99	40.1	12	10	1						21	49	
ABERDEEN	92.50	28.5				21	51	-33			25	46	PPS
PAVIA	92.54	42.4				21	51	-33	14	0	26	39	*SS
BASLE	92.62	39.8	12	25	13						21	45	
STRASBOURG	93.22	39.0	12	15	1	21	55	-35	14	3	16	4	PP
FLORENCE X.	93.27	44.4	12	18	3	22	33	3					
ROME	93.30	46.4	12	17	2	21	54	-37	14	20	16	6	PP
DE BILT	93.42	35.1	12	21	6	21	57	-35	14	21	23	27	S
WILKES	93.43	177.5				22	33	1			26	9	*SS
CHUR	93.50	41.1	12	15	-1				14	25	21	55	
EBINGEN	93.75	39.7	12	17	0								
KARLSRUHE	93.79	38.8	12	17	0								
RAVENSBURG	93.97	40.2	12	18	0								
TUBINGEN	93.97	39.4	12	19	1								
BENSBERG	93.97	36.7	12	18K	0	22	37	1	14	23	16	11	PP
MESSINA	93.99	50.8	12	18	0	22	38	1	14	22	16	16	PP
REGGIO CALA.	94.02	50.9									21	58	
HEIDELBERG	94.15	38.5	12	17	-2								
STUTTGART	94.20	39.3	12	17	-2	22	0	-38	14	14	16	10	PP
PADOVA	94.36	43.1	12	23	3	22	2	-38			26	29	*SS
WITTEVEEN	94.56	34.9	12	22	2								

MUNSTER	94.69	35.9	12 22	1					
TRIESTE	95.66	43.4	12 26	1	22 6	0	14 29	16 21	PP
LJUBLJANA	96.31	43.2	12 27	-1	22 14	5	14 33	16 25	PP
JENA	96.47	37.9	12 28	-1	22 13	3	14 33	16 22	PP
HALLE	96.91	37.5	12 32	1	22 14	1			
KASPERSKE H.	96.92	40.1	12 30	-1	22 16	3	14 35	23 7	S
RESOLUTE	96.97	351.9	12 31	0	22 16	3		26 51	
ZAGREB	97.17	43.8	12 33	1	22 9	-5			
COLLMBERG	97.43	38.0	12 32	-1	22 21	6	14 41	16 40	PP
PRUHONICE	97.83	39.6	12 35	0	22 19	2	14 41	16 39	PP
BRATISLAVA	98.73	41.9	12 39	0				22 21	PKS
COPENHAGEN	98.86	33.7	12 41K	1	22 25	3		16 48	PP
HURBANOVO	99.32	42.4	12 36	-6					
GOTEBORG	99.41	31.8	12 43K	1					
BELGRADE	99.78	45.9						16 56	PP
KARAPIRO	99.94	223.4	12 45	0			15 5		
ATHENS	99.95	53.3	12 49K	4	22 30	2			
RACIBORZ	100.07	40.3	12 46	1				16 54	PP
TIMISOARA	100.59	45.2			22 33	2		26 25	PS
SKALNATE PL.	101.04	41.6	12 50	0					
KRAKOW	101.11	40.7	12 51	1	22 33	0		17 6	
TANANARIVE	101.76	115.3	12 59	6				17 9	PP
SKALSTUGAN	101.81	26.3	12 55	2					
WARSAW	102.43	38.8			22 27	-12		16 18	PP
UPPSALA	102.93	30.8	12 59	1	22 41	-1		17 18	PP
BUCHAREST	103.52	47.5			22 46	2		17 7	PP
LWOW	103.58	41.7	16 36	215				26 25	
HELWAN	103.69	63.0						15 11	
ISTANBUL KA.	104.79	51.4			22 49	-1		17 33	PP
COLLEGE	105.96	333.8	13 12	777	23 43	48		17 41	PP
TROMSOE	106.23	21.2	13 17	777				17 43	
KIRUNA	106.32	23.1			22 59	2		17 44	PP
NURMIJARVI	106.49	31.0	17 23	777	22 57	0		17 44	PP
HELSINKI	106.57	31.4						28 40	PKKP
JERUSALEM	107.40	62.0	13 29	777				17 49	PP
KSARA	108.40	60.0	13 21	777			15 29	17 57	PP
KAJAANI	108.53	27.6	17 26	777				18 0	PP
SODANKYLA	108.56	24.1	17 27	777				23 1	PP
PULKOVO	109.15	32.3	17 28	777					
SIMFEROPOL	109.22	48.2	13 27	777					
APATITY	111.19	24.2						18 19	PP
MOORLANDS	111.47	203.8	17 32	3					
MOSCOW	112.68	37.0	17 32	1					
SOTCHI	113.00	50.3			23 25	1			
TIFLIS	116.56	52.7	17 40	1					
CANBERRA	116.72	209.2	17 39	0				18 58	PP
RIVERVIEW	116.91	211.8	16 27	-73				23 45	SKKS
GORIS	117.55	55.3						19 4	PP
MAKHACH-KALA	118.62	51.4	17 47	4					
BRISBANE	121.08	217.6	17 49	1	23 59	6			
TEHERAN	121.30	59.9	17 50	2				19 25	PP
SHIRAZ	121.70	67.1	17 49A	0				21 24	
SVERDLOVSK	125.21	34.0	17 54	-2					
CHARTERS TS.	130.48	217.5	17 51	-15				21 36	
SAMARKAND	133.45	54.3	18 11	0					
QUETTA	134.23	67.4	18 11	-2			20 28	20 49	PP
PETROPAVLOVK	134.24	325.7						20 55	PP
TASHKENT	134.86	51.5	18 17	3					
STALINABAD	135.01	55.5	18 5	-9					
NAMANGAN	136.69	51.4						21 1	PP
ANDIJAN	137.26	51.5	18 12	-6					
YAKUTSK	137.42	351.0	18 11	-8					
WARSAK DAM	137.89	61.5	18 14	-5					
PORT MORESBY	137.93	228.2	18 14	-6				21 4	
FRUNSE	138.27	47.8	18 14	-6					
BOMBAY	138.69	84.3						21 20	
POONA	139.59	85.1	18 16	-7					
ALMATA	139.72	46.3	18 22	-1					
LAHORE	140.49	64.9	18 22	-3					
NEW DELHI	143.22	69.3	18 31K	1				21 19	
DEHRA DUN	143.80	66.3	18 30	-1					
MADRAS	144.27	96.0	18 32	1					
Y.-SAKHLINSK	146.05	327.6	18 34	0					
VISHAKHAPTNM	148.30	89.1	18 44	7				21 22	
ULAN-BATOR	151.39	13.9	18 45	3			20 58		
LEMBANG	151.52	160.7	18 43	1				22 30	PP
MIZUSAWA	151.91	317.0	18 54A	11				21 11	
CHATRA	152.19	71.0	18 44	1				21 9	
GUAM	152.38	260.0	18 30	-13			20 39		

VLADIVOSTOK	154.00	334.1	19	4	18						
TUKUBASAN	154.18	312.6	18	45K	-1	25	3	6		41	42 SSS
LHASA	154.99	63.3	18	49	2						
MATUSIRO	155.28	315.2	18	48	1				21 3	19	17 PKP2
CHANGCHUN	155.54	344.9	18	47	-1					22	55 PP
MEDAN	155.74	131.1	18	48	0					21	20 PP
SHILLONG	156.53	72.6	18	48	-1						
PEKING	160.40	1.3	18	55	1					23	24 PP
SIAN	164.54	25.0	18	59	1					23	41 PP
CHENGTU	164.62	45.7	18	59	1					23	45 PP
KUNMING	166.24	67.3	19	0	1					23	52 PP
NANKING	168.22	351.5	19	2	2					24	0 PP
ZO-SE	168.60	340.4	19	3	2					23	53 PP
MANILA	172.98	216.8	19	5	2						

SEPTEMBER 19 9.H 46.M 17.S EPICENTRE 6.91 -82.33 DEPTH= 0.KM
A= 0.13250 B=-0.98396 C= 0.11944 D=-0.9911 E=-0.1335
G= 0.0159 H=-0.1184 K=-0.9928 HT= 6.9

SE= 3.03

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
BALBOA HTS.	3.42	53.2	0	56	0	1	41	3				
CHINCHINA	6.95	105.7	1	43	-3	2	56	-11				
GALERAZAMBA	7.97	60.6	2	OK	0	3	25	-7				
BOGOTA	8.53	105.0	2	7	-1	3	40	-6				
FUQUENE	8.67	99.0	2	9	-1	3	52	2				
SANTIAGO MA.	8.90	317.8	2	14	1	3	56	0				
SAN SALVADOR	9.54	315.4	2	19	-3							
COMITAN	13.35	314.9	3	15	1						7	11
CARACAS	15.64	75.7	3	41K	-3	6	49	11				
MERIDA	15.64	333.9	3	40	-4	6	52	14			4	16
OAXACA	17.32	306.8	4	6	1	7	31	14			9	4
VERA CRUZ	18.15	313.6	4	19	4						4	43 PP
SAN JUAN	19.48	52.7	4	31	0	8	15	9				
PUEBLA	19.58	309.5	4	37	4						8	37
HUANCAYO	20.08	159.7	4	35	-3	8	23	4				
TACUBAYA	20.57	308.8	4	40A	-3	8	18	-11			5	4 PP
GRENADA	20.95	74.3	4	45A	-2							
ST. VINCENT	21.64	71.6	4	54	0							
ST. KITTS	21.76	59.8	4	57	1							
BARBADOS	23.21	72.8	5	14A	4							
GUADALAJARA	24.51	306.1	5	28	5						13	43
MANZANILLO	24.56	301.5									12	3
COLUMBIA	26.99	2.4	5	46	0	10	27	5				
LA PAZ	27.17	149.0	5	44A	-3	10	28	3				
MAZATLAN	28.24	307.5									12	55
CHAPEL HILL	29.03	5.5	6	4	0							
LITTLE ROCK	29.24	342.9				11	8	9				
C. GIRARDEAU	30.98	348.8	6	19A	-3	11	35	9	6	29		
FAYETTEVILLE	31.01	341.2	6	20A	-2	11	25	-2				
CHIHUAHUA	31.15	316.8	6	27	4	11	39	10				
WICHITA MTS.	31.48	333.8	6	23	-3	11	23	-11			7	18 PP
ROLLA	32.05	345.7	6	31A	0	11	20	-23				
LUBBOCK	32.12	328.4	6	29	-3							
WASHINGTON	32.20	7.7	6	32	0	11	11	-34				
BLOOMINGTON	32.36	353.9	6	32A	-2	11	49	1			13	39
ST. LOUIS 1	32.39	348.4	6	32A	-2	11	48	0				
PENNSYLVANIA	33.98	6.1	6	47	-1	12	18	5				
CLEVELAND	34.44	1.1	6	51A	-1	12	19	-1				
MANHATTEN	34.62	340.3	6	53A	0	12	40	17				
FORDHAM	34.63	11.3	6	54	1	12	27	4				
PALISADES	34.78	11.2	6	54	-1	12	28	3			7	24 PP
DUBUQUE	36.22	349.5	7	5A	-2	12	46	-2				
TUCSON TELE.	36.59	317.5	7	11	1							
TUCSON	36.61	317.3	7	11	1	13	3	10			8	36 PP
OTTAWA	38.77	7.4	7	27	-1							
BREBEUF	39.18	9.7	7	31	-1	13	35	2				
LARAMIE	40.02	332.5	7	38	-1						9	12
HALIFAX	40.97	20.5	7	47A	1							
RAPID CITY	41.29	337.1	7	48	-1							
BOULDER CITY	41.49	318.9	7	52	1							
FLAMING GRGE	41.59	328.7	7	52	0	13	49	-20			9	24 PCP
PASADENA	42.76	314.3	8	2A	1	14	34	8			9	44 PCP

SALT LAKE C.	42.79	326.6	8	2	1						
EUREKA	44.33	322.2	8	14	0					10	0 PP
FRESNO	45.26	316.5	8	20	-1						
BOZEMAN	45.92	332.0	8	27	0						
VINEYARD	46.33	315.6	8	30	0						
RENO	46.76	319.8	8	33A	0						
LICK	46.81	316.2	8	34A	0						
BUTTE	46.89	331.3	8	33	-1	15	22	-3			
BRANNER	47.22	316.0	8	37K	0						
BERKELEY	47.50	316.5	8	39A	0	15	35	1		10	36 PP
SAN FRANCSCO	47.58	316.2	8	40	0						
PT. REYES	48.03	316.4	8	43	0						
CALISTOGA	48.11	317.2	8	44	0						
MINERAL	48.36	319.7	8	45A	-1					10	38 PP
SHASTA	49.05	319.6	8	49	-2						
HUNGRY HORSE	49.27	332.4	8	51	-2	16	8	9		10	52 PP
CORVALLIS	51.74	323.4	9	11A	-1						
BANFF	51.99	334.0	9	12A	-2						
PENTICTON	52.61	330.1	9	17	-1						
VICTORIA	54.08	327.3	9	27A	-2						
ALBERNI	55.26	327.4	9	38	0						
MBOUR	64.49	77.4	10	50	9	19	25	5			
RESOLUTE	68.11	356.4	11	2	-2	20	3	-1			
HAWAII V.OB.	71.68	288.1	11	15	-11	21	35	49			
LISBON	72.59	51.7	11	33	2					12	22
ARGENTINE I.	73.20	172.2	11	16	-19						
SERRA PILAR	73.24	49.2	11	31A	-4	20	57	-6	11 41	14	18 PP
COIMBRA	73.28	50.2	11	36K	0	21	8	4			
COLLEGE	73.51	336.1	11	35	-2	21	7	1	11 45	14	22 PP
KIPAPA	74.22	290.2	11	51	10						
TOLEDO	76.62	50.8	11	56K	1	21	45	4		14	56 PP
ABERDEEN	78.93	33.2				22	55	49		15	51
FOLINIERE	79.47	41.8	12	11	1						
KEW	79.66	39.0	12	10	-1	22	13	0		15	11 PP
BAGNERES	79.84	47.6	12	11	-1						
PARIS	81.44	41.7	12	23	2	22	33	1		14	53 PP
GARCHY	81.85	43.3	12	21	-2					15	4 PP
CLERMONT-FD.	81.93	44.8	12	24K	1	22	41	4			
DE BILT	83.07	38.4	12	35	6	22	51	2			
BESANCON	83.84	43.2	12	34	1						
WITTEVEEN	83.95	37.6	12	39	5						
BENSBERG	84.38	39.5	12	36K	0					15	39 PP
MUNSTER	84.59	38.4	12	47	10						
ISOLA	84.80	46.3	12	40	2						
BASLE	84.90	42.9	12	40	2					23	11
STRASBOURG	84.94	41.8	12	40	1	23	7	0		28	53 SS
ROSELEND	85.10	44.9	12	37	-2						
MONACO	85.11	46.7	12	38	-2						
KARLSRUHE	85.33	41.3	12	39	-2					22	57
SKALSTUGAN	85.92	26.6	12	43	-1						
STUTTGART	85.92	41.5	12	42	-2	23	12	-5		29	0 SS
GOTEBORG	86.52	32.4	12	47	0						
COPENHAGEN	87.04	34.4	12	48	-1	23	21	-6		23	35 SCS
JENA	87.16	39.2	12	50	0	23	19	-10		16	3 PP
HALLE	87.31	38.6	12	51	1	23	33	3			
TROMSOE	87.48	20.1	12	53	2						
FLORENCE X.	87.85	46.3	12	52	-1	23	56	21			
COLLMBERG	87.99	38.7	12	55	1	23	58	22		16	23 PP
PADOVA	88.08	44.7	13	1K	7	23	28	-9		25	1 PS
KIRUNA	88.44	21.7	12	59	3	23	26	-15		16	29 PP
KASPERSKE H.	88.69	40.8	12	56A	-1						
ROME	89.01	48.1	12	53	-6	23	28	-18		23	48 S
UPPSALA	89.06	29.8	13	0	1	23	41	-5			
PRUHONICE	89.17	39.9	12	59	0	23	56	9		16	35 PP
TRIESTE	89.35	44.2	12	59	-1	23	31	-18		16	32 PP
LJUBLJANA	89.81	43.7	13	2	0					16	31 PP
VIENNA-H.	90.66	41.4	13	7	1					13	15 PCP
SODANKYLA	90.84	21.5	13	8	1						
RACIBORZ	91.46	39.3	13	12	2						
MESSINA	91.93	51.3	12	58	-14	23	36	-36		16	50 PP
NURMIJARVI	92.28	28.3	13	2	-12						
KAJAANI	92.42	24.4	13	21	7					16	59 PP
KRAKOW	92.56	39.1				23	47	-31		15	10
WARSAW	92.68	36.8				23	50	-29		24	21 S
TARANTO	92.80	48.9	13	19	3	23	44	-36		29	19
BELGRADE	94.15	44.1	13	27	5	24	56	25		17	31 PP
SOUTH POLE	96.86	180.0	13	34	-1						
BUCHAREST	98.14	43.4								24	14

ISTANBUL UN.	101.24	45.9							17	34	
ISTANBUL KA.	101.29	45.9							26	57	
HERMANUS	103.40	123.6							27	28	PS
TUKUBASAN	121.49	320.2							30	19	PS
MATUSIRO	122.47	321.7	18	58	0				20	26	PP
SHIRAZ	123.42	47.7	19	1	1				20	41	
CHANGCHUN	123.65	336.2							20	41	
RIVERVIEW	123.92	233.7							20	35	PP
BRISBANE	124.03	241.6							21	25	PP
ULAN-BATOR	124.81	352.4							20	39	
PEKING	130.27	341.4							21	20	
CHARTERS TS.	131.15	249.4	19	16	1						
QUETTA	132.79	37.1	19	15	-3				21	46	PP
ZO-SE	136.02	330.5							22	10	
NANKING	136.33	333.7							21	49	
SIAN	137.71	346.1	19	28	1				22	5	
NEW DELHI	139.57	28.3	19	16	-14				22	28	
CHATRA	144.96	16.5	19	38	-2						
POONA	145.49	42.6	19	42	1						
CANTON	146.48	333.2	19	43	1						
SHILLONG	147.23	9.7	19	43A	0						
KUNMING	147.79	351.4	19	48	4						
MUNDARING	149.65	212.3	19	49	2						
LEMBANG	170.12	269.8	20	19	9				21	45	

SEPTEMBER 19 18.H 25.M 26.S EPICENTRE -21.62-179.28 DEPTH= 553.KM

A=-0.93041 B=-0.01175 C=-0.36634 D=-0.0126 E= 0.9999
G= 0.3663 H= 0.0046 K=-0.9305 HT= 4.3

DEPTH OF FOCUS= 0.082R

SE= 1.48

	DELTA DEG.	AZ. DEG.	P M	S	O-C S	S M	S	O-C S	*PP M	S	SUPP. M	S	
NOUMEA	13.26	264.4	2	47	-5	3	59	-71					
KOUMAC	15.38	271.0	3	17K	4								
KARAPIRO	16.86	194.3	3	29	2								
WELLINGTON	20.23	193.1	3	58	-1								
GEBBIES PASS	23.02	195.1	4	22	-2	7	48	-9					
BRISBANE	26.04	251.7	4	51	0								
RIVERVIEW	28.76	238.6	5	16A	1								
CANBERRA	30.90	236.9	5	34K	1						11	1	SCP
CHARTERS TS.	32.20	266.4	5	45K	1	10	15	-5					
PORT MORESBY	34.47	285.4	6	3	0	10	50	-4					
FORT NELSON	34.98	224.8	6	9	1								
ADELAIDE	39.02	240.8	6	41K	0						11	30	SCP
DARWIN	48.42	272.5	7	54	0	14	9	-5					
SCOTT BASE	56.68	183.5	8	54K	1								
MUNDARING	57.77	245.1	9	0	0								
BYRD STATION	63.74	170.3	9	39	0								
SOUTH POLE	68.51	180.0	10	9	0								
MATUSIRO	70.41	324.7	10	20A	0								
LICK	79.88	43.1	11	13A	0								
MAWSON	80.11	200.1	11	12A	-2								
PASADENA	80.32	47.4	11	15	0								
FRESNO	80.73	44.5	11	18	1								
SHASTA	81.46	40.1	11	21A	0								
MINERAL	81.72	40.7	11	22K	0								
RENO	82.34	42.2	11	25	0								
CORVALLIS	83.35	36.6	11	30A	0								
BOULDER CITY	83.61	47.4	11	32	1								
TUCSON	84.54	52.3	11	38	2								
TUCSON TELE.	84.67	52.3	11	38	1								
EUREKA	84.75	44.0	11	37	0				13	49			
VICTORIA	85.78	33.5	11	42	0								
PENTICTON	88.25	34.4	11	52	-2								
COLLEGE	89.56	12.9	11	57	-3						12	16	
FLAMING GRGE	89.81	45.4	12	1	0								
HUNGRY HORSE	90.75	37.3	12	4	-1								
WICHITA MTS.	94.80	54.7	12	23	-1								
QUETTA	120.53	293.1	17	50	1								
KIMBERLEY	124.81	205.8	17	28	-29								
BULAWAYO	130.34	215.2	18	8	0						20	37	PP
TROMSOE	130.74	351.7	18	6	-3								
SODANKYLA	131.43	347.0	18	7	-3						20	40	SKP

KIRUNA	132.18	350.1	18 9	-2				
SHIRAZ	132.94	290.9	18 12	-1				
KAJAANI	133.91	343.9	18 9	-6				
BROKEN HILL	134.99	219.6	18 17	0			20 53	PP
SKALSTUGAN	137.35	352.4	18 10	-11				
NURMIJARVI	137.66	342.7	18 13	-8			20 59	SKP
UPPSALA	139.96	346.8	18 18	-8				
GOTEBORG	143.04	350.0	18 27A	-5				
COPENHAGEN	144.88	348.5	18 34A	-1				
JERUSALEM	147.68	295.5	18 34A	-5				
NIEDZIKA	148.20	335.4	18 40	1				
RACIBORZ	148.43	338.3	18 45	5				
COLLMBERG	148.87	345.0	18 46A	6	21 8			
HALLE	148.92	346.4					19 1	
ISTANBUL UN.	149.26	315.5	18 45	4				
JENA	149.54	346.4	18 46	5				
PRUHONICE	149.66	342.2	18 48A	6				
BENSBERG	150.29	351.8	18 48A	5				
KASPERSKE H.	150.70	342.6	18 49A	6				
HELWAN	151.30	292.9	18 52	8				
STUTTGART	152.06	347.9	18 45	0			19 5	
STRASBOURG	152.52	349.8	18 54	8				
FOLINIERE	152.89	1.7	18 46	0				
LJUBLJANA	153.15	338.4	18 47	0			18 55	PKP2
MESSINA	159.12	325.6					23 21	

SEPTEMBER 19 21.H 34.M 38.S EPICENTRE -60.41 -24.36 DEPTH= 0.KM

A= 0.45209 B=-0.20470 C=-0.86816 D=-0.4125 E=-0.9110
G=-0.7909 H= 0.3581 K=-0.4963 HT= -9.1

SE= 1.33

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S	
ARGENTINE I.	18.60	237.8	4 21	0					
PORT STANLEY	20.43	280.2	4 41	-1	8 23	-3			
SOUTH POLE	29.75	180.0	6 11	0				9 14	PP
BYRD STATION	32.11	199.1	6 33	2			7 28		
MAWSON	35.80	139.1	7 3K	0	12 37	-4		8 21	PP
HERMANUS	38.22	67.1						13 28	PCS
SCOTT BASE	41.81	183.5	7 55A	2	13 44	-28		9 29	PP
GRAHAMSTOWN	42.56	74.0	8 2	2					
KIMBERLEY	45.53	68.5	7 54A	-30					
CAPE HALLETT	47.18	186.0	8 37A	0	15 42	13		10 24	PP
WILKES	49.23	157.8						16 6	PS
PRETORIA	49.66	69.9	8 22	-34					
LA PAZ	53.92	304.8	9 28	0	17 6	3			
BULAWAYO	54.69	66.8	9 33	-1					
BROKEN HILL	59.62	63.5	10 8	-1					
HUANCAYO	60.93	299.6	10 18	0					
TANANARIVE	64.81	84.0	10 46A	3				11 22	
BANGUI	72.77	45.4	11 32	-1			11 42		
MBOUR	74.77	7.4	11 47	3					
GEBBIES PASS	75.32	192.7	11 49	2					
FORT NELSON	76.79	173.8	11 54A	-2					
MOORLANDS	77.27	173.6	11 58A	0					
WELLINGTON	77.46	194.7	11 56	-3					
CARACAS	78.33	317.2	12 5	1				22 44	PS
TUAI	79.57	196.9	12 11	0					
KARAPIRO	80.65	195.8	12 16	-1					
MUNDARING	82.44	147.0	12 25	-1					
ONERAHI	82.93	195.3	12 29	0					
ADELAIDE	83.95	166.1	12 34K	0				15 45	PP
CANBERRA	84.46	174.5	12 37	1					
SAN JUAN	85.44	320.6	12 41	0					
RIVERVIEW	86.03	176.3	12 43	-1				23 22	
MESSINA	103.58	31.3						24 3	
JERUSALEM	103.95	49.2	18 26	260					
KSARA	106.01	48.8	14 18	777				18 42	PP
ROME	106.33	27.8						28 12	
PALISADES	108.89	322.5						28 17	PS
SHIRAZ	109.22	63.9	17 30	777				18 4	
LJUBLJANA	110.73	27.9						19 11	
WICHITA MTS.	112.40	301.0	18 42	4				19 14	PP
KASPERSKE H.	113.42	26.1	19 29	49					

COLLMBERG	115.35	24.9	18 44	0	19 36 PP
NEW DELHI	120.04	84.5	18 50K	-3	
BOULDER CITY	120.74	289.3	18 55	0	
PASADENA	120.83	285.5	18 57	2	
GOTEBORG	121.18	21.8	18 54	-2	
FLAMING GRGE	122.28	296.8	18 58	0	
SALT LAKE C.	123.25	294.9	19 0	1	
CHATRA	123.54	94.3	18 57	-3	
EUREKA	124.09	290.9	19 1	0	
UPPSALA	124.28	24.1	19 0	-2	
VINEYARD	124.47	284.8	19 4	2	
SHILLONG	124.80	99.4	19 2K	0	
LICK	125.06	285.0	19 5A	2	
BERKELEY	125.78	284.9	19 6A	2	
RENO	125.94	288.1	19 7	2	
NURMIJARVI	126.40	27.7	19 5A	-1	
SKALSTUGAN	126.75	19.5	19 6	0	
BOZEMAN	126.79	299.1	19 8	2	
BUTTE	127.73	298.3	19 10	2	
SHASTA	128.07	287.0	19 10	1	
KUNMING	129.63	110.1			21 31
HUNGRY HORSE	130.16	299.2	19 14	1	
KIRUNA	132.03	21.1	19 15A	-1	22 45 PKS
CANTON	132.57	122.7			22 51 PP
SODANKYLA	132.81	24.2	19 17	-1	
BANFF	132.92	300.7	19 17	-1	
PENTICTON	133.33	296.4	19 18	-1	22 51
SIAN	140.19	109.6	19 33	2	22 43 PP
RESOLUTE	142.46	335.7	19 31	-4	
NANKING	142.73	122.8	19 33	-3	22 51 PP
ZO-SE	142.87	126.5	19 34	-2	22 49 PP
PEKING	148.25	111.9	19 49	4	23 21 PP
ABUYAMA	151.33	144.0	19 58K	8	
MATUSIRO	153.63	147.1	19 54A	1	43 26 PSPS
COLLEGE	154.41	304.4	19 50	-4	20 26
CHANGCHUN	155.38	118.7	19 56	1	23 59 PP

SEPTEMBER 20 19.H 3.M 33.S EPICENTRE -3.53 151.08 DEPTH= 0.KM
A=-0.87363 B= 0.48273 C=-0.06112 D= 0.4836 E= 0.8753
G= 0.0535 H=-0.0296 K=-0.9981 HT= 7.1

SE= 2.90

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
PORT MORESBY	7.02	213.6	1 48	1	3 3	-5		
CHARTERS TS.	17.12	195.6	4 2A	0	7 22	10		
KOUMAC	21.26	143.8	5 49	59				
PORT VILA	22.02	131.1	4 56	-2				
BRISBANE	23.78	176.2	5 15	0	9 35	7		
NOUMEA	23.89	142.7	5 14	-2	9 47	17		
RIVERVIEW	30.15	179.9	6 13A	-1	11 9	-4		7 15 PP
SUVA	30.47	120.5			10 57	-21		8 40
CANBERRA	31.69	183.2	6 25A	-2	11 35	-2		7 34 PP
ADELAIDE	33.32	198.7	6 39A	-3	11 55	-7		
MELBOURNE	34.59	188.5	6 51	-2	12 23	1		
MANILA	34.79	302.0	6 57	3	12 21	-4		
BAGUIO CITY	36.08	304.2	7 4	-1	12 45	0		
AFIAMALU	38.08	108.1	6 54	-28	13 15	-1		8 57 PP
ONERAHI	38.64	149.0	7 31	4				
MOORLANDS	38.90	184.6	7 29K	0				
FORT NELSON	39.37	184.3	7 31K	-2	13 35	0		
HWALIEN	39.62	315.1	7 43	8	13 27	-12		
TUKUBASAN	40.85	346.4	7 41	-4	13 45	-12	8 5	9 22 PP
ABUYAMA	40.88	340.4	7 42A	-3				
KARAPIRO	40.90	150.0	7 44	-2				9 48
MATUSIRO	41.63	344.3	7 48A	-4	14 9	0		9 28 PP
TONGARIRO	41.89	151.2	7 53	-1				
CHATEAU	41.89	151.2	7 53	-1				
COBB RIVER	42.16	155.4	8 0	4				
TUAI	42.38	149.4	7 57	-1				
KAIMATA	42.86	157.8	8 6	4				
WELLINGTON	43.19	153.7	8 5	1	14 34	2		9 50 PP
MUNDARING	43.26	225.2	8 1K	-4	14 35	2		
LEMBANG	43.39	263.8	8 8	2	14 31	-4		

PERTH	43.52	225.4	8	34	27	14	36	-1	17	44	
DJAKARTA	44.16	264.8	8	15	3	14	39	-7	10	9	
HONG KONG	44.27	307.2	8	13	0	14	20	-27			
GEBBIES PASS	44.33	157.6	8	11	-3						
NHATRANG	44.45	291.3	8	15	0						
ZO-SE	44.70	322.6	8	16A	-1	14	47	-7			
CANTON	45.33	307.6	8	20	-2	15	7	4			
NANKING	46.83	321.5	8	33A	0	15	27	3			
VLADIVOSTOK	49.56	341.6	8	54	-1	16	7	4	10	58	PP
Y.-SAKHLINSK	50.87	352.6	9	3	-2	16	18	-3	11	3	PP
CHANGCHUN	52.53	336.6	9	16A	-1	16	45	2			
PEKING	53.89	327.1	9	25A	-2	16	56	-6			
SIAN	54.64	317.0	9	33A	0	17	14	2			
KUNMING	54.85	304.1	9	34	0	17	19	4			
CHENGTU	56.30	310.7	9	44	-1	17	35	1			
PETROPAVLOVK	56.70	5.5	9	46	-2	17	43	3	11	55	PP
LANCHOW	59.12	316.1	10	4	-1	18	8	-3			
PORT BLAIR	59.95	285.5	10	44	34						
TOCKLAI	62.11	302.7	10	30	5						
MAGADAN	62.89	359.8	10	28	-2	18	59	0	12	48	PP
ULAN-BATOR	64.13	328.6	10	28	-10	19	18	3			
SHILLONG	64.20	300.5	10	38A	-1	19	12	-4			
LHASA	66.18	304.5	10	53	1	19	42	2			
CALCUTTA	66.43	296.3	10	56	3	19	49	6	20	18	PS
YAKUTSK	67.39	349.3	10	57	-2	19	54	-1			
IRKUTSK	68.16	331.2	11	3A	-1	20	8	4	15	43	PCS
CHATRA	68.60	300.5	11	12A	5	20	13	4	13	46	PP
WILKES	68.78	196.3				20	8	-3			
CAPE HALLETT	69.73	173.9	11	12	-2	20	19	-3	24	52	SS
VISHAKHAPTNM	70.04	290.2	11	18	2	20	32	6	14	2	PP
MADRAS	72.26	284.8	11	31	2	20	55	3			
HYDERABAD	74.55	289.0	11	24	-19	20	49	-29			
SCOTT BASE	74.73	176.6	11	45A	1	21	13	-7	14	35	PP
TIKSI	76.41	352.9	11	51	-2	21	28	-10	14	42	PP
DEHRA DUN	77.22	302.0	11	57	-1	21	50	3	14	52	PP
NEW DELHI	77.60	300.1	11	56K	-4	21	48	-3	24	51	PP
POONA	79.04	289.5	12	7	-1	22	6	-1	22	41	PS
BOMBAY	80.06	289.8	12	36	23	22	14	-3	22	36	
LAHORE	80.59	302.6	12	16	0						
SEMIPALATNSK	80.63	322.2	12	15	-1						
ALMATA	80.93	314.6	12	18	0						
COLLEGE	81.33	22.2	12	17	-3	22	27	-3			
FRUNSE	82.50	313.8	12	25	-1	22	46	4			
WARSAK DAM	83.30	304.7	12	31	1						
TASHKENT	86.15	311.7	12	45	1	23	24	5	12	48	PCP
BYRD STATION	86.45	169.9	12	42	-4						
SOUTH POLE	86.50	180.0	12	45	-1	23	34	12			
QUETTA	86.68	300.4	12	47	0	23	26	2	12	54	16 5 PP
BERKELEY	89.51	52.2	13	5	5	23	57	7			29 59 SS
SHASTA	89.65	49.4	13	1	0						
LICK	89.95	52.8	13	9A	6						13 31
VINEYARD	90.12	53.4	13	9	6						
FRESNO	91.38	53.4	13	14	5						
RENO	91.54	50.7	13	14K	4						
PENTICTON	92.19	40.9	13	11	-2						
PASADENA	92.58	56.1	13	14	-1	24	18	1			17 3 PP
SVERDLOVSK	93.17	326.6	13	14	-3	23	49	-34			
ASHKABAD	94.30	307.6	13	29	6						
EUREKA	94.50	50.8	13	24	0						16 27
BANFF	94.85	39.1	13	24	-1						
BOULDER CITY	95.37	54.4	13	27	0						17 18 PP
HUNGRY HORSE	95.87	41.9	13	31	1						16 45
BOZEMAN	98.02	44.5	13	45	6						
TUCSON	98.72	58.1	13	43	0						
SHIRAZ	99.17	299.3	13	47	2						16 46 PP
FLAMING GRGE	99.51	49.3	13	45	-1						
RESOLUTE	99.61	14.3	13	45	-2	25	10	45	32	6	PSPS
GORIS	103.61	309.7							14	14	
RAPID CITY	103.73	45.6	14	10	5						
SODANKYLA	105.95	340.6							18	40	PP
MOSCOW	105.97	327.3	14	13	777	24	52	-3	18	34	PP
KIRUNA	107.66	342.4				25	3	1	34	13	SS
PULKOVO	108.12	332.8				25	3	-1	18	51	PP
WICHITA MTS.	108.68	54.6	18	29	777	25	15	8	18	54	PP
MANHATTEN	109.47	49.7							19	55	PP
SIMFEROPOL	111.37	317.2							28	42	PS
KSARA	112.81	305.2							19	31	PP
DUBUQUE	112.98	45.0							29	2	PS
ROLLA	113.34	50.1							19	36	PP

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UPPSALA	113.53	336.4							35	11	SS
JERUSALEM	113.75	303.1	18	47	6				19	54	PP
C. GIRARDEAU	115.31	50.2							21	13	PP
LWOW	115.85	324.9							19	54	PP
ISTANBUL KA.	116.10	314.4	19	52	67	26	44	68	21	2	PP
WARSAW	116.31	328.3				25	39	2	19	59	PP
BUCHAREST	116.91	318.8				25	45	6	20	18	PP
BLOOMINGTON	117.02	47.4							21	13	PP
HELWAN	117.42	301.8	18	53	5						
KRAKOW	118.04	326.6							20	3	PP
COPENHAGEN	118.33	334.8							19	55	PP
BULAWAYO	118.85	244.8	18	55	4						
SOFIA	119.45	318.0	18	58	6						
BROKEN HILL	120.39	251.1	18	55	1						
COLLMBERG	120.92	330.7	19	OK	5				20	33	PP
PRUHONICE	120.95	328.8	19	0	5				30	19	PS
HERMANUS	121.07	226.0							31	37	PPS
HALLE	121.30	331.4	19	0	5	25	49	-5			
OTTAWA	121.65	37.1	19	0	4						
JENA	121.84	331.1	19	0	4	25	49	-7	20	28	PP
KASPERSKE H.	121.97	328.5	19	0	3						
SHAWINIGAN	122.75	34.6	19	2	4						
BREBEUF	122.85	36.1	19	3	5						
LJUBLJANA	123.27	325.1	19	2	3				20	47	
BENSBERG	123.88	333.3							20	49	PP
DE BILT	123.91	335.4							20	33	PP
TRIESTE	123.94	325.0	19	4	4	26	4	1	20	49	PP
STUTTGART	124.39	330.3	19	4	3				20	48	PP
PALISADES	125.04	40.8							37	49	SS
PADOVA	125.15	325.7				26	17	11	22	7	
STRASBOURG	125.25	330.9	19	9	6				42	43	SSS
FLORENCE X.	126.48	324.5	19	1	-4				20	53	PP
KEW	126.57	338.1	19	12	7				21	8	PP
MESSINA	126.78	316.4				26	5	-6	21	6	PP
ROME	126.84	321.9	19	9	3				21	6	PP
ROSELEND	127.41	328.2							19	13	
PARIS	127.52	334.3							21	51	
GARCHY	128.40	332.6	19	15	6				21	8	PP
FOLINIERE	128.79	336.2	19	15	5						
HALIFAX	128.97	31.5	19	15A	5						
CLERMONT-FD.	129.48	331.2	19	18	7				21	50	
BANGUI	132.57	272.7	19	17	0				21	44	PP
BAGNERES	132.91	330.9							21	55	PP
CHINCHINA	133.42	86.5	19	21	2				22	57	PKS
GALERAZAMBA	133.50	78.5							23	3	PKS
BOGOTA	134.96	87.0	19	28	7				23	4	PKS
FUQUENE	135.30	85.8	19	32	10				23	7	PKS
LA PAZ	136.45	118.3	19	28	4				26	55	PKS
ALICANTE	136.70	326.9	19	27	2	26	36	2	23	2	PKS
TOLEDO	137.38	331.4	19	33	7				34	23	PS
SERRA PILAR	138.34	336.8	19	27A	-1						
ALMERIA	138.88	327.1	19	36	7				22	33	PP
GRANADA	139.23	328.5	19	29A	0	26	25	-13	23	5	PP
LISBON	140.61	335.4	19	45	13						
SAN JUAN	140.73	65.1	19	38	6						
CARACAS	141.68	77.6	19	39	5				23	0	PP

SEPTEMBER 24 19.H 4.M 41.S EPICENTRE 18.45 -98.74 DEPTH= 81.KM
A=-0.14429 B=-0.93822 C= 0.31453 D=-0.9884 E= 0.1520
G=-0.0478 H=-0.3109 K=-0.9492 HT= 5.0

DEPTH OF FOCUS= 0.008R

SE= 2.29

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
PUEBLA	0.77	41.6	0	17	0	0	31	0				
TACUBAYA	1.04	335.5	0	18A	-2	0	34	-1				
OAXACA	2.36	126.8	0	38	1							
VERA CRUZ	2.59	72.8	0	45	5	1	21	10			1	5
LEON	3.83	314.4									2	22
GUADALAJARA	4.85	298.0	1	11	-1						1	34
MANZANILLO	5.33	277.3									1	59
COMITAN	6.68	108.1	1	45	8	3	28	36				

MERIDA	8.95	72.4	2 15	7	3 43	-5		
SAN SALVADOR	10.32	116.0	2 25	-2	5 33	72		
SANTIAGO MA.	11.04	115.0	2 34	-2	5 49	70		
CHIHUAHUA	12.16	327.8	2 39	-12				5 25
LUBBOCK	15.32	350.1	3 33	1				
WICHITA MTS.	16.21	0.5	3 43	0	6 52	12		5 8
TUCSON	17.53	323.9	4 1	1				
TUCSON TELE.	17.54	324.3	4 2	2				
FAYETTEVILLE	18.03	12.0	4 6K	0			4 26	7 34 *SS
ROLLA	20.28	15.8	4 31	0	8 19	10	4 47	
C. GIRARDEAU	20.47	21.4	4 27K	-6	8 16	4	4 43	
LAWRENCE	20.67	7.7	4 34	-1	8 29	13		
MANHATTEN	20.76	4.7	4 35K	-2	8 27	9	4 51	
BALBOA HTS.	20.87	114.3	4 32	-5				
COLUMBIA	22.14	42.1	4 50	1	8 36	-7		
BOULDER CITY	22.52	324.1	4 55	2				
BLOOMINGTON	23.24	24.7	5 1	1	9 9	7	5 35	
PASADENA	23.34	315.9	5 2K	1	9 19	15	5 15	8 46 PCP
LARAMIE	23.53	347.0	5 4	1				12 48
GALERAZAMBA	23.94	105.3					5 34	9 55 SS
FLAMING GRGE	24.20	340.0	5 10	1	9 27	8		
CHAPEL HILL	24.61	41.1	5 14	1				
SALT LAKE C.	24.94	335.9	5 17	0				
DUBUQUE	24.94	14.2	5 17K	1	9 48	17		
EUREKA	25.73	328.1	5 24	0			5 38	6 13 PP
RAPID CITY	25.83	352.6	5 25	0				
FRESNO	26.00	318.8	5 26	0				
MORGANTOWN	26.64	33.7	5 32A	0			5 54	
VINEYARD	26.99	317.1	5 30	-6				
CLEVELAND	27.27	29.0	5 36	-2				
PARAISO	27.40	315.3	5 33	-6				
LICK	27.51	317.8	5 41K	1				8 52
WASHINGTON	27.							
BOGOTA	27.75	116.7	5 43	1	10 29	12	6 8	7 0 PPP
RENO	27.82	323.4	5 44K	1				
BERKELEY	28.22	318.1	5 49	2				
PENNSYLVANIA	28.59	34.4	5 50	0	10 36	5		
PT. REYES	28.74	317.9	5 51	0				
BOZEMAN	29.01	342.0	5 54	0				
MINERAL	29.38	322.8	5 57K	0				
BUTTE	29.79	340.4	6 1	0				9 3 PCP
SHASTA	30.07	322.5	6 1	-2				
SAN JUAN	30.93	84.9	6 9	-2				8 5
PALISADES	30.96	38.2	6 9	-2	11 3	-5	6 33	7 17 PP
CARACAS	31.76	100.0	6 21	3	11 21	0		
OTTAWA	32.99	30.4	6 27K	-2				
CORVALLIS	33.17	327.1	6 30A	0				
BREBEUF	34.10	32.2	6 36K	-2				
ST. KITTS	34.26	86.1	6 38	-2				
PENTICTON	35.09	336.1	6 45K	-2				
SHAWINIGAN	35.26	31.6	6 47K	-1				
BANFF	35.26	341.6	6 48K	0				
VICTORIA	36.06	331.9	6 54K	-1				
GRENADA	36.22	94.7	6 56	0				
ST. VINCENT	36.39	92.7	6 55	-3				
TRINIDAD	36.91	96.8	7 0	-2				
HUANCAYO	38.10	141.0	7 13	1			7 39	
LA PAZ	45.98	137.2	8 15	-1	14 59	5		
RESOLUTE	56.29	1.2	9 32	-2				
COLLEGE	56.64	337.3	9 35	-1				11 41 PP
COIMBRA	78.57	51.4	11 57	3			12 19	
DURHAM	79.18	35.8	11 53A	-4	21 53	4		20 50
KEW	80.88	38.8	12 7	1			12 29	
FOLINIERE	81.63	41.4	12 11	1				
TOLEDO	81.89	50.8	12 12	1			12 33	
TROMSOE	81.94	18.3	12 13	1				
SKALSTUGAN	82.59	24.9	12 16K	1				
KIRUNA	83.37	19.5	12 19K	0				
PARIS	83.47	40.7	12 20	1			12 42	13 37
BAGNERES	83.89	46.7	12 22K	0				13 8
KEVO	84.15	16.5	12 24	1				
GARCHY	84.37	42.0	12 24	0			12 45	
CLERMONT-FD.	84.95	43.4	12 28K	1				12 50
GOTEBORG	85.12	30.3	12 29	1			12 50	
MUNSTER	85.32	36.6	12 30	1				
BENSBERG	85.47	37.6	12 31K	2			12 53	
SODANKYLA	85.56	18.5	12 34	4				
BESANCON	86.22	41.3	12 33	0				13 16

UPPSALA	86.64	26.9	12	34	-1						
STRASBOURG	86.79	39.6	12	36	0					13	14
BASLE	87.11	40.6	12	36	-1						
STUTTGART	87.56	39.0	12	40	1	13	2				
HALLE	87.95	35.8	12	42	1						
JENA	88.00	36.4	12	41	-1			13	3	15	55
KAJAANI	88.01	20.7	12	43	1						
ISOLA	88.13	43.8	12	43	1						
MONACO	88.57	44.1	12	45	1						
COLLMBERG	88.62	35.7	12	45	0			13	7	16	13 PP
NURMIJARVI	89.15	24.4	12	46K	-1					16	15 PP
KASPERSKE-H.	89.98	37.4	12	51K	0						
PRUHONICE	90.12	36.4	12	53K	1					13	15
FLORENCE X.	91.04	42.9	12	53	-3					13	35
TRIESTE	91.75	40.4	13	1	2			13	23		
VIENNA-H.	92.02	37.3	13	2	1					13	23
LJUBLJANA	92.03	39.8	13	1K	0					13	23
BRATISLAVA	92.48	37.1	13	4	1						
SKALNATE PL.	93.70	35.1	13	10	2						
BYRD STATION	98.91	183.6				23	29 -32			18	51
SHIRAZ	124.73	30.6	18	51K	1	23	29-135			20	4
MAWSON	129.48	171.0	18	58K	-1			19	14		
QUETTA	129.73	16.2	19	2K	3					22	21 PKS
NEW DELHI	133.09	4.9	19	3K	-3					22	32
SHILLONG	135.05	346.4	19	6	-3						
TANANARIVE	148.09	96.3	19	35	2					20	38
LEMBANG	151.85	290.8	19	46A	8					20	38
MEDAN	152.18	320.2	19	49A	10						

SEPTEMBER 24 21.H 40.M 58.S EPICENTRE 33.73 141.43 DEPTH= 49.KM

A=-0.65165 B= 0.51956 C= 0.55264 D= 0.6234 E= 0.7819
G=-0.4321 H= 0.3445 K=-0.8334 HT= 0.6

DEPTH OF FOCUS= 0.003R

SE= 2.43

	DELTA DEG.	AZ. DEG.	P M	P S	P O-C S	S M	S S	S O-C S	*PP M	*PP S	SUPP. M	SUPP. S
HATIDYOZIMA	1.51	246.0	0	25K	-1	0	44	-1				
MERA	1.78	312.3	0	30	1	0	51	0				
OSIMA	1.99	302.0	0	31	-1	1	2	6				
TYOSI	2.05	346.6	0	33A	0	0	55	-3				
YOKOHAMA	2.25	319.6	0	35K	-1	1	4	1				
AJIRO	2.34	305.0	0	35K	-2	1	4	-1				
TOKYO C.M.O.	2.39	325.0	0	38	0							
HONGO	2.41	325.7	0	36	-2							
MISIMA	2.48	304.8	0	36	-3	1	13	4			1	9
KAKIOKA	2.70	337.9	0	42	0	1	9	-5				
TUKUBASAN	2.72	336.6	0	41K	-2							
MITO	2.76	343.6	0	43	0	1	14	-2				
SHIZUOKA	2.80	297.1	0	44K	0	1	26	9				
OMAESAKI	2.80	289.0	0	45	1	1	19	2				
HUNATU	2.82	309.6	0	45	1	1	4	-13				
KUMAGAYA	2.95	325.7	0	46	0	1	23	3				
TITIBU	2.97	319.9	0	49	3	1	23	2				
KOHU	3.06	310.1	0	48	1	1	24	1				
UTUNOMIYA	3.09	336.0	0	47	-1	1	27	3				
ONAHAMA	3.25	352.4	0	49A	-1	1	24	-4				
MAEBASI	3.30	324.6	0	48	-3	1	36	7				
TORISIMA	3.38	196.9	0	49	-3	1	31	0				
IIDA	3.47	302.0	0	54K	1	1	50	16				
OIWAKE	3.51	318.5	0	56	2	1	37	2				
SHIRAKAWA	3.53	344.0	0	52	-2	1	33	-2				
MATUMOTO	3.80	312.5	1	0	2	1	45	3				
MATUSIRO	3.85	317.6	0	58K	-1	1	52	9				
NAGANO	3.95	318.9	1	3	3	1	27	-19				
NAGOYA	3.96	292.6	1	0	0	1	53	7				
HUKUSIMA	4.09	349.2	1	0	-2	1	48	-1				
TU	4.19	284.8	1	8	5							
GIHU	4.20	294.7	1	5	2	2	5	13				
TAKAYAMA	4.20	306.3	1	5	2	2	3	11				
TAKADA	4.25	323.2	1	3	-1	1	57	4				
OWASE	4.37	275.9	1	6	0							
HIKONE	4.55	291.2	1	11	3	2	10	9				
SENDAI	4.55	354.7	1	7A	-1	1	56	-5				

TOYAMA	4.56	311.7	1	10	1	1	43	-18				
YAMAGATA	4.60	349.3	1	7A	-2	1	59	-3				
NIIGATA	4.61	335.8	1	11	2	2	0	-2				
ISINOMAKI	4.69	358.9	1	8A	-2	2	1	-3				
SIOMISAKI	4.74	268.2	1	10	-1	1	43	-22				
NARA	4.74	283.1	0	54	-17							
TSURUGA	4.82	295.0	1	13	1							
HUKUI	4.86	299.9	1	13	0	1	58	-11				
OSAKA	4.98	282.3	1	14	0	2	9	-2			2	56
ABUYAMA	4.99	284.9	1	13K	-1							
AIKAWA	5.00	329.8	1	15	0	2	5	-7				
WAZIMA	5.19	315.9	1	19	2							
WAKAYAMA	5.23	277.2	1	17	-1	2	5	-13				
KOBE	5.27	282.1	1	14	-4							
SAKATA	5.32	346.4	1	19	0							
MIZUSAWA	5.40	357.5	1	19	-1	2	19	-3				
SUMOTO	5.45	278.3	1	23	2	2	24	1			4	17
MORIOKA	5.97	358.0	1	29	1	2	31	-5				
AKITA	6.08	350.2	1	38	8	2	56	17				
TAKAMATU	6.16	277.6	1	31	0							
TSURUGI SAN	6.18	273.2	1	30	-1							
KOTI	6.60	270.7	1	38	1	2	53	1				
SAIGO	7.10	292.6	1	25	-19	2	29	-35			1	51
AOMORI	7.10	356.0	1	43	-1	2	58	-6				
SIMIDU	7.15	264.7	1	43	-2	3	17	11				
MATUYAMA	7.21	273.3	1	47	2	3	14	7				
HIROSIMA	7.50	277.4	1	49	-1	3	21	7				
HAKODATE	8.09	356.4	1	55	-3	3	30	1				
OOITA	8.21	269.3	2	7	8						5	9
MORI	8.39	355.6	2	0	-2							
URAKAWA	8.48	6.8	2	1	-2	3	32	-6				
MURORAN	8.59	357.7	2	6	1							
HIROO	8.67	9.3	2	1	-5	3	34	-9				
TOMAKOMAI	8.89	0.7	2	12	3							
KUMAMOTO	9.03	267.2	2	12	1	3	55	3				
SUTTSU	9.11	354.4									3	42
HUKUOKA	9.22	272.1	2	13	0	4	3	6				
OBIHIRO	9.28	8.1	2	11	-3							
SAPPORO	9.33	359.6	2	15	0	4	3	4			3	51
KAGOSIMA	9.43	259.8	2	22	6	4	23	21				
KUSIRO	9.53	13.3	2	13	-4	3	53	-11				
YAKUSIMA	9.83	253.6	2	23	1	4	24	12				
NEMURO	10.12	17.5	2	20	-6	4	5	-14				
TOMIE	10.67	267.5	2	37	4							
WAKKANAI	11.68	0.9									6	19
VLADIVOSTOK	11.98	324.3	2	51	0	4	52	-12				
Y.-SAKHLINSK	13.31	3.8	3	4	-4							
UGLEGORSK	15.35	1.6				6	45	21				
CHANGCHUN	16.09	313.5	3	45	1	6	50	9				
ZO-SE	17.30	266.8	4	OK	0	7	17	8				
NANKING	19.09	271.3	4	18	-3	7	50	1				
PEKING	21.13	294.6	4	40	-3	8	32	2			5	4
PETROPAVLOVK	22.88	27.4	5	2	2	9	10	8				
BAGUIO CITY	25.48	232.6	5	20	-5	10	43	56				
MANILA	26.45	229.1	5	30	-4	10	10	7				
HONG KONG	26.55	251.7	6	11	36	9	52	-12				
SIAN	26.91	280.3	5	37	-2	10	16	6				
YAKUTSK	29.28	348.7	5	59	-1							
LANCHOW	30.81	285.1	6	10	-3							
CHENGTU	31.71	274.9	6	19	-2	11	26	0				
IRKUTSK	32.39	316.2	6	30	3							
KUNMING	34.62	266.0	6	47	0	12	20	8			8	5 PP
LHASA	42.74	278.8	7	54	0						9	36 PP
PORT MORESBY	43.23	171.8	7	59	1	14	11	-10				
SHILLONG	43.49	272.8	8	1A	1							
CHITTAGONG	44.85	268.7	8	8	-3	14	36	-9				
CHATRA	46.92	276.7	8	26A	-2							
MEDAN	49.83	242.5	8	49	-1							
LEMBANG	51.52	224.9	9	OK	-3							
COLLEGE	51.90	30.8	9	7	1	16	29	5				
DEHRA DUN	53.10	284.8	9	39	24	16	39	-1				
CHARTERS TS.	53.71	174.4	9	21	2							
ANDIJAN	54.16	298.9	9	23	0	16	59	5				
NEW DELHI	54.44	283.2	9	19A	-6	16	51	-7			16	59 PS
NAMANGAN	54.60	299.4	9	28	2	17	2	2				
LAHORE	55.63	287.7	9	32	-1							
TASHKENT	56.23	300.4	9	40	2	17	24	2				
WARSAK DAM	56.93	291.4	9	42	-1							

STALINABAD	57.47	297.4	9	47	1	17	42	4		
SVERDLOVSK	57.67	320.0	9	47K	-1					
SAMARKAND	58.41	299.2	9	53	0	17	50	-1		
POONA	61.57	274.1	10	12	-3					
BRISBANE	61.73	168.5	10	13	-3	18	37	4		
QUETTA	62.00	289.1	10	16	-2	18	36	-1	10 40	12 42 PP
BOMBAY	62.25	275.0	10	17	-2	18	36	-4		19 4 PPS
AFIAMALU	65.03	128.7	10	38	1					
APATITY	65.71	336.4	10	41	-1					
RESOLUTE	65.80	14.0	10	42	0					
KEVO	66.54	339.8	10	47	0					
SODANKYLA	68.02	337.7	10	55	-1					
ADELAIDE	68.38	182.4	10	57K	-2					
VICTORIA	68.71	45.3	11	0	-1					
TROMSOE	68.85	341.5	11	0	-1					
CANBERRA	69.05	173.4	11	2	-1					
KAJAANI	69.57	334.6	11	5	-1					
KIRUNA	69.61	339.7	11	6	0	20	19	10		
MOSCOW	69.93	324.2	11	7A	-1	20	15	2		
MAKHACH-KALA	70.53	309.0				20	28	8		
PENTICTON	70.54	43.3	11	11K	-1					
CORVALLIS	70.61	49.0	11	9	-3					
PULKOVO	71.05	330.1	11	15	0	20	32	6		
TEHERAN	71.29	300.8	11	16	0	20	35	6		
BANFF	71.87	40.2	11	19	-1					
NURMIJARVI	72.87	332.5	11	25A	-1					
TIFLIS	72.88	308.9	11	26	0	20	50	3		
HELSINKI	72.97	332.1	11	29	3					
GORIS	72.98	306.3	11	26	0					
SHASTA	73.09	52.2	11	28	1					
SHIRAZ	73.40	294.7	11	28	-1	21	54	61		14 4 PP
MINERAL	73.79	52.2	11	31K	0					
BERKELEY	74.61	54.7	11	36	0					
SKALSTUGAN	75.00	339.0	11	38	0					
SOTCHI	75.13	312.6	11	39	0	21	13	1		
LICK	75.30	54.9	11	40K	0					12 2
PARAISO	75.32	56.1	11	45	5					
RENO	75.39	52.2	11	42K	2					
VINEYARD	75.79	55.3	11	42	-1					
UPPSALA	75.94	334.4	11	42	-1	21	21	0		11 59 PCP
BUTTE	76.33	43.6	11	47	1					
PRIEST	76.60	55.5	11	33	-14					
FRESNO	76.86	54.6	11	50	1					
BOZEMAN	77.40	43.3	11	53	1					
SIMFEROPOL	77.70	316.1	11	54	1	21	44	4		
EUREKA	77.92	50.6	11	56	1					12 37
PASADENA	79.39	56.1	12	2	-1	22	8	10		27 32 SS
GOTEBORG	79.52	335.1	12	3	0					
SALT LAKE C.	79.78	47.7	12	14	9					
BOULDER CITY	80.63	53.0	12	10	1					
COPENHAGEN	80.88	333.5	12	8	-3	22	32	18		
FLAMING GRGE	81.18	46.4	11	43	-29					
KRAKOW	81.85	326.3	12	12	-4					22 37
SKALNATE PL.	82.31	325.5	12	19	1					12 23 PCP
RACIBORZ	82.62	327.1	12	20	0				12 36	13 12
RAPID CITY	82.77	41.0	12	21	1					
KSARA	83.10	306.1	12	23	1				12 42	15 33 PP
LARAMIE	83.21	44.3	12	23	0					
COLLMBERG	83.98	330.4	12	26A	0					15 43 PP
HALLE	84.25	331.0	12	27	-1					15 43 PP
PRUHONICE	84.31	328.7	12	28A	0	22	55	7		15 46 PP
BRATISLAVA	84.50	326.3	12	32	3					12 45 PCP
JERUSALEM	84.75	304.8	12	30A	0					
VIENNA-H.	84.78	326.7	12	31	1					12 59
JENA	84.84	330.8	12	30	-1	22	50	-4	12 58	15 51 PP
SOFIA	85.18	319.3	12	34	2				13 7	
WITTEVEEN	85.24	334.4	12	31	-2					
BELGRADE	85.25	322.2	12	27K	-6					23 6 SCS
KASPERSKE H.	85.37	328.6	12	33A	0					
TUCSON	85.51	54.1	12	35	1					
TUCSON TELE.	85.53	53.9	12	35	1					
MUNSTER	85.57	333.4	12	34	0					
DURHAM	86.29	339.6	12	47A	9	23	8	0	13 3	
DE BILT	86.36	334.7				23	22	14		
BENSBERG	86.55	333.0	12	39	0					13 33
LJUBLJANA	87.25	326.1	12	42	-1					16 6 PP
STUTTGART	87.49	330.6	12	44	5	23	22	3		
TRIESTE	87.91	326.3	12	49	3	23	38	15		24 43 SP
STRASBOURG	88.22	331.3	13	2	15					23 32

KEW	88.75	337.2	12 52	2			
MANHATTEN	89.72	41.2	12 55	1			
BESANCON	90.01	331.5	12 55	-1			
DUBUQUE	90.36	35.7	13 4	7			
FLORENCE X.	90.49	326.4	13 1A	3	23 59 12		
GARCHY	91.11	333.1	13 0	-1		13 59	
FOLINIERE	91.12	335.9	13 4	3			
ROME	91.35	324.5			24 2 8	30 12	SS
WICHITA MTS.	91.70	45.6	13 4	0	23 47 -10	16 40	PP
MONACO	92.24	328.5	13 4	-2			
ROLLA	93.19	39.5	13 12K	2			
FAYETTEVILLE	93.27	42.0	13 11	0		13 44	*SP
ST. LOUIS 1	93.51	38.0	13 14	2			
BLOOMINGTON	94.94	35.4				26 0	PS
BREBEUF	94.99	23.9	13 20	1			
PALISADES	98.81	26.3			23 50 -19	17 48	PP
TOLEDO	100.11	333.7				17 37	PP
SCOTT BASE	112.37	174.4				19 15	PP
MAWSON	116.56	204.8	18 39	0		19 44	PP
SOUTH POLE	123.55	180.0	18 52	0			
BYRD STATION	124.54	167.9	18 54	0		20 40	PP
HUANCAYO	140.15	66.0	19 18	-6			
ARGENTINE I.	144.83	161.5	19 31	-1			
LA PAZ	148.37	64.5	19 44	6			

SEPTEMBER 25 2.H 27.M 13.S EPICENTRE 60.33-152.94 DEPTH= 117.KM

A=-0.44300 B=-0.22632 C= 0.86749 D=-0.4550 E= 0.8905
G=-0.7725 H=-0.3947 K=-0.4975 HT= -9.0

DEPTH OF FOCUS= 0.013R

SE= 2.07

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S	
COLLEGE	5.13	25.2	1 16	0	2 11	-3			
VICTORIA	20.64	111.7	4 29K	-3					
PENTICTON	21.88	105.3	4 44K	0					
BANFF	22.66	97.1	4 52	0					
CORVALLIS	23.68	118.4	5 2	1					
RESOLUTE	25.00	32.3	5 15	1				12 14	
HUNGRY HORSE	25.24	100.8	4 17	-59			4 40	4 53	*SP
SHASTA	27.23	122.4	5 35K	0					
BUTTE	27.59	102.9	5 37	-1			6 0		
MINERAL	27.85	121.7	5 40K	0				6 20	
RENO	29.29	120.2	5 55K	2					
BERKELEY	29.67	125.3	5 56	0					
LICK	30.38	125.0	6 3K	0					
PARAISO	30.96	127.0	6 7	-1					
VINEYARD	30.99	125.3	6 9	1					
EUREKA	31.02	115.4	6 8	0			6 32	7 11	PP
FRESNO	31.62	123.2	6 14	0					
SALT LAKE C.	31.89	109.1	6 16	0					
FLAMING GRGE	32.93	106.2	5 54	-31			6 18	12 10	SCP
RAPID CITY	33.58	96.1	6 30	-1					
BOULDER CITY	34.42	117.7	6 37	-1					
LARAMIE	34.48	101.8	6 39	1				7 1	
PASADENA	34.55	123.5	6 39	0				7 15	
TUCSON TELE.	39.31	116.1	7 20	1			7 45	13 4	SCP
TUCSON	39.34	116.3	7 20	1			7 44		
MANHATTEN	40.52	95.3	7 29	0	14 21	53	7 53		
DUBUQUE	40.95	86.8	7 35A	3			7 57		
WICHITA MTS.	43.06	101.4	7 49	0			8 14	13 18	SCP
ROLLA	43.85	92.3	7 56	0			8 21		
ST. LOUIS 1	44.10	90.2	7 58	0			8 22		
FAYETTEVILLE	44.13	96.0	7 58A	0			8 22		
C. GIRARDEAU	45.48	90.7	8 3	-6			8 26		
LITTLE ROCK	46.08	95.4	8 10	-4			8 34		
OTTAWA	46.12	72.4	8 14	0					
SHAWINIGAN	46.66	69.2	8 27	9					
BREBEUF	47.04	70.8	8 21	0				8 41	
MORGANTOWN	48.43	80.8	8 32A	0				8 56	
PENNSYLVANIA	48.55	78.1					8 59		
MATUSIRO	48.79	273.3	8 34	-1					
CHANGCHUN	49.44	289.5	8 39	-1					

KEVO	50.20	0.0	8 52	7							
PALISADES	50.31	74.9	8 45	-1	16 17	29	9 11	11 41	PPP		
WASHINGTON	50.41	79.1	9 3	16				25 51			
KIRUNA	52.05	3.2	8 58	-1							
HALIFAX	52.31	64.5	9 2	1							
COLUMBIA	52.32	86.2	9 2	1			9 25				
SODANKYLA	52.60	0.2	9 3	-1			9 29				
ULAN-BATOR	54.35	305.4	9 39	23							
TACUBAYA	55.66	112.8						10 21			
SKALSTUGAN	55.90	7.9	9 26A	-2							
PEKING	56.65	293.2	9 33	0							
NURMIJARVI	59.47	1.4	9 52	-1				10 16			
HELSINKI	59.82	1.2	9 51	-4							
UPPSALA	59.93	5.5	9 55	-1			10 29				
ZO-SE	61.54	283.3	10 7	0							
GOTEBORG	61.71	9.1	10 7	-1			10 41				
NANKING	61.91	285.8	10 8	-1							
SIAN	64.68	294.9	10 26	-1							
LANCHOW	65.42	299.8	10 33K	1							
HALLE	67.86	10.1	10 49	2				11 23			
BENSBERG	67.91	13.4	10 48	0				11 21			
COLLMBERG	68.14	9.5	10 49A	0				13 16	PP		
JENA	68.39	10.5	10 50	-1			11 26				
FOLINIERE	68.98	19.1	10 54	0							
PARIS	69.40	17.1	10 57	0							
PRUHONICE	69.58	8.6	10 58A	0			11 33				
CHENGTU	69.92	296.6	10 59K	-1							
STUTTGART	70.30	12.4	11 3	1			11 37				
STRASBOURG	70.32	13.5	11 3	1							
KASPERSKE H.	70.35	9.4	11 2A	-1							
GARCHY	70.98	17.0	11 6	0				11 42			
SAN JUAN	72.66	83.4	11 43	27							
LJUBLJANA	73.48	9.1	11 21	0							
ISOLA	74.56	14.8	11 28	1							
MONACO	75.06	14.6	11 30	0							
KUNMING	75.25	294.7	11 31	0							
LHASA	76.30	306.4	11 40A	3							
TOLEDO	76.92	24.1	11 42	1			12 6				
CARACAS	78.98	88.2	11 52	0				13 17			
SHILLONG	79.56	303.8	11 54A	-1							
CHATRA	80.33	308.2	12 1K	2							
NEW DELHI	82.39	317.1	12 5A	-5							
QUETTA	84.07	326.1	12 19	1							
SHIRAZ	87.94	338.0	12 38	1				13 7			
CHARTERS TS.	93.91	235.3	13 9	4							
BULAWAYO	139.83	357.7	19 10	-4							
SCOTT BASE	140.12	192.3	19 8	-7						22 40	SKP
KIMBERLEY	148.38	3.8	19 29	0							

SEPTEMBER 27 6.H 34.M 3.S EPICENTRE -17.55-178.64 DEPTH= 524.KM

A=-0.95378 B=-0.02267 C=-0.29964 D=-0.0238 E= 0.9997
G= 0.2996 H= 0.0071 K=-0.9541 HT= 5.2

DEPTH OF FOCUS= 0.078R

SE= 1.44

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S	
AFIAMALU	7.53	62.3	1 53K	-1	3 20	-4			
RAOUL ISLAND	11.67	176.9	2 37	1					
PORT VILA	12.44	267.2	2 45A	1	5 2	6			
NOUMEA	14.80	248.9	3 9K	1	5 45	5			
KOUMAC	16.42	256.8	3 25	1	6 14	5			
ONERAHI	19.18	197.5	3 55	4	7 4	8			
KARAPIRO	20.94	193.0	4 9	2					
TUAI	21.49	189.0	4 10	-2					
CHATEAU	22.16	192.1	4 16	-2					
HONIARA	22.31	288.4	4 19	-1				4 58	
WELLINGTON	24.32	192.1	4 36	-2	8 20	0		14 35	SCS
COBB RIVER	24.60	195.8	4 40	0	8 21	-4			
KAIMATA	26.30	196.7	4 54	-1	8 46	-6			
GEBBIES PASS	27.09	194.0	5 1	-1	8 59	-5		14 47	SCS
BRISBANE	28.11	244.5	5 10	-1	9 15	-5			
RABAUL	31.52	291.5	5 39A	-2				10 9	
RIVERVIEW	31.53	233.2	5 41K	0	10 11	-2	7 11	7 13	PP

CHARTERS TS.	33.29	260.0	5	57	2	10	36	-4					
CANBERRA	33.75	232.0	6	0K	1	10	45	-2			7	36	PP
PORT MORESBY	34.19	279.2	6	4K	1	10	53	-1	7	34	11	20	SCP
MOORLANDS	38.21	222.2	6	36A	0						11	36	PCP
FORT NELSON	38.35	221.5	6	38A	1	11	52	-4					
ADELAIDE	41.64	236.9	7	4K	0	12	40	-3			8	53	PP
HONOLULU	43.54	28.4	7	20	1								
KIPAPA	43.68	28.4	7	20	0								
GUAM	47.50	308.1	7	49	0						12	13	SCP
CAPE HALLETT	55.15	184.1	8	46	1	15	55	7			17	39	SCS
MUNDARING	60.09	242.8	9	17K	-1	16	45	-6					
SCOTT BASE	60.76	183.5	9	23A	0	17	1	2	11	22	12	32	PP
WILKES	66.39	204.6				18	5	-2					
MATUSIRO	67.49	323.4	10	4K	-1	18	19	-1	11	57	19	19	SCS
MANILA	67.52	294.5	10	4	-2				12	11			
BYRD STATION	67.64	170.7	10	6	0	18	10	-12					
ABUYAMA	67.89	320.5	10	7K	-1								
LEMBANG	72.50	268.2	10	36K	1	19	15	-2	12	29	13	29	PP
SOUTH POLE	72.56	180.0	10	36	1	19	8	-10					
PETROPAVLOVK	72.97	345.9	10	36K	-2				12	31			
Y.-SAKHLINSK	73.06	333.5	10	37	-1				12	31			
MIRNY	73.41	204.7	10	40K	0								
DJAKARTA	73.44	268.7	10	37K	-3	19	19	-8	12	27	13	29	PP
ZO-SE	75.35	309.7	10	50K	-1	19	48	0	12	47	20	6	SKS
PARAISO	75.46	43.9	10	56	4								
VLADIVOSTOK	75.52	324.9	10	53K	1	19	49	-1					
PT. REYES	76.14	42.2	10	54	-1								
BRANNER	76.21	43.1	10	56K	0								
SAN FRANCSCO	76.23	42.7	10	56	0								
VINEYARD	76.35	44.0	10	57	0								
BERKELEY	76.41	42.7	10	57A	0	19	57	-2	12	51	13	47	PP
LICK	76.51	43.4	10	58A	1				12	54			
UKIAH	76.54	41.2	10	58	0								
HONG KONG	76.73	298.7	11	0K	1	20	5	2	12	55	13	55	PP
NHATRANG	77.12	287.3	11	1	0						13	59	PP
PASADENA	77.14	47.7	11	0A	-1	20	5	-2	12	56	13	55	*SP
FRESNO	77.42	44.8	11	3	1						12	59	
NANKING	77.60	309.5	11	4K	1	20	15	3	13	1	20	25	SKS
CANTON	77.76	299.1	11	3K	-1	20	12	-2	12	59	13	57	*SP
SHASTA	77.97	40.3	11	5	0						13	2	
MINERAL	78.26	40.9	11	7A	0						13	4	PP
RENO	78.94	42.4	10	58A	-12	20	15	-11	12	55	13	13	PP
MAGADAN	80.76	344.8	11	19	-1								
EUREKA	81.41	44.1	11	23	0	20	52	1	13	21	36	32	PKPPKP
TUCSON	81.59	52.5	11	25	1				13	23	40	36	SKPPKP
VICTORIA	82.07	33.5	11	26	-1								
PEKING	83.37	315.4	11	33K	0	21	11	1	13	31	21	2	SKS
MEDAN	84.10	275.6	11	37K	0	21	9	-8			12	21	
MAWSON	84.12	199.8	11	37K	0	21	14	-3	13	44	15	5	PP
PENTICTON	84.56	34.3	11	38A	-1								
SALT LAKE C.	84.80	44.5	11	41	1						40	20	SKPPKP
COLLEGE	85.47	12.7	11	41	2	21	26	-4	13	41	25	1	*SS
SIAN	85.95	307.7	11	47	1	21	41	6	13	46	21	21	SKS
TACUBAYA	86.21	68.4	11	48K	1	21	46	9					
FLAMING GRGE	86.53	45.2	11	48	0	21	26	-14	13	45	36	16	PKPPKP
BUTTE	86.86	39.6	11	47	-3				13	50			
HUNGRY HORSE	87.15	37.1	11	50	-1				13	50	29	39	PKKP
KUNMING	87.47	297.2	11	54K	1	21	52	3	13	56	21	29	SKS
BOZEMAN	87.63	40.5	12	54	60				14	54			
BANFF	87.77	34.2	11	54A	0								
CHENGTU	88.40	302.7	11	58K	1	22	0	3	13	57	21	34	SKS
YAKUTSK	89.14	338.3	12	6	5								
LARAMIE	89.29	46.1	12	2	1						14	1	
LANCHOW	90.49	307.7	12	8K	1	22	18	2	14	8	15	4	*SP
WICHITA MTS.	91.95	54.3	12	13A	-1	22	34	6	14	15	24	54	PS
MANHATTEN	94.94	50.6	12	29	2	22	13	-41	14	29			
TIKSI	95.74	345.4	12	29A	-2								
FAYETTEVILLE	95.79	54.1	12	31	0				14	34			
SHILLONG	96.95	294.5	12	35K	-1								
ROLLA	98.07	52.9				22	26	-2					
LHASA	98.75	293.3	12	45K	0	22	30	-2	14	46	16	55	PP
C. GIRARDEAU	99.73	54.0	12	49	0	22	31	-5	14	50			
CHINCHINA	103.88	89.1				22	55	-1			17	32	PP
BOGOTA	105.26	89.9				23	1	-1			17	46	PP
PALISADES	112.30	52.3				25	24	113			27	24	
SHAWINIGAN	113.38	46.3	17	38	0								
NAMANGAN	116.05	307.5	17	43	0								
SAN JUAN	116.16	77.8									20	30	

QUETTA	119.43	295.1	17	51	1	23	59	2	20	10	19	19 PP
SVERDLOVSK	121.22	326.5	17	51	-3							
KEVO	125.47	349.3	18	0	-2							
TROMSOE	126.81	352.4	18	3	-1							
SODANKYLA	127.60	348.0	18	4	-2						20	34 SKP
KIRUNA	128.28	350.9									20	38
KIMBERLEY	128.71	206.6	18	10	2							
KAJAANI	130.16	345.2	18	10	-1						20	43 SKP
SHIRAZ	131.94	294.3									20	50
TEHERAN	132.29	302.6	18	15	0						21	53 PP
PULKOVO	132.91	340.5									20	54
MOSCOW	133.02	332.8	18	15	-1				20	29		
SKALSTUGAN	133.40	353.3									20	55
MAKHACH-KALA	133.53	313.1									20	54 PP
NURMIJARVI	133.94	344.2	18	10	-8						20	57 SKP
BULAWAYO	133.98	216.7									20	57 PP
TIFLIS	135.83	312.4	18	22	1							
UPPSALA	136.14	348.2									21	3
BROKEN HILL	138.45	221.7	18	19	-7						21	12 PP
GOTEBORG	139.14	351.3									21	26
COPENHAGEN	141.01	350.0									21	18
SIMFEROPOL	141.33	322.1	18	26	-6							
LWOW	142.99	335.5	18	32	-3						21	23
KRAKOW	144.30	339.4	18	36	-1						21	26
CHORZOW	144.40	340.5	18	36	-1						21	26
WITTEVEEN	144.56	354.4	18	38K	1				21	27		
RACIBORZ	144.83	341.1	18	38	0						19	28
SKALNATE PL.	144.93	338.3	18	37	-1				20	57		
COLLMBERG	145.07	347.2	18	38	0				20	47	21	29 SKP
KSARA	145.13	304.4	18	38K	0				20	45	22	2 PP
MUNSTER	145.30	353.2	18	38	-1							
JENA	145.71	348.5	18	39	0				20	58	22	3 PP
PRUHONICE	145.95	344.7	18	42	2				20	51		
BUCHAREST	146.09	327.5	18	44A	4						20	50 PP
JERUSALEM	146.28	301.3	18	41A	1				20	51		
BENSBERG	146.34	353.4	18	43K	3				20	49		
ISTANBUL KA.	146.59	320.3	18	39	-1				20	49	21	44 *SPKP
ISTANBUL UN.	146.66	320.3	18	43	3						20	50
KASPERSKE H.	146.97	345.2	18	41K	0				20	49		
VIENNA-H.	147.01	341.5	18	41	0							
STUTTGART	148.20	350.0	18	41	-2				20	55		
BELGRADE	148.45	333.6	18	47K	4						29	12 PPS
STRASBOURG	148.61	351.8	18	48	5				20	57	18	54 PKP2
SOFIA	148.73	327.9	18	50	7				21	2		
PARIS	148.80	358.6	18	49	5				20	59		
FOLINIERE	148.82	2.4	18	44	0							
LJUBLJANA	149.55	341.8	18	45K	0				20	55	22	9 PP
BASLE	149.66	351.6	18	51A	6							
HELWAN	150.04	299.7	18	42A	-3				20	51		
TRIESTE	150.13	342.4	18	47	1				21	2	22	11
BESANCON	150.13	353.7	18	52	6				21	1	21	59 *SPKP
GARCHY	150.32	357.7	18	52	6				21	2	18	59 PKP2
PADOVA	150.86	344.7									19	3 PKP2
ATHENS	151.75	320.6	18	55K	7				21	10		
CLERMONT-FD.	151.82	357.4	18	55	7						21	6
FLORENCE X.	152.54	344.3	18	49	0				20	59		
ISOLA	153.02	351.0	18	58	8						21	8
TOLEDO	157.26	10.8							21	32	25	46
BANGUI	158.62	234.3	18	58	1						23	20 PP
GRANADA	159.96	11.6							21	57	25	30 PP

SEPTEMBER 27 11.H 20.M 45.S EPICENTRE 52.40-168.68 DEPTH= 0.KM

A=-0.60075 B=-0.12028 C= 0.79034 D=-0.1963 E= 0.9805
G=-0.7750 H=-0.1552 K=-0.6127 HT= -6.3

SE= 1.81

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
COLLEGE	16.44	32.5	3	52	-2	6	49	-8			9	11
SITKA	19.69	63.1	4	38	4							
PETROPAVLOVK	19.72	284.8	4	33	-1	8	19	8				
MAGADAN	23.46	303.8	5	15	3							
VICTORIA	28.71	79.5	6	3	2							
CORVALLIS	30.64	87.0	6	21	2							

PENTICTON	30.64	75.9	6	19	0							
Y.-SAKHLINSK	31.40	279.9	6	24	-1							
BANFF	32.28	70.6	6	34	1							
TIKSI	32.92	328.9	6	38K	0							
SHASTA	33.36	91.8	6	45	3							
YAKUTSK	33.45	311.2	6	41	-2							
MINERAL	34.05	91.7	6	49A	1							
HUNGRY HORSE	34.38	74.5	6	51	0						7	25
BERKELEY	35.18	95.6	6	59	1	12	39	8				
RENO	35.63	91.3	7	2	1							
LICK	35.89	95.8	7	3K	-1							
RESOLUTE	36.16	25.6	7	6	0							
BUTTE	36.40	77.1	7	10	2							
VINEYARD	36.43	96.3	7	6	-2							
FRESNO	37.38	94.9	7	19	2							
BOZEMAN	37.49	76.7	7	21	4							
EUREKA	38.02	88.4	7	24	2						9	11
SALT LAKE C.	39.76	83.7	7	38	2							
VLADIVOSTOK	39.96	281.0	7	39	1							
PASADENA	40.11	96.6	7	41	2							
MATUSIRO	40.12	268.3	7	39	0	13	40	-7			9	22 PP
FLAMING GRGE	41.16	81.8	7	47	-1						18	10 SCS
RAPID CITY	43.02	74.0	8	6	3							
LARAMIE	43.23	78.8	8	5	0							
TUCSON	45.90	92.5	8	28	2							
MANHATTEN	49.92	75.1	8	15	-43	16	9	1				
PEKING	51.18	287.7	9	6	-1	16	24	-1				
ULAN-BATOR	51.33	301.0	9	9	1							
WICHITA MTS.	51.69	80.8	9	9	-2	16	32	0			12	49
FAYETTEVILLE	53.40	76.4	9	20K	-4						20	18 SCS
ROLLA	53.54	73.3	9	19	-6	16	53	-4				
ZO-SE	54.22	276.0	9	29	-1	17	7	0				
NANKING	55.00	278.6	9	35	-1	17	17	0				
C. GIRARDEAU	55.31	72.2	9	36	-2	17	9	-12				
LITTLE ROCK	55.39	76.4	9	37	-2							
BLOOMINGTON	55.79	68.6	9	41	0	17	27	-1				
OTTAWA	57.41	56.6	9	51	-2							
KEVO	57.61	353.6	9	53	-1							
SHAWINIGAN	58.10	54.0	9	55	-3							
TROMSOE	58.15	356.9	9	58	0							
BREBEUF	58.41	55.3	9	59	-1							
MORGANTOWN	59.16	64.1	10	2	-3							
APATITY	59.22	350.3	10	4	-2							
SIAN	59.35	287.4	10	7	0							
KIRUNA	59.89	356.0	10	9	-1							
SODANKYLA	60.00	353.2	10	9	-2							
LANCHOW	61.00	292.2	10	17	-1							
PALISADES	61.44	59.2	10	20	-1	18	41	0	10	30	23	0 SS
FORDHAM	61.57	59.3	10	22	0							
COLUMBIA	62.56	69.3	10	28	0							
KAJAANI	63.15	352.0	10	32	0							
SVERDLOVSK	63.86	332.3	10	21	-16							
HALIFAX	63.93	50.1	10	43	6							
SKALSTUGAN	64.35	359.5	10	39A	-1							
CHENGTU	64.80	288.0	10	43	0	19	21	-2				
CANTON	64.81	275.5	10	44	1	19	23	0				
HONG KONG	64.89	274.3	10	56	12	19	25	0				
NURMIJARVI	66.93	352.9	10	55	-2	19	49	0				
HELSINKI	67.24	352.7	10	59	0							
UPPSALA	67.99	356.6	11	2	-1							
KUNMING	69.67	284.9	11	15	1	20	25	3				
MOSCOW	70.06	344.5	11	15	-1							
GOTEBORG	70.26	359.6	11	17	0							
FRUNSE	70.56	315.8	11	19	0							
COPENHAGEN	72.28	359.3	11	30	1							
LHASA	72.92	296.3	11	35A	2	20	55	-5				
ANDIJAN	73.23	316.0	11	37	2							
NAMANGAN	73.33	316.6	11	37	1							
NHATRANG	75.62	271.3	12	5	16							
SHILLONG	75.62	293.1	11	47	-2							
SAMARKAND	76.36	319.0	11	54	1							
HALLE	76.47	359.6	11	52	-2							
COLLMBERG	76.66	358.9	11	55	0						12	9 PCP
BENSBERG	76.95	2.7	11	57	1							
JENA	77.04	359.8	11	57	0							
CHATRA	77.24	297.3	11	57	-1							
RACIBORZ	77.73	355.5	12	2	1						12	19 PCP
PRUHONICE	77.96	357.9	12	3	1							
CHITTAGONG	78.15	291.1	12	3	0				12	12	15	7 PP

SKALNATE PL.	78.51	354.0	12 5	0						
FOLINIERE	78.70	7.9	12 6	0						
KASPERSKE H.	78.83	358.5	12 7	0						
PARIS	78.88	5.9	12 7	0						
STUTTGART	79.19	1.4	12 9	0						
STRASBOURG	79.35	2.4	12 11	1						
LAHORE	79.97	309.4	12 14	1						
GARCHY	80.44	5.7	12 16	1						
NEUCHATEL	80.90	3.0	12 16	-2					12 37	
NEW DELHI	81.03	305.6	12 13K	-6					22 38	
SIMFEROPOL	81.06	343.8	12 20	1						
SOTCHI	81.30	339.5	12 21	1						
TIFLIS	81.87	335.3	12 25	2						
LJUBLJANA	81.89	357.8	12 24	1						
CLERMONT-FD.	81.95	5.8	12 25	2						
CHARTERS TS.	82.13	222.2	12 24	0						
TRIESTE	82.30	358.3	12 27	2						
ROSELEND	82.43	2.6	12 27	1						
SAN JUAN	83.04	69.0	12 28	-1						
GORIS	83.54	333.5	12 34	2						
ISOLA	83.73	3.1	12 33	1						
FLORENCE X.	84.20	0.1	12 37	2						
QUETTA	84.50	314.1	12 37	1	23 3	0	12 45		15 51	PP
TEHERAN	85.52	328.3	12 45	4						
SHIRAZ	90.70	325.0	13 6A	0						
SCOTT BASE	130.87	186.7							22 36	SKP
BYRD STATION	135.10	169.2	19 12	-10					22 53	
SOUTH POLE	142.22	180.0	19 30	-5						
BULAWAYO	145.10	330.8	19 38	-2						
MAWSON	151.16	218.5	20 53	64			21 2		21 26	

SEPTEMBER 27 12.H 7.M 28.S EPICENTRE -59.37 -23.56 DEPTH= 0.KM

A= 0.46941 B=-0.20471 C=-0.85892 D=-0.3998 E=-0.9166
G=-0.7873 H= 0.3434 K=-0.5121 HT= -8.7

SE= 1.42

	DELTA DEG.	AZ. DEG.	P M	S	O-C S	S M	S	O-C S	*PP M	S	SUPP. M	S	
G. G. VIDELA	18.93	236.6	4	24	-1	8	1	8					
ARGENTINE I.	19.52	235.3	4	31	0						16	25	SCS
PORT STANLEY	20.68	276.6	4	44	0	8	31	0					
SOUTH POLE	30.80	180.0	6	20	1								
BYRD STATION	33.23	198.5	6	20	-21								
MAWSON	36.34	139.8	7	6A	-1	12	52	3	7	25	8	28	PP
HERMANUS	37.44	67.5				13	5	-1			15	45	SS
SANTIAGO	40.31	288.8	7	38	-2								
SCOTT BASE	42.89	183.2	8	3	1	14	24	-3			8	56	PP
KIMBERLEY	44.77	68.7	8	17A	0								
MIRNY	45.93	150.1	8	25	-1	15	5	-6					
WINDHOEK	46.62	56.0	8	32K	0								
CAPE HALLETT	48.26	185.6	8	43	-1	15	48	4			18	32	SCS
WILKES	50.05	157.8	9	3K	5	16	3	-6			10	58	PP
KERGUELEN I.	51.05	122.9				16	32	9			21	32	
LA PAZ	53.67	303.3	9	25	0	16	59	0					
BULAWAYO	53.91	66.7	9	24K	-3								
BROKEN HILL	58.79	63.3	10	1K	-1								
HUANCAYO	60.78	298.3									11	3	PPP
TANANARIVE	64.29	83.7	10	41	2	19	24	7					
BANGUI	71.75	44.8	11	25	-1				11	46			
MBOUR	73.68	6.7	11	39	2	21	12	4					
BOGOTA	75.17	307.3	11	47	1	21	23	-1	12	22	22	23	*SS
CHINCHINA	76.13	306.0	11	49K	-2	21	28	-7	12	24			
FORT NELSON	77.79	173.2	12	0K	-1	21	47	-6					
CARACAS	77.84	316.3	12	0A	-1	21	50	-3					
MOORLANDS	78.27	173.0	12	3	0								
ST. VINCENT	78.45	322.6	12	6	2								
WELLINGTON	78.57	194.0	12	5	0								
FORT FRANCE	79.89	323.2	12	13	1								
DOMINICA	80.50	323.1	12	17	2								
CHATEAU	80.52	194.9	12	16A	1								
TUAI	80.69	196.3	12	16	0								
GALERAZAMBA	81.25	308.7	12	20	1	22	32	3					
BALBOA HTS.	81.37	304.1	12	21	1								

KARAPIRO	81.77	195.2	12	21	-1						
MELBOURNE	82.69	170.9	12	26	-1						
MUNDARING	83.09	146.4	12	28	-1						
ADELAIDE	84.87	165.5	12	38A	0	23	2	-4		12	42 PCP
SAN JUAN	84.89	319.8	12	37	-1						
CANBERRA	85.46	173.9	12	42A	1	23	3	-9		28	50 SS
RIVERVIEW	87.05	175.6	12	48A	0	23	6	-21		29	5 SS
BRISBANE	93.52	176.7	13	18	-1	23	53	-32			
GRANADA	97.61	16.0				25	18	63		17	36 PP
HELWAN	99.78	46.1				25	38	72		17	52 PP
TOLEDO	100.20	15.1	13	50	1	25	36	68		17	56 PP
CHARTERS TS.	100.40	170.3	13	49	-1					26	27
JERUSALEM	102.95	48.4								18	17
LEMBANG	103.50	129.8	18	22	258					24	46
BAGNERES	103.94	17.7								18	8 PP
KSARA	105.02	47.9	14	26	777					18	40 PP
ROME	105.21	27.1								27	42 PS
MONACO	105.87	22.8								18	38 PP
ISOLA	106.22	22.4	14	53	777					18	41 PP
FLORENCE X.	106.72	25.6								18	36 PP
CLERMONT-FD.	107.05	19.2	18	48	777						
PALISADES	108.31	322.1				25	5	0		28	15 PS
SHIRAZ	108.39	62.9	18	30	777					18	57
PADOVA	108.40	25.5								20	36
GARCHY	108.50	18.8	18	48	777						
BESANCON	108.98	20.8	18	51	777						
TRIESTE	109.05	26.7	18	43	777					18	59 PP
ISTANBUL KA.	109.09	39.5	14	31	777					18	52 PP
BOMBAY	109.30	85.5								25	12
FOLINIERE	109.41	16.0								19	4 PP
LJUBLJANA	109.61	27.1	18	31	777					18	57
STRASBOURG	110.59	21.6								19	10 PP
C. GIRARDEAU	110.62	308.9	18	31	-3						
PORT MORESBY	111.06	170.2								26	44
STUTTGART	111.06	22.6								19	2 PP
BLOOMINGTON	111.07	312.1	18	35	0						
BUCHAREST	111.20	35.9								19	13
FAYETTEVILLE	111.48	304.8	17	59	-37						
WICHITA MTS.	112.21	300.7	14	42	-235	25	23	2		19	18 PP
BREBEUF	112.29	324.4								19	24 PP
BENSBERG	112.77	20.5								18	58 PP
SHAWINIGAN	113.00	325.4	18	39	0						
PRUHONICE	113.32	25.7	18	37	-3					19	29
JENA	113.58	23.4	18	43	3					19	56 PP
HALLE	114.20	23.5								19	34
COLLMBERG	114.23	24.2	18	42	1					19	35 PP
SIMFEROPOL	114.23	41.2								19	37 PP
MANHATTEN	115.12	304.8	18	43	0						
DURHAM	115.14	13.9								19	44 PP
TIFLIS	115.35	50.4								19	41 PP
LWOW	115.51	32.0								19	45
QUETTA	115.70	73.9	18	46K	2	25	32	-2		19	53 PP
TUCSON	115.81	289.9	18	45	1						
MAKHACH-KALA	117.47	51.5								20	2 PP
COPENHAGEN	118.24	22.2								36	14 SS
NEW DELHI	119.53	83.2	18	47A	-5					25	43
PASADENA	120.93	285.5	18	55	1					20	22
DEHRA DUN	121.37	82.8								25	53
RAPID CITY	121.94	303.3	18	56	0						
FLAMING GRGE	122.16	296.8	18	57	0						
UPPSALA	123.16	23.4	18	57	-2						
SALT LAKE C.	123.17	294.9	18	59	0						
CHATRA	123.20	92.9	18	57K	-2						
SAMARKAND	123.36	67.5	19	0	1						
FRESNO	123.82	286.1	19	2	2						
EUREKA	124.09	291.0	19	1	0					19	31
VINEYARD	124.59	284.9	19	4	3						
MOSCOW	124.66	37.1	18	51	-11						
PARAISO	124.75	283.8	19	3	1						
HELSINKI	125.05	27.2	19	3	1						
LICK	125.18	285.1	19	4K	1					20	53
NURMIJARVI	125.28	26.9	19	2	-1						
SKALSTUGAN	125.62	18.8	19	3	0					20	53 PP
BERKELEY	125.90	285.0	19	6A	2						
SAN FRANCSCO	125.91	284.8	19	5	1						
RENO	125.99	288.2	18	52	-12						
PULKOVO	126.02	30.4	19	4	0						
NAMANGAN	126.62	69.9	19	7	2						
BOZEMAN	126.63	299.2	19	8	3						

ANDIJAN	126.78	70.6	19	7A	1						
LHASA	127.46	94.3	19	7K	0					21	10 PP
MINERAL	127.49	287.5	19	8A	1						
BUTTE	127.58	298.5	19	7	0						
SHASTA	128.15	287.2	19	9A	1						
KAJAANI	129.10	26.2	19	9	-1					22	31 PKS
FRUNSE	129.45	70.6	19	10K	-1						
KUNMING	129.60	108.5	19	12	1	26	5 -14			21	23 PP
HUNGRY HORSE	129.99	299.5	19	11	-1			19	52	22	32 PP
KIRUNA	130.91	20.4	19	13	-1					22	38 PKS
ALMATA	130.91	71.9	19	14	0						
CORVALLIS	131.51	289.9	19	16	1						
SODANKYLA	131.69	23.5	19	14	-1					22	41 PKS
HONG KONG	132.45	122.4	19	17	0					22	42 PP
BANFF	132.72	301.1	19	16	-1						
CANTON	132.79	121.0	19	20	3					21	48 PP
PENTICTON	133.22	296.7	19	17	-1						
SVERDLOVSK	133.55	49.0	19	17	-2						
KEVO	133.79	21.9	19	16	-3						
VICTORIA	134.42	293.5	19	19	-1						
SEMIPALATNSK	137.58	67.1	19	15	-11						
LANCHOW	139.05	100.8	19	31	2					22	25 PP
SIAN	140.15	107.6	19	32	1					22	33 PP
RESOLUTE	141.67	336.0	19	28	-5					22	37
NANKING	142.94	120.6	19	33	-2					22	43 PP
ZO-SE	143.15	124.4	19	33	-3					22	46 PP
SITKA	145.39	296.7	19	40	0						
KHEYS	146.62	17.2	19	53	11						
PEKING	148.24	109.4	19	45	1					23	19 PP
ULAN-BATOR	149.22	89.6	19	46	0						
IRKUTSK	150.56	80.6	19	47K	-1						
COLLEGE	154.13	306.0	19	48	-5	20	1			29	46 SKKS
MATUSIRO	154.28	144.5	19	54K	1					23	50 PP
TUKUBASAN	154.51	148.1	20	29	35					34	55
VLADIVOSTOK	157.83	126.3	19	58	0						
TIKSI	163.44	31.0	19	59A	-5						
Y.-SAKHLINSK	165.19	140.6	20	10	4						
YAKUTSK	166.69	67.1	20	2	-5						
PETROPAVLOVK	173.52	191.9	20	8K	-3						
MAGADAN	177.12	83.9	20	9	-3						

SEPTEMBER 27 19.H 20.M 44.S EPICENTRE 52.46-168.79 DEPTH= 0.KM

A=-0.60026 B=-0.11895 C= 0.79091 D=-0.1944 E= 0.9809
G=-0.7758 H=-0.1537 K=-0.6119 HT= -6.3

SE= 2.52

	DELTA DEG.	AZ. DEG.	P M	P S	P O-C S	S M	S S	S O-C S	*PP M	*PP S	SUPP. M	SUPP. S
COLLEGE	16.43	32.7	3	54	0							
PETROPAVLOVK	19.64	284.6	4	32A	-1							
SITKA	19.73	63.2	4	36	2							
MAGADAN	23.37	303.7	5	14	3							
VICTORIA	28.77	79.5	6	3	1							
PENTICTON	30.70	75.9	6	12	-7							
CORVALLIS	30.71	86.4	6	22	3							
Y.-SAKHLINSK	31.32	279.7	6	24	-1							
TIKSI	32.84	328.8	6	38K	0							
YAKUTSK	33.37	311.1	6	40	-2							
SHASTA	33.43	91.8	6	44	1							
UKIAH	33.87	94.7	6	47	0							
MINERAL	34.12	91.6	6	50	1							
HUNGRY HORSE	34.44	74.5	6	52	0						9	27 PCP
BERKELEY	35.25	95.6	6	59	0							
RENO	35.70	91.3	6	54	-9							
LICK	35.97	95.8	7	5A	0							
RESOLUTE	36.14	25.7	7	6	0						9	32
PARAISO	36.18	97.7	6	54	-13							
BUTTE	36.45	77.1	6	56	-13							
VINEYARD	36.51	96.3	7	13	4							
FRESNO	37.46	94.9	7	19	2							
BOZEMAN	37.54	76.7	7	18	0							
EUREKA	38.09	88.4	7	24	1				7	37	9	8
SALT LAKE C.	39.82	83.7	7	39	2							
VLADIVOSTOK	39.88	280.9	7	38A	0	13	53 10					

MATUSIRO	40.05	268.2	7	39	0	13	44	-2				
PASADENA	40.19	96.6	7	46	6	13	34	-14			9	14 PP
FLAMING GRGE	41.22	81.8	7	36	-13				7	50		
RAPID CITY	43.07	74.0	8	6	2							
LARAMIE	43.29	78.7	8	3	-3							
CHANGCHUN	43.39	285.9	8	6A	0							
TUCSON	45.97	92.4	8	27	0							
MANHATTEN	49.98	75.1	8	56	-2							
PEKING	51.10	287.6	9	6	-1	16	22	-2				
ULAN-BATOR	51.24	300.9	9	8	0							
WICHITA MTS.	51.74	80.7	9	11	-1	16	34	1			18	51 SCS
FAYETTEVILLE	53.46	76.4	9	23	-2						15	38
ROLLA	53.59	73.2	9	20	-5	17	52	54				
ST. LOUIS 1	54.06	71.4	9	27	-2	17	19	14				
ZO-SE	54.14	275.9	9	29A	-1	17	8	2				
NANKING	54.93	278.5	9	36A	1							
C. GIRARDEAU	55.36	72.2	9	40	1	17	28	6				
LITTLE ROCK	55.45	76.3	9	38	-1	17	0	-23				
BLOOMINGTON	55.84	68.5	9	50	8	17	28	-1				
OTTAWA	57.44	56.6	9	51	-2							
KEVO	57.55	353.6	9	52	-2							
TROMSOE	58.09	356.8	9	56	-2							
SHAWINIGAN	58.13	53.9	9	57	-1							
BREBEUF	58.44	55.3	9	59K	-1							
APATITY	59.16	350.3	10	4	-1							
MORGANTOWN	59.20	64.0	10	5K	-1							
SIAN	59.26	287.3	10	6A	0							
PENNSYLVANIA	59.51	61.7	10	10	2							
KIRUNA	59.84	356.0	10	8	-2						11	30
SODANKYLA	59.93	353.2	10	9	-2							
LANCHOW	60.92	292.1	10	17	0							
WASHINGTON	61.30	62.8	10	17	-3							
PALISADES	61.47	59.1	10	20	-1	18	43	1	10	31	20	27 SCS
FORDHAM	61.60	59.2	10	21	-1	18	43	-1				
SEMIPALATNSK	62.12	317.5	10	23	-3							
CHAPEL HILL	62.34	66.4	10	26	-1							
COLUMBIA	62.61	69.2	10	28	-1							
KAJAANI	63.09	352.0	10	32	0							
SVERDLOVSK	63.78	332.3	10	49	12							
HALIFAX	63.95	50.1	10	59	21							
CHENGTU	64.72	287.9	10	43A	0							
HONG KONG	64.82	274.2	10	43	0	19	24	0				
NURMIJARVI	66.87	352.8	10	55A	-1	19	47	-2				
PULKOVO	67.07	349.6	10	57	-1	19	59	8				
HELSINKI	67.18	352.6	10	57	-1							
BERGEN	67.40	3.2	10	48	-12							
UPPSALA	67.93	356.5	11	1	-2							
ALMATA	69.11	314.5	11	11	1							
KUNMING	69.59	284.8	11	14A	1	20	24	3				
MOSCOW	69.99	344.5	11	16	0							
GOTEBORG	70.20	359.6	11	25	8							
FRUNSE	70.47	315.7	11	20A	1							
PORT MORESBY	72.21	226.1	11	32	3						20	52 PS
COPENHAGEN	72.22	359.3	11	28	-1							
LHASA	72.84	296.3	11	35A	2	21	0	1				
NAMANGAN	73.25	316.5	11	37	2							
WITTEVEEN	75.03	2.8	11	38	-8							
SHILLONG	75.53	293.0	11	46K	-3							
NHATRANG	75.55	271.2	11	49	0				12	0		
MUNSTER	75.90	2.3	11	52	1							
KEW	75.99	7.4	11	52	1							
SAMARKAND	76.28	318.9	11	54A	1							
HALLE	76.42	359.5	11	54	0							
COLLMBERG	76.61	358.8	11	54A	-1						12	7 PCP
BENSBERG	76.90	2.6	11	58	2							
JENA	76.99	359.8	11	57	0						12	25
CHATRA	77.15	297.2	11	57K	-1							
CHORZOW	77.42	354.9	11	58	-1						12	9 PCP
LWOW	77.52	351.5	12	0A	0							
KRAKOW	77.60	354.3	11	58	-2	21	52	1			12	36
RACIBORZ	77.67	355.4	12	3	3						12	20 PCP
PRUHONICE	77.90	357.8	12	2A	0							
SKALNATE PL.	78.45	354.0	12	5A	0							
HEIDELBERG	78.50	1.7	12	6	1							
FOLINIERE	78.66	7.9	12	7	1						13	26
KASPERSKE H.	78.77	358.4	12	7	0							
PARIS	78.84	5.9	12	8	1						12	14 PCP
STUTTGART	79.14	1.3	12	8	-1							
STRASBOURG	79.30	2.3	12	12	3							

TUBINGEN	79.37	1.4	12 11	1						
VIENNA-H.	79.57	356.5	12 12	1						
EBINGEN	79.72	1.5	12 13	1						
LAHORE	79.89	309.3	12 13	0						
RAVENSBURG	80.13	1.1	12 15	1						
BASLE	80.34	2.5	13 16A	61						
GARCHY	80.40	5.6	12 16	1					12 27	PCP
BESANCON	80.57	3.6	12 18	2						
NEUCHATEL	80.85	3.0	12 20	2						
NEW DELHI	80.94	305.6	12 13A	-5						
SIMFEROPOL	80.99	343.7	12 19	1						
SOTCHI	81.23	339.5	12 21	1						
TIFLIS	81.79	335.3	12 25	2						
LJUBLJANA	81.83	357.7	12 22A	-1						
CLERMONT-FD.	81.91	5.7	12 24	1						
CHARTERS TS.	82.13	222.1	12 20	-4						
TRIESTE	82.25	358.2	12 26	1				12 37		
ROSELEND	82.38	2.5	11 27	-59					13 40	
PADOVA	82.51	359.5	12 52	26						
SAN JUAN	83.08	69.0	12 30	1						
ISOLA	83.68	3.0	12 35K	3						
MONACO	84.14	2.8	12 36	1						
FLORENCE X.	84.14	360.0	12 36A	1					29 24	
BAGNERES	84.37	8.1	12 36	0					13 2	
QUETTA	84.42	314.0	12 37	1	23 3	1	12 50		15 51	PP
TEHERAN	85.44	328.2	12 46	5						
ISTANBUL KA.	85.57	346.5	12 39	-3	22 27	-46				
ISTANBUL UN.	85.61	346.6	12 43	1						
ROME	86.01	359.0	12 46A	2					23 36	
TOLEDO	87.09	11.7	12 50	1	23 34	6			19 6	
MEDAN	88.73	274.2	12 59K	2					13 47	
SHIRAZ	90.62	324.9	13 5	-1					16 39	PP
POONA	90.97	302.6	13 9	1						
KSARA	91.42	339.7	13 12K	2						
JERUSALEM	93.53	339.7	13 21K	2						
SCOTT BASE	130.92	186.7							22 35	SKP
BROKEN HILL	139.66	333.6	19 33	3						
BULAWAYO	145.02	330.6	19 39A	-1						
MAWSON	151.16	218.6	19 53	3			20 5		20 29	

SEPTEMBER 27 19.H 27.M 0.S EPICENTRE 52.35-168.75 DEPTH= 0.KM

A=-0.60167 B=-0.11966 C= 0.78973 D=-0.1951 E= 0.9808
G=-0.7746 H=-0.1540 K=-0.6135 HT= -6.3

SE= 2.01

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
COLLEGE	16.51	32.5	3 53	-1				
PETROPAVLOVK	19.69	285.0	4 32	-1				
SITKA	19.75	63.0	4 35	1				
CORVALLIS	30.69	86.3	6 20A	2				
PENTICTON	30.70	75.7	6 18	0				
KIPAPA	31.97	160.9	6 28	-1				
HONOLULU	32.07	161.1	5 54	-36				6 29
TIKSI	32.95	328.9	6 36	-2				
SHASTA	33.40	91.7	6 43	1				
UKIAH	33.84	94.6	6 47	1				
MINERAL	34.09	91.5	6 49A	1				
HUNGRY HORSE	34.44	74.3	6 51	0				8 48
SAN FRANCSCO	35.16	95.8	6 58	1				
BERKELEY	35.21	95.5	6 57	0				
RENO	35.68	91.2	6 50	-11				
LICK	35.93	95.7	7 5A	1				
RESOLUTE	36.23	25.6	7 5	-1				
BUTTE	36.45	77.0	7 9	1	12 34	-16		
VINEYARD	36.47	96.2	7 10	2				
MIZUSAWA	36.65	269.2	7 11	1	12 58	5		
FRESNO	37.42	94.8	7 18	2				
BOZEMAN	37.54	76.6	7 18	1				
EUREKA	38.07	88.3	7 23	2			7 37	
TUKUBASAN	39.12	266.4	7 14	-16	13 31	0		17 54 SCS
SALT LAKE C.	39.81	83.6	7 38	2				
MATUSIRO	40.07	268.3	7 38A	0	13 46	1		17 55 SCS
PASADENA	40.15	96.5	7 39	0	13 15	-31		

FLAMING GRGE	41.21	81.7	7	43	-5					17	52 SCS
ABUYAMA	42.79	268.6	8	1A	1						
RAPID CITY	43.08	73.9	8	3	0						
LARAMIE	43.29	78.7	8	5	0						
CHANGCHUN	43.45	286.1	8	5A	-1	14	31	-4			
KHEYS	44.75	350.2	8	17	1						
TUCSON	45.94	92.4	8	27	1					9	3
IRKUTSK	49.97	306.7	8	56A	-1						
MANHATTEN	49.98	75.0	8	56	-1	16	4	-4			
PEKING	51.15	287.7	9	6A	0	16	22	-2			
ULAN-BATOR	51.32	301.0	9	6	-2						
WICHITA MTS.	51.74	80.7	9	10	-1	16	32	0		18	50 SCS
ROLLA	53.60	73.2	9	22	-3	16	50	-7			
ST. LOUIS 1	54.08	71.4	9	26K	-2	17	0	-4			
ZO-SE	54.18	276.0	9	29A	0	17	5	0			
NANKING	54.97	278.6	9	34A	-1	17	14	-2			
C. GIRARDEAU	55.38	72.1	9	34	-4	17	18	-3			
LITTLE ROCK	55.45	76.3	9	36	-2	17	17	-5			
BLOOMINGTON	55.86	68.5	9	40	-1	17	24	-4			
CLEVELAND	57.08	63.4	9	49	-1						
OTTAWA	57.48	56.6	9	51	-2						
KEVO	57.66	353.6	9	54	0						
SHAWINIGAN	58.17	53.9	9	56	-2						
TROMSOE	58.21	356.8	9	55	-3						
BREBEUF	58.48	55.3	9	57	-3						
MORGANTOWN	59.23	64.0	10	4K	-1						
APATITY	59.27	350.3	10	3	-2						
SIAN	59.32	287.3	10	6A	0	18	14	1			
PENNSYLVANIA	59.55	61.7	10	6	-1	18	16	0			
KIRUNA	59.95	356.0	10	9A	-1					18	36 PS
SODANKYLA	60.05	353.2	10	9A	-2						
LANCHOW	60.98	292.2	10	16A	-1	18	33	-2			
WASHINGTON	61.32	62.7	9	18	-61						
PALISADES	61.51	59.1	10	23	3	18	35	-6	10 35	23	15 SS
CHAPEL HILL	62.36	66.4	10	25	-1						
COLUMBIA	62.62	69.2	10	27	-1						
KAJAANI	63.21	352.0	10	31A	-1						
SVERDLOVSK	63.89	332.3	10	36	0						
HALIFAX	64.00	50.1	10	41	4						
CANTON	64.77	275.5	10	42A	0	19	20	-2			
CHENGTU	64.77	287.9	10	43A	1	19	22	0			
HONG KONG	64.85	274.3	10	42	-1	19	24	1			
MANILA	66.41	263.4	10	52	-1	19	14	-28			
NURMIJARVI	66.98	352.8	10	55A	-1	19	45	-4		20	51 SCS
PULKOVO	67.18	349.7	10	56	-1						
HELSINKI	67.29	352.6	10	57	-1						
UPPSALA	68.04	356.5	11	1A	-2						
ALMATA	69.21	314.6	11	10	0						
KUNMING	69.64	284.9	11	13A	0	20	23	2			
MOSCOW	70.10	344.5	11	15	-1						
GOTEBORG	70.31	359.6	11	16A	-1						
FRUNSE	70.57	315.8	11	19A	1						
COPENHAGEN	72.34	359.3	11	25	-4					21	37 SCS
DURHAM	72.72	7.7	11	31A	0	22	12	75			
LHASA	72.91	296.3	11	34A	2	20	59	0			
ANDIJAN	73.24	316.0	11	35	1						
NAMANGAN	73.34	316.6	11	36A	1						
WARSAW	75.47	353.8	11	47	0	21	32	5		16	34 PPP
NHATRANG	75.57	271.3	11	48	0					12	2 PCP
SHILLONG	75.60	293.1	11	46A	-2						
MUNSTER	76.01	2.3	11	51	1						
KEW	76.10	7.4	11	52	1						
SAMARKAND	76.38	319.0	11	52	0						
HALLE	76.53	359.5	11	53	0	22	2	23			
COLLMBERG	76.72	358.9	11	54A	0					12	6 PCP
BENSBERG	77.01	2.6	11	56A	0	22	8	24			
JENA	77.10	359.8	11	57	1	21	36	-9		14	45
CHORZOW	77.53	354.9	11	58	-1					12	9 PCP
LWOW	77.63	351.6	12	0A	1						
KRAKOW	77.71	354.3	12	0	0	21	52	0		22	9 SKS
RACIBORZ	77.78	355.4	12	3	3					13	16
PRUHONICE	78.01	357.8	12	2A	1					14	4
SKALNATE PL.	78.56	354.0	12	5A	1						
HEIDELBERG	78.61	1.7	12	5	0						
FOLINIERE	78.77	7.9	12	5	-1						
KASPERSKE H.	78.88	358.4	12	7A	1						
PARIS	78.95	5.9	12	7	0					12	16 Pc.
DEHRA DUN	79.18	306.0	12	10	2	22	19	12			

STUTTGART	79.25	1.3	12 9A	1							
STRASBOURG	79.41	2.3	12 10	1							
TUBINGEN	79.48	1.5	12 10	1							
VIENNA-H.	79.69	356.5	12 11A	0						12 58	
EBINGEN	79.83	1.5	12 12	1							
LAHORE	79.97	309.4	12 13A	1							
MAKHACH-KALA	80.02	333.9	12 13	1							
RAVENSBURG	80.24	1.1	12 14	0							
BASLE	80.45	2.5	12 16	1							
GARCHY	80.51	5.6	12 15	0						12 42	
BESANCON	80.68	3.6	12 16	0							
NEUCHATEL	80.96	3.0	12 18	1							
NEW DELHI	81.03	305.6	12 14	-4	22 30	3					
SIMFEROPOL	81.10	343.8	12 18A	0	22 36	9					
SOTCHI	81.34	339.5	12 20A	1							
TIFLIS	81.90	335.3	12 24	2							
LJUBLJANA	81.94	357.7	12 23A	1						13 6	
CLERMONT-FD.	82.01	5.7	12 23A	0						13 4	
TRIESTE	82.36	358.2	12 25	0	22 40	0					
ROSELEND	82.49	2.6	12 26A	1							
PADOVA	82.62	359.6	12 26	0	23 0	17				24 0	PS
BUCHAREST	82.77	349.3	12 17A	-10						22 49	SS
PAVIA	82.84	1.5	12 30	3	22 41	-4				26 0	
BELGRADE	82.89	353.4	12 29	2						12 39	PCP
SAN JUAN	83.10	69.0	12 28	0							
GORIS	83.58	333.4	12 32	1							
GALERAZAMBA	83.68	80.7								25 14	PPS
ISOLA	83.78	3.0	12 34	2							
FLORENCE X.	84.25	360.0	12 34A	0	23 25	26					
BAGNERES	84.48	8.1	12 36	1						12 58	
QUETTA	84.51	314.1	12 36A	0	23 1	-1	12 45			15 50	PP
SOFIA	84.76	351.1	12 36	-1						14 29	
SERRA PILAR	85.32	14.9	12 36A	-4	23 3	-7				15 57	PP
TEHERAN	85.54	328.3	12 46	5	23 11	-1					
ISTANBUL UN.	85.72	346.6	13 42K	60							
ROME	86.13	359.1	12 44A	0						23 34	SCS
BRISBANE	86.23	213.7	12 40	-4						28 22	
ANTIGUA	86.52	66.4	12 52	6							
TORTOSA	86.74	8.2	13 20	33							
TOLEDO	87.19	11.7	12 50	1							
CHINCHINA	88.02	84.5	12 53	0	23 35	-1				24 59	PS
MEDAN	88.77	274.2	12 57K	1	23 42	-1				14 17	
CARACAS	88.89	74.3	13 0	3	24 20	36					
BOGOTA	89.24	83.5			23 49	2				23 30	SKS
ATHENS	89.40	350.2	12 35	-24							
GRANADA	89.91	11.8	13 4A	2	24 10	17					
ST. VINCENT	90.04	68.3	13 3	1							
SHIRAZ	90.73	325.0	13 6A	0	23 43	-17				16 40	PP
POONA	91.05	302.6	13 7	0							
BOMBAY	91.27	303.6								24 2	
KSARA	91.53	339.7	13 11	2	24 13	5				16 47	PP
JERUSALEM	93.64	339.7	13 19	0						17 5	PP
HELWAN	96.27	342.5	13 31	0							
SCOTT BASE	130.81	186.7	19 11	-2						20 47	PP
MIRNY	139.37	217.5	19 30	1							
BROKEN HILL	139.77	333.6	19 31	1							
ARGENTINE I.	141.34	139.3	19 23	-9							
BULAWAYO	145.13	330.6	19 39A	0							
WINDHOEK	149.93	349.2	19 53K	6							
MAWSON	151.09	218.4	19 54	5			20 12				
KIMBERLEY	154.37	331.6	19 49	-4							

SEPTEMBER 28 1.H 24.M 2.S EPICENTRE -3.95 102.41 DEPTH= 78.KM

A=-0.21432 B= 0.97436 C=-0.06847 D= 0.9767 E= 0.2148
G= 0.0147 H=-0.0669 K=-0.9977 HT= 7.1

DEPTH OF FOCUS= 0.007R

SE= 1.43

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
DJAKARTA	4.93	116.8	1	14K	1						2	10	SG
LEMBANG	5.93	119.1	1	25K	-2	2	30	-4					
MEDAN	8.36	333.5	2	OK	0	3	30	-4					
BAGUIO CITY	27.07	41.1	5	38	1	10	28	21					

MADRAS	27.77	307.7	5	42A	-1						6	37
HONG KONG	28.52	23.3	5	51	1	10	53	23				
KUNMING	28.90	0.6	5	54A	1	10	40	3				
CANTON	28.92	21.2	5	54A	1	10	43	6				
MUNDARING	30.74	156.6	6	9	0						9	21
SHILLONG	31.08	341.3	6	10A	-2							
TOCKLAI	31.40	346.8	6	14K	-1							
CHATRA	33.96	335.1	6	39A	2	11	57	1			7	47 PP
CHENGTU	34.45	2.4	6	41A	-1	12	4	1				
LHASA	35.13	342.7	6	46A	-1	12	13	-1				
POONA	35.92	309.4	6	54	0	12	27	1				
BOMBAY	36.93	308.9	7	4	1	12	47	6			8	32
NANKING	39.05	22.3	7	23A	3	13	20	6				
ZO-SE	39.19	25.9	7	23A	2						9	15
LANCHOW	39.81	1.8	7	28A	1	13	23	-2				
NEW DELHI	40.42	324.7	7	30A	-2	13	34	0			9	5 PP
DEHRA DUN	41.28	327.3	7	40	1	13	47	0			9	5 PP
LAHORE	44.29	324.9	8	2	-1							
PORT MORESBY	44.74	99.3	8	6	-1	14	33	-4			18	30 SCS
PEKING	45.56	14.8	8	14A	1	14	47	-2				
CHARTERS TS.	45.61	114.3	8	14	0	14	49	-1				
ADELAIDE	45.63	137.1	8	14A	0	14	52	2				
WARSAK DAM	47.67	324.8	8	33	3							
QUETTA	47.98	317.5	8	32A	0	15	23	0	8	51	10	19 PP
ABUYAMA	49.63	36.2	9	5A	20							
MELBOURNE	51.42	136.7	9	0	1							
ULAN-BATOR	51.80	3.8	9	1	-1							
CHANGCHUN	51.84	21.0	9	1A	-1	16	15	-2				
ANDIJAN	52.29	331.3	9	4A	-1	16	25	2				
ALMATA	52.32	336.6	9	5	0							
MATUSIRO	52.34	36.5	9	4A	-2							
NAMANGAN	52.81	330.9	9	10	1							
FRUNSE	52.92	334.5	9	9	-1				9	25		
CANBERRA	53.13	132.0	9	12A	1	16	28	-6				
BRISBANE	53.34	121.4	9	15	2	16	42	5				
VLADIVOSTOK	53.90	26.5	9	17	0	16	56	11				
RIVERVIEW	54.16	129.5	9	19A	0	16	53	5			17	22 *SS
SAMARKAND	54.27	326.6	9	18A	-2							
MOORLANDS	55.24	140.6	9	28A	1				9	41		
TANANARIVE	55.55	249.8	9	29	0						9	57
FORT NELSON	55.59	141.0	9	29A	0				9	43		
IRKUTSK	56.03	1.4	9	18A	-15							
HONIARA	57.36	98.6	9	40	-2						28	57
SEMIPALATNSK	57.40	343.4	10	41A	59							
SHIRAZ	58.27	308.5	9	48A	0	17	45	2	10	5	12	4 PP
TEHERAN	61.91	314.2	10	20	7	18	35	6				
Y.-SAKHLINSK	61.93	30.1	10	12	-1				10	32		
MIRNY	62.83	184.2	10	17	-2							
NOUMEA	64.52	112.7	10	30K	0							
PORT VILA	65.87	107.6	10	40	1							
GORIS	67.21	315.9	10	46A	-2							
MAKHACH-KALA	68.01	319.6	10	52	0				11	23		
MAWSON	69.01	195.1	10	58A	-1						39	6 PKPPKP
YAKUTSK	69.04	13.4	10	58	-1							
TIFLIS	69.22	317.5	11	0A	0							
SVERDLOVSK	69.40	337.0	11	0	-1							
JERUSALEM	72.93	304.8	11	23A	1							
KSARA	72.97	307.0	11	23A	1	21	12	30	11	44		
GEBBIES PASS	73.04	134.5	11	23	0							
ONERAHI	73.08	126.1	11	46	23							
SOTCHI	73.40	317.6	11	24	-1							
BULAWAYO	73.44	250.3	11	25A	0							
BROKEN HILL	73.47	256.2	11	25A	0							
PETROPAVLOVK	73.72	31.6	11	26A	-1	20	56	6				
MAGADAN	73.83	23.4	11	27	0							
WELLINGTON	74.17	131.7	11	28	-1							
KARAPIRO	74.29	128.2	11	29	-1							
TUAI	75.65	128.9	11	37	-1							
HELWAN	75.69	302.0									14	32
KIMBERLEY	77.26	241.6	11	47K	0							
TIKSI	77.39	8.3	11	46K	-2							
SIMFEROPOL	77.65	317.5	11	48	-1	21	33	0				
MOSCOW	79.39	328.6	11	58	-1				12	14		
CAPE HALLETT	79.61	163.3	12	2	2	21	59	5	12	18		
ISTANBUL KA.	80.12	312.7	12	2A	-1	21	59	0			15	3 PP
ISTANBUL UN.	80.18	312.6	13	2K	59						14	40
SCOTT BASE	80.89	168.8	12	7	0	22	4	-3	12	23	15	2 PP
BUCHAREST	83.02	315.5	12	19	1							

ATHENS	83.53	308.7	12 20A	0					
BANGUI	84.12	274.8	12 24	1			12 40		
PULKOVO	84.48	331.1	12 25	0					
SOFIA	84.66	313.4	12 27	1				14 39	
AFIAMALU	85.01	103.6	12 29A	1					
LWOW	85.52	320.5	12 31A	1				15 51	
APATITY	85.74	338.9	12 30	-1					
SOUTH POLE	86.07	180.0	12 33	0			12 50		
KAJAANI	86.89	334.9	12 37A	0					
KHEYS	87.16	353.4	12 38	0					
HELSINKI	87.18	330.8	12 39A	1					
NURMIJARVI	87.40	331.1	12 39A	0	23 26 14			30 44	PKKP
SKALNATE PL.	87.84	319.4	12 41A	0					
SODANKYLA	88.18	338.0	12 43A	0				13 15	
KEVO	88.66	340.3	12 45A	0					
RACIBORZ	89.28	320.1	12 49	1			13 9	14 9	
MESSINA	89.95	308.1	12 44	-7				13 13	
VIENNA-H.	90.28	318.2	12 54A	1				14 5	
KIRUNA	90.60	337.9	12 54A	0			13 11	13 27	*SP
UPPSALA	90.76	329.8	12 55A	0			13 12	16 34	PP
LJUBLJANA	91.35	315.9	12 58	0				16 30	PP
TROMSOE	91.40	339.6	12 58	0					
PRUHONICE	91.61	319.8	12 59	0				16 43	PP
TRIESTE	91.86	315.4	13 0	0	23 16 -36		13 17	16 37	PP
KASPERSKE H.	92.19	318.9	13 1	-1					
ROME	92.56	311.6						12 58	
COLLMBERG	92.68	321.1	13 4A	0				16 46	PP
HALLE	93.35	321.2	13 8	1				16 40	PP
FLORENCE X.	93.54	313.5	13 7K	-1				17 24	
BYRD STATION	93.56	173.3	13 9	1					
JENA	93.56	320.7	13 8	0			13 23	16 52	PP
SKALSTUGAN	93.57	333.4	13 8A	0			13 23		
STUTTGART	95.01	318.5	13 14	-1			13 30	17 5	PP
ISOLA	96.58	313.9	13 23	1				17 19	PP
PARIS	99.49	318.7						17 36	PP
COLLEGE	101.89	24.2	13 58	12				29 56	PKKP
RESOLUTE	108.62	4.8	18 20	777					
VICTORIA	120.89	33.8	18 44	1					
PENTICTON	122.46	31.3	18 47	1					
CORVALLIS	123.08	37.6	18 50	3					
SHASTA	125.64	41.2	18 54	2					
UKIAH	125.85	43.3	18 56	3					
HUNGRY HORSE	125.90	29.3	18 53	0					
MINERAL	126.34	41.2	18 55A	2					
CALISTOGA	126.53	43.5	18 55	1					
BERKELEY	127.11	44.2	18 58	3					
PARAISO	127.75	46.0	19 0	4					
LICK	127.80	44.5	18 58A	2					
RENO	127.94	41.2	18 47	-10					
BUTTE	128.23	30.6	18 58	1					
VINEYARD	128.26	45.1	19 0	3					
FRESNO	129.36	44.2	19 2	3					
EUREKA	130.44	39.1	19 4	3			19 21	22 20	SKP
PASADENA	131.81	46.4	19 6	2			19 23	22 25	PKS
SALT LAKE C.	132.13	35.2	19 7	2				22 27	SKP
FLAMING GRGE	133.41	33.3	19 8	1				22 31	SKP
LARAMIE	135.13	30.1	19 5	-5					
SHAWINIGAN	137.36	355.1	19 15	1					
TUCSON	138.03	44.0	19 9	-6					
BREBEUF	138.47	355.8	19 17	1				22 24	PP
MANHATTEN	140.91	23.6	19 16	-5				23 0	PKS
PALISADES	142.96	355.4	19 21	-3				22 37	PP
FORDHAM	143.12	355.3	19 26	1					
PENNSYLVANIA	143.32	0.3	19 24	-1					
ST. LOUIS 1	143.61	16.8	19 23	-2					
WICHITA MTS.	143.71	29.9	19 24	-2				22 41	PP
ROLLA	143.77	19.3	19 22	-4					
BLOOMINGTON	144.00	11.8	19 27	1					
MORGANTOWN	144.42	3.1	19 27A	0					
FAYETTEVILLE	144.55	23.5	19 27	0			19 42		
C. GIRARDEAU	145.03	16.7	19 28	0					
WASHINGTON	145.21	359.3	19 29	1				23 20	PP
LITTLE ROCK	146.41	22.3	19 31	1					
CHAPEL HILL	148.16	2.2	19 36	3					
COLUMBIA	149.93	5.7	19 38	2					
ANTOFAGASTA	151.64	193.9	19 48	10					
LA PAZ	157.63	204.5	19 50	3				19 26	PP
SAN JUAN	161.79	322.8	19 54	3					

TRINIDAD	162.62	293.4	19	57	5									
CARACAS	167.58	302.2	19	58	2								25	2 PP
BOGOTA	176.42	280.8	20	2	2								25	36 PP
CHINCHINA	177.79	297.2	20	2A	1								25	43 PP

SEPTEMBER 28 3.H 24.M 40.S EPICENTRE 30.87 141.64 DEPTH= 54.KM

A=-0.67423 B= 0.53363 C= 0.51054 D= 0.6206 E= 0.7841
G=-0.4003 H= 0.3168 K=-0.8599 HT= 1.5

DEPTH OF FOCUS= 0.003R

SE= 3.23

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
TORISIMA	1.22	251.7	0	18	-3						0	40
HATIDYOZIMA	2.72	325.2	0	42	0							
MERA	4.32	339.8	1	1	-4						2	8
OSIMA	4.33	334.5	1	3	-2							
AJIRO	4.68	333.6	1	8K	-2	2	3	-1				
OMAESAKI	4.71	323.1	1	20	10							
MISIMA	4.80	332.6	1	8	-4							
YOKOHAMA	4.84	340.4	1	10	-2	2	7	-1				
SHIZUOKA	4.91	327.2	1	13	0							
TOKYO C.M.O.	5.05	342.2	1	15	0	2	11	-2				
HONGO	5.07	342.5	0	59	-16						2	59
HUNATU	5.21	333.2	1	17	0	2	19	2				
KOHU	5.44	332.5	1	19	-1	2	25	2				
KAKIOKA	5.48	347.6	1	18	-3	2	21	-3				
TUKUBASAN	5.49	346.9	1	19K	-2						2	2
TITIBU	5.53	337.9	1	22	0	2	25	0				
MITO	5.58	350.2	1	21	-1	2	23	-3				
KUMAGAYA	5.59	340.9	1	23	0	2	28	2				
SIOMISAKI	5.60	298.9	1	33	10	2	50	23				
IIDA	5.63	326.5	1	24	1	2	36	9				
NAGOYA	5.81	318.8	1	32	6	2	45	13				
UTUNOMIYA	5.85	345.9	1	21	-5	2	29	-4				
KAMEYAMA	5.89	313.7	1	41	14	2	43	9				
MAEBASI	5.92	339.5	1	27	0	2	41	7				
OIWAKE	6.02	335.5	1	30	1	2	39	2				
GIHU	6.09	319.2	1	30	1							
ONAHAMA	6.10	354.4	1	33	3	2	33	-6				
MATUMOTO	6.18	331.3	1	33	2	2	46	5				
NARA	6.19	309.4	1	31	0							
HIKONE	6.30	315.6	1	35	3	2	55	11				
MATUSIRO	6.34	334.1	1	32K	-1	2	44	-1				
SHIRAKAWA	6.34	349.7	1	30	-3	2	41	-4				
OSAKA	6.38	307.8	1	37	3							
TAKAYAMA	6.42	326.3	1	37	3							
NAGANO	6.45	334.6	1	36	1	3	4	16				
ABUYAMA	6.48	309.6	1	35A	0							
SUMOTO	6.65	303.1	1	45	8	3	9	16			6	28
TSURUGA	6.67	317.1	1	42	4							
TAKADA	6.82	336.5	1	40	0	2	57	0				
TOYAMA	6.89	328.8	1	44	3	3	10	11				
HUKUSIMA	6.93	352.3	1	37	-4	2	54	-6				
NIIGATA	7.35	343.8	1	45	-2	3	11	1				
SENDAI	7.41	355.5	1	43	-5	3	4	-7				
YAMAGATA	7.44	352.1	1	44	-4	3	6	-6				
ISINOMAKI	7.55	358.1	1	47	-3	3	6	-9				
WAZIMA	7.59	330.1	1	55	5	3	30	14				
SIMIDU	7.62	286.7				3	51	34			2	31
AIKAWA	7.66	339.5	1	51	0							
MATUYAMA	8.06	293.9	2	6	9						4	34
SAKATA	8.15	350.0	1	56	-2	3	28	-2				
MIZUSAWA	8.25	357.2	1	59	0	3	23	-9				
HIROSIMA	8.52	296.6	1	59	-4						4	38
SAIGO	8.74	309.7	1	35	-31						4	14
MIYAKO	8.76	1.7	2	9	2	3	32	-13				
MORIOKA	8.82	357.6	2	5	-2	3	35	-11				
OOITA	8.82	288.1	2	7	0	4	5	19				
AKITA	8.92	352.3	2	7	-2	3	41	-8				
KUMAMOTO	9.51	284.6	2	18	1	4	15	12				
KAGOSIMA	9.52	277.1	2	21	4							
YAKUSIMA	9.60	270.3	2	20	2							
HATINOHE	9.64	359.5									3	52

HUKUOKA	9.91	288.8	2	24	2					
AOMORI	9.95	356.2	2	25	2	4	38	24		
NAGASAKI	10.18	283.5	2	28	2	4	38	18		
HAKODATE	10.94	356.5	2	34	-2	4	31	-7		
TOMIE	11.10	282.4	2	40	2				6	30
MORI	11.24	355.9	2	46	6					
HIROO	11.47	6.3							4	35
TOMAKOMAI	11.74	359.8	3	0	13					
SUTTSU	11.96	355.0							4	49
SAPPORO	12.18	359.0	2	59	6	5	0	-8		
KUSIRO	12.29	9.6	2	51	-3	4	58	-13		
VLADIVOSTOK	14.48	330.3	3	19	-4	5	50	-13		
WAKKANAI	14.53	0.1							6	14
Y.-SAKHLINSK	16.15	2.7	3	41	-4					
ZO-SE	17.55	276.0	4	0A	-2	7	23	10		
CHANGCHUN	18.28	319.6	4	8A	-3	7	27	-3		
NANKING	19.53	279.4	4	23	-2	8	2	5		
PEKING	22.61	300.8	4	54A	-3	8	54	-2		
BAGUIO CITY	24.00	238.0	5	8	-2	9	24	3		
PETROPAVLOVK	25.37	24.4	5	27	4	9	47	4		
HONG KONG	25.95	257.4	5	28	-1	10	4	11		
CANTON	26.33	259.8	5	30	-2	9	46	-13		
MAGADAN	29.34	9.5				10	53	5		
ULAN-BATOR	31.45	312.7	6	16	-2					
LANCHOW	31.83	289.6	6	19	-3				11	37
YAKUTSK	32.12	349.4	6	20	-4					
CHENGTU	32.24	279.5	6	23	-2	11	34	1		
IRKUTSK	34.62	319.0	6	46A	0	12	10	0		
KUNMING	34.70	270.3	6	46	0	12	11	-1		
PORT MORESBY	40.39	171.6	7	36	2	13	35	-3		
TIKSI	41.40	353.9	7	41K	-1					
LHASA	43.42	281.8	7	59A	0	14	28	5		
SHILLONG	43.89	275.9	8	OK	-3					
CHATRA	47.49	279.4	8	31A	0					
SEMIPALATNSK	49.02	311.9							16	7
CHARTERS TS.	50.86	174.4	8	55	-2	16	9	1		
FRUNSE	53.65	302.8	9	17	-1					
DEHRA DUN	54.04	286.9				17	24	33	10	57
COLLEGE	54.27	29.7	9	22	-1				9 34 9 42	*SP
HONOLULU	54.40	84.8	8	40	-44					
NEW DELHI	55.30	285.2	9	26A	-4				13	13
ANDIJAN	55.72	300.7	9	38A	5					
NAMANGAN	56.19	301.1	9	37	1					
LAHORE	56.70	289.5	9	39	-1					
HAWAII V.OB.	57.58	85.5	9	43	-3					
WARSAK DAM	58.17	293.2	9	50	0					
BRISBANE	58.90	168.4	9	50	-6	17	54	-2		
SVERDLOVSK	59.98	321.2	10	3	0					
SAMARKAND	59.99	300.7	10	2	-1					
BOMBAY	62.71	276.6	10	19	-2	18	46	2	19	16 PPS
QUETTA	63.13	290.6	10	23	-1	18	48	-1	10 49	
RIVERVIEW	64.97	171.3	10	38	2	19	15	3		
ADELAIDE	65.55	182.6	10	39A	-1				20	36
CANBERRA	66.20	173.4	10	44	0				11	11 PCP
MUNDARING	66.98	203.4	10	47	-2					
APATITY	68.40	336.9	10	57	-1					
MELBOURNE	68.41	177.2	11	1	3					
RESOLUTE	68.52	13.8	10	58K	-1					
KEVO	69.27	340.2	11	2	-1					
VICTORIA	70.60	44.6	11	13	2					
SODANKYLA	70.73	338.2	11	12A	0					
TROMSOE	71.61	341.9	11	18	1					
KAJAANI	72.22	335.0	11	20	-1				17	16
MOSCOW	72.35	324.8	11	22	0	20	43	3		
KIRUNA	72.35	340.1	11	22	0				20	45 SCS
CORVALLIS	72.37	48.3	11	28	6				13	43
MAKHACH-KALA	72.47	309.8	11	21	-1					
PENTICTON	72.51	42.7	11	22	-1					
TEHERAN	72.91	301.7	11	25	0					
PULKOVO	73.61	330.6	11	30	1	20	59	5		
FORT NELSON	73.62	175.6	11	29	0					
SHASTA	74.71	51.6	11	37	1				14	2
SHIRAZ	74.77	295.6	11	35A	-1				19	29
TIFLIS	74.82	309.6	11	37	1	21	14	7		
MINERAL	75.41	51.6	11	40A	1				14	17 PP
NURMIJARVI	75.48	332.9	11	41	1				14	28 PP
CALISTOGA	75.54	53.6	11	42	2					
HELSINKI	75.57	332.5	11	42	2					
BERKELEY	76.13	54.2	11	45	1					

HUNGRY HORSE	76.21	41.7	11	47	3							
PARAISO	76.78	55.6	11	51	4							
LICK	76.81	54.4	11	48K	1						14	25
RENO	77.01	51.7	11	39	-10						26	46
SOTCHI	77.19	313.2	11	50	0							
SKALSTUGAN	77.72	339.3	11	53	1				12	12		
UPPSALA	78.58	334.7	11	57	0	21	39	-9				
BOZEMAN	79.36	42.9	12	6	5							
EUREKA	79.60	50.2	12	3	0							
SIMFEROPOL	79.88	316.5	12	4	0							
PASADENA	80.84	55.8	12	12	3	22	14	2			15	26 PP
SALT LAKE C.	81.58	47.4	13	18	65							
GOTEBORG	82.18	335.3	12	17	1							
WARSAW	82.35	327.7	12	18	1						22	33 SCS
LWOW	82.48	324.6	12	19	1							
FLAMING GRGE	83.03	46.2	12	21	0							
COPENHAGEN	83.51	333.8	12	24	1	22	18	-21			22	45 SCS
KRAKOW	84.32	326.6	12	26	-1						22	54 SCS
CHORZOW	84.60	327.1	12	28	-1							
SKALNATE PL.	84.76	325.8	12	30	1							
RAPID CITY	84.81	40.9	12	31	1							
BUCHAREST	84.81	319.5	12	31	1							
KSARA	84.93	306.5	12	31	1	23	0	7			23	58 PS
RACIBORZ	85.11	327.3	12	30	-1				13	6		
LARAMIE	85.13	44.2	12	33	2							
ISTANBUL KA.	85.15	315.5	12	27	-4	22	57	2			15	45 PP
JERUSALEM	86.53	305.1	12	39	1							
COLLMBERG	86.54	330.6	12	40	2						16	9 PP
PRUHONICE	86.84	329.0	12	39	-1						16	4
TUCSON	87.04	54.0	12	45	4							
JENA	87.42	331.0	12	42	0	23	32	15			16	8 PP
MUNSTER	88.20	333.6	12	42	-4							
DURHAM	89.02	339.7	13	2	12	23	41	9				
BENSBERG	89.17	333.2	12	51	0							
LJUBLJANA	89.72	326.3	12	52	-1						16	28
STUTTGART	90.03	330.7	12	55	0	23	51	10			16	28 PP
TRIESTE	90.38	326.4	12	56	0	23	29	-15			16	33 PP
PADOVA	91.44	327.2	13	23	22						24	33
KEW	91.45	337.3									23	56
BASLE	91.71	330.8	13	14	11							
MANHATTEN	91.75	41.4	13	4	1	23	33	-23	16	14		
TARANTO	92.32	320.9									15	29
PARIS	92.69	334.3	13	12	5							
FLORENCE X.	92.96	326.5	12	58	-10							
CHIAVARI	93.44	327.9	12	1A	-70	23	26	-45				
WICHITA MTS.	93.57	45.8	13	13	2	23	48	-24			30	34 SS
GARCHY	93.73	333.2	13	13	1						14	5
ROME	93.77	324.5									17	0 PP
ISOLA	94.57	329.1									17	8
FAYETTEVILLE	95.27	42.3	13	20	1						16	40 PP
ROLLA	95.27	39.7				23	52	3			31	14 SS
C. GIRARDEAU	96.99	38.7				24	4	6				
BLOOMINGTON	97.16	35.7				24	6	7			15	4
BREBEUF	97.52	24.2	13	31	2						17	30 PP
BAGNERES	98.38	332.5									20	5
MORGANTOWN	99.92	31.4									17	23 PP
PALISADES	101.29	26.7				25	21	62			26	9 SKKS
GRANADA	104.89	331.9									18	39 PP
SCOTT BASE	109.51	174.5	18	35	777							
BULAWAYO	119.39	263.0									26	59
SAN JUAN	124.23	32.3	19	46	53							
LA PAZ	149.33	69.0	19	42	4							

SEPTEMBER 28 5.H 0.M 44.S EPICENTRE 36.50 70.67 DEPTH= 205.KM

A= 0.26669 B= 0.76033 C= 0.59227 D= 0.9436 E=-0.3310
G= 0.1960 H= 0.5589 K=-0.8057 HT= -0.4

DEPTH OF FOCUS= 0.027R

SE= 1.94

	DELTA DEG.	AZ. DEG.	P M	P S	P O-C S	S M	S S	S O-C S	*PP M	*PP S	SUPP. M	SUPP. S
KHOROG	1.19	34.9	0	34	2	0	58	1				
KULYAB	1.58	332.5	0	35	-1	1	1	-2				

OBI-GARM	2.33	340.9	0	43	0	1	13	-3				
GARM	2.51	353.4	0	45	0	1	17	-3				
DUZHANBE	2.56	324.4	0	46	0	1	18	-3				
WARSAK DAM	2.60	163.7	0	44K	-2							
DZERGETAL	2.75	9.1	0	48	0	1	23	-2				
FERGANA	3.97	12.3	1	3	1	1	48	-3				
SAMARKAND	4.30	318.5	1	4	-3	1	50	-8				
ANDIJAN	4.44	6.9	1	9	1	2	0	-1				
NAMANGAN	4.54	9.6	1	10	0	2	0	-3				
LAHORE	5.80	147.4	1	24	-2							
TCHIMKENT	5.85	352.2	1	26	0	2	28	-5				
FRUNSE	7.01	24.5	1	42	1	3	0	0			2	12
QUETTA	7.03	207.3	1	40K	-2	2	56	-5			2	29 *SP
RYBACHE	7.31	34.0	1	45	0	3	2	-5				
FABRICHNAYA	7.96	32.0	1	53	-1							
ALMATA	8.30	33.6	1	58	0						2	49 *SP
PRZHEVALSK	8.44	42.7	2	0	0							
DEHRA DUN	8.72	132.9	2	8	4						3	35
KURMENTY	8.74	39.7	2	3	-1							
NEW DELHI	9.63	143.3	2	10K	-5	3	49	-12				
ASHKABAD	9.93	282.0	2	17	-2	3	59	-9				
KIZYL-ARVAT	11.70	287.6	2	39	-3	4	40	-9			5	6
SEHORE	14.40	155.6	3	17	1	5	43	-7			3	29 PPP
TEHERAN	15.60	272.9	3	31	0							
SHIRAZ	16.67	251.0	3	42A	-1	6	41	0			3	58 PP
CHATRA	17.02	119.9	3	47A	0	6	53	5				
BOMBAY	17.64	173.3	4	11	17						7	7
POONA	18.12	170.3	3	59	0	7	18	7				
MAKHACH-KALA	18.93	297.1	4	10	3	7	28	1				
KIROVOBAD	19.46	289.7	4	11	-2							
TIFLIS	20.71	292.5	4	27	2						5	30 *SP
SVERDLOVSK	21.43	344.8	4	33	1							
VISHAKHAPTNM	21.79	145.8	4	42	6						9	17
MADRAS	24.91	157.5									9	55
KSARA	28.48	275.0	6	40	62	11	56	107				
MOSCOW	29.49	321.2	5	46	-1				6	27	12	22 SSS
LWOW	35.95	306.7	6	43	0				7	26		
ATHENS	37.10	286.8	7	30	38							
APATITY	37.51	337.6	6	55	-1							
NURMIJARVI	37.67	324.4	6	57A	0				7	40	8	3 PP
KAJAANI	37.71	330.7	6	55	-2						8	39
SKALNATE PL.	38.39	305.5	7	3	0							
SODANKYLA	39.62	335.0	7	13A	0				7	56		
KEVO	40.70	338.4	7	20	-2							
UPPSALA	40.90	322.0	7	23K	-1							
VIENNA-H.	40.99	304.2	8	3	39							
KIRUNA	41.97	334.1	7	32K	0							
PRUHONICE	42.07	306.9	7	33	0				8	13	10	10 PP
LJUBLJANA	42.47	301.1	7	36	0						9	16 PP
KASPERSKE H.	42.77	305.7	7	37	-2				8	22		
COLLMBERG	42.99	308.9	7	40K	-1	14	3	13	8	24	9	43 PP
TROMSOE	43.16	336.3	7	41	-1							
COPENHAGEN	43.24	315.3	7	43	0							
HALLE	43.63	309.3	7	45	-1						8	28
JENA	43.90	308.5	7	47	-1	14	4	1	8	32	15	32
SKALSTUGAN	44.06	326.8	7	49	0							
STUTTGART	45.62	305.6	8	1	-1				8	45		
TIKSI	45.86	22.1	8	3	-1	14	31	-2	8	47	9	54 PP
MUNSTER	46.27	310.3	8	6	-1							
ROSELEND	47.32	301.5	8	19	4						9	0
ISOLA	48.02	299.9	8	20	0				9	5		
Y.-SAKHLINSK	53.00	54.6	8	57	-1							
MATUSIRO	53.20	68.4	8	58	-1						9	46
BANGUI	57.38	249.0	9	27	-2				16	13		
TANANARIVE	59.30	205.6	9	42K	0							
BROKEN HILL	64.44	226.2	10	15	-2							
BULAWAYO	68.94	222.4	10	52A	7							
COLLEGE	74.56	16.0	11	17	-1				12	5		
CHARTERS TS.	90.79	114.4	12	39	-2							
PENTICTON	94.07	6.7	12	53	-3							
SOUTH POLE	126.32	180.0	18	36	-2							
SCOTT BASE	126.65	164.8	18	38	-1							
BYRD STATION	136.18	177.4	18	17	-40						18	44
PORT STANLEY	140.90	230.5	18	48	-18							

SEPTEMBER 28 22.H 36.M 27.S EPICENTRE 27.43 57.02 DEPTH= 51.KM

A= 0.48381 B= 0.74566 C= 0.45817 D= 0.8389 E=-0.5443
G= 0.2494 H= 0.3844 K=-0.8889 HT= 2.6

DEPTH OF FOCUS= 0.003R

SE= 2.71

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
SHIRAZ	4.54	300.3	1	8A	0	2	10	9			1	30	PG
QUETTA	9.13	70.2	2	11K	-1	3	49	-6			2	18	PP
TEHERAN	9.58	331.3	2	19	1	4	46	40					
WARSAK DAM	14.10	58.8	3	18	-1								
SAMARKAND	14.75	31.6	3	27	0				3	45			
LAHORE	15.62	70.6	3	36	-3								
MAKHACH-KALA	17.33	335.9	3	59	-1	7	13	4					
TIFLIS	17.43	328.0	4	2	1								
POONA	17.83	116.2	4	15	9								
NEW DELHI	17.86	81.6	4	2	-5	7	28	7			4	18	PP
ANDIJAN	18.35	39.7	4	12	-1	7	38	6					
DEHRA DUN	18.64	76.1	4	28	12	7	43	4					
KSARA	19.26	294.5	4	23	0	8	4	11			8	24	PCP
JERUSALEM	19.44	288.1	4	25A	0	8	8	12					
FRUNSE	20.99	38.4	4	41	-1								
SOTCHI	21.34	323.6	4	45K	0	8	40	6					
ALMATA	22.59	40.4	4	58	1								
HELWAN	22.67	282.3	4	58	0	9	4	6					
SIMFEROPOL	25.31	319.7	5	25	1	9	48	4					
ISTANBUL UN.	26.73	307.8	5	37A	0						6	8	
CHATRA	26.81	84.3	5	37K	-1								
SEMIPALATNSK	28.98	31.4	5	57K	0								
SVERDLOVSK	29.50	4.0	6	2K	0								
ATHENS	29.79	299.1	6	2	-2						7	10	
LHASA	29.91	77.6	6	7	2	11	2	4					
MOSCOW	31.56	339.0	6	23	3				6	41			
LWOW	33.70	320.5	6	39	0								
SKALNATE PL.	35.62	317.6	6	53	-2								
NIEDZIKA	35.67	318.0	6	55	-1						8	15	
KRAKOW	36.16	318.8	6	59	-1						7	17	
MESSINA	36.21	298.0	7	0	0						11	39	
PULKOVO	37.16	337.9									7	37	
RACIBORZ	37.20	318.1	7	8	0								
VIENNA-H.	37.67	314.6	7	13K	1								
LJUBLJANA	38.26	310.6	7	18A	1						8	45	PP
TRIESTE	38.69	309.7	7	20	-1				7	38			
ROME	38.94	303.6									8	23	PP
HELSINKI	39.34	335.3	7	37	11								
PRUHONICE	39.36	316.6	7	25	-1								
NURMIJARVI	39.68	335.5	7	29	0	13	29	0			9	23	
KASPERSKE H.	39.70	315.0	7	29A	0								
LANCHOW	40.41	65.7	7	36K	1								
COLLMBERG	40.72	318.0	7	38	0						9	18	PP
KUNMING	40.89	82.5	7	40K	1	13	40	-7					
CHENGTU	40.98	73.9	7	41	1								
KAJAANI	41.22	340.9	7	44	2								
HALLE	41.41	318.0	7	43	0				9	38			
JENA	41.46	317.1	7	44	0						9	27	PP
RAVENSBURG	41.92	312.0	7	47	-1								
UPPSALA	42.08	331.4	7	46	-3				7	59			
STUTTGART	42.35	313.4	7	50	-1								
COPENHAGEN	42.59	324.0	7	55	2								
APATITY	42.62	346.9	7	53	0								
HEIDELBERG	42.85	314.2	7	55	0								
ROSELEND	42.89	308.3	8	1	6								
ISOLA	43.15	306.3	7	58	0								
BANGUI	43.17	244.9	7	58	0				8	7			
BASLE	43.23	311.3	7	56A	-2								
STRASBOURG	43.29	312.8	7	58	-1								
ULAN-BATOR	43.59	48.2	8	2	1								
GOTEBORG	43.64	326.6	8	11	9								
SODANKYLA	44.01	343.6	8	6	1						9	46	
MUNSTER	44.13	317.6	8	7	2								
BENSBERG	44.16	316.1	8	7	1						8	33	
BESANCON	44.26	310.6	8	6	-1								
KEVO	45.78	345.9	8	19	0								
KIRUNA	45.99	341.7	8	20A	0								
SKALSTUGAN	46.20	334.1	8	22	0								
GARCHY	46.24	310.3	8	22	0								

PARIS	46.79	312.4	8 26	-1					
TROMSOE	47.62	343.0	8 32	-1					
FOLINIERE	48.74	312.1	8 41	-1					
KEW	48.89	315.7	8 45	2					
BROKEN HILL	50.00	217.2	8 49	-3					
DURHAM	50.08	319.8	8 51	-1			9 36		
BULAWAYO	54.71	213.2	9 25	-2					
CHANGCHUN	56.35	53.9	9 38K	0					
TIKSI	58.51	20.7	9 53	-1	17 54	2			
KIMBERLEY	63.84	211.5	10 29	-1					
MATUSIRO	67.59	59.4	10 50	-4					
RESOLUTE	76.52	352.6	11 45	-2					
COLLEGE	85.99	10.4	12 36	0			12 52		
SHAWINIGAN	93.50	327.9	13 9	-3					
FLAMING GRGE	110.83	349.0						29 36	PKKP
EUREKA	113.12	354.1	18 35	3				29 19	PKKP
WICHITA MTS.	114.02	338.1	18 35	1				19 30	PP
SCOTT BASE	120.75	166.6	18 48	1					

SEPTEMBER 29 16.H 50.M 42.S EPICENTRE 43.38 145.28 DEPTH= 76.KM

A=-0.59937 B= 0.41526 C= 0.68433 D= 0.5695 E= 0.8220
G=-0.5625 H= 0.3897 K=-0.7292 HT= -2.9

DEPTH OF FOCUS= 0.007R

SE= 4.62

	DELTA DEG.	AZ. DEG.	P M	P S	P O-C S	S M	S S	S O-C S	*PP M	*PP S	SUPP. M	SUPP. S
NEMURO	0.22	101.9	0	14K	2	0	11	-11				
KUSIRO	0.76	238.9	0	10K	-7	0	21	-9				
ABASHIRI	0.97	311.8	0	10	-9	0	37	4				
OBIHIRO	1.59	254.1	0	22	-5	0	44	-3				
HIROO	1.81	233.5	0	24	-6	0	46	-6				
ASAHIGAWA	2.16	281.8	0	35	1							
URAKAWA	2.21	237.3	0	30A	-5	1	1	-1				
KURILSK	2.62	44.1	0	39	-2	1	14	2				
RUMOE	2.72	283.4	0	42	0							
TOMAKOMAI	2.82	255.9	0	40	-4	1	16	-1				
SAPPORO	2.89	265.3	0	43K	-2	1	19	0				
WAKKANAI	3.29	309.6	0	51	1							
MURORAN	3.34	253.0	0	45	-6	1	27	-3				
HAKODATE	3.69	246.4	0	51A	-5	1	34	-4				
MORI	3.70	251.4	0	55	-1	1	46	7				
SUTTSU	3.75	262.9	0	53	-4	1	45	5				
HATINOHE	3.99	225.8	0	52A	-8	1	32	-14				
Y.-SAKHLINSK	4.07	334.4	1	2	1	1	54	6			1	17 *SP
AOMORI	4.21	234.2	0	57	-6	1	43	-8				
MIYAKO	4.48	214.9	0	55	-12	1	40	-18				
MORIOKA	4.80	221.4	1	3A	-8	1	51	-15				
MIZUSAWA	5.27	217.8	1	8	-10	2	0	-18				
AKITA	5.34	228.6	1	12	-7	2	10	-9				
ISINOMAKI	5.78	212.6	1	13	-12	2	13	-17				
SAKATA	6.08	224.5	1	21	-8	2	27	-11				
SENDAI	6.09	214.6	1	18	-11	2	21	-17				
UGLEGORSK	6.12	339.8	1	32	3	2	50	11				
YAMAGATA	6.34	217.8	1	22A	-10	2	27	-17				
HUKUSIMA	6.71	214.7	1	26	-12	2	36	-17				
NIIGATA	7.22	223.1	1	36	-9	2	50	-16				
ONAHAMA	7.24	209.1	1	41	-4	2	46	-20				
SHIRAKAWA	7.35	213.5	1	37	-9	2	52	-17				
AIKAWA	7.56	227.3	1	41A	-8							
MITO	7.91	209.5	1	42K	-12	3	4	-19				
UTUNOMIYA	7.98	213.2	1	46	-9							
KAKIOKA	8.14	210.5	1	44	-13	3	7	-22				
TUKUBASAN	8.18	210.9	1	44	-14	3	8	-22				
TAKADA	8.26	223.0									2	54
MAEBASI	8.44	216.5	1	51	-10	3	21	-15				
KUMAGAYA	8.53	214.2	1	51	-11	3	22	-16				
NAGANO	8.62	221.4	1	57	-7							
MATUSIRO	8.72	220.9	1	55K	-10	3	28	-15			3	11
OIWAKE	8.73	218.6	2	2	-3	3	32	-11				
WAZIMA	8.76	229.7	2	0	-6							
TOKYO C.M.O.	8.79	210.9	1	56	-10	3	24	-21				
YOKOHAMA	9.05	210.6				3	32	-19				

MATUMOTO	9.07	220.8	2 11	1							
TOYAMA	9.10	225.6	2 3	-7							
KOHU	9.28	216.2	2 5	-8	3 42	-14					
HUNATU	9.34	214.8	1 51	-23	2 44	-74					
MERA	9.44	208.4			3 36	-24					
MISIMA	9.59	212.9	2 36	19							
AJIRO	9.60	212.0	2 5	-12	3 43	-21					
IIDA	9.73	218.8	2 19	0							
OSIMA	9.74	210.0			3 44	-24			3 32		
VLADIVOSTOK	9.77	273.1	2 18	-1					4 3		
SHIZUOKA	9.95	214.7			3 54	-18					
GIHU	10.33	222.4	2 20	-7							
OMAESAKI	10.34	214.4							3 13		
SEVERO-KUR.	10.37	41.5	2 45	17							
NAGOYA	10.42	220.9	2 23	-5	4 23	-1					
HIKONE	10.69	223.8	2 25	-7	4 21	-10					
KAMEYAMA	10.92	221.7	2 46	11					3 48		
HATIDYOZIMA	11.13	204.6							4 14		
ABUYAMA	11.35	224.8	2 31A	-10							
OSAKA	11.55	224.3	2 57	14							
PETROPAVLOVK	13.12	38.0	3 13	9							
CHANGCHUN	14.48	278.7	3 20	-2	6 1	0					
YAKUTSK	20.82	339.1	4 42	5							
PEKING	21.94	271.2	4 46A	-2	8 45	4					
ZO-SE	22.68	245.3	4 52	-3	8 55	1					
NANKING	23.72	250.4	5 3A	-2							
ULAN-BATOR	27.02	293.2	5 36	-1							
IRKUTSK	28.57	302.6	5 49	-1	10 39	7					
SIAN	29.57	264.4	5 58A	-1							
LANCHOW	32.45	271.2	6 24A	-1	11 34	1					
CHENGTU	34.97	262.7	6 45A	-1	12 13	1					
MANILA	35.33	223.3	6 47	-2	11 59	-18					
KUNMING	39.11	256.3	7 20A	-1	13 16	1					
COLLEGE	42.18	35.8	7 46	0					7 58		
SEMIPALATNSK	43.71	302.9	7 58	-1					8 9		
LHASA	44.96	270.9	8 9	0	14 45	4					
SHILLONG	46.66	265.6	8 19A	-3							
RABAUL	47.76	170.7	8 25	-6							
ALMATA	48.39	294.8	8 37	1							
CHITTAGONG	48.65	262.2	8 43	5							
CHATRA	49.35	270.3	8 42	-1							
FRUNSE	50.12	295.2	8 50	1							
SVERDLOVSK	52.48	316.4	9 6	-1							
NEW DELHI	55.60	278.5	9 27A	-3	17 17	9				9 53	
RESOLUTE	55.72	16.2	9 29K	-2							
LAHORE	55.98	283.2	9 31	-2					9 42		
WARSAK DAM	56.59	287.2	9 36	-1							
SAMARKAND	56.69	295.3	9 37A	-1							
APATITY	58.16	335.2	9 46A	-2							
KEVO	58.58	339.0	9 51A	0							
VICTORIA	59.99	50.1	9 57	-4							
SODANKYLA	60.28	337.0	10 2A	-1							
TROMSOE	60.68	341.1	10 4	-1							
KIRUNA	61.64	339.3	10 11A	-1							
QUETTA	61.97	286.1	10 12	-2					10 24		
KAJAANI	62.20	333.9	10 14	-1							
BANFF	62.71	44.4	10 17	-2							
CHARTERS TS.	63.16	179.0	10 16	-6							
ASHKABAD	63.26	297.8	10 23	1							
POONA	64.12	271.5	10 26	-2							
HUNGRY HORSE	65.19	46.2	10 34	-1					10 46		
NURMIJARVI	65.74	332.2	10 38	-1							
HELSINKI	65.88	331.8	10 40	1							
SKALSTUGAN	67.07	339.2	10 46A	-1							
BUTTE	67.42	47.5	10 48	-1							
UPPSALA	68.54	334.6	10 55A	-1							
TEHERAN	69.04	299.6	11 0	1							
TIFLIS	69.25	308.1	11 1	1							
EUREKA	69.66	54.7	11 2	-1							
GORIS	69.77	305.5	11 5	1							
WOODY	70.31	59.3	11 4	-3							
BERGEN	71.53	340.3	11 20	6							
GOTEBORG	72.01	335.7	11 16A	-1							
SHIRAZ	72.17	294.0	11 18A	0	20 48	15			11 45		
FLAMING GRGE	72.51	50.0	11 19	-1							
BOULDER CITY	72.62	56.9	11 20	-1							
SIMFEROPOL	72.85	316.1	11 23	1					11 39	PCP	
COPENHAGEN	73.55	334.3	11 26A	0							
RAPID CITY	73.64	44.3	11 24	-3							

KRAKOW	75.45	327.1	11 37	0						
SKALNATE PL.	76.01	326.4	11 40	0						
RACIBORZ	76.11	328.0	11 41	0					12 32	
COLLMBERG	77.02	331.5	11 46A	0					11 57	PCP
HALLE	77.21	332.2	11 47	0					12 36	
PRUHONICE	77.56	329.9	11 50A	1					12 51	
TUCSON TELE.	77.58	57.3	11 48	-1						
JENA	77.82	332.1	11 52	2					12 21	
BRATISLAVA	78.08	327.5	11 54K	2					12 6	PCP
ADELAIDE	78.20	185.5	11 37	-15		11 49				
MUNSTER	78.22	334.8	11 53	0						
DURHAM	78.23	341.1	11 55K	2						
ISTANBUL UN.	78.27	316.2	11 54	1						
VIENNA-H.	78.29	327.9	11 54	1						
CANBERRA	78.39	176.9	11 50	-4						
BENSBERG	79.23	334.5	11 58A	0		12 10			12 14	*SP
KSARA	79.78	307.1	12 2	1						
STUTTGART	80.44	332.2	12 5	0					12 22	
LJUBLJANA	80.82	327.7	12 7	0						
KEW	80.93	339.0	12 9	2						
TRIESTE	81.45	327.9	12 8	-2						
JERUSALEM	81.63	306.0	12 12A	1						
BASLE	82.08	332.6	12 14A	1						
WICHITA MTS.	82.91	48.2	12 17	0						
ATHENS	83.25	317.3	12 18	-1						
FOLINIERE	83.44	338.0	12 21	1						
GARCHY	83.75	335.2	12 22	0						
FAYETTEVILLE	84.18	44.5	12 23A	-1					12 29	PCP
SHAWINIGAN	84.32	25.3	12 24	0						
OTTAWA	84.38	27.7	12 23	-2						
BREBEUF	84.99	26.3	12 27K	-1			12 38			
ISOLA	85.18	331.3	12 30	1						
HELWAN	85.30	307.2	12 31	2						
MORGANTOWN	87.81	33.3	12 42A	0						
PALISADES	88.87	28.6			23 33	7			24 33	PS
SCOTT BASE	121.67	174.8	18 43	-2						
MAWSON	126.52	208.2	18 53	-1			19 5			
SOUTH POLE	133.18	180.0	18 49	-18						
BYRD STATION	133.26	166.2	18 51	-16					22 29	
LA PAZ	140.99	57.1	19 24	3						

SEPTEMBER 29 19.H 6.M 17.S EPICENTRE 0.66 122.25 DEPTH= 142.KM

A=-0.53354 B= 0.84570 C= 0.01145 D= 0.8458 E= 0.5336
G=-0.0061 H= 0.0097 K=-0.9999 HT= 7.2

DEPTH OF FOCUS= 0.017R

SE= 2.65

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S	
MANILA	13.97	355.3	3 12	-1	5 56	11			
DARWIN	15.51	146.9	3 25	-7				4 28	
BAGUIO CITY	15.75	354.1	3 33	-2	6 32	7			
LEMBANG	16.38	242.8	3 43	0	6 52	12		15 52	SCS
DJAKARTA	16.82	246.0	3 46K	-2	6 55	6		16 3	SCS
HENGCHUN	21.26	356.2	4 43	7					
TAWU	21.60	356.6	5 41	62					
HSINKONG	22.32	357.9	4 41	-6					
HONG KONG	22.90	340.5	4 52	0	8 51	3			
HWALIEN	23.18	358.5	5 0	5					
MEDAN	23.73	277.4	4 59	-1	9 5	3		16 2	SCS
CANTON	23.92	339.4	5 4A	2	9 16	11			
PORT MORESBY	26.74	112.5	5 26	-2	9 57	5		5 50	
RABAUL	30.29	99.4	5 57	-3					
ZO-SE	30.29	358.2	6 0	0	10 53	5			
KUNMING	30.77	323.7	6 4	0	10 59	3			
CHARTERS TS.	31.29	132.6	6 6	-3	11 8	4			
NANKING	31.40	354.3	6 11	1					
MUNDARING	32.95	189.5	6 20K	-3					
CHENGTU	34.49	331.6	6 37	1	11 59	5			
SIAN	35.67	340.9	6 47	1	12 20	8			
ABUYAMA	36.24	18.7	6 49K	-2					
CHITTAGONG	36.63	308.2	6 54	0	12 35	9	7 18	8 45	PPP
TOCKLAI	37.02	316.7	7 4K	6					

MATUSIRO	38.64	20.8	7	8	-3	12	56	-1			9	21	PCP
ADELAIDE	38.65	158.1	7	9K	-2	13	1	4			15	39	SS
HONIARA	38.86	105.9	7	10	-3								
TUKUBASAN	39.07	23.2	7	12	-3	13	5	2			7	33	
LANCHOW	39.15	336.1	7	16	1	13	3	-1					
CALCUTTA	39.47	305.8	6	59	-19	13	19	10			7	48	
HOWRAH	39.52	305.8	7	21	3						9	0	PP
PEKING	39.57	352.7	7	19	0	13	16	5					
BRISBANE	40.49	135.9	7	17	-9	13	21	-3					
LHASA	41.39	317.0	7	36	2	13	46	8					
VISHAKHAPTNM	41.87	296.1	7	36K	-2	13	57	13			9	18	PP
MIZUSAWA	42.00	22.1	7	41	2	13	22	-25					
CHATRA	42.58	310.6	6	45A	-58								
CHANGCHUN	43.07	3.2	7	47	0	14	5	3					
VLADIVOSTOK	43.15	10.3									9	29	PP
MADRAS	43.44	288.2	7	51A	1	14	18	11			9	46	PP
CANBERRA	43.65	147.8	7	51A	-1	14	16	6	8	13	9	35	PP
MELBOURNE	43.67	153.7	7	52	0	14	17	6					
RIVERVIEW	43.75	144.4	7	54K	1	14	21	9	8	15	17	38	SS
HYDERABAD	46.18	293.7	8	14	2	14	58	11			9	58	PP
KOUMAC	46.21	119.6	8	11A	-2						10	10	
TARRALEAH	48.02	155.8	8	28	1						8	57	
MOORLANDS	48.44	155.3	8	39K	9						9	22	
NOUMEA	48.74	120.8	8	31K	-1						8	58	
PORT VILA	48.88	114.3	8	32A	-1								
FORT NELSON	48.91	155.6				15	31	6			18	48	SS
ULAN-BATOR	48.92	346.3	8	34	0								
SEHORE	49.21	300.5	8	36	0								
Y.-SAKHLINSK	49.51	18.3	8	37	-1								
POONA	50.69	293.5	8	45	-2	15	58	8					
UGLEGORSK	51.16	16.6	8	50	-1	15	58	2					
NEW DELHI	51.19	307.0	8	49A	-2	16	0	4			19	32	SS
DEHRA DUN	51.27	309.4	8	53	2	16	5	7			11	45	PPP
BOMBAY	51.73	293.6	8	55	0	16	9	5			16	39	PS
IRKUTSK	53.58	346.4	9	6	-3				9	32	17	6	PS
LAHORE	54.68	309.1	9	16	-1	16	50	6	9	43			
WARSAK DAM	57.82	310.6	9	41	2								
FRUNSE	59.77	321.0	9	52	0	18	1	11	10	21			
QUETTA	60.09	304.8	9	54	-1	18	4	10	10	22	12	13	PP
PETROPAVLOVK	60.31	24.4	9	55	-1	17	55	-2					
SEMIPALATNSK	61.03	330.7	9	59	-2								
YAKUTSK	61.46	4.0	10	1	-3	18	16	4	10	21			
KARAPIRO	62.25	134.2	10	8	-1				10	29			
CHATEAU	62.79	135.5	10	13	0								
WELLINGTON	63.19	137.9	10	14	-1								
TUAI	63.76	134.5	10	17	-2				10	40			
AFIAMALU	66.88	105.3	10	18	-21				10	37			
ASHKABAD	69.22	310.6	10	54	1	19	52	6	11	23			
TIKSI	70.99	2.2	11	1	-3	20	6	-1			20	42	PS
SHIRAZ	72.11	300.9	11	10A	-1	20	7	-13	11	34	13	43	PP
TEHERAN	74.13	307.0	11	21	-2	20	51	9					
SVERDLOVSK	74.28	329.8	11	21	-2	20	48	4			14	24	PP
TANANARIVE	75.75	250.4	11	29	-3				11	53	12	50	
GORIS	78.73	310.1	11	48	0						16	7	
CAPE HALLETT	78.83	166.6	11	47	-2	21	41	8			27	11	SS
MAWSON	79.36	199.6	11	52A	0				12	24	11	59	PCP
HONOLULU	80.12	68.6	12	18	22								
TIFLIS	80.20	312.1	11	56	0	21	57	9			15	12	PP
KIPAPA	80.20	68.5	12	18	22								
SCOTT BASE	81.96	171.4	12	6K	1	22	7	1	12	27	22	59	SP
HAWAII V.OB.	82.69	70.6	12	11	2								
MOSCOW	86.42	325.6	12	26	-2	22	50	0	12	48	23	25	SS
KSARA	86.61	303.7	12	30	1	22	56	5	12	58	15	47	PP
JERUSALEM	87.12	301.6	12	32	1				13	0			
SIMFEROPOL	88.21	314.8	12	38	2	23	13	7	13	4	16	18	PP
APATITY	88.94	337.4	12	39	-1								
COLLEGE	89.38	25.3	12	41	-1				13	4	14	59	
PULKOVO	90.41	329.6	12	50	3						16	29	PP
HELWAN	90.47	299.7	12	47	0	23	39	12					
SOUTH POLE	90.66	180.0	12	47	-1								
KEVO	91.20	339.7	12	49	-1								
KAJAANI	91.40	334.0	12	52	1								
SODANKYLA	91.57	337.3	12	44	-8				13	12	30	11	PKKP
ISTANBUL KA.	91.97	310.9	12	53	-1	23	43	3	13	19	16	37	PP
NURMIJARVI	93.17	330.6	12	59	0								
BULAWAYO	93.64	250.0	13	0	-1								
BROKEN HILL	93.82	255.7	13	1	-1								
KIRUNA	93.85	338.1	13	0	-2	23	49	-8			30	18	SS

BUCHAREST	93.94	314.4	13	6	3	24	30	33			17	0 PP
LWOW	94.81	320.0	13	6	-1	23	37	-28			24	42 S
BYRD STATION	95.38	171.1	13	8	-1						24	30
ATHENS	96.32	308.2									17	32 PP
WARSAW	96.36	322.6									16	27
UPPSALA	96.75	330.5				24	18	40				
NIEDZIKA	97.25	319.9	13	17	-1						13	47
SKALNATE PL.	97.34	319.7	14	18	60							
KRAKOW	97.40	320.6	13	19	0						17	25
BELGRADE	97.90	315.3									15	35 PP
SKALSTUGAN	98.19	334.9	13	24	2							
BRATISLAVA	99.58	319.1	13	56	28							
VIENNA-H.	100.04	319.2	13	59	28							
COPENHAGEN	100.51	327.2				24	41	44			18	12 PP
PRUHONICE	100.81	321.2	14	3	29						18	9 PP
COLLMBERG	101.42	322.8	13	37A	0				14	5	17	49 PP
KASPERSKE H.	101.63	320.6	14	5	27							
LJUBLJANA	101.76	317.3	14	1	23						17	53 PP
HALLE	102.00	323.2	13	54	15	24	49	45				
TRIESTE	102.38	317.1	14	10	29	24	51	45			18	22 PP
JENA	102.38	322.7	14	2	21	25	16	70	14	10	17	49 PP
MESSINA	102.67	309.3				24	12	5			17	52 PP
BANGUI	103.54	274.6	14	17	31						18	23 PP
PADOVA	103.72	317.2									19	43
ROME	104.17	313.6				24	23	9			17	53 PP
MUNSTER	104.41	324.5									18	7
STUTTGART	104.45	321.0	14	39	49				14	59		
BENSBERG	105.02	323.6	14	3	777						18	40 PP
STRASBOURG	105.46	321.2	18	29	777							
DE BILT	105.76	325.2				25	53	92			33	43 SS
ROSELEND	106.55	318.2	18	30	777						19	3
ISOLA	107.36	317.0									18	15 PP
SHASTA	108.55	46.4	18	29	777							
PARIS	108.63	322.7									19	7 PP
GARCHY	108.88	321.1									19	15 PP
KEW	109.13	326.1									26	16
MINERAL	109.24	46.6	18	35A	777							
CLERMONT-FD.	109.42	319.6	14	52	777							
BERKELEY	109.49	49.3	19	5	777							
LICK	110.11	49.7	18	33A	18							
HUNGRY HORSE	111.21	36.5	18	23	6						14	42 P
BUTTE	113.16	38.3	18	43	22							
EUREKA	113.60	45.9	18	24	3						19	32 PP
PASADENA	113.77	52.0	18	23	1	25	42	48			19	18 PP
BOZEMAN	114.26	38.1	18	26	3							
BOULDER CITY	115.73	49.1	18	29	3							
TOLEDO	116.63	316.1	18	29	2				18	54	29	46
ALMERIA	116.74	312.4	18	27	-1						19	38 PP
RAPID CITY	119.84	36.3	18	55	21							
TUCSON TELE.	120.25	51.5	18	36	2							
MANHATTEN	126.73	37.4	18	48	1							
DUBUQUE	127.80	30.6	18	51	2	27	40	119				
WICHITA MTS.	128.07	43.2	18	50	1	25	49	8			21	9 PP
FAYETTEVILLE	130.16	39.0	18	57A	4						22	50
ROLLA	130.36	35.6									21	17 PP
SHAWINIGAN	131.17	13.7	19	0	5							
BREBEUF	131.94	15.0	18	59A	2							
C. GIRARDEAU	132.13	34.5									21	35 PP
LITTLE ROCK	132.15	39.1	18	51	-6						22	48 PKS
BLOOMINGTON	132.38	30.4									24	39
HALIFAX	134.62	5.9	19	28	26							
PENNSYLVANIA	134.86	21.6	19	32	30						22	29 SKP
MORGANTOWN	135.05	24.4	18	52A	-11						21	51 PKS
PALISADES	136.00	17.6									22	31 PP
WASHINGTON	136.82	22.2	19	32	26						22	35 PP
MBOUR	136.96	292.0									22	20 PP
COLUMBIA	139.18	30.1	19	30	20							
GALERAZAMBA	159.20	56.4									24	23 PP
HUANCAYO	159.21	123.7							20	8	25	10 PKP2
SAN JUAN	159.37	23.1	20	5	24						24	32 PP
LA PAZ	161.23	147.5	19	47	4						23	20 PKS
CHINCHINA	161.30	72.4	19	45	2							
BOGOTA	162.88	72.0									31	1 SKKS
CARACAS	165.64	39.2	20	8	21						25	10 PP
TRINIDAD	168.19	17.8	19	53	4							

SEPTEMBER 29 22.H 36.M 16.S EPICENTRE 28.33 88.05 DEPTH= 0.KM

A= 0.02993 B= 0.88103 C= 0.47212 D= 0.9994 E=-0.0340
G= 0.0160 H= 0.4718 K=-0.8815 HT= 2.4

SE= 3.19

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
CHATRA	1.69	207.9	0 37A	6	0 57	3		0 44 PP
LHASA	2.92	62.8						0 59 PG
SHILLONG	4.38	128.1	1 3	-7	1 49	-13		
HOWRAH	5.76	177.6	1 32	3				
CALCUTTA	5.79	177.1	1 32	3	2 31	-7		
TOCKLAI	6.17	103.2	1 35	0	2 32	-15		
CHITTAGONG	6.85	149.4	1 47K	2	2 54	-10		
DEHRA DUN	8.95	285.2	2 18	4	3 49	-8		4 1 SS
NEW DELHI	9.56	274.0	2 21A	-1	4 2	-10		2 37 PPP
SEHORE	11.14	245.0	2 41	-3	4 40	-11		4 52 SS
VISHAKHAPTNM	11.43	203.5	2 48	0	4 41	-17		4 56 SS
LAHORE	12.33	288.4	3 0	0	5 6	-13		
KUNMING	13.51	100.3	3 18	2	5 38	-10		
CHENGTU	14.09	76.7	3 23	0	5 49	-13		
WARSAK DAM	15.21	295.9	3 40	2				
POONA	16.27	236.2	3 48	-4	6 38	-15		
BOMBAY	16.81	239.3	3 51	-8				7 1
MADRAS	16.93	207.3	3 59	-1	6 54	-14		4 16 PPP
QUETTA	18.51	280.8	4 20	0	7 29	-15	4 42	
SIAN	18.77	66.5	4 19	-4				
ULAN-BATOR	24.42	31.7	5 26	5				
SHIRAZ	31.04	281.1	6 23A	1	11 18	-9	6 44	
CHANGCHUN	33.53	52.5	6 33	-11				
MATUSIRO	42.72	65.7	8 1	0				
KSARA	44.63	290.6	8 11	-5				8 42
JERUSALEM	45.49	287.9						8 47
HELWAN	49.15	286.3	9 4	12				
KAJAANI	51.99	331.0	9 14	1				
HELSINKI	52.53	325.8	9 18A	1				
NURMIJARVI	52.73	326.2	9 19A	0				
SODANKYLA	53.24	334.9	9 23	0				
KEVO	53.76	337.8	9 27	0				
NIEDZIKA	54.85	312.3	9 36	1				10 12
TROMSOE	56.48	336.9	9 47	1				
PRUHONICE	58.52	313.5	10 1	0				14 52
KASPERSKE H.	59.27	312.6	10 6	0				
COLLMBERG	59.32	315.1	10 4	-2				
HALLE	59.94	315.5	10 11	0				10 34
STUTTGART	62.12	312.8	10 26	1				
CHARTERS TS.	74.02	123.8	11 41	1				
COLLEGE	77.54	21.2	12 0	0				
CANBERRA	85.51	134.2	12 42	1				13 6

SEPTEMBER 30 13.H 13.M 14.S EPICENTRE 40.32 142.19 DEPTH= 73.KM

A=-0.60410 B= 0.46875 C= 0.64446 D= 0.6130 E= 0.7901
G=-0.5092 H= 0.3951 K=-0.7646 HT= -1.8

DEPTH OF FOCUS= 0.006R

SE= 4.06

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
HATINOHE	0.55	293.2	0 10K	-5	0 20	-7		
MIYAKO	0.69	194.4	0 8	-8	0 16	-13		
MORIOKA	1.00	232.2	0 14K	-5	0 27	-7		
AOMORI	1.19	295.6	0 21	-1	0 38	0		
MIZUSAWA	1.44	215.0	0 22	-3	0 39	-5		
AKITA	1.71	250.3	0 30	1	0 53	3		
HAKODATE	1.84	324.5	0 30K	0	0 55	2		
URAKAWA	1.89	13.4	0 32	1	0 57	3		
ISINOMAKI	2.00	200.0	0 39	7	0 52	-5		
HIROO	2.14	23.1	0 35	1	0 58	-2		
MORI	2.16	326.1	0 36	1				
MURORAN	2.20	335.9	0 35	0	1 2	0		
SENDAI	2.28	206.5	0 33	-3	1 1	-2		
SAKATA	2.31	233.0	0 35	-2	1 6	2		

TOMAKOMAI	2.36	349.0	0	41	4						
YAMAGATA	2.51	215.3	0	37A	-3	1	7	-2			
OBIHIRO	2.71	15.9	0	40	-2	1	20	6			
SAPPORO	2.82	347.4	0	47	3	1	21	4			
SUTTSU	2.89	330.0	0	52	7						
HUKUSIMA	2.89	208.2	0	43	-2	1	24	5			
KUSIRO	3.13	31.2	0	45	-3	1	19	-6			
NIIGATA	3.42	226.6	1	4	12	1	46	14			
ASAHIGAWA	3.46	2.2	0	55	2						
ONAHAMA	3.51	197.1	1	5	12	1	31	-3			
SHIRAKAWA	3.54	206.4	0	52	-2	1	34	-1			
RUMOE	3.66	353.5	0	57	1	1	41	3			
AIKAWA	3.83	234.4	1	0	2						
NEMURO	3.94	39.0	0	58	-1	1	37	-8			
MITO	4.16	199.5	0	57	-5						
UTUNOMIYA	4.18	206.6	1	0	-3	2	0	9			
KAKIOKA	4.38	201.8	1	1	-4	2	1	5			
TAKADA	4.45	225.1	1	5	-2						
MAEBASI	4.61	213.1	1	11	2	2	22	20			
TYOSI	4.71	193.4	1	21	11						
KUMAGAYA	4.71	208.9	1	6	-4	2	12	8			
NAGANO	4.80	222.0	1	11	0	2	37	31			
MATUSIRO	4.90	220.9	1	11A	-2	2	14	5			
OIWAKE	4.90	216.9	1	17	4						
TITIBU	4.97	210.5				2	6	-5			
TOKYO C.M.O.	5.01	203.4	1	12	-2	2	7	-5			
YOKOHAMA	5.27	203.2							2	36	
TOYAMA	5.32	228.9	1	12	-7						
KOHU	5.45	212.9	1	22	2	2	24	1			
HUNATU	5.52	210.4	1	43	22	2	26	2			
MISIMA	5.79	207.4	1	31	6						
AJIRO	5.80	206.0	1	20	-5	2	22	-9			
IIDA	5.90	217.1	1	39	12	2	41	7			
SHIZUOKA	6.12	210.6							2	14	
GIHU	6.52	222.8	1	27	-8						
OMAESAKI	6.52	210.2							3	8	
NAGOYA	6.59	220.5	1	33	-3				3	3	
ABUYAMA	7.56	226.1	1	47A	-3						
COLLEGE	46.01	33.9	8	18	0						
CHATRA	47.08	271.0	8	26K	0						
NEW DELHI	53.77	278.9	9	15A	-2						
WARSAK DAM	55.30	287.6	9	28	0						
ALERT	56.82	3.8	9	38K	-1						
RESOLUTE	59.28	15.0	9	54	-2						
QUETTA	60.59	286.0	10	5	0						
SODANKYLA	62.19	336.8	10	15	-1						
KAJAANI	63.92	333.6	10	26	-1						
NURMIJARVI	67.35	331.6	10	48	-1						
EUREKA	73.34	52.2	11	26	1						
WOODY	73.88	56.8	11	27	-2						
FLAMING GRGE	76.26	47.7	11	42	0						12 35
RAPID CITY	77.45	42.2	12	2	13						
COLLMBERG	78.56	330.2	11	55	0						12 20
KASPERSKE H.	80.07	328.6	12	4	1						
LJUBLJANA	82.12	326.2	12	14	0						

The scanned images of the bulletins of the International Seismological Summary (ISS) have been obtained thanks to funding provided by the US National Science Foundation through grant EAR-9725140 (Villaseñor et al., 1997) and collected by SGA Storia Geofisica Ambiente (Bologna) on behalf of the Istituto Nazionale di Geofisica e Vulcanologia (Rome), in the frame of the EUROSEISMOS project.

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A digital hypocenter file of the ISS (Villaseñor and Engdahl, 2005) can be obtained from the USGS web site: http://earthquake.usgs.gov/scitech/iss/

Villaseñor, A., and E.R. Engdahl, *A digital hypocenter catalog for the International Seismological Summary,* Seism. Res. Lett., vol. 76, no. 5, pp. 554-559, 2005.

Villaseñor, A., E.A. Bergman, T.M. Boyd, E.R. Engdahl, D.W. Frazier, M.M. Harden, J.L. Orth, R.L. Parkes, and K.M. Shedlock*, Toward a comprehensive catalog of global historical seismicity,* Eos Trans. AGU, vol. 78, no. 50, pp. 581, 583, 588, 1997.