The International Seismological Summary

1957 APRIL, MAY, JUNE

The 1957 number of the Summary includes a few modifications to the presentation due to the output format of the electronic computer and card-controlled typewriter.

No lower case letters are available so the letterpress is uniformly in capitals. Phases pP, sP, sS when available are therefore designated by *PP, *SP, *SS; the asterisk implying that the first letter of the pair is equivalent to lower case. An additional column is provided and used exclusively for the phase pP. Surface waves are no longer included in a separate column. Residuals are by comparison with the Jeffreys-Bullen tables; P is used up to 105°, PKP from 110°, S up to 106° and SKS from 106°. For P and PKP beyond the scope of the tables the dummy figure of 777 is placed to complete the residual column. The quantity called SE at the head of each earthquake is the standard error of the computed P residuals.

KEW OBSERVATORY
November 1963

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.

APRIL 1 11.H 35.M 31.S EPICENTRE 50.66-173.12 DEPTH= 0.KM

A=-0.63183 B=-0.07627 C= 0.77134 D=-0.1198 E= 0.9928
G=-0.7658 H=-0.0924 K=-0.6364 HT= -5.7

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
PETROPAVLOVK	17.55	289.0	4 8	2	7 20	0		
COLLEGE	19.41	33.3	4 24	-5	8 56	55		5 36
SITKA	22.96	59.2	5 7	2				5 44
HORSESHOE B.	31.56	72.6	6 23A	-1				
VICTORIA	31.80	74.2	6 26A	-1				
SEATTLE	32.84	75.1	6 39	3				
TIKSI	33.02	330.4	6 39	2				
CORVALLIS	33.59	80.7	6 43	1				
BANFF	35.50	66.2	6 55K	-3				9 25 PCP
SHASTA	36.16	85.9	7 5	1				
TUKUBASAN	36.28	264.9	7 5	0				
MINERAL	36.86	85.8	7 10K	0				
MATUSIRO	37.27	266.9	7 14	1	13 2	2		
HUNGRY HORSE	37.56	69.9	7 5	-11				9 34 PCP
VLADIVOSTOK	37.56	280.3	7 15	-1				
BERKELEY	37.86	89.7			13 13	4		
RENO	38.45	85.7	7 25	2				
LICK	38.58	89.9	7 26A	2				
RESOLUTE	38.91	24.5	7 27	0	13 6	-19		9 38 PCP
BUTTE	39.53	72.4	7 32	0				9 39 PCP
FRESNO	40.09	89.2	7 38	1				
SASKATOON	40.19	61.1			13 45	1		
BOZEMAN	40.62	72.1	7 42	1				
TINEMAHA	40.91	87.6	7 47	3				9 46 PCP
EUREKA	40.92	83.1	7 44	0				
KING RANCH	41.02	90.9	7 45	0				9 47 PCP
CHANGCHUN	41.28	285.2	7 49	2				
WOODY	41.35	89.7	7 48A	1				9 45 PCP
CHINA LAKE	42.08	88.6	7 53	0				9 48 PCP
PASADENA	42.77	91.0	7 59	0	14 29	7		9 51 PCP
SALT LAKE C.	42.77	78.8	7 59	0				
RIVERSIDE	43.37	90.6	8 4	0				9 51 PCP
BOULDER CITY	43.74	86.4	8 7	0				
PALOMAR	44.11	90.9	8 10	0				8 26
HAYFIELD	44.66	89.5	8 16	2				8 28
BARRETT	44.67	91.4	8 14	0				8 29
RAPID CITY	46.19	69.7	8 26	0				
TUCSON	48.67	87.4	8 45	-1	16 5	18		11 11
IRKUTSK	48.77	305.9	8 45	-2				
PEKING	49.04	286.3	8 48	-1	15 55	3		
ZO-SE	51.60	274.0	9 8	0	16 32	5		
LUBBOCK	53.47	79.7	9 23	1				
CHIHUAHUA	54.13	87.3						10 21 PCP
FAYETTEVILLE	56.54	72.3	9 42K	-3				
KIRKLAND LA.	56.63	53.2	9 45A	0				
CLEVELAND	60.28	59.9	10 8	-3	17 53	-30		
OTTAWA	60.68	53.3	10 11K	-2				
SODANKYLA	61.35	351.4	10 16	-2				10 30
SHAWINIGAN	61.36	50.7	10 17	-1				
KIRUNA	61.39	354.2	10 16	-2	18 37	0	10 30	
GUADALAJARA	61.54	91.7						13 49 PPP
SEMIPALATNSK	61.57	315.8	10 17	-2	18 37	-2		
SEVEN FALLS	61.90	49.2			18 38	-5		
MANZANILLO	62.09	93.7						12 57 PP
HONG KONG	62.22	271.8	10 25A	1	18 29	-18		
CANTON	62.22	273.1	10 25	1	18 54	7		
RABAUL	62.25	219.9	10 20	-4				
MORGANTOWN	62.43	60.4	10 23A	-2				
BAGUIO CITY	62.47	262.3	10 24	-1				
MANILA	63.61	260.6	10 28	-5				
SVERDLOVSK	64.06	330.5	10 34	-2	19 28	18		
PALISADES	64.71	55.7	10 38	-2	19 12	-6		19 36 PPS
WESTON	65.06	53.1	10 40K	-2				
TACUBAYA	65.10	89.5	10 44	1	19 15	-8		14 51 PPP
COLUMBIA	65.79	65.5	10 46	-1				
SKALSTUGAN	66.02	357.4	10 47	-2				
HALIFAX	67.16	46.9	10 53K	-3				
VERA CRUZ	67.20	87.3						13 5 PP
PULKOVO	68.29	347.5	11 5	2				

HELSINKI	68.56	350.4	11	4	0						11	36 PCP
UPPSALA	69.50	354.2	11	8	-2	20	12	-4	11	23		
FRUNSE	69.79	313.6	11	12	0							
MOSCOW	70.93	342.2	11	19	0							
NAMANGAN	72.62	314.1	11	28	-1							
SHILLONG	73.69	290.4	11	36	1							
COPENHAGEN	73.92	356.7	11	38A	1	21	9	2			11	49 PCP
CHATRA	75.50	294.5	11	46	0						13	32 PP
RATHFARNHAM	75.82	8.1	11	59A	11				12	22		
HAMBURG	76.11	358.1	11	52	3						12	11
WARSAW	76.79	351.1	11	54A	1	21	33	-5			12	5
WITTEVEEN	76.89	0.1	11	56	2							
POTSDAM	77.20	356.1	11	57	2	21	45	2				
DE BILT	77.60	1.1	12	0A	2	21	49	2				
DEHRA DUN	77.89	303.2	12	1	2	21	50	0				
KEW	78.06	4.6	12	1	1	21	52	0				
JENA	78.71	357.0	12	3	-1	21	59	0			12	16 PCP
LAHORE	78.86	306.5	12	3	-2							
KRAKOW	79.05	351.5	12	5	-1	22	1	-2				
PRAGUE	79.44	355.1	12	9	1	22	4	-3			12	23 PCP
KARLSRUHE	80.70	359.0	12	16A	2	22	23	3				
PARIS	80.84	2.9	12	16	1						12	30
KISHINEV	80.87	345.0	12	14	-1	22	19	-3				
IASI	80.90	345.9	12	16	1							
STUTTGART	80.93	358.4	12	15	-1	22	24	2			12	30 PCP
STRASBOURG	81.13	359.4	12	17	0	22	27	2			23	23 PS
EBINGEN	81.52	358.6	12	18	-1						12	33
SIMFEROPOL	81.88	340.8	12	21	0	22	33	1				
SOTCHI	81.88	336.5	12	20	-1	22	31	-1				
BASLE	82.19	359.5	12	13	-9	22	37	2				
TIFLIS	82.21	332.3	12	22	0	22	36	0				
BESANCON	82.46	0.6	12	50	26						14	9
NEUCHATEL	82.72	360.0	12	25	0	22	42	1			17	53
QUETTA	83.64	311.0	12	29K	-1	22	52	2	12	39	15	42 PP
BUCHAREST	83.84	346.3	12	32A	1	22	58	6			14	38
TRIESTE	83.88	355.2	12	31A	0	22	48	-4			23	47 PS
CLERMONT-FD.	83.89	2.6	12	30A	-1	22	55	2				
OROPA	84.09	359.2	12	37	5	22	59	4				
BELGRADE	84.17	350.3	12	34K	2	22	55	0			12	50
PAVIA	84.52	358.4	12	36	2	23	3	4			23	54
FLORENCE X.	85.86	356.8	12	39A	-2	23	15	3			24	6 PS
MONACO	85.99	359.6	12	42A	1						13	7
ROME	87.69	355.8	12	50A	0	23	30	1			16	20 PP
TOLEDO	89.33	8.4	12	58A	1	23	50	5				
POONA	89.58	299.2	12	59	0							
BOMBAY	89.85	300.2	13	2	2	23	51	2				
MESSINA	91.18	353.2	13	16	10	23	58	-3			16	41 PP
GRANADA	92.04	8.4	13	10A	0						19	45
KSARA	92.07	336.2	13	4	-6	24	8	-1			16	38 PP
MALAGA	92.42	9.1	13	15A	3							
TAMANRASSET	106.87	1.3	14	18	777						18	33 PP
LA PAZ	112.06	89.3	18	59	24						19	35 PP
LWIRO	128.32	331.6	19	10	3							
PRETORIA	150.23	318.7	19	50	4							
KIMBERLEY	154.27	321.6	20	0	9							

APRIL 2 0.H 39.M 45.S EPICENTRE 51.11-173.02 DEPTH= 0.KM

A=-0.62565 B=-0.07664 C= 0.77633 D=-0.1216 E= 0.9926
G=-0.7706 H=-0.0944 K=-0.6303 HT= -5.8

SE= 2.25

	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	19.00	34.0	4	21	-2	7	42	-10			4	52 PP
SITKA	22.67	60.1	5	19	17	9	24	19			5	49
HORSESHOE B.	31.37	73.4	6	23K	1							
SEATTLE	32.67	75.8	6	37	4							
CORVALLIS	33.46	81.4	6	43	3							
BANFF	35.26	66.9	6	55	-1							
SHASTA	36.07	86.6	7	3	0							
TUKUBASAN	36.38	264.4	7	2	-3							
MINERAL	36.76	86.5	7	9	0							
HUNGRY HORSE	37.34	70.5	7	14	1	13	9	9				
MATUSIRO	37.36	266.4	7	11	-3	13	4	4				
VLADIVOSTOK	37.54	279.8	7	14	-1	13	4	1				

BERKELEY	37.80	90.3	7 10	-7						
RENO	38.36	86.3	7 23	1						
RESOLUTE	38.47	24.7	7 23A	0					8 50	PP
BUTTE	39.33	73.0	7 27	-3	14	9	39		8 23	
FRESNO	40.02	89.8	7 37	1						
BOZEMAN	40.43	72.6	7 39	0						
EUREKA	40.80	83.6	7 43	1	13	7	-45			
TINEMAHA	40.83	88.2	7 45	3						
CHANGCHUN	41.22	284.8	7 43	-3	14	1	2			
WOODY	41.29	90.3	7 46	0						
CHINA LAKE	42.00	89.2	7 53	1					9 48	PP
SALT LAKE C.	42.62	79.3	7 57	0						
PASADENA	42.71	91.6	7 58	0						
RIVERSIDE	43.31	91.1	8 1	-2						
BOULDER CITY	43.65	86.9	8 6	0						
PALOMAR	44.06	91.4	8 8	-1					10 2	PP
HAYFIELD	44.60	90.0	8 13	0						
BARRETT	44.62	92.0	8 14	1						
RAPID CITY	45.98	70.2	8 24	0						
IRKUTSK	48.55	305.6	8 43	-1						
TUCSON	48.59	87.9	8 45	0	15	53	8			
TATUNG	50.67	287.9	9 5	4						
ZO-SE	51.64	273.7	9 7	-1	16	31	4			
PAOTOW	52.31	290.3	9 15	2						
LUBBOCK	53.33	80.1	9 19	-2						
KIRKLAND LA.	56.31	53.5	9 42	0						
FAYETTEVILLE	56.34	72.7	9 41	-2						
SCORESBY SD.	56.93	11.2	9 58	11						
SCHEFFERVLLE	57.96	40.9	9 53A	-1						
WUWEI	58.38	292.5	9 58	1						
CLEVELAND	60.00	60.2	10 6	-2	17	37	-41			
OTTAWA	60.36	53.5	10 9A	-2	18	29	6			
SODANKYLA	60.91	351.4	10 12	-2					10 26	
KIRUNA	60.95	354.2	10 12	-3				10 26		
SHAWINIGAN	61.03	50.9	10 13A	-2						
SEMIPALATNSK	61.29	315.7	10 15	-2	13	35	-300			
PITTSBURGH	61.58	60.1							10 16	
MORGANTOWN	62.15	60.7	10 21A	-2						
CANTON	62.26	272.9	10 22	-1	18	50	3			
HONG KONG	62.27	271.6	10 21	-2						
PENNSYLVANIA	62.46	58.5	10 25	0						
BAGUIO CITY	62.60	262.2	10 30	4						
SVERDLOVSK	63.70	330.4	10 32	-1						
MANILA	63.74	260.5	10 46	13	14	0	-306			
PALISADES	64.41	55.9	10 36	-2	19	26	12	10 50	19 58	PS
C.C.N.Y.	64.52	56.1	10 44	6	19	26	11			
FORDHAM	64.54	56.1	10 37	-1	19	28	12			
WESTON	64.74	53.3	10 39A	-1						
TACUBAYA	65.03	89.8	10 42	0	19	11	-11			
COLUMBIA	65.55	65.8	10 44	-1						
SKALSTUGAN	65.57	357.4	10 43	-2				10 53		
HALIFAX	66.81	47.1	10 51K	-2	19	46	3		11 4	PCP
PULKOVO	67.87	347.5	10 59	-1						
HELSINKI	68.12	350.4	10 59	-2					11 26	PCP
UPPSALA	69.06	354.3	11 6A	-1				11 19	39 6	PKPPKP
FRUNSE	69.53	313.5	11 8	-2	20	15	-1			
MOSCOW	70.52	342.2	11 15	-1	20	25	-2			
NAMANGAN	72.36	314.1	11 26	-1	20	52	3			
COPENHAGEN	73.48	356.8	11 35A	1					11 47	PCP
SHILLONG	73.59	290.3	11 31	-3	21	3	0			
RATHFARNHAM	75.36	8.2	11 43A	-1				11 56		
CHATRA	75.37	294.5							11 43	
HAMBURG	75.66	358.2	11 49A	3					13 7	
BERMUDA	75.76	56.0	11 51	4	21	22	-5		25 57	SS
WARSAW	76.35	351.2	11 51	1						
WITTEVEEN	76.44	0.2	11 52	1						
POTSDAM	76.75	356.2	11 53	1	21	42	4			
DE BILT	77.15	1.1	11 57A	2	21	45	3			
KEW	77.60	4.7	11 58	1	21	48	1			
DEHRA DUN	77.70	303.2	11 57	-1	21	49	1			
JENA	78.26	357.0	12 1	0	21	58	4		14 35	PP
LWOW	78.39	348.8	12 2	1	21	58	3			
KRAKOW	78.61	351.5	12 1	-2	21	57	-1			
LAHORE	78.64	306.5	12 0	-3	21	59	1			
RACIBORZ	78.73	352.7	12 4	1						
PRAGUE	78.99	355.1	12 6K	1	21	56	-6		12 19	
CHEB	79.08	356.5	12 5	0					12 37	
JERSEY	79.78	6.0	12 11	2						

KARLSRUHE	80.25	359.0	12	14A	3	22	23	8			12	27
PARIS	80.38	3.0	12	14K	2						15	15 PP
KISHINEV	80.45	345.0	12	12	-1	22	14	-3				
IASI	80.48	345.9	12	14	1						12	22
STUTTGART	80.48	358.5	12	12	-1	22	23	6			12	25 PCP
STRASBOURG	80.68	359.5	12	14A	0	22	27	8			27	45 SS
TUBINGEN	80.72	358.6	12	14	0						12	28 PCP
EBINGEN	81.07	358.7	12	16	0						12	28 PCP
SIMFEROPOL	81.47	340.9	12	19	1	22	33	6				
SOTCHI	81.49	336.6	12	18	0	22	29	1				
FOCSANI	82.00	345.8	12	31	10							
BESANCON	82.01	0.7	12	50	29						13	22
NEUCHATEL	82.27	0.0	12	23	1	22	42	6				
CAMPULUNG	82.73	347.3	12	19	-5							
QUETTA	83.39	311.0	12	27	-1	22	51	4	12	41	15	39 PP
BUCHAREST	83.41	346.3	12	28	0	22	54	7				
CLERMONT-FD.	83.44	2.7	12	28	0							
TRIESTE	83.44	355.2	12	28	0	22	48	1			23	49 PS
BELGRADE	83.74	350.4	12	31A	1	22	55	5			23	15 SKS
PAVIA	84.07	358.4	12	32	1							
FLORENCE X.	85.41	356.9	12	37K	-1	23	13	6	12	50	13	19
MONACO	85.54	359.7	12	40	1							
SAN JUAN	86.02	65.6	12	39	-2							
KARACHI	86.97	308.6	12	54	8							
ROME	87.24	355.9	12	48K	1	23	33	8	13	1	23	18 SKS
POONA	89.41	299.2	12	57	0	23	53	7				
BOMBAY	89.68	300.3									13	28
ALICANTE	90.67	5.9	13	3	0	23	58	2				
MESSINA	90.74	353.3	13	1	-2						16	37 PP
GRANADA	91.59	8.4	13	6K	-1	22	57	-67			17	12 PP
KSARA	91.68	336.3	13	11K	3	24	11	6			16	44 PP
MALAGA	91.97	9.1	13	13K	4							
ALGIERS UNI.	92.42	3.2	12	57	-14						13	12
TAMANRASSET	106.42	1.4	14	3	777						18	21 PP
MBOUR	111.51	25.0				25	17	3			19	16 PP
LA PAZ	111.99	89.2	18	38	4						19	25 PP
LWIRO	127.95	331.9	19	8A	3							
PRETORIA	149.93	319.4	19	48K	3							
PIETERMZBURG	152.30	311.9	19	54	6						20	7
KIMBERLEY	153.96	322.3	19	58	8							

APRIL 2 8.H 33.M 13.S EPICENTRE 30.07 137.22 DEPTH= 520.KM

DEPTH OF FOCUS= 0.077R

A=-0.63634 B= 0.58874 C= 0.49846 D= 0.6791 E= 0.7340
G=-0.3659 H= 0.3385 K=-0.8669 HT= 1.8

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
SIOMISAKI	3.59	340.2	1	14	-3	2	14	-5				
HATIDYOZIMA	3.75	35.6	1	23	4	2	24	3				
SIMIDU	4.53	307.7	1	25	0	2	32	0				
TOKUSIMA	4.58	331.3				2	33	0				
OMAESAKI	4.60	10.3	1	28	3	2	35	2				
KOTI	4.69	318.8	1	32	6	2	36	2				
OSAKA	4.79	343.0	1	30	3	2	38	2				
KOBE	4.92	339.9				2	40	2				
SHIZUOKA	4.99	11.2	1	30	1	2	38	-1				
TAKAMATU	5.02	328.4	1	30	1	2	43	3				
OSIMA	5.03	20.7	1	27	-2	2	35	-5				
NAGOYA	5.09	357.6	1	31	1	2	42	1				
KYOTO	5.10	346.1	1	29	-1	2	39	-2				
AJIRO	5.22	17.2	1	24	-7	2	36	-7				
MISIMA	5.25	15.7	1	31	0	2	38	-5				
HIKONE	5.25	351.3	1	32	1	2	39	-4				
MIYAZAKI	5.32	291.8	1	33	1						1	48
MERA	5.32	23.8	2	8	36							
GIHU	5.33	356.0	1	32	0	2	43	-2				
MATUYAMA	5.34	315.8	1	31	-1	2	45	0				
IIDA	5.46	5.2	1	36	3	2	47	0				
HUNATU	5.57	13.1	1	30	-4	2	47	-2				
TSURUGA	5.65	350.4	1	36	1	2	30	-20				
KOHU	5.66	11.2	1	34	-1	2	51	1				
OOITA	5.73	304.9	1	38	2	2	55	4				

YOKOHAMA	5.73	20.3	1	27	-9	2	47	-4				
HIROSIMA	5.91	317.8	1	37	0	2	54	0				
KAGOSIMA	5.93	286.3	1	38	1	2	59	4				
TOKYO C.M.O.	5.99	20.1	1	36	-2	2	50	-6				
HUKUI	6.02	352.6				2	58	2				
TAKAYAMA	6.07	0.2				2	47	-10				
TITIBU	6.10	14.3				2	55	-3				
MATUMOTO	6.20	5.6	1	41	1	2	57	-2				
KUMAMOTO	6.21	297.9	1	41	1	3	1	1				
KUMAGAYA	6.33	16.0	1	41	0	2	58	-4				
OIWAKE	6.35	9.7	1	42	1	2	56	-6				
TYOSI	6.41	27.4				2	57	-6				
KANAZAWA	6.47	355.9	2	42	59							
HAMADA	6.50	319.2				3	5	0				
MAEBASI	6.50	13.3	1	41	-2	3	0	-5				
MATUSIRO	6.52	7.1	1	41K	-2	3	1	-4				
TUKUBASAN	6.59	20.7	1	39	-5	2	59	-7				
TOYAMA	6.62	359.8	1	49	5	3	5	-2				
KAKIOKA	6.63	21.2	1	42	-2	3	1	-6				
NAGANO	6.64	6.8	1	45	1	3	4	-3				
SAGA	6.70	300.0	1	46	1						3	41
HUKUOKA	6.77	302.9	1	45	-1	3	6	-3				
NAGASAKI	6.82	294.8	1	47	1	3	13	3				
UTUNOMIYA	6.84	18.2	1	43	-3	3	2	-8				
MITO	6.86	22.5				3	4	-7				
SHIRAKAWA	7.47	18.7	1	52	0	3	14	-8				
ONAHAMA	7.52	23.1				3	16	-7			2	41
HUKUSIMA	8.12	18.5	1	59	0	3	29	-5				
YAMAGATA	8.56	16.8				3	14	-28				
SENDAI	8.73	19.4	2	2	-3	3	37	-8				
ISINOMAKI	9.00	21.0	2	7	-1	3	46	-4				
MIZUSAWA	9.60	18.5	2	38	24	4	0	-2				
MORIOKA	10.14	17.5	2	19	-1	4	12	0				
MIYAKO	10.32	20.9	2	22	0	4	14	-1				
HATINOHE	11.02	17.4	2	30	1	4	27	-2				
AOMORI	11.11	14.1	2	31	1	4	31	1				
HAKODATE	12.03	12.6	2	39	0	4	51	3				
MORI	12.31	11.8	2	45	3	4	54	1			3	4
MURORAN	12.61	12.8	2	45	0							
URAKAWA	12.86	18.9	2	49	1	5	5	2				
TOMAKOMAI	12.91	14.5	2	56	7	5	5	1				
SAPPORO	13.39	13.2	2	53	-1	5	15	2				
VLADIVOSTOK	13.71	343.3	2	55	-2							
KUSIRO	14.11	22.1	3	2	1	5	32	5				
NEMURO	14.83	24.5	3	6	-2	5	47	7				
BAGUIO CITY	20.42	232.0	4	0	-2	7	25	8				
MANILA	21.48	227.7	4	11	-1	7	29	-6				
HONG KONG	22.06	254.9				7	55	11				
IRKUTSK	32.81	322.0	5	51	0	10	33	1				
SHILLONG	40.17	275.0	6	50	-2							
CHATRA	43.85	278.6	7	21	0						8	57
SEMIPALATNSK	46.73	312.5	7	42	-1	13	51	-4				
FRUNSE	50.89	302.7	8	14	0	14	51	-1				
NAMANGAN	53.33	300.8	8	32	0	15	22	-2				
COLLEGE	56.85	29.5	8	55	-2							
SVERDLOVSK	58.21	321.0	9	4	-2							
POONA	58.26	274.2	9	7	1							
BRISBANE	59.18	163.6	9	12	0							
QUETTA	59.82	289.5	9	17	0	16	47	-1				
KARACHI	61.26	284.8	9	28	2							
MELBOURNE	67.93	173.4	10	4	-4							
SODANKYLA	70.03	337.3	10	19	-2							
RESOLUTE	70.18	12.9	10	21A	0							
KIRUNA	71.77	339.1	10	29	-2							
HORSESHOE B.	73.51	42.2	10	41K	0							
VICTORIA	73.82	43.1	10	43	1							
HELSINKI	74.48	331.3	10	42	-4						10	54 PCP
SOTCHI	74.92	311.7	10	48	-1						19	26
CORVALLIS	75.72	46.7	10	56A	3							
BANFF	76.96	38.1	11	0A	0							
SKALSTUGAN	77.08	337.9	10	59	-1							
UPPSALA	77.63	333.3	11	1A	-2	20	8	-4			11	23
SHASTA	78.17	49.8	11	6A	0							
SCORESBY SD.	78.63	353.0	11	9	0							
MINERAL	78.87	49.8	11	10K	0							
HUNGRY HORSE	79.31	40.0	11	14	2	20	33	3	13	5		
BERKELEY	79.66	52.3	11	15A	1							
LICK	80.35	52.5	11	19	1							
RENO	80.47	49.8	11	21	3							

LWOW	80.87	322.9	11	33	13						
BUTTE	81.44	41.4	11	24	1				13	16	
FRESNO	81.91	52.2	11	28	2						
COPENHAGEN	82.49	332.0	11	28A	-1						
BOZEMAN	82.51	41.1	11	30	1				13	21	
KRAKOW	82.83	324.7	11	30	0	21	30	25			14 39
EUREKA	83.01	48.3	11	32	1				13	24	
WOODY	83.11	52.7	11	31	-1						11 46
JERUSALEM	83.82	303.1	11	37A	2						
CHINA LAKE	83.92	52.1	11	38	2						
PASADENA	84.42	53.7	11	39	1						
RIVERSIDE	85.06	53.5	11	41	0						
BOULDER CITY	85.70	50.7	11	47	3						
BARRETT	86.27	54.3	11	47	0						
RAPID CITY	87.87	38.8	11	56	1	21	56	4	13	51	15 27 PP
STUTTGART	88.83	328.6	11	58	-1						
STRASBOURG	89.61	329.2	12	1	-2						
TUCSON	90.56	51.8	12	9	2						
PARIS	91.68	332.0	12	12	0						
TAMANRASSET	109.90	312.9									17 51
HUANCAYO	144.91	66.3	18	42	4						21 29 *SPKP

APRIL 2 20.H 16.M 59.S EPICENTRE 51.04-173.01 DEPTH= 0.KM

A=-0.62661 B=-0.07681 C= 0.77553 D=-0.1217 E= 0.9926
G=-0.7698 H=-0.0944 K=-0.6313 HT= -5.8

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
PETROPAVLOVK	17.49	287.9	4	2	-3							
COLLEGE	19.05	33.8	4	21	-3	8	2	9			4	42 PP
SITKA	22.71	59.9	5	8	6							
HORSESHOE B.	31.39	73.2	6	23	0							
VICTORIA	31.64	74.8	6	24	-1							
SEATTLE	32.68	75.7	7	1	27							
TIKSI	32.73	330.1	6	33	-1							
CORVALLIS	33.47	81.3	6	41	0							
BANFF	35.29	66.8	6	56	0							
SHASTA	36.07	86.5	7	4	1							
TUKUBASAN	36.38	264.5	7	4	-2							
MINERAL	36.77	86.4	7	10K	1							
MATUSIRO	37.35	266.5	7	12	-2	12	54	-7			8	35
HUNGRY HORSE	37.37	70.4	7	13	-1						9	33 PCP
VLADIVOSTOK	37.56	279.9	7	17	1							
BERKELEY	37.80	90.2	7	19	1							
RENO	38.36	86.2	7	25	3							
LICK	38.51	90.4	7	20	-4							
RESOLUTE	38.54	24.7	7	24	0	13	8	-11			9	18 PPP
BUTTE	39.35	72.9	7	32	1							
FRESNO	40.02	89.7	7	39	3							
BOZEMAN	40.45	72.6	7	39	-1							
EUREKA	40.81	83.6	7	43	0							
TINEMAHA	40.83	88.2	7	46	3							
KING RANCH	40.96	91.4	7	45	1							
CHANGCHUN	41.24	284.9	7	47	1	13	40	-19				
WOODY	41.28	90.3	7	47	1						8	0
CHINA LAKE	42.00	89.1	7	53	1						9	48
SALT LAKE C.	42.63	79.2	7	57	-1							
PASADENA	42.71	91.5	7	58	0	15	0	39			8	17
RIVERSIDE	43.32	91.5	8	3	0						8	36
BOULDER CITY	43.65	86.9	8	5	-1							
HAYFIELD	44.60	90.0	8	14	1						8	31
BARRETT	44.62	91.9	8	13	-1						8	56
RAPID CITY	46.00	70.1	8	25	0							
TUCSON	48.59	87.8	8	46	1						11	19
IRKUTSK	48.60	305.7	8	44	-1							
PEKING	49.00	286.1	8	48	0	15	43	-8				
TATUNG	50.70	287.9	9	5	4							
ZO-SE	51.65	273.8	9	10	2	16	31	4			19	3 SS
NANKING	52.50	276.4	9	15	0	16	40	1				
LUBBOCK	53.34	80.1	9	20	-1							
KIRKLAND LA.	56.35	53.5	9	42	-1							
FAYETTEVILLE	56.36	72.6	9	42K	-1							
SCORESBY SD.	57.00	11.2	9	46	-2	17	41	1				

SCHEFFERVLLE	58.01	40.9	9	54A	-1						
APATITY	60.07	348.6	10	7	-2	18	20	0			
OTTAWA	60.40	53.5	10	10A	-1						
SODANKYLA	60.99	351.4	10	13	-2					10	59 PCP
KIRUNA	61.02	354.2	10	13	-2	18	37	5	10 25		
SHAWINIGAN	61.07	50.9	10	14K	-2						
SEMIPALATNSK	61.34	315.7	10	17	-1	18	35	-1			
GUADALAJARA	61.48	92.0								16	41
PITTSBURGH	61.62	60.0	10	16	-3						
MORGANTOWN	62.18	60.7	10	21	-2						
CANTON	62.27	273.0	10	25	1	18	52	4			
HONG KONG	62.27	271.7				18	54	6			
RABAUL	62.58	219.9	10	21	-5						
BAGUIO CITY	62.59	262.2	10	43	17						
MANILA	63.73	260.5	10	28	-5	19	14	8			
SVERDLOVSK	63.76	330.4	10	35	1	19	11	5			
PALISADES	64.45	55.9	10	39	1	19	26	11		11	8 PCP
HARVARD	64.57	53.4	10	38	-1						
WESTON	64.78	53.3	10	39A	-1						
TACUBAYA	65.03	89.7	10	46	4						
COLUMBIA	65.57	65.8	10	45	0						
SKALSTUGAN	65.65	357.4	10	44	-2						
HALIFAX	66.86	47.1	10	53	-1						
PULKOVO	67.94	347.5	11	0	0	19	54	-3			
HELSINKI	68.20	350.4	11	0	-2						
UPPSALA	69.13	354.3	11	5	-3				11 18	20	40
FRUNSE	69.58	313.5	11	9	-1	20	18	1			
MOSCOW	70.59	342.2	11	16	-1	20	25	-4			
ABERDEEN	71.89	5.2								36	26
NAMANGAN	72.41	314.1	11	26	-2						
COPENHAGEN	73.55	356.8	11	35	1	21	10	8		21	49 SCS
SHILLONG	73.62	290.3	11	35	0	21	3	0			
RATHFARNHAM	75.43	8.2	11	43	-2				11 55		
HAMBURG	75.73	358.2	11	50	3					12	3
BERMUDA	75.80	55.9	11	46	-1	21	37	10		26	26 SS
WARSAW	76.42	351.2	11	50	-1	21	37	3			
WITTEVEEN	76.51	0.2	11	53	2						
POTSDAM	76.83	356.2	11	53	0	21	45	6			
DE BILT	77.22	1.1	11	57	2					22	36 PS
KEW	77.68	4.7	11	58	0						
DEHRA DUN	77.74	303.2	12	7	9	21	48	-1			
JENA	78.33	357.0	12	1	0	21	58	3			
LWOW	78.46	348.8	12	2	0	21	58	2			
BOKARO	78.50	293.5								22	0
KRAKOW	78.68	351.5	12	7	4	21	54	-5			
LAHORE	78.69	306.5	12	1	-2	22	2	3			
RACIBORZ	78.80	352.7	12	7	3						
PRAGUE	79.07	355.1	12	8A	3	22	10	7		13	21
MAKHACH-KALA	79.96	331.0	12	12	2	22	10	-2			
KARLSRUHE	80.32	359.1	12	13A	1						
PARIS	80.45	3.0	12	15	2	22	19	2		22	39 SCS
KISHINEV	80.52	345.0	12	14	1	22	25	7			
IASI	80.55	345.9	12	16	3						
STUTTGART	80.55	358.5	12	12	-1	22	24	6		22	56 PS
STRASBOURG	80.76	359.5	12	15A	1	22	25	5		23	2 PS
BRATISLAVA	80.79	353.2	12	17	2	22	28	7		12	33
TUBINGEN	80.79	358.6	12	15	0						
EBINGEN	81.14	358.7	12	16	0						
SIMFEROPOL	81.54	340.9	12	19	0	22	30	2			
SOTCHI	81.56	336.6	12	19	0	22	31	2			
BASLE	81.81	359.6	12	21	1						
BESANCON	82.09	0.7	12	43	22					13	4
NEUCHATEL	82.34	0.0	12	22	-1	22	11	-26			
QUETTA	83.44	311.0	12	27K	-1	22	47	-1		15	40 PP
BUCHAREST	83.48	346.3	12	31	2	22	54	6			
CLERMONT-FD.	83.51	2.7	12	28	-1	22	57	9			
TRIESTE	83.51	355.2	12	28	-1	22	43	-5		23	43 PS
BELGRADE	83.81	350.4	12	33A	3	23	0	9			
PAVIA	84.14	358.4	12	23K	-9						
FLORENCE X.	85.49	356.9	12	38A	-1	23	14	6		13	17
MONACO	85.61	359.7	12	40K	1						
ROME	87.31	355.9	12	49A	1	23	31	6		24	41 PS
TARANTO	88.43	352.2								32	28
POONA	89.45	299.2	12	57	-1					23	49
BOMBAY	89.71	300.3	13	2	3	23	50	2			
RIVERVIEW	90.21	209.2				23	36	-16			
ALICANTE	90.74	5.9	13	1	-3	23	52	-5			
MESSINA	90.82	353.3	13	0	-4	23	53	-5		16	37 PP
GRANADA	91.66	8.4	13	13A	5						

KSARA	91.75	336.3	13	11	3	24	11	5			16 48 PP
MALAGA	92.04	9.1	12	42A	-28						
ALGIERS UNI.	92.49	3.2	13	11	-1	24	11	-1			
JERUSALEM	93.86	336.2	13	20	2						
TAMANRASSET	106.49	1.4									18 7 PP
MBOUR	111.57	25.0	14	57	-217						
LWIRO	128.02	331.9	19	8	2						20 19
PRETORIA	149.99	319.3	19	19	-26						
PIETERMZBURG	152.35	311.8									19 56 PKP2
KIMBERLEY	154.02	322.2	19	59	8						

APRIL 2 21.H 27.M 56.S EPICENTRE 50.85-173.16 DEPTH= 0.KM

A=-0.62935 B=-0.07547 C= 0.77345 D=-0.1191 E= 0.9929
G=-0.7679 H=-0.0921 K=-0.6339 HT= -5.7

SE= 2.47

	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	17.46	288.5	4	5	0	7	15	-3				
COLLEGE	19.26	33.6	4	23	-4	7	51	-7			4	40 PP
SITKA	22.88	59.6	5	5	0	9	23	14				
HORSESHOE B.	31.53	72.9	6	24K	0							
VICTORIA	31.78	74.5	6	27K	1							
SEATTLE	32.82	75.4	6	46	11							
TIKSI	32.85	330.3	6	33	-3							
CORVALLIS	33.59	80.9	6	44K	2							
BANFF	35.45	66.5	6	56K	-2							
SHASTA	36.18	86.1	7	5K	1							
TUKUBASAN	36.26	264.6	7	5	0							
UKIAH	36.54	88.9	7	9	2							
MINERAL	36.87	86.1	7	10	0							
MATUSIRO	37.25	266.6	7	13A	0	13	3	4				
VLADIVOSTOK	37.50	280.1	7	6	-9							
HUNGRY HORSE	37.52	70.1	7	15	-1	13	4	0			17	29 SCS
BERKELEY	37.89	89.9	7	19	0							
RENO	38.47	85.9	7	25	2	13	22	4				
LICK	38.60	90.1	7	25	0							
RESOLUTE	38.75	24.6	7	25	-1	12	46	-36			17	36 SCS
BUTTE	39.50	72.6	7	31	-1							
FRESNO	40.12	89.4	7	37	0							
BOZEMAN	40.59	72.3	7	40	-1							
EUREKA	40.92	83.2	7	44	0							
TINEMAHA	40.94	87.8	7	46	2							
KING RANCH	41.05	91.0	7	46	1							
CHANGCHUN	41.20	285.0	7	46	0	14	0	1				
WOODY	41.38	89.9	7	47K	-1							
CHINA LAKE	42.10	88.8	7	54K	0							
SALT LAKE C.	42.76	78.9	7	59	0							
PASADENA	42.80	91.2	7	58	-1							
RIVERSIDE	43.40	90.7	8	3	-1							
BOULDER CITY	43.75	86.6	8	7	0							
BARRETT	44.71	91.6	8	14K	-1							
RAPID CITY	46.15	69.9	8	25	-1							
IRKUTSK	48.63	305.7	8	45	-1	15	42	-4				
TUCSON	48.69	87.5	8	46	0							
PEKING	48.96	286.1	8	50	2	15	57	6				
TATUNG	50.67	288.0	9	8	7							
ZO-SE	51.56	273.8	9	9	1	16	34	7				
NANKING	52.43	276.5	9	14	-1	16	42	3				
LUBBOCK	53.46	79.8	9	20	-2							
FAYETTEVILLE	56.51	72.4	9	52K	8							
KIRKLAND LA.	56.54	53.3	10	45	60							
SCORESBY SD.	57.20	11.1	9	49	0	17	44	1				
SCHEFFERVLLE	58.22	40.8	9	55K	-1							
CLEVELAND	60.21	59.9	10	8	-2							
APATITY	60.24	348.6	10	10K	0						14	16
OTTAWA	60.59	53.3	10	11K	-2							
SODANKYLA	61.16	351.4	10	15	-2							
KIRUNA	61.20	354.2	10	14	-3	18	37	3	10	27		
SHAWINIGAN	61.26	50.7	10	15K	-2							
SEMIPALATNSK	61.41	315.7	10	18	0	18	37	0				
PITTSBURGH	61.79	59.9	10	17	-4							
CANTON	62.18	272.9	10	26	2	18	56	9				
HONG KONG	62.18	271.7	10	24	0	18	54	7				
MORGANTOWN	62.36	60.5	10	23	-2							

RABAUL	62.38	219.8	9	42	-43				12	1
BAGUIO CITY	62.47	262.2	10	18	-7					
PENNSYLVANIA	62.67	58.3	10	31	4					
MANILA	63.61	260.5	10	21	-12	18	51	-14		
SVERDLOVSK	63.88	330.4	10	34	-1					
PALISADES	64.63	55.8	10	38	-2	17	59	-78	19	55 SCS
WESTON	64.97	53.2	10	41	-1					
TACUBAYA	65.12	89.5	10	48	5				13	3 PP
COLUMBIA	65.74	65.6	10	45	-2					
SKALSTUGAN	65.83	357.3	10	46	-1				11	0
HALIFAX	67.05	46.9	10	54A	-1					
PULKOVO	68.10	347.4	11	1	-1	19	58	-1		
HELSINKI	68.37	350.4	11	3	0					
UPPSALA	69.31	354.2	11	7	-2	20	5	-9	11	19
FRUNSE	69.64	313.5	11	12	1	20	14	-4		
MOSCOW	70.74	342.1	11	16	-2	20	27	-4		
NAMANGAN	72.47	314.1	11	29	1	20	53	2		
SHILLONG	73.60	290.3	11	31	-4					
COPENHAGEN	73.73	356.7	11	37A	1	21	6	1	11	47 PCP
RATHFARNHAM	75.63	8.1	11	44	-3					
HAMBURG	75.92	358.1	11	51A	3	21	34	5		
BERMUDA	75.98	55.8	11	51	2	21	32	2	14	19 PP
WARSAW	76.59	351.1	11	52	0	21	33	-3		
WITTEVEEN	76.70	0.1	11	56	3					
POTSDAM	77.01	356.1	11	35	-19	21	43	2		
DE BILT	77.41	1.0	12	0	3	21	50	5		
DEHRA DUN	77.76	303.1	11	57	-2	21	47	-2		
KEW	77.87	4.6	12	0	1	21	51	1		
BOKARO	78.49	293.5				22	2	5		
JENA	78.51	356.9	12	1	-2	21	58	1		
LWOW	78.63	348.7	12	6	3	21	57	-1		
LAHORE	78.72	306.5	12	2K	-2	22	0	1		
KRAKOW	78.86	351.4	12	6	1	22	0	-1	12	22 PCP
RACIBORZ	78.98	352.6	12	8	3	21	56	-6	22	30 SKS
PRAGUE	79.25	355.0	12	8	1	22	6	1	14	19
SKALNATE PL.	79.69	351.1	12	12	3	22	11	1	22	46 PS
KARLSRUHE	80.51	359.0	12	13A	0	22	23	5		
PARIS	80.65	2.9	12	15	1	22	19	-1	15	18 PP
KISHINEV	80.68	345.0	12	15	1	22	17	-3		
IASI	80.71	345.8	12	16	2					
STUTTGART	80.74	358.4	12	14	-1	22	24	4		
STRASBOURG	80.94	359.4	12	17A	1	22	27	4	23	4 PS
BRATISLAVA	80.96	353.1	12	15	-1	22	25	2	15	18 PP
TUBINGEN	80.98	358.5	12	17	1					
EBINGEN	81.33	358.6	12	18	0					
SIMFEROPOL	81.69	340.8	12	20	0	22	34	4		
SOTCHI	81.69	336.5	12	20	0	22	30	0		
BASLE	82.00	359.5	12	22	1	22	37	4		
BESANCON	82.28	0.6	12	51	28				15	15
NEUCHATEL	82.53	359.9	12	23	-1	22	42	3		
CAMPULUNG	82.97	347.2	12	30	4					
TIMISOARA	82.98	349.9	12	46	20	22	50	7		
QUETTA	83.49	310.9	12	29K	0	22	51	2	12 40	15 36 PP
BUCHAREST	83.64	346.2	12	30A	0	22	55	5		
TRIESTE	83.69	355.1	12	31A	1	22	51	0	23	53 PS
CLERMONT-FD.	83.70	2.6	12	29	-1	22	54	3		
BELGRADE	83.98	350.3	12	33K	2	23	1	8		
PAVIA	84.33	358.3	12	34	1	22	56	-1		
FLORENCE X.	85.67	356.8	12	38A	-2	23	14	4	13	6
MONACO	85.80	359.6	12	42K	2	23	10	-1		
SAN JUAN	86.22	65.5	12	22	-21					
KARACHI	87.06	308.5	12	54	7					
ROME	87.50	355.8	12	50A	1	23	29	1	16	12 PP
TOLEDO	89.14	8.4	12	57	0	23	39	-4		
POONA	89.46	299.1	13	1	3	23	47	1		
BOMBAY	89.73	300.1	13	3	4	23	52	4		
RIVERVIEW	90.00	209.1				23	36	-15		
ALICANTE	90.94	5.7	13	4	-1	23	59	0	18	42 PPP
MESSINA	90.99	353.1	13	4	-1	23	59	-1	25	6 PS
GRANADA	91.86	8.3	13	10K	1					
KSARA	91.88	336.1	13	12	3	24	11	4	16	45 PP
MALAGA	92.24	9.0	12	41K	-30					
ALGIERS UNI.	92.69	3.0	13	8	-5					
JERUSALEM	93.99	336.1	13	34	15					
TAMANRASSET	106.68	1.3							16	5
MBOUR	111.78	24.9							19	22 PP
LWIRO	128.14	331.6	19	8A	2					
PRETORIA	150.07	318.9	19	20A	-25					

PIETERMZBURG	152.41	311.3								19	57 PKP2
KIMBERLEY	154.11	321.7	20	OA	9						
GRAHAMSTOWN	157.29	312.9								20	27 PKP2

APRIL 4 0.H 13.M 4.S EPICENTRE 58.17-155.04 DEPTH= 89.KM

DEPTH OF FOCUS= 0.009R

A=-0.48048 B=-0.22360 C= 0.84802 D=-0.4219 E= 0.9066
G=-0.7688 H=-0.3578 K=-0.5300 HT= -8.3

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	
COLLEGE	7.55	24.1	1	52	3	3	36	22			2	16	
SITKA	10.64	87.6	2	27	-4	4	15	-14					
HORSESHOE B.	20.56	101.5	4	33K	-1								
VICTORIA	21.02	103.6	4	38K	0	8	39	17					
SEATTLE	22.15	104.1	4	52	2	9	41	58			5	14	
BANFF	23.61	90.0	5	5	1								
CORVALLIS	23.76	111.0	5	7K	2	9	53	42					
HUNGRY HORSE	26.04	94.2	5	27	0								
PETROPAVLOVK	26.18	279.1	5	27	-1								
SHASTA	27.12	115.8	5	37K	0								
RESOLUTE	27.42	30.0	5	41K	2						16	36	SCS
MINERAL	27.77	115.3	5	42K	-1						12	28	
SASKATOON	27.80	81.3									11	8	
UKIAH	27.97	119.0	5	44	0								
BUTTE	28.28	96.8	5	47	0	10	31	6			11	0	*SS
RENO	29.26	114.1	5	56K	0						12	34	
BOZEMAN	29.31	95.9	5	56	0								
BERKELEY	29.43	119.3	5	57K	0								
LICK	30.14	119.1	6	3K	-1								
EUREKA	31.19	109.6	6	14	1								
FRESNO	31.46	117.4	6	15K	0								
TINEMAHA	31.98	115.2	6	21	1								
SALT LAKE C.	32.32	103.5	6	22	-1								
TIKSI	32.36	324.9	6	21	-2								
KING RANCH	32.67	118.9	6	27K	1								
CHINA LAKE	33.27	115.8	6	32K	1						7	8	
PASADENA	34.37	118.2	6	40K	0	10	29	-92			7	7	
BOULDER CITY	34.49	112.3	6	42	1	12	52	50					
RAPID CITY	34.53	91.0	6	50	8	12	12	9			7	9	
RIVERSIDE	34.87	117.4	6	33K	-12						7	4	
PALOMAR	35.64	117.4	6	51	0						7	27	
HAYFIELD	35.93	115.6	6	54K	0						7	14	
BARRETT	36.28	117.8	6	56K	-1								
HONOLULU	36.89	184.7	7	0	-2								
Y.-SAKHLINSK	38.10	280.8	7	12	0								
TUCSON	39.45	111.6	7	4	-19								
LUBBOCK	42.95	101.2	7	51	-1						17	47	SS
KIRKLAND LA.	43.81	69.1	8	0K	1	14	25	3					
SCHEFFERVLLE	45.55	54.1	8	12	-1								
VLADIVOSTOK	46.32	284.4	8	16	-3								
SUIHWA	46.33	291.2	8	20	1								
TUKUBASAN	47.08	271.6	8	23	-2								
CLEVELAND	47.73	76.8	8	29	-1								
MATUSIRO	47.83	273.4	8	30A	-1	15	20	0			10	39	PP
OTTAWA	47.86	69.0	8	30K	-1	15	21	1			10	26	PP
SHAWINIGAN	48.48	66.0	8	35	-1						10	30	PP
SEVEN FALLS	49.01	64.2	8	39	-1	15	30	-6			19	16	SS
MORGANTOWN	49.91	77.3	8	46	-1								
PENNSYLVANIA	50.11	74.7	8	50	2	16	30	39					
WASHINGTON	51.94	75.8	9	4	2								
PALISADES	51.97	71.7	9	2	0	16	15	-2	9	10	18	43	SCS
PHILADELPHIA	52.12	73.5				16	23	4					
WESTON	52.24	68.7	9	4K	0								
IRKUTSK	52.49	310.4	9	6	0								
COLUMBIA	53.61	82.8	9	13	-1								
HALIFAX	54.26	61.6	9	18K	-1								
KIRUNA	54.26	2.1	9	17A	-2	16	48	0			10	22	PCP
SODANKYLA	54.76	359.2	9	24	1						14	18	SCP
TACUBAYA	55.89	109.4	9	34	3								
PEKING	56.50	293.0	9	35A	0	17	21	3					
TATUNG	57.85	295.1	9	46	1								
SKALSTUGAN	58.19	6.6	9	45	-2				10	13			
ZO-SE	60.98	282.8	10	6	0								

SVERDLOVSK	61.85	338.7	10	12	0							
HELSINKI	62.00	360.0	10	11	-2	18	20	-9			39	21 PKPPKP
UPPSALA	62.18	4.2	10	13A	-1	18	31	0	10	53	14	47
PULKOVO	62.33	356.9	10	14	-1	18	31	-2				
YINCHUAN	62.45	298.9	10	18	2							
SEMIPALATNSK	62.71	323.7	10	17	-1							
BERMUDA	63.31	71.3	10	17	-5	18	44	-1			13	2 PP
MOSCOW	66.00	352.2	10	39	0	19	23	5				
RATHFARNHAM	66.03	19.9	10	39K	0	19	49	30				
COPENHAGEN	66.06	7.7	10	39A	-1	19	32	13			20	32 SKS
WITTEVEEN	68.37	11.8	10	55	1							
KEW	68.78	16.6	10	57	0	19	55	3	11	39		
WARSAW	69.91	2.6	11	2	-2	20	6	1				
JENA	70.71	8.9	11	8	0	20	14	0	11	47	12	2 *SP
FRUNSE	71.18	323.7	11	12	1	20	24	4				
CANTON	71.56	284.0	11	13A	0							
CHEB	71.62	8.5	11	23	9	20	24	-1	11	55	12	10 *SP
HONG KONG	71.75	282.8	11	14	-1	20	30	4				
PRAGUE	71.78	7.1	11	15	0	20	28	1	11	51	21	33 *SS
PARIS	71.79	15.4	11	16A	1	20	26	-1	11	59		
RACIBORZ	71.97	4.6	11	16	0							
KRAKOW	72.06	3.4	11	16	0						14	57
KARLSRUHE	72.32	11.4	11	19A	1						12	16
LWOW	72.36	0.6	11	19	1	20	35	2				
STUTTGART	72.64	10.8	11	20A	0	20	40	4	11	59	11	36 PCP
STRASBOURG	72.67	11.9	11	21	1				11	45	12	24
TUBINGEN	72.86	11.0	11	22	1						11	38 PCP
SKALNATE PL.	72.94	3.2	11	42	20						20	1
EBINGEN	73.20	11.1	11	24A	1				12	8	11	39 PCP
BASLE	73.69	12.2	11	26	0	21	29	41				
NAMANGAN	73.81	325.0	11	27	0							
BRATISLAVA	73.83	5.5	11	26	-1	20	33	-17	12	9	21	27 *SS
SAN JUAN	74.02	81.0	11	27	-1							
NEUCHATEL	74.14	12.7	11	29	0							
BALBOA HTS.	74.79	97.6	11	30	-2							
CLERMONT-FD.	74.85	15.6	11	26	-7							
IASI	74.97	358.2	11	34	1							
RABAUL	75.05	235.3	11	52	18							
KISHINEV	75.13	357.3	11	33	-1							
TRIESTE	76.13	8.1	11	40A	0	21	26	11				
SIMFEROPOL	76.96	353.3	11	43	-2							
BELGRADE	77.31	3.3	11	48A	1	21	45	17				
MONACO	77.42	12.9	11	48A	1							
ANTIGUA	77.76	77.6	11	46	-3							
BUCHAREST	77.77	359.2	11	49	0	21	36	3			21	55
FLORENCE X.	77.78	10.1	11	56A	7	21	33	0	12	26		
SOTCHI	77.87	349.1	11	49	-1							
COIMBRA	78.10	25.5	12	23	32							
TIFLIS	79.10	345.0	11	57	1							
LISBON	79.34	26.5	11	59A	1						12	24 PCP
TOLEDO	79.34	22.3	11	59A	1	21	56	6			12	23
SOFIA	79.49	1.2	11	59	1							
ROME	79.75	9.4	12	1A	1	21	56	2	12	37	27	20 SS
SHILLONG	79.84	302.4	11	59	-1							
ST. LUCIA	80.33	79.1	12	2	-1							
CHATRA	80.80	306.8									9	6
ST. VINCENT	80.91	79.8	12	6	0							
DEHRA DUN	81.33	315.6	12	9	1	22	15	5				
ALICANTE	81.51	20.0	12	1	-8	21	59	-13				
LAHORE	81.55	319.1	12	7	-2	22	12	0				
GRANADA	82.04	22.7	12	18K	6	22	26	9			15	52 PP
MALAGA	82.32	23.4	12	16A	3				12	46	12	22 PCP
TRINIDAD	82.88	81.4	12	12	-4							
ALGIERS UNI.	83.65	17.5	12	20A	0	22	37	3	12	46		
MESSINA	83.67	7.4	12	16A	-4	22	25	-9	12	58	15	34 PP
RELIZANE	84.22	19.7	12	24A	1	22	44	5	12	48		
QUETTA	85.23	324.5	12	28A	0	22	46	-3	13	1	15	38 PP
KSARA	87.90	350.9	12	43K	2	23	7	-8			16	9 PP
POONA	93.60	314.2	13	9	2	24	6	0				
BOMBAY	93.65	315.3				24	6	0			23	34 SKS
HUANCAYO	94.78	105.0	13	14	1							
TAMANRASSET	97.75	18.1	13	27	1				13	52	17	25 PP
RIVERVIEW	102.09	223.4				25	25	8			26	5
LA PAZ	102.24	101.4	14	6	19						27	32 PS
LWIRO	124.16	355.4	18	51	2				19	14		
TANANARIVE	137.43	327.5									22	41 SKP
PRETORIA	147.52	354.6									19	5
KIMBERLEY	150.59	0.3	19	37	1							

PIETERMZBURG 151.21 350.1 19 55K 18
GRAHAMSTOWN 155.12 356.8 19 56 14

APRIL 4 11.H 0.M 48.S EPICENTRE -35.96 -71.12 DEPTH= 136.KM

DEPTH OF FOCUS= 0.016R

A= 0.26250 B=-0.76770 C=-0.58457 D=-0.9462 E=-0.3235
G=-0.1891 H= 0.5531 K=-0.8113 HT= -0.2

SE= 1.75

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
SANTA LUCIA	2.55	8.4	0 37K	-5				1 4
BUENOS AIRES	10.43	86.2	2 25	-2	4 33	11		
LA PAZ	19.56	8.6	4 18	-1	8 6	18		4 42 PP
HUANCAYO	24.10	349.9	5 6	2	9 20	11		
CHINCHINA	40.93	353.2	7 30	0	13 36	4		
BALBOA HTS.	45.38	348.2	8 6	0	14 39	3		
TACUBAYA	61.14	329.5	10 2	0				
BERMUDA	68.25	5.9						19 40
MBOUR	71.57	55.9	11 10	2			11 34	11 42 *SP
CHAPEL HILL	71.89	353.2	11 8	-2				
LUBBOCK	74.90	333.8	11 25	-3				12 0
MORGANTOWN	75.65	353.0	11 31	-1				
PALISADES	76.63	357.8	11 36	-1	21 51	40		21 15
GRAHAMSTOWN	76.78	121.5	12 11A	33				
TUCSON	77.38	326.3	11 41	0				
WESTON	77.96	359.9	11 44A	-1				
KIMBERLEY	78.09	116.8	11 45K	0				
BARRETT	80.50	322.4	11 58K	0				12 23
HAYFIELD	80.83	323.7	12 0	0				12 25
OTTAWA	81.09	356.7	12 0K	-1	22 2	4	12 25	
PALOMAR	81.13	322.7	12 1K	-1				12 44
RIVERSIDE	81.90	322.7	12 5	-1				12 40
SHAWINIGAN	82.14	358.9	12 37K	30			13 2	
PRETORIA	82.28	116.1	12 7	-1				
BOULDER CITY	82.31	325.6	12 7	-1				
PASADENA	82.42	322.2	12 8K	0				12 24
CHINA LAKE	83.48	323.6	12 14K	0				15 26
WOODY	84.00	322.7	12 18	2				
KIRKLAND LA.	84.11	354.0	12 16K	-1				
KING RANCH	84.14	321.9	12 17K	0				12 42
TINEMAHA	84.78	323.9	12 22	2				12 41
RAPID CITY	84.82	337.4	12 20	0				
SALT LAKE C.	85.02	330.2	12 20	-1				
EUREKA	85.70	326.8	12 25	0				
BOZEMAN	88.88	333.2	12 40	0				
MINERAL	88.99	323.9	12 39	-1				
SHASTA	89.64	323.6	12 32	-12				
BUTTE	89.74	332.5	12 43	-1				
SCHEFFERVLLE	90.49	2.6	12 48A	0				
HUNGRY HORSE	92.24	333.0	12 55	-1				
TAMANRASSET	92.98	64.1	13 1	2			13 26	16 44 PP
BANFF	95.12	333.7	13 5	-4				
VICTORIA	96.13	328.1	13 12	-1				
LWIRO	96.71	97.7	13 19	3				17 11 PP
HORSESHOE B.	96.73	328.7	13 13	-3				
RIVERVIEW	100.13	214.7					13 55	14 30
RABAUL	123.12	234.7	18 32	-9				19 14
HELSINKI	123.32	36.5	18 40	-1				19 7
SODANKYLA	125.55	28.1	18 46	1				
POONA	144.59	110.0	19 22	2				19 48
QUETTA	144.60	87.1	19 22A	1				19 50
MATUSIRO	156.37	280.2	19 39	1				23 45 PP
SHILLONG	162.11	120.7	19 46	1				

APRIL 5 2.H 49.M 40.S EPICENTRE 52.09-172.10 DEPTH= 0.KM

A=-0.61117 B=-0.08475 C= 0.78695 D=-0.1374 E= 0.9905
G=-0.7795 H=-0.1081 K=-0.6170 HT= -6.2

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	
PETROPAVLOVK	17.74	285.0	4	8K	-2	7	26	-1					
COLLEGE	17.87	34.9	4	10	-2	7	45	15			4	43	PPP
SITKA	21.71	62.2	4	55	0	8	57	6					
MAGADAN	21.89	304.5	4	57	0	8	58	3					
Y.-SAKHLINSK	29.40	278.1	6	8	0								
NEMURO	29.42	269.7	6	5	-3								
KUSIRO	30.34	270.0	6	14	-2	11	11	-5					
HORSESHOE B.	30.56	75.4	6	18	0	11	18	-2			9	20	PCP
WAKKANAI	30.76	276.1	7	6	46	13	26	123					
VICTORIA	30.83	77.0	6	20A	0	11	27	3					
OBIHIRO	31.11	270.9	6	25	2								
ASAHIGAWA	31.17	272.9	6	24	1								
URAKAWA	31.80	270.0	6	27	-2	11	26	-13					
SEATTLE	31.89	77.8	6	38	8	11	38	-2					
TIKSI	32.11	329.2	6	34	2						7	41	PP
SAPPORO	32.17	272.5	6	31	-1	11	53	8			7	44	PP
HONOLULU	32.60	155.2	6	34	-2								
CORVALLIS	32.77	83.5	6	39A	2	11	58	4					
MURORAN	32.81	271.6	6	34	-4								
MORI	33.19	271.6	6	45	4								
AOMORI	33.79	269.5	6	48	2								
BANFF	34.37	68.6	6	50A	-1								
SENDAI	35.25	265.8	6	55	-4	12	24	-9					
SHASTA	35.46	88.6	7	1A	0	13	12	36					
HUKUSIMA	35.84	265.5	7	2	-2								
UKIAH	35.89	91.4	7	5	1	12	45	3					
MINERAL	36.15	88.5	7	6A	0								
HUNGRY HORSE	36.49	72.2	7	9	0	12	51	-1			8	40	PP
NIIGATA	36.61	266.9									15	50	
UTUNOMIYA	36.97	264.5	7	12	-1								
KAKIOKA	36.99	263.8	7	7	-6								
TUKUBASAN	37.05	263.9	7	10	-4	12	56	-4					
BERKELEY	37.26	92.3	7	14	-2	13	2	-1					
RESOLUTE	37.35	25.3	7	16K	0	13	19	14			8	42	PP
KUMAGAYA	37.53	264.4	7	20	2	13	7	-1					
MAEBASI	37.56	265.0	7	17	-1	13	6	-2			8	43	PP
TOKYO C.M.O.	37.61	263.5	7	20	1	13	9	0			7	58	
RENO	37.74	88.2	7	20	0								
SANTA CLARA	37.77	92.7	7	21A	1	13	17	6					
YOKOHAMA	37.84	263.3	7	21	0						14	52	
NAGANO	37.92	266.0	7	23	2	13	11	-3			8	41	PP
OIWAKE	37.93	265.3	7	21	0						8	53	PP
VLADIVOSTOK	37.94	279.2	7	20	-1	13	10	-4					
LICK	37.97	92.5	7	22A	0	13	17	3					
MATUSIRO	37.99	265.9	7	18	-4	13	13	-2			8	49	PP
MERA	38.07	262.5	7	17	-5	13	9	-7					
MATUMOTO	38.34	265.7	7	25	0	13	18	-2					
KOHU	38.37	264.5	7	29	4	13	17	-3					
BUTTE	38.52	74.7	7	26	0	13	19	-4			9	5	PP
TOYAMA	38.52	266.9	7	26	0						9	12	PP
IIDA	38.90	265.0				13	26	-2					
SASKATOON	38.97	63.1	7	28	-2	13	27	-2					
OMAESAKI	39.27	263.5				13	31	-3			8	57	
FRESNO	39.47	91.7	7	35A	1	13	40	3					
BOZEMAN	39.60	74.3	7	35	0	13	37	-2			7	56	
GIHU	39.63	265.7	7	39	3	13	34	-5					
NAGOYA	39.66	265.3	7	42	6								
EUREKA	40.14	85.4	7	40	0	13	31	-16					
TINEMAHA	40.25	90.1	7	43	2						13	32	SCP
KING RANCH	40.44	93.3	7	43A	1						9	17	PP
KYOTO	40.52	266.1	7	42	-1	13	54	1					
WOODY	40.74	92.2	7	43	-2						13	31	SCP
TOYOOKA	40.74	267.5	7	46	1								
OSAKA	40.89	265.9	7	54	8	13	56	-2					
KOBE	41.08	266.2	7	44	-3	13	58	-3					
CHINA LAKE	41.44	91.0	7	53A	3						13	37	SCP
CHANGCHUN	41.52	284.3	7	50	-1								
TOKUSIMA	41.86	266.0	7	54	0	14	3	-10					
SALT LAKE C.	41.89	81.0	7	54	0						9	36	PP
PASADENA	42.19	93.4	7	57A	0	14	14	-3			13	40	SCP
RIVERSIDE	42.78	92.9	8	1A	0	14	24	-2			9	47	PP
KOTI	42.85	266.3	8	2	0	14	25	-2					
BOULDER CITY	43.04	88.7	8	4	0	14	32	2			8	37	
PALOMAR	43.53	93.2	8	7A	0						13	44	SCP
HAYFIELD	44.05	91.8	8	12	0						9	34	PP
BARRETT	44.10	93.7	8	11A	-1	14	46	1			13	44	SCP

OOITA	44.25	267.6	8	18	5	14	45	-2		
SAGA	45.05	268.6	8	23	3					
RAPID CITY	45.12	71.6	8	19	-1	14	57	-3	10	7 PP
KAGOSIMA	46.04	266.7	8	28	0				15	13
KABANSK	47.39	304.0	8	40A	2	15	32	-1	10	32 PP
TUCSON	48.00	89.4	8	43	0					
PEKING	49.25	285.8	8	53	0				10	47 PP
TATUNG	50.92	287.7	9	16	11					
ZO-SE	52.14	273.7	9	14	-1	16	36	-3	19	11 SS
LUBBOCK	52.61	81.5	9	19	1					
NANKING	52.95	276.3	9	19	-2	16	47	-3		
CHIHUAHUA	53.45	89.1							15	8
KIRKLAND LA.	55.28	54.5	9	38K	0	17	20	-1		
CHICAGO CGS.	55.49	64.6				17	26	2		
FAYETTEVILLE	55.52	73.9	9	38	-2					
FLORISSANT	55.92	69.0	9	40	-2	17	26	-4		
ST. LOUIS 1	56.11	69.1	9	41A	-3	17	29	-3		
SCHEFFERVLLE	56.85	41.8	9	57A	8					
TERRE HAUTE	57.15	66.6	12	0	129	21	10	204		
LITTLE ROCK	57.51	73.8	9	52	-2					
OTTAWA	59.33	54.5	10	5K	-2					
BUFFALO L.	59.59	58.3	10	8	0					
SHAWINIGAN	59.97	51.9	10	8	-3					
SODANKYLA	60.03	351.8	10	10	-1				10	57 PCP
KIRUNA	60.04	354.5	10	9	-2					
SEVEN FALLS	60.50	50.3	10	13	-2					
PITTSBURGH	60.61	61.1	10	18	3					
SEMIPALATNSK	60.99	315.8	10	17	-1					
MORGANTOWN	61.18	61.7	10	19A	0					
PENNSYLVANIA	61.47	59.5	10	26	5	18	49	7		
HONG KONG	62.80	271.8	10	28K	-2	18	58	-1		
SVERDLOVSK	63.13	330.6	10	33	1	19	4	1		
WASHINGTON	63.26	60.5	10	20	-13					
BAGUIO CITY	63.29	262.4	10	35	2	19	4	-1		
PALISADES	63.39	56.9	10	31	-3	19	3	-3	15	3 PCS
FORDHAM	63.53	57.0	10	34	-1	19	12	4		
WESTON	63.71	54.3	10	34A	-2	19	14	4		
RABAUL	63.75	220.5	10	30	-6				11	37
MANILA	64.46	260.8	11	14	33	19	23	4		
TACUBAYA	64.47	90.9	10	47	6				12	56 PP
SKALSTUGAN	64.62	357.8	10	41	-1					
COLUMBIA	64.63	66.8	10	40	-2	19	18	-3	20	28 SCS
HALIFAX	65.73	48.0	10	47	-2					
PULKOVO	67.04	347.9	10	52	-6	19	45	-6		
HELSINKI	67.25	350.8	10	56	-3				11	26 PCP
UPPSALA	68.14	354.7	11	2	-2					
FRUNSE	69.27	313.8	11	11	0	20	18	1	15	32 PPP
MOSCOW	69.77	342.6	11	14	0					
COPENHAGEN	72.53	357.3	11	30	-1	21	8	13	21	38 SKS
TASHKENT	72.84	316.2	11	34	1	20	54	-5		
DURHAM	73.22	5.7	11	48	13				9	50
SHILLONG	73.78	290.7	11	45	7	21	6	-3		
RATHFARNHAM	74.31	8.8	11	35	-7					
BERMUDA	74.75	56.8	11	52	8	21	18	-2	14	33 PP
STALINABAD	75.35	314.9	11	45	-2	21	22	-5		
WITTEVEEN	75.46	0.8	11	50	2					
WARSAW	75.47	351.7							13	41
CHATRA	75.48	294.9	11	47	-1					
POTSDAM	75.81	356.7	11	51	1					
DE BILT	76.16	1.7	11	50	-2	21	38	2		
KEW	76.58	5.3				21	31	-9		
JENA	77.31	357.6	11	58	0				12	11 PCP
LWOW	77.54	349.4	11	59	-1				22	45 PS
DEHRA DUN	77.63	303.6	12	0	0	21	45	-7	22	36 PS
KRAKOW	77.73	352.1	12	6	5	21	54	1	12	44
PRAGUE	78.07	355.7	12	3	0	22	3	6	22	39 PS
LAHORE	78.51	307.0	12	4	-1					
BOKARO	78.59	294.0	12	6	0	21	58	-4		
KARLSRUHE	79.28	359.7	12	11A	2				12	29
PARIS	79.37	3.6	12	11	1	22	15	5	15	13 PP
STUTTGART	79.51	359.1	12	10	-1	22	14	2	22	37 SCS
IASI	79.66	346.5	12	11	0					
STRASBOURG	79.71	0.1	12	13	1	22	5	-9	15	13 PP
BRATISLAVA	79.81	353.8	12	14	2				13	33
EBINGEN	80.11	359.3	12	13	-1				12	35 PCP
ASHKABAD	80.13	321.8	12	14	0				22	31 SCS
BUDAPEST	80.35	352.3							22	32 SCS
SIMFEROPOL	80.73	341.5	12	17	0	22	22	-3	23	7 PS
BESANCON	81.03	1.3	12	20	1				13	16

TIFLIS	81.24	332.9	12	19	-1					23	22 PS
NEUCHATEL	81.29	0.7	12	19	-1						
TRIESTE	82.51	355.9	12	32	6					28	24 SS
BUCHAREST	82.59	347.0	12	30	3	22	46	2		28	30 SS
OROPA	82.67	359.9				22	47	2			
GORIS	82.84	331.0	12	28	0	22	44	-2			
BELGRADE	82.87	351.0	12	30K	2	22	57	10			
PAVIA	83.11	359.1	12	34	5					23	39 PS
QUETTA	83.17	311.6	12	29K	-1						
FLORENCE X.	84.47	357.6	12	38	2	23	5	2			
BALBOA HTS.	84.57	82.5	12	38	1	22	57	-6			
BRISBANE	84.92	210.7	12	37	-2						
SAN JUAN	85.11	66.4	12	39	-1	23	0	-9		28	38 SS
ROME	86.31	356.6				23	6	-14		28	35 SS
TARANTO	87.46	352.9								21	53
HYDERABAD	87.81	295.7	12	52K	-1	23	27	-8		23	14 SKS
ONERAHI	88.29	191.0	12	56	1						
ANTIGUA	88.99	63.3	12	57	-1						
POONA	89.42	299.9	13	0	0	23	43	-7			
ALICANTE	89.64	6.6	13	0	-1	23	51	-1			
BOMBAY	89.67	301.0	13	4	2	23	45	-7		16	36 PP
MESSINA	89.84	354.0				23	58	4		30	36
CHINCHINA	90.10	81.9	13	5	1	23	56	0			
MADRAS	90.41	291.8				23	36	-23			
GRANADA	90.54	9.2				23	57	-3			
ALMERIA	90.97	8.3	13	5	-3						
KSARA	91.01	337.0	13	9	1	24	31	27		16	50 PP
BOGOTA	91.32	80.8	13	17	8					23	43 SKS
RIVERVIEW	91.40	209.9	13	7K	-3	24	11	4		23	41 SKS
ALGIERS UNI.	91.41	3.9	13	2	-8	23	54	-14		16	31 PP
JERUSALEM	93.12	337.0	13	19	1						
KODAIKANAL	94.19	292.3	13	26	4						
TAMANRASSET	105.43	2.3				26	1	0		17	5
MBOUR	110.38	25.8				25	35	21			
LA PAZ	111.41	89.5								19	29 PP
LWIRO	127.35	333.4	19	8	1					32	18
TANANARIVE	134.69	301.8								22	52 PKS
PRETORIA	149.54	321.9	19	50	3						
KIMBERLEY	153.51	325.1	20	0	7						

APRIL 5 7.H 30.M 28.S EPICENTRE -26.58-177.24 DEPTH= 92.KM

DEPTH OF FOCUS= 0.009R

A=-0.89446 B=-0.04310 C=-0.44507 D=-0.0481 E= 0.9988
G= 0.4446 H= 0.0214 K=-0.8955 HT= 2.9

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	
SUVA	9.30	333.6	2	16	3	3	56	-1					
ONERAHI	11.63	216.0	2	46	1	5	18	25					
AUCKLAND	12.28	211.5	2	57	4	5	12	4			3	17	
KARAPIRO	12.85	206.6	3	6	5						3	19	
TUAI	13.06	199.7	3	2	-1	5	15	-12					
APIA	13.71	23.0	3	2	-10	5	20	-22					
TONGARIRO	13.96	203.9	3	8	-7	5	46	-2					
NOUMEA	15.45	282.5	3	40	6						3	57	PP
WELLINGTON	16.08	202.2	3	43	1	6	23	-14			15	38	SCS
COBB RIVER	16.67	207.3	3	47	-2	6	37	-14					
KAIMATA	18.41	207.4	4	6	-4	7	16	-13					
GEBBIES PASS	18.95	203.1	4	11	-6	7	26	-15					
BRISBANE	26.47	261.3	5	32	1	9	54	-2					
RIVERVIEW	28.18	247.5	5	47A	1						6	23	*SP
RABAUL	36.75	302.0	6	56	-5	13	0	23			8	39	PP
HONOLULU	51.09	23.1	9	14A	19								
SCOTT BASE	51.88	184.3	9	3	2	16	24	9					
PERTH	57.81	247.5	9	42	-2						24	38	SSS
MANILA	72.62	296.6	11	19	-1								
BAGUIO CITY	73.97	298.0	11	24	-3	21	26	35					
TUKUBASAN	74.29	325.3	11	25	-4	21	17	23	11	53	12	2	*SP
DJAKARTA	74.69	270.7	11	30	-2	20	41	-18					
MATUSIRO	75.52	324.3	11	35A	-1	21	36	28			26	47	*SSS
Y.-SAKHLINSK	81.63	333.5	12	10	0	22	15	2					
SANTA CLARA	82.10	41.4							12	35			
PETROPAVLOVK	82.11	345.6	12	10	-2	22	26	8					
KING RANCH	82.12	44.1	12	13K	1				12	35			

ZO-SE	82.13	310.4	12	12	0	22	15	-3					
HONG KONG	82.25	299.5	12	13A	0	22	18	-1			15	32	PP
BERKELEY	82.26	40.9	12	12K	-1	22	23	4	12	35			
LICK	82.28	41.6	12	13K	0	22	25	6					
PASADENA	82.36	45.9	12	14K	1	22	42	22	12	35	22	27	SKS
BARRETT	82.42	47.8	12	13K	-1				12	35	15	45	PP
UKIAH	82.56	39.4	12	15K	1				12	39			
PALOMAR	82.71	47.2	12	15K	0				12	37			
RIVERSIDE	82.77	46.4	12	13K	-2	22	31	7	12	36			
WOODY	82.90	44.3	12	15K	-1				12	38	15	49	PP
FRESNO	83.01	43.0	12	17K	0								
CANTON	83.36	299.7	12	19	1				12	46			
VLADIVOSTOK	83.64	325.2	12	20	0	22	30	-3					
HAYFIELD	83.74	47.5	12	21	1				12	45			
CHINA LAKE	83.77	44.9	12	13K	-8				12	35	15	55	PP
SHASTA	84.10	38.7	12	22K	0				12	43			
TINEMAHA	84.16	43.6	12	23	1	22	45	7	12	47	15	57	PP
MINERAL	84.31	39.3	12	22K	-1				12	47			
NANKING	84.33	309.9	12	25	2								
RENO	84.80	40.9	12	25K	-1	22	49	4	12	52			
BOULDER CITY	85.64	46.1	12	31K	1	22	51	-2	12	53	38	35	PKPPKP
TUCSON	86.14	51.1	12	33K	1	22	52	-6	12	57	30	33	PKKP
CORVALLIS	86.25	35.4	12	57	24								
EUREKA	87.06	42.8	12	36	-1	23	10	4			15	52	PP
CHANGCHUN	87.62	322.4	12	39	0				13	4			
TACUBAYA	88.38	67.5	12	48	5	23	27	8	13	12	16	19	PP
SEATTLE	88.86	33.6	13	10	25								
VICTORIA	88.91	32.5	12	44A	-2	23	8	-16	13	9			
HORSESHOE B.	89.57	31.9	12	47A	-2								
SALT LAKE C.	90.36	43.7	12	52A	0				13	16			
SITKA	90.49	21.4	12	53A	0				13	17			
PEKING	90.68	315.2	12	54	0	23	14	-26	13	18			
LINFEN	91.59	309.9	13	1	3								
TAIYUAN	91.77	311.8	13	2	3								
TATUNG	92.57	314.0	13	7	4								
BUTTE	93.00	39.1	13	3A	-2				13	28	17	9	PP
LUBBOCK	93.24	54.0	13	6	0				13	32			
HUNGRY HORSE	93.57	36.6	13	6K	-1	23	32	-33	13	30	17	11	PP
BOZEMAN	93.66	40.0	13	7K	-1				13	29			
COLLEGE	93.98	12.1	13	7A	-2	24	5	-3	13	35	23	31	SKS
BANFF	94.50	33.8	13	10	-1				13	34			
HUANCAYO	95.08	106.1	13	18	4				13	42	17	6	PP
RAPID CITY	97.53	44.3	13	25K	0						17	45	PP
LA PAZ	98.95	113.4	13	42	10	24	56	6			17	36	PP
BALBOA HTS.	100.78	85.3				24	9	-57			32	50	SS
CHINCHINA	102.59	90.7				24	19	-62			27	15	PS
BOGOTA	103.83	91.7				24	25	-66			25	9	SKKS
ST. LOUIS 1	103.90	53.7				24	24	-68			25	6	SKKS
IRKUTSK	103.94	321.7				24	24	-68			18	39	
RESOLUTE	113.41	16.7	18	25A	-2						29	14	PS
KIRKLAND LA.	113.93	46.6	19	47K	79								
POONA	114.58	279.2	18	30	0						21	46	PP
DEHRA DUN	114.84	292.8									19	44	
BOMBAY	115.62	279.2	19	30	58	29	53	281			22	30	PP
OTTAWA	116.22	50.3	19	1K	28						29	36	PS
SAN JUAN	116.48	81.8				25	16	1					
PALISADES	116.56	55.4				25	11	-5			29	23	PS
TANANARIVE	117.27	228.6	18	34	-1								
SHAWINIGAN	118.46	49.5	19	3K	26								
FRUNSE	120.47	305.9	18	41	0								
KIMBERLEY	121.06	202.6	18	43K	1								
BERMUDA	121.87	66.9				25	32	-2			20	24	PP
NAMANGAN	122.32	303.3	18	45	0	25	17	-18					
PRETORIA	122.49	207.3	18	46	1								
QUETTA	124.07	289.8	18	49A	1	25	47	6	19	16	20	31	PP
SVERDLOVSK	129.32	323.0	18	56	-2								
SCORESBY SD.	133.84	11.2									22	24	PP
SODANKYLA	136.66	346.8	19	10	-2				19	37	22	36	SKP
KIRUNA	137.36	350.2	19	12	-1								
MOSCOW	141.50	328.7	19	15	-6								
PULKOVO	141.78	337.8	19	20	-1								
LWIRO	141.87	225.3	19	19K	-2						22	29	
SKALSTUGAN	142.48	353.0	19	23	0								
UPPSALA	145.20	346.9	19	26A	-1				19	50	23	3	SKP
SOTCHI	145.66	309.2	19	27	-1								
SIMFEROPOL	148.91	314.3	19	34	1								
COPENHAGEN	150.09	349.0	19	34A	-1				20	13			
KSARA	150.57	292.2	19	37K	1				20	25	23	20	PP

WARSAW	150.92	336.6	19 37	1				23 27	
JERUSALEM	151.25	288.1	19 38	1				18 39	
LWOW	151.59	330.4							
IASI	151.62	323.0	19 45	8		20 13			
DURHAM	151.66	5.3	19 38	1		20 6			
BACAU	152.37	322.5	19 47	9					
RATHFARNHAM	152.47	11.8	19 36A	-3		20 3		19 44	PKP2
HAMBURG	152.51	350.7	19 39	0					
FOCSANI	152.73	320.7	19 35	-4					
POTSDAM	153.09	346.0	19 40	1				23 59	
KRAKOW	153.10	335.1	19 40	1				24 14	
WITTEVEEN	153.63	354.7	19 41	1					
RACIBORZ	153.70	337.2	19 40	0				20 1	PKP2
BUCHAREST	154.11	319.4	19 41	0		20 4		24 30	
DE BILT	154.45	356.5						30 26	SKKS
JENA	154.77	346.8	19 41	-1		20 12		24 9	PP
PRAGUE	154.89	342.1	19 42	0		20 9		23 48	PP
KEW	155.04	4.6	20 5	23		20 27		43 14	SS
BRATISLAVA	155.70	336.2	19 44	1		20 11		29 49	SKKS
SOFIA	156.75	319.0	19 43	-1		20 15		23 53	PP
BELGRADE	156.90	326.5	19 36K	-9					
JERSEY	157.13	8.2	20 0	15					
KARLSRUHE	157.18	350.4	19 46A	1				20 42	
STUTTGART	157.29	348.9	19 45A	0				30 37	SKKS
STRASBOURG	157.69	351.2	19 46	0		20 14		23 55	PP
PARIS	157.81	0.5	19 46	0				30 39	SKKS
EBINGEN	157.90	348.9	19 46A	0				20 19	PKP2
MBOUR	157.93	119.5	19 50	4		20 14		24 7	PP
ZAGREB	158.09	334.6	19 49	3					
BASLE	158.75	351.0						20 25	
TRIESTE	159.04	338.0	19 48	1		20 12		30 37	SKKS
BESANCON	159.21	353.8	19 48	1		20 26		24 4	PP
NEUCHATEL	159.35	351.8	19 48	0				30 50	SKKS
PAVIA	160.74	346.1	19 56	7				24 31	PP
FLORENCE X.	161.51	340.3	19 51	1		20 17		31 1	SKKS
MONACO	162.48	348.7	19 52	1		20 20		20 32	*SPKP
MESSINA	164.18	320.2						30 52	
TOLEDO	165.57	21.5	19 57	3					
ALICANTE	167.95	12.3	19 43	-12	26 25 -23			24 39	PP
GRANADA	168.14	25.5	20 0	4		21 33		31 33	SKKS
MALAGA	168.20	29.3	19 57	1	26 37 -11			32 7	SKKS
ALMERIA	168.84	22.2	19 57	1					
ALGIERS UNI.	169.84	358.7	19 55	-2	26 33 -16	20 21		31 15	SKKS
RELIZANE	170.67	11.1	19 57	0		20 20		25 32	PP
TAMANRASSET	175.46	214.2	20 1A	2		20 26		25 24	PP

APRIL 5 16.H 12.M 22.S EPICENTRE 12.57 -87.98 DEPTH= 53.KM

DEPTH OF FOCUS= 0.003R

A= 0.03440 B=-0.97574 C= 0.21621 D=-0.9994 E=-0.0352
G= 0.0076 H=-0.2161 K=-0.9763 HT= 6.2

SE= 4.26

	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
SANTIAGO MA.	1.03	332.5	0	20	1	0	30	-3				
SAN SALVADOR	1.68	313.6	0	30	2	0	49	0				
COMITAN	5.44	312.8	1	20	-1							
MERIDA	8.48	349.6	2	5	2	3	45	7			2	19
BALBOA HTS.	9.02	112.6	2	6	-4							
OAXACA	9.58	298.6	2	18	0	4	14	9				
VERA CRUZ	10.24	311.1									3	17
PUEBLA	11.74	304.4									5	32
TACUBAYA	12.74	303.6	3	7	6	5	42	20			3	20 PP
CHINCHINA	14.35	120.7	3	18	-4						3	40
BOGOTA	15.85	118.7	3	38	-3	6	39	4			3	52 PP
GUADALAJARA	16.76	300.8	3	58	5							
MANZANILLO	16.99	294.4									6	48
SAN JUAN	21.84	71.9	4	52	2	8	50	7				
COLUMBIA	22.25	15.4	4	54	0				5	7		
LUBBOCK	24.45	331.1	5	15	0				5	29		
CHAPEL HILL	24.61	17.6	5	13	-4							
GRENADA	25.65	88.3	5	30	4							
ST. VINCENT	26.04	85.7	5	32	2							
ST. LUCIA	26.29	83.8	5	41	9							

HUANCAYO	27.49	152.3	5 44	1	10 29	10			6 34	PP
MORGANTOWN	27.87	13.3	5 45	-2					10 27	PCP
TUCSON	28.69	316.7	5 54	0						
BERMUDA	29.08	43.5	5 51	-7	10 44	0				
CLEVELAND	29.35	9.9	5 57	-3						
PALISADES	30.90	21.0	6 10	-4	11 9	-4	6 26			
BUFFALO L.	31.26	13.3	6 14	-3						
BARRETT	33.02	312.0	6 31A	-1						
WESTON	33.04	22.9	6 31K	-2						
PALOMAR	33.50	312.9	6 33A	-3					7 21	
BOULDER CITY	33.59	318.5	6 37	0						
RAPID CITY	34.02	340.2	6 40	-1					7 51	
RIVERSIDE	34.20	313.5	6 42A	-1						
OTTAWA	34.35	15.4	6 41	-3			6 59		7 58	PP
PASADENA	34.85	313.1	6 48A	0	12 38	24				
LA PAZ	34.92	145.3	6 46	-3						
SALT LAKE C.	35.04	327.6	6 49	-1						
CHINA LAKE	35.33	316.0	6 52A	0						
KIRKLAND LA.	36.08	9.0	6 55A	-4						
SHAWINIGAN	36.23	17.8	6 56A	-4						
TINEMAHA	36.44	317.3	7 4	2						
EUREKA	36.47	322.3	7 1	-1						
SEVEN FALLS	37.34	19.4	7 7	-2						
FRESNO	37.34	315.7	7 7	-2						
HALIFAX	38.15	28.5	7 13	-3						
BOZEMAN	38.37	333.7	7 17	-1						
RENO	38.87	319.5	7 22	0						
LICK	38.90	315.3	7 23	1						
BUTTE	39.31	332.8	7 24	-1						
BERKELEY	39.59	315.6							9 34	PCP
SHASTA	41.16	319.2	8 4	23					9 37	PCP
HUNGRY HORSE	41.74	333.9	7 44	-2						
BANFF	44.53	335.5	8 6A	-2						
SEATTLE	45.21	327.5	8 3	-11						
SCHEFFERVLLE	45.35	17.2	8 34A	19						
VICTORIA	46.34	327.8	8 20	-3						
HORSESHOE B.	46.81	328.8	8 23A	-3						
SANTA LUCIA	48.63	160.6	8 38	-2						
RESOLUTE	62.22	357.9	10 13A	-6						
COLLEGE	66.11	336.2	10 39	-5			10 53			
TOLEDO	77.44	51.6	12 9	18						
MALAGA	77.50	54.9	12 3	11						
KEW	78.84	39.6	12 13	14						
ALICANTE	80.38	52.8	11 58	-9	21 56	-12				
PARIS	80.97	42.0	12 26	16						
WITTEVEEN	82.89	37.6	12 36	16						
BESANCON	83.55	43.2	12 40	16						
STRASBOURG	84.45	41.6	12 41	13						
KIRUNA	85.24	21.2	12 44	12						
EBINGEN	85.32	41.8	12 45	12						
STUTTGART	85.33	41.2	12 44	11						
JENA	86.29	38.7	12 31	-6						
UPPSALA	86.90	29.1	12 55	15						
TAMANRASSET	88.38	67.2	12 41	-6					13 6	
QUETTA	121.12	29.1	19 14	8						
SHILLONG	142.09	0.2	19 18	-8						

APRIL 7 10.H 14.M 9.S EPICENTRE -1.06 136.89 DEPTH= 0.KM

A=-0.72994 B= 0.68326 C=-0.01843 D= 0.6834 E= 0.7301
G= 0.0135 H=-0.0126 K=-0.9998 HT= 7.2

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
MAMBAJAO	15.21	312.6	2	35	-63	5	35	-53				
RABAUL	15.57	101.8	3	27	-16						8	33 PCP
GUAM	16.41	28.1	3	48	-5							
MANILA	22.13	315.2	5	0	1	9	9	10				
BAGUIO CITY	23.69	317.9	5	15	1	9	35	9				
HENGCHUN	27.82	326.4	5	54	1							
HSINKONG	28.38	328.8	6	7	9	12	15	91				
TAINAN	28.91	326.8				10	13	-40				
HWALIEN	28.97	330.2	6	8	5	11	2	8				
ILAN	29.58	331.2	6	8	-1	11	3	-1				
TAIPEI	29.92	331.2	6	15	0	11	6	9				

DJAKARTA	30.42	259.6	6	15	-1	12	39	82		
BRISBANE	30.49	150.9	6	14	-3	11	12	-6		
HONG KONG	32.10	317.7	6	31	0	11	41	-2		
KAGOSIMA	33.01	350.0	6	39	0					
CANTON	33.23	317.7	6	40A	-1	11	54	-7	7	56 PP
TOMIE	34.37	347.8	6	49	-2	11	55	-24	14	48
OOITA	34.47	352.2	7	0	8					
KOTI	34.57	355.0	6	51	-2					
SAGA	34.69	350.3	7	29	35					
HUKUOKA	34.99	350.6	6	54	-2	12	24	-4	15	1
RIVERVIEW	35.23	159.2	6	56K	-2	12	31	-1	14	50 SS
SUMOTO	35.28	357.1	6	59	0	12	27	-6		
ZO-SE	35.30	336.3	6	59A	0	12	27	-6	8	19 PP
HIROSIMA	35.49	353.6	6	57	-3	12	30	-6	14	55
OMAESAKI	35.50	1.9	7	49	49				15	12
OSAKA	35.55	358.1	7	10	9	12	15	-22	13	23
KOBE	35.59	357.6	7	3	2	12	33	-4	7	20
OSIMA	35.72	3.5	7	39	37				14	57
SHIZUOKA	35.87	2.1							8	20
MERA	35.90	4.1	7	17	13					
KYOTO	35.91	358.4	7	0	-4	12	29	-13		
NAGOYA	36.04	0.1	7	4	-1					
MISIMA	36.05	2.9	7	1	-4				8	16
HIKONE	36.15	359.1	7	5	-1	12	43	-3		
GIHU	36.27	359.8	7	6	-1	12	40	-8	15	22
YOKOHAMA	36.39	3.8	7	42	34				10	16
IIDA	36.40	1.3	7	11	3				15	46
YONAGO	36.45	355.1				12	52	1		
KOHU	36.54	2.3	7	32	23					
PERTH	36.59	210.8	7	11	1	12	57	4	8	34 PP
TOKYO C.M.O.	36.65	3.9	7	8	-2	12	48	-6	8	45 PP
KUMAGAYA	37.09	3.3				13	19	18		
NANKING	37.12	334.1	7	14	0	13	2	1	8	45 PP
MATUMOTO	37.14	1.4	7	21	7					
TUKUBASAN	37.21	4.3	7	10	-5	12	51	-11		
MAEBASI	37.33	2.9	7	19	3	12	58	-6	8	52 PP
MELBOURNE	37.34	169.4	7	16	0	13	7	3	17	17 SCS
MATUSIRO	37.44	1.8	7	12K	-5	12	56	-10	8	42 PP
UTUNOMIYA	37.52	3.9	7	11	-6	12	52	-15		
NAGANO	37.56	1.7	7	22	4					
TOYAMA	37.57	0.4	7	18	0					
SHIRAKAWA	38.12	4.3	7	19	-3	13	11	-5	7	59
HUKUSIMA	38.76	4.5	7	26	-2	13	23	-3		
NIIGATA	38.84	2.7	7	33	4					
SENDAI	39.31	5.0	7	29	-3					
SAKATA	39.86	3.6	7	47	10					
MIZUSAWA	40.19	5.1	7	37	-3	13	38	-9		
AKITA	40.69	3.8	7	44	0	13	54	-1		
MORI	43.09	4.0	8	3	-1					
URAKAWA	43.34	6.4	8	10	4	14	4	-30		
TOMAKOMAI	43.59	5.0							8	36
SIAN	43.85	325.9	8	13	3					
LINFEN	43.88	330.0	8	14	4					
SAPPORO	44.12	4.7	8	13	1	14	29	-16		
OBIHIRO	44.15	6.7	8	11	-1					
VLADIVOSTOK	44.21	354.8	8	10	-3	14	44	-3		
PEKING	45.07	337.4	8	20	0	14	55	-4		
Y.-SAKHLINSK	48.09	5.4	8	41	-2					
ONERAHI	49.01	139.0	8	52	2					
SHILLONG	50.92	304.6	9	4	-1	16	18	-3		
KARAPIRO	51.03	140.6	9	5	-1					
COBB RIVER	51.33	145.5	9	14	6					
KAIMATA	51.58	147.7	9	18	8					
TONGARIRO	51.80	141.9	9	10	-2					
APIA	52.32	106.6	9	16	0					
TUAI	52.58	140.5							9	25
WELLINGTON	52.63	144.4	9	14A	-4	16	36	-9	20	21 SS
CHRISTCHURCH	52.92	147.8				16	49	0		
GEBBIES PASS	53.05	148.0	9	19	-2					
CHATRA	55.30	304.0	9	38	0					
BOKARO	55.41	300.1	9	33	-5	17	18	-4		
PETROPAVLOVK	56.98	15.4	9	46	-4	17	40	-3		
COLOMBO	57.44	278.8	9	54	1	17	50	1		
MADRAS	57.94	286.0	9	55	-2	17	55	-1	13	30 PPP
IRKUTSK	59.79	337.5	10	9	0	18	19	-1		
KODAIKANAL	60.17	282.4	10	12A	0	18	31	6		
HYDERABAD	60.39	290.7	10	11A	-2	18	29	1	10	56 PCP
DEHRA DUN	64.02	304.6	10	38	0					
POONA	64.90	290.9	10	44	1	19	22	-2	13	6 PP

TERRE ADELIE	65.70	178.0	11	45	56	19	31	-3		
BOMBAY	65.92	291.2	10	50	0	19	37	0		
HONOLULU	67.22	66.5	11	0	2					
LAHORE	67.43	304.9	10	57	-3					
SEMIPALATNSK	70.26	325.4	11	15	-2	20	27	-2		
FRUNSE	70.79	316.4	11	19	-1	20	34	-1		
NAMANGAN	72.23	313.8	11	29	0	20	48	-4		
KARACHI	72.40	297.4	11	30	0	20	53	0		
TIKSI	72.76	357.3	11	34	2					
QUETTA	73.28	301.9	11	34A	-1	21	2	-1	14	18 PP
SVERDLOVSK	83.39	327.5	11	29	-61	22	47	-4		
COLLEGE	84.73	24.5	12	34	-3	22	56	-9	15	50 PP
TANANARIVE	89.04	251.2	13	0	2					
MAKHACH-KALA	90.27	312.8	13	5	1	23	58	1		
TIFLIS	92.27	311.5	13	12	-1					
MOSCOW	96.10	325.8	13	29	-2					
APATITY	96.11	337.9							23	4
VICTORIA	97.22	41.3							24	11
SODANKYLA	98.68	338.5	13	39	-3					
SHASTA	98.82	49.1	13	43	0				17	48 PP
BERKELEY	99.22	51.9	13	45	0				24	5 SKS
MINERAL	99.46	49.4	13	48	2					
KSARA	99.74	304.0	13	49	2	24	23	-55	17	46 PP
SIMFEROPOL	99.78	315.4							17	55 PP
KIRUNA	100.73	339.8	13	49	-3	25	20	-7	24	31 SKS
RENO	100.92	50.0	13	58	5					
WOODY	102.18	53.8	13	57	-1					
ISABELLA	102.50	53.8	14	2	2					
PASADENA	102.95	55.3	14	6	4	25	45	0	24	45 SKS
HUNGRY HORSE	103.40	40.4	14	8	4				18	21 PP
RIVERSIDE	103.62	55.4	14	6	1	24	41	-70	27	21 PS
PALOMAR	104.14	56.0	14	4	-3				18	7 PP
BUTTE	104.93	42.5	17	43	213	24	49	-73	27	41 PS
UPPSALA	105.23	332.8							27	40 PS
BOULDER CITY	105.37	53.0							18	35 PP
LWOW	105.41	321.8							17	27
BUCHAREST	105.50	316.0	18	41	777				24	55 SKS
WARSAW	106.43	324.8							21	4 PPP
SASKATOON	106.82	35.2							25	44
BELGRADE	109.26	317.5	14	58K	777	25	6	-3	19	19
SCORESBY SD.	109.32	352.6							26	11 SKKS
COPENHAGEN	109.60	330.3				25	13	3	19	8 PP
PRAGUE	111.09	324.4							19	20 PP
RAPID CITY	111.84	42.3							18	50 PP
HERMANUS	111.92	232.1				25	27	7	26	21 SKKS
JENA	112.33	326.1	19	0	22					
TARANTO	112.90	314.0							19	21 PP
TRIESTE	113.36	320.2							19	22 PP
STUTTGART	114.72	324.8	18	48	5	27	31	120	14	58 P
MESSINA	114.90	312.1	18	45	2				26	40 SKKS
KARLSRUHE	115.06	325.3	15	2A	-221				19	52 PP
DE BILT	115.14	329.4							29	21 PS
STRASBOURG	115.64	325.1	19	49	65				14	51 P
ROME	115.73	316.9							19	57 PP
FLORENCE X.	115.77	319.2							19	56 PP
PAVIA	116.47	321.3							19	24 PP
KEW	118.25	331.2							25	51
MONACO	118.25	320.6							20	2 PP
PARIS	118.44	327.5							35	51 SS
ALGIERS UNI.	124.55	315.3							20	49 PP
RELIZANE	126.81	315.5							21	2 PP
OTTAWA	127.33	28.5	19	13	6					
SHAWINIGAN	127.80	25.6	19	11K	3					
TAMANRASSET	128.10	298.3	19	10	2				22	29 PKS
SEVEN FALLS	128.16	23.8							28	4 SKKS
ALMERIA	128.29	318.3							21	24 PP
MORGANTOWN	129.02	36.6	19	6	-4					
MALAGA	129.63	319.3							21	28 PP
WASHINGTON	131.19	35.4							22	39 PP
PALISADES	131.45	31.1				26	7	-17	21	32 PP
COLUMBIA	131.72	43.2	19	13	-2				28	24 SKKS
BERMUDA	142.80	31.0	19	45	10				29	40 SKKS
CHINCHINA	147.31	82.5	19	43	0				19	52 PKP2
LA PAZ	149.76	126.3	19	51	4				23	23 PP
MBOUR	150.97	298.4	19	51	2				23	34 PP
SAN JUAN	151.60	51.3	19	53	3	30	25	209	23	23 PP

APRIL 8 20.H 18.M 13.S EPICENTRE 8.53 -82.78 DEPTH= 0.KM

A= 0.12435 B=-0.98123 C= 0.14740 D=-0.9921 E=-0.1257
G= 0.0185 H=-0.1462 K=-0.9891 HT= 6.7

SE= 2.99

	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	
BALBOA HTS.	3.21	82.2	0	50	-1	1	35	5					
SANTIAGO MA.	7.45	311.9	1	56	5								
CHINCHINA	7.94	116.0	1	57	-1	3	33	5					
SAN SALVADOR	8.17	309.8	2	1	0								
BOGOTA	9.48	113.7	2	18	-1	4	11	4					
COMITAN	11.92	310.9	2	47	-6	5	12	5			6	27	
MERIDA	14.00	332.6	3	13	-7	6	2	6			6	23	SS
OAXACA	16.03	303.1	3	49	2						5	9	
VERA CRUZ	16.73	310.7	3	49	-6	7	4	4			7	35	SS
SAN JUAN	18.91	57.1	4	18	-5	8	3	13			5	43	
TACUBAYA	19.23	305.9	4	29	3	7	55	-2			8	28	SS
GRENADA	21.00	78.6	4	49A	4								
TRINIDAD	21.07	82.5	4	43	-3								
ST. VINCENT	21.61	75.8	4	53	2								
HUANCAYO	21.75	160.0	4	50	-3	8	51	3			5	9	PP
ST. LUCIA	22.04	73.7	4	57	1								
FORT FRANCE	22.05	71.8	4	55	-1	9	3	9			5	31	
ANTIGUA	22.71	66.1	4	55K	-7								
GUADALAJARA	23.22	303.6	5	10	3	9	43	28					
COLUMBIA	25.40	3.4	5	30	2								
LITTLE ROCK	27.56	342.8	5	48	0								
LA PAZ	28.79	149.8	5	58A	-1	10	47	0			6	52	PP
BERMUDA	29.07	32.8	6	15	13	11	27	35			7	14	PP
FAYETTEVILLE	29.34	340.9	6	3A	-1	11	40	44	6	9			
LUBBOCK	30.51	327.5	6	13	-2								
WASHINGTON	30.67	8.8	6	22	6	11	23	6					
ST. LOUIS 1	30.72	348.5	6	15A	-2	11	19	1					
FLORISSANT	30.90	348.4	6	16	-2	11	22	1					
MORGANTOWN	31.07	4.2	6	20K	0								
PHILADELPHIA	32.01	11.1	6	38	10	11	49	11			7	39	PP
CLEVELAND	32.83	1.7	6	33	-2	11	52	1					
PALISADES	33.29	12.3	6	39	0	12	6	8			7	50	PP
TUCSON	35.12	316.2	6	56	1								
WESTON	35.19	14.8	6	57A	2	12	35	8					
OTTAWA	37.23	8.2	7	12A	-1	13	1	2	7	35	9	29	PCP
SHAWINIGAN	38.84	11.0	7	26K	0						9	34	PCP
HAYFIELD	39.28	314.4	7	30	0								
BARRETT	39.50	312.3	7	31A	-1	13	40	7					
KIRKLAND LA.	39.55	2.9	7	34A	2	13	34	0					
HALIFAX	39.62	21.6				13	40	5			10	21	
PALOMAR	39.97	313.1	7	37A	1								
BOULDER CITY	39.99	317.9	7	38	2								
RIVERSIDE	40.67	313.6	7	43	2	13	57	6					
SALT LAKE C.	41.20	325.9	7	46	0								
PASADENA	41.32	313.3	7	48	1	14	9	9			9	44	PP
CHINA LAKE	41.77	315.8	7	51A	1								
ISABELLA	42.29	315.1	7	56A	1								
WOODY	42.59	314.9	7	58A	1						9	48	PP
EUREKA	42.78	321.4	8	0	1						9	48	PP
TINEMAHA	42.86	317.0	8	1A	2	14	34	11					
KING RANCH	43.02	313.9	8	2A	1								
FRESNO	43.79	315.7	8	6	-1								
BOZEMAN	44.28	331.6	8	11	0								
RENO	45.25	319.0	8	19A	0								
BUTTE	45.26	330.8	8	17	-2						10	21	PP
LICK	45.34	315.3	8	20A	1								
BERKELEY	46.03	315.6	8	25A	0	15	17	8			10	0	PP
MINERAL	46.84	318.9	8	30A	-1								
UKIAH	47.30	316.6	8	36	1								
SHASTA	47.54	318.9	8	35A	-2								
HUNGRY HORSE	47.63	332.1	8	36	-1						15	35	
BANFF	50.35	333.7	8	55A	-3								
SEATTLE	51.36	326.6	9	5	-1								
VICTORIA	52.48	326.9	9	12	-2								
HORSESHOE B.	52.91	327.8	9	15	-3								
MBOUR	64.59	78.1	10	38	-1	19	23	7			12	55	PP
RESOLUTE	66.47	356.5	10	47A	-4	19	38	-1					
COLLEGE	71.85	336.0	11	21	-3								
RATHFARNHAM	75.14	37.1	11	42	-1								

MALAGA	75.65	54.3	11	46A	0						
TOLEDO	75.94	51.1	11	46	-2						
GRANADA	76.29	53.9	12	15A	25	21	42	9			
JERSEY	77.50	41.5	11	38	-19						
ABERDEEN	77.83	33.4				21	47	-2	27	5	
KEW	78.68	39.2	12	9	6	22	0	1			
RELIZANE	79.68	55.2	12	6	-3						
PARIS	80.53	41.9	12	19	6	22	29	11	15	57	
ALGIERS UNI.	81.63	54.0	12	24	5	22	32	3			
DE BILT	82.08	38.5	12	23	2	22	47	13			
STRASBOURG	84.03	41.9	12	37	6	22	48	-6	23	47	PS
KARLSRUHE	84.41	41.4	12	39K	6						
SKALSTUGAN	84.67	26.6	12	34	0						
HAMBURG	84.84	36.7	12	30	-5						
EBINGEN	84.87	42.2	12	34	-1				13	17	
STUTTGART	84.95	41.6	12	34	-2	23	4	1	23	59	SP
TAMANRASSET	85.19	67.8	12	37A	0	23	6	1	15	56	PP
COPENHAGEN	85.96	34.4				23	17	5	23	7	SKS
JENA	86.18	39.2	12	40	-2	23	5	-10	12	49	PCP
POTSDAM	86.87	37.6	12	53	8	23	24	3			
FLORENCE X.	87.06	46.3	12	25	-21	23	29	6			
KIRUNA	87.10	21.7	12	44	-2	23	10	-13			
UPPSALA	87.88	29.8	12	48	-2	23	10	-21			
PRAGUE	88.12	39.8				23	29	-4			
ROME	88.26	48.1	13	0A	8	23	33	-1	23	19	SKS
TRIESTE	88.50	44.2				23	47	11	23	20	SKS
MESSINA	91.27	51.2	13	5	-1	24	2	0	23	36	SKS
WARSAW	91.65	36.7	13	12	4	24	8	3	14	30	
TARANTO	92.07	48.7							15	47	
KSARA	108.25	50.3	14	24	777				19	5	PP
MATUSIRO	120.91	322.0	18	51	-1						
RIVERVIEW	124.50	234.7	19	3A	4				27	36	SKKS
RABAUL	125.26	270.9	18	59	-1						
QUETTA	131.75	35.8	19	6	-7	26	27	7	22	39	PKS
POONA	144.57	40.5	19	35	-1						
HONG KONG	145.15	331.8	19	37A	0						
SHILLONG	145.71	8.6	19	36	-2						
BAGUIO CITY	146.10	317.0	19	39	0						

APRIL 9 0.H 24.M 43.S EPICENTRE 30.54 138.39 DEPTH= 457.KM

DEPTH OF FOCUS= 0.067R

A=-0.64510 B= 0.57295 C= 0.50555 D= 0.6641 E= 0.7477
G=-0.3780 H= 0.3357 K=-0.8628 HT= 1.6

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	
HATIDYOZIMA	2.83	25.2	1	6	-1	1	58	-2					
SIOMISAKI	3.66	323.2	1	15	2	2	8	-3					
OWASE	3.98	332.8	1	17	1	2	18	2					
OMAESAKI	4.05	358.0	1	16K	-1	2	21	4			2	2	
OSIMA	4.30	10.9	1	17	-2	2	18	-3			1	54	
SHIZUOKA	4.42	0.1	1	21	1	2	22	-1					
TU	4.47	339.8	1	23	2	2	28	4					
MUROTO	4.49	308.2	1	25	4	2	30	6					
MERA	4.54	15.1	1	19	-2	2	22	-3			1	31	
AJIRO	4.54	7.4	1	21	0	2	24	-1					
MISIMA	4.59	5.7	1	19K	-3	2	21	-5					
KAMEYAMA	4.60	339.9	1	24K	2	2	30	4					
OSAKA	4.76	330.3	1	29	6	2	29	0					
NAGOYA	4.77	345.9	1	24	1	2	33	4			14	2	SCS
TOKUSIMA	4.78	318.5	1	26	3	2	32	3			14	3	SCS
SUMOTO	4.82	323.0	1	27	3	2	31	1					
KOBE	4.94	327.6	1	26	1	2	31	-1					
HUNATU	4.96	3.6	1	26	1	2	31	-1			14	3	SCS
IIDA	4.99	354.7	1	29	4	2	34	1					
YOKOHAMA	4.99	11.9	1	25	0	2	30	-3			2	12	
KYOTO	5.00	334.1	1	30	4	2	32	-1					
GIHU	5.04	344.7	1	26	0	2	31	-3			14	1	SCS
HIKONE	5.05	339.7	1	28K	2	2	37	3			14	1	SCS
KOHU	5.08	1.7	1	26K	0	2	34	0			14	1	SCS
KOTI	5.10	307.3	1	29	2	2	30	-5			14	3	
IBUKISAN	5.12	341.3	1	30	3	2	38	3			14	3	SCS
SIMIDU	5.13	297.2	1	27	0	2	33	-2					

HIMEJI	5.19	320.6			2	41	2			
TOKYO C.M.O.	5.25	12.2	1	25K	-3	2	34	-4		
TAKAMATU	5.26	316.9	1	30	2	2	39	1		
TSURUGA	5.46	339.7	1	31	1	2	42	1		
TITIBU	5.46	5.3	1	28	-2	2	39	-2		
MAIZURU	5.50	334.3	1	33	3	2	43	1	15	1
TYOSI	5.57	21.1	1	29	-2	2	43	0		
OKAYAMA	5.59	318.8	1	29	-2	2	44	0	14	17 SCS
UWAZIMA	5.65	299.9	1	35	3	2	44	-1	14	2 SCS
KUMAGAYA	5.66	8.2	1	30K	-2	2	41	-4		
TAKAYAMA	5.68	350.6	1	34	2	2	49	4		
MATUMOTO	5.71	356.6	1	33	0	2	45	-1	14	1 SCS
HUKUI	5.78	342.7	1	35	2	2	44	-3	14	3 SCS
OIWAKE	5.78	1.3	1	32K	-1	2	44	-3		
TOYOOKA	5.81	329.9	1	35	1	2	49	2		
TUKUBASAN	5.85	13.7	1	30	-4	2	33	-15	14	0 SCS
KAKIOKA	5.87	14.3	1	31	-3	2	40	-9		
MAEBASI	5.88	5.4	1	32	-2	2	43	-6	13	58 SCS
MATUSIRO	6.00	358.7	1	33K	-2	2	49	-2	14	2 SCS
MITO	6.08	16.0	1	34	-2	2	46	-6		
NAGANO	6.12	358.6	1	36K	-1	2	52	-1		
UTUNOMIYA	6.12	11.2	1	33	-4	2	45	-8	14	1 SCS
MIYAZAKI	6.13	284.8	1	38	1	2	57	4	14	3 SCS
KANAZAWA	6.15	346.8	1	39	2	2	58	4		
TOYAMA	6.23	351.1	1	41	3	2	53	-2	14	4 SCS
HIROSIMA	6.32	308.7	1	38	-1	2	54	-3	14	2 SCS
OOITA	6.35	296.8	1	39K	0	2	54	-4		
TAKADA	6.55	359.0	1	42	1	2	57	-4		
MATSUE	6.63	319.0	1	39	-3	3	1	-2		
ASOSAN	6.67	292.6	1	44	2	2	59	-5		
ONAHAMA	6.73	17.4	1	41	-2	2	59	-6	2	20
SHIRAKAWA	6.74	12.6	1	41	-2	2	59	-6		
KAGOSIMA	6.81	280.7	1	46K	2	3	10	4		
YAKUSIMA	6.81	271.3	1	45	1	3	10	4		
HAMADA	6.88	310.9	1	45	0	3	10	2	13	52 SCS
WAZIMA	6.94	350.1	1	47	2	3	9	0		
KUMAMOTO	6.94	291.1	1	46K	1	3	13	4		
SIMONOSEKI	7.18	300.2	1	49	1	3	17	4	14	3 SCS
UNZENDAKE	7.28	289.6	1	49K	0	3	19	4		
NIIGATA	7.39	4.1	1	49	-1	3	15	-2		
SAGA	7.39	293.6	1	53K	3	3	21	4	14	7 SCS
HUKUSIMA	7.40	12.9	1	50	0	3	14	-4		
HUKUOKA	7.41	296.2	1	50	0	3	20	2		
AIKAWA	7.47	359.1	1	51	0	3	16	-3		
NAGASAKI	7.58	289.0	1	53	1	3	23	2	14	4 SCS
YAMAGATA	7.86	11.4	1	54	-1	3	22	-5		
SENDAI	7.99	14.4	1	54	-3	3	23	-6		
ISINOMAKI	8.24	16.3	1	59	0	3	31	-3		
TOMIE	8.47	286.7	2	1	-1	3	37	-2	14	4 SCS
ITUHARA	8.53	297.7	2	3	0	3	42	2	14	5 SCS
MIZUSAWA	8.86	14.0	2	6	0	3	46	0		
AKITA	9.27	8.2	2	10	-1	3	54	0		
MORIOKA	9.42	13.2	2	11	-1	3	54	-3		
MIYAKO	9.55	16.9	2	13	-1	3	58	-2		
HATINOHE	10.29	13.5	2	21	-1	4	15	0	3	19
AOMORI	10.44	10.1	2	22	-2	4	15	-3		
HAKODATE	11.38	8.9	2	35	1	4	41	4	14	12 SCS
MORI	11.67	8.0	2	37A	0	4	44	1		
MURORAN	11.95	9.3	2	37	-3	4	47	-1		
URAKAWA	12.12	15.7	2	42	0	4	55	4	14	14 SCS
TOMAKOMAI	12.23	11.2	2	45	2	4	58	4		
SUTTSU	12.33	6.4	2	44	0	4	56	0	4	15
SAPPORO	12.73	9.9	2	46A	-2	5	2	-1		
OBIHIRO	12.94	16.0	2	51	0	5	13	5		
KUSIRO	13.32	19.5	2	56	1	5	18	3	3	26
VLADIVOSTOK	13.59	339.4	2	57	0	5	24	4		
ASAHIGAWA	13.59	12.4	3	0	3	5	26	6		
NEMURO	14.00	22.2	3	2	0	5	28	0		
ABASHIRI	14.25	17.5	3	7	3	5	38	5	14	16 SCS
ZO-SE	14.80	276.6	3	6	-4	5	41	-2	4	54 *SP
WAKKANAI	15.08	8.9	3	16	3	5	57	8		
ILAN	15.82	252.7	3	18	-2	6	2	0		
DAIREN	16.09	305.7	3	24	1					
HWALIEN	16.28	250.4	3	23	-2	6	8	-3		
KURILSK	16.45	24.3	3	29	2	6	23	9		
Y.-SAKHLINSK	16.73	10.4	3	33	4	6	28	9		
NANKING	16.82	280.2	3	29	-1	6	22	2	7	42 PCP
CHANGCHUN	16.84	325.6	3	31	0	6	26	5	5	30 *SP

HSINKONG	16.89	248.1	3	29	-2	6	29	7					
TAICHUNG	16.96	252.3	3	30	-2								
ALISHAN	17.15	250.2	3	36	2	6	30	4					
TAITUNG	17.24	247.4	3	37	2	6	43	15					
TAWU	17.64	246.6	3	39	0								
TAINAN	17.86	249.5	3	42	1	6	45	6					
SUIHWA	18.33	334.3	3	47	2	6	57	10					
UGLEGORSK	18.73	7.6	3	50	1	7	0	6					
FUTZELING	18.97	278.0	3	53	1								
PEKING	20.42	303.7	4	3	-2	7	22	-1			6	6	*SP
KWANTING	20.90	303.8	4	10	0								
BAGUIO CITY	21.50	233.2	4	13	-3								
TATUNG	22.54	301.9	4	27	2								
MANILA	22.55	229.1	4	23	-2	7	48	-11					
LINFEN	23.09	291.1	4	29	-1								
HONG KONG	23.16	255.0	4	29K	-2						6	32	*SP
CANTON	23.58	257.7	4	32	-3	8	14	-1			6	40	*SP
MAMBAJAO	24.31	212.1	4	45	4	8	25	-2					
PAOTOW	25.06	301.3	4	46	-2								
SIAN	25.12	286.2	4	48	0								
PETROPAVLOVK	26.98	27.4	5	2	-3	9	7	-2			6	18	
YINCHUAN	27.53	295.4	5	10	0								
TIENSHUI	27.74	287.0	5	9	-3								
LANCHOW	29.32	290.1	5	26	1								
KLYUCHI	30.20	24.9	5	33	0						12	31	*SS
MAGADAN	30.20	12.6	5	33	0	10	3	3					
WUWEI	30.33	293.8	5	34	0								
IRKUTSK	33.07	320.9	5	59A	2	10	46	2			15	31	SCS
YUMEN	34.82	297.7	6	12	0								
RABAUL	36.97	156.7	6	28K	-2	11	36	-7			9	31	PPP
SHILLONG	41.13	274.9	7	1K	-3	12	38	-6	8	47	15	18	*SS
TIKSI	41.47	355.5	7	6	-1	12	49	0	8	32	16	15	SCS
CHATRA	44.78	278.5	7	32	-1	13	36	0					
BOKARO	46.91	275.1	7	48K	-1	14	3	-3	9	44	17	3	*SS
SEMIPALATNSK	47.16	312.2	7	48	-3	14	0	-9			9	13	PCP
DJAKARTA	47.40	225.0	7	49K	-4				8	47			
DEHRA DUN	51.46	286.1	8	22	-1	15	8	0			17	26	SS
FRUNSE	51.49	302.5	8	24K	0	15	9	1			10	33	PP
NEW DELHI	52.68	284.3	8	29	-3	15	21	-3			18	2	SCS
LAHORE	54.17	288.7	8	40	-3	15	44	0			17	42	*SS
TASHKENT	55.65	301.5	8	53	0	16	4	1			17	51	SCS
HYDERABAD	55.73	271.0	8	50K	-4	16	2	-2			10	0	PCP
COLLEGE	55.95	29.7	8	53	-3	16	4	-3	10	24	9	25	PCP
MADRAS	56.22	265.4	8	58K	1	16	11	0			10	51	PP
STALINABAD	56.68	298.4	9	1	0	16	17	0					
SVERDLOVSK	58.48	320.9	9	11	-2	16	38	-2			11	28	PP
POONA	59.23	274.4	9	16	-2	16	49	0			9	59	PCP
BRISBANE	59.36	164.9	9	18	-1	16	50	-1					
COLOMBO	59.49	259.4	9	16	-4	16	49	-4					
BOMBAY	59.96	275.3	9	22	-1	17	1	2	10	54	19	43	*SS
QUETTA	60.62	289.6	9	25	-2	17	6	-1	10	58	11	44	PP
SITKA	63.01	37.7	9	42	-1	17	41	5	11	11	12	2	PP
APIA	65.11	125.1	9	59	9								
RIVERVIEW	65.14	168.3	9	56K	6	18	2	0	11	27	12	22	PP
APATITY	67.59	336.3	10	11A	0	18	32	1	11	53	12	58	PP
MELBOURNE	68.29	174.4	10	16	0	18	42	3	11	51	19	39	SKS
RESOLUTE	69.50	13.2	10	21A	-2	18	54	1	11	54	12	46	PP
SODANKYLA	69.98	337.5	10	25	-1	19	0	1	12	8	19	40	SCS
MOSCOW	70.99	324.0	10	30	-2	19	9	-1	12	15	19	49	SCS
KIRUNA	71.69	339.3	10	34A	-2	19	19	1			13	22	PP
HORSESHOE B.	72.49	42.7	10	40A	0	19	1	-26			19	31	
PULKOVO	72.50	329.7	10	41	0	19	27	0	12	22	13	29	PP
GORIS	72.77	305.9	10	43	1	19	32	2			19	57	SKS
VICTORIA	72.79	43.5	10	41A	-1	19	35	5	12	20	14	7	PP
TIFLIS	72.86	308.6	10	44	1	19	32	1			20	7	SCS
SEATTLE	73.85	44.0	10	50K	2	19	50	8					
ONERAHI	74.12	150.2	10	53	3								
HELSINKI	74.55	331.6	10	52	0	19	48	-2	12	36			
CORVALLIS	74.66	47.2	10	53A	0	19	57	6	12	37			
KARAPIRO	76.43	150.6	11	3	0	20	18	8					
SKALSTUGAN	77.02	338.2	11	4A	-2	20	24	8			14	5	PP
SHASTA	77.10	50.3	11	7A	1	20	20	3	12	52	14	9	PP
UKIAH	77.30	52.1	11	8	1								
TONGARIRO	77.51	151.3	11	8	-1	20	24	3	12	50			
UPPSALA	77.66	333.6	11	7A	-2	20	19	-4	12	52	14	12	PP
MINERAL	77.79	50.4	11	10A	0								
TUAI	77.86	150.0				20	22	-3					
COBB RIVER	78.02	154.2	11	12	1	20	25	-2	12	59			
SIMFEROPOL	78.17	315.3	11	11K	-1	20	27	-1	12	59	20	45	SCS

SCORESBY SD.	78.29	353.4	11	12	-1	20	33	4	12	54	25	43 SS
HUNGRY HORSE	78.30	40.5	11	13	0	20	33	3			20	45 SCS
BERKELEY	78.57	52.8	11	14A	0	20	37	5	12	52	22	26 PS
KAIMATA	78.79	155.7	11	24	9	20	34	-1	13	23		
WELLINGTON	78.97	152.9				20	30	-6	12	54		
LICK	79.26	53.0	11	18A	0				13	1		
RENO	79.39	50.4	11	18A	-1	20	45	4	13	1		
CHRISTCHURCH	80.10	155.5				20	45	-3			23	40
GEBBIES PASS	80.26	155.5	11	22	-1							
BUTTE	80.42	41.9	11	23	-1	20	54	3	13	3	14	43 PP
IASI	80.75	319.8	11	29	3	20	53	-2				
FRESNO	80.82	52.8	11	26A	0	20	59	4				
LWOW	81.10	323.3	11	28	1	20	59	1			26	29 SS
WARSAW	81.10	326.4	11	27A	0	20	59	1	13	9	14	41 PP
BOZEMAN	81.49	41.6	11	31	2							
BACAU	81.49	319.5	11	30	1	21	3	1				
KING RANCH	81.61	54.0	11	31A	1	21	13	10			40	48 SKPPKP
TINEMAHA	81.74	51.8	11	31A	0	21	9	4	13	7	14	54 PP
FOCSANI	81.83	318.7	11	41	10	21	9	3				
EUREKA	81.95	48.8	11	32	0	21	5	-2	13	12	14	46 PP
WOODY	82.03	53.3	11	32A	0	21	10	3	13	14	14	51 PP
ISABELLA	82.32	53.2	11	33A	-1	21	12	2	13	22	14	49 PP
COPENHAGEN	82.54	332.5	11	34A	-1	21	12	-1	13	21	14	56 PP
CHINA LAKE	82.83	52.6	11	36A	0	21	5	-10	13	18	14	56 PP
KSARA	82.85	305.0	11	36	0	21	16	0	13	26	14	1 *SP
KRAKOW	83.03	325.2	11	36	-1	21	17	0	13	22	14	53 PP
BUCHAREST	83.22	318.1	11	39A	1	21	18	-1	13	26	24	10 *SS
CAMPULUNG	83.32	319.3				21	20	0			12	0
PASADENA	83.33	54.3	11	39A	0	21	24	4	13	22	14	56 PP
SKALNATE PL.	83.43	324.4	11	42	3	21	25	4	13	28	24	21 *SS
SALT LAKE C.	83.84	46.0	11	42	1							
RACIBORZ	83.85	325.9	11	42	1	21	24	-1			21	40 SKS
RIVERSIDE	83.97	54.1	11	40A	-2	21	20	-7	13	24	15	2 PP
REYKJAVIK	84.38	351.4	11	46	2				13	29		
JERUSALEM	84.40	303.6	11	45	1	21	27	-4				
BOULDER CITY	84.63	51.3	11	38	-7							
POTSDAM	84.63	329.8	11	45	0	21	34	1	13	31	15	11 PP
PALOMAR	84.68	54.4	11	45A	0	21	39	6	13	29	15	6 PP
HAMBURG	85.06	332.0	11	47	0	21	38	1	13	34	21	23 SKS
TIMISOARA	85.12	321.3	11	53	5	21	31	-7				
BUDAPEST	85.13	323.6	11	50	2	22	1	23	13	36	21	29 SKS
BARRETT	85.18	54.9	11	47A	-1	21	30	-8	13	31	15	14 PP
HURBANOVO	85.32	324.3				21	41	2			16	45
HAYFIELD	85.34	53.5	11	48	-1	21	34	-6	13	34	15	12 PP
SZEGED	85.38	322.2				21	27	-13				
PRAGUE	85.64	327.6	11	51K	1	21	41	-1	13	21	21	30 SKS
BRATISLAVA	85.67	325.0	11	50	0	21	43	0	13	38	15	34 PP
KALOCSA	85.80	322.9	11	55	4	21	34	-10	13	17		
SOFIA	85.86	318.0	11	50	-1	21	36	-9	13	32	21	50
BELGRADE	86.13	320.9	11	53A	1	21	49	2	13	44	24	39 *SS
JENA	86.31	329.5	11	52	-1	21	48	-1	13	39	15	20 PP
ABERDEEN	86.48	339.7				21	50	0			24	50 *SS
CHEB	86.57	328.5				21	37	-14			24	52 *SS
WITTEVEEN	86.94	333.0	11	55	-1							
DE BILT	88.08	333.3	12	1A	-1	21	47	-18	13	46	15	37 PP
BOULDER	88.27	43.5									12	3
DURHAM	88.33	338.1				21	50	-17			15	37 PP
STUTTGART	88.95	329.1	12	3	-3	21	51	-22	13	52	15	36 PP
TRIESTE	89.07	324.7	12	7	1	22	14	0	13	57	21	42 SKS
KARLSRUHE	89.11	329.7	12	6A	0	21	58	-16	13	52	15	45 PP
TUBINGEN	89.18	329.0	12	8	1	21	52	-23			15	46 PP
TUCSON	89.48	52.4	12	8	0	22	1	-17	13	50	15	47 PP
EBINGEN	89.49	328.9	12	6	-2				13	54	15	48 PP
STRASBOURG	89.72	329.7	12	9A	0	22	17	-3	13	49	15	48 PP
BASLE	90.59	329.1	12	11K	-2	22	27	-1				
KEW	90.63	335.6	12	13	0	22	26	-2	14	1	22	1 SKS
TARANTO	90.78	319.2				22	32	3				
RATHFARNHAM	91.04	339.7	12	13K	-2	22	36	5	14	1	15	58 PP
NEUCHATEL	91.28	329.1									16	1 PP
BESANCON	91.51	329.8	12	19	1						16	5 PP
PAVIA	91.63	326.8	12	19	1				14	0	16	6 PP
FLORENCE X.	91.65	324.7	11	55	-23	22	5	-32	14	3	16	5
PARIS	91.74	332.6	12	18K	-1	22	43	6			16	6 PP
ROME	92.37	322.8	12	21A	-1	22	41	-2	14	7	16	11 PP
MESSINA	93.29	318.5	12	24K	-2	22	49	-2	14	1	16	11 PP
REGGIO CALA.	93.30	318.3				22	48	-3				
KIRKLAND LA.	94.42	24.7	12	32A	1							
LUBBOCK	94.54	46.6	12	33	2	22	27	-34	14	15	25	40

FAYETTEVILLE	97.36	40.4	12	45A	1	22	27	-58	25	48 SS
FLORISSANT	97.41	36.3	12	45A	1	23	32	6	22	38 SKS
ST. LOUIS 1	97.60	36.4	12	45	0	22	40	-47	14 30	16 52 PP
SHAWINIGAN	98.26	21.2	12	48K	0	22	41	-52	14 44	16 51 PP
OTTAWA	98.31	23.5	12	47K	-2	22	41	-52	14 30	16 55 PP
TANANARIVE	100.07	254.0	12	56	0					16 52 PP
PITTSBURGH	100.95	28.8				22	52	-63		
ALGIERS UNI.	101.04	324.9	16	55	234					25 32 SP
MORGANTOWN	101.62	29.3	13	5A	2					16 27 PKP
TOLEDO	101.74	331.4								17 26 PP
WESTON	102.46	22.1	13	10K	3					
PALISADES	102.79	24.5	13	10	2	23	0	-71	14 48	17 27 PKP
FORDHAM	102.95	24.6				23	5	-67		17 32 PP
RELIZANE	103.07	325.9								17 22 PP
PHILADELPHIA	103.26	25.9	17	35	265	26	20	126		23 5
GRANADA	103.81	329.6	13	20A	7	25	50	91		17 35 PP
MALAGA	104.55	329.9								17 43 PP
TACUBAYA	105.64	55.8				23	22	0		17 38 PP
LWIRO	107.99	278.2								22 4
TAMANRASSET	110.31	313.8	17	42	3	25	19	104		18 19 PP
BERMUDA	113.72	21.2								18 53 PP
GRAHAMSTOWN	123.02	248.0	17	36	-27					
SAN JUAN	125.95	29.1	18	10	1				19 56	
ANTIGUA	129.12	24.3	18	17	2					20 24
MBOUR	129.44	328.5	18	19	3					20 58 PP
FORT FRANCE	131.22	25.5	18	23	4					21 4 PP
ST. LUCIA	131.92	25.7	18	22	1					21 5 PP
CHINCHINA	131.99	48.6	18	23	2				20 11	21 55 PKS
ST. VINCENT	132.61	26.4	18	24	2					21 8 PP
BOGOTA	133.25	47.3	18	31	8	24	27	-22		26 11 SKKS
BARBADOS	133.27	24.4								21 13 PP
TRINIDAD	134.78	28.1	18	28	2					21 13 PP
HUANCAYO	143.79	66.8	18	43	0					22 23 PKS
LA PAZ	152.05	66.0	19	1	6				20 46	28 59 SKKS

APRIL 9 10.H 35.M 34.S EPICENTRE 30.57 138.24 DEPTH= 468.KM

DEPTH OF FOCUS= 0.069R

A=-0.64338 B= 0.57438 C= 0.50611 D= 0.6660 E= 0.7460
G=-0.3775 H= 0.3371 K=-0.8625 HT= 1.6

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
HATIDYOZIMA	2.86	27.8	1	6	-2	1	58	-3				
OMAESAKI	4.01	359.7	1	17	0	2	18	1				
OSIMA	4.29	12.6	1	18	-1	2	17	-5				
SHIZUOKA	4.39	1.7	2	22	62							
KAMEYAMA	4.52	341.2	1	22	1	2	28	2				
AJIRO	4.52	9.0	1	19	-2	2	24	-2				
MERA	4.54	16.7	1	19	-2	2	21	-5				
MISIMA	4.57	7.3	1	20	-2	2	19	-8				
NARA	4.57	334.2	1	24	2	2	29	2				
OSAKA	4.66	331.3	1	24	1	2	30	2				
NAGOYA	4.71	347.2	1	25	2	2	30	1				
SUMOTO	4.72	323.8	1	24	1	2	30	1				
KOBE	4.84	328.5	1	27	3	2	35	4				
KYOTO	4.91	335.1	1	26	1	2	33	1				
HUNATU	4.93	5.0	1	27	2	2	29	-3				
IIDA	4.94	356.1	1	29	4	2	34	1				
GIHU	4.97	346.0	1	26	1	2	30	-3				
HIKONE	4.97	340.8	1	26	1	2	35	2				
KOTI	4.98	307.8	1	26	1	2	34	1			14	0 SCS
YOKOHAMA	4.98	13.3	1	28	3	2	29	-4				
SIMIDU	5.00	297.4	1	27	1						2	20
IBUKISAN	5.04	342.4	1	42	16							
KOHU	5.05	3.0	1	27	1	2	34	0				
TOKYO C.M.O.	5.25	13.5	1	26	-2	2	33	-5				
TITIBU	5.44	7.2	1	30	0	2	37	-4				
UWAZIMA	5.52	300.1	1	31	0	2	45	2			6	28
KUMAGAYA	5.64	9.4	1	31	-1	2	40	-5				
MATUMOTO	5.67	357.8	1	32	0	2	44	-1				
HUKUI	5.71	343.7	1	34	1	2	47	1				
TOYOOKA	5.72	330.7	1	33	0	2	47	1			2	51
OIWAKE	5.75	2.5	1	31	-2						3	16

TUKUBASAN	5.84	14.9	1	30	-4	2	43	-5			
MAEBASI	5.85	6.6	1	33	-1	2	46	-3	2	2	
KAKIOKA	5.87	15.5	1	31	-3	2	43	-6			
MATUSIRO	5.96	359.8	1	33A	-2	2	47	-4			
MIYAZAKI	5.99	284.7	1	37	2	2	56	5			
NAGANO	6.08	359.7	1	36	0	2	52	-1			
MITO	6.08	17.2	1	36	0	2	46	-7			
KANAZAWA	6.09	347.8				2	56	3			
UTUNOMIYA	6.11	12.4	1	33	-4	2	46	-7			
HIROSIMA	6.20	309.1	1	35	-3	2	47	-8			
OOITA	6.22	296.9	1	38	0	2	55	0			
KAGOSIMA	6.67	280.5	1	44	2	3	7	3			
SHIRAKAWA	6.73	13.6	1	43	0	2	59	-6			
ONAHAMA	6.73	18.5				2	59	-6	2	49	
KUMAMOTO	6.81	291.1	1	44	0	3	10	4			
SAGA	7.26	293.6	1	58	9	3	19	4			
HUKUOKA	7.28	296.3	1	49	0	3	19	4	3	4	
HUKUSIMA	7.39	13.9	1	49	-1	3	14	-3			
AIKAWA	7.43	0.0				3	14	-4			
SENDAI	7.98	15.2	1	55	-1	3	24	-5			
ISINOMAKI	8.24	17.1	1	58	-1	3	29	-5			
MIZUSAWA	8.86	14.7	3	43	97	3	52	6			
AKITA	9.25	8.9				3	53	-1			
MORIOKA	9.41	13.9	2	10	-2	3	58	1			
URAKAWA	12.11	16.3				4	53	3			
OBIHIRO	12.94	16.5				5	13	7			
KUSIRO	13.32	20.0				5	24	10			
VLADIVISTOK	13.51	339.7				5	22	4			
NEMURO	14.01	22.6				5	11	-16			
ZO-SE	14.67	276.4	3	5K	-3	5	41	1	7	3	
NANKING	16.68	280.1	3	26K	-2	6	20	3			
CHANGCHUN	16.74	325.8	3	30K	1	6	25	7			
PEKING	20.29	303.7	4	4	1	7	25	6			
BAGUIO CITY	21.43	232.9	4	12	-2	7	41	3			
MANILA	22.48	228.7	4	20	-3	7	48	-8			
HONG KONG	23.04	254.8	4	30	1	8	22	17	6	34	*SP
CANTON	23.46	257.5	4	30	-2						
SHILLONG	41.00	274.8	7	0K	-2						
CHATRA	44.65	278.4	7	30	-1						
SEMIPALATNSK	47.04	312.1	7	47	-2				13	43	
NAMANGAN	53.83	300.6	8	38	-1				15	40	
LAHORE	54.03	288.7	8	39	-2						
COLLEGE	55.98	29.7	8	52	-2						
SVERDLOVSK	58.37	320.9	9	11	0						
QUETTA	60.48	289.5	9	21	-4	17	4	1	19	57	*SS
KARACHI	61.98	284.9	9	36	1	17	28	6			
RESOLUTE	69.49	13.1	10	22K	1						
SODANKYLA	69.90	337.5	10	23	-1						
MOSCOW	70.88	324.0	10	28	-2						
KIRUNA	71.61	339.3	10	34	0						
HORSESHOE B.	72.54	42.7	10	39	0						
VICTORIA	72.85	43.5	10	41	0						
HELSINKI	74.46	331.5	10	48	-2						
BANFF	76.02	38.5	10	58	-1						
SKALSTUGAN	76.94	338.2	11	4	0				14	4	PP
SHASTA	77.17	50.3	11	7A	2						
UPPSALA	77.57	333.6	11	6A	-1	20	17	-3			
MINERAL	77.87	50.3	11	10A	1						
HUNGRY HORSE	78.35	40.4	11	12	0	20	45	17			
BERKELEY	78.65	52.8	11	14K	1						
RENO	79.46	50.3	11	18K	1						
BUTTE	80.47	41.9	11	23	0						
FRESNO	80.90	52.7	11	26A	1						
LWOW	81.00	323.3	11	27	2						
BOZEMAN	81.55	41.5	11	30	2						
KING RANCH	81.69	53.9	11	31A	2						
TINEMAHA	81.82	51.8	11	32A	2						
EUREKA	82.02	48.8	11	32	1				13	12	14 47
WOODY	82.11	53.2	11	31A	0						
ISABELLA	82.40	53.1	11	32A	0						
COPENHAGEN	82.45	332.4	11	33	0						
CHINA LAKE	82.91	52.6	11	36A	1						
PASADENA	83.41	54.2	11	38A	0						
RIVERSIDE	84.05	54.0	11	40A	-1						
BOULDER CITY	84.70	51.2	11	45	1						
PALOMAR	84.76	54.3	11	45	1						
BARRETT	85.26	54.8	11	47	0						
HAYFIELD	85.42	53.5	11	48	1						
BOULDER	88.33	43.4	12	3	2						

	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	
STUTTGART	88.85	329.1	12	4	0								
TUCSON	89.56	52.3	12	8	1								
TAMANRASSET	110.19	313.7	17	57	20								
HUANCAYO	143.90	66.6	18	42	1								
											18	20	PP
											21	41	PP

APRIL 9 11.H 2.M 12.S EPICENTRE 51.27-178.56 DEPTH= 0.KM

A=-0.62807 B=-0.01576 C= 0.77799 D=-0.0251 E= 0.9997
G=-0.7777 H=-0.0195 K=-0.6283 HT= -5.9

SE= 2.59

	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	
PETROPAVLOVK	14.09	286.5	3	21	-2	6	0	-1					
COLLEGE	20.92	37.7	4	46	0	8	44	8			7	2	PCP
Y.-SAKHLINSK	25.50	275.6	5	31	0								
SITKA	25.62	60.0	5	34	2	10	5	6			6	16	PP
TIKSI	30.80	330.5	6	17	-2								
ALBERNI	33.77	71.8	6	47	2								
MATUSIRO	33.90	261.3	6	46	0	12	11	0					
VLADIVOSTOK	34.06	276.0	6	48	0								
HORSESHOE B.	34.64	70.9	6	53	0	12	24	2					
VICTORIA	34.93	72.3	6	54	-1	12	31	4					
SEATTLE	35.99	73.1	7	8A	4								
CORVALLIS	36.87	78.2	7	16	4	13	7	10			8	50	
CHANGCHUN	37.79	281.3	7	14	-5								
BANFF	38.38	64.6	7	24	0								
SHASTA	39.53	82.9	7	36	2	13	33	-4					
RESOLUTE	39.79	24.4	7	35	-1	13	28	-13			9	9	PP
UKIAH	39.93	85.5	7	42	5								
MINERAL	40.22	82.8	7	40K	0								
HUNGRY HORSE	40.55	67.9	7	42	0	13	38	-14			9	53	PCP
BERKELEY	41.28	86.3	7	49	1								
RENO	41.81	82.6	7	54	1								
LICK	42.00	86.5	7	54A	0								
BUTTE	42.60	70.1	7	59	0	14	25	2			9	48	PP
SASKATOON	42.89	59.4				14	33	6					
FRESNO	43.50	85.8	8	8	1								
BOZEMAN	43.68	69.7	8	8	0								
EUREKA	44.23	80.0	8	12	0	14	50	3			9	56	PP
TINEMAHA	44.31	84.3	8	16	3						8	39	
KING RANCH	44.45	87.4	8	16	2						10	15	
WOODY	44.77	86.3	8	17	0								
ISABELLA	45.04	86.1	8	19	0								
CHINA LAKE	45.48	85.2	8	22	0						10	23	
PEKING	45.55	282.3	8	26	3	15	10	4					
IRKUTSK	45.59	303.0	8	22	-1								
SALT LAKE C.	45.99	75.9	8	27	0								
PASADENA	46.20	87.4	8	29	1	15	26	11			8	46	
RIVERSIDE	46.80	87.0	8	33	0								
BOULDER CITY	47.11	83.1	8	36	1								
PALOMAR	47.55	87.3	8	39	0								
HAYFIELD	48.08	86.0	8	44	1								
BARRETT	48.11	87.8	8	42	-1						9	0	
ZO-SE	48.15	269.4	8	43	0	15	42	0					
NANKING	49.00	272.1	8	49	-1								
BOULDER	50.41	72.6	8	51	-10								
TUCSON	52.06	83.9	9	13	0						11	30	PP
LUBBOCK	56.71	76.4	3	46	-1								
SEMIPALATINSK	58.68	312.7	9	59	-2	18	5	0					
CANTON	58.77	268.5	10	1	-1	18	6	0					
HONG KONG	58.78	267.2	10	1	-1	18	7	0					
KIRKLAND LA.	58.97	50.6	10	6	3								
BAGUIO CITY	59.19	257.4	10	6	1								
FAYETTEVILLE	59.59	69.2	10	7A	-1						10	56	
SCHEFFERVLLE	60.07	38.3	10	11	0						10	57	PCP
SODANKYLA	60.17	349.1	10	15	3						11	0	PCP
KIRUNA	60.38	351.8	10	11	-2								
RABAUL	60.66	214.0	10	9	-6						11	5	
SVERDLOVSK	61.77	327.6	10	28	5								
OTTAWA	63.02	50.4	10	29A	-2								
SHAWINIGAN	63.58	47.9	10	37	3								
BREBEUF	63.95	49.1	10	34	-3								
SEVEN FALLS	64.05	46.3				19	31	17			23	28	SS
SKALSTUGAN	65.18	354.7	10	45	0								
FRUNSE	66.82	310.1	10	55	0								

PALISADES	67.15	52.6	10	57A	-1	19	55	4		24	43 SS
HELSINKI	67.31	347.5	10	57	-1						
UPPSALA	68.47	351.3	11	2	-4	20	3	-4			
TACUBAYA	68.51	85.6	11	19	13	19	52	-16		13	31 PP
COLUMBIA	68.62	62.2	11	7	0						
HALIFAX	69.19	43.8	11	8	-2						
MOSCOW	69.22	339.1	11	8	-2						
NAMANGAN	69.67	310.6	11	11	-2						
SHILLONG	70.23	286.3	11	13	-4	20	25	-3			
CHATRA	72.09	290.5	11	26	-2	20	55	5			
COPENHAGEN	73.03	353.5	11	34	1	21	6	6			
DEHRA DUN	74.63	299.3	11	48	5	21	16	-2			
BOKARO	75.16	289.5								21	26
WARSAW	75.56	347.7	11	51	3	21	29	0		16	26 PPP
RATHFARNHAM	75.61	4.8	11	49K	1						
LAHORE	75.68	302.6	11	47	-2	21	30	0			
POTSDAM	76.26	352.7	11	53	1						
DE BILT	76.96	357.6	11	58	2	21	42	-2			
LWOW	77.46	345.2	12	4	5						
KEW	77.63	1.1	12	4	4					14	48 PP
JENA	77.82	353.5	11	59	-2					15	6
KRAKOW	77.84	347.9	12	0	-1					15	0 PP
MAKHACH-KALA	77.97	327.3	11	59	-2	21	54	-1			
BERMUDA	78.50	52.1	12	4	0	22	2	2		15	6 PP
KISHINEV	79.30	341.3	12	14	5						
IASI	79.37	342.2	13	12	63						
TIFLIS	79.99	328.5	12	10	-2	22	13	-3			
BRATISLAVA	80.04	349.4	12	12	-1	22	28	11		15	24 PP
SIMFEROPOL	80.08	337.1	12	12	-1	22	20	3			
STUTTGART	80.12	354.8	12	3	-10					12	18
PARIS	80.30	359.3	12	15	1	22	22	3		15	21 PP
STRASBOURG	80.39	355.7	12	8	-7	22	16	-4		15	19 PP
QUETTA	80.58	307.0	12	15	-1	22	18	-4		27	39 SS
EBINGEN	80.72	354.9	12	15	-1						
BESANCON	81.79	356.9	12	28	6					13	1
BRISBANE	82.31	205.2	12	26	1						
BUCHAREST	82.33	342.4	12	31	6	22	51	11			
TRIESTE	82.88	351.3	12	28	0	22	51	5		23	42 PS
BELGRADE	82.89	346.5	12	30K	2					15	45
PAVIA	83.70	354.5	12	31	-1						
HYDERABAD	84.44	290.8	12	40K	5	22	57	-5		15	56 PP
FLORENCE X.	84.95	352.9	12	21	-17	23	10	3		16	20 PP
POONA	86.24	295.0	12	43	-1	23	18	-1			
BOMBAY	86.53	296.0	12	52	6	23	21	-1			
ROME	86.72	351.8	12	46A	-1	23	28	4		16	20 PP
RIVERVIEW	88.83	204.8	12	58A	1	24	10	27		24	30
SAN JUAN	89.08	61.4	12	57	-1						
KSARA	90.02	331.9	13	4	1					25	15 PS
MESSINA	90.05	348.9	12	57	-6	23	50	-5		16	32 PP
ALICANTE	90.74	1.5	13	3	-3	23	54	-7		16	39 PP
COLOMBO	91.85	283.3				23	41	-30			
ALGIERS UNI.	92.33	358.7	13	13	0					25	29 PS
ST. LUCIA	95.44	59.8	13	22	-5						
ST. VINCENT	96.00	60.5	13	30	0						
TRINIDAD	97.91	62.1	13	38	-1						
TAMANRASSET	106.19	356.1				26	21	3		18	45 PP
LA PAZ	115.47	84.7								19	51 PP
LWIRO	126.01	325.4	19	5A	1						
PRETORIA	147.37	311.2	19	45	2						

APRIL 9 20.H 23.M 57.S EPICENTRE 52.26-169.21 DEPTH= 0.KM
A=-0.60382 B=-0.11503 C= 0.78878 D=-0.1871 E= 0.9823
G=-0.7748 H=-0.1476 K=-0.6147 HT= -6.2

SE= 2.47

	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	16.74	32.7	3	52	-4	7	11	10			4	28
PETROPAVLOVK	19.41	285.4	4	28	0							
SITKA	20.05	62.7	4	34	-1	8	16	1				
HORSESHOE B.	28.79	77.2	5	59	0	10	50	3				
VICTORIA	29.06	78.9	6	2	0	10	55	4			12	24
SEATTLE	30.11	79.8	6	21	10	11	27	19				
HONOLULU	32.08	160.2	6	27	-2							
BANFF	32.64	70.1	6	28	-6							

SHASTA	33.68	91.1	6 43K	0						
UKIAH	34.12	94.1	6 46	0						
MINERAL	34.37	91.0	6 47K	-2						
HUNGRY HORSE	34.74	74.0	6 51	-1	12	20	0		9	24 PCP
BERKELEY	35.49	95.0	6 57K	-1	12	31	-1			
RENO	35.96	90.7	7 1K	-1						
SANTA CLARA	36.01	95.4	7 15	13						
LICK	36.21	95.1	7 3K	-1						
RESOLUTE	36.43	25.5	7 4K	-2					9	42
BUTTE	36.75	76.6	7 9	0	12	38	-13			
FRESNO	37.70	94.3	7 16	-1						
BOZEMAN	37.84	76.2	7 16	-2						
EUREKA	38.36	87.8	7 23	1						
TINEMAHA	38.48	92.6	7 25	2						
KING RANCH	38.68	96.0	7 24	-1					7	41
WOODY	38.97	94.8	7 27K	0					8	0
ISABELLA	39.24	94.5	7 29	-1					7	45
VLADIVOSTOK	39.66	280.9	7 33	0						
CHINA LAKE	39.67	93.6	7 33	0					7	49
MATUSIRO	39.78	268.1	7 34	0	13	41	4			
PASADENA	40.43	96.0	7 39K	0						
RIVERSIDE	41.02	95.5	7 43K	-1						
BOULDER CITY	41.26	91.1	7 46	0						
PALOMAR	41.77	95.8	7 40K	-10					8	18
BARRETT	42.34	96.3	7 55K	0					8	26
CHANGCHUN	43.20	285.9	8 0A	-2						
BOULDER	44.53	79.5	8 13	0						
TUCSON	46.22	91.9	8 26	0	15	12	1		9	33 PCP
IRKUTSK	49.79	306.6	8 53	-1						
KIRKLAND LA.	53.72	56.2	9 22	-2						
FAYETTEVILLE	53.75	76.0	9 21	-3						
ZO-SE	53.90	275.7	9 26	1	17	4	6		17	21 *SS
NANKING	54.69	278.3	9 30A	-1	17	17	8			
SCHEFFERVLLE	55.52	43.3	9 37K	0						
OTTAWA	57.77	56.2	9 50K	-3						
SHAWINIGAN	58.45	53.6	9 56	-2						
BREBEUF	58.76	54.9	10 3	3						
MORGANTOWN	59.52	63.6	10 4	-1						
KIRUNA	60.02	355.8	10 7A	-2				10	18	
SODANKYLA	60.10	353.0	10 7	-2				10	18	
PALISADES	61.80	58.8	10 28	7						
COLUMBIA	62.92	68.8	10 36	8						
SVERDLOVSK	63.83	332.1	10 34	0						
SKALSTUGAN	64.50	359.3	10 36	-2				10	46	
CANTON	64.54	275.2	10 41	2	19	19	3			
HONG KONG	64.57	274.0	10 51K	12	19	20	4			
RABAUL	65.06	223.3	10 40	-2					11	41
PULKOVO	67.22	349.4	10 55	-1						
HELSINKI	67.35	352.4	10 54	-3					11	22 PCP
UPPSALA	68.11	356.3	11 0A	-1						
MOSCOW	70.11	344.2	11 12	-2						
FRUNSE	70.41	315.6	11 16	0						
COPENHAGEN	72.42	359.0	11 28K	0						
NAMANGAN	73.21	316.3	11 33	1	21	8	9			
RATHFARNHAM	73.85	10.6	11 36	0				11	47	
HAMBURG	74.54	0.5	11 42	2						
WITTEVEEN	75.24	2.6	11 36	-8						
SHILLONG	75.37	292.8	11 43A	-2						
WARSAW	75.53	353.5	11 47	1	21	45	21			
POTSDAM	75.72	358.6	11 46	-1						
JENA	77.19	359.5	11 55	0						
LWOW	77.67	351.3	11 58	0						
KRAKOW	77.77	354.0	11 59	1	21	50	1		12	15 PCP
RACIBORZ	77.84	355.1	11 58	-1					12	10 PCP
PRAGUE	78.00	357.6	12 0	1					12	11 PCP
DEHRA DUN	79.00	305.7	12 15	10	22	29	27			
PARIS	79.06	5.6	12 5A	0	22	4	1		22	28 SCS
KARLSRUHE	79.09	1.6	12 16A	11						
STUTTGART	79.34	1.1	12 7A	0	22	21	15		13	30
STRASBOURG	79.51	2.0	12 8A	0	22	27	20		28	15 SS
TUBINGEN	79.58	1.2	12 8	0						
BRATISLAVA	79.81	355.7	12 11	2	22	15	5			
LAHORE	79.81	309.0	12 9	0	22	9	-1			
IASI	79.88	348.5	12 10	0						
KISHINEV	79.90	347.6	12 9	-1						
EBINGEN	79.93	1.2	12 11A	1					12	26
MAKHACH-KALA	79.98	333.5	12 11	1						
BASLE	80.55	2.2	12 13	0						

NEUCHATEL	81.07	2.7	12	16	0						
SIMFEROPOL	81.11	343.5	12	16	0	22	37	13			
TIFLIS	81.86	335.0	12	20	0						
TRIESTE	82.44	357.9	12	34	11	23	11	33	22	51	SKS
BUCHAREST	82.80	349.0	12	24	-1	22	44	3			
PAVIA	82.93	1.2	12	24	-2						
BELGRADE	82.94	353.1	12	26K	0	22	46	3			
SAN JUAN	83.40	68.6	12	27	-1	22	49	2	23	29	SCS
FLORENCE X.	84.34	359.7	12	43A	10	23	16	19			
MONACO	84.35	2.4	12	34	1				13	43	
QUETTA	84.37	313.7	12	33A	0	22	59	2	15	52	PP
ROME	86.21	358.7	12	55	13	23	33	18	24	59	PS
TOLEDO	87.33	11.4	13	0	12	23	42	16	14	2	
ALICANTE	89.23	8.8	13	0	3	23	51	8	18	35	PPP
MESSINA	89.82	356.2				23	53	4			
POONA	90.86	302.2	13	4	0	24	1	3			
KSARA	91.52	339.3	13	10	3	24	4	0			
JERUSALEM	93.62	339.3	13	18	1						
TAMANRASSET	105.14	5.0							17	32	
LA PAZ	109.63	91.7	18	41	777						
LWIRO	127.94	336.9	19	8K	2						
PRETORIA	150.44	326.9							19	53	PKP2
KIMBERLEY	154.31	330.7							20	1	PKP2

APRIL 10 5.H 12.M 7.S EPICENTRE 15.53 -98.04 DEPTH= 0.KM

A=-0.13490 B=-0.95449 C= 0.26600 D=-0.9902 E= 0.1399
G=-0.0372 H=-0.2634 K=-0.9640 HT= 5.7

SE= 1.89

	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	1.93	39.3	0	33A	-1								
PUEBLA	3.49	357.6	0	59	3						1	33	
TACUBAYA	4.01	344.2	1	1A	-3	1	23	-30			1	48	
VERA CRUZ	4.09	26.3	1	5A	0						1	29	
COMITAN	5.74	82.0	1	33	5	2	39	3					
MANZANILLO	6.95	301.2	1	49	4	3	9	3			3	42	
GUADALAJARA	7.17	316.4	1	53	5						3	17	
SANTIAGO MA.	9.49	101.1									2	39	
MERIDA	9.65	54.8	2	22K	-1	4	12	-1			3	57	
MAZATLAN	10.96	315.3	2	32	-9						5	37	
CHIHUAHUA	15.01	331.7	3	36K	1	6	34	11	6	46			
LUBBOCK	18.30	349.8	4	14	-3	7	48	9					
BALBOA HTS.	19.20	107.7	4	28	0	8	14	15					
LITTLE ROCK	19.84	13.9	4	33	-2						8	34	SS
TUCSON	20.31	327.3	4	41K	1	8	31	8					
FAYETTEVILLE	20.77	8.8	4	44	-1	8	48	16					
GALERAZAMBA	22.67	99.2				8	56	-12					
COLUMBIA	23.96	36.8	5	16A	0	9	35	4			5	53	PP
BARRETT	24.03	318.6	5	19K	2	9	51	19					
ST. LOUIS 1	24.03	15.2	5	17A	0	9	35	3					
HAYFIELD	24.09	321.9	5	19	1	9	52	19					
FLORISSANT	24.15	14.8	5	19A	1	9	42	8					
CHINCHINA	24.40	113.1	5	22	1	9	49	11			5	54	PP
PALOMAR	24.59	319.6	5	24K	1								
BOULDER	25.22	346.8	5	29	0								
BOULDER CITY	25.29	326.8	5	31K	2	10	18	24					
RIVERSIDE	25.34	320.0	5	29K	-1	10	8	14					
TERRE HAUTE	25.61	19.3	5	38	6	10	3	4					
BOGOTA	25.94	112.2	5	39	4	10	15	11					
PASADENA	25.94	319.3	5	36K	1	10	9	5					
CHAPEL HILL	26.46	36.4	5	40	0								
CHINA LAKE	26.72	322.8	5	43K	0								
ISABELLA	27.12	321.4	5	46K	0						9	5	PCP
WOODY	27.38	321.0	5	49K	0	11	2	34			9	6	PCP
CHICAGO CGS.	27.67	17.0	5	54	3	10	36	3					
KING RANCH	27.69	319.4	5	52K	1								
SALT LAKE C.	27.87	337.2	5	54	1	10	48	12					
TINEMAHA	27.95	323.9	5	55K	1	10	43	6			9	6	PCP
EUREKA	28.56	330.1	5	59K	0	10	5	-42					
FRESNO	28.66	321.6	6	0K	0	11	20	31					
MORGANTOWN	28.76	29.9	6	2A	1								
RAPID CITY	28.80	352.3	6	2K	1	10	59	8					
PITTSBURGH	29.40	28.9	6	5	-2	11	4	4					
CLEVELAND	29.55	25.7	6	8	0	10	58	-5					
LICK	30.15	320.6	6	13K	-1								

SANTA CLARA	30.35	320.3	6	16K	1	11	20	5		
RENO	30.58	325.7	6	18K	1					
SAN JUAN	30.65	80.1	6	15A	-3	11	21	1	7	5 PP
PENNSYLVANIA	30.68	30.9	6	21	3	11	26	5		
BERKELEY	30.87	320.7	6	20K	0	11	30	6	7	34 PP
PHILADELPHIA	31.47	34.9	6	27	2	11	38	5		
BOZEMAN	31.98	342.7	6	30	0	11	47	6		
MINERAL	32.13	324.9	6	31K	0				7	53 PP
UKIAH	32.25	321.7	6	32K	0	11	57	12		
BUTTE	32.75	341.2	6	37	1	11	53	0		
SHASTA	32.80	324.7	6	36K	-1				7	52 PP
FORDHAM	32.81	35.0	6	38	1					
PALISADES	32.90	34.7	6	33A	-5	11	56	1	7	52 PP
ARCATA	33.88	323.3	6	46	0					
BERMUDA	34.61	55.0	6	53	0	12	25	3		
OTTAWA	35.21	27.7	6	57A	-1	12	29	-2	8	11 PP
WESTON	35.26	35.3	6	59	1					
HUNGRY HORSE	35.28	341.5	6	58K	0	12	36	4		
HUANCAYO	35.44	139.4	7	1	1	12	23	-12		
FORT FRANCE	35.60	86.3							10	8
KIRKLAND LA.	35.76	20.7	7	3A	1	12	33	-7		
ST. LUCIA	35.82	87.4	9	34	151					
CORVALLIS	35.99	328.7	7	4K	0					
SASKATOON	37.15	351.2	8	16	62	14	1	60		
SHAWINIGAN	37.43	29.0	7	17A	1				8	37 PP
SEATTLE	37.79	333.0	7	21A	2	13	30	19		
BANFF	38.23	342.2	7	22K	-1					
SEVEN FALLS	38.76	29.9	7	29	1	13	26	0	16	13 SS
VICTORIA	38.94	333.0	7	29K	0	13	31	3	9	5
HORSESHOE B.	39.54	334.0	8	33K	59	12	38	-59		
HALIFAX	41.07	37.9				13	50	-10		
LA PAZ	43.41	135.9	8	5	-1	14	35	0	8	59 PP
SCHEFFERVLLE	46.11	24.7	8	27A	0				10	3
SITKA	50.06	334.4	8	58	0	16	16	7		
HONOLULU	56.99	285.5	9	47A	-2					
RESOLUTE	59.18	1.0	10	2K	-3	18	13	1		
COLLEGE	59.58	337.8	10	5K	-3	18	11	-6	12	15 PP
SCORESBY SD.	70.83	20.2	11	19	-1	20	39	4	25	5 SS
MBOUR	77.84	78.3	12	1	0	22	0	7	14	52 PP
RATHFARNHAM	78.76	37.7	12	3	-3	22	4	1		
ABERDEEN	80.29	33.3	12	12	-2	22	18	-1	15	17 PP
DURHAM	81.15	35.6	12	18	-1	22	27	-1	22	33 SKS
KEW	82.73	38.7	12	26	-1	22	46	2	15	40 PP
BERGEN	83.08	29.1	12	30	1	22	41	-7		
TOLEDO	83.21	50.6	12	29K	0	22	49	0		
MALAGA	83.74	53.8	12	32A	0	22	58	3	15	46 PP
GRANADA	84.24	53.2	12	34A	0	23	1	1	15	58 PP
SKALSTUGAN	84.95	24.9	12	37	-1					
ALMERIA	85.20	53.2	12	37	-2	23	0	-9		
PARIS	85.23	40.7	12	40	1	23	10	1	15	43 PP
PETROPAVLOVK	85.49	324.0	12	40	-1				22	53 SKS
DE BILT	85.80	37.0	12	43K	1	23	11	-4	16	9 PP
KIRUNA	85.89	19.5	12	41	-2	23	8	-8	16	0 PP
ALICANTE	86.30	51.4	12	46	1	23	15	-5		
WITTEVEEN	86.40	36.0	12	38	-7					
MAGADAN	87.04	331.6	12	48	0	23	22	-5		
TIKSI	87.51	346.6	12	49	-2	23	24	-7	18	4 PPP
HAMBURG	87.96	34.6	12	53	0	23	17	-18	16	18 PP
SODANKYLA	88.11	18.6	12	51	-2	23	21	-16	16	21 PP
COPENHAGEN	88.39	32.1	12	57A	2	23	48	9	16	23 PP
STRASBOURG	88.60	39.7	12	57	1	23	41	0	16	26 PP
KARLSRUHE	88.83	39.2	12	59	2	23	31	-12	16	17 PP
UPPSALA	88.92	27.1	12	56	-1	23	44	0	16	25 PP
STUTTGART	89.40	39.2	12	58K	-2	23	27	-22	16	9 PP
ALGIERS UNI.	89.45	52.0	12	58	-2	23	52	3	16	32 PP
EBINGEN	89.49	39.8	12	59	-1				16	34 PP
JENA	89.94	36.6	13	0	-2	23	32	-22	16	35 PP
APATITY	89.98	16.7				23	34	-20	15	51
POTSDAM	90.16	34.9	13	3	0	23	12	-44	16	38 PP
CHEB	90.76	37.1	13	10	4	24	11	10	23	40 SKS
PAVIA	90.79	42.5	13	5	-1				16	23 PP
HELSINKI	91.85	24.8	13	8	-3					
PRAGUE	91.95	36.6				23	47	-25	24	25 S
FLORENCE X.	92.71	43.2	13	27	12	24	25	7		
TRIESTE	93.52	40.7	13	18	-1	24	43	18	17	7 PP
PULKOVO	94.20	23.4	13	23	1	23	55	-36	16	59 PP
ROME	94.32	44.5	13	25A	3	24	12	-20	17	9 PP
BRATISLAVA	94.39	37.4	13	23	0	24	1	-32	17	14 PP

WARSAW	94.49	32.6	13 23	0	24 0	-34	17 13 PP
KRAKOW	95.06	34.9	13 26	0			17 17 PP
TAMANRASSET	96.10	64.5	13 31	1	24 12	-35	17 9 PP
LWOW	97.40	33.6	13 36	0			17 35 PP
Y.-SAKHLINSK	97.40	322.9	13 34	-2			
MESSINA	98.06	46.8					18 36
MOSCOW	99.83	23.7	13 47	0			17 49 PP
BUCHAREST	101.66	37.3			24 36	-58	27 11 PS
SIMFEROPOL	105.80	33.2	14 12	777			18 36 PP
VLADIVOSTOK	105.85	324.4			25 3	-66	18 33 PP
MATUSIRO	105.87	315.9			25 6	-63	18 19 PP
IRKUTSK	109.75	345.6					19 14 PP
TIFLIS	113.50	29.5					19 25 PP
KSARA	114.16	41.1	18 44	3			19 37 PP
RIVERVIEW	115.62	239.7					23 29
FRUNSE	121.49	6.4					20 31 PP
HONG KONG	130.92	319.2					21 31 PP
QUETTA	132.32	17.6	19 10	-6			21 28 PP
BOMBAY	144.63	15.1					19 38
POONA	145.23	13.6	19 41	2			
HYDERABAD	147.07	6.2	19 47	5			

APRIL 10 9.H 9.M 22.S EPICENTRE 50.50-176.86 DEPTH= 20.KM

A=-0.63766 B=-0.03498 C= 0.76953 D=-0.0548 E= 0.9985
G=-0.7684 H=-0.0422 K=-0.6386 HT= -5.6

SE= 1.91

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
PETROPAVLOVK	15.35	289.3	3 36	-1				
COLLEGE	20.89	35.5	4 41	-2	8 38	8		6 19
SITKA	25.09	58.7	5 22	-2	9 51	6		6 41
Y.-SAKHLINSK	26.66	278.2	5 39	0				
TIKSI	32.00	330.9	6 24	-3				
HORSESHOE B.	33.88	70.6	6 43K	0				9 21
VICTORIA	34.13	72.1	6 45K	0				
MATUSIRO	34.87	264.0	6 51K	-1	12 22	2		9 24 PCP
SEATTLE	35.18	73.0	6 56K	2				
CORVALLIS	35.97	78.2	7 2	1				
BANFF	37.74	64.5	7 14K	-2				
SHASTA	38.55	83.1	7 24K	1				9 34
UKIAH	38.91	85.8	7 25	-1				
MINERAL	39.25	83.0	7 29K	1				
HUNGRY HORSE	39.84	67.9	7 34	1	13 40	4		17 59 SCS
RESOLUTE	40.04	24.2	7 35A	0				9 14 PP
BERKELEY	40.25	86.7	7 37K	0				
SANTA CLARA	40.76	87.1	7 41K	0				
RENO	40.84	82.9	7 42	0				
LICK	40.97	86.9	7 43K	0				8 2
BUTTE	41.84	70.3	7 49	-1				
FRESNO	42.48	86.2	7 55K	0				
BOZEMAN	42.93	69.9	8 0	1				
EUREKA	43.30	80.4	8 1	-1				
TINEMAHA	43.31	84.8	8 4K	2				9 51
KING RANCH	43.41	87.8	8 4	1				
WOODY	43.74	86.8	8 14	9				
ISABELLA	44.01	86.5	8 7	-1				
CHINA LAKE	44.47	85.7	8 11K	0				8 28
SALT LAKE C.	45.13	76.2	8 18	2				9 50 PP
PASADENA	45.15	88.0	8 17K	0				8 45
RIVERSIDE	45.76	87.5	8 21K	0				
BOULDER CITY	46.13	83.6	8 24	0				
PALOMAR	46.50	87.8	8 27K	0				8 53
PEKING	46.78	284.1	8 32	3	15 24	7		
IRKUTSK	46.91	304.4	8 29	-2				
HAYFIELD	47.05	86.6	8 34	2				
BARRETT	47.06	88.4	8 32K	0				
RAPID CITY	48.47	67.5	8 42	-1	15 56	15		
TATUNG	48.52	286.0	8 48	5				
ZO-SE	49.23	271.4	8 49	0				
BOULDER	49.60	73.0	8 51	0				
NANKING	50.12	274.1	8 53K	-2				
TUCSON	51.06	84.5	9 2	-1				
SIAN	54.90	283.0			17 22	13		
LUBBOCK	55.84	77.1	9 35	-3				

KIRKLAND LA.	58.62	51.2	9	58K	0						
FAYETTEVILLE	58.85	69.8	9	58A	-1						
CANTON	59.84	270.3	10	5K	-1	18	16	2			
SCHEFFERVLLE	60.00	38.8	10	8A	1					10	19
RABAUL	60.65	216.1	10	9	-3	18	23	-2		12	24 PP
SODANKYLA	61.12	349.9	10	14	-1				10 25	10	57 PCP
MANILA	61.23	257.6	10	50	34						
KIRUNA	61.28	352.6	10	14	-2	18	33	0	10 26		
CLEVELAND	62.41	57.6	10	22	-1						
OTTAWA	62.67	51.1	10	23K	-2					11	3 PCP
SHAWINIGAN	63.28	48.5	10	28K	-1						
SEVEN FALLS	63.79	47.0				19	8	4			
MORGANTOWN	64.56	58.1	10	38	0						
SKALSTUGAN	66.04	355.5	10	45	-2						
PALISADES	66.75	53.4	10	51	-1	19	49	8			
TACUBAYA	67.49	86.5	10	50	-6					11	22 PCP
CHAPEL HILL	67.73	60.3	10	57	-1	20	2	10			
PULKOVO	67.90	345.6	10	57	-2						
COLUMBIA	68.01	63.0	10	59	0					11	42
FRUNSE	68.14	311.3	11	0	0						
HELSINKI	68.28	348.5	11	0	-1				11 11	11	28 PCP
UPPSALA	69.38	352.2	11	7	-1				11 19	39	14 PKPPKP
MOSCOW	70.32	340.1	11	13	-1						
OAXACA	70.79	86.4	12	58	101						
NAMANGAN	70.99	311.8	11	18	0						
SHILLONG	71.49	287.8	11	21K	0	20	39	3			
CHATRA	73.38	292.0								11	31
HAMBURG	76.14	355.8	11	50	2					12	0
RATHFARNHAM	76.27	5.8	11	48	-1	21	50	20			
BOKARO	76.44	290.9								21	35
WARSAW	76.53	348.8	11	51	1	21	39	6		22	8 PPS
WITTEVEEN	77.01	357.8	11	54	1					12	6
POTSDAM	77.15	353.8	11	54	0						
DE BILT	77.76	358.7	11	59	2	21	54	8			
BERMUDA	78.10	53.2				21	50	0			
KEW	78.36	2.2				21	55	2			
LWOW	78.47	346.4	12	0	-1						
JENA	78.69	354.6	12	2	0					12	15 PCP
KRAKOW	78.81	349.1	12	3	0	21	57	0			
RACIBORZ	78.98	350.2	13	7	63						
MAKHACH-KALA	79.19	328.5	12	5	0						
PRAGUE	79.35	352.6	12	9	3					13	59
KISHINEV	80.36	342.5	12	10	-1	22	15	1			
IASI	80.42	343.4	12	12	1					12	23
KARLSRUHE	80.77	356.5	12	15A	2	22	25	7		12	25
STUTTGART	80.97	355.9	12	14K	0	22	21	1		12	26 PCP
BRATISLAVA	80.98	350.6	12	15	1	22	22	2	12 27	12	51
PARIS	81.07	0.4	12	15	0	22	25	4		12	23 PCP
SIMFEROPOL	81.20	338.3	12	16	1	22	24	2			
TIFLIS	81.20	329.8	12	15	0	22	27	5			
TUBINGEN	81.22	356.0	12	16	0					12	28 PCP
STRASBOURG	81.22	356.9	12	16	0	22	27	4		22	48 SCS
EBINGEN	81.57	356.1	12	18K	1					12	30 PCP
QUETTA	81.90	308.3	12	19	0	22	33	3	12 31	15	24 PP
BRISBANE	82.09	206.7	12	20	0						
BESANCON	82.60	358.0	12	25	2					12	50
CAMPULUNG	82.74	344.6	12	27	4						
NEUCHATEL	82.83	357.4	12	25	1	22	43	4			
BUCHAREST	83.37	343.7	12	26	-1	22	52	7		23	32
BELGRADE	83.88	347.7	12	31K	2	22	54	4			
HYDERABAD	85.73	292.2								23	8
POONA	87.54	296.3	12	48	1						
SAN JUAN	88.49	62.7	12	44	-8						
KSARA	91.20	333.2	13	9	4					16	45 PP
GRANADA	92.49	5.4	13	1A	-9	23	35	-35			
TAMANRASSET	107.02	357.7	17	23	777					18	37 PP
LWIRO	127.24	327.1	19	4A	1					20	1 PP
PRETORIA	148.68	312.7	19	44	2						
KIMBERLEY	152.80	314.9	19	56	8						

APRIL 10 11.H 30.M 0.S EPICENTRE 55.36-153.86 DEPTH= 0.KM

A=-0.50488 B=-0.24774 C= 0.82688 D=-0.4405 E= 0.8977
G=-0.7423 H=-0.3643 K=-0.5624 HT= -7.6

SE= 2.61

	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	9.42	15.9	2	17A	-2								
SITKA	10.31	76.2	2	30K	-1	4	20	-7					
ALBERNI	18.76	98.7	4	20	-1								
HORSESHOE B.	19.56	96.8	4	28	-2	8	11	6					
VICTORIA	19.95	99.1	4	30K	-5	8	16	3			5	11	
SEATTLE	21.06	99.9	4	47K	1	7	35	-60			5	23	
CORVALLIS	22.41	107.6	4	59	-1	9	14	13					
BANFF	23.04	85.8	5	5K	-1								
ARCATA	24.61	115.2	5	22	1						8	28	
KLYUCHI	24.94	289.9	5	23	-1	9	48	3			6	17	PP
HUNGRY HORSE	25.30	90.6	5	28	0	9	59	8			37	58	PKPPKP
SHASTA	25.61	113.3	5	30K	-1								
MINERAL	26.27	112.8	5	36K	-1						5	54	
UKIAH	26.36	116.8	5	37K	-1	10	13	5					
PETROPAVLOVK	27.27	284.2	5	45	-1	10	24	1			6	6	
BUTTE	27.44	93.7	5	47K	-1	10	49	23			8	2	PCP
SASKATOON	27.57	77.9	6	32	43	10	31	3					
RENO	27.80	111.8	5	50K	-1								
BERKELEY	27.81	117.2	5	49K	-2	10	36	4					
SANTA CLARA	28.36	117.5	5	54K	-2	10	52	11					
BOZEMAN	28.50	92.9	5	58K	1								
LICK	28.53	117.1	5	54A	-3								
MAGADAN	29.01	300.3	6	0	-2	10	54	3					
RESOLUTE	29.05	28.0	6	1A	-1	10	47	-5			8	14	PCP
EUREKA	29.88	107.4	6	9A	0								
FRESNO	29.90	115.5	6	8	-2								
TINEMAHA	30.48	113.2	6	15	0								
KING RANCH	31.05	117.2	6	21	1								
WOODY	31.20	115.7	6	19	-2								
SALT LAKE C.	31.21	101.2	6	21K	0	11	19	-7					
ISABELLA	31.43	115.3	6	21	-2								
CHINA LAKE	31.75	114.0	6	24	-2								
PASADENA	32.77	116.6	6	34K	-1	11	53	3					
BOULDER CITY	33.07	110.6	6	36K	-2	12	2	7					
RIVERSIDE	33.30	115.9	6	38K	-2	12	1	3					
RAPID CITY	33.89	88.8	6	43A	-2	12	9	1			8	9	PP
PALOMAR	34.07	115.9	6	45K	-1								
TIKSI	34.56	327.0	6	48	-2						8	4	PP
BARRETT	34.70	116.4	6	51K	-1	12	28	8					
HONOLULU	34.75	186.9	6	52A	0	12	26	5					
TUCSON	38.05	110.3	7	20K	0	13	14	2			9	20	PCP
Y.-SAKHLINSK	39.22	284.3	7	28	-2	13	29	0					
NEMURO	39.91	277.9	7	32	-3	13	33	-7			39	57	PKPPKP
ABASHIRI	40.19	279.6	7	46	8	13	45	1					
WAKKANAI	40.73	283.1	7	49	7	13	55	3					
KUSIRO	40.79	278.3	7	46	3	13	54	1					
ASAHIGAWA	41.40	280.7	7	48	0								
OBIHIRO	41.50	279.1	7	50	2	14	4	1					
LUBBOCK	41.91	99.9	7	55	3	14	15	6					
URAKAWA	42.24	278.6	7	54	-1	14	14	0					
SAPPORO	42.42	280.6	7	55	-1	14	6	-11			9	33	PP
TOMAKOMAI	42.66	279.9	8	9	11						14	40	
MURORAN	43.12	280.1	8	4	2								
SUTTSU	43.22	281.1	8	1	-2	14	17	-12			10	18	
CHIHUAHUA	43.42	108.7	7	57	-7	14	31	0			9	25	PCP
MORI	43.50	280.1	8	5	0	14	0	-33			10	16	
HAKODATE	43.63	279.7	8	6	0						14	37	
KIRKLAND LA.	44.02	67.7	8	11K	2	14	42	2					
HATINOHE	44.02	277.8	7	58	-11	14	40	0			10	5	
CHICAGO CGS.	44.10	79.7	9	11	61	14	39	-2			10	27	PPP
AOMORI	44.24	278.6	8	9	-2	14	41	-2					
FAYETTEVILLE	44.36	90.7	8	13A	1	14	43	-2	8	20			
MIYAKO	44.38	276.5	8	13	1	14	46	1					
FLORISSANT	44.59	84.9	8	14K	0	14	49	1			10	31	PPP
ST. LOUIS 1	44.78	84.9	8	13K	-2	14	51	0					
MORIOKA	44.79	277.2	8	15	0	14	54	3					
MIZUSAWA	45.21	276.6	8	21	2	14	59	2					
AKITA	45.38	278.0	8	14	-6	15	4	4			10	11	
SENDAI	45.94	275.9	8	23	-1	15	0	-8					
SAKATA	46.10	277.4	8	39	13								
YAMAGATA	46.26	276.3	8	27	0	15	16	4					
LITTLE ROCK	46.34	90.4	8	27	-1								
SCHEFFERVLLE	46.34	53.0	8	27	-1						8	54	
HUKUSIMA	46.55	275.8	8	31	2	15	20	4					
ONAHAMA	46.87	274.6	8	32	0	15	17	-4					
SHIRAKAWA	47.13	275.3	8	40	6	15	22	-3			9	44	

NIIGATA	47.22	277.0	8	36	2	15	33	7	
MITO	47.52	274.4	8	39	2	15	32	2	
VLADIVOSTOK	47.54	287.2	8	35	-2	15	25	-6	14 5
AIKAWA	47.59	277.7	8	38	1	15	38	7	
CLEVELAND	47.63	75.7	8	39	1	15	32	0	
MAZATLAN	47.66	113.5				15	20	-12	28 0
UTUNOMIYA	47.74	275.1	8	38	-1	15	33	0	11 14
SUIHWA	47.77	293.9	8	39	0	15	39	5	
KAKIOKA	47.79	274.5	8	36	-3	15	36	2	
TUKUBASAN	47.84	274.6	8	39	0	15	33	-2	
OTTAWA	48.07	67.9	8	41K	0	15	40	2	10 16 PCP
TAKADA	48.25	276.8	8	43	0	15	44	3	
MAEBASI	48.29	275.6	8	42	-1	15	44	3	10 37 PP
KUMAGAYA	48.30	275.1	8	47	4	15	44	3	
TOKYO C.M.O.	48.43	274.4	8	41	-3	15	43	0	10 58
NAGANO	48.58	276.5	8	52	7	15	50	5	
TITIBU	48.59	275.2	8	49	4	15	46	1	
OIWAKE	48.63	275.9	8	43	-3	15	58	12	
MATUSIRO	48.66	276.4	8	44A	-2	15	51	5	10 37 PP
YOKOHAMA	48.67	274.2	8	49	3	15	50	4	
WAZIMA	48.80	278.1				15	55	7	
SHAWINIGAN	48.82	65.0	8	46K	-1				10 20 PCP
MERA	48.94	273.6	8	47	-1	15	42	-8	
MATUMOTO	49.02	276.3	8	46	-2	15	42	-9	
HUNATU	49.11	275.0	8	55	6	15	54	1	11 9
TOYAMA	49.12	277.3	9	48	59	15	58	5	
KOHU	49.13	275.2	8	45	-4	15	54	1	
AJIRO	49.25	274.3	8	42	-8	15	54	-1	
SCORESBY SD.	49.27	19.3	8	50	0	16	1	6	10 41 PP
MISIMA	49.29	274.5	8	50	-1	15	46	-9	
OSIMA	49.30	273.8	8	47	-4	15	54	-1	
SEVEN FALLS	49.41	63.2	8	53	1	15	54	-3	11 1 PP
IIDA	49.62	275.7	8	54	1	16	6	6	
SHIZUOKA	49.70	274.8	8	57	3	16	4	3	
MORGANTOWN	49.79	76.3	8	55K	1				18 43 SCS
OMAESAKI	50.07	274.6	8	47	-10	16	8	2	
PENNSYLVANIA	50.09	73.8	9	0	3	16	8	2	10 52 PP
GIHU	50.30	276.4	8	57	-1	16	10	1	
NAGOYA	50.36	276.1	9	17	18	16	14	4	
TSURUGA	50.51	277.2							20 1
IBUKISAN	50.53	276.7	9	0	0				
CHANGCHUN	50.54	292.3	8	58	-2	16	12	-1	
HIKONE	50.69	276.7	9	4	3	16	16	1	
KAMEYAMA	50.87	276.2	9	4	1	16	21	4	
KYOTO	51.16	276.9	9	10	5	16	21	0	
TOYOOKA	51.29	278.1	9	1	-5	16	24	1	
GUADALAJARA	51.32	112.2	9	16	10	16	32	9	26 44
OSAKA	51.54	276.7	9	3	-5	16	25	-1	12 35
OWASE	51.59	275.7	9	7	-1	16	30	3	
KOBE	51.72	277.0	9	9	0	16	27	-2	11 7
WASHINGTON	51.87	74.9	9	10	0	16	44	13	
PALISADES	52.07	70.9	9	13	1	16	35	1	19 59 SS
SUMOTO	52.13	277.0	9	14	2	16	37	3	
PHILADELPHIA	52.15	72.7	9	27	15	16	36	1	13 28 PCS
MANZANILLO	52.16	114.3				16	48	13	23 12
FORDHAM	52.20	71.0	9	14	1	16	39	4	
SIOMISAKI	52.29	275.5	9	4	-9	16	40	3	
WESTON	52.46	67.9	9	14K	-1	16	40	1	
TOKUSIMA	52.50	277.0	9	16	1	16	38	-1	
TAKAMATU	52.61	277.6	9	15	-1	16	42	1	
COLUMBIA	53.26	82.1	9	21	0	16	50	0	10 24 PCP
HAMADA	53.28	279.6	9	20	-1	16	54	4	20 46 SS
KOTI	53.47	277.4	9	18	-4	16	57	4	11 17 PP
HIROSIMA	53.48	278.9	9	21	-1	16	56	3	20 9
MATUYAMA	53.70	278.2	9	20	-4	16	56	0	20 54
UWAZIMA	54.25	277.9				17	8	5	
SIMIDU	54.36	277.2	9	27	-2	17	8	3	11 28 PP
IRKUTSK	54.44	312.3	9	28A	-1	17	10	4	11 42 PP
TACUBAYA	54.55	109.0	9	32	2	17	1	-6	10 15 PCP
REYKJAVIK	54.68	23.6	9	31	0				
HALIFAX	54.76	61.0	9	31	-1	17	12	2	
OOITA	54.77	278.6	9	30	-2	17	7	-3	
HUKUOKA	55.18	279.8	9	34	-1	17	25	9	
ASOSAN	55.33	278.7	9	37	1	17	23	5	
KUMAMOTO	55.59	278.9	9	47	9	17	10	-11	
MIYAZAKI	55.87	277.7	9	42	2	17	29	4	
UNZENDAKE	55.91	279.2				18	4	39	
NAGASAKI	56.11	279.5	9	40	-1	17	35	7	
KIRUNA	56.45	2.6	9	42A	-2	17	34	1	19 33 SCS

KAGOSIMA	56.61	278.1	9	42	-3	17	38	3	20	50 SS
APATITY	56.69	356.7	9	45K	-1	17	41	5	10	33 PCP
TOMIE	56.81	280.3	9	45	-1	17	37	0		
SODANKYLA	56.99	359.8	9	44	-4	17	40	0	17	57 PS
YAKUSIMA	57.49	277.3	10	11	20				17	44
OAXACA	57.80	108.3	10	5	12	17	51	1		
PEKING	58.00	295.1	9	53	-2	17	52	-1	12	6 PP
KWANTING	58.14	295.7	9	57	1					
MERIDA	58.51	99.2	10	0	2	18	0	0	17	51
TATUNG	59.40	297.1	10	5	0					
PAOTOW	60.64	299.7	10	13	0					
COMITAN	60.94	104.6	10	22	7	18	40	9	10	56 PCP
TAIYUAN	61.51	295.9	10	20	1					
ZO-SE	62.13	284.9	10	22A	-1	18	50	4	12	43 PP
NANKING	62.69	287.3	10	24A	-3	18	52	-1	12	43 PP
BERGEN	62.82	11.5	10	25	-3	18	52	-3	22	56 SS
LINFEN	63.36	295.4	10	34	3					
BERMUDA	63.42	71.1	10	36	4	18	48	-14	14	46 PPP
YINCHUAN	64.11	300.7	10	37	1					
SVERDLOVSK	64.16	339.8	10	35	-1	19	11	0	20	35 SCS
HELSINKI	64.21	0.6	10	34	-3	19	17	5	20	30 SCS
UPPSALA	64.34	4.8	10	35A	-3	19	15	1	39	34 PKPPKP
PULKOVO	64.57	357.7	10	39	0	19	32	15	20	31 PS
FUTZELING	64.61	288.6	10	38	-1					
SEMIPALATNSK	64.89	325.1	10	41	0	19	23	3		
ABERDEEN	64.94	16.5	10	41	-1	19	24	3	13	6 PP
SANTIAGO MA.	65.20	103.0	11	0	17				19	30
EDINBURGH	65.96	17.6				19	36	2	20	42 SKS
SIAN	66.13	296.0	10	49	0	19	39	3	13	18 PP
WUWEI	66.27	302.9	10	49	-1					
TAIPEI	66.69	280.4	11	41	48					
ILAN	66.76	280.1	10	41	-12	19	33	-10		
YUMEN	66.93	308.2	10	54	0					
LANCHOW	67.19	300.8	10	57	1					
DURHAM	67.33	17.0	10	57	0	19	52	2	11	29 PCP
TIENSHUI	67.45	298.5	10	58	0					
SINING	67.73	302.6	11	1	2					
RATHFARNHAM	67.89	20.3	11	0A	0	20	0	3	28	0 SSS
COPENHAGEN	68.16	8.3	11	2A	0	20	5	5	24	24 SS
MOSCOW	68.28	353.0	11	2	-1	20	2	1	13	40 PP
HSINKONG	68.30	279.3	11	3	0	20	12	10		
TAINAN	69.01	280.1	11	7	0	20	50	40		
TAWU	69.15	279.2	11	19	11	20	16	4		
HENGCHUN	69.52	279.1	11	11	1	20	13	-3		
HAMBURG	70.03	10.2	11	15A	2	20	24	2	21	15 SCS
WITTEVEEN	70.40	12.4	11	19	3					
KEW	70.72	17.2	11	17A	-1	20	35	5	13	49 PP
DE BILT	70.92	13.5	11	21A	2	20	39	6	14	3 PP
POTSDAM	71.49	8.4	11	22	0	20	41	2	15	51
JERSEY	72.61	19.0							15	57 PPP
CANTON	72.75	285.6	11	29	-1	20	55	1		
JENA	72.80	9.6	11	30	0	20	56	2	14	12 PP
HONG KONG	72.90	284.4	11	30A	-1	20	53	-2		
FRUNSE	73.36	325.0	11	33A	0	21	8	8	14	22 PP
CHEB	73.71	9.2	11	36	1	21	8	4	14	15 PP
SAN JUAN	73.73	81.3	11	34A	-2	21	0	-5	14	23 PP
PARIS	73.75	16.0	11	36A	0	21	7	2	14	41 PP
BALBOA HTS.	73.84	98.0	11	35	-1	21	4	-2		
PRAGUE	73.89	7.8	11	39	3	21	9	3	26	0 SS
BAGUIO CITY	74.09	275.8	11	35	-3	21	4	-5		
RACIBORZ	74.12	5.3	11	36	-2	21	14	5		
KRAKOW	74.23	4.2	11	37	-1	21	5	-5	11	54 PCP
RABAUL	74.35	236.9	11	32	-7				14	26 PP
KARLSRUHE	74.36	12.0	11	41A	2	21	17	5	12	3 PCP
LWOW	74.57	1.4	11	40	0	21	16	2	14	23 PP
STUTTGART	74.69	11.5	11	41A	0	21	20	5	12	10 PCP
STRASBOURG	74.71	12.5	11	41A	0	21	20	4	14	28 PP
GALERAZAMBA	74.76	93.3				21	19	3		
TUBINGEN	74.91	11.7	11	43	1	21	23	5		
SKALNATE PL.	75.12	4.0	11	48	4	21	26	6	14	18 PP
EBINGEN	75.24	11.8	11	44A	0	21	25	3	12	11 PCP
MANILA	75.36	274.3	11	49	4	21	22	-1		
ANGRA DO HO.	75.43	40.5				21	31	7		
BASLE	75.71	12.9	11	39	-8	21	30	3		
BESANCON	75.78	14.0	11	50	3				14	46 PP
BRATISLAVA	75.97	6.2	11	49	1	21	30	0	14	55 PP
ZURICH	75.99	12.2	11	50	1					
NEUCHATEL	76.16	13.4	11	51	2	21	35	3	14	46

HURBANOVO	76.33	5.5	11	51	1	21	27	-6			22	9 PS
TASHKENT	76.42	328.0	11	48	-3	21	37	3			14	41 PP
BUDAPEST	76.76	4.9				21	44	6			11	56 PCP
IASI	77.21	359.0	11	58	3						21	45
SUVA	77.44	206.9				21	43	-3			22	30 PS
OROPA	77.64	12.9	11	58	0	21	37	-11			14	57
KALOCSA	77.71	5.1				21	51	3			12	0 PCP
BACAU	77.84	359.5	11	59	0							
SZEGED	78.04	4.3	12	32	32	22	0	8			22	45 SCS
PAVIA	78.22	12.2	12	2A	1	21	58	4			15	0 PP
TRIESTE	78.23	8.8	11	58	-3	21	55	1			14	58 PP
ZAGREB	78.23	7.2	12	0A	-1	21	32	-22				
TIMISOARA	78.58	3.5	12	6	3	22	4	6				
FOCSANI	78.71	359.2	12	6	2	22	11	12			22	37
STALINABAD	79.12	327.3	12	6	0							
BOLOGNA	79.14	10.7	12	10	4	22	17	13				
CAMPULUNG	79.14	0.8	12	10	4	22	10	6			22	28
SIMFEROPOL	79.24	354.2	12	6A	-1	22	6	1			15	7 PP
CHINCHINA	79.32	97.0	12	5	-2	22	6	0			27	21 SS
MONACO	79.43	13.7	12	10	2						12	42
FORT FRANCE	79.45	79.5	12	9	1	22	6	-1				
BELGRADE	79.48	4.1	12	8K	0	22	11	4			27	27 PS
COIMBRA	79.81	26.2	12	10	0	22	7	-4				
FLORENCE X.	79.84	10.9	12	11A	1	22	26	15	12	30	15	21 PP
BUCHAREST	79.99	0.0	12	8	-3	22	15	2			22	56 PS
BOGOTA	80.47	95.9	12	14	1	22	12	-6			27	34 SS
BARCELONA	80.88	18.1	12	11	-4	22	26	4			23	24 PS
LISBON	81.03	27.2	11	59K	-17	22	10	-13				
TOLEDO	81.14	23.1	12	17A	0	22	31	6			15	26 PP
TIFLIS	81.41	346.0	12	19	1	22	32	5			23	22 PS
SHILLONG	81.59	303.7	12	17A	-2	22	32	3			15	12 PP
SOFIA	81.68	2.1	12	21	1	22	41	11			15	17
ROME	81.83	10.3	12	20A	0	22	32	0	12	33	15	34 PP
CHATRA	82.66	308.0	12	23	-2							
CUGLIERI	83.07	13.5									14	40
ALICANTE	83.36	20.8	12	36	8	23	6	19			22	58 SKS
GORIS	83.37	344.4	12	30	2	22	52	5			15	52 PP
DEHRA DUN	83.38	316.8	12	27	-1	22	47	0			15	38 PP
TARANTO	83.64	6.8	12	46	16	22	48	-2				
LAHORE	83.66	320.2	12	29	-1	22	49	-1				
GRANADA	83.83	23.5	12	35A	4	22	57	5			15	54 PP
MALAGA	84.09	24.2	12	33A	1	23	1	7			15	51 PP
ALMERIA	84.39	22.7	12	27	-6	23	0	3			15	34 PP
NOUMEA	84.90	216.4	12	45	9	23	21	18				
ALGIERS UNI.	85.56	18.4	12	39	0	23	7	-2			15	43 PP
MESSINA	85.78	8.3	12	39	-1	23	12	1			16	0 PP
BOKARO	85.87	307.6	12	40A	-1	23	19	7			16	0 PP
REGGIO CALA.	85.88	8.3	12	42	1							
RELIZANE	86.08	20.6	12	41	-1	23	10	-4			15	55 PP
ATHENS	86.42	1.9	12	42	-1						23	17 SKKS
QUETTA	87.42	325.5	12	48	0	23	32	5			13	12 PP
KSARA	90.19	351.9	13	3K	2	24	1	9			16	41 PP
KARACHI	91.42	323.8	13	13	6	23	41	-22				
HUANCAYO	93.56	106.1	13	22	5	23	48	-34			17	10 PP
BRISBANE	94.56	225.5	13	23	1						17	5 PP
HYDERABAD	94.71	310.7	13	24A	2	23	55	-37			17	13 PP
POONA	95.61	315.1	13	24	-2	24	3	-37			17	15 PP
BOMBAY	95.68	316.2	13	28	1	24	17	-23			24	4 SKS
AUCKLAND	96.24	204.8				24	52	7			24	4 SKS
MADRAS	97.88	307.2	13	32	-5	24	13	-46			17	37 PP
TAMANRASSET	99.64	19.2	13	42	-3	24	27	-47			17	52 PP
DJAKARTA	100.30	274.2	14	26	38	24	26	-53				
WELLINGTON	100.46	203.5				25	18	-2			24	20 SKS
RIVERVIEW	100.93	224.0	14	0A	10	25	36	12			18	10 PP
LA PAZ	101.14	102.8	13	2	-49	24	30	-56			18	6 PP
MBOUR	101.18	42.5	13	54	2	24	40	-46			18	9 PP
KODAIKANAL	101.53	308.3	13	58	5	24	34	-55			25	34
CHRISTCHURCH	103.09	204.4				25	49	7			24	35 SKS
COLOMBO	103.39	304.6									18	10
MELBOURNE	106.87	226.5									26	26 PS
SANTA LUCIA	113.43	115.2				25	30	8			35	1 SS
LOME	114.81	27.5				25	32	5			19	19 PP
PERTH	115.98	251.0									14	35
LWIRO	126.41	356.7	19	4	1	20	59	-307				
SCOTT BASE	135.73	191.1	19	23	2						22	53 PP
TANANARIVE	139.65	327.7	19	32	4						22	27 PP
PRETORIA	149.78	356.3	19	45	0							
KIMBERLEY	152.79	2.6	19	53	4							

PIETERMZBURG			153.50	351.7	20	0	10							
HERMANUS			157.94	15.3									20	36 PKP2

APRIL 12 15.H 58.M 44.S EPICENTRE 11.49 43.11 DEPTH= 0.KM

A= 0.71567 B= 0.66984 C= 0.19783 D= 0.6833 E=-0.7301
G= 0.1444 H= 0.1352 K=-0.9802 HT= 6.3

SE= 1.44

	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	
LWIRO	19.71	227.1	4	34A	1						17	28	
JERUSALEM	21.47	341.4	4	51	-1	11	20	154					
KSARA	23.19	344.6	5	10	1	9	12	-5			9	24	SS
QUETTA	28.92	46.4	6	2	0	11	1	8			7	4	
BOMBAY	29.58	71.9									6	14	
TIFLIS	30.15	2.5	6	12	-1	11	16	4					
MAKHACH-KALA	31.60	6.2									7	20	PP
SIMFEROPOL	34.23	348.6									8	58	PCP
MESSINA	36.24	321.9									15	18	
DEHRA DUN	37.42	54.6									15	50	
TAMANRASSET	37.53	292.5	7	14K	-3								
NAMANGAN	38.64	35.4	7	28	2								
ROME	40.42	324.1									10	33	
FRUNSE	41.53	35.4	7	48	-2	14	13	6					
MOSCOW	44.35	355.6	8	14	1								
PRAGUE	45.13	334.1	8	21	1						10	8	PP
SVERDLOVSK	47.23	13.0	8	37	1								
BESANCON	47.37	326.0	8	39	2						9	16	
GRANADA	49.01	309.6									11	41	PP
COPENHAGEN	50.16	337.9									16	28	
HERMANUS	50.97	205.5									20	24	
UPPSALA	51.87	344.0				16	39	5					
APATITY	56.37	355.6									19	26	
SKALSTUGAN	56.39	344.0	9	45	0								
KIRUNA	58.24	350.1	9	57	-1								

APRIL 13 3.H 44.M 0.S EPICENTRE 48.38-128.47 DEPTH= 0.KM

A=-0.41469 B=-0.52196 C= 0.74538 D=-0.7830 E= 0.6221
G=-0.4637 H=-0.5836 K=-0.6666 HT= -4.8

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	
ALBERNI	2.57	68.4	0	44K	0	1	18	2					
VICTORIA	3.36	85.8	0	55A	0	1	36	0					
HORSESHOE B.	3.57	71.8	0	59A	1	1	43	1					
SEATTLE	4.20	97.8	1	8A	1	2	2	4			1	50	
CORVALLIS	5.22	134.9	1	22	1	2	20	-3					
BANFF	8.82	66.7	2	12	0	4	28	35					
SHASTA	8.82	148.3	2	12	0						5	18	
MINERAL	9.41	146.0	2	20K	0								
HUNGRY HORSE	9.61	84.8	2	19	-4	3	51	-22					
SITKA	9.62	337.0	2	29	6	4	12	-1					
UKIAH	10.00	155.8	2	25	-3	4	19	-3					
RENO	10.81	141.7	2	41	2								
BUTTE	11.07	96.4	2	42	-1	5	0	11					
BERKELEY	11.44	154.4	2	45	-3	5	3	5					
SANTA CLARA	12.01	154.2	3	4	8	5	18	6					
BOZEMAN	12.19	96.4	3	0	2	5	29	13					
EUREKA	12.65	130.1	3	5	1								
FRESNO	13.23	148.1	3	11K	-1	5	30	-11			4	24	
TINEMAHA	13.57	142.7	3	18	2						6	0	
SALT LAKE C.	14.06	116.6	3	23	0	6	6	5					
SASKATOON	14.45	66.8	3	32	4	6	36	26					
WOODY	14.53	147.2	3	28K	-1						3	39	
ISABELLA	14.71	146.2	3	31K	0						3	37	
CHINA LAKE	14.90	143.4	3	34K	0								
BOULDER CITY	15.96	135.9	3	51	3								
PASADENA	16.17	147.8	3	50	0	6	36	-14			7	0	
DALTON	16.28	146.8	3	49	-3						3	54	
RIVERSIDE	16.60	146.0	3	56	0								
PALOMAR	17.36	145.6	4	5K	0								

HAYFIELD	17.53	142.1	4	6	-1					
RAPID CITY	17.97	94.4	4	14	1	7	22	-10		
BARRETT	18.03	146.2	4	13	-1				4	20
BOULDER	18.54	108.2							4	21
COLLEGE	19.51	334.9	4	30	-2	8	15	9		
TUCSON	20.91	134.0	4	46	-1	8	48	12		
LUBBOCK	24.78	116.8	5	25	0	10	3	18		
CHIHUAHUA	26.21	130.7	5	40	2				10	56
FAYETTEVILLE	27.95	103.3	4	54	-60	10	51	14		
RESOLUTE	29.98	17.1	6	11K	-1	11	3	-7		
TERRE HAUTE	30.56	91.5	7	55	97	14	30	191		
KIRKLAND LA.	31.80	71.9	6	29A	0					
CLEVELAND	33.50	84.0	6	44	1	12	30	25		
OTTAWA	35.58	74.5	7	1K	0	12	44	7	8	19 PP
SHAWINIGAN	36.99	71.3	7	13	0				8	42 PP
TACUBAYA	37.34	130.5	7	21	5	13	4	0		
SCHEFEERVLLE	37.79	56.3	7	22A	2					
COLUMBIA	37.86	94.5	7	20	0					
SEVEN FALLS	37.98	69.6	7	21	0	13	21	7	8	49 PP
PALISADES	38.76	80.0	7	27	-1	13	30	4	8	46 PP
VERA CRUZ	39.11	126.7				13	34	3	8	43
HALIFAX	43.62	69.6				14	45	7	17	55 SCS
COMITAN	43.69	124.5							11	30
TIKSI	48.66	335.7							8	45
BERMUDA	49.73	84.2	8	57	1	16	16	11	10	55 PP
SCORESBY SD.	50.33	24.7				16	24	11		
KIRUNA	61.77	12.9	10	21	-2	18	47	2		
BOGOTA	63.48	115.1	10	42	8	19	15	8		
APATITY	63.59	7.7							28	48
SKALSTUGAN	64.17	18.3	10	39	0					
VLADIVOSTOK	64.79	307.1							10	42
DURHAM	67.94	30.0							14	18
UPPSALA	68.65	17.6	11	5	-2	20	12	2		
KEW	71.09	31.3							20	43
COPENHAGEN	71.27	22.2	11	24	1	20	43	2		
DE BILT	72.37	27.9				21	0	7		
HAMBURG	72.50	24.5	11	30	-1				11	40
JENA	75.30	24.8	11	43	-4					
MOSCOW	75.61	8.1	11	47	-2					
STRASBOURG	76.26	28.2	11	54	2	21	44	7	26	36 SS
STUTTGART	76.53	27.3	11	53	-1	21	47	7		
BESANCON	76.84	30.0	11	51	-5					
PRAGUE	76.86	23.5	11	55	-1				12	32
EBINGEN	76.99	27.7	11	55	-1					
GRANADA	81.71	41.5	12	25K	3				12	54 PCP
BELGRADE	83.26	21.7	12	31K	1					
ROME	83.72	28.2				23	0	5	28	17 SS
LA PAZ	83.91	123.0							13	0
SIMFEROPOL	85.81	12.3							24	16
MESSINA	88.05	27.6							29	40
NAMANGAN	89.25	344.9							12	59
TIFLIS	90.08	5.0							24	6
KIMBERLEY	151.57	56.1							20	5 PKP2

APRIL 13 6.H 30.M 9.S EPICENTRE 6.37 126.77 DEPTH= 0.KM

A=-0.59496 B= 0.79615 C= 0.11028 D= 0.8010 E= 0.5986
G=-0.0660 H= 0.0883 K=-0.9939 HT= 6.9

SE= 2.78

	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	
MAMBAJAO	3.08	338.0	0	51	0	1	28	-1					
MANILA	9.94	325.5	2	35	8	4	23	2					
BAGUIO CITY	11.68	329.3	2	57	6	5	36	33					
HONG KONG	19.97	323.7	4	38A	1	8	19	3					
DJAKARTA	23.49	238.3	5	11A	-1	9	1	-22					
RABAUL	27.45	111.9	5	52	3	10	36	7			6	44	PP
MATUSIRO	31.81	17.7	6	26	-2	11	39	0			7	40	PP
BRISBANE	42.16	144.2	7	58	2	14	13	-3					
CHATRA	42.79	303.0	8	1	0						9	53	PP
RIVERVIEW	46.17	151.6	8	29	1	15	16	1			18	29	SS
MELBOURNE	47.13	160.3	8	38	2						9	17	
POONA	52.89	288.3	9	19	-1								
LAHORE	54.92	304.2	9	32	-3								

NAMANGAN	59.83	314.1	10	9	0							
QUETTA	60.80	301.0	10	16A	0	18	25	-8			14	57 PCS
TIKSI	65.20	0.7	10	41	-4							
SVERDLOVSK	71.75	328.0	11	25	-1							
TIFLIS	79.80	311.1	12	12	0	22	12	-2				
TANANARIVE	81.93	249.9	11	35	-48							
COLLEGE	82.32	25.4	12	23	-2							
MOSCOW	84.30	325.4	12	33	-2							
APATITY	85.44	337.4	12	44	3	23	19	8			22	55 SKS
KSARA	87.24	303.6	12	50	1	23	28	-1				
SIMFEROPOL	87.42	314.8	12	49	-1							
PULKOVO	87.79	329.8	12	43	-9	23	16	-18				
JERUSALEM	88.00	301.6	12	54	1							
SODANKYLA	88.05	337.6	12	53	0	23	17	-19			13	6
KIRUNA	90.24	338.6	13	1	-3	23	46	-11			13	16
HELSINKI	90.35	330.7	13	2	-2						13	19
UPPSALA	93.97	331.4	13	21	0	24	23	-6			23	51 SKS
SKALSTUGAN	94.92	335.9	13	25	0							
RESOLUTE	95.23	10.2	13	24A	-3							
KRAKOW	95.82	321.7	13	29	0						13	46
HUNGRY HORSE	103.96	36.9	14	15	9							
WOODY	105.65	50.4									30	5 PKKP
ISABELLA	105.96	50.3									30	7 PKKP
EUREKA	106.41	45.8	14	30	777						18	12 PP
CHINA LAKE	106.57	49.9									18	30
DALTON	106.98	51.5									29	59 PKKP
RIVERSIDE	107.38	51.6									18	48
RAPID CITY	112.60	36.7	18	20	-18							
TAMANRASSET	115.68	298.9	18	46	2						19	40 PP
KIRKLAND LA.	120.80	20.6	19	12	18							
SHAWINIGAN	124.52	16.3	19	1A	0							
OTTAWA	124.66	19.1	19	2A	0						19	19
HUANCAYO	157.48	106.1	20	5	7						20	37 PKP2
LA PAZ	162.28	125.9	20	9	6							

APRIL 13 10.H 10.M 54.S EPICENTRE 5.24 126.11 DEPTH= 28.KM

A=-0.58697 B= 0.80451 C= 0.09068 D= 0.8078 E= 0.5894
G=-0.0534 H= 0.0733 K=-0.9959 HT= 7.0

SE= 3.90

	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	
MAMBAJAO	4.02	352.7	0	36	-25	1	19	-29					
MANILA	10.57	331.8	2	35	3	4	43	12					
BAGUIO CITY	12.37	334.4	2	55	-2	5	23	9					
HONG KONG	20.52	326.9	4	38	0	8	6	-15			4	42	
CANTON	21.64	326.3	4	39	-10								
DJAKARTA	22.34	239.8	4	58A	2	9	1	6					
ZO-SE	26.14	350.4	5	32	-1	10	0	-1					
NANKING	27.54	346.5	5	43	-3	10	20	-3					
RABAUL	27.66	109.3	5	43	-4						6	51	PPP
KYOTO	30.94	15.5	6	18	2								
MATUSIRO	33.08	18.0	6	30	-5	11	30	-21			7	50	
PEKING	34.78	346.9	6	54	-4								
VLADIVOSTOK	38.07	6.9	7	18	1								
CHANGCHUN	38.44	359.1	7	19	-1								
BRISBANE	41.64	142.8	7	46	-1	13	53	-8					
CHATRA	42.88	304.4									7	59	
Y.-SAKHLINSK	43.96	16.4	8	15	9	14	45	10					
RIVERVIEW	45.30	150.4	8	16	-2	15	0	3	8	38	10	6	PP
MADRAS	45.94	283.0	8	27	5						15	4	
COLOMBO	46.00	274.5	7	25	-57						15	7	
MELBOURNE	46.30	159.3	8	27	2	15	11	2			10	21	PP
HYDERABAD	48.14	288.7	8	50	11	15	35	0			10	38	PP
IRKUTSK	50.22	342.7	8	52	-3	16	0	-4			11	0	PP
DEHRA DUN	51.61	304.8	9	13	8	16	18	-5					
POONA	52.63	289.2	9	12	-1						16	28	
BOMBAY	53.65	289.3	9	21	0	16	49	-2			17	13	PPS
MAGADAN	57.39	14.6	9	48	0								
KLYUCHI	57.88	22.0	9	55	4								
FRUNSE	58.88	317.8	9	55	-3	18	0	0			18	48	*SS
SEMIPALATNSK	59.10	327.6	9	59	-1	17	59	-4					
STALINABAD	61.47	311.3				18	30	-3					
TASHKENT	61.97	314.4	10	15	-4	18	34	-6					
MELBOURNE	46.30	159.3	8	27	2	15	11	2			10	21	PP
HYDERABAD	48.14	288.7	8	50	11	15	35	0			10	38	PP
IRKUTSK	50.22	342.7	8	52	-3	16	0	-4			11	0	PP
DEHRA DUN	51.61	304.8	9	13	8	16	18	-5					
POONA	52.63	289.2	9	12	-1						16	28	
BOMBAY	53.65	289.3	9	21	0	16	49	-2			17	13	PPS
MAGADAN	57.39	14.6	9	48	0								
KLYUCHI	57.88	22.0	9	55	4								
FRUNSE	58.88	317.8	9	55	-3	18	0	0			18	48	*SS
SEMIPALATNSK	59.10	327.6	9	59	-1	17	59	-4					
STALINABAD	61.47	311.3				18	30	-3					
TASHKENT	61.97	314.4	10	15	-4	18	34	-6					

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
TIKSI	66.33	1.0	10 44	-4	19 26	-8		20 15 *SS
ASHKABAD	69.30	308.5	11 4	-2	20 7	-2		
SVERDLOVSK	72.37	328.3	11 21	-4	20 36	-9		
TERRE ADELIE	72.72	173.7	11 25	-2				
TIFLIS	80.06	311.3	12 7	-1	22 5	-4		23 12 PS
TANANARIVE	80.93	250.0	12 14	1				
COLLEGE	83.62	25.4	12 21	-6				
MOSCOW	84.86	325.4	12 30	-3			12 57	23 32 *SS
APATITY	86.23	337.4	12 47	7	23 24	13		22 56 SKS
KSARA	87.32	303.5	12 46	1	23 25	4		24 43 PS
SIMFEROPOL	87.75	314.7	12 42	-5	23 15	-10		16 11 PP
JERUSALEM	88.04	301.6	12 48	0				
SODANKYLA	88.85	337.6	12 49	-3			13 20	13 27 *SP
HELSINKI	91.01	330.6	12 59	-3				13 12
KIRUNA	91.05	338.6	12 59	-4	23 46	-9	13 21	23 23 SKS
IASI	91.98	317.6	13 29	22				
BUCHAREST	93.49	315.0	13 30	16	23 44	-33		
LWOW	93.79	320.6			23 31	-48	13 28	23 44 SKKS
UPPSALA	94.65	331.3	13 19	0	24 42	15	13 44	23 44 SKS
SKALSTUGAN	95.68	335.7	13 21	-3				13 34
KRAKOW	96.29	321.5	13 35	9				16 41
RESOLUTE	96.45	10.1	13 36A	9				
LWIRO	97.48	268.4	17 41K	249				18 8
COPENHAGEN	98.72	328.3			25 7	6		17 53 PP
PRAGUE	99.66	322.6	14 1	19				17 31
JENA	101.04	324.1	13 51	3				17 57 PP
MINERAL	103.31	46.6						18 24 PP
STUTTGART	103.31	322.7	14 6	8	25 24	-16		18 26 PP
LICK	104.22	49.6	14 3	1				18 22 PP
HUNGRY HORSE	105.26	36.8	14 29	777				17 58 PKP
WOODY	106.87	50.4						17 59 PP
ISABELLA	107.18	50.3						18 5 PP
EUREKA	107.66	45.9						18 28 PP
PASADENA	107.92	51.7			24 36	4		18 26 PP
RIVERSIDE	108.59	51.7						19 1
BOULDER CITY	109.83	48.9					18 37	
RAPID CITY	113.89	36.7	18 54	18				29 27
TUCSON	114.34	51.2						19 7 PP
TAMANRASSET	115.65	298.2	18 44	5				20 5 PP
SCHEFFERVLLE	119.22	8.4	18 50	4				19 20
KIRKLAND LA.	122.09	20.4	19 4	12				
FAYETTEVILLE	124.19	39.3	18 55	-1				
SHAWINIGAN	125.78	16.0	18 59	0				20 32
OTTAWA	125.94	18.9	18 59A	0				
TACUBAYA	129.13	59.9						21 18
PALISADES	130.45	19.9	19 16	8				
MBOUR	138.52	298.5						23 5 PKS
SAN JUAN	153.61	26.9	20 10	23				
HUANCAYO	157.76	109.1	20 5	12				20 40 PKP2
LA PAZ	162.10	129.8	20 22	24				24 36 PP

APRIL 14 7.H 11.M 52.S EPICENTRE 30.64 84.21 DEPTH= 0.KM

A= 0.08693 B= 0.85746 C= 0.50715 D= 0.9949 E=-0.1009
G= 0.0512 H= 0.5046 K=-0.8619 HT= 1.6

SE= 2.99

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
CHATRA	4.60	144.9	1 16	4				4 58
DEHRA DUN	5.33	268.1	1 31	9	2 42	17		
BOKARO	6.93	167.9	1 47K	2	3 13	8		2 24 PG
SHILLONG	8.44	124.3	2 4	-2	3 42	-1		2 45 PG
KHOROG	12.48	306.5	3 0	-2				7 59
NARYN	12.64	330.6	3 6	2	5 33	6		3 28
PRZHEVALSK	12.70	340.1	3 12	7				
RYBACHE	13.46	333.3	3 14	-1	5 48	0		3 26
ALMATA	13.87	337.3	3 24	4	6 4	8		
ANDIJAN	13.92	319.6	3 21	0	5 59	2		
KULYAB	13.95	305.1	3 18	-3	5 57	-1		7 38
FERGANA	14.02	317.2	3 21	-1	5 57	-2		
HYDERABAD	14.16	203.1	3 23K	-1	5 52	-11	3 38	6 14 SS
YUMEN	14.19	43.8	3 24	0				
FRUNSE	14.43	330.4	3 32A	5	6 35	26		7 24
STALINABAD	14.95	306.0	3 34	0	6 20	-2		

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POONA	15.29	220.3	3	39K	0	6	19	-11	12	55 PCS
BOMBAY	15.60	224.1	3	44	1	6	29	-8	6	49 SS
CHANGYEH	15.77	54.0	3	46	1					
SINING	15.79	63.2	3	47	2					
TASHKENT	16.09	315.5	3	45	-4	6	43	-6	4	1 PP
TCHIMKENT	16.51	318.8	3	53	-1	6	53	-5	4	4 PP
WUWEI	16.86	59.5	4	0	1					
LANCHOW	17.25	66.5	4	5	1					
MADRAS	17.95	192.8	4	13K	0	7	27	-4	4	24 PP
TIENSHUI	18.56	72.1	4	22	2					
YINCHUAN	19.74	60.8	4	38	4					
SEMIPALATNSK	19.96	352.6	4	36	-1	8	19	3		
SIAN	21.15	73.7	4	50	1					
KODAIKANAL	21.26	198.6	4	55A	5	8	52	10	5	16 PP
ASHKABAD	22.53	295.8	5	4	2					
PAOTOW	23.14	57.6	5	9	1					
LINFEN	23.41	69.3	5	13	2					
COLOMBO	23.97	190.7	5	27	10	9	37	6		
TAIYUAN	24.47	65.4	5	23	1					
TATUNG	25.42	60.3	5	35	4					
IRKUTSK	26.18	28.6	5	40A	2	10	12	3		
CANTON	26.95	99.2	5	43	-2	10	17	-4		
FUTZELING	27.47	80.3	5	50	0					
PEKING	27.58	61.4	5	51	0	10	30	-2		
HONG KONG	28.01	100.0	5	49	-6	10	38	0		
NANKING	29.50	78.2	6	8	0	11	2	0		
SVERDLOVSK	30.92	334.7	6	24	4	11	30	6	7	20 PP
ZO-SE	31.64	79.5	6	28	2	11	37	1		
TIFLIS	33.41	300.3	6	45	3				17	8 SCS
CHANGCHUN	34.91	56.2	6	54	-1					
BAGUIO CITY	36.05	104.7	7	12	7	12	44	0		
TOMIE	37.78	75.1	7	18	-2				12	26
NAGASAKI	38.69	74.7	7	32	5					
HUKUOKA	39.00	73.2	7	38	8	13	28	-1		
KUMAMOTO	39.36	74.4	7	36	3					
KAGOSIMA	39.46	76.3	7	37	3					
VLADIVOSTOK	39.63	58.1	7	36	1				9	8 PP
YAKUSIMA	39.64	78.1							16	19
OOITA	40.05	73.5							16	46
MIYAZAKI	40.12	75.6	7	53	14	13	58	12		
HAMADA	40.17	70.9							16	48
HIROSIMA	40.54	71.6	7	43	1				16	13
KSARA	40.71	287.6	7	50	6	14	6	11	9	31 PP
MOSCOW	41.12	321.3	7	49	2	14	4	3	9	27 PP
SIMIDU	41.24	73.9	7	47	-1				16	56
SIMFEROPOL	41.43	304.6	7	51	1	14	8	2	10	12 PPP
KOTI	41.57	72.6	7	50	-1	14	6	-2	17	10
JERUSALEM	41.63	284.7	7	56A	5					
TAKAMATU	41.87	71.4	7	54	0	14	10	-2		
TOKUSIMA	42.34	71.6	8	0	3	14	15	-3		
SUMOTO	42.54	71.2				14	19	-3		
DJAKARTA	42.54	145.6	7	59A	0	14	17	-5		
KOBE	42.73	70.6				14	24	-1		
KYOTO	43.12	70.0	8	7	3					
SIOMISAKI	43.43	72.3							17	38
HIKONE	43.50	69.6							18	0
OWASE	43.67	71.3				14	36	-3		
KAMEYAMA	43.75	70.1	8	4	-4	14	37	-3		
GIHU	43.90	69.3	8	12	2					
MATUMOTO	44.73	67.9	8	21	5					
IIDA	44.74	68.9	8	26	10					
NAGANO	44.85	67.2	8	24	7					
MATUSIRO	44.88	67.4	8	17	-1	14	44	-2	9	59 PP
OIWAKE	45.18	67.7	8	28	8				15	56
OMAESAKI	45.21	70.1				14	30	-31		
ISTANBUL	45.22	299.1	8	21	1	15	2	1		
SHIZUOKA	45.29	69.6				15	3	1		
KOHU	45.31	68.6	8	27	6					
MAEBASI	45.58	67.5	8	37	13	15	31	25	18	19
MISIMA	45.71	69.3	8	22	-2	15	7	-1	10	4
SUTTSU	45.74	58.4				15	8	0		
KUMAGAYA	45.87	67.8	8	46	20					
PULKOVO	46.02	325.4	8	29	2	15	18	6	15	33 PS
IASI	46.04	307.7	8	31	4				18	32 SCS
MORI	46.05	59.4	8	35	7	15	16	3		
OSIMA	46.12	69.6				15	27	13		
YOKOHAMA	46.21	68.7				15	15	0		
TOKYO C.M.O.	46.25	68.3	8	29	0	15	9	-6		
MERA	46.45	69.3				16	7	48		

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HUKUSIMA	46.48	65.4	8	28	-3					
SAPPORO	46.55	58.0	8	36	4	15	18	-3	10	20
WAKKANAI	46.65	54.7	8	29	-3	15	7	-14		
MORIOKA	46.75	62.6	8	38	5					
MIZUSAWA	46.79	63.4	8	44	11	15	29	5		
BUCHAREST	47.16	303.9	8	40	4	15	38	11	18	41 SCS
Y.-SAKHLINSK	47.32	52.6	8	38	1	15	38	7		
APATITY	47.35	336.1	8	40	2	15	35	3	10	31 PP
TIKSI	47.52	17.6	8	40	2	15	33	-1	9	43 PCP
URAKAWA	47.68	59.1	8	46	6	15	18	-14		
OBIHIRO	47.91	58.0	8	47	5					
LWOW	48.40	311.3	8	45	-1	15	47	1	16	47
HELSINKI	48.73	325.1	8	49	1	15	53	2		
KUSIRO	48.78	57.8	8	52	3	15	58	6		
SOFIA	49.32	301.9	8	57	4					
NEMURO	49.60	57.3	8	59	4	15	59	-4		
SODANKYLA	49.73	334.6	8	57	1	16	8	3	10	19 PCP
ATHENS	49.74	295.7	8	47	-9				16	8 PS
WARSAW	50.29	314.5	9	0K	0	16	17	4	10	26 PCP
TIMISOARA	50.50	306.0	9	14	12	16	26	10		
SKALNATE PL.	50.88	310.5	9	11	6	16	28	7	10	25
KRAKOW	51.04	311.7	9	5	-1	16	21	-2	11	6 PP
BELGRADE	51.14	304.9	9	10K	4	16	31	7	11	16 PP
BUDAPEST	51.80	308.4	9	23	11	16	30	-3	10	54 PP
KALOCSA	51.96	307.3	9	17	4				11	31 PP
KIRUNA	52.14	334.5	9	14A	0	16	42	3	19	8 SCS
RACIBORZ	52.15	311.8	9	15	0	16	40	1	11	19 PP
HURBANOVO	52.35	309.0	9	18	2	16	40	-1	16	48 PS
MAGADAN	52.35	36.2				16	41	0		
UPPSALA	52.36	324.2	9	16A	0	16	39	-2		
BRATISLAVA	53.05	309.5	9	24	3	16	54	3	11	27 PP
VIENNA-H.	53.52	309.7	9	27	3	17	2	5		
ZAGREB	54.12	306.7	9	33	4	17	11	5		
TARANTO	54.18	300.0	9	40	10	17	38	33		
PRAGUE	54.57	312.1	9	35	3	17	11	0	11	40 PP
SKALSTUGAN	55.03	328.7	9	35	0				10	39 PCP
POTSDAM	55.15	315.0	9	38	1	17	19	0	11	44 PP
COPENHAGEN	55.20	319.1	9	39K	2	17	23	3	17	32
TRIESTE	55.69	306.8	9	41	1	17	34	8	10	38 PCP
CHEB	55.87	312.3	9	51	9	17	36	7	11	7
REGGIO CALA.	55.93	297.6	9	42	0	17	35	6		
MESSINA	55.99	297.7	9	42	-1	17	41	11	11	48 PP
JENA	56.25	313.4	9	43	-1	17	38	4	11	54 PP
HAMBURG	56.85	316.7	9	51	2	17	42	0	11	59 PP
PETROPAVLOVK	57.04	43.8	9	54	4	17	43	-1	12	1 PP
ROME	57.38	302.7	9	53K	0	17	50	1	10 15	12 1 PP
BOLOGNA	57.60	305.9	10	6	12	18	2	11		23 11 SSS
KLYUCHI	57.81	39.8	10	0	5	17	55	1		
FLORENCE X.	57.82	305.1	9	53K	-2	17	52	-2	10 30	18 23 PS
STUTTGART	58.15	311.2	9	57K	-1	18	2	3		12 8 PP
TUBINGEN	58.28	310.9	10	2	3					10 17
EBINGEN	58.41	310.6	10	0	0	18	19	17		10 52 PCP
BERGEN	58.50	325.2	10	2K	2	18	1	-2		
KARLSRUHE	58.61	311.6	10	4K	3	18	10	6		12 17 PP
ZURICH	58.84	309.7	10	5	3	18	9	2		
WITTEVEEN	58.94	316.2	10	7	4					
PAVIA	58.94	307.1	10	5K	2	18	19	11		22 37 SS
STRASBOURG	59.11	311.2	10	6	2	18	12	1		12 15 PP
BASLE	59.47	310.1	10	9	2	18	23	7		
OROPA	59.66	307.8	10	10	1	18	13	-5		19 21
DE BILT	59.98	315.6	10	14	3					
NEUCHATEL	60.01	309.6	10	12	1	18	24	1		
MONACO	60.51	305.8	10	16K	2					11 13 PCP
TANANARIVE	60.59	220.5	10	18K	3					11 1 PCP
LWIRO	62.02	248.7	10	27A	3	19	5	17		
PARIS	62.45	312.4	10	27K	0	18	55	1		12 49 PP
CLERMONT-FD.	62.89	309.0	10	35	5					
ABERDEEN	62.90	322.4								25 52 SSS
DURHAM	63.26	319.7	10	35	2	19	4	0		
KEW	63.44	315.9	10	35K	1	19	7	1		19 25 PS
JERSEY	65.22	313.8	11	45	60					
ALGIERS UNI.	65.88	299.6	10	52A	2					
RATHFARNHAM	66.35	319.1	10	54K	1	19	54	11		12 31 PCP
SCORESBY SD.	66.61	339.4	10	56	2	19	55	10		20 16 PS
ALICANTE	67.91	302.3	11	6	4	20	3	2		13 30 PP
RELIZANE	68.14	299.4	11	4	0					
PERTH	69.09	151.5	11	8	-2	20	28	13		
TAMANRASSET	69.44	284.9	11	14	2	20	20	1		13 49 PP

TOLEDO	69.88	305.0	11	16	1	20	28	4	13	52	PP
ALMERIA	69.95	301.5	11	19	4						
GRANADA	70.64	302.2	11	22K	3	18	38	-115	14	14	PP
MALAGA	71.42	302.1	11	26A	2	20	40	-2	14	6	PP
COIMBRA	72.80	306.8	11	33	1				20	58	
RABAUL	73.40	105.3	11	34	-2				14	21	PP
LISBON	73.95	305.7	11	18A	-21				11	48	PCP
RESOLUTE	74.94	359.8	11	43K	-1				12	42	
COLLEGE	76.58	20.2	11	52	-2	21	36	-4	14	48	PP
KIMBERLEY	81.82	229.8	12	24	2						
SITKA	86.48	20.4	12	49	3	23	11	-11	16	9	PP
BRISBANE	87.48	124.0	12	51	0	23	31	0			
MELBOURNE	88.65	136.3	12	56	0	23	45	2			
HERMANUS	89.09	228.5				23	56	10	23	37	SKS
RIVERVIEW	90.00	130.0	12	59A	-4	23	52	-2	25	31	PPS
MBOUR	92.11	288.0	13	18	6	24	17	4	23	50	SKS
VICTORIA	97.40	18.1				24	20	-39			
SEVEN FALLS	99.39	343.0				25	24	9	24	24	SKS
HALIFAX	99.55	337.3				24	25	-51	31	2	SS
HUNGRY HORSE	99.68	12.2	13	54	7				17	58	PP
KIRKLAND LA.	100.30	349.4							18	8	PP
OTTAWA	102.15	345.7				25	42	3	18	13	PP
BUTTE	102.20	11.9				25	20	-19	24	38	SKS
RAPID CITY	105.33	5.5	18	14	777						
MINERAL	105.42	20.2							18	41	PP
PALISADES	105.89	342.9				24	55	0	18	43	PP
PHILADELPHIA	107.20	343.5				25	2	2	32	17	
SALT LAKE C.	107.41	12.7	17	58	777						
BERKELEY	107.49	21.7				25	8	-6	19	3	PP
EUREKA	107.75	16.3	17	45	777				18	20	
TINEMAHA	109.45	18.9							18	38	PP
WOODY	110.53	19.9							18	53	PP
ISABELLA	110.69	19.6							18	40	PP
BERMUDA	110.74	332.1				25	28	13	26	28	SKKS
CHINA LAKE	110.78	18.8							18	45	PP
BOULDER CITY	111.36	16.5							19	25	PP
PASADENA	112.18	19.9				25	28	7	19	20	PP
RIVERSIDE	112.56	19.3				29	2	214	19	28	PP
PALOMAR	113.31	19.1							19	30	PP
BARRETT	113.99	19.2							18	46	PP
TUCSON	115.85	14.1	18	50	5						
TACUBAYA	130.14	4.2	19	26	14				21	32	PP
BALBOA HTS.	137.65	335.8	19	26	0						
BOGOTA	139.25	325.6	19	47	18				22	23	PP
LA PAZ	151.10	292.9	19	54	5				23	8	PP
HUANCAYO	153.52	309.9	20	2	10				23	34	PP

APRIL 14 19.H 18.M 2.S EPICENTRE -15.39-173.37 DEPTH= 0.KM

A=-0.95816 B=-0.11139 C=-0.26369 D=-0.1155 E= 0.9933
G= 0.2619 H= 0.0305 K=-0.9646 HT= 5.7

SE= 2.66

	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	
APIA	2.20	44.5	0	30	-6								
NOUMEA	20.29	247.1	4	37	0	8	33	14			5	1	PP
ONERAHI	23.07	206.1	5	7	1	9	23	11			5	42	
AUCKLAND	23.84	204.0	5	3	-10	9	11	-14			9	50	
TUAI	24.77	197.9	5	22	0	9	39	-2					
TONGARIRO	25.65	200.2	5	29	-1						8	7	
WELLINGTON	27.77	199.4	5	47A	-3	10	41	11	5	57	6	32	PP
COBB RIVER	28.30	202.5	5	52	-3	10	53	14			6	53	PPP
KAIMATA	30.04	202.8	6	8	-2						15	42	SCS
BRISBANE	33.40	243.3	6	36	-4	12	6	7					
RABAUL	35.67	284.6	6	54	-5						8	22	PP
RIVERVIEW	36.87	233.6	7	9A	0				7	18	8	37	PP
HONOLULU	39.42	22.8	7	30K	-1	13	34	3					
MELBOURNE	42.97	230.5	7	59	-1	14	38	14			9	44	PP
MACQUARIE I.	44.57	202.7	8	13	0	15	1	14			9	58	PP
TERRE ADELIE	59.27	199.1	10	5	2	18	22	13					
SCOTT BASE	63.27	184.6	10	32	2	19	9	9					
PERTH	65.89	241.6	10	48	1	19	49	17			13	18	PP
MERA	66.90	319.4	10	52	-1	19	43	-1					
OSIMA	67.09	319.0	10	53	-1	19	44	-2					

YOKOHAMA	67.34	319.7	10	55	-1	19	52	3		
TOKYO C.M.O.	67.44	319.9	11	0	3	19	53	2		
AJIRO	67.44	319.1	11	0	3				12	0
MITO	67.45	320.9	10	54	-3					
KAKIOKA	67.53	320.6	10	57	0	19	57	5		
ONAHAMA	67.57	321.6	10	57	-1	19	53	1		
TUKUBASAN	67.57	320.6	10	56	-2	19	51	-1	13	29 PP
MISIMA	67.58	319.0	10	56	-2	19	40	-12		
OMAESAKI	67.72	318.2	11	4	6	20	0	6	12	2
SHIZUOKA	67.84	318.6	10	59	0	20	0	5		
UTUNOMIYA	67.93	320.7	11	1	1	19	57	0		
HUNATU	67.94	319.2	11	0	0	20	1	4		
KUMAGAYA	67.97	320.1	11	1	1	19	58	1		
TITIBU	68.05	319.8	11	0	-1					
KOHU	68.14	319.2	11	3	2	20	5	6		
ISINOMAKI	68.31	323.1	11	1	-1	19	59	-2		
HUKUSIMA	68.36	322.0	11	3	1	19	58	-4		
SENDAI	68.45	322.7	11	11	8	20	3	0	12	51
IIDA	68.54	318.7	11	4	0					
OIWAKE	68.60	319.8	11	2	-2	20	7	2	12	35
SIOMISAKI	68.63	315.9	11	2	-2	20	1	-4		
OWASE	68.71	316.6	11	4	-1	20	8	2		
YAMAGATA	68.76	322.4	11	4	-1	20	6	0		
MIYAKO	68.77	324.4	11	5	0	20	3	-4		
NAGOYA	68.88	318.0	11	5	-1	20	1	-7		
MIZUSAWA	68.89	323.5	11	6	0	20	10	2		
MATUMOTO	68.91	319.4	11	7	1	20	8	0		
MATUSIRO	68.95	319.8	11	5A	-1	20	8	-1	39	16 PP
KAMEYAMA	69.01	317.4	11	4	-2	20	2	-7	11	25
NAGANO	69.03	319.9	11	7	0	20	11	1	11	54
GIHU	69.15	318.1	11	7	0	20	10	-1		
MORIOKA	69.25	324.0	11	9	1	20	2	-10		
TAKADA	69.28	320.3	11	18	10					
NARA	69.32	317.0	11	10	2					
IBUKISAN	69.39	317.8	11	6	-3					
HIKONE	69.41	317.7	11	9	0	20	13	-1		
NEMURO	69.48	329.2	11	8	-1	20	13	-2		
OSAKA	69.50	316.8	11	16	7	20	36	21	12	0
KYOTO	69.59	317.2	11	10	0	20	15	-1		
HATINOHE	69.62	324.8	11	21	11	20	30	13		
TOYAMA	69.68	319.4	11	13	2				19	21
KOBE	69.75	316.6	11	21	10	20	17	-1		
SUMOTO	69.76	316.2	11	12	1	20	18	0		
TOKUSIMA	69.80	315.8	11	11	0	20	15	-4		
KUSIRO	69.82	328.3	11	9	-2	20	20	1		
AKITA	69.88	323.4				20	21	1		
URAKAWA	70.06	326.8	11	13	0	20	23	1		
SIMIDU	70.16	313.8	11	12	-1	20	22	-1		
KOTI	70.21	314.8	11	14	0	20	26	2		
AOMORI	70.23	324.6	11	15	1					
TAKAMATU	70.30	315.7	11	14	0	20	25	0		
OBIHIRO	70.39	327.6	11	16	1	20	27	1		
TOYOOKA	70.50	317.1	11	14	-2	20	8	-19		
ABASHIRI	70.63	329.0	11	17	1	20	30	2		
YAKUSIMA	70.65	310.5	11	17	0	20	29	0		
MIYAZAKI	70.78	312.3	11	17	0	20	27	-3		
MATUYAMA	70.90	314.6	11	18	0	20	24	-8	13	59
HAKODATE	70.92	325.4	11	17	-1	20	31	-1	12	19
STA. BARBARA	71.10	44.7	11	17	-2	20	17	-17		
MURORAN	71.16	325.9	11	20	0	20	34	-1		
KAGOSIMA	71.21	311.6	11	19	-1	20	9	-26	12	4
MORI	71.22	325.5	11	25	5	20	38	3	11	58
SANTA CLARA	71.33	41.1	11	21K	0	20	40	3		
OOITA	71.35	313.6	11	23	2	20	24	-13		
YONAGO	71.41	316.3				20	30	-7		
ASAHIGAWA	71.42	327.8	11	25	4					
HIROSIMA	71.42	314.9	11	21	0	20	35	-3	12	23
BERKELEY	71.45	40.5	11	18	-3	20	40	2	14	9 PP
SAPPORO	71.46	326.7	11	21	0	20	38	0	14	0 PP
LICK	71.52	41.3	11	20K	-2					
KING RANCH	71.58	43.9	11	21	-1				39	6 PP
UKIAH	71.64	39.0	11	22K	0	20	44	4		
SUTTSU	71.88	325.9	11	23	-1	20	44	1	12	35
PASADENA	71.99	45.7	11	23	-1	20	37	-7	21	30 SCS
ARCATA	72.23	37.1	11	27	1	20	55	8		
BARRETT	72.24	47.7	11	25K	-1	20	50	3	39	3 PP
DALTON	72.25	45.9	11	25	-1					
SAGA	72.29	312.9	11	27	1				12	29
PETROPAVLOVK	72.37	342.7	11	26	-1	20	47	-2	13	56 PP

FRESNO	72.37	42.7	11	25	-2	20	51	2	
HUKUOKA	72.38	313.3	11	27	0	20	20	-29	15 14
WOODY	72.38	44.1	11	25K	-2	20	52	3	34 10 PP
BAGUIO CITY	72.44	293.1	11	25	-2	20	25	-24	
RIVERSIDE	72.45	46.3	11	24A	-3	20	50	1	21 26 SCS
PALOMAR	72.47	47.1	11	26A	-1				39 17
ISABELLA	72.62	44.3	11	27	-1				39 10 PP
WAKKANAI	72.93	328.6	11	56	26	20	37	-18	
TOMIE	73.05	311.7	11	30	-1	20	52	-4	
SHASTA	73.11	38.1	11	28K	-3				
CHINA LAKE	73.30	44.6	11	30	-2				11 45
MINERAL	73.37	38.8	11	31A	-2				
Y.-SAKHLINSK	73.50	330.3	11	32	-1	21	2	1	
HAYFIELD	73.53	47.3	11	33	-1	21	3	1	
TINEMAHA	73.57	43.2	11	32	-2	21	7	5	12 48
RENO	73.99	40.3	11	30K	-6	21	11	4	17 19
CORVALLIS	75.05	34.6	11	43	1				19 31
BOULDER CITY	75.28	45.7	11	46A	2	21	22	1	
MAZATLAN	75.87	60.8	11	56	9	21	50	22	
MANZANILLO	76.06	65.5	11	52K	4	21	32	2	12 26
TUCSON	76.30	50.7	11	48K	-1	21	28	-4	14 38 PP
EUREKA	76.39	42.1	11	47K	-3	21	32	-1	15 2 PP
VLADIVOSTOK	76.81	322.1	11	52	0	21	41	3	
ALBERNI	77.35	30.2	11	55	0				
VICTORIA	77.54	31.4	11	56K	0	21	47	1	14 45 PP
GUADALAJARA	77.55	64.3	11	58K	2	21	50	4	
SEATTLE	77.55	32.6	12	1	4	21	51	5	
ZO-SE	77.98	307.1	12	0A	1	21	50	-1	
HORSESHOE B.	78.18	30.8	11	59K	-1	21	53	0	22 30 SCS
CHIHUAHUA	78.36	55.9	12	9K	8	22	5	10	22 43 SCS
DJAKARTA	78.58	266.7	11	59A	-3	22	12	15	
SITKA	78.80	20.1	12	2K	-1	21	59	0	12 46
SALT LAKE C.	79.76	42.7	12	8K	-1	22	5	-4	
MAGADAN	80.13	342.4	12	9	-2				
NANKING	80.22	307.1	12	11A	0	22	13	-1	
HONG KONG	80.23	296.4	12	11A	0	22	14	0	
TACUBAYA	80.72	67.0	12	15	1	22	23	4	27 54 SCS
CHANGCHUN	81.20	320.0				22	21	-3	
CANTON	81.27	296.8	12	16	-1	22	23	-2	
PUEBLA	81.48	67.6	12	28	10				22 52 SCS
SUIHWA	81.66	323.1	12	20	1				
BUTTE	82.02	37.9	12	18A	-2	22	31	-2	15 28 PP
OAXACA	82.11	70.0	12	22	1	22	38	4	
COLLEGE	82.35	10.7	12	17K	-5	22	29	-7	15 28 PP
HUNGRY HORSE	82.43	35.4	12	20A	-3	22	34	-3	15 48 PP
BOZEMAN	82.75	38.8	12	24K	0	22	37	-3	15 37 PP
BANFF	83.20	32.5	12	26K	-1				
VERA CRUZ	83.39	68.1	12	19K	-8	22	42	-5	25 4
LUBBOCK	83.68	52.8	12	28	-1	22	50	0	
PEKING	85.48	313.5	12	39	1	22	51	-16	
COMITAN	86.11	72.1	12	46	5	23	14	1	
RAPID CITY	86.96	42.8	12	45A	0	23	11	-11	16 21 PP
DALLAS	87.36	55.1	12	49	2	23	19	-6	
TATUNG	87.55	312.6	12	53	5				
SAN SALVADOR	88.08	75.3	12	55	4	23	44	12	
SASKATOON	88.44	34.5	12	57	5	23	17	-18	25 47
SIAN	88.72	305.9	12	57	3				
SANTIAGO MA.	88.72	75.7	12	58	4	23	49	11	
MERIDA	89.75	68.3	12	58K	-1	23	48	0	23 30 SKS
PAOTOW	90.04	312.2	13	2	2				
FAYETTEVILLE	90.46	52.7	13	3K	1	23	33	-21	
ELORISSANT	94.17	51.0	13	20K	1	24	29	3	23 52 SKS
ST. LOUIS 1	94.23	51.2	13	17A	-2	23	52	-35	17 3 PP
HUANCAYO	94.43	103.7	13	28	8	24	3	-26	17 17 PP
TIKSI	94.99	344.4	13	21	-2	24	32	-1	23 51 SKS
BALBOA HTS.	95.98	82.4	13	28	1	24	49	7	
TERRE HAUTE	96.56	51.0	13	33	3				17 18 PP
CHICAGO CGS.	97.00	48.7				24	1	-50	26 5 PS
IRKUTSK	97.40	322.1	13	33A	-1	24	56	2	24 8 SKS
CHINCHINA	98.76	87.2	13	43	3	24	19	-46	17 45 PP
LA PAZ	99.72	110.1	13	48A	4	24	28	-45	17 54 PP
BOGOTA	100.16	88.0	13	40	-6	24	24	-53	17 56 PP
COLUMBIA	100.34	57.5	13	46	-1	25	17	-2	17 9 PPP
GALERAZAMBA	100.52	81.7				25	24	4	24 32 SKS
SHILLONG	100.69	293.7	13	47	-2	24	1	-81	
CLEVELAND	101.38	50.0	13	51	-1	24	31	-56	17 59 PP
RESOLUTE	101.71	15.4	13	50K	-3				
KIRKLAND LA.	103.49	43.4	14	2	1	24	35	-70	18 15

PENNSYLVANIA	103.99	51.1	14	2	-1	25	56	7		18	19 PP
WASHINGTON	104.33	53.2	17	41	216	27	29	97			
CHATRA	105.07	294.1	14	35	777					24	52
BOKARO	105.78	290.8								17	11
PHILADELPHIA	105.93	52.3	18	32	777	24	53	-1		18	32 PP
OTTAWA	106.12	46.6	14	13A	777	26	10	75		18	33 PP
PALISADES	107.00	51.3	14	25	777	25	5	6		18	41 PP
FORDHAM	107.00	51.5	14	16	777	26	24	2		24	58 SKS
BREBEUF	107.60	46.7	14	20	777					19	11
COLOMBO	107.92	272.4								19	46
SHAWINIGAN	108.26	45.6	14	23A	777					18	49 PP
MADRAS	108.98	278.7								18	54
WESTON	109.04	50.0	15	8	777	27	42	8		18	52 PP
SEVEN FALLS	109.61	45.0	14	31	777	25	8	-3		26	45 S
SAN JUAN	110.75	75.9	14	41	-231	26	40	89		18	18 PKP
KODAIKANAL	110.99	275.2	14	35	-237					19	17 PP
HYDERABAD	111.46	283.0								17	51
SCHEFFERVLLE	112.05	36.7	13	15K	-319						
SEMIPALATNSK	112.13	318.5	18	33	-1					14	36 P
DEHRA DUN	113.47	296.7								16	20
NEW DELHI	114.06	294.7								16	35
HALIFAX	114.68	47.7				27	23	117		19	34 PP
FORT FRANCE	114.81	80.7	18	39	-1	27	39	133			
POONA	115.96	283.4								18	42
FRUNSE	116.42	310.5	18	38	-5	25	35	3		14	56 P
BOMBAY	116.97	283.6								15	2
TASHKENT	120.48	309.1	18	32	-19	25	45	-2		15	14 P
STALINABAD	121.14	305.9	18	55	3						
SVERDLOVSK	122.14	328.3	18	54	0	27	23	91		15	24 P
SCORESBY SD.	122.21	11.0	18	56	2	25	55	3		20	21 PP
KARACHI	122.93	291.0	18	50	-5						
QUETTA	123.06	296.2	18	57	1	26	11	16		20	50 PP
APATITY	125.04	347.8	18	58K	-2	26	1	0		20	45 PP
SODANKYLA	126.44	350.5	19	2	0	26	6	1	20 57	22	25 PKS
KIRUNA	126.83	353.5	19	2	-1	26	6	-1		20	58 PP
TANANARIVE	127.23	231.1	19	7A	3					21	3 PP
REYKJAVIK	127.50	15.3	19	28	24						
GRAHAMSTOWN	127.96	201.2	19	10A	5					21	11
HERMANUS	129.04	193.4								21	16 PP
ASHKABAD	129.34	306.6	19	8	0					22	31
PIETERMZBURG	129.72	207.1	19	9	1					21	25
SKALSTUGAN	131.70	356.6	18	58	-14					21	30 PP
PULKOVO	132.41	344.0	19	14	0	26	14	-7		22	41 PKS
KIMBERLEY	132.74	201.9	19	1	-13					19	15
MOSCOW	133.25	336.4	19	16	1					28	22 SKKS
HELSINKI	133.32	347.5	19	3	-12					21	36 PP
PRETORIA	134.04	207.4	19	19	2						
UPPSALA	134.88	352.2	19	9	-9					21	56 PP
BERGEN	135.04	0.9	19	21	2					22	0 PP
ABERDEEN	137.77	7.1				26	13	-18		22	49 SKP
TIFLIS	137.95	316.3	19	26	2					23	2 PKS
COPENHAGEN	139.54	354.9	19	20	-7					22	25 PP
DURHAM	140.19	7.4	19	27	-1					22	27
RATHFARNHAM	140.83	12.3	19	25A	-4					23	6 PP
WARSAW	141.50	345.8	19	26A	-4	26	41	4		22	34 PP
HAMBURG	141.81	356.8	19	28	-3					22	40 PP
ANGRA DO HD.	142.30	45.5								22	27 PP
SIMFEROPOL	142.49	327.4	19	26A	-6	26	36	-2		22	33 PP
WITTEVEEN	142.66	360.0	19	32A	0						
LWOW	142.85	341.3	19	28	-5	26	44	5		22	31 PP
DE BILT	143.36	1.5	19	30K	-3	29	40	180		22	58 PP
KEW	143.58	7.3	19	31	-3					22	44 PP
KRAKOW	143.78	345.5	19	32	-2					23	14 PKS
IASI	143.82	335.6	19	34	0					23	13 PP
RACIBORZ	144.15	347.3	19	34	-1					23	16 PKS
JENA	144.32	354.6	19	34	-1				19 48	27	54 PPP
SKALNATE PL.	144.50	344.6	19	38	3	26	22	-19		23	7 PP
BENSBERG	144.52	359.4	19	34	-1					19	48
BACAU	144.60	335.6	19	35	-1						
PRAGUE	144.83	351.3	19	36	0	26	34	-8		22	58 PP
CHEB	145.09	353.5	19	37	1					29	50 SKKS
FOCSANI	145.19	334.5	19	38	1						
JERSEY	145.55	10.1	19	42	5					23	10 PP
BRATISLAVA	146.19	347.4	19	41	3	26	56	12		22	56 PP
HURBANOVO	146.23	345.9	19	44	6					22	58 PP
VIENNA-H.	146.26	348.3	19	40	2	26	54	10		24	22 PKS
BUDAPEST	146.38	344.7	19	41	2					21	38 PP
CAMPULUNG	146.41	336.2	19	32	-7					20	4

KARLSRUHE	146.44	357.9	19	40	1					24	19 PP
PARIS	146.50	5.0	19	40A	1					23	17 PP
STUTTGART	146.64	356.9	19	40A	1				19 55	23	19 SKP
BUCHAREST	146.68	334.2	19	39A	0					23	15 PKS
STRASBOURG	146.89	358.6	19	40A	1	26	51	6		23	13 PP
TUBINGEN	146.89	357.0	19	43A	4				19 57		
SZEGED	147.22	342.6	19	44	4					22	36 PP
EBINGEN	147.24	357.1	19	41A	1				19 56		
KALOCSA	147.28	344.1	19	43	3					23	0 PP
TIMISOARA	147.34	340.9	19	45	5					23	0 PP
KSARA	147.86	310.1	19	45K	4					23	17 PKS
BASLE	147.94	358.8	19	45	4					29	53
ZURICH	148.07	357.5	19	46	5						
BESANCON	148.23	0.8	19	42	0	27	3	16		23	3 PP
BELGRADE	148.42	341.1	19	42K	0					33	32 SKSP
NEUCHATEL	148.48	359.6	19	43	1					23	26 PP
ZAGREB	148.66	347.4	19	45	3						
TRIESTE	149.24	350.2	19	44A	1					23	22 PP
JERUSALEM	149.27	307.1	19	46K	3						
CLERMONT-FD.	149.57	4.9	19	48	4	27	0	12		22	59 PP
OROPA	149.84	358.1	19	45	1					30	8 SKKS
PAVIA	150.22	356.4	19	46A	1					23	22 PP
BOLOGNA	150.71	353.1	19	47	2					27	13 PPP
FLORENCE X.	151.43	353.0	19	46A	-1					23	47 PP
MONACO	151.74	358.8	19	48A	1					23	50 PP
LWIRO	151.93	233.2	19	50A	3						
COIMBRA	152.00	25.1	19	48	1	26	49	-3		23	33 PP
ATHENS	152.91	329.3	19	50	1						
LISBON	152.92	27.9	19	50A	1						
ROME	153.10	350.3	19	50A	1					23	50 PP
TARANTO	153.35	341.7	20	5	16					30	30 SKKS
BARCELONA	153.77	7.7								20	15
TOLEDO	153.87	18.9	19	52A	2	27	0	6		23	55 PP
CUGLIERI	155.24	356.5								22	50
MESSINA	155.95	342.6	19	53A	0	26	51	-5		29	54 SKKS
REGGIO CALA.	156.01	342.3	19	55	2						
ALICANTE	156.28	14.0	19	55	2	26	48	-8		23	53 PP
GRANADA	156.47	20.8	19	54A	1	27	2	6		24	0 PP
MALAGA	156.59	22.8	19	56A	2	27	0	4		24	2 PP
ALMERIA	157.14	19.1	19	56	2	26	35	-22		24	8 PP
MBOUR	157.17	89.4	19	57	3	27	4	7		24	19 PP
ALGIERS UNI.	158.47	7.9	19	57A	1					24	12 PP
RELIZANE	159.00	13.9	19	58	1					24	23 PP
LOME	169.37	149.4	20	14	8	27	23	17		32	0 SKKS
TAMANRASSET	172.57	8.0	20	11A	3					25	27 PP

APRIL 14 20.H 59.M 1.S EPICENTRE 50.14-178.81 DEPTH= 0.KM

A=-0.64332 B=-0.01331 C= 0.76548 D=-0.0207 E= 0.9998
G=-0.7653 H=-0.0158 K=-0.6435 HT= -5.5

SE= 1.34

	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	14.30	290.7	3	24	0							
COLLEGE	21.92	36.1	4	54	-1							
Y.-SAKHLINSK	25.47	277.8	5	30	1							
SITKA	26.34	58.0	5	39	2	10	10	2			6	22 PP
HONOLULU	33.10	142.8	6	39	1							
MATUSIRO	33.59	262.8	6	42K	0						7	57 PP
HORSESHOE B.	35.18	69.3	6	56K	1						9	27
VICTORIA	35.44	70.7	6	58K	0						9	26
CHANGCHUN	37.86	282.5	7	17K	-1							
BANFF	39.02	63.3	7	28K	0						9	48
SHASTA	39.84	81.4	7	36	1						9	50
UKIAH	40.19	84.0	7	38	1							
MINERAL	40.54	81.3	7	40K	0						9	43
RESOLUTE	40.88	23.8	7	41A	-2						9	40 PPP
HUNGRY HORSE	41.14	66.5	7	46	1	13	35	-23			9	45 PCP
BERKELEY	41.53	84.9	7	49K	1						9	46
RENO	42.13	81.2	7	54K	1							
LICK	42.24	85.1	7	55K	1						8	12
BUTTE	43.14	68.9	8	1	-1						9	43 PP
FRESNO	43.76	84.4	8	7K	0							
TINEMAHA	44.59	83.0	8	15K	2						9	57 PCP

EUREKA	44.60	78.7	8	13	0						
KING RANCH	44.68	86.0	8	15K	1						
WOODY	45.01	85.0	8	16K	-1						
ISABELLA	45.29	84.8	8	19	0					10	7 PCP
PEKING	45.65	283.3	8	22K	0						
CHINA LAKE	45.75	84.0	8	23K	0					10	0 PCP
IRKUTSK	46.07	303.8	8	25	0						
PASADENA	46.42	86.2	8	28K	0	15	17	3		10	2 PCP
SALT LAKE C.	46.44	74.7	8	28	0					10	3 PCP
RIVERSIDE	47.03	85.8	8	32K	-1					10	4 PCP
BOULDER CITY	47.42	81.9	8	36	0						
PALOMAR	47.77	86.1	8	39K	0					9	58 PCP
ZO-SE	47.98	270.2	8	41K	1	15	47	11			
BARRETT	48.33	86.6	8	45K	2					10	9 PCP
HAYFIELD	48.33	84.8	8	48	5						
NANKING	48.89	272.9	8	46K	-1						
RAPID CITY	49.77	66.1	8	53	-1						
BOULDER	50.91	71.6								9	2
TUCSON	52.35	82.8	9	13	0					10	25 PCP
LUBBOCK	57.14	75.5	9	47	-1						
SCORESBY SD.	58.53	8.9	9	56	-2						
HONG KONG	58.57	267.7	9	59	1						
CANTON	58.58	269.0	9	57K	-2						
BAGUIO CITY	58.79	257.9	9	59	-1						
RABAUL	59.63	214.1	10	4	-2					11	15 PCP
KIRKLAND LA.	59.81	50.0	10	7K	0					39	47 PKPPKP
FAYETTEVILLE	60.15	68.4	10	8A	-1					10	54
APATITY	60.15	346.3	10	8A	-1	18	21	0			
SCHEFFERVLLE	61.06	37.8	10	17K	1						
SODANKYLA	61.25	349.1	10	16	-1	18	34	-1	10 26	11	0 PCP
KIRUNA	61.47	351.8	10	18K	0	18	38	1		39	34 PKPPKP
SVERDLOVSK	62.64	327.8	10	25	-1						
OTTAWA	63.86	49.9	10	33K	-1					12	47 PP
SHAWINIGAN	64.46	47.3	10	36K	-2					11	12 PCP
BREBEUF	64.81	48.6	10	39K	-1						
PITTSBURGH	65.23	56.2	10	43	0						
SKALSTUGAN	66.29	354.6	10	49K	-1					39	15 PKPPKP
FRUNSE	67.43	310.3	10	58	1						
PULKOVO	67.92	344.6	11	0	0						
PALISADES	67.97	52.1	11	0	0						
WESTON	68.24	49.5	11	1K	-1						
HELSINKI	68.37	347.5	11	2	-1	20	1	-1	11 12	11	31 PCP
TACUBAYA	68.76	84.9	11	6	1	20	14	7		13	34 PP
COLUMBIA	69.29	61.6	11	8	-1						
UPPSALA	69.56	351.2	11	10K	0	20	16	0	11 20	39	5 PKPPKP
HALIFAX	70.12	43.4	11	12K	-2						
MOSCOW	70.22	339.1	11	15	1	20	25	1			
NAMANGAN	70.29	310.7	11	15	0						
VERA CRUZ	70.87	82.8								12	34
MERIDA	73.71	76.8	11	35	0						
COPENHAGEN	74.13	353.4	11	39K	1						
DURHAM	75.44	1.7	11	46	1						
LAHORE	76.16	302.7	11	48	-1						
HAMBURG	76.40	354.6	11	52	1						
RATHFARNHAM	76.74	4.6	11	52K	0						
WITTEVEEN	77.31	356.6	11	57K	1						
DE BILT	78.08	357.5	12	0	0						
KEW	78.76	1.0	12	4	0					12	12
KRAKOW	78.91	347.8	12	5	1					12	23
JENA	78.92	353.3	12	5	0						
RACIBORZ	79.10	348.9	12	7	1						
BENSBERG	79.15	356.2	12	6A	0					12	54 PCP
PRAGUE	79.53	351.4	12	8K	0	22	17	10		14	8 PP
CHEB	79.70	352.7	12	13	4	22	17	8		12	27
VAS	80.40	342.1	12	14	2					12	25
TIFLIS	80.87	328.5	11	17	-58	22	27	6			
KARLSRUHE	81.04	355.2	12	17K	1						
SIMFEROPOL	81.06	337.0	11	17	-59						
BRATISLAVA	81.12	349.3	12	18	2					12	27
QUETTA	81.13	307.0	12	18K	2	22	29	5			
BRISBANE	81.22	205.1	12	17	0						
STUTTGART	81.23	354.6	12	17K	0					12	27 PCP
PARIS	81.43	359.1	12	19K	1					12	25
TUBINGEN	81.48	354.7	12	19	1						
STRASBOURG	81.50	355.6	12	19K	1					13	3
BUDAPEST	81.54	347.8	12	20	2						
EBINGEN	81.83	354.7	12	21K	1					12	30 PCP
KALOCSA	82.49	347.7	12	26	3						
BASLE	82.56	355.6	12	24	0						

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SZEGED	82.60	346.9	12 28	4				
BESANCON	82.90	356.7	12 27	1			13 5	
NEUCHATEL	83.11	356.0	12 28	1				
BUCHAREST	83.35	342.3	12 28K	0				
ZAGREB	83.56	349.6	12 29	0				
BELGRADE	83.95	346.3	12 36A	5				
TRIESTE	83.97	351.2	12 32	1	22 56	3	22 49	
KARACHI	84.58	304.3	12 37	3				
FLORENCE X.	86.05	352.7	12 41	0			13 7	
MONACO	86.35	355.5	12 43	0			13 0	
POONA	86.57	294.9	12 44	0				
RIVERVIEW	87.73	204.6	12 51A	2				
ROME	87.81	351.6	12 50	0				
BALBOA HTS.	89.07	77.2	12 55	-1				
SAN JUAN	89.76	61.2	12 59	0			16 37 PP	
LISBON	91.05	8.1	13 6A	1				
GRANADA	92.95	3.8	13 14K	0			16 19 PP	
MALAGA	93.37	4.5	13 15A	-1			19 15	
RELIZANE	94.48	0.5	13 21	0				
TAMANRASSET	107.31	355.8	14 20	777			18 38 PP	
HUANCAYO	107.79	87.5					18 55 PP	
LWIRO	126.84	324.6	19 5A	2			21 2 PP	
TANANARIVE	131.84	293.1	19 18	5			22 23	
PRETORIA	147.97	309.5	19 44	2				
PIETERMZBURG	149.93	302.0					19 52 PKP2	
KIMBERLEY	152.14	311.2	19 19	-29			19 26	
GRAHAMSTOWN	154.86	302.3					20 5 PKP2	

APRIL 15 10.H 38.M 42.S EPICENTRE 51.48-179.02 DEPTH= 39.KM

DEPTH OF FOCUS= 0.001R

A=-0.62532 B=-0.01069 C= 0.78029 D=-0.0171 E= 0.9999
G=-0.7802 H=-0.0133 K=-0.6254 HT= -6.0

SE= 1.64

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
PETROPAVLOVK	13.75	285.7	3 14	0	5 42	-5		
COLLEGE	20.93	38.3	4 40	-1	8 32	5		
Y.-SAKHLINSK	25.20	274.8	5 25	2	9 50	7		
SITKA	25.77	60.3	5 33	5	9 56	3		6 33
TIKSI	30.48	330.4	6 9	-2				
TUKUBASAN	32.71	258.3	6 29	-2				7 41 PP
MATUSIRO	33.65	260.6	6 38A	-1	12 1	3		7 46 PP
VLADIVOSTOK	33.76	275.3	6 40	0	12 0	1		
ALBERNI	33.98	71.9	6 44	2				
HONOLULU	34.25	143.7	6 42	-2				
HORSESHOE B.	34.85	71.0	6 50K	1				
VICTORIA	35.14	72.4	6 53A	2	12 24	3		
CORVALLIS	37.10	78.2	7 11K	3				
CHANGCHUN	37.46	280.7	7 11A	0				
BANFF	38.55	64.7	7 20A	0				
RESOLUTE	39.71	24.5	7 29A	-1	13 34	3		9 8 PP
SHASTA	39.79	82.8	7 31K	1				
MINERAL	40.48	82.7	7 37A	1				
HUNGRY HORSE	40.74	67.9	7 39	1	13 48	2		
BERKELEY	41.56	86.2	7 46	1				9 42
RENO	42.07	82.5	7 50K	1				
LICK	42.27	86.4	7 51A	0				
BUTTE	42.80	70.1	7 55	0	14 20	4		
FRESNO	43.78	85.7	8 3	0				
BOZEMAN	43.88	69.7	8 5	1				
EUREKA	44.48	79.9	8 9	0				9 14
TINEMAHA	44.57	84.2	8 11A	1				8 28
KING RANCH	44.73	87.2	8 11	0				
WOODY	45.04	86.2	8 13A	0				
PEKING	45.23	281.8	7 55	-20				
IRKUTSK	45.23	302.6	8 15	0				
ISABELLA	45.31	85.9	8 14A	-1				
CHINA LAKE	45.75	85.1	8 19A	0				
SALT LAKE C.	46.22	75.8	8 22	-1				
PASADENA	46.48	87.3	8 25A	0	15 12	3		
RIVERSIDE	47.08	86.9	8 28A	-1				
BOULDER CITY	47.37	83.0	8 31	-1				

PALOMAR	47.82	87.1	8	35A	0							
ZO-SE	47.86	268.8	8	37A	1	15	36	7				
HAYFIELD	48.35	85.8	8	38	-1							
BARRETT	48.39	87.6	8	39A	-1							
NANKING	48.71	271.6	8	41A	-1	15	43	2				
RAPID CITY	49.36	67.1	8	46	-1	15	52	2				
BOULDER	50.62	72.5	8	55	-1							
TUCSON	52.32	83.7	9	9	-1	16	32	1				
LUBBOCK	56.94	76.2	9	43	0							
CANTON	58.49	268.1	9	53A	-1	17	56	3				
HONG KONG	58.50	266.7	9	54	0	17	18	-35				
APATITY	58.82	346.1	9	55K	-1	17	57	0				
BAGUIO CITY	58.96	256.9	10	3	6							
KIRKLAND LA.	59.06	50.5	9	59A	1							
FAYETTEVILLE	59.78	69.0	9	52A	-11							
SODANKYLA	59.91	348.8	10	5	1						10	48 PCP
SCHEFFERVLLE	60.08	38.1	11	6	61							
KIRUNA	60.13	351.6	10	5A	0	18	16	2			12	20 PP
RABAUL	60.67	213.5	10	4	-5						10	29
SVERDLOVSK	61.44	327.3	10	14	0	18	35	4				
CLEVELAND	63.02	56.7	10	25	0							
OTTAWA	63.10	50.2	10	22K	-4						13	1 PP
SHAWINIGAN	63.65	47.7	10	28K	-1						11	9 PCP
BREBEUF	64.03	49.0	10	30K	-2							
SEVEN FALLS	64.11	46.2	10	32	0							
SKALSTUGAN	64.94	354.4	10	38	1							
FRUNSE	66.47	309.7	10	47	0							
PULKOVO	66.60	344.3	11	18	30							
HELSINKI	67.04	347.2	10	49	-2						11	22 PCP
PALISADES	67.25	52.4	10	52	0	19	41	-2			24	37 SS
WESTON	67.47	49.8	10	53A	0							
UPPSALA	68.22	351.0	10	57A	-1	19	53	-1			11	6
COLUMBIA	68.77	62.0	11	1	-1	20	3	2			11	38
TACUBAYA	68.78	85.3	11	5	3	20	4	3			14	37
MOSCOW	68.92	338.8	11	2	-1	20	4	1				
HALIFAX	69.24	43.6	10	59A	-5							
NAMANGAN	69.32	310.2	11	5	0	20	7	0				
SHILLONG	69.90	285.9	11	6A	-2	20	13	-1				
CHATRA	71.75	290.1	11	21	1	20	44	8				
COPENHAGEN	72.79	353.2	11	26A	0	20	53	5			21	42
MERIDA	73.53	77.1				21	6	10				
WARSAW	75.29	347.4	11	40	0						16	19 PPP
LAHORE	75.33	302.3	11	41	0							
RATHFARNHAM	75.42	4.5	11	40A	-1							
WITTEVEEN	75.97	356.4	11	46	2							
POTSDAM	76.02	352.4	11	45	1							
DE BILT	76.74	357.3	11	48	-1	21	36	5				
KEW	77.43	0.8	11	53	1							
KRAKOW	77.57	347.6	11	53	0	21	44	4			12	46
JENA	77.58	353.2	11	52	-1							
PRAGUE	78.19	351.2	11	57	0						13	31
IASI	79.08	341.9	12	2	0							
TIFLIS	79.66	328.2	12	6	1							
JERSEY	79.69	2.1									21	51
STUTTGART	79.89	354.5	12	6A	0	22	3	-2			12	15 PCP
PARIS	80.09	359.0	12	9A	2	22	11	4			15	9 PP
STRASBOURG	80.16	355.4	12	8A	1	22	13	5			15	9 PP
QUETTA	80.23	306.6	12	8A	0	22	10	1			15	6 PP
EBINGEN	80.49	354.6	12	9	0						12	17 PCP
BESANCON	81.56	356.6	12	15	0							
BUCHAREST	82.04	342.1	12	18	1	22	33	6				
BELGRADE	82.62	346.2	12	21A	1	22	36	3			13	22
TRIESTE	82.63	351.0	12	18	-2	22	58	25			22	44 SKS
CLERMONT-FD.	83.12	358.5	12	22	-1							
HYDERABAD	84.10	290.5	12	29A	1	22	51	3			23	6 SCS
ISTANBUL	84.64	339.0	12	30	0	22	52	-1				
FLORENCE X.	84.71	352.5	12	35	4				13	26	22	25
MONACO	85.01	355.3	12	33	1							
POONA	85.89	294.6	13	36	59						24	7
BOMBAY	86.18	295.6	12	40	2	23	27	19			23	15 SKS
ROME	86.47	351.4	12	41A	2	23	13	2	13	0	22	30 SCS
MADRAS	86.55	286.4									12	41
RIVERVIEW	88.90	204.5	12	52K	1	23	38	4			23	19 SKS
BALBOA HTS.	88.90	77.1	12	51	0							
TOLEDO	88.92	3.9	12	50	-1							
KSARA	89.70	331.6	12	57	2	23	48	7			16	32 PP
GRANADA	91.63	3.7	13	0K	-4							
TAMANRASSET	105.96	355.6									18	33 PP

LA PAZ	115.73	84.2	18 54	16							19 50	PP
LWIRO	125.67	325.0	18 59A	2							19 24	
PRETORIA	147.01	310.8	19 42	6								
KIMBERLEY	151.14	312.8	19 50	7								

APRIL 15 21.H 33.M 6.S EPICENTRE 52.07-167.04 DEPTH= 0.KM

A=-0.60152 B=-0.13845 C= 0.78677 D=-0.2243 E= 0.9745
G=-0.7667 H=-0.1765 K=-0.6173 HT= -6.2

SE= 1.90

	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	
COLLEGE	16.19	30.3	3	44	-6	6	30	-21					
SITKA	18.94	62.2	4	25	0	7	57	3			5	4	
PETROPAVLOVK	20.76	286.6	4	42	-3								
ALBERNI	26.63	79.1	5	42	0								
HORSESHOE B.	27.52	78.0	5	50K	0						6	17	
VICTORIA	27.77	79.8	5	51K	-2								
SEATTLE	28.82	80.8	6	2A	0						12	36	
CORVALLIS	29.65	87.0	6	9K	0								
BANFF	31.44	70.8	6	24K	-1						6	45	
SHASTA	32.34	92.6	6	32K	-1						9	17	PCP
Y.-SAKHLINSK	32.48	281.3	6	33	-1								
UKIAH	32.76	95.7	6	36	-1								
MINERAL	33.03	92.5	6	38K	-1						9	20	PCP
HUNGRY HORSE	33.50	74.9	6	42	-1	12	4	-1			9	31	PCP
TIKSI	33.73	329.1	6	44	-1								
BERKELEY	34.14	96.6	6	47K	-1	13	16	61			9	22	PCP
RENO	34.61	92.2	6	52K	-1								
LICK	34.85	96.8	6	53K	-1						9	26	PCP
BUTTE	35.49	77.7	6	59	-1								
RESOLUTE	36.02	25.5	7	3K	-2	12	39	-1			9	28	PCP
FRESNO	36.35	95.9	7	7K	0								
BOZEMAN	36.58	77.3	7	8	-2								
EUREKA	37.02	89.2	7	13	0								
TINEMAHA	37.13	94.2	7	15K	1				7	33			
WOODY	37.62	96.4	7	18K	0						9	32	PCP
ISABELLA	37.89	96.1	7	19K	-1								
CHINA LAKE	38.31	95.2	7	24K	0				7	50			
SALT LAKE C.	38.79	84.5	7	28	0								
PASADENA	39.07	97.7	7	30K	-1	13	24	-7	7	48	9	37	PCP
RIVERSIDE	39.66	97.2	7	33K	-3				7	52			
BOULDER CITY	39.92	92.7	7	37	0						8	7	
TUKUBASAN	40.16	268.1	7	37	-3	13	48	1					
PALOMAR	40.42	97.4	7	41K	0				7	59			
BARRETT	40.99	98.0	7	46K	0				8	1			
VLADIVOSTOK	41.02	282.5	7	45	-1								
MATUSIRO	41.11	270.0	7	46	-1	13	51	-8			9	27	PP
RAPID CITY	42.14	74.6	7	54	-1						9	31	PCP
BOULDER	43.24	80.8	8	4	0								
CHANGCHUN	44.54	287.4	8	12	-3								
TUCSON	44.87	93.5	8	17	-1						9	13	
LUBBOCK	49.51	85.2	8	52	-2						10	15	
IRKUTSK	50.97	307.7	9	3	-3	16	18	-4					
PEKING	52.24	289.0	9	12	-3	16	35	-4					
FAYETTEVILLE	52.49	77.3	9	13K	-4								
KIRKLAND LA.	52.70	57.2	9	15K	-3								
SCHEFFERVLLE	54.73	44.2	10	32K	59								
SCORESBY SD.	55.19	13.6	9	36	-1								
ZO-SE	55.26	277.4	9	36	-2	17	22	1					
NANKING	56.05	280.0	9	41K	-2	17	28	-4					
OTTAWA	56.75	57.4	9	44K	-4								
SHAWINIGAN	57.48	54.7	9	48K	-5						10	42	PCP
BREBEUF	57.76	56.1	9	51K	-4	18	2	8					
APATITY	59.71	351.1	10	6A	-3	18	15	-4					
KIRUNA	60.29	356.7	10	10A	-3	18	22	-4			10	55	PCP
SODANKYLA	60.44	354.0	10	12	-1	18	25	-2			12	30	PP
PALISADES	60.74	60.0	10	12	-3	18	29	-3			23	1	SS
WESTON	61.13	57.3	10	15A	-3								
TACUBAYA	61.34	95.0	10	18	-2						12	26	PP
HALIFAX	63.37	51.0	10	29K	-3						10	43	PCP
SVERDLOVSK	64.61	333.3	10	39	-2	19	20	-1					
SKALSTUGAN	64.69	0.3	10	40	-2				10	53			
RABAUL	65.87	225.6	10	45	-5						11	2	
CANTON	65.89	277.0	10	46	-4	19	34	-3					

HONG KONG	65.92	275.7	10	48K	-3	19	39	2			
BAGUIO CITY	66.40	266.6	10	49A	-4						
PULKOVO	67.64	350.6	10	59	-2						
HELSINKI	67.70	353.5	10	59	-2	19	54	-4		11	30 PCP
UPPSALA	68.37	357.5	11	3K	-3	20	1	-6	11 17	39	10 PKPPKP
MOSCOW	70.64	345.5	11	27	8						
FRUNSE	71.47	317.0	11	23	-1						
BERMUDA	72.09	60.3	11	30	2	20	44	-6		25	50 SS
COPENHAGEN	72.62	0.3	11	31	0	20	56	0		21	44
DURHAM	72.84	8.8	11	31	-1	21	1	3			
RATHFARNHAM	73.77	11.9	11	35K	-3					38	41 PKPPKP
NAMANGAN	74.26	317.8	11	39	-2	21	15	0			
HAMBURG	74.70	1.8	11	44K	1	21	20	1	11 58		
WARSAW	75.85	354.9	11	50K	0	21	34	2			
POTSDAM	75.92	359.9	11	49	-1					12	6
DE BILT	76.00	4.9	11	50	-1	21	36	2			
KEW	76.23	8.5	11	50	-2	21	36	0		14	45 PP
BENSBERG	77.23	3.8	11	57K	0					12	11
JENA	77.37	0.9	11	57	-1						
KRAKOW	78.08	355.4	12	1	-1	21	55	-1		12	17 PCP
RACIBORZ	78.13	356.6	12	2	0	21	53	-3			
CHEB	78.22	0.4	12	3	0	21	58	1		12	17 PCP
PRAGUE	78.23	359.0	12	2K	-1	21	56	-1		22	29 PS
CHATRA	78.28	298.6	12	12	9	22	1	2			
SKALNATE PL.	78.94	355.1	12	8	1	22	8	3		22	32
PARIS	79.10	7.0	12	8	0	22	7	0	12 22	15	11 PP
KARLSRUHE	79.22	3.0	12	10	2	22	9	1		13	13
STUTTGART	79.49	2.5	12	8K	-2	22	9	-2	12 23	12	14 PCP
STRASBOURG	79.63	3.5	12	10K	0	22	12	0		15	3 PP
TUBINGEN	79.72	2.6	12	10	-1				12 25		
VIENNA-H.	80.02	357.7	12	13	0	22	19	2			
EBINGEN	80.07	2.7	12	13	0				12 27	12	18 PCP
BRATISLAVA	80.08	357.2	12	13	0					22	22 PS
IASI	80.32	350.0	12	13	-1					12	27
HURBANOVO	80.34	356.4	12	19	5	22	23	3			
BASLE	80.67	3.7	12	15K	-1	22	25	1			
MAKHACH-KALA	80.73	335.1	12	16	0						
ZURICH	80.87	3.0	12	16	-1						
BESANCON	80.88	4.8	12	17	0					14	58 PP
LAHORE	80.96	310.6	12	16	-2						
NEUCHATEL	81.17	4.2	12	18	-1						
SIMFEROPOL	81.65	345.0	12	21	0	22	34	1			
CLERMONT-FD.	82.17	6.9	12	21	-3						
SAN JUAN	82.21	70.2	12	22	-2	22	44	5			
TIMISOARA	82.30	354.2	12	28	3	22	43	3			
TIFLIS	82.59	336.5	12	26	0						
TRIESTE	82.66	359.4	12	23	-4	22	43	-1		15	46 PP
PAVIA	83.07	2.7	12	28	-1	22	47	-1		50	26
BUCHAREST	83.22	350.6	12	28	-1	22	48	-1			
BELGRADE	83.27	354.6	11	30K	-60	22	50	0			
BOLOGNA	83.80	1.2	12	42	10	23	0	5		13	28
MONACO	84.46	4.0	12	35K	-1					13	2
FLORENCE X.	84.52	1.2	12	34K	-2	23	2	0	13 26	24	45 PPS
SOFIA	85.18	352.3	12	39	0						
QUETTA	85.45	315.4	12	40	0	23	12	0	12 55	15	55 PP
ANTIGUA	86.16	67.2	12	40K	-4						
ISTANBUL	86.19	347.9	12	42	-2	23	10	-9			
ROME	86.41	0.4	12	45	0	23	24	3	13 23	16	40 PP
BRISBANE	86.60	214.8	13	44	58						
TORTOSA	86.85	9.4	13	21	34	23	27	1			
TOLEDO	87.23	13.0	12	49	0	23	34	6		26	25
TARANTO	87.76	356.7				23	26	-8			
ST. LUCIA	88.62	68.9	12	54	-2						
ST. VINCENT	89.16	69.6	12	57	-2						
ALICANTE	89.19	10.5	12	54	-5	23	39	-8			
GRANADA	89.95	13.2	13	2A	0	24	3	9		16	15 PP
MESSINA	90.07	358.0				23	52	-3			
MALAGA	90.29	13.9	13	1A	-3	23	33	-24		16	35 PP
HYDERABAD	90.59	299.7	13	5	0	23	42	-18		24	40 PS
TRINIDAD	91.01	71.3	13	4	-3						
ALGIERS UNI.	91.11	7.9	13	6K	-2	24	4	0		16	46 PP
RELIZANE	91.88	10.1	13	11	0						
POONA	92.09	304.0	13	14	2						
KSARA	92.15	341.1	13	10	-2	24	17	3		16	52 PP
BOMBAY	92.30	305.0								12	20
RIVERVIEW	93.04	213.8	13	18A	1	24	28	7		23	51 SKS
JERUSALEM	94.25	341.1	14	6	44					18	53
TAMANRASSET	105.19	7.1	14	5	777	25	17	-47		18	21 PP

LWIRO	128.61	339.6	19 10	1							
PRETORIA	151.29	330.5	19 56A	7					20	5	
PIETERMZBURG	154.11	323.3	19 57	4							
KIMBERLEY	155.09	334.7	19 54	-1							
GRAHAMSTOWN	158.82	327.0	20 38	39							

APRIL 16 4.H 4.M 3.S EPICENTRE -4.68 107.16 DEPTH= 546.KM

DEPTH OF FOCUS= 0.081R

A=-0.29405 B= 0.95235 C=-0.08109 D= 0.9555 E= 0.2950
G= 0.0239 H=-0.0775 K=-0.9967 HT= 7.0

SE= 2.17

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
DJAKARTA	1.52	192.4	1 15K	7				
MAMBAJAO	23.01	53.0	4 17	-8	6 54	-63		
BAGUIO CITY	24.82	32.1	4 42	1				
HONG KONG	27.68	14.1	5 9A	3	9 9	-2		6 39 PP
CANTON	28.23	12.0	5 13A	2	9 18	-1		8 4 PCP
PERTH	28.32	164.3	5 16	4	9 21	0		6 43
COLOMBO	29.57	292.7	5 17	-6				8 5
HENGCHUN	29.67	26.1	5 27	4	9 35	-7		
TAWU	30.04	26.1	5 29	2	9 47	0		
TAINAN	30.33	24.4	5 31	2	9 50	-2		
TAITUNG	30.50	26.1	5 34	3	10 15	20		
PENGHU	30.54	22.8	5 10	-21				
HSINKONG	30.90	26.1	5 35	1	9 55	-6		
ALISHAN	31.03	24.8	5 38	3	10 2	-1		
TAICHUNG	31.54	24.1	5 41	2				
HWALIEN	31.78	25.7	5 44	3	10 18	4		
MADRAS	32.04	303.5	5 46K	2	10 9	-9		6 33
HSINCHU	32.24	24.0	5 24	-21	10 21	0		
ILAN	32.53	25.2	5 48	0	10 19	-7		
TAIPEI	32.67	24.6	5 51	2	10 23	-5		
SHILLONG	33.54	334.5	5 59A	3	10 34	-7	6 58	7 6 PP
BOKARO	35.17	324.6	6 12	2	10 57	-9	7 9	7 5 PP
HYDERABAD	35.86	308.5	6 18A	2				11 10
CHATRA	36.81	329.4	6 25	2				11 29
ZO-SE	38.02	19.7	6 35A	2	11 41	-7	8 15	8 30 PCP
NANKING	38.17	16.1	6 36A	2	11 47	-3	8 15	15 37 SCS
SIAN	38.76	2.3	6 41	2	11 56	-3	8 22	
TIENSHUI	39.07	358.2	6 44	2	12 0	-3		
POONA	40.12	306.0	6 52	2	12 15	-4	8 12	16 50 SCS
LANCHOW	40.67	355.8	6 57	2				
LINFEN	40.77	5.4	6 59	4				
BOMBAY	41.14	305.7	7 0	2	12 32	-1		8 11 PP
SINING	41.39	353.5	7 4	4				
YAKUSIMA	41.46	31.1	7 1A	0	12 27	-11	8 43	
KAGOSIMA	42.39	30.2	7 9A	1	12 47	-4	8 55	9 59
TOMIE	42.40	27.5	7 8	0	12 44	-7	8 40	
TAIYUAN	42.56	6.4	7 13	3				
WUWEI	42.60	354.7	7 12	2				
YINCHUAN	42.94	359.0	7 16	3				
NAGASAKI	43.01	28.5	7 15A	2	12 55	-5	9 0	16 9 SCS
MIYAZAKI	43.11	30.8	7 14A	0	12 55	-6	8 52	16 12 SCS
UNZENDAKE	43.18	28.9	7 16A	2	12 59	-3		
KUMAMOTO	43.48	29.3	7 17A	0	13 0	-6	9 4	
SAGA	43.63	28.5	7 19	1	13 7	-2	9 16	
ASOSAN	43.72	29.6	7 19	0				
CHANGYEH	43.82	352.6	7 23	4				
ITUHARA	43.95	26.7	7 17	-3	12 45	-28		16 16 SCS
HUKUOKA	43.96	28.4	7 21A	0	13 5	-8	9 5	16 15 SCS
OOITA	44.26	29.8	7 22	-1			8 57	
SIMONOSEKI	44.51	28.6	7 26	1	13 18	-3	9 12	16 19 SCS
SIMIDU	44.59	31.5	7 26A	1	13 5	-17	9 11	16 18 SCS
UWAZIMA	44.73	30.7	7 27	1	13 16	-8	9 21	16 16 SCS
RABAUL	44.87	91.2	7 26	-2	12 57	-29		
TATUNG	44.92	6.7	7 31	3				
PAOTOW	45.12	3.1	7 32	2				
PEKING	45.26	9.7	7 33	2	13 31	0	9 18	16 23 SCS
KWANTING	45.36	9.1	7 34	3				
DAIREN	45.38	15.9	7 33	1				
KOTI	45.48	31.3	7 33A	1	13 25	-10	9 15	16 29 SCS
HIROSIMA	45.57	29.6	7 33A	0	13 23	-13	9 19	16 25 SCS

YUMEN	45.72	349.2	7	35	1						
HAMADA	45.83	28.9	7	33	-2	13	31	-8	9 0	16	26 SCS
TAKAMATU	46.35	31.2	7	39A	0	13	41	-6	9 27	16	31 SCS
TOKUSIMA	46.43	31.8	7	40A	0	13	35	-13	9 25	16	31 SCS
OKAYAMA	46.57	30.7	7	50A	9	13	43	-7	9 29	16	31 SCS
SIOMISAKI	46.60	33.4	7	41	0	13	45	-5	9 28		
HIMEJI	46.67	31.3	7	48	7	13	51	0		16	38 SCS
SUMOTO	46.81	31.9	7	43A	1	13	48	-5	9 30	16	35 SCS
WAKAYAMA	46.87	32.2	7	44	1	13	49	-5		8	30
YONAGO	46.87	29.6	7	45	2	13	49	-5	9 32		
KOBE	47.22	31.8	7	45	-1	13	51	-8	9 31	16	33 SCS
OWASE	47.30	33.2	7	46A	0	13	54	-6	9 34	16	38 SCS
OSAKA	47.38.	32.2	7	47A	0	13	52	-9	9 37	9	9 PCP
NARA	47.56	32.4	7	50	2	14	3	0		17	5
TOYOOKA	47.69	30.8	7	48A	-1	13	58	-7	9 37	16	39 SCS
MELBOURNE	47.70	139.0	7	58	9	14	13	8	9 44	9	17 PCP
LAHORE	47.71	321.3	7	48	-1	13	57	-8		16	39 *SS
KYOTO	47.77	32.0	7	48	-2	13	59	-7	9 37	16	41
TU	47.97	32.9	7	53	2	14	5	-4			
MAIZURU	47.98	31.4	7	50A	-1	14	2	-7	9 37	16	41 SCS
KAMEYAMA	48.04	32.8	7	51A	-1	14	4	-6	9 40	16	44 SCS
HIKONE	48.24	32.2	7	53A	0	13	59	-13	9 41	16	43 SCS
IBUKISAN	48.39	32.2	7	58	4				9 14		
TSURUGA	48.43	31.8	7	52	-3	14	6	-9		16	46 SCS
NAGOYA	48.55	32.9	7	55	-1	14	8	-9	9 42	16	46 SCS
GIHU	48.61	32.6	7	56	0	14	11	-7	9 43	16	46 SCS
HATIDYOZIMA	48.69	37.1	7	53	-4				9 44		
OMAESAKI	48.82	34.4	7	59	1	14	15	-5	9 56	16	50 SCS
HUKUI	48.84	31.6	7	57	-1	14	13	-8			
BRISBANE	49.17	122.6	8	1	1	14	25	0			
SHIZUOKA	49.19	34.2	7	59A	-1	14	20	-5	9 49	16	51 SCS
IIDA	49.27	33.3	8	0	-1	14	21	-6			
KARACHI	49.32	310.0	7	58	-3	14	15	-12	9 51		
KANAZAWA	49.40	31.5	8	4	2						
TAKAYAMA	49.43	32.3	8	1	-1						
OSIMA	49.60	35.2	8	1	-2	14	22	-9		16	52 SCS
MISIMA	49.61	34.5	8	0A	-3	14	23	-8	9 50	16	52 SCS
AJIRO	49.64	34.7	8	2	-2	14	25	-7	9 56		
KOHU	49.76	33.8	8	3A	-2	14	27	-6	9 54	16	54 SCS
HUNATU	49.78	34.1	8	4	-1	14	28	-5	9 56	16	55 SCS
TOYAMA	49.82	31.8	8	5	0	14	33	-1		16	59 SCS
MATUMOTO	49.89	32.8	8	5	-1	14	24	-11	9 51		
MERA	49.96	35.4	8	3	-3	14	26	-10			
RIVERVIEW	50.07	131.1	8	8K	1	14	38	1	9 54	10	10 PP
WAZIMA	50.18	31.0	8	7	-1	14	31	-8	9 56	16	59 SCS
YOKOHAMA	50.23	34.8	8	5	-3	14	57	17	10 5	16	53 SCS
MATUSIRO	50.25	32.7	8	7A	-1	14	32	-8	9 56	12	54 PP
OIWAKE	50.27	33.2	8	6	-2					11	5
TITIBU	50.30	33.9	8	8	-1	14	31	-10	9 58		
NAGANO	50.33	32.6	8	9	0	14	31	-10	9 59	17	0 SCS
TOKYO C.M.O.	50.46	34.7	8	7	-3	14	20	-23	9 45	10	39 PP
KUMAGAYA	50.59	34.0	8	6	-5	14	32	-12		9	25
MAEBASI	50.60	33.5	8	8A	-3	14	33	-12	9 57	16	54 SCS
TAKADA	50.67	32.3	8	11	0						
CHANGCHUN	50.99	16.9	8	15	1	14	42	-8			
TUKUBASAN	51.05	34.4	8	11	-3	14	34	-17		9	19 PCP
KAKIOKA	51.10	34.5	8	12	-2	14	40	-11			
UTUNOMIYA	51.15	34.0	8	12	-3	14	39	-13		17	1 SCS
AIKAWA	51.36	31.5	8	15	-1				10 5		
MITO	51.37	34.6	8	15	-1						
NIIGATA	51.71	32.2	8	17	-2						
QUETTA	51.79	314.6	8	18	-1	14	54	-7	10 6	9	22 PCP
ONAHAMA	52.02	34.4	8	13	-8	14	55	-9		17	5 SCS
HUKUSIMA	52.35	33.4	8	23	0	15	1	-7	10 15		
VLADIVOSTOK	52.58	22.7	8	24	-1	15	7	-4	10 13	9	25 PCP
YAMAGATA	52.65	32.8	8	26	0	15	4	-8	10 16		
SAKATA	52.84	31.9								9	40
SENDAI	52.96	33.2	8	28	0	15	8	-8	10 21	17	14 SCS
ISINOMAKI	53.30	33.4	8	30	0	15	13	-8		17	17 SCS
AKITA	53.59	31.4	8	32A	0	15	1	-23	10 23	17	21 SCS
MIZUSAWA	53.70	32.6	8	33	0				10 24		
SUIHWA	54.02	16.8	8	37	2						
MORIOKA	54.14	32.2	8	35A	-1	15	23	-9	10 26	17	22 SCS
MIYAKO	54.53	32.8	8	37	-2	15	27	-10	10 28	17	25 SCS
AOMORI	54.75	31.0	8	40	0	15	34	-6	10 33		
HATINOHE	54.93	31.7	8	39	-3	15	34	-8		22	25
HAKODATE	55.43	30.1	8	43	-2	15	42	-6		10	37 PP
MORI	55.60	29.8	8	47	1	15	47	-4	10 41	17	22 SCS

FRUNSE	55.78	331.4	8	47K	-1	15	48	-5			11	2 PP
STALINABAD	55.79	323.9	8	44	-4	15	43	-10				
SUTTSU	55.95	29.0	8	49	0	15	49	-6	10	39	17	36 SCS
MURORAN	55.97	29.9	8	48	-1				10	43	16	2
TOMAKOMAI	56.41	30.1	9	2	10							
SAPPORO	56.70	29.5	8	54	0	15	59	-6	10	48	17	43 SCS
URAKAWA	56.75	31.2	8	54	0	16	1	-4	10	49	17	45 SCS
IRKUTSK	56.79	357.9	8	55K	1				10	47	17	42 SCS
TASHKENT	57.37	326.7	8	57	-1	16	7	-6			11	19 PP
OBIHIRO	57.52	30.8	9	4	5	16	12	-3	10	58		
ASAHIGAWA	57.73	29.6	9	3	2	16	13	-5	10	57		
KUSIRO	58.18	31.5	9	1	-3	16	17	-7	10	58	17	52 SCS
WAKKANAI	58.61	27.9				16	26	-3	11	13		
ABASHIRI	58.86	30.6	9	9	1	16	28	-4			17	58 SCS
NEMURO	59.04	31.9	9	8	-2	16	27	-8	11	7		
SEMIPALATNSK	59.57	340.4	9	13	0	16	38	-3			11	37 PP
TANANARIVE	59.77	250.9	9	17A	2	16	46	2			9	56 PCP
NOUMEA	59.87	113.0	9	18	3				11	10		
ASHKABAD	62.01	317.6									16	7
MACQUARIE I.	64.82	149.6	9	49	2	17	49	4				
TERRE ADELIE	66.38	165.9	9	55	-2	17	56	-8				
KAIMATA	68.00	134.1	10	8	1	18	19	-4	12	7	11	0
ONERAHI	68.83	126.5	10	14	2	18	30	-2	12	12	11	6
CHRISTCHURCH	69.10	134.9	10	16	3				12	14	38	15 PKPPKP
GEBBIES PASS	69.16	135.1	10	14	0	18	32	-4	12	13		
KARAPIRO	70.11	128.6	10	22	3	18	47	0	12	22	19	26 SP
TONGARIRO	70.34	129.9	10	21	0	18	51	1	12	21	38	13 PKPPKP
SUVA	70.77	107.5	10	22	-1							
TUAI	71.51	129.3	10	29	2	18	52	-11	12	29	10	35
PETROPAVLOVK	71.99	29.7	10	30	0	18	59	-9	12	30	13	17 PP
SVERDLOVSK	71.99	335.2	10	31	1	19	2	-6			13	27 PP
MAGADAN	72.69	21.6	10	34	0				12	37		
TIFLIS	73.00	316.1	10	36	0	19	0	-19			19	45 SCS
PIETERMZBURG	76.19	240.8	10	56K	2							
KSARA	77.21	306.0	11	2	3	20	4	0	13	8	14	5 PP
JERUSALEM	77.25	303.9	11	1A	2				14	1		
TIKSI	77.48	6.9	11	0	-1	19	58	-9	13	2	14	0 PP
PRETORIA	78.06	244.8	11	6A	2							
LWIRO	78.22	268.7	11	7K	2				13	21		
SCOTT BASE	79.27	169.3	11	12	2	20	28	2				
GRAHAMSTOWN	79.58	237.1	11	16K	4							
KIMBERLEY	81.09	241.8	11	21K	1							
SIMFEROPOL	81.41	316.6	11	22	1	20	42	-5	13	25	14	36 PP
MOSCOW	82.51	327.7	11	27	0	20	49	-9	13	29		
ISTANBUL	84.12	311.9	11	34	-1	20	58	-16				
HERMANUS	85.68	235.9	11	44	2	21	32	4			21	14 SKS
FOCSANI	86.33	316.3	11	44	-1	21	52	17			21	30 SKS
IASI	86.36	317.8	11	45A	-1	21	32	-3			21	13 SKS
BACAU	86.70	317.1	11	48	1	21	37	-1			21	16 SKS
BUCHAREST	86.88	314.9	11	49K	1	21	40	0	13	55	23	17 PS
PULKOVO	87.43	330.4	11	51	0	21	40	-5	13	57	21	21 SKS
ATHENS	87.69	308.2	11	52K	0	21	17	-30				
CAMPULUNG	87.77	315.6	11	53	1						15	30 PP
APATITY	88.14	338.4	11	52	-2	21	45	-6	14	0	21	23 SKS
SOFIA	88.61	312.9	11	58	2	21	27	-28			15	31 PP
LWOW	89.12	320.0	11	59	0	21	28	-32	14	5	15	39 PP
HELSINKI	90.14	330.3	12	3	0	22	4	-5	14	8	21	35 SKS
TIMISOARA	90.48	315.7	12	6	1	22	24	12			19	54 PPP
SODANKYLA	90.65	337.6	12	6	0	22	7	-6	14	11	21	39 SKS
BELGRADE	90.93	314.7	12	8A	1	22	58	42	14	15	15	52 PP
SZEGED	91.29	316.1	12	10	1	22	20	1	14	23	15	50 PP
WARSAW	91.30	322.1	12	10K	1	21	44	-35	14	17	18	35 *PP
SKALNATE PL.	91.48	319.0	12	12	3	21	49	-32	14	32	15	57 PP
KECSKEMET	91.65	316.8	12	13	3				14	48		
KRAKOW	91.77	319.9	12	11	0				14	19	28	42 SS
KALOCSA	92.11	316.3	12	11	-1				14	17		
BUDAPEST	92.12	317.3	12	13	1	22	32	6	14	20	25	41 *SS
HURBANOVO	92.74	317.6	12	16A	1	21	51	-40	14	19	16	8
RACIBORZ	92.89	319.8	12	16K	0	21	55	-38	14	23	29	7 SS
TARANTO	92.94	310.2	11	58	-18	22	8	-25			16	3 PP
KIRUNA	93.06	337.7	12	16K	-1	22	25	-9	14	23	16	5 PP
BRATISLAVA	93.49	317.9	12	19	0	22	18	-20	14	27	16	12 PP
UPPSALA	93.78	329.6	12	19K	-1	22	33	-7	14	26	16	15 PP
VIENNA-H.	93.98	317.9	12	21	0				14	28	16	17 PP
REGGIO CALA.	94.04	307.8	12	21K	0	21	59	-44			16	20 PP
MESSINA	94.13	307.9	12	21K	-1	22	37	-6	14	33	16	20 PP
ZAGREB	94.15	315.5	12	22K	0	22	0	-43				
PRAGUE	95.31	319.7	12	26K	-1	22	5	-48	14	33	16	25 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.

TRIESTE	95.70	315.3	12	27	-2	22	51	-5	14	37	16	28	PP
POTSDAM	96.18	322.0	12	31	0	22	57	-3	14	37	16	33	PP
SKALSTUGAN	96.34	333.4	12	31K	-1				14	39	16	35	PP
COPENHAGEN	96.50	325.4	12	32K	0				14	40	16	34	PP
ROME	96.58	311.5	12	32	-1	22	13	-51			16	27	PP
CHEB	96.63	319.7	12	23	-10	22	58	-6	14	42	16	31	PP
JENA	97.13	320.6	12	34	-1	23	2	-6	14	49	16	37	PP
BOLOGNA	97.42	314.1	12	39	3	22	22	-49	16	57	25	24	PS
FLORENCE X.	97.48	313.4	12	35K	-2	22	16	-55	14	42	16	38	PP
HAMBURG	98.01	323.3	12	39	0	22	17	-59	14	48	16	43	PP
STUTTGART	98.75	318.5	12	41K	-1	23	17	-5	14	47	16	51	PP
TUBINGEN	98.85	318.2	12	42	-1						16	52	PP
EBINGEN	98.93	317.9	12	43K	0				14	49	16	52	PP
PAVIA	98.93	314.8	12	43K	0	23	5	-19	14	48	16	56	PP
ZURICH	99.24	317.1	12	44	-1						16	42	PP
KARLSRUHE	99.26	318.7	12	42	-3	23	24	-2			16	57	PP
STRASBOURG	99.71	318.3	12	46	-1	23	26	-4	14	53	16	57	PP
OROPA	99.76	315.3	12	37	-10	22	41	-49					
BASLE	99.91	317.3	12	45	-3						16	56	PP
BERGEN	99.91	330.4	12	46K	-2	23	23	-9	14	54	22	29	SKS
BENSBERG	99.91	320.8	12	46	-2				14	54			
WITTEVEEN	100.05	322.7	12	48	0						17	1	PP
MONACO	100.25	313.4	12	49K	0				15	26	17	1	PP
NEUCHATEL	100.37	316.8	12	48	-2						16	51	PP
COLLEGE	100.58	24.8	12	47A	-4	23	25	-12	14	56	16	3	*SP
DE BILT	101.04	322.1	12	51	-2	22	36	-65	14	59	17	9	PP
TAMANRASSET	102.52	292.2	13	0K	1	23	54	1	15	9	17	8	PP
CLERMONT-FD.	103.13	315.8	12	59K	-3	22	42	-77	15	10	17	21	PP
PARIS	103.16	318.9	13	2	0	23	52	-7	15	8	17	6	PP
ALGIERS UNI.	104.09	306.6	13	5	-1	22	47	-79	15	13	17	14	PP
ABERDEEN	104.30	327.9	13	6	-1	22	48	-80			17	36	PP
BARCELONA	104.35	311.4									16	41	
KEW	104.51	322.0	13	8K	0	24	7	-3	15	16	17	38	PP
DURHAM	104.57	325.5	13	7	-1						15	14	
EDINBURGH	105.19	326.8				26	5	121			17	3	PP
TORTOSA	105.64	311.0	16	23	777						17	42	PP
JERSEY	106.08	319.9				22	57	6			16	52	PP
RELIZANE	106.19	305.7	13	17K	777	23	2	-1	15	32	17	44	PP
LOME	106.31	275.0	13	20	777						17	49	PP
ALICANTE	106.71	308.5	13	11	777	22	59	16			17	41	PP
SCORESBY SD.	106.72	344.2	13	18	777	24	19	-8	15	25	17	45	PP
RATHFARNHAM	107.63	324.7	13	19	777				15	38	17	49	PP
ALMERIA	108.48	307.2	13	26	777						18	4	PP
SITKA	108.64	30.8	13	27	777	24	41	-19	15	35	17	12	PKP
RESOLUTE	108.89	6.1	13	26K	777	24	39	-22	15	34	18	6	PP
TOLEDO	109.22	310.6	13	30	777	23	12	7			18	4	PP
GRANADA	109.33	307.7	13	31K	777	23	12	-4	16	33	18	42	PP
MALAGA	110.03	307.3	13	29A	-240	20	35	-163			17	45	PP
REYKJAVIK	110.39	338.7	17	30	0						18	24	PP
COIMBRA	112.45	311.6	17	34	-3	23	18	-10			18	34	PP
HORSESHOE B.	118.44	35.0	17	47A	1				20	1			
VICTORIA	118.78	35.9	17	43K	-3	23	49	-2	20	3	20	26	PP
SEATTLE	119.85	36.3	17	52K	3	25	25	90	20	8			
CORVALLIS	120.68	39.8	17	52K	2				20	7	25	26	
BANFF	121.61	30.1	17	52K	0				20	8	18	9	
SHASTA	122.98	43.6	17	56K	1				20	12	28	34	SKP
UKIAH	123.05	45.6	17	56K	1				20	12	28	40	SKP
MINERAL	123.67	43.7	14	58	-178						17	43	*SP
HUNGRY HORSE	124.11	32.0	17	58	1	26	42	154	20	14	14	44	P
MBOUR	124.19	284.1	18	0	3						19	46	PP
BERKELEY	124.24	46.6	17	59K	2	25	47	98	20	15	27	47	PKKP
SANTA CLARA	124.68	47.1	17	59K	1				20	16	28	47	SP
LICK	124.91	47.0	18	1K	3				20	17	27	45	PKKP
SASKATOON	125.06	24.8	17	57	-2								
RENO	125.27	43.8	18	1K	2				20	17	28	43	SKP
BUTTE	126.32	33.6	18	1A	0				20	17	14	55	P
FRESNO	126.48	46.9	18	3K	2				20	17			
ANGRA DO HO.	126.61	315.8	20	9	127						22	27	
KING RANCH	127.12	48.5	18	6A	3						20	22	PP
BOZEMAN	127.37	33.1	18	4K	1								
TINEMAHA	127.49	45.9	17	53	-10				20	31	20	23	PP
WOODY	127.62	47.7	14	50	-194				20	28	20	19	PP
EUREKA	127.90	42.1	17	44	-20				20	20	31	3	PS
ISABELLA	127.93	47.6	17	56	-8				20	29	20	20	PP
CHINA LAKE	128.49	47.0	17	52	-13				20	32	20	22	PP
PASADENA	128.79	49.2	14	55	-191	24	27	6	17	3	20	23	PP
DALTON	129.05	49.0	17	50	-16				20	34	20	22	PP
RIVERSIDE	129.45	49.0	17	48	-19				20	33	20	24	PP
BIG BEAR	129.69	48.5	17	53	-15				20	43	20	25	PP

SCHEFFERVLLE	129.76	355.4	18	10K	2					20	37			
SALT LAKE C.	129.87	38.5	18	10K	2					20	23	20	36	PP
PALOMAR	130.11	49.5	17	55	-13					20	39	20	26	PP
BOULDER CITY	130.41	45.5	17	56K	-13					20	25			
BARRETT	130.54	50.2	17	55	-14					20	40	20	26	PP
HAYFIELD	130.88	48.5	17	53	-17					20	41	20	28	PP
RAPID CITY	132.54	29.6	17	58	-15					20	19	20	47	PP
BOULDER	134.24	35.1										18	18	
TUCSON	135.13	47.7	18	5	-13					20	35	30	7	SKP
KIRKLAND LA.	136.25	7.0	18	19A	-1					20	37	20	57	SKP
SEVEN FALLS	137.69	358.0	18	18	-4							21	20	PP
SHAWINIGAN	138.29	359.9	18	14A	-10					20	33	21	28	PP
BREBEUF	139.34	0.8	18	18K	-7							20	41	
OTTAWA	139.37	3.1	18	16A	-9					20	42	21	26	PP
HALIFAX	139.40	349.8	18	18A	-8					20	42	21	7	SKP
CHIHUAHUA	140.49	49.2	18	29	1							21	10	SKP
LUBBOCK	140.56	39.6	18	19	-9	24	19	-25				20	46	PP
CHICAGO CGS.	140.78	17.5	18	18	-11							22	2	*SP
WESTON	142.44	358.2	18	28	-4	24	44	-3	20	41		22	11	PKS
FLORISSANT	142.49	22.7	18	30K	-2	24	28	-19	20	48		39	29	SS
CLEVELAND	142.55	10.8	18	29	-3							24	23	PKS
ST. LOUIS 1	142.68	22.7	18	29K	-3	24	28	-20	20	51		39	29	SS
MAZATLAN	142.76	57.2	18	29	-3							22	9	PKS
FAYETTEVILLE	143.08	29.4	18	31K	-2					20	49	22	10	PP
PENNSYLVANIA	143.76	6.5	18	32	-2					20	52	22	11	PKS
PALISADES	143.82	1.4	18	33K	-1	24	24	-25	20	38		21	44	PP
PITTSBURGH	143.83	9.2				24	29	-20				18	36	
FORDHAM	143.98	1.3	18	33	-1					20	48	24	27	*PPKS
DALLAS	144.15	35.7	18	34	0									
PHILADELPHIA	144.83	3.1	18	37	1					20	44	40	50	SS
WASHINGTON	145.72	5.9	18	39K	2	24	59	7		20	49	21	49	*SPKP
MANZANILLO	146.13	62.4										22	21	PP
GUADALAJARA	146.38	59.1	18	45	7					20	57	23	47	
COLUMBIA	149.85	13.6	18	45K	2	28	17	199		21	0	22	22	PP
TACUBAYA	150.43	58.1	18	47K	3					20	55	22	37	PP
BERMUDA	151.41	345.5										18	50	
PUEBLA	151.44	57.9								21	11			
ANTOFAGASTA	151.74	184.7	18	49	3	28	33	213						
OAXACA	153.54	60.6	19	6	18					21	27	28	45	*PPP
MERIDA	157.04	43.8	19	0K	7					21	18	23	19	PP
COMITAN	157.85	57.3	18	55	1							21	38	*PPKP2
LA PAZ	158.44	192.4	18	58	3					21	13	23	17	PP
SAN SALVADOR	161.51	59.8	18	59	1							21	57	
HUANCAYO	163.19	171.6	19	6	6					21	24	23	55	PP
ANTIGUA	163.20	317.8	19	2K	2							19	57	PKP2
FORT FRANCE	164.76	311.8	19	4	3					21	20			
SAN JUAN	164.88	334.8	19	3K	2	25	9	-3		21	17	22	9	*SPKP
ST. LUCIA	165.08	309.3	19	3K	2							20	5	PKP2
ST. VINCENT	165.80	307.2	19	3K	1							20	7	PKP2
TRINIDAD	167.30	298.6	19	7K	4							20	16	PKP2
BALBOA HTS.	172.09	57.1	19	6	0	30	23	307						
GALERAZAMBA	173.48	21.5	19	12	6	25	5	-12		21	9	30	25	*PPP
CHINCHINA	177.22	84.0	19	10	3					21	3	20	59	PKP2
BOGOTA	178.77	92.8	19	9K	2	25	1	-16		21	7	26	1	PPP

APRIL 17 8.H 8.M 6.S EPICENTRE -20.33-175.93 DEPTH= 214.KM

DEPTH OF FOCUS= 0.029R

A=-0.93607 B=-0.06657 C=-0.34545 D=-0.0709 E= 0.9975
G= 0.3446 H= 0.0245 K=-0.9384 HT= 4.6

SE= 1.35

	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	5.75	291.3	1	25	0	2	20	-11					
NOUMEA	16.53	260.1	3	43	2	6	26	-11			3	55	PP
ONERAHI	17.58	207.0	3	51	-1	7	9	10					
KARAPIRO	19.03	201.1	4	7	0	7	30	3					
TUAI	19.35	196.5	4	13	2	7	30	-3					
TONGARIRO	20.19	199.5	4	16	-3	7	57	8					
WELLINGTON	22.33	198.7	4	40	0	8	31	5					
KAIMATA	24.55	202.9	5	3	2	9	16	12					
GEBBIES PASS	25.18	199.7	5	9	2	9	25	11			9	34	
BRISBANE	29.20	249.9	5	43	0	10	22	3					
RIVERVIEW	32.09	238.4	6	8K	-1	11	7	3			7	27	PP

RABAUL	34.94	293.0	6	30	-3	11	41	-7		9	1 PCP
MELBOURNE	38.03	234.1	6	58	-1						
MATUSIRO	71.24	322.4	10	57K	0	19	58	2	11 46		
Y.-SAKHLINSK	76.64	332.3	11	13	-15					21	1 SCS
BERKELEY	76.77	40.9	11	30	1				12 15	21	29
KING RANCH	76.82	44.3	11	30	1				12 13		
LICK	76.83	41.7	11	30K	1				12 12		
PASADENA	77.17	46.0	11	32K	1	21	18	17	12 14		
BARRETT	77.36	48.0	11	31	-1				12 16		
PALOMAR	77.60	47.3	11	33K	-1				12 18		
RIVERSIDE	77.61	46.5	11	34K	0				12 17		
WOODY	77.61	44.4	11	33K	-1				12 15		
FRESNO	77.64	43.0	11	34K	0						
ISABELLA	77.85	44.6	11	36K	1				12 19		
SHASTA	78.49	38.6	11	39K	0				12 21		
CHINA LAKE	78.51	44.9	11	39K	0				12 22		
HAYFIELD	78.65	47.6	11	38	-1				12 24		
MINERAL	78.73	39.3	11	40	0				12 21		
TINEMAHA	78.82	43.6	11	41K	1				12 22		
KLYUCHI	78.85	347.0	11	39	-2						
ZO-SE	79.09	309.0	11	41	-1						
RENO	79.31	40.8	11	44	1						
HONG KONG	80.31	298.1	11	50K	2	21	28	-6			
BOULDER CITY	80.46	46.1	11	49	0				12 31		
CORVALLIS	80.48	35.2								12	34
TUCSON	81.30	51.0	11	55	2	22	3	19	12 38	13	2 *SP
NANKING	81.32	308.7	11	55K	1						
CANTON	81.39	298.4	11	55	1						
EUREKA	81.67	42.6	11	55	0				12 38	13	5 *SP
SEATTLE	83.01	33.3	12	4	2					12	49
VICTORIA	83.01	32.1	12	2K	0						
MAGADAN	84.13	343.7	12	9	1					22	16 SCS
TACUBAYA	84.88	67.3							12 57		
SALT LAKE C.	85.02	43.3	12	13	1				12 56		
PEKING	87.15	314.6	12	23	0						
BUTTE	87.40	38.6	12	24	0				13 7		
COLLEGE	87.64	11.6	12	23	-2	22	48	2	13 9		
HUNGRY HORSE	87.85	36.1	12	26	0				13 12		
BOZEMAN	88.11	39.4	12	16	-11						
LUBBOCK	88.59	53.4	12	29	0	23	4	9		13	15 PP
BANFF	88.65	33.2	12	29K	-1					13	12
BOULDER	88.99	46.4	12	28	-3					13	15
RAPID CITY	92.22	43.5	12	47	1				13 30		
FAYETTEVILLE	95.36	53.6	13	48	47						
HUANCAYO	95.58	105.0							13 58	17	1 PP
TIKSI	99.08	344.7								17	16 PP
OTTAWA	111.25	48.1								19	28 PP
FRUNSE	117.67	308.5	18	22	2						
TASHKENT	121.57	306.6								26	35 SKKS
STALINABAD	121.93	303.4	18	30	1						
TANANARIVE	122.23	230.4	19	5	36						
KARACHI	122.28	288.3	18	34	5						
QUETTA	122.90	293.4	18	33K	3	23	4-126		19 21	20	9 PP
SVERDLOVSK	124.95	326.0	18	35	1						
KIMBERLEY	127.26	203.0	18	43	4						
ASHKABAD	130.14	302.9	18	46	2					22	12 PKS
KIRUNA	131.40	351.8	18	40	-7						
PULKOVO	136.37	341.1								22	30 PKS
SKALSTUGAN	136.42	354.7	18	46	-10						
MOSCOW	136.65	332.9	18	58	2						
HELSINKI	137.52	344.7	18	49	-9					19	1
UPPSALA	139.35	349.5	18	53	-8						
TIFLIS	139.59	311.1	19	4	2					22	42 PKS
COPENHAGEN	144.15	351.9	19	10A	0						
SIMFEROPOL	145.09	321.6	19	14	2				20 0		
WARSAW	145.54	341.5	19	4	-9				20 1	21	21
RATHFARNHAM	146.14	11.2	19	14K	0						
HAMBURG	146.51	353.6	19	15	1				20 5		
LWOW	146.56	336.4	19	16	2				20 4	19	18 PKP2
LWIRO	146.95	230.1	19	18	3					20	28
IASI	147.09	330.0	19	20	5				20 9		
POTSDAM	147.26	349.8	19	20	5					20	6
WITTEVEEN	147.51	357.1	19	21K	5						
KRAKOW	147.78	340.7	19	18	2					20	21
RACIBORZ	148.27	342.6	19	22	5						
DE BILT	148.28	358.7	19	23	6						
SKALNATE PL.	148.44	339.5	19	28	11	26	0	-2	20 14	20	37 *SPKP
KEW	148.74	5.3	19	23	5				20 10	24	26
KSARA	148.79	302.1	19	22	4				20 10	20	39 *SPKP

JENA	148.90	350.8	19 18	0	20 12	21 23	PP
PRAGUE	149.21	346.9	19 25	7	19 45		
BENSBERG	149.34	356.2	19 19	1			
JERUSALEM	149.89	298.6	19 27	8		19 22	
BRATISLAVA	150.30	342.3	19 23	3	20 16		
STUTTGART	151.33	352.9	19 23	2	20 18		
PARIS	151.56	2.2	19 30	8	20 18	21 10	
STRASBOURG	151.66	354.8	19 31K	9	20 18	19 40	
EBINGEN	151.94	353.0	19 24	2	30 19		
BELGRADE	152.06	334.6				34 46	
BESANCON	153.11	357.1	19 26	2	20 16	19 46	
TRIESTE	153.52	344.7	19 25	0		19 46	PKP2
CLERMONT-FD.	154.62	1.5	19 29	3	20 27		
GRANADA	161.93	20.1	20 27A	52		24 54	PP
ALGIERS UNI.	163.60	2.9	19 38	2	20 29		
TAMANRASSET	177.22	331.2	19 48K	4	20 35	25 31	PP

APRIL 17 13.H 24.M 56.S EPICENTRE 52.52-168.69 DEPTH= 0.KM

A=-0.59921 B=-0.11987 C= 0.79157 D=-0.1962 E= 0.9806
G=-0.7762 H=-0.1553 K=-0.6111 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	16.34	32.7	3	54	2	7	10	17			4	48	
SITKA	19.64	63.4	4	34	1	9	19	71			5	44	
HORSESHOE B.	28.42	78.0	6	0	2	11	47	62					
VICTORIA	28.69	79.7	6	1	0	10	50	0					
SEATTLE	29.75	80.6	6	15	4	11	14	7			9	21	
CORVALLIS	30.64	86.6	6	21	3								
Y.-SAKHLINSK	31.40	279.6	6	25	0								
BANFF	32.25	70.8	6	32	0								
TIKSI	32.82	328.8	6	39	2								
SHASTA	33.37	92.0	6	44	2								
MINERAL	34.06	91.8	6	50A	2								
HUNGRY HORSE	34.36	74.6	6	52	1	12	19	1			9	29	PCP
BERKELEY	35.19	95.8	7	0	2	12	26	-5					
RENO	35.64	91.5	7	4	3								
LICK	35.91	96.0	7	6A	2								
RESOLUTE	36.06	25.7	7	4A	-1								
BUTTE	36.38	77.3	7	16	8	12	50	0			9	14	PCP
FRESNO	37.40	95.1	7	18A	2								
BOZEMAN	37.47	76.8	7	19	2								
EUREKA	38.02	88.5	7	24	3								
TINEMAHA	38.17	93.4	7	27	4						7	31	
KING RANCH	38.39	96.8	7	26	1								
WOODY	38.67	95.6	7	28	1						7	44	
ISABELLA	38.94	95.3	7	31	2								
CHINA LAKE	39.36	94.3	7	35	2						7	42	
SALT LAKE C.	39.75	83.8	7	37	1								
VLADIVOSTOK	39.93	280.9	7	40	3								
MATUSIRO	40.11	268.2	7	41A	2	13	48	2			9	57	PPP
PASADENA	40.13	96.8	7	39	0	13	50	3					
RIVERSIDE	40.72	96.3	7	45	1								
BOULDER CITY	40.95	91.9	7	47	1								
PALOMAR	41.48	96.5	7	53	3								
HAYFIELD	41.98	95.1	8	2	8								
BARRETT	42.05	97.1	7	58	3								
RAPID CITY	42.99	74.1	8	3	0	14	27	-2					
CHANGCHUN	43.44	285.9	8	7	1								
BOULDER	44.17	80.1	8	13	1								
TUCSON	45.91	92.6	8	29	3	15	14	3					
IRKUTSK	49.90	306.6	8	58	1								
LUBBOCK	50.47	84.3	9	2	0								
PEKING	51.14	287.6	9	8	2								
KIRKLAND LA.	53.30	56.6	9	23A	0								
FAYETTEVILLE	53.38	76.5	9	23K	-1								
DALLAS	54.05	81.3	9	28	0								
ZO-SE	54.20	275.9	9	31	2	17	9	3					
NANKING	54.97	278.5	9	36	1	17	20	3					
SCHEFFERVLLE	55.11	43.6	11	38	122						11	54	
OTTAWA	57.35	56.7	9	52K	0								
SHAWINIGAN	58.04	54.0	9	57	0								
BREBEUF	58.35	55.4	9	58K	-1								

SEVEN FALLS	58.59	52.4	10	1	0					
APATITY	59.11	350.3	10	5	1	18	12	1	12	12 PP
KIRUNA	59.78	356.0	10	10K	1					
SODANKYLA	59.88	353.2	10	12	2					
PALISADES	61.39	59.2	10	20	0	18	39	-1	23	25 SS
PHILADELPHIA	61.48	60.8	10	43	22	18	40	-2		
WESTON	61.74	56.5	10	23A	1					
TACUBAYA	62.39	93.9	10	28	1	18	47	-6	12	38 PP
COLUMBIA	62.53	69.3	10	26	-2					
SVERDLOVSK	63.75	332.3	10	38	2					
SKALSTUGAN	64.24	359.5	10	40	1					
CANTON	64.83	275.5	10	44	1	19	29	6		
HONG KONG	64.88	274.3	10	45K	2	19	28	4		
RABAUL	65.47	223.8	10	46	-1				12	42 PPP
HELSINKI	67.13	352.6	10	58	1				11	34 PCP
UPPSALA	67.87	356.6	11	3	1					
MOSCOW	69.95	344.5	11	16	1					
FRUNSE	70.45	315.8	11	20	2					
BERMUDA	72.74	59.3	11	32	0	20	56	-1	25	24 SS
NAMANGAN	73.24	316.6	11	37	2					
RATHFARNHAM	73.53	10.9	11	36K	0					
HAMBURG	74.28	0.8	11	45	4					
WITTEVEEN	74.96	2.9	11	49	4					
WARSAW	75.31	353.8	11	49	2					
POTSDAM	75.46	358.9	11	50	2					
SHILLONG	75.57	293.1	11	50	2					
KEW	75.92	7.5	11	51	1					
BENSBERG	76.84	2.7	11	57K	2					
JENA	76.93	359.8	11	57	1					
CHATRA	77.18	297.3	11	58	1					
KRAKOW	77.55	354.3	12	1	1	21	52	1	22	12 SCS
RACIBORZ	77.61	355.5	12	4	4					
PRAGUE	77.75	357.9	12	4	3				13	42
PARIS	78.77	5.9	12	8A	2				15	10 PP
STUTTGART	79.07	1.4	12	10A	2					
STRASBOURG	79.23	2.4	12	11A	3				12	34
TUBINGEN	79.31	1.5	12	12	3					
BRATISLAVA	79.57	356.1	12	13	3				12	26
EBINGEN	79.66	1.6	12	13A	2					
IASI	79.69	348.8	12	13	2					
BASLE	80.28	2.6	12	16	2					
BESANCON	80.51	3.7	12	20	5					
NEUCHATEL	80.79	3.0	12	20	3					
SIMFEROPOL	80.95	343.8	12	20	2	22	32	5		
TIFLIS	81.76	335.3	12	25	3					
CLERMONT-FD.	81.84	5.8	12	26	4					
TRIESTE	82.19	358.3	12	27	3	22	45	6	28	16 SS
BUCHAREST	82.60	349.4	12	28	2				22	11
PAVIA	82.66	1.5							13	3
BELGRADE	82.72	353.5	12	31A	4					
SAN JUAN	83.00	69.0	12	28	0	22	47	0		
BOLOGNA	83.36	360.0	12	44	14				13	13
MONACO	84.07	2.8	12	36A	2				13	4
FLORENCE X.	84.08	0.0	12	38A	4	23	18	20	12	48
QUETTA	84.42	314.1	12	38A	2	23	3	2	15	53 PP
ROME	85.95	359.1	12	47	4	23	31	14		
KARACHI	88.12	311.8	13	4	10					
GRANADA	89.73	11.9	13	26A	25					
MALAGA	90.08	12.6	13	6A	3					
POONA	90.99	302.6	13	10	3				24	2
BOMBAY	91.21	303.7	13	11	3	24	7	2	23	44
KSARA	91.38	339.7	13	15	6				16	55 PP
TAMANRASSET	104.85	5.5							18	39 PP
MBOUR	109.03	29.1				24	52	-17	22	5 PKS
LWIRO	127.83	337.7	19	11	3					
PRETORIA	150.39	328.0	19	58	10					

APRIL 17 18.H 9.M 32.S EPICENTRE 14.49 -92.33 DEPTH= 57.KM

DEPTH OF FOCUS= 0.004R

A=-0.03936 B=-0.96781 C= 0.24858 D=-0.9992 E= 0.0406
G=-0.0101 H=-0.2484 K=-0.9686 HT= 5.8

SE= 1.49

	DELTA DEG.	AZ. DEG.	P M	S	O-C S	S M	S	O-C S	*PP M	S	SUPP. M	S	
COMITAN	1.76	6.2	0	26	-3						0	33	
AYAGUALO	3.08	105.7	0	47K	-1	1	25	1					
SAN SALVADOR	3.10	103.7	0	48	0	1	26	2					
SANTIAGO MA.	3.87	104.3	1	2	3	1	51	7					
OAXACA	4.96	301.1	1	13	-1	2	16	5			2	1	
BALBOA HTS.	13.65	112.3	3	12	0								
BOGOTA	20.48	116.8	4	36A	1	8	28	12			4	53	PP
LUBBOCK	20.88	337.2	4	40	0						5	0	PP
COLUMBIA	21.96	25.8	4	53	3	8	49	5					
TUCSON	24.45	319.5	5	18	3	9	50	22					
SAN JUAN	25.42	77.7	5	52	28						8	33	
CHICAGO CGS.	27.50	7.7	5	47	4	10	51	33					
BOULDER	27.87	338.4	5	47	1								
CLEVELAND	28.48	17.2	4	51	-61								
BARRETT	28.62	313.5	5	53A	0						6	3	
PALOMAR	29.12	314.4	5	58A	0								
BOULDER CITY	29.40	320.8	6	0	0								
RIVERSIDE	29.84	315.0	6	3A	-1						6	14	
FORT FRANCE	30.16	85.6				11	8	7					
PASADENA	30.47	314.5	6	10A	0	11	28	23			9	8	PCP
BERMUDA	30.85	50.0	6	13	0	11	8	-3					
PALISADES	30.91	27.7	6	13	0	11	20	8			7	12	PP
RAPID CITY	30.92	344.7	6	13	-1						7	12	
SALT LAKE C.	31.23	330.7	6	17	1								
HUANCAYO	31.29	146.6	6	17	0	11	38	20			8	7	PPP
ISABELLA	31.53	316.7	6	19A	0						9	11	PCP
WOODY	31.81	316.4	6	21A	0						9	11	PCP
KING RANCH	32.20	315.1	6	26	1								
TINEMAHA	32.20	319.0	6	27A	2								
EUREKA	32.42	324.6	6	26	-1								
FRESNO	33.05	317.2	6	31	-1								
OTTAWA	33.86	21.2	6	38A	-1				6	57	7	58	PP
LICK	34.58	316.6	6	46K	1								
RENO	34.70	321.2	6	49	3								
BREBEUF	34.72	23.3	5	35A	-72								
BOZEMAN	34.87	336.8	6	49	1								
KIRKLAND LA.	35.07	14.4	6	49	-1								
BERKELEY	35.29	316.9	6	50	-1	12	31	11					
BUTTE	35.75	335.6	6	55	0	12	36	8			8	44	
SHAWINIGAN	35.92	23.2	6	56A	-1				7	21	8	22	PP
MINERAL	36.29	320.8	7	1	1								
SHASTA	36.98	320.7	7	4	-2						9	25	
SEVEN FALLS	37.15	24.5				13	16	27			16	13	SS
HUNGRY HORSE	38.23	336.5	7	16	0								
LA PAZ	38.98	141.3	7	20	-2	13	12	-5			8	56	PP
CORVALLIS	39.88	325.0	7	31	1								
SEATTLE	41.37	329.3	7	43A	1	14	53	61					
VICTORIA	42.51	329.5	7	51A	0	14	13	4					
HORSESHOE B.	43.03	330.5	7	54A	-2	14	25	8					
SCHEFFERVLLE	44.92	20.8									10	10	PP
RESOLUTE	60.20	359.2	10	2K	-2	18	11	-1					
COLLEGE	62.67	336.7	10	18	-3								
MBOUR	72.63	79.2									21	12	PS
PARIS	82.37	41.7	12	17	0						12	26	PCP
CLERMONT-FD.	83.50	44.5	12	21	-2								
BENSBERG	84.75	38.8	12	28	-1								
KIRUNA	84.97	20.6				23	5	12					
BESANCON	85.03	42.6	12	31	0						12	51	
HAMBURG	85.62	35.8	12	35	1								
STRASBOURG	85.81	41.0	12	34	0						12	48	
STUTTGART	86.66	40.5	12	38	-1								
MONACO	87.01	45.7	12	40	0						13	27	
JENA	87.41	37.9	12	41	-1								
TIKSI	89.73	347.9	12	51	-1								
TAMANRASSET	91.51	66.1	13	3	1	23	15	-39			16	48	PP
WARSAW	92.30	34.4	12	59	-5								
PULKOVO	92.87	25.3									23	42	
MESSINA	94.66	48.8									48	52	
KASHIWARA	113.18	318.0	19	22	51								
NAMANGAN	122.86	14.4									18	11	
QUETTA	131.31	24.1	19	8A	2	25	48	-21			22	35	PKS
SHILLONG	139.98	354.1	21	13	111								
POONA	144.48	23.0	19	41	11								

APRIL 19 15.H 44.M 56.S EPICENTRE 51.47-168.21 DEPTH= 0.KM

A=-0.61236 B=-0.12778 C= 0.78018 D=-0.2043 E= 0.9789
G=-0.7637 H=-0.1594 K=-0.6256 HT= -6.0

SE= 1.73

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S	
COLLEGE	17.09	30.4	3 54	-5	7 20	12			
SITKA	19.88	60.8	4 34	1	8 13	2		5 49	
PETROPAVLOVK	20.24	287.8	4 35	-2	8 18	0			
ALBERNI	27.47	77.3	5 48	1					
HORSESHOE B.	28.37	76.3	5 54	-1	10 42	2		9 6	
VICTORIA	28.61	78.0	5 57K	0	10 47	3		9 7	
SEATTLE	29.65	79.1	6 9K	2				11 40	
CORVALLIS	30.42	85.2	6 15K	1					
Y.-SAKHLINSK	31.88	281.5	6 27	1	11 37	1			
BANFF	32.33	69.4	6 28K	-2					
SHASTA	33.05	90.7	6 37K	0				9 18	PCP
UKIAH	33.44	93.7	6 40	0					
MINERAL	33.74	90.6	6 43K	0				9 19	PCP
TIKSI	33.88	329.6	6 43	-1					
HUNGRY HORSE	34.37	73.4	6 48	0	12 18	4		17 14	SCS
BERKELEY	34.80	94.7	6 52K	0	12 26	5		9 23	PCP
SANTA CLARA	35.32	95.2	6 6K	-50	12 41	12			
RENO	35.33	90.4	6 57	1					
LICK	35.52	94.9	6 58K	0				9 26	PCP
BUTTE	36.33	76.1	7 5	0	12 48	3		8 18	
RESOLUTE	36.88	25.1	7 9K	0	12 53	0			
FRESNO	37.02	94.1	7 11K	1					
BOZEMAN	37.43	75.8	7 14	0					
EUREKA	37.77	87.5	7 17	0				9 33	PCP
TINEMAHA	37.82	92.4	7 20K	3				9 34	PCP
KING RANCH	37.98	95.9	7 19K	0					
WOODY	38.29	94.7	7 21K	0				9 33	PCP
ISABELLA	38.56	94.4	7 27K	4				8 4	
CHINA LAKE	39.00	93.5	7 28K	1				9 37	PCP
TUKUBASAN	39.41	267.9	7 29	-1					
SALT LAKE C.	39.59	82.9	7 33	1					
PASADENA	39.73	95.9	7 34K	1			7 51		
RIVERSIDE	40.32	95.4	7 37K	-1				9 40	PCP
MATUSIRO	40.38	269.8	7 38K	-1	13 43	-3		9 40	PCP
VLADIVOSTOK	40.43	282.4	7 41	2	13 48	1			
BOULDER CITY	40.63	91.0	7 41	0					
PALOMAR	41.07	95.7	7 44	0				8 3	
HAYFIELD	41.60	94.3	7 49K	0			8 3		
BARRETT	41.64	96.3	7 49K	0				9 44	PCP
RAPID CITY	43.01	73.3	8 0	0	14 31	6		9 45	PCP
CHANGCHUN	44.02	287.3	8 7K	-1	14 41	2			
BOULDER	44.07	79.4						7 37	
TUCSON	45.57	91.9	8 21	0				18 58	SCS
IRKUTSK	50.77	307.6	9 0	-1	16 16	1			
PEKING	51.75	288.7	9 7K	-2	16 27	-1			
TATUNG	53.40	290.6	9 23	2					
KIRKLAND LA.	53.64	56.2	9 22K	-1					
ZO-SE	54.61	277.0	9 29K	-1	17 10	3			
NANKING	55.43	279.3	9 34K	-2	17 18	0		11 45	PP
SCHEFFERVLLE	55.68	43.4	9 35K	-2					
SCORESBY SD.	55.95	13.0	9 40	1	17 31	6			
CLEVELAND	57.18	63.2	9 47	-1					
OTTAWA	57.69	56.4	9 50K	-2				10 47	PCP
SHAWINIGAN	58.42	53.8	9 53K	-4				10 59	PCP
BREBEUF	58.71	55.1	9 55K	-4	18 1	0			
SEVEN FALLS	59.00	52.2	9 59	-2	18 6	1		13 40	PPP
PENNSYLVANIA	59.67	61.6	10 3	-3	18 14	0			
APATITY	60.20	350.6	10 9A	0	18 24	3		12 22	PP
KIRUNA	60.85	356.3	10 13K	-1	18 31	2			
SODANKYLA	60.96	353.5	10 13	-1	18 30	0		18 45	PS
WASHINGTON	61.43	62.7	10 17	-1				22 29	SS
PALISADES	61.68	59.0	10 17	-2	18 40	0		10 56	PCP
WESTON	62.08	56.4	10 20K	-2	18 47	2			
COLUMBIA	62.63	69.1	10 23	-3					
HALIFAX	64.32	50.1	10 34K	-3	19 11	-2			
RABAUL	64.92	224.6	10 37	-4				11 13	
CANTON	65.24	276.4	10 41K	-2	19 26	2			
HONG KONG	65.26	275.1	10 42A	-1	19 27	3			
SKALSTUGAN	65.30	359.8	10 42	-1					
BAGUIO CITY	65.63	265.9	10 43	-2					

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PULKOVO	68.11	350.0	11	1	0	20	0	1			
HELSINKI	68.21	352.9	11	0	-2	20	2	2		11	29 PCP
UPPSALA	68.94	356.8	11	5K	-1	20	4	-5			
MOSCOW	71.04	344.9	11	18	-1	20	30	-3			
FRUNSE	71.41	316.4	11	21	0						
BERMUDA	73.03	59.3	11	31K	0	20	45	-11		14	25 PP
COPENHAGEN	73.22	359.6	11	32K	0						
DURHAM	73.55	8.0	11	34	0						
NAMANGAN	74.21	317.1	11	37	-1	21	12	3			
RATHFARNHAM	74.51	11.1	11	39K	0	21	19	6			
HAMBURG	75.33	1.1	11	46K	2						
WITTEVEEN	76.00	3.2	11	50K	2						
SHILLONG	76.26	293.7	11	48K	-1	21	27	-5			
WARSAW	76.39	354.2	11	51	1	21	37	4		12	17
POTSDAM	76.52	359.2	11	52	1						
KEW	76.93	7.7				21	43	4			
BENSBERG	77.88	3.0	11	58K	0					12	7
CHATRA	77.93	297.8	12	1	2						
JENA	77.98	0.1	12	0	1	21	58	7			
RACIBORZ	78.69	355.8				22	9	11		12	11 PCP
PRAGUE	78.82	358.3	12	4	1	22	3	3		12	28
CHEB	78.83	359.6	12	4	0						
SKALNATE PL.	79.47	354.4	12	13	6	22	12	6		22	38 PS
PARIS	79.79	6.2	12	9K	0	22	17	7		15	17 PP
KARLSRUHE	79.86	2.3	12	12K	3	22	20	10		12	17
DEHRA DUN	79.97	306.5	11	50	-20	21	55	-17			
STUTTGART	80.12	1.7	12	11K	0	22	18	5			
STRASBOURG	80.28	2.7	12	12K	1	22	21	6		28	4 SS
TUBINGEN	80.36	1.8	12	12K	0						
BRATISLAVA	80.64	356.4	12	15	2	22	25	6		23	0
EBINGEN	80.71	1.9	12	14K	0						
IASI	80.78	349.2	12	14	0					12	25
LAHORE	80.79	309.9	12	12	-2	22	19	-1			
BASLE	81.32	2.9	12	17K	0						
ZURICH	81.51	2.2	12	19	1						
BESANCON	81.54	4.0	12	19	1						
NEUCHATEL	81.83	3.3	12	20	1						
SIMFEROPOL	82.04	344.2	12	22	1	22	35	2			
TIFLIS	82.84	335.7	12	25	0	22	49	8			
CLERMONT-FD.	82.86	6.1	12	26	1						
SAN JUAN	83.10	69.3	12	26	0						
TRIESTE	83.25	358.6	12	26	-1	22	49	4		28	34 SS
BUCHAREST	83.69	349.7	12	29	0	22	52	2		12	57
PAVIA	83.71	1.9	12	37	8						
BELGRADE	83.80	353.8	12	31A	1	22	55	4		23	43 PS
BOLOGNA	84.42	0.3	12	32	-1					13	29
MONACO	85.11	3.2	12	37	1						
FLORENCE X.	85.13	0.4	12	36K	0	23	12	8		12	59
CUETTA	85.36	314.5	12	37K	0	23	9	3	12 55	15	54 PP
SOFIA	85.68	351.5	12	39	0					24	2
BRISBANE	85.68	213.9	12	38	-1					23	6 SKS
ROME	87.01	359.5	12	45K	-1	23	25	3		29	41 SS
TORTOSA	87.57	8.5	12	53	5	13	42	-585			
HYDERABAD	90.25	298.8	13	3	2	23	29	-23		16	27 PP
MESSINA	90.65	357.0	13	3	0	23	54	-2		25	0 PS
ALGIERS UNI.	91.80	7.0	13	7A	-1	24	4	-2		16	46 PP
POONA	91.81	303.0	13	10	2	24	7	1			
BOMBAY	92.04	304.0	13	12	3	24	11	3		23	59
RIVERVIEW	92.13	212.9	13	9A	-1	24	14	5		30	58 SS
KSARA	92.48	340.1	13	13	2	24	12	0		16	55 PP
JERUSALEM	94.58	340.1	13	22	1					17	12
HUANCAYO	101.11	95.3								18	6 PP
TAMANRASSET	105.87	6.0	14	11	777	25	7	10		18	36 PP
LWIRO	128.91	337.9	19	8K	1						
PRETORIA	151.44	327.8	19	49	2					19	56
PIETERMZBURG	154.14	320.4	20	0	10						
KIMBERLEY	155.30	331.8	19	52A	0						
GRAHAMSTOWN	158.91	323.6								20	34 PKP2

APRIL 19 22.H 19.M 30.S EPICENTRE 52.20-166.28 DEPTH= 4.KM

A=-0.59791 B=-0.14602 C= 0.78815 D=-0.2372 E= 0.9714
G=-0.7656 H=-0.1870 K=-0.6155 HT= -6.2

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	
COLLEGE	15.85	29.7	3	38	-6	6	34	-5					
SITKA	18.47	62.5	4	19A	3	17	48	609			7	5	
KLYUCHI	19.57	295.2	4	28	-1	8	0	-4					
PETROPAVLOVK	21.17	286.5	4	45	-1	8	31	-5			9	36	SSS
MAGADAN	24.80	304.2	5	22	0	9	41	0					
ALBERNI	26.14	79.8	5	38	3								
HORSESHOE B.	27.03	78.7	5	44K	1	10	26	8			9	5	PCP
VICTORIA	27.29	80.5	5	47K	2	9	37	-45			9	4	
SEATTLE	28.34	81.5	5	59K	4	9	43	-56					
CORVALLIS	29.18	87.8	6	5K	3	11	2	10					
ARCATA	30.73	94.7	6	18	2	11	22	5					
BANFF	30.95	71.4	6	19K	1						9	14	
HONOLULU	31.49	165.3	6	23A	0	11	36	7					
SHASTA	31.87	93.5	6	28K	2						9	18	PCP
UKIAH	32.31	96.6	6	33K	3	12	2	20			9	18	PCP
MINERAL	32.57	93.3	6	34	2						9	20	PCP
Y.-SAKHLINSK	32.92	281.5	6	36	1	11	52	1			7	8	
NEMURO	33.01	273.9	6	34	-2	11	51	-2			15	11	
HUNGRY HORSE	33.01	75.5	6	37K	1	11	56	3			9	20	PCP
ABASHIRI	33.44	275.9	6	39	-1	12	1	2					
BERKELEY	33.69	97.5	6	43K	1	12	6	3			9	21	PCP
TIKSI	33.86	329.0	6	42	-1						7	54	PP
KUSIRO	33.92	274.2	6	42	-2	12	4	-3			7	26	
RENO	34.15	93.0	6	48K	2	12	19	9					
SANTA CLARA	34.21	97.9	6	48K	2	12	10	-1			14	31	L
WAKKANAI	34.30	279.8	6	53	6	12	15	2					
LICK	34.40	97.7	6	49K	1						9	23	PCP
OBIHIRO	34.69	275.0	6	51	0	12	19	0					
ASAHIGAWA	34.73	276.8	6	52	1								
BUTTE	35.00	78.3	6	55	2	12	14	-10			8	30	PP
URAKAWA	35.38	274.2	6	56	0	12	31	2			13	16	
SASKATOON	35.68	65.8	7	2	3	12	36	2					
RESOLUTE	35.70	25.6	6	59K	0	13	36	62					
SAPPORO	35.74	276.5	6	59K	-1	12	30	-5			7	56	
FRESNO	35.89	96.8	7	3K	2	12	45	8					
TOMAKOMAI	35.91	275.6	7	0	-1								
BOZEMAN	36.09	77.9	7	3K	1	12	50	10			8	30	PP
MURORAN	36.39	275.7	7	4	-1	12	45	0					
EUREKA	36.55	90.0	7	8K	2	12	54	7					
SUTTSU	36.58	276.9	7	6	-1	12	48	0			7	56	
TINEMAHA	36.67	95.0	7	10K	3	12	58	9			9	31	PCP
MORI	36.76	275.7	7	9	1	12	51	0			8	32	PP
HAKODATE	36.85	275.1	7	9	0	12	52	0					
KING RANCH	36.88	98.5	7	11K	2						9	31	PCP
HATINOHE	37.08	272.9	7	12	1	12	54	-2					
WOODY	37.17	97.3	7	13K	1	13	3	6			9	30	PCP
MIYAKO	37.34	271.4	7	4	-9	12	57	-3					
AOMORI	37.37	273.8	7	14	1	13	1	1					
CHINA LAKE	37.86	96.0	7	19K	2						9	36	PCP
MIZUSAWA	38.17	271.3	7	17	-3	13	12	0			7	23	
SALT LAKE C.	38.31	85.2	7	23K	2	13	22	8			8	50	PP
AKITA	38.45	272.9	7	24	2	13	18	2					
ISINOMAKI	38.49	270.3	7	22	-1	13	15	-2					
PASADENA	38.63	98.5	7	26K	2	13	25	6			8	53	PP
SENDAI	38.84	270.4	7	20	-6	13	23	1			8	5	
RIVERSIDE	39.22	98.0	7	30K	1	13	31	3			9	37	PCP
BIG BEAR	39.33	97.3	7	32K	2								
HUKUSIMA	39.43	270.1	7	32	2	13	30	-1					
BOULDER CITY	39.45	93.5	7	33K	2	13	40	8					
ONAHAMA	39.68	268.8	7	30	-2						8	53	PP
PALOMAR	39.97	98.3	7	38K	3								
SHIRAKAWA	39.99	269.6	7	37	2	13	35	-5			8	44	PP
NIIGATA	40.20	271.4	7	38	1	13	42	-1					
MITO	40.31	268.5	7	30	-8						13	46	
HAYFIELD	40.47	96.8	7	41K	2	13	31	-16			7	53	
BARRETT	40.54	98.8	7	41K	1	13	55	7			9	42	PCP
UTUNOMIYA	40.57	269.2	7	41	1	13	50	2			8	25	
KAKIOKA	40.58	268.5	7	41	1	13	50	2					
AIKAWA	40.63	272.2	7	42	2	13	50	1					
TUKUBASAN	40.64	268.6	7	40	0	13	28	-21			17	2	SS
KUMAGAYA	41.13	269.1	7	44	0	14	1	4					
MAEBASI	41.16	269.6	7	46	1	13	59	2			8	26	
TOKYO C.M.O.	41.20	268.3	7	48	3	13	50	-8			9	2	PP
TAKADA	41.21	271.1	8	47	62								
TITIBU	41.42	269.1	7	47	0	14	5	4					
YOKOHAMA	41.43	268.1	7	48	1								

VLADIVOSTOK	41.45	282.8	7	47	0	14	1	0		
NAGANO	41.52	270.6	7	49	1	14	8	6	9	0 PP
OIWAKE	41.52	270.0	7	48	0	13	56	-6	8	54 PP
MATUSIRO	41.58	270.5	7	49K	1	14	5	2	9	51
RAPID CITY	41.65	75.2	7	50A	1	13	39	-25	9	32 PP
MERA	41.65	267.3	7	50	1	14	5	1		
WAZIMA	41.86	272.4	7	56	6	14	9	2	13	36
HUNATU	41.93	268.8	7	52	1	14	10	2		
MATUMOTO	41.93	270.3	7	52	1	14	12	4		
KOHU	41.96	269.2	7	53	2	14	11	2		
OSIMA	42.03	267.5	7	57	5	14	12	2		
MISIMA	42.06	268.3	7	51	-1	14	6	-4		
TOYAMA	42.11	271.4	7	52	-1	14	16	5		
TAKAYAMA	42.44	270.8	7	56	1					
IIDA	42.49	269.6	7	57	1	14	23	6		
SHIZUOKA	42.50	268.6	7	57	1					
KANAZAWA	42.56	271.7	8	2	6					
BOULDER	42.76	81.5	7	59	1					
OMAESAKI	42.86	268.3	8	23	24	14	22	0	8	45
HUKUI	43.10	271.4	8	3	2	14	30	4		
GIHU	43.22	270.3	8	2	0	14	28	1	11	14
NAGOYA	43.25	269.9	8	3	1	14	33	5		
IBUKISAN	43.47	270.6	8	5	1					
HIKONE	43.63	270.:	8	7	2	14	34	1		
KAMEYAMA	43.77	270.0	8	6	0	14	38	3	9	46
KYOTO	44.11	270.7	8	11	2	14	46	6		
NARA	44.28	270.3	8	12	2	14	46	3		
TOYOOKA	44.34	272.0	8	10	-1	14	45	1		
TUCSON	44.41	94.3	8	13A	2	14	46	1		
OWASE	44.45	269.3	8	13	1	14	47	2		
KOBE	44.68	270.8	8	14	1	14	47	-1		
CHANGCHUN	44.95	287.7	8	15K	-1	14	50	-2		
SUMOTO	45.08	270.7	8	12	-5	14	56	2		
YONAGO	45.31	273.0	8	8	-10	15	0	2		
TOKUSIMA	45.45	270.6	8	22	2	14	56	-4		
TAKAMATU	45.61	271.3	8	20	-1	15	1	-1		
HAMADA	46.44	273.4	8	28	1	15	17	3		
KOTI	46.45	270.9	8	28	1	15	17	3	18	46 SS
HIROSIMA	46.57	272.6	8	28	0	15	19	3		
MATUYAMA	46.74	271.8	8	32	2	15	23	5		
SIMIDU	47.31	270.6	8	34	0	15	20	-6	10	19
SIMONOSEKI	47.78	273.3	8	39	1	15	38	5		
OOITA	47.84	272.1	8	39	1	15	35	1		
HUKUOKA	48.34	273.3	8	43	1	15	43	2		
ASOSAN	48.40	272.8	8	44	1	15	49	7		
SAGA	48.64	273.1	8	48	3	16	3	18		
KUMAMOTO	48.68	272.4	8	45	0	15	48	3		
MIYAZAKI	48.86	270.9	8	46	0	15	53	5		
KAGOSIMA	49.63	271.3	8	53	1	16	1	2	9	46
TOMIE	50.01	273.6	8	55	0	16	6	2		
IRKUTSK	51.27	308.0	9	6K	1	16	18	-3	11	6 PP
CHICAGO CGS.	52.15	68.2	9	8K	-3	16	32	-1	12	4 PPP
KIRKLAND LA.	52.23	57.7	9	12K	0				10	24 PCP
FLORISSANT	52.49	72.8	9	13K	-1	16	37	-1		
PEKING	52.64	289.4	9	14K	-1	16	37	-3	11	17 PP
ST. LOUIS 1	52.67	72.9	9	13K	-2	16	40	-1		
KWANTING	52.84	289.9	9	16	-1					
TERRE HAUTE	53.77	70.3	9	25	2	17	0	5		
TATUNG	54.27	291.3	9	31	4					
SCHEFFERVLLE	54.31	44.6	9	25A	-2					
SCORESBY SD.	54.96	13.9	9	33	1	17	12	1	11	37 PP
ZO-SE	55.70	277.9	9	38K	1	17	24	3	11	41 PP
CLEVELAND	55.78	64.8	9	36	-2	17	24	2		
PADTOW	55.79	293.7	9	41	3					
TAIYUAN	56.22	289.6	9	44	3					
OTTAWA	56.28	57.9	9	40A	-2	17	30	1	11	51 PP
NANKING	56.49	280.4	9	42K	-1	17	30	-2		
SHAWINIGAN	57.02	55.2	9	44K	-3	16	34	-65	11	53 PP
BREBEUF	57.30	56.6	9	47K	-2				14	53
SEVEN FALLS	57.60	53.6	9	50	-1	17	46	0	10 20	12 1 PP
LINFEN	58.00	288.9	9	55	1					
PENNSYLVANIA	58.26	63.2	9	48	-8	17	46	-9		12 4 PP
YINCHUAN	59.35	294.3	10	5	2					
APATITY	59.66	351.4	10	5A	0	18	12	-1		12 25 PP
AKUREYRI	59.96	14.6	10	11	4	18	20	3		18 27
WASHINGTON	60.03	64.2	10	9K	1	18	55	37		12 21 PP
KIRUNA	60.19	357.1	10	8K	-1	18	19	-1	10 21	19 54 SCS
PALISADES	60.27	60.5	10	8K	-2	18	22	1		12 22 PP
PHILADELPHIA	60.33	62.2	10	8	-2	18	21	-1		12 23 PP

SODANKYLA	60.36	354.3	10	9	-1	19	21	59			12	28 PP
HWALIEN	60.57	271.8	10	13	1	18	30	5				
WESTON	60.67	57.9	10	12A	0	18	28	2			22	37 SS
REYKJAVIK	60.74	17.0	10	15A	2						12	32
SIAN	60.81	289.1	10	13K	0	18	33	5				
COLUMBIA	61.25	70.8	10	15K	-1	18	27	-7			10	58 PCP
HSINKONG	61.36	271.3	10	15	-2	18	40	5				
ALISHAN	61.40	272.1	10	19	2							
WUWEI	61.76	296.2	10	20	0							
TAITUNG	61.76	271.2	10	21	1							
PUEBLA	61.78	95.1	10	22	2							
CHANGYEH	62.17	298.3	10	24	2							
TIENSHUI	62.40	291.5	10	26	2							
LANCHOW	62.42	293.9	10	27	3							
HENGCHUN	62.56	271.0	10	27	2	18	49	-1				
HALIFAX	62.92	51.5	10	25A	-2	18	55	0			12	45 PP
VERA CRUZ	62.92	93.3	10	27K	0						14	39
YUMEN	63.08	301.6	10	29	1							
SINING	63.17	295.7	10	31	2							
SEMIPALATNSK	63.34	318.9	10	28	-2	18	55	-5				
OAXACA	64.19	95.4	10	34K	-2	19	9	-2			30	57
SKALSTUGAN	64.56	0.7	10	38K	0	19	16	1				
SVERDLOVSK	64.71	333.6	10	36	-3	19	15	-2			13	8 PP
MERIDA	65.61	86.9	10	46K	1	19	25	-3			13	13 PP
RABAUL	66.29	226.3	10	47	-2						13	12 PP
CANTON	66.34	277.5	10	50K	1	19	41	4				
HONG KONG	66.38	276.3	10	50K	0	19	37	0				
BAGUIO CITY	66.88	267.1	10	52	-1	19	45	2				
BERGEN	67.55	4.5	11	0K	3	19	55	3			11	30 PCP
PULKOVO	67.58	351.0	10	58	1	19	53	1			13	17 PP
HELSINKI	67.62	353.9	10	58	0	19	53	1			11	26 PCP
COMITAN	67.62	92.2	11	2	4	19	58	6			18	45
MANILA	68.04	265.5	11	2	2	20	0	3				
UPPSALA	68.26	357.9	11	1K	-1	19	55	-5	11	12	20	59 SCS
ABERDEEN	70.22	9.1	11	15	1	20	25	2			21	0 PS
MOSCOW	70.63	345.9	11	16	0	20	23	-5			13	50 PP
SUVA	71.31	195.4	11	12	-8	20	42	6			21	11 SKS
EDINBURGH	71.34	9.9	11	30	10	20	38	2			14	7 PP
BERMUDA	71.62	60.9	11	23K	1	20	41	2			15	46 PPP
FRUNSE	71.70	317.5	11	24K	1						21	23 PS
COPENHAGEN	72.48	0.8	11	28K	1	20	52	3			14	10 PP
DURHAM	72.64	9.2	11	28	0	20	57	6			14	16 PP
RATHFARNHAM	73.55	12.4	11	34K	1	21	3	2			14	28 PP
HAMBURG	74.56	2.3	11	42K	3	21	18	5				
TASHKENT	75.16	320.0	11	43	0						21	51 PS
WITTEVEEN	75.19	4.4	11	45	2							
WARSAW	75.76	355.4	11	49K	3	21	33	7			14	44 PP
POTSDAM	75.79	0.4	11	49	3	21	31	5			12	21
DE B LT	75.83	5.4	11	49	2	21	33	6			14	36 PP
KEW	76.03	9.0	11	49K	1	21	32	3			14	41 PP
SHILLONG	77.05	294.9	11	56K	2	21	37	-3			14	46 PP
BENSBERG	77.07	4.2	11	54K	0						12	4 PCP
JENA	77.23	1.4	11	56	2	21	45	3	12	25	22	5 PS
STALINABAD	77.72	318.9	11	58	1						22	8
NOUMEA	77.92	205.7	11	58	0						18	29
LWOW	77.97	353.2	11	59	0	21	51	1			22	35 PS
KRAKOW	77.99	355.9	12	0	1	21	51	1				
RACIBORZ	78.03	357.1	12	1A	2	21	55	4			12	13 PCP
CHEB	78.09	0.9	12	1	2	21	52	1	12	32	26	56 SS
JERSEY	78.10	10.5	11	59	0	21	56	5				
PRAGUE	78.11	359.5	12	0K	1	21	50	-1	12	35		
CHATRA	78.63	299.1	12	3	1	21	52	-5				
SKALNATE PL.	78.85	355.6	12	8	5	22	6	7			12	36
PARIS	78.91	7.5	12	5K	1	22	3	3			15	8 PP
KARLSRUHE	79.07	3.6	12	7K	2	22	7	5	12	36	27	24 SS
STUTTGART	79.34	3.0	12	7K	1	22	9	5	12	36	12	16 PCP
STRASBOURG	79.47	4.0	12	8K	1	22	10	4	12	42	15	7 PP
TUBINGEN	79.57	3.1	12	9K	2				12	38		
VIENNA-H.	79.90	358.2	11	41	-28	22	14	4			15	27 PP
EBINGEN	79.92	3.2	12	11K	2	22	16	5	12	37		
BRATISLAVA	79.97	357.7	12	12	3	22	16	5			27	30
HURBANOVO	80.24	356.9	12	12	1	22	16	2			13	0
IASI	80.27	350.5	12	13	2	22	16	2			22	42 PS
RAVENSBURG	80.34	2.8	12	13K	2	22	19	4				
DEHRA DUN	80.49	307.8	12	9	-3	22	12	-5			15	24 PP
BASLE	80.51	4.2	12	14K	2	22	22	5			40	32 L
BUDAPEST	80.59	356.3	12	17	4	22	24	6			15	17 PP
BESANCON	80.71	5.3									12	15

ZURICH	80.71	3.5	12	11	-2	22	23	4			
BACAU	80.96	350.8	12	18	3	22	24	3		23	3 PS
BALBOA HTS.	80.98	87.1	12	16	1						
NEUCHATEL	81.01	4.7	12	14	-1	22	24	2			
LAHORE	81.23	311.2	12	17	1	22	20	-4			
KALOCSA	81.55	356.3	12	22	4	22	30	2		23	16 PS
SIMFEROPOL	81.65	345.5	12	18K	0	22	31	2		15	35 PP
SAN JUAN	81.72	70.8	12	19K	0	22	32	3		15	52 PP
BOKARO	81.77	298.3	12	20K	1	22	31	1			
SZEGED	81.78	355.5	12	22	3	22	24	-6			
FOCSANI	81.79	350.5	12	23	4	22	34	4		23	35
CLERMONT-FD.	81.99	7.5	12	22	2	22	39	7	12 55		
ASHKABAD	82.16	325.9	12	21	0						
TIMISOARA	82.22	354.7	12	25	4	22	40	6			
NEW DELHI	82.34	307.4	12	22K	0	22	35	-1		16	15 PPP
ZAGREB	82.34	358.4	12	24	2	22	39	3			
CAMPULUNG	82.42	352.0	12	26	4	22	44	8			
OROPA	82.43	4.1	12	12	-10					15	40 PP
TRIESTE	82.53	360.0	12	24K	1	22	42	4		15	48 PP
TIFLIS	82.65	337.1	12	26	3					12	54
ANGRA DO HO.	82.75	31.2	12	29	5	22	55	15			
PAVIA	82.92	3.2	12	28K	3	22	46	4	12 58	16	5 PP
BUCHAREST	83.17	351.1	12	26K	0	22	46	2	13 7	23	27 PS
BELGRADE	83.19	355.2	12	28A	2	22	49	5		15	32 PP
BOLOGNA	83.66	1.7	12	32K	3	22	56	7	13 10	17	36 PPP
MONACO	84.30	4.6	12	34K	2	23	1	6		16	7 PP
FLORENCE X.	84.38	1.8	12	32K	0	23	1	5	13 4		
SOFIA	85.11	352.9	12	37	1	23	9	6		23	57
QUETTA	85.69	315.9	12	40K	1	22	14	-55		15	56 PP
COIMBRA	85.98	16.8	12	39A	-1	23	11	-1		16	3 PP
BARCELONA	86.22	8.7	12	43	2	23	17	3			
ROME	86.27	0.9	12	43K	1	23	20	5		22	49 SKS
CHINCHINA	86.51	86.4	12	44	1	23	20	3		13	2
TORTOSA	86.65	10.0	12	45	2	23	21	3			
BRISBANE	86.97	215.5	12	45	0					23	12 SKS
TOLEDO	87.00	13.6	12	48K	3	23	16	-6		16	11 PP
FORT FRANCE	87.49	69.2	12	48	0	24	10	44			
TARANTO	87.66	357.3	12	45	-3	23	27	-1			
BOGOTA	87.74	85.4	12	48K	-1	23	28	0		24	24 PS
ST. VINCENT	88.67	70.2	12	55K	2						
ALICANTE	88.98	11.1	12	56	1	23	40	[illegible]		16	24 PP
ONERAHI	89.22	195.6	12	56	0						
KARACHI	89.42	313.7	13	9	12	23	57	13		23	33 SKS
BARBADOS	89.67	69.0	13	1	3						
GRANADA	89.72	13.8	12	59	1	23	29	-18		17	20 PP
ATHENS	89.78	352.1	12	58	0	23	25	-22		24	54 PS
MESSINA	89.96	358.6	12	57A	-2	23	50	1		23	26 SKS
MALAGA	90.05	14.5	13	0A	0	24	6	16		16	32 PP
REGGIO CALA.	90.06	358.5	13	0	0	24	3	13		24	54
ALMERIA	90.20	12.9	13	0	0	23	58	7		16	37 PP
TRINIDAD	90.52	71.9	13	1	-1						
ALGIERS UNI.	90.91	8.6	13	4A	0	24	0	2		16	39 PP
HYDERABAD	90.93	300.3	13	5K	1	23	31	-27		16	38 PP
KARAPIRO	91.14	194.3	13	4	-1	24	4	4		16	34 PP
RELIZANE	91.66	10.7	13	8K	1	24	0	-4		16	39 PP
KSARA	92.17	341.7	13	10	0	24	13	4		16	55 PP
POONA	92.40	304.6	13	13	2	24	13	2		16	57 PP
BOMBAY	92.61	305.6	13	12	0	24	13	0		23	44 SKS
DJAKARTA	92.93	263.8	13	12	-1	19	13	-302			
RIVERVIEW	93.41	214.3	13	16K	1	24	24	5	13 29	17	7 PP
MADRAS	93.64	296.4	13	18	2	24	20	-1		17	10 PP
JERUSALEM	94.28	341.8	13	21	2					23	18
WELLINGTON	94.55	194.2	13	19	-1	24	36	7	13 39	23	45 SKS
COBB RIVER	94.68	195.8	13	24	3						
CHRISTCHURCH	97.08	195.3	14	27	55	26	18	87		31	20 SS
KODAIKANAL	97.41	297.1	13	38	5	25	2	9		17	35 PP
COLOMBO	98.81	293.2	13	47	7	24	21	-44			
MELBOURNE	99.21	217.1	13	41	-1	25	11	2		17	54 PP
HUANCAYO	99.99	96.7	13	48	3					17	32 PP
TAMANRASSET	105.00	7.8	14	10K	3	26	6	9		18	37 PP
PERTH	107.78	240.8								28	4
LA PAZ	107.83	94.0	14	20	777					18	48 PP
MBOUR	108.57	31.5	18	56	777					19	27 PP
ANTOFAGASTA	111.84	100.7	19	16	42					29	14
LOME	120.93	14.5	19	7	16	26	2	14		30	18 PS
TERRE ADELIE	125.09	202.5				32	14	373		19	58
LWIRO	128.65	340.6	19	9K	3	24	40	-91			
SCOTT BASE	130.85	187.3								19	9

WILKES	133.70	213.9	22	53	217					39	53 SS
TANANARIVE	137.56	308.7	19	26A	3					22	16 PP
PRETORIA	151.41	331.9	19	48A	2					19	56
PIETERMZBURG	154.28	324.8	19	53	3					20	2
KIMBERLEY	155.17	336.4								19	3
GRAHAMSTOWN	158.96	328.8	19	58A	2					20	6

APRIL 20 12.H 30.M 42.S EPICENTRE -5.83 147.55 DEPTH= 0.KM

A=-0.83952 B= 0.53387 C=-0.10097 D= 0.5366 E= 0.8438
G= 0.0852 H=-0.0542 K=-0.9949 HT= 7.0

SE= 3.38

	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	4.88	70.8	1	16K	-1						7	24	
BRISBANE	22.15	167.0	4	51	-8	8	47	-12					
NOUMEA	24.53	133.7	5	17	-5								
RIVERVIEW	28.06	173.6	5	53A	-2	10	30	-9			6	40	PP
MELBOURNE	31.93	183.9	6	23	-7	11	35	-6			7	47	PP
SUVA	32.53	114.8	7	2	27	11	58	8			9	52	PP
MANILA	33.25	307.8	6	43	2	12	3	2					
BAGUIO CITY	34.65	310.1	6	49	-4	12	44	21					
PERTH	39.41	224.7	7	30	-3	13	29	-7			9	3	PP
DJAKARTA	40.49	267.3	7	48	6						9	20	
SIMIDU	40.82	341.1	7	41	-4						10	6	
OSIMA	41.11	349.8	7	50	3								
KOTI	41.36	342.2	7	52	2	14	19	14					
MISIMA	41.53	349.3	7	56	5						13	33	
KUMAMOTO	41.64	338.5	7	52	0								
OOITA	41.69	339.8	7	55	3	14	19	9					
COBB RIVER	41.69	151.1	7	56	4	14	0	-10					
YOKOHAMA	41.71	350.3	7	49	-3	14	26	16					
SUMOTO	41.72	344.2	7	53	1								
KAMEYAMA	41.79	346.3	8	1	8	14	33	22			18	26	
OSAKA	41.83	345.1	8	10	17						15	10	
TAKAMATU	41.92	343.2	7	56	2	14	25	12					
HUNATU	41.93	349.3	7	54	0	14	22	9					
TOKYO C.M.O.	41.94	350.5	7	54	0	14	18	4			8	48	
KOBE	41.95	344.7	7	56	2						14	3	
NAGOYA	41.98	347.0	7	51	-4								
IIDA	42.14	348.2	8	7	11	14	34	18					
SAGA	42.17	338.3	8	10	14								
KAIMATA	42.22	153.6	8	2	5								
HIKONE	42.25	346.2	8	0	3						15	53	
GIHU	42.25	346.9	7	54	-3						14	5	
TITIBU	42.35	349.8	8	0	2								
KAKIOKA	42.41	351.2	7	51	-7								
TUKUBASAN	42.41	351.1	7	57	-1	14	27	7					
HUKUOKA	42.43	338.6	7	58	0	14	22	1			9	42	PP
KUMAGAYA	42.46	350.2	8	1	2	14	42	21					
MAEBASI	42.76	349.9	8	2	1	14	40	14			9	8	
UTUNOMIYA	42.77	350.9	8	2	1	14	33	7					
OIWAKE	42.78	349.3	8	0	-1								
MATUMOTO	42.81	348.6	8	2	1	14	44	18					
WELLINGTON	42.85	149.5	8	10K	8	14	19	-8			17	39	SCS
HONG KONG	43.00	311.7	8	4A	1	14	32	3					
ONAHAMA	43.01	352.2	8	39	36								
MATUSIRO	43.06	349.0	8	3A	0	14	16	-14			10	37	PPP
HAMADA	43.06	341.3	8	5	2	14	34	4			18	0	
YONAGO	43.16	343.0									15	30	
NAGANO	43.18	349.0	8	8	4	14	37	5					
TOYAMA	43.41	347.9	8	20	14	14	54	19					
CHRISTCHURCH	43.55	153.4	8	20	13	14	27	-10			10	42	PP
GEBBIES PASS	43.70	153.6	8	4	-5								
CANTON	44.13	311.9	8	10	-2	14	46	1					
SENDAI	44.31	352.5	8	9	-5								
ZO-SE	44.54	327.1	8	15	0	14	53	1					
MIZUSAWA	45.13	353.0	8	22	2	15	18	18			8	39	
AKITA	45.84	352.0	8	53	27	15	30	20					
NANKING	46.58	325.8	8	32A	0	15	26	5			18	22	SCS
MORI	48.13	353.0									9	13	
OBIHIRO	48.68	355.7	9	13	25								
VLADIVOSTOK	50.75	345.2	9	3	-1								
Y.-SAKHLINSK	52.73	355.8	9	20	1						16	59	PS

CHANGCHUN	53.36	340.0	9	23	-1						
PEKING	54.02	330.4	9	26A	-2	17	6	2			
PETROPAVLOVK	59.49	7.7	10	4	-3				18	18	PS
TERRE ADELIE	61.03	182.8	10	20	2						
MAGADAN	65.23	1.8	10	44	-2						
WILKES	65.51	195.6				19	28	-4	23	18	SS
CHATRA	66.79	302.3							10	54	
IRKUTSK	68.54	333.1	11	4A	-3				20	28	PS
COLOMBO	68.71	279.7	11	8	0	20	10	-1			
MADRAS	69.48	286.1	11	16	4				11	37	
HYDERABAD	72.01	290.3							11	22	
SCOTT BASE	72.68	175.8							11	28	
DEHRA DUN	75.49	303.2							11	56	
POONA	76.52	290.5	11	55	1	21	54	14			
BOMBAY	77.55	290.7	11	56	-4	21	54	3	22	30	PS
TIKSI	78.28	354.0	12	0	-4	22	8	9	22	31	PS
SEMIPALATNSK	80.32	323.2	12	13	-2	22	19	-1			
FRUNSE	81.62	314.7	12	18	-3				22	46	SCS
COLLEGE	84.80	22.8	12	33	-5						
QUETTA	84.82	300.9	12	34A	-4	23	6	0	15	53	PP
STALINABAD	84.88	309.4	12	36	-2	23	7	1			
TASHKENT	85.07	312.2	12	35	-4				22	58	SKKS
ASHKABAD	92.91	307.7							23	48	SKS
SVERDLOVSK	93.15	326.7	13	17	0				24	37	PS
VICTORIA	93.68	41.8	13	15	-5						
SHASTA	93.81	49.6	12	17	-63						
HORSESHOE B.	93.84	40.9	13	24	3						
LICK	94.14	53.0	13	21A	-1						
SEATTLE	94.37	42.7	13	24	1						
MINERAL	94.38	50.0	13	21A	-2						
KING RANCH	95.55	55.1	13	28	0						
FRESNO	95.58	53.7	13	28	-1						
RENO	95.71	50.9	13	27	-2						
WOODY	96.28	54.8	13	29	-3						
PASADENA	96.78	56.4	13	35	1				17	18	PP
CHINA LAKE	97.31	54.7	13	33	-3						
RIVERSIDE	97.43	56.6	13	37	0						
EUREKA	98.68	51.1	13	40	-3				17	33	PP
BOULDER CITY	99.56	54.6	13	49	2						
HUNGRY HORSE	99.93	42.1	13	48	0						
RESOLUTE	102.69	14.0	14	8	7	24	26	-77	27	29	PS
TIFLIS	103.37	311.4							18	20	PP
APATITY	104.44	338.8							25	0	
MOSCOW	105.96	326.4							18	38	PP
RAPID CITY	107.84	45.6	14	48	777				19	0	PKP
PULKOVO	108.51	331.7							18	55	PP
KIRUNA	108.74	341.4							28	32	
SIMFEROPOL	110.61	315.9							19	10	PP
KSARA	111.21	303.9	18	35	-1				19	18	PP
PRETORIA	113.35	238.9							18	48	
SKALSTUGAN	113.98	339.8	18	38	-3						
UPPSALA	114.17	334.9	18	39	-3				19	37	PP
KIMBERLEY	115.12	234.6	18	43	0						
BUCHAREST	116.25	317.0	20	6	80				29	19	
HERMANUS	116.94	226.7							29	24	
KRAKOW	117.95	324.7	20	3	74						
COPENHAGEN	118.84	332.8	18	52	1				20	28	
PRAGUE	121.02	326.7							20	59	
KIRKLAND LA.	121.62	35.5	18	56	0						
JENA	122.06	328.7	19	12	15				20	31	PP
TRIESTE	123.71	322.5							18	56	
STUTTGART	124.58	327.7	18	58	-4				20	45	PP
EBINGEN	125.05	327.3	19	2	-1						
STRASBOURG	125.45	328.2							20	57	PP
OTTAWA	125.60	36.4	18	59	-5						
MESSINA	125.92	313.7	19	1	-3				20	57	PP
FLORENCE X.	126.20	321.7							19	37	
ROME	126.37	319.1							21	24	
SHAWINIGAN	126.63	33.8	19	2	-4						
BREBEUF	126.76	35.3	19	3	-3						
COLUMBIA	127.09	51.3	19	4	-3						
BESANCON	127.22	327.9	19	36	29						
KEW	127.28	335.3							22	31	PKS
PARIS	127.94	331.3	19	19	11				20	58	PP
WASHINGTON	128.01	44.1	19	6	-2						
RATHFARNHAM	128.07	340.3							19	28	
PALISADES	129.07	40.2	19	9	-1				21	10	PP
CLERMONT-FD.	129.68	328.1	19	28	16						
WESTON	129.92	37.3	19	6	-6						

HALIFAX	132.75	30.2	19 15	-2				
BALBOA HTS.	133.21	83.2	19 16	-2				
HUANCAYO	133.81	112.7	19 22	3				22 52 PKS
ALGIERS UNI.	135.28	318.5	19 9	-13				21 28 PP
LA PAZ	138.31	122.7	19 29A	1				23 3 PP
TAMANRASSET	139.70	298.6	19 29	-1				22 48 PP
BERMUDA	139.99	44.6						22 22
SAN JUAN	144.88	66.2	19 35	-4				
ST. VINCENT	150.68	73.5	19 50	1				
TRINIDAD	150.85	78.6	19 52	3				
MBOUR	162.56	300.3	20 3	-1				24 34 PP

APRIL 21 21.H 12.M 29.S EPICENTRE 7.07 -72.32 DEPTH= 0.KM

A= 0.30148 B=-0.94561 C= 0.12218 D=-0.9527 E=-0.3038
G= 0.0371 H=-0.1164 K=-0.9925 HT= 6.9

SE= 3.39

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
BOGOTA	2.99	215.8	0 47	-1	1 29	5		
CHINCHINA	3.89	237.8	1 1	1	1 52	5		1 8
GALERAZAMBA	4.71	321.9	1 17	5	2 17	10		1 45 PG
BALBOA HTS.	7.42	285.2	1 47	-3				
TRINIDAD	11.25	70.7	2 35	-8				2 37
ST. VINCENT	12.45	60.0	2 53	-6				
SAN JUAN	12.76	27.6	2 58	-5	5 1	-25		4 3
ST. LUCIA	13.10	57.2	2 59	-9				
FORT FRANCE	13.35	54.3	3 3	-8	6 3	23		3 24
BARBADOS	13.89	63.3	3 17	-1				
SANTIAGO MA.	17.12	293.2	4 0	0	6 41	-28		
SAN SALVADOR	17.90	293.1	4 9	-1	7 31	4		
AYAGUALO	17.91	292.7	4 0	-10	6 41	-46		
HUANCAYO	19.22	189.0	4 24	-2	7 57	0		
COMITAN	21.42	297.0	4 48	-1	8 50	8		13 30
MERIDA	21.70	311.2	4 55A	3	9 1	14		5 19 PP
LA PAZ	23.78	170.0	5 7	-5	9 26	2		5 45 PP
OAXACA	25.85	294.7	5 37	5	10 20	21		14 35
VERA CRUZ	26.10	299.8	5 39	4	10 31	28		6 25 PP
BERMUDA	26.17	14.8	5 38	3	10 6	2		6 17 PP
PUEBLA	27.83	297.8	5 51	1				
COLUMBIA	27.99	344.4	5 51	-1	10 39	5		6 45 PP
TACUBAYA	28.84	297.8	5 58A	-2	10 58	10		6 46 PP
WASHINGTON	31.98	353.0	6 32	5				9 8 PCP
PHILADELPHIA	32.84	356.0	6 41	6	11 52	1		8 2
MANZANILLO	33.31	294.1	6 41	2	12 26	28		7 16
FORDHAM	33.67	357.9	6 47	5	12 28	25		
PALISADES	33.83	357.8	6 42A	-1	12 0	-6		8 12 PP
PITTSBURGH	33.93	349.5	6 52K	8	12 22	15		7 35
PENNSYLVANIA	33.96	352.4	6 49	4	12 20	12		7 57 PP
WESTON	35.18	1.3	6 56A	1	12 33	6		15 3
CLEVELAND	35.24	348.0	6 56	0	12 36	8		7 2
ST. LOUIS 1	35.36	335.4	6 55A	-2	12 38	8		7 35
FLORISSANT	35.55	335.4	6 57	-1	12 41	8		7 5
MAZATLAN	36.46	299.8	7 0	-6	13 0	13		16 1
CHICAGO CGS.	37.14	340.9	7 15	3	13 3	6		8 43 PP
LUBBOCK	37.98	318.0	7 13	-6	13 15	5	7 25	
HALIFAX	38.17	10.1	7 20A	0	13 19	6		8 50 PP
OTTAWA	38.30	356.1	7 20K	-1	13 15	0		8 56 PP
BREBEUF	38.31	358.5	7 21K	0	13 17	2		
CHIHUAHUA	38.41	308.2	7 21A	-1	13 27	11		9 1
SHAWINIGAN	39.34	359.5	7 30K	0				9 30 PCP
SEVEN FALLS	39.93	1.6	7 42	7	13 42	3		9 49 PPP
KIRKLAND LA.	41.47	352.2	7 47	-1	14 6	4		7 54
TUCSON	43.70	310.2	8 5	-1	14 39	4		8 55
BOULDER	44.15	323.1						8 9
RAPID CITY	45.69	328.9	8 20	-2	14 56	-7		18 14 SCS
HAYFIELD	47.97	309.7	8 38	-2				8 41
BOULDER CITY	48.33	312.8	8 42	0	15 53	12		
SALT LAKE C.	48.63	319.9	8 43	-2	15 51	6		19 51
PALOMAR	48.78	308.7	8 45	-1				10 51 PP
RIVERSIDE	49.42	309.3	8 50	-1	16 19	23		10 49 PP
PASADENA	50.09	309.1	8 56A	0	16 3	-3		11 5 PP
CHINA LAKE	50.30	311.4	8 56	-2				9 30
EUREKA	50.72	31[illegible].4	9 0	-1				39 40 PKPPKP

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BOZEMAN	50.95	325.6	9	2	-1	16	27	10			
WOODY	51.20	310.7	9	3A	-1				10	23	
TINEMAHA	51.27	312.6	9	4	-1	16	32	10	9	54	
ANGRA DO HO.	51.34	45.2				16	27	5	22	50	
KING RANCH	51.73	309.9	9	7	-1				9	22	
BUTTE	52.01	325.2	9	9	-2	16	24	-8	10	12	PCP
FRESNO	52.31	311.6	9	11	-2						
SASKATOON	53.02	334.2							16	52	
RENO	53.41	314.8	9	20A	-1				17	24	
LICK	53.89	311.6	9	23A	-2						
SANTA CLARA	54.12	311.5	9	29	3	18	43	102			
HUNGRY HORSE	54.18	326.8	9	25	-2	17	7	5	39	40	PKPPKP
BERKELEY	54.54	312.0	9	28A	-1	17	19	13	20	55	SS
MBOUR	54.76	77.4	9	28	-3	17	16	7	11	44	PP
MINERAL	55.00	315.0	9	30A	-3				11	50	PP
SHASTA	55.69	315.1	9	5	-33				9	11	
UKIAH	55.69	313.0	9	43	5	17	56	34			
BANFF	56.62	328.9	9	41A	-3				9	49	
ARCATA	56.95	314.7	9	51	4				18	43	
CORVALLIS	57.86	319.0	9	53	0	18	7	17	9	59	
SEATTLE	58.57	322.6	9	56	-2	17	1	-59	18	31	
VICTORIA	59.63	323.1	10	2A	-3	18	34	21	19	58	SCS
HORSESHOE B.	59.93	324.1	10	4A	-4	18	26	9	10	37	PCP
ALBERNI	60.79	323.5	10	17	4						
COIMBRA	65.60	49.0	10	43	-2	19	25	-3			
REYKJAVIK	67.22	21.5	10	59K	4				11	16	
MALAGA	68.13	53.4	10	58A	-3	19	44	-15	13	40	PP
RESOLUTE	68.81	353.7	11	2K	-3	20	7	0	11	7	
GRANADA	68.82	53.0	11	10K	5	20	8	1	11	17	14 0 PP
TOLEDO	68.85	50.0	11	3A	-3	20	8	0	24	18	SS
SITKA	69.60	328.7	11	9	-1	20	15	-1	21	13	SCS
ALMERIA	69.68	53.4	11	11	0	20	20	3	13	45	PP
RATHFARNHAM	70.14	35.7	11	9K	-4	20	27	4	39	1	PKPPKP
SCORESBY SD.	70.86	15.9	11	18	0	20	32	1	21	17	SKS
ALICANTE	71.41	52.0	11	20	-1	20	51	13			
JERSEY	71.78	40.5	11	33	10	20	44	2			
RELIZANE	72.01	54.8	11	22	-3						
LOME	72.98	85.8	11	37	6	20	53	-3	14	10	PP
DURHAM	73.18	34.9	11	29	-3	21	0	2	21	38	SKS
KEW	73.31	38.4	11	31	-1	20	55	-4	25	35	SS
ABERDEEN	73.41	32.3	12	1	28	21	3	3	25	59	SS
BARCELONA	73.70	49.0				21	2	-2	11	17	
ALGIERS UNI.	74.09	53.9	11	36	-1	21	7	-1	14	25	PP
PARIS	74.71	41.4	11	38	-3	21	15	0	14	33	PP
CLERMONT-FD.	74.81	44.6	11	40	-1	21	19	3	11	49	PCP
TAMANRASSET	76.11	68.3	11	47K	-2	21	29	-1	14	50	PP
DE BILT	76.78	38.2	11	52	0	21	36	-2	14	51	PP
BESANCON	76.90	43.2	11	53	0				14	58	PP
COLLEGE	77.49	334.9	11	53	-3	21	46	1	14	55	PP
NEUCHATEL	77.55	43.5	11	54	-3	21	48	2			
MONACO	77.75	46.9	11	58K	0				14	29	
WITTEVEEN	77.75	37.6	11	56	-2						
BERGEN	77.78	29.7	11	59	1	21	51	3	22	24	PS
BASLE	78.00	43.0	12	0K	1	21	53	2			
STRASBOURG	78.18	41.9	12	1A	1	21	52	-1	27	19	SS
OROPA	78.20	45.0	12	10	10	22	2	9	15	6	PP
KARLSRUHE	78.62	41.5	12	1A	-1	21	54	-4	15	0	PP
ZURICH	78.68	43.2	11	59	-4	21	48	-10			
EBINGEN	78.96	42.4	12	1	-3				12	13	PCP
PAVIA	79.03	45.4	12	13K	8	22	5	3	15	9	PP
TUBINGEN	79.04	42.0	12	6	1				12	13	PCP
STUTTGART	79.14	41.8	12	2	-3	22	3	0	14	39	PP
HAMBURG	79.78	36.9	12	7	-2	22	8	-2	24	37	
FLORENCE X.	80.51	46.9	12	11A	-2	22	40	23	28	26	SS
BOLOGNA	80.56	46.1	12	12	-1	22	12	-6	15	11	PP
JENA	80.71	39.6	12	11	-3	22	18	-1	12	22	PCP
CHEB	81.23	40.5	12	20	4	22	29	4	12	37	
COPENHAGEN	81.26	34.8	12	14	-3	22	30	5	15	17	PP
SKALSTUGAN	81.31	26.8	12	15	-2	22	32	6	22	40	
ROME	81.46	48.7	12	19	1	22	31	4	27	54	SS
POTSDAM	81.64	38.1	12	17	-2	22	31	2	12	27	
TRIESTE	82.25	44.9	12	21	-1	22	31	-4	15	29	PP
PRAGUE	82.55	40.5	12	26	3	22	32	-6	15	35	PP
HONOLULU	83.56	290.6	12	33	5						
ZAGREB	83.80	44.7	12	39	9	22	59	8			
VIENNA-H.	83.91	42.2	12	30	0	22	55	3	12	33	PCP
UPPSALA	83.92	30.5	12	27	-3	22	47	-5			
MESSINA	84.01	52.3	12	31	0	22	49	-4	15	41	PP

REGGIO CALA.	84.10	52.4							12 43	
BRATISLAVA	84.40	42.3	12	32	-1	22	56	-1	28 19	SS
KIRUNA	84.55	22.4	12	32	-1	22	56	-2	22 51	SKS
RACIBORZ	84.97	40.3	12	35	-1	23	4	2	17 51	PP
TARANTO	85.14	50.0	12	33	-3	22	48	-16		
HURBANOVO	85.16	42.5	12	47	10	23	3	-1	15 54	PP
BUDAPEST	85.79	42.8	12	48	8	23	21	11	28 11	SS
KALOCSA	85.82	43.8	12	43	3	23	9	-2	23 31	SCS
KRAKOW	86.08	40.2	12	40	-1	23	6	-7	12 50	PCP
SKALNATE PL.	86.39	41.1	12	49	6	23	26	10	23 11	SKS
WARSAW	86.51	38.0	12	40A	-3	23	12	-5	16 13	PP
SZEGED	86.64	44.0	12	50	6	23	24	5	15 37	PP
SODANKYLA	86.97	22.5	12	43	-2	23	10	-12	16 16	PP
BELGRADE	87.03	45.4	12	47	1	23	14	-8	16 4	PP
TIMISOARA	87.46	44.4	12	52	4	23	19	-7	23 36	PS
HELSINKI	87.54	29.8	12	45	-3	23	29	2	16 15	PP
LWOW	88.73	40.1	12	54	0	23	34	-4	23 23	SKS
SOFIA	89.39	47.2	12	56	-1	23	40	-4	16 22	PP
APATITY	89.46	21.7	12	58	1	23	32	-13	16 31	PP
CAMPULUNG	90.18	44.5	13	12	11					
PULKOVO	90.26	29.6	12	59	-2	23	23	-29	23 59	SCS
BUCHAREST	91.08	45.2	13	7	2	24	14	14	16 52	PP
BACAU	91.22	42.9							13 3	
IASI	91.54	42.2	13	8	1				13 24	
MOSCOW	95.21	32.3	13	24	0	23	57	-38	17 24	PP
HERMANUS	95.21	123.9	13	33	9	23	57	-38	17 29	PP
SIMFEROPOL	96.51	43.3				24	31	-15	17 25	PP
KIMBERLEY	99.56	117.9	13	43	-1					
TIKSI	100.23	353.3				24	17	-61	17 59	PP
KSARA	100.97	53.7	14	OK	10	25	33	9	18 3	PP
JERUSALEM	100.99	55.8	14	0	10	24	1	-83		
LWIRO	101.30	90.9	13	55	4					
PRETORIA	102.47	114.7							18 1	
TIFLIS	104.93	43.6				24	51	-66	18 35	PP
MAGADAN	105.30	338.8							18 22	PP
SVERDLOVSK	105.64	24.7	14	11	777	24	41	-87	18 36	PP
GORIS	106.90	45.2							18 26	PP
CHRISTCHURCH	112.93	225.7	19	2	26				19 31	
ASHKABAD	115.88	41.8							19 45	PP
Y.-SAKHLINSK	117.89	333.6							20 3	PP
TASHKENT	120.36	32.8	19	0	9	25	45	-1	20 19	PP
TANANARIVE	120.48	107.7	18	55	4				20 20	PP
IRKUTSK	120.83	2.4	18	59	8				27 17	SKKS
NOUMEA	121.51	248.3							21 16	
FRUNSE	121.89	28.2	18	58	4				30 7	PS
STALINABAD	121.99	35.5	19	0	6				27 40	
QUETTA	126.17	44.4	19	1	-1	26	13	8	21 2	PP
CHANGCHUN	126.89	344.1	19	1	-2				21 2	PP
MATUSIRO	128.02	328.7	19	5A	0				21 14	PP
LAHORE	130.10	37.9	19	2	-7					
RIVERVIEW	131.86	230.3	19	14A	1				21 37	PP
PEKING	132.49	351.2	19	12	-2				21 43	PP
BRISBANE	132.52	239.0	19	17	3				23 19	
NEW DELHI	133.96	38.3							21 55	
MELBOURNE	134.42	222.2							22 50	PP
RABAUL	135.65	271.2	19	6	-14				22 41	PKS
BOMBAY	137.03	52.6	19	36	14				22 58	PP
POONA	138.04	52.2	19	28	4				22 17	
NANKING	139.68	345.3	19	26	-1				23 21	PP
ZO-SE	139.91	341.9	19	25	-2				22 15	PP
CHATRA	140.88	29.8	19	27	-2				24 43	
SHILLONG	144.10	24.8	19	30A	-5					
MADRAS	146.18	54.0	19	45	7					
CANTON	149.54	349.8							22 27	PP
HONG KONG	150.13	347.9	19	57	12				42 31	SS
BAGUIO CITY	153.40	331.4	20	1	12					
MANILA	154.77	328.5	20	2	11				24 4	

APRIL 22 1.H 42.M 18.S EPICENTRE 30.85 84.31 DEPTH= 0.KM

A= 0.08530 B= 0.85582 C= 0.51019 D= 0.9951 E=-0.0992
G= 0.0506 H= 0.5077 K=-0.8601 HT= 1.5

SE= 1.88

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

	DEG.	DEG.	M	S	S	M	S	S	M	S	M	S	
CHATRA	4.72	147.2	0	17	-57						2	31	
NEW DELHI	6.58	251.7	0	59	-42						2	9	
BOKARO	7.11	168.9									2	11	
SHILLONG	8.49	126.4	2	8	1	3	45	0			2	51	PG
FRUNSE	14.30	329.8	3	24	-2						6	31	
NAMANGAN	14.38	318.1									2	36	
STALINABAD	14.90	305.2									2	37	
QUETTA	14.98	271.9	3	33K	-2	6	22	-1			3	44	PP
POONA	15.50	220.1	3	40	-2	6	19	-16					
BOMBAY	15.80	223.8	3	47	1	6	27	-15			7	20	
KARACHI	16.00	256.1	3	49	1	9	1	134					
MADRAS	18.17	193.0	4	16	1	7	46	10			7	58	SS
YINCHUAN	19.57	61.2	4	36	4	5	16	-172					
SIAN	21.01	74.2				8	38	0			5	8	
KODAIKANAL	21.48	198.7				8	48	1					
LINFEN	23.26	69.7									9	30	
TAIYUAN	24.31	65.8									9	41	
TATUNG	25.25	60.6									5	34	
CANTON	26.90	99.6				10	44	23					
PEKING	27.41	61.7	5	48	-1	10	39	10					
HONG KONG	27.97	100.5				10	36	-2					
NANKING	29.38	78.6									11	35	
SVERDLOVSK	30.78	334.4									6	19	
ZO-SE	31.52	79.9	6	26	0						12	14	
KSARA	40.73	287.4	7	50	6	14	3	7					
MOSCOW	41.02	321.2	7	48	1								
SIMFEROPOL	41.39	304.4									7	54	
MATUSIRO	44.73	67.6	8	15	-2								
PULKOVO	45.90	325.3									8	28	
HELSINKI	48.61	325.0	7	51	-56								
SODANKYLA	49.58	334.6	8	55	0								
KRAKOW	50.97	311.6	9	22	17						9	44	
KIRUNA	51.99	334.4	9	14	1								
UPPSALA	52.24	324.1	9	15	0								
SKALSTUGAN	54.90	328.7	9	34	-1								
COPENHAGEN	55.10	319.0	9	36	0								
MESSINA	55.96	297.6	9	43	1	17	32	2					
JENA	56.18	313.3	9	44	0								
HAMBURG	56.76	316.6	9	49	1						9	56	
STUTTGART	58.07	311.1	9	56	-1								
EBINGEN	58.35	310.5	10	2	3								
STRASBOURG	59.04	311.1	10	7A	3								
BESANCON	60.53	310.0	10	14	0						10	36	PCP
LWIRC	62.17	248.6	10	25	-1								
PARIS	62.37	312.4	10	26	-1								
CLERMONT-FD.	62.83	309.0	10	32	2								
KEW	63.36	315.8	10	34	1						10	37	
RATHFARNHAM	66.25	319.0	10	47	-5								
TAMANRASSET	69.47	284.8	11	12	0						13	45	PP
RESOLUTE	74.74	359.8	11	42A	-2								
COLLEGE	76.36	20.3	11	52	-1								
PRETORIA	77.77	230.0	11	58	-3								
PIETERMZBURG	79.03	225.8	12	8	0								
KIMBERLEY	82.02	229.8	11	54A	-29								
BRISBANE	87.53	124.0	12	50	-1						12	54	
EUREKA	107.54	16.3	15	34	777								
WOODY	110.32	20.0	15	13	-201								
CHINA LAKE	110.56	18.9	15	18	-196								
TUCSON	115.63	14.2	15	30	-194								
LA PAZ	151.10	293.3	19	59	10								
HUANCAYO	153.46	310.4	20	6	13								

APRIL 24 19.H 10.M 13.S EPICENTRE 36.37 28.59 DEPTH= 48.KM

DEPTH OF FOCUS= 0.002R

A= 0.70874 B= 0.38621 C= 0.59037 D= 0.4785 E=-0.8781
G= 0.5184 H= 0.2825 K=-0.8071 HT= -0.4

SE= 2.46

	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	4.20	293.8	1	6A	3	2	1	9			2	26	SG
KSARA	6.50	110.9	1	31	-4	2	41	-8					

JERUSALEM	7.16	127.8	1	40K	-5	2	54	-11						
SOFIA	7.51	328.9	1	51	2	3	26	12				2	30	
SKOPJE	7.91	317.3	1	57	2									
BUCHAREST	8.26	347.5	2	0	0	3	43	10				4	23	S*
YALTA	9.14	25.9	2	10	-2	3	51	-4						
CAMPULUNG	9.29	344.3	2	15	1	4	18	20				5	32	SG
FOCSANI	9.38	354.0	2	20	5	4	35	35				5	55	SG
SIMFEROPOL	9.55	24.4	2	15K	-2							4	19	
TARANTO	9.79	298.1	2	26	5	4	22	11						
THEODOSIA	10.06	28.7	2	23K	-2	4	21	4						
BACAU	10.27	353.5	2	27	0	5	41	79				6	18	SG
REGGIO CALA.	10.46	283.4	2	28	-2	4	27	0						
BELGRADE	10.46	326.3	2	32K	2							3	20	PG
MESSINA	10.55	283.9	2	30A	-1	4	27	-2				2	39	PP
KISHINEV	10.65	0.9	2	30	-3							3	33	
IASI	10.85	356.3	2	35A	0	4	58	22				6	49	SG
TIMISOARA	10.89	331.6	2	40	4	5	15	38				2	48	
SZEGED	11.74	329.9	2	50	3	5	7	9				3	4	PP
CERNAUTI-2	12.08	351.5	2	49	-3							3	5	
KALOCSA	12.44	327.7	2	57	0	5	13	-2				3	3	PP
KECSKEMET	12.45	330.6	2	59	2	5	39	24				3	5	PP
UZHGOROD	13.10	341.3	3	9	4							3	44	
BUDAPEST	13.16	330.5	3	5	-1	5	29	-3				3	11	PP
ZAGREB	13.38	318.7	3	9A	0							4	58	
ROME	13.66	298.7	3	12A	-1	5	56	12						
TIFLIS	13.68	62.1	3	12	-1							5	54	
HURBANOVO	13.82	329.5	3	16A	1	5	56	8				3	54	
LWOW	13.86	347.6	3	17	2									
SKALNATE PL.	14.18	337.1	3	21	1	6	6	10				4	14	
GORIS	14.35	72.1	3	22	0							6	21	
BRATISLAVA	14.52	327.9	3	25	1	6	5	1				3	30	
TRIESTE	14.52	314.2	3	24A	0	6	8	4				3	51	
VIENNA-H.	14.90	326.6	3	30	1	6	26	13				3	41	
FLORENCE X.	15.18	304.5	3	33A	0	6	38	18						
BOLOGNA	15.43	307.1	3	37A	1	6	51	26				4	2	
RACIBORZ	15.63	334.5	3	38	0							3	51	PP
WARSAW	15.74	343.7	3	55A	3	7	9	13						
PRAGUE	17.10	327.6	3	57A	0	7	7	3						
PAVIA	17.11	306.9	3	59A	2	7	40	36				7	43	
MONACO	17.76	300.9	4	5A	0	7	22	3				4	25	
CHEB	18.04	324.5	4	9	0	7	27	2				5	52	
OROPA	18.06	307.1	3	55	-14	7	20	-6						
RAVENSBURG	18.07	315.0	4	11A	2	7	27	1				4	29	
ZURICH	18.46	312.7	4	10	-4	7	41	6						
EBINGEN	18.65	315.4	4	15A	-1	7	32	-7				7	48	SS
TUBINGEN	18.78	316.4	4	17A	-1									
STUTTGART	18.84	317.2	4	17A	-1	7	35	-8	4	45		4	27	PP
JENA	18.99	325.3	4	19	-1	7	53	7	4	41		4	29	PP
BASLE	19.13	312.2	4	19	-3	8	1	11				4	22	
NEUCHATEL	19.28	310.1	4	21	-2	8	4	11				9	56	
POTSDAM	19.41	330.4	4	24	-1	8	2	7				8	29	SS
KARLSRUHE	19.41	316.9	4	24	-1	7	56	0	4	49		4	35	PP
STRASBOURG	19.54	315.1	4	25A	-1	8	2	4	4	47		5	2	SP
BESANCON	19.98	310.0	4	28	-3									
MOSCOW	20.32	14.8	4	32	-2	8	14	-1						
ALGIERS UNI.	20.50	278.8	4	34A	-2	8	23	5				4	54	PP
BARCELONA	21.16	291.9	4	42	-1	9	3	32						
CLERMONT-FD.	21.30	304.0	4	44A	0	8	44	11	5	11				
HAMBURG	21.55	328.8	4	45A	-2	8	41	3						
COPENHAGEN	22.23	335.4	4	52	-2	8	52	2						
WITTEVEEN	22.53	323.8	4	56A	-1									
RELIZANE	22.65	276.8	4	55	-3	9	6	8						
PARIS	22.76	311.3	4	57A	-2	9	2	2				5	33	PP
DE BILT	22.84	320.9	4	58A	-2	9	15	14						
ALICANTE	23.15	283.7	5	5	2	9	15	8						
PULKOVO	23.45	2.2	5	6	0	9	13	1				5	45	PP
ASHKABAD	23.73	77.2	5	8	0	9	18	1						
HELSINKI	23.93	355.5	5	10	0	9	26	6						
TAMANRASSET	24.13	242.2	5	14A	2	9	26	2				8	56	PCP
UPPSALA	24.54	346.6	5	15A	-1	9	35	4				9	30	
ALMERIA	24.88	280.4	5	18	-1	9	46	9				5	44	PP
KEW	25.50	315.4	5	24A	-1	9	43	-4				6	30	
JERSEY	25.72	309.5	5	23	-4	10	8	18				5	49	
GRANADA	25.73	281.5	5	27K	0	9	58	7	5	46		6	34	PP
TOLEDO	25.83	287.8	5	28	0	10	19	27						
MALAGA	26.44	280.7	5	34A	0	10	0	-2				6	16	PP
DURHAM	27.69	321.2	6	41	56	10	30	8				9	0	PCP
BERGEN	28.29	335.5	5	49	-2	10	30	-2				11	9	

SKALSTUGAN	29.01	345.0	5	55A	-2					6	51 PP
EDINBURGH	29.04	322.4	5	47	-11	10	30	-14		6	36 PP
ABERDEEN	29.17	325.2	5	54	-5	10	49	3		6	56 PPP
COIMBRA	29.17	288.9	5	57K	-2	11	44	58			
RATHFARNHAM	29.58	316.0	6	9A	7	11	13	20		7	17
SVERDLOVSK	29.63	36.2	6	0	-3					7	14
SODANKYLA	31.07	358.5	6	15	-1	11	16	0		7	10 PP
APATITY	31.35	3.6	6	17A	-1	11	20	-1		7	26 PP
STALINABAD	31.80	73.8	6	21	-1	11	28	0			
KIRUNA	31.85	354.1	6	21A	-1	11	27	-1		7	4
QUETTA	32.51	89.7	6	27K	-1	11	35	-4		9	13 PCP
KARACHI	34.36	96.8	6	48	4	12	23	16			
FRUNSE	35.66	65.1	6	53K	-2	12	32	4		15	17 SSS
LAHORE	37.97	83.6	7	12	-3	12	56	-7			
LWIRO	38.42	179.7	6	21K	-57						
LOME	39.17	226.4	7	28	3	13	36	15		8	58 PP
VIK	39.46	328.5								16	27
AKUREYRI	39.94	332.0	7	53	22	13	39	6		17	8
REYKJAVIK	40.90	328.9	7	39K	0						
NEW DELHI	41.38	86.5	7	38	-5	13	45	-9		9	16 PP
DEHRA DUN	41.40	83.6	10	30	167	16	35	161		12	1 PP
BOMBAY	42.47	102.0	7	55	3	14	13	3		9	42 PP
SCORESBY SD.	43.24	337.7	7	58	0	14	22	1		17	36 SS
POONA	43.49	101.7	8	0	0	14	23	-2		9	38 PP
ANGRA DO HO.	43.76	290.5	7	54	-8	14	31	2			
MBOUR	46.10	253.8	8	21	0	15	11	9	8 45	10	17 PP
HYDERABAD	47.74	99.6	8	31	-3	15	20	-6		10	28 PP
CHATRA	50.13	83.5	8	50	-2	15	50	-9			
BOKARO	50.40	87.7	8	54K	0	15	59	-4	10 10	10	41 PP
KODAIKANAL	51.20	107.9	9	3	3	16	16	2		11	0 PP
MADRAS	51.63	103.1	9	4	0	16	28	8		11	5 PP
YUMEN	52.61	63.5	9	11	0						
IRKUTSK	53.99	47.4	9	19K	-2					19	8 SCS
SHILLONG	54.47	82.5	9	22K	-3	16	52	-6		11	22 PP
COLOMBO	55.13	109.2	9	25	-5	17	7	0			
CHANGYEH	55.66	63.9	9	34	1						
SINING	57.43	66.1	9	46	0						
WUWEI	57.54	64.3	9	47	0						
TANANARIVE	57.84	158.7	9	50A	1	17	53	10		12	5 PP
TIKSI	59.05	21.3	9	56	-1					12	4 PP
LANCHOW	59.15	65.8	9	58	0						
YINCHUAN	59.94	62.4	10	5	2						
TIENSHUI	61.22	66.6	10	12	0						
PAOTOW	61.70	58.8	10	14	-1						
PRETORIA	61.78	180.4	10	16K	0						
PORT BLAIR	62.38	95.8	10	35	15					18	56
RESOLUTE	63.21	345.6	10	23A	-2	18	47	-5		12	36 PP
SIAN	63.70	65.6	10	29	0	19	1	3			
SCHEFFERVLLE	63.99	320.1	11	55A	85						
TATUNG	64.15	58.1	10	34	2						
TAIYUAN	64.72	60.6	10	35	0						
LINFEN	64.74	62.7	10	37	2						
KIMBERLEY	64.87	183.7	10	37A	1					10	53
PIETERMZBURG	65.66	178.3	10	14	-27						
PEKING	66.15	57.0	10	43K	-1	19	27	-1		13	10 PP
HALIFAX	66.97	309.2	10	48A	-2	19	35	-3		10	55 PCP
GRAHAMSTOWN	69.35	181.8	11	6	2						
SUIHWA	69.73	46.6	11	5	-2						
SEVEN FALLS	70.06	314.2	11	6	-3	20	11	-3	11 29	20	41 SCS
CHANGCHUN	70.18	49.8	11	8	-1	20	15	-1			
DAIREN	70.38	55.8	11	9	-2						
HERMANUS	70.96	188.2				20	37	12		14	14 PP
SHAWINIGAN	71.49	314.5	11	14A	-3						
NANKING	71.99	63.2	11	19	-1	20	35	-2		15	46 PPP
CANTON	72.61	73.9	11	25K	1	20	46	2			
WESTON	72.93	310.2	11	25A	-1	20	49	1		21	47 PPS
MAGADAN	73.21	26.8	11	29	1	20	55	4			
HONG KONG	73.72	74.1	11	30K	-1	20	57	1		16	12 PPP
OTTAWA	73.83	314.7	11	31A	0	21	1	3	11 55	26	39 SS
BERMUDA	74.00	298.5	11	34	2	21	5	6		16	21 PPP
ZO-SE	74.21	62.9	11	33K	0	21	1	-1			
VLADIVOSTOK	74.57	47.7	11	33	-2	21	4	-2		11	49 PCP
KIRKLAND LA.	74.59	318.8	11	35A	-1	21	24	18		11	41
PALISADES	75.30	310.2	11	40A	0	21	13	-1	11 47	14	33 PP
FORDHAM	75.38	310.0	11	39	-1	21	18	3			
PHILADELPHIA	76.70	309.9	11	56	8	21	32	3			
TAIPEI	77.82	67.9	12	2	8	21	44	3			
PENNSYLVANIA	77.84	311.9	11	53	-1	21	44	2			
Y.-SAKHLINSK	78.23	39.7	11	55	-1	21	45	-1			

HWALIEN	78.50	68.8	12	5	7	21	54	5				
WASHINGTON	78.51	309.9	11	59A	1	21	56	7				
TOMIE	78.68	57.9	11	57	-2	21	42	-9				
WAKKANAI	78.69	41.4	12	24	25						21	58
HSINKONG	78.80	69.6	12	0	1	21	54	2				
HENGCHUN	78.95	70.9	12	12	12	21	59	6				
COLLEGE	79.06	358.4	11	58A	-3	21	53	-2			14	59 PP
HUKUOKA	79.23	56.3	12	1	-1	21	57	1				
SAGA	79.35	56.6	12	9	7	22	4	6				
SIMONOSEKI	79.35	55.7				22	1	3				
HAMADA	79.54	54.4	11	54	-9	21	58	-2				
CLEVELAND	79.57	314.2	12	2	-1	22	0	0				
KUMAMOTO	79.87	56.8	12	5	0	22	7	4				
SAPPORO	80.05	43.3	12	5	-1	22	6	1	12	31	15	31 PP
YONAGO	80.05	53.3									21	8
HIROSIMA	80.10	54.6	12	7	1	22	4	-1			15	16 PP
MORI	80.24	44.4	12	8	1	22	7	0			13	7
OOITA	80.24	56.0	12	7	0	22	7	0				
MURORAN	80.32	44.1	12	7	0							
KAGOSIMA	80.52	57.8	12	10	2	22	3	-7				
TOMAKOMAI	80.53	43.6	12	15	6	22	16	6				
HAKODATE	80.54	44.6	12	10	1	22	15	5				
MATUYAMA	80.63	54.9	12	7	-2	22	8	-3			27	20 SS
MIYAZAKI	80.90	57.1	12	9	-1	22	16	2				
PETROPAVLOVK	80.90	27.8	12	10	0	22	14	0			15	11 PP
TOYOOKA	80.94	52.5	12	11	0	22	17	3				
WAZIMA	81.09	50.0	12	13	2	22	17	1				
OBIHIRO	81.16	42.5	12	22	10							
TAKAMATU	81.19	53.8	12	11	-1	22	16	-1				
AOMORI	81.20	45.3	12	15	3	22	21	4				
FORT FRANCE	81.21	281.8	12	13	1	22	17	0				
KOTI	81.32	54.7	12	4	-9	22	17	-1			27	26 SS
SIMIDU	81.42	55.6	12	13	0	22	17	-2				
URAKAWA	81.45	43.3	12	11	-2	22	21	2			27	7
KANAZAWA	81.47	50.7				22	23	3				
ST. LUCIA	81.50	281.1	12	13	-1							
AKITA	81.52	46.5	12	14	0	22	21	1				
TOKUSIMA	81.69	53.8	12	14	-1	22	18	-4				
KOBE	81.70	53.0	12	17	2	22	25	3				
TOYAMA	81.71	50.3	12	30	15	22	25	3				
SUMOTO	81.71	53.4	12	6	-9	22	24	2				
KUSIRO	81.77	41.9	12	15	0	22	27	4				
KYOTO	81.84	52.4	12	15	0	22	22	-1				
SAKATA	81.89	47.3	12	29	13	22	29	5				
OSAKA	81.94	52.8	12	19	3	22	25	0			16	57
HIKONE	82.01	51.9	12	15	-1	22	25	0				
NIIGATA	82.06	48.4	12	33	17	22	33	7				
NEMURO	82.16	41.0	12	17	0	22	30	3				
ST. VINCENT	82.21	280.5	12	17	0							
GIHU	82.26	51.6	12	8	-9	22	27	-1				
NAGANO	82.34	49.8	12	22	4	22	30	1				
KAMEYAMA	82.42	52.2	12	19	1	22	30	1			12	58
MATUSIRO	82.43	49.9	12	19K	1	22	31	1			27	51 SS
MATUMOTO	82.47	50.3	12	21	2	22	32	2				
MIZUSAWA	82.51	46.4	12	19	0	22	32	2			12	27
TU	82.52	52.2				22	32	2				
NAGOYA	82.53	51.6	12	25	6	22	31	0				
YAMAGATA	82.63	47.5	12	19	0	22	31	0				
OIWAKE	82.78	49.9	12	26	6	22	37	4				
CHICAGO CGS.	82.79	317.4				22	29	-4				
SIOMISAKI	82.85	53.6				22	37	3				
IIDA	82.85	50.9	12	35	14	22	36	2				
SENDAI	82.94	47.2	12	21	0	22	32	-3			12	49
SAN JUAN	82.99	287.5	12	22A	1	22	40	5			15	36 PP
HUKUSIMA	83.02	47.8	12	20	-1	22	28	-8				
MAEBASI	83.05	49.6	12	22	0	22	39	3			15	40 PP
KOHU	83.24	50.4	12	23	0	22	42	4				
SHIRAKAWA	83.29	48.4	12	24	1							
TITIBU	83.33	49.9	12	24	1	22	39	0				
MANILA	83.39	76.9	12	26	3	22	46	7				
KUMAGAYA	83.41	49.6	12	30	7	22	41	2				
UTUNOMIYA	83.45	49.0	12	24	0	22	40	0			23	12
HUNATU	83.45	50.4	12	24	0	22	39	-1				
SHIZUOKA	83.56	51.0	12	26	2	22	41	0				
OMAESAKI	83.68	51.4	12	27	2	22	45	3				
TUKUBASAN	83.80	49.2	12	24	-1	22	40	-3			15	36 PP
MISIMA	83.81	50.6	12	25	0	22	41	-2			15	39 PP
ONAHAMA	83.81	48.2	12	47	22	22	45	2			15	43 PP

KAKIOKA	83.84	49.1	12	27	1	22	43	-1				
TRINIDAD	83.85	278.7	12	28	2							
MITO	83.92	48.9				22	44	0				
TOKYO C.M.O.	83.94	49.8	12	30	4	22	42	-3				
YOKOHAMA	84.04	50.0	12	27	0	22	33	-13			15	39 PP
COLUMBIA	84.06	308.1	12	26A	-1	22	43	-3			23	18 SCS
DJAKARTA	84.24	101.9	12	26	-2	22	49	1				
OSIMA	84.30	50.7	12	27	-1	22	51	3				
MERA	84.49	50.3	12	29	0	22	56	6				
SITKA	85.95	351.3	12	35K	-1	22	55	-9			23	42 SCS
FLORISSANT	86.38	316.8	12	39A	1	22	59	-10				
ST. LOUIS 1	86.42	316.6	12	38A	0	23	13	4			22	57 SKS
RAPID CITY	88.76	327.5	12	49K	-1	23	13	-18				
HUNGRY HORSE	89.31	336.1	12	52A	0	23	37	1			23	16 SKS
FAYETTEVILLE	90.44	317.1	12	52A	-6	23	13	-33	12	59	23	49 SCS
BOZEMAN	90.59	333.0	12	59K	1	23	54	6				
BUTTE	90.84	334.1	12	58K	-1	23	52	2			16	26 PP
HORSESHOE B.	91.05	342.0	12	58A	-2	23	28	-24				
VICTORIA	91.88	341.8	13	3A	-1	23	32	-27			13	10
SEATTLE	92.40	340.8	13	14A	7	23	31	-32			23	39
BOULDER	92.95	326.3									13	8
GALERAZAMBA	94.60	286.8				24	34	12			23	53 SKS
SALT LAKE C.	95.08	330.9	13	17K	-2	23	52	-35				
CORVALLIS	95.50	340.2	13	21K	0							
LUBBOCK	96.43	320.3	13	25	0	23	59	-39	13	32		
BOGOTA	97.41	281.3	13	35	6	23	56	-50				
EUREKA	97.76	333.1	13	30A	-1						38	22 PKPPKP
CHINCHINA	98.43	282.5				24	9	-46				
MERIDA	98.44	303.6				24	37	-18			16	0
SHASTA	98.81	338.1	13	35A	-1							
MINERAL	98.89	337.4	13	35A	-1							
BALBOA HTS.	99.03	288.1				24	9	-51				
RENO	99.05	335.8	13	37	0							
BOULDER CITY	100.39	330.6	13	43A	0							
UKIAH	100.50	338.1									17	56 PP
TINEMAHA	100.73	333.5	13	45	1						30	32 PKKP
BERKELEY	101.36	336.8				24	26	-53			17	55 PP
FRESNO	101.54	334.6	13	47	-1							
CHINA LAKE	101.60	332.5	13	49	1						29	57 PKKP
LICK	101.64	336.2									18	2 PP
SANTA CLARA	101.74	336.4	18	5A	256						18	37
TUCSON	101.88	325.7	13	50	0						17	59 PP
WOODY	102.17	333.4	13	50	-1						17	46 PP
CHIHUAHUA	102.56	320.2				25	15	-14			16	3
RIVERSIDE	103.13	331.5	14	1	6						18	11 PP
PASADENA	103.29	332.2	13	56	0	24	33	-63			18	14 PP
PALOMAR	103.50	330.8	13	52	-5						18	15 PP
VERA CRUZ	103.97	306.8				24	42	-59			24	59
BARRETT	104.01	330.3	13	58	-1	24	40	-62			18	24 PP
LA PAZ	104.90	260.4	13	57	-6	24	43	-66			18	19 PP
TACUBAYA	105.78	309.2				25	57	0			15	36
PERTH	106.13	117.9									18	43
HUANCAYO	108.20	268.3	14	21	777						19	7 PP
RABAUL	119.22	72.2	18	44	0						20	9 PP
MELBOURNE	130.13	111.9	19	6	1						21	22 PP
BRISBANE	132.57	95.8	19	11	2						22	38 PP
RIVERVIEW	133.53	104.6	19	18A	7	26	21	6			21	45 PP
SCOTT BASE	134.78	168.5	19	16	2						21	51 PP
SUVA	147.82	63.8	19	50	13						20	41
KAIMATA	150.81	113.7	19	57	16						20	19
CHRISTCHURCH	151.68	115.8	19	51	9						33	47
GEBBIES PASS	151.69	116.1	19	53	11							
COBB RIVER	151.76	110.6	19	52	9							
ONERAHI	152.42	99.0	19	55	11						20	21
WELLINGTON	153.31	111.0	19	51	6						20	9

APRIL 25 2.H 25.M 42.S EPICENTRE 36.47 28.56 DEPTH= 53.KM

DEPTH OF FOCUS= 0.003R

A= 0.70798 B= 0.38533 C= 0.59185 D= 0.4780 E=-0.8783
G= 0.5198 H= 0.2829 K=-0.8060 HT= -0.4

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

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ATHENS	4.14	292.6	1	6	4	2	1	11			1	15	P*
KSARA	6.56	111.7	1	30	-6	2	40	-11					
JERUSALEM	7.24	128.4	1	29K	-17	2	43	-24					
SOFIA	7.41	328.6	1	51	3	3	15	3			3	37	
SKOPJE	7.81	316.9	1	56	2								
BUCHAREST	8.16	347.5	1	59K	1	3	39	9					
YALTA	9.06	26.3	2	9	-2	3	51	-2					
CAMPULUNG	9.18	344.2	2	13	0	4	14	18			5	26	SG
FOCSANI	9.28	354.1	2	13	-1	4	34	36					
SIMFEROPOL	9.46	24.8	2	15	-1								
TARANTO	9.72	297.6	2	14	-6	3	54	-15					
THEODOSIA	9.98	29.1	2	22	-1	4	14	-1					
BACAU	10.16	353.5	2	16	-10	4	25	5			6	0	SG
BELGRADE	10.36	326.1	2	29K	0	4	38	14			3	59	PGSG
REGGIO CALA.	10.41	282.8	2	28	-1	4	25	-1					
MESSINA	10.50	283.3	2	29A	-2	4	27	-1					
KISHINEV	10.54	1.0	2	30	-1	4	32	3			4	14	
IASI	10.74	356.4	2	32	-2	4	54	20			5	45	
TIMISOARA	10.79	331.5	2	37	3	4	41	6			5	14	S*
SOTCHI	11.11	46.9	2	36	-3						4	56	
SZEGED	11.63	329.7	2	50	4	5	5	10			3	5	PPP
CERNAUTI-2	11.98	351.5	2	48	-2						4	48	
KALOCSA	12.34	327.5	2	58	3	5	22	10			3	12	PP
KECSKEMET	12.35	330.4	2	58	3						3	14	PPP
UZHGOROD	12.99	341.2	3	6	2	5	31	3			3	16	
BUDAPEST	13.06	330.3	3	7	2	5	25	-4			3	14	PPP
ZAGREB	13.29	318.5	3	10A	2						6	38	
ROME	13.59	298.4	3	12A	0	5	56	14	3	29			
TIFLIS	13.65	62.5	3	12	-1	5	48	4			3	25	
HURBANOVO	13.72	329.3	3	16A	2	5	53	8			4	40	
LWOW	13.75	347.6	3	14	0	5	47	1			6	1	
SKALNATE PL.	14.07	337.1	3	22	4	6	3	9					
GORIS	14.34	72.5	3	21	-1								
BRATISLAVA	14.42	327.7	3	23A	0	6	0	-2			6	15	
TRIESTE	14.43	314.0	3	23A	0	6	8	6			4	12	
VIENNA-H.	14.80	326.5	3	29	1	6	22	11			3	44	
KRAKOW	14.94	338.0	3	30A	1	6	18	4					
FLORENCE X.	15.10	304.2	3	32A	0	7	36	78	3	50			
PRATO	15.24	304.4	3	36	3	7	33	72					
BOLOGNA	15.35	306.8	3	37	2	6	40	17			5	14	
RACIBORZ	15.53	334.4	3	38A	1						6	48	SS
WARSAW	16.63	343.6	3	54K	3	7	11	18					
PRAGUE	17.00	327.5	3	55A	-1	7	2	0					
PAVIA	17.03	306.7	3	58A	2	7	40	38			10	20	
MONACO	17.69	300.7	4	4A	0	7	26	9			7	47	SS
CHEB	17.94	324.3	4	8	1	7	27	4					
RAVENSBURG	17.98	314.8	4	9A	1	7	30	7			4	27	
OROPA	17.98	306.9	3	59	-9	7	27	4					
ZURICH	18.37	312.5	4	11	-1	7	36	4			11	9	
EBINGEN	18.56	315.2	4	14A	-1	7	41	5			7	57	SS
TUBINGEN	18.69	316.2	4	16A	0								
STUTTGART	18.75	317.0	4	16A	-1	7	44	3					
JENA	18.89	325.2	4	20	1	7	51	7			4	31	PP
BASLE	19.05	312.0	4	19A	-1	7	54	7					
NEUCHATEL	19.19	309.9	4	21	-1	8	0	10					
POTSDAM	19.30	330.3	4	23	0	7	57	4			4	33	PP
KARLSRUHE	19.32	316.7	4	23A	0	7	57	4			4	38	PP
STRASBOURG	19.45	314.9	4	25A	0	8	0	4	4	44	8	32	SS
BESANCON	19.90	309.8	4	28	-2								
MOSCOW	20.23	14.9	4	32	-1						8	17	
ALGIERS UNI.	20.46	278.5	4	34A	-2	8	24	7			8	46	PCP
BENSBERG	21.07	320.1	4	41	-1								
BARCELONA	21.10	291.6	4	41	-1	8	56	27			5	5	PP
CLERMONT-FD.	21.22	303.8	4	43A	0	8	43	12	5	10			
HAMBURG	21.45	328.7	4	45A	-1	8	39	4					
COPENHAGEN	22.12	335.3	4	50	-2	8	48	0					
WITTEVEEN	22.43	323.6	4	55	0								
RELIZANE	22.61	276.5	4	56A	-1	9	0	3					
PARIS	22.67	311.1	4	57A	-1	9	0	2			5	22	PP
DE BILT	22.75	320.7	4	58A	0	9	7	8					
ALICANTE	23.10	283.4	5	0	-2								
PULKOVO	23.34	2.3	5	6	2	9	14	5			8	56	PCP
ASHKABAD	23.73	77.4	5	6	-2	9	15	-1					
HELSINKI	23.83	355.6	5	10	1	9	20	2					
TAMANRASSET	24.16	242.0	5	14A	2	9	21	-3					
UPPSALA	24.44	346.6	5	14A	-1	9	29	1			5	32	
ALMERIA	24.84	280.2	5	18	-1	9	47	12			5	52	PP
KEW	25.41	315.3	5	23A	-1	9	46	1	5	41	6	1	PP

JERSEY	25.63	309.3	5	24	-2	9	59	11		5	55 PP
GRANADA	25.69	281.3	5	34K	7	9	53	4	6 8	6	25 PP
TOLEDO	25.78	287.5	5	27	-1	9	54	3			
MALAGA	26.39	280.5	5	34A	1						
DURHAM	27.59	321.1	5	40	-4	10	29	9		8	59
BERGEN	28.19	335.5	5	48A	-2	10	29	-1		11	25
SKALSTUGAN	28.90	345.0	5	54A	-2						
EDINBURGH	28.95	322.3	5	49	-7	10	32	-10		6	38 PP
ABERDEEN	29.07	325.1	5	54	-4	10	55	11		7	0 PPP
COIMBRA	29.11	288.7	5	57K	-1	10	49	4		6	52 PP
RATHFARNHAM	29.49	315.8	5	57A	-4	10	53	2	6 17	9	1
SVERDLOVSK	29.56	36.3	6	0	-2	10	50	-2		7	1 PP
SODANKYLA	30.96	358.5	6	14	0	10	42	-32		7	28 PPP
APATITY	31.25	3.6	6	17A	0	11	20	2		9	4 PCP
KIRUNA	31.74	354.1	6	20A	-1	11	22	-4		10	35
STALINABAD	31.79	73.9	6	21	-1	11	28	1			
QUETTA	32.53	89.8	6	25A	-3	11	35	-3		7	32 PP
KARACHI	34.40	96.9	6	46	2						
FRUNSE	35.64	65.2	6	54A	-1	12	23	-4		8	29 PPP
LAHORE	37.99	83.7	7	12	-2	12	57	-5			
LWIRO	38.52	179.6	7	20K	1	13	14	3			
LOME	39.22	226.2	7	25	0	13	20	-1		8	59 PP
VIK	39.36	328.4	7	24	-2	13	45	22		16	18
AKUREYRI	39.84	331.9				13	18	-12		8	3
REYKJAVIK	40.80	328.8	7	38A	0					9	31 PP
NEW DELHI	41.40	86.6	7	41	-2	13	51	-3		9	17 PP
BOMBAY	42.52	102.1	7	53	1	14	7	-3		9	43 PP
SCORESBY SD.	43.14	337.7	7	57	0	14	20	1		9	53 PPP
POONA	43.53	101.8	8	0A	0	14	24	-1		9	45 PP
ANGRA DO HO.	43.70	290.4	8	3	1	14	44	17			
HYDERABAD	47.78	99.6	8	32	-2	15	20	-6		10	37 PP
CHATRA	50.15	83.5	8	50	-2	15	56	-3			
BOKARO	50.42	87.7	8	52	-2	15	59	-3		10	41 PP
KODAIKANAL	51.25	108.0	9	3	2	16	15	1		10	18 PCP
MADRAS	51.68	103.1	9	4	0	16	20	0		10	5 PCP
YUMEN	52.58	63.6	9	12	1						
IRKUTSK	53.93	47.5	9	18K	-3					19	1 SCS
SHILLONG	54.48	82.5	9	22	-2	16	53	-5	10 0	11	28 PP
COLOMBO	55.19	109.3	9	26	-4					16	6
CHANGYEH	55.64	64.0	9	35	2						
SINING	57.40	66.1	9	47	1						
WUWEI	57.51	64.4	9	45	-1						
TANANARIVE	57.94	158.7	9	49	0	17	49	5		11	55 PP
TIKSI	58.97	21.4	9	55	-1					19	36 SCS
LANCHOW	59.13	65.9	9	57	-1						
YINCHUAN	59.91	62.4	10	4	1						
TIENSHUI	61.20	66.7	10	13	1						
PRETORIA	61.89	180.4	10	15A	-1					10	31
PORT BLAIR	62.41	95.9	10	41	21					19	3
RESOLUTE	63.10	345.6	10	22A	-2	18	34	-16		23	32 SS
SCHEFFERVLLE	63.89	320.1	8	42A	-108						
TATUNG	64.11	58.1	10	33	2						
TAIYUAN	64.69	60.7	10	33	-2						
LINFEN	64.71	62.7	10	34	-1						
KIMBERLEY	64.97	183.7	10	37A	0					10	53
KWANTING	65.63	57.1	10	40	-1						
PIETERMZBURG	65.77	178.2	10	43K	1						
PEKING	66.11	57.0	10	43K	-1	19	27	0		11	14 PCP
HALIFAX	66.88	309.1	10	42A	-7	19	34	-2		23	40 SS
GRAHAMSTOWN	69.46	181.8	11	5A	0					11	23
SUIHWA	69.68	46.6	11	6	0						
SEVEN FALLS	69.97	314.2	11	6	-2	20	11	-2	11 26	13	39 PP
CHANGCHUN	70.13	49.8	11	9	0	20	15	0		11	24 PCP
FUTZELING	70.54	65.1	11	11	0						
HERMANUS	71.06	188.1				20	30	5		24	59 SS
SHAWINIGAN	71.40	314.4	11	16A	0	20	29	0	11 33		
NANKING	71.96	63.3	11	19	-1	20	35	-1		11	37 PCP
BREBEUF	72.47	313.9	11	22A	-1						
CANTON	72.60	73.9	11	24K	0	20	46	3		21	2
WESTON	72.84	310.2	11	25A	0	20	49	3		21	28 SCS
MAGADAN	73.12	26.8	11	28	1	20	53	4		14	13 PP
HONG KONG	73.72	74.2	11	30	0	20	57	1		16	16 PPP
OTTAWA	73.74	314.7	11	30A	0	21	0	4	11 50	21	40 SCS
BERMUDA	73.92	298.5	11	31A	0					15	37 PP
ZO-SE	74.18	63.0	11	32K	-1	20	59	-2		11	52 PCP
KIRKLAND LA.	74.50	318.8	11	34A	-1	21	7	3			
VLADIVOSTOK	74.52	47.7	11	33	-2	21	3	-2		14	19 PP
PALISADES	75.22	310.2	11	37A	-2	21	16	4	11 47	14	24 PP

FORDHAM	75.29	310.0	11	39	0	21	16	3		
PHILADELPHIA	76.62	309.9	11	48	1	21	30	2		
PENNSYLVANIA	77.75	311.8	11	51	-2	21	44	4		.. PP
TAIPE'	77.81	68.0	11	59	6	21	41	1		
ILAN	78.12	68.0	12	4	9	22	0	16		
Y.-SAKHLINSK	78.16	39.7	11	56	1	21	47	3		
WASHINGTON	78.42	309.9	11	58A	1	21	54	7	14	46
HWALIEN	78.48	68.8	12	6	9	21	52	4		
WAKKANAI	78.63	41.4	11	59	1	21	54	5		
TOMIE	78.64	57.9	11	56	-2	21	49	0		
HSINKONG	78.79	69.6	12	2	3	21	56	5		
TAWU	78.86	70.5	12	5	6	21	55	3		
HENGCHUN	78.94	70.9	11	53	-7	21	40	-13		
COLLEGE	78.95	358.4	11	58A	-2	21	54	1	16	49 PP
HUKUOKA	79.19	56.3	12	2	1	21	52	-3		
SAGA	79.31	56.6	12	28	26				13	18
CLEVELAND	79.48	314.1	12	2	-1	22	3	5		
HAMADA	79.50	54.4				21	48	-10		
KUMAMOTO	79.83	56.8				22	4	2		
SAPPORO	79.99	43.3	12	5	0	22	3	-1	14	46
YONAGO	80.01	53.3				22	6	2		
ASOSAN	80.04	56.5	12	11	5					
HIROSIMA	80.05	54.6	12	4	-2	22	5	1		
ASAHIGAWA	80.08	42.3	12	4	-2					
MORI	80.18	44.4	12	10	4	22	7	1	2	55
OOITA	80.21	56.0	12	8	2	22	7	1		
MURORAN	80.26	44.1	12	7	0					
TOMAKOMAI	80.48	43.6	12	13	5	22	32	23		
HAKODATE	80.48	44.6	12	5	-3	22	9	0		
KAGOSIMA	80.48	57.8	12	7	-1	22	12	3	14	3
MATUYAMA	80.59	54.9	12	9	1	22	8	-2		
PETROPAVLOVK	80.82	27.8	12	8	-2	22	10	-2	15	8 PP
MIYAZAKI	80.86	57.1	12	9	-1	22	12	-1		
BARBADOS	80.87	279.5	12	13	3					
TOYOOKA	80.89	52.5	12	10	0	22	14	1		
WAZIMA	81.04	49.9	12	5	-6	22	1	-14		
OBIHIRO	81.10	42.5	12	20	9					
AOMORI	81.14	45.3	12	11	0	22	22	6		
TAKAMATU	81.14	53.8	12	11	0	22	16	0		
FORT FRANCE	81.17	281.7	12	12	1	22	19	3		
KOTI	81.28	54.7	12	14	2	22	15	-2	15	15 PP
SIMIDU	81.38	55.6	12	10	-3	22	10	-8		
URAKAWA	81.39	43.3	12	13	0	22	21	3	27	22
ST. LUCIA	81.45	281.1	12	13A	0					
AKITA	81.46	46.5	12	13	0	22	22	3		
TOKUSIMA	81.64	53.7	12	16	2	22	16	-5		
KOBE	81.65	53.0	12	8	-6	22	20	-1		
TOYAMA	81.66	50.3	12	13	-1	22	26	5		
SUMOTO	81.66	53.4	12	12	-2	22	22	1		
KUSIRO	81.71	41.9	12	15	1	22	23	2		
HATINOHE	81.76	45.2	12	15	0	22	21	-1		
KYOTO	81.79	52.4	12	14	-1	22	22	0		
OSAKA	81.90	52.8	12	13	-2	22	25	2	12	46
HIKONE	81.97	51.9	12	16	0	22	26	2		
IBUKISAN	81.98	51.8	12	16	0					
NIIGATA	82.01	48.4	12	36	20	22	28	4		
BAGUIO CITY	82.01	75.6	12	15	-1	22	22	-3		
NEMURO	82.10	41.0	12	17	1	22	25	0		
MORIOKA	82.10	46.0	12	18	2	22	25	0		
ST. VINCENT	82.16	280.5	12	17A	0					
GIHU	82.21	51.6	12	18	1	22	27	0		
NAGANO	82.29	49.8	12	20	3	22	33	6		
KAMEYAMA	82.37	52.1	12	19	1	22	28	0		
MATUSIRO	82.38	49.9	12	18K	0	22	30	2		
MATUMOTO	82.42	50.3	12	17	-1	22	27	-2		
MIZUSAWA	82.45	46.4	12	18	0	22	27	-2		
TU	82.48	52.2				22	35	6		
NAGOYA	82.48	51.6	12	24	6	22	30	1	13	4
YAMAGATA	82.57	47.5	12	20	1	22	30	0		
MIYAKO	82.60	45.6	12	21	2	22	26	-4		
OWASE	82.69	52.9	12	25	6	22	33	2		
CHICAGO CGS.	82.70	317.4	12	17	-2	22	25	-6	23	25
OIWAKE	82.73	49.9	12	20	0	22	36	4		
IIDA	82.80	50.9	12	22	2	22	35	3		
SENDAI	82.88	47.2	12	20	0	22	33	0		
SAN JUAN	82.93	287.5	12	21A	0	22	30	-4	15	22 PP
HUKUSIMA	82.97	47.8	12	23	2	22	35	1		
MAEBASI	83.00	49.6	12	21	0	22	34	-1	15	41 PP
KOHU	83.19	50.4	12	23	1				22	58

SHIRAKAWA	83.23	48.4	12	23	1	22	26	-11		13 27
TITIBU	83.28	49.9	12	24	2	22	38	1		
KUMAGAYA	83.36	49.6	12	26	3	22	40	2		
MANILA	83.39	76.9	12	26	3	22	36	-2		
UTUNOMIYA	83.40	49.0	12	25	2	22	36	-2		14 33
HUNATU	83.40	50.4	12	24	1	22	40	1		
SASKATOON	83.48	334.1				22	37	-2		
SHIZUOKA	83.51	51.0	12	26	2	22	43	3		
OMAESAKI	83.64	51.4	12	30	6	22	43	2		
TUKUBASAN	83.75	49.2	12	24	-1	22	38	-4		15 37 PP
ONAHAMA	83.76	48.2	12	25	0	22	42	0		23 15
MISIMA	83.76	50.6	12	24	-1	22	41	-1		
KAKIOKA	83.79	49.1	12	26	1	22	42	0		
TRINIDAD	83.81	278.6	12	27	2					
TOKYO C.M.O.	83.89	49.8	12	28	3	22	38	-5		13 23
COLUMBIA	83.98	308.1	12	26A	0	22	41	-3		23 19 SCS
YOKOHAMA	83.99	50.0	12	27	1	22	46	2		
OSIMA	84.25	50.7	12	27	0	22	52	5		
DJAKARTA	84.28	101.9	12	25A	-2	22	44	-3		
MERA	84.44	50.3	12	29	1	22	53	4		
SITKA	85.84	351.2	12	36	1	22	54	-9		15 56 PP
FLORISSANT	86.29	316.7	12	37A	0	23	6	-1		22 56 SKS
ST. LOUIS 1	86.33	316.5	12	37A	0	23	7	0		22 56 SKS
BANFF	87.20	338.3	12	41A	-1					
RAPID CITY	88.66	327.5	12	47K	-2	23	9	-20		24 54 PPS
HUNGRY HORSE	89.21	336.1	12	51A	0	23	33	-1		23 13 SKS
FAYETTEVILLE	90.35	317.1	12	56A	-1	23	23	-22	13 8	23 46 SCS
BOZEMAN	90.49	333.0	12	22K	-35	23	25	-21		
BUTTE	90.73	334.1	12	58	-1	23	45	-3		16 36 PP
HORSESHOE B.	90.94	342.0	12	57A	-2	23	23	-27		13 29
VICTORIA	91.78	341.8	13	3A	0	23	31	-26		13 22
SEATTLE	92.29	340.8	13	6A	0	23	37	-25		23 51
GALERAZAMBA	94.54	287.1	13	26	12	23	52	-26		31 25 SS
SALT LAKE C.	94.98	330.9	13	17A	-1	23	48	-37		26 0 PS
CORVALLIS	95.39	340.2	13	21K	1	23	51	-37		
LUBBOCK	96.34	320.2	13	24	0	23	59	-37		
BOGOTA	97.37	281.2	13	28	-1	23	58	-47		
EUREKA	97.66	333.1	13	30A	0					31 4 PKKP
MERIDA	98.36	303.6				24	9	-44		17 33
CHINCHINA	98.38	282.5	13	33	0	24	9	-45		
SHASTA	98.70	338.1	13	34A	-1					
MINERAL	98.78	337.4	13	35A	0					13 54
RENO	98.94	335.8	13	37	1	24	12	-46		
BALBOA HTS.	98.98	288.1	13	36	0	24	8	-51		
BOULDER CITY	100.29	330.6	13	42A	0					17 47 PP
UKIAH	100.39	338.0	13	44K	1					17 52 PP
TINEMAHA	100.62	333.5	13	44	0					17 48 PP
BERKELEY	101.25	336.8	13	40	-6	24	21	-57		17 49 PP
FRESNO	101.44	334.5	13	47	0	24	22	-57		17 59 PP
CHINA LAKE	101.49	332.5	13	48A	1					29 57 PKKP
LICK	101.54	336.2	13	48A	0					17 34 PP
SANTA CLARA	101.63	336.4	18	0	252					32 0
TUCSON	101.78	325.7	13	48A	-1	24	24	-58		17 57 PP
WOODY	102.06	333.4	13	50A	0					17 56 PP
CHIHUAHUA	102.46	320.2								14 46
KING RANCH	102.71	333.9	13	53	0					
RIVERSIDE	103.03	331.5	13	54	0	24	31	-62		18 7 PP
PASADENA	103.19	332.1	13	55	0	24	32	-62		18 14 PP
PALOMAR	103.39	330.8	13	56A	0					18 15 PP
VERA CRUZ	103.89	306.8	14	2	4	24	38	-62		25 8 SKKS
BARRETT	103.91	330.3	13	57	-1	24	37	-63		18 11 PP
LA PAZ	104.90	260.4	13	58	-4	24	42	-66		18 30 PP
TACUBAYA	105.69	309.2	14	10	777	26	0	8		24 44 SKS
PERTH	106.20	117.8								18 43
HUANCAYO	108.18	268.3	14	23	777	24	54	6		18 51 PP
RABAUL	119.21	72.1	18	44	1	27	11	97		20 9 PP
MELBOURNE	130.19	111.8	19	6	2					22 26 PKS
BRISBANE	132.61	95.6	19	11	2					22 30
RIVERVIEW	133.58	104.5	19	18	7	26	22	7		21 51 PP
SCOTT BASE	134.89	168.5	19	13	0					
NOUMEA	140.99	80.6	19	23	-2					23 55
SUVA	147.79	63.6	19	45	9					19 57 PKP2
KAIMATA	150.88	113.5	19	50	9					
CHRISTCHURCH	151.74	115.6	19	56	14					39 11 SKSP
GEBBIES PASS	151.76	116.0	19	50	8					
COBB RIVER	151.82	110.4	19	52	10					
ONERAHI	152.46	98.8	19	48	5					20 20 PKP2
WELLINGTON	153.37	110.8	19	54	10					32 20

KARAPIRO 153.72 103.2 19 58 13

APRIL 25 7.H 15.M 17.S EPICENTRE 51.79-173.56 DEPTH= 0.KM

A=-0.61726 B=-0.06962 C= 0.78367 D=-0.1121 E= 0.9937
G=-0.7787 H=-0.0878 K=-0.6212 HT= -6.1

SE= 1.79

	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	18.64	35.5	4	19	-1	7	44	0			4	33	PP
SITKA	22.65	61.5	5	5	3	9	11	6					
Y.-SAKHLINSK	28.54	277.8	5	54	-4								
HORSESHOE B.	31.51	74.1	6	9	-15								
VICTORIA	31.78	75.7	6	27K	1	11	28	-7					
SEATTLE	32.84	76.6	6	46	10								
CORVALLIS	33.70	82.1	6	43	0								
BANFF	35.32	67.5	7	57A	60								
SHASTA	36.38	87.1	7	7K	1								
MATUSIRO	37.06	265.0	7	12A	0	12	56	-1			8	40	PP
MINERAL	37.07	87.0	7	12K	0								
HUNGRY HORSE	37.45	71.0	7	16	1	13	3	1			17	25	SCS
RESOLUTE	38.01	25.0	7	18	-2	13	22	11			9	11	PP
BERKELEY	38.15	90.7	7	21K	0	13	8	5					
RENO	38.66	86.7	7	25	0								
BUTTE	39.47	73.5	7	32	0	13	31	-2					
FRESNO	40.37	90.2	7	38	-1								
BOZEMAN	40.56	73.1	7	42	1								
EUREKA	41.07	84.0	7	44	-1								
TINEMAHA	41.16	88.6	7	47	1						8	5	
KING RANCH	41.33	91.8	7	47	0						10	0	
WOODY	41.63	90.7	7	49K	-1						13	31	SCP
CHINA LAKE	42.34	89.5	7	56	1						13	37	SCP
SALT LAKE C.	42.83	79.7	8	0	1								
PASADENA	43.08	91.8	8	1	0	14	29	3					
RIVERSIDE	43.67	91.4	8	6	0						8	17	
BOULDER CITY	43.96	87.2	8	9	0								
PALOMAR	44.42	91.7	8	12K	0								
BARRETT	44.99	92.2	8	17	0						8	28	
RAPID CITY	46.08	70.5	8	24	-2	15	9	-1					
BOULDER	47.26	76.2	8	20	-15								
TUCSON	48.91	88.0	8	45	-3								
LUBBOCK	53.55	80.2	9	22	-1								
KIRKLAND LA.	56.19	53.6	9	41A	-1								
SCORESBY SD.	56.33	11.1	9	43	0								
FAYETTEVILLE	56.47	72.7	9	42	-2								
SCHEFFERVLLE	57.68	40.9	8	26K	-87								
APATITY	59.27	348.3	10	1K	-3						17	4	
CLEVELAND	59.96	60.2	10	8	0	18	19	0					
SODANKYLA	60.20	351.1	10	9	-1						10	57	PCP
OTTAWA	60.24	53.5	10	9A	-1	18	23	1					
KIRUNA	60.25	353.9	10	9A	-1								
SHAWINIGAN	60.87	50.9	10	12A	-3								
SEVEN FALLS	61.38	49.4	10	17	-1	18	31	-6					
HONG KONG	61.91	270.9	10	21	-1								
BAGUIO CITY	62.35	261.4	10	24	-1	18	52	3					
PENNSYLVANIA	62.40	58.5	10	26	1	18	51	1					
MANILA	63.52	259.7	11	1	29	19	2	-2					
WASHINGTON	64.20	59.4	10	39	2	19	17	5					
PALISADES	64.32	55.9	10	37	-1	19	13	0	10	49	19	33	PS
PHILADELPHIA	64.44	57.5				19	18	3					
WESTON	64.62	53.3	10	39A	0	19	17	0					
SKALSTUGAN	64.88	357.1	10	40	-1						11	14	PCP
TACUBAYA	65.37	89.6	11	6	22						13	8	PP
COLUMBIA	65.58	65.7	10	45	-1	19	27	-2			13	11	PP
HALIFAX	66.60	47.0	10	51	-1	19	18	-23					
PULKOVO	67.14	347.2	10	54	-2								
HELSINKI	67.40	350.1	10	55	-2						11	23	PCP
UPPSALA	68.35	353.9	11	2A	-1	19	59	-3	11	15	39	13	PKPPKP
COPENHAGEN	72.79	356.4	11	30	0								
SHILLONG	73.04	289.7	11	31	-1								
RATHFARNHAM	74.75	7.9	11	49	8								
CHATRA	74.79	293.9	11	41	-1								
HAMBURG	74.97	357.8	11	45	2								
WARSAW	75.63	350.8	11	49	2	21	3	-23			12	2	PCP

BERMUDA	75.67	55.7	11	49	2	21	28	2	14	43	PP
POTSDAM	76.06	355.8	11	49	0						
DE BILT	76.48	0.8							25	43	
KRAKOW	77.90	351.1	12	0	1				12	10	PCP
RACIBORZ	78.02	352.3	11	59	-1				22	23	PS
PRAGUE	78.29	354.7	12	1	0	21	55	0	20	18	
PARIS	79.73	2.6	12	3A	-6				15	12	PP
IASI	79.74	345.5	12	11	2						
STUTTGART	79.80	358.1	12	10A	0						
BRATISLAVA	80.01	352.8	12	11	0						
STRASBOURG	80.01	359.1	12	12A	1				24	19	
EBINGEN	80.39	358.3	12	13A	0						
SIMFEROPOL	80.72	340.5	12	15	0	22	21	1			
BASLE	81.06	359.2	12	17	1						
TIFLIS	81.09	331.9	12	18	2						
BESANCON	81.34	0.3	12	19	1				13	5	
BUCHAREST	82.68	345.9	12	26A	1	22	45	5	25	10	
QUETTA	82.69	310.5	12	26A	1	22	41	1	15	41	PP
TRIESTE	82.74	354.8	12	25	0	22	43	2			
CLERMONT-FD.	82.78	2.3	12	26	1						
BELGRADE	83.02	350.0	12	27K	1	23	4	20			
PAVIA	83.39	358.1	12	25	-3				31	43	
FLORENCE X.	84.72	356.5	12	35A	0						
MONACO	84.86	359.3	12	36A	0				13	38	
BALBOA HTS.	85.50	81.3	12	44	5						
SAN JUAN	86.06	65.2	12	42	0	23	17	3			
KARACHI	86.28	308.1	12	47	4	23	17	1			
ROME	86.55	355.5	12	45	1	23	28	10	24	25	PS
TARANTO	87.64	351.8	13	18	29						
POONA	88.79	298.8	12	55	0				13	16	
BOMBAY	89.04	299.8	12	40	-16				24	1	
RIVERVIEW	90.70	208.7	13	2A	-2	24	2	5	23	46	
KSARA	90.93	335.8	13	6	1	24	0	1	16	48	PP
GRANADA	90.97	8.0	13	6	1						
MALAGA	91.36	8.7	13	8A	1						
ALGIERS UNI.	91.77	2.7	13	8	-1						
HUANCAYO	104.45	91.1	13	50	-16						
TAMANRASSET	105.76	0.9							17	5	
LWIRO	127.20	331.5	19	6A	2				21	5	
PIETERMZBURG	151.60	312.0	19	56	8						
KIMBERLEY	153.22	322.2	19	58	8						

APRIL 25 10.H 16.M 20.S EPICENTRE -4.59 134.10 DEPTH= 0.KM

A=-0.69366 B= 0.71591 C=-0.07946 D= 0.7182 E= 0.6959
G= 0.0553 H=-0.0571 K=-0.9968 HT= 7.1

SE= 2.44

	DELTA DEG.	AZ. DEG.	P M	S	O-C S	S M	S	O-C S	*PP M	S	SUPP. M	S	
RABAUL	18.03	89.5	4	15	2						4	32	PP
MANILA	23.06	325.9	5	10	2	9	20	5					
BAGUIO CITY	24.79	327.7	5	23	-1	9	47	2					
BRISBANE	29.05	143.6	6	3	-1						11	27	
PERTH	32.16	210.0	6	34	3						15	14	
HONG KONG	33.08	324.7	6	48	9	11	50	-8					
RIVERVIEW	33.14	153.5	6	39A	-1	11	58	-1			7	50	PP
MELBOURNE	34.54	164.7	6	53	1	12	20	-1			7	42	
NOUMEA	35.92	122.3									8	44	
SUVA	45.37	111.0	7	17	-64	8	36	-387			8	19	
VLADIVOSTOK	47.53	357.8	8	39	0	15	33	-1					
ONERAHI	48.34	135.3	9	31	46								
GEBBIES PASS	51.68	144.8	9	11	1								
APIA	54.10	103.6	8	57	-31								
IRKUTSK	62.03	339.8	10	23	-1	18	49	1					
TERRE ADELIE	62.33	176.7	10	23	-3								
POONA	63.62	293.2	10	52	17								
BOMBAY	64.66	293.3									19	20	
FRUNSE	71.47	318.1	11	23	-1	20	43	1					
KARACHI	71.59	299.0	11	21	-4								
NAMANGAN	72.70	315.3	11	33	2	20	59	3					
QUETTA	72.81	303.4	11	30	-2	20	55	-3			11	51	PCP
SCOTT BASE	75.20	173.2	11	47	1						14	49	
TIKSI	76.15	358.3	11	49	-2								
SVERDLOVSK	84.86	328.1	12	37	0								

TANANARIVE	85.27	251.5	12	41	1					12	57
COLLEGE	89.08	24.7	12	57	-1					16	45 PP
TIFLIS	92.49	311.5	13	14	0						
KSARA	99.36	303.4	13	42	-3					17	48 PP
KIMBERLEY	104.57	238.9								23	10
LWIRO	105.05	266.4	18	27	777						
WOODY	106.50	54.3	14	18	777					16	50
CHINA LAKE	107.50	54.0								16	56
HUNGRY HORSE	107.88	40.6	17	18	777						
RIVERSIDE	107.90	55.9								16	54
EUREKA	108.26	50.0	17	7	777						
PALOMAR	108.41	56.5								16	55
BARRETT	108.64	57.2								16	54
TUCSON	113.59	56.9	17	14	-86						
JENA	113.62	324.4								19	34 PP
TRIESTE	114.20	318.4	18	42	1	27	7	98			
STUTTGART	115.90	322.9	18	45	1						
BOULDER	116.14	47.4								13	34
EBINGEN	116.29	322.4	18	47	2						
RAPID CITY	116.31	42.6	18	31	-14						
MONACO	119.09	318.3								23	47
LUBBOCK	120.65	53.5	18	56	2						
CLERMONT-FD.	120.95	322.0								23	49
TAMANRASSET	127.18	295.1	19	8	2					21	3 PP
OTTAWA	131.74	28.0	19	16A	1						
SHAWINIGAN	132.16	24.9	19	17A	1						
BREBEUF	132.62	26.4	19	19	2						
COLUMBIA	136.18	43.7	19	26	3						
BALBOA HTS.	146.31	80.8	19	44	3						
HUANCAYO	146.40	119.7	19	47	6						
BERMUDA	147.24	30.2	19	50	7						
LA PAZ	149.64	134.1	19	52	5					23	12 PP
MBOUR	149.89	290.9	19	55	8						
SAN JUAN	155.95	53.6	20	2	7						

APRIL 25 11.H 6.M 12.S EPICENTRE 1.64 126.58 DEPTH= 54.KM

DEPTH OF FOCUS= 0.003R

A=-0.59566 B= 0.80274 C= 0.02844 D= 0.8031 E= 0.5959
G=-0.0169 H= 0.0228 K=-0.9996 HT= 7.2

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	
MAMBAJAO	7.62	352.7	1	52	1	3	22	5					
MANILA	14.00	337.0	3	17	0	5	41	-11					
BAGUIO CITY	15.83	338.4	3	39	-2	6	42	8					
DJAKARTA	21.19	248.3	4	45	2	8	12	-18					
HONG KONG	23.82	330.5	5	9A	0	9	19	1					
CANTON	24.91	329.8	5	20K	1	9	34	-2			9	46	
RABAUL	26.23	102.9	5	31	-1						8	51	PCP
ZO-SE	29.74	350.6	6	5	2	10	54	-1					
NANKING	31.12	347.2	6	17	1	11	18	2					
MATUSIRO	36.37	15.9	7	0A	-1	12	34	-4					
BRISBANE	38.55	140.6	7	18	-1	13	12	1					
VLADIVOSTOK	41.57	5.9	7	45	1								
RIVERVIEW	42.19	149.0	7	49A	0	14	13	8	8	1	9	28	PP
MELBOURNE	42.80	158.4	7	53	-1						9	33	
CHATRA	45.34	307.1	8	14	-1						14	53	
IRKUTSK	53.78	343.2	9	19	0								
POONA	54.31	291.6	10	21	58								
LAHORE	57.50	306.8	9	43K	-3								
PETROPAVLOVK	57.78	22.2	9	49	1								
ONERAHI	58.02	134.8	9	5C	0								
COBB RIVER	59.68	140.8	10	0	-1								
KARAPIRO	59.89	136.4	10	7	4								
TONGARIRO	60.52	137.7	10	6	-1								
WELLINGTON	61.08	140.1	10	12	1								
GEBBIES PASS	61.09	143.4	10	12	1								
FRUNSE	61.86	318.9	10	15	-1	18	33	-1					
KARACHI	62.03	298.4	10	15K	-2								
NAMANGAN	63.02	316.0	10	25	1								
QUETTA	63.14	303.1	10	22	-3	18	46	-4			12	44	PP
TERRE ADELIE	69.12	173.8	10	58	-5								
TIKSI	69.90	0.8	11	6	-1								

SVERDLOVSK	75.66	328.8	11	43	2					
TANANARIVE	80.16	250.6	12	5K	-1				13	13
SCOTT BASE	82.30	172.1	12	18	1					
TIFLIS	82.77	311.7	12	20	0					
COLLEGE	86.65	25.2	12	38	-1				15	58 PP
MOSCOW	88.06	325.5	12	45	-1					
KSARA	89.68	303.6	12	56	3	23	49	11		
APATITY	89.70	337.4	13	2	8	23	42	3	15	13
JERUSALEM	90.30	301.6	12	56	0					
SIMFEROPOL	90.60	314.8	12	57	-1	23	48	1		
PULKOVO	91.75	329.8	13	3	0					
SODANKYLA	92.33	337.6	13	4	-2				16	53 PP
HELSINKI	94.35	330.6	13	14	-1					
KIRUNA	94.54	338.5	13	15	-1	23	44	-37		
LWIRO	97.83	268.0	13	34A	3					
UPPSALA	98.01	331.2	13	30	-2					
SKALSTUGAN	99.12	335.6	13	35	-2					
KRAKOW	99.37	321.2	13	39	1				16	41
RESOLUTE	99.89	10.3	13	40A	0				15	51
KIMBERLEY	101.13	241.2	13	48	2					
COPENHAGEN	102.00	328.1				24	28	-56		
TRIESTE	104.58	318.1							14	3
SHASTA	104.73	47.2							18	23 PP
MESSINA	105.37	310.3				24	43	7		
MINERAL	105.41	47.4							18	22 PP
STUTTGART	106.43	322.2							17	43
HUNGRY HORSE	107.82	37.6	14	18	777				18	27 PKP
WOODY	108.77	51.4							29	34 PKKP
TINEMAHA	108.86	49.9							29	47 PKKP
BESANCON	109.01	321.7	14	11	777					
BUTTE	109.68	39.4	14	27	777				18	29 PKP
CHINA LAKE	109.71	51.0							29	42 PKKP
PASADENA	109.74	52.8							18	28
EUREKA	109.80	46.9	14	28	777				18	28 PKP
RIVERSIDE	110.42	52.8							29	29 PKKP
BOZEMAN	110.79	39.3	18	30	3				29	37 PKKP
BARRETT	111.36	54.0							18	25
CLERMONT-FD.	111.43	321.1							19	18 PP
BOULDER CITY	111.80	50.1	18	32	3					
TUCSON	116.18	52.7	18	38	1				29	10 PKKP
RAPID CITY	116.46	37.9	18	40	2				29	6 PKKP
TAMANRASSET	117.71	296.7	18	43	3				19	53 PP
LUBBOCK	122.55	47.8	18	54	4					
SCHEFFERVLLE	122.68	9.1	18	29K	-21					
FAYETTEVILLE	126.62	41.2	18	59	1					
SHAWINIGAN	129.08	17.1	19	3K	1				21	31 PP
OTTAWA	129.16	20.2	19	5K	3				21	37 PP
BREBEUF	129.76	18.4	19	5K	1					
TACUBAYA	130.44	62.7							19	49
WESTON	133.29	18.2	19	11K	1					
PALISADES	133.63	21.5	19	14	3					
COLUMBIA	136.06	33.7	19	9	-6					
BERMUDA	144.53	16.5	19	30	0					
BALBOA HTS.	151.91	67.5	19	45	3					
HUANCAYO	155.94	116.4	19	54	6				20	23 PKP2
SAN JUAN	156.51	31.6	19	52	3					
LA PAZ	159.32	136.4	19	56	4				20	36 PKP2

APRIL 26 2.H 11.M 54.S EPICENTRE 36.58 70.84 DEPTH= 194.KM

DEPTH OF FOCUS= 0.025R

A= 0.26419 B= 0.76030 C= 0.59341 D= 0.9446 E=-0.3282
G= 0.1948 H= 0.5605 K=-0.8049 HT= -0.4

SE= 1.40

	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
KHOROG	1.08	34.1	0	30	0	0	52	-1				
KULYAB	1.56	328.0	0	34	0	0	58	-2				
KARA-SU	2.40	322.6	0	42	-1	1	14	-2				
GARM	2.45	350.1	0	43	-1	1	15	-2				
STALINABAD	2.56	320.7	0	45	0	1	18	-2				
GISSAR	2.61	316.9	0	46	1	1	19	-1				
DZHERGETAL	2.65	6.4	0	46	0	1	20	-1				
MURGAB	3.04	53.1	0	53	3	1	31	2				

FERGANA	3.86	10.7	1	0	-1	1	46	-1				
ANDIJAN	4.33	15.6	1	6	0	1	56	-2				
SAMARKAND	4.33	316.5	1	6	0	1	52	-6				
NAMANGAN	4.44	8.2	1	8	0	1	59	-1				
TASHKENT	4.88	346.1	1	14	0	2	8	-3				
LUNACHARSKOE	4.88	346.5	1	13	-1	2	7	-4			2	45
TCHIMKENT	5.79	350.9	1	25	0	2	27	-5			1	38
LAHORE	5.80	149.0	1	21	-4	2	24	-8				
NARYN	6.29	38.1	1	31	-1	2	34	-9			1	56
FRUNSE	6.92	23.5	1	39	-1	2	48	-10				
RYBACHE	7.12	33.1	1	43	0							
QUETTA	7.17	208.1	1	41	-2	2	57	-7			2	4 PG
FABRICHNAYA	7.85	31.3	1	51	-1							
ALMATA-2	8.35	34.9	1	59	0							
KURMENTY	8.63	39.3	2	1	-1							
DEHRA DUN	8.68	134.0				0	16	-203				
ILI	8.77	31.0									1	58
ASHKABAD	10.05	281.5									2	18
KARACHI	11.20	197.9	2	41A	5	4	46	8				
KIZYL-ARVAT	11.78	286.3									2	39
CHATRA	16.94	120.4	3	44	-3						6	53
BOMBAY	17.70	173.8									3	56
BOKARO	18.10	130.5	4	28	28						7	4
POONA	18.18	170.8	4	19	19	7	18	5				
GORIS	19.51	286.0	4	14	0						7	46
TIFLIS	20.80	292.3	4	28	1						8	13
SHILLONG	21.05	115.5	4	27	-3	8	11	4				
SVERDLOVSK	21.38	344.5	4	35	2						9	6 SS
IRKUTSK	28.27	45.7									6	18
KSARA	28.61	274.9	6	21	41	11	47	94				
SIMFEROPOL	28.84	298.3									6	22
MOSCOW	29.51	321.0	5	47	-1							
IASI	33.52	302.2	7	40	77							
PULKOVO	34.77	324.8	6	35	1	11	51	2				
LWOW	36.01	306.6	6	45	1						8	44
HELSINKI	37.43	323.8	6	56	0				7	36	8	14 PP
KRAKOW	38.66	306.8	7	7	1				7	46	8	41 PP
SODANKYLA	39.61	335.0	7	14	0				7	54	8	44 PP
RACIBORZ	39.78	306.8									7	59
HONG KONG	40.00	98.6	7	17A	0							
BRATISLAVA	40.58	303.9	7	23	1	12	50	-26	8	5	9	6 PP
UPPSALA	40.92	321.9	7	25K	0	13	22	0	8	6	8	58 PP
KIRUNA	41.95	334.1	7	34	1							
PRAGUE	42.21	307.0	7	36	1				8	21	9	25 PP
TRIESTE	43.14	300.5									8	24
COPENHAGEN	43.28	315.3	7	45	1				8	26		
MESSINA	43.40	289.5									7	45
SKALSTUGAN	44.07	326.7	7	50	0				8	32	9	31 PP
HAMBURG	44.76	312.3	7	57	1				8	39	9	27 PP
FLORENCE X.	45.23	298.4									8	35
STUTTGART	45.74	305.6	8	4	1				8	46		
TIKSI	45.74	22.1	8	3	0	14	32	1	8	46		
EBINGEN	45.98	304.8	8	5	0				8	47		
STRASBOURG	46.70	305.6	8	12	1				8	54	10	0 PP
BENSBERG	46.73	308.9	8	12	1				8	54		
MONACO	47.94	299.2	8	21	0				9	2	9	44 PCP
BESANCON	48.14	304.1	8	19	-3						9	49 PCP
PARIS	50.09	306.8	8	39	2	15	36	4	9	21	10	36 PP
MAGADAN	54.40	38.1									4	6
LWIRO	54.96	234.8	9	12	-1							
TAMANRASSET	57.41	275.5	9	29	-1				10	14		
TANANARIVE	59.43	205.8	9	43	-1				10	23	10	6
COLLEGE	74.44	16.1	11	17	-1				12	3	13	28
PIETERMZBURG	76.02	215.6	11	27	0							
KIMBERLEY	78.08	220.3	11	38	-1							
SCHEFFERVLLE	81.93	336.7	11	42K	-17							
SHAWINIGAN	91.02	335.8	12	42	-1							
BANFF	92.44	4.0	12	51	1							
HUNGRY HORSE	95.33	3.3	13	4	1							
ST. LUCIA	112.22	308.6									20	33
ST. VINCENT	113.04	308.3									20	27
TRINIDAD	115.08	306.7									20	9
HUANCAYO	141.00	300.1	19	10	3							

APRIL 26 6.H 33.M 36.S EPICENTRE 36.21 28.87 DEPTH= 23.KM

A= 0.70828 B= 0.39043 C= 0.58814 D= 0.4827 E=-0.8758
G= 0.5151 H= 0.2839 K=-0.8088 HT= -0.3

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	
ATHENS	4.47	294.7	1	9K	1	2	3	3					
KSARA	6.23	110.5	1	33	0	2	40	-4					
JERUSALEM	6.88	128.1	1	41K	-1	2	54	-6					
SOFIA	7.77	328.3	1	56	2						3	41	
BUCHAREST	8.47	346.4	2	3A	-1	3	42	2			4	56	SG
YALTA	9.19	24.4	2	14	0	3	55	-3					
CAMPULUNG	9.51	343.4				4	12	6			5	28	SG
FOCSANI	9.56	353.0	2	29	10	4	44	37					
SIMFEROPOL	9.60	23.0	2	18	-2	4	4	-4					
TARANTO	10.07	298.5	2	25	-1						3	46	
THEODOSIA	10.09	27.3	2	26	-1	4	20	0			2	34	
BACAU	10.46	352.5	2	44	12	5	0	31					
REGGIO CALA.	10.72	284.1	2	34	-1	4	30	-5					
BELGRADE	10.72	325.9	2	35	0	4	38	3			4	3	
KISHINEV	10.80	359.9	2	34	-2								
MESSINA	10.81	284.6	2	35K	-1	4	34	-4			5	37	
IASI	11.02	355.4	2	37	-2	5	5	22					
TIMISOARA	11.14	331.2	2	55	14	5	44	58			6	13	SG
SZEGED	11.99	329.5	2	56	4	4	56	-10			3	6	PP
CERNAUTI-2	12.28	350.7	2	52	-4						5	13	
KALOCSA	12.69	327.4	3	1	-1						3	18	PP
KECSKEMET	12.70	330.2	3	6	4	7	12	108					
UZHGOROD	13.32	340.8	3	13	3						3	35	
BUDAPEST	13.41	330.2	3	12	1						3	24	PPP
TIFLIS	13.56	61.2	3	14	1						3	30	
ZAGREB	13.65	318.6	3	14A	-1	7	19	93					
ROME	13.94	299.0	3	4	-14	5	52	-1	3	16			
LWOW	14.06	347.0	3	19	-1						6	6	
HURBANOVO	14.07	329.2	3	33	13	6	7	11			4	59	
GORIS	14.18	71.4	3	22	0								
SKALNATE PL.	14.41	336.7	3	29A	4	6	21	17			3	39	
BRATISLAVA	14.77	327.6	3	32	3	6	24	11			3	48	PP
TRIESTE	14.79	314.2	3	28	-1	6	7	-6			4	42	
VIENNA-H.	15.15	326.4	3	34	0	6	26	4			6	50	SS
KRAKOW	15.28	337.7	3	36	0						3	44	PP
FLORENCE X.	15.46	304.7	3	38K	0	6	37	8	3	49	9	14	0
BOLOGNA	15.70	307.2	3	44	3	6	58	23			3	57	
RACIBORZ	15.87	334.2	3	42	-1						3	51	PP
WARSAW	16.96	343.3	3	58K	1	7	15	11			4	26	PP
PRAGUE	17.36	327.4	4	2	0	7	21	8			4	30	
PAVIA	17.38	307.1	4	2A	-1	7	30	17			8	8	SS
MONACO	18.04	301.2	4	8A	-3						4	36	
CHEB	18.30	324.4	4	13	-1	7	33	-1			4	25	
OROPA	18.33	307.3	4	15	1	7	56	21					
RAVENSBURG	18.34	315.0	4	16	2								
ZURICH	18.73	312.8	4	16	-3	7	45	1					
EBINGEN	18.92	315.4	4	21	-1						4	35	PP
TUBINGEN	19.05	316.4	4	22	-1						4	36	PP
STUTTGART	19.11	317.2	4	22A	-2	7	47	-5			4	36	PP
JENA	19.25	325.2	4	25	0	7	56	1			4	40	PP
BASLE	19.41	312.2	4	26	-1	8	1	2			4	40	
NEUCHATEL	19.55	310.2	4	25	-4	8	15	13					
POTSDAM	19.66	330.3	4	31	1	8	20	16			4	37	PP
KARLSRUHE	19.68	316.9	4	47K	17	8	7	2			5	0	
STRASBOURG	19.81	315.2	4	30	-1	8	9	1	4	45	4	47	PP
BESANCON	20.26	310.1	4	34	-2	8	7	-10			4	55	
MOSCOW	20.42	14.3	4	36	-2						8	20	
ALGIERS UNI.	20.75	279.2	4	38	-3	8	25	-2			8	41	PCP
CLERMONT-FD.	21.57	304.2	4	48	-2				5	0	9	1	PCP
HAMBURG	21.80	328.7	4	49	-3	8	36	-11			9	42	
COPENHAGEN	22.46	335.2	4	56	-3	8	59	0			5	10	PP
WITTEVEEN	22.79	323.7	5	16	14								
RELIZANE	22.89	277.3	5	2	-1	9	8	2			5	23	PP
PARIS	23.03	311.4	5	2A	-2	9	8	-1					
DE BILT	23.11	320.8				9	12	1					
ALICANTE	23.41	284.1	5	5	-3	9	3	-12					
ASHKABAD	23.55	76.9	5	9	0	9	20	2					
PULKOVO	23.60	1.8	5	11	1						5	56	PPP
HELSINKI	24.11	355.2	5	14	-1	9	34	6					
TAMANRASSET	24.25	242.9	5	17	1	9	36	6					
UPPSALA	24.75	346.4	5	18	-3	9	40	1	5	31	5	46	PP

ALMERIA	25.13	280.9	5	23	-2	9	51	6			5	3 PP
KEW	25.77	315.4	5	42	11						7	50
GRANADA	25.99	281.9	5	55	22	10	34	35			11	16 SS
JERSEY	25.99	309.6									9	6 PCP
TOLEDO	26.10	288.1	5	32	-2	10	14	13				
MALAGA	26.69	281.1	5	34A	-5	10	22	11			6	30 PP
DURHAM	27.95	321.2									2	8
BERGEN	28.53	335.4				10	20	-20			11	56 SS
SKALSTUGAN	29.22	344.8	5	58	-4						6	15
ABERDEEN	29.43	325.2	11	56	352						12	46
SVERDLOVSK	29.62	35.8	6	4	-1	10	55	-3			7	6 PP
RATHFARNHAM	29.85	316.0	6	21	14							
SODANKYLA	31.23	358.3	6	18	-2						7	20 PP
APATITY	31.50	3.4	6	30	8	11	33	6				
STALINABAD	31.63	73.6	6	24	1							
TASHKENT	31.72	68.3	6	22	-2						7	29 PP
KIRUNA	32.03	354.0	6	24	-3	11	36	0	6	37		
QUETTA	32.29	89.6	6	25	-4	11	41	1			7	20 PP
KARACHI	34.12	96.8	6	46A	1							
FRUNSE	35.53	64.9	6	56A	-1						8	12 PP
LAHORE	37.77	83.5	7	14	-2	13	1	-3				
LWIRO	38.26	180.1	7	22K	2							
DEHRA DUN	41.19	83.6	5	59	-105	11	56	-120			14	30 SS
BOMBAY	42.22	102.1	7	55	2	14	12	1			9	39 PP
POONA	43.24	101.7	8	3	2						8	23
SCORESBY SD.	43.47	337.7	8	12	9							
MBOUR	46.27	254.1	8	25	0				8	49	10	15 PP
CHATRA	49.93	83.5	8	53	-1						16	1
BOKARO	50.18	87.7	8	55	-1	16	2	-2				
IRKUTSK	53.93	47.4	9	22A	-2	16	49	-7				
SHILLONG	54.27	82.5	9	23	-3	16	56	-4				
TANANARIVE	57.61	159.0	9	53K	3						10	3
TIKSI	59.12	21.3	10	0	-1						18	20 PS
PRETORIA	61.63	180.7	10	19	1							
RESOLUTE	63.42	345.7	10	28	-2	18	57	-2				
KIMBERLEY	64.73	184.0	10	40	2						10	51
PEKING	66.05	57.1	10	46A	-1							
GRAHAMSTOWN	69.20	182.1	11	25	18							
CHANGCHUN	70.11	49.9	11	11	-1							
SEVEN FALLS	70.33	314.4	11	30	17							
SHAWINIGAN	71.76	314.6	11	34	12							
NANKING	71.86	63.3	11	22	-1	20	37	-3				
CANTON	72.44	74.0	11	27	1	20	48	1				
BREBEUF	72.83	314.1	11	28	0							
WESTON	73.20	310.4	11	29K	-2							
MAGADAN	73.25	26.8	11	31	0	20	55	-1				
HONG KONG	73.55	74.2	11	34K	1	21	2	3			13	32
ZO-SE	74.08	63.0	11	36A	0	21	3	-2				
OTTAWA	74.10	314.9	11	44	8							
BERMUDA	74.27	298.7	11	40	3	21	40	32				
VLADIVOSTOK	74.51	47.8				21	7	-3				
KIRKLAND LA.	74.86	319.0	11	48	8							
PALISADES	75.58	310.4	11	52	8	21	18	-4			25	58 SS
Y.-SAKHLINSK	78.21	39.8	11	58	-1							
COLLEGE	79.22	358.6	12	2	-3							
BAGUIO CITY	81.84	75.7	12	33	15							
MATUSIRO	82.36	50.0	12	27	6							
SAN JUAN	83.25	287.7	12	26	0							
COLUMBIA	84.33	308.3	12	31	0							
BANFF	87.54	338.5	11	53	-54							
RAPID CITY	89.01	327.6	12	54	0							
HUNGRY HORSE	89.55	336.3	12	56	0							
FAYETTEVILLE	90.71	317.2	13	13	11							
BOZEMAN	90.83	333.2	13	3	0							
BUTTE	91.08	334.2	13	18	14							
HORSESHOE B.	91.27	342.2	13	1	-4							
VICTORIA	92.10	342.0	13	19	11							
LUBBOCK	96.70	320.4	13	32	3							
EUREKA	98.00	333.2	13	24	-11							
MINERAL	99.12	337.6	13	40	0							
RENO	99.28	336.0	14	3	22							
TUCSON	102.14	325.9	14	11	17							
ISABELLA	102.30	333.3	13	59	4						18	20 PP
PASADENA	103.54	332.3				24	18	-85				
LA PAZ	105.10	260.5	14	8	777						18	32 PP
RABAUL	119.06	72.5	20	8	81							

APRIL 26 15.H 8.M 30.S EPICENTRE 44.14 147.86 DEPTH= 78.KM

DEPTH OF FOCUS= 0.007R

A=-0.60959 B= 0.38306 C= 0.69402 D= 0.5321 E= 0.8467
G=-0.5876 H= 0.3693 K=-0.7200 HT= -3.2

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
KURILSK	1.09	0.6	0	21	1							
NEMURO	1.84	244.6	0	30K	0	0	50	-3				
ABASHIRI	2.58	268.5	0	42K	2	1	11	0				
KUSIRO	2.77	246.4	0	45	2	1	15	-1				
OBIHIRO	3.60	251.8	0	56	1	1	37	1				
ASAHIGAWA	3.98	266.7	1	3	3	2	1	15			2	11
URAKAWA	4.21	243.6	1	3	0	1	51	-1				
Y.-SAKHLINSK	4.57	309.7	1	10K	2	2	1	1				
SAPPORO	4.84	259.5	1	14K	2	2	11	4			1	33
TOMAKOMAI	4.86	252.7	1	14	2	2	12	5			1	27
MURORAN	5.35	252.6	1	18K	-1	2	20	0				
SUTTSU	5.71	259.0	1	24	0	2	30	1				
MORI	5.71	251.6	1	25	1	2	37	8			1	52
HAKODATE	5.74	248.2	1	25K	1	2	27	-2				
HATINOHE	5.92	234.6	1	25	-1	2	28	-6				
AOMORI	6.19	240.0	1	30A	0	2	34	-7				
MIYAKO	6.28	226.4	1	28	-4	2	33	-10				
UGLEGORSK	6.34	323.1	1	34K	2	2	44	0				
MORIOKA	6.67	230.6	1	36	-1	2	46	-6				
MIZUSAWA	7.10	227.5	1	41	-2	2	55	-8				
AKITA	7.28	235.3	1	46A	1	3	4	-3			2	16
ISINOMAKI	7.53	223.0	1	48	-1	3	5	-9				
SENDAI	7.87	224.1	1	50	-3	3	12	-10				
SAKATA	7.98	231.7	1	59	4							
YAMAGATA	8.16	226.4	1	55	-3	3	20	-9				
HUKUSIMA	8.48	223.7	1	57	-5	3	24	-13				
ONAHAMA	8.92	218.7	2	20	12	3	37	-11			3	15
SHIRAKAWA	9.10	222.2	2	11	1	3	42	-10				
NIIGATA	9.10	229.9	2	45	35							
AIKAWA	9.48	233.1	2	15	0						3	56
MITO	9.59	218.5	2	18	1	3	54	-10				
UTUNOHIYA	9.72	221.5	2	17	-2	3	57	-10			2	56
KAKIOKA	9.84	219.2	2	18	-2	4	0	-10				
TYOSI	9.98	214.9	4	1	99							
MAEBASI	10.23	223.9	2	26	0	4	13	-6				
KUMAGAYA	10.28	221.9	2	29	3	4	14	-7				
NAGANO	10.48	227.9	2	29	0	4	35	10				
TOKYO C.M.O.	10.49	219.1	2	26	-3	4	17	-9				
OIWAKE	10.55	225.5	2	29	-1	4	12	-15				
MATUSIRO	10.56	227.4	2	28K	-2	4	18	-9				
TITIBU	10.56	222.5	2	30	0	4	17	-10				
WAZIMA	10.70	234.6	2	32	0	4	26	-5				
YOKOHAMA	10.74	218.7	2	30	-3	4	27	-5			3	4
MATUMOTO	10.91	227.1	2	33	-2	4	30	-6				
TOYAMA	11.00	231.1	2	36	0	4	18	-20				
KOHU	11.09	223.1	2	38	1	4	30	-10				
MERA	11.09	216.6	2	49	12	4	34	-6				
AJIRO	11.31	219.6	2	42	2	4	35	-10				
MISIMA	11.32	220.3	2	39	-1	4	38	-8				
OSIMA	11.42	217.8				4	26	-22				
PETROPAVLOVK	11.47	34.6	2	45K	3	4	56	7			4	41
VLADIVOSTOK	11.61	270.5	2	43	-1	4	52	-1			5	22
SHIZUOKA	11.70	221.7				4	48	-7			4	32
HUKUI	11.99	231.6	2	50	1							
OMAESAKI	12.09	221.2	4	1	70	4	44	-20				
GIHU	12.19	228.0	2	51	-1						4	55
NAGOYA	12.26	226.8	2	52	-1	5	1	-7				
IBUKISAN	12.42	229.1	3	57	62							
HIKONE	12.57	229.1	3	56	59							
KAMEYAMA	12.77	227.3	2	51	-9	5	33	13				
TU	12.84	226.8				4	59	-23				
KYOTO	13.04	229.8	3	2	-1	5	19	-8				
TOYOOKA	13.19	233.7	3	4	-1	5	24	-6				
OSAKA	13.43	229.3	3	9	1	6	2	26				
KOBE	13.60	230.3				5	45	5				
SUMOTO	14.01	230.1				5	53	3				
TOKUSIMA	14.38	230.1	3	19	-2							

TAKAMATU	14.50	232.1	3 16	-6				
KLYUCHI	14.69	29.4	3 24	-1				6 18
HAMADA	15.26	238.2	3 33	1	6 34	15		
MAGADAN	15.54	5.6	3 34A	-1				
CHANGCHUN	16.23	276.8	3 42A	-2				4 10 *SP
SIMIDU	16.24	230.7	3 43	-1	6 55	14		
OOITA	16.68	234.7	3 42	-8	7 8	17		
HUKUOKA	17.16	238.0	3 56K	0	7 14	12		4 19
SAGA	17.46	237.4	4 3	4				8 9
KUMAMOTO	17.52	235.6	3 57	-3				
MIYAZAKI	17.75	232.1	4 6	3	7 32	17		9 17
KAGOSIMA	18.51	233.1	4 13	1				5 17
TOMIE	18.82	238.8	4 17K	1	7 39	0		
PEKING	23.79	271.1	5 6K	0	9 13	0	5 30	5 50 PP
ZO-SE	24.69	247.2	5 17	2	9 34	6	5 42	5 19
NANKING	25.72	251.9	5 25	1	9 47	2	5 50	6 5 PP
TATUNG	25.84	273.1	5 33	8				
TAIYUAN	27.23	268.8	5 41	3				
KYAKHTA	28.50	297.4	5 50	0				
TIKSI	29.07	347.7	5 49	-6				6 42 PP
HONG KONG	35.25	242.9	6 50A	1	12 18	2		
BAGUIO CITY	35.99	228.5	6 55	0	12 28	1		
MANILA	37.31	226.2	7 13	7				
COLLEGE	40.47	36.4	7 31	-1				
RABAUL	48.28	174.2	8 36	1			8 56	
FRUNSE	51.48	295.9	9 0	1	16 12	0		
SVERDLOVSK	53.21	316.7	9 9	-3				
RESOLUTE	54.45	16.9	9 19	-2				
TASHKENT	55.67	296.6	9 29	-1	17 9	1		
STALINABAD	57.48	294.1	9 42	-1	17 33	1		
LAHORE	57.61	284.2	9 42	-2	17 31	-3		
HORSESHOE B.	57.68	50.6	9 44A	0				
VICTORIA	58.06	51.6	9 46A	-1				
SEATTLE	59.16	52.0	9 56A	1				
SODANKYLA	60.30	337.6	10 0	-2				10 28
BANFF	60.85	45.7	10 6A	0				
KIRUNA	61.57	340.0	10 8	-3				
SHASTA	63.05	58.5	10 22A	1				
HUNGRY HORSE	63.31	47.7	10 24	1				20 11 SCS
QUETTA	63.53	287.2	10 24A	0	18 49	-1		22 53 SS
MINERAL	63.75	58.4	10 25	0				
MOSCOW	64.44	324.0	10 28	-2				
PULKOVO	64.52	330.2	10 30	0				11 6 PCP
ASHKABAD	64.54	298.9	10 33	2	19 3	1		
BERKELEY	64.82	61.0	10 33A	1				
RENO	65.33	58.2	10 36A	0				
BUTTE	65.52	49.0	10 37	0				
HELSINKI	66.07	332.7	10 38	-2				11 9
BOZEMAN	66.57	48.6	10 45	1				
SKALSTUGAN	67.00	340.1	10 43	-3				
EUREKA	67.69	56.3	10 51	0				
TINEMAHA	67.84	59.5	10 53A	1				
KING RANCH	67.99	61.8	10 54A	2				
WOODY	68.31	61.0	10 54A	0				11 15
ISABELLA	68.58	60.8	10 57A	1				11 22
UPPSALA	68.63	335.6	10 54	-2				
CHINA LAKE	69.02	60.2	10 51A	-8				11 26
SALT LAKE C.	69.28	53.0	11 1	1				
PASADENA	69.73	61.9	11 4A	1	20 24	19		
TIFLIS	70.22	309.2	11 7	1	20 11	1		11 38 PCP
RIVERSIDE	70.34	61.6	11 6A	-1				
BOULDER CITY	70.64	58.5	11 9	0				
GORIS	70.83	306.6	11 11	1	20 19	2		
PALOMAR	71.08	61.8	11 12	1				
BRISBANE	71.43	175.2	11 16	3			11 34	
BARRETT	71.64	62.2	11 15A	0				11 31
RAPID CITY	71.78	45.9	11 16	0				
BOULDER	73.48	50.0	11 27	1				
SIMFEROPOL	73.57	317.3	11 26	0	20 50	2		
COPENHAGEN	73.65	335.5	11 26A	0				
IASI	74.93	322.4	11 35	1				
TUCSON	75.59	59.1	11 39	1				
KRAKOW	75.80	328.4	11 39	0				12 1 PCP
HAMBURG	76.20	335.7	11 42A	1				
POTSDAM	76.27	333.4	11 41	0				
RACIBORZ	76.42	329.3	11 40	-2				
SCHEFFERVLLE	77.13	19.7	12 29A	43				
RIVERVIEW	77.66	177.2	11 53K	4			12 10	

BUCHAREST		77.73	321.4	11	50	0	21	35	1			
PRAGUE		77.77	331.4	11	49	-1	21	35	0	16	9	
WITTEVEEN		77.81	337.1	11	51	1						
JENA		77.99	333.4	11	50	-1						
BRATISLAVA		78.41	328.8	11	54	1				12	8	
KIRKLAND LA.		78.92	30.4	11	30A	-26						
BELGRADE		79.85	324.9	12	2A	1	21	59	2			
LUBBOCK		80.00	52.7	12	3	1						
RATHFARNHAM		80.43	344.6	12	4K	0						
STUTTGART		80.63	333.7	12	6A	1				12	23	
KSARA		80.78	308.5	12	7	1	22	11	5			
KEW		80.86	340.5	12	5A	-2	22	7	0			
EBINGEN		81.22	333.6	12	8A	0				12	24	
STRASBOURG		81.25	334.5	12	10A	1				12	38	
MELBOURNE		81.63	182.3	12	13	2				13	9	
TRIESTE		81.77	329.4	12	12	1	22	21	5			
FAYETTEVILLE		82.32	46.2	12	15A	1						
PARIS		82.58	337.7	12	8	-7						
SHAWINIGAN		82.81	26.9	12	17A	0						
OTTAWA		82.82	29.3	12	16A	-1						
BESANCON		82.98	334.9	12	18	0				14	22	
BREBEUF		83.46	28.0	12	20A	0						
CLERMONT-FD.		85.17	336.1	12	30	2						
WESTON		86.99	27.9	12	39A	2						
PALISADES		87.29	30.3	12	40	1						
HALIFAX		87.29	21.9	12	39A	0						
ALGIERS UNI.		93.37	332.4	13	7	0				12	49	
TAMANRASSET		105.00	324.3	13	58	-1				18	15	PP
PRETORIA		128.41	269.9							20	10	
HUANCAYO		131.11	62.7	19	8	5						
KIMBERLEY		132.62	269.1	19	8	2						

APRIL 28 1.H 23.M 48.5 EPICENTRE 7.07 126.75 DEPTH= 42.KM

DEPTH OF FOCUS= 0.001R

A=-0.59380 B= 0.79527 C= 0.12225 D= 0.8013 E= 0.5983
G=-0.0731 H= 0.0980 K=-0.9925 HT= 6.9

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	
BAGUIO CITY		11.08	327.6	2	36	-3	5	34	52					
TAWU		16.20	340.2	3	46	0								
HSINKONG		16.76	342.6	4	27	34	7	18	21					
TAINAN		17.04	339.1	3	56	-1								
HWALIEN		17.51	344.2	4	28	25	7	26	12					
TAIPEI		18.55	344.9	4	17	2	7	46	9					
CANTON		20.52	322.3	4	38	1	8	18	-2					
YAKUSIMA		23.52	8.1	5	8	1	9	16	1					
DJAKARTA		23.84	236.9	5	12	2	9	21	1					
ZO-SE		24.47	348.4	5	16A	0	9	34	3					
MIYAZAKI	*	25.11	9.4	5	23	1	9	49	7					
TOMIE		25.49	4.0	5	27	1	9	26	-22					
KUMAMOTO		25.88	7.6	5	28	-2								
ASOSAN		26.01	8.3	5	32	1								
SIMIDU		26.23	11.9	5	34	1	9	49	-11					
SAGA		26.26	6.7	5	34	1	9	54	-7					
UWAZIMA		26.58	10.9	5	34	-2	10	14	8					
HUKUOKA		26.60	6.9	5	37	1	9	51	-15			6	28	
KOTI		27.09	12.5	5	42	1	10	12	-2					
MATUYAMA		27.20	11.0	5	40	-2	10	14	-2			11	29	
SIOMISAKI		27.55	16.5	5	47	2	10	20	-2					
HIROSIMA		27.67	10.2	5	46	0	10	23	0			6	47	
RABAUL		27.73	113.1	5	46	-1	10	22	-2			9	3	PCP
TOKUSIMA		27.83	14.0	5	48	0	10	25	-1					
TAKAMATU		27.94	13.0				10	26	-2			6	40	
HAMADA		28.13	9.3	5	47	-3	10	8	-23			11	50	
SUMOTO		28.17	14.4	5	46	-5	10	30	-1					
OWASE		28.25	16.7	5	52	1								
OKAYAMA		28.26	12.6	5	54	3								
KOBE		28.56	14.6	5	52	-2								
OSAKA		28.62	15.2	5	55	0	10	21	-18			6	50	
MATSUE		28.84	10.7	5	57	0	10	46	4					
KYOTO		29.02	15.3	5	56	-2	10	41	-4					
KAMEYAMA		29.06	16.6	5	59	0	10	46	0			12	26	

TOYOOKA	29.28	13.5	6 1	1				
OMAESAKI	29.37	19.5	6 3	2	10 52	1		
HIKONE	29.39	16.0	6 2	0	10 48	-3		
NAGOYA	29.50	17.2	6 3	1	10 53	0		7 7
GIHU	29.66	16.7	6 4	0	10 52	-3		6 31
SHIZUOKA	29.77	19.5	6 5	0	10 58	1		
OSIMA	29.92	21.2	6 2	-4	10 52	-7		12 47
IIDA	30.09	18.2	6 8	0				
MISIMA	30.09	20.2	6 6	-2				11 29
HUKUI	30.13	15.5	6 9	1				
MERA	30.22	21.7	6 53	44				
HUNATU	30.37	19.6	6 11	1	10 51	-16		
KOHU	30.43	19.2	6 11	0	11 9	2		
YOKOHAMA	30.61	21.0	6 20	8				7 18 PP
KANAZAWA	30.69	15.7	6 7	-6				
MATUMOTO	30.81	17.9	6 16	2				
TOKYO C.M.O.	30.87	20.9	6 12	-3	11 4	-10		7 24 PP
TITIBU	30.91	19.7	6 14	-1				
TOYAMA	31.00	16.4	6 17	1	11 16	0		
OIWAKE	31.06	18.7	6 15	-1	11 12	-5		7 32 PP
MATUSIRO	31.16	18.0	6 16A	-1	11 12	-7		
KUMAGAYA	31.17	20.0	6 16	-1				7 34 PP
NAGANO	31.26	17.9	6 17	-1	11 16	-5		
MAEBASI	31.29	19.4	6 16	-2	11 25	4	6 34	7 26 PP
TUKUBASAN	31.48	21.0	6 16	-4	11 20	-4		7 29 PP
WAZIMA	31.55	15.6	6 18	-3	11 22	-3		
UTUNOMIYA	31.70	20.4	6 20	-2				7 51 PP
LINFEN	32.08	336.4	6 27	2				
ONAHAMA	32.42	21.4	6 29	1	11 29	-10		9 25
NIIGATA	32.68	18.2	6 45	15				
HUKUSIMA	32.99	20.2	6 34	1	11 44	-3		
YAMAGATA	33.40	19.7	6 37	0				
SENDAI	33.60	20.4	6 39	1	11 53	-4		7 40 PP
SAKATA	33.82	18.5	6 39	-1				
PEKING	34.16	345.5	6 43A	0	12 7	1		9 20 PCP
MIZUSAWA	34.45	20.0	6 46	0	12 8	-2		
KWANTING	34.50	344.8	6 45	-1				
AKITA	34.65	18.3	6 48	1	12 24	11		
MORIOKA	34.98	19.6	6 51	1	12 15	-3		
TATUNG	35.03	341.9	6 53	2				
LANCHOW	35.69	327.3	6 59	3				
AOMORI	35.87	18.3	6 59	1				
VLADIVOSTOK	36.19	6.4	7 1	0	12 38	1		8 25 PP
PAOTOW	36.56	338.4	7 4	0				
CHANGCHUN	36.64	358.3	7 5	1	13 47	63		
MORI	36.97	17.2	7 10	3	12 49	0		7 42 PP
SINING	37.20	325.8	7 11	2				
MURORAN	37.30	17.5	7 7	-3				
TOMAKOMAI	37.66	18.0	7 15	2				
WUWEI	37.70	328.1	7 14	1				
URAKAWA	37.71	19.6	7 16	3	13 2	2		
SHILLONG	38.01	303.0	7 17	1	13 5	0		8 55 PP
SAPPORO	38.09	17.4	7 16	-1	13 3	-3	7 39	8 46 PP
OBIHIRO	38.54	19.5	7 26	6				
KUSIRO	39.00	20.7	7 27	3	13 21	1		
CHANGYEH	39.53	327.3	8 32	64				
NEMURO	39.73	21.6	7 31	1	13 30	-1		
PERTH	40.17	194.5	7 35	1	13 36	-1		8 59 PP
WAKKANAI	40.34	16.3	7 41	6				
Y.-SAKHLINSK	42.03	16.4	7 50	1	14 3	-2		8 8
CHATRA	42.40	302.4	7 50	-2				14 38
BOKARO	42.64	297.6	7 54	0				14 29
BRISBANE	42.73	144.6	7 53	-2	14 11	-4		
MADRAS	46.18	281.2	8 25K	2	15 25	20		18 47 SS
COLOMBO	46.51	272.8	8 20	-5	15 12	2		
RIVERVIEW	46.79	151.8	8 28A	1	15 14	0	8 38	18 36 SS
MELBOURNE	47.79	160.5	8 35	0	15 28	0	8 44	10 34 PP
IRKUTSK	48.68	341.8	8 42A	0	15 48	8		10 33 PP
KODAIKANAL	48.78	277.4	9 45	62				
DEHRA DUN	51.11	303.4	8 33	-28	16 0	-14		12 8 PPP
POONA	52.65	287.8	9 14	2	16 54	19		11 18 PP
PETROPAVLOVK	52.75	23.6	9 12	-1			9 34	16 50 PS
BOMBAY	53.66	288.2	9 20	0				35 56
LAHORE	54.52	303.8	9 25	-1				
MAGADAN	55.47	14.6	9 33	0	17 13	0		
SUVA	56.82	117.0	10 30	47	16 59	-32		17 28 PS
FRUNSE	57.97	316.8	9 50A	-1	17 50	4		12 0 PP
KARACHI	59.72	295.7	9 58K	-5				

QUETTA	60.43	300.6	10	7A	-1	18	19	1	10	52	PCP
STALINABAD	60.76	310.4	10	9	-1	18	27	5			
TASHKENT	61.15	313.5	10	10	-3	18	28	1	12	27	PP
ONERAHI	61.78	137.0	10	18	1				10	38	
KARAPIRO	63.74	138.4	10	36	6						
KAIMATA	63.93	144.6	10	50	19				11	22	
TONGARIRO	64.46	139.6	10	34	0						
TIKSI	64.51	0.7	10	32	-3	19	7	-2			
GEBBIES PASS	65.37	145.0	10	39	-1				10	54	
ASHKABAD	68.67	307.9	11	2	1	20	8	8	13	36	PP
SVERDLOVSK	71.15	327.9	11	17	1				21	3	SCS
TERRE ADELIE	74.46	174.0	11	32	-4	20	57	-9			
GORIS	78.15	308.8	11	59	2	21	51	5	22	5	SKS
TIFLIS	79.33	311.0	12	4	1	22	4	5	22	19	SKS
COLLEGE	81.70	25.5	12	13	-3	22	24	0	27	32	SS
TANANARIVE	82.14	249.8	12	17K	-1				13	1	
MOSCOW	83.72	325.3	12	25	-1	22	41	-3	23	47	PS
APATITY	84.79	337.4	12	31K	0	22	55	0	23	15	
KSARA	86.83	303.5	12	43K	2	23	22	8	16	0	PP
SIMFEROPOL	86.92	314.7	12	42A	0	23	18	3	23	2	SKS
PULKOVO	87.18	329.8	12	43	0	23	21	3	23	9	SKKS
SODANKYLA	87.41	337.6	12	42	-2						
SCOTT BASE	87.62	172.2	12	45	0						
JERUSALEM	87.62	301.6	12	47K	2	23	42	20			
KIRUNA	89.58	338.6	12	52	-2	23	35	-5			
HELSINKI	89.74	330.7	12	54	-1	23	40	-1			
IASI	91.06	317.7	13	1	0						
BUCHAREST	92.64	315.2	13	9A	0	23	40	-27	15	54	
LWOW	92.78	320.8	13	10	1				25	48	PS
UPPSALA	93.36	331.5	13	10A	-2	24	10	-3	23	37	SKS
WARSAW	93.96	323.6	13	15A	0	24	23	4	17	4	PP
SKALSTUGAN	94.28	335.9	13	14A	-2						
RESOLUTE	94.55	10.2	13	16	-1	23	46	-38	17	2	PP
SOFIA	95.00	314.0	13	20	1				17	12	
KRAKOW	95.26	321.7	13	20	-1	24	19	-11	17	11	PP
SKALNATE PL.	95.32	320.8	13	23	2	24	12	-18	17	15	PP
ATHENS	95.85	309.3				23	53	-42			
RACIBORZ	96.31	322.1	13	26	1	24	44	5	23	15	
BELGRADE	96.45	316.6	13	26A	0	24	4	-36	14	39	
BUDAPEST	96.58	319.4	13	37	10	24	17	-24	23	45	SKS
HORSESHOE B.	97.41	38.3	13	31K	1						
COPENHAGEN	97.50	328.6	13	30A	-1	25	2	13	17	32	PP
VICTORIA	97.62	39.1	13	30	-1				36	12	
BRATISLAVA	97.62	320.5	13	32	1	24	52	2	17	31	PP
LWIRO	98.16	268.7	13	34A	0				17	35	PP
PRAGUE	98.59	322.9	13	48	12	25	5	7	24	21	SKS
HAMBURG	99.70	327.3	13	41	0				16	41	
SCORESBY SD.	99.78	349.8				25	6	-2	27	48	
CHEB	99.81	323.4	13	41	0	24	53	-15	26	31	PS
JENA	99.93	324.4	13	42	0				17	57	PP
TARANTO	100.00	313.1							26	57	
TRIESTE	100.65	318.9	13	44	-1	25	17	2	17	20	SKS
SHASTA	100.91	46.3	13	46	0				18	3	PP
WITTEVEEN	101.81	327.6	13	51	1						
BERKELEY	101.93	49.0				24	20	-66	18	3	PP
REGGIO CALA.	101.93	311.2	13	51	0	25	29	3			
MESSINA	101.97	311.3	13	49	-2	25	31	5	18	3	PP
STUTTGART	102.24	323.1	13	52A	0	24	24	-64	14 22	18	2	PP
LICK	102.56	49.4	13	55	1				18	0	PP
EBINGEN	102.63	322.6	13	53	-1						
BOLOGNA	102.68	318.5							18	33	
ROME	102.90	315.7	13	53A	-2	25	53	19	18	11	PP
DE BILT	102.96	327.4	13	54	-1	24	42	-52	18	12	PP
FLORENCE X.	103.01	317.9	13	56K	0	25	52	17	18	5	PP
RENO	103.17	46.8							18	11	PP
STRASBOURG	103.17	323.4	13	57A	1	25	42	6	18	12	PP
HUNGRY HORSE	103.42	36.8	13	58	1	24	32	-66	17	9	PP
ABERDEEN	103.69	334.1							27	32	
PAVIA	103.80	319.8	13	58A	-1				18	20	
FRESNO	104.14	49.4							18	18	PP
KING RANCH	104.68	50.8							30	18	PKKP
DURHAM	104.89	331.9							18	27	
TINEMAHA	105.22	48.7							18	22	PP
WOODY	105.22	50.2	14	6	777				18	43	PP
BUTTE	105.38	38.4				26	0	5	18	51	PP
ISABELLA	105.54	50.1	14	7	777				18	28	PP
EUREKA	105.94	45.7	14	8	777				17	25	PKP
PARIS	106.12	325.3				25	46	1	28	6	PS

CHINA LAKE	106.14	49.7	14	10	777				18	35	PP
KEW	106.19	328.7							18	35	PP
PASADENA	106.30	51.5	14	12	777	26	1	-3	18	34	PP
BOZEMAN	106.48	38.2	17	24	777						
RIVERSIDE	106.97	51.4	14	15	777				18	39	PP
CLERMONT-FD.	107.30	322.4				25	14	15	28	28	PS
PALOMAR	107.60	?.9							18	31	PP
RATHFARNHAM	107.98	332.5							19	25	PP
BOULDER CITY	108.16	48.7	18	18	777						
HERMANUS	108.41	236.2				25	8	12	28	13	PS
ALGIERS UNI.	111.67	314.0	18	21	-9				19	8	PP
RAPID CITY	112.06	36.5	14	52	-219				18	33	PKP
TUCSON	112.71	50.8	18	37	5				19	29	PP
BOULDER	112.98	41.1							18	34	
ALICANTE	113.36	317.0	18	32	-1	25	19	4			
TAMANRASSET	115.33	299.2	18	39	2				18	1	
GRANADA	116.08	317.3							19	42	PP
MALAGA	116.87	317.3	17	57	-43	29	33	245			
SCHEFFERVLLE	117.32	8.7	26	4	443						
LUBBOCK	118.73	45.6	18	45	*						
KIRKLAND LA.	120.16	20.4	18	47	0						
FAYETTEVILLE	122.38	38.9	18	52A	1				20	26	
SHAWINIGAN	123.86	16.1	18	54A	0				20	34	PP
OTTAWA	124.02	19.0	18	54	0						
BREBEUF	124.58	17.3	18	45	-10				20	43	
MORGANTOWN	127.38	25.9	19	2K	2				22	34	PKS
TACUBAYA	127.66	59.0							17	2	
HALIFAX	127.71	9.3	19	1K	0				21	2	PP
WESTON	128.10	17.0	19	3A	1						
PALISADES	128.53	20.0	19	4	1				21	9	PP
COLUMBIA	131.41	31.1	19	11	3				21	30	PP
MBOUR	138.17	300.7	19	23	2				22	12	PP
BERMUDA	139.29	14.9	19	23	0	28	36	129	22	19	PP
BALBOA HTS.	149.33	59.1	19	41	1						
SAN JUAN	151.70	26.5	19	44	1				23	27	PP
GALERAZAMBA	151.81	51.2	19	47	3				21	2	PKP2
CHINCHINA	154.68	62.4	19	50	2				23	30	PP
BOGOTA	156.20	61.4	19	55	5				20	24	PKP2
FORT FRANCE	156.97	19.9	19	53	2						
ST. LUCIA	157.67	20.1	19	53	1				20	27	
HUANCAYO	157.68	104.5	19	58	6				25	2	PP
ST. VINCENT	158.37	21.6	19	52	0				20	27	
TRINIDAD	160.55	25.1	19	54	-1				20	38	
LA PAZ	162.69	124.1	20	1	4	30	42	226	24	32	PP

APRIL 28 14.H 48.M 54.S EPICENTRE 52.59-168.52 DEPTH= 0.KM

A=-0.59792 B=-0.12148 C= 0.79230 D=-0.1991 E= 0.9800
G=-0.7764 H=-0.1577 K=-0.6101 HT= -6.4

SE= 1.92

	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	
COLLEGE	16.23	32.7	3	50	0	7	8	17			4	8	
SITKA	19.52	63.6	4	36	5	8	20	14					
PETROPAVLOVK	19.74	284.7	4	34	0								
HORSESHOE B.	28.30	78.2	5	56	-1	10	47	4					
VICTORIA	28.58	79.9	6	0	0	10	50	2					
SEATTLE	29.63	80.8	6	20	11	11	18	14					
CORVALLIS	30.53	86.8	6	20	3								
TIKSI	32.82	328.7	6	38	1								
SHASTA	33.26	92.2	6	43	2								
UKIAH	33.72	95.2	6	52	7								
HUNGRY HORSE	34.24	74.8	6	51	2	12	18	2			9	26	PCP
BERKELEY	35.10	96.0	6	57	0	12	27	-3			7	8	
RENO	35.54	91.7	7	2	2								
LICK	35.81	96.2	7	2A	-1								
RESOLUTE	35.95	25.8	7	2A	-2	12	44	1					
FRESNO	37.30	95.3	7	18	2								
BOZEMAN	37.35	77.0	7	16	0								
TINEMAHA	38.07	93.6	7	24	2								
KING RANCH	38.29	97.0	7	26	2								
WOODY	38.58	95.8	7	26	0						7	40	
ISABELLA	38.84	95.5	7	29	1						7	56	
CHINA LAKE	39.26	94.6	7	32	0						7	43	
SALT LAKE C.	39.64	84.0	7	36	1								

VLADIVOSTOK	40.02	280.9	7	38	0	13	48	4				
PASADENA	40.04	97.0	7	41	3	13	46	1			7	50
MATUSIRO	40.21	268.2	7	40A	0	13	45	-3				
RIVERSIDE	40.63	96.5	7	44	1						8	0
BOULDER CITY	40.84	92.1	7	45	0							
PALOMAR	41.38	96.7	7	50	0						7	57
BARRETT	41.96	97.3	7	55	1						8	6
RAPID CITY	42.87	74.3	8	1	-1	14	28	1			9	59 PCP
CHANGCHUN	43.52	286.0	8	7	0							
TUCSON	45.80	92.8	8	27	2							
IRKUTSK	49.94	306.7	8	56	-1							
LUBBOCK	50.36	84.5	9	1	0							
PEKING	51.22	287.7	9	7A	0							
CHIHUAHUA	51.25	92.3				16	30	4				
KIRKLAND LA.	53.18	56.7	9	22A	0							
FAYETTEVILLE	53.26	76.7	9	22	-1							
ZO-SE	54.29	276.0	9	30A	0	17	11	4				
SCORESBY SD.	54.90	13.1	9	35	0	17	22	6				
SCHEFFERVLLE	54.99	43.8									15	11
NANKING	55.07	278.6	9	35A	-1							
OTTAWA	57.23	56.8	9	50A	-1	17	46	0	10	16		
BREBEUF	58.22	55.5	9	56	-2							
SEVEN FALLS	58.46	52.6				18	1	-2				
MORGANTOWN	58.99	64.3	10	3K	-1							
APATITY	59.06	350.4	10	3	-1							
SIAN	59.39	287.4	10	17	11							
KIRUNA	59.72	356.1	10	7	-2							
PALISADES	61.26	59.4	10	19K	-1	18	39	0			14	1 PPP
PHILADELPHIA	61.36	61.0				18	43	3				
WESTON	61.61	56.7	10	22A	0	18	40	-3				
TACUBAYA	62.29	94.1				18	22	-20			10	55 PCP
COLUMBIA	62.40	69.5	10	25	-2	18	46	-7				
HALIFAX	63.74	50.3	10	35A	-1	19	6	-4			11	1 PCP
SVERDLOVSK	63.74	332.4	10	37	1							
SKALSTUGAN	64.17	359.6	10	37	-2							
HONG KONG	64.98	274.4	10	44	0	19	30	4			14	6 PPP
MERIDA	66.95	85.4				19	51	1			13	22 PP
PULKOVO	66.97	349.8	10	58	1							
UPPSALA	67.81	356.7	11	1	-1							
MOSCOW	69.91	344.6	11	15	0							
COPENHAGEN	72.10	359.4	11	30	2							
DURHAM	72.46	7.9	11	31	1							
BERMUDA	72.61	59.4	11	31	0	20	55	-1			25	36 SS
NAMANGAN	73.27	316.7	11	37	2							
RATHFARNHAM	73.44	11.0	11	37	1							
HAMBURG	74.21	0.9	11	43	3							
WITTEVEEN	74.89	3.0	11	49K	5							
POTSDAM	75.40	359.0	11	48	1							
DE BILT	75.55	4.0	11	48	0	21	36	7				
SHILLONG	75.64	293.2	11	46	-2							
KEW	75.84	7.6	11	50	0							
BENSBERG	76.76	2.8	11	57A	2							
JENA	76.86	359.9	11	57	1						15	9 PP
KRAKOW	77.49	354.4	12	0	1	21	50	0				
RACIBORZ	77.55	355.6	12	0	0							
PRAGUE	77.69	358.1	12	0A	0	21	54	2			22	35 PS
PARIS	78.69	6.1	12	7A	1	22	7	4			22	21 SKS
KARLSRUHE	78.75	2.1	12	8A	2							
STUTTGART	79.00	1.5	12	8	1	22	29	23				
DEHRA DUN	79.16	306.1	12	12	4						22	38
STRASBOURG	79.16	2.5	12	10A	2	22	17	9			15	12 PP
TUBINGEN	79.24	1.6	12	10	2							
BRATISLAVA	79.51	356.2	12	14	4						12	28
EBINGEN	79.59	1.7	12	11	1						12	24
IASI	79.64	348.9	12	10	0						12	23
MAKHACH-KALA	79.87	334.0	12	13	1							
LAHORE	79.93	309.5	12	11K	-1	22	28	12				
BASLE	80.21	2.7	12	15	1							
BESANCON	80.43	3.8	12	18	3							
NEUCHATEL	80.72	3.1	12	18	2							
CLERMONT-FD.	81.76	5.9	12	24	2							
TRIESTE	82.12	358.4	12	25	1	22	35	-3				
BUCHAREST	82.56	349.5	12	27A	1	23	0	17			22	33
PAVIA	82.59	1.7	12	30	4							
SAN JUAN	82.88	69.2	12	28	0	22	44	-2				
BOLOGNA	83.29	0.1	12	34	4						23	25
MONACO	84.00	3.0	12	36	3							
FLORENCE X.	84.01	0.2	12	35	2	23	12	15				

QUETTA	84.45	314.2	12	36A	0	23	4	2			15	51 PP
ROME	85.89	359.3	12	44A	1	23	36	20				
KARACHI	88.15	312.0	12	55A	1							
MESSINA	89.52	356.8									14	4
GRANADA	89.64	12.0	13	12K	11							
MALAGA	89.99	12.7	13	3A	0							
POONA	91.05	302.8	13	9	1							
KSARA	91.36	339.9	13	11	2	24	11	4			16	51 PP
RIVERVIEW	92.97	212.7				24	23	2				
TAMANRASSET	104.78	5.7									18	12 PP
MBOUR	108.92	29.2									23	57
LWIRO	127.80	337.9	19	10A	2							
PRETORIA	150.39	328.4	19	54	6							

APRIL 29 4.H 30.M 6.S EPICENTRE 52.40-168.80 DEPTH= 0.KM

A=-0.60111 B=-0.11902 C= 0.79026 D=-0.1942 E= 0.9810
G=-0.7752 H=-0.1535 K=-0.6128 HT= -6.3

SE= 1.93

	DELTA DEG.	AZ. DEG.	P M	S	O-C S	S M	S	O-C S	*PP M	S	SUPP. M	S	
COLLEGE	16.48	32.6	3	49	-3	7	2	8			4	7	
SITKA	19.76	63.1	4	34	2	8	17	9					
HORSESHOE B.	28.51	77.7	5	57	0								
VICTORIA	28.78	79.4	6	0	1	10	49	2					
SEATTLE	29.84	80.3	6	11	2	11	6	2					
CORVALLIS	30.72	86.3	6	18	2								
TIKSI	32.89	328.9	6	35	0								
SHASTA	33.43	91.7	6	40	0								
HUNGRY HORSE	34.46	74.4	6	48	-1						17	8	SCS
BERKELEY	35.25	95.5	6	54	-2	12	31	3					
RENO	35.71	91.2	7	2	2								
LICK	35.97	95.7	7	1A	-1						7	42	
RESOLUTE	36.20	25.6	7	2K	-2	12	29	-14			15	40	SS
BUTTE	36.47	77.0	7	11	5	12	51	4			8	41	PP
FRESNO	37.46	94.8	7	17	3								
BOZEMAN	37.56	76.6	7	15	0								
TINEMAHA	38.23	93.1	7	21	0						7	39	
WOODY	38.73	95.3	7	24	-1								
ISABELLA	39.00	95.0	7	27	0						7	52	
TUKUBASAN	39.10	266.3	7	23	-5	13	26	-1			15	37	
CHINA LAKE	39.42	94.1	7	33	2						7	49	
SALT LAKE C.	39.84	83.6	7	36	2								
VLADIVOSTOK	39.89	281.0	7	34	-1								
MATUSIRO	40.03	268.2	7	37	1	13	41	0					
PASADENA	40.19	96.5				13	50	7			7	39	
RIVERSIDE	40.78	96.0	7	35	-7						7	41	
BOULDER CITY	41.01	91.6	7	46	2								
PALOMAR	41.53	96.3	7	50	2						7	56	
BARRETT	42.11	96.8	7	54	1						8	17	
RAPID CITY	43.09	73.9	8	0	-1								
CHANGCHUN	43.41	286.0	8	3	0								
TUCSON	45.97	92.4	8	23	-1								
LUBBOCK	50.55	84.1	9	1	1								
PEKING	51.11	287.6	9	3	-1								
FAYETTEVILLE	53.47	76.4	9	19	-3								
ZO-SE	54.14	275.9	9	27A	1	17	7	6					
NANKING	54.92	278.5	9	32A	0								
SCHEFFERVLLE	55.25	43.5	9	32	-3						9	46	
OTTAWA	57.48	56.6	9	49	-2								
SHAWINIGAN	58.17	53.9	9	53K	-2				10	7			
BREBEUF	58.48	55.3	9	56K	-1								
MORGANTOWN	59.23	64.0	10	1K	-2								
KIRUNA	59.90	356.0	10	5A	-2								
SODANKYLA	59.99	353.2	10	6	-2				10	27	10	50	PCP
PALISADES	61.51	59.1	10	17	-1	18	37	-1			12	13	PP
WESTON	61.86	56.4	10	19K	-2								
COLUMBIA	62.63	69.2	10	25	-1								
SVERDLOVSK	63.83	332.3	10	34	0								
SKALSTUGAN	64.36	359.5	10	35	-2								
PULKOVO	67.13	349.6	10	56	1								
HELSINKI	67.24	352.6	10	57	1								
UPPSALA	67.99	356.5	10	59A	-1								
MOSCOW	70.05	344.5	11	10	-3								
FRUNSE	70.49	315.8	11	16	0								

BERMUDA	72.86	59.2	11	31	1	20	55	1	25	32 SS
NAMANGAN	73.29	316.5	11	33	1					
RATHFARNHAM	73.66	10.8	11	35	0					
HAMBURG	74.40	0.8	11	41	2					
SHILLONG	75.55	293.0	11	42	-3					
POTSDAM	75.59	358.8	11	47	1					
DE BILT	75.75	3.8	11	44	-3	21	24	-3		
KEW	76.05	7.4	11	47	-1					
BENSBERG	76.96	2.6	11	54K	1					
JENA	77.05	359.8	11	54	0				15	19 PP
CHATRA	77.17	297.2	11	51	-4					
KRAKOW	77.66	354.3	11	58	1	21	49	2	22	2 SKS
PRAGUE	77.87	357.9	12	0	2				12	16
PARIS	78.90	5.9	12	6	2	22	15	14	22	23 SKS
KARLSRUHE	78.94	1.9	12	6K	2				12	17
STUTTGART	79.20	1.3	12	6	0	22	29	25	12	27
STRASBOURG	79.36	2.3	12	6	-1				22	26 SCS
TUBINGEN	79.44	1.4	12	8	1					
BRATISLAVA	79.69	356.0	12	10	2					
EBINGEN	79.78	1.5	12	10	1					
IASI	79.80	348.7	12	9	0				12	21
BASLE	80.40	2.5	12	4	-8					
BESANCON	80.63	3.6	12	18	5				13	23
NEUCHATEL	80.92	2.9	12	15	0					
SIMFEROPOL	81.05	343.7	12	18	2					
TIFLIS	81.85	335.3	12	21	1					
CLERMONT-FD.	81.97	5.7	12	22	2					
TRIESTE	82.31	358.2	12	23	1	22	43	7		
BUCHAREST	82.71	349.3	12	24	0	22	33	-7		
BELGRADE	82.84	353.4	12	26A	1	23	4	23		
SAN JUAN	83.11	68.9	12	24	-2					
FLORENCE X.	84.20	360.0	12	34K	2				13	5
QUETTA	84.45	314.0	12	34	1	23	1	4	15	47 PP
ROME	86.08	359.0	12	42	1	23	30	17	13	14
TARANTO	87.36	355.4	12	39	-8	24	17	51		
POONA	91.00	302.6	13	7	2					
BOMBAY	91.22	303.6				24	1	0		
KSARA	91.48	339.7	13	8	1					
RIVERVIEW	92.72	212.4	12	10K	-62				17	57
TAMANRASSET	104.98	5.4							18	10 PP
PRETORIA	150.46	327.7	19	52	7					
KIMBERLEY	154.31	331.6	19	55	4					

APRIL 29 20.H 55.M 58.S EPICENTRE -8.78 107.09 DEPTH= 0.KM

A=-0.29040 B= 0.94481 C=-0.15169 D= 0.9559 E= 0.2938
G= 0.0446 H=-0.1450 K=-0.9884 HT= 6.7

SE= 2.84

	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	2.60	354.4	0	49A	5	1	20	3				
PERTH	24.44	161.8	5	25	3						5	57 PP
BAGUIO CITY	28.38	28.1	6	12	14							
HONG KONG	31.66	12.6	6	29	2	11	42	6			8	12
MADRAS	34.39	308.7	7	2	11						9	36
SHILLONG	37.22	336.9	7	13K	-2	12	56	-7			8	33 PP
BOKARO	38.51	327.7	7	29	3						13	27
CHATRA	40.33	331.9	7	37	-4	13	51	1				
ZO-SE	41.89	18.2	7	54	0	14	16	3				
NANKING	42.12	14.9	7	56A	0	14	22	6				
POONA	42.57	309.8	8	0	1	14	23	0			9	45 PP
BOMBAY	43.57	309.3	8	9	2	14	47	10			10	0 PP
MELBOURNE	44.74	136.3	8	16	-1							
RABAUL	45.00	87.2	8	22	3						10	30 PP
BRISBANE	47.14	119.4	8	35	-1	15	16	-13				
RIVERVIEW	47.52	128.3	8	40A	1	15	29	-5			10	32 PP
DEHRA DUN	47.85	325.5	8	47	5	15	44	5			19	1 SS
PEKING	49.29	9.2	8	52A	-1	15	59	0				
LAHORE	50.90	323.5	9	1	-4	16	21	0				
KARACHI	51.96	312.6	9	6	-7	16	33	-3				
MATUSIRO	53.75	31.1	9	22A	-4	16	56	-4				
QUETTA	54.66	316.8	9	32A	-1	17	13	1			11	45 PP
VLADIVOSTOK	56.38	21.7	9	43	-3							
TANANARIVE	58.45	253.2									12	0 PP

FRUNSE	59.34	332.7	10	4	-2	18	11	-3							
IRKUTSK	60.85	358.1	10	15	-2	18	36	2							
TERRE ADELIE	62.45	165.4	10	19	-8										
PETROPAVLOVK	75.57	29.2	11	47	-1	21	31	2							
SVERDLOVSK	75.66	335.7	11	48	-1	21	30	0							
TIFLIS	75.90	316.9	11	50	0	21	31	-2							
LWIRO	78.09	269.5	12	5K	3							12	43		
KIMBERLEY	79.12	242.4	12	7	-1										
JERUSALEM	79.48	304.6	12	10	0										
KSARA	79.57	306.7	12	13	2	22	18	6				16	24	PCS	
TIKSI	81.54	6.8	12	20	-1										
HERMANUS	83.34	236.3										23	2		
SIMFEROPOL	84.33	317.0	12	35	0	23	4	3							
MOSCOW	85.92	327.9	12	41	-2	23	23	7							
BUCHAREST	89.70	314.9	13	6	5	23	57	5				13	54		
PULKOVO	90.94	330.5	13	9	2										
APATITY	91.90	338.4										24	26		
HELSINKI	93.65	330.2	13	20	0										
SODANKYLA	94.38	337.5	13	22	-1										
WARSAW	94.47	322.0										17	23	PP	
KRAKOW	94.84	319.7										13	19		
MESSINA	96.56	307.6										18	3		
KIRUNA	96.80	337.6	13	33	-1	24	12	-42							
UPPSALA	97.25	329.4				24	16	-41				17	35	PP	
PRAGUE	98.37	319.4	17	54	253							18	7		
ROME	99.22	311.1										18	14		
COPENHAGEN	99.80	325.0				24	32	-47							
FLORENCE K.	100.22	312.9										18	26		
JENA	100.22	320.2	17	57	247							18	18	PP	
STUTTGART	101.74	318.0	18	8	252							18	27	PP	
PAVIA	101.74	314.3										18	28		
STRASBOURG	102.69	317.8				26	2	19				18	20	PP	
BESANCON	103.93	316.5										18	32	PP	
TAMANRASSET	103.96	291.3				26	9	15				18	41	PP	
PARIS	106.17	318.2										18	54	PP	
ALGIERS UNI.	106.43	305.7										19	16	PP	
RESOLUTE	112.95	6.2	18	39	0	27	20	116							
HUNGRY HORSE	127.57	33.6	19	8	0										
KING RANCH	129.82	50.9	19	19	7										
TINEMAHA	130.32	48.2	19	20	7										
WOODY	130.36	50.1	19	14	1							21	34	PP	
ISABELLA	130.67	50.0	19	20	7							22	4		
BOZEMAN	130.79	34.9	19	19	5										
EUREKA	130.92	44.4	19	15	1										
CHINA LAKE	131.26	49.5	19	21	6							22	43	SKP	
PASADENA	131.44	51.8	19	22	7							21	42	PP	
RIVERSIDE	132.11	51.7	19	21	5							22	45	SKP	
SALT LAKE C.	133.05	40.8	19	22	4										
BOULDER CITY	133.26	48.1	19	23	5										
RAPID CITY	136.08	31.6	19	28	4							22	2	PP	
TUCSON	137.84	50.9										22	15	PP	
SHAWINIGAN	142.37	359.8	19	38	3										
HALIFAX	143.39	348.8	19	35A	-2							19	42		
BREBEUF	143.41	0.8	18	32	-65										
OTTAWA	143.44	3.3	19	38	1										
LUBBOCK	143.67	43.0	19	36	-1										
FAYETTEVILLE	146.62	32.3	19	39	-3										
PALISADES	147.89	1.4	19	48	4							22	21	PP	
MORGANTOWN	148.65	10.5	19	51K	6										
WASHINGTON	149.78	6.5	19	53	6										
COLUMBIA	153.82	15.4	19	59	6										
LA PAZ	154.44	190.7	19	42	-12							23	50	PP	
BERMUDA	155.31	343.1	20	4	9							24	50	PP	
HUANCAYO	159.16	173.3	20	10	10										
BOGOTA	175.71	164.4	20	18	6							26	1	PP	

MAY 1 23.H 28.M 13.S EPICENTRE 52.52-170.99 DEPTH= 20.KM

A=-0.60359 B=-0.09572 C= 0.79153 D=-0.1566 E= 0.9877
G=-0.7818 H=-0.1240 K=-0.6111 HT= -6.3

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
COLLEGE	17.13	34.8	4	1	2	7	27	20				

PETROPAVLOVK	18.30	284.0	4	13	0	7	41	7					
SITKA	20.90	63.3	4	42	0	8	35	6			5	18	
HORSESHOE B.	29.79	76.7	6	7	0	11	5	5			9	9	PCP
VICTORIA	30.07	78.3	6	9	0	11	7	2					
SEATTLE	31.13	79.2	6	21A	3								
CORVALLIS	32.04	84.9	6	31	5								
SHASTA	34.77	90.1	6	50	0						7	4	
MINERAL	35.46	90.0	6	59	3								
HUNGRY HORSE	35.71	73.3	6	59	1	12	35	2			9	26	PCP
BERKELEY	36.59	93.8									7	18	
RESOLUTE	36.67	25.6	7	6A	0	13	12	25			9	28	PCP
RENO	37.05	89.6	7	9	0								
LICK	37.31	94.0	7	9K	-3						7	25	
BUTTE	37.75	75.9	7	15	0	13	3	-1			8	51	PCP
TUKUBASAN	37.77	264.3	7	14A	-1								
VLADIVOSTOK	38.55	279.4	7	21	-1								
MATUSIRO	38.70	266.3	7	23A	0	13	14	-4			9	35	PCP
FRESNO	38.80	93.1	7	23	-1								
BOZEMAN	38.83	75.4	7	24	0								
EUREKA	39.43	86.8	7	28	-1	13	19	-10					
TINEMAHA	39.57	91.5	7	31	1	13	37	6	7	43	13	22	SCP
KING RANCH	39.78	94.8	7	33	1				7	45	13	22	SCP
WOODY	40.08	93.6	7	33K	-2				7	47	9	0	PCP
ISABELLA	40.34	93.3	7	35	-2				7	49	13	24	SCP
PASADENA	41.53	94.8	7	46	-1	14	1	0	7	59	13	28	SCP
RIVERSIDE	42.12	94.3	7	51	0	14	6	-3	8	4	13	32	SCP
BOULDER CITY	42.35	90.0	7	53	0								
PALOMAR	42.88	94.5	7	56	-2				8	9	13	33	SCP
BARRETT	43.45	95.1	8	0	-2				8	15	13	35	SCP
RAPID CITY	44.34	72.7	8	9	0	14	42	0			13	42	SCP
BOULDER	45.55	78.6									8	20	
TUCSON	47.31	90.7	8	32	-1	15	26	2			11	7	
IRKUTSK	48.76	305.5	8	43	-1								
LUBBOCK	51.87	82.6	9	7	-1								
ZO-SE	52.80	274.2	9	15	0	16	45	5					
NANKING	53.58	276.8	9	19	-2	16	53	2					
KIRKLAND LA.	54.47	55.4	9	28	1								
FAYETTEVILLE	54.74	75.0	9	29A	0								
SCHEFFERVLLE	56.08	42.5	9	36	-3								
OTTAWA	58.52	55.3	9	56A	0								
SHAWINIGAN	59.17	52.7	10	2	1								
BREBEUF	59.50	54.0	10	1	-2								
KIRUNA	59.67	355.0	10	4A	0								
SEVEN FALLS	59.70	51.1	10	7	3								
SODANKYLA	59.71	352.2	10	4	0						10	50	PCP
MORGANTOWN	60.38	62.7	10	9	0								
WASHINGTON	62.46	61.4	10	46	23								
PALISADES	62.59	57.8	10	24	0								
WESTON	62.90	55.1	10	21	-5								
CANTON	63.43	273.8	10	29	0	19	3	4					
HONG KONG	63.47	272.5	10	29A	-1								
CHAPEL HILL	63.54	65.0	10	20	-10								
COLUMBIA	63.84	67.8	10	32	0								
SKALSTUGAN	64.22	358.4	10	35	0						11	9	PCP
HALIFAX	64.94	48.8	10	39A	0								
HELSINKI	66.94	351.4	10	51	-1						13	19	PP
UPPSALA	67.77	355.3	10	57	0								
FRUNSE	69.46	314.4	11	8	0								
MOSCOW	69.56	343.2	11	7	-1								
COPENHAGEN	72.13	358.0	11	24	0								
NAMANGAN	72.27	315.1									12	26	
RATHFARNHAM	73.78	9.5	11	31A	-3								
BERMUDA	73.94	57.7				21	6	2			25	52	SS
SHILLONG	74.27	291.4	11	35A	-1								
HAMBURG	74.28	359.4	11	39	3								
WITTEVEEN	75.02	1.5	11	33A	-8								
CHATRA	75.92	295.6	11	45A	-1								
BENSBERG	76.89	1.2									11	52	
JENA	76.91	358.3	11	51	0								
KRAKOW	77.39	352.8	11	54	0								
RACIBORZ	77.49	354.0	11	54	-1								
PRAGUE	77.69	356.4	11	56	0						13	14	
CHEB	77.74	357.8	11	57	1						12	17	
KARLSRUHE	78.85	0.4	12	3A	1						12	11	
PARIS	78.90	4.4	12	3A	1	22	15	17			15	8	PP
STUTTGART	79.09	359.9	12	5A	2	22	19	19			12	13	PCP
STRASBOURG	79.28	0.8	12	6A	2						12	38	
TUBINGEN	79.33	360.0	12	6	1								
BRATISLAVA	79.46	354.5	12	8A	3						12	27	

EBINGEN	79.68	0.0	12	8A	1						
SIMFEROPOL	80.54	342.2	12	12	1	22	30	15			
BESANCON	80.58	2.1	12	8	-3					12	44
TIFLIS	81.16	333.7	12	16	2	22	27	6			
CAMPULUNG	81.63	348.6								8	27 PG
CLERMONT-FD.	81.96	4.2	12	21	2						
QUETTA	83.40	312.4	12	27A	1	22	49	5		22	46 SKS
FLORENCE X.	84.06	358.4	12	30	1	23	5	14		24	0 PS
SAN JUAN	84.31	67.3	12	31	0						
POONA	89.80	300.8	12	57	0						
MALAGA	90.37	10.7	13	5	5						
ALGIERS UNI.	90.93	4.8	13	2	-1						
RIVERVIEW	92.12	210.7	13	18A	10						
TAMANRASSET	104.97	3.3	14	8	2					18	33 PP
LWIRO	127.26	334.8	19	4	2						
PRETORIA	149.61	324.2	19	45	3					19	49
PIETERMZBURG	152.22	317.1	19	53A	7						
KIMBERLEY	153.53	327.6	19	48	0						

MAY 2 3.H 55.M 35.S EPICENTRE 72.04 -67.65 DEPTH= 0.KM

A= 0.11799 B=-0.28692 C= 0.95066 D=-0.9249 E=-0.3803
G= 0.3616 H=-0.8792 K=-0.3102 HT=-12.2

SE= 1.94

	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	
RESOLUTE	8.20	301.4	1	55A	-6	3	20	-14					
SCORESBY SD.	14.49	74.0	3	20	-6	5	47	-21					
SCHEFFERVLLE	17.29	178.1	5	10K	68								
REYKJAVIK	18.33	92.2	4	19	4	8	5	29					
AKUREYRI	18.44	85.1									4	40	
VIK	19.73	91.0									5	5	
KIRKLAND LA.	24.64	200.2	5	19A	-2	9	39	0					
SEVEN FALLS	25.04	185.1	5	24	-1	9	52	6					
SHAWINIGAN	25.68	188.2	5	29A	-2						10	8	
SASKATOON	26.21	241.4	5	41	6						9	50	
BREBEUF	26.77	189.4	5	38	-3	10	24	10					
OTTAWA	26.99	192.6	5	41A	-2	10	25	7					
HALIFAX	27.57	173.7	5	47	-1	10	28	1					
KIRUNA	27.94	54.1	5	51K	0	10	35	2					
COLLEGE	28.09	296.7	5	52	-1	10	27	-8			9	5	PCP
SKALSTUGAN	29.01	65.2	6	1	0						6	52	PP
BANFF	29.59	251.1	6	4A	-2	11	34	35			6	35	
BUFFALO L.	29.74	196.4	6	6	-1								
WESTON	29.79	185.5	6	7	-1	11	26	23					
SODANKYLA	29.81	50.9	6	8	0	11	3	0					
ABERDEEN	29.87	84.7				11	3	-1			6	58	PP
SITKA	30.62	277.0	6	15	0	11	34	18			7	7	PP
APATITY	31.26	46.6				11	20	-6			7	17	PP
PALISADES	31.26	189.2	6	19A	-2	11	24	-2			7	4	PP
CLEVELAND	31.40	200.2	6	21	-1						11	28	
HUNGRY HORSE	31.68	246.9	6	23	-2						7	5	
PENNSYLVANIA	31.73	194.8	6	29	4	11	34	1					
RATHFARNHAM	31.83	92.7	6	25K	-1						11	33	
CHICAGO CGS.	31.88	208.9	6	25	-1	11	17	-19			11	41	
DURHAM	32.04	86.8	6	29	1	11	35	-3			7	36	PP
PITTSBURGH	32.27	197.7	6	26	-4	11	43	2					
PHILADELPHIA	32.39	190.8	6	34	3	11	46	3			7	28	PP
RAPID CITY	32.76	230.8	6	34	0						8	58	PCP
MORGANTOWN	33.07	197.6	6	36	-1								
BOZEMAN	33.30	241.4	6	38	-1	11	49	-8					
BUTTE	33.39	243.4	6	37	-2	11	38	-21			7	39	PP
HORSESHOE B.	33.49	257.9	6	39K	-1						14	29	
UPPSALA	33.54	65.6	6	40	-1	11	58	-3					
WASHINGTON	33.56	193.4	6	40	-1	12	2	1					
VICTORIA	34.30	257.3	6	45K	-2						7	47	
SEATTLE	34.74	255.4	6	50A	-1	12	40	20			7	47	PP
KEW	35.26	88.7	6	56A	0	12	32	4					
HELSINKI	35.29	59.8	6	55	-1								
COPENHAGEN	35.54	73.7	6	59	1	12	37	5			8	19	PP
TIKSI	36.17	351.2	7	4A	1	12	45	3			8	31	PP
WITTEVEEN	36.25	81.2	7	5K	1								
DE BILT	36.41	83.1	7	7	2	12	38	-8					
HAMBURG	36.61	77.7	7	9A	2	12	32	-17			7	41	
CHAPEL HILL	36.67	195.6	7	6	-1								

PULKOVO	37.04	56.3	7	12K	1	12	59	4	8	35 PP
BOULDER	37.10	231.0							7	11
CORVALLIS	37.81	254.3	7	18A	1				19	34
SALT LAKE C.	38.07	239.2	7	19	0	13	14	3		
PARIS	38.47	88.2	7	23	0	13	15	-2	8	58 PP
FAYETTEVILLE	38.53	215.5	7	21A	-2	13	18	0		
COLUMBIA	38.75	197.9	7	25	0	13	22	1	8	40 PP
JENA	39.40	78.4	7	30	0	13	29	-2	8	53 PP
BERMUDA	39.75	176.1	7	33	0	13	31	-5	8	48 PP
KARLSRUHE	40.12	82.6	7	38A	2	13	49	7	9	23 PP
STRASBOURG	40.30	83.5	7	39A	1	13	44	-1	9	23 PP
CHEB	40.39	78.3	7	37	-1	13	50	4	17	43 SSS
EUREKA	40.39	243.1	7	39	1				9	21 PP
STUTTGART	40.57	82.1	7	41A	1	13	52	3	8	56 PP
TUBINGEN	40.75	82.4	7	42	1					
BESANCON	40.93	86.1	7	44	1				9	35 PCP
PRAGUE	41.02	76.5	7	44	0	13	51	-4	9	39 PCP
ERINGEN	41.03	82.7	7	45A	1					
WARSAW	41.06	69.4	7	45	1	13	59	3	17	2 SS
SHASTA	41.09	250.8	7	43A	-1				20	43
BASLE	41.18	84.4	7	40	-5				16	43
MINERAL	41.18	249.8	7	45A	0				9	45 PCP
CLERMONT-FD.	41.37	89.8	7	47	0	14	4	4		
RENO	41.42	247.4	7	47	0					
NEUCHATEL	41.45	85.4	7	48	1	14	7	5	9	34
RACIBORZ	42.14	73.3	7	53	0				10	30
MOSCOW	42.46	53.9	7	55	-1	14	16	-1		
LUBBOCK	42.48	224.0	7	56	0	14	19	2		
KRAKOW	42.68	71.8	7	57	0	14	22	2	9	40 PP
UKIAH	42.78	250.8	7	59	1				9	51 PP
OROPA	43.01	85.4	8	6	6	14	38	13	11	4
TINEMAHA	43.28	244.4	8	3	1				9	53 PP
BOULDER CITY	43.36	240.1	8	3	0				9	50 PP
BRATISLAVA	43.51	75.5	8	4	0	14	36	4	10	7 PP
BERKELEY	43.67	249.1	8	6A	1	14	35	1	9	53 PCP
PAVIA	43.77	84.5	8	10	4	14	44	8	18	32 SS
LICK	43.99	248.2	8	9A	1				9	55 PCP
FRESNO	43.99	245.9	8	8	0	14	40	1		
LISBON	44.03	106.3	7	56K	-12					
LWOW	44.07	68.6	8	9	0	14	43	3	10	8 PP
SANTA CLARA	44.07	248.5	8	8A	-1				15	2
MONACO	44.54	87.0	8	13	1					
ISABELLA	44.66	243.9	8	14A	1					
WOODY	44.73	244.4	8	14A	0				9	55 PP
TRIESTE	44.76	80.1	8	13	-1	14	52	2	9	56 PP
BOLOGNA	45.05	83.0	8	32	16					
ZAGREB	45.28	78.0	8	26	8					
KING RANCH	45.32	245.1	8	19	0				10	0 PP
FLORENCE X.	45.68	83.5	8	16	-5	15	13	10	8 49	10 2 PP
HAYFIELD	45.71	239.9	8	23	1					
TUCSON	45.85	233.9	8	23	0	15	27	21		
RIVERSIDE	45.92	241.9	8	24A	1				10	25 PP
PASADENA	45.99	242.9	8	25A	1	15	5	-3	10	13 PP
MAGADAN	46.02	333.9	8	24	0	15	9	1		
PALOMAR	46.39	241.1	8	27A	0					
SVERDLOVSK	46.49	36.5	8	27	-1	15	19	4	10	19 PP
BARRETT	46.97	240.6	8	32A	0	15	39	17	10	25 PP
ALICANTE	47.00	97.7	8	33	1	15	23	1	13	59 PCS
GRANADA	47.12	101.5	8	35A	2	15	32	8	10	25 PP
MALAGA	47.30	102.5	8	37K	3				10	5 PCP
IASI	47.46	67.2	8	36	1				9	17
BELGRADE	47.53	74.6	8	37	1				10	39 PP
ROME	47.76	83.4	8	37A	-1	15	42	9	10	27 PP
ALMERIA	47.77	100.5	8	36	-2					
CHIHUAHUA	48.18	227.2	8	39K	-2				23	26
ALGIERS UNI.	49.54	95.1	8	52	0	16	3	5	10	51 PP
BUCHAREST	49.57	70.0	8	52	0	16	4	6	12	21
RELIZANE	49.71	98.0	8	53	0				10	49 PP
SOFIA	50.32	73.3	7	55	-63					
PETROPAVLOVK	50.99	325.9	9	2	-1				17	26
SIMFEROPOL	51.36	62.9	9	6	1	16	27	4		
YALTA	51.80	63.1	9	10	1					
MESSINA	52.09	82.5	9	13A	2	16	38	5	11	16 PP
MERIDA	52.64	206.1	9	21A	6				16	49
SAN JUAN	53.67	178.2	9	22	-1					
SOTCHI	54.14	58.8	9	27	1	17	4	3	17	41
VERA CRUZ	55.36	213.2	9	31	-4	17	7	-10	19	43
TACUBAYA	55.71	216.7	9	37A	-1	17	27	5	11	48 PP

IRKUTSK	55.86	6.0	9	37	-2	17	27	3	
KABANSK	56.15	4.2	9	40	-1	17	32	4	
MAKHACH-KALA	56.71	52.6	9	44	-1	17	37	2	
TIFLIS	57.21	55.4	9	49	1	17	47	5	
FORT FRANCE	57.42	172.5	9	48	-2				
COMITAN	57.62	208.1				17	46	-1	21 7
KYAKHTA	57.82	4.5	9	51	-2	18	1	11	
ST. LUCIA	58.12	172.4	9	54	-1				
KIROVOBAD	58.54	54.5	9	59	1	18	1	2	
EREVAN	58.58	56.3	9	59	1				16 35
ST. VINCENT	58.97	172.7	9	59	-2				
GORIS	59.69	55.0	10	6	0	18	18	4	
SAN SALVADOR	59.70	204.5							10 9
BAKU	59.74	51.6	10	9	3	18	25	10	11 31
KSARA	62.21	66.2	10	24K	1	18	52	6	12 43 PP
FRUNSE	62.34	30.6	10	25A	1	18	56	8	
KIZYL-ARVAT	62.52	46.8	10	27	2	18	59	9	20 23 SCS
TASHKENT	62.96	35.3	10	27	-1	19	0	4	
TAMANRASSET	63.33	98.7	10	30A	0	19	5	5	12 52 PP
BALBOA HTS.	63.45	193.2	10	30	-1				
NAMANGAN	63.71	33.4	10	35	2	19	5	0	
ASHKABAD	64.02	45.4	10	34	-1				
CHANGCHUN	64.07	349.6	10	34	-1				
VLADIVOSTOK	64.32	344.2	10	35	-2				17 39
MBOUR	64.84	124.1	10	40	0				11 18 PCP
BAIRAM-ALI	65.17	42.3	10	43	1	19	30	7	
STALINABAD	65.56	36.4	10	37	-8	19	37	9	
PEKING	68.20	356.8	11	2	!				
MATUSIRO	70.19	338.1	11	13	-1				12 5
QUETTA	73.33	40.1	11	33	1	21	4	5	11 51 PCP
LAHORE	73.36	33.3	11	33	0	21	5	5	
NANKING	76.10	354.4	11	48	0	21	32	2	
ZO-SE	76.96	352.2	11	54	1	21	43	4	
SHILLONG	81.63	18.6	12	19A	1				
HUANCAYO	84.06	187.6	12	34	3				15 49 PP
CANTON	85.13	359.1	12	38	2				
BOMBAY	85.44	37.2							12 40
HONG KONG	85.90	358.3	12	41A	1	23	15	4	
POONA	85.99	36.3	12	41	1				
LA PAZ	88.32	180.5	12	54	2				
BAGUIO CITY	91.58	352.1	13	7	0				
LWIRO	94.12	84.6	13	20	1				13 29
BRISBANE	130.19	310.7	19	12	3	26	5	-10	
TONGARIRO	135.01	281.3	19	17	-1				
RIVERVIEW	136.72	310.5	19	48A	27				
WELLINGTON	137.14	280.8	19	21	-1				
MELBOURNE	141.95	316.2	19	26	-5				
TERRE ADELIE	168.63	282.9	20	1	-4				

MAY 2 10.H 34.M 19.S EPICENTRE -55.86-123.53 DEPTH= 0.KM

A=-0.31140 B=-0.46996 C=-0.82594 D=-0.8336 E= 0.5524
G= 0.4562 H= 0.6885 K=-0.5638 HT= -7.5

SE= 3.15

	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	
GEBBIES PASS	41.50	259.2	7	54	4								
WELLINGTON	41.90	263.5	7	52	-2	14	14	1			17	16	SS
TONGARIRO	42.89	266.4	8	0	-2								
COBB RIVER	43.18	262.2									8	11	
KARAPIRO	43.78	267.7	8	5	-4								
ONERAHI	45.96	268.9	8	30	4								
LA PAZ	57.30	69.8	9	51	-1	17	48	1			21	31	SS
HUANCAYO	57.39	60.0	9	53	1	17	58	10					
RIVERVIEW	60.27	252.8	10	13A	1	18	31	5			12	31	PP
MELBOURNE	60.48	245.5	10	12	-2								
NOUMEA	60.66	273.2	10	14	-1								
BRISBANE	64.13	258.8	10	35	-3	13	57	-18					
CHINCHINA	72.22	50.9	11	27	-2	20	53	2					
BOGOTA	72.59	52.5	11	31	0	20	59	4					
BALBOA HTS.	74.15	45.5	11	38	-2	21	15	2					
GALERAZAMBA	77.57	48.7				21	57	7					
TACUBAYA	77.75	23.4	12	7	7	21	25	-27			1	7	PP
PERTH	79.01	228.2				22	1	9					

MERIDA	81.74	31.8						29	43	
HERMANUS	84.62	149.8				22	59	-4		
CHIHUAHUA	85.46	15.3						19	1	
FORT FRANCE	87.47	59.1	12	53	3					
SAN JUAN	88.31	53.2	13	9	14					
BARRETT	88.38	5.8	12	52	-3					
TUCSON	88.43	10.7	12	54	-1	23	46	6		
PALOMAR	89.04	5.6	12	56	-2					
HAYFIELD	89.47	6.6	13	7	7					
RIVERSIDE	89.65	5.1	12	59	-2	23	38	-13		
PASADENA	89.77	4.4	13	0	-1	23	35	-17	29	29 SS
KING RANCH	90.89	3.1	13	5	-2					
LUBBOCK	90.99	18.0	13	5	-2					
ISABELLA	91.26	4.1	13	7	-1				13	23
WOODY	91.29	3.8	13	7	-1					
TINEMAHA	92.67	4.2							13	17
BERKELEY	93.37	1.0				24	24	0	30	47 SS
PAYETTEVILLE	94.95	23.5	13	38	13					
EUREKA	95.19	5.9	13	26	0					
RAPID CITY	101.04	14.8							18	7 PP
BERMUDA	101.15	47.6				24	29	-61	17	59 PP
PALISADES	105.28	36.7							33	40 SS
MBOUR	111.07	95.5				26	41	85	26	12 SKKS
LWIRO	117.82	148.4	19	0	12					
COLLEGE	121.83	348.1	18	53	-3				19	20
MATUSIRO	123.70	286.7							14	34 P
TAMANRASSET	130.22	110.2	19	5	-7				21	23 PP
RESOLUTE	131.65	9.8	19	17	2				39	4 SS
VLADIVOSTOK	131.79	288.1							21	13
MALAGA	135.41	89.0							22	3 PP
GRANADA	136.19	89.2							20	48 PP
ALGIERS UNI.	139.64	95.2	19	23	-7				23	5 PKS
SHILLONG	140.32	235.0							19	23
POONA	140.48	206.4	22	46	195					
BOMBAY	141.09	205.1							23	9
RATHFARNHAM	144.64	67.2	19	35A	-3				19	47
SCORESBY SD.	144.68	34.7	19	34	-4					
CLERMONT-FD.	145.63	84.1	19	39	-1				41	55 SS
MONACO	146.81	90.4	19	43	1					
KEW	146.88	73.3	19	49	7				23	23 PP
PARIS	147.02	79.2	19	49	7	26	55	5	23	13 PP
REGGIO CALA.	147.57	105.9	17	23	-140				18	14
MESSINA	147.59	105.6	19	43	0				23	6 PP
DURHAM	147.78	67.2	19	47	3					
BESANCON	148.10	84.1	19	48	4					
ROME	148.46	97.5	19	50	5				30	4 SKKS
NEUCHATEL	148.50	85.2	19	47	2					
PAVIA	148.68	89.7	19	48	3				23	31 PP
FLORENCE X.	148.99	93.6	19	52	6				20	58
BASLE	149.15	84.8	19	42	-4					
ZURICH	149.63	85.8	20	5	18					
STRASBOURG	149.84	83.2	20	1	14				23	23 PP
TARANTO	150.13	104.4							23	8
DEHRA DUN	150.25	219.9							19	59
EBINGEN	150.29	84.7	19	49	1				20	16 PKP2
KARLSRUHE	150.43	82.9	19	50	2				21	36
STUTTGART	150.74	83.9	19	51	3				26	41 PPP
WITTEVEEN	151.31	75.0	20	1	12					
TRIESTE	151.54	92.9	19	56	6	26	59	3	23	45 PP
JERUSALEM	151.69	139.4							19	49 PKP2
ATHENS	151.73	115.5							20	20 PKP2
JENA	153.16	81.6	20	0	8				23	49 PP
QUETTA	153.27	200.5	19	57	5				21	36
HAMBURG	153.44	75.3							20	2
KSARA	153.76	138.5	19	53	0				23	55 PP
PRAGUE	154.34	85.3	20	17	24				23	56 PKS
BELGRADE	154.79	100.7	20	5A	11				24	35 PP
BRATISLAVA	154.87	91.2	20	23	29				23	39
SOFIA	154.97	107.7	20	53	59				21	45
COPENHAGEN	155.55	72.0							43	53 SS
KRAKOW	157.43	89.5							20	23
UPPSALA	159.17	62.9							20	44 PKP2
NAMANGAN	162.08	220.2							20	6
SIMFEROPOL	162.14	118.3							20	15
HELSINKI	162.87	62.5							20	57 PKP2
PULKOVO	165.57	63.5							25	19
MOSCOW	169.39	82.9							20	19
SVERDLOVSK	177.49	294.4							20	15

MAY 2 11.H 29.M 14.S EPICENTRE 52.74-168.76 DEPTH= 0.KM

A=-0.59642 B=-0.11847 C= 0.79388 D=-0.1948 E= 0.9808
G=-0.7787 H=-0.1547 K=-0.6081 HT= -6.4

SE= 2.28

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S	
COLLEGE	16.19	33.2	3 50A	-1	7 26	35			
KLYUCHI	17.96	293.7	4 13	0				7 46	SS
PETROPAVLOVK	19.56	284.2	4 30	-2				4 48	PP
SITKA	19.59	63.9	4 32	0	8 15	7		5 25	
MAGADAN	23.23	303.1	5 11	1				9 37	
HORSESHOE B.	28.42	78.3	6 0	2	10 46	1		9 9	PCP
VICTORIA	28.70	80.0	6 0K	-1	10 54	4		15 34	
SEATTLE	29.76	80.9	6 15A	4	11 6	-1			
CORVALLIS	30.67	86.9	6 20	1					
Y.-SAKHLINSK	31.32	279.2	6 26	2				16 4	
BANFF	32.22	71.0	6 31	-1					
HONOLULU	32.44	161.2	6 40	6					
TIKSI	32.61	328.6	6 34	-2				7 49	PPP
SHASTA	33.42	92.2	6 42A	-1					
URAKAWA	33.83	271.5	6 37	-9					
UKIAH	33.88	95.2	6 49	2					
MINERAL	34.11	92.1	6 47A	-2					
SAPPORO	34.18	274.0	6 43	-6					
HUNGRY HORSE	34.35	74.9	6 50	-1	12 17	-1		9 36	PCP
BERKELEY	35.26	96.0	6 58	0				12 34	
RENO	35.69	91.7	7 4	2					
AOMORI	35.83	271.2	6 42	-21					
RESOLUTE	35.88	25.8	7 3K	-1	12 47	5		8 18	PP
LICK	35.98	96.2	7 2K	-3				8 49	
BUTTE	36.38	77.5	7 7	-1	12 51	1			
SASKATOON	36.84	65.4	7 1	-11					
AKITA	36.91	270.3	7 11A	-1					
SENDAI	37.33	267.8	7 15	-1					
BOZEMAN	37.46	77.1	7 17	0					
FRESNO	37.47	95.3	7 16	-1					
HUKUSIMA	37.92	267.5	7 22	1					
EUREKA	38.07	88.7	7 21	-1					
ONAHAMA	38.18	266.1	7 1	-22				13 31	
TINEMAHA	38.23	93.6	7 23	0					
KING RANCH	38.46	97.0	7 26	1				7 47	
NIIGATA	38.68	268.8	7 31	4					
WOODY	38.74	95.8	7 26	-2				7 33	
ISABELLA	39.00	95.5	7 29	-1				7 47	
UTUNOMIYA	39.06	266.5	7 32	1	13 20	-11			
TUKUBASAN	39.14	265.9	7 29	-2	13 28	-4			
KUMAGAYA	39.63	266.4	7 38	3					
MAEBASI	39.65	267.0	7 36	1				9 6	
TOKYO C.M.O.	39.71	265.6	7 38	2					
SALT LAKE C.	39.78	84.0	7 38	2					
NAGANO	40.00	268.0	7 40	2					
OIWAKE	40.01	267.3	7 43	5	13 45	0			
MATUSIRO	40.07	267.9	7 37A	-2	13 44	-2		9 41	PCP
PASADENA	40.21	97.0	7 42	2					
MATUMOTO	40.42	267.7	7 41	-1					
KOHU	40.46	266.5	7 45	3	13 53	1			
MISIMA	40.57	265.6	7 41	-2	13 43	-10			
TOYAMA	40.59	268.9	7 44	1					
RIVERSIDE	40.79	96.4	7 45	0				7 39	
BOULDER CITY	41.00	92.0	7 46	0					
PALOMAR	41.55	96.7	7 49	-2					
GIHU	41.71	267.7	7 54	2					
NAGOYA	41.74	267.3	8 13	20					
BARRETT	42.13	97.2	7 53	-3					
KAMEYAMA	42.26	267.4	7 57	0					
KYOTO	42.59	268.2	8 4	4	14 19	-4			
OSAKA	42.96	267.9	8 19	16	14 27	-2			
RAPID CITY	42.98	74.3	8 2	-1					
BOULDER	44.18	80.3						8 12	
HIROSIMA	45.04	270.1	8 16	-3					
TUCSON	45.96	92.7	8 26	-1	15 15	3			
KUMAMOTO	47.15	269.9	8 38	2					

IRKUTSK	49.73	306.5	8	54A	-2					10	52 PP
LUBBOCK	50.50	84.4	9	3	1						
PEKING	51.03	287.4	9	5	-1						
KIRKLAND LA.	53.22	56.7	9	21	-1						
CHICAGO CGS.	53.36	67.1				26	18	563		30	2 SS
FAYETTEVILLE	53.37	76.6	9	21K	-3						
GUAM	53.77	241.0								19	1
ZO-SE	54.13	275.7	9	28A	-1	17	8	3			
SCORESBY SD.	54.79	13.0	9	34	0						
NANKING	54.90	278.3	9	32A	-3	17	16	0			
SCHEFFERVLLE	54.99	43.7	9	54K	19						
CLEVELAND	56.92	63.6	9	47	-2						
OTTAWA	57.27	56.8	9	49K	-3	17	50	3			
BUFFALO L.	57.50	60.7	9	52	-1						
SHAWINIGAN	57.95	54.1	9	56A	-1						
BREBEUF	58.26	55.4	9	56	-3						
APATITY	58.89	350.2	10	5	2						
MORGANTOWN	59.07	64.2	10	2	-2						
KIRUNA	59.56	356.0	10	7	-1						
SODANKYLA	59.66	353.2	10	7	-2					10	52 PCP
PALISADES	61.32	59.3	10	18	-2	18	37	-3			
PHILADELPHIA	61.42	60.9				19	1	20		22	10 SS
WESTON	61.66	56.6	10	20	-2						
CHAPEL HILL	62.22	66.6	10	21	-5	18	47	-4			
TACUBAYA	62.45	93.9	10	38	11					18	10
COLUMBIA	62.49	69.4	10	25	-3	18	42	-12			
SVERDLOVSK	63.54	332.2	10	35	0						
HALIFAX	63.76	50.2	10	38	2						
SKALSTUGAN	64.02	359.5	10	38	0						
CANTON	64.77	275.4	10	41A	-2	19	23	0			
HONG KONG	64.81	274.1	10	42	-1	19	27	4			
BAGUIO CITY	65.40	264.9	10	42	-5	19	30	-1			
MANILA	66.58	263.3	10	58	4						
PULKOVO	66.80	349.6	10	56	0					20	6 PS
HELSINKI	66.91	352.6	10	56	0					11	25 PCP
UPPSALA	67.65	356.5	11	0A	-1						
MOSCOW	69.73	344.4	11	12	-2						
FRUNSE	70.26	315.7	11	17A	0					21	11 PS
COPENHAGEN	71.95	359.3	11	28K	1						
DURHAM	72.34	7.8	11	30	0						
BERMUDA	72.67	59.3	11	35	3	20	54	-3		29	21
RATHFARNHAM	73.33	10.9	11	35K	0						
TASHKENT	73.75	318.3	11	40	2						
HAMBURG	74.06	0.8	11	42	2					11	53
WITTEVEEN	74.75	2.9	11	46	2						
POTSDAM	75.25	358.8								11	49
DE BILT	75.41	3.9	11	52	4	21	27	0			
SHILLONG	75.44	293.0	11	46A	-2						
KEW	75.71	7.4	11	49	0					12	1
STALINABAD	76.30	317.1	11	52	-1						
JENA	76.71	359.8	11	55	0					14	56 PP
CHATRA	77.04	297.2	11	55	-2	21	37	-8			
LWOW	77.24	351.6	11	59	1						
KRAKOW	77.33	354.3	11	59	1	21	50	2		12	14 PCP
PRAGUE	77.54	357.9	11	58A	-1					15	2 PP
PARIS	78.56	5.9	12	6	1	22	16	15		12	14 PCP
KARLSRUHE	78.60	1.9	12	11	6					12	33
STUTTGART	78.86	1.4	12	7A	0					12	13 PCP
STRASBOURG	79.02	2.3	12	9A	1					14	9
TUBINGEN	79.10	1.5	12	9	1						
BRATISLAVA	79.35	356.0	12	11	2					15	5 PP
EBINGEN	79.44	1.5	12	11A	1					12	22 PCP
IASI	79.47	348.8	12	10	0	21	52	-19		22	2
LAHORE	79.72	309.3	12	12	1						
BASLE	80.06	2.5	12	15K	2						
ZURICH	80.25	1.8								12	10
BESANCON	80.29	3.6	12	16	2					14	37
NEUCHATEL	80.58	3.0	12	17	1						
SIMFEROPOL	80.73	343.8	12	18A	1						
TIFLIS	81.55	335.3	12	22	1						
CLERMONT-FD.	81.63	5.7	12	22	1						
TRIESTE	81.97	358.2	12	23	0	22	36	-1			
BUCHAREST	82.38	349.3				22	50	9			
PAVIA	82.45	1.5	12	30	4					22	10
BELGRADE	82.50	353.4	12	28	2						
SAN JUAN	82.97	69.0	12	26	-2						
GORIS	83.22	333.4	12	30	0						
MONACO	83.86	2.8	12	34K	1					13	6
FLORENCE X.	83.86	360.0	12	34A	1					12	58

QUETTA	84.23	314.0	12	35A	0				15	47	PP
SOFIA	84.37	351.1	12	36	0				13	22	
ROME	85.74	359.1	11	42K	-60						
COIMBRA	85.88	15.0	12	44	1						
BRISBANE	86.55	213.4	13	6	20						
ALICANTE	88.72	9.2	12	54	-3	23	37	-6			
GRANADA	89.53	11.8	13	1K	0				13	49	
MALAGA	89.88	12.5	13	8A	6						
ALGIERS UNI.	90.58	6.6	13	6	0						
POONA	90.84	302.6	13	6	-1						
KSARA	91.16	339.7	13	8	0				16	52	PP
RIVERVIEW	93.02	212.5	14	30A	73						
JERUSALEM	93.27	339.7	13	18	0						
KODAIKANAL	95.80	295.1							16	25	
TAMANRASSET	104.64	5.5	14	3	-6				18	5	PP
MBOUR	108.87	28.9	18	4	777	25	39	-18	28	38	PS
LWIRO	127.61	337.6	19	9	1						
PRETORIA	150.18	328.1	19	54	6						
PIETERMZBURG	152.94	321.1	19	59	7						
KIMBERLEY	154.02	332.0	19	54	1						

MAY 2 11.H 38.M 54.S EPICENTRE 52.67-168.78 DEPTH= 0.KM

A=-0.59732 B=-0.11849 C= 0.79321 D=-0.1946 E= 0.9809
G=-0.7780 H=-0.1543 K=-0.6090 HT= -6.4

SE= 2.14

	DELTA DEG.	AZ. DEG.	P M	S	O-C S	S M	S	O-C S	*PP M	S	SUPP. M	S	
COLLEGE	16.24	33.1	3	52	1								
KLYUCHI	17.98	293.8	4	16	3	7	36	4			4	34	PP
PETROPAVLOVK	19.57	284.4	4	31	-1						5	4	
MAGADAN	23.26	303.2	5	12	2								
HORSESHOE B.	28.44	78.2	5	59A	0	10	50	4			9	10	PCP
VICTORIA	28.72	79.9	6	2A	1	10	52	2			9	11	
CORVALLIS	30.69	86.8	6	22A	3								
Y.-SAKHLINSK	31.32	279.2	6	25K	1						13	0	SS
BANFF	32.25	70.9	6	31K	-2								
HONOLULU	32.38	161.2	6	29	-5	10	36	-72			8	14	PCP
SHASTA	33.43	92.1	6	41K	-2								
URAKAWA	33.83	271.6	6	43	-3	12	7	-3					
UKIAH	33.88	95.1	6	48	1								
MINERAL	34.12	92.0	6	49A	0								
SAPPORO	34.17	274.1	6	48	-1						7	37	
HUNGRY HORSE	34.37	74.8	6	50	-1	12	19	0			17	13	SCS
MORI	35.20	273.2	6	59	1						12	46	
BERKELEY	35.26	95.9	6	59A	0						8	39	
RENO	35.70	91.6	7	4	2								
SANTA CLARA	35.79	96.3	7	6A	3								
MIYAKO	35.80	268.8	7	2	-1								
AOMORI	35.82	271.3	7	3	0								
RESOLUTE	35.94	25.8	7	3	-1								
LICK	35.98	96.1	7	5A	0								
BUTTE	36.40	77.4	7	7	-1	12	46	-4					
MIZUSAWA	36.64	268.7	7	10	0	12	51	-3					
AKITA	36.90	270.3	7	12A	0						8	42	
SENDAI	37.32	267.8	7	14	-2								
FRESNO	37.47	95.2	7	17	0								
BOZEMAN	37.49	77.0	7	19	2								
SAKATA	37.57	269.5	7	56	38								
HUKUSIMA	37.91	267.5	7	20	-1								
EUREKA	38.08	88.6	7	23	1								
TINEMAHA	38.23	93.5	7	26	2						7	42	
KING RANCH	38.46	96.9	7	27	1						7	50	
WOODY	38.75	95.7	7	25	-3						7	29	
ISABELLA	39.01	95.4	7	30	0						7	44	
UTUNOMIYA	39.05	266.6	7	23	-7	13	30	0					
TUKUBASAN	39.13	266.0	7	29	-2	13	27	-5			17	35	SCS
KUMAGAYA	39.61	266.5	7	39	4								
MAEBASI	39.64	267.0	7	34	-1						9	2	
TOKYO C.M.O.	39.70	265.6	7	43	7	13	6	-34					
SALT LAKE C.	39.79	84.0	7	52	15								
VLADIVOSTOK	39.85	280.6	7	37K	0						13	47	
YOKOHAMA	39.93	265.4	8	2	24	14	4	20			9	21	

NAGANO	39.99	268.1	7	40	2	13	44	-1	17	43	
OIWAKE	40.00	267.4	7	38	0	13	40	-5			
MATUSIRO	40.06	267.9	7	36A	-3	13	52	6			
MERA	40.16	264.7	8	9	29						
PASADENA	40.21	96.9	7	41	1	13	46	-2	8	4	
MATUMOTO	40.40	267.8	7	42	0	13	50	-1	17	43	
MISIMA	40.56	265.7	7	33	-10	13	52	-1			
RIVERSIDE	40.80	96.4	7	44	-1				7	50	
BOULDER CITY	41.01	92.0	7	46	-1						
PALOMAR	41.55	96.6	7	49	-2				7	58	
GIHU	41.70	267.8	7	46	-6	14	7	-3			
NAGOYA	41.73	267.4	8	2	9						
HAYFIELD	42.05	95.2	7	55	0						
BARRETT	42.13	97.2	7	55	-1				8	1	
KAMEYAMA	42.25	267.4	7	58	1						
KYOTO	42.58	268.2	7	59	-1	14	22	-1			
OSAKA	42.95	268.0	8	6	3	14	30	2			
RAPID CITY	43.00	74.2	8	3	0	14	27	-2	8	20	
KOBE	43.15	268.3	8	6	2	14	26	-5	14	53	
TOKUSIMA	43.92	268.1	8	12	2	14	41	-2			
BOULDER	44.20	80.2	8	13	0						
KOTI	44.92	268.5	8	18	0				13	20	
HIROSIMA	45.03	270.2	8	17	-2	14	57	-2			
TUCSON	45.97	92.7	8	27	0	15	13	1	18	24	SCS
IRKUTSK	49.76	306.5	8	56A	0						
LUBBOCK	50.52	84.4	9	1	-1	16	13	-3	18	53	
PEKING	51.04	287.4	9	5	-1						
KIRKLAND LA.	53.27	56.7	9	23K	0						
FAYETTEVILLE	53.40	76.6	9	22K	-2	16	25	-30			
ZO-SE	54.13	275.7	9	29A	0	17	7	2			
SCORESBY SD.	54.85	13.0	9	34	-1						
NANKING	54.90	278.3	9	33A	-2	17	14	-2			
CLEVELAND	56.95	63.6	9	48	-2						
OTTAWA	57.32	56.7	9	50K	-2	17	46	-2			
BUFFALO L.	57.54	60.6	9	50	-4						
SHAWINIGAN	57.99	54.0	9	56K	-1						
BREBEUF	58.31	55.4	9	56	-3						
APATITY	58.95	350.2	10	2K	-2						
MORGANTOWN	59.10	64.1	10	2	-3						
SIAN	59.21	287.1	10	8	3	18	17	4			
KIRUNA	59.62	356.0	10	6	-2				13	14	
SODANKYLA	59.72	353.2	10	8	-1				10	55	PCP
WASHINGTON	61.19	62.9	10	20	1						
PALISADES	61.36	59.2	10	19	-1	18	39	-1			
WESTON	61.70	56.6	10	21	-2						
CHAPEL HILL	62.25	66.5	10	23	-3	18	48	-4			
TACUBAYA	62.46	93.9	10	33	5	18	48	-6	13	23	
COLUMBIA	62.53	69.3	10	25	-3	18	50	-5	20	16	SCS
SVERDLOVSK	63.59	332.2	10	35	0						
HALIFAX	63.81	50.2							10	47	
SKALSTUGAN	64.09	359.5	10	37	-1						
VERA CRUZ	64.47	91.6				18	58	-21	18	48	
CANTON	64.76	275.4	10	43	0	19	24	1			
HONG KONG	64.81	274.1	10	42A	-1	19	25	2			
MANILA	66.56	263.3	10	51	-3	19	38	-7			
PULKOVO	66.86	349.6	10	57	1				11	28	PCP
HELSINKI	66.97	352.6	10	56	-1						
MERIDA	67.11	85.2							19	54	
UPPSALA	67.71	356.5	11	0	-2						
MOSCOW	69.78	344.4	11	15	1	20	24	1			
COPENHAGEN	72.01	359.3	11	27	-1						
DURHAM	72.40	7.7	11	32	2						
BERMUDA	72.71	59.3	11	32	0	20	55	-2	15	58	PPP
RATHFARNHAM	73.39	10.9	11	36K	0						
TASHKENT	73.80	318.3	11	37	-1				23	2	
HAMBURG	74.12	0.8	11	41	1				11	54	
WITTEVEEN	74.81	2.9	11	44	0						
WARSAW	75.15	353.8	11	49A	3				11	59	PCP
POTSDAM	75.31	358.8							11	47	
DE BILT	75.48	3.8	11	50	2						
KEW	75.78	7.4	11	50A	0				14	50	PP
STALINABAD	76.34	317.1	11	53	0				21	38	
JENA	76.77	359.8	11	55	0				14	56	PP
LWOW	77.30	351.5	11	59	1	21	59	11	12	11	PCP
KRAKOW	77.39	354.3	11	59	0	21	50	1			
RACIBORZ	77.45	355.4	11	59	0				12	11	PCP
PRAGUE	77.60	357.9	12	2A	2	21	47	-4	22	27	PS
SKALNATE PL.	78.24	354.0	11	55	-8				21	46	PS
PARIS	78.62	5.9	12	6	1	22	24	22	12	16	PCP

KARLSRUHE	78.67	1.9	12 10	4	22 33	30	12 55
STUTTGART	78.92	1.4	12 7	0	22 24	19	12 19 PCP
DEHRA DUN	78.97	305.9	12 3	-4	22 31	25	27 39 SS
STRASBOURG	79.08	2.3	12 8A	0			12 19 PCP
TUBINGEN	79.16	1.5	12 9	1			
BRATISLAVA	79.41	356.0	12 11	1	22 19	8	12 44
EBINGEN	79.51	1.5	12 11	1			12 23 PCP
HURBANOVO	79.66	355.2			21 43	-30	22 35 PS
LAHORE	79.75	309.3	12 12	0			
BUDAPEST	80.00	354.6	12 16	3	22 10	-7	27 51 SS
BASLE	80.13	2.5	12 14	0			
BOKARO	80.19	296.4					12 21
ZURICH	80.31	1.8	12 10	-5			
BESANCON	80.36	3.6	12 16	1			12 28
NEUCHATEL	80.64	3.0	12 16	0			
SIMFEROPOL	80.78	343.7	12 18A	1			22 28 PS
ASHKABAD	80.90	324.1	12 19	1			15 18 PP
TIMISOARA	81.58	352.9	12 17	-4	22 46	13	12 24
TIFLIS	81.60	335.3	12 22	1			22 43 SCS
CLERMONT-FD.	81.69	5.7	12 22	0			
ZAGREB	81.80	356.6	12 25K	3	22 37	2	
TRIESTE	82.03	358.2	12 25	1	22 44	6	28 6 SS
BELGRADE	82.56	353.4	12 27K	1	22 47	4	23 1 SKS
SAN JUAN	83.00	69.0	12 28	-1			
GORIS	83.28	333.4	12 32	2			
MONACO	83.92	2.8	12 34K	1			
FLORENCE X.	83.93	360.0	12 32A	-1			13 23
QUETTA	84.27	314.0	12 34A	-1	23 0	0	15 49 PP
SOFIA	84.43	351.1	12 38	2	23 2	0	
ROME	85.80	359.1	12 44A	1			23 23 SKKS
COIMBRA	85.95	15.0	12 44	1			
BRISBANE	86.49	213.4	12 50	4	23 11	-11	
KARACHI	87.97	311.8	12 54	1			
CHINCHINA	88.00	84.5	12 54	1	23 34	-2	13 57
ALICANTE	88.78	9.2	12 53	-4	23 36	-8	
ATHENS	89.08	350.1			23 25	-21	
HYDERABAD	89.36	298.3	12 59	-1	23 24	-25	
GRANADA	89.59	11.8	13 3A	2			13 56
MALAGA	89.94	12.5	13 4K	1			
ALGIERS UNI.	90.64	6.6	13 7	1			13 56
POONA	90.86	302.6	13 7	0	24 4	2	23 41 SKKS
BOMBAY	91.08	303.6	13 7	-1	23 31	-33	
KSARA	91.22	339.7	13 12	3			
RELIZANE	91.46	8.7	13 10	0			16 52 PP
RIVERVIEW	92.96	212.5			24 22	1	17 4 PP
JERUSALEM	93.33	339.7	13 19	1			14 5
TAMANRASSET	104.71	5.4	13 58	-12			18 5 PP
LWIRO	127.66	337.6	19 9	1			
PRETORIA	150.23	328.0	19 54	6			
PIETERMZBURG	152.98	321.0	19 59	7			
KIMBERLEY	154.07	331.9	19 54	0			

MAY 2 21.H 36.M 29.S EPICENTRE -7.46 120.20 DEPTH= 601.KM

DEPTH OF FOCUS= 0.090R

A=-0.49883 B= 0.85706 C=-0.12894 D= 0.8643 E= 0.5030
G= 0.0649 H=-0.1114 K=-0.9917 HT= 6.8

SE= 2.04

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
DJAKARTA	13.34	274.6	2 48	-4	5 8	-2		
MAMBAJAO	17.45	18.0	2 30	-61	5 19	-62		
MANILA	21.91	2.0	4 15	3	6 59	-36		
BAGUIO CITY	23.73	0.9	4 25	-4	7 45	-19		
PERTH	24.71	188.9	4 39	1				
HENGCHUN	29.28	1.0	5 19	2	9 31	1		
TAWU	29.63	1.3	5 20	0	9 34	-2		
HONG KONG	30.16	348.8	5 24A	0	9 42	-2	6 56	12 35 SS
TAINAN	30.27	0.0	5 54	29	10 16	30		
HSINKONG	30.39	2.1	5 25	-1	9 41	-6		
ALISHAN	30.79	1.1	5 31	1				
PENGHU	30.80	358.8	4 35	-55	8 37	-77		
CANTON	31.10	347.6	5 33	1	9 57	-1		

HWALIEN	31.27	2.5	5	35	1	9	54	-7			
TAICHUNG	31.42	0.8	5	39	4						
RABAUL	31.96	86.0	5	39	-1					8	11 PCP
GUAM	32.04	49.6	5	39	-1				7	49	
ILAN	32.07	2.7	5	40	-1	10	3	-10			
TAIPEI	32.32	2.2	5	41	-2						
PORT BLAIR	33.29	304.6	6	2	11					10	32
BRISBANE	36.92	126.7	6	22	1	11	22	-4			
MELBOURNE	37.65	147.1	6	28	1	11	38	2	8	10	8 29 PCP
ZO-SE	38.35	1.4	6	33	1	11	46	-1	8	22	
RIVERVIEW	38.79	136.9	6	37K	1	11	56	3	8	23	15 17 SS
NANKING	39.31	358.1	6	41	1	11	58	-3			
KAGOSIMA	40.05	13.8	6	50	4	11	58	-13			8 36
MIYAZAKI	40.60	14.7	6	50	0	12	18	-1			15 53
TOMIE	40.68	11.1	6	57A	6	12	21	1			8 45
KUMAMOTO	41.28	13.4	6	55	-1	12	34	5			
SAGA	41.61	12.8	7	0	2						13 0
OOITA	41.89	14.4	7	1	0	12	38	0			
HUKUOKA	41.95	12.8	7	1A	0	12	34	-4			8 53
COLOMBO	42.68	288.6	7	5	-2	12	38	-11			
KOTI	42.70	16.5	7	7	0	12	43	-6			8 45 PP
MATUYAMA	42.75	15.5	7	7	0	12	49	-1			8 47
SIAN	42.83	346.2	7	9	1	12	31	-20			
SHILLONG	42.86	320.9	7	8K	0	12	50	-1			
HIROSIMA	43.18	14.8	7	9A	-2	12	51	-5			16 6 SCS
TSINGTAU	43.29	0.1	7	19	7						
TOKUSIMA	43.49	17.4	7	15	2	12	58	-2			16 10 SCS
TAKAMATU	43.57	16.7	7	13	-1	12	59	-2			8 50
SUMOTO	43.84	17.6	7	13	-3	13	3	-2			
LINFEN	44.09	349.9	7	19	1						
OSAKA	44.32	18.2	7	19	-1	13	14	2			
MADRAS	44.65	296.9	7	22K	0	13	13	-3			8 55 PP
KYOTO	44.72	18.2	7	21	-2	13	11	-6			
KAMEYAMA	44.80	19.1	7	23A	0	13	16	-2			11 52
NAGOYA	45.26	19.4	7	27	0	13	23	-2			
GIHU	45.40	19.1	7	28	0	13	24	-3			
SHIZUOKA	45.57	21.1	7	25A	-4	13	25	-4			
TAIYUAN	45.57	351.6	7	31	2						
BOKARO	45.77	313.8									9 16
HUKUI	45.84	18.2	7	30	-1	13	27	-6			
MISIMA	45.90	21.5	7	31	-1	13	30	-4			
LANCHOW	45.96	341.5	7	33	1						
KODAIKANAL	46.03	291.9	7	37K	4	13	37	2			9 7 PP
HUNATU	46.17	21.1	7	54	20	13	35	-2			9 30
KOHU	46.22	20.8	7	34	0	13	36	-2			11 54
YOKOHAMA	46.43	22.0	8	35	59						14 50
MATUMOTO	46.57	19.9	7	39	2	13	43	0			
TOKYO C.M.O.	46.69	22.0	7	36	-2	13	39	-6			12 38
TITIBU	46.71	21.1	7	37	-1	13	41	-4			
TOYAMA	46.73	18.8	7	39	1	13	43	-2			
CHATRA	46.76	318.0	7	35	-3						
OIWAKE	46.84	20.4	7	31	-8	13	44	-3			
NOUMEA	46.87	113.5	7	40	1						
MATUSIRO	46.93	19.9	7	38A	-2	13	44	-4			9 0 PP
KUMAGAYA	46.97	21.3	7	38	-2	13	47	-1			
NAGANO	47.03	19.8	7	40	0	13	17	-32			
MAEBASI	47.09	20.9	7	39	-2	13	45	-5			9 39 PP
TUKUBASAN	47.30	22.0	7	39K	-3	13	41	-12	9	36	9 41 PP
KAKIOKA	47.34	22.1	7	39	-4	13	49	-4			
PEKING	47.39	355.8	7	43	0	13	52	-2	9	30	16 32 SCS
YINCHUAN	47.50	345.1	7	45	1						
UTUNOMIYA	47.51	21.6	7	41	-3	14	1	5			9 9
MITO	47.58	22.3	7	55	11	13	53	-4			
KWANTING	47.64	355.2	7	44	-1						
TATUNG	47.75	352.8	7	47	1						
WUWEI	48.03	341.3	7	49	1						
HYDERABAD	48.10	301.3				13	54	-10			9 35 PP
SHIRAKAWA	48.14	21.6	7	48	-1	14	2	-2			8 15
ONAHAMA	48.24	22.3	7	49	0	14	5	-1			14 44
NIIGATA	48.45	20.0	7	58	7	14	8	-1			
PAOTOW	48.71	349.7	7	53	0						
HUKUSIMA	48.79	21.4	7	54	0	14	14	1			
YAMAGATA	49.19	21.0	7	57	0	14	18	-1			
SENDAI	49.41	21.5	7	57	-1	14	21	-1			8 45
ISINOMAKI	49.71	21.8	8	2	2	14	27	1			
MIZUSAWA	50.26	21.2	8	5	1	14	33	0			
AKITA	50.42	19.9	8	6A	1	14	35	0			9 56
MORIOKA	50.78	20.9	8	7A	-1	14	38	-2			9 58

CHANGCHUN	51.26	4.7	8	10	-2	14	41	-5	10	6	
VLADIVOSTOK	51.45	10.9	8	12	-1	14	48	-1	10	13	9 17 PCP
HAKODATE	52.48	19.3	8	19	-1						
POONA	52.50	300.1	7	20	-60						9 22
MORI	52.72	19.0	8	23	1	15	6	0			
MURORAN	53.05	19.2	8	23	-1						
TOMAKOMAI	53.43	19.6	8	43	16	15	15	0			
URAKAWA	53.51	20.8	8	28	1	15	17	1			10 32
BOMBAY	53.54	300.0	8	28	0	15	13	-4			10 18
SAPPORO	53.84	19.1	8	29	-1	15	16	-5	10	18	17 14 SCS
OBIHIRO	54.33	20.7	8	36	3						
DEHRA DUN	55.18	315.0	8	37	-2	17	26	108			
NEMURO	55.55	22.3	8	39	-3						
MACQUARIE I.	56.23	153.9	8	46	0						
ONERAHI	56.83	128.0	8	51	1						
KAIMATA	56.91	136.5	8	52	1						
COBB RIVER	57.28	134.5	8	54	0	16	8	3			
SUVA	57.56	106.7	8	56	1						
Y.-SAKHLINSK	57.75	18.1	8	57	0	16	9	-2	10	49	17 47 SCS
GEBBIES PASS	58.19	137.4	8	59	-1						
KARAPIRO	58.33	130.2	9	1	0						
LAHORE	58.51	314.1	9	1	-1	16	15	-5			
TONGARIRO	58.70	131.6	9	2	-1						9 44 PCP
WELLINGTON	58.80	134.1	9	3K	-1	16	22	-2			9 39 PCP
TUAI	59.80	130.7	9	11	1						
IRKUTSK	61.03	348.9	9	18	0	16	52	0	11	13	9 54 PCP
TERRE ADELIE	61.03	170.6	9	15	-3	16	47	-5			
KARACHI	61.32	304.7	9	14	-6	16	46	-9			
QUETTA	63.30	309.0	9	33K	0	17	13	-7	11	26	10 12 PCP
FRUNSE	65.01	324.6	9	44K	0	17	39	-1	11	38	18 37 SCS
STALINABAD	66.12	317.9	9	50	-1	17	50	-3			
TASHKENT	67.29	320.7	9	59	1	18	6	-1			19 0 SCS
PETROPAVLOVK	68.59	23.7	10	6	0	18	25	3	12	6	12 56 PP
MAGADAN	71.11	15.9	10	21	1	18	52	2	12	25	
TANANARIVE	71.25	252.6	10	22A	1	18	55	3	12	19	
ASHKABAD	73.09	313.2	10	33K	1	19	14	2	12	31	19 46 SCS
TIKSI	79.13	2.8	11	4	-1				13	6	23 50 *SS
SVERDLOVSK	80.31	331.3	11	10	-1	20	25	-3	13	16	
GORIS	82.45	311.4	11	22	0	20	48	-1	13	26	
TIFLIS	84.17	313.3	11	32	2				13	35	16 59 PPP
HONOLULU	85.01	67.9	11	36	2						
PIETERMZBURG	86.19	240.8	11	41	1						
PRETORIA	88.61	244.4	11	52K	1						
GRAHAMSTOWN	88.97	236.7	11	54K	1						
KSARA	89.41	304.1	11	57	2	22	1	8	14	1	15 47 PP
JERUSALEM	89.64	302.0	11	56	0				14	5	
KIMBERLEY	91.18	241.0	12	24A	21						
MOSCOW	91.94	325.9	12	6	0	22	18	3	14	17	21 43 SKS
SIMFEROPOL	92.44	314.8	12	9K	0	21	46	-34	14	14	26 1 *SS
PULKOVO	96.33	329.4	12	25	-1	22	6	-47			29 55 SS
IASI	97.20	316.6				22	12	-48			
COLLEGE	97.54	25.5	12	31	-1	22	11	-52			22 40 SKKS
BACAU	97.63	315.0				22	15	-48			
BUCHAREST	98.09	313.8				22	20	-47			
SODANKYLA	98.21	337.0	12	34	-1				14	43	16 35 PP
HELSINKI	99.03	329.7	12	39	1	22	20	-55			16 47 PP
ATHENS	99.64	307.2				22	15	-65	14	51	
KIRUNA	100.55	337.6	12	44K	-1	22	30	-58			
KRAKOW	102.27	319.5	12	43	-10						16 12
UPPSALA	102.72	329.7	12	54	-1						17 11 PP
RACIBORZ	103.38	319.6									13 13
BRATISLAVA	104.26	317.7	13	1	-1						17 13 PKP
SKALSTUGAN	104.59	333.9	13	3	0						17 8
PRAGUE	105.80	319.9	17	21	777	22	52	0			17 39 PP
MESSINA	106.08	307.5	16	47	777						17 36
COPENHAGEN	106.11	325.8	17	3	777						17 20
TRIESTE	106.79	315.4									22 58
JENA	107.47	321.0	13	15	777						17 19 PKP
HAMBURG	107.93	324.0									17 23 PP
ROME	108.13	311.6	16	49	777	27	20	0			23 4
FLORENCE X.	108.79	313.6	17	17	777				19	2	23 4
STUTTGART	109.38	319.1	13	24	777	23	3	0			17 25 PKP
EBINGEN	109.64	318.5	17	25	777						20 1 *PPP
RESOLUTE	109.88	9.4	17	24	777	23	5	0			27 44 PS
STRASBOURG	110.35	319.1	17	26	2				19	55	26 41 SP
BASLE	110.69	318.0									13 40
DE BILT	111.11	323.2									26 43 PS
NEUCHATEL	111.22	317.6	17	28	2						26 49
MONACO	111.53	314.1	17	29	2				19	39	

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BESANCON	111.81	318.0	17 30	3				18 37	PP
HORSESHOE B.	112.77	39.4	17 34K	5					
VICTORIA	112.91	40.3	17 31K	1					
PARIS	113.68	320.3	17 33A	2	23 9	-13		18 37	PP
SEATTLE	113.87	41.0	17 37	6	23 31	8		24 42	
CORVALLIS	113.98	44.4	17 35K	3					
DURHAM	114.06	327.4						18 41	
CLERMONT-FD.	114.08	316.9	17 34	2				27 16	SP
KEW	114.56	323.7	17 34	1	23 29	3		33 52	SS
UKIAH	115.22	50.3	17 37	3					
SHASTA	115.52	48.4	17 36K	1					
TAMANRASSET	115.58	291.6	17 39K	4				18 56	PP
ALGIERS UNI.	116.12	307.3	17 38	2				18 51	PP
MINERAL	116.19	48.6	17 38K	2					
BERKELEY	116.21	51.5	17 39K	3				20 19	
LICK	116.80	51.9	17 39K	2				17 45	
BANFF	116.85	35.7	17 38	1				33 35	
RATHFARNHAM	117.19	327.1	17 38	0	23 32	-3	20 18		
RENO	117.71	49.2	17 42K	3					
RELIZANE	118.30	306.6	17 42	2				18 45	PKP
FRESNO	118.36	52.2	17 43K	3					
ALICANTE	118.52	309.7	17 50	10	23 32	-8		22 23	PKS
KING RANCH	118.71	53.8	17 45K	4				28 6	PKKP
HUNGRY HORSE	118.86	38.2	17 43	2	23 39	-2	20 24	14 31	P
TINEMAHA	119.52	51.6	17 46K	4			20 26	28 0	PKKP
ISABELLA	119.65	53.2	17 45K	2			20 26	27 56	PKKP
PASADENA	120.22	54.8	17 47K	3	23 52	6	20 27	27 42	SP
CHINA LAKE	120.30	52.8	17 46K	2			20 27	27 55	PKKP
EUREKA	120.59	48.3	17 48	4	23 46	-1	19 55	14 34	P
BUTTE	120.70	40.2	17 50	5	23 45	-2		27 58	PKKP
RIVERSIDE	120.90	54.8	17 48K	3	23 54	6	20 28	27 54	PKKP
GRANADA	121.21	309.1			25 25	96		34 49	SS
PALOMAR	121.46	55.4	17 47K	1					
BARRETT	121.76	56.2	17 49	2			20 30	27 50	PKKP
BOZEMAN	121.81	40.1	17 50	3				27 52	PKKP
MALAGA	121.95	308.8	17 46	-1	23 26	-26		19 24	PP
BOULDER CITY	122.44	52.0	17 51	3					
SALT LAKE C.	123.17	45.7	17 52	3					
LISBON	124.90	312.5	17 55K	2					
TUCSON	126.65	55.2	18 0	4	23 38	-28	20 22	26 6	
RAPID CITY	127.49	38.6	17 59	1				20 24	PP
BOULDER	128.05	44.1	18 1	2					
LUBBOCK	133.29	50.2	17 59	-10				20 46	PP
KIRKLAND LA.	135.96	19.5	18 15	1					
MBOUR	137.44	283.1	18 8	-8				21 7	PP
SEVEN FALLS	139.37	11.6	18 22	2				21 4	SKP
SHAWINIGAN	139.49	13.8	18 13K	-7	27 16	164		21 15	PP
OTTAWA	139.76	17.4	18 15	-6			21 3	21 16	PP
TACUBAYA	139.99	68.7	18 15	-6	24 29	-4	20 27	21 27	PP
CLEVELAND	141.01	26.2	18 19	-5					
BUFFALO L.	141.02	22.2	17 50	-34					
HALIFAX	142.83	4.5	18 26K	-1			21 12		
VERA CRUZ	142.86	68.0						18 46	
MORGANTOWN	143.21	26.4	18 27K	0			20 35		
WESTON	143.76	14.5	18 29K	1				21 15	
PALISADES	144.30	18.4	18 30	1	23 52	-48	21 14	39 46	SS
WASHINGTON	145.04	23.8	18 33	3			20 45		
CHAPEL HILL	146.64	29.1	18 34	1					
COLUMBIA	147.11	33.6	18 36	3			20 51	20 8	
MERIDA	148.21	61.9	18 31A	-4				27 59	
SAN SALVADOR	150.43	75.4	18 40	2				18 47	
BERMUDA	154.79	9.7	18 51	7	25 57	64		21 20	PP
LA PAZ	154.81	160.9	18 46	2				23 51	PP
HUANCAYO	155.22	141.3	18 51	6				19 21	PKP2
BALBOA HTS.	160.39	84.3	18 54	3					
BOGOTA	165.53	100.4	19 0	4	24 10	-53		19 21	
SAN JUAN	167.52	28.9	18 59	1				28 34	SKKS
FORT FRANCE	172.65	10.3	19 3	3				30 1	SKKS
ST. LUCIA	173.36	10.1	19 3K	2					
ST. VINCENT	174.14	14.2	19 6	5					
TRINIDAD	176.38	27.9	19 6K	4					

MAY 4 10.H 5.M 45.S EPICENTRE -3.93 136.32 DEPTH= 0.KM

A=-0.72158 B= 0.68897 C=-0.06811 D= 0.6906 E= 0.7233

G= 0.0493 H=-0.0470 K=-0.9977 HT= 7.1

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	
KABAUL	15.81	91.5	3	44	-2						5	2	
MAMBAJAO	16.90	320.8	3	51	-8								
GUAM	19.20	25.7	4	32	4								
MANILA	23.87	320.7	5	19	3	7	27	-123					
BAGUIO CITY	25.52	322.8	5	30	-2	10	1	3					
BRISBANE	28.33	147.4	5	57	0	10	23	-21					
DJAKARTA	29.46	264.4	6	33	25	11	30	28					
ILAN	31.85	334.3				12	15	36			7	7	
TAIPEI	32.18	334.2	6	23	-9	11	40	-4					
RIVERVIEW	32.80	156.8	6	37A	0	11	51	-3			12	5	
PERTH	33.87	212.3	6	51	5						7	56	
HONG KONG	33.90	321.2	6	47A	0	12	9	-2			8	3	PP
MELBOURNE	34.65	167.9	6	53	0	12	23	0			14	10	
CANTON	35.02	321.1	6	57	1	12	27	-2			8	22	PP
KOTI	37.37	356.2				13	5	0					
ZO-SE	37.71	338.5	7	18	-1	13	7	-3			8	48	PP
TOKUSIMA	37.83	357.6	7	22	2								
HIROSIMA	38.27	354.8	7	22	-2	13	17	-1			8	55	
OSAKA	38.38	358.9	7	40	15	13	23	3					
KAMEYAMA	38.57	0.2	7	26	0	13	15	-8			15	35	
KYOTO	38.75	359.2	7	24	-4	13	19	-7					
HAMADA	38.83	354.4	7	29	1	13	27	0			15	37	
NAGOYA	38.90	0.8	7	32	3								
MISIMA	38.92	3.4	7	25	-4								
GIHU	39.13	0.6	7	31	0	13	29	-2			10	25	
KOHU	39.41	2.9	7	35	2								
NANKING	39.47	336.3	7	33	-1	13	34	-3			9	6	PP
TOKYO C.M.O.	39.53	4.4	7	27	-7						14	23	
KUMAGAYA	39.97	3.9	7	41	3						8	55	
TUKUBASAN	40.10	4.7	7	35	-4	13	41	-5					
OIWAKE	40.10	2.8	7	39	0								
MAEBASI	40.20	3.4	7	39	-1	13	55	7			8	0	
MITO	40.29	5.2	7	44	4								
MATUSIRO	40.31	2.4	7	38	-3	13	44	-5					
UTUNOMIYA	40.41	4.4	7	39	-2	13	45	-6			8	45	
NAGANO	40.43	2.3	7	49	7	13	47	-4					
SHIRAKAWA	41.00	4.7	7	46	0	14	0	1			8	29	
HUKUSIMA	41.65	4.9	7	51	-1								
YAMAGATA	42.13	4.7	8	0	4	14	18	2					
SENDAI	42.20	5.4	7	54	-2	14	20	3					
TSINGTAU	42.52	340.7	8	43	44								
MIZUSAWA	43.08	5.5	8	5	2	14	27	-3					
AKITA	43.57	4.2	8	6	-1	14	37	0					
AOMORI	44.72	4.8	8	14	-3								
SIAN	45.93	328.0	8	29	3	15	10	-1					
MORI	45.98	4.4	8	30	3	15	12	0					
LINFEN	46.09	331.9	8	30	2								
VLADIVOSTOK	47.00	355.6	8	34	-1								
PEKING	47.51	339.0	8	37	-2	15	31	-3			9	3	PP
CHANGCHUN	48.57	349.4	8	47	0								
TONGARIRO	49.94	140.1	8	56	-2								
LANCHOW	50.08	325.4	8	51	-8								
PAOTOW	50.42	334.0	9	3	2								
YINCHUAN	50.53	329.4	9	4	2								
WELLINGTON	50.68	142.7	9	2	-1	16	29	11			20	30	
GEBBIES PASS	50.96	146.4	9	8	3								
WUWEI	52.06	326.2	9	16	2								
SHILLONG	52.12	306.7	9	11A	-3	16	39	1			11	8	PP
CHATRA	56.46	305.8	9	46	0	17	38	2					
COLOMBO	57.37	280.7									9	10	
MADRAS	58.23	287.8	9	57	-1	17	58	-2			12	4	PP
PETROPAVLOVK	59.88	15.3	10	7	-3								
KODAIKANAL	60.27	284.0				18	8	-18					
IRKUTSK	62.21	338.4	10	24	-2	18	53	2					
TERRE ADELIE	62.87	177.7	10	25	-5						12	43	PP
DEHRA DUN	65.20	305.9	10	45	0	19	27	-1			24	6	SS
POONA	65.42	292.3	10	47	0						19	23	
BOMBAY	66.46	292.4	10	53	0	19	42	-1			13	23	PP
FRUNSE	72.48	317.2	11	30	0	20	51	-3					
KARACHI	73.23	298.3	11	35	0								
NAMANGAN	73.81	314.6	11	39	1	21	7	-2					
QUETTA	74.32	302.7	11	39A	-2	21	14	-1			14	23	PP
TIKSI	75.58	357.6	11	48	0								

SVERDLOVSK	85.49	327.7	12	41	0			1c	1		
COLLEGE	87.56	24.5	12	47	-4	23	27 -5			24	12 PS
TANANARIVE	87.58	251.3	12	55	4					13	39
MAKHACH-KALA	91.79	312.8	13	10	-1			16	54		
TIFLIS	93.73	311.4	13	21	1	23	53 -34				
MOSCOW	98.13	325.6	13	39	-1						
KSARA	100.85	303.5	13	57	5					18	9 PP
SHASTA	101.11	49.5	13	53	0					18	3 PP
SIMFEROPOL	101.40	314.9	13	53	-2	24	34 -58				
BERKELEY	101.41	52.3	13	59	4						
PULKOVO	101.42	330.3								18	3 PP
MINERAL	101.74	49.8	14	1	5						
RENO	103.18	50.5	14	4	1						
KIRUNA	103.20	339.5	14	0	-3						
RESOLUTE	103.40	12.3	14	0	-4					27	15 PS
FRESNO	103.46	53.3	14	4	0						
ISABELLA	104.63	54.3	14	9	0					18	28 PP
TINEMAHA	104.68	52.9	14	12	3						
PASADENA	105.03	55.8	14	11	777					18	28 PP
CHINA LAKE	105.32	54.1	14	12	777						
RIVERSIDE	105.69	55.9	14	14	777					18	34 PP
HUNGRY HORSE	105.93	40.8	14	25	777					18	39 PP
EUREKA	106.14	50.1	14	18	777					18	37 PP
BARRETT	106.42	57.2								18	40 PP
BUCHAREST	107.14	315.3	18	55	777					21	4
LWIRO	107.31	266.4								18	47
KRAKOW	109.75	322.2								17	44
TUCSON	111.37	57.0								19	0 PP
PRAGUE	113.06	323.5								19	33 PP
RAPID CITY	114.32	43.0								19	14 PP
JENA	114.37	325.2	18	37	-5					19	40 PP
TRIESTE	115.17	319.2								19	40 PP
MESSINA	116.37	310.9	18	49	3	25	37 0			19	58 PP
STUTTGART	116.71	323.8	18	45	-1					19	57 PP
EBINGEN	117.11	323.3	18	45	-2					20	0 PP
ROME	117.40	315.7	20	4K	76	26	47 66			23	46 PPP
FLORENCE X.	117.53	318.0	20	5	77					29	59
STRASBOURG	117.64	324.1								20	5 PP
BESANCON	119.33	323.4								20	15 PP
PARIS	120.52	326.4	18	38	-16					20	15 PP
ALGIERS UNI.	126.14	313.6	19	9	4					21	4 PP
ALICANTE	127.88	317.0	19	7	-1	26	13 -1			21	12 PP
RELIZANE	128.40	313.6	19	7	-2					21	18 PP
TAMANRASSET	128.90	296.2	19	11	1					21	19 PP
ALMERIA	130.00	316.4	19	15	3					21	28 PP
GRANADA	130.60	317.4	19	18K	5	26	26 5			21	34 PP
MALAGA	131.38	317.3				26	37 14			21	33 PP
BALBOA HTS.	144.01	80.2	19	35	-2						
HUANCAYO	144.75	117.2	19	41	2					23	38 PP
CHINCHINA	148.14	86.9	19	56	12						
BOGOTA	149.68	87.6	19	58	11						
MBOUR	151.70	293.3	20	1	11					20	15 PKP2
SAN JUAN	153.77	55.1	19	54	1					20	16 PP

MAY 6 15.H 6.M 51.S EPICENTRE 36.46 51.51 DEPTH= 0.KM

A= 0.50175 B= 0.63106 C= 0.59161 D= 0.7827 E=-0.6223
G= 0.3682 H= 0.4631 K=-0.8062 HT= -0.4

SE= 3.96

	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
LENKORAN	3.15	318.0	0	57	5							
BAKU	4.12	342.6	1	7	2						1	50
KIZYL-ARVAT	4.56	54.3	1	11	-1							
SHEMAKHA	4.74	332.4	1	13	-1	2	9	-2				
NAKHICHEVAN	5.56	301.4	1	31	5							
ASHKABAD	5.66	72.7	1	29	2						3	19
KIROVOBAD	5.87	318.2	1	26	-4	2	28	-11			3	37
EREVAN	6.65	306.1				3	0	1			1	54
MAKHACH-KALA	7.20	335.8	1	46	-3	3	3	-9				
TIFLIS	7.41	317.2	1	50	-2						3	26
GORI	7.96	316.1	1	57	-2							
AKHALKALAKI	7.97	310.7	1	58	-2							
BAKURIANA	8.14	312.7	2	3	1							

GROZNY	8.16	328.9	2	0	-2						
BORZHOMI	8.29	312.8	2	4	0						
BAIRAM-ALI	8.56	79.2	2	6	-2					3	43
ABASTUMANJ	8.57	310.7	2	9	1						
ZUGDIDI	9.59	312.1	2	29	7						
SOTCHI	11.50	311.8	2	46	-2	4	48	-11		3	6
SAMARKAND	12.61	70.6	2	59	-4						
KSARA	13.06	263.0	3	13	4	5	46	9			
STALINABAD	13.86	76.1	3	20	0					5	12
JERUSALEM	14.28	111.4	3	27	2						
QUETTA	14.34	111.4	3	35K	9	6	24	17		6	33
KULYAB	14.64	78.9	3	28	-2					7	7
TASHKENT	14.66	65.3	3	27	-3					6	33
YALTA	15.43	306.6	3	40	0						
SIMFEROPOL	15.66	308.2	3	49	6	6	39	1		7	7
KHOROG	16.09	80.3	3	47	-2						
ISTANBUL	18.08	291.6	4	11	-3	7	37	3			
FRUNSE	18.85	63.0	4	23	0					8	9
NARYN	19.66	67.9	4	34	1					8	21
IASI	20.74	308.6	4	43	-1	8	37	5			
BUCHAREST	20.86	300.3	4	52	6	8	44	10		5	22
SVERDLOVSK	21.28	13.9	4	49	-1					8	48
MOSCOW	21.47	338.2	4	49	-3					9	15 SS
ATHENS	22.16	282.3	4	51	-8					5	28 PP
DEHRA DUN	22.95	97.8								5	28
LWOW	23.94	312.6	5	15	-1	9	31	0		7	45
BOMBAY	25.63	127.3								10	20
KRAKOW	26.49	310.8	5	39	-2						
POONA	26.57	126.3	5	51	10						
WARSAW	26.65	315.9	10	25	283	12	48	152			
PULKOVO	27.04	336.3	5	45	-1	10	22	-1		6	41 PP
RACIBORZ	27.56	310.1	5	57	6						
MESSINA	28.54	284.4								10	35
PRAGUE	29.90	308.8	6	17	6					6	59 PP
CHATRA	31.69	97.4	6	22	-5						
JENA	31.86	309.7	6	31	2					7	38 PP
UPPSALA	31.94	327.9	6	27	-2						
COPENHAGEN	32.63	318.6				11	50	-1			
APATITY	32.80	347.3	6	45	8	11	54	0			
STUTTGART	33.06	305.3	6	40	1	11	39	-19			
EBINGEN	33.16	304.2	6	42	2						
HAMBURG	33.40	314.1	6	48	6						
SODANKYLA	34.05	343.1	6	45	-3					7	48
BESANCON	35.13	302.3	7	1	4					7	34
KIRUNA	35.96	340.5	7	2	-2	12	37	-6			
SHILLONG	36.02	96.0	7	3K	-2						
SKALSTUGAN	36.05	331.3	7	8	3					8	20 PP
IRKUTSK	39.99	49.6	7	37	-1					9	9
RELIZANE	40.79	284.7	7	42	-2	14	1	5		9	25 PP
TAMANRASSET	41.87	264.1	7	51	-2	14	15	3			
GRANADA	43.59	288.2	7	59K	-8	14	39	2			
LWIRO	43.94	213.8	8	1	-9						
TIKSI	51.90	23.2	9	10	-2	16	35	0		10	23 PCP
RESOLUTE	66.94	350.8				19	51	2			
MATUSIRO	67.17	60.7	6	47	-251						
KIMBERLEY	69.56	204.9	11	2	-11						
COLLEGE	77.87	8.3	11	58	-3						
SHAWINIGAN	83.41	325.0	12	33	3						
HUNGRY HORSE	94.59	350.4	13	27	3						

MAY 8 20.H 9.M 49.S LPICENTRE -16.03 179.70 DEPTH= 302.KM
DEPTH OF FOCUS= 0.042R

A=-0.96158 B= 0.00499 C=-0.27447 D= 0.0052 E= 1.0000
G= 0.2745 H=-0.0014 K=-0.9616 HT= 5.6

SE= 1.90

	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
SUVA	2.43	209.8	0	6	-45							
NOUMEA	13.98	241.5	3	23	15						4	50
ONERAHI	20.23	192.6	4	11	-2							
KARAPIRO	22.11	188.8	4	29	-3						4	50
TONGARIRO	23.37	188.2	4	44	0							

WELLINGTON	25.52	188.7	5	4	1						
BRISBANE	27.20	240.7	5	16	-3	9	58	24			
RABAUL	29.49	290.5	5	31	-8						
MELBOURNE	37.50	227.8	6	51	4				8	11	10 31
TERRE ADELIE	56.58	197.1	9	13	-1	17	17	37			
MATUSIRO	65.33	324.1	10	9	-3	18	55	24			
BAGUIO CITY	66.64	296.2	10	21	1						
HONG KONG	74.62	299.0				20	53	35			
LICK	76.53	44.4	11	19K	0						
PASADENA	77.32	48.7	11	23	0	20	41	-6			
FRESNO	77.49	45.7									11 25
WOODY	77.60	47.1	11	23	-2						
BARRETT	77.72	50.6	11	24	-1						
RIVERSIDE	77.82	49.2	11	25	-1						
ISABELLA	77.85	47.2	11	25	-1						
PALOMAR	77.89	50.0	11	27	1						
MINERAL	78.18	41.8									11 28
CHINA LAKE	78.55	47.5	11	30	0						
TINEMAHA	78.72	46.1	11	15	-16						
RENO	78.91	43.3									11 32
EUREKA	81.45	44.9	11	46	1						
VICTORIA	81.70	34.2	11	45	-1						
SEATTLE	81.82	35.4	11	49	2						
TUCSON	81.95	53.3	11	50	2						
COLLEGE	84.36	13.3	11	56	-4						
HUNGRY HORSE	86.92	37.7	12	14	2						
BANFF	87.42	34.8	12	14	0						
RESOLUTE	104.13	15.9	13	30	-1	23	46	-65			32 36 SKS
BOMBAY	110.66	284.5									25 51
NAMANGAN	113.87	308.1									19 8
QUETTA	117.34	296.0	18	16	6						
SVERDLOVSK	119.09	326.6	18	21	8						
BERMUDA	119.87	61.6									23 11 PKS
KIMBERLEY	129.30	208.7	18	41	9						
MOSCOW	130.95	332.6	18	42	6						
PULKOVO	130.96	340.0									20 51 PP
HAMBURG	141.69	350.1	19	4	8						
KRAKOW	142.33	338.6	19	4	7						19 26
KSARA	142.96	305.3	18	52	-6						22 18 PP
JENA	143.90	347.2	19	2	2						
PRAGUE	144.02	343.8	18	59	-1				20	31	21 16 *SPKP
JERUSALEM	144.14	302.4	19	3	3						
BRATISLAVA	144.90	339.6	19	26	24				20	30	22 24 PP
LWIRO	145.99	240.3	19	11	8				19	26	
KARLSRUHE	146.35	349.6	19	11	7						19 53
STUTTGART	146.44	348.6	19	7	3						24 1 *PPP
SOFIA	146.61	327.5	19	9	5						20 9
TUBINGEN	146.69	348.6	19	11	7						
STRASBOURG	146.87	350.2	19	12K	7				20	37	21 1
EBINGEN	147.05	348.6	19	11	6						
PARIS	147.23	356.6	19	12	7				20	21	23 23 PP
BASLE	147.92	349.9	19	7	0						
TRIESTE	148.21	341.1	19	5	-2						19 21
BESANCON	148.44	351.8	19	20	13				20	42	23 32
NEUCHATEL	148.54	350.5	19	17	-1						
PAVIA	149.87	346.6	19	23	14						21 51
CLERMONT-FD.	150.22	355.2	19	11	1						
FLORENCE X.	150.65	342.8	19	21A	11						19 42
ROME	151.97	339.4	19	25	13						
MESSINA	153.88	330.7	19	15	0						19 57
ALGIERS UNI.	159.13	352.4	19	13	-9				20	53	
TAMANRASSET	171.33	321.6	19	40	8				21	21	24 46 PP

MAY 12 4.H 47.M 46.S EPICENTRE -60.69 -25.15 DEPTH= 0.KM

A= 0.44537 B=-0.20908 C=-0.87059 D=-0.4250 E=-0.9052
G=-0.7881 H= 0.3700 K=-0.4920 HT= -9.1

SE= 1.52

	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
SCOTT BASE	41.51	183.8	7	52	2							
KIMBERLEY	46.00	69.1	8	21	-7							
PRETORIA	50.12	70.5	8	54	-5							
TERRE ADELIE	52.41	173.3	9	16	0	16	42	0				
LA PAZ	53.77	305.8	9	26	0	17	1	1			19	20 SCS

HUANCAYO	60.74	300.5	10	30	14				14	28 PPP
TANANARIVE	65.22	84.5	10	45K	0				13	32 PP
LWIRO	71.14	58.6	11	20	-2					
GEBBIES PASS	74.95	193.3	11	44	-1					
MBOUR	75.10	8.2	11	46	0				17	8 PP
BOGOTA	75.37	309.1	11	50	3				21	20
CHINCHINA	76.29	307.7	11	51	-1	21	49	12		
WELLINGTON	77.08	195.3	11	57K	0					
COBB RIVER	77.53	193.7	12	2	3					
ST. LUCIA	79.79	324.7	12	12A	1					
KARAPIRO	80.29	196.5	12	13	-1					
FORT FRANCE	80.49	324.8	12	17	2	22	28	6		
DOMINICA	81.11	324.7	12	18	0					
BALBOA HTS.	81.48	305.7	12	21	1					
MELBOURNE	81.49	172.1	12	19	-2					
ONERAHI	82.56	195.9	12	28	2					
ANTIGUA	82.67	325.5	12	28A	1					
SAN JUAN	85.42	321.3	12	38	-3					
RIVERVIEW	85.77	176.9	12	41K	-1	23	14	-1	16	5 PP
TAMANRASSET	86.82	28.1	12	47K	0	23	20	-5	16	8 PP
BRISBANE	92.14	178.4	13	11	-1				16	52
BERMUDA	98.22	327.0	13	42	2	24	22	-43	17	39 PP
MALAGA	98.55	16.7							17	43 PP
GRANADA	99.11	17.3				25	46	33	17	50 PP
ALGIERS UNI.	99.83	22.6	13	49	1	25	21	2	17	50 PP
MESSINA	104.02	32.0							18	27
COLUMBIA	104.79	314.7				26	1	1	18	25 PP
KSARA	106.49	49.4							18	43 PP
ROME	106.76	28.4	14	1K	777				18	41 PP
FLORENCE X.	108.26	26.9							18	50
PHILADELPHIA	108.29	321.7	18	45	777				25	9
PALISADES	108.88	323.0	14	25	777	25	9	1	19	9 PP
PARIS	111.41	19.2	18	29	-7				19	8 PP
EBINGEN	111.98	23.9	18	34	-3					
STRASBOURG	112.13	22.9							19	46 PP
STUTTGART	112.59	23.8	18	37	-1				28	56 PS
BUCHAREST	112.74	37.3				29	11	228	19	21 PP
OTTAWA	113.43	323.6	18	39	-1	25	24	-2	19	28 PP
BRATISLAVA	113.76	29.5	18	58	17				19	28
BENSBERG	114.29	21.8	19	40	58					
PRAGUE	114.92	26.9							19	24 PP
JENA	115.12	24.7	18	40	-3				19	35 PP
RABAUL	115.27	177.0	18	43	0				19	40 PP
TUCSON	115.53	290.6	18	44	0	25	44	10	29	42 SS
SIMFEROPOL	115.75	42.7	18	42	-2				22	29 PKS
KRAKOW	116.20	30.6							19	28
LWOW	117.07	33.4				25	45	5	20	3 PP
KIRKLAND LA.	117.20	322.0	18	45	-2					
HAMBURG	117.31	22.7	18	45	-2				19	48 PP
WARSAW	118.48	30.3	18	49	-1				20	10 PP
BARRETT	118.61	286.2	18	52	2					
COPENHAGEN	119.78	23.5				25	50	1	20	22 PP
SCHEFFERVLLE	119.79	333.8	19	17	25					
RIVERSIDE	120.02	286.5	18	51	-2					
PASADENA	120.53	286.0	18	54	0	26	2	10	20	22 PP
CHINA LAKE	121.62	287.5	18	55K	-1				28	55 PKKP
ISABELLA	121.90	286.7	18	56K	0				20	51 PP
RAPID CITY	122.01	303.7	18	55	-2				31	43
WOODY	122.12	286.5	18	57K	0				28	51 PKKP
TINEMAHA	122.93	287.9	18	58	0				20	38 PP
UPPSALA	124.70	24.6	18	58K	-4				20	41 PP
LICK	124.76	285.4	19	2K	0					
SHILLONG	125.14	100.3	19	1K	-2					
BERKELEY	125.48	285.3	19	4K	1				27	50
MOSCOW	126.20	38.6	19	2	-3				20	52 PP
BOZEMAN	126.59	299.4	19	6	1					
MINERAL	127.14	287.7	19	6	0					
SKALSTUGAN	127.14	19.9	19	3K	-3					
BUTTE	127.52	298.6	19	7	0				21	27 PP
PULKOVO	127.57	31.7	18	47	-20				21	9 PP
SHASTA	127.78	287.4	19	7K	-1					
NAMANGAN	127.80	72.1	19	4	-4				21	4 PP
BAGUIO CITY	129.40	135.6	19	10	-1					
HUNGRY HORSE	129.95	299.5	19	11	-1				22	35 PKS
FRUNSE	130.64	72.7	19	11	-2				23	1 PKS
SCORESBY SD.	130.90	1.4	19	6	-8				22	43 PKS
CORVALLIS	131.21	289.9	19	33	19					
HONG KONG	132.38	125.2							22	46

KIRUNA	132.43	21.5	19 13	-4	21 31 PP
CANTON	132.71	123.7	19 17	0	21 42 PP
SEATTLE	133.07	293.3	19 18	0	22 53 PP
SODANKYLA	133.23	24.7	19 15	-3	21 46 PP
VICTORIA	134.22	293.4	19 19K	-1	
HORSESHOE B.	134.78	294.3	19 19	-2	22 51
SVERDLOVSK	135.02	50.9			22 52 PKS
SEMIPALATNSK	138.81	69.5	19 27	-1	23 1 PKS
RESOLUTE	142.56	335.8	19 27	-8	
NANKING	142.90	124.1	19 30	-5	
ZO-SE	143.01	127.8	19 31	-5	
TAIYUAN	145.05	111.5	19 40	1	
SITKA	145.27	295.8	19 39	-1	
PAOTOW	146.09	105.8	19 42	1	
TATUNG	147.23	109.9	19 44	1	
PEKING	148.50	113.3	19 43	-2	
MATUSIRO	153.61	148.8	19 52	-1	23 44 PP
COLLEGE	154.24	304.2	19 49	-4	20 16
CHANGCHUN	155.58	120.3	19 54	-1	
VLADIVOSTOK	157.62	131.4	19 56	-2	24 7 PP
TIKSI	165.00	32.4	20 0	-6	24 47 PP
PETROPAVLOVK	172.14	197.0	20 8	-2	

MAY 12 6.H 48.M 28.S EPICENTRE 53.28 142.48 DEPTH= 0.KM

A=-0.47635 B= 0.36574 C= 0.79958 D= 0.6090 E= 0.7932
G=-0.6342 H= 0.4869 K=-0.6006 HT= -6.6

SE= 3.15

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
UGLEGORSK	4.21	183.7	1 6	0	1 58	0		1 18
Y.-SAKHLINSK	6.33	178.5	1 33	-3				
MAGADAN	7.79	32.9	1 54	-3				
KURILSK	8.79	154.3	2 12	1	3 56	4		
PETROPAVLOVK	9.71	84.4	2 23	0				
VLADIVOSTOK	12.36	218.9	2 59	-1				6 19
CHANGCHUN	14.75	237.1	3 38	7	6 32	15		
MATUSIRO	16.99	191.8	3 56	-4	7 27	18		4 6
TUKUBASAN	17.14	186.6	4 1	-1				
TIKSI	19.37	347.0	4 26	-3	8 2	-1		4 57 PPP
KABANSK	21.63	281.3	4 54	1	8 51	2		
PEKING	22.24	244.1	4 58	-1	8 58	-2		9 10
ZO-SE	27.01	223.3	5 52	7	10 31	9		
COLLEGE	35.71	43.3	7 0	-2				
SEMIPALATNSK	37.49	291.5	7 20	3				
FRUNSE	44.91	285.3						18 23 SCS
SHILLONG	46.57	254.0	8 29	-2				
RESOLUTE	46.79	17.9	8 28K	-5	15 19	-4		
APATITY	48.47	331.0	8 47A	1	15 44	-3		
TASHKENT	48.96	287.0	8 49	0				
SODANKYLA	50.51	333.2	8 59	-2				10 18 PCP
STALINABAD	51.07	284.7	9 7	1				
KIRUNA	51.77	335.8	9 7	-4				9 13
PULKOVO	54.90	325.1						21 26 SS
MOSCOW	55.09	318.2	9 34	-2				
BANFF	57.13	47.2	9 47	-3				
SKALSTUGAN	57.20	336.0	9 46	-5				9 52
ASHKABAD	57.44	291.1	9 53	1				
RABAUL	57.84	168.6	9 54	-1				
QUETTA	58.00	278.6	9 53	-3	17 50	-6		
UPPSALA	58.87	331.1	9 58	-4	18 12	4		19 54 SCS
HUNGRY HORSE	59.85	48.6	10 8	-1				
SHASTA	61.41	59.6	10 18	-2				
KIROVOBAD	61.89	301.1	10 25	2				
TIFLIS	61.97	302.8	10 27	3				14 9 PPP
MINERAL	62.07	59.4	10 22A	-2				
BUTTE	62.25	49.5	10 23	-2				
BOZEMAN	63.21	48.9	10 38	6				
RENO	63.60	58.8	10 38	4				
LICK	64.28	61.6	10 37A	-2				
SIMFEROPOL	64.62	311.8	10 42	1				
LWOW	64.92	321.1	10 45	2				
KRAKOW	66.24	323.6	10 52	1				11 19 PCP
TINEMAHA	66.28	59.6	10 51	-1				10 57

HAMBURG	66.44	331.3	10	56	3			11	6
POTSDAM	66.55	328.9	10	56	1				
WOODY	66.99	61.0	10	54	-2				
ISABELLA	67.22	60.7	11	0	2				
RAPID CITY	67.91	45.1	10	59	-3				
WITTEVEEN	68.03	332.9	11	7	4				
JENA	68.27	329.0	11	5	1			13	50 PP
PASADENA	68.54	61.6	11	13	7				
BARRETT	70.47	61.5	11	17	-1				
STUTTGART	70.90	329.4	11	22	2			14	7 PP
EBINGEN	71.50	329.2	11	25	1				
KSARA	72.54	303.2	11	25	-5	20 49	-5	14	7 PP
KIRKLAND LA.	72.70	28.3	11	33	2				
TUCSON	73.83	57.7	11	37	-1				
FLORENCE X.	74.66	325.6	11	48	5				
ROME	75.89	323.9	11	51	1				
OTTAWA	76.41	26.6	11	59	6				
BREBEUF	76.87	25.2	12	3	8				
WESTON	80.37	24.7	12	26K	12				
BRISBANE	80.94	170.5	12	16	-1			12	23
RIVERVIEW	87.07	172.8	12	49A	1				

MAY 12 11.H 29.M 5.S EPICENTRE -9.01 107.24 DEPTH= 0.KM

A=-0.29283 B= 0.94342 C=-0.15557 D= 0.9551 E= 0.2964
G= 0.0461 H=-0.1486 K=-0.9878 HT= 6.7

SE= 2.20

	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	
DJAKARTA	2.84	351.7	0	51	4	1	22	-1					
PERTH	24.18	161.9	5	23	4	9	55	20			5	59	PP
MAMBAJAO	25.75	45.7	5	13	-21	9	35	-26					
MANILA	27.11	30.3	5	50	4	10	24	0					
COLOMBO	31.53	299.2	6	26	0	11	44	10					
HONG KONG	31.85	12.2	6	15	-14	10	55	-44					
TAWU	33.92	23.1	6	51	4								
TAINAN	34.25	21.6									8	29	PPP
HSINKONG	34.78	23.2	7	6	12	14	11	106					
KODAIKANAL	35.26	302.1	6	59A	1	12	14	-18			8	23	PP
SHILLONG	37.49	336.8	7	14K	-3	13	2	-4			8	31	PP
HYDERABAD	38.73	312.7	7	31	3	13	35	10			13	47	PS
BOKARO	38.79	327.7	7	29A	1	13	33	7					
CHATRA	40.60	331.9	7	43	0	14	1	7					
ZO-SE	42.06	18.0	7	55	0	14	16	1					
NANKING	42.29	14.6	7	57	0	14	19	0			17	25	SS
POONA	42.83	309.8	8	3	2	14	34	8			9	42	PP
BOMBAY	43.83	309.4	8	11	2	14	56	15			10	19	PP
MELBOURNE	44.46	136.2	8	16	1	14	56	6			10	0	PP
RABAUL	44.86	86.9	8	18	0								
LINFEN	45.05	4.9	8	23	4								
SINING	45.67	353.9	8	27	3								
TAIYUAN	46.82	5.8	8	34	1								
BRISBANE	46.89	119.3	8	36	2	15	30	5					
WUWEI	46.89	355.0	8	36	2								
RIVERVIEW	47.26	128.2	8	38A	1	15	33	3			10	9	PCP
CHANGYEH	48.09	353.0	8	45	2								
DEHRA DUN	48.12	325.5	8	42	-2						19	8	SS
TATUNG	49.18	6.1	8	56	4								
PAOTOW	49.41	2.8	8	54	1								
PEKING	49.49	9.0	8	53	-1	16	2	1					
KWANTING	49.60	8.4	8	55	0								
LAHORE	51.17	323.5	9	6	-1	16	23	-2					
MATUSIRO	53.86	30.9	9	24A	-3	16	57	-5			10	0	
TUKUBASAN	54.58	32.6	9	30	-2						9	42	
QUETTA	54.93	316.8	9	33A	-2	17	7	-9			11	43	PP
CHANGCHUN	55.09	15.9	9	35	-1	17	18	0					
VLADIVOSTOK	56.54	21.5	9	43	-3						17	35	
TANANARIVE	58.53	253.4	10	1A	0						10	12	
STALINABAD	59.35	325.5	10	3	-3								
FRUNSE	59.61	332.6	10	6A	-2								
TASHKENT	61.03	328.0	10	13	-5						18	37	
IRKUTSK	61.08	357.9	10	17	-1								
TERRE ADELIE	62.20	165.4	10	24	-2	18	51	0					
SEMIPALATNSK	63.66	341.1	10	35	0	19	8	-1					

Y.-SAKHLINSK	64.04	26.2	10	36	-2					
ROXBURGH	64.17	136.4				19	17	2	23 13	SS
ASHKABAD	65.28	319.0	10	45	-1	19	35	6	20 28	SCS
GEBBIES PASS	66.09	133.8	10	48	-3					
WELLINGTON	67.24	131.0				19	57	4	24 43	SS
GORIS	74.16	315.3	11	39	-1	21	41	28	16 22	PPP
PIETERMZBURG	74.20	241.8							12 36	
SCOTT BASE	75.04	169.1	11	44	-1					
PETROPAVLOVK	75.69	29.1	11	47	-2				22 5	SCS
TIFLIS	76.17	316.9	11	51	-1	21	51	15	14 44	PP
PRETORIA	76.34	245.7	11	52	-1					
MAGADAN	76.66	21.1	11	53	-1					
GRAHAMSTOWN	77.34	237.9	11	58A	0					
LWIRO	78.24	269.6	12	4A	1					
KIMBERLEY	79.15	242.4	12	8K	0					
KSARA	79.83	306.7	12	13	1	22	16	1	15 16	PP
TIKSI	81.74	6.8	12	17	-5				22 55	SCS
HERMANUS	83.35	236.3				23	4	13		
SIMFEROPOL	84.60	317.0	12	36A	-1	23	3	0	15 49	PP
MOSCOW	86.19	327.9	12	45	1				23 23	SCS
IASI	89.60	317.9	13	7	6	23	58	7		
BUCHAREST	89.97	314.9	13	4	1	24	3	9	23 38	SKS
ATHENS	90.42	308.2	13	2	-3	23	34	-24		
PULKOVO	91.21	330.5	13	8	0	23	46	-19	24 12	SCS
APATITY	92.17	338.3	13	10	-3	24	14	0	23 38	SKS
LWOW	92.47	319.9	13	15	1	23	51	-25	24 27	SKS
BELGRADE	94.01	314.6	13	22A	1	24	3	-27	17 31	PP
SODANKYLA	94.65	337.5	13	23	-1	24	27	-8	17 6	PP
WARSAW	94.74	322.0	13	24A	-1				13 48	PCP
BRATISLAVA	96.73	317.6	13	34	0				17 43	PP
REGGIO CALA.	96.73	307.4							17 51	
MESSINA	96.82	307.5	13	37	3	24	15	-39	17 32	PP
KIRUNA	97.07	337.6	13	34A	-1	24	16	-40	26 23	
UPPSALA	97.52	329.4	13	36	-1	24	16	-44	17 34	PP
TRIESTE	98.81	314.9							31 45	SS
ROME	99.48	311.0	14	0	14	24	33	-43	18 3	PP
COPENHAGEN	100.08	325.0				24	23	-58	17 47	PP
SKALSTUGAN	100.22	333.1	13	48	-1				17 57	PP
FLORENCE X.	100.48	312.9				24	32	-53	18 16	PP
JENA	100.49	320.2	13	49	-2				17 50	PP
HAMBURG	101.50	322.9				24	35	-58		
STUTTGART	102.01	318.0	14	2	5	24	37	-60	18 5	PP
EBINGEN	102.16	317.3							18 5	PP
KARLSRUHE	102.53	318.2							19 24	
STRASBOURG	102.96	317.8				24	37	-68	18 32	PP
TAMANRASSET	104.19	291.2	14	6	-1	26	1	6	18 33	PP
COLLEGE	104.44	25.2	14	7	-1	26	3	5	18 26	PP
DE BILT	104.47	321.5				24	55	-63	18 55	
CLERMONT-FD.	106.25	315.0							18 48	PP
PARIS	106.44	318.2	14	15	777				18 48	PP
ALGIERS UNI.	106.69	305.6				26	44	28	18 56	PP
KEW	107.93	321.2				25	15	0		
DURHAM	108.15	324.7							19 13	
ALICANTE	109.42	307.4	18	34	777	25	12	2	19 9	PP
SCORESBY SD.	110.88	343.8				25	42	26	19 12	PP
RATHFARNHAM	111.17	323.8							19 5	PP
GRANADA	111.98	306.4	14	45K	-232	27	3	103	19 47	PP
MALAGA	112.67	306.0	19	14	36	30	10	287	20 4	PP
RESOLUTE	113.16	6.3	18	38	-1	25	40	15	19 50	PP
HORSESHOE B.	121.88	36.4	18	57	1					
MBOUR	125.22	281.2							21 17	PP
BANFF	125.26	31.6	19	1	-2					
SHASTA	125.98	45.7	19	6	2					
MINERAL	126.67	45.8	19	7K	1					
HUNGRY HORSE	127.67	33.8	19	9	1					
LICK	127.71	49.4	19	10K	2					
RENO	128.25	46.1	19	12	3					
BUTTE	129.82	35.5	19	13	1				21 23	PP
KING RANCH	129.84	51.1	19	15	3					
TINEMAHA	130.35	48.4	19	13	0				22 38	PP
WOODY	130.38	50.4	19	15	2				21 24	PP
ISABELLA	130.69	50.2	19	16	3				22 40	PP
BOZEMAN	130.89	35.1	19	16	2					
CHINA LAKE	131.29	49.7	19	17	3				22 44	PP
PASADENA	131.45	52.0	19	18	3				21 59	PP
RIVERSIDE	132.12	51.9	19	19	3				22 44	SKP
PALOMAR	132.75	52.5	19	22	5					
SALT LAKE C.	133.12	41.0	19	19	1					

SCHEFFERVLLE	134.06	355.1	19 16	-4			
RAPID CITY	136.19	31.8	19 24	0			22 1 PP
TUCSON	137.86	51.2	19 30	3	26 14 -22		22 12 PP
KIRKLAND LA.	140.51	7.7	19 32	1			22 26
SEVEN FALLS	141.99	357.9	19 33	-1			
SHAWINIGAN	142.59	0.0	19 39	4			22 43 PP
BREBEUF	143.64	1.0	19 35	-2			
HALIFAX	143.64	348.9	19 36	-1			
OTTAWA	143.65	3.5	19 35	-2			
BUFFALO L.	145.88	7.7	19 42	1			
FAYETTEVILLE	146.72	32.6	19 46A	4			
WESTON	146.74	358.1	19 45	3			
CLEVELAND	146.74	12.1	19 45	3			
PENNSYLVANIA	148.02	7.3	19 49	5			
PALISADES	148.11	1.7	19 46	2			22 54 PP
PHILADELPHIA	149.11	3.6	20 27	41			43 49 SS
CHAPEL HILL	152.61	11.2	19 52	1			
COLUMBIA	153.99	15.8	19 56	3			23 43 PP
LA PAZ	154.25	190.3	19 57	3			30 57 SKKS
BERMUDA	155.57	343.3	19 55	0			
FORT FRANCE	167.30	297.7					24 3 SKP
BALBOA HTS.	173.28	89.9	20 12	1			
CHINCHINA	175.08	144.5	20 29	17	27 18 5		26 20 PP
BOGOTA	175.45	163.3	20 24	12	26 56 -17		

MAY 13 2.H 21.M 0.S EPICENTRE 43.68 135.68 DEPTH= 350.KM

DEPTH OF FOCUS= 0.050R

A=-0.51911 B= 0.50689 C= 0.68818 D= 0.6986 E= 0.7155
G=-0.4924 H= 0.4808 K=-0.7255 HT= -3.1

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
VLADIVOSTOK	2.81	259.8	0 59A	1	1 45	1		
MORI	3.92	112.0	1 9	0	2 3	0		1 34
MURORAN	4.11	107.4	1 10	-1	2 4	-2		
HAKODATE	4.17	115.4	1 9	-2				
SAPPORO	4.18	96.4	1 10A	-1	2 4	-3		1 25
TOMAKOMAI	4.47	103.0	1 15	1	2 13	0		
WAKKANAI	4.63	65.8	1 22	6				
AOMORI	4.74	125.3	1 16	-1				
ASAHIGAWA	4.85	86.5	1 19	1				
AKITA	5.16	138.6	1 25	3	2 28	2		
HATINOHE	5.37	123.9	1 24	0	2 26	-4		
URAKAWA	5.43	103.9	1 24	-1	2 29	-3		
OBIHIRO	5.54	95.3	1 21	-5	3 31	57		1 36
MORIOKA	5.72	132.2	1 28K	0	2 34	-3		
Y.-SAKHLINSK	5.94	54.2	1 32	1	2 43	1		
MIZUSAWA	6.12	136.1	1 30	-3	2 38	-8		
MIYAKO	6.19	128.4	1 32	-2	2 40	-7		
ABASHIRI	6.23	83.9	1 34	0	2 45	-3		
KUSIRO	6.40	93.3	1 33	-3	2 44	-7		
SENDAI	6.69	142.1	1 37	-2	2 52	-6		
ISINOMAKI	6.76	139.0	1 37	-3	2 52	-7		
HUKUSIMA	6.95	146.8	1 41	-1	2 59	-4		
UGLEGORSK	6.98	37.0	1 44A	1	3 7	3		
TOYAMA	7.07	170.0	2 20	36				3 6
NEMURO	7.21	89.4	1 46	0	3 1	-7		
NAGANO	7.26	163.8	1 46	0	3 17	7		
MATUSIRO	7.38	163.9	1 46K	-2	3 11	-1		2 31
SHIRAKAWA	7.41	150.6	1 46	-2	3 7	-6		
MATUMOTO	7.62	165.9	1 48	-2	3 20	3		
OIWAKE	7.66	162.4	1 57	6				
MAEBASI	7.72	159.2	1 50	-2	3 17	-2		
UTUNOMIYA	7.81	154.4	1 50	-3	3 16	-5		
ONAHAMA	7.81	147.6	1 50	-3	3 14	-7		3 43
KUMAGAYA	8.04	158.1	2 0	5	3 22	-4		
TITIBU	8.12	160.1	1 55	-1	3 23	-5		
MITO	8.16	151.7			3 23	-6		
TUKUBASAN	8.18	154.1	1 52A	-5	3 20	-9		
KAKIOKA	8.20	153.6	1 53	-4	3 22	-8		
GIHU	8.31	173.8	2 29	30				3 32
IIDA	8.31	167.8			3 34	2		

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.

KOHU	8.34	163.6	1	59	0	3	29	-4			
HIKONE	8.41	176.8	2	0	0	3	33	-1			
HUNATU	8.51	162.7				3	30	-6			
NAGOYA	8.56	172.9	2	2	1	3	37	0			
TOKYO C.M.O.	8.58	157.2	2	0	-2	3	34	-4		3	9
YOKOHAMA	8.79	158.3	2	9	5	3	38	-4		3	3
KAMEYAMA	8.84	175.8	2	10	5						
KURILSK	8.86	75.7	2	2	-3	3	39	-5			
TYOSI	8.89	151.7				3	38	-6			
MISIMA	8.91	162.4	2	7	1	3	38	-7			
AJIRO	9.01	161.8	2	9	2	3	40	-7			
OSAKA	9.02	180.8				3	47	0			
MERA	9.32	158.5	2	8	-3						
TAKAMATU	9.43	188.3	2	11	-1	3	57	1			
HIROSIMA	9.63	196.3	2	16A	2	4	3	2			
TOKUSIMA	9.63	185.5	2	15	1	4	1	0			
KOTI	10.25	190.1	2	20A	-2	4	14	0			
HUKUOKA	10.89	203.9	2	32	3	4	32	4			
OOITA	10.91	198.3	2	32	2	4	26	-2			
KUMAMOTO	11.52	201.5	2	38	1						
PETROPAVLOVK	17.87	50.0	3	44	-3						
MAGADAN	18.38	24.9	3	50	-2	7	4	5			
KYAKHTA	20.93	298.9	4	17	0						
TIKSI	28.23	355.4								12	0 SS
COLLEGE	46.00	35.3	7	52	1						
QUETTA	55.10	280.3	8	58K	-1	16	5	-8			
SODANKYLA	57.12	334.2	9	11	-2					10	2 PCP
RESOLUTE	57.25	14.1	9	12A	-2						
KIRUNA	58.72	336.3	9	23A	-1						
MOSCOW	59.34	319.4	9	26	-2	17	6	-2			
PULKOVO	60.24	325.8	9	33	-1	17	20	1			
HELSINKI	62.11	328.1	9	44	-2				10 46	10	21 PCP
KIROVOBAD	63.01	301.5	9	52	0						
SKALSTUGAN	64.10	335.5	9	58	-1				11 16	12	18 PP
HORSESHOE B.	64.53	45.3	10	2A	0						
VICTORIA	64.99	46.1	10	5	0						
UPPSALA	65.05	330.6	10	4A	-1					10	34
LWOW	69.46	320.0	10	34	2						
HUNGRY HORSE	69.83	41.8	10	36	1						
COPENHAGEN	70.01	329.7	10	36A	0						
SHASTA	70.55	52.1	10	40A	1						
MINERAL	71.23	51.9	10	44A	1						
BUTTE	72.17	42.8	10	49	0						
BERKELEY	72.50	54.2	10	51	0						
HAMBURG	72.55	329.5	10	53K	2						
RENO	72.79	51.6	10	53	1						
BOZEMAN	73.16	42.3	10	54	-1						
LICK	73.22	54.3	10	54A	-1						
BRATISLAVA	73.81	322.3	11	0	2				12 14		
JENA	74.01	327.0	11	0	1						
TINEMAHA	75.40	52.6	11	8	1						
JERUSALEM	75.61	300.2	11	4	-5						
KING RANCH	75.71	54.7	11	11A	2						
WOODY	75.97	54.0	11	10A	-1					14	10 PP
ISABELLA	76.23	53.8	11	11A	-1						
CHINA LAKE	76.62	53.1	11	16A	2						
STUTTGART	76.67	326.9	11	14	0				12 34		
TUBINGEN	76.91	326.8	11	17	1						
EBINGEN	77.23	326.6	11	18	1				12 37		
STRASBOURG	77.38	327.5	11	19	1						
PASADENA	77.46	54.7	11	19	0						
RATHFARNHAM	78.03	337.8	11	22K	0						
RIVERSIDE	78.03	54.3	11	21	-1						
RAPID CITY	78.06	39.1	11	24	2						
BASLE	78.31	327.0	11	20K	-3						
PALOMAR	78.79	54.5	11	27	1						
PARIS	79.16	330.6	11	28A	0				12 48	14	37 PP
BARRETT	79.38	54.9	11	29A	0						
BOULDER	80.18	43.0	11	34	1						
TUCSON	83.08	51.5	11	50	2						
SHAWINIGAN	86.69	19.2	12	7	1						
HALIFAX	90.42	13.6	12	24	1						
TAMANRASSET	99.61	314.3	13	4	-1					17	11 PP
BALBOA HTS.	118.62	40.3	19	22	76						
CHINCHINA	123.95	38.6	19	7	50					19	33
BOGOTA	124.95	37.1	19	34	75					20	28
HUANCAYO	138.68	49.8								21	50 PP
LA PAZ	146.20	44.1	19	19	21						

MAY 13 15.H 19.M 37.S EPICENTRE 32.36 137.72 DEPTH= 404.KM

DEPTH OF FOCUS= 0.059R

A=-0.62620 B= 0.56940 C= 0.53260 D= 0.6728 E= 0.7399
G=-0.3940 H= 0.3583 K=-0.8464 HT= 1.0

SE= 1.92

	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
HATIDYOZIMA	1.93	66.8	0	56	-1							
SIOMISAKI	1.97	304.2	0	57	0	1	40	-1				
OWASE	2.13	323.7	0	59	1	1	42	-1				
OMAESAKI	2.28	10.4	1	0	1	1	47	2				
TU	2.57	337.4	1	11	10	2	0	11				
SHIZUOKA	2.67	12.1	1	1	-1	1	51	1				
KAMEYAMA	2.70	337.6	1	1	-1	1	51	0				
OSIMA	2.78	29.5	1	3	0	1	52	0			2	40
NAGOYA	2.88	347.7	1	4	1	1	55	2				
AJIRO	2.92	22.8	1	1	-3	1	51	-3				
OSAKA	2.93	321.9	1	5	1	1	54	0				
MISIMA	2.94	20.1	1	3	-1	1	48	-6				
SUMOTO	3.10	310.7	1	7	2	1	54	-2				
MERA	3.10	34.0	1	2	-3	1	52	-4				
KYOTO	3.13	328.6	1	3	-2	1	53	-4				
GIHU	3.14	345.7	1	6	0	1	57	0				
TOKUSIMA	3.14	303.9	1	5	-1	1	57	0				
HIKONE	3.15	337.6	1	5	-1	1	59	2				
IIDA	3.16	1.6	1	7	1	1	56	-1				
HUNATU	3.26	15.3	1	7	0	1	57	-2				
KOHU	3.34	12.0	1	8	1	2	1	1				
YOKOHAMA	3.46	27.1	1	7	-1	1	59	-3				
TAKAMATU	3.64	303.5	1	9	-1	2	5	0				
KOTI	3.72	289.8	1	10	-1	2	9	3				
TOKYO C.M.O.	3.72	26.4	1	8	-3	2	0	-6				
HUKUI	3.88	342.3	1	19	7	2	10	1				
MATUMOTO	3.89	3.0	1	13	1	2	10	1				
OIWAKE	4.02	9.6	1	15	2	2	11	0				
KUMAGAYA	4.03	19.5	1	14	0	2	9	-2				
SIMIDU	4.03	277.3	1	13	-1	2	14	3				
MAEBASI	4.19	15.1	1	13A	-2	2	10	-4				
MATUSIRO	4.20	5.5	1	13K	-2	2	12	-2				
NAGANO	4.32	5.1	1	15	-1	2	13	-3				
TUKUBASAN	4.33	26.4	1	12	-5	2	5	-11				
TOYAMA	4.36	354.5	1	19	2	2	18	1				
KAKIOKA	4.37	27.1	1	16	-1	2	15	-2				
MATUYAMA	4.42	290.8	2	15	58	3	20	62				
UWAZIMA	4.44	282.7				2	22	4				
UTUNOMIYA	4.55	22.4	1	17	-2	2	15	-5				
MITO	4.61	28.8	1	19	0	2	16	-5				
TAKADA	4.75	5.1				2	23	-1				
HIROSIMA	4.86	295.8	1	20	-2	2	28	2				
WAZIMA	5.06	352.6	1	26	2							
SHIRAKAWA	5.18	22.7	1	24	-1	2	27	-5				
OOITA	5.21	281.3	1	25A	0	2	34	2				
HAMADA	5.35	299.8				2	35	0				
MIYAZAKI	5.36	267.0	1	30	3	2	41	6				
NIIGATA	5.66	10.7				2	39	-2				
HUKUSIMA	5.83	22.0	1	31	-1	2	40	-4				
KUMAMOTO	5.94	276.3	1	33	0	2	50	4				
KAGOSIMA	6.14	264.6	1	37	2	2	53	3				
HUKUOKA	6.26	283.2	1	37	0	2	55	3				
YAMAGATA	6.26	19.3	1	54	17	2	49	-3				
SAGA	6.31	280.1	1	39	2	2	56	3				
SENDAI	6.45	22.9	1	38	-1	2	51	-5				
YAKUSIMA	6.46	254.8	1	41	2	2	39	-17				
ISINOMAKI	6.74	24.9	1	41	-1	2	56	-6				
SAKATA	6.75	14.1				3	3	1				
MIZUSAWA	7.31	21.3	1	53	5	3	11	-3				
AKITA	7.60	14.0				3	20	0				
MORIOKA	7.84	19.9	1	53	-2	3	20	-5				
MIYAKO	8.05	24.1				3	24	-5			2	54
AOMORI	8.80	15.4				3	55	11				
HAKODATE	9.71	13.4	2	17	1	4	5	2				
MORI	9.99	12.3	2	22	3	4	13	4				

URAKAWA	10.57	20.9	2	27	1	4	24	3				
TOMAKOMAI	10.60	15.7				4	23	1				
SUTTSU	10.61	10.1				4	23	1				
SAPPORO	11.07	14.0	2	30A	-2	4	30	-2				
OBIHIRO	11.40	20.8	2	34	-2	4	35	-4				
VLADIVOSTOK	11.69	338.5				4	45	0				
KUSIRO	11.85	24.6				4	49	1				
NEMURO	12.59	27.3				4	59	-4				
ABASHIRI	12.73	22.0				5	5	-1				
ZO-SE	14.14	269.3	3	3	-3	5	35	1				
CHANGCHUN	15.04	323.2	3	15	0	5	55	3				
Y.-SAKHLINSK	15.07	13.3	3	16	0	5	48	-5				
NANKING	16.02	274.0	3	24	-1	6	12	1				
PEKING	18.98	299.9	3	55	0	7	9	5				
SHILLONG	40.44	272.5	6	59A	-4							
COLLEGE	54.66	30.3	8	51	0						11	1 PP
QUETTA	59.48	288.4	9	23A	-1	17	2	1				
RESOLUTE	67.86	13.2	10	16	-2							
MOSCOW	69.19	323.4				19	17	18				
KIRUNA	69.79	338.9	10	29	-1	19	6	0				
UPPSALA	75.79	333.2	11	2	-2	20	9	-3				
SHASTA	76.38	50.4	11	8	0							
SIMFEROPOL	76.49	314.8				20	19	-1				
MINERAL	77.08	50.4	11	13	1							
HUNGRY HORSE	77.29	40.5	11	14	1							
BERKELEY	77.93	52.8	11	16	0							
LICK	78.63	53.0	11	20	0							
RENO	78.67	50.4	11	22	2							
EUREKA	81.18	48.7	11	35	2						11	55
WOODY	81.40	53.2	11	34	0				13	3	14	44 PP
ISABELLA	81.69	53.1	11	35	-1							
CHINA LAKE	82.18	52.5	11	40	2						14	54 PP
PASADENA	82.73	54.2	11	43	2							
SALT LAKE C.	82.99	45.8	11	45	2							
RIVERSIDE	83.37	53.9	11	43	-1							
PALOMAR	84.09	54.2	11	49	1							
BARRETT	84.60	54.7	11	50	-1							
RAPID CITY	85.83	39.2	11	58	2							
MBOUR	127.59	328.5	18	29	11	24	7	-38	19	44	21	25 SKP

MAY 15 2.H 11.M 9.S EPICENTRE 16.75 -93.51 DEPTH= 125.KM

DEPTH OF FOCUS= 0.014R

A=-0.05870 B=-0.95631 C= 0.28640 D=-0.9981 E= 0.0613
G=-0.0175 H=-0.2859 K=-0.9581 HT= 5.4

SE= 2.46

	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	1.42	110.3	0	31	4	0	55	7				
OAXACA	3.13	275.4	1	7	18	1	37	11				
VERA CRUZ	3.49	314.8	0	47K	-6	1	27	-8				
PUEBLA	5.01	297.6	1	10	-4							
SAN SALVADOR	5.11	125.4	1	16	1	1	56	-18				
MERIDA	5.57	40.8	1	18K	-3	2	21	-4				
SANTIAGO MA.	5.85	123.0	1	21	-4							
TACUBAYA	6.02	296.8	1	29	2	2	45	9			2	28
GUADALAJARA	10.08	294.3	2	25	3	4	23	9			3	5
MANZANILLO	10.55	284.1				4	39	14			5	5
CHIHUAHUA	16.55	317.8									5	15
LUBBOCK	18.37	337.4	4	8	1	7	39	15			4	27 PP
FAYETTEVILLE	19.27	358.3	4	15A	-2	7	48	5	4	49		
COLUMBIA	20.52	30.8	4	30	0	8	17	10			4	58 PP
TUCSON	22.01	317.7	4	45	1	8	59	25			5	21 PP
BOGOTA	22.56	120.1	4	52	2						15	51 SCS
CHAPEL HILL	23.02	31.2	4	56	2							
BOULDER	25.36	338.5	5	17	0							
MORGANTOWN	25.68	24.7	5	34	15							
SAN JUAN	26.16	82.3	5	23	-1						8	46 PCP
BARRETT	26.26	311.4									5	49
CLEVELAND	26.72	20.3	5	38	9							
PALOMAR	26.75	312.5	5	31	2						6	8
BOULDER CITY	26.94	319.4	5	41	10						5	56
RIVERSIDE	27.46	313.2	5	35	-1						6	17
DALTON	27.85	313.1	5	58	19						6	17

PHILADELPHIA	28.08	30.9							6	23	PP
PASADENA	28.10	312.7			10	21	5		6	8	
RAPID CITY	28.45	345.3	5	46	1				6	24	*SP
CHINA LAKE	28.63	316.2	5	47	1				6	27	
SALT LAKE C.	28.71	330.2	5	48	1			6	13		
ISABELLA	29.12	315.1	5	50	-1				6	29	
WOODY	29.41	314.8	5	53	0				6	21	
PALISADES	29.51	31.0							6	20	
TINEMAHA	29.76	317.6	5	56	0				6	35	
BERMUDA	30.36	53.8	6	4	2	10	57	5	11	51	SS
ST. VINCENT	31.33	92.1	6	8	-2						
ST. LUCIA	31.44	90.4	6	8	-3						
TRINIDAD	31.63	96.8	6	7	-6						
LICK	32.18	315.1	6	17A	-1				6	43	
OTTAWA	32.22	23.8	6	17K	-1			6	45	7	21 PP
RENO	32.24	320.0	6	18	0						
BOZEMAN	32.35	336.7	6	20	1						
BARBADOS	32.94	91.6	6	22	-2						
KIRKLAND LA.	33.21	16.5	6	24	-2			6	53	9	4 SP
BUTTE	33.23	335.5	6	27	0					7	6 *SP
HUANCAYO	33.79	146.7	6	31	0					7	13 *SP
MINERAL	33.83	319.7	6	31A	-1						
SHAWINIGAN	34.35	25.7	6	42	6			7	4	7	17 *SP
SHASTA	34.52	319.6	6	36	-2						
SEVEN FALLS	35.62	26.9	7	14K	27						
HUNGRY HORSE	35.71	336.4	6	48	0					9	12 PCP
CORVALLIS	37.39	324.2	7	2	0						
BANFF	38.58	337.8	7	10A	-2						
SEATTLE	38.85	328.7	9	21	127						
VICTORIA	39.99	328.9	7	23A	0						
HORSESHOE B.	40.51	330.0	7	27	-1						
LA PAZ	41.45	141.6	8	0	25	13	43	2		17	12
RESOLUTE	57.94	359.6	9	38A	-3	17	3	-26		28	21
COLLEGE	60.15	336.4	9	54	-2				10	23	10 34 *SP
PARIS	81.45	41.7	12	5	1	22	8	5	12	36	15 9 PP
SKALSTUGAN	81.98	25.8	12	8A	1				12	34	
CLERMONT-FD.	82.70	44.5	12	10	-1					13	1
WITTEVEEN	82.83	37.0	12	13	2					12	46
KIRUNA	83.26	20.4	12	13A	0	22	23	1			
BENSBERG	83.71	38.7	10	17K	-119						
BESANCON	84.15	42.5	12	20	2					13	16
HAMBURG	84.46	35.6	12	21K	2						
STRASBOURG	84.86	40.8	12	23K	2					13	2
COPENHAGEN	85.02	33.1	12	23K	1						
SODANKYLA	85.53	19.6	12	24	-1						
STUTTGART	85.68	40.3	12	23	-2						
EBINGEN	85.74	40.9	12	24	-2						
UPPSALA	85.83	28.2	12	26	0						
MONACO	86.25	45.5	12	29K	1						
JENA	86.34	37.8	12	28	-1				13	2	16 4 PP
HELSINKI	88.88	26.1	12	39	-2						
TAMANRASSET	91.64	65.8	12	53	-1				13	22	16 45 PP
QUETTA	129.69	22.1	18	55A	1						22 8 PKS
TANANARIVE	142.92	99.3	19	18	0						19 22

MAY 17 2.H 42.M 29.S EPICENTRE -18.47-176.56 DEPTH= 301.KM

DEPTH OF FOCUS= 0.042R

A=-0.94740 B=-0.05702 C=-0.31493 D=-0.0601 E= 0.9982
G= 0.3144 H= 0.0189 K=-0.9491 HT= 5.0

SE= 1.08

	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
SUVA	4.77	273.1	0	18	-57	1	23	-51				
KARAPIRO	20.58	198.1	4	16	-1							
BRISBANE	29.34	246.6	5	37	0	10	9	1				
RIVERVIEW	32.61	235.6	6	7A	1							
SCOTT BASE	59.98	184.0	9	36	-1							
MATUSIRO	69.42	322.4	10	37K	0							
BERKELEY	75.77	41.5	11	15	1							
KING RANCH	75.91	44.9	11	15	0							
PASADENA	76.31	46.6	11	17	0							
BARRETT	76.56	48.6	11	21	2							

WOODY	76.71	45.0	11 19	-1							
RIVERSIDE	76.77	47.1	11 20	0							
PALOMAR	76.79	47.9	11 20A	0							
ISABELLA	76.95	45.2	11 21	0							
SHASTA	77.41	39.2	11 22K	-1							
CHINA LAKE	77.62	45.5	11 25	0							
MINERAL	77.68	39.8	11 24	-1							
TINEMAHA	77.90	44.1	11 26A	0							
RENO	78.30	41.3	11 29	1							
HONG KONG	78.92	298.0	11 13A	-18							
CORVALLIS	79.31	35.6	11 35	1							
TUCSON	80.60	51.5	11 41	1						12 51	
EUREKA	80.72	43.1	11 41	0							
VICTORIA	81.76	32.5	11 46	0							
HORSESHOE B.	82.38	31.9	11 49	-1							
TACUBAYA	84.71	67.7	12 18	17	22 16	14				17 16	
COLLEGE	85.95	11.9	12 6	-1			12 23				
HUNGRY HORSE	86.70	36.4	12 10	-1						15 36	PP
BOZEMAN	87.05	39.7	12 13	0							
BANFF	87.43	33.5	12 11	-3							
RAPID CITY	91.28	43.7	12 34	2							
QUETTA	121.61	294.5	18 19A	1							
KIRUNA	129.49	351.7	18 33	0							
SKALSTUGAN	134.52	354.5	18 42	0							
MOSCOW	134.74	333.4								21 11	
HELSINKI	135.57	344.8	18 44	0							
UPPSALA	137.42	349.5	18 37	-11							
SIMFEROPOL	143.26	322.7	18 57	-2							
RATHFARNHAM	144.43	10.0	19 1K	0							
HAMBURG	144.61	353.3	19 2A	1							
LWOW	144.63	336.8	19 3	2							
WITTEVEEN	145.63	356.5	19 5A	2							
KEW	146.94	4.3	19 8	3							
JENA	146.97	350.5	19 4	-1							
PRAGUE	147.27	346.9	19 10	5						19 36	
BENSBERG	147.45	355.6	19 9	4							
STUTTGART	149.42	352.5	19 9	1			19 19				
PARIS	149.73	1.3	19 16	7			19 34		19 43		
STRASBOURG	149.76	354.3	19 16K	7							
EBINGEN	150.03	352.6	19 15	6			19 22				
BESANCON	151.22	356.4	19 19	8						19 38	
TAMANRASSET	175.29	336.0	19 35	2						25 2	PP

MAY 18 5.H 24.M 6.S EPICENTRE 51.19-171.27 DEPTH= 0.KM

A=-0.62200 B=-0.09552 C= 0.77717 D=-0.1518 E= 0.9884
G=-0.7682 H=-0.1180 K=-0.6293 HT= -5.9

SE= 1.83

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
COLLEGE	18.33	32.7	4 11	-4	7 37	1		8 19 PCP
PETROPAVLOVK	18.49	287.8	4 17	0	7 42	2		
HORSESHOE B.	30.29	74.3	6 13	1				
VICTORIA	30.54	76.0	6 15	0				
SEATTLE	31.58	76.9	6 26A	2				
CORVALLIS	32.36	82.7	6 34K	3				
TIKSI	33.15	329.9	6 35	-3	11 54	-1		
SHASTA	34.97	88.0	6 56K	3				
UKIAH	35.35	90.8	6 59	3				
MINERAL	35.66	87.9	6 59K	0				9 28 PCP
HUNGRY HORSE	36.28	71.4	7 5	1				9 30 PCP
BERKELEY	36.70	91.8	7 8K	0	12 58	8		9 29 PCP
SANTA CLARA	37.21	92.2	7 12	0				
RENO	37.25	87.7	7 13K	0				
LICK	37.42	92.0	7 14K	0				9 31 PCP
TUKUBASAN	37.48	265.7	7 14	0	13 12	10	7 30	8 45 PP
RESOLUTE	37.94	24.8	7 17	-1	13 0	-9		9 31 PCP
BUTTE	38.26	74.1	7 20	-1				
MATUSIRO	38.46	267.7	7 22K	-1	13 18	1		8 56 PP
SASKATOON	38.91	62.5						13 11
FRESNO	38.92	91.2	7 28	1				
BOZEMAN	39.35	73.7	7 30	0				
EUREKA	39.70	85.0	7 33	0				
TINEMAHA	39.73	89.7	7 34K	1				
KING RANCH	39.87	93.0	7 35K	1				9 41

WOODY	40.19	91.8	7	33	-4				9	38	
ISABELLA	40.46	91.5	7	38K	-1				7	56	
CHINA LAKE	40.90	90.7	7	43K	0				9	37	
SALT LAKE C.	41.52	80.5	7	48	0						
PAS. DENA	41.62	93.1	7	48K	-1	14	10	6			
RIVERSIDE	42.22	92.6	7	58K	4				9	49	
CHANGCHUN	42.26	285.8	7	52	-2						
BOULDER CITY	42.55	88.3	7	57	1						
PALOMAR	42.96	92.9	8	0K	0				8	26	
HAYFIELD	43.50	91.5	8	4	0						
BARRETT	43.53	93.5	8	3K	-1				9	47	
RAPID CITY	44.92	71.2	8	15	-1				10	47	PPP
BOULDER	46.00	77.1	8	24	-1						
TUCSON	47.49	89.3	8	36	0				10	5	PCP
IRKUTSK	49.40	306.3	8	49	-2						
PEKING	50.01	287.0	8	54	-1	15	56	-8			
LUBBOCK	52.23	81.4	9	11	-1						
ZO-SF	52.73	275.0	9	17	1	16	49	7			
NANKING	53.57	277.6				16	54	1			
KIRKLAND LA.	55.38	54.5	9	34K	-1						
SCORESBY SD.	56.63	11.9	9	44	0	17	32	-2			
CLEVELAND	59.01	61.2	9	58	-3						
OTTAWA	59.43	54.5	10	2K	-2	18	16	5	12	13	PP
SHAWINIGAN	60.12	51.9	10	6K	-3				12	17	PP
APATITY	60.13	349.3	10	9K	0	18	19	-1			
BREBEUF	60.43	53.3	10	8K	-3	17	58	-26			
SEVEN FALLS	60.67	50.4	10	10K	-3	18	32	5	22	49	SS
KIRUNA	60.98	355.0	10	13	-2	18	32	1			
SODANKYLA	61.00	352.2	10	14	-1				11	0	PCP
MORGANTOWN	61.15	61.8	10	14K	-2						
SEMIPALATNSK	62.00	316.6	10	20	-2	18	42	-2			
WASHINGTON	63.25	60.6	10	30	0						
HONG KONG	63.36	272.9	10	32	1	19	11	10			
RABAUL	63.41	221.6	10	28	-3				10	44	
PALISADES	63.45	57.0	10	28K	-3	19	3	1	12	51	PP
BAGUIO CITY	63.70	263.5	10	14	-19						
WESTON	63.81	54.4	10	32K	-2						
TACUBAYA	63.93	91.2	10	38	3						
SVERDLOVSK	64.17	331.3	10	36	0	18	14	-57			
CHAPEL HILL	64.27	64.2	10	33	-4						
COLUMBIA	64.51	67.0	10	37	-1	19	12	-3	10	58	PCP
SKALSTUGAN	65.54	358.3	10	43	-2						
HALIFAX	65.95	48.2	10	49	2						
PULKOVO	68.02	348.4	11	1	1						
HELSINKI	68.22	351.3	11	0	-2				11	28	PCP
UPPSALA	69.08	355.2	11	6	-1	20	8	-2	39	10	PKPPK
FRUNSE	70.27	314.6	11	14	0						
MOSCOW	70.78	343.2	11	19	2						
NAMANGAN	73.09	315.2	11	31	0	20	59	2			
COPENHAGEN	73.45	357.8	11	33	0	21	4	3	25	48	SS
BERMUDA	74.80	57.2	11	43	2	21	22	6	14	34	PP
RATHFARNHAM	75.12	9.3	11	43A	0						
HAMBURG	75.61	359.2	11	47	1						
CHATRA	76.34	295.7	11	49	-1	21	39	6			
WITTEVEEN	76.35	1.3	11	50	0						
WARSAW	76.43	352.3	11	51	1	21	37	3	12	36	
POTSDAM	76.74	357.3	11	54	2						
DE BILT	77.04	2.2	11	56	2	21	48	7			
KEW	77.43	5.8	11	58	2	21	48	3	27	32	SS
BENSBERG	78.22	1.0	12	0	0			12 16			
JENA	78.23	358.2	12	0	0	21	57	4	15	12	PP
KRAKOW	78.69	352.7	12	3	0	22	1	3	12	18	PCP
RACIBORZ	78.79	353.8	12	5	2				21	5	
WARSAK DAM	78.83	311.1	12	5	1						
PRAGUE	79.00	356.3	12	5	0	21	54	-8	12	45	
KARLSRUHE	80.18	0.2	12	13A	2						
PARIS	80.24	4.2	12	12	1	22	14	0	15	12	PP
MAKHACH-KALA	80.35	332.2	12	10	-2	22	14	-2			
STUTTGART	80.42	359.7	12	12K	0	22	18	2	12 29	31	54 SSS
STRASBOURG	80.61	0.6	12	14	1	22	24	6		23	14 PPS
IASI	80.66	347.1	12	14	1						
TUBINGEN	80.66	359.8	12	14	1				12 30		
BRATISLAVA	80.76	354.3	12	15	1					12	49
EBINGEN	81.01	359.8	12	16K	1				12 31		
BASLE	81.66	0.8	12	19K	0						
SOTCHI	81.85	337.8	12	20	0	22	27	-4			
BESANCON	81.91	1.9	12	22	2					15	6 PP
NEUCHATEL	82.18	1.2	12	22	1					14	30
TIFLIS	82.27	333.6	12	22	0	22	42	7			

CHUR	82.34	359.4	12	23K	1						
CLERMONT-FD.	83.30	4.0	12	29	2	22	54	8	13	6	
TRIESTE	83.44	356.5	12	30	2	22	48	1			
ORDPA	83.57	0.5	12	30	1	22	56	7			
BUCHAREST	83.59	347.6	12	29A	0	22	56	7			
BELGRADE	83.83	351.6	12	31	1	23	4	13	24	11	PPS
PAVIA	84.01	359.7	12	33	2	23	2	9			
QUETTA	84.16	312.3	12	32K	0	22	59	5	12	36	PCP
BALBOA HTS.	84.16	83.1	12	30	-2	22	55	1			
BRISBANE	84.42	211.4	12	31	-2				16	20	PP
BOLOGNA	84.66	358.1	12	42	8	23	24	25	13	24	
SAN JUAN	84.99	66.9	12	34	-2						
FLORENCE X.	85.39	358.2	12	37A	-1	23	12	5	24	7	PS
GALERAZAMBA	85.42	78.6							24	8	PS
MONACO	85.45	0.9	12	38K	0				12	44	
ROME	87.23	357.2	12	48K	1	23	21	-3	24	14	PS
CHINCHINA	89.70	82.5	12	58	0	23	52	5			
POONA	90.33	300.6	13	0	-1	23	55	2	23	44	SCS
ALICANTE	90.47	7.2	13	0	-2	23	55	1	16	38	PP
BOMBAY	90.58	301.6	13	5	2	24	0	5			
MESSINA	90.78	354.6	13	4	0	23	53	-4	23	31	SKS
RIVERVIEW	90.89	210.5	13	5A	1	24	8	10	23	39	SKS
BOGOTA	90.94	81.5	13	10	6	23	52	-6	16	50	
GRANADA	91.34	9.8	13	10A	4	24	13	11			
MALAGA	91.71	10.5	13	10K	2	24	16	11	16	50	PP
KSARA	92.04	337.7	13	8	-1						
ALGIERS UNI.	92.27	4.6	13	8	-2	24	13	3	16	50	PP
RELIZANE	93.13	6.7	13	7	-7						
JERUSALEM	94.15	337.6	13	19	0				13	32	
HUANCAYO	103.00	93.1							18	7	PP
TAMANRASSET	106.30	3.1	14	14	777				16	54	
LWIRO	128.38	334.1	19	8A	2				19	21	
SCOTT BASE	129.49	185.9	19	7	-1						
TANANARIVE	135.61	302.0	18	57	-23						
PRETORIA	150.57	322.3	19	53	8						
PIETERMZBURG	153.05	314.8							19	57	PKP2

MAY 19 20.H 60.M 33.S EPICENTRE 12.14 -87.24 DEPTH= 24.KM
A= 0.04707 B=-0.97680 C= 0.20893 D=-0.9988 E=-0.0481
G= 0.0101 H=-0.2087 K=-0.9779 HT= 6.2

SE= 2.57

	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.	1.80	318.4	0	28	-1	0	48	-3					
SAN SALVADOR	2.50	309.4	0	37	-2	1	1	-8					
COMITAN	6.26	311.3	1	33	0	2	53	9			10	33	
BALBOA HTS.	8.19	112.0	1	58	-1	4	22	50					
MERIDA	9.05	345.7	2	9K	-3	3	54	0			3	1	
VERA CRUZ	11.07	310.5	2	39	0	4	51	8			3	31	
GALERAZAMBA	11.81	95.4				4	47	-14			3	47	
CHINCHINA	13.51	120.8	3	9	-3	5	50	8					
BOGOTA	15.01	118.7	3	31	-1	6	39	21			6	19	
GUADALAJARA	17.60	300.9	4	12	8	7	34	17			10	50	
SAN JUAN	21.29	70.5	4	45	-1						5	8	
COLUMBIA	22.49	13.6	5	0	2	8	55	-3			5	55	PP
FAYETTEVILLE	24.66	346.4	5	18	-1						9	47	PCP
CHAPEL HILL	24.81	16.0	5	25	4						5	39	
LUBBOCK	25.17	330.3	5	24	0	9	51	6					
FORT FRANCE	25.50	81.2	5	33	6						10	57	SS
HUANCAYO	26.78	153.4	5	39	0	10	25	14			6	57	PP
WASHINGTON	28.14	17.0	5	53	1	10	46	13	6	8	6	36	PP
BERMUDA	28.90	42.2	6	3	5	10	58	13					
TUCSON	29.50	316.5	6	8	4								
CHICAGO CGS.	29.53	359.5	6	46	42								
PHILADELPHIA	29.68	18.9	7	19	74								
PENNSYLVANIA	29.72	14.4	6	8	2	11	20	21			7	3	PP
PALISADES	31.05	19.8	6	17A	0	11	28	8			7	16	PP
BOULDER	32.03	333.3	6	25	-1								
WESTON	33.16	21.8	6	36	0								
BARRETT	33.84	311.9	6	44	2								
LA PAZ	34.16	146.0	6	47	3	12	9	1			16	7	SSS
PALOMAR	34.32	312.8	6	47	1								
OTTAWA	34.57	14.4	6	48A	0	12	39	25					

RAPID CITY	34.67	339.6	6 48	-1				
RIVERSIDE	35.02	313.4	6 52	0				
BREBEUF	35.22	16.7	6 53K	-1				
PASADENA	35.66	313.0	6 57	0				
SALT LAKE C.	35.79	327.3	6 59	1			7 17	
CHINA LAKE	36.14	315.9	7 1	0			9 26	PCP
KIRKLAND LA.	36.40	8.1	7 2A	-2				
SHAWINIGAN	36.42	16.9	7 3A	-1				
ISABELLA	36.66	315.0	7 6	0			9 27	PCP
WOODY	36.95	314.8	7 8	0			9 27	PCP
TINEMAHA	37.25	317.1	7 15	4			9 39	PCP
EUREKA	37.25	322.1	7 11	0				
KING RANCH	37.37	313.6	7 13	1				
SEVEN FALLS	37.51	18.5	7 12	-1				
HALIFAX	38.18	27.6	7 18A	0				
BOZEMAN	39.07	333.3	7 25	-1				
RENO	39.67	319.3	7 24	-7				
LICK	39.71	315.2	7 36K	5			7 40	
BUTTE	40.02	332.4	7 33	-1	13 10	-28	9 38	PCP
HUNGRY HORSE	42.44	333.5	7 51	-3			17 54	SCS
BANFF	45.22	335.1	8 14	-2				
VICTORIA	47.09	327.6	8 29	-2				
HORSESHOE B.	47.55	328.6	8 32	-3				
RESOLUTE	62.67	357.7	10 20A	-4				
COLLEGE	66.79	336.1	10 47	-4			11 17	
CLERMONT-FD.	81.67	45.0			23 48	82		
ALGIERS UNI	83.08	54.0	12 26	2	22 40	0		23 21 PS
COPENHAGEN	85.47	34.1			23 3	-1		
TAMANRASSET	87.88	67.3	12 43	-5				
KIMBERLEY	114.96	116.1	14 14	-264				
QUETTA	131.13	30.0	19 9A	0	26 4	-11		22 35 PKS

MAY 20 1.H 50.M 54.S EPICENTRE 51.28 179.57 DEPTH= 0.KM

A=-0.62801 B= 0.00467 C= 0.77819 D= 0.0074 E= 1.0000
G=-0.7782 H= 0.0058 K=-0.6280 HT= -5.9

SE= 2.44

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S	
PETROPAVLOVK	12.96	286.4	3 9	1					
COLLEGE	21.63	38.6	4 55	1	9 1	12		5 6	PP
Y.-SAKHLINSK	24.33	274.3	5 22	2	9 43	5			
SITKA	26.63	59.7	6 7	25	10 57	41			
TIKSI	30.21	330.8	6 14	0					
MATUSIRO	32.75	259.6	6 36	-1	11 51	-2			
VLADIVOSTOK	32.90	274.7	6 36	-2	11 56	0			
HORSESHOE B.	35.74	70.0	7 4	2				12 44	
VICTORIA	36.03	71.4	7 6	1					
CORVALLIS	38.01	77.1	7 24	3					
BANFF	39.43	63.8	7 33	0					
RESOLUTE	40.25	24.2	7 42	2	13 50	2		9 22	PP
HUNGRY HORSE	41.63	67.0	7 52	1	14 14	5			
BERKELEY	42.45	85.0	8 0	2	14 32	11			
RENO	42.97	81.3	8 2	0					
LICK	43.16	85.1	8 4	0					
BUTTE	43.69	69.1	8 9	1	14 33	-6		9 16	PCP
PEKING	44.40	281.1	8 13	-1					
IRKUTSK	44.59	302.2	8 13	-3					
BOZEMAN	44.77	68.7	8 18	1					
EUREKA	45.38	78.8	8 21	-1					
TINEMAHA	45.47	83.0	8 24	1	15 32	27			
KING RANCH	45.62	86.0	8 24	0					
WOODY	45.93	84.9	8 24	-2				8 44	
ISABELLA	46.20	84.7	8 27	-1				8 42	
CHINA LAKE	46.65	83.9	8 32	0					
ZO-SE	46.98	267.9	8 34	-1					
SALT LAKE C.	47.12	74.8	8 36	0					
PASADENA	47.37	86.1	8 37	-1	15 34	2			
NANKING	47.83	270.7	8 40	-1					
RIVERSIDE	47.97	85.6	8 41	-1					
BOULDER CITY	48.27	81.8	8 42	-3					
PALOMAR	48.71	85.9	8 48	0					
HAYFIELD	49.25	84.6	8 52	0					
BARRETT	49.28	86.4	8 51	-1					

RAPID CITY	50.24	66.1	9	0	0					
TUCSON	53.22	82.6	9	22	0					
SCORESBY SD.	57.55	8.4	9	54	0					
CANTON	57.60	267.1	9	51	-3					
LUBBOCK	57.84	75.1	9	59	3					
BAGUIO CITY	58.06	255.8	10	2	5					
APATITY	58.79	345.5	9	55	-7	17	56	-11		
MANILA	59.24	254.1	10	43	38					
KIRKLAND LA.	59.86	49.6	9	48	-22					
KIRUNA	60.18	351.0	10	11	-1	18	24	-1		
FAYETTEVILLE	60.67	68.0	10	19	4				18	28
SVERDLOVSK	61.12	326.7	10	19	1					
SHAWINIGAN	64.43	46.8	10	48	8					
SEVEN FALLS	64.87	45.3	10	44	1					
SKALSTUGAN	65.04	353.8	10	44	0					
FRUNSE	65.91	308.9	10	48	-2					
MORGANTOWN	66.03	56.2	11	2	11					
PENNSYLVANIA	66.24	54.1	10	50	-2	19	42	1		
PULKOVO	66.54	343.6							11	14
HELSINKI	67.03	346.5	10	55	-2				11	24 PCP
PALISADES	68.06	51.5	11	1	-3	20	3	0	13	47 PP
WASHINGTON	68.07	54.9	11	25	21					
PHILADELPHIA	68.24	53.0	11	9	4					
UPPSALA	68.26	350.3	11	4	-1	20	4	-1		
WESTON	68.27	48.9	11	4A	-1				11	12
NAMANGAN	68.77	309.4	11	8	0	20	15	4		
MOSCOW	68.78	338.0	11	6	-2					
COLUMBIA	69.64	61.0	11	14	1	20	21	0	21	20 SCS
COPENHAGEN	72.87	352.4				20	59	0	21	32 PS
DURHAM	74.31	0.7							19	39
HAMBURG	75.15	353.6	11	47	1	21	51	27		
WARSAW	75.28	346.6				21	37	11	14	23 PP
DE BILT	76.88	356.5	12	6	10	21	42	-1		
LWOW	77.13	344.0	11	58	1					
KRAKOW	77.57	346.7	12	22	23					
KEW	77.62	359.9				22	3	12	27	12 SS
BENSBERG	77.93	355.1	12	0	-1					
IASI	78.99	341.0	12	33	26					
TIFLIS	79.35	327.3	12	10	1	22	16	6		
BERMUDA	79.40	50.8	12	6	-4	22	14	4	17	32 PPP
SIMFEROPOL	79.60	335.8	12	12	1					
QUETTA	79.63	305.7	12	10	-1	22	15	2	23	9 PPS
STUTTGART	79.99	353.5	12	12	-1	22	18	2		
PARIS	80.26	358.0	12	9	-5				12	23
STRASBOURG	80.27	354.5				22	26	7	27	36 SS
BUCHAREST	81.94	341.1	12	23	0	22	43	6	15	16 PP
BELGRADE	82.59	345.2	12	29A	3				23	29 SKKS
TRIESTE	82.67	350.0	12	32	5	22	51	7	28	19 SS
CLERMONT-FD.	83.28	357.5				23	10	20	14	6
FLORENCE X.	84.78	351.5	11	51	-46	22	11	-34	27	40 SS
BOMBAY	85.46	294.6	12	13	-28	23	13	1		
ROME	86.52	350.4	13	1	15	23	29	7		
KSARA	89.44	330.5	11	10	-110	19	52	-237	12	38 PP
MESSINA	89.80	347.5	12	57	-5	23	57	4	18	29 PPP
ALGIERS UNI.	92.27	357.2				23	43	-32	17	11 PP
MALAGA	92.30	3.2							24	15 PP
TAMANRASSET	106.08	354.3							18	21 PP
PRETORIA	146.46	308.6	19	42	0					
PIETERMZBURG	148.46	301.5	19	48	3					
KIMBERLEY	150.61	310.4	19	52	4					

MAY 20 19.H 57.M 34.S EPICENTRE 38.65 14.11 DEPTH= 0.KM

A= 0.75943 B= 0.19087 C= 0.62196 D= 0.2438 E=-0.9698
G= 0.6032 H= 0.1516 K=-0.7830 HT= -1.2

SE= 3.28

	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
MESSINA	1.22	111.1	0	24A	-1	0	43	1			0	30
REGGIO CALA.	1.33	113.8				0	53	8			0	26 PG
ROME	3.48	339.5	0	55	-2	1	40	0			1	13
FLORENCE X.	5.56	338.1	0	27	-60	1	42	-50				
BOLOGNA	6.21	341.3	1	39	3							

	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	
TRIESTE	7.00	357.9	1	57	10								
MONACO	7.15	317.4				3	18	6			3	2	
ZAGREB	7.30	10.4	0	36	-75						4	23	
PAVIA	7.49	332.2	1	56A	2	3	27	7			4	6	
ATHENS	7.59	92.1	1	55	0	3	18	-5			2	4	PP
BELGRADE	7.78	35.5									3	58	
SOFIA	8.09	57.1	2	0	-2						3	34	
OROPA	8.32	328.8	2	5	0	4	6	25					
KALOCSA	8.66	22.9									5	26	
SZEGED	8.80	28.4				3	55	2			3	40	
TIMISOARA	8.84	34.3									3	38	
ALGIERS UNI.	8.96	261.3	2	16	2	3	59	2					
BUDAPEST	9.54	20.7				4	15	4			5	4	S*
HURBANOVO	9.69	16.6									4	56	
BRATISLAVA	9.76	11.9	2	24	-1						2	49	
NEUCHATEL	9.86	330.1	2	25	-2						2	45	
BASLE	10.08	333.9	2	29	-1						5	54	
EBINGEN	10.23	340.3	2	29	-3								
BESANCON	10.45	327.9	2	34	-1	4	19	-15			2	54	PPP
TUBINGEN	10.53	341.4	2	32	-4								
BUCHAREST	10.68	53.5									3	12	
STUTTGART	10.72	342.3	2	32									
STRASBOURG	10.93	337.3	2	39A							2	50	PP
KARLSRUHE	11.14	340.2	2	51							3	16	
SKALNATE PL.	11.42	20.8	2	52							5	47	
PRAGUE	11.42	1.0	2	47							4	20	
ALICANTE	11.44	273.1	2	54		5	5	7					
CHEB	11.50	354.4									6	34	
KRAKOW	12.13	18.1	2	58							3	7	PP
JENA	12.41	352.5	2	59		5	6	-16			3	7	PP
PARIS	13.17	324.2	3	16	5	5	46	6			3	30	PP
LWOW	13.23	29.1									3	16	
BENSBERG	13.25	340.5	3	19	6								
POTSDAM	13.75	357.3	3	26	7						5	56	
GRANADA	14.06	269.5	3	25K	2	6	15	14					
WARSAW	14.41	17.3	3	28	0						6	31	SS
MALAGA	14.78	268.3	3	27	-6	5	57	-21					
DE BILT	14.83	338.0									3	36	
HAMBURG	15.19	350.6	3	42	4	6	35	7			3	47	
SIMFEROPOL	16.18	60.7									4	24	
KEW	16.34	326.4	3	50	-3	7	16	21			4	18	PP
COPENHAGEN	17.08	356.8	4	2	0	7	28	16					
TAMANRASSET	17.44	207.4	4	8K	1	7	28	8			4	23	PP
KSARA	18.20	98.7	4	26	10						5	56	
JERUSALEM	18.54	105.3	4	18	-2	7	58	13					
RATHFARNHAM	20.28	322.9	4	50	10						5	26	
UPPSALA	21.34	4.9	4	52	1	8	48	4					
ABERDEEN	21.38	335.3									4	20	
HELSINKI	22.61	14.2	5	3	-1								
MOSCOW	23.21	34.9	5	8	-2								
TIFLIS	23.59	72.7	5	15	1						9	35	
SKALSTUGAN	24.99	358.1	5	28	1								
KIRUNA	29.45	4.9	6	6	-2	11	3	1					
SODANKYLA	29.62	9.8	6	8	-2								
QUETTA	43.89	84.5	8	10	0								
HALIFAX	56.33	303.0	9	43K	-2								
OTTAWA	63.70	308.2	10	34	-2								
SHILLONG	65.36	76.2	10	43K	-4								
COLUMBIA	73.27	300.2	11	33	-2								
COLLEGE	75.85	352.1	11	49	-1								
RAPID CITY	80.08	319.5	12	13	-1								
BAGUIO CITY	92.20	67.1	11	36	-97								

MAY 21 1.H 12.M 4.S EPICENTRE 21.73 144.25 DEPTH= 113.KM

DEPTH OF FOCUS= 0.013R

A=-0.75455 B= 0.54328 C= 0.36809 D= 0.5843 E= 0.8115
G=-0.2987 H= 0.2151 K=-0.9298 HT= 4.2

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	
TORISIMA	9.41	338.7	2	11	-3	3	50	-9					
HATIDYOZIMA	11.98	341.9									4	13	
OSIMA	13.68	342.8	3	10K	0	5	33	-7			15	24	SCS

MERA	13.70	344.5	3	8K	-3	5	30	-10		
OMAESAKI	13.87	338.8	3	11K	-2	5	40	-5	4	41
SIOMISAKI	13.87	329.1	3	13K	0	5	40	-5		
AJIRO	14.02	342.3	3	12	-3				6	3
MISIMA	14.13	341.9	3	13K	-3	5	44	-6	15	26 SCS
SHIZUOKA	14.15	340.0	3	15	-2	5	48	-3	4	10
HAMAMATU	14.15	337.5	3	15K	-2				6	33
OWASE	14.19	331.7	3	18	1	5	50	-2	15	27 SCS
TYOSI	14.25	348.7	3	16	-2				3	49
TOKYO C.M.O.	14.44	345.2	3	16	-4	5	50	-8	3	56
MUROTO	14.53	324.3	3	24	3				6	42
HUNATU	14.53	341.9	3	20K	-1	5	56	-4	15	27 SCS
TU	14.62	334.0	3	22	-1					
KOHU	14.71	341.5	3	23K	-1	6	1	-3	15	27 SCS
KAMEYAMA	14.75	334.1	3	22A	-2	6	8	3	15	29 SCS
WAKAYAMA	14.80	329.2	3	24	-1	6	5	-1		
NAGOYA	14.83	336.1	3	24	-1	5	59	-8	15	29 SCS
IIDA	14.84	339.2	3	26	1	6	4	-3		
NARA	14.87	332.0	3	26	0					
SIMIDU	14.88	320.1	3	25K	-1	6	9	1		
KAKIOKA	14.88	347.1	3	25	-1	6	0	-8		
TUKUBASAN	14.88	346.8	3	23	-3	5	59	-9	15	27 SCS
TITIBU	14.90	343.5	3	24	-2	5	58	-10		
TOKUSIMA	14.96	327.3	3	28K	1	5	58	-12	15	30 SCS
MITO	14.96	348.1	3	30	3				6	4
OSAKA	14.98	331.1	3	30	3	5	59	-11		
KUMAGAYA	14.98	344.6	3	22	-5	5	59	-11		
SUMOTO	15.03	328.7	3	28K	0	6	12	0	15	29 SCS
YAKUSIMA	15.08	308.0	3	30	2	6	24	11	15	27 SCS
GIHU	15.11	335.9	3	27	-2	6	11	-2	15	28 SCS
KOTI	15.11	323.4	3	28	-1	6	17	4	15	30 SCS
KOBE	15.16	330.2	3	33K	4	6	12	-2		
HIKONE	15.20	334.3	3	29K	-1	6	44	-1	15	29 SCS
KYOTO	15.20	332.4	3	28	-2	6	13	-2		
IBUKISAN	15.24	334.8	3	32	2					
UTUNOMIYA	15.25	346.5	3	28	-3	6	10	-6	15	28 SCS
MIYAZAKI	15.29	314.3	3	36K	5	6	36	19	15	35 SCS
MAEBASI	15.30	344.0	3	28	-3	5	57	-21	15	28 SCS
OIWAKE	15.37	342.4	3	33	1	6	8	-11		
TAKAMATU	15.42	326.6	3	33	0				15	30 SCS
ONAHAMA	15.44	349.9	3	33K	0	6	14	-7	5	0
UWAZIMA	15.44	320.3	3	36	3	6	34	13	15	31 SCS
MATUMOTO	15.47	340.6	3	30K	-3	6	11	-10	15	24 SCS
TSURUGA	15.60	334.5	3	34	-1	6	20	-4		
KAGOSIMA	15.67	311.6	3	46K	10	6	44	18	15	36 SCS
MATUSIRO	15.67	341.8	3	33K	-3	6	18	-8	15	29 SCS
MAIZURU	15.70	332.6	3	38	2	6	36	9	15	26 SCS
SHIRAKAWA	15.73	348.1	3	34	-3	6	20	-7	15	28 SCS
MATUYAMA	15.76	322.3	3	36	-1	6	34	6	15	30 SCS
OKAYAMA	15.77	327.1	3	40	3	6	30	2	15	41 SCS
NAGANO	15.79	341.9	3	38	1	6	28	-1		
HUKUI	15.87	335.7	3	39	1	6	32	1		
OOITA	16.01	318.4	3	41K	1	6	42	8		
TOYAMA	16.13	339.2	3	41	-1	6	43	6		
ASOSAN	16.13	316.4	3	44	2	6	49	12		
KANAZAWA	16.16	337.5	3	45	3					
TOTTORI	16.28	329.6	3	45	2					
HUKUSIMA	16.29	349.3	3	43K	-1	6	34	-7		
KUMAMOTO	16.32	315.4	3	46K	2	6	53	12	15	32 SCS
HIROSIMA	16.33	323.0	3	44K	0	6	50	8	15	32 SCS
UNZENDAKE	16.56	314.3	3	49	2	6	55	8		
YONAGO	16.65	327.4	3	48	0	6	47	-2		
SENDAI	16.73	350.8	3	47K	-2	6	41	-10	7	57
NIIGATA	16.75	345.6	3	50	1	6	59	7	4	19 PP
YAMAGATA	16.80	349.3	3	48	-2	6	47	-6		
MATSUE	16.81	326.8	3	52	2	6	59	6	15	36 SCS
NAGASAKI	16.81	313.7	3	56	6					
ISINOMAKI	16.83	352.0	3	52	2	6	44	-10	7	43
WAZIMA	16.84	339.4	3	50	0	6	59	5		
SAGA	16.85	315.8	3	55A	4				15	37 SCS
SIMONOSEKI	16.92	318.9	3	52K	1	7	2	6		
HAMADA	16.92	323.4	3	52K	1	7	2	6	15	34 SCS
HUKUOKA	16.99	316.9	3	54	2	7	5	8	15	36 SCS
AIKAWA	17.04	343.6	3	53	0	7	2	3	15	34 SCS
SAIGO	17.27	328.9	3	56	0	7	7	4		
TOMIE	17.51	311.5	4	0K	2	7	15	7	15	35 SCS
MIZUSAWA	17.55	351.9	3	59	0	7	7	-2	15	35
MIYAKO	17.97	354.3	4	3	-1	7	12	-6		

MORIOKA	18.10	352.3	4 6	0	7 3	-17		15 36	SCS
ITUHARA	18.11	316.5	4 6	0	7 25	4		15 37	SCS
AKITA	18.28	349.8	4 8K	0	7 34	10			
HATINOHE	18.88	353.6	4 13K	-1	7 45	8			
AOMORI	19.26	352.0	4 18K	0	7 49	4			
HAKODATE	20.21	352.3	4 29K	1	7 50	-13			
URAKAWA	20.40	356.9	4 32	2	8 12	5		15 47	SCS
MORI	20.54	352.2	4 34K	2	8 17	7		4 52	
MURORAN	20.72	353.1	4 33	0	8 18	5			
TOMAKOMAI	20.85	354.5	4 39	4	8 30	14		5 38	
ILAN	20.89	282.7	4 36	0	9 4	48			
HWALIEN	20.97	280.4	4 38	2	8 24	6			
TAIPEI	21.11	283.4	4 37	0	9 0	40			
OBIHIRO	21.15	357.9	4 42	4					
KUSIRO	21.19	0.3	4 38K	0	8 28	6	4 57	15 48	SCS
HSINKONG	21.19	278.0	4 38	0	8 23	1			
SUTTSU	21.28	351.8	4 40	1	8 28	5	5 0	15 47	SCS
TAITUNG	21.40	277.1	4 42	2					
SAPPORO	21.42	354.2	4 41K	1	8 30	4	5 4	15 47	SCS
NEMURO	21.57	2.6	4 41	-1	8 33	4	5 2	15 49	SCS
HSINCHU	21.60	282.6	4 44	2	9 29	60			
TAWU	21.65	276.0	4 42	-1	9 18	48			
ALISHAN	21.71	279.2	4 44	1	9 25	54			
MAMBAJAO	21.80	238.2	4 56	12	8 56	23			
HENGCHUN	21.81	275.1	4 42	-2	9 11	38			
TAICHUNG	21.83	280.9	3 45	-59					
ASAHIGAWA	22.04	356.4	4 50	4	8 59	22		15 52	SCS
ABASHIRI	22.23	0.1	4 50K	2	8 46	6		15 52	SCS
TAINAN	22.25	277.8	4 45	-2					
ZO-SE	22.63	299.1	4 52	0	8 40	-7	5 14	5 26	*SP
PENGHU	22.86	279.2	3 51	-63					
BAGUIO CITY	22.97	260.8	4 54	-1	9 45	52			
MANILA	23.21	256.1	4 55	-3	9 31	34			
VLADIVOSTOK	23.69	337.1	5 3	1	9 10	4			
WAKKANAI	23.72	355.5	5 13	10	9 9	3			
NANKING	24.86	299.8	5 12	-2			5 35	5 45	SP
Y.-SAKHLINSK	25.19	357.5	5 16	-1	9 33	2		5 39	PP
TSINGTAU	25.27	309.7	5 18	1					
DAIREN	25.85	316.5	5 25	2					
RABAUL	26.91	162.3	5 30	-3				6 40	PPP
CHANGCHUN	27.06	328.9	5 33	-1					
CANTON	28.64	278.6	5 46	-2			6 11		
PEKING	30.03	313.8	6 0	-1	10 43	-6	6 21	6 54	PP
LINFEN	31.85	303.9	6 17	0					
TATUNG	32.04	311.9	6 19	1					
SIAN	33.43	299.6	6 29	-1					
PAOTOW	34.50	310.9	6 40	1					
TIENSHUI	36.06	299.2	6 52	-1					
KLYUCHI	36.65	15.4	6 58	0	12 35	3	7 21	9 18	PCP
LANCHOW	37.89	301.2	7 8	0					
MAGADAN	38.07	5.4	7 10	1	12 54	1		17 8	SCS
WUWEI	39.19	303.8	7 19	0					
SINING	39.61	301.6	7 23	1					
CHANGYEH	40.98	304.8	7 35	2					
IRKUTSK	43.23	324.8	7 51	-1	14 10	0	8 13	17 33	SCS
YUHEN	43.94	306.0	7 57	-1					
DJAKARTA	45.98	237.1	8 12	-2	14 51	2			
SHILLONG	47.88	285.3	8 27A	-2	15 12	-4		10 16	PP
NOUMEA	48.83	152.3	8 35A	-1				10 3	PCP
BRISBANE	49.65	169.7	8 40	-2	15 33	-8			
PORT BLAIR	50.16	267.2	8 48	2	15 45	-3		13 47	SCP
TIKSI	50.70	353.8	8 48	-2	15 53	-2		11 53	PPP
SUVA	51.87	137.2	9 0	1	16 15	4		16 38	
CHATRA	51.92	287.6	8 59	0				18 35	
HONOLULU	53.36	79.1	9 10K	0				9 47	
BOKARO	53.60	284.2	9 10A	-2	16 24	-11		11 4	PP
RIVERVIEW	55.64	173.0	9 27A	0	17 2	0		11 41	PP
SEMIPALATNSK	57.06	316.7	9 35	-2			9 59	18 0	*SS
MELBOURNE	59.24	179.3	9 51	-1	17 52	3	10 29	10 33	PCP
DEHRA DUN	59.38	293.2	9 37	-16	17 31	-20		13 5	PPP
PERTH	59.91	207.9	9 58	1	18 14	16		10 26	
NEW DELHI	60.39	291.3	9 59	-1	18 0	-4		18 45	
FRUNSE	60.85	307.9	10 2A	-1	18 10	0		12 26	
COLLEGE	61.18	26.9	10 3K	-2	18 11	-3	10 28	12 32	PP
MADRAS	61.40	273.3	10 6A	-1	18 14	-3		12 38	PP
HYDERABAD	61.74	278.7	10 9A	0	18 17	-4		12 34	PP
LAHORE	62.34	295.1	10 11	-2	18 26	-3			
COLOMBO	63.69	267.0	10 18	-4	18 42	-3			
ONERAHI	63.91	153.0	10 34	11				20 14	SCS

TASHKENT	64.93	306.6	10	28	-2	19	1	0			19	41 *SS
POONA	65.65	281.2	10	34	-1	19	6	-4			12	47 PP
STALINABAD	65.71	303.6	10	32	-3	19	2	-8				
KARAPIRO	66.22	153.3	10	37	-1						20	31 SCS
BOMBAY	66.49	281.9	10	40	0	19	29	9			11	24
SITKA	66.88	35.9	10	41K	-1	19	24	0	11	3	13	8 PP
COBB RIVER	67.86	157.1	10	51	3						20	36 SCS
SVERDLOVSK	68.63	324.1	10	51	-2	19	43	-2			11	16 PCP
KAIMATA	68.67	158.7	10	54	1							
WELLINGTON	68.79	155.8	10	52A	-2	19	42	-5			20	33 SCS
QUETTA	68.83	295.1	10	54A	0	19	46	-2	11	23	13	24 PP
GEBBIES PASS	70.14	158.5	11	0	-2							
ROXBURGH	70.74	161.6				20	6	-4			24	56 SS
ASHKABAD	73.86	304.8	11	18	-6	20	46	1				
HORSESHOE B.	75.38	42.4	11	33K	0	21	4	2			11	59
VICTORIA	75.54	43.3	11	34K	0	21	7	3				
SEATTLE	76.51	44.0	11	42K	3	21	20	6			12	8
CORVALLIS	76.76	47.2	11	42K	1	21	19	2	12	10	12	10 PP
RESOLUTE	76.82	13.6	11	40K	-1	21	17	-1			14	32 PP
ARCATA	77.33	51.0	11	44	0	21	28	5				
APATITY	77.70	338.4	11	44	-2	21	23	-4	12	10	14	38 PP
UKIAH	78.50	52.5	11	51K	1	21	38	2	12	17	22	13 *SS
SHASTA	78.60	50.7	11	52K	1	21	34	-3			14	53 PP
MINERAL	79.29	50.9	11	54	-1							
BANFF	79.50	39.1	11	55K	-1						12	23
BERKELEY	79.62	53.4	11	57K	0	21	49	1	12	23	14	56 PP
SANTA CLARA	80.03	53.8	12	1K	2	21	53	1				
SODANKYLA	80.06	339.6	11	58	-1	21	49	-3	12	22	15	10 PP
LICK	80.26	53.8	12	1K	1	21	53	-1			12	40 SP
RENO	80.85	51.2	12	4A	1	22	2	2			12	32
MOSCOW	81.19	326.7	12	4	-1	22	0	-4	12	28	22	44 *SS
KIRUNA	81.71	341.4	12	6K	-2	22	6	-3	12	31	22	48 SS
FRESNO	81.84	53.8	12	10	2	22	11	0			22	59
GORIS	82.29	309.3	12	11	0	22	15	0			22	37 SCS
KING RANCH	82.40	55.1	12	12K	1	22	19	3	12	38	15	22 PP
TIFLIS	82.54	311.9	12	12A	0	22	17	-1	12	40	15	27 PP
PULKOVO	82.72	332.2	12	14	1						22	35 SCS
TINEMAHA	82.91	53.1	12	15K	1	22	25	4	12	42	13	5 *SP
WOODY	82.93	54.5	12	14K	0	22	22	0	12	41	38	36 PKPPKP
ISABELLA	83.24	54.4	12	16K	1	22	24	-1	12	41	38	35 PKPPKP
BUTTE	83.33	43.1	12	16	0	22	23	-2			18	1 PPP
EUREKA	83.64	50.1	12	18K	1	22	25	-4			15	25 PP
CHINA LAKE	83.84	54.0	12	20K	2	22	40	9	12	47	15	34 PP
PASADENA	84.04	55.7	12	20K	1	22	30	-3	12	46	15	34 PP
SASKATOON	84.14	35.8	12	8	-12	22	13	-21			12	23
BOZEMAN	84.44	43.0	12	22A	1	22	32	-5	12	49		
RIVERSIDE	84.70	55.6	12	23K	0	22	35	-4	12	51	38	41 PKPPKP
HELSINKI	84.75	334.0	12	21	-2	22	35	-5	12	47	15	42 PP
PALOMAR	85.35	56.1	12	26K	0				12	52	13	9 *SP
BARRETT	85.76	56.6	12	28K	0				12	53	15	46 PP
BOULDER CITY	85.85	53.0	12	29K	1	22	44	-6	12	49		
SALT LAKE C.	86.00	47.7	12	30A	1	22	3	-49				
SKALSTUGAN	87.07	340.5	12	32	-2							
SCORESBY SD.	87.53	355.4	12	36	0	23	7	1	13	8	16	10 PP
UPPSALA	87.83	336.1	12	36K	-2	22	49	-20	13	3	16	27 PP
SIMFEROPOL	88.17	318.2	12	40A	0	22	58	-14	13	14	16	14 PP
RAPID CITY	90.11	41.7	12	49A	0	23	31	1	13	27	23	7 SKS
TUCSON	90.43	55.0	12	52K	2	23	14	-19	13	18	16	26 PP
BOULDER	90.78	46.0									12	53
IASI	90.88	322.5	12	55	3	23	35	-2	13	23	23	12 SKS
LWOW	91.30	326.0									16	56 PP
WARSAW	91.33	329.0	12	55A	1	24	24	43	13	42	16	37 PP
BACAU	91.62	322.2				23	42	-1			23	16 SKS
BERGEN	91.64	341.0				23	41	-2			24	31 *SS
FOCSANI	91.93	321.4				23	47	1			24	34 PS
COPENHAGEN	92.73	335.0	12	59	-2	23	47	-6	13	23	16	43 PP
KRAKOW	93.24	327.8	13	4	1	23	52	-5			19	5 PPP
BUCHAREST	93.30	320.7	13	5	2	23	56	-2	13	28	23	25 SKS
ZABRZE	93.63	328.4				23	28	-33				
SKALNATE PL.	93.63	327.0				24	18	17			17	17 PP
JERUSALEM	93.74	306.2	13	4	-1	23	30	-32				
REYKJAVIK	93.74	354.0	13	10	5						13	34
RACIBORZ	94.07	328.5	13	9	2	24	2	-3			24	50 SCS
POTSDAM	94.84	332.4				24	7	-4			17	0 PP
HAMBURG	95.26	334.6	13	14	2	23	34	-41	13	43	17	3 PP
TIMISOARA	95.28	323.9				24	13	-2			23	39 SKS
BUDAPEST	95.33	326.2	13	42	29	24	26	11			17	29 PP
HURBANOVO	95.52	326.8				24	20	3			29	38 SS

SZEGED	95.56	324.7				24	15	-2		13	12 PCP
CHIHUAHUA	95.72	56.3								18	2
PRAGUE	95.86	330.2	13	18	3	24	15	-5	13 43	17	28 PP
BRATISLAVA	95.88	327.6	13	16	1	24	20	0	13 42	17	11 PP
SOFIA	95.94	320.5	12	37	-38	23	40	-40		13	17
KALOCSA	95.99	325.5				24	20	-1	13 48	23	37 SKS
BELGRADE	96.29	323.5	13	35	18	24	24	1		14	51
LUBBOCK	96.42	50.2	13	21	3	25	20	55	13 47	23	48 SKS
ABERDEEN	96.48	342.3				23	40	-45		17	40 PP
JENA	96.53	332.1	13	16	-2	24	21	-4	13 42	17	13 PP
CHEB	96.79	331.1				24	29	1		17	12 PP
WITTEVEEN	97.12	335.6								17	14 PP
DE BILT	98.26	335.9				23	53	-47		17	31 PP
DURHAM	98.38	340.8	13	19	-7						
ATHENS	98.50	316.5				23	49	-53			
STUTTGART	99.17	331.7	13	28	-2	23	56	-52	13 55	17	26 PP
TRIESTE	99.28	327.3	13	24	-7	24	45	-4	13 56	26	3 PS
KARLSRUHE	99.33	332.3				23	58	-51	13 57	17	26 PP
EBINGEN	99.71	331.5	13	31	-2						
KIRKLAND LA.	99.92	28.3								17	37 PP
STRASBOURG	99.93	332.3	13	35	1	25	35	41	14 4	17	42 PP
SCOTT BASE	100.24	175.3	12	26	-69				13 34		
CHICAGO CGS.	100.68	36.8				24	40	-20		17	28 PP
KEW	100.76	338.3				24	52	-9	14 6	17	44 PP
BASLE	100.81	331.7								14	7
FLORISSANT	101.01	40.5	13	39	1	25	4	1	14 6	17	46 PP
RATHFARNHAM	101.04	342.5							14 21	17	46 PP
ST. LOUIS 1	101.20	40.5	13	39A	0	25	7	2	14 6	17	47 PP
BOLOGNA	101.30	327.7								18	27
NEUCHATEL	101.50	331.7								17	19
BESANCON	101.73	332.4	13	41	-1	24	8	-61	14 2	17	54 PP
PAVIA	101.85	329.3				25	6	-7		29	9
FLORENCE X.	101.86	327.2	13	9	-33	23	43	-87		17	29 PP
PARIS	101.92	335.3	13	42A	0	25	6	-5	14 8	17	56 PP
OROPA	102.09	330.3								16	10
ROME	102.56	325.2	14	18	33	24	12	-64		18	7 PP
TANANARIVE	102.78	254.6	13	46	0	24	18	-60		18	2 PP
JERSEY	103.30	338.1				24	14	-68		19	28 PPP
MESSINA	103.37	320.8	13	44	-5	25	23	0		18	1 PP
OTTAWA	103.94	27.8				24	18	-70		18	3 PP
CLERMONT-FD.	104.11	333.1				25	29	0		18	7 PP
CLEVELAND	104.15	33.7				24	19	-70			
SEVEN FALLS	104.52	23.9				25	36	4		18	10 PP
TACUBAYA	105.71	61.3								24	45 SKKS
PITTSBURGH	105.72	33.6								18	18
MORGANTOWN	106.32	34.1	14	15	777					18	28 PKP
PENNSYLVANIA	106.50	32.1	18	29	777	25	6	0		25	57 SKKS
PALISADES	108.22	29.5	14	29	777	26	5	0		18	37 PP
WESTON	108.25	27.0				24	38	-2			
VERA CRUZ	108.30	59.9				24	40	0	19 6		
WASHINGTON	108.34	32.9								18	43 PP
FORDHAM	108.36	29.6				24	40	0		18	44 PP
PHILADELPHIA	108.47	31.0				24	39	10		19	45
HALIFAX	109.24	20.7				25	52	0		18	45 PP
COLUMBIA	109.80	38.9	17	52	777	24	43	1		18	22 PP
ALGIERS UNI.	111.25	327.3	18	14	-7	24	48	-3		18	57 PP
ALICANTE	111.68	330.8	18	20	-1	24	46	-6		19	6 PP
MERIDA	112.43	54.8							19 20	28	56 *PPS
COMIAN	113.09	60.4								21	8
RELIZANE	113.29	328.4	18	49	24	24	58	-1		19	22 PP
COIMBRA	113.33	337.5								21	55 PPP
ALMERIA	113.81	331.2				25	0	-1		19	2 PP
GRANADA	114.03	332.3				27	31	149		19	27 PP
MALAGA	114.76	332.6								19	10 PP
BERMUDA	119.50	28.0	19	6	29	25	26	5		20	22 PP
TAMANRASSET	120.21	315.2	18	39	1	25	29	5	19 6	20	7 PP
PIETERMZBURG	120.55	247.6	19	11	32						
PRETORIA	121.84	252.5	18	41	0						
GRAHAMSTOWN	124.25	243.8	18	47K	1						
KIMBERLEY	125.29	249.5	18	49	1						
BALBOA HTS.	127.30	59.3	18	52	0						
GALERAZAMBA	129.52	54.1								27	45 SKKS
SAN JUAN	130.27	39.0	18	59A	2				19 28	22	10 PKS
HERMANUS	130.40	242.8								22	9
CHINCHINA	132.79	60.5	18	58	-4					28	10 SKKS
ANTIGUA	134.16	34.9	18	55	-10					22	20 SKP
BOGOTA	134.24	59.6	19	3	-2					27	1 SKKS
LOME	134.40	303.2								22	27 PKS

DOMINICA	135.43	36.5	19	8	1					22	22 SKP
FORT FRANCE	136.03	36.7	19	10	2					22	31 PP
ST. LUCIA	136.68	37.1	19	2	-7						
ST. VINCENT	137.22	38.2	19	6	-4						
MBOUR	139.66	331.2	19	18	3	26	7	-5	19 47	22	41 PP
HUANCAYO	141.03	82.3	19	14	-3					22	46 *PPP
LA PAZ	149.01	86.0	19	38	7				20 7	23	11 PP

MAY 21 11.H 36.M 5.S EPICENTRE 36.32 141.59 DEPTH= 0.KM

A=-0.63286 B= 0.50177 C= 0.58967 D= 0.6213 E= 0.7836
G=-0.4621 H= 0.3663 K=-0.8076 HT= -0.3

SE= 2.85

	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
ONAHAMA	0.84	318.8	0	18K	-1	0	29	-3				
TYOSI	0.85	225.4	0	17K	-2	0	29	-3				
MITO	0.91	274.2	0	19	0	0	28	-5				
KAKIOKA	1.14	266.0	0	22K	-1	0	29	-10				
TUKUBASAN	1.21	265.8	0	22	-2	0	37	-4				
SHIRAKAWA	1.36	306.4	0	27	1	0	45	0				
UTUNOMIYA	1.41	280.0	0	26K	-1	0	44	-2				
TOKYO C.M.O.	1.62	247.4	0	29K	-1	0	44	-8				
HUKUSIMA	1.69	328.2	0	31K	0	0	55	2				
KUMAGAYA	1.80	265.3	0	31K	-1	0	51	-5				
YOKOHAMA	1.81	241.2	0	32	0	1	0	4				
MERA	2.00	226.3	0	35K	0	1	0	-1				
SENDAI	2.02	344.4	0	35K	0	0	59	-3				
MAEBASI	2.04	273.0	0	35K	-1	0	59	-3				
TITIBU	2.06	261.3	0	34	-2	1	8	5				
ISINOMAKI	2.12	354.2	0	38	1	1	3	-1				
YAMAGATA	2.17	333.2	0	39	1	1	8	3				
OSIMA	2.37	230.1	0	41	1	1	8	-3				
AJIRO	2.39	238.8	0	40	-1	1	12	1				
HUNATU	2.43	251.2	0	42	1	1	19	7				
OIWAKE	2.46	271.2	0	42	0	1	9	-4				
MISIMA	2.46	241.7	0	41	-1	1	8	-5				
KOHU	2.54	255.2	0	43K	0	1	15	0				
NIIGATA	2.58	309.0	0	46	3	1	18	2				
MATUSIRO	2.73	275.9	0	45K	-1	1	20	0				
NAGANO	2.75	278.3	0	46K	0	1	16	-4				
TAKADA	2.80	287.2	0	49	3	1	23	2				
MIZUSAWA	2.83	352.7	0	48	1	1	15	-7				
SHIZUOKA	2.93	243.6	0	49	1	1	24	-1				
MATUMOTO	2.93	269.7	0	49	1	1	26	1				
IIDA	3.15	256.5	0	54	2	1	30	-1				
AIKAWA	3.16	303.5	0	50	-2	1	38	7				
OMAESAKI	3.24	239.1	0	54	1	1	39	6			1	8
MIYAKO	3.34	5.0	0	55	1	1	31	-4				
MORIOKA	3.39	354.5	0	56	1	1	39	2				
TAKAYAMA	3.51	268.5	1	10	13	2	9	29				
HATIDYOZIMA	3.52	204.8	1	1	4						1	13
HAMAMATU	3.54	244.3	0	57	0	1	30	-11			1	52
TOYAMA	3.56	277.4	1	2	5	1	37	-4				
AKITA	3.59	341.3	0	56	-2	1	47	5				
WAZIMA	3.91	287.1	1	5	3							
NAGOYA	3.93	254.4	1	5	2	1	55	4				
KANAZAWA	3.99	274.5	1	13	10	1	53	1				
GIHU	4.02	258.2	1	3	-1	2	1	8				
HATINOHE	4.21	359.4	1	5	-2	2	4	6				
HUKUI	4.31	268.0	1	13	5	2	3	3				
IBUKISAN	4.34	259.1	1	11	3	2	9	8				
KAMEYAMA	4.42	252.2	1	8	-2	2	13	10				
TU	4.43	250.5	1	17	7	2	18	15				
HIKONE	4.47	258.0	1	11	1	2	7	3				
TSURUGA	4.53	263.2	1	11	0	2	14	8				
AOMORI	4.54	352.2	1	13K	2	2	7	1				
KYOTO	4.94	256.5	1	18	1	2	27	11				
OWASE	4.95	244.6	1	17	0	2	27	11				
MAIZURU	5.04	262.1	1	19	1	2	17	-1			1	32
OSAKA	5.22	253.2	1	25	4	2	23	0				
KOBE	5.48	254.5	1	26	1	2	38	9			2	52
HAKODATE	5.50	353.2	1	26	1	2	39	9			2	13
TOYOOKA	5.55	263.8	1	27	1	2	39	8				
SIOMISAKI	5.57	240.8	1	28	2	2	30	-2				

WAKAYAMA	5.65	250.2	1	27	0	2	27	-7			
SUMOTO	5.83	252.3	1	32	3				3	2	
MORI	5.83	352.5	1	32	3	2	35	-3	1	58	
URAKAWA	5.90	8.6	1	32	2	2	35	-5			
TORISIMA	5.92	190.9	1	29	-2						
MURORAN	6.02	355.6	1	38	6	2	48	5			
TOTTORI	6.03	264.4	1	36	4						
HIMEJI	6.15	254.9	1	26	-8						
TOKUSIMA	6.16	250.7	1	34	0	2	49	3	3	13	
TOMAKOMAI	6.19	359.9	2	4	29	2	59	12			
OKAYAMA	6.47	257.6	1	37	-2	2	57	3			
TAKAMATU	6.48	254.3	1	42	3	3	1	7	3	24	
SUTTSU	6.56	351.2	1	42	2	2	59	3			
SAIGO	6.68	271.4	1	42	1	3	8	9			
OBIHIRO	6.71	10.2	1	47	5	3	0	0			
SAPPORO	6.75	358.5	1	39	-3				3	7	
MATSUE	6.97	265.4	1	49	3	3	0	-7			
KUSIRO	7.00	17.2	1	48	2	3	0	-7	3	40	
KOTI	7.17	249.7	1	48	0	3	20	8			
ASAHIGAWA	7.48	4.3	1	53	0	3	39	20			
NEMURO	7.65	22.4	1	55	0	3	10	-13			
MATUYAMA	7.66	253.7	1	54	-1	3	30	6			
HIROSIMA	7.73	258.1	1	56	0	3	34	8	4	1	
HAMADA	7.88	262.5	2	12	14	3	21	-8	3	56	
SIMIDU	7.94	246.1	1	58	-1	3	32	1			
UWAZIMA	8.05	250.1	2	8	7	4	7	33			
ODITA	8.76	252.3	2	0	-11	4	4	13			
ASOSAN	9.32	251.6	2	17	-1				4	38	
MIYAZAKI	9.50	245.4	2	28	7				5	26	
HUKUOKA	9.57	256.7	2	21K	-1	4	18	7			
KUMAMOTO	9.63	251.9	2	21	-2				4	41	
SAGA	9.78	255.0	2	25	0				6	0	
KAGOSIMA	10.32	245.9	2	36	4				5	39	
CHANGCHUN	14.53	306.1	3	25	-4						
ZO-SE	17.75	258.9	4	6	-4						
NANKING	19.32	263.9	4	23	-6						
PEKING	20.30	288.2	4	33	-7						
PETROPAVLOVK	20.63	30.1	4	52	9	8	1	-29			
BAGUIO CITY	27.22	228.8	5	39	-8						
MANILA	28.43	225.7	6	20	22						
TIKSI	36,00	353.2	7	2	-2						
SHILLONG	43.55	270.2	8	3A	-4						
CHATRA	46.79	274.4	8	30	-3						
COLLEGE	49.62	31.9	8	55	0	16	1	-2			
FRUNSE	50.83	299.2	9	2	-2						
DEHRA DUN	52.60	283.0	9	14	-4						
SVERDLOVSK	55.78	319.0	9	38	-3						
QUETTA	61.30	287.8	10	16A	-3				11	0	PCP
POONA	61.54	272.8	10	18	-3						
RESOLUTE	63.26	14.4	10	29A	-3						
APATITY	63.40	335.9	10	30K	-3	16	42	-143			
SODANKYLA	65.68	337.4	10	45	-3				13	16	PP
HORSESHOE B.	66.48	45.2	10	51	-2						
VICTORIA	66.81	46.1	11	5	10						
KIRUNA	67.24	339.4	10	55A	-3						
MOSCOW	67.91	323.7	11	0	-2						
CORVALLIS	68.83	49.8	11	18	10						
PULKOVO	68.88	329.6	11	5	-3						
RIVERVIEW	70.35	171.6	11	22	5						
HELSINKI	70.75	331.7	11	17	-3				11	40	PCP
TIFLIS	71.37	308.3	11	22	-1						
SHASTA	71.42	52.9	11	24	0						
SKALSTUGAN	72.63	338.7	11	28A	-3						
SCORESBY SD.	72.84	354.3	11	32	0						
BERKELEY	73.02	55.4	11	32	-1						
SOTCHI	73.48	312.1	11	32	-4						
UPPSALA	73.66	334.1	11	34A	-3				11	45	
RENO	73.71	52.8	11	36	-1						
LICK	73.72	55.5	11	37K	0						
BUTTE	74.38	44.1	11	40	-1						
BOZEMAN	75.44	43.7	11	46	-1						
SIMFEROPOL	75.94	315.7	11	47	-3						
KING RANCH	76.12	56.4	12	3	12						
TINEMAHA	76.13	54.2	11	51	0						
EUREKA	76.19	51.1	11	51	0				12	8	
WOODY	76.50	55.6	11	51	-2						
ISABELLA	76.78	55.5	11	54	-1						
CHINA LAKE	77.26	54.9	11	57	0						

PASADENA	77.85	56.6	11 58	-3
SALT LAKE C.	77.95	48.1	12 11	10
RIVERSIDE	78.48	56.3	12 7	3
BOULDER CITY	78.98	53.4	12 5	-2
BARRETT	79.73	57.1	12 10	-1
RAPID CITY	80.74	41.4	12 15	-1
TUCSON	83.89	54.3	12 32	-1
HUANCAYO	138.93	63.4	19 23	-5
LA PAZ	147.07	61.0	19 45	3

MAY 21 11.H 44.M 6.S EPICENTRE 38.67 14.11 DEPTH= 0.KM

A= 0.75913 B= 0.19088 C= 0.62233 D= 0.2439 E=-0.9698
G= 0.6035 H= 0.1518 K=-0.7828 HT= -1.2

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
MESSINA	1.22	112.4	0 24A	0	0 43	1	0 31	
REGGIO CALA.	1.34	115.0	0 26A	0	0 48	3	0 45	
TARANTO	3.01	52.5	0 30	-20	1 50	23	1 20	
ROME	3.46	339.3	0 55	-1	1 40	1		
CUGLIERI	4.55	291.0	3 4	112	3 51	105		
FLORENCE X.	5.54	338.0	0 28	-58	1 44	-47		
BOLOGNA	6.18	341.2	1 38	3			2 1	
MONACO	7.13	317.2	1 55K	7	3 18	7	2 4	PP
ZAGREB	7.27	10.4	1 51	1			3 59	
PAVIA	7.47	332.0	1 56A	3	3 28	9	4 11	
ATHENS	7.58	92.3	1 55A	1	3 15	-7	2 13	PPP
BELGRADE	7.75	35.6	2 29	32			3 26	
SOFIA	8.07	57.2	2 1	0			3 31	
OROPA	8.30	328.7	2 3	-1				
KALOCSA	8.63	23.0	2 45	36	4 30	42	3 7	PG
SZEGED	8.78	28.5					2 44	PG
TIMISOARA	8.82	34.4					3 30	
CHUR	8.84	339.1	2 12K	0				
ALGIERS UNI.	8.97	261.2	3 3	49	3 56	-1	4 5	SS
BUDAPEST	9.52	20.8			4 17	7	0 19	PG
BRATISLAVA	9.74	11.9	2 22	-2	4 23	7	2 51	
NEUCHATEL	9.84	330.0	2 25	-1			6 7	
BASLE	10.05	333.8	2 28A	-1			5 44	
EBINGEN	10.21	340.2	2 29	-2			3 35	
BESANCON	10.43	327.8	2 34	0			2 54	
TUBINGEN	10.51	341.3	2 33	-2				
BUCHAREST	10.66	53.6	2 37	0			4 35	
STUTTGART	10.70	342.2	2 36	-2	4 34	-5		
CLERMONT-FD.	10.80	314.6	2 41	2				
STRASBOURG	10.91	337.2	2 39K	-1	4 38	-6	3 22	
RELIZANE	11.20	259.1	2 50	6				
SKALNATE PL.	11.39	20.8					3 11	
PRAGUE	11.40	1.0	2 48	1			3 4	
ALICANTE	11.44	272.9	2 45	-3	5 2	5		
CHEB	11.47	354.4			5 10	12	6 36	
RACIBORZ	11.77	13.0	2 53	1			3 10	PPP
KRAKOW	12.10	18.1	2 56	-1				
JENA	12.38	352.5	2 58	-2	5 33	13		
IASI	13.02	44.8					3 9	
PARIS	13.15	324.2	3 14	3	5 38	-1	3 26	PP
BENSBERG	13.23	340.5	3 12	0	6 6	25		
ALMERIA	13.25	267.2	3 6	-6				
POTSDAM	13.73	357.3					3 28	
GRANADA	14.07	269.4	3 23K	0	5 39	-22	3 53	PP
WARSAW	14.39	17.3	3 31	4			3 47	PP
MALAGA	14.79	268.2	3 42	10	6 18	0		
DE BILT	14.80	338.0	3 37A	5			6 46	
WITTEVEEN	15.06	342.4	3 44	8			4 2	PP
HAMBURG	15.17	350.5	3 39	2	6 36	9		
KEW	16.32	326.3	3 51	-1			4 20	PP
COPENHAGEN	17.05	356.8	4 0	-1	7 22	11		
TAMANRASSET	17.47	207.4	4 8K	2	7 27	7	12 21	PCS
KSARA	18.20	98.8	4 19K	3	7 49	12		
JERUSALEM	18.54	105.4	4 17	-3	7 35	-10		
DURHAM	19.29	331.7	4 27	-2				
SOTCHI	19.87	67.5	4 36	1			8 29	
RATHFARNHAM	20.26	322.8	4 38	-2	8 28	6	5 0	PP
UPPSALA	21.31	4.9	4 53	2	8 43	0		

HELSINKI	22.59	14.2	5	2	-1						
MOSCOW	23.19	35.0	5	9	0					9	25
PULKOVO	23.49	20.7	5	12	0	9	25	2			
TIFLIS	23.57	72.8	5	16	3	9	32	8			
SKALSTUGAN	24.96	358.1	5	25K	-1						
KIRUNA	29.42	4.9	6	6	-1	11	2	1			
SODANKYLA	29.59	9.8	6	7	-2						
MBOUR	36.56	237.1	7	10	1					7	26
QUETTA	43.88	84.5	8	10A	0						
DEHRA DUN	52.41	78.6	9	0	-16						
SCHEFFERVLLE	54.55	315.5	9	23K	-9						
HALIFAX	56.32	303.0	9	43K	-2						
RESOLUTE	57.85	342.7	9	54	-2					22	20 SS
SEVEN FALLS	59.89	308.1	10	8K	-2						
OTTAWA	63.69	308.2	10	34K	-1						
KIRKLAND LA.	64.91	312.5	10	40	-3						
SHILLONG	65.35	76.2	10	44A	-2						
MORGANTOWN	69.36	304.6	11	11	0						
COLUMBIA	73.26	300.2	11	33	-2						
COLLEGE	75.82	352.1	11	49	-1						
RAPID CITY	80.06	319.5	12	12	-1						
BOZEMAN	82.67	324.7	12	27	0						
HORSESHOE B.	84.58	333.6	12	35	-1						
VICTORIA	85.36	333.2	12	40	0						
EUREKA	89.77	323.7	13	2	0						

MAY 21 13.H 24.M 18.S EPICENTRE 39.41 22.83 DEPTH= 0.KM

A= 0.71404 B= 0.30059 C= 0.63229 D= 0.3880 E=-0.9217
G= 0.5828 H= 0.2453 K=-0.7747 HT= -1.5

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	
ATHENS	1.60	153.8	0	31	1	0	54	2					
SOFIA	3.31	6.4	0	54	0	1	32	-3			1	5	PG
TARANTO	4.42	285.7	1	14	4	2	18	15			1	58	
BUCHAREST	5.57	24.9	1	25	-1	2	29	-3			1	52	PG
BELGRADE	5.69	342.7	1	29A	1						2	37	PGSG
REGGIO CALA.	5.76	259.2									1	31	
MESSINA	5.81	260.3	1	29	-1	2	34	-4			2	45	S*
CAMPULUNG	6.08	14.8									1	37	
TIMISOARA	6.45	349.9	1	36	-3	2	54	0			2	11	PG
FOCSANI	7.07	25.7									2	5	
SZEGED	7.12	344.7									2	27	PG
KALOCSA	7.66	339.6	1	41	-15						2	22	PG
BACAU	7.75	21.3									2	0	
ZAGREB	8.16	324.0	2	5	2						4	27	
ROME	8.25	290.9	2	4	0	4	2	23					
BUDAPEST	8.52	342.5	2	9	1	4	10	24			4	34	SG
IASI	8.52	22.4	2	5	-3	4	5	19					
TRIESTE	9.15	315.9	2	4	-13	3	59	-3			2	57	PGPG
BRATISLAVA	9.69	336.6	2	25	1	4	16	1			2	46	
FLORENCE X.	9.71	300.5	2	12	-12	4	21	6					
PRATO	9.85	300.7	2	56	30	4	12	-7					
SKALNATE PL.	9.94	350.2	2	27	0	5	24	63			5	43	
BOLOGNA	9.96	304.4	2	26	-2	4	17	-4					
SIMFEROPOL	10.04	52.9	2	30	1						4	18	
LWOW	10.45	4.3	2	38	4	4	41	7					
KRAKOW	10.84	350.0	2	41	2								
RACIBORZ	11.16	344.4	2	47	3								
ZABRZE	11.26	346.7									4	2	
BYTOM	11.28	347.1									5	3	
PAVIA	11.64	304.1	2	56	5	5	30	27					
KSARA	11.87	114.0	2	56	2	5	15	7					
PRAGUE	12.21	333.6	2	59	1	5	28	12			3	57	
CHUR	12.22	311.8	2	58	-1								
MONACO	12.31	295.5	2	58	-2						3	8	PP
OROPA	12.59	304.3	3	5	2						4	58	
JERUSALEM	12.63	123.3	3	7	3						5	30	
WARSAW	12.88	355.0	3	12K	5	5	44	11			7	13	
CHEB	12.98	328.7	3	10	1	5	52	17			4	10	
EBINGEN	13.29	315.8	3	10	-3						6	0	SS
SOTCHI	13.33	66.3	3	13	0	5	44	1					
TUBINGEN	13.45	317.2	3	12	-3								

STUTTGART	13.53	318.2	3	16	0				3	26 PP
BASLE	13.71	311.2	3	18K	0				6	34
NEUCHATEL	13.83	308.4	3	19	-1				7	25
JENA	13.97	329.2	3	22	0	5	59	0	6	29 SS
KARLSRUHE	14.09	317.6	3	30	7	6	8	6		
STRASBOURG	14.17	315.2	3	26	2	6	8	4	3	32 PP
BESANCON	14.53	308.1	3	27	-2	6	17	5	3	33
POTSDAM	14.62	335.7							3	38
ALGIERS UNI.	15.80	266.6	3	46	0	6	38	-4		
CLERMONT-FD.	15.83	300.1	3	50	4					
BENSBERG	15.94	321.6	3	48	1	7	0	15		
HAMBURG	16.66	332.4	3	57	0	7	7	5		
TIFLIS	16.85	75.1	4	3	4					
PARIS	17.32	309.5	4	5	0	7	30	13	4	20 PP
DE BILT	17.62	321.8	4	12	3	7	38	14		
COPENHAGEN	17.69	340.4	4	10	0	7	34	9		
RELIZANE	18.02	265.3	4	12	-2				4	27 PP
ALICANTE	18.17	274.1	4	16	0	7	36	-1		
MAKHACH-KALA	18.89	71.2	4	27	3	7	59	6		
MOSCOW	19.07	26.2	4	25	-2	7	55	-2		
ALMERIA	20.05	270.7	4	37	-1					
KEW	20.13	314.4	4	39A	0	8	21	1	9	0 PCP
JERSEY	20.26	307.0	4	46	6	8	32	9		
UPPSALA	20.72	352.6	4	43	-2	8	20	-12		
HELSINKI	20.83	3.0	4	44	-2					
GRANADA	20.84	272.2	4	47A	1	9	41	67	5	8 PP
PULKOVO	20.93	10.6	4	46	-1	8	39	3		
MALAGA	21.58	271.5	4	50A	-4				9	20 SS
TAMANRASSET	22.17	226.7	4	59	0	8	15	-45	5	30 PP
DURHAM	22.46	321.2	5	4	2	9	5	0	13	1
ABERDEEN	24.08	325.8				9	42	8		
RATHFARNHAM	24.22	314.6	5	9	-10				6	14
SKALSTUGAN	25.01	348.8	5	23	-4				5	37
SODANKYLA	28.09	3.1	5	55	-1				10	53
KIRUNA	28.51	358.1	5	56	-3	10	40	-7		
APATITY	28.80	8.4				11	3	12	6	39
SVERDLOVSK	30.15	42.1	6	13	-1	11	9	-4		
QUETTA	37.07	90.5	7	13	-1					
FRUNSE	38.63	67.6	7	27	0					
SCORESBY SD.	38.71	337.8	7	28	0					
LWIRO	41.82	171.0	7	53A	0				7	58
MBOUR	42.87	245.7							9	46 PP
SCHEFFERVLLE	58.70	317.4	9	53	-9					
RESOLUTE	59.09	344.1	10	3A	-2					
SEVEN FALLS	64.65	311.0	10	40	-2					
SHAWINIGAN	66.08	311.3	10	50	-1					
BREBEUF	67.15	310.7	10	58	0					
KIMBERLEY	67.83	178.2	11	1	-1					
OTTAWA	68.43	311.5	11	5K	-1					
KIRKLAND LA.	69.27	315.7	11	10	-1					
MORGANTOWN	74.38	308.6	11	42	0					
COLLEGE	75.80	355.9	11	48	-2					
BANFF	82.72	335.1	12	25	-2					
RAPID CITY	83.69	324.1	12	31	-1					
MATUSIRO	83.83	47.0	12	33A	0					
BUTTE	86.04	330.6	12	44	0					

MAY 22 13.H 29.M 48.S EPICENTRE 50.46-176.90 DEPTH= 0.KM

A=-0.63827 B=-0.03456 C= 0.76903 D=-0.0541 E= 0.9985
G=-0.7679 H=-0.0416 K=-0.6392 HT= -5.6

SE= 3.18

	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
KLYUCHI	14.52	302.4	3	22	-5							
PETROPAVLOVK	15.34	289.5	3	33K	-4							
MAGADAN	20.45	308.8	4	37K	-2							
COLLEGE	20.94	35.5	4	46	2	8	38	6				
SITKA	25.13	58.7	5	28	3	9	58	11				
NEMURO	26.39	269.0	5	40	3							
Y.-SAKHLINSK	26.65	278.2	5	35K	-5							
KUSIRO	27.32	269.2	5	49	3	10	31	8				
OBIHIRO	28.11	270.0	5	48	-5							
URAKAWA	28.77	269.0	6	0	1						6	55

SAPPORO	29.22	271.7	5	52	-11	10	56	2	13 2	SSS
MORI	30.20	270.6	6	16	4					
AOMORI	30.74	268.3	6	21	5					
TIKSI	32.02	331.0	6	25	-3				7 42	PP
HONOLULU	32.65	146.1	6	26	-7	11	50	2		
NIIGATA	33.49	265.2							13 42	
UTUNOMIYA	33.80	262.5	6	46	3					
TUKUBASAN	33.85	261.9	6	39	-5					
HORSESHOE B.	33.92	70.6	6	44	0	12	13	6	9 20	PCP
VICTORIA	34.17	72.0	6	49A	3	12	19	8		
KUMAGAYA	34.35	262.4	6	48	0					
MAEBASI	34.40	263.0	6	57	9				7 9	
TOKYO C.M.O.	34.41	261.4	6	58	10	12	16	1		
OIWAKE	34.77	263.4	6	56	5					
NAGANO	34.78	264.2	6	54	2					
MATUSIRO	34.84	264.0	6	48	-4	12	27	5	9 26	PCP
HUNATU	35.15	262.1	6	48	-7					
MATUMOTO	35.19	263.8	6	52	-3					
KOHU	35.19	262.4	7	0	5					
VLADIVOSTOK	35.21	278.2	6	52A	-3				12 41	
SEATTLE	35.22	72.9	6	58	3	12	42	15		
IIDA	35.73	262.9	7	2	2					
CORVALLIS	36.00	78.1	7	2	0				14 22	
GIHU	36.48	263.7	7	10	4					
KAMEYAMA	37.02	263.3	7	17	7					
KYOTO	37.38	264.1	7	11	-2					
ARCATA	37.41	83.9	7	12	-2					
OSAKA	37.74	263.8	7	20	3					
BANFF	37.78	64.4	7	16	-1					
KOBE	37.94	264.1							13 26	
SUMOTO	38.34	264.0	7	21	-1					
SHASTA	38.59	83.0	7	24K	0				9 38	PCP
TOKUSIMA	38.71	263.9	7	22	-3					
UKIAH	38.94	85.7	7	29	2	13	36	12		
CHANGCHUN	38.99	283.3	7	23	-4	13	30	5		
MINERAL	39.28	83.0	7	26	-3					
KOTI	39.72	264.2	7	39	6					
HUNGRY HORSE	39.88	67.8	7	34	0	14	0	22	39 31	PKPPKP
RESOLUTE	40.09	24.1	7	35K	-1	13	53	11	9 19	PP
BERKELEY	40.28	86.6	7	38A	0	13	51	7	9 45	PCP
SANTA CLARA	40.79	87.0	7	46A	4	14	2	10		
RENO	40.87	82.8	7	42	-1					
LICK	40.99	86.8	7	43	-1				9 47	PCP
OOITA	41.14	265.4	7	41	-4					
HUKUOKA	41.68	266.8	7	38	-11				14 29	
BUTTE	41.88	70.2	7	55	4	14	12	4	9 50	PP
SAGA	41.97	266.5	8	2	10					
KUMAMOTO	41.99	265.7	7	56	4					
SASKATOON	42.39	59.4	7	35	-20	14	14	-2		
FRESNO	42.51	86.1	7	57	1					
KAGOSIMA	42.91	264.4	7	56	-3					
BOZEMAN	42.97	69.8	7	59	-1	14	27	3		
EUREKA	43.33	80.3	8	3	0					
TINEMAHA	43.34	84.7	8	3	0	14	40	11	18 6	SCS
KING RANCH	43.44	87.8	8	4	0					
WOODY	43.77	86.7	8	5	-1					
ISABELLA	44.04	86.4	8	7	-1					
CHINA LAKE	44.50	85.6	8	12K	0				10 0	
SALT LAKE C.	45.17	76.2	8	17	-1	15	0	4		
PASADENA	45.18	87.9	8	17	-1	14	47	-9	9 25	
RIVERSIDE	45.79	87.5	8	22	0	15	9	4	9 4	
BOULDER CITY	46.16	83.5	8	24	-1	15	19	9	10 0	PCP
PALOMAR	46.53	87.8	8	26	-2					
PEKING	46.76	284.2	8	27K	-3	15	23	4		
IRKUTSK	46.91	304.4	8	28	-3					
BARRETT	47.09	88.3	8	31	-2	15	20	-3	10 5	
RAPID CITY	48.52	67.4	8	42	-2	16	5	21	11 6	PP
ZO-SE	49.20	271.4	8	45K	-4	15	57	4	10 44	PP
NANKING	50.09	274.1	8	52K	-4	16	11	5	10 52	PP
TUCSON	51.09	84.5	9	2	-2					
LUBBOCK	55.87	77.0	9	36	-3	17	32	8		
CHIHUAHUA	56.55	84.3	9	54	10	17	48	15	11 6	
SCORESBY SD.	58.02	9.7	9	55	1	18	6	14	12 5	PP
KIRKLAND LA.	58.66	51.1	9	57	-2	18	10	9		
FAYETTEVILLE	58.89	69.8	9	58	-2	18	3	-1		
FLORISSANT	59.33	65.1	10	3	0	18	9	-1	10 39	
ST. LOUIS 1	59.52	65.1	10	3A	-2	18	11	-1	39 49	PKPPKP
HONG KONG	59.80	269.0	10	10	3	17	36	-40		
SCHEFFERVLLE	60.05	38.8	10	8A	0				10 48	PCP

BAGUIO CITY	60.06	259.3	10	2	-6	18	24	5				
APATITY	60.12	347.1	10	7A	-2	18	27	7			10	46 PCP
MAZATLAN	60.18	89.1									12	49
RABAUL	60.60	216.0	10	6	-6						12	23 PP
SODANKYLA	61.16	349.8	10	14	-2	18	41	8			12	42 PP
MANILA	61.20	257.6	10	5	-11	18	21	-13				
KIRUNA	61.32	352.6	10	16K	-1	18	42	7			12	43 PP
CLEVELAND	62.45	57.5	10	23	-1						19	54 PPS
OTTAWA	62.71	51.1	10	25K	-1	18	59	6			12	49 PP
SVERDLOVSK	63.01	328.6	10	28	0						19	18 PS
SHAWINIGAN	63.33	48.5	10	27K	-3							
BREBEUF	63.68	49.8	9	30	-63	19	9	4				
SEVEN FALLS	63.84	47.0	10	32	-2	19	18	11			14	36 PPP
PITTSBURGH	64.03	57.4	10	34	-1	19	18	9				
REYKJAVIK	64.09	11.9	10	36	1							
APIA	64.14	174.5	10	40	4							
MANZANILLO	64.49	90.7									13	19 PP
MORGANTOWN	64.61	58.1	10	38A	-1						13	6 PP
PENNSYLVANIA	64.89	55.9	10	48	8	19	25	5				
SKALSTUGAN	66.08	355.5	10	45K	-3						39	23 PKPPKP
WASHINGTON	66.68	56.8	10	45	-7	20	2	20				
PALISADES	66.80	53.3	10	51	-2	19	48	5			12	58 PP
PHILADELPHIA	66.92	54.9				19	50	6			11	41
FORDHAM	66.93	53.4	10	52	-1	19	50	5				
WESTON	67.09	50.8	10	54K	-1	19	58	11				
TACUBAYA	67.52	86.5	11	0	3	19	37	-15			13	24 PP
COLUMBIA	68.05	63.0	10	59	-2	20	6	8			24	28 SS
FRUNSE	68.15	311.3	11	0K	-1						20	23 PS
HELSINKI	68.32	348.4	11	1	-1						11	34 PCP
SUVA	68.43	184.8				20	2	0			20	24 PS
HALIFAX	69.04	44.6	11	6A	-1	20	15	5				
UPPSALA	69.42	352.2	11	8	-1	20	13	-1			39	4 PKPPKP
BERGEN	69.48	358.8				20	28	13				
MOSCOW	70.35	340.1	11	14	-1						11	37 PCP
SHILLONG	71.47	287.8	11	16K	-5	20	44	6			14	3 PP
TASHKENT	71.86	313.5	11	20	-4						25	30 SS
MERIDA	72.44	78.3	11	36	9	20	42	-7			14	9 PP
ABERDEEN	72.65	3.0	11	22	-6	21	2	10			21	53
CHATRA	73.37	291.9	11	31	-2						21	45
NOUMEA	73.92	196.0	11	42	6							
COPENHAGEN	73.95	354.5	11	36K	0	21	18	12			11	50 PCP
STALINABAD	74.29	312.1	11	36	-2	21	17	6				
COMITAN	74.35	83.4									12	20
DURHAM	75.07	2.8	11	48	5	21	31	12			22	8 SKS
DEHRA DUN	75.95	300.6	11	51	3	21	33	4			14	24 PP
HAMBURG	76.19	355.8	11	51A	2	21	37	6				
RATHFARNHAM	76.32	5.8	11	50A	0	21	43	10				
WARSAK DAM	76.53	307.4	11	53	2							
WARSAW	76.57	348.8				21	44	9				
WITTEVEEN	77.05	357.8	11	56	2							
POTSDAM	77.19	353.8	11	55	0							
DE BILT	77.81	358.7	12	5	7	22	4	15			27	6 SS
BERMUDA	78.15	53.2	12	2	2	22	2	10			15	0 PP
KEW	78.41	2.2	12	2	1	22	3	8			27	18 SS
LWOW	78.50	346.4	12	2	0	22	5	9			16	53 PPP
JENA	78.73	354.5	12	2	-1				12	27	15	4 PP
KRAKOW	78.84	349.0	12	3	-1	22	7	7			12	19 PCP
BENSBERG	78.90	357.4	12	4	0	22	12	12				
RACIBORZ	79.01	350.2	12	5	0	22	9	7			15	23 PP
PRAGUE	79.39	352.6	12	7	0	22	16	11			15	16 PP
ASHKABAD	79.46	318.6	12	6	-1						22	17 SKS
SKALNATE PL.	79.66	348.7	12	20	12	22	22	14			15	25 PP
IASI	80.46	343.4	12	12	0	22	26	9				
JERSEY	80.64	3.5				22	30	11				
KARLSRUHE	80.81	356.5	12	12	-2	22	34	14			12	22 PCP
STUTTGART	81.02	355.9	12	14	-1	22	33	10			12	28 *PP
BRATISLAVA	81.02	350.6	12	16	1	22	26	3			15	28 PP
PARIS	81.11	0.4	12	16	0						15	28 PP
BACAU	81.19	343.6	12	21	5							
TIFLIS	81.22	329.7	12	16K	0						22	37 SCS
SIMFEROPOL	81.23	338.3	12	16	0	22	32	7			15	37 PP
TUBINGEN	81.26	356.0	12	16	-1							
STRASBOURG	81.26	356.9	12	16	-1	22	34	9			15	35 PP
BUDAPEST	81.48	349.1	12	20	2							
EBINGEN	81.62	356.0	12	18	0						12	22 PCP
QUETTA	81.91	308.3	12	18K	-2	22	34	2			15	31 PP
FOCSANI	81.97	343.2	12	24	4							
BRISBANE	82.04	206.7	12	18	-3							

BASLE	82.32	356.9	12	22	0				15	58	
BESANCON	82.64	358.0	12	24	0				22	54	SCS
GORIS	82.71	327.7	12	23	-1	22	50	10	23	45	PS
CAMPULUNG	82.77	344.6	12	27	3				15	36	PP
NEUCHATEL	82.87	357.3	12	25	0	22	56	15			
TIMISOARA	82.90	347.3	12	35	10	22	59	17	15	46	PP
BUCHAREST	83.41	343.6	12	27	-1	22	59	12			
ZAGREB	83.46	351.0	12	34	6						
TRIESTE	83.83	352.5	12	36	6	22	58	7	17	48	PPP
BELGRADE	83.91	347.7	12	29	-1	23	6	14	16	10	PP
CLERMONT-FD.	84.16	360.0	12	33	2	23	9	15			
OROPA	84.21	356.6	12	46	14				23	2	SKS
PAVIA	84.60	355.7	12	47	13	23	5	6	29	35	SS
BOLOGNA	85.16	354.1	12	46	10	23	22	18	23	48	
SOFIA	85.56	345.2	12	43	5	23	22	14	24	29	
PRATO	85.79	354.2	12	38	-2	23	8	-2			
FLORENCE X.	85.88	354.1	12	4	-36	22	53	-18	23	50	PS
MONACO	86.12	356.9	12	40K	-1				13	14	
POONA	87.54	296.3	12	45	-3						
ROME	87.66	353.0	12	54	5	23	36	8	24	52	PS
BALBOA HTS.	87.81	78.7	12	48	-1	23	19	-11			
BOMBAY	87.83	297.3	12	49	0	23	57	27	23	38	SKKS
KARAPIRO	88.25	186.0	12	52	1						
SAN JUAN	88.53	62.6	12	31	-22						
RIVERVIEW	88.55	206.1	12	55K	2				29	37	SS
GALERAZAMBA	89.07	74.3							24	56	PPS
MESSINA	91.04	350.2				23	34	-25	16	42	PP
KSARA	91.22	333.2	13	12	7	24	12	11	16	56	PP
ALICANTE	91.51	2.8	13	10	3	24	13	10	23	43	SKS
COBB RIVER	91.61	187.8	13	6	-1						
ANTIGUA	92.42	59.6	13	8	-3						
GRANADA	92.54	5.4	13	18A	6	24	25	13	16	59	PP
ALMERIA	92.93	4.5	13	18	5				25	46	PS
MALAGA	92.95	6.0	13	13A	0	24	33	17	16	11	PP
COLOMBO	93.06	284.6				24	5	-12			
ALGIERS UNI.	93.15	0.0	13	7	-7	23	53	-25	16	45	PP
JERUSALEM	93.33	333.0	13	18	3						
CHINCHINA	93.35	78.2	13	15	0				23	51	SKS
RELIZANE	94.14	2.1	13	17	-2				16	58	PP
BOGOTA	94.59	77.2	13	21	0	24	38	8	23	57	SKS
HUANCAYO	106.56	88.9							18	45	PP
TAMANRASSET	107.06	357.7	14	21	777	24	58	40	18	39	PP
MBOUR	113.08	21.2							19	30	PP
LA PAZ	114.48	86.4							19	48	PP
TERRE ADELIE	121.15	197.9	18	48	-4						
LWIRO	127.27	327.0	19	4	0				20	56	
SCOTT BASE	128.44	184.4	19	2	-4						
PRETORIA	148.69	312.6	19	44A	2						
PIETERMZBURG	150.78	305.1	19	51A	5						
KIMBERLEY	152.82	314.8	19	46	-3						
GRAHAMSTOWN	155.70	305.9							20	19	PKP2

MAY 24 2.H 37.M 50.S EPICENTRE 3.74 -76.77 DEPTH= 60.KM

DEPTH OF FOCUS= 0.004R

A= 0.22834 B=-0.97143 C= 0.06471 D=-0.9735 E=-0.2288
G= 0.0148 H=-0.0630 K=-0.9979 HT= 7.1

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	
CHINCHINA	1.68	43.1	0	30	2								
BALBOA HTS.	5.88	332.0	1	25	-2	2	29	-5					
GALERAZAMBA	7.16	11.9	1	50	6	3	5	0					
SANTIAGO MA.	15.08	310.7	3	30	-1								
HUANCAYO	15.75	174.8	3	39	0								
SAN SALVADOR	15.81	309.7	3	38	-2				3	44			
TRINIDAD	16.62	64.7	3	49	-1						3	54	PP
SAN JUAN	17.90	34.8	4	2	-4	7	33	12			15	50	SCS
ST. LUCIA	18.62	55.7	4	14A	-1						4	18	PP
FORT FRANCE	18.88	53.6	4	15	-3	7	47	4					
DOMINICA	19.00	51.8	4	20	1								
BARBADOS	19.36	60.2	4	22	-1								
COMITAN	19.56	310.5	4	22	-3	8	10	13			4	58	
ANTIGUA	20.25	48.2	4	26	-7								

MERIDA	21.19	324.9	4	37K	-5	8	25	-4		9	25 SS
LA PAZ	21.85	157.2	4	48A	-1	8	52	11		15	50 SCS
OAXACA	23.65	305.4	5	6A	0	9	20	7		5	50 PPP
VERA CRUZ	24.37	310.6	5	14	1					10	32
PUEBLA	25.87	307.6	5	34	6					6	26 PPP
TACUBAYA	26.87	307.2	5	40	3	10	17	10		6	42 PPP
COLUMBIA	30.37	353.0	6	8	0	11	2	-1		6	48
BERMUDA	30.67	20.3	6	10	-1	11	10	2		6	58 PP
GUADALAJARA	30.84	305.3	6	18A	6	11	14	3		16	50 SCS
MANZANILLO	30.93	301.6	6	10	-3					9	58
WASHINGTON	35.00	359.6	6	52	4	12	22	7		8	16 PCP
MORGANTOWN	35.85	355.8	6	56A	0	12	34	6			
FAYETTEVILLE	35.99	335.6	6	57	0	12	29	-1			
PHILADELPHIA	36.08	2.1	7	1	3	12	23	-9			
PITTSBURGH	36.65	355.9	7	0	-2	12	41	0		8	40
ST. LOUIS 1	36.84	342.3	7	4K	0	12	42	-2		9	25 PCP
PENNSYLVANIA	36.91	358.6	7	6	1	12	48	3		8	28 PP
FLORISSANT	37.03	342.2	7	5	-1	12	45	-1		17	13 SCS
FORDHAM	37.04	3.6	7	7	1	12	47	0		8	44 PP
PALISADES	37.20	3.6	7	6A	-1	12	47	-2	7 20	8	41 PP
CHIHUAHUA	37.27	314.7	7	11	3					9	5 PP
SANTA LUCIA	37.41	171.6	7	24	15	12	56	4			
LUBBOCK	37.80	324.7	7	12	0	12	57	-1		8	45 PP
CLEVELAND	37.82	354.2	7	13	1	12	59	1			
WESTON	38.78	6.5	7	22A	2	13	11	-2			
CHICAGO CGS.	39.10	347.1	7	27	4	13	7	-11			
OTTAWA	41.51	1.1	7	43A	0	13	54	0	7 58	9	32 PP
HALIFAX	42.34	14.0	7	52A	2	14	10	4		9	33 PP
TUCSON	42.70	315.6	7	53	1	14	15	4		9	1 PCP
SHAWINIGAN	42.79	4.1	7	54	1	14	18	6	8 9	9	38 PP
SEVEN FALLS	43.52	5.9	8	0	1	14	28	5	8 15	17	52 SS
KIRKLAND LA.	44.34	356.9	8	5A	-1	14	37	2	8 19	17	58 SS
RAPID CITY	46.46	333.7	8	17	-6	15	0	-5		39	21 PKPPKP
PALOMAR	47.59	313.1	8	32K	1				8 52	13	50 SCP
RIVERSIDE	48.28	313.6	8	36K	-1	15	34	3			
SALT LAKE C.	48.52	324.4	8	38	-1	15	37	3		18	13 SCS
PASADENA	48.93	313.3	8	42K	0	15	45	5	8 56	10	36 PP
CHINA LAKE	49.35	315.5	8	45K	0				9 0	10	45 PP
ISABELLA	49.88	314.9	8	49K	0				9 1	13	58 SCP
WOODY	50.18	314.7	8	51K	0				9 5	13	59 SCP
EUREKA	50.25	320.5	8	52	0	16	42	44		39	29 PKPPKP
TINEMAHA	50.42	316.6	8	53K	0	16	5	4	9 1	18	40 SCS
KING RANCH	50.63	313.9	8	55K	0				9 8	9	28
BOZEMAN	51.37	329.6	9	0	0	16	14	0			
FRESNO	51.37	315.5	8	59K	-1						
SCHEFFERVLLE	51.58	7.4	8	22K	-40						
BUTTE	52.38	329.0	9	7	-1	16	22	-6		11	14 PP
RENO	52.77	318.5	9	11K	0	16	39	6			
LICK	52.93	315.2	9	12K	0						
SANTA CLARA	53.15	315.1	9	15K	1	16	53	15			
BERKELEY	53.61	315.5	9	17K	0	16	50	6		18	56 SCS
MINERAL	54.36	318.5	9	22K	-1						
HUNGRY HORSE	54.69	330.3	9	24	-1	17	0	1		19	4 SCS
SHASTA	55.06	318.5	9	26K	-2						
BANFF	57.31	332.1	9	42K	-2						
CORVALLIS	57.59	322.1	9	46K	0	17	39	2			
SEATTLE	58.64	325.6	9	52	-1	17	55	4			
VICTORIA	59.75	326.0	10	0K	-1	18	8	3		10	29
MBOUR	59.84	75.6	10	0	-1	18	10	3		12	13 PP
HORSESHOE B.	60.14	326.9	10	2K	-2	18	12	1			
SITKA	70.20	330.3	11	8	0	20	17	3		24	46 SS
RESOLUTE	71.67	355.0	11	15A	-2	20	27	-4		25	13 SS
REYKJAVIK	71.94	22.2	11	19	0					11	39
MALAGA	73.66	52.9	11	33K	4	20	51	-2		14	11 PP
GRANADA	74.36	52.6	12	7K	34	21	10	9		14	4 PP
ALMERIA	75.21	53.0	11	36	-2	21	11	0			
SCORESBY SD.	75.27	16.5	11	39	1	21	14	3		21	44 SKS
RATHFARNHAM	75.42	35.8	11	38A	-1	21	34	21			
ALICANTE	76.94	51.6	11	43	-5	21	31	1		21	53 SKS
JERSEY	77.18	40.5	11	49	0	21	36	4		12	13 *SP
RELIZANE	77.54	5[illegible].4	11	47A	-4	21	42	6			
HAWAII V.OB.	77.92	259.0	11	53	0						
DURHAM	78.43	34.9	11	54	-2	21	43	-2		12	12
ABERDEEN	78.58	32.4	11	55	-2	21	47	0		22	35 PS
COLLEGE	78.64	335.7	11	56	-1	21	47	-1		26	49 SS
KEW	78.66	38.3	11	57A	0	21	49	1		22	5 SKS
ALGIERS UNI.	79.62	53.5	12	2A	0	21	59	1		15	4 PP
PARIS	80.13	41.2	12	6A	1	22	2	-1		15	8 PP

CLERMONT-FD.	80.28	44.4	12	6	0	22	10	5	12	22	15	10 PP
HONOLULU	80.58	290.9	12	7	0							
TAMANRASSET	81.46	67.6	12	14A	2	22	22	5			15	18 PP
DE BILT	82.12	38.1	12	16A	1	22	28	4				
BESANCON	82.35	43.0	12	17	0				12	31	15	25 PP
NEUCHATEL	83.00	43.3	12	20	0	22	35	2			15	25 PP
WITTEVEEN	83.07	37.4	12	21A	1							
MONACO	83.24	46.6	12	22	1						15	34 PP
BASLE	83.45	42.8	12	22A	0	22	37	0				
STRASBOURG	83.60	41.7	12	23A	0	22	39	0	12	37	15	35 PP
OROPA	83.67	44.7	12	23	0	22	43	4			15	43 PP
KARLSRUHE	84.04	41.3	12	26	1	22	44	1	12	43	15	41 PP
ZURICH	84.12	42.9	12	26	0							
EBINGEN	84.40	42.1	12	27A	0				12	42	15	42 PP
TUBINGEN	84.47	41.8	12	28	1							
PAVIA	84.51	45.1	12	28A	1	22	48	0			15	45 PP
STUTTGART	84.55	41.5	12	28A	0	22	44	-4	12	44	15	42 PP
CHUR	84.77	43.5	12	30A	1						15	48 PP
HAMBURG	85.09	36.7	12	32A	2	22	52	-1			15	48 PP
PRATO	85.90	46.4	12	34	0	22	43	-18				
FLORENCE X.	86.01	46.5	12	33A	-2	23	1	-1	13	3	15	54 PP
BOLOGNA	86.05	45.8	12	29	-6						23	27 PS
JENA	86.09	39.3	12	36	1	22	58	-5	12	58	15	55 PP
SKALSTUGAN	86.26	26.6	12	36A	0							
COPENHAGEN	86.50	34.6	12	36A	-1	23	12	5			23	0 SKS
CHEB	86.62	40.2	12	38	0	23	21	13			22	56 SKS
POTSDAM	86.97	37.9	12	41	1						23	3
ROME	86.98	48.4	12	41A	1	23	17	5	12	57	23	3 SKS
TRIESTE	87.72	44.6	12	44A	1	23	23	4	12	59	23	10 SKS
PRAGUE	87.94	40.1	12	46	2	23	30	9			23	10 SKS
UPPSALA	89.02	30.2	12	48A	-1	23	23	-8			16	25 PP
ZAGREB	89.27	44.3	12	53	2							
KIRUNA	89.29	22.1	12	50A	-1	23	34	1			23	13 SKS
MESSINA	89.54	51.9	12	49	-3	23	11	-25			15	33 PP
BRATISLAVA	89.83	41.9	12	54	1	23	40	2	13	10	23	19 SKS
RACIBORZ	90.36	39.9	12	57	1	23	25	-18			16	31 PP
KRAKOW	91.47	39.8	13	2	1	23	28	-25			16	36 PP
SKALNATE PL.	91.79	40.7	13	15	13	24	2	6			23	32 SKS
WARSAW	91.85	37.6				24	0	4			16	52 PP
BELGRADE	92.51	45.0	13	8	2	23	36	-26			16	50 PP
HELSINKI	92.61	29.3	13	6	0	23	32	-31	13	25	16	50 PP
TIMISOARA	92.92	44.0	13	12	4	24	21	15			18	5
LWOW	94.11	39.6	13	14	1	24	23	7			24	3 SKS
APATITY	94.16	21.2				23	41	-35			17	0 PP
SOFIA	94.89	46.8	13	18	1	23	47	-35			16	24
PULKOVO	95.31	29.1	13	18	0	24	25	-1			23	47 SKS
ATHENS	95.97	51.4	13	22	1	24	15	-17			23	50 SKS
BUCHAREST	96.56	44.7	13	24	0	24	43	6	13	40	23	55 SKS
IASI	96.96	41.7									23	56 SKS
HERMANUS	97.05	124.1									24	4
MOSCOW	100.36	31.6	13	40	-1	24	12	-57			17	51 PP
SIMFEROPOL	101.95	42.7	13	49	1	24	21	-61			17	59 PP
TIKSI	102.94	351.9				24	24	-66				
PRETORIA	105.08	115.5									17	3
LWIRO	105.68	91.3	14	6	777						17	17 PP
KSARA	106.51	53.3	14	8	777	24	52	-25			18	32 PP
PETROPAVLOVK	106.84	328.8									21	39 PKS
TIFLIS	110.38	42.9				25	4	6			19	4 PP
SVERDLOVSK	110.47	23.4									19	5 PP
GORIS	112.38	44.5				25	10	4			19	16 PP
ASHKABAD	121.29	40.8	18	48	2						20	19 PP
TANANARIVE	123.61	110.2	18	54	3						20	31 PP
IRKUTSK	124.20	359.2									20	49 PP
TASHKENT	125.52	31.1									20	43 PP
FRUNSE	126.86	26.1				26	3	7			20	54 PP
BRISBANE	127.01	238.2									20	57 PP
MATUSIRO	128.31	323.9	19	1A	1						22	16 PKS
RABAUL	131.18	267.7									22	26 PKS
QUETTA	131.62	43.3	18	45A	-21	26	17	8			21	24 PP
KARACHI	134.25	48.0	19	15	4						22	42 PKS
PEKING	134.85	346.0	19	14	2						22	55
DEHRA DUN	138.45	33.7									22	56
ZO-SE	141.36	334.9	19	24	0							
NANKING	141.46	338.5	19	18	-6						19	36
BOMBAY	142.56	52.0									22	30
POONA	143.57	51.6	19	25	-3	22	45	-224			19	37 PP
CHATRA	145.88	26.1	19	34	2							
SHILLONG	148.86	20.1	19	39K	2							

BAGUIO CITY 153.63 319.9 19 46 2
COLOMBO 154.40 65.7 20 2 17

MAY 24 3.H 36.M 37.S EPICENTRE 53.24-167.50 DEPTH= 36.KM

DEPTH OF FOCUS= 0.000R

A=-0.58678 B=-0.13013 C= 0.79922 D=-0.2165 E= 0.9763
G=-0.7803 H=-0.1730 K=-0.6010 HT= -6.6

SE= 1.93

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
COLLEGE	15.34	32.9	3 37	1	6 29	4		
SITKA	18.68	65.3	4 19	1	7 45	4		
PETROPAVLOVK	20.18	283.4	4 34	-1				8 18
ALBERNI	26.70	81.1	5 44K	6				
HORSESHOE B.	27.57	80.0	5 47	1	10 28	5		
VICTORIA	27.86	81.7	5 49K	0	10 32	4		
SEATTLE	28.93	82.6	6 11	13	10 56	11		
CORVALLIS	29.89	88.7	6 8	1				
Y.-SAKHLINSK	32.00	279.2	6 23	-3				
SHASTA	32.68	94.1	6 32K	0				
UKIAH	33.17	97.1	6 36	0				6 53
MINERAL	33.37	93.9	6 38K	1				7 54
HUNGRY HORSE	33.48	76.3	6 39	1	13 1	64		
BERKELEY	34.56	97.9	6 48K	0	12 18	5		
RENO	34.95	93.5	6 52	1				
RESOLUTE	35.09	26.2	6 52A	0	12 21	-1		
LICK	35.28	98.0	6 54K	0				
BUTTE	35.52	79.0	7 5	9	12 29	1		8 19 PP
BOZEMAN	36.61	78.5	7 4	-1				7 50
FRESNO	36.76	97.1	7 7K	1				
EUREKA	37.30	90.4	7 11	0	13 13	18		
TINEMAHA	37.50	95.3	7 13K	0	13 7	8		
KING RANCH	37.77	98.8	7 15K	0				
WOODY	38.04	97.5	7 17K	0	13 16	9		9 1 PP
ISABELLA	38.30	97.2	7 19K	0	13 13	2		10 2
CHINA LAKE	38.71	96.3	7 23K	0	13 18	1		
SALT LAKE C.	38.97	85.6	7 25	0				
PASADENA	39.52	98.7	7 29K	0	13 35	6		
TUKUBASAN	39.94	266.4	7 32	-1	13 23	-12		
RIVERSIDE	40.10	98.2	7 33	-1	13 34	-4		
MATUSIRO	40.85	268.3	7 40A	0	13 46	-3		13 29 SCP
PALOMAR	40.85	98.4	7 41K	1				8 8
RAPID CITY	42.10	75.6	7 51	0				
KYOTO	43.38	268.7	8 2	1				
TUCSON	45.23	94.3	8 16	0	14 57	4		8 33
LUBBOCK	49.69	85.8	8 50	-1	15 58	2		
CHIHUAHUA	50.67	93.7						25 6
KIRKLAND LA.	52.30	57.7	9 10	-1				
SCORESBY SD.	54.12	13.6	9 25	1	17 2	5		
CLEVELAND	56.00	64.7	9 36	-2				
OTTAWA	56.36	57.8	9 39K	-1	17 27	0		11 48 PP
SHAWINIGAN	57.03	55.1	9 44	-1				
BREBEUF	57.35	56.5	9 45K	-2	17 40	0		
SEVEN FALLS	57.58	53.5	9 48	-1	17 43	0		10 43 PCP
MORGANTOWN	58.16	65.3	9 52	-1				
KIRUNA	59.10	356.5	9 58	-2	18 1	-2		10 34
WASHINGTON	60.24	64.0	10 19	11				
PALISADES	60.40	60.3	10 5	-4	18 18	-1	10 13	12 18 PP
PHILADELPHIA	60.50	61.9			18 26	5		
WESTON	60.74	57.6	10 11	0				
COLUMBIA	61.60	70.5	10 16	-1				
TACUBAYA	61.73	95.2	10 21	3				14 16 PPP
HALIFAX	62.85	51.2	10 27	2				
SVERDLOVSK	63.44	332.8	10 28	-1	19 1	3		
SKALSTUGAN	63.52	0.1	10 29	0				
HONG KONG	65.54	274.9	10 44	1	18 55	-28		
BAGUIO CITY	66.20	265.7	10 45	-2	19 35	3		
PULKOVO	66.43	350.3	10 46	-2	18 36	-58		
HELSINKI	66.50	353.2	10 49	0				11 17 PCP
UPPSALA	67.19	357.2	10 52	-1				
COMITAN	68.40	91.7						18 21
ABERDEEN	69.30	8.4			20 13	4		21 11
MOSCOW	69.44	345.1	11 5	-2				

FRUNSE	70.43	316.4	11	14	1	20	28	6			
BERMUDA	71.75	60.3	11	29	8	20	39	2	25	15	SS
RATHFARNHAM	72.68	11.7	11	25	-1						
HAMBURG	73.54	1.6	11	33	2						
DE BILT	74.85	4.7				21	23	11			
SHILLONG	75.94	293.8	11	43A	-2						
JENA	76.20	0.6	11	47	0						
LWOW	76.84	352.4	11	52	2	21	35	1			
KRAKOW	76.89	355.1	11	51	0	21	37	2	12	52	
PRAGUE	77.05	358.7	11	53	1	21	39	3	14	56	PP
PARIS	77.97	6.7	11	57	0	22	5	19	15	5	PP
STUTTGART	78.33	2.2	11	58	-1	21	53	3	12	34	
STRASBOURG	78.48	3.2	12	0A	1	21	56	4	31	11	SSS
BRATISLAVA	78.89	356.9	12	3	1				12	35	
EBINGEN	78.91	2.4	12	2	0				12	37	
BASLE	79.52	3.4	12	5	0						
BESANCON	79.73	4.5	12	8	2				12	41	
NEUCHATEL	80.02	3.9	12	7	-1						
CHUR	80.26	2.1	12	10A	1						
SIMFEROPOL	80.45	344.6	12	11	1	22	17	5			
SOTCHI	80.76	340.3	12	12	0	22	22	6			
CLERMONT-FD.	81.04	6.6				22	41	22			
TIFLIS	81.40	336.1	12	17	2	22	27	5			
TRIESTE	81.48	359.1	12	16	0						
SAN JUAN	82.07	70.0	12	19	0						
FLORENCE X.	83.35	0.9	12	21A	-4	22	49	7	13	34	
QUETTA	84.43	314.9	12	31A	0	22	57	4	22	53	SKS
ROME	85.24	0.0	12	37	2	23	8	7			
KARACHI	88.16	312.7	12	46	-3						
MESSINA	88.89	357.6	12	51	-1						
ALGIERS UNI.	89.98	7.6	12	57	0	23	48	3			
RELIZANE	90.77	9.7	12	58	-3						
KSARA	90.95	340.7	13	5	3	25	3	69	16	49	PP
POONA	91.20	303.6	13	5	2						
JERUSALEM	93.06	340.8							18	28	
TAMANRASSET	104.06	6.6	14	4	3				18	25	PP
LA PAZ	108.63	92.7				24	57	3	28	15	PS
LWIRO	127.42	339.3	19	4A	2						
SCOTT BASE	131.79	187.1	19	14	4						
TANANARIVE	136.34	308.1							22	51	SKP
PRETORIA	150.13	330.7	19	48	6						

MAY 26 6.H 33.M 34.S EPICENTRE 40.67 30.86 DEPTH= 0.KM

A= 0.65291 B= 0.39019 C= 0.64920 D= 0.5130 E=-0.8584
G= 0.5573 H= 0.3330 K=-0.7606 HT= -1.9

SE= 2.73

	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	
YALTA	4.51	31.4	1	9	-1								
SIMFEROPOL	4.90	28.2	1	15A	0	2	9	-4					
BUCHAREST	5.14	318.4	1	19K	1						2	15	
FOCSANI	5.69	333.2	2	28	62	3	30	58			4	9	SG
SOFIA	5.99	292.2	1	31	1	2	43	3			1	45	
ATHENS	6.16	246.3	1	32A	-1						3	24	SG
CAMPULUNG	6.28	319.0	1	37	2	2	51	4					
KISHINEV	6.51	347.6	1	36	-2								
BACAU	6.56	335.3	1	40	2	2	52	-2					
IASI	6.94	341.1	1	43	-1	2	58	-6			2	18	PG
SOTCHI	7.20	63.3	1	44A	-3	3	0	-10					
KSARA	7.92	148.1	1	55A	-3	3	20	-8					
CERNAUTI	8.38	336.8	2	1	-3								
TIMISOARA	8.68	309.0	2	8	0	3	41	-6			2	40	
BELGRADE	8.71	301.8	2	6	-3						2	31	
JERUSALEM	9.54	157.0	2	17A	-3	4	45	37					
SZEGED	9.59	309.1	2	23	2	4	3	-6			2	34	PP
UZHGOROD	10.02	325.4	2	25	-2	4	15	-5					
KECSKEMET	10.20	311.5	2	34	5	4	2	-22			2	56	PPP
LWOW	10.35	334.6	2	29	-2	4	21	-7					
TARANTO	10.36	273.3	2	33	2	5	3	35					
KALOCSA	10.41	308.1	2	32	0	4	19	-11			3	20	PG
TIFLIS	10.56	79.8	2	33	-1	4	29	-4			4	48	
BUDAPEST	10.87	312.7	2	35	-3	4	42	1					
HURBANOVO	11.57	312.6	2	48K	0	5	22	24			3	17	

GORIS	11.91	90.6	2 52	0		5 25	
ZAGREB	12.01	300.3	2 49K	-5		6 17	
REGGIO CALA.	12.05	262.6	2 51	-3	5 35 25	5 0	
MESSINA	12.10	263.2	2 53K	-2	5 24 13	3 40	
KRAKOW	12.11	324.4	2 53K	-2			
BRATISLAVA	12.36	311.9	2 57K	-1	5 26 9		
DABROWA	12.63	323.7	3 2	0			
BYTOM	12.78	323.2	3 3	-1			
ZABRZE	12.80	322.8	3 2	-2			
VIENNA-H.	12.81	311.0	3 3K	-2	5 41 13	6 0	SS
RACIBORZ	12.93	320.9	3 6	0		3 15	PP
WARSAW	13.39	333.0	3 10	-2		6 28	
TRIESTE	13.44	297.4	3 12	-1	5 48 5	4 17	
ROME	13.88	281.1	3 18K	-1	5 48 -6		
FLORENCE X.	14.86	288.5	3 28	-3	6 21 4		
PRAGUE	14.86	314.7	3 35K	4	6 35 18		
MOSCOW	15.72	14.2	3 38	-5	6 22 -15		
CHEB	16.00	312.2	3 44	-2			
PAVIA	16.50	293.0	3 52K	-1		4 54	
CHUR	16.58	298.9	3 53	-1		6 10	
RAVENSBURG	16.77	302.1	3 56K	0	7 22 21		
JENA	16.86	313.9	3 57	0	7 16 13		
POTSDAM	16.89	319.8	3 57	0	7 13 9		
EBINGEN	17.31	303.0	4 2K	-1			
ZURICH	17.34	300.1	4 9	6	7 25 11		
STUTTGART	17.35	305.0	4 2K	-1	7 26 11		
TUBINGEN	17.35	304.2	4 2K	-1			
OROPA	17.40	294.1	4 4	0	7 41 25	4 55	
MONACO	17.62	287.7	4 7K	0		7 46	SS
KARLSRUHE	17.92	305.2	4 10K	0	7 40 12		
BASLE	18.03	300.1	4 11K	-1	7 43 13	4 24	
STRASBOURG	18.19	303.5	4 14K	0	7 49 15	4 25	PP
NEUCHATEL	18.34	298.1	4 15	-1	7 57 20	9 6	
BESANCON	19.04	298.5	4 25	1	8 9 16		
HAMBURG	19.10	319.5	4 25K	0	8 0 6		
COPENHAGEN	19.30	327.2	4 24	-3	7 54 -5		
BENSBERG	19.37	310.0	4 28	0	8 11 11		
HELSINKI	19.86	351.3	4 28	-5	7 53 -18	4 59	PPP
WITTEVEEN	20.44	314.6	4 40K	1			
CLERMONT-FD.	20.80	293.4	4 44K	1	8 40 10		
UPPSALA	20.90	341.1	4 42K	-2	8 21 -11		
DE BILT	20.96	311.6	4 46K	1	8 44 11		
ASHKABAD	21.41	88.4	4 48	-1		7 58	
PARIS	21.64	301.6	4 50A	-2	8 48 2	5 14	PP
BARCELONA	21.65	281.4	4 51	-1	9 13 27	5 18	PPP
ALGIERS UNI.	22.01	268.8	4 53K	-2	8 57 4	5 18	PP
KEW	24.00	307.2	5 18K	3	9 32 4	5 51	PP
ALICANTE	24.23	274.8	5 15	-2	9 42 10	5 54	PP
RELIZANE	24.25	268.1	5 17	0			
JERSEY	24.68	301.2	5 20	-2	9 44 4	5 30	
SVERDLOVSK	25.14	40.0	5 25	-1	9 41 -7	6 15	PP
SKALSTUGAN	25.43	340.6	5 28	-1			
DURHAM	25.70	314.2	5 30	-1	9 55 -2	6 17	PPP
ALMERIA	26.18	272.5	5 35	-1	10 13 8	6 3	PP
SODANKYLA	26.85	356.4	5 41	-1	10 18 2	6 12	
ABERDEEN	26.87	319.0	5 39	-3	10 19 3	6 19	PP
GRANADA	26.93	273.8	6 18K	35	11 2 45	6 59	PP
EDINBURGH	26.96	316.0	5 42	-1	10 19 1	6 28	PP
APATITY	26.97	2.2	5 41K	-2	10 7 -11		
MALAGA	27.69	273.3	5 41A	-9	10 33 4	6 37	PP
KIRUNA	27.81	351.5	5 50	-1	10 33 2	6 12	
TAMANRASSET	27.83	237.8	5 51K	0	10 30 -2		
RATHFARNHAM	27.97	309.4	5 51K	-1	10 39 5	6 29	PP
TASHKENT	28.85	75.9	5 57	-3		6 53	PPP
STALINABAD	29.13	81.7	6 2	-1		11 4	
COIMBRA	29.74	282.1	6 7	-1	11 9 7	7 7	PP
LISBON	30.67	279.6	6 14K	-2	11 13 -4	7 21	PP
QUETTA	31.02	98.2	6 17A	-2	11 18 -5	7 19	PP
FRUNSE	32.41	71.4	6 30A	-1			
WARSAK DAM	32.81	88.5	6 33	-2			
KARACHI	33.42	105.0	6 43	3	12 19 19		
LAHORE	35.97	90.6	6 58	-4	12 43 4		
AKUREYRI	37.08	328.8	7 26	15	13 8 11	8 31	PP
REYKJAVIK	38.25	325.7	7 22	1		8 49	PP
DEHRA DUN	39.37	90.0	7 29	-2	13 23 -8	9 3	PP
SCORESBY SD.	40.01	335.4	7 36	0	13 45 4	9 17	PP
LWIRO	42.76	183.0	7 58A	0	14 31 10		
POONA	42.86	108.0	7 58	-1	14 21 -2	9 41	PP
LOME	43.44	225.7	8 7	3	14 42 11	9 55	PP

HYDERABAD	46.92	105.2	8	30K	-2	15	19	-2	10	16 PP
CHATRA	48.05	88.5	8	37	-4	15	44	7		
BOKARO	48.63	92.7	8	42	-3	15	39	-7	10	28 PP
MBOUR	49.08	251.9	8	48	-1	15	56	4	10	47 PP
YUMEN	49.20	67.5	8	50	0					
IRKUTSK	49.82	50.5	8	52	-2				19	32 SS
KODAIKANAL	51.03	113.1	9	2K	-2	16	17	-2	10	56 PP
MADRAS	51.07	108.2	9	2	-2	16	17	-2	10	59 PP
CHANGYEH	52.27	67.7	9	13	0					
SHILLONG	52.29	86.9	9	10	-3	16	33	-3	11	17 PP
SINING	54.15	69.7	9	26	-1					
WUWEI	54.16	67.9	9	26	-1					
TIKSI	54.40	22.7	9	27	-2				19	14 SCS
COLOMBO	55.05	113.9	9	32	-1	16	57	-17		
LANCHOW	55.86	69.4	9	39	0					
YINCHUAN	56.45	65.7	9	44	0					
TIENSHUI	57.97	70.0	9	54	0					
PAOTOW	58.02	61.9	9	56	1					
RESOLUTE	59.49	345.5	10	3	-2	18	16	4		
SIAN	60.39	68.8	10	11	0					
TATUNG	60.43	61.0	10	12	1					
TAIYUAN	61.13	63.5	10	14	-2					
PORT BLAIR	61.19	99.7	10	14	-2					
LINFEN	61.26	65.7	10	19	2					
TANANARIVE	61.28	161.9	10	17	0	18	44	9	12	20 PP
SCHEFFERVLLE	61.86	319.4	10	20K	-1					
KWANTING	61.90	59.8	10	21	0					
PEKING	62.37	59.7	10	22A	-2	17	50	-59		
SUIHWA	65.52	48.9	10	47	2					
HALIFAX	65.66	308.6	10	45K	-1	19	35	5	11	16 PCP
CHANGCHUN	66.09	52.1	10	47A	-2					
PRETORIA	66.13	182.6	10	49	0				10	53
DAIREN	66.54	58.3	10	55	4					
FUTZELING	67.21	67.8	10	55	-1					
TSINGTAU	67.27	61.4	11	0	4					
SEVEN FALLS	68.35	314.0	11	2K	-1	20	4	2	20	41 PS
NANKING	68.53	65.8	11	2A	-2	20	1	-3		
MAGADAN	68.57	28.3	11	2	-2					
KIMBERLEY	69.30	185.7	10	59K	-10					
SHAWINIGAN	69.75	314.4	11	11K	0	20	29	10	14	1 PP
CANTON	69.79	76.6	11	10A	-2	20	20	1		
PIETERMZBURG	69.94	180.4	11	15	2					
VLADIVOSTOK	70.40	49.7	11	12	-3					
ZO-SE	70.73	65.3	11	14A	-3	20	28	-2		
HONG KONG	70.91	76.7	11	16A	-3	20	31	-1	15	43 PPP
WESTON	71.52	310.2	11	22K	0	21	15	36		
OTTAWA	72.08	314.8	11	25K	0	20	54	8	15	45 PPP
KIRKLAND LA.	72.52	319.0	11	27K	-1	20	54	3		
BERMUDA	73.51	298.6	11	35K	1	21	10	8	26	4 SS
GRAHAMSTOWN	73.73	183.7	11	39	4					
Y.-SAKHLINSK	73.80	41.5	11	32	-4					
PALISADES	73.88	310.4	11	35K	-1	21	9	3	14	33 PP
FORDHAM	73.97	310.2	11	38	1	21	2	-5		
ITUHARA	74.28	58.4							29	55
WAKKANAI	74.31	43.1	11	48	9	21	10	-1		
TAIPEI	74.62	70.2	11	40	0	20	40	-34		
COLLEGE	74.79	359.4	11	41A	0	21	13	-3	38	58 PKPPKI
TAINAN	74.93	72.6	12	9	27					
TOMIE	74.93	60.0	11	40	-2	21	16	-2		
SUTTSU	75.29	45.9	11	40	-4	21	3	-19	14	31 PP
PHILADELPHIA	75.30	310.2	11	52	8	21	28	6	26	34 SS
HWALIEN	75.34	71.0	11	51	6	21	33	11		
HUKUOKA	75.41	58.3	11	42K	-3	21	21	-2	22	26 SCS
HERMANUS	75.49	189.9				21	35	11	14	26 PP
SIMONOSEKI	75.50	57.7	11	46	1					
SAGA	75.54	58.6	11	48A	2					
NAGASAKI	75.59	59.3	11	45	-1	21	33	8		
HAMADA	75.63	56.3	11	47	1	21	23	-2		
HSINKONG	75.70	71.8	11	53	6	21	50	24		
SAPPORO	75.72	45.1	11	46	-1	21	19	-7	14	37 PP
ASAHIGAWA	75.78	44.0	11	48	1					
TAWU	75.82	72.7	11	51	4	21	30	2		
UNZENDAKE	75.83	59.1				21	59	31		
MATSUE	75.90	55.4	12	6	18					
HENGCHUN	75.93	73.1	12	6	18	21	34	5		
MORI	75.95	46.2	11	41	-7	21	20	-9	14	44 PP
KUMAMOTO	76.07	58.7	11	53	4	21	28	-2		
YONAGO	76.09	55.2				21	40	9	29	57

HIROSIMA	76.19	56.6	11	46	-3	21	27	-5	14	34 PP
TOMAKOMAI	76.22	45.4	12	14	24					
HAKODATE	76.25	46.4	11	47	-3	21	4	-28	14	42 PP
ASOSAN	76.26	58.5	11	52	2	21	42	10		
PETROPAVLOVK	76.28	29.4	11	47	-3					
PENNSYLVANIA	76.28	312.3	11	50	0	21	39	6	14	45 PP
OOITA	76.40	57.9	11	52	1	21	34	0		
ABASHIRI	76.62	42.9	12	0	8				21	24
MATUYAMA	76.74	56.8	11	52	0	21	28	-10	26	11
KAGOSIMA	76.76	59.8	12	18	25	21	33	-5	13	48
OBIHIRO	76.81	44.3	12	14	21					
AOMORI	76.93	47.1	11	56	2					
TOYOOKA	76.94	54.4	11	54	0	21	38	-2	26	39 SS
WAZIMA	76.99	51.8				21	36	-4		
WASHINGTON	77.10	310.4	11	55	1	21	45	3	14	39 PP
URAKAWA	77.12	45.0	11	56	1	21	30	-12	18	15
TAKAMATU	77.25	55.7	11	56	1	21	23	-20		
KUSIRO	77.40	43.6	12	0	4	21	54	9	30	37
KOTI	77.42	56.6	11	58	2	21	43	-2	26	32
YAKUSIMA	77.44	60.7	11	58	2					
HUKUI	77.49	53.2	11	47	-10					
SIMIDU	77.56	57.5	11	51	-6	21	41	-5		
TOYAMA	77.62	52.1							14	2
TSURUGA	77.63	53.6	11	55	-2	21	43	-4	16	41 PPP
KOBE	77.72	54.8	11	59	1	21	50	2	26	50 SS
TOKUSIMA	77.74	55.6	12	0	2	21	47	-1		
SUMOTO	77.75	55.2	12	1	3	21	57	8		
NEMURO	77.77	42.7	11	56	-2	21	46	-3		
KYOTO	77.84	54.2	11	57	-2	21	58	9		
CLEVELAND	77.84	314.7	11	58	-1	21	54	4		
NIIGATA	77.90	50.2				21	26	-24		
MORIOKA	77.91	47.7	12	2	3					
OSAKA	77.96	54.6	12	0	1				23	9
HIKONE	77.99	53.8	12	3	4	21	48	-3		
TAKAYAMA	78.02	52.5							30	49
GIHU	78.22	53.4	11	59	-2				26	22
NAGANO	78.24	51.6	12	5	4	21	57	3	29	46
MORGANTOWN	78.25	312.5	12	1K	0					
MIZUSAWA	78.28	48.2	12	4	3	21	52	-2		
MATUSIRO	78.33	51.7	11	59A	-2	21	47	-8	27	10 SS
MATUMOTO	78.38	52.1	12	4	2	21	55	0		
KAMEYAMA	78.41	54.0	11	59	-3	21	26	-30		
YAMAGATA	78.44	49.3	11	59	-3					
NAGOYA	78.50	53.4	12	5	3	22	12	15	31	6
OIWAKE	78.68	51.7	12	7	4	22	4	6	17	24
SENDAI	78.74	48.9	12	2	-1	22	9	10	15	33
OWASE	78.76	54.7	11	57	-7	21	57	-2		
IIDA	78.79	52.7	12	4	0	21	59	-1	31	21
HUKUSIMA	78.85	49.6							13	6
ISINOMAKI	78.87	48.6	12	6	2					
MAEBASI	78.94	51.3	12	5K	0				22	26
SHIRAKAWA	79.13	50.2	12	15	9				20	40
KOHU	79.16	52.2	12	29	23					
TITIBU	79.23	51.7	12	11	5					
BAGUIO CITY	79.28	77.6	12	4	-2	22	4	-1		
KUMAGAYA	79.29	51.4	12	22	15				14	47
UTUNOMIYA	79.31	50.8	12	9	2					
HUNATU	79.37	52.2	12	12	5	21	29	-37	18	40
SHIZUOKA	79.50	52.8	12	10	2	22	5	-2	30	49
ONAHAMA	79.64	49.9	12	8	0				13	6
OMAESAKI	79.64	53.2				22	4	-5		
TUKUBASAN	79.67	50.9	12	7	-2	22	9	0	15	27 PP
KAKIOKA	79.71	50.8	12	10	1	22	13	4		
MISIMA	79.73	52.4	12	12	3	22	10	0		
TOKYO C.M.O.	79.83	51.5	12	12	3	22	9	-2	16	44
YOKOHAMA	79.94	51.7	12	13	3	22	11	-1	17	24
OSIMA	80.23	52.4	12	19	7					
CHAPEL HILL	80.28	309.3	12	12	0					
MERA	80.40	52.0	12	12	0				22	30
SASKATOON	80.47	335.0	11	52	-21	21	54	-23		
ANTIGUA	80.59	284.3	12	21	7					
MANILA	80.74	78.8	11	52	-22					
CHICAGO CGS.	80.81	318.2	12	17	2	22	17	-4	27	53 SS
DOMINICA	81.88	283.1	12	10	-10				12	21
SITKA	81.95	352.4	12	24K	3	22	31	-2	15	49 PP
ST. LUCIA	82.39	281.9							12	23
COLUMBIA	82.78	309.0	12	25K	0	22	40	-1	28	12 SS
ST. VINCENT	83.14	281.4	12	28	1					

SAN JUAN	83.36	288.4	12	28K	0	22	48	1			15	36 PP
DJAKARTA	83.46	103.9	12	27	-1	22	55	7				
FLORISSANT	84.44	317.8	12	32K	-1	22	54	-4	12	41	23	3 SCS
ST. LOUIS 1	84.49	317.6	12	32K	-2	22	57	-1	12	41	15	58 PP
RAPID CITY	86.05	328.7	12	41	0	23	13	0			32	33 SSS
HUNGRY HORSE	86.07	337.4	12	41K	0	22	58	-16			38	52 PKPPKP
HORSESHOE B.	87.48	343.4	12	46K	-2	23	39	12			23	20 SKS
BOZEMAN	87.53	334.3	12	49A	1						24	27 PS
BUTTE	87.71	335.5	12	49K	0	23	30	1			23	13 SKS
VICTORIA	88.32	343.2	12	52K	0	23	31	-4			23	11 SKS
FAYETTEVILLE	88.46	318.4	13	0	7	23	20	-16			16	22 PP
SEATTLE	88.89	342.2	13	1	6	23	32	-8			23	58
CORVALLIS	92.01	341.8	13	11	1	23	49	-19			16	52 PP
SALT LAKE C.	92.14	332.6	13	10A	0	23	29	-40				
LUBBOCK	94.21	322.0	13	20	0	24	39	12			24	3 SKS
GALERAZAMBA	94.99	288.7				24	8	-26			24	36 SKKS
SHASTA	95.44	339.9	13	23	-2							
MINERAL	95.55	339.2	13	25K	-1						13	45
ARCATA	95.69	341.2				24	52	12				
RENO	95.81	337.6	13	27	0						17	24 PP
UKIAH	97.13	340.0	13	41	8						17	51 PP
BOULDER CITY	97.46	332.5	13	35K	1	25	10	15			30	15 PKKP
MERIDA	97.46	305.7				24	2	-53			17	31 PP
TINEMAHA	97.61	335.5	13	41	6						17	40 PP
BERKELEY	98.05	338.8	13	44	7	25	17	17			17	35 PP
BOGOTA	98.25	283.3	14	6	28	24	15	-46			18	6 PP
FRESNO	98.37	336.6	13	48K	10	25	16	14			24	20 SKS
LICK	98.38	338.2	13	43A	4						17	42 PP
SANTA CLARA	98.45	338.4									17	46 PP
CHINA LAKE	98.55	334.5	13	41	2						17	37 PP
ISABELLA	98.97	335.1	13	41	0							
WOODY	99.06	335.4	13	37	-5						17	41 PP
CHINCHINA	99.16	284.6				24	19	-50			26	49 PS
TUCSON	99.26	327.8	13	45K	2	24	32	-38			17	50 PP
BALBOA HTS.	99.31	290.2	13	49	6						24	19 SKS
KING RANCH	99.68	336.0	13	54	10						16	57
HAYFIELD	99.79	332.2	13	45	0						17	27
RIVERSIDE	100.14	333.6	13	47	0	25	30	13			18	1 PP
PASADENA	100.26	334.3	13	48K	1	24	16	-62			17	9 PKP
PALOMAR	100.55	333.0	13	49	1						18	5 PP
BARRETT	101.09	332.5	13	53	2	24	44	-41			18	8 PP
TACUBAYA	104.34	311.8				24	39	-73			18	22 PP
OAXACA	104.80	308.4				21	50	-246			28	41
PERTH	106.57	117.9									14	36
LA PAZ	107.30	262.9				25	3	-68			18	52 PP
HUANCAYO	110.01	271.2	18	29	-2						20	20
RABAUL	116.19	71.7	19	50	67						20	29
MELBOURNE	129.98	109.4	19	16	7						21	31 PP
BRISBANE	131.13	93.2	19	16	4						39	3 SS
RIVERVIEW	132.77	101.7				28	37	135			21	45 PP
TERRE ADELIE	134.57	148.6	19	20	2						22	51 SKP
NOUMEA	138.43	77.6									22	16 PP
SCOTT BASE	138.60	167.1	19	24	-1						22	10 PP
MACQUARIE I.	143.23	129.9	19	35	1	26	35	-5				
SUVA	144.24	60.8	19	41	6						42	12 SS
ROXBURGH	149.54	113.2	19	52	8						30	19 SKKS
KAIMATA	150.62	106.8	19	56	10							
COBB RIVER	151.31	103.5							19	57		
KARAPIRO	152.63	95.8	19	56	7							
WELLINGTON	152.86	103.2	19	50	1				20	2		

MAY 26 8.H 54.M 45.S EPICENTRE 40.58 30.74 DEPTH= 0.KM
A= 0.65465 B= 0.38929 C= 0.64798 D= 0.5111 E=-0.8595
G= 0.5569 H= 0.3312 K=-0.7617 HT= -1.9

SE= 2.40

	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	
YALTA	4.64	31.8	1	13	0	2	4	-4					
SIMFEROPOL	5.03	28.6	1	19A	1	2	13	-5					
BUCHAREST	5.14	319.7	1	20K	0	2	37	16			1	51	PG
FOCSANI	5.73	334.3	1	29	1	2	36	1			1	59	PG
SOFIA	5.94	293.3	1	32	1						3	28	SG
ATHENS	6.04	246.7	1	29	-3						3	21	SG

CAMPULUNG	6.29	320.1	1	37	1	3	9	20	3 35	SG
KISHINEV	6.58	348.5	1	38	-2	2	49	-8	1 52	
BACAU	6.60	336.3	1	41	1	2	53	-4	2 13	PG
IASI	7.00	342.0	1	47	1	3	0	-7	2 21	PG
SOTCHI	7.32	62.9	1	48	-2	3	11	-4	2 10	
KSARA	7.90	147.1	1	56	-2					
CERNAUTI	8.43	337.5	2	3	-3	3	36	-7	2 23	
TIMISOARA	8.66	309.8	2	11	2	3	51	2	4 47	SG
BELGRADE	8.68	302.6	2	8A	-1				3 17	
JERUSALEM	9.50	156.2	2	20	-1	4	47	38		
UZHGOROD	10.04	326.1	2	27	-1	4	18	-5		
TARANTO	10.27	273.8	2	28	-3	5	28	60		
LWOW	10.39	335.2	2	29	-4	4	21	-10	4 40	
KALOCSA	10.40	308.8	3	24	51	4	26	-5	5 34	SG
TIFLIS	10.67	79.3	2	39	2					
BUDAPEST	10.86	313.3	2	47	8	4	55	12	6 5	SG
REGGIO CALA.	11.94	262.9	2	55	2					
ZAGREB	11.97	300.8	3	27	33				5 11	
MESSINA	11.99	263.5							2 28	
GORIS	12.00	90.1	2	57	2				5 19	
BRATISLAVA	12.35	312.4	2	56	-4				5 46	
RACIBORZ	12.95	321.4							2 40	
TRIESTE	13.40	297.8							5 9	
WARSAW	13.43	333.4	3	13A	-1				6 32	
ROME	13.81	281.4	3	20	1				6 31	
FLORENCE X.	14.80	288.9	3	5	-27					
PRAGUE	14.86	315.1	3	33	0	6	38	19	4 29	
MOSCOW	15.83	14.4	3	43	-2					
CHEB	15.99	312.6				6	44	-2	3 56	
PAVIA	16.45	293.3	3	59	6	7	14	18	5 48	
CHUR	16.54	299.3	3	56	2	7	16	18		
JENA	16.86	314.3	3	57	-1	7	18	12		
POTSDAM	16.90	320.2	3	59	0				7 18	
EBINGEN	17.28	303.3	4	3	-1					
ZURICH	17.30	300.5	4	7	3					
STUTTGART	17.33	305.4	4	5K	1	7	35	18		
TUBINGEN	17.33	304.5	4	5	1					
ORDPA	17.35	294.4	4	1	-4	7	18	1	6 12	
MONACO	17.55	288.0	4	8	1				4 15	PP
KARLSRUHE	17.90	305.5	4	8A	-3	7	39	9	4 27	
BASLE	18.00	300.4	4	13	0	7	57	25	10 7	
STRASBOURG	18.16	303.8	4	18A	3	7	47	11	4 28	PP
NEUCHATEL	18.30	298.4	4	16	0	7	47	8		
BESANCON	19.00	298.8	4	25	0				5 13	
HAMBURG	19.11	319.8	4	26	0				4 37	
PULKOVO	19.21	359.4	4	23	-5				4 35	PP
COPENHAGEN	19.33	327.5	4	26	-3					
BENSBERG	19.36	310.3	4	30	1				10 50	
KIZYL-ARVAT	19.66	86.2	4	33	0					
HELSINKI	19.94	351.5	4	33	-3	8	3	-12		
WITTEVEEN	20.44	314.9	4	42	1					
CLERMONT-FD.	20.75	293.6	4	45	1					
UPPSALA	20.96	341.3	4	44	-3	8	22	-14	8 37	
PARIS	21.61	301.8	4	52	-1	8	49	1	5 30	PP
ALGIERS UNI.	21.91	269.0	4	46	-10					
RELIZANE	24.16	268.2	5	16	-2					
JERSEY	24.65	301.4	5	24	1	9	57	15		
SKALSTUGAN	25.48	340.8	5	31	0					
SODANKYLA	26.94	356.5	5	43	-1	10	25	4		
APATITY	27.06	2.3	5	48	2	10	20	-3		
TAMANRASSET	27.70	237.8	5	52	1				6 7	
KIRUNA	27.88	351.6	5	53	0				6 23	
QUETTA	31.10	98.0	6	20	-2	11	21	-6		
SCORESBY SD.	40.05	335.5	7	41	3					
LWIRO	42.66	182.9	8	2A	3					
SHILLONG	52.39	86.8	9	15A	-1					
RESOLUTE	59.56	345.5	10	9	2	17	47	-29		
SCHEFFERVLLE	61.87	319.4	10	22K	-1					
HALIFAX	65.64	308.6	10	46	-2					
SEVEN FALLS	68.34	314.0	11	5K	0					
SHAWINIGAN	69.75	314.3	11	12	-1					
BREBEUF	70.86	313.8	11	22K	2					
OTTAWA	72.07	314.8	11	27K	0					
KIRKLAND LA.	72.53	319.0	11	31	1					
COLLEGE	74.88	359.4	11	43	-1					
MORGANTOWN	78.24	312.4	12	7K	4					
MATUSIRO	78.47	51.6	12	8	4					
RAPID CITY	86.08	328.7	12	44	1					
HUNGRY HORSE	86.12	337.3	12	43	-1					

BOZEMAN	87.57	334.3	12 53	2		
LUBBOCK	94.22	322.0	13 25	3		
LA PAZ	107.19	262.8				18 26 PP

MAY 26 9.H 36.M 37.S EPICENTRE 40.77 30.77 DEPTH= 0.KM

A= 0.65260 B= 0.38852 C= 0.65051 D= 0.5116 E=-0.8593
G= 0.5589 H= 0.3328 K=-0.7595 HT= -2.0

SE= 2.82

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
YALTA	4.47	32.8	1 10	1				
SIMFEROPOL	4.85	29.4	1 16A	2	2 9	-2		
BUCHAREST	5.02	318.2	1 16	-1	2 29	14		1 48 PG
FOCSANI	5.57	333.3	1 28	3	2 39	10		1 56 PG
SOFIA	5.89	291.5	1 31	2	1 46	-51		2 10
ATHENS	6.13	245.1	1 23	-9	2 36	-7		2 57 S*
CAMPULUNG	6.16	318.8	1 34	1	2 49	5		4 13
KISHINEV	6.40	348.0	1 34	-2	2 44	-6		3 39
BACAU	6.44	335.5	1 37	0	2 49	-2		2 8 PG
IASI	6.83	341.3	1 42	0	2 59	-2		2 13 PG
SOTCHI	7.22	64.2	1 44A	-4	3 8	-2		
KSARA	8.04	148.0	1 54	-5	3 21	-10		2 30 PG
CERNAUT	8.26	336.9	2 0	-2	3 32	-4		
TIMISOARA	8.56	308.7	2 16	10	3 57	13		4 48 SG
BELGRADE	8.60	301.5	2 4K	-3	3 51	6		2 24
JERUSALEM	9.66	156.8	6 18	236	8 46	275		
UZHGOROD	9.90	325.4	2 23	-2	4 13	-4		
KECSKEMET	10.08	311.2			4 9	-12		4 51 SSS
LWOW	10.22	334.6	2 27	-2	4 19	-6		4 50
TARANTO	10.28	272.7	2 33	3	5 36	70		
KALOCSA	10.30	307.9	2 31	1				
TIFLIS	10.61	80.3	2 35	0				
BUDAPEST	10.75	312.5	2 32	-5				2 58 P*
HURBANOVO	11.45	312.5			5 35	40		3 23
ZAGREB	11.89	300.0	2 54	2				5 57
GORIS	11.98	91.0	2 55	2				5 15
KRAKOW	11.99	324.3	2 50K	-3				6 35
REGGIO CALA.	11.99	262.0	2 52	-1				
MESSINA	12.04	262.6	2 52K	-2	5 11	2		
BRATISLAVA	12.24	311.7	2 55	-2	5 31	17		
DABROWA	12.51	323.7	3 0	0				
BYTOM	12.66	323.1	3 0	-2				
ZABRZE	12.68	322.7	3 2	-1				
VIENNA-H.	12.70	310.9	3 2	-1	5 42	17		3 18 PP
RACIBORZ	12.81	320.8	2 53	-11				3 21 PP
WARSAW	13.27	333.0	3 11	0				
TRIESTE	13.33	297.1	3 10	-1				4 16
ROME	13.79	280.7	3 21	4	5 49	-2		3 29
PRAGUE	14.74	314.6	3 26A	-4	6 34	20		3 49
FLORENCE X.	14.76	288.2	3 20	-10				
MOSCOW	15.64	14.5	3 38	-3				
CHEB	15.88	312.0	3 42	-3				
PAVIA	16.40	292.7	3 54	3				6 46
CHUR	16.47	298.7	3 52	0				
JENA	16.74	313.8	3 54	-2	7 7	6		
POTSDAM	16.76	319.8	3 59	3	7 10	9		
CUGLIERI	16.90	275.3	5 37	99				
EBINGEN	17.19	302.8	4 1	0				
ZURICH	17.22	299.9	4 3	1				
STUTTGART	17.24	304.8	4 3K	1	7 30	18		
TUBINGEN	17.24	304.0	4 3	1				
OROPA	17.30	293.8	3 55	-7				6 2
MONACO	17.52	287.4	4 7A	2	7 15	-3		7 29 SS
BASLE	17.92	299.9	4 13	3	7 40	12		10 7
STRASBOURG	18.08	303.3	4 14	2	7 46	15		4 28 PP
NEUCHATEL	18.23	297.9	4 13	-1	7 46	12		
BESANCON	18.92	298.3	4 25	2	7 52	2		4 51
HAMBURG	18.98	319.4	4 22	-1	7 59	8		
PULKOVO	19.02	359.3	4 20	-4				4 45 PP
COPENHAGEN	19.18	327.2	4 23K	-3	8 1	5		
BENSBERG	19.26	309.9	4 26	0	8 13	16		
HELSINKI	19.75	351.4	4 29	-3	7 53	-16		
WITTEVEEN	20.32	314.5	4 39	1				

CLERMONT-FD.	20.69	293.2	4 45A	3	8 35	7		
UPPSALA	20.79	341.1	4 41K	-2	8 18	-12		8 41
DE BILT	20.84	311.5	4 44A	0	8 41	10		
PARIS	21.52	301.4	4 49	-2	8 48	4		5 17 PP
ALGIERS UNI.	21.94	268.5	4 53	-2	8 54	3		
KEW	23.88	307.1	5 18	4	9 34	8		
ALICANTE	24.15	274.5	5 18	2	9 39	8		
RELIZANE	24.18	267.8	5 18	1				
JERSEY	24.57	301.1	5 30	10	9 50	12		9 26
SVERDLOVSK	25.11	40.2	5 28	2				
BERGEN	25.16	329.9	5 28K	2	9 58	10		5 47
SKALSTUGAN	25.31	340.6	5 27	-1				
DURHAM	25.58	314.1	5 33	3	9 56	1		11 5 SS
ALMERIA	26.10	272.2	5 36	1	10 9	5		
ABERDEEN	26.74	318.9			10 22	8		6 10 PP
SODANKYLA	26.75	356.4	5 40	-1	10 19	5		12 45 PCS
EDINBURGH	26.83	315.9			10 28	12		
GRANADA	26.86	273.6	6 24K	42	11 6	50		7 24 PP
APATITY	26.87	2.3	5 44K	2	10 16	0		
MALAGA	27.61	273.1	5 52A	3	10 40	12		
KIRUNA	27.70	351.6	5 48	-2	10 39	9		6 6
TAMANRASSET	27.82	237.5	5 48	-3	10 36	5		6 34 PP
STALINABAD	29.19	81.8	6 1	-2				11 3
QUETTA	31.11	98.3	6 18	-2	11 18	-6		
FRUNSE	32.45	71.5	6 31	-1				13 41 SS
WARSAK DAM	32.88	88.6	6 35	0				
KARACHI	33.52	105.1	6 46	5	12 24	23		
LAHORE	36.04	90.7	7 5	2				
DEHRA DUN	39.44	90.0	7 41	10				16 21
SCORESBY SD.	39.89	335.4	7 39	4				9 9 PP
LWIRO	42.85	182.9	7 59	0				
MBOUR	49.04	251.7	8 44	-4				10 37 PP
IRKUTSK	49.81	50.5	8 52	-2				
SHILLONG	52.36	87.0	9 12A	-2				
TIKSI	54.34	22.7						12 37 PPP
RESOLUTE	59.38	345.5	10 2	-2	18 15	4		
TANANARIVE	61.40	161.9	10 17	-1				
SCHEFFERVLLE	61.74	319.3	10 17	-3				10 21
HALIFAX	65.54	308.5	10 43K	-2				
PRETORIA	66.22	182.5	10 50K	1				
SEVEN FALLS	68.23	313.9	10 58	-4				
MAGADAN	68.52	28.3	11 6	2				
KIMBERLEY	69.39	185.6	11 8K	-1				
SHAWINIGAN	69.63	314.3	11 9K	-2			11 32	13 57 PP
BREBEUF	70.75	313.8	13 21	124				
WESTON	71.40	310.1	11 21A	0				
OTTAWA	71.95	314.7	11 25K	0				
KIRKLAND LA.	72.40	319.0	11 29	2				
COLLEGE	74.69	359.4	11 39	-2				11 59
KURILSK	77.54	40.1	11 43	-14				
MORGANTOWN	78.13	312.4	12 0	0				
MATUSIRO	78.33	51.7	12 3	2				
SAN JUAN	83.26	288.3	12 29	2				
RAPID CITY	85.93	328.7	12 40	-1				
HUNGRY HORSE	85.95	337.3	12 40	-1	23 20	8		
BOZEMAN	87.41	334.3	12 51	3				
BUTTE	87.59	335.4	12 50	1				
VICTORIA	88.20	343.2	12 53	1				
SEATTLE	88.77	342.2	12 59K	5				
CORVALLIS	91.90	341.8	13 12	3				
SALT LAKE C.	92.02	332.5	13 12	3				
LUBBOCK	94.08	322.0	13 20	1				
MINERAL	95.44	339.1	13 33	8				
RENO	95.69	337.6	13 29	3				
BOULDER CITY	97.34	332.5	13 36	2				
TACUBAYA	104.22	311.7						15 34

MAY 27 11.H 1.M 27.S EPICENTRE 40.70 30.97 DEPTH= 0.KM

A= 0.65186 B= 0.39125 C= 0.64962 D= 0.5146 E=-0.8574
G= 0.5570 H= 0.3343 K=-0.7603 HT= -1.9

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

YALTA	4.44	30.8	1 11	1	2 1	-3	
ALUSHTA	4.73	31.3	1 14	-1	2 5	-6	
SIMFEROPOL	4.83	27.6	1 16K	0	2 9	-5	
BUCHAREST	5.17	317.5	1 21	0	2 29	7	3 6 SG
FOCSANI	5.70	332.4	1 31	3	2 37	2	1 58 PG
SOFIA	6.06	291.7	1 34	1	2 54	10	3 16
ATHENS	6.25	246.4	1 33	-3	2 45	-4	3 21 SG
CAMPULUNG	6.31	318.3	1 39	2	2 52	1	3 37 SG
KISHINEV	6.50	346.9	1 37	-2	2 47	-8	3 4
BACAU	6.57	334.6	1 43	3	2 56	-1	3 30 S*
IASI	6.94	340.4	1 47A	1	3 4	-2	2 19 PG
SOTCHI	7.11	63.3	1 47	-1			3 12
KSARA	7.91	148.8	1 58	-1	3 31	1	2 35 PG
CERNAUTI	8.39	336.3	2 3	-3	3 34	-8	
TIMISOARA	8.72	308.5	2 25	14	3 58	7	4 56 SG
BELGRADE	8.76	301.5	2 9K	-2			3 29 PS
JERUSALEM	9.54	157.6	2 20	-2	4 50	39	
UZHGOROD	10.04	325.0	2 29	0	4 20	-3	
KECSKEMET	10.24	311.1			4 21	-7	4 40 SS
TARANTO	10.44	273.2	2 9	-25	4 49	16	
KALOCSA	10.46	307.8	2 33	-1	4 21	-13	3 29 PG
TIFLIS	10.47	79.9	2 39A	4			
BUDAPEST	10.91	312.3	2 57	16	4 52	7	3 50 PG
HURBANOVO	11.61	312.3	3 24	34	5 51	49	3 48
GORIS	11.83	90.8	2 56	3			5 17
ZAGREB	12.06	300.0	3 0	4			6 7
KRAKOW	12.14	324.0	2 58	1			3 9 PP
REGGIO CALA.	12.14	262.6					2 34
BRATISLAVA	12.40	311.6	3 3	2	5 50	29	3 18
BYTOM	12.81	322.9	3 3	-3			
VIENNA-H.	12.86	310.8	3 9	2	5 38	6	5 58 SS
RACIBORZ	12.96	320.6	3 3	-5			3 24 PP
WARSAW	13.40	332.7	3 13K	-1			6 33 SSS
TRIESTE	13.50	297.2	3 14	-2			4 17
ROME	13.96	281.0	3 21A	-1			3 57
PRAGUE	14.90	314.5	3 35	1	6 28	7	3 57
FLORENCE X.	14.93	288.4	3 35	1	6 27	6	
BOLOGNA	14.95	291.2	3 36	2			
MOSCOW	15.66	14.1	3 40	-4			
CHEB	16.04	312.0	3 50	1	7 2	15	4 9
PAVIA	16.57	292.9	4 0	5			5 20
CHUR	16.64	298.8	4 0	4	7 15	14	
JENA	16.90	313.7	3 58	-2	7 20	13	
POTSDAM	16.92	319.6	4 2	2	7 13	5	
EBINGEN	17.36	302.8	4 4	-1			
ZURICH	17.39	300.0					3 59
STUTTGART	17.40	304.9	4 5	-1	7 20	1	
TUBINGEN	17.41	304.0	4 6	0			
OROPA	17.47	294.0	4 4	-3			
MONACO	17.69	287.6					4 14 PP
KARLSRUHE	17.97	305.0	4 11A	-2	7 42	10	5 4
BASLE	18.09	299.9	4 16	1	7 20	-15	10 15
STRASBOURG	18.24	303.3	4 19K	3	7 51	13	8 3 SS
NEUCHATEL	18.40	298.0	4 18	0	7 46	5	4 49
PULKOVO	19.09	359.0	4 23	-4			4 46 PPP
BESANCON	19.09	298.4	4 28	1			4 55
HAMBURG	19.13	319.3	4 27	0	8 7	9	
COPENHAGEN	19.32	327.1	4 29	0	8 3	1	
HELSINKI	19.84	351.1	4 38	3	8 1	-13	
WITTEVEEN	20.48	314.4	4 42	0			
CLERMONT-FD.	20.86	293.3	4 46	0	8 40	5	
UPPSALA	20.90	340.9	4 44K	-3	8 25	-11	
DE BILT	21.00	311.5	4 50K	2	8 44	6	
ASHKABAD	21.33	88.5	4 51	0			
PARIS	21.69	301.5	4 54	-1	8 54	3	5 17 PP
BARCELONA	21.72	281.4	4 54	-1	9 7	16	
ALGIERS UNI.	22.09	268.8	4 55	-4	8 57	-1	
KEW	24.05	307.1	5 22	4			5 56
ALICANTE	24.31	274.7	5 5	-15	9 50	13	5 52 PP
RELIZANE	24.34	268.1	5 21	0			
JERSEY	24.74	301.2	5 27	3			8 59 PCP
BERGEN	25.30	329.8	5 24	-6	9 59	5	
SKALSTUGAN	25.42	340.5	5 31	0	10 9	13	
DURHAM	25.75	314.1	5 39	5	9 59	-2	16 54 SCS
ALMERIA	26.26	272.5	5 36	-3	10 17	7	
SODANKYLA	26.83	356.3	5 42	-2	10 32	13	
ABERDEEN	26.90	318.9					10 19
APATITY	26.93	2.1	5 44	-1	10 20	-1	11 1 SS
EDINBURGH	26.99	315.9			10 21	-1	

GRANADA	27.02	273.8	5	45K	-1	10	15	-8	6	18	PP
MALAGA	27.77	273.3	6	4A	11	10	48	13	7	8	PP
KIRUNA	27.79	351.4	5	51	-2	10	34	-1	6	12	
TAMANRASSET	27.91	237.9	5	54A	0	10	32	-5	6	39	PP
RATHFARNHAM	28.02	309.3	6	0	5						
TASHKENT	28.76	76.0	6	3	1				11	20	
QUETTA	30.94	98.4	6	20	-1	11	28	3	7	28	PP
FRUNSE	32.32	71.5	6	33	0				7	38	PP
LAHORE	35.89	90.7	7	1	-3						
DEHRA DUN	39.29	90.1							9	13	
SCORESBY SD.	40.01	335.3	7	37	-1	13	40	-5	9	7	PP
BOMBAY	41.81	108.7	8	7	14	14	18	6	14	11	
POONA	42.79	108.1	8	2	1						
LWIRO	42.79	183.2	8	0	-1						
HYDERABAD	46.85	105.3							15	24	
CHATRA	47.97	88.6	8	43	0	15	51	11			
MBOUR	49.17	252.0	8	51	-1	15	39	-18	10	45	PP
IRKUTSK	49.73	50.5	8	58	2				19	33	SS
KODAIKANAL	50.97	113.2							16	29	
TIKSI	54.34	22.7							10	26	PCP
RESOLUTE	59.48	345.5	10	7	0	18	18	2			
PEKING	62.29	59.8	10	26	0	18	52	0			
HALIFAX	65.70	308.6	10	47	-2						
CHANGCHUN	66.00	52.2	10	50	-1						
PRETORIA	66.16	182.8	10	56A	4						
SEVEN FALLS	68.39	314.0	10	42	-24						
NANKING	68.44	65.8	11	7	1	20	9	2			
MAGADAN	68.50	28.4	11	7	1						
KIMBERLEY	69.34	185.8	11	10A	-2						
SHAWINIGAN	69.79	314.4	11	13A	-1						
VLADIVOSTOK	70.31	49.8	11	17	0						
ZO-SE	70.64	65.4	11	20	1	20	33	0			
BREBEUF	70.91	313.9	11	21	0						
WESTON	71.56	310.3	11	25A	0						
OTTAWA	72.11	314.8	11	28K	0						
KIRKLAND LA.	72.55	319.1	11	30	-1						
Y.-SAKHLINSK	73.73	41.5	11	37	-1						
PALISADES	73.93	310.4	11	40	1	21	12	1	14	26	PP
COLLEGE	74.76	359.5	11	43	-1						
WASHINGTON	77.14	310.4	11	55	-2						
MATUSIRO	78.25	51.8	12	4K	1				31	33	
MORGANTOWN	78.29	312.5	12	4K	0						
RAPID CITY	86.07	328.8	12	44	0						
HUNGRY HORSE	86.07	337.4	12	44	0						
HORSESHOE B.	87.47	343.5	12	50	-1						
BOZEMAN	87.54	334.4	12	52	1						
BUTTE	87.72	335.5	12	54	2						
VICTORIA	88.31	343.3	12	54	-1						
SALT LAKE C.	92.15	332.7	13	13	0						
EUREKA	94.69	334.9	13	30	6						
PASADENA	100.27	334.4							27	3	PS

MAY 28 5.H 51.M 38.S EPICENTRE 25.42 95.03 DEPTH= 61.KM

DEPTH OF FOCUS= 0.004R

A=-0.07934 B= 0.90079 C= 0.42695 D= 0.9961 E= 0.0877
G=-0.0375 H= 0.4253 K=-0.9043 HT= 3.2

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	
SHILLONG	2.86	273.6	0	44K	-1	1	14	-4	0	53	PG		
CHATRA	7.21	282.9	1	46	1	3	6	0					
BOKARO	8.55	261.2	2	1K	-3	3	29	-11	2	8	PP		
PORT BLAIR	13.85	189.5	3	15	0	5	51	3	3	26	PP		
SIAN	14.91	50.6	3	26	-3								
DEHRA DUN	15.79	291.8	3	39	-1	6	21	-12	4	0	PPP		
YINCHUAN	16.11	33.5	3	46	2								
CANTON	16.80	94.2	3	56	3	7	9	13	7	42			
HYDERABAD	17.36	246.0	3	55K	-4	7	10	1	4	21	PP		
LINFEN	17.69	49.1	4	6	2								
HONG KONG	17.78	96.1	4	7A	2	7	23	5					
MADRAS	18.67	231.3	4	14K	-1	7	58	20	4	35	PP		
LAHORE	19.18	293.3	4	19	-2	7	37	-12	4	37	PP		

TAIYUAN	19.34	46.2	4	28	5							
FUTZELING	19.60	67.8	4	44	18							
PAOTOW	19.62	35.9	3	29	-57							
POONA	20.79	255.0	4	39	1	8	27	5				
TATUNG	21.14	41.7	4	42	0	8	27	-1			5	17
BOMBAY	21.56	256.9	4	49	3	8	39	3			5	6 PP
NANKING	21.84	66.9	4	47	-2	8	43	2				
WARSAK DAM	22.08	298.3	4	55	4							
KODAIKANAL	22.49	230.9	5	4	9							
COLOMBO	23.44	220.8	5	2	-2	9	17	7				
ZO-SE	23.69	70.2	5	6	-1	9	13	-1				
TAIPEI	23.95	85.2	5	53	44	10	3	44				
FRUNSE	24.18	321.2	5	12	0						10	12
HWALIEN	24.19	87.8	5	20	8							
KARACHI	25.23	277.0	5	24	2				5	40		
QUETTA	25.26	287.2	5	23K	1	9	53	12	5	53	6	40 PP
BAGUIO CITY	25.45	105.6	5	25	1	10	31	47				
MANILA	26.61	109.0	6	1	26							
CHANGCHUN	30.70	45.6	6	8K	-3							
DJAKARTA	33.44	158.4	6	36	1							
VLADIVOSTOK	34.86	50.2	6	44	-3	12	8	-5				
MATUSIRO	38.36	62.6	7	14A	-3						7	37
TUKUBASAN	39.86	63.3	7	25	-4	13	20	-9			9	35 PCP
SVERDLOVSK	39.93	331.1	7	31	1	13	30	0				
SHEMAKHA	41.28	303.3	7	45	4							
SOTCHI	48.14	306.6	8	55	19							
TIKSI	49.98	13.3	8	49	-1	15	49	-6				
MOSCOW	51.12	322.3	8	57	-2	16	6	-5				
KSARA	51.50	294.0	9	5	4							
SIMFEROPOL	52.21	308.3	9	6	-1	16	23	-2				
JERUSALEM	52.34	291.6	9	9	1							
PULKOVO	55.69	326.4	9	32	0	17	10	-2				
APATITY	55.99	335.9	9	31	-4	17	12	-4			17	44 PS
HELSINKI	58.40	326.5	9	51	-1							
SODANKYLA	58.50	335.0	9	48	-4						10	35 PCP
WARSAW	60.67	317.3	10	27	20							
KIRUNA	60.91	335.2	10	7	-2	18	22	2			10	29
UPPSALA	62.09	326.1	10	15	-2	18	32	-3			19	3 PS
RACIBORZ	62.66	315.1	10	20	-1						11	1 PCP
RABAUL	62.72	109.5	10	22	1							
BRATISLAVA	63.66	313.1	10	28	1						10	46
TANANARIVE	63.84	231.0	10	29A	1						11	4 PCP
SKALSTUGAN	64.35	330.5	10	30A	-2						10	52
PRAGUE	65.06	315.5	10	42	6	19	12	0			12	38
COPENHAGEN	65.29	321.8	10	38	0	19	15	0			10	57 PCP
JENA	66.68	316.8	10	46	-1	19	28	-4			14	12 PP
FLORENCE X.	68.57	309.3	11	4	6							
STUTTGART	68.68	314.9	10	58	-1	19	53	-3			20	32 SCS
WITTEVEEN	69.21	319.5	11	4	2							
STRASBOURG	69.64	315.0	11	6	1	20	10	3			11	26 PCP
LWIRO	69.67	257.2	11	6A	0							
BASLE	70.05	313.9									11	28
DE BILT	70.28	319.1	11	28	19	20	16	1				
NEUCHATEL	70.61	313.5	11	2	-9							
BESANCON	71.17	314.0	11	14	0						11	34 PCP
ABERDEEN	72.73	325.5									21	18
PARIS	72.91	316.3	11	25	1	20	53	8			14	18 PP
DURHAM	73.28	323.1	11	28	1	20	48	-1			11	48
KEW	73.72	319.6	11	33	4	20	52	-2			21	36 PPS
SCORESBY SD.	74.68	341.9	11	35	0	21	3	-2			21	39 SKS
RATHFARNHAM	76.41	322.7	11	46K	1	21	40	16				
BRISBANE	76.71	129.3	11	46	0							
ALGIERS UNI.	76.74	304.5	11	38	-8	21	19	-8			12	4
COLLEGE	77.88	22.9	11	50	-3	21	35	-5			26	34
MELBOURNE	78.46	141.8	11	56	0						12	1
RELIZANE	79.00	304.3	11	59	0							
RIVERVIEW	79.45	135.3	12	1A	0							
RESOLUTE	79.93	2.7	12	3	-1	21	58	-3				
TAMANRASSET	80.13	290.5	12	5	0	22	5	2			15	12 PP
KIMBERLEY	86.33	235.9	12	37K	0							
HUNGRY HORSE	102.07	19.4	13	50	1							
SHASTA	105.59	28.7									17	15 PP
MINERAL	106.21	28.4	13	16	777						18	15
SHAWINIGAN	107.52	351.2									18	55 PP
RAPID CITY	108.85	13.8	14	20	777						18	22 PKP
OTTAWA	109.02	353.1									18	46 PP
EUREKA	109.24	25.0	13	33	777							
WOODY	111.28	29.2									18	29

ISABELLA	111.48	28.9							19	10	
CHINA LAKE	111.72	28.2							19	0	
PASADENA	112.89	29.5							28	44	PS
PALISADES	113.11	350.9							28	41	PS
RIVERSIDE	113.37	29.0							19	36	
PALOMAR	114.14	29.0							19	7	
TUCSON	117.56	24.6	13	26	-313						
TRINIDAD	137.47	324.7	19	18	1						
LA PAZ	161.96	296.2	19	58	4						
HUANCAYO	163.88	323.9	20	2	6				20	56	PKP2

MAY 29 10.H 17.M 43.S EPICENTRE 40.80 30.82 DEPTH= 0.KM

A= 0.65194 B= 0.38888 C= 0.65095 D= 0.5123 E=-0.8588
G= 0.5590 H= 0.3335 K=-0.7591 HT= -2.0

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	
ISTANBUL	1.35	281.9	0	25A	-1								
SIMFEROPOL	4.80	29.3	1	17	2	2	10	-3					
BUCHAREST	5.02	317.6	1	18	-1	2	17	-1			1	47	PG
FOCSANI	5.56	332.9	1	32	6	2	32	0			2	47	
SOFIA	5.91	291.1	1	29	-2						2	32	
CAMPULUNG	6.15	318.4	1	35	0						3	0	
ATHENS	6.18	245.0	1	34	-1	2	47	0			3	7	S*
KISHINEV	6.38	347.7	1	34	-4								
BACAU	6.42	335.1	1	37	-1	2	54	1					
IASI	6.81	341.0	1	44	0	3	1	-2			3	47	SG
SOTCHI	7.17	64.3	1	48	-1	3	12	0					
KSARA	8.05	148.4	2	2	1	3	32	-2					
TIMISOARA	8.57	308.4									2	59	
BELGRADE	8.61	301.2	2	27	18						4	32	
SZEGED	9.48	308.6									3	41	SS
JERUSALEM	9.68	157.1	2	22	-2						6	50	
KALOCSA	10.30	307.7									4	47	
TIFLIS	10.57	80.5	2	38	2	6	9	93					
BUDAPEST	10.75	312.3				5	49	68			5	15	
ZAGREB	11.91	299.8				5	45	36					
KRAKOW	11.99	324.1	2	55	0								
MESSINA	12.08	262.5									2	51	
BRATISLAVA	12.24	311.5	2	56	-3	5	33	16			6	29	
MAKHACH-KALA	12.62	74.6	3	7	3								
RACIBORZ	12.81	320.6	3	2	-4								
WARSAW	13.25	332.8									4	14	
TRIESTE	13.35	296.9	3	19	6						6	56	
SHEMAKHA	13.52	84.9	3	18	2								
ROME	13.82	280.6	3	19	-1								
PRAGUE	14.74	314.4	2	33	-59	5	46	-31			3	19	
FLORENCE X.	14.78	288.1	3	34	2	6	28	10					
MOSCOW	15.60	14.5	3	41	-2	6	23	-14					
JENA	16.74	313.6	3	57	-1	7	9	5					
EBINGEN	17.21	302.7	4	4	1								
STUTTGART	17.25	304.7	4	5	1	7	23	8					
KARLSRUHE	17.82	304.9	4	9	-2	7	43	15			4	18	
STRASBOURG	18.09	303.1	4	18	4	7	46	12			4	30	PP
NEUCHATEL	18.24	297.8	4	16	0						10	13	
BESANCON	18.94	298.2	4	29	4	7	49	-5			4	56	PPP
HAMBURG	18.98	319.3	4	25	0								
PULKOVO	18.99	359.2	4	23	-3	7	48	-7					
COPENHAGEN	19.17	327.1	4	25	-3								
HELSINKI	19.73	351.3	4	31	-3	8	4	-7					
WITTEVEEN	20.32	314.4	4	41	0								
CLERMONT-FD.	20.71	293.1	4	48	3								
UPPSALA	20.77	341.0	4	43K	-2	8	34	1			5	50	
DE BILT	20.85	311.4				8	43	8					
PARIS	21.54	301.3	4	53	0	8	39	-9			5	15	PP
ALGIERS UNI.	21.98	268.5									7	28	
SVERDLOVSK	25.06	40.2	5	29	1								
SKALSTUGAN	25.29	340.6	5	29	-1								
SODANKYLA	26.72	356.4	5	44	1								
KIRUNA	27.67	351.5	5	51	-1								
TAMANRASSET	27.87	237.5	5	52	-1								
QUETTA	31.08	98.4	6	21	-1								
LWIRO	42.89	183.0	8	0	-2								

KIMBERLEY	69.43	185.7	11	10	-1							
OTTAWA	71.96	314.7	11	27	0							
COLLEGE	74.66	359.4	11	41	-2							
RAPID CITY	85.92	328.7	12	43	0							
HUNGRY HORSE	85.93	337.4	12	44	1							
RABAUL	116.19	71.6	16	47A	-119							
MELBOURNE	130.06	109 3									23	3 PKS

MAY 29 18.H 39.M 10.S EPICENTRE 37.14 23.74 DEPTH= 0.KM

A= 0.73151 B= 0.32178 C= 0.60113 D= 0.4027 E=-0.9154
G= 0.5502 H= 0.2420 K=-0.7992 HT= -0.6

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	
ATHENS	0.83	358.7	0	33A	14	0	44	12					
SOFIA	5.57	356.9	1	32	6						2	8	
TARANTO	6.07	305.3	1	34	1	2	31	-13					
REGGIO CALA.	6.50	281.0	1	43A	4	2	48	-7			2	6	
MESSINA	6.59	281.8	1	44A	4	2	41	-16			2	4	PG
BUCHAREST	7.49	13.1	1	59	6	3	12	-8			2	31	PG
BELGRADE	8.07	343.1	2	2	1						4	23	SSG
TIMISOARA	8.81	348.4	2	18	7								
FOCSANI	8.94	15.8	2	34	21						4	16	
SZEGED	9.50	344.6	2	25	4	4	19	9			2	45	PPP
BACAU	9.71	13.0	2	29	5						4	24	
ROME	9.92	302.1	2	27	0	3	12	-68					
KALOCSA	10.03	340.8	2	50	22	4	37	14			5	40	SG
KSARA	10.43	104.9	2	34	0	4	38	5					
ZAGREB	10.44	328.6	2	29	-5						5	14	
IASI	10.45	14.5	2	38	4						3	22	
KISHINEV	10.57	19.3	2	40	4								
BUDAPEST	10.90	343.0	2	40	0						5	35	S*
SIMFEROPOL	11.05	41.8									2	51	
TRIESTE	11.34	321.7	2	43	-3	4	40	-15					
FLORENCE X.	11.60	308.8	2	52	2	5	4	3					
BOLOGNA	11.93	311.9	2	59	5	5	22	13			3	48	
BRATISLAVA	12.06	338.2	2	55	-1	5	0	-12			4	20	
KRAKOW	13.20	349.2	3	12	1								
PAVIA	13.59	310.8	3	18K	2	6	0	11			5	38	
OROPA	14.54	310.6	3	28	-1	6	11	-1			5	51	
PRAGUE	14.57	335.5	3	30	1	6	17	5			4	11	
ZURICH	15.16	317.2	3	37	0								
WARSAW	15.21	353.6	3	41	3	6	32	4					
CHEB	15.31	331.3	3	39	0	5	50	-40					
EBINGEN	15.46	320.2	3	40	-1								
TUBINGEN	15.64	321.3	3	42	-1								
STUTTGART	15.73	322.2	3	42	-2	6	20	-20			6	35	SS
BASLE	15.80	316.2	3	46K	1	6	43	1					
NEUCHATEL	15.86	313.7	3	47	1	6	29	-14			3	52	
KARLSRUHE	16.28	321.6	3	50	-1	6	58	5			4	3	
JENA	16.30	331.6	3	52	0	6	54	1					
STRASBOURG	16.33	319.5	3	54A	2	6	51	-3			7	22	SSS
ALGIERS UNI.	16.55	275.0	3	54	-1	6	54	-5					
BESANCON	16.56	313.2	3	56	1	6	50	-9			4	28	
TIFLIS	16.89	67.8	4	4	5								
POTSDAM	16.99	337.1	4	2	2	7	10	1					
CLERMONT-FD.	17.67	305.7	4	9	0						7	42	SS
BENSBERG	18.19	324.7	4	16	1						7	47	
RELIZANE	18.71	272.7	4	23	1						4	49	PPP
HAMBURG	19.01	334.2	4	23	-3	7	58	3			4	56	
MAKHACH-KALA	19.07	64.8									4	32	
PARIS	19.37	313.7	4	28	-2	7	54	-9			4	46	PP
SHEMAKHA	19.67	72.1	4	38	4								
WITTEVEEN	19.71	328.1	4	33	-1								
DE BILT	19.87	324.7	4	36	1	8	8	-6					
COPENHAGEN	20.07	341.1	4	35K	-3	8	9	-9					
MOSCOW	20.84	22.4	4	47	1						8	25	
TAMANRASSET	21.25	232.8	4	53	3	8	43	1					
GRANADA	21.77	278.4	5	31K	36								
KEW	22.27	317.7	5	0K	0	8	53	-8			5	27	
PULKOVO	23.04	8.5	5	7	-1						9	1	
HELSINKI	23.07	1.6	5	5	-3	9	6	-9			5	14	
UPPSALA	23.07	352.1	5	5K	-3	9	4	-11			9	14	
DURHAM	24.70	323.6	5	23	-1	9	30	-14			5	49	

	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
RATHFARNHAM	26.35	317.4	5	37A	-2	10	10	-1			6	13 PP
ABERDEEN	26.38	327.7	5	16	-24	9	56	-16			10	41 SS
SKALSTUGAN	27.38	348.9	5	46K	-3							
SODANKYLA	30.33	2.2	6	12	-3						7	3
KIRUNA	30.80	357.5	6	17K	-2						7	6 PP
SVERDLOVSK	31.40	39.3	6	22	-2							
QUETTA	36.38	88.0	7	11A	3							
LWIRO	39.47	172.0	7	39	5						8	2
CHATRA	53.89	81.6	9	30	3							
SHILLONG	58.20	80.5	9	57A	-1							
SCHEFFERVLLE	60.87	318.5	10	14A	-2							
RESOLUTE	61.47	344.6	10	17K	-4							
HALIFAX	63.43	307.1	10	31A	-3							
KIMBERLEY	65.55	179.0	10	49K	2							
SEVEN FALLS	66.70	312.2	10	53A	-2							
SHAWINIGAN	68.13	312.4	11	2A	-2							
WESTON	69.43	308.0	10	57	-15							
OTTAWA	70.49	312.5	11	17	-1							
KIRKLAND LA.	71.41	316.7	11	21	-3							
MORGANTOWN	76.36	309.5	11	52A	-1							
COLLEGE	78.11	356.3	11	58	-4							
BANFF	85.08	335.7	12	37K	-2							
RAPID CITY	85.95	324.7	12	42	-1						13	10
HUNGRY HORSE	86.96	333.3	12	47	-1						16	10 PP
HORSESHOE B.	89.04	339.2	12	55	-3							
VICTORIA	89.85	338.9	12	59	-3							
EUREKA	95.23	329.8	13	26	-1							

MAY 30 0.H 18.M 55.S EPICENTRE -20.60-174.19 DEPTH= 0.KM

A=-0.93205 B=-0.09481 C=-0.34970 D=-0.1012 E= 0.9949
G= 0.3479 H= 0.0354 K=-0.9369 HT= 4.5

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
APIA	7.14	19.2	1	46	-2	3	0	-11				
SUVA	7.38	288.0	2	3	12							
WELLINGTON	22.65	202.0	5	2	-2						10	0
KAIMATA	24.99	205.8	5	31	5							
BRISBANE	30.65	250.7									6	17
RIVERVIEW	33.36	239.4	6	38A	-4						7	49 PP
TERRE ADELIE	54.12	200.0	9	26	-3							
WILKES	65.41	205.6				19	25	-5				
MATUSIRO	72.45	321.4	11	30K	0	20	57	3				
MANILA	72.64	293.4	12	33	62							
BAGUIO CITY	73.83	294.9	11	37	-1	21	15	6				
SANTA CLARA	75.76	40.5	11	52K	3							
KING RANCH	75.87	43.3	11	51	1							
BERKELEY	75.91	40.0	11	50	0	21	39	7				
LICK	75.95	40.7	11	50	0							
PASADENA	76.18	45.1	11	50	-1							
PALOMAR	76.59	46.4	11	54	0							
RIVERSIDE	76.62	46.0	11	55	1	21	40	0				
WOODY	76.67	43.5	11	53	-1						12	19
FRESNO	76.73	42.1	11	55	0							
ISABELLA	76.90	43.7	11	55	0							
PETROPAVLOVK	77.10	343.6	11	56	-1	21	47	2				
CHINA LAKE	77.56	44.0	12	2	3							
HAYFIELD	77.63	46.7	12	0	0							
SHASTA	77.68	37.7	12	0	0							
TINEMAHA	77.90	42.7	12	4	3	21	58	4				
MINERAL	77.91	38.4	12	1	0							
RENO	78.45	39.9	12	4	0							
BOULDER CITY	79.47	45.2	12	10	0							
TUCSON	80.20	50.2	12	14	0	22	23	5			12	40
VLADIVOSTOK	80.45	323.1	12	15	0	22	31	10				
ZO-SE	80.53	308.2	12	16K	1	22	33	11			12	28
EUREKA	80.77	41.8	12	15	-2							
HONG KONG	81.87	297.4				22	47	11				
VICTORIA	82.37	31.3	12	24	-1	22	41	0				
NANKING	82.76	308.0	12	29K	2						12	41
HORSESHOE B.	83.03	30.7	12	26	-2	22	28	-19				
TACUBAYA	83.48	66.6	12	25	-6						14	0
SALT LAKE C.	84.10	42.6	12	33	-1							

HUNGRY HORSE	87.11	35.4	12	49	0						
LUBBOCK	87.44	52.8	12	56	6						
COLLEGE	87.58	10.9	12	47	-4	23	28	-4	29	25	SS
BANFF	87.99	32.5	12	51	-2						
PEKING	88.49	313.9	12	57K	2	23	53	13			
RAPID CITY	91.29	43.0	13	9	1						
HUANCAYO	93.94	104.3	13	22	1						
LA PAZ	98.62	111.2				24	19	-50	31	17	SS
TIKSI	99.76	344.4				24	27	-51	17	48	PP
RESOLUTE	106.91	15.8				25	134678				
PALISADES	110.80	52.8	14	59	-216	25	17	2	19	35	PP
BERMUDA	116.82	63.3				25	40	2	19	54	PP
QUETTA	124.50	293.0	19	3	2	26	15	11	38	5	SS
SVERDLOVSK	126.07	326.2	19	5	1						
APATITY	129.92	346.6							22	35	
KIRUNA	131.88	352.6	19	17	2				22	43	PKS
PULKOVO	137.14	342.0	19	23	-2				29	5	SKKS
MOSCOW	137.62	333.7	19	24	-2				22	8	PP
MAKHACH-KALA	138.68	312.3	19	31	3				23	5	PKS
UPPSALA	139.89	350.8							23	4	PKS
TIFLIS	140.98	311.6	19	26	-6				29	42	SKKS
SOTCHI	143.63	316.9	19	37	0				23	17	PKS
COPENHAGEN	144.62	353.5	19	39K	1						
DURHAM	145.42	7.5	19	40	0						
RATHFARNHAM	146.05	13.0	19	42	1				19	54	PKP2
WARSAW	146.28	343.1	19	46K	5				20	37	PKP2
SIMFEROPOL	146.30	322.6	19	44	3				30	0	SKKS
HAMBURG	146.93	355.4	19	46	4						
KISHINEV	147.67	330.0	19	45	2						
POTSDAM	147.78	351.6	19	47	4						
WITTEVEEN	147.83	359.0	19	49	5						
LWIRO	148.01	227.5	19	46A	2	20	37				
IASI	148.11	331.4	19	49	5				20	3	
KRAKOW	148.54	342.5	19	50	5				20	53	
DE BILT	148.55	0.7	19	49	4				42	35	SS
KEW	148.82	7.4	19	49	4						
BACAU	148.89	331.3							19	59	
RACIBORZ	148.98	344.4	19	47	1						
JENA	149.39	352.8	19	46	0				20	1	PKP2
PRAGUE	149.80	348.9	19	55	8				20	20	
KSARA	150.31	302.6	19	50	2				23	34	PP
BUCHAREST	150.88	329.3	19	57	9				22	19	
BRATISLAVA	151.02	344.3	19	50	1				19	57	
JERUSALEM	151.44	299.0	19	49	0				24	39	
KARLSRUHE	151.57	356.4							20	0	
PARIS	151.72	4.6	19	50	0.				23	37	PP
STUTTGART	151.76	355.3	19	50	0				20	8	PKP2
STRASBOURG	152.04	357.2	19	50	0				23	43	PP
EBINGEN	152.36	355.4	19	52	1						
BELGRADE	152.97	336.7	20	2	10						
BESANCON	153.41	359.7							20	4	PKP2
TRIESTE	154.17	347.1	19	55	2				23	51	PP
CLERMONT-FD.	154.80	4.4	19	57	3				20	20	PKP2
PAVIA	155.33	354.3	19	58	3				23	57	
FLORENCE X.	156.44	350.1	19	58	2				21	43	
MBOUR	157.43	102.2							24	18	PP
ROME	158.02	346.6	20	2	4				44	15	SS
MESSINA	160.54	336.4							20	58	
GRANADA	161.56	24.4	19	19K	-43				21	26	
MALAGA	161.63	26.9	20	5A	3	31	33	267	24	59	PP
ALGIERS UNI.	163.71	7.9	20	6	2				24	46	PP
TAMANRASSET	177.81	7.0	20	13	1				25	31	PP

MAY 31 2.H 16.M 30.S EPICENTRE -27.61 -63.08 DEPTH= 578.KM

DEPTH OF FOCUS= 0.086R

A= 0.40173 B=-0.79130 C=-0.46093 D=-0.8917 E=-0.4527
G=-0.2087 H= 0.4110 K=-0.8874 HT= 2.6

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	
LA PAZ	12.00	336.1	2	38	-1	4	45	-1			2	59	PP
HUANCAYO	19.27	321.0	3	52	3	6	54	1			7	46	PCP

BOGOTA	33.75	340.0	5	54K	-2	10	36	-5			15	10 SCS
CHINCHINA	34.57	337.6	6	3K	0	10	49	-4			15	16 SCS
TRINIDAD	38.08	2.5	6	33	1						8	33 PCP
GALERAZAMBA	39.94	341.2	6	46	-1	12	11	-1			8	48 PP
ST. VINCENT	40.57	2.7	6	50K	-2						8	40 PCP
BARBADOS	40.62	5.2	6	54	2							
ST. LUCIA	41.44	3.1	6	58K	-1	12	32	-2			8	36 PCP
FORT FRANCE	42.12	2.8	7	2	-2	12	38	-5				
ANTIGUA	44.40	2.7	7	19K	-3						8	53 PCP
SAN SALVADOR	48.28	325.0				14	8	-6				
COMITAN	51.90	323.7				14	54	-4			14	6
MERIDA	54.67	329.2	8	48	11	12	3	-211			10	42
OAXACA	55.08	319.7				15	35	-5				
VERA CRUZ	56.47	321.8	8	49	-1	15	49	-9				
TACUBAYA	58.37	319.2	9	6	3	16	24	2			11	27 PP
BERMUDA	59.67	358.4	9	13K	2	16	40	2			14	43 PPP
MBOUR	61.16	52.9	9	21	0	17	1	4	11	15	11	46 PP
MANZANILLO	61.21	314.6	9	30	9							
GUADALAJARA	61.80	316.7				17	8	4			17	30
COLUMBIA	63.59	343.4	9	35	-2	17	24	-2	11	29	12	3 PP
WASHINGTON	67.44	348.2	10	0	-1	18	15	3	11	56	12	37 PP
PHILADELPHIA	68.14	350.0	10	6	1	18	21	1	12	3	13	0 PP
MORGANTOWN	68.71	346.1	10	8K	0	17	27	-59				
PALISADES	69.00	351.2	10	9K	-1	18	28	-2	12	4	10	15 PCP
HERMANUS	69.06	118.7				18	32	2			22	3 SS
PENNSYLVANIA	69.43	348.1	10	11	-1	18	35	0	12	9	12	56 PP
CHIHUAHUA	69.46	320.2							12	10	20	35
FAYETTEVILLE	69.81	333.5	10	15	0	18	39	0			19	16 SCS
WESTON	70.05	353.5	10	16K	0	18	44	2				
SCOTT BASE	70.78	189.9	10	20	0							
CLEVELAND	70.83	345.4	10	21	0	18	49	-1				
LUBBOCK	71.10	326.5	10	21	-1	18	51	-2				
HALIFAX	71.88	359.6	10	27K	0	19	3	1				
BREBEUF	73.38	352.3	10	35K	0	19	21	2				
OTTAWA	73.56	350.8	10	36K	0	19	21	1	12	35	13	16 SP
SHAWINIGAN	74.32	353.1	10	40K	-1	19	31	2	12	39	13	55 PP
SEVEN FALLS	74.70	354.5	10	43K	0	19	37	4	12	41	13	22 *SP
TUCSON	74.88	319.5	10	43	-1	19	35	0	12	44	21	36
GRAHAMSTOWN	75.14	120.0	10	45	0							
KIMBERLEY	75.55	115.0	10	48	0							
KIRKLAND LA.	76.93	348.4	10	54K	-1	19	51	-6	12	55		
BARRETT	78.66	316.2	11	5K	1				13	5		
PALOMAR	79.24	316.6	11	7K	0	20	23	3	13	9	29	44 PKKP
PRETORIA	79.54	113.5	11	10	1							
BOULDER CITY	79.86	319.7	11	11	1	20	29	2			14	11 PP
RIVERSIDE	79.99	316.8	11	10K	-1	20	29	1	13	12	29	51 PKKP
RAPID CITY	80.24	331.9	11	12	0	20	50	19			14	26
PASADENA	80.58	316.4	11	15K	1	20	36	2	13	15	14	17 *SP
CHINA LAKE	81.37	318.0	11	18K	0	20	41	-1	13	20	29	48 PKKP
SALT LAKE C.	81.70	324.7	11	20	0	20	47	2	13	22		
ISABELLA	81.78	317.4	11	20K	0	20	48	2	13	22	14	48
WOODY	82.04	317.2	11	21K	-1	20	48	0	13	23	29	46 PKKP
KING RANCH	82.33	316.4	11	23K	0	20	52	1	13	26	29	47 PKKP
TINEMAHA	82.58	318.5	11	25K	1	20	56	2	13	27		
EUREKA	82.96	321.5	11	26	0	20	58	1	13	29	37	45 PKPPKP
TAMANRASSET	83.03	60.0	11	27K	0	21	0	2	13	32	14	53 PP
FRESNO	83.32	317.5	11	27K	-1	20	56	-5	13	28		
TERRE ADELIE	84.06	189.5	11	29	-3	20	57	-11				
COIMBRA	84.44	38.9	11	34	1				13	46		
MALAGA	84.48	43.6	11	34A	0						14	36 PPP
LICK	84.80	316.9	11	35K	0	21	17	2	13	39		
BOZEMAN	84.95	328.5	11	35	-1						12	5
RENO	85.17	319.5	11	37K	0	21	25	6	13	41		
GRANADA	85.26	43.7	11	57A	20	22	32	73			14	27 PP
BERKELEY	85.52	317.0	11	39K	0	21	23	1	13	42		
ALMERIA	85.75	44.5	11	39	-1	21	22	-2				
BUTTE	85.92	327.9	11	41	0	21	30	4	13	46	21	11 SKS
MINERAL	86.74	319.2	11	43K	-1				13	47		
UKIAH	86.90	317.5	11	46	1	21	40	5	13	50		
RELIZANE	86.99	46.9	11	48	2				14	0	13	10
SHASTA	87.42	319.1	11	46K	-2	21	35	-4	13	51		
ALICANTE	87.92	44.3	11	50	0	21	37	-7			15	23 PP
HUNGRY HORSE	88.30	328.8	11	52	0	21	44	-3	13	58	21	24 SKS
ALGIERS UNI.	89.22	47.3	11	57K	1	21	59	3	14	12	15	26 PP
CORVALLIS	90.42	321.7	12	2K	0	22	11	5	14	8		
LWIRO	90.64	92.9	12	5	2	22	11	3				
SEATTLE	91.86	324.5	12	9	1	22	9	-10			14	14
VICTORIA	93.00	324.7	12	13K	0	22	1	-27			14	17

ROXBURGH	93.00	213.9				21 54 -34				
HORSESHOE B.	93.47	325.4	12 14K	-2	21 54 -38				14 19	
RATHFARNHAM	94.42	30.2	12 19K	-1			14 29		16 16	PP
CLERMONT-FD.	94.51	40.0	12 20K	0					26 30	
MONACO	95.91	43.4	12 27K	0					12 31	
PARIS	95.93	37.2	12 26	-1	22 54 1		14 36		16 30	
KEW	96.06	34.0	12 28	1					20 18	
BESANCON	96.97	39.9	12 33	2					15 45	SP
NEUCHATEL	97.39	40.4	12 34	1						
PAVIA	97.73	42.8							16 43	
BASLE	98.04	40.2	12 36	0					15 56	
ROME	98.14	46.9	12 39	2						
FLORENCE X.	98.29	44.8	12 38	0						
MESSINA	98.40	51.3							15 25	
STRASBOURG	98.70	39.4	12 39K	0					16 48	
ABERDEEN	98.75	28.8							22 23	
EBINGEN	99.18	40.2	12 41K	0						
DE BILT	99.21	35.5	12 42	1					16 50	PP
STUTTGART	99.61	39.7	12 43K	0	22 22 -62		14 50		16 52	PP
TRIESTE	100.76	44.0	12 46	-2	22 30 -64		15 0		15 54	PP
JENA	102.03	38.6	12 53	-1			15 5		17 8	PP
HAMBURG	102.46	35.8	12 57	1					17 14	PKP
PRAGUE	103.23	40.3	13 0	1	24 3 9				17 20	PP
BRATISLAVA	103.95	42.8	13 3	1					17 26	PP
RESOLUTE	104.11	351.7	13 3	0	24 5 4				17 24	PP
COPENHAGEN	104.73	34.5	17 24	258					25 54	SP
KRAKOW	106.43	41.8							12 33	
WARSAW	107.90	40.0							25 49	SKKS
SKALSTUGAN	108.18	27.1	17 26	777						
BUCHAREST	108.21	49.0	16 20	777	27 11 6				20 0	PP
UPPSALA	109.00	31.8	17 24	777					17 55	PP
JERUSALEM	110.53	64.1	17 30	3					17 47	
KISHINEV	110.88	47.0							17 30	
KSARA	111.74	62.3			23 18 -1				18 20	PP
COLLEGE	112.46	332.6	13 39	-233			15 45		17 31	PKP
HELSINKI	112.59	32.8	17 30	-2					19 44	
KIRUNA	112.85	24.2	17 32A	0					18 30	PP
SIMFEROPOL	113.80	50.4	17 33	-1					22 47	
SODANKYLA	115.04	25.3	17 36	0			19 39		18 41	PP
MOSCOW	118.26	39.1	17 42	0						
TIFLIS	120.64	55.9	17 42	-5						
SVERDLOVSK	130.98	37.3	18 8	1					21 34	
TIKSI	135.43	354.6							18 14	
QUETTA	136.46	74.2	18 6	-11					21 25	PP
FRUNSE	142.63	54.6	18 26	-3					24 40	
LAHORE	142.92	73.4	18 28	-1					22 2	PKS
DEHRA DUN	146.00	76.0	18 35	-3						
CHATRA	153.56	84.7	18 48	3					21 9	PP
IRKUTSK	153.62	17.6	18 46	1						
SHILLONG	157.52	89.4	18 52K	2						
MATUSIRO	159.90	301.7	18 54K	1			21 6		25 24	*PPP
VLADIVOSTOK	160.33	325.8							23 10	
PEKING	167.59	2.7	19 2K	2					24 0	PP
BAGUIO CITY	168.36	197.7	19 1	0						
HONG KONG	174.16	154.1	19 5	2						
ZO-SE	174.90	314.1	19 6K	3					24 38	PP
NANKING	175.28	340.2	19 6K	2					24 35	PP

MAY 31 21.H 57.M 48.S EPICENTRE 3.66 -76.82 DEPTH= 62.KM

DEPTH OF FOCUS= 0.005R

A= 0.22763 B=-0.97168 C= 0.06349 D=-0.9736 E=-0.2281
G= 0.0145 H=-0.0618 K=-0.9980 HT= 7.1

SE= 1.88

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
CHINCHINA	1.76	42.6	0 30K	1				
BOGOTA	2.90	70.8	0 44K	-1	1 19	0		
BALBOA HTS.	5.93	332.7	1 27	0	2 34	0		
SANTIAGO MA.	15.09	311.0	3 39	8				
HUANCAYO	15.68	174.6	3 39	1	6 33	3		8 20 PCP
SAN SALVADOR	15.82	310.0	3 41	1				
TRINIDAD	16.69	64.6	3 52	1	7 2	9		
SAN JUAN	17.98	34.8	4 6	-1				7 32

ST. LUCIA	18.70	55.6	4	13	-2						
FORT FRANCE	18.95	53.5	4	18	0	7	48	4			
BARBADOS	19.43	60.1	4	22	-2						
COMITAN	19.57	310.8	4	21	-4	7	57	0		8	12 *SS
ANTIGUA	20.33	48.1	4	27	-6						
MERIDA	21.22	325.1	4	41	-1	8	33	4			
LA PAZ	21.80	157.0	4	45	-3	8	42	2		5	3 PP
VERA CRUZ	24.38	310.8								9	0
TACUBAYA	26.87	307.3	5	42	5	10	25	18	6 4	8	49 PCP
COLUMBIA	30.44	353.1	6	8	0	11	2	-2			
BERMUDA	30.75	20.4	6	12	1	11	12	3		7	16 PP
WASHINGTON	35.07	359.7	6	49	0	12	20	4		8	10 PP
MORGANTOWN	35.91	355.9	6	57	1					8	22 PP
PHILADELPHIA	36.15	2.1	7	0	2	12	36	4		8	19 PP
PALISADES	37.27	3.6	7	6K	-1	12	32	-17		8	28 PP
LUBBOCK	37.83	324.8	7	11	-1	12	59	1	7 26	8	42 PP
WESTON	38.86	6.5	7	22K	2	13	12	-2			
OTTAWA	41.58	1.2	7	43K	0	13	56	2	8 4		
BREBEUF	41.76	3.4	7	45K	1	14	1	4			
HALIFAX	42.42	14.0	7	52A	2						
TUCSON	42.72	315.7	7	53	1						
SHAWINIGAN	42.86	4.1	7	53K	0					9	34 PP
SEVEN FALLS	43.60	5.9	8	0K	1	14	29	5	8 21		
KIRKLAND LA.	44.40	356.9	8	5K	-1						
RAPID CITY	46.50	333.8	8	22	-1					10	13 PP
HAYFIELD	46.90	314.3	8	25K	-1						
BOULDER CITY	47.56	317.4	8	31	0						
PALOMAR	47.61	313.2	8	31K	0						
RIVERSIDE	48.30	313.6	8	36K	-1					9	11
SALT LAKE C.	48.55	324.4	8	38	-1				9 6		
DALTON	48.70	313.6	8	39K	-1					9	1
PASADENA	48.95	313.4	8	42K	0	15	50	10			
CHINA LAKE	49.37	315.6	8	44	-1						
ISABELLA	49.90	315.0	8	49K	0					9	10
EUREKA	50.27	320.5	8	52	0						
KING RANCH	50.65	313.9	8	55K	0					9	10
FRESNO	51.39	315.5	8	59	-1					10	12
BUTTE	52.42	329.1	9	6	-2	16	30	2		20	34 SS
RENO	52.79	318.5	9	10	-1						
LICK	52.95	315.3	9	12K	0				9 47		
BERKELEY	53.63	315.5	9	16K	-1	16	50	6			
MINERAL	54.39	318.5	9	21K	-1						
HUNGRY HORSE	54.73	330.4	9	24	-1	16	59	0			
UKIAH	54.89	316.5	9	26	0						
SHASTA	55.08	318.5	9	25K	-3				9 57		
CORVALLIS	57.62	322.1	9	45K	-1						
SEATTLE	58.68	325.6	9	53	0	17	58	7		10	25
VICTORIA	59.78	326.0	10	0K	-1	18	11	6			
MBOUR	59.90	75.6	10	1	0	18	11	4			
HORSESHOE B.	60.18	326.9	10	1K	-2	18	14	4			
RESOLUTE	71.73	355.0	11	13K	-4	20	24	-7		21	9 *SS
MALAGA	73.74	52.9	11	31K	2	20	58	4		21	54 PS
GRANADA	74.43	52.5	11	37A	4	21	7	6		12	17 PCP
RATHFARNHAM	75.50	35.8	11	38K	-1						
RELIZANE	77.61	54.4	11	34	-17						
ABERDEEN	78.66	32.4				21	50	3		26	47
COLLEGE	78.69	335.7	11	55	-2				12 20	14	52 PP
KEW	78.74	38.3	11	56	-1	21	49	1		22	12 SCS
ALGIERS UNI.	79.70	53.5	12	2	0	21	58	0			
PARIS	80.21	41.2	12	7	2	22	4	0		22	25 SCS
CLERMONT-FD.	80.36	44.4	12	6	0	22	6	1			
TAMANRASSET	81.53	67.6	12	13A	1	22	25	8	12 39	23	23 SP
DE BILT	82.20	38.1	12	15	0	22	26	2		26	42 SS
BESANCON	82.43	43.0	12	18	1				12 39		
WITTEVEEN	83.16	37.4	12	22	2						
MONACO	83.32	46.6	12	19	-2				12 42		
STRASBOURG	83.68	41.7	12	24	1	22	42	3		28	0 SS
KARLSRUHE	84.12	41.3	12	30K	5	22	49	6		12	43
EBINGEN	84.48	42.1	12	27	0						
PAVIA	84.59	45.1				22	47	-1		32	6 SSS
STUTTGART	84.64	41.5	12	27	-1	22	49	1		23	31 PS
HAMBURG	85.17	36.7	12	32	2						
FLORENCE X.	86.09	46.5				23	5	2		23	18
SKALSTUGAN	86.34	26.6	12	36A	0						
COPENHAGEN	86.58	34.6				24	0	53		23	13 SKS
ROME	87.05	48.4				23	15	3			
POTSDAM	87.05	37.9	12	42	2	23	16	4			
TRIESTE	87.80	44.6	12	46	3	23	22	3		23	5 SKS

PRAGUE	88.02	40.1	12 46	2			13 22	*SP
UPPSALA	89.10	30.2	12 48	-1	23 30	-1		
KIRUNA	89.37	22.1	12 50	-1	23 34	1	24 1	*PS
MESSINA	89.62	51.9			23 33	-2		
BRATISLAVA	89.91	41.9	12 54	1	23 42	4	13 15	
KRAKOW	91.55	39.8					21 22	
MATUSIRO	128.34	323.9	19 0	1				
QUETTA	131.70	43.3	19 9	3			22 30	SKP
CHATRA	145.96	26.1	19 34	2				
SHILLONG	148.94	20.1	19 38A	2				

MAY 31 22.H 17.M 9.S EPICENTRE 51.19-179.24 DEPTH= 0.KM

A=-0.62930 B=-0.00838 C= 0.77712 D=-0.0133 E= 0.9999
G=-0.7771 H=-0.0104 K=-0.6294 HT= -5.8

SE= 1.86

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
PETROPAVLOVK	13.71	286.8	3 21	3	5 55	3		
COLLEGE	21.24	37.9	4 50	0	8 57	15	5 4	PP
SITKA	26.03	59.7	5 56	19	10 31	25		
TIKSI	30.66	330.7	5 57	-22	11 14	-7		
MATUSIRO	33.47	260.8	6 42K	-1	12 16	11	13 6	
VLADIVOSTOK	33.65	275.6	6 44	-1	12 7	-1		
HONOLULU	34.10	143.1	6 53	4				
HORSESHOE B.	35.07	70.5	6 57K	0				
VICTORIA	35.36	71.9	7 0K	1	12 38	4		
SEATTLE	36.42	72.7	7 11	3	12 57	7		
CORVALLIS	37.30	77.7	7 17K	1	13 11	7		
CHANGCHUN	37.39	281.0	7 15	-2				
SHASTA	39.96	82.3	7 39K	1	13 31	-13		
RESOLUTE	40.03	24.3	7 39A	0	13 40	-5		
UKIAH	40.36	84.9	7 42	1				
MINERAL	40.66	82.2	7 44K	0				
HUNGRY HORSE	40.97	67.4	7 48	2	13 35	-24	18 0	SCS
BERKELEY	41.71	85.7	7 53K	1				
RENO	42.24	82.0	7 58K	1			14 21	
BUTTE	43.02	69.7	8 3	0	14 28	-2	9 27	PCP
FRESNO	43.93	85.2	8 11K	0				
BOZEMAN	44.11	69.3	8 12	0				
EUREKA	44.67	79.5	8 16	0	14 50	-3	13 42	
KING RANCH	44.88	86.8	8 18	0				
PEKING	45.16	282.0	8 20	0	15 0	0		
IRKUTSK	45.27	302.8	8 21	0	15 1	-1		
ISABELLA	45.47	85.5	8 22K	-1			8 40	
CHINA LAKE	45.91	84.7	8 26K	0			13 54	SCP
SALT LAKE C.	46.42	75.4	8 31	1			9 27	PCP
PASADENA	46.63	86.9	8 31K	-1				
RIVERSIDE	47.23	86.4	8 35K	-2			9 29	
BOULDER CITY	47.54	82.5	8 39	0	14 1	-93		
ZO-SE	47.72	268.9	8 41	0	15 38	1		
PALOMAR	47.97	86.7	8 42K	-1			9 1	
HAYFIELD	48.51	85.4	8 45	-2				
NANKING	48.58	271.7	8 46	-1	15 47	-2		
RAPID CITY	49.60	66.7	8 55	0	16 7	4		
TUCSON	52.49	83.3	9 17	0				
LUBBOCK	57.14	75.9	9 50	-1				
SCORESBY SD.	57.54	8.8	9 57	3				
CANTON	58.34	268.1	9 57	-2				
HONG KONG	58.35	266.7	9 59	-1				
BAGUIO CITY	58.76	256.9	10 4	2				
APATITY	59.07	346.0	10 2	-3	18 7	-4		
KIRKLAND LA.	59.35	50.2	10 5	-1				
SODANKYLA	60.17	348.8	10 11	-1			39 31	PKPPKP
KIRUNA	60.39	351.6	10 12	-2	18 26	-2		
OTTAWA	63.39	50.0	10 31A	-3				
SHAWINIGAN	63.94	47.5	10 35A	-2				
BREBEUF	64.32	48.7	10 38	-2				
SEVEN FALLS	64.41	45.9	10 39A	-1				
SKALSTUGAN	65.22	354.4	10 44A	-2				
MORGANTOWN	65.47	56.9	10 49	2				
FRUNSE	66.55	309.7	10 54	0	19 49	4		
PULKOVO	66.84	344.2	10 55	-1	19 46	-2		
HELSINKI	67.29	347.2	10 58	-1			11 26	PCP

WASHINGTON	67.51	55.6	11	11		11					
PALISADES	67.54	52.2	11	0	0	19	57	0			
PHILADELPHIA	67.70	53.7	11	21	19	20	2	3			
WESTON	67.76	49.6	11	1A	-1						
UPPSALA	68.48	350.9	11	5	-1	20	3	-5	21	1	SCS
COLUMBIA	69.03	61.7	11	7	-3	20	15	1			
MOSCOW	69.15	338.7	11	9	-1	20	13	-3			
HALIFAX	69.54	43.4	11	12	-1						
SHILLONG	69.85	285.9	11	11K	-4	20	21	-3			
CHATRA	71.72	290.1	11	26	0						
COPENHAGEN	73.06	353.1	11	34	0	21	3	2			
DEHRA DUN	74.30	298.8	11	43	2						
WARSAK DAM	74.90	305.7	11	44	-1						
HAMBURG	75.33	354.3	11	49	2						
LAHORE	75.37	302.2				21	22	-5			
WARSAW	75.55	347.3	10	53	-55						
RATHFARNHAM	75.72	4.4	11	49	0				12	13	
WITTEVEEN	76.25	356.3	11	54	2						
POTSDAM	76.29	352.3	11	54	1	21	39	2			
DE BILT	77.02	357.2	11	58	1	21	48	3			
KEW	77.72	0.7	11	57	-4						
JENA	77.85	353.0	12	1	0	21	53	-1	15	6	PP
PRAGUE	78.45	351.1	12	5	0	22	0	0	22	43	PS
BERMUDA	78.88	51.7	12	16	9	22	9	4			
IASI	79.32	341.8	12	11	2	22	10	0			
TIFLIS	79.83	328.1	12	12	0	22	15	0			
KARLSRUHE	79.97	354.9	12	13A	0	22	20	4	12	25	PCP
SIMFEROPOL	79.99	336.6	12	12	-1	22	16	-1			
BRATISLAVA	80.04	349.0	12	15	2	22	29	12	12	27	PCP
STUTTGART	80.16	354.3	12	13	-1	22	18	0	12	24	PCP
QUETTA	80.29	306.5	12	15K	0	22	21	1	15	17	PP
PARIS	80.37	358.8	12	15A	0	22	23	2	15	13	PP
TUBINGEN	80.41	354.4	12	15	0						
STRASBOURG	80.43	355.3	12	15A	0	22	22	1	15	21	PP
EBINGEN	80.76	354.4	12	17	0				12	27	PCP
BASLE	81.49	355.3	12	9	-12						
BESANCON	81.84	356.4	12	24	1				13	9	
NEUCHATEL	82.05	355.7	12	24	0						
CHUR	82.05	353.9	12	24A	0						
BRISBANE	82.06	204.7	12	22	-2						
BUCHAREST	82.27	342.0	12	25K	0	22	41	1			
BELGRADE	82.87	346.0	12	29A	1						
TRIESTE	82.89	350.9	12	29	1	22	44	-3			
CLERMONT-FD.	83.40	358.3	12	32	1	22	45	-7			
HYDERABAD	84.08	290.3				22	54	-4			
FLORENCE X.	84.98	352.4	12	39A	0	23	2	-5	13	56	
MONACO	85.29	355.2	12	40	0				12	59	
POONA	85.89	294.5	12	43	0	23	14	-2			
BOMBAY	86.18	295.5				23	23	4			
ROME	86.73	351.3	12	46	-1	23	12	-12			
RIVERVIEW	88.58	204.3	12	56A	0				13	6	
SAN JUAN	89.49	60.9	13	1	0						
KSARA	89.89	331.4	13	4	2	23	59	5	16	45	PP
GRANADA	91.92	3.5	13	19K	7	24	10	-2	17	16	PP
JERUSALEM	91.99	331.2	13	23	11				17	5	PP
MALAGA	92.35	4.2	13	15K	1						
TAMANRASSET	106.24	355.4				24	58	-62	18	25	PP
LWIRO	125.83	324.6	19	6	2						
TANANARIVE	131.18	293.6							22	40	SKP
PRETORIA	147.10	310.1							19	47	PKP2
PIETERMZBURG	149.14	302.9							20	21	PKP2
KIMBERLEY	151.24	312.0	19	57K	7						
GRAHAMSTOWN	154.06	303.5							20	13	PKP2

JUNE 1 5.H 26.M 52.S EPICENTRE 40.75 30.89 DEPTH= 0.KM

A= 0.65197 B= 0.39007 C= 0.65022 D= 0.5134 E=-0.8581
G= 0.5580 H= 0.3338 K=-0.7597 HT= -2.0

SE= 2.40

	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	
SIMFEROPOL	4.82	28.4	1	18	3	2	12	-1					
BUCHAREST	5.10	317.6	1	17	-2	2	29	9			1	48	PG
SOFIA	5.98	291.5	1	33	1						1	59	
ATHENS	6.21	245.8	1	34	-1	3	9	21					

CAMPULUNG	6.23	318.4	1	35	0			1	47	
BACAU	6.50	334.9	1	39	0	2	54	-1	2	43	
IASI	6.88	340.7	1	42	-2	3	1	-3	2	14	PG
SOTCHI	7.14	63.8	1	51	3	3	11	0			
KSARA	7.98	148.6	1	56	-4	3	27	-5	2	48	PG
TIMISOARA	8.65	308.5	2	12	3	4	28	39	4	54	S*
BELGRADE	8.69	301.4	2	20	10	4	17	27	3	25	
SZEGED	9.56	308.7				3	27	-44	4	24	SS
JERUSALEM	9.61	157.3	2	19	-3	4	49	37			
LWOW	10.29	334.3	2	30	-2	4	21	-8			
TARANTO	10.38	272.9							3	41	
TIFLIS	10.52	80.2	2	40	5						
BUDAPEST	10.83	312.3	3	5	26				5	50	SG
ZAGREB	11.99	299.9				6	6	55			
KRAKOW	12.06	324.1	2	53	-3				5	38	SS
MESSINA	12.13	262.8	2	54	-3	5	27	13	6	8	
MAKHACH-KALA	12.58	74.4	3	8	5						
RACIBORZ	12.89	320.6	3	6	-1				3	21	PP
WARSAW	13.33	332.8							6	2	SS
TRIESTE	13.43	297.1	3	16	2				4	30	
ROME	13.89	280.8	3	19K	-1	6	13	17	3	29	
PRAGUE	14.82	314.5	3	33	1	6	22	4	4	27	
FLORENCE X.	14.85	288.2	3	36	3	6	29	10			
MOSCOW	15.64	14.3	3	40	-3	6	20	-18			
PAVIA	16.49	292.8	4	0	6				5	33	
CHUR	16.56	298.7	3	57A	2						
POTSDAM	16.84	319.6	3	58	-1	7	17	11			
EBINGEN	17.29	302.8	4	1	-3						
ZURICH	17.32	299.9	4	3	-1				4	10	
STUTTGART	17.33	304.8	4	4	-1				4	12	PP
TUBINGEN	17.33	303.9	4	4	-1						
MONACO	17.61	287.5	4	11K	3				4	21	
KARLSRUHE	17.90	305.0	4	7	-5	7	39	9	4	34	
BASLE	18.02	299.9	4	14	1				9	39	
STRASBOURG	18.17	303.2	4	18	3	7	42	6	4	32	PP
NEUCHATEL	18.32	297.9	4	16	-1	7	49	10			
BESANCON	19.02	298.3	4	28	2				4	49	PPP
PULKOVO	19.05	359.1	4	22	-4	7	47	-9			
HAMBURG	19.06	319.3	4	25	-1						
COPENHAGEN	19.25	327.1	4	26A	-2	8	2	2			
BENSBERG	19.34	309.8	4	30	1				4	44	
HELSINKI	19.79	351.2	4	32	-2	8	5	-7			
WITTEVEEN	20.40	314.4	4	41	0						
CLERMONT-FD.	20.79	293.2	4	45	0	8	47	14			
UPPSALA	20.84	341.0	4	42	-4	8	34	0			
DE BILT	20.93	311.5	4	47	1	8	42	6			
PARIS	21.62	301.4	4	56	3	8	54	5	5	12	PP
ALGIERS UNI.	22.03	268.6				8	33	-24			
KEW	23.97	307.1	5	16	-1	9	38	7			
ALICANTE	24.25	274.6	5	18	-1	9	38	2	5	54	PP
SVERDLOVSK	25.07	40.1							5	38	
SKALSTUGAN	25.36	340.5	5	29K	-1				5	38	
TOLEDO	26.56	279.7	5	41	0						
SODANKYLA	26.78	356.3	5	46	3						
ABERDEEN	26.82	318.9							10	38	
APATITY	26.89	2.2	5	59	15	10	31	11			
GRANADA	26.95	273.7	5	56A	11	10	32	11			
MALAGA	27.71	273.2	5	53	1						
KIRUNA	27.73	351.5	5	51	-1	10	39	5	6	9	
TAMANRASSET	27.89	237.7	5	52	-1	10	36	0	11	4	
NAMANGAN	30.64	76.0	6	31	3						
QUETTA	31.01	98.4	6	19	-2						
LWIRO	42.84	183.1	8	2K	1						
MBOUR	49.12	251.9	8	54	3						
SHILLONG	52.27	87.0	8	51	-24						
SCHEFFERVLLE	61.82	319.4	10	21K	-2						
HALIFAX	65.63	308.6	10	47	-1						
SEVEN FALLS	68.31	314.0	11	3	-2						
SHAWINIGAN	69.72	314.4	11	13	0						
BREBEUF	70.83	313.9	11	21	1						
WESTON	71.48	310.2	11	24K	0						
OTTAWA	72.04	314.8	11	28	0						
KIRKLAND LA.	72.48	319.0	11	29	-1						
COLLEGE	74.72	359.4	11	43	0						
RAPID CITY	86.00	328.7	12	44	1						
HUNGRY HORSE	86.01	337.4	12	43	0						
EUREKA	94.62	334.9	13	25	1						

JUNE 1 21.H 8.M 13.S EPICENTRE 40.68 30.90 DEPTH= 0.KM

A= 0.65260 B= 0.39051 C= 0.64932 D= 0.5135 E=-0.8581
G= 0.5572 H= 0.3334 K=-0.7605 HT= -1.9

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	
SIMFEROPOL	4.88	28.0	1	18	1	2	11	-4					
BUCHAREST	5.15	318.1	1	20A	-1	2	20	-2			2	56	SG
FOCSANI	5.70	332.9	1	30	2						2	14	
SOFIA	6.01	292.1	1	34	1						2	38	
ATHENS	6.19	246.4				3	9	21					
CAMPULUNG	6.29	318.8	1	36	-1						2	50	
BACAU	6.56	335.1	1	40	-1						2	44	
IASI	6.94	340.9	1	46	0	3	6	-1			3	42	SG
KSARA	7.92	148.3	1	59	-1	3	29	-2			2	38	PG
TIMISOARA	8.69	308.8				3	58	8			4	52	SG
BELGRADE	8.73	301.7	2	19A	8						2	55	
JERUSALEM	9.54	157.2	2	20	-2	4	50	39					
SZEGED	9.60	309.0				4	15	2			3	3	PPP
LWOW	10.35	334.4	2	30	-3						4	23	PS
TARANTO	10.39	273.3									5	27	
KALOCSA	10.43	308.0				4	26	-7			5	45	SG
TIFLIS	10.53	79.8	2	40	4								
BUDAPEST	10.88	312.6				4	36	-8			5	43	
HURBANOVO	11.59	312.5									6	9	
ZAGREB	12.02	300.2				6	16	64					
REGGIO CALA.	12.08	262.6	2	54	-3								
KRAKOW	12.12	324.3	2	54	-3	5	22	8			3	5	PP
MESSINA	12.12	263.2	2	53	-4	5	13	-2			5	32	
BRATISLAVA	12.37	311.8	3	0	-1	5	27	7			5	7	
MAKHACH-KALA	12.60	74.1	3	8	4								
RACIBORZ	12.94	320.8	3	8	0						6	47	
WARSAW	13.39	332.9	3	16	2	5	38	-7			6	4	SS
TRIESTE	13.46	297.3									7	4	
ROME	13.90	281.1	3	20A	-1	5	56	-1					
PRAGUE	14.87	314.6	3	36	2	6	16	-4			5	54	
FLORENCE X.	14.88	288.5	3	36	2	6	26	6					
MOSCOW	15.70	14.2	3	41	-4	6	27	-13					
PAVIA	16.52	293.0	4	3	8						8	57	
JENA	16.87	313.8	3	59	-1	7	20	13			4	8	PP
POTSDAM	16.90	319.8	3	58	-2	7	17	9					
EBINGEN	17.32	302.9	4	4	-1								
STUTTGART	17.37	305.0	4	5	-1	7	14	-4			4	18	PP
TUBINGEN	17.37	304.1	4	8	2								
MONACO	17.64	287.7	4	9	0						4	15	PP
KARLSRUHE	17.94	305.2	4	10K	-3	7	40	9			4	23	
BASLE	18.05	300.0	4	14	0						9	59	
STRASBOURG	18.21	303.4	4	19K	3	7	46	9			4	32	PP
NEUCHATEL	18.35	298.1	4	16	-2						8	14	
BESANCON	19.05	298.5	4	31	4						4	47	PP
HAMBURG	19.11	319.4	4	25	-2								
PULKOVO	19.11	359.1	4	23	-4								
COPENHAGEN	19.31	327.2	4	29A	-1								
BENSBERG	19.39	310.0	4	30	0								
HELSINKI	19.86	351.3	4	34	-2	8	6	-8					
WITTEVEEN	20.45	314.5	4	44	2								
CLERMONT-FD.	20.82	293.4	4	47	1	8	38	4					
UPPSALA	20.90	341.1	4	44	-3	8	39	3			4	50	
DE BILT	20.98	311.6				8	44	7					
PARIS	21.66	301.5	4	57A	3	8	49	-1			5	13	PP
ALGIERS UNI.	22.03	268.8				8	41	-16					
KEW	24.01	307.2	5	21	3	9	39	6					
ALICANTE	24.25	274.8	5	19	-1	9	39	2			10	33	SS
SVERDLOVSK	25.12	40.0	5	27	-1								
SKALSTUGAN	25.43	340.6	5	31A	0								
SODANKYLA	26.85	356.3	5	44	0						6	43	PP
ABERDEEN	26.88	319.0				10	27	8					
APATITY	26.96	2.1									5	59	
GRANADA	26.96	273.8	6	15A	30	10	42	20					
MALAGA	27.71	273.3	5	48	-4	10	18	-16					
KIRUNA	27.80	351.5	5	52	-1								
TAMANRASSET	27.85	237.8	5	54	0	10	31	-5			6	38	PP
RATHFARNHAM	27.99	309.4	5	55	0								

QUETTA	31.00	98.3	6 21	-1	
COLLEGE	74.78	359.4	11 44	0	
RAPID CITY	86.06	328.7	12 46	2	
HUNGRY HORSE	86.07	337.4	12 45	1	

JUNE 2 1.H 11.M 57.S EPICENTRE 40.71 30.81 DEPTH= 0.KM

A= 0.65291 B= 0.38936 C= 0.64970 D= 0.5122 E=-0.8589
G= 0.5580 H= 0.3328 K=-0.7602 HT= -1.9

SE= 2.19

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
SIMFEROPOL	4.89	28.8	1 18	2	2 12	-2		
BUCHAREST	5.08	318.4	1 20	1	2 30	11		1 48 PG
FOCSANI	5.64	333.3	1 32	5	2 34	1		2 54 S*
SOFIA	5.94	292.0	1 31	0				2 37
ATHENS	6.14	245.8						3 26 SG
CAMPULUNG	6.22	319.0	1 35	0	2 46	-2		3 9 S*
BACAU	6.51	335.5	1 36	-3	2 54	-1		3 21 S*
IASI	6.90	341.3	1 45	0	3 1	-4		2 4 P*
KSARA	7.98	148.0	1 55	-5	3 25	-7		2 35 PG
TIMISOARA	8.62	308.9	2 25	16	4 28	40		4 54 SG
BELGRADE	8.66	301.7	2 11	2				4 3
SZEGED	9.53	309.0			4 11	1		4 50 SSS
JERUSALEM	9.59	156.9	2 20	-2	4 50	38		
LWOW	10.29	334.6	2 30	-2	4 23	-6		
KALOCSA	10.36	308.1			5 2	31		5 37 SG
TIFLIS	10.59	80.0	2 42	6				
BUDAPEST	10.81	312.6						5 26 SSS
HURBANOVO	11.52	312.6						6 15
ZAGREB	11.95	300.2			6 15	65		
KRAKOW	12.06	324.4	2 53	-3				3 26 PPP
MESSINA	12.06	262.9	2 53	-3	5 13	1		
BRATISLAVA	12.30	311.9	2 59	0				3 12 PP
MAKHACH-KALA	12.65	74.3	3 6	2	5 19	-8		
RACIBORZ	12.88	320.9	3 4	-3				6 22
WARSAW	13.34	333.0	3 11	-2				6 24
TRIESTE	13.39	297.3	3 13	0				4 14
ROME	13.83	280.9	3 21	2	6 17	22		7 12
PRAGUE	14.80	314.7	3 31	-1	6 27	9		3 39
FLORENCE X.	14.81	288.4	3 37	5	6 35	17		3 42
MOSCOW	15.69	14.4	3 41	-3	6 23	-16		
JENA	16.81	313.9	3 57	-1	7 19	14		
POTSDAM	16.83	319.8	3 59	1				
EBINGEN	17.25	302.9	4 2	-2				
STUTTGART	17.30	305.0	4 5	1	7 17	1		
TUBINGEN	17.30	304.1						4 8
MONACO	17.57	287.6	4 8	1				4 32
KARLSRUHE	17.87	305.1	4 12K	1	7 42	13		4 41
BASLE	17.98	300.0	4 10	-3				10 19
STRASBOURG	18.14	303.4	4 17A	2	7 42	7		4 33 PP
NEUCHATEL	18.28	298.1	4 16	0	7 42	4		
BESANCON	18.98	298.4	4 26	1				4 45 PP
HAMBURG	19.05	319.5	4 25	-1				
PULKOVO	19.09	359.2	4 22	-4	8 19	23		
COPENHAGEN	19.25	327.2	4 26	-2				
BENSBERG	19.32	310.0	4 30	1				
HELSINKI	19.92	351.4	4 33	-2	8 0	-13		8 39 PCP
WITTEVEEN	20.38	314.6	4 41A	0				
CLERMONT-FD.	20.74	293.3	4 45	1	8 37	5		
UPPSALA	20.86	341.1	4 44	-2	8 38	4		8 25
DE BILT	20.91	311.6	4 45	-1	8 43	8		
PARIS	21.58	301.5	4 54	1	8 50	2		5 27 PPP
ALGIERS UNI.	21.97	268.7			8 48	-7		
KEW	23.94	307.2	5 17	1	9 38	7		
ALICANTE	24.19	274.6	5 19	0	9 39	4		
SVERDLOVSK	25.14	40.1	5 29	1				
SKALSTUGAN	25.38	340.6	5 30	0				
ABERDEEN	26.81	319.0						15 48
SODANKYLA	26.81	356.4	5 44	1				
GRANADA	26.89	273.7	6 9K	25				
APATITY	26.93	2.2	6 0	16	10 32	11		
MALAGA	27.65	273.2	5 54	3				16 22 SCS
KIRUNA	27.76	351.6	5 52K	0				

TAMANRASSET	27.81	237.7	5	54	2	10	38	3		8	20
RATHFARNHAM	27.92	309.4	5	49	-4	10	29	-8			
NAMANGAN	30.71	75.9	6	20	2						
QUETTA	31.07	98.3								6	28
TANANARIVE	61.33	161.9								5	43
SEVEN FALLS	68.29	314.0	11	3	-2						
SHAWINIGAN	69.70	314.3	11	12	-1						
OTTAWA	72.02	314.8	11	28A	1						
COLLEGE	74.75	359.4	11	43	0						
RAPID CITY	86.00	328.7	12	44	1						
HUNGRY HORSE	86.02	337.4	12	45	2						

JUNE 4 17.H 5.M 12.S EPICENTRE -17.84-178.63 DEPTH= 589.KM

DEPTH OF FOCUS= 0.088R

A=-0.95225 B=-0.02279 C=-0.30447 D=-0.0239 E= 0.9997
G= 0.3044 H= 0.0073 K=-0.9525 HT= 5.2

SE= 1.55

	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	2.82	263.2	1	19	1	2	23	3					
RAOUL ISLAND	11.38	176.9	2	32	-1	4	39	4			4	22	*SP
NOUMEA	14.70	250.0	3	6	0	5	41	6					
ONERAHI	18.91	197.8	3	48A	2	7	1	14					
AUCKLAND	19.82	195.7	4	3	9	6	37	-25					
WELLINGTON	24.04	192.3	4	30	-2	8	3	-7			7	28	
COBB RIVER	24.33	196.0	4	33	-2	8	8	-6			6	14	
KAIMATA	26.02	196.9	4	48	-2	8	36	-6			6	24	
GEBBIES PASS	26.81	194.1	4	54	-3	8	48	-5			6	30	
BRISBANE	27.80	244.7	5	5	0	9	8	-1					
ROXBURGH	29.40	197.4									6	51	
RIVERVIEW	31.37	233.6	5	36K	0	10	4	0	7	0	7	9	PP
RABAUL	31.63	291.9	5	36	-2	10	7	-1			11	1	SCP
MELBOURNE	37.53	230.5	6	15K	-12	11	23	-13			15	25	SCS
HONOLULU	43.79	28.2	7	15	-2								
TERRE ADELIE	55.35	198.0	8	41	0	15	43	1					
SCOTT BASE	60.48	183.5	9	17	1	16	49	2					
MANILA	67.70	294.5	10	3	2	18	6	-7					
MATUSIRO	67.72	323.5	10	1K	-1	18	15	1			22	21	SS
BAGUIO CITY	68.86	296.1	10	8	0								
PETROPAVLOVK	73.35	345.9									19	49	SKS
ZO-SE	75.54	309.8	10	46K	-1	19	43	3					
VLADIVOSTOK	75.77	325.0				19	47	4					
BERKELEY	76.62	42.6	10	53A	0	19	54	2	12	55	23	36	*SS
LICK	76.72	43.4	10	53A	0				12	56	11	43	
UKIAH	76.75	41.1	10	52	-1				12	55	13	54	PP
KING RANCH	76.87	46.0	10	53A	-1				12	56	11	8	
HONG KONG	76.88	298.8	10	55K	1	19	59	4			13	58	PP
PASADENA	77.33	47.7	10	56A	0	20	4	5	12	59	20	17	SCS
FRESNO	77.62	44.7	10	58A	0	20	4	2	13	1	14	2	*SP
NANKING	77.77	309.5	10	59K	0	20	8	4					
RIVERSIDE	77.80	48.2	10	58A	-1	20	7	3	13	2	14	3	*SP
PALOMAR	77.85	49.0	11	0A	1				12	2	14	3	*SP
ISABELLA	77.92	46.3	10	59A	0				13	2	14	4	*SP
SHASTA	78.19	40.2	11	1A	0				13	5			
MINERAL	78.47	40.9	11	2A	0				13	5			
CHINA LAKE	78.60	46.5	11	4A	1				13	7	14	7	*SP
RENO	79.15	42.3	11	6A	0	20	21	3	13	10			
CHANGCHUN	79.93	322.4	11	10K	0	20	31	5					
CORVALLIS	79.96	36.6	11	11A	1				13	15			
BOULDER CITY	80.62	47.5	11	14	0	20	42	9	13	18	14	28	PP
EUREKA	81.62	44.0	11	19	0	20	25	-18	13	23	11	38	PCP
TUCSON	81.76	52.4	11	21	2	20	50	6	13	24			
VICTORIA	82.30	33.4	11	21A	-1						13	27	
SEATTLE	82.37	34.6	11	24K	2	20	53	3			13	28	
SITKA	82.89	22.2	11	24	-1	20	51	-4	13	30	14	44	PP
HORSESHOE B.	82.90	32.8	11	24A	-1	20	51	-4			13	29	
PEKING	83.59	315.5	11	29	1	21	9	7			20	57	
COLLEGE	85.75	12.7	11	37	-2	21	7	-15	13	45	14	56	PP
TACUBAYA	86.31	68.4	11	46	4				13	36	15	17	*SP
BUTTE	87.08	39.6	11	45	0	21	18	-17	13	52	15	17	PP
HUNGRY HORSE	87.38	37.1	11	46	-1	21	19	-18	13	53	15	19	PP
KUNMING	87.64	297.1	11	50K	2	21	46	6			21	23	
BOZEMAN	87.84	40.4	11	48	-1				13	56			

TIKSI	96.02	345.3									16	23 PP
SHILLONG	97.08	294.5	12	31	0							
FLORISSANT	99.64	52.4				23	29	7			22	26 SKS
ST. LOUIS 1	99.70	52.6	12	43K	0	23	31	8	14	51	16	50 PP
RESOLUTE	105.42	15.9				24	15	20			17	31 PP
KIRKLAND LA.	108.74	44.4	17	23	777						17	59
OTTAWA	111.47	47.6	17	29	0	25	11	115			18	18 PP
PALISADES	112.47	52.4				25	19	119	15	50	18	16 PP
SHAWINIGAN	113.58	46.4	17	32K	0							
FRUNSE	114.12	309.6									18	38 PP
SEVEN FALLS	114.91	45.8				23	31	2			18	42 PP
TASHKENT	118.04	307.7	18	42	61	23	42	1			19	6 PP
STALINABAD	118.42	304.6				23	50	8				
BERMUDA	119.30	62.5									19	17
QUETTA	119.56	295.0	17	45	1	23	51	5			19	15 PP
HALIFAX	120.06	48.4	17	45K	0						20	28 *PPP
SCORESBY SD.	125.51	9.4									19	43 PP
SODANKYLA	127.89	347.9	17	59	-1						20	27 SKP
KIMBERLEY	128.45	206.5	20	2	121						20	19
KIRUNA	128.56	350.9	18	2	1						20	29 SKP
PRETORIA	129.43	211.8									20	33 SKP
SKALSTUGAN	133.69	353.3	18	0	-11						20	47 SKP
HELSINKI	134.43	343.7	18	1	-11						20	50 SKP
TIFLIS	136.03	312.2	18	17	2						20	54 PP
UPPSALA	136.42	348.2	18	5	-11						20	55 SKP
LWOW	143.25	335.4	18	27	-2							
HAMBURG	143.72	351.3	18	30	0						23	23 PP
RATHFARNHAM	144.11	7.8	18	30A	0						18	28
POTSDAM	144.32	347.7										
KRAKOW	144.58	339.3	18	30	-1							
WITTEVEEN	144.85	354.4	18	34A	3							
RACIBORZ	145.11	341.0	18	37	5							
KSARA	145.30	304.1	18	34K	2	21	21				21	53
JENA	145.99	348.4	18	33	0	20	52				21	53 PP
PRAGUE	146.18	344.8	18	35	2	20	58					
LWIRO	146.40	236.3	18	35K	1							
KEW	146.42	1.9	18	36	2						21	48
JERUSALEM	146.44	300.9	18	32K	-2	21	22					
BENSBERG	146.63	353.3	18	38	4	20	54					
BRATISLAVA	147.13	340.5	18	35	0	20	53					
STUTTGART	148.50	350.1	18	40	3	20	58				21	53 PP
BELGRADE	148.71	333.4	18	41A	4						20	59
TUBINGEN	148.75	350.1									18	24
STRASBOURG	148.90	351.8	18	44A	7	20	58				22	26 PP
PARIS	149.09	358.6	18	44	6	20	49				23	4 PP
EBINGEN	149.11	350.1	18	44	6	20	59				18	50 PKP2
BASLE	149.95	351.6	18	47	8						22	20
TRIESTE	150.41	342.3									18	30
BESANCON	150.42	353.6	18	56	16	21	3				22	28 PP
NEUCHATEL	150.56	352.2	18	27	-13						21	1
CLERMONT-FD.	152.11	357.4	19	3	21	21	12					
FLORENCE X.	152.83	344.2	19	6	23						23	1 PP
MONACO	153.69	350.1	18	45	1						19	9 PKP2
ROME	154.20	340.7	19	4	19						34	58
TOLEDO	157.54	11.0	19	27	38						23	6
GRANADA	160.24	11.8	19	40A	47	21	51				27	10 PP
MALAGA	160.51	14.0	19	43A	50						21	52 PKS
ALGIERS UNI.	161.08	355.8									19	43 PKP2
RELIZANE	162.14	2.2	19	3	9							
TAMANRASSET	173.73	322.3	19	5	3	21	26				24	32 PP

JUNE 4 20.H 18.M 14.S EPICENTRE -2.73 101.29 DEPTH= 78.KM
DEPTH OF FOCUS= 0.007R

A=-0.19558 B= 0.97955 C=-0.04723 D= 0.9806 E= 0.1958
G= 0.0092 H=-0.0463 K=-0.9989 HT= 7.1

SE= 2.10

	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	6.50	122.0	1	35	0	2	54	5				
COLOMBO	23.42	294.2	5	18	15	9	16	9				
MANILA	26.00	48.1	5	29	2						6	10
MADRAS	26.14	307.2	5	43	14						10	46
BAGUIO CITY	26.93	44.4	5	37	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.

KUNMING	27.64	2.7	5	43	1							
HONG KONG	27.87	26.2	5	47	2	9	46	-35				
SHILLONG	29.57	342.6	5	57A	-3							
CHATRA	32.39	336.0	6	24	0	12	4	32				
BOMBAY	35.30	308.6				12	22	5				
NANKING	38.37	24.3	7	17	2							
ZO-SE	38.61	27.9	7	19A	2	13	12	5				
DEHRA DUN	39.65	327.7	7	24	-2	13	24	1				
LAHORE	42.65	325.2	7	50	0	14	7	0				
PEKING	44.68	16.3	8	7	0							
WARSAK DAM	46.03	325.1	8	19	1							
QUETTA	46.33	317.5	8	18A	-2	15	1	1			18	12 SCS
RABAUL	50.80	93.2	8	53	-2							
NAMANGAN	51.20	331.3	8	57	-1	16	12	4				
FRUNSE	51.40	335.0	8	58	-1	16	6	-5				
MATUSIRO	52.05	37.8	9	4A	0	16	27	7			14	9
IRKUTSK	54.85	2.3	9	24	-1	17	3	5				
BRISBANE	55.16	121.8	9	27	0						9	46
WILKES	63.70	175.8				18	59	7				
MAKHACH-KALA	66.36	319.7	10	40	-3	19	24	-1				
TIFLIS	67.57	317.5	10	49	-1	19	41	2				
TERRE ADELIE	69.77	164.2	10	59	-5							
KSARA	71.35	307.0	11	15	2	20	29	5	11	34	20	59 SP
SOTCHI	71.75	317.7	11	15	-1	20	28	0				
LWIRO	72.41	268.5	11	30	10							
SIMFEROPOL	76.00	317.6	11	38	-2	21	14	-2				
TIKSI	76.35	8.7	11	39	-3	21	8	-12				
KIMBERLEY	76.87	241.3	11	45	0							
MOSCOW	77.77	328.8	11	49	-1	21	36	1				
SCOTT BASE	82.30	168.8	12	15	1							
PULKOVO	82.87	331.2	12	17	0	22	29	1				
LWOW	83.88	320.6	12	24	1	22	40	2				
APATITY	84.20	339.0	12	23	-1	22	40	-1			23	8 PS
HELSINKI	85.57	330.8	12	32	1						15	52 PP
WARSAW	86.18	322.6	12	33	-1						12	44
KRAKOW	86.52	320.3	12	36	1							
SODANKYLA	86.63	338.0	12	36	0						12	55
RACIBORZ	87.63	320.2	12	45	5							
BRATISLAVA	88.13	318.2	12	42	-1	23	21	2			12	59
MESSINA	88.32	308.2	12	40	-4							
KIRUNA	89.05	338.0	12	48	0	23	31	3			23	10 SKS
UPPSALA	89.15	329.9	12	47A	-1	23	31	3			23	10 SKS
PRAGUE	90.05	320.0	12	54	2						16	32 PP
COPENHAGEN	91.57	325.5	13	0	1						23	59
JENA	91.91	320.7	13	0	-1							
SKALSTUGAN	91.98	333.4	13	1	0						16	41 PP
HAMBURG	92.95	323.3	13	6	0							
STUTTGART	93.41	318.5	13	10	2						19	8
EBINGEN	93.56	317.9	13	10	1						13	19
TAMANRASSET	96.37	292.5	13	23	2						17	15 PP
COLLEGE	101.23	24.0	13	44	1							
HUNGRY HORSE	125.37	28.2	18	53	1							
SHASTA	125.44	40.1	18	54	2						20	44
LICK	127.69	43.3	18	59K	2						19	15
BOZEMAN	128.71	28.7	19	2	3							
KING RANCH	130.04	44.5	19	18	17						22	22 SKP
EUREKA	130.18	37.8	19	5	4						16	46 P
ISABELLA	130.75	43.4	19	6	4						21	18 PP
CHINA LAKE	131.25	42.7	19	6	3						21	24 PP
PASADENA	131.76	45.0	19	9	5						22	28 SKP
RIVERSIDE	132.40	44.7	19	7	1						21	23 PP
PALOMAR	133.10	45.1	19	10	3						21	35 PP
KIRKLAND LA.	134.73	1.3	20	11	61						21	43
SHAWINIGAN	136.04	354.1	19	14K	2							
HALIFAX	136.20	344.4	19	14	1							
TUCSON	137.89	42.2									22	49 PP
PALISADES	141.64	354.1									18	52
COLUMBIA	148.81	3.7	19	37	2							

JUNE 5 7.H 16.M 17.S EPICENTRE 52.80 -35.03 DEPTH= 0.KM

A= 0.49719 B=-0.34857 C= 0.79454 D=-0.5741 E=-0.8188
G= 0.6506 H=-0.4561 K=-0.6072 HT= -6.4

SE= 2.40

	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	
REYKJAVIK	13.24	25.8	3	15	3						3	25	
ANGRA DO HO.	15.15	156.0				6	25	-2			4	4	
AKUREYRI	15.46	26.9				6	53	19			3	50	
RATHFARNHAM	17.25	76.8	3	59	-5	7	27	11					
SCORESBY SD.	18.72	13.7	4	25	3	8	0	11					
ABERDEEN	19.28	63.8	4	25	-4	8	6	5					
DURHAM	19.76	70.9	4	37	2	8	17	5			4	14	
HALIFAX	20.44	257.9	4	39A	-3	8	21	-5			8	31	
KEW	21.23	79.6	4	50	0	8	41	-1			8	45	
COIMBRA	22.08	114.1	4	58	-1	8	52	-6					
LISBON	22.73	117.9	5	3K	-2	8	59	-11					
SEVEN FALLS	23.54	270.5	5	11	-2	9	30	6			5	57	PP
DE BILT	24.30	75.4	5	17	-3	9	43	6					
TOLEDO	24.77	109.0	5	23	-2	9	47	2					
WITTEVEEN	24.96	73.1	5	29	2								
SHAWINIGAN	24.99	270.8	5	26A	-1								
CLERMONT-FD.	25.62	90.5	5	32	-1	10	12	12			11	31	SS
BENSBERG	25.85	77.0	5	36	1						5	43	
BREBEUF	26.02	269.3	5	35K	-2						6	12	PP
WESTON	26.33	261.3	5	39A	-1	10	14	3					
SKALSTUGAN	26.52	47.4	5	38	-3								
HAMBURG	26.65	70.1	5	43	1	10	16	-1					
BESANCON	26.65	85.4	5	46	4						5	55	
MALAGA	26.77	114.6	5	47	3	10	31	12			6	37	PP
TORTOSA	26.82	102.2	5	46	2	10	14	-6					
GRANADA	26.89	112.9	5	49K	4	10	22	1			6	13	PP
STRASBOURG	27.14	81.6	5	47	0	10	19	-6			6	28	PP
KARLSRUHE	27.34	80.3				10	40	12			11	6	
OTTAWA	27.35	270.8	5	48A	-1	10	23	-5					
NEUCHATEL	27.35	85.2	5	54	5						12	7	
COPENHAGEN	27.47	64.8	5	51	1	10	25	-5					
ALMERIA	27.76	112.0	5	48	-5	10	44	9			12	3	SS
ALICANTE	27.85	107.4	5	54	1	10	40	4			6	46	PP
STUTTGART	27.92	80.3	5	55	1	10	57	20			13	3	SS
TUBINGEN	27.94	80.9	5	55	1								
EBINGEN	28.03	81.6	5	49	-6						10	25	
JENA	28.46	74.8	5	47	-12	10	10	-36			6	38	PP
KIRKLAND LA.	28.66	279.0	6	0	-1						13	48	
PALISADES	28.70	261.5	5	58A	-3	10	49	-1			6	29	PP
POTSDAM	28.80	71.3	6	1	-1								
UPPSALA	29.33	55.0	6	5	-2	10	53	-7					
BERMUDA	29.54	238.1	6	11	2	11	9	6					
KIRUNA	30.03	38.7	6	11	-2	11	11	0					
PHILADELPHIA	30.11	261.0	6	15	1	11	16	4			12	26	
RELIZANE	30.25	110.0	6	15	0								
PRAGUE	30.47	75.0	6	15	-2						6	43	
ALGIERS UNI.	30.98	105.8	6	23	2	11	29	3					
FLORENCE X.	31.60	87.7	6	30	3	12	2	26			13	55	SS
RESOLUTE	32.11	334.4	6	30K	-1	11	21	-23					
TRIESTE	32.12	82.9	6	33	2	11	43	-1					
SODANKYLA	32.42	39.4	6	31	-3	11	56	8			6	39	
RACIBORZ	32.67	73.0	6	36	0								
HELSINKI	32.87	52.9	6	45	7								
BRATISLAVA	32.89	76.7	6	38	0	11	58	2			7	53	PP
CLEVELAND	33.03	268.9	6	39	0	12	0	2			7	54	PP
WARSAW	33.38	68.0	6	42	0	12	2	-1			7	41	PP
ROME	33.40	89.6	6	42	-1	12	8	4			14	8	SS
KRAKOW	33.68	72.1	6	43	-2						7	47	PP
APATITY	34.99	38.5	6	56K	0	12	29	1			8	14	PP
CHAPEL HILL	35.06	259.0	6	57	0								
PULKOVO	35.57	52.3	6	59	-2								
LWOW	36.13	70.4	7	7	1	12	50	4					
BELGRADE	36.58	79.7	7	11	1								
MESSINA	37.53	92.2	7	22	4	13	8	1			8	55	PP
COLUMBIA	37.56	258.6	7	18	0	13	7	-1			8	41	PP
BUCHAREST	40.16	76.7				13	47	0			9	22	PP
MOSCOW	40.75	55.8	7	45	0								
SAN JUAN	42.03	227.1	7	54	-1								
TAMANRASSET	42.97	118.3	8	1	-2	14	25	-4			8	35	
ISTANBUL	43.90	78.8	8	9	-1	14	36	-6					
FAYETTEVILLE	44.10	272.2	8	12	0	14	46	1					
RAPID CITY	44.47	287.3	8	16	1								
SIMFEROPOL	44.53	71.1	8	15	0	14	53	2					
BOZEMAN	47.98	293.7	8	48	5								
HUNGRY HORSE	47.99	298.2	8	43	0								
BOULDER	48.21	284.2	8	44	0								

SOTCHI	48.56	69.3	8	46	-1	15	50	1			
BUTTE	48.61	294.9	8	55	7	15	53	3	10	43	PP
LUBBOCK	50.43	275.4	9	1	-1						
SALT LAKE C.	51.54	289.2	9	10	0						
COLLEGE	51.83	329.9	9	12	0	16	38	4	20	13	SS
TIFLIS	52.63	68.0	9	18	0	16	51	6			
KSARA	52.74	81.3	9	24	5	16	54	7	11	24	PP
MAKHACH-KALA	53.31	65.2	9	23	0	16	54	0			
EUREKA	54.75	290.6	9	34	0						
TIKSI	55.35	6.1	9	36	-2						
SHEMAKHA	55.50	66.6	9	39	0						
BOULDER CITY	56.50	286.8	9	45	-2						
TUCSON	56.76	280.8	9	48	0				10	3	
MINERAL	57.30	295.0	9	51K	-1						
SHASTA	57.49	295.8	9	51	-3						
CHINA LAKE	58.21	288.5	9	59	0						
FRESNO	58.80	290.8	10	3	0						
ISABELLA	58.82	289.0	10	2	-1						
RIVERSIDE	59.38	286.9	10	5	-2				10	14	
LICK	59.44	292.5	10	8A	1						
PALOMAR	59.54	286.0	10	8	0						
PASADENA	59.73	287.6	10	9	0	18	23	4	22	23	SS
KING RANCH	59.79	289.6	10	16	6						
FRUNSE	67.12	48.7	11	0	2	19	55	3			
NAMANGAN	67.24	51.9	10	59	0						
IRKUTSK	69.90	25.2	11	15	0						
QUETTA	73.25	62.2	11	35	0	21	10	7	21	36	SCS
HUANCAYO	73.25	221.4	11	37	2				12	14	
LA PAZ	74.71	212.9	11	43	-1	21	57	37	21	19	PS
SCOTT BASE	153.63	190.2	20	1	8						

JUNE 5 13.H 57.M 41.S EPICENTRE 52.72 162.59 DEPTH= 0.KM

A=-0.58046 B= 0.18197 C= 0.79369 D= 0.2991 E= 0.9542
G=-0.7574 H= 0.2374 K=-0.6083 HT= -6.4

SE= 1.37

	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	
PETROPAVLOVK	2.42	281.4	0	43A	2	1	11	-1			0	53	*SP
KLYUCHI	3.76	344.3	1	2A	2	1	47	0			1	15	*SP
MAGADAN	9.49	320.8	2	22A	1								
KURILSK	12.22	238.0	2	58	0						3	10	*SP
UGLEGORSK	13.45	262.5	3	16A	2						5	55	
Y.-SAKHLINSK	14.05	253.7	3	22A	0	6	0	0					
MATUSIRO	23.54	236.3	5	13K	0	9	32	8					
TIKSI	24.05	334.4	5	17	-1	9	35	2			5	28	*SP
COLLEGE	27.61	44.5	5	50	-1	10	31	-1					
KYAKHTA	34.25	289.1	6	49	-1								
SITKA	34.88	57.6	6	55	0						7	21	
RESOLUTE	43.10	22.3	8	3A	0	14	31	1			9	52	PP
HORSESHOE B.	44.81	63.1	8	17K	0								
VICTORIA	45.22	64.2	8	20K	-1								
SEATTLE	46.33	64.6	8	31A	2						10	3	
CORVALLIS	47.60	68.5	8	40	1								
BAGUIO CITY	48.95	238.4	9	19	29								
MANILA	50.29	236.7	9	1	1								
HUNGRY HORSE	50.35	59.4	9	0	-1						10	19	PCP
SHASTA	50.57	72.0	9	2K	0						10	17	
UKIAH	51.11	74.0	9	5	-1								
MINERAL	51.25	71.8	9	6K	-1								
BERKELEY	52.51	74.6	9	16K	-1								
RENO	52.82	71.4	9	19	0								
LICK	53.23	74.7	9	22K	0								
SVERDLOVSK	53.58	318.1	9	26	1	16	59	1					
BOZEMAN	53.63	60.4	9	26	1								
APATITY	54.18	338.5	9	28	-1	17	4	-2					
FRESNO	54.70	73.9	9	33K	0								
EUREKA	55.06	69.0	9	36	0						10	36	PCP
KING RANCH	55.72	75.2	9	41K	0								
SODANKYLA	55.76	341.0	9	40	-1						9	53	
ISABELLA	56.24	74.0	9	42K	-2								
FRUNSE	56.38	298.1	9	47A	2	17	37	2					
SALT LAKE C.	56.49	65.3	9	56	10						10	43	PCP
KIRUNA	56.50	343.8	9	45K	-1	17	36	-1					

CHINA LAKE	56.64	73.3	9	47K	0						
RABAUL	57.39	192.4	9	51	-2						
PASADENA	57.47	75.1	9	53K	0	18	3	13	21	43	SS
RIVERSIDE	58.05	74.7	9	56K	-1						
BOULDER CITY	58.13	71.3	9	58	0						
SHILLONG	58.53	271.6	9	59K	-1	18	3	0			
RAPID CITY	58.80	57.2	10	2	0						
PALOMAR	58.81	74.8	10	2K	0				10	19	
TASHKENT	60.29	300.0	10	11	-2	18	27	1			
CHATRA	60.46	276.2	10	15	1				19	8	
BOULDER	60.57	61.8	10	15	0						
PULKOVO	61.48	334.8	10	21	0	18	42	1	18	54	PS
SKALSTUGAN	61.74	345.4	10	21	-1						
HELSINKI	62.44	337.7	10	26	-1				10	40	
STALINABAD	62.56	298.2	10	28	0	18	59	4			
MOSCOW	62.79	328.6	10	29	0				20	17	SCS
TUCSON	63.11	71.5	10	31	-1						
DEHRA DUN	63.34	285.6				19	4	-1			
UPPSALA	64.30	341.2	10	38K	-1	19	15	-2	10	57	
KIRKLAND LA.	66.28	40.5	10	50K	-2						
LUBBOCK	67.18	64.3	10	58	0						
ASHKABAD	68.42	304.5	11	7	1	20	8	1			
COPENHAGEN	69.19	342.4	11	10	0	20	17	1	13	43	PP
QUETTA	69.81	293.3	11	14K	0	20	22	-1	13	46	PP
OTTAWA	70.24	39.6	11	14K	-3				13	51	PP
SHAWINIGAN	70.38	37.1	11	16K	-2						
WARSAW	70.57	336.1	11	20K	1	20	36	4			
SEVEN FALLS	70.60	35.6	11	18	-1						
BREBEUF	70.96	38.2	11	19K	-2						
TIFLIS	71.71	315.8	11	27	1	20	50	5			
KRAKOW	72.85	335.8	11	33	1						
GORIS	72.87	313.4	11	34	1	21	5	6			
SIMFEROPOL	73.14	324.5	11	33K	-1	21	1	-1			
RACIBORZ	73.24	336.9	11	36	1						
IASI	73.32	329.8	11	32	-3						
JENA	73.87	341.4	11	37	-1				14	21	PP
RATHFARNHAM	73.94	353.1	11	38A	-1				14	53	PP
PRAGUE	74.10	339.3	11	41	1	21	16	4	14	24	PP
PALISADES	74.65	40.9	11	40K	-3	21	17	-2	14	33	PP
HALIFAX	75.23	32.2	11	45A	-1						
BRATISLAVA	75.28	336.9	11	48	1				12	7	
BUCHAREST	76.26	329.5	11	53A	1	21	40	4	22	16	PS
STUTTGART	76.39	342.3	11	53	0	21	38	0	19	2	
CHAPEL HILL	76.76	47.2	11	54	-1						
STRASBOURG	76.83	343.1	11	56	1				14	51	PP
EBINGEN	77.00	342.2	11	33	-23				12	56	PCP
PARIS	77.44	346.7	12	0	1				14	57	PP
ISTANBUL	78.31	326.0	12	3	0	21	58	0			
BESANCON	78.43	344.0	12	5	1						
TACUBAYA	79.62	71.8	12	16	6						
CLERMONT-FD.	80.32	345.6	12	16	2						
FLORENCE X.	80.76	339.4	12	18	1	22	29	5	23	14	PS
MONACO	81.58	342.1	12	21	0				13	23	
KSARA	82.13	317.6	12	27	3	22	42	4			
ROME	82.28	338.0				22	43	3			
JERUSALEM	84.18	317.1	12	37	3	22	58	-1			
MESSINA	85.03	334.5				23	0	-7			
BERMUDA	85.77	38.6	12	45	3						
COMITAN	86.17	68.2							9	22	
GRANADA	89.67	349.0	13	45K	44						
MELBOURNE	91.47	193.9							13	9	PCP
TAMANRASSET	102.21	338.4	13	58	0				18	3	PP

JUNE 6 19.H 49.M 48.S EPICENTRE 3.64 126.82 DEPTH= 0.KM

A=-0.59804 B= 0.79898 C= 0.06313 D= 0.8006 E= 0.5992
G=-0.0378 H= 0.0505 K=-0.9980 HT= 7.1

SE= 2.28

	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
MAMBAJAO	5.70	347.8										
MANILA	12.30	332.5	3	6	7	5	16	-2				
GUAM	20.23	60.1	4	38	-2							
ILAN	21.56	347.4	4	55	2	8	53	5				
DJAKARTA	22.21	244.0	5	6	6	8	25	-35				

HONG KONG	22.23	327.6	5	0A	0	9	1	0		
RABAUL	26.51	106.9	5	40	-1				6	33 PPP
ZO-SE	27.82	349.6	5	55	2	10	37	1		
NANKING	29.24	346.0	6	6	1	10	59	1		
KUNMING	31.50	314.8	6	26A	0	11	30	-4	7	28 PP
MATUSIRO	34.39	16.4	6	53A	2	12	10	-9		
PEKING	37.48	346.5	7	18A	1	13	3	-4	17	32 SCS
KWANTING	37.81	345.9	7	23	3					
TATUNG	38.30	343.2	7	29	5					
VLADIVOSTOK	39.57	5.8	7	36	1	13	38	0		
BRISBANE	39.96	142.3	7	37	-1	13	35	-9		
SHILLONG	40.01	306.4	7	38A	0	13	30	-15	9	10 PP
CHANGCHUN	40.04	358.3	7	40	1					
RIVERVIEW	43.78	150.3	8	9A	0	14	35	-5	17	48 SS
CHATRA	44.35	305.4	8	13	-1				18	16
MELBOURNE	44.57	159.4	8	16A	0	14	50	-2	10	14 PP
HYDERABAD	49.32	289.8	8	53A	0	15	55	-4	10	50 PP
IRKUTSK	51.94	342.6	9	13	0	16	32	-4		
DEHRA DUN	53.09	305.6	9	23	2					
POONA	53.82	290.2	9	24	-3					
BOMBAY	54.85	290.5	9	34	0					
PETROPAVLOVK	55.85	22.6	9	37	-5					
LAHORE	56.51	305.7	9	43A	-3	17	33	-4		
ONERAHI	59.27	135.7	10	10	4					
WARSAK DAM	59.50	307.6	10	9	2					
FRUNSE	60.52	318.1	10	13	-1	18	28	-1		
KAIMATA	61.13	143.6	10	25	6					
NAMANGAN	61.77	315.2	10	23	0	18	39	-6		
ROXBURGH	61.84	147.4							18	38
QUETTA	62.26	302.2	10	24A	-2	18	43	-9	11	3 PCP
WELLINGTON	62.47	140.9	10	26	-2					
GEBBIES PASS	62.56	144.1	10	28	0					
TIKSI	67.91	0.7	11	0	-3	19	54	-7		
TERRE ADELIE	71.07	174.0	11	18	-4	20	30	-8		
SVERDLOVSK	74.08	328.5	11	39	-1	21	3	-9		
HONOLULU	74.79	69.0	11	46	2					
HAWAII V.OB.	77.40	71.0	12	1	2					
SHEMAKHA	78.67	310.6	12	5	-1	22	9	6		
MAKHACH-KALA	79.71	312.9	12	9	-2					
CAPE HALLETT	80.71	167.7				22	21	-3		
TANANARIVE	81.05	250.3	12	19K	1				12	44
TIFLIS	81.63	311.5	12	21	0					
SCOTT BASE	84.24	172.1	12	35	0					
COLLEGE	84.75	25.3	12	36	-1	22	54	-11	28	28 SS
SOTCHI	85.40	313.3	12	40	-1					
MOSCOW	86.56	325.5	12	45	-1					
APATITY	87.96	337.4	12	51K	-2	23	31	-5	16	18 PP
KSARA	88.77	303.6	12	59K	2	23	40	-3	16	31 PP
SIMFEROPOL	89.36	314.8	12	59	-1	23	46	-3		
PULKOVO	90.15	329.8	13	2	-2	23	56	0		
SODANKYLA	90.58	337.6	13	5	-1	23	54	-6	16	43 PP
HELSINKI	92.74	330.7	13	13	-2				13	22
KIRUNA	92.78	338.6	13	14	-2	24	11	-8	16	55 PP
ISTANBUL	93.46	311.4	13	18	-1	23	53	-32		
SOUTH POLE	93.62	180.0	13	20	0					
LWOW	95.45	320.6	13	28	0	24	42	0		
UPPSALA	96.38	331.3	13	31	-1	24	47	-3	24	11 SKS
WARSAW	96.74	323.4							25	22
SKALSTUGAN	97.41	335.8	13	35	-2					
RESOLUTE	97.89	10.3	13	38	-1	24	11	-52	31	32 SS
KRAKOW	97.97	321.5	13	40	1				17	40 PP
JENA	102.73	324.1	14	0	-1					
SCORESBY SD.	103.14	349.7	14	4	1				18	10 PP
SHASTA	103.20	46.9							17	53 PPP
TRIESTE	103.25	318.5	14	3	0					
BERKELEY	104.09	49.7				24	48	-67		
MESSINA	104.26	310.7				25	52	-4	18	24 PP
STUTTGART	104.99	322.6	14	32	21	24	49	-73	18	28 PP
ROME	105.37	315.1				24	42	-83	18	40 PP
STRASBOURG	105.94	322.9				26	15	5	33	42 SS
HUNGRY HORSE	106.10	37.3	14	21	777					
CHINA LAKE	108.27	50.2							18	53 PP
PASADENA	108.34	52.4							19	6 PP
PARIS	108.95	324.7	14	26	777	26		5	19	1 PP
ALGIERS UNI.	114.06	313.0							19	36 PP
RAPID CITY	114.74	37.4	18	45	2				19	53 PP
TAMANRASSET	117.01	297.7	18	51	4				29	24 PKKP
LUBBOCK	121.03	47.0	13	58	3					

KIRKLAND LA.	123.32	21.2	19	0	1						
SHAWINIGAN	127.10	16.9	19	8K	1						
OTTAWA	127.20	19.8	19	9K	2						
BREBEUF	127.80	18.1	19	12	4						
TACUBAYA	129.30	61.4								5	27 PG
HALIFAX	131.06	9.9	19	16	2						
WESTON	131.33	17.9								22	38 PP
PALISADES	131.69	21.0				26	23	-1		22	39 PKS
SAN JUAN	154.67	29.8	19	55	1					20	20
HUANCAYO	156.55	112.1	20	3	6					20	34 PKP2
LA PAZ	160.54	132.1	20	5	3					31	22 SKKS

JUNE 8 17.H 12.M 5.S EPICENTRE -16.34-173.57 DEPTH= 0.KM

A=-0.95409 B=-0.10748 C=-0.27957 D=-0.1119 E= 0.9937
G= 0.2778 H= 0.0313 K=-0.9601 HT= 5.5

SE= 1.95

	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
APIA	3.06	34.7	0	56	6	1	30	2				
SUVA	7.85	255.6	2	8	9							
ONERAHI	22.14	206.8	4	57	-2							
WELLINGTON	26.82	199.7	5	44	1							
COBB RIVER	27.35	202.9	5	48	0							
KAIMATA	29.09	203.2	6	7	3							
GEBBIES PASS	29.68	200.4	6	15	6							
BRISBANE	32.81	244.5	6	35	-2							
RABAUL	35.73	286.0	7	3	1							
SCOTT BASE	62.31	184.6	10	23	-3							
BERKELEY	72.30	40.4	11	30A	1							
LICK	72.36	41.2	11	28A	-1							
KING RANCH	72.40	43.8	11	29K	-1							
PASADENA	72.79	45.6	11	31	-1	21	31	33				
FRESNO	73.20	42.6	11	30A	-4							
PALOMAR	73.26	46.9	11	34K	-1							
ISABELLA	73.44	44.2	11	35K	-1							
SHASTA	73.98	38.0	11	39K	0							
CHINA LAKE	74.11	44.5	11	40K	0							
MINERAL	74.23	38.7	11	40A	0							
HAYFIELD	74.31	47.2	11	41	0							
RENO	74.83	40.3	11	44	0							
CORVALLIS	75.94	34.5	11	51	1						12	15
BOULDER CITY	76.08	45.6	11	50	-1							
TUCSON	77.05	50.6	11	57	1							
EUREKA	77.23	42.1	11	57	0						12	25
VLADIVOSTOK	77.43	322.3				21	43	-6				
VICTORIA	78.45	31.4	12	3K	-1							
SEATTLE	78.45	32.6	12	6A	2							
SALT LAKE C.	80.58	42.7	12	15	-1							
BUTTE	82.89	37.9	12	28	0							
COLLEGE	83.31	10.8	12	29	-1							
HUNGRY HORSE	83.32	35.4	12	28	-2							
BOZEMAN	83.61	38.8	12	31	0							
BOULDER	84.62	45.8	12	36	0							
QUETTA	123.29	295.6	18	59	0							
WITTEVEEN	143.60	359.8	19	37	1							
LWOW	143.68	340.7	19	35	-1							
KRAKOW	144.64	344.9	19	38	0							
RACIBORZ	145.02	346.7	19	41	2							
JENA	145.25	354.3	19	40	1							
BENSBERG	145.46	359.2	19	41K	1						20	6 PKP2
PRAGUE	145.74	350.8	19	42	2						20	8
BRATISLAVA	147.07	346.8	19	44	2						20	5
PARIS	147.46	4.8	19	47	4						23	20 PKS
STUTTGART	147.58	356.6	19	47K	4						20	9 PKP2
STRASBOURG	147.83	358.3	19	49K	5						20	3
EBINGEN	148.18	356.8	19	48K	4						20	13 PKP2
KSARA	148.31	308.8	19	47	3							
BESANCON	149.17	0.6	19	52	6						20	43
NEUCHATEL	149.42	359.3	19	52	6							
JERUSALEM	149.67	305.7	19	48	1						20	21
CLERMONT-FD.	150.53	4.7	19	56K	8							
TAMANRASSET	173.54	7.5	20	12	1						25	34 PP

JUNE 10 1.H 0.M 20.S EPICENTRE -8.76 118.05 DEPTH= 187.KM

DEPTH OF FOCUS= 0.024R

A=-0.46479 B= 0.87239 C=-0.15134 D= 0.8826 E= 0.4702
G= 0.0712 H=-0.1336 K=-0.9885 HT= 6.7

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	
DJAKARTA	11.41	282.2	2	38	-1	4	42	-1					
MAMBAJAO	19.41	23.0				8	21	43			4	48	
MANILA	23.37	7.2	4	55	2	8	1	-48					
CANTON	31.99	351.7	6	9	-2	11	8	1	6	39	7	14	PP
RABAUL	34.19	84.6	6	24K	-6						7	34	PP
GUAM	34.51	50.5	6	51	19	12	33	47					
MELBOURNE	37.79	144.2	7	OK	0	12	41	5			8	25	PP
BRISBANE	37.91	124.0	7	0	-1	12	39	1					
RIVERVIEW	39.36	134.2	7	12K	-1	13	4	4	7	40	8	50	PP
ZO-SE	39.75	4.2	7	16	0	13	7	2	7	44	17	10	SCS
NANKING	40.59	1.0	7	24A	1	13	21	3	7	57	9	2	PP
YAKUSIMA	40.78	16.6	7	14	-10								
COLOMBO	41.11	291.0	7	26	-1						15	11	
KAGOSIMA	41.85	16.1	7	35	2	13	40	4			17	24	
TOMIE	42.40	13.5	7	40A	2	13	47	3					
MIYAZAKI	42.42	17.0	7	40	2	13	49	4			17	27	
SHILLONG	42.59	323.9	7	37A	-2	13	38	-9	7	59	9	14	PP
KUMAMOTO	43.07	15.7	7	46	3	13	56	2			14	27	
SAGA	43.38	15.0	7	53	7	14	20	21			17	33	
MADRAS	43.38	299.4	7	46	0						9	12	PP
SIAN	43.64	349.0	7	47	-1	14	8	6	8	24	8	38	*SP
SIMIDU	43.69	18.3	7	47	-1	14	4	1					
OOITA	43.71	16.5	7	50K	2	14	4	1			17	32	SS
HUKUOKA	43.72	15.0	7	47	-1	14	4	0	8	17	13	13	SCP
TORISIMA	44.49	27.8	7	57	3								
KODAIKANAL	44.58	294.2	7	58K	3						12	16	
MATUYAMA	44.60	17.5	7	54	-1	14	15	-1			17	37	SCS
HIROSIMA	45.01	16.9	7	57	-2	14	22	0	8	26	17	38	SCS
LINFEN	45.04	352.5	8	1	2								
BOKARO	45.19	316.5	7	59	-1						8	0	PP
TOKUSIMA	45.39	19.4	8	2	0	14	29	1			17	43	SCS
HAMADA	45.41	16.2	8	24	22	14	26	-2			17	41	
TAKAMATU	45.45	18.7	8	5	3	14	28	0					
WAKAYAMA	45.74	19.9	8	3	-1								
SUMOTO	45.75	19.5	8	5	1	14	33	0			17	45	
OWASE	45.95	21.1	8	26	20						9	58	
KOBE	46.15	19.7	8	9	1	14	40	2					
OSAKA	46.24	20.1	8	11	3	14	44	4			17	52	
TAIYUAN	46.59	354.0	8	11	0								
KYOTO	46.64	20.1	8	8	-3	14	42	-3					
TU	46.66	21.0	8	13	2								
TOYOOKA	46.81	18.8	8	12	-1	14	50	2			17	51	SCS
HYDERABAD	46.99	303.7	8	13A	-1	14	49	-1			10	13	PP
HIKONE	47.05	20.4	8	14	0	14	53	2			17	56	SCS
OMAESAKI	47.17	22.8	8	17	2	14	54	1			17	59	SCS
NAGOYA	47.21	21.2	8	18	2	14	55	2					
GIHU	47.35	20.9	8	18	1	14	57	2			17	58	SCS
SHIZUOKA	47.56	22.8	8	17	-2	15	1	3			18	0	SCS
OSIMA	47.77	23.9				14	56	-5					
MISIMA	47.91	23.2	8	20	-1	15	2	-1			18	1	SCS
KOHU	48.21	22.5	8	22	-2	15	9	2			18	3	SCS
YINCHUAN	48.25	347.6	8	27	3								
NOUMEA	48.33	112.0	8	22K	-2								
YOKOHAMA	48.45	23.7	9	53	88	15	4	-7			13	49	
PEKING	48.58	358.1	8	25A	-1	15	14	2	8	56	10	20	PP
WUWEI	48.63	343.7	8	31	5								
TOYAMA	48.67	20.6	8	26	-1	15	17	3			18	9	SCS
TOKYO C.M.O.	48.71	23.6	8	30	3	15	12	-2			11	54	
TATUNG	48.81	355.1	8	30	2								
MATUSIRO	48.90	21.6	8	25K	-4	15	14	-3			11	18	PPP
KUMAGAYA	48.98	23.0	8	29	0						18	8	SCS
NAGANO	49.00	21.5	8	31	1	15	21	3			18	6	SCS
MAEBASI	49.08	22.5	8	27A	-3	15	17	-2			18	4	SCS
WAZIMA	49.18	19.9	8	34	3	15	21	0			18	6	SCS
KAKIOKA	49.36	23.7	8	28	-4	15	20	-3					
UTUNOMIYA	49.52	23.2	8	32	-2	15	23	-2			18	11	SCS

PAOTOW	49.65	352.0	8	35	0						
SHIRAKAWA	50.15	23.1	8	34	-4	15	29	-5		18	13 SCS
CHANGYEH	50.15	342.2	8	41	3						
ONAHAMA	50.27	23.9	8	40	1	16	39	63		18	16 SCS
NIIGATA	50.42	21.6	8	38	-2	15	42	4			
HUKUSIMA	50.80	23.0	8	42	-1	15	44	1			
POONA	51.35	302.1	8	46A	-1	16	20	29		10	46 PP
SENDAI	51.42	23.0	8	46	-2	15	52	0		18	20 SCS
SAKATA	51.57	21.7	9	11	22	16	1	7			
MIZUSAWA	52.25	22.7	8	53	-1	16	4	1			
BOMBAY	52.38	302.0	8	54	-1	16	43	38		10	38 PP
AKITA	52.39	21.4	8	56	1	16	10	5			
YUMEN	52.54	339.8	8	58	2						
MIYAKO	53.03	23.1				16	13	0			
VLADIVOSTOK	53.15	12.7	8	59A	-2	16	17	2	9 29	17	7 *SS
HATINOHE	53.62	22.2				16	20	-1			
DEHRA DUN	54.64	317.0	9	9	-2					12	38
MORI	54.66	20.5	9	12	0	16	36	1			
SUTTSU	55.16	19.8	9	29	14	16	43	1			
TOMAKOMAI	55.38	21.0				16	46	1			
URAKAWA	55.50	22.2	9	18	0	16	49	3		18	52
SAPPORO	55.78	20.5	9	18	-2	16	52	2		9	54
KUSIRO	56.82	22.9	9	30	3	17	6	2		19	1 SCS
ROXBURGH	57.17	139.3				17	12	4		19	7 SCS
KAIMATA	57.46	135.3	9	34	2						
WILKES	57.60	183.6				17	21	7		23	35 SSS
ABASHIRI	57.66	22.2				17	17	2			
ONERAHI	57.74	126.8	9	37	4						
LAHORE	57.92	315.9	9	32	-3						
COBB RIVER	57.92	133.3	9	35	0	17	26	8			
AUCKLAND	58.33	128.0	9	35	-3	17	35	11		19	20 SCS
GEBBIES PASS	58.70	136.2	9	40	0					11	25 PCP
SUVA	59.25	105.9	9	48	4	17	43	8		11	39 PP
WELLINGTON	59.45	133.0	9	44A	-1	17	36	-2		19	19 SCS
Y.-SAKHLINSK	59.66	19.4	9	45A	-2				10 15	11	59 PP
KARACHI	60.33	306.3	9	40	-11						
WARSAK DAM	61.24	316.6	9	57	0						
IRKUTSK	61.92	350.5	10	1A	-1	18	14	5		19	6 *SS
QUETTA	62.49	310.6	9	41A	-25	17	55	-21		14	31 PCS
FRUNSE	64.87	326.0	10	20A	-1	18	50	4		12	44 PP
STALINABAD	65.69	319.3	10	24	-3						
TASHKENT	66.97	322.0	10	34	-1	19	13	2		11	1 PCP
TANANARIVE	68.83	253.1	10	49K	3					12	5
PETROPAVLOVK	70.64	24.6	10	56	-1	19	58	4	11 25	20	52 *SS
ASHKABAD	72.45	314.3	11	9	1	20	18	3		12	18
MAGADAN	72.95	16.8				20	24	3		20	44
SVERDLOVSK	80.43	332.0	11	50	-2	21	42	1		15	3 PP
TIKSI	80.54	3.5	11	50	-3	21	40	-2		21	59 SKS
GORIS	81.72	312.1	11	59	0	22	4	10		15	10 PP
TIFLIS	83.51	313.8	12	7	-1	22	19	7		12	12 PCP
PIETERMZBURG	83.70	241.1	11	59A	-10						
PRETORIA	86.13	244.7	12	21K	0						
GRAHAMSTOWN	86.48	237.0	12	26K	3						
HONOLULU	87.48	68.1	12	29	1					13	1
KSARA	88.38	304.4	12	36K	4	23	24	25		16	8 PP
LWIRO	88.92	267.9	12	37	3				13 50		
MOSCOW	91.82	326.1	12	46	-2				13 29	23	9 SCS
SIMFEROPOL	91.85	315.1	12	48A	0	23	10	-20	13 31	24	33 *SS
HERMANUS	92.30	234.8				23	17	-17		25	20 PPS
APATITY	95.98	337.4	13	10K	3	24	20	15	13 52	17	12 PP
PULKOVO	96.36	329.4	13	8	-1	23	31	-38		16	11 PP
IASI	96.68	316.6	13	8	-2	23	34	-37		13	20
FOCSANI	96.79	315.1				23	39	-33			
BACAU	97.08	316.0	13	14	2	23	38	-37			
BUCHAREST	97.45	313.8	13	15A	1	23	43	-35		24	25 PS
CAMPULUNG	98.27	314.6				23	46	-39			
SODANKYLA	98.57	337.0	13	17	-2	23	43	-44		17	18 PP
ATHENS	98.72	307.1	13	18	-1	24	40	11		24	24 SKKS
HELSINKI	99.07	329.6	13	19	-2	23	46	-45		17	28 PP
COLLEGE	99.63	25.6	13	23	0	24	39	3		23	47 SKS
KIRUNA	100.94	337.5	13	28	-1	24	48	1		17	44 PP
TIMISOARA	100.97	314.9				24	1	-46		17	42
WARSAW	101.17	321.5	13	33	3	24	55	6		24	1 SKS
BELGRADE	101.50	314.0				24	2	-50		17	44 PP
SZEGED	101.74	315.4				24	4	-50		17	44 PP
KRAKOW	101.87	319.3	13	36	3	25	6	11		17	37 PP
UPPSALA	102.76	329.4	13	36	-1	25	4	2		17	55 PP
RACIBORZ	102.98	319.4				24	11	-53		16	57
BRATISLAVA	103.77	317.4	13	43	1	25	11	0		24	12 SKS

TARANTO	103.83	309.5								17	40	
SKALSTUGAN	104.80	333.6	13	45	-1					18	4	PP
REGGIO CALA.	105.10	307.1								24	20	SS
MESSINA	105.17	307.2	13	50	777	24	17	-42	14 16	18	13	PP
PRAGUE	105.41	319.5	13	49	777	25	25	23		18	13	PP
COPENHAGEN	105.98	325.4	13	53	777	24	23	0		18	4	PP
POTSDAM	106.03	322.0	13	59	777	25	36	0		24	24	SKS
TRIESTE	106.21	314.9	13	53	777	25	35	0		18	15	PP
CHEB	106.72	319.6				24	25	0		18	18	PP
JENA	107.13	320.6	13	57	777	25	26	0		18	30	PP
ROME	107.38	311.1				24	29	0		18	22	PP
HAMBURG	107.72	323.5	14	4	777	24	28	0		18	18	PP
FLORENCE X.	108.13	313.1	13	50	777	24	20	0				
STUTTGART	108.95	318.5	14	5	777	24	32	0		18	40	PP
TUBINGEN	109.07	318.3								18	18	PP
EBINGEN	109.19	318.0								14	8	
KARLSRUHE	109.43	318.9								17	40	
PAVIA	109.46	314.8	14	10	777					18	40	PP
ZURICH	109.57	317.1								24	37	
WITTEVEEN	109.81	323.1	18	12	777							
BENSBERG	109.88	321.1								17	27	
STRASBOURG	109.92	318.5	18	12	777	26	10	0		18	29	PP
BASLE	110.21	317.4								17	48	
NEUCHATEL	110.72	316.9								17	39	
DE BILT	110.86	322.5	18	8	-3	24	45	12		18	50	PP
RESOLUTE	111.50	8.9								18	50	PP
PARIS	113.29	319.5	18	19	4	26	43	121		19	14	PP
SCORESBY SD.	113.39	346.4	14	27	-229	24	54	11		19	14	PP
ABERDEEN	113.41	329.1								19	15	
CLERMONT-FD.	113.56	316.2	18	21	5	24	58	14		26	4	SKKS
DURHAM	113.99	326.5								19	2	
TAMANRASSET	114.07	291.0	18	24	7	24	59	14		19	23	PP
KEW	114.32	322.8	18	21	4	24	56	10		19	9	PP
HORSESHOE B.	115.12	39.3	18	22	3	25	0	11		19	18	
ALGIERS UNI.	115.19	306.5	18	22	3	24	58	8		19	17	PP
VICTORIA	115.28	40.2	18	23	4	24	58	8		19	21	
JERSEY	116.10	320.8				25	4	11				
SEATTLE	116.24	40.9	19	37	76	26	20	87		25	7	SKS
CORVALLIS	116.40	44.4				25	6	12		19	22	PP
RELIZANE	117.34	305.7	18	26	3					19	37	PP
ALICANTE	117.69	308.7	18	22	-2	25	13	14		19	40	PP
UKIAH	117.69	50.4								19	41	PP
SHASTA	117.98	48.5	18	26	2					28	45	PS
MINERAL	118.64	48.7	18	28A	2					21	52	SKP
BERKELEY	118.69	51.6	18	29	3	25	12	10		19	40	PP
SANTA CLARA	119.03	52.1				25	14	11		19	50	PP
LICK	119.28	52.1	18	30	3					19	49	PP
ALMERIA	119.54	307.4	18	30	3	25	13	8		19	51	PP
TOLEDO	120.05	311.1	18	32	4	25	17	10		19	44	PP
RENO	120.17	49.2	18	32	3					19	57	PP
GRANADA	120.35	308.0	19	1K	32	25	21	13		22	19	PPP
FRESNO	120.84	52.4	18	33	3					26	48	SKKS
MALAGA	121.08	307.7	18	35K	4					19	55	PP
KING RANCH	121.20	54.0	18	33	2					20	1	PP
HUNGRY HORSE	121.20	38.0	18	33	2	25	19	8		15	24	P
ISABELLA	122.14	53.3	18	35	2					20	4	PP
PASADENA	122.71	55.0	18	34	0	25	27	11				
CHINA LAKE	122.79	53.0	18	38	4					20	14	PP
EUREKA	123.05	48.3	18	37	3					15	22	P
BUTTE	123.06	40.0	18	40	6	25	25	8		27	0	SKKS
RIVERSIDE	123.39	55.0	18	39	4	25	30	12		20	17	PP
PALOMAR	123.95	55.7	18	39	3					20	12	PP
BOZEMAN	124.18	39.8	18	40	4					19	11	
HAYFIELD	124.87	54.9								20	36	PP
BOULDER CITY	124.92	52.1	18	42	4					20	28	PP
SALT LAKE C.	125.60	45.6	18	43	4					20	31	PP
TUCSON	129.14	55.4	18	51	5					21	57	
RAPID CITY	129.83	38.2	18	51	4					21	0	PP
BOULDER	130.46	43.8	18	52	3							
CHIHUAHUA	134.10	58.5								24	18	PPP
MBOUR	135.63	281.6	18	55	-3	26	7	18		21	35	PP
LUBBOCK	135.76	50.1	18	50	-8					22	19	PKS
ANGRA DO HO.	136.91	319.2								22	40	
KIRKLAND LA.	137.87	18.1	18	55	-7					22	23	PKS
FLORISSANT	140.69	35.9								22	30	
ST. LOUIS I	140.88	36.0	19	6	-2					22	41	PKS
SEVEN FALLS	141.03	9.6	19	3	-5					22	33	PKS
SHAWINIGAN	141.22	11.9	19	5	-4					21	40	PP

OTTAWA	141.61	15.7	19	5A	-4					25	16 PPP
BREBEUF	142.04	13.4	19	7	-3					22	36 PP
TACUBAYA	142.44	69.6				25	57	-3		21	51 PP
CLEVELAND	143.10	24.8	19	11	-1					22	40 PP
HALIFAX	144.25	2.0	19	14A	0					22	43 PKS
PITTSBURGH	144.62	24.0	19	12	-3					22	39
MORGANTOWN	145.30	24.8	19	18	2					22	42 PP
WESTON	145.52	12.3	19	19A	3					29	18 SKKS
PALISADES	146.18	16.4	19	20A	3				19 50	25	58 PPP
FORDHAM	146.33	16.4	19	21A	4					29	23 SKKS
COLUMBIA	149.36	32.2	19	26	4						
MERIDA	150.70	62.5	19	39	15					20	1
LA PAZ	154.17	166.3	19	36	7					20	20 PKP2
HUANCAYO	155.42	147.0	19	38	7	27	40	83		23	18 PP
BERMUDA	156.36	5.8								22	56
BALBOA HTS.	162.60	88.0	19	44	5						
CHINCHINA	165.92	104.6	19	44	2					24	33 PP
GALERAZAMBA	166.72	80.2								31	14 SKKS
BOGOTA	167.28	108.1	19	47	4					24	43 PP
SAN JUAN	169.62	22.5	19	48	4					31	25 SKKS
ANTIGUA	171.75	354.5	19	49	3						
FORT FRANCE	174.02	352.5	19	46	-1					31	47

JUNE 10 3.H 13.M 17.S EPICENTRE 13.09 143.91 DEPTH= 151.KM

DEPTH OF FOCUS= 0.019R

A=-0.78736 B= 0.57398 C= 0.22500 D= 0.5891 E= 0.8081
G=-0.1818 H= 0.1325 K=-0.9744 HT= 6.1

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
GUAM	0.90	65.0	0	22	-2							
TORISIMA	17.63	349.7	3	56	-1						5	21
RABAUL	19.03	153.9	4	13	1	7	48	13			11	55 PCS
HATIDYOZIMA	20.27	350.1	4	27	2							
YAKUSIMA	21.26	326.5	4	36	1							
SIOMISAKI	21.59	341.2	4	40	2							
MUROTO	21.95	337.7	4	43	1							
OSIMA	21.97	350.0	4	41	-1						9	20
MIYAZAKI	21.97	330.6	4	44A	2	8	16	-14				
OMAESAKI	22.03	347.4	4	43A	1							
OWASE	22.03	342.7	4	42	-1							
MERA	22.05	351.0	4	41	-2							
KAGOSIMA	22.12	328.4	4	47A	4							
SHIZUOKA	22.35	348.0	4	44A	-2							
MISIMA	22.39	349.3	4	46	0						9	35
KOTI	22.46	336.8	4	47A	0	9	35	57			5	28
WAKAYAMA	22.50	340.8	4	53	6							
TOKUSIMA	22.54	339.5	4	48A	1	9	43	63				
TU	22.56	344.0	5	12	24							
YOKOHAMA	22.58	350.9	4	48	0						9	40
KAMEYAMA	22.69	344.0	4	40A	-9						5	56
SUMOTO	22.70	340.3	4	49	0							
NARA	22.71	342.5	5	2	13							
OSAKA	22.77	341.9	4	51	1	9	50	67			5	17
HUNATU	22.79	349.1									5	49
BAGUIO CITY	22.80	281.2	4	51	1	9	37	53				
TOKYO C.M.O.	22.81	351.2	4	50A	0	9	31	47				
NAGOYA	22.86	345.2	4	52	1							
KOBE	22.91	341.3	4	54	3						5	56
ASOSAN	22.95	331.4	4	53	2							
TAKAMATU	22.96	338.7	4	49	-2							
KOHU	22.96	348.8	4	51	0						9	7
OOITA	22.97	332.8	4	53A	1							
HIMEJI	23.00	339.6	4	55	3							
MATUYAMA	23.01	335.7	4	51	-1							
KYOTO	23.06	342.7	4	51	-1							
KUMAMOTO	23.06	330.6	4	54	2							
GIHU	23.13	345.0	4	53	0						9	39
HIKONE	23.14	343.9	4	54	1							
TITIBU	23.20	350.0	4	53	-1							
IBUKISAN	23.21	344.2	4	55	1							
KAKIOKA	23.29	352.4	4	55	0							

TUKUBASAN	23.29	352.2	4	53	-2	8	54	2	9 58	SS
KUMAGAYA	23.32	350.7	4	54	-1	9	51	58		
MITO	23.40	353.0	4	54	-2					
SAGA	23.60	330.5	5	0	2					
HIROSIMA	23.61	335.7	4	56A	-2	10	2	64	5 37	
MAEBASI	23.62	350.2	4	58A	0	9	57	59	6 35	
OIWAKE	23.64	349.2	4	57	-1				7 55	
UTUNOMIYA	23.64	351.9	4	57	-1	9	51	53	9 3	
MATUMOTO	23.67	348.0	5	0	2					
TOYOOKA	23.80	341.4	4	59	-1					
HUKUOKA	23.82	331.2	4	59A	-1	9	33	32		
TOMIE	23.87	327.0	5	1A	1					
ONAHAMA	23.91	354.0	5	1	0				5 54	
MATUSIRO	23.91	348.6	4	59A	-2	9	53	50	8 40	PCP
NAGANO	24.03	348.7	5	0	-2				10 3	
SHIRAKAWA	24.16	352.8	5	3	0	9	8	1		
HAMADA	24.22	335.7	5	3	-1					
TOYAMA	24.27	346.8	5	5	1				5 55	
HUKUSIMA	24.75	353.5	5	9	0					
WAZIMA	24.99	346.7	5	10	-1					
NIIGATA	25.11	350.9	5	11A	-1				9 16	
SENDAI	25.22	354.4	5	11	-2				5 41	
SAKATA	25.96	352.7	5	29	9					
MIZUSAWA	26.05	355.1	5	21	0	9	9	-30		
MORIOKA	26.62	355.3	5	25	-1					
AKITA	26.74	353.5	5	27	0				6 6	
ZO-SE	27.56	314.2	5	33A	-1				6 7	*
AOMORI	27.76	354.9	5	36	0					
URAKAWA	28.97	358.3	5	48	1				9 30	
MORI	29.05	354.9	5	49	1					
HONG KONG	29.73	292.1	5	54A	0					
NANKING	29.77	313.5	5	53A	-1				6 37	*SP
SAPPORO	29.96	356.2	5	54	-2				10 23	
NEMURO	30.17	2.4	5	55	-3					
CANTON	30.70	293.2	6	1A	-1				6 45	*SP
ABASHIRI	30.83	0.5	6	3	-1					
VLADIVOSTOK	31.67	343.1	6	10A	-1					
Y.-SAKHLINSK	33.77	358.5	6	28A	-1					
CHANGCHUN	34.55	336.0	6	34	-2					
PEKING	36.26	322.8	6	50A	0	12	16	-3	8 15	PP
LINFEN	37.03	313.9	6	58	2					
TAIYUAN	37.18	317.0	7	0	2					
TATUNG	38.05	320.7	7	7	2					
PAOTOW	40.37	319.0	7	26	2					
TIENSHUI	40.60	308.4	7	26	0					
BRISBANE	41.28	167.7	7	32	0	13	37	3		
DJAKARTA	41.51	244.8	7	33	0	13	41	4		
PETROPAVLOVK	41.64	13.3	7	31A	-4				9 27	PCP
WUWEI	44.21	311.6	7	56	1					
RIVERVIEW	47.16	171.8	8	19K	0				8 43	
IRKUTSK	50.29	329.4	8	42A	-1			9 27	10 38	PP
SHILLONG	50.36	292.4	8	42A	-1					
MELBOURNE	50.66	178.9	8	47A	2	15	54	7		
CHATRA	54.65	293.6	9	13	-2					
HONOLULU	55.75	73.1	9	23K	0					
HAWAII V.OB.	58.49	75.1	9	44	2					
TIKSI	59.22	354.5	9	45	-2			10 28		
WELLINGTON	61.15	153.8	10	1	1					
GEBBIES PASS	62.31	156.8	10	7	-1				10 43	PCP
DEHRA DUN	62.77	297.4	10	12	1					
FRUNSE	66.08	311.2	10	32A	-1			11 18	19 10	
POONA	67.27	284.8	10	33	-7				11 10	
COLLEGE	69.05	25.1	10	49A	-2					
TASHKENT	69.97	309.4	10	55	-2	19	53	0	11 43	20 34 SCS
STALINABAD	70.39	306.4	11	1	2	20	1	3		
SVERDLOVSK	75.48	325.7	11	30	1				21 20	SCS
ASHKABAD	78.61	306.5	11	48	2			12 32	21 36	
HORSESHOE B.	82.01	41.2	12	3A	-1					
VICTORIA	82.08	42.1	12	4A	-1					
CORVALLIS	82.91	46.0	12	9	0					
SEATTLE	82.98	42.8	12	12K	3					
UKIAH	84.06	51.4	12	16K	1					
SHASTA	84.36	49.7	12	14A	-2				15 31	PP
MINERAL	85.02	49.9	12	20A	1					
BERKELEY	85.07	52.4	12	19A	-1	22	34	0	25 39	PP
RESOLUTE	85.25	13.2	12	19K	-1	22	25	-11	39 53	
APATITY	85.59	338.8	12	24K	2	22	36	-3	16 28	PP
LICK	85.66	52.8	12	23A	1				15 43	PP

RENO	86.55	50.4	12 28	1						
CAPE HALLETT	86.97	172.2	13 1	32						
FRESNO	87.23	53.0	12 30	0						
KING RANCH	87.63	54.4	12 32A	0						
SODANKYLA	88.01	339.9	12 32	-2			13 6			
HUNGRY HORSE	88.18	40.7	12 34A	-1	23 7 3			22 48	SKS	
MOSCOW	88.22	327.1	12 32	-3				13 20	*SP	
ISABELLA	88.55	53.8	12 35A	-1				30 19	PKKP	
PASADENA	89.18	55.2	12 40A	1	23 17 4			29 23	SS	
CHINA LAKE	89.19	53.5	12 40A	1				30 19	PKKP	
EUREKA	89.43	49.6	12 42A	2			13 0			
KIRUNA	89.76	341.5	12 40	-2	22 53 -25					
BUTTE	89.85	42.6	12 42A	0	23 20 1		13 42	22 59	SKS	
RIVERSIDE	89.85	55.2	12 43A	1				16 15	PP	
PULKOVO	90.18	332.4	12 43	-1				16 14	PP	
PALOMAR	90.44	55.7	12 45A	0				16 22	PP	
BARRETT	90.78	56.3	12 49A	2						
BOZEMAN	90.97	42.6	12 49A	1						
BOULDER CITY	91.30	52.7	12 50A	1				13 36		
HAYFIELD	91.33	55.1	12 51	2						
SALT LAKE C.	92.05	47.4	12 53K	0						
HELSINKI	92.34	334.0	12 51	-3			13 25			
SIMFEROPOL	94.35	317.9	13 1	-2	23 23 -35			16 43	PP	
SKALSTUGAN	95.07	340.4	13 6	0				16 48	PP	
UPPSALA	95.56	335.9	13 10	1	23 26 -43					
TUCSON	95.62	55.2	12 49A	-20				13 21		
SCORESBY SD.	96.07	355.3	13 11	0						
RAPID CITY	96.73	42.0	13 12K	-2	23 39 -40		13 52	30 27	PKKP	
BOULDER	96.97	46.3	13 16	1						
LWOW	98.22	325.4			23 34 -57			17 16	PP	
BUCHAREST	99.72	320.0	16 37	189				25 59		
KRAKOW	100.31	327.1	13 30	0				17 39	PP	
COPENHAGEN	100.37	334.4	16 44	193	23 56 -53			17 41	PP	
RACIBORZ	101.20	327.8						17 32		
LUBBOCK	102.13	51.1	13 40	2						
PRAGUE	103.13	329.3						17 56	PP	
JENA	103.95	331.2	13 44	-2				18 2	PP	
WITTEVEEN	104.79	334.8						18 6	PP	
DE BILT	105.94	335.0						18 21	PP	
STUTTGART	106.55	330.6	13 55	777	24 25 15			18 23	PP	
KARLSRUHE	106.75	331.2						18 23		
TUBINGEN	106.77	330.5						18 25	PP	
EBINGEN	107.06	330.3						18 27	PP	
STRASBOURG	107.36	331.2						18 27	PP	
FLORISSANT	107.70	41.8						21 48	PKS	
ST. LOUIS 1	107.88	41.8			24 32 0			18 32	PP	
BASLE	108.19	330.5						18 37		
KEW	108.60	337.3						18 38	PP	
NEUCHATEL	108.87	330.4						18 41		
ROME	109.37	323.6						18 48	PP	
PARIS	109.55	334.1	18 11	777	24 42 8			18 46	PP	
MESSINA	109.75	319.0						18 51	PP	
OTTAWA	111.66	28.9	18 20	4						
SHAWINIGAN	112.12	26.4	18 18	1						
LWIRO	114.96	273.6	18 26	3			18 37			
WESTON	116.02	28.4	18 27K	2						
HALIFAX	117.37	21.8	18 29K	2						
ALGIERS UNI.	118.21	324.9	18 34	5				19 47	PP	
PRETORIA	118.60	247.7	18 29	-1						
TOLEDO	119.46	332.0	18 34	3						
GRAHAMSTOWN	119.85	239.0	18 34	2						
GRANADA	121.40	329.8						22 46	PPP	
KIMBERLEY	121.61	244.2	18 39	4				28 9		
MALAGA	122.15	330.1	18 38A	1						
TAMANRASSET	125.85	310.9	18 47	3			19 23	20 42	PP	
CHINCHINA	136.83	68.0	19 5	1				21 46	PP	
SAN JUAN	136.93	44.1	18 55K	-9				22 31		
ANTIGUA	141.18	40.2	19 6	-7						
HUANCAYO	141.71	92.9	18 19	-54						
DOMINICA	142.28	42.4	19 12	-2						
FORT FRANCE	142.86	42.7	19 3	-12						
ST. VINCENT	143.90	44.7	19 16K	-1				19 59		
BARBADOS	145.06	42.7	19 23K	4				19 46		
TRINIDAD	145.44	48.1	19 20K	0						
MBOUR	146.78	324.6	19 28	6				22 47	PP	
LA PAZ	148.86	100.3	19 31K	6				23 9	PP	

JUNE 11 4.H 4.M 37.S EPICENTRE 53.92-164.79 DEPTH= 22.KM

A=-0.57078 B=-0.15513 C= 0.80631 D=-0.2623 E= 0.9650
G=-0.7781 H=-0.2115 K=-0.5915 HT= -6.8

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	
COLLEGE	13.91	31.2	3	16	-1	5	48	-4					
SITKA	16.93	67.4	3	57	1	7	32	29					
PETROPAVLOVK	21.60	282.8	4	51	1	8	51	9					
HORSESHOE B.	25.88	83.0	2	34	-177								
VICTORIA	26.18	84.9	5	31	-3						10	14	
SEATTLE	27.26	85.8	6	3	19								
CORVALLIS	28.28	92.2	5	53	0								
SHASTA	31.15	97.6	6	18	-1								
HUNGRY HORSE	31.76	79.0	6	25	1						9	14	PCP
MINERAL	31.84	97.4	6	25A	0								
BERKELEY	33.09	101.5	6	45	9	11	53	1					
RENO	33.41	96.9	6	40	2								
RESOLUTE	33.76	26.7	6	40	-1	12	3	1			7	57	PP
LICK	33.81	101.6	6	43A	1								
BOZEMAN	34.90	81.2	6	53	2						8	12	PP
FRESNO	35.27	100.5	6	53	-1								
EUREKA	35.71	93.6	6	57	-1	13	7	35			9	36	PCP
KING RANCH	36.31	102.2	7	3	0								
WOODY	36.56	100.9	7	3A	-2						13	38	SCP
ISABELLA	36.81	100.6	7	6	-1								
CHINA LAKE	37.21	99.6	7	10	-1								
PASADENA	38.05	102.1	7	17	-1	13	17	9					
RIVERSIDE	38.63	101.5	7	21	-2						7	34	
BOULDER CITY	38.72	96.9	7	23	0								
PALOMAR	39.39	101.7	7	29	0								
HAYFIELD	39.84	100.1	7	32	-1								
RAPID CITY	40.38	78.1	7	37	0								
MATUSIRO	42.47	269.7	7	54A	0	14	15	1					
TUCSON	43.69	97.3	8	2	-2								
KIRKLAND LA.	50.57	59.7	9	4	6								
OTTAWA	54.62	59.8	9	26	-2								
SHAWINIGAN	55.31	57.0	9	31K	-2								
BREBEUF	55.62	58.4	9	33K	-3								
SEVEN FALLS	55.87	55.4	9	36	-1								
MORGANTOWN	56.41	67.4	9	39K	-2								
KIRUNA	58.51	357.7	9	55A	-1	17	59	3	10	9			
PALISADES	58.66	62.4	10	1	4	18	11	13			22	18	SS
SODANKYLA	58.73	354.9	9	57	-1				10	11	10	29	
WESTON	59.01	59.6	10	3A	3								
HALIFAX	61.16	53.1	10	13	-1								
SKALSTUGAN	62.81	1.5	10	24	-1				10	37			
HELSINKI	65.99	354.7	10	45	-1				10	58	11	16	PCP
PULKOVO	66.01	351.7	10	46	0								
UPPSALA	66.56	358.7	10	48A	-2								
HONG KONG	67.07	276.7	10	53	0								
MOSCOW	69.17	346.7	11	5	-1								
FRUNSE	71.02	318.0	11	18	1								
NAMANGAN	73.78	318.9	11	34	0								
WARSAW	74.11	356.3	11	39	4								
BENSBERG	75.27	5.2	11	43	1								
JENA	75.48	2.4	11	44	1								
PRAGUE	76.38	0.5	11	49	1						15	12	
PARIS	77.08	8.6	11	53	1	21	52	14			14	54	PP
SHILLONG	77.12	295.6	11	51A	-2								
STUTTGART	77.56	4.1	11	55	0						12	22	
STRASBOURG	77.68	5.0	11	57	1								
EBINGEN	78.14	4.3	11	55	-3								
BRATISLAVA	78.27	358.7	12	0	1								
SIMFEROPOL	80.19	346.5	12	10	1								
SAN JUAN	80.33	72.2	12	9	-1								
TIFLIS	81.40	338.0	12	17	1	22	30	6					
QUETTA	85.06	317.0	12	35A	1								
TRINIDAD	89.15	73.1	12	52	-2								
JERUSALEM	92.91	343.0	12	36	-36								
HUANCAYO	99.31	97.6	13	45K	4								
LWIRO	127.30	342.8	19	5	3								
PRETORIA	150.25	335.9	19	47	4								
KIMBERLEY	153.89	340.6	19	57	9								

JUNE 11 4.H 57.M 26.S EPICENTRE 36.56 70.58 DEPTH= 202.KM

DEPTH OF FOCUS= 0.027R

A= 0.26770 B= 0.75939 C= 0.59301 D= 0.9431 E=-0.3325
G= 0.1972 H= 0.5593 K=-0.8052 HT= -0.4

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	
KHOROG	1.23	41.2	0	33	1	0	57	0					
OBI-GARM	2.25	342.2	0	43	1	1	14	0					
KARA-SU	2.30	326.9	0	42	0	1	14	-1					
STALINABAD	2.46	324.7	0	46	2	1	20	2					
GISSAR	2.49	320.7	0	43	-2	1	16	-3					
DZHERGETAL	2.71	10.6	0	48	1	1	24	1					
MURGAB	3.22	54.8	0	55	2	1	36	2					
FERGANA	3.93	13.5	1	2	0	1	46	-3					
SAMARKAND	4.21	318.7	1	5	0	1	52	-4					
ANDIJAN	4.42	17.9	1	8	0	2	0	0					
NAMANGAN	4.50	10.6	1	9	0	2	2	0					
TASHKENT	4.86	348.4	1	12	-1	2	0	-10					
TCHIMKENT	5.79	352.8	1	25	0	2	32	0			1	53	
LAHORE	5.88	147.0	1	24	-2	2	26	-8			2	5	*SP
NARYN	6.44	39.3	1	31	-3						2	22	
BAIRAM-ALI	6.84	281.3	1	37	-2	2	52	-4			2	23	
FRUNSE	7.03	24.8	1	41	0	2	59	-1			2	29	
QUETTA	7.05	206.6	1	41K	-1	2	56	-5			2	25	*SP
PRZHEVALSK	8.45	43.2	2	0	0	3	32	-2					
DEHRA DUN	8.81	132.8	2	3	-2	3	34	-8			3	48	SS
ASHKABAD	9.85	281.8	2	17	-1	4	2	-4					
KARACHI	11.11	196.8	2	43	9	4	45	9					
KIZYL-ARVAT	11.59	286.6	2	39	-1	4	41	-6					
BAKU	16.64	289.5				6	53	12					
BOMBAY	17.70	173.0	3	57	2	7	4	1					
POONA	18.19	170.0	3	59	-1	7	26	13			4	14	PP
BOKARO	18.24	129.8				7	14	0					
HYDERABAD	20.28	157.9				7	58	4					
SHILLONG	21.22	115.1	4	31	0	8	12	3					
SVERDLOVSK	21.36	344.9	4	33	1	8	19	7			9	4	SS
SOTCHI	24.54	296.2	5	5	3	9	11	5			6	9	
KODAIKANAL	26.94	164.9				9	47	0					
IRKUTSK	28.44	45.8	5	37A	-1						6	43	
SIMFEROPOL	28.67	298.4	5	39	-1	10	11	-2			6	22	
KYAKHTA	29.15	50.4	5	43A	-1								
MOSCOW	29.40	321.2	5	46	-1	10	25	1			6	45	PP
JERUSALEM	29.54	271.2	5	51	3								
KABANSK	29.73	47.1	5	49A	0								
BUCHAREST	34.38	297.2	6	30	0						16	28	SCS
PULKOVO	34.67	324.9	6	32	0	11	47	1			12	59	*SS
LWOW	35.87	306.6	6	43	1	12	7	3			16	35	SCS
HELSINKI	37.33	323.9	6	55	1						7	27	
APATITY	37.44	337.6	7	3K	8	12	42	14	8	9	8	43	PP
WARSAW	37.93	310.4									8	6	
KRAKOW	38.51	306.8	7	1	-3						8	36	PP
SODANKYLA	39.54	335.0	7	14	1	13	3	3			8	54	PP
RACIBORZ	39.63	306.9	7	16	3						18	31	SCS
HONG KONG	40.20	98.4	7	19K	1								
BRATISLAVA	40.42	303.9	7	22	2				8	59			
UPPSALA	40.82	321.9	7	22A	-1	13	18	-1			8	58	PP
KIRUNA	41.89	334.1	7	32A	0	13	36	2			10	11	
PRAGUE	42.06	307.0	7	36	3						9	18	PP
POTSDAM	42.81	310.5	7	41	2								
COPENHAGEN	43.16	315.3	7	44A	2	13	57	4			10	32	PPP
JENA	43.81	308.4	7	48	1						9	29	PP
SKALSTUGAN	43.98	326.8	7	48	-1						9	33	PP
HAMBURG	44.62	312.3	7	56	2						9	52	PP
STUTTGART	45.59	305.6	8	2	1	14	32	4			15	51	*SS
EBINGEN	45.83	304.8	8	4	1				9	4			
TIKSI	45.84	22.1	8	2	-2	14	30	-1			9	54	PP
STRASBOURG	46.55	305.5	8	3	-6	14	48	7			10	5	PP
BENSBERG	46.59	308.9	8	9	0								
PARIS	49.94	306.7	8	26	-9				9	6	10	17	PP
KEW	51.14	310.6	8	42	-2								
MATUSIRO	53.25	68.3	8	58K	-2								

LWIRO	54.77	234.6	9	11K	0						
TAMANRASSET	57.21	275.4	9	28	0			10	15	10 47	*SP
COLLEGE	74.53	16.0	11	17	-1						
KIMBERLEY	77.93	220.1	11	21A	-16						
MBOUR	79.65	280.2	11	48	2						
HUANCAYO	140.84	299.8	19	10	4						

JUNE 11 14.H 49.M 42.S EPICENTRE -30.59-178.01 DEPTH= 31.KM

A=-0.86178 B=-0.03001 C=-0.50640 D=-0.0348 E= 0.9994
G= 0.5061 H= 0.0176 K=-0.8623 HT= 1.6

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	
RAOUL ISLAND	1.34	3.2	0	24	1								
ONERAHI	8.21	229.1	2	4	4								
AUCKLAND	8.66	221.8	2	14	8	3	52	8			2	23	
TUAI	9.10	204.6	2	12	-1	3	50	-5					
WELLINGTON	12.16	206.7	2	47	-7	4	59	-11			15	44	SCS
SUVA	12.81	344.5	2	56	-7	6	24	59					
COBB RIVER	12.87	213.1	3	6	2	5	15	-12			3	16	
KAIMATA	14.61	212.5	3	24	-3	5	55	-13					
GEBBIES PASS	15.04	207.0	3	27	-5	6	2	-16			15	10	SCS
NOUMEA	16.17	297.0	3	54A	7	6	52	7	4	14	7	17	SS
APIA	17.67	20.3	4	1	-5	7	11	-8					
ROXBURGH	17.92	210.0	4	0	-9	7	24	0					
BRISBANE	25.48	269.7	4	14	-73						4	23	
RIVERVIEW	26.25	254.8	5	36A	2	10	1	-2	5	45	6	16	PP
MELBOURNE	31.31	246.6	6	21A	1	11	23	0	6	39	7	31	PP
RABAUL	38.47	307.1	7	24	3								
CAPE HALLETT	42.23	185.3	7	55	3								
TERRE ADELIE	43.59	201.9	8	5	2	14	30	0					
SCOTT BASE	47.84	184.3	8	40	3	15	44	13					
HAWAII V.OB.	54.33	26.7	9	31	5	17	16	16					
WILKES	54.97	208.0	9	28	-3	17	4	-5					
HONOLULU	55.03	22.8	9	31K	0								
PERTH	55.74	250.2	9	35	-1	17	21	2	10	2	11	43	PP
GUAM	56.59	315.1	9	42	0								
MANILA	73.87	298.2	11	33	-1	21	15	13					
DJAKARTA	74.12	272.2	11	32A	-3	20	51	-14					
BAGUIO CITY	75.30	299.4	11	39	-3	21	16	-2					
MATUSIRO	78.40	325.3	11	58A	-1	21	48	-4			22	35	SCS
KYOTO	78.46	322.8	11	58A	-2								
MIZUSAWA	79.11	328.8	12	8	5	22	17	18					
HONG KONG	83.66	300.4	12	27A	0	22	46	0					
ZO-SE	84.24	311.2	12	29A	-1	23	11	19	12	55	22	50	SKS
CANTON	84.79	300.5	12	33A	0	23	16	19	12	59	22	55	SKS
Y.-SAKHLINSK	84.93	334.2	12	34A	0						22	53	SCS
KING RANCH	85.45	44.2	12	37A	1				12	55	16	4	PP
BRANNER	85.46	41.4	12	37A	1								
SANTA CLARA	85.54	41.5	12	38A	1	23	3	-1					
SAN FRANCSCO	85.55	41.0	12	37A	0								
PASADENA	85.62	46.0	12	38A	1	23	6	1	12	52	16	15	PP
LICK	85.71	41.7	12	38A	1						12	56	
BERKELEY	85.72	41.0	12	38A	1	22	58	-8			28	18	SS
PETROPAVLOVK	85.82	346.1	12	37	-1						28	30	SS
PALOMAR	85.92	47.3	12	39A	1				12	54	13	2	*SP
RIVERSIDE	86.01	46.5	12	39A	0	23	2	-7	12	56	16	21	PP
UKIAH	86.07	39.6	12	39A	0				12	57			
WOODY	86.23	44.4	12	36A	-4						13	3	*SP
FRESNO	86.39	43.1	12	41A	0								
NANKING	86.40	310.6	12	41A	0	23	32	19	13	7	23	6	SKS
ISABELLA	86.44	44.7	12	37A	-4						13	2	*SP
VLADIVOSTOK	86.55	325.8	12	42	0								
HAYFIELD	86.93	47.7	12	46A	3				13	3	13	8	*SP
CHINA LAKE	87.07	45.0	12	41A	-3				13	2	30	38	PKKP
SHASTA	87.63	38.9	12	47A	0						24	2	
MINERAL	87.82	39.6	12	48	0								
RENO	88.26	41.1	12	50A	0						23	37	
TUCSON	89.17	51.4	12	56A	2	23	29	-10	13	13			
CORVALLIS	89.90	35.7	12	57A	-1						23	58	
CHANGCHUN	90.38	322.8	12	59	-1								
EUREKA	90.44	43.1	13	0A	0				13	23	38	27	PKPPKP
TACUBAYA	90.53	67.8	13	3	3	23	44	-7			13	37	*SP

SEATTLE	92.56	34.0	13	12	2					13	35	
VICTORIA	92.64	32.8	13	12	2					23	40	
VERA CRUZ	92.89	69.5				24	21	9		35	0	
PEKING	93.05	315.5	13	11	-1	24	18	5	13 38	24	2	SKS
MAGADAN	93.45	344.7	13	12	-2					23	45	SKKS
SALT LAKE C.	93.71	44.1	13	15K	0				13 37			
KUNMING	93.91	296.7	13	17	1	24	27	6	13 44	23	51	SKS
HUANCAYO	94.59	106.8	13	23	4	23	59	-28		17	32	*PPP
BUTTE	96.51	39.6	13	26K	-2	23	58	-45		17	25	PP
BOZEMAN	97.14	40.6	13	33K	2					17	50	PP
HUNGRY HORSE	97.17	37.2	13	33	2	24	7	-41		18	10	
LA PAZ	97.95	114.4	13	32	-2	24	14	-41		17	50	PP
COLLEGE	98.03	12.5	13	32A	-3	24	58	2	13 57	24	4	SKS
MERIDA	99.05	71.1								42	42	
RAPID CITY	100.85	45.1	13	48K	0	24	31	-48	14 11	17	51	PP
SHILLONG	102.65	292.2								12	25	
CHINCHINA	103.17	92.0				24	35	-64		18	32	PP
COLOMBO	103.90	269.8	18	20	259	27	38	113				
BOGOTA	104.33	93.1				24	37	-71		18	37	PP
GALERAZAMBA	106.31	87.0				24	48	1		33	39	SS
IRKUTSK	106.64	321.2	14	10	777	24	46	-2		27	54	PS
FLORISSANT	106.75	54.6				24	47	-2		25	40	SKKS
ST. LOUIS 1	106.78	54.8				24	46	-3		18	39	PP
KODAIKANAL	107.59	271.6	18	50A	777					28	11	
HYDERABAD	110.09	278.8								28	42	
GRAHAMSTOWN	112.32	202.1	18	36	4							
HERMANUS	113.32	195.5				27	6	109		19	31	PP
POONA	114.50	277.8	18	37A	0	29	16	234		21	52	PP
BOMBAY	115.54	277.7								19	24	
DEHRA DUN	115.72	291.3								19	44	
WASHINGTON	116.38	58.8	19	58A	77							
KIMBERLEY	117.11	202.5	18	45	3							
KIRKLAND LA.	117.13	48.2	18	43	1							
RESOLUTE	117.43	17.3	18	41A	-2	25	33	1		19	48	PP
SAN JUAN	117.64	84.1	18	45A	2	25	34	1		20	12	PP
PRETORIA	118.62	207.0	18	46	1							
LAHORE	119.15	291.3	18	47	1							
OTTAWA	119.25	52.1	18	43	-3	25	28	-11		20	11	PP
PALISADES	119.34	57.3	18	49	2	25	42	3		15	22	
FORT FRANCE	120.32	90.2								24	35	
BREBEUF	120.71	52.4	18	49	0							
SHAWINIGAN	121.52	51.4	18	51	0					20	15	PP
WESTON	121.57	56.4	18	55A	4					30	22	PS
FRUNSE	122.21	304.0	18	52	0	25	43	-6		20	22	PP
SEVEN FALLS	122.94	51.0	18	53	-1	25	47	-4		22	29	PPP
BERMUDA	123.97	69.5	21	6	130	27	41	107		22	10	PP
QUETTA	124.71	287.4	18	58A	1				19 26	20	41	PP
STALINABAD	125.51	297.7	19	0	1							
TASHKENT	125.72	301.1	18	59	0	26	4	4		20	48	PP
HALIFAX	127.51	55.1	19	2A	0	26	7	2		27	51	SKKS
SVERDLOVSK	132.05	320.8	19	14	3	26	22	5		21	35	PP
ASHKABAD	133.46	295.0	19	14	0							
SCORESBY SD.	137.89	11.7	19	22	0					22	8	PP
LWIRO	138.53	222.9	19	19A	-4					23	1	PP
APATITY	138.60	342.4	19	31	8					22	21	PP
SODANKYLA	140.38	345.3	19	19	-7					22	52	SKP
KIRUNA	141.17	349.0	19	21	-7					22	27	PP
GORIS	142.94	296.2	19	27	-4							
REYKJAVIK	143.22	17.3	19	36	5							
TIFLIS	144.03	300.0	19	31	-2					22	45	PP
MOSCOW	144.49	325.4	19	31	-3					22	51	PP
PULKOVO	145.17	335.1	19	33	-2	26	33	-6		22	53	PP
SKALSTUGAN	146.35	351.7	19	36	-1							
UPPSALA	148.91	344.7	19	40A	-1					23	11	SKP
BERGEN	150.11	356.7	19	45	2					19	51	
SIMFEROPOL	151.06	308.7	19	44	0	26	41	-6		19	53	PKP2
KSARA	151.22	285.4	19	46K	2				20 18	23	30	PP
JERUSALEM	151.61	281.1	19	49	4					23	19	PKS
ABERDEEN	153.28	5.0	20	3	16	27	0	11		32	53	
COPENHAGEN	153.85	346.5	19	48A	0					23	40	PP
WARSAW	154.25	332.5	19	48A	-1					23	43	
IASI	154.26	317.3	19	58	9					20	48	
LWOW	154.63	325.5	19	48	-1					30	38	SKKS
DURHAM	155.70	5.0	19	36	-14							
MBOUR	156.24	128.6	19	54	3	26	39	-13	20 14	24	4	PP
HAMBURG	156.32	348.1	19	53	2							
KRAKOW	156.35	330.3	19	52	1					23	57	PP
RATHFARNHAM	156.52	12.5	19	57A	5					23	56	PP
BUCHAREST	156.53	312.7	19	53	1	26	48	-5		20	23	PP

POTSDAM	156.76	342.6	19	54	2					36	44
SKALNATE PL.	156.85	328.5								22	7
RACIBORZ	157.04	332.6	19	54	2					20	28
WITTEVEEN	157.53	352.6	19	54	1					24	8 PP
DE BILT	158.38	354.7	19	53	-1					22	45
PRAGUE	158.41	337.8	19	58	4						
JENA	158.46	343.3	19	54	0			20	32	22	6 PP
BRATISLAVA	158.99	330.9	19	55	0					24	15 PP
CHEB	159.03	341.1								22	51
KEW	159.07	4.1	19	55A	0					24	8 PP
SOFIA	159.11	311.2	19	29	-26					20	22
BENSBERG	159.29	350.7	19	57	2					20	33 PKP2
BELGRADE	159.70	319.5	19	56A	0					31	4 SKKS
KARLSRUHE	160.97	347.0	19	58A	1			20	45	24	38
STUTTGART	161.03	345.2	19	57A	0			20	44	27	54 PSKS
STRASBOURG	161.50	347.8	19	58A	0					24	26 PP
EBINGEN	161.64	345.0	19	58	0			20	46	24	30
PARIS	161.80	359.0	19	59A	1	26	49 -9	20	17	25	6 PP
TRIESTE	162.38	331.8	19	59	1					24	35 PP
ZURICH	162.49	345.0	20	17	18						
BASLE	162.55	347.3	19	33	-26					24	30 PP
CHUR	162.75	342.3	20	3	4					20	48
BESANCON	163.08	350.6	20	0	1					24	51 PP
NEUCHATEL	163.17	348.2	19	59	0					24	34 PP
BOLOGNA	164.28	334.6	20	18	18					24	58 PP
OROPA	164.29	344.3	19	57	-3					24	38
PAVIA	164.39	340.8	20	1	1					24	43 PP
CLERMONT-FD.	164.82	357.0	20	2	1					24	42 PP
FLORENCE X.	164.93	333.4	20	3	2						
ROME	165.91	326.1	20	8	6					24	52 PP
REGGIO CALA.	166.47	307.2								21	6
MESSINA	166.49	307.8	20	3	1			20	31	24	50 PP
COIMBRA	167.20	38.7	20	3	0					24	59 PP
LISBON	167.76	45.5	20	7K	4					21	13 PKP2
TOLEDO	169.50	26.4	20	6A	2			20	29	25	6 PP
TORTOSA	169.72	6.4	20	18	14						
TAMANRASSET	171.60	202.9	20	8A	3	28	20 76	20	26	25	17 PP
MALAGA	171.89	39.4	20	6K	0	26	52 -12			25	18 PP
GRANADA	171.95	33.8	20	9A	3	26	37 -27			25	25 PP
ALICANTE	172.00	14.1	19	56	-10	26	41 -23			23	45 PKS
ALMERIA	172.74	29.6	20	9	3	26	36 -28			25	25 PP
ALGIERS UNI.	173.78	352.2	20	7	1			20	26	25	22 PP
RELIZANE	174.72	12.9	20	9	2			20	27	25	34 PP

JUNE 11 18.H 49.M 32.S EPICENTRE 17.88 120.24 DEPTH= 44.KM

DEPTH OF FOCUS= 0.002R

A=-0.47965 B= 0.82267 C= 0.30520 D= 0.8639 E= 0.5037
G=-0.1537 H= 0.2637 K=-0.9523 HT= 5.2

SE= 2.21

	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
BAGUIO CITY	1.49	167.5	0	25	0	0	42	-1				
MANILA	3.36	167.7	0	53	2							
HENGCHUN	4.12	6.5	1	1	-1	1	44	-6				
TAWU	4.49	7.8	1	6	-1	1	53	-6				
KAOHSIUNG	4.71	0.3	1	10	0	2	2	-2				
TAINAN	5.09	359.8	1	16	1	2	12	-2				
HSINKONG	5.30	11.3	1	19	1	2	18	-1				
ALISHAN	5.63	5.2	1	21	-2	2	24	-3				
PENGHU	5.66	353.5	2	26	63	3	24	56				
HWALIEN	6.19	11.8	1	31A	0	2	36	-5				
TAICHUNG	6.25	3.7	1	32A	0	2	43	0				
HSINCHU	6.92	5.5	1	39	-2	2	51	-8				
ILAN	7.00	11.3	1	42K	0	2	57	-4				
HONG KONG	7.20	308.6	1	42A	-3							
TAIPEI	7.21	9.3	1	43A	-2	3	6	-1				
CANTON	8.33	309.5	1	57A	-4							
MAMBAJAO	10.04	148.1									0	24
ZO-SE	13.19	3.5	3	4A	-3	5	31	-2				
FUTZELING	13.83	345.7	3	16	1							
NANKING	14.17	355.0	3	19A	0	5	58	2				
YAKUSIMA	15.61	34.8	3	39	1							

KAGOSIMA	16.52	32.5	3	50	0	7	1	10		
TOMIE	16.56	26.0	3	51	1	6	45	-7		
NAGASAKI	17.14	28.6	4	10	13	7	19	14		
MIYAZAKI	17.25	33.8	3	59	0	7	9	2	4	23
KUMAMOTO	17.60	30.4	4	2	-1	7	19	3		
SAGA	17.77	28.6	4	6	1	7	31	12	4	28 PP
KUNMING	17.83	296.6	4	6A	0	7	27	6		
ASOSAN	17.85	31.0	4	5	-1	7	24	3		
HUKUOKA	18.10	28.3	4	9	0	7	30	3	4	53
TSINGTAU	18.12	0.2	4	11	1					
ITUHARA	18.15	24.7	4	5	-5	7	21	-7		
OOITA	18.39	31.6	4	10	-3	7	33	0		
SIMONOSEKI	18.64	28.8	4	17	1	7	44	5		
SIMIDU	18.74	35.3	4	15	-2	7	50	9		
UWAZIMA	18.86	33.5	4	24	5				7	59
SIAN	19.19	330.3	4	24	2					
MATUYAMA	19.43	32.8	4	25	0	7	50	-6		
KOTI	19.63	34.8	4	25	-2	8	4	3	8	19
HIROSIMA	19.70	31.2	4	26	-2	8	3	1	7	4
LINFEN	19.72	338.7	4	30	2					
MUROTO	19.77	36.6	4	30	1	8	10	6	4	52
HAMADA	19.96	29.6	4	26	-5	8	4	-4		
TAKAMATU	20.50	34.3	4	35	-1	8	14	-4	4	50
TOKUSIMA	20.60	35.7	4	37	0	8	25	5		
HIMEJI	20.82	34.6	4	44	4	8	38	13		
SIOMISAKI	20.84	39.0	4	42	2	8	28	3		
MATSUE	20.88	30.6	4	43	3	8	32	6		
TAIYUAN	20.94	342.8	4	43	2					
SUMOTO	20.97	35.7	4	40	-1	8	25	-2		
YONAGO	21.00	31.1	4	42	0	8	37	9		
WAKAYAMA	21.05	36.5	4	32	-10				8	23
KOBE	21.38	35.6	4	48	3	8	40	5	5	13
TOTTORI	21.50	32.6	4	43	-4	8	42	5		
OWASE	21.53	38.4	4	48	1	8	51	13		
OSAKA	21.56	36.3	4	50	3	8	43	5	5	10
NARA	21.75	36.7	4	54	5					
TOYOOKA	21.83	33.5	4	50	0	8	48	5		
KYOTO	21.94	35.9	4	48K	-3	8	46	1		
TORISIMA	22.14	51.8	4	53	0	8	57	8	5	49
TU	22.18	37.7	4	54	1					
KAMEYAMA	22.24	37.4	4	55	1	8	52	1		
PEKING	22.35	351.8	4	56A	1	8	59	6	5	18 5 26 PP
HIKONE	22.41	36.3	4	57	1	8	59	5		
IBUKISAN	22.57	36.3	4	57	0	9	6	9		
TSURUGA	22.59	35.3	4	57	0	9	4	7		
KWANTING	22.63	350.7	4	58	0					
NAGOYA	22.75	37.6	5	0	1	9	30	30		
GIHU	22.80	36.8	4	58	-1	9	3	2		
HAMAMATU	22.89	39.5	5	26	26	9	35	32		
TATUNG	22.95	346.2	5	4	3					
HUKUI	22.99	34.9	5	1	0	9	11	6	6	16
OMAESAKI	23.11	40.4	5	8	5	9	34	27		
HATIDYOZIMA	23.22	45.5	5	21	17					
LANCHOW	23.23	324.5	5	8	4					
SHIZUOKA	23.47	40.0	5	5	-1	9	22	9		
IIDA	23.50	38.2	5	10	4	9	23	10		
KANAZAWA	23.56	34.7	5	9	2					
YINCHUAN	23.87	332.1	5	12	2					
MISIMA	23.91	40.4	5	11	1	9	41	21		
OSIMA	23.95	41.7	5	29	18	9	57	36	6	8
AJIRO	23.95	40.8	5	9	-2	9	54	33		
TOYAMA	23.98	35.2	5	7	-4	9	36	14		
GUAM	23.99	97.0	5	12	1					
KOHU	24.02	39.0	5	26	15	9	41	19		
HUNATU	24.05	39.5	5	22	10	9	55	32		
MATUMOTO	24.09	37.1	5	14	2	9	38	14		
PAOTOW	24.27	340.8	5	15	1					
WAZIMA	24.32	33.7	5	15	1	9	36	8		
MERA	24.33	42.0				9	56	28	5	54
MATUSIRO	24.44	36.9	5	12A	-3	9	41	11	5	48 PP
OIWAKE	24.48	37.7	5	14	-2	9	56	26	6	18
NAGANO	24.52	36.7	5	17	1	9	56	25		
YOKOHAMA	24.54	40.8	5	19	3	10	18	47	5	38
TITIBU	24.56	39.1	5	10	-6	9	37	5		
TOKYO C.M.O.	24.77	40.5				10	16	41	5	33
SINING	24.77	322.6	5	23	4					
MAEBASI	24.83	38.3	5	18	-1	10	1	25	6	10
TAKADA	24.85	36.0	5	22	3					
KUMAGAYA	24.85	39.1	5	22	3	10	7	30		

WUWEI	25.23	325.9	5	26	3						
TUKUBASAN	25.33	39.9	5	19	-5	9	52	7	5 35	6 9	PP
KAKIOKA	25.39	40.0	5	22	-2	10	26	41			
UTUNOMIYA	25.41	39.1	5	23	-2	9	48	2		6 9	
AIKAWA	25.51	34.5	5	26	0	10	12	24			
NIIGATA	25.88	35.7	5	34	5	9	59	5		10 20	
SHIRAKAWA	26.00	38.5	5	47	17	9	42	-14		6 12	
CHANGCHUN	26.22	8.3	5	32A	0						
ONAHAMA	26.30	39.6	5	48	15	10	21	21		6 40	
HUKUSIMA	26.57	37.8	5	35	0					9 35	
SAKATA	27.01	35.2	5	43	4						
VLADIVOSTOK	27.03	19.0	5	39	-1	10	13	1		6 38	PPP
CHANGYEH	27.07	324.8	5	44	4						
SENDAI	27.17	37.4	5	47	6	10	8	-7		6 54	
DJAKARTA	27.33	210.2	5	39K	-3					6 30	SP
SHILLONG	27.41	291.2	5	42K	-1	10	18	0		6 28	PP
ISINOMAKI	27.52	37.7	5	42	-2	10	20	0			
AKITA	27.74	34.3	5	45	-1	10	42	18		9 30	
MIZUSAWA	27.89	36.4	5	44	-3	10	21	-5			
MORIOKA	28.31	35.5	5	51	0	10	36	3			
MIYAKO	28.72	36.5	5	50	-5	10	33	-7			
AOMORI	28.89	33.4	6	1	5						
HATINOHE	29.09	34.7	5	52	-6	11	6	21			
HAKODATE	29.56	32.0	6	2	0						
MORI	29.72	31.4	6	6	2	10	57	1		6 37	
YUMEN	30.01	322.9	6	8	2						
SAPPORO	30.83	31.0	6	11	-3	10	57	-16		7 32	PP
URAKAWA	30.89	33.7	6	12	-2	11	34	20			
OBIHIRO	31.66	33.1	6	21	0						
ASAHIGAWA	31.85	31.1	6	22	-1						
KUSIRO	32.33	34.2	6	27	0	11	55	19			
BOKARO	32.67	286.4	6	29	-1	11	41	-1			
WAKKANAI	32.76	28.4	6	39	8	11	44	1		14 29	
ABASHIRI	32.99	32.7	6	33	0	12	28	41			
NEMURO	33.20	34.8	6	33	-1						
Y.-SAKHLINSK	34.39	27.6	6	44	-1	12	6	-3			
IRKUTSK	36.53	343.5	7	3A	0					8 23	PP
RABAUL	38.38	121.8	7	18	0					9 34	PCP
MADRAS	38.87	268.6	7	23	1	13	22	5		8 56	PP
HYDERABAD	39.77	275.9	7	28K	-2					9 14	PP
DEHRA DUN	40.24	296.0	7	35	1	13	41	3		9 22	PP
COLOMBO	40.82	259.7	7	38	-1	13	48	2			
KODAIKANAL	42.11	265.5	7	54K	5	14	15	10		10 15	PP
LAHORE	43.57	297.2	7	59	-2						
POONA	43.98	278.4	8	3	-1	14	31	-2		9 53	PP
BOMBAY	44.91	279.1	8	13	1	14	48	2		10 0	PP
FRUNSE	45.88	312.9	8	22	2	14	57	-3		10 11	PP
PETROPAVLOVK	46.11	31.3	8	18	-3	15	0	-3		18 45	
WARSAK DAM	46.20	300.2	8	22	0						
MAGADAN	47.13	20.7	8	27	-2	15	17	-1			
STALINABAD	49.12	305.8	8	46	1	15	47	1			
TASHKENT	49.27	309.5	8	47	1	15	50	2		19 16	SS
PERTH	49.73	184.9	8	52	3	15	52	-2		10 49	
KARACHI	49.74	289.0	8	48	-2						
QUETTA	49.79	294.6	8	50K	0	15	57	2		10 50	PP
TIKSI	53.99	3.4	9	18	-3					10 25	PCP
BRISBANE	55.17	144.1	9	28	-2	17	1	-7			
ASHKABAD	57.21	304.0	9	45	0	17	41	6		18 7	PS
SVERDLOVSK	58.69	326.3	9	54	-1	17	50	-5		12 8	PP
RIVERVIEW	59.27	150.2	9	59A	0	17	58	-4		13 30	PPP
MELBOURNE	60.10	157.5	10	4	-1	18	13	0		10 50	
GORIS	66.58	305.9	10	47	0	19	36	2		13 21	PP
SUVA	67.49	119.0				19	53	8			
TIFLIS	67.57	308.4	10	54	0	19	48	2		20 10	PS
MOSCOW	71.28	323.7	11	15	-1	20	26	-3			
APATITY	72.42	336.3	11	22A	-1	20	40	-2		14 11	PP
APIA	74.06	110.5	10	58	-35						
PULKOVO	74.70	328.4	11	34	-2	21	5	-3		11 52	PCP
COLLEGE	74.80	26.2	11	34	-3	21	8	-1		14 44	PP
SIMFEROPOL	74.89	312.8	11	36	-2	21	10	0		14 28	PP
SODANKYLA	75.04	336.4	11	35	-3	21	9	-3		21 24	SKS
KSARA	75.70	301.2	11	43	1	21	21	2		14 31	PP
HONOLULU	76.17	71.8	11	45	0						
KAIMATA	76.36	143.7	11	56	10						
JERUSALEM	76.69	299.3	11	48	0				12 31		
ROXBURGH	77.23	147.0	11	52	1	21	38	2		26 27	SS
KIRUNA	77.25	337.5	11	49A	-2	21	33	-3		16 51	
WELLINGTON	77.53	141.1	12	18	26	21	38	-1		22 6	PS

GEBBIES PASS	77.80	144.0	11	56	2							
IASI	78.88	316.0	12	0	0	21	52	-1			13	22
HAWAII V.OB.	79.21	73.0	12	1	-1							
BACAU	79.48	315.5	12	3	0	21	57	-3			12	28
FOCSANI	79.50	314.6	12	5	2	22	1	1				
TANANARIVE	80.22	246.5	12	7A	0						15	4 PP
LWOW	80.46	319.2	12	7	-1	22	6	-4			15	14 PP
BUCHAREST	80.59	313.6	12	10K	1	22	13	2	12	36	15	19 PP
UPPSALA	80.88	330.1	12	9A	-2	22	11	-3			18	30
CAMPULUNG	81.08	314.6	12	14	2	22	22	6			13	15
WARSAW	81.56	322.1	11	14K	-60	21	19	-62			22	4 PS
SKALSTUGAN	81.86	334.5	12	14	-2							
SITKA	82.77	32.2	12	20	0	22	34	0			22	54
KRAKOW	82.91	320.3	12	20	-1	22	36	1			28	4 SS
SKALNATE PL.	83.00	319.4	12	26	4	22	37	1			15	38 PP
SOFIA	83.01	312.5	12	23	1	22	37	1			15	48 PP
DABROWA	83.25	320.7	12	22	-1							
TIMISOARA	83.49	315.9	12	25	1	22	44	3				
ZABRZE	83.51	320.8	12	24	0							
RACIBORZ	83.95	320.7	12	26K	0	22	43	-2			12	38 PCP
WILKES	84.16	183.9	12	24	-3	22	42	-6				
ATHENS	84.18	307.9	12	26A	-2	22	43	-5				
BELGRADE	84.31	315.2	12	28A	0	22	48	-1			23	17 SKKS
BUDAPEST	84.31	318.0	12	29	1	22	46	-3			23	50 PS
KALOCSA	84.70	317.2	12	29	-1	22	49	-4				
HURBANOVO	84.73	318.6	12	30	0	22	51	-2			28	39 SS
RESOLUTE	85.00	8.8	12	29A	-3	22	54	-2			16	0 PP
COPENHAGEN	85.03	327.2	12	31K	-1	22	55	-1			12	45
BRATISLAVA	85.31	319.2	12	33	0	22	55	-4			28	45 SS
VIENNA-H.	85.73	319.4	12	36	1	23	8	5			22	59 SKS
POTSDAM	86.06	324.1	12	39	2	23	1	-5				
PRAGUE	86.21	321.6	12	38	0	22	58	-10			15	49 PP
BERGEN	86.24	333.2	12	38K	0	23	0	-8			28	39 SS
ZAGREB	86.90	317.3	12	41K	0	23	16	2				
HAMBURG	87.23	325.9	12	43K	0	23	7	-10			24	31 PS
CHEB	87.41	322.1	12	43	0	23	3	-16			24	7 PS
SCORESBY SD.	88.02	348.1	12	46	0	23	36	11			16	13 PP
TRIESTE	88.40	317.7	12	47K	-1	23	28	0			16	19 PP
WITTEVEEN	89.35	326.2	12	53K	0							
STUTTGART	89.85	321.9	12	54K	-1	23	23	-19			16	33 PP
TUBINGEN	90.04	321.7	12	56	0						13	18
REGGIO CALA.	90.10	310.2	12	54	-2	23	39	-5				
MESSINA	90.14	310.3	12	55K	-1	23	47	3			16	30 PP
KARLSRUHE	90.20	322.3	12	58A	1	23	24	-21			16	38 PP
EBINGEN	90.26	321.4	12	57K	0						14	11
BOLOGNA	90.44	317.4	12	51	-7	23	45	-2			16	58 PP
DE BILT	90.50	326.0	12	57	-1	23	26	-21			16	44 PP
CHUR	90.53	320.1	12	58K	0						16	36
STRASBOURG	90.78	322.1	12	59K	0	23	52	2			16	44 PP
ROME	90.79	314.7	13	4	5	23	52	2			16	36 PP
FLORENCE X.	90.81	316.8	12	58	-2	23	54	4			16	58 PP
ZURICH	90.87	320.8	12	59	-1							
ABERDEEN	91.24	332.6				23	53	-1			16	30 PP
BASLE	91.39	321.3	13	2K	0						23	55
PAVIA	91.51	318.7	13	3K	0						23	57 SKKS
NEUCHATEL	92.02	321.0	13	4	-1						23	32
LWIRO	92.06	268.3	13	5K	0						16	51 PP
OROPA	92.06	319.5	13	7	2	24	11	10			17	56
DURHAM	92.42	330.5	13	6	-1	23	36	-28			17	6 PP
EDINBURGH	92.47	331.9				24	4	-1				
BESANCON	92.48	321.6	13	6	-1						16	49 PP
HORSESHOE B.	92.66	35.8	13	8K	0							
VICTORIA	93.03	36.6	13	10K	0							
REYKJAVIK	93.19	344.4	13	11K	1							
PARIS	93.68	324.1	13	13	0	24	17	2			16	59 PP
KEW	93.71	327.3	13	12	-1	24	12	-4			23	44 SKS
CLERMONT-FD.	94.93	321.3	13	18	0	24	30	4			17	9 PP
CORVALLIS	95.15	40.0	13	21A	2						24	50
RATHFARNHAM	95.51	331.0	13	53	32							
CAPE HALLETT	95.94	166.4	13	23	0							
SHASTA	97.73	43.0	13	31K	0						24	28
BARCELONA	97.84	318.0									24	41
HUNGRY HORSE	98.25	33.2	13	34	1	25	23	29			24	6 SKS
MINERAL	98.43	42.9	13	33	-1						16	58
TORTOSA	99.20	318.1									17	54
BERKELEY	99.29	45.3				23	50	-73			13	52
PRETORIA	99.37	246.0	13	38	-1							
ALGIERS UNI.	99.65	313.6	13	35	-5	23	49	-77			17	43 PP

LICK	99.98	45.5	13	42A	1					17	27
RENO	100.03	42.9	13	42	0					24	18
BUTTE	100.50	34.4	13	44	0	25	14	1		17	23 PP
ALICANTE	101.18	316.4	13	48	1	24	28	-51		18	2 PP
FRESNO	101.53	45.2								17	56
BOZEMAN	101.53	33.9	13	50	2						
RELIZANE	101.90	313.8								17	52 PP
KING RANCH	102.35	46.4	13	54	2						
EUREKA	102.51	41.2	13	52	-1					17	57 PP
TOLEDO	102.59	319.4	13	50	-3	25	8	-22		18	7 PP
WOODY	102.75	45.7	13	52	-2					17	58 PP
ISABELLA	103.04	45.6	13	55	0					18	5 PP
ALMERIA	103.33	316.1	13	59	3	25	34	-3		18	15 PP
CHINA LAKE	103.54	45.0	13	58	1						
GRANADA	103.88	316.9	14	23K	24	26	58	77		18	13 PP
PASADENA	104.07	46.7	13	58	-2	24	25	-78		18	18 PP
TAMANRASSET	104.48	300.0	14	1	0	25	53	7		18	8 PP
MALAGA	104.67	316.9				28	30	162	19 24	18	28 PP
RIVERSIDE	104.71	46.5	14	3	1					18	14 PP
BOULDER CITY	105.29	43.6	18	5	777						
PALOMAR	105.42	46.8	14	7	777					18	27 PP
RAPID CITY	106.66	31.2	17	36	777					14	14 P
HERMANUS	108.79	239.0								24	28
TUCSON	110.18	44.6	18	30	4					29	11 PKKP
KIRKLAND LA.	111.81	14.5								17	52
SHAWINIGAN	114.80	9.9	18	27	-8					19	27 PP
LUBBOCK	114.96	38.1	18	38	2						
OTTAWA	115.37	12.4	18	38	1					19	36 PP
BREBEUF	115.68	10.8	18	36	-1						
HALIFAX	117.70	3.1	18	43	2					29	35 PS
WESTON	119.10	9.8	18	44K	0						
MORGANTOWN	119.76	17.9	18	46	1					20	7 PP
PALISADES	119.95	12.3	15	16	-209	24	48	-50		20	12 PP
PHILADELPHIA	120.70	13.7				26	30	50		20	25 PP
WASHINGTON	121.23	15.8	18	48	0					20	14 PP
COLUMBIA	124.57	21.5	18	54	0						
TACUBAYA	126.40	48.2	19	2	4					20	56 PP
MBOUR	127.01	304.5	19	1	2	26	5	5		21	1 PP
VERA CRUZ	128.67	45.9								21	4 PP
SAN JUAN	143.43	10.2	19	25	-4	27	16	43		22	44 PP
ANTIGUA	145.29	2.3	19	33	0						
FORT FRANCE	147.57	2.5	19	38	2						
GALERAZAMBA	147.66	29.4	19	49	12						
BARBADOS	149.19	359.7								19	46 PKP2
TRINIDAD	151.58	3.6								19	51 PKP2
CHINCHINA	152.42	36.0	19	44	0					20	3 PKP2
BOGOTA	153.55	33.6	19	42	-3	26	29	-17			
HUANCAYO	163.88	71.1	20	2	4					24	54 PP
LA PAZ	171.88	81.5	20	6K	3					25	20 PP

JUNE 11 23.H 53.M 56.S EPICENTRE 51.59-176.04 DEPTH= 0.KM

A=-0.62232 B=-0.04305 C= 0.78158 D=-0.0690 E= 0.9976
G=-0.7797 H=-0.0539 K=-0.6238 HT= -6.0

SE= 1.91

	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
PETROPAVLOVK	15.51	285.6	3	41	-1							
COLLEGE	19.70	36.8	4	34	0	8	13	2				
SITKA	24.09	60.9	5	21	3	9	37	3				
Y.-SAKHLINSK	27.04	276.5	5	44	-2							
TIKSI	31.30	330.0	6	23	-1							
HORSESHOE B.	33.04	72.6	6	43	4	12	3	5			9	27
VICTORIA	33.32	74.1	6	43	1							
SEATTLE	34.38	74.9				12	24	5				
TUKUBASAN	34.56	261.0	5	51	-62							
CORVALLIS	35.25	80.2	7	9	10							
MATUSIRO	35.51	263.1	6	59K	-2	12	13	-23			8	16
VLADIVOSTOK	35.59	277.2	7	0	-1	12	36	-2				
BANFF	36.81	66.1	7	13	1						12	26
SHASTA	37.93	85.1	7	23	2							
KYOTO	38.04	263.4	7	23A	1							
UKIAH	38.33	87.7	7	29	5							
RESOLUTE	38.83	24.8	7	28	-1	13	45	18			9	34 PCP
HUNGRY HORSE	38.96	69.5	7	31	1	13	31	2			9	42 PCP

CHANGCHUN	39.26	282.4	7	31	-1					
BERKELEY	39.69	88.6	7	38	2	13	41	1	9	22
SANTA CLARA	40.21	89.0	7	45A	5	13	53	5		
RENO	40.21	84.7	7	42	2				13	16
LICK	40.41	88.7	7	43A	1				13	5
FRESNO	41.91	88.0	7	56	2					
BOZEMAN	42.09	71.5	7	56	1	14	8	-8	8	45
EUREKA	42.62	82.1	8	0	0				9	14 PCP
KING RANCH	42.87	89.6	8	7	5					
WOODY	43.18	88.5	8	4	0					
ISABELLA	43.45	88.3	8	6	-1				8	22
CHINA LAKE	43.89	87.4	8	10	0				8	43
SALT LAKE C.	44.38	77.8	8	14	0					
PASADENA	44.61	89.7	8	17	1	14	54	1	8	32
RIVERSIDE	45.21	89.2	8	20	-1	15	0	-1	8	32
BOULDER CITY	45.51	85.2	8	24	1					
PALOMAR	45.96	89.5	8	28	1				8	56
BARRETT	46.53	90.0	8	31	0	15	20	0		
IRKUTSK	46.72	303.9	8	31	-2					
RAPID CITY	47.59	68.9	8	40	0	15	31	-4	9	9
TATUNG	48.72	285.6	8	49	1					
ZO-SE	49.72	271.0	8	55	-1	16	4	-1		
PAOTOW	50.36	288.1	9	3	2					
TUCSON	50.46	86.0	9	4	2					
NANKING	50.56	273.8	9	0	-2	16	14	-3		
YINCHUAN	53.94	288.4	9	31	3					
LUBBOCK	55.10	78.3	9	37	1					
SIAN	55.16	282.8	9	38	1					
CHIHUAHUA	55.91	85.7							9	7
WUWEI	56.43	290.3	9	44	-2					
SCORESBY SD.	56.81	10.1	9	49	0	17	59	18	10	47 PCP
KIRKLAND LA.	57.53	52.1	9	54A	0					
CHICAGO CGS.	57.90	62.0	10	13	17	17	53	-2		
FAYETTEVILLE	58.00	71.0	9	53	-4	17	57	0		
APATITY	59.13	347.3	10	2	-3					
SODANKYLA	60.14	350.1	10	10	-2				10	56 PCP
CANTON	60.35	270.3	10	11A	-2	18	27	0		
HONG KONG	60.37	269.0	10	12A	-1					
BAGUIO CITY	60.80	259.4	10	13	-3	18	30	-3		
CLEVELAND	61.39	58.6	10	20	0				13	9
OTTAWA	61.58	52.0	10	21A	-1	18	43	0	19	30 PS
SHAWINIGAN	62.18	49.4	10	24A	-2					
SVERDLOVSK	62.32	328.8	10	26	-1	18	54	2		
SEVEN FALLS	62.67	47.9	10	28A	-1					
PITTSBURGH	62.97	58.4	10	26	-5				15	40
MORGANTOWN	63.55	59.1	10	35A	0					
PENNSYLVANIA	63.81	56.9	10	37	1	19	14	3		
SKALSTUGAN	64.98	355.9	10	44	0				11	16 PCP
KUNMING	65.49	279.8	10	45A	-2	19	27	-5	13	11 PP
WASHINGTON	65.61	57.8	10	47	-1				11	20 PCP
PALISADES	65.69	54.3	10	48A	-1	19	36	2	13	16 PP
PHILADELPHIA	65.83	55.8	10	55	5	19	40	4	20	34
WESTON	65.96	51.7	10	50A	0					
TACUBAYA	66.92	87.6							13	17 PP
PULKOVO	66.96	345.9	10	56	-1	19	46	-4		
COLUMBIA	67.06	64.0	10	57	0	19	48	-3	13	40 PP
FRUNSE	67.80	311.5	11	2	0	20	2	2		
HALIFAX	67.85	45.5	11	2A	0	19	57	-3		
UPPSALA	68.36	352.6	11	4	-2	20	5	-1		
MOSCOW	69.46	340.4	11	11	-1					
NAMANGAN	70.64	312.1	11	20	0					
ABERDEEN	71.49	3.5				20	44	1		
SHILLONG	71.64	288.0	11	24A	-2	20	41	-4		
COPENHAGEN	72.86	355.0	11	33A	0	20	48	-11		
DURHAM	73.91	3.3	11	53	14	20	24	-47		
HAMBURG	75.09	356.3	11	49	3					
RATHFARNHAM	75.13	6.3	11	47A	1				27	34 SS
WARSAW	75.55	349.3	11	48	0				15	46
DEHRA DUN	75.83	300.9	11	49	-1	21	32	0		
DE BILT	76.68	359.2	11	56	1	20	57	-44		
LAHORE	76.82	304.3	11	54	-2					
KEW	77.25	2.7	11	57	-1	22	3	16	27	32 SS
JENA	77.65	355.1	12	0	0					
BENSBERG	77.79	357.9	12	2	1					
KRAKOW	77.83	349.5				21	55	1	22	9 SCS
RACIBORZ	77.98	350.7	12	2	0					
PRAGUE	78.32	353.1	12	8	4				13	15
MAKHACH-KALA	78.53	328.9	13	4	59					

KISHINEV	79.47	343.0	12	10	0	22	18	7		
IASI	79.52	343.9	12	10	0					
KARLSRUHE	79.70	357.0	12	11A	0					
STUTTGART	79.92	356.5	12	13A	1	22	30	14	15	22 PP
PARIS	79.97	1.0	12	14	1	22	20	4	15	19 PP
BRATISLAVA	79.98	351.1	12	13	0				14	34
STRASBOURG	80.15	357.4	12	14A	0	22	22	4	22	37 SCS
TUBINGEN	80.16	356.6	12	16	2					
SOTCHI	80.27	334.5	12	15	1					
SIMFEROPOL	80.37	338.8	12	15	0	22	25	4		
TIFLIS	80.51	330.2	12	17	1	22	25	3		
EBINGEN	80.51	356.6	12	17	1					
BASLE	81.21	357.5	12	21	2					
BESANCON	81.52	358.6	12	14	-7					
QUETTA	81.63	308.8	12	22A	1	22	37	3	12	28 PCP
NEUCHATEL	81.75	357.9	12	23	1					
CAMPULUNG	81.82	345.1	12	24	2					
BUCHAREST	82.47	344.2	12	26	0	23	10	28	14	38 PP
TRIESTE	82.77	353.1	12	27	0	22	47	2		
CLERMONT-FD.	83.01	0.6	12	31	2	23	4	16		
PAVIA	83.50	356.3							12	31
BOLOGNA	84.08	354.7							11	51
FLORENCE X.	84.80	354.7	12	37	-1	22	56	-10		
ROME	86.59	353.6				23	14	-9	22	42
POONA	87.51	296.9	12	51	0				15	19
SAN JUAN	87.53	63.3	12	51	0	23	30	-2	29	30
TOLEDO	88.64	6.2	7	50	-306					
MESSINA	90.01	350.9							21	30
KSARA	90.45	333.9	13	4K	-1	23	58	-1	16	36 PP
GRANADA	91.35	6.0	13	13A	4	24	15	8		
ANTIGUA	91.38	60.2	13	11	2					
MALAGA	91.75	6.7	13	10K	-1	24	18	8	16	54 PP
ALGIERS UNI.	92.01	0.7	13	6	-6					
CHINCHINA	92.59	78.8	13	15	0	24	30	12		
MBOUR	111.82	21.9							19	24 PP
LA PAZ	113.87	86.6	18	52	11					
LWIRO	126.59	328.5	19	8	2					
SCOTT BASE	129.61	184.7	19	12	1				22	30 PP
PRETORIA	148.29	315.3	19	47	2					
KIMBERLEY	152.37	317.7	19	59	8					
GRAHAMSTOWN	155.43	309.3							20	23

JUNE 12 8.H 28.M 38.S EPICENTRE 41.18 142.83 DEPTH= 45.KM

DEPTH OF FOCUS= 0.002R

A=-0.60153 B= 0.45605 C= 0.65588 D= 0.6041 E= 0.7969
G=-0.5227 H= 0.3962 K=-0.7549 HT= -2.1

SE= 2.28

	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
URAKAWA	0.97	357.7	0	16K	-2	0	31	0				
HATINOHE	1.18	237.2	0	18K	-2	0	36	0				
AOMORI	1.59	257.7	0	26K	0	0	44	-2				
TOMAKOMAI	1.64	325.5	0	29K	2	0	50	3				
MIYAKO	1.66	203.6	0	25K	-2	0	47	-1				
HAKODATE	1.70	291.5	0	26K	-2	0	47	-2			0	34
OBIHIRO	1.76	8.8	0	30K	1	0	54	4				
MURORAN	1.81	310.2	0	28K	-1	0	51	0				
MORI	1.93	299.3	0	31K	0	0	53	-1				
MORIOKA	1.95	221.2	0	30K	-1	0	52	-3				
KUSIRO	2.15	32.4	0	32K	-2	0	58	-2				
SAPPORO	2.19	330.2	0	34K	-1	1	0	-1			0	44
MIZUSAWA	2.43	213.1	0	38	0	1	8	1				
SUTTSU	2.53	310.7	0	38K	-1	1	11	2				
AKITA	2.54	236.0	0	39K	-1	1	14	4				
ASAHIGAWA	2.62	352.7	0	43	2	1	22	10				
RUMOE	2.91	342.5	0	44	-1	1	20	1				
NEMURO	2.96	42.6	0	43K	-3	1	15	-5			1	3
ISINOMAKI	2.98	203.5	0	45K	-1	1	20	-1			1	3
ABASHIRI	3.03	20.1	0	48A	1	1	16	-6				
SAKATA	3.24	226.3	0	54	5	1	34	7				
SENDAI	3.26	207.8	0	49K	-1	1	27	-1			1	5
YAMAGATA	3.50	214.0	0	54	1	1	42	8				
HUKUSIMA	3.88	208.9	0	57K	-1	1	47	4				

WAKKANAI	4.32	349.2	1	9	4	1	57	2	1 22
NIIGATA	4.37	223.2	1	12	7	2	8	12	
ONAHAMA	4.48	200.2	1	3K	-4	2	0	1	1 24
SHIRAKAWA	4.53	207.5	1	6	-2	2	2	2	
AIKAWA	4.74	229.8	1	11	0	2	5	0	
MITO	5.13	201.8	1	14K	-2	2	18	3	
UTUNOMIYA	5.17	207.5	1	16	-1	2	14	-2	1 37
KAKIOKA	5.36	203.6	1	21K	2	2	41	20	
TUKUBASAN	5.39	204.2	1	16	-4	2	42	21	
TAKADA	5.41	222.7	1	22	2	2	11	-11	
KURILSK	5.47	40.6	1	19	-2				
MAEBASI	5.60	212.8	1	22K	-1	2	33	6	
TYOSI	5.67	196.6	1	22	-2	2	29	1	2 57
KUMAGAYA	5.70	209.4	1	23K	-1	2	54	25	
NAGANO	5.77	220.2	1	28K	3	2	32	1	
Y.-SAKHLINSK	5.77	359.2	1	27	2	2	32	1	
MATUSIRO	5.86	219.4	1	26K	0	2	31	-2	1 36
OIWAKE	5.88	216.0	1	27	0	2	59	25	
WAZIMA	5.96	232.4	1	28	0	2	40	4	
TITIBU	5.96	210.7	1	26	-2	2	38	2	
TOKYO C.M.O.	6.00	204.8	1	26A	-2	2	34	-3	
MATUMOTO	6.22	219.3	1	32	1	2	51	9	
YOKOHAMA	6.26	204.6	1	32	0	2	7	-36	1 44
TOYAMA	6.27	226.3	1	32	0	2	41	-2	
KOHU	6.47	212.5	1	34	-1	2	56	8	2 5
HUNATU	6.51	210.7	1	38K	3	2	53	4	
TAKAYAMA	6.65	222.8	1	40	3				2 39
MERA	6.68	201.7	1	34	-4	2	53	-1	
KANAZAWA	6.69	228.1	1	42	4				
MISIMA	6.78	208.1	1	35	-4	2	54	-2	1 45
AJIRO	6.79	206.9	1	37	-2	3	6	10	
IIDA	6.88	216.4	1	42	1	3	20	22	
OSIMA	6.95	204.2	1	37	-5				
SHIZUOKA	7.11	210.8	1	45	1	3	12	8	
HUKUI	7.25	227.2	1	48	2	3	13	5	
GIHU	7.48	221.5	1	49	0	3	22	9	2 15
OMAESAKI	7.51	210.5	1	54	5	3	33	19	2 4
NAGOYA	7.57	219.5	1	51	1	3	27	11	
TSURUGA	7.66	226.0	1	49	-2	3	18	0	
IBUKISAN	7.70	223.3	1	51	-1				3 31
HIKONE	7.85	223.4	1	55K	1	3	47	25	4 58
UGLEGORSK	7.92	356.4	1	56	1				4 16
KAMEYAMA	8.07	220.5	1	59	2	3	44	16	
MAIZURU	8.12	227.8	1	59	1				
TU	8.14	219.8	2	1	3	3	48	18	
KYOTO	8.31	224.6	2	2K	2	4	3	29	
VLADIVOSTOK	8.35	287.0	2	2	1	3	41	6	2 28
HATIOYOZIMA	8.41	197.5	2	28	26				
TOYOOKA	8.45	230.7	2	2	0	3	40	3	4 46
NARA	8.52	222.7	2	6	3				
OSAKA	8.70	223.8	2	9K	3	4	0	16	3 2
TOTTORI	8.82	232.8	2	6	-1				
OWASE	8.83	218.7	2	10	2	4	4	17	
KOBE	8.86	225.4	2	8	0	3	51	3	4 11
SAIGO	8.94	239.3	2	15	6				
WAKAYAMA	9.21	223.6	2	2	-11	3	47	-9	
SUMOTO	9.28	225.3	2	15	1	4	4	6	
YONAGO	9.40	235.4	2	20	5	4	4	3	
HIMEJI	9.43	227.7	2	11	-5				5 5
SIOMISAKI	9.54	218.3	2	18	1	4	26	22	
MATSUE	9.57	236.4	2	17	-1				
OKAYAMA	9.57	230.2	2	22	4	4	15	10	
TOKUSIMA	9.65	225.3	2	18	-1	4	12	5	
TAKAMATU	9.75	228.2	2	19	-1	4	15	5	
MUROTO	10.49	223.8	2	33	3				5 16
HAMADA	10.55	237.0	2	32	1	4	57	28	3 32
KOTI	10.61	227.1	2	23	-9	4	45	14	3 8
HIROSIMA	10.67	233.8	2	30	-3	4	34	2	2 58
MATUYAMA	10.85	230.7	2	36	1	4	42	6	3 26
UWAZIMA	11.40	229.2	2	50	7				5 56
SIMIDU	11.50	226.4	2	47	3	4	48	-4	5 35
SIMONOSEKI	11.88	236.4	2	50	1				
OOITA	11.94	232.0	2	49K	-1	5	12	9	6 35
HUKUOKA	12.44	236.4	2	58K	1	5	18	3	
ASOSAN	12.50	232.4	3	4	6				6 8
SAGA	12.73	235.6	3	9	8				7 32
KUMAMOTO	12.78	233.1	3	2	1	5	52	29	
ITUHARA	12.79	241.3	3	1	0				

MIYAZAKI	13.01	228.4	3	4	0	5	54	26			
UNZENDAKE	13.12	234.0	3	7	1	6	10	39			
CHANGCHUN	13.20	287.4	3	7	0				3	27	PPP
NAGASAKI	13.34	234.9	3	13	4						
KAGOSIMA	13.76	229.7	3	18	4	6	14	28	3	41	
TOMIE	14.11	237.2	3	20K	1				4	38	
YAKUSIMA	14.64	226.9	3	26	0						
PETROPAVLOVK	16.04	36.5	3	49	5	6	54	14	4	13	PPP
MAGADAN	19.06	12.5	4	18	-3	7	48	0			
KLYUCHI	19.13	31.6	4	20	-2				5	10	
ZO-SE	20.13	246.9	4	31	-1	8	14	3	4	53	PP
PEKING	20.25	275.6	4	31	-3	8	13	-1			
NANKING	21.28	252.3	4	41	-3	8	30	-3	4	50	*SP
TATUNG	22.41	277.0	4	49	-7						
TAIPEI	23.95	234.3	5	9	-2	9	36	15			
LINFEN	24.90	268.5	5	31	11						
SIAN	27.58	266.5	5	48	3						
YINCHUAN	28.08	276.6	5	41	-8						
IRKUTSK	28.31	306.2	5	50A	-1	10	33	0	12	4	SS
HONG KONG	30.59	240.8	6	11A	0				6	22	
CANTON	30.64	243.0	6	12	0	11	13	3	6	19	*SP
WUWEI	30.97	277.4	6	16	1						
BAGUIO CITY	31.27	224.4	6	22	5	10	44	-36			
TIKSI	31.32	351.5	6	15	-3	11	21	0	7	22	PP
KUNMING	36.92	256.8	7	5A	-1	12	49	2			
SHILLONG	44.69	266.0	8	11A	1	14	40	-3	8	32	PP
COLLEGE	45.03	34.4	8	11	-2	14	49	1	9	32	PCP
RABAUL	45.96	167.0	8	20	0				10	19	PP
CHATRA	47.55	270.6	8	33	0	15	44	20			
FRUNSE	49.44	296.0	8	46A	-1	15	53	3	10	45	PP
DEHRA DUN	52.59	280.0	9	21	10				16	41	
SVERDLOVSK	52.83	316.9	9	13	0	16	39	2	16	59	PS
HONOLULU	53.22	93.0	9	15	-1						
TASHKENT	53.67	296.3	9	16	-3	16	44	-4	17	3	PS
LAHORE	54.71	283.3	9	25	-2	17	3	1	10	27	PCP
STALINABAD	55.28	293.5	9	29	-2	17	10	0			
DJAKARTA	57.52	223.9				17	36	-3			
RESOLUTE	58.32	15.3	9	50A	-2	17	50	0	21	36	SS
APATITY	59.39	335.1	10	2	2	18	10	6	19	42	SCS
QUETTA	60.82	285.9	10	9A	-1	18	23	1	12	23	PP
SODANKYLA	61.59	336.7	10	12	-3				10	39	
POONA	62.35	271.0	10	18	-2				10	25	
HORSESHOE B.	62.42	47.4	10	20A	-1						
ASHKABAD	62.68	297.7	10	22	0	18	50	4			
BOMBAY	62.91	272.0							18	51	
KIRUNA	63.05	338.9	10	23A	-2	18	50	0	10	48	
KARACHI	63.18	281.8	10	25	0	18	53	1			
SEATTLE	63.90	48.6	10	31	1						
MOSCOW	64.60	322.8	10	34	-1	19	11	1	12	55	PP
CORVALLIS	65.01	51.9	10	38A	1						
PULKOVO	65.20	329.0	10	38	-1	19	18	1	12	59	PP
BANFF	65.56	42.6	10	40A	-1						
SHASTA	67.78	54.9	10	55A	0						
HUNGRY HORSE	68.03	44.5	10	57	1				39	7	PKPPKP
SCORESBY SD.	68.11	354.5	10	58	1	19	57	5			
UKIAH	68.17	56.7	10	58	1						
SKALSTUGAN	68.47	338.6	10	57A	-2						
MINERAL	68.47	54.9	11	0A	1						
BRISBANE	68.96	170.3	11	2	0	20	7	5			
TIFLIS	69.15	307.5	11	3	0	20	9	5	11	24	PCP
BERKELEY	69.52	57.3	11	6A	0				11	29	
GORIS	69.55	304.9	11	6	0	20	12	3			
UPPSALA	69.73	333.9	11	5A	-2	20	9	-2			
RENO	70.05	54.7	11	10A	1						
LICK	70.23	57.5	11	10A	0						
BUTTE	70.25	45.8	11	11	1	20	35	18	13	35	PP
BOZEMAN	71.30	45.3	11	16	0				39	2	PKPPKP
FRESNO	71.75	57.0	11	19A	0						
EUREKA	72.43	52.8	11	23	0						
KING RANCH	72.67	58.1	11	25A	0			11	40		
BERGEN	72.97	339.5				20	41	-8			
WOODY	73.01	57.4	11	21	-6				14	6	PP
SIMFEROPOL	73.15	315.4	11	27A	0	20	54	3	14	14	PP
ISABELLA	73.28	57.2	11	27A	-1				14	7	PP
CHINA LAKE	73.73	56.6	11	31A	0						
SALT LAKE C.	74.03	49.6	11	32	-1						
WARSAW	74.19	327.1	11	33	0	21	6	4	21	25	PS
PASADENA	74.42	58.3	11	35A	0	21	20	15	26	22	SS

LWOW	74.68	324.0	11	36	0	21	10	2		14	22 PP
COPENHAGEN	74.72	333.4	11	36A	-1	21	9	1		11	47 PCP
IASI	74.93	320.3	11	38	0	21	13	3			
RIVERSIDE	75.03	57.9	11	37A	-1				11 52	12	1 *SP
RIVERVIEW	75.03	172.8	11	39A	1	21	20	8		22	15 PPS
BOULDER CITY	75.36	55.0	11	42	2						
PALOMAR	75.77	58.2	11	43A	0				11 56		
KRAKOW	76.29	326.1	11	35	-10	21	28	3		14	28 PP
BARRETT	76.32	58.6	11	45	-1				12 0		
HAYFIELD	76.32	57.2	11	46A	0				11 59		
RAPID CITY	76.49	42.6	11	47	0						
RACIBORZ	76.98	327.0	11	50	1	21	35	2		11	58 PCP
POTSDAM	77.16	331.1	11	50	0	21	38	3			
HAMBURG	77.28	333.4	11	52	1	21	40	4			
BUCHAREST	77.63	319.1	11	54	1	21	46	6		12	56
PRAGUE	78.50	329.0	11	58	0	21	54	5		14	49 PP
BUDAPEST	78.62	324.9	12	1	3						
MELBOURNE	78.65	178.3	12	0A	1					12	12
HURBANOVO	78.69	325.6				21	56	5		26	7 SS
JENA	78.88	331.0	11	59	-1	22	2	9			
BRATISLAVA	78.92	326.4	12	0	0	21	59	5		14	56 PP
TIMISOARA	78.98	322.6	12	29	29	22	1	7		22	19 PS
WITTEVEEN	79.00	334.6								12	1
CHEB	79.28	330.1	12	1	-1					15	5 PP
KSARA	79.62	305.9	12	5K	1	22	6	5	12 36	15	5 PP
DURHAM	79.70	340.0	12	4	0	22	30	28		15	18
BELGRADE	80.04	322.4	12	5A	-1	22	11	6		15	12 PP
DE BILT	80.09	335.1	12	6	0	22	12	6			
SOFIA	80.26	319.4	12	8	1						
TUCSON	80.31	55.6	12	8	0	22	37	29		12	39
ZAGREB	81.25	325.5	12	22	10						
JERUSALEM	81.42	304.8	11	56	-17						
STUTTGART	81.54	331.0	12	14A	0	22	33	12		12	23 PCP
KARLSRUHE	81.62	331.6	12	14A	0	22	38	16		21	50
TUBINGEN	81.78	331.0	12	16	1						
EBINGEN	82.11	330.8	12	17A	0					12	27 PCP
RATHFARNHAM	82.20	341.9	12	18A	1	22	31	3			
STRASBOURG	82.21	331.7	12	18A	1	22	32	4		31	10 SSS
KEW	82.31	337.8	12	19	1	22	32	3		27	52 SS
TRIESTE	82.32	326.7	12	17	-1	22	31	2		15	30 PP
BASLE	83.17	331.3	12	27	5					21	51
KIRKLAND LA.	83.30	27.3	12	22A	-1						
PARIS	83.80	334.9	12	26	0					12	32 PCP
NEUCHATEL	83.84	331.4	12	26	0						
BESANCON	83.98	332.1	12	26	0					15	48 PP
LUBBOCK	84.75	49.3	12	32	2						
JERSEY	84.87	337.8	13	10	39	22	53	-1			
FLORENCE X.	84.88	327.0	12	31	0	23	1	6			
CLERMONT-FD.	86.25	333.0	12	39	1	23	25	17			
SHAWINIGAN	87.07	23.7	12	42A	0						
SEVEN FALLS	87.13	22.3	12	41A	-1						
OTTAWA	87.16	26.1	12	42A	0						
MESSINA	87.50	321.1	12	48	4	23	18	-2		16	45
CLEVELAND	88.44	31.7	12	49	1						
PENNSYLVANIA	90.43	29.7	13	0	2	23	40	-7			
MORGANTOWN	90.64	31.6	12	59	0					16	37 PP
WESTON	91.28	24.6	13	3A	1						
HALIFAX	91.35	18.5	13	2A	0						
PALISADES	91.66	26.9	13	2A	-1	22	40	-78		31	0 SS
WASHINGTON	92.39	30.1	13	7	0					16	50 PP
TOLEDO	93.88	335.1	13	14K	0	24	35	18		13	24
ALICANTE	94.05	331.9	13	12	-2	24	16	-2		16	56 PP
COLUMBIA	95.00	35.3	13	19	0						
GRANADA	96.18	333.6								17	20 PP
MALAGA	96.87	334.0								17	24 PP
TAMANRASSET	105.05	319.6	14	5	777	25	5	-44		18	13 PP
TANANARIVE	106.09	258.8								18	51 PP
LWIRO	109.44	284.6								18	40
SAN JUAN	114.94	30.5	19	33	57					29	30
SCOTT BASE	119.66	174.3	18	46	1						
PRETORIA	124.57	264.5	18	56K	2						
KIMBERLEY	128.72	263.3	19	4A	2						
HUANCAYO	135.78	60.1	19	10	-6					22	29 PP
LA PAZ	143.72	56.5	19	31	1						

JUNE 13 10.H 40.M 41.S EPICENTRE 51.51-175.14 DEPTH= 0.KM

A=-0.62268 B=-0.05294 C= 0.78068 D=-0.0847 E= 0.9964
G=-0.7779 H=-0.0661 K=-0.6249 HT= -6.0

SE= 2.44

	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	
KLYUCHI	14.95	298.2	3	36	3								
PETROPAVLOVK	16.08	286.1	3	45	-2						3	50	PP
COLLEGE	19.44	36.1	4	27A	-2	7	59	-3					
MAGADAN	20.69	306.1	4	40	-2						7	50	
SITKA	23.64	60.8	5	14K	3	9	31	9					
NEMURO	27.53	268.3	5	46	-2	10	22	-5			8	33	
Y.-SAKHLINSK	27.61	277.3	5	39	-10	10	23	-5					
ABASHIRI	27.99	270.6	5	52	0								
KUSIRO	28.45	268.6	5	56	0	10	43	1					
WAKKANAI	28.94	275.1	6	3	2	11	1	12					
OBIHIRO	29.23	269.5	6	3	0								
URAKAWA	29.90	268.5	6	9	0	11	7	2					
SAPPORO	30.31	271.2	6	7	-6	11	6	-5			7	4	PP
TOMAKOMAI	30.45	270.1	6	41	27						7	30	
SUTTSU	31.15	271.6	6	19	-1						7	38	
MORI	31.31	270.2	6	20	-2	11	26	-1			7	19	
HAKODATE	31.39	269.5	6	21	-2	11	35	7					
HATINOHE	31.59	266.9	6	21	-3	11	34	3					
ALBERNI	31.65	73.9	6	29	4								
TIKSI	31.65	329.9	6	23	-2						16	52	SCS
MIYAKO	31.83	265.2	6	24	-2	11	33	-2					
AOMORI	31.89	268.0	6	29	2	11	39	3					
MORIOKA	32.29	265.9	6	30	0	11	37	-5					
HORSESHOE B.	32.53	72.9	6	34A	2	11	50	4					
MIZUSAWA	32.66	265.1	6	33	-1	11	39	-9					
VICTORIA	32.80	74.4	6	35A	0	11	48	-2			12	40	
AKITA	32.95	266.9	6	35A	-1	11	55	2			7	1	
HONOLULU	32.96	149.8	6	35A	-1	11	57	4					
ISINOMAKI	32.96	263.9	6	21	-15	11	53	0					
SENDAI	33.32	264.1	6	38	-1	11	53	-5			7	51	
SAKATA	33.61	265.9	6	45	3								
YAMAGATA	33.68	264.5	6	42	0	12	0	-4					
SEATTLE	33.86	75.3	6	47	3	12	15	8			8	14	
HUKUSIMA	33.91	263.7	6	45	1								
ONAHAMA	34.14	262.2	6	54	8	12	32	21			8	32	
SHIRAKAWA	34.46	263.0	6	49	0	12	21	5			7	5	
NIIGATA	34.69	265.2	6	54	3						13	3	
CORVALLIS	34.71	80.7	6	54	3	12	30	10					
MITO	34.77	261.8	6	51	-1								
UTUNOMIYA	35.04	262.6	6	51	-3	12	21	-4			7	27	
KAKIOKA	35.05	261.9	6	53	-1	12	30	5					
TUKUBASAN	35.11	261.9	6	53	-2	12	25	-1					
KUMAGAYA	35.60	262.5	7	0	1	12	43	9			8	39	
MAEBASI	35.63	263.1	6	58A	-1	12	47	13			8	14	PP
HAWAII V.OB.	35.63	146.6	6	57	-2	12	40	6					
TOKYO C.M.O.	35.67	261.5	7	1	1	13	12	37			7	55	
TAKADA	35.69	264.7	6	57	-3								
YOKOHAMA	35.89	261.3	7	2	1	13	0	22			9	0	
OIWAKE	36.00	263.5	6	59	-3	12	54	14			8	21	PP
NAGANO	36.00	264.2	7	2	0	12	43	3			7	40	
MATUSIRO	36.06	264.0	6	58A	-5	12	31	-10			8	17	
MERA	36.12	260.5	7	4	1	13	0	18					
VLADIVOSTOK	36.16	277.9	7	2	-2	12	36	-6					
ARCATA	36.22	86.6				12	51	8					
BANFF	36.33	66.4	7	5A	0	12	54	9			9	31	
WAZIMA	36.36	266.3	7	5	0								
HUNATU	36.39	262.2	7	5	-1	13	2	16			17	21	SCS
MATUMOTO	36.41	263.9	7	6	0	12	44	-2					
KOHU	36.43	262.5	7	5	-1	12	47	1			17	19	SCS
MISIMA	36.53	261.6	7	5A	-2	12	47	-1			17	23	SCS
TOYAMA	36.60	265.1	7	6	-1	13	2	13					
IIDA	36.96	263.1	7	12	2	12	55	0			8	16	
SHIZUOKA	36.97	261.9	7	10A	0	12	54	-1			10	1	
KANAZAWA	37.05	265.4	7	15	4								
OMAESAKI	37.32	261.6	7	19	6								
SHASTA	37.37	85.6	7	15A	1	13	18	17			15	59	
HUKUI	37.59	265.1	7	17	1	13	11	7					
GIHU	37.70	263.8	7	15	-2	12	59	-7					
NAGOYA	37.72	263.4	7	17	0								
UKIAH	37.77	88.3	7	22K	5	13	13	6			9	33	PCP
IBUKISAN	37.95	264.2	7	29	10								

MINERAL	38.07	85.5	7	20A	0	13	29	18		7	42
HIKONE	38.11	264.1	7	20	0	13	19	7			
TU	38.29	263.2	7	22	0						
HUNGRY HORSE	38.46	69.9	7	23A	0	13	19	2		9	37 PCP
KYOTO	38.59	264.3	7	25A	1	13	20	1			
RESOLUTE	38.67	24.8	7	23	-2	13	13	-8		8	55 PP
NARA	38.75	263.8	7	26	1						
TOYOOKA	38.83	265.7	7	23	-3	13	21	-2		9	3
OSAKA	38.96	264.0	7	34	7	13	22	-3		11	27
BERKELEY	39.13	89.2	7	28A	-1	13	25	-3		10	7 PP
KOBE	39.16	264.3	7	27	-2	13	30	2			
SUMOTO	39.56	264.2	7	29	-3	13	33	-1			
SIOMISAKI	39.60	262.4	7	32	-1	13	34	-1			
SANTA CLARA	39.65	89.6	7	47	14	13	39	4			
RENO	39.66	85.3	7	33A	0	13	27	-8			
HIMEJI	39.76	264.8	7	33	-1						
YONAGO	39.81	266.8	7	37	3	13	47	9			
CHANGCHUN	39.83	283.1	7	43	9						
TOKUSIMA	39.93	264.1	7	35	0	13	38	-2			
MATSUE	39.97	267.0	7	35	-1	13	34	-6			
TAKAMATU	40.10	264.9	7	36	-1	13	33	-9			
BUTTE	40.49	72.3	7	41K	1	13	30	-18		9	17 PP
SASKATOON	40.90	61.2	7	32	-11	13	36	-18			
KOTI	40.93	264.4	7	44	1	13	58	4		9	30 PP
HAMADA	40.95	267.2	7	43	-1	13	50	-5			
HIROSIMA	41.07	266.3	7	44A	-1	13	55	-2	7	55	
FRESNO	41.35	88.6	7	48	1						
BOZEMAN	41.58	71.9	7	49A	0	14	3	-1			
SIMIDU	41.79	264.0	7	47	-4	14	18	11		11	13
EUREKA	42.08	82.6	7	52A	-1	13	28	-43		8	12
SIMONOSEKI	42.28	267.0	7	55	0	14	17	2			
KING RANCH	42.30	90.2	7	55	0					13	38 SCP
OOITA	42.33	265.7	7	55A	0	14	19	4			
HUKUOKA	42.85	267.1	7	59A	0	14	24	1		8	22
ISABELLA	42.89	88.9	7	59	0					14	26
ASOSAN	42.89	265.8	7	59	-1	14	27	4		10	9
SAGA	43.14	266.8	8	4	2					8	52
ITUHARA	43.15	268.6	7	58	-4						
KUMAMOTO	43.18	266.0	8	2	0	14	27	-1			
CHINA LAKE	43.33	88.0	8	3A	0					13	43 SCP
MIYAZAKI	43.34	264.4	8	5	2	14	33	3			
NAGASAKI	43.75	266.6	8	7	0						
SALT LAKE C.	43.85	78.3	8	7A	0	14	38	1		9	31 PCP
PASADENA	44.05	90.3	8	8A	-1	14	31	-9		18	7 SCS
KAGOSIMA	44.12	264.8	8	12	3	15	0	19		9	33
TOMIE	44.52	267.4	8	12A	-1	14	47	0			
RIVERSIDE	44.65	89.9	8	13A	-1					8	19
YAKUSIMA	44.92	263.7	8	17	1						
BOULDER CITY	44.95	85.8	8	16A	0	15	13	20			
PALOMAR	45.40	90.1	8	19A	-1					14	11
HAYFIELD	45.93	88.8	8	23	-1					13	52 SCP
BARRETT	45.96	90.7	8	23A	-1	15	10	2		13	52 SCP
RAPID CITY	47.09	69.3	8	32K	-1	15	24	0		39	45 PKPPKP
IRKUTSK	47.23	304.3	8	32A	-2					19	7 SS
PEKING	47.58	284.3	8	38A	1	15	30	-1			
KWANTING	47.80	284.9	8	38	-1						
TATUNG	49.28	286.2	8	50	0						
GUAM	49.78	235.2	8	27	-27						
TUCSON	49.90	86.6	8	54A	-1	16	6	3		19	35
ZO-SE	50.29	271.8	8	57	-1	16	8	-1		10	52 PP
PAOTOW	50.92	288.7	9	3	0						
NANKING	51.13	274.5	9	2A	-2						
TAIYUAN	51.16	284.3	9	6	2						
LINFEN	52.91	283.4	9	21	3						
TAIPEI	54.35	266.1	9	35	6	17	15	11			
ILAN	54.39	265.7								9	50
YINCHUAN	54.50	289.1	9	32	3						
LUBBOCK	54.56	78.9	9	32	2	17	11	4		19	19 SCS
HWALIEN	55.06	265.2	9	35	2						
CHIHUAHUA	55.36	86.3	9	39	3					20	47 SS
SIAN	55.73	283.5	9	38	0						
HSINKONG	55.85	264.7	9	41	1	17	41	17			
SCORESBY SD.	56.79	10.4	9	45	-1	17	37	0		21	40 SS
WUWEI	56.99	290.9	9	46	-1						
KIRKLAND LA.	57.14	52.6	9	47A	-1	17	40	-1		11	3
TIENSHUI	57.42	285.9	9	50	0						
CHICAGO CGS.	57.44	62.5	9	43	-7	17	35	-10			
FAYETTEVILLE	57.49	71.5	9	50	-1	17	40	-6		26	24
CHANGYEH	57.51	293.1	9	56	5						

LANCHOW	57.55	288.5	9	52	1					
FLORISSANT	57.88	66.7	9	51A	-3	17	49	-2	10 9	
ST. LOUIS 1	58.07	66.8	9	51A	-4	17	48	-6	10 10	
SINING	58.38	290.3	9	58	1					
APATITY	59.34	347.7	10	6K	2	18	14	4	12 27	PP
IVIGTUT	59.93	26.6				18	21	3	22 5	SS
SODANKYLA	60.31	350.5	9	41	-29	18	19	-4	30 58	SCS
KIRUNA	60.41	353.3	10	8A	-3	18	22	-2	12 28	PP
CANTON	60.91	271.1	10	12	-3	18	29	-1		
HONG KONG	60.93	269.8	10	13A	-2					
CLEVELAND	60.95	59.1	10	14	-1	18	30	-1		
OTTAWA	61.19	52.5	10	15A	-1	18	35	1	14 28	PPP
BAGUIO CITY	61.34	260.2	10	14	-3	18	36	0		
SHAWINIGAN	61.80	49.9	10	19A	-2	18	40	-2	12 38	PP
RABAUL	62.11	217.5	10	19	-4					
SEVEN FALLS	62.30	48.4	10	22A	-2	18	46	-2	14 25	PPP
MANILA	62.51	258.5	10	27	2	18	57	7		
PITTSBURGH	62.53	58.9	10	28	3	18	51	0	10 30	
SVERDLOVSK	62.68	329.2	10	26	0	18	49	-4	12 44	PP
REYKJAVIK	62.82	12.8	10	30	3					
MORGANTOWN	63.11	59.6	10	28	-1	18	50	-8		
PENNSYLVANIA	63.38	57.4	10	31	0	19	7	6		
SKALSTUGAN	65.10	356.3	10	40	-2				15 18	PCS
WASHINGTON	65.18	58.3	10	43A	0	19	29	5	23 13	SS
PALISADES	65.28	54.8	10	42A	-1	19	27	2	13 7	PP
PHILADELPHIA	65.41	56.4	10	44	0	19	25	-1	24 34	SS
FORDHAM	65.41	54.9	10	43	-1	19	26	-1		
WESTON	65.56	52.2	10	45A	0	19	37	9	24 17	
KUNMING	66.06	280.5	10	46A	-2	19	36	2	13 46	PP
TACUBAYA	66.36	88.3	10	49K	-1	19	29	-9	11 18	PCP
COLUMBIA	66.59	64.6	10	51A	-1	19	39	-2	24 53	
PULKOVO	67.18	346.3	10	54	-1	19	46	-2	13 18	PP
HELSINKI	67.50	349.3	10	48	-9	19	48	-4		
HALIFAX	67.50	46.0	10	56A	-2	19	49	-3		
FRUNSE	68.28	312.1	11	1A	-1	20	2	1	11 26	PCP
VERA CRUZ	68.42	86.1	10	59	-4	19	45	-18	20 43	
BERGEN	68.44	359.8	11	6	3	20	4	1	24 26	SS
UPPSALA	68.52	353.1	11	2A	-2	20	1	-3	13 30	PP
SUVA	69.59	186.5				20	12	-5	20 45	PS
MOSCOW	69.73	340.9	11	9	-2	20	12	-6	13 46	PP
MERIDA	71.15	80.0	11	19	-1	20	31	-4		
ABERDEEN	71.53	4.0	11	29	7	20	54	15	15 49	PP
TASHKENT	71.93	314.4	11	24	-1	20	46	2	11 43	PCP
SHILLONG	72.20	288.7	11	21	-5	20	40	-7	14 6	PP
EDINBURGH	72.73	4.7				20	55	2		
COPENHAGEN	72.99	355.5	11	30A	-1	20	58	2	21 41	SKS
DURHAM	73.95	3.9	11	39	3	21	9	2	14 38	PP
STALINABAD	74.39	313.0	11	38	-1	21	12	0		
RATHFARNHAM	75.14	6.9	11	44A	1	21	22	2	26 32	SS
HAMBURG	75.20	356.8	11	44	0	21	24	3	22 8	PPS
NOUMEA	75.25	197.6	11	49	5					
WARSAW	75.74	349.8	11	45A	-2	21	41	14	14 43	PP
WITTEVEEN	76.03	358.9	11	50	-1					
POTSDAM	76.25	354.8	11	50	0	21	35	3	26 55	SS
DEHRA DUN	76.36	301.6	11	50	0	21	30	-3	14 42	PP
BERMUDA	76.63	54.6	11	55A	3	21	42	6	14 49	PP
WARSAK DAM	76.76	308.4	11	52	-1					
DE BILT	76.76	359.8	11	53A	0	21	41	3	27 1	SS
BOKARO	77.08	291.9	11	54A	0	21	41	0	12 3	PCP
KEW	77.30	3.3	11	55A	-1	21	45	1	27 16	SS
LAHORE	77.33	305.0	11	55	-1					
LWOW	77.73	347.4	11	57	-1	21	43	-5	22 13	SCS
JENA	77.78	355.7	11	56	-2	21	49	0	15 2	PP
BENSBERG	77.89	358.5	11	59	0	21	53	3		
KRAKOW	78.01	350.1	11	59	0	21	44	-7	15 5	PP
RACIBORZ	78.15	351.3	11	54	-6	21	38	-15	12 4	PCP
PRAGUE	78.47	353.7	12	3K	1	21	56	0	15 11	PP
CHEB	78.58	355.1	12	4	1	21	54	-3	14 47	PP
SKALNATE PL.	78.83	349.8	12	6	2				27 25	SS
ASHKABAD	79.39	319.7	12	6	-1	22	10	4	15 5	PP
JERSEY	79.51	4.6				22	10	3	15 22	PP
IASI	79.75	344.5	12	7	-2	22	14	4	13 6	
KARLSRUHE	79.81	357.6	12	12	3	22	14	4	27 13	SS
STUTTGART	80.03	357.1	12	10	0	22	14	1	15 26	PP
PARIS	80.04	1.6	12	9	-1	22	23	10	15 15	PP
BRATISLAVA	80.15	351.7	12	12	1	22	10	-4	15 23	PP
STRASBOURG	80.26	358.0	12	13A	1	22	17	2	15 19	PP
TUBINGEN	80.27	357.2	12	12	0					

HURBANOVO	80.34	350.9	12	19	7	22	25	9	15	30	PP
BACAU	80.47	344.8	12	16	3	22	24	7			
EBINGEN	80.63	357.2	12	11	-3				15	31	PP
BUDAPEST	80.64	350.3	12	13	-1	22	31	12	22	41	SCS
SIMFEROPOL	80.65	339.4	12	14	0	22	20	1	15	20	PP
TIFLIS	80.86	330.9	12	15	0				22	24	SCS
RAVENSBURG	81.00	356.8	12	13	-3						
FOCSANI	81.27	344.4	12	24	7	22	34	8	14	31	
BASLE	81.31	358.1	12	17	0				22	5	
ZURICH	81.45	357.4	12	19	1	22	30	3			
KALOCSA	81.59	350.2	12	19	0				15	0	PP
BESANCON	81.61	359.2	12	21	2	22	35	6	15	12	PP
NEUCHATEL	81.85	358.6	12	20	0	22	32	0			
CHUR	81.94	356.8	12	21	1	22	33	1			
CAMPULUNG	82.04	345.8	12	25	4	22	39	6	12	48	
TIMISOARA	82.10	348.5	12	25	4	22	40	6	23	14	PS
QUETTA	82.11	309.4	12	22A	1	22	36	2	12	28	PCP
PORT BLAIR	82.30	278.9	12	28	6	22	46	10			
GORIS	82.40	328.9	12	23	0				22	41	SCS
ZAGREB	82.58	352.2	12	23	-1	22	38	-1	23	51	PPS
BUCHAREST	82.70	344.8	12	25A	1	22	47	7	15	28	PP
TRIESTE	82.92	353.7	12	25A	-1	22	44	2	28	19	SS
CLERMONT-FD.	83.09	1.2	12	27	1	22	40	-4			
BELGRADE	83.11	348.9	12	27A	1	22	54	10	12	58	PCP
OROPA	83.21	357.8	12	26	-1	22	50	5			
BRISBANE	83.49	208.1	12	28	0	32	47	599			
PAVIA	83.62	356.9	12	28A	-1	22	52	3	15	44	PP
BOLOGNA	84.21	355.4	12	37	5	22	56	1	26	15	
SOFIA	84.81	346.4	12	33	-2	23	4	3			
FLORENCE X.	84.93	355.4	12	34A	-2	23	1	-1	16	7	PP
KARACHI	85.67	306.9	12	43	4	23	15	5	12	49	PCP
HYDERABAD	86.34	293.4	12	44A	1	23	22	6	16	5	PP
BALBOA HTS.	86.52	80.1	12	35	-9	23	6	-12			
ROME	86.73	354.3	12	44A	-1	23	33	13	16	15	PP
SAN JUAN	87.06	64.0	12	46A	0	23	7	-16	28	39	SS
ONERAHI	87.40	188.5	13	0	12						
DJAKARTA	87.40	256.8	12	45	-3	23	21	-5			
BARCELONA	87.42	2.1				23	47	21			
GALERAZAMBA	87.72	75.7	12	55	6	23	34	5			
TARANTO	87.76	350.6	12	33	-17	23	18	-12			
COIMBRA	87.93	10.1	12	52	2	23	32	1	23	20	SKS
POONA	88.05	297.6	12	56	5	23	31	-1	16	17	PP
BOMBAY	88.32	298.6	12	54	2	23	34	-1	16	19	PP
AUCKLAND	88.45	188.1				23	21	-15	24	44	PS
TOLEDO	88.65	6.8	12	54	0	23	25	-13	16	40	PP
MADRAS	88.85	289.4	12	57K	2	23	40	0	16	32	PP
LISBON	89.31	10.9	12	59K	2	23	19	-25	29	55	SS
ATHENS	89.37	345.2				23	11	-34			
RIVERVIEW	89.99	207.5	13	1A	1	23	52	2	13	9	23 30 SKS
MESSINA	90.17	351.6	12	59	-2	23	51	-1	16	30	PP
REGGIO CALA.	90.26	351.5	12	57	-4	23	39	-14	24	39	PS
ALICANTE	90.39	4.2	12	55	-7	23	53	-1	16	37	PP
KSARA	90.77	334.6	13	3	-1	23	57	0	16	42	PP
ANTIGUA	90.93	60.9	13	3	-2						
GRANADA	91.37	6.7	13	5K	-2	24	11	8	16	29	PP
MALAGA	91.77	7.4	13	16K	8	24	14	8	16	44	PP
ALMERIA	91.78	5.9	13	8	0	24	9	3	16	34	PP
CHINCHINA	92.05	79.5	13	13	3	23	35	-34	24	8	SKKS
ALGIERS UNI.	92.08	1.5	13	9	-1	24	2	-7	16	48	PP
KODAIKANAL	92.64	289.9	13	14	2	24	2	-12	16	50	PP
FORT FRANCE	92.78	62.3	13	16	3	23	49	-26			
WELLINGTON	92.83	187.6				24	4	-11	23	39	SKS
JERUSALEM	92.87	334.5	13	10	-3	24	4	-12			
RELIZANE	93.03	3.5	13	17	3	24	16	-1	16	4	
BOGOTA	93.28	78.5	12	57	-18	23	22	-57	17	2	PP
COLOMBO	93.86	286.0	13	19	1	24	7	-17			
ST. VINCENT	93.99	63.2	13	27	8						
MELBOURNE	95.57	210.7	13	43	17	25	30	51	18	24	PP
TRINIDAD	95.88	64.9	13	26	-1						
ROXBURGH	97.61	190.9				25	0	4	24	10	SKS
PERTH	102.77	234.5	14	5	7				24	43	
HUANCAYO	105.43	90.0	18	41	777	24	53	2			
TAMANRASSET	106.03	359.4	14	6	777	24	56	2	18	29	PP
MBOUR	111.69	22.8	14	41	-233				19	21	PP
LA PAZ	113.31	87.3	18	41	4	25	23	2	19	39	PP
LWIRO	126.95	329.5	19	6	2						
SCOTT BASE	129.58	184.9	19	8	-1				22	27	
WILKES	130.18	210.7							21	33	PP

TANANARIVE	133.35	298.0	19	20A	4				21	44 PP
PRETORIA	148.74	316.5	19	50	7					
PIETERMZBURG	151.03	309.2	20	0	14					
KIMBERLEY	152.81	319.1	19	52	3					
GRAHAMSTOWN	155.92	310.6	19	25	-28				19	36
HERMANUS	160.00	323.1							24	25 PP

JUNE 14 6.H 24.M 25.S EPICENTRE 51.95-176.11 DEPTH= 40.KM

DEPTH OF FOCUS= 0.001R

A=-0.61744 B=-0.04198 C= 0.78550 D=-0.0678 E= 0.9977
G=-0.7837 H=-0.0533 K=-0.6189 HT= -6.1

SE= 2.67

	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	15.38	284.4	3	36	0	6	33	8					
COLLEGE	19.44	37.4	4	26	0	8	8	11			5	31	
SITKA	23.95	61.6	5	14	3	9	22	0			5	49	
Y.-SAKHLINSK	26.96	275.8	5	31	-9								
TIKSI	30.97	329.7	6	16	0								
ALBERNI	32.11	74.1	6	27	1								
HORSESHOE B.	32.98	73.1	6	37	4	11	52	4			8	15	
VICTORIA	33.27	74.6	6	38K	2	11	49	-3					
HONOLULU	33.64	148.6	6	47	8	14	25	147					
SEATTLE	34.33	75.4	6	58	13	12	16	7					
TUKUBASAN	34.58	260.4	6	46	-1								
CORVALLIS	35.24	80.7	6	55	2								
MATUSIRO	35.51	262.6	6	54A	-1	12	28	1			9	20	PCP
BANFF	36.70	66.6	7	5A	0								
SHASTA	37.94	85.5	7	17K	2	13	12	8			10	26	
UKIAH	38.36	88.1	7	29	10								
RESOLUTE	38.52	25.0	7	20A	0	13	10	-3			8	58	PP
MINERAL	38.63	85.4	7	22K	1	13	15	0			7	43	
HUNGRY HORSE	38.88	69.9	7	25	2	13	16	-2			9	30	PCP
CHANGCHUN	39.14	281.9	7	23A	-2								
BERKELEY	39.73	89.0	7	30K	0	13	28	-3					
RENO	40.22	85.1	7	35K	1	13	43	5					
SANTA CLARA	40.25	89.3				13	42	3					
LICK	40.44	89.1	7	37K	1						13	22	
BUTTE	40.93	72.2	7	41	1	13	47	-2			9	10	PP
FRESNO	41.94	88.4	7	49K	0								
BOZEMAN	42.01	71.8	7	50	1	14	3	-2			8	53	PCP
EUREKA	42.62	82.4	7	54	0	13	31	-43			10	0	PP
KING RANCH	42.91	90.0	7	58	2								
ISABELLA	43.48	88.6	8	1K	0						13	34	SCP
CHINA LAKE	43.91	87.8	8	5K	0						13	36	SCP
SALT LAKE C.	44.35	78.2	8	9	1	14	43	4					
PASADENA	44.66	90.0	8	10	-1	14	46	2			8	39	PCP
RIVERSIDE	45.25	89.5	8	15K	0	14	44	-8			9	1	PCP
BOULDER CITY	45.52	85.5	8	18	1	14	59	3					
PALOMAR	46.00	89.8	8	21K	0	15	6	3			9	5	
IRKUTSK	46.49	303.6	8	24	-1								
HAYFIELD	46.52	88.5	8	25	0						13	47	SCP
BARRETT	46.57	90.3	8	25K	-1	15	12	1					
PEKING	46.89	283.3	8	26A	-2	15	25	10					
RAPID CITY	47.50	69.1	8	35	2	15	25	1					
ZO-SE	49.67	270.7	8	49A	-1	15	54	-1			10	47	PP
TUCSON	50.47	86.3	8	55	-1	16	7	1			16	43	
NANKING	50.49	273.4	8	55A	-1								
LUBBOCK	55.07	78.5	9	30	0	17	10	2			19	16	
SCORESBY SD.	56.46	10.1	9	38	-2								
KIRKLAND LA.	57.34	52.3	9	46	0								
FLORISSANT	58.26	66.4	9	51A	-2	17	49	-1			19	38	SCS
ST. LOUIS 1	58.45	66.4	9	51A	-3	17	52	-1			10	44	PCP
SODANKYLA	59.77	350.0	10	4	1								
KIRUNA	59.90	352.8	10	3	-1								
CANTON	60.30	270.1	10	6A	-1								
HONG KONG	60.33	268.8	10	6	-1	18	18	1					
BAGUIO CITY	60.83	259.1	10	6	-5	18	45	22					
CLEVELAND	61.24	58.7	10	15	2						20	0	SKS
OTTAWA	61.39	52.1	10	13A	-1						39	28	PKPPKP
RABAUL	62.10	216.4	10	15	-4	18	45	5			12	15	PP
SEVEN FALLS	62.46	48.0	10	20	-2	18	41	-3			11	1	PCP
MORGANTOWN	63.40	59.2	10	27A	-1						20	17	SCS

PENNSYLVANIA	63.64	57.0	10	31	2	19	2	3			
SKALSTUGAN	64.62	355.9	10	35	-1						
KUNMING	65.38	279.6	10	40A	-1	19	20	0			
WASHINGTON	65.46	57.9	11	9	28					12	47 PP
PALISADES	65.51	54.4	10	41A	0	19	23	1	10 51	13	35 *PP
PHILADELPHIA	65.66	55.9	10	44	2	19	26	2			
WESTON	65.77	51.8	10	42A	-1						
PULKOVO	66.60	345.8	10	49	1	19	42	7			
CHAPEL HILL	66.61	61.4	10	47	-1						
COLUMBIA	66.94	64.1	10	51	0	19	38	-1		11	34
FRUNSE	67.53	311.3	10	54	0	19	50	4			
HALIFAX	67.63	45.5	10	53A	-2						
UPPSALA	68.00	352.6	10	56	-1	19	48	-4			
MOSCOW	69.11	340.3	11	5	1						
ABERDEEN	71.13	3.4								20	30
SHILLONG	71.49	287.8	11	17A	-1						
COPENHAGEN	72.50	354.9	11	24	0	20	50	5			
CHATRA	73.27	292.1	11	30	1						
HAMBURG	74.72	356.2	11	50	13						
RATHFARNHAM	74.77	6.3	11	38	0						
WARSAW	75.19	349.2	11	44	4					22	0 PPS
DEHRA DUN	75.61	300.8	11	48	5	21	17	-2			
DE BILT	76.32	359.2	11	45	-2	21	31	4		14	48 PP
LAHORE	76.58	304.2	11	46	-2	21	27	-3		12	7
BERMUDA	76.86	54.0	11	53	3	21	37	4		26	19 SS
KEW	76.89	2.7	11	49	-1	21	36	3			
JENA	77.29	355.0								19	35
JENA	77.29	355.0	11	51	-1	21	59	21		15	0 PP
KRAKOW	77.46	349.5								13	41
RACIBORZ	77.62	350.6								12	9 PCP
MAKHACH-KALA	78.20	328.9	11	54	-3	21	49	2			
KISHINEV	79.11	342.9	12	1	-1						
IASI	79.16	343.8	11	58	-4					13	34
KARLSRUHE	79.34	357.0	12	16A	13						
STUTTGART	79.55	356.4	12	3	-1	22	4	2		15	7 PP
PARIS	79.61	0.9	12	5	0	22	6	4		22	18 SKS
BRATISLAVA	79.62	351.1	12	0	-5					15	12 PP
STRASBOURG	79.79	357.4	12	6	0	22	9	5		14	55 PP
SOTCHI	79.92	334.4	12	6	0	22	7	1			
SHEMAKHA	79.92	327.0	12	7	1	22	11	5			
SIMFEROPOL	80.02	338.7	12	6	-1	22	9	2			
BESANCON	81.16	358.6	12	24	11					13	5
QUETTA	81.37	308.7	12	14A	0	22	18	-3		22	42 SCS
BUCHAREST	82.11	344.1	12	17	-1					13	5
TRIESTE	82.41	353.0								13	8
CLERMONT-FD.	82.65	0.5	12	27	6	22	39	5			
OROPA	82.74	357.1	12	31	10	23	19	44			
PAVIA	83.14	356.2	12	33	10	23	23	44		15	54 PP
BRISBANE	83.60	207.3	12	24	-1						
FLORENCE X.	84.43	354.7	12	38	8	23	17	25		16	1 PP
ROME	86.23	353.6	12	38A	-1	23	15	6		16	4 PP
BALBOA HTS.	87.03	79.4	12	42	0	23	2	-15			
POONA	87.31	296.8	12	44	0	23	16	-3		24	40
SAN JUAN	87.41	63.3	12	55	11	23	5	-15		15	35
BOMBAY	87.58	297.8	12	48	3	23	20	-2			
GALERAZAMBA	88.19	74.8				23	48	21			
MESSINA	89.64	350.8				23	41	0		17	36
KSARA	90.10	333.8	12	58	1	24	1	16		16	40 PP
RIVERVIEW	90.11	206.8	12	55A	-2	23	47	2		13	10 *SP
GRANADA	91.00	6.0	13	2A	1	23	49	-4		25	35 PPS
ANTIGUA	91.23	60.2	13	2	0						
MALAGA	91.40	6.7	13	3	0					16	39 PP
ALGIERS UNI.	91.65	0.7	13	1	-3	23	33	-26		16	40 PP
JERUSALEM	92.21	333.7	13	5	-2						
DOMINICA	92.50	61.3	13	10	2						
CHINCHINA	92.56	78.7	13	13	5	24	37	30		23	38 SKS
BOGOTA	93.77	77.7	13	29	15	24	41	24		23	43 SKS
TAMANRASSET	105.58	358.4				24	47	11		17	16
LA PAZ	113.89	86.4	18	47	12	25	17	0		19	45 PP
LWIRO	126.26	328.5	19	1	2					22	53 PP
SCOTT BASE	129.97	184.7	19	6	0					22	23 PP
TANANARIVE	132.61	297.4	19	12	1					22	56 PKS
PRETORIA	148.01	315.6	19	38	0						
PIETERMZBURG	150.28	308.4	19	48	6						
KIMBERLEY	152.07	318.0	19	44K	0						
HALLEY BAY	153.43	163.4	13	40	-366					18	20
GRAHAMSTOWN	155.17	309.7	19	51	3						

JUNE 14 11.H 36.M 53.S EPICENTRE 31.81 67.16 DEPTH= 0.KM

A= 0.33041 B= 0.78464 C= 0.52456 D= 0.9216 E=-0.3881
G= 0.2036 H= 0.4834 K=-0.8514 HT= 1.2

SE= 2.50

	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	
QUETTA	1.64	186.5	0	29K	-1	0	55	3					
WARSAK DAM	4.29	58.2	1	10	2								
KARACHI	5.96	181.1	1	36	5	2	56	15					
LAHORE	6.11	90.6	1	31	-3	2	41	-4					
KHOROG	6.73	31.7	1	47	5						3	53	
STALINABAD	6.85	10.6	1	46	2						3	36	
BAIRAM-ALI	7.11	325.7	1	47	-1								
SAMARKAND	7.84	359.0	1	59	1	3	33	5					
FERGANA	9.33	22.3	2	19	0	4	5	0			5	9	
DEHRA DUN	9.45	96.2	2	22	2	4	5	-4			4	20	SS
ASHKABAD	9.48	312.6	2	19	-2	4	10	1			4	56	
TASHKENT	9.64	9.6	2	23	0								
ANDIJAN	9.86	23.7	2	28	2	4	20	2			5	36	
TCHIMKENT	10.65	9.8	2	36	-1	4	37	-1			5	16	
KIZYL-ARVAT	11.43	312.0	2	44	-3						5	15	
NARYN	11.93	34.0	2	53	-1						5	19	
FRUNSE	12.52	26.0	3	0	-2	5	19	-4					
BOMBAY	13.83	157.0	2	57	-22						6	28	
HYDERABAD	17.59	141.8	4	7	-1	9	10	107			10	26	PCS
CHATRA	18.13	100.8	4	14	-1						10	33	
BOKARO	18.28	111.1	4	16	-1						7	27	
GORIS	18.56	300.2	4	25	5	7	51	6					
TIFLIS	20.41	305.2	4	41	0	8	29	4					
SHILLONG	22.52	99.8	5	2A	0	9	11	5			5	31	PP
SVERDLOVSK	25.42	351.6	5	32	1								
KSARA	26.32	282.8	5	37	-2	10	22	11					
COLOMBO	27.48	151.8				10	38	8					
SIMFEROPOL	28.82	306.6	6	2	0	10	49	-2			6	55	PP
MOSCOW	31.61	327.9	6	23	-4								
IRKUTSK	33.82	41.8	6	44	-2								
LWOW	36.68	312.2	7	13	3								
HELSINKI	39.68	328.3	7	35	0						9	45	PCP
MESSINA	42.31	293.4									17	59	
UPPSALA	42.97	325.7	8	0	-2						8	47	
ROME	44.24	299.2									13	37	
COPENHAGEN	44.69	318.9	8	20	4								
JENA	44.71	312.1	8	19	3								
KIRUNA	45.03	337.0	8	17	-2								
STUTTGART	46.20	309.0	8	27	-1						17	47	SS
EBINGEN	46.36	308.2	8	27	-3						9	25	
SKALSTUGAN	46.51	329.7	8	28	-3								
CLERMONT-FD.	50.55	305.4	9	23	21						9	58	PCP
PARIS	50.63	309.4	9	3	0	16	20	3			11	1	PP
TIKSI	51.28	21.0	9	7	-1	16	27	1			10	29	PCP
TAMANRASSET	54.89	276.9	9	31	-3						10	36	PCP
GRANADA	57.34	296.4	10	OK	8								
MATUSIRO	57.75	64.2	9	52A	-3						11	15	
MBOUR	77.66	279.3									14	41	PP
COLLEGE	79.84	14.4	12	10	-2								
HUANCAYO	140.31	291.2	19	44	13								

JUNE 15 0.H 44.M 17.S EPICENTRE -33.84 56.37 DEPTH= 0.KM

A= 0.46094 B= 0.69300 C=-0.55432 D= 0.8326 E=-0.5538
G=-0.3070 H=-0.4616 K=-0.8323 HT= 0.5

SE= 1.78

	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	
TANANARIVE	16.82	329.9	3	56K	-1	7	8	6			4	10	PP
GRAHAMSTOWN	24.80	262.8	5	23	0								
PRETORIA	25.70	280.8	5	31	0								
KIMBERLEY	27.40	272.0	5	44	-3								
HERMANUS	30.64	258.3	6	10	-6	11	16	-1			11	29	

LWIRO	40.64	314.8	7	42	1						
WILKES	45.22	152.4	8	21	3	15	6	9		10	24
COLOMBO	46.24	33.2				15	14	2			
KODAIKANAL	48.20	28.4								15	49
PERTH	49.35	105.2								16	35
DJAKARTA	54.12	71.1								9	28
POONA	54.68	20.4	9	30	-1	17	13	4		11	35 PP
BOMBAY	54.74	19.2	9	32	1	17	13	3			
HYDERABAD	55.16	25.9				17	26	10			
TERRE ADELIE	57.48	152.1	9	46	-5	17	46	0			
QUETTA	64.46	10.1	10	38K	0	19	19	4		20	34 SCS
DEHRA DUN	67.02	20.3	10	57	2	20	4	18			
LAHORE	67.21	16.6	10	52	-4	19	50	2			
SHILLONG	68.03	34.4	11	0K	-1	20	4	6		15	13 PPP
JERUSALEM	68.25	340.7	11	2	0					21	16
MELBOURNE	69.23	122.2	11	10	2					11	16
KSARA	70.00	341.9	11	15K	2	20	8	-14		13	49 PP
KUNMING	73.26	43.2	11	32	-1						
TAMANRASSET	74.24	312.0	11	38K	0	21	17	7		14	32 PP
SHEMAKHA	74.45	353.9	11	40	1	21	20	8			
RIVERVIEW	75.56	121.1				21	36	11		12	13
NAMANGAN	75.78	11.9	11	48	1						
TIFLIS	75.94	351.1	11	47	-1	21	35	6			
MAKHACH-KALA	76.87	353.3	11	52	-1	21	41	2			
ATHENS	77.63	334.1	11	55	-2					22	11 SCS
MANILA	78.06	63.4	12	0	0						
FRUNSE	78.15	13.6	12	0	0	21	57	4			
CANTON	78.32	52.0	11	59	-2						
SOTCHI	78.54	347.7	12	1	-1	21	57	0			
BAGUIO CITY	78.94	61.7	12	5	0	22	6	5			
ROXBURGH	80.43	139.0				22	3	-14		23	27 PS
SIMFEROPOL	80.98	344.2	12	15	-1	22	24	1			
MESSINA	81.09	328.6	12	16	0	22	25	1		15	22 PP
BUCHAREST	82.62	338.6	12	24	0	23	29	50		22	51 SKS
KISHINEV	84.22	341.5	12	32	0						
MBOUR	84.58	291.2	12	36	2					15	57 PP
IASI	84.73	340.7	12	33	-2					12	54
BELGRADE	84.82	335.2	12	35A	0					13	26
ROME	85.47	328.7	12	39K	1	23	11	3		29	12 SS
ALGIERS UNI.	86.05	319.8	12	41K	0	23	12	-1		16	2 PP
SZEGED	86.18	335.7	12	39	-3					13	23
WELLINGTON	86.22	138.4				23	28	13			
RELIZANE	86.68	317.6	12	45K	1					13	37
FLORENCE X.	87.52	329.1	12	46	-2	23	34	7		25	2 PPS
TRIESTE	88.02	331.6	12	51K	0	23	31	-1		23	15 SKS
NANKING	88.03	48.9	12	51	0						
BOLOGNA	88.07	329.6								13	8
SKALNATE PL.	88.69	337.2	12	56	2	23	49	11		14	54
BRATISLAVA	88.88	334.9	12	54	-1	23	43	3		14	17
ZO-SE	88.91	50.9	12	55	0	23	46	6		23	30 SKS
ALICANTE	89.12	318.8	12	53	-3	23	36	-6			
ALMERIA	89.17	316.6	12	57	1	23	57	14		29	57 SS
PAVIA	89.54	328.7	13	1	3					18	12 PPP
KRAKOW	89.55	337.5	12	58	0						
GRANADA	90.05	316.3	13	5K	5	24	8	17	13 50	15	40 PP
RACIBORZ	90.14	336.5	12	59	-2						
MALAGA	90.20	315.5	13	1A	0	24	19	27		16	41 PP
MOSCOW	90.64	349.5	13	5	2	24	2	6			
WARSAW	91.12	339.1	13	6	1					14	24
PRAGUE	91.43	334.5	13	10	3	24	1	-2		16	52 PP
NEUCHATEL	91.92	328.7	13	9	0						
PEKING	91.93	41.6	13	10	1						
EBINGEN	92.00	330.5	13	9K	0					14	51
BASLE	92.07	329.3	13	9	-1					14	7
TOLEDO	92.17	318.0	13	12	2	24	22	12		16	51 PP
TUBINGEN	92.23	330.7	13	11	0						
STUTTGART	92.37	330.9	13	10K	-1	23	48	-23		24	14 SKKS
BESANCON	92.54	328.3	13	14	2					13	39
CLERMONT-FD.	92.71	325.8	13	13	0	24	29	15		25	44 PS
STRASBOURG	92.80	330.1	13	13	0	23	43	-32		16	57 PP
JENA	93.18	333.5	13	13	-2					17	2 PP
PARIS	95.26	327.6	13	26	2	24	43	7		17	23 PP
HAMBURG	95.89	334.3	13	27	0					13	39
DE BILT	96.58	331.1	13	33	3	24	13	-34		31	43 SS
COPENHAGEN	96.73	336.7				24	13	-36		17	37 PP
JERSEY	97.62	325.6								17	55
KEW	98.43	328.1								32	5 SS
UPPSALA	98.67	341.4	13	39	-1					26	41 PS

CHANGCHUN	99.56	43.2	13	45	1					
DURHAM	101.29	329.9							18	13
ABERDEEN	103.17	331.5				24	23	-80	18	23 PP
SKALSTUGAN	103.20	341.4	14	11	11					
MATUSIRO	103.51	55.1	14	1	-1				27	27
KIRUNA	104.90	346.7							33	26 SS
LA PAZ	107.21	235.9				25	15	19	19	12 PP
TIKSI	116.51	19.8	18	44	1					
PETROPAVLOVK	123.30	44.8	19	28	31					
BERMUDA	131.20	285.5	19	18	6				21	43 PP
BALBOA HTS.	132.58	248.9	19	16	2				22	46 PP
HALIFAX	133.23	301.9	19	17	1				22	43 PKS
RESOLUTE	136.75	349.2	19	22	0				21	57 PP
SEVEN FALLS	138.47	304.9							22	26 PKS
PALISADES	140.32	295.3	19	31	2				22	27 PP
BREBEUF	140.38	302.3	19	21	-8					
OTTAWA	141.85	302.2	19	20	-11				22	38 PKS
WASHINGTON	142.49	291.5	19	29	-3	27	29	50	22	48 PP
CHAPEL HILL	143.61	286.2	19	32	-2					
KIRKLAND LA.	144.63	307.1	19	34K	-2					
MORGANTOWN	144.79	292.3	19	36K	0					
COLUMBIA	144.84	282.5	19	36	0					
COLLEGE	145.63	18.1	19	37	-1				21	42
CLEVELAND	146.08	295.5	19	41	2					
TACUBAYA	153.94	242.7	20	29	38				23	33 PP
RAPID CITY	161.16	308.8	20	2	3				20	49
BANFF	161.71	343.6	20	43	43					
LUBBOCK	161.88	275.2	20	2	2				24	32
HUNGRY HORSE	163.82	336.5	20	2	0				29	53
BOZEMAN	164.76	324.5	20	5	2				24	50 PP
BUTTE	165.19	328.5	20	4	1				24	40 PP
VICTORIA	165.34	359.4							21	2
SEATTLE	166.17	356.2	20	18	14				20	43
SALT LAKE C.	168.35	309.8	20	8	2				25	5 PP
TUCSON	169.14	265.1	20	9	3				21	53
EUREKA	171.66	314.6	20	10	2				20	44
BOULDER CITY	172.46	288.9	20	11	3				25	26 PP
SHASTA	173.08	352.1	20	11	3				21	37 PKP2
MINERAL	173.31	346.6	20	10A	1				21	39 PKP2
HAYFIELD	173.34	271.1	20	11	2					
RENO	173.54	332.8	20	14	5				21	42 PKP2
BARRETT	174.06	260.7	20	11	2					
PALOMAR	174.33	266.9	20	11	2				25	36 PP
CHINA LAKE	174.66	293.4	20	13	4				25	46 PP
RIVERSIDE	174.80	273.4	20	12	3				25	40 PP
ISABELLA	175.38	294.6	20	13	4				25	44 PP
PASADENA	175.45	275.4	20	12	3				25	43 PP
FRESNO	175.72	314.1	20	27	18				25	29
BERKELEY	175.83	344.9	20	12	3	27	24	15	25	42 PP
LICK	176.15	335.6	20	10	1				21	51 PKP2
KING RANCH	176.46	295.9	20	13	4					

JUNE 15 18.H 18.M 24.S EPICENTRE 52.31-171.32 DEPTH= 28.KM

A=-0.60688 B=-0.09269 C= 0.78937 D=-0.1510 E= 0.9885
G=-0.7803 H=-0.1192 K=-0.6139 HT= -6.3

SE= 2.03

	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	
COLLEGE	17.41	34.7	4	2	0	7	22	9					
PETROPAVLOVK	18.15	284.5	4	12	1								
SITKA	21.17	62.8	4	45	0	8	39	6					
HORSESHOE B.	30.03	76.2	6	9	1	11	7	4			9	9	PCP
VICTORIA	30.31	77.8	6	9	-1	11	11	4					
SEATTLE	31.37	78.7	6	23A	3								
TIKSI	32.17	329.0	6	27	0	11	39	3					
CORVALLIS	32.26	84.4	6	27	-1								
BANFF	33.83	69.2	6	40K	-1								
SHASTA	34.97	89.6	6	52K	1						13	4	
MINERAL	35.66	89.4	6	58A	1								
HUNGRY HORSE	35.96	72.9	7	0	1	12	36	1			9	28	PCP
BERKELEY	36.78	93.3	7	6	0	12	51	3			7	19	
RESOLUTE	36.94	25.5	7	7A	-1	12	31	-19			8	30	PP
RENO	37.25	89.1	7	12K	2	12	55	0			12	59	

LICK	37.50	93.4	7	13K	1						
TUKUBASAN	37.55	264.2	7	12K	-1						
BUTTE	37.99	75.4	7	9	-7	13	6	0	8	30	PP
VLADIVOSTOK	38.38	279.4	7	19	-1	13	12	0			
MATUSIRO	38.49	266.3	7	21A	0	13	15	1	8	50	PP
FRESNO	38.99	92.6	7	25K	0	13	29	8			
BOZEMAN	39.08	75.0	7	27	1				8	35	
KING RANCH	39.97	94.3	7	33	0						
WOODY	40.26	93.1	7	35K	0				13	23	SCP
ISABELLA	40.53	92.8	7	37K	-1				13	24	SCP
CHINA LAKE	40.96	91.9	7	41K	0				13	27	SCP
SALT LAKE C.	41.38	81.8	7	45	0						
PASADENA	41.72	94.3	7	54	7	14	4	2			
CHANGCHUN	41.94	284.5	7	48A	-1						
RIVERSIDE	42.31	93.8	7	52	0	14	11	0	8	4	
BOULDER CITY	42.55	89.5	7	55	1	14	18	4			
PALOMAR	43.06	94.0	7	57K	-1				8	10	
HAYFIELD	43.57	92.6	8	1	-1						
BARRETT	43.63	94.6	8	2K	-1	14	31	1	8	17	
RAPID CITY	44.59	72.3	8	11	0				13	43	
TUCSON	47.51	90.3	8	34	0	15	30	4			
IRKUTSK	48.72	305.5	8	43	0						
PEKING	49.66	286.1	8	50A	0	15	57	1			
TATUNG	51.31	288.0	9	6	3						
LUBBOCK	52.10	82.2	9	9	0						
ZO-SE	52.61	274.1	9	13A	0	16	40	4			
NANKING	53.41	276.7	9	17A	-2						
KIRKLAND LA.	54.75	55.1	9	28A	-1	17	7	2			
SCORESBY SD.	55.54	12.0	9	34	0	17	16	0	19	21	SCS
SIAN	57.82	285.6	9	54	3						
OTTAWA	58.80	55.1	9	56A	-1	18	0	1	12	4	PP
SHAWINIGAN	59.45	52.4	10	1	-1						
BREBEUF	59.78	53.8	10	2K	-2	17	46	-26			
KIRUNA	59.86	354.9	10	3	-2						
SODANKYLA	59.88	352.1	10	5	0				10	51	PCP
SEVEN FALLS	59.98	50.9	10	5	-1	18	12	-2	20	18	SCS
PITTSBURGH	60.08	61.7				18	17	1			
MORGANTOWN	60.65	62.3	10	10K	0						
PENNSYLVANIA	60.94	60.1	10	20	8	18	29	3			
WASHINGTON	62.73	61.1	10	26	2						
PALISADES	62.86	57.5	10	23A	-2	18	52	1	12	52	PP
PHILADELPHIA	62.98	59.1	10	32	6	18	51	-1	20	16	
SVERDLOVSK	63.17	331.0	10	27	0						
WESTON	63.18	54.8	10	27	0	18	54	-1			
CANTON	63.25	273.6	10	28	1	18	59	3			
BAGUIO CITY	63.80	263.0	10	29	-2	19	25	23			
TACUBAYA	63.99	91.7	10	40	8				13	1	PP
COLUMBIA	64.10	67.4	10	32	-1	18	58	-8	20	19	
RABAUL	64.24	221.2	10	31	-3				12	57	PP
SKALSTUGAN	64.41	358.2	10	35	0				11	9	PCP
MANILA	64.98	261.3	10	36	-3						
HALIFAX	65.22	48.5	10	39A	-1	19	19	-1			
PULKOVO	66.92	348.3	10	50	-1						
UPPSALA	67.96	355.1	10	56A	-2				39	8	PKPKPK
KUNMING	68.21	283.0	10	59A	0	19	58	2			
FRUNSE	69.46	314.2	11	7	0	20	11	0			
MOSCOW	69.69	343.0	11	9	1						
ABERDEEN	70.52	6.2	11	16	3				21	13	PS
NAMANGAN	72.27	314.9	11	27	3						
COPENHAGEN	72.33	357.8	11	25K	1	20	54	10			
RATHFARNHAM	74.02	9.3	11	35	1						
SHILLONG	74.15	291.2	11	35A	0	21	5	0	21	41	SKS
BERMUDA	74.22	57.4	11	40	5	21	11	6	25	56	SS
HAMBURG	74.48	359.2	11	39	2						
WITTEVEEN	75.23	1.3	11	37	-4						
CHATRA	75.83	295.4	11	45	1						
DE BILT	75.92	2.2	11	46	1	21	54	30			
KEW	76.31	5.8	11	46	-1						
BENSBERG	77.09	1.0	11	51A	-1						
JENA	77.10	358.1	11	52	0	22	0	23	15	6	PP
KRAKOW	77.57	352.6	11	54	0				12	18	
RACIBORZ	77.66	353.7	11	54	-1						
PRAGUE	77.88	356.2	11	57A	1				12	14	
DEHRA DUN	77.91	304.1	11	55	-1				27	20	
CHEB	77.94	357.6	11	53	-3				12	39	
PARIS	79.12	4.2	12	3A	0	22	2	3	15	5	PP
STUTTGART	79.29	359.7	12	4A	0	22	3	2	17	8	PPP
STRASBOURG	79.48	0.6	12	6A	1	22	10	7	31	18	SSS
TUBINGEN	79.53	359.7	12	6	1						

KISHINEV	79.55	346.1										15	48
BRATISLAVA	79.64	354.3	12	6	0							22	47
EBINGEN	79.88	359.8	12	7A	0								
BASLE	80.53	0.8	12	2	-8								
SIMFEROPOL	80.67	342.0	12	12	1	22	20	5					
BESANCON	80.79	1.9	12	10	-2							12	29
SOTCHI	80.80	337.7	12	13	1	22	17	1					
NEUCHATEL	81.05	1.2	12	14	1								
CHUR	81.21	359.4	12	15A	1								
TIFLIS	81.25	333.5	12	15	1	22	24	3					
CLERMONT-FD.	82.18	3.9	12	20	1								
PAVIA	82.89	359.7	12	23	0							22	25
BALBOA HTS.	84.06	83.1	12	42	13	22	44	-5					
FLORENCE X.	84.26	358.1	12	32	2	22	58	7	13	7			
SAN JUAN	84.57	67.0	12	31	0							12	47
BRISBANE	85.36	211.3				22	18	-44					
ROME	86.11	357.2	12	39A	0	23	3	-7				29	36 SS
TARANTO	87.29	353.5										22	46
TOLEDO	87.52	9.8	12	45	-1	23	14	-9					
CHINCHINA	89.59	82.5	12	57	2							23	45 SKKS
MESSINA	89.66	354.6										13	52
POONA	89.73	300.6	12	57	1								
GRANADA	90.24	9.8	13	1K	2	23	55	7					
MALAGA	90.60	10.5	12	59K	-1								
BOGOTA	90.80	81.5	13	19	18	23	29	-24				16	53 PP
KSARA	90.99	337.6	13	4	2	23	52	-3				16	48 PP
ALGIERS UNI.	91.15	4.5	13	1	-2	23	59	3				16	39 PP
RIVERVIEW	91.84	210.5				24	0	-2				33	52 SSS
RELIZANE	92.02	6.6	13	6	-1							13	33
TAMANRASSET	105.18	3.0										18	31 PP
LA PAZ	110.93	90.0	18	25	-5								
PRETORIA	149.65	323.4	19	49K	8								
PIETERMZBURG	152.23	316.3	19	54	9								
KIMBERLEY	153.59	326.8	19	51	4								
GRAHAMSTOWN	157.04	318.8	20	24	32								

JUNE 17 6.H 16.M 45.S EPICENTRE -15.15-173.33 DEPTH= 0.KM

A=-0.95918 B=-0.11209 C=-0.25964 D=-0.1161 E= 0.9932
G= 0.2579 H= 0.0301 K=-0.9657 HT= 5.7

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
APIA	2.01	48.6	0	36	0	0	55	-7				
SUVA	8.44	248.1	2	15	8	3	48	4			2	46
NOUMEA	20.41	246.6	4	42	0						5	37
ONERAHI	23.30	206.0	5	11	0						5	25
AUCKLAND	24.08	203.8	5	19	1							
TONGARIRO	25.88	200.1	5	33	-2							
WELLINGTON	28.01	199.3	5	53	-2	9	52	-47				
KAIMATA	30.27	202.7	6	17	2							
GEBBIES PASS	30.87	200.0	6	21	0							
BRISBANE	33.54	243.0	6	40	-4	14	31	145				
RABAUL	35.64	284.2	6	51	-11							
RIVERVIEW	37.04	233.4	7	10A	-4						8	39 PP
MELBOURNE	43.15	230.4	8	2	-2							
CAPE HALLETT	57.95	185.8	10	3	6							
TERRE ADELIE	59.50	199.0	10	6	-2							
SCOTT BASE	63.51	184.6	10	34	-1							
MATUSIRO	68.78	319.7	11	8A	0	20	12	0				
BERKELEY	71.25	40.6	11	23K	0	20	43	2				
LICK	71.32	41.3	11	24K	0							
KING RANCH	71.39	44.0	11	25	1							
UKIAH	71.43	39.0	11	26	2							
PASADENA	71.80	45.8	11	27K	0	20	47	0				
FRESNO	72.17	42.7	11	29K	0							
RIVERSIDE	72.26	46.3	11	29	0							
PALOMAR	72.28	47.1	11	29K	-1						11	51
ISABELLA	72.43	44.3	11	30K	0							
SHASTA	72.90	38.1	11	33K	0							
CHINA LAKE	73.10	44.6	11	34K	0							
MINERAL	73.16	38.8	11	34K	-1						11	55
HAYFIELD	73.34	47.3	11	41	5						11	47
RENO	73.78	40.4	11	39K	1							

CORVALLIS	74.83	34.6	11	45K	1					
BOULDER CITY	75.09	45.7	11	45	-1					
TUCSON	76.12	50.7	11	52	0					
EUREKA	76.19	42.2	11	52	0				12	11
SEATTLE	77.33	32.6	11	58	0					
SALT LAKE C.	79.56	42.7	12	11	0				12	48
TACUBAYA	80.59	67.0	12	25	8					
BUTTE	81.81	37.9	12	23	0	22	34	-2	12	40
COLLEGE	82.10	10.7	12	23	-1	22	32	-7		
HUNGRY HORSE	82.22	35.4	12	23	-2	22	41	1	15	32 PP
BOZEMAN	82.54	38.8	12	27	1				12	59
BANFF	82.97	32.5	12	27	-2					
LUBBOCK	83.51	52.8	12	31	0					
RAPID CITY	86.76	42.8	12	47	-1					
RESOLUTE	101.47	15.4				24	30	-63	46	25
PALISADES	106.82	51.3				24	53	-6	28	59 PPS
BERMUDA	113.56	61.0							25	27
QUETTA	122.98	296.3	19	0A	1					
KIRUNA	126.60	353.5	19	5	-1					
KIMBERLEY	132.98	201.9	19	18	0					
HAMBURG	141.57	356.8	19	37	3					
KRAKOW	143.56	345.6	19	35	-2				20	25
RACIBORZ	143.92	347.4	19	37	-1					
JENA	144.09	354.7	19	36	-2					
BENSBERG	144.28	359.5	19	38A	0					
PRAGUE	144.60	351.4	19	38	-1				20	30
BRATISLAVA	145.96	347.5	19	43	2				19	58
KARLSRUHE	146.20	357.9	19	45K	3					
PARIS	146.26	5.0	19	45K	3	20	8		23	37 PP
STUTTGART	146.41	357.0	19	43	1				20	34
STRASBOURG	146.65	358.7	19	45A	3				20	10
TUBINGEN	146.65	357.1	19	43	1				19	54
EBINGEN	147.01	357.2	19	45A	2				20	1
BASLE	147.70	358.8	19	50	6					
KSARA	147.73	310.4	19	48	4					
BESANCON	147.99	0.9	19	47	2					
BELGRADE	148.20	341.2	19	50A	5				20	5
TRIESTE	149.01	350.3	19	51	5				20	5 PKP2
JERUSALEM	149.15	307.5	19	53K	7				20	19
CLERMONT-FD.	149.33	4.9	19	52	5					
FLORENCE X.	151.19	353.1	20	10	20				20	22 PKP2
LWIRO	152.10	233.6	19	52A	1					
ROME	152.87	350.5	19	52	0				24	7 PP
TARANTO	153.13	341.9	19	10	-42				46	6 SSS
GRANADA	156.23	20.7	20	42	46				44	33 SS
MALAGA	156.36	22.6	20	29K	32				24	5 PKS
ALGIERS UNI.	158.22	7.8	19	59	0				20	35 PKP2
TAMANRASSET	172.33	7.9	20	13	2				25	40 PP

JUNE 18 2.H 12.M 20.S EPICENTRE 14.39 95.65 DEPTH= 43.KM

DEPTH OF FOCUS= 0.002R

A=-0.09536 B= 0.96431 C= 0.24700 D= 0.9951 E= 0.0984
G=-0.0243 H= 0.2458 K=-0.9690 HT= 5.9

SE= 2.06

	DELTA DEG.	AZ. DEG.	P M	S	O-C S	S M	S	O-C S	*PP M	S	SUPP. M	S	
PORT BLAIR	3.93	226.8	1	3	4	1	51	6			1	19	PG
CHITTAGONG	8.72	335.9	2	4	-2								
SHILLONG	11.67	342.9	2	40A	-7	4	44	-13			2	47	PP
KUNMING	12.49	30.9	3	2A	4						3	14	PP
BOKARO	13.21	316.7	3	4	-3	5	34	0			3	22	PPP
CHATRA	14.69	328.7	3	29	2	6	34	25					
MADRAS	15.09	266.6	3	29K	-3	6	11	-7			3	40	PP
HYDERABAD	16.81	282.6	3	53K	-.	7	10	12			4	14	PP
KODAIKANAL	18.23	258.9	4	10K	-1	8	7	37			4	37	PP
CANTON	18.79	60.0	4	15	-3						4	22	
HONG KONG	19.25	63.2	4	21	-2								
POONA	21.30	284.1	4	47	2	8	42	8			5	8	PP
BOMBAY	22.32	284.7	4	57	2	9	2	9			5	26	PP
DEHRA DUN	22.67	317.3	5	1	2	9	11	12			5	46	PPP
LANCHOW	22.81	17.3	5	2	2								
SIAN	23.13	29.0	5	4	1								
DJAKARTA	23.26	150.8	5	4	0	9	20	10					

BAGUIO CITY	24.12	81.9	5 12	-1	9 43	18				
WUWEI	24.25	13.6	5 14	0						
MANILA	24.53	86.4	5 23	6	7 51	-100				
CHANGYEH	24.83	9.2	5 23	3						
YINCHUAN	25.76	19.4	5 32	4						
YUMEN	25.84	2.4	5 31	2						
LAHORE	25.93	314.8	5 30	0	10 18	23				
NANKING	27.50	46.3	5 46	2	10 30	10			6 26	
ZO-SE	28.72	50.3	5 53K	-2	10 44	4			12 12	SS
KARACHI	29.10	297.5	5 56	-3						
WARSAK DAM	29.27	316.1	6 3	3						
QUETTA	30.73	305.5	6 13K	0	11 13	1			12 40	
PEKING	31.23	31.3	6 17	-1	11 25	5			13 9	SS
FRUNSE	33.68	331.5	6 39	0	12 5	7				
NAMANGAN	33.73	326.3	6 40	1						
IRKUTSK	38.42	8.6	7 19	0	13 18	7				
CHANGCHUN	38.75	34.9	7 21	-1	13 20	4				
VLADIVOSTOK	42.23	40.1	7 48	-3	13 13	-55				
MATUSIRO	43.86	51.8	8 2A	-2	14 44	13				
SHEMAKHA	48.47	311.9	8 40	0	15 43	6				
PERTH	49.98	157.5							20 10	
SVERDLOVSK	50.02	335.7	8 53	1	16 4	5				
MAKHACH-KALA	50.04	314.5	8 50	-2	16 0	1				
TIFLIS	51.55	312.2	9 4	0	16 27	7				
SOTCHI	55.65	313.2	9 33	-1	17 20	5				
KSARA	57.11	301.1	9 45A	1	17 36	1			11 44	PP
JERUSALEM	57.54	298.6	9 47A	0					10 5	
TANANARIVE	57.79	236.4	9 48K	-1					10 30	PCP
RABAUL	58.99	103.9	9 59	1						
SIMFEROPOL	59.87	313.8	10 3	-1	18 15	4				
MOSCOW	60.39	326.5	10 6	-1	18 20	3				
TIKSI	60.58	11.5	10 5	-3	18 20	0				
PETROPAVLOVK	62.47	37.3	10 19	-2	18 43	-1				
KISHINEV	63.82	315.5	10 29	-1	19 2	1				
IASI	64.70	315.6	10 26	-10	19 13	2			11 49	
FOCSANI	64.81	313.9	10 42	5	19 32	19			15 43	
BACAU	65.09	314.9	10 52	14						
PULKOVO	65.31	329.6	10 39	-1	19 23	4				
BUCHAREST	65.49	312.4	10 41	0	19 27	6			23 39	SS
CAMPULUNG	66.30	313.3	10 49	3						
ATHENS	67.11	305.4	10 48	-3	19 42	1				
HELSINKI	68.02	329.4	10 56	-1	20 9	17			13 3	PP
SODANKYLA	68.77	337.2	11 1	-1					11 20	PCP
TIMISOARA	68.99	313.7	11 5	2					22 42	
WARSAW	69.34	320.7	11 6A	1					20 36	PS
BRISBANE	69.47	127.0	11 5	-1	20 17	8				
BELGRADE	69.53	312.7	11 4A	-2	20 13	4			12 6	PCP
MELBOURNE	69.56	140.1	11 6	0	20 17	7			11 11	
KRAKOW	69.94	318.3	11 8	-1	20 18	4			13 18	
BUDAPEST	70.48	315.6	11 14	2	20 27	6				
KALOCSA	70.55	314.6	11 13	1	20 27	6			20 53	PS
RACIBORZ	71.06	318.3	11 16	1					15 40	PPP
HURBANOVO	71.07	316.0	11 19	3	20 35	8			25 10	SS
KIRUNA	71.19	337.2	11 15K	-1	20 33	4			11 36	PCP
RIVERVIEW	71.34	133.6	11 15K	-2	20 37	6			25 13	SS
UPPSALA	71.65	328.7	11 18K	-1	20 35	1			11 24	
BRATISLAVA	71.80	316.3	11 20	0	20 44	8				
TARANTO	72.04	308.2							22 6	
REGGIO CALA.	73.47	305.9	11 29	-1	21 4	9			11 47	
PRAGUE	73.49	318.4	11 31K	1	20 59	4			22 0	PPS
MESSINA	73.54	306.0	11 29K	-1	21 3	7			14 17	PP
POTSDAM	74.22	320.8	11 34	0	21 10	8				
TRIESTE	74.23	313.8	11 34	0	21 2	-1			14 23	PP
SKALSTUGAN	74.28	332.5	11 34	0						
COPENHAGEN	74.42	324.3	11 35	0	21 9	4			26 27	SS
CHEB	74.81	318.5	11 40	3	21 18	8			14 56	PP
JENA	75.25	319.4	11 40	0	21 18	3			14 55	PP
ROME	75.50	310.0	11 39K	-2	21 24	7	11 46		14 49	PP
HAMBURG	76.00	322.2	11 44	0	21 30	7			12 1	PCP
BOLOGNA	76.04	312.8	11 51	6	21 44	21			22 11	PS
FLORENCE X.	76.18	312.1	11 42	-3	21 28	3			14 43	PP
PIETERMZBURG	76.60	234.4	11 48	0						
STUTTGART	77.00	317.3	11 49K	-1	21 49	15			14 44	PP
TUBINGEN	77.12	317.1	11 50	-1						
EBINGEN	77.23	316.8	11 51K	0					13 18	
PAVIA	77.48	313.7	11 52K	-1	21 42	3			14 49	PP
KARLSRUHE	77.49	317.6	11 53K	0	21 40	1			14 40	PP
STRASBOURG	77.97	317.3	11 55K	0	21 49	5			14 52	PP

BENSBERG	78.02	319.7	11	56A	0	21	46	1				
WITTEVEEN	78.06	321.7	11	57K	1						12	17
OROPA	78.26	314.3	11	53	-4						21	40
NEUCHATEL	78.75	315.8	11	59	-1	21	56	3				
MONACO	78.93	312.4	12	0	-1						15	2 PP
DE BILT	79.07	321.1	12	1	0	22	2	6				
BESANCON	79.36	316.1	12	4	1						14	55 PP
KIMBERLEY	80.75	237.2	12	10	0							
WILKES	81.13	174.0	12	11	-1	22	18	1				
PARIS	81.37	318.1	12	14K	0	22	25	5			15	18 PP
CLERMONT-FD.	81.58	315.0	12	16	1	22	31	9				
ABERDEEN	82.18	327.0	12	17	-1	22	32	4			15	17 PP
DURHAM	82.49	324.6	12	21	2	22	36	5	12	26	22	47 SCS
KEW	82.55	321.1	12	20	0	22	37	5			15	31 PP
ALGIERS UNI.	83.57	306.2	12	23	-2	22	40	-2			15	36 PP
TAMANRASSET	84.66	292.0	12	32K	2	22	58	5			15	48 PP
SCORESBY SD.	85.31	342.6	12	33	-1	23	0	1			18	33 PPP
RATHFARNHAM	85.56	323.9	12	34A	-1						15	46 PP
RELIZANE	85.78	305.7	12	37K	1	23	19	15			15	58 PP
ALICANTE	85.91	308.4	12	37	0	23	14	9			16	2 PP
COLLEGE	87.79	22.5	12	44	-2	23	7	-16			23	29
ALMERIA	87.84	307.4	12	46	0	23	40	16			16	4 PP
TOLEDO	88.16	310.6	12	48K	1	23	28	1			16	10 PP
REYKJAVIK	88.55	337.1	12	52A	3							
GRANADA	88.61	307.9	12	52K	2	23	45	14			16	10 PP
MALAGA	89.36	307.7	12	52A	-1	23	36	-2			15	56 PP
RESOLUTE	90.87	2.8	12	58	-2	23	29	-22			16	33 PP
LISBON	92.28	310.8	13	9A	2				13	27	16	49 PP
MBOUR	107.47	290.3									28	7 PS
HUNGRY HORSE	112.19	20.9	18	32	1						19	18 PP
BUTTE	114.70	21.3	19	33	57						29	32 PS
SHASTA	114.82	31.1									19	38 PP
MINERAL	115.48	30.8	18	46	9						19	44 PP
BERKELEY	117.01	33.1									19	55 PP
KIRKLAND LA.	117.62	356.7	18	42	1							
EUREKA	118.83	27.6	18	45	1						20	3 PP
RAPID CITY	119.32	15.5	18	47	2						20	6 PP
OTTAWA	119.98	353.0	18	48	2						20	12 PP
ISABELLA	120.66	32.1	18	52	5						20	21 PP
CHINA LAKE	120.98	31.3	18	50	2						20	21 PP
PASADENA	121.98	33.0	18	57	7						20	28 PP
BOULDER CITY	122.20	29.1	18	53	3							
WESTON	122.25	348.6	18	57	7							
RIVERSIDE	122.52	32.5	18	53	2							
PALOMAR	123.29	32.6	19	0	8							
HAYFIELD	123.64	31.3	18	55	2							
PALISADES	124.04	350.5	18	55	1						20	40 PP
MORGANTOWN	126.10	355.8	19	OK	2							
WASHINGTON	126.55	352.9	19	2	3						22	24 PKS
TUCSON	127.14	28.3	19	4	4						21	6 PP
LUBBOCK	129.46	19.0	19	7	3							
CHAPEL HILL	129.71	354.4	19	5	0							
BERMUDA	129.82	338.2	19	17	;2						21	28 PP
COLUMBIA	131.77	356.3	19	9	0						22	35 PKS
SAN JUAN	142.81	330.6	19	24	-5							
ST. VINCENT	144.33	319.1	19	31	0							
TRINIDAD	146.35	316.5	19	38	3							
CHINCHINA	158.90	335.2	19	54	1						20	32 PKP2
LA PAZ	164.22	260.3	20	1A	3						24	45 PP
HUANCAYO	170.91	283.8	20	8	5						25	15 PP

JUNE 18 14.H 48.M 21.S EPICENTRE 14.47 95.66 DEPTH= 0.KM

A=-0.09560 B= 0.96397 C= 0.24822 D= 0.9951 E= 0.0987
G=-0.0245 H= 0.2470 K=-0.9687 HT= 5.8

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	
PORT BLAIR	3.99	226.3	1	10	6	1	58	5			1	26	PG
CHITTAGONG	8.66	335.7	2	10	0	3	44	-5					
SHILLONG	11.61	342.7	2	46	-4	4	49	-13			2	53	PP
KUNMING	12.42	31.0	3	6A	5	5	39	18			3	18	PP
BOKARO	13.17	316.5	3	10	-1	5	45	6			3	25	PPP
CHATRA	14.64	328.5	3	29	-1						6	43	

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.

MADRAS	15.11	266.3	3	36K	-1	6	18	-8		3	43 PP
COLOMBO	17.24	245.8	4	2	-2	7	30	15			
KODAIKANAL	18.26	258.7	4	17K	0	8	14	36		4	44 PP
CANTON	18.74	60.2	4	21A	-1	7	51	2		4	41 PP
HONG KONG	19.20	63.4	4	31A	3						
POONA	21.30	283.9	4	53K	2	9	0	17		5	4 PP
BOMBAY	22.32	284.5	5	3	2	9	9	7		5	45 PPP
DEHRA DUN	22.62	317.1	5	6	2	9	17	9		5	53 PPP
SINING	22.73	12.8	5	8	3						
LANCHOW	22.73	17.3	5	8	3						
SIAN	23.06	29.0	5	9	1						
DJAKARTA	23.31	150.9	5	13	2	9	30	10			
BAGUIO CITY	24.09	82.1	5	38	20	9	59	25			
WUWEI	24.18	13.6	5	20	1						
MANILA	24.51	86.5	5	8	-14	8	25	-76			
YINCHUAN	25.68	19.5	5	37	4						
YUMEN	25.76	2.4	5	25	-9						
LINFEN	25.80	30.6	5	41	7						
LAHORE	25.89	314.7	5	35	0	10	16	12			
NANKING	27.43	46.4	5	47	-2	10	30	1		6	34 PP
ZO-SE	28.66	50.4	6	0	-1	10	52	3		6	53 PP
WARSAK DAM	29.22	316.0	6	11	5						
TATUNG	29.84	27.8	6	16	5						
QUETTA	30.70	305.4	6	19K	0						
PEKING	31.16	31.3	6	21K	-2	11	31	2			
FRUNSE	33.62	331.5	6	45K	1					8	31
TASHKENT	35.22	324.5	6	59	1	12	33	1		12	57
IRKUTSK	38.34	8.6	7	25	1	13	25	5		8	54 PP
CHANGCHUN	38.68	34.9	7	26	-1	13	27	2		9	0 PP
ASHKABAD	40.44	312.4	7	43A	1	13	59	8		9	19 PP
VLADIVOSTOK	42.17	40.1	7	55	-1	14	17	0		9	41 PCP
MATUSIRO	43.80	51.9	8	7A	-2	14	46	5		18	2
GORIS	49.78	309.8	8	57	1	16	8	2		10	54 PP
SVERDLOVSK	49.96	335.7	8	57	-1	16	9	1		16	21 PS
PERTH	50.04	157.5								20	13
Y.-SAKHLINSK	50.73	40.4	9	3	-1	16	19	0			
TIFLIS	51.52	312.1	9	10	0	16	31	1		16	46 PS
JERUSALEM	57.52	298.6	9	53	-1						
TANANARIVE	57.84	236.4	9	54	-2					10	50 PCP
RABAUL	59.00	104.0	10	6	2						
SIMFEROPOL	59.83	313.8	10	9	-1	18	22	1		13	55 PPP
MAGADAN	60.29	28.8	10	11	-2	18	27	1			
MOSCOW	60.34	326.5	10	12	-1	18	27	0			
TIKSI	60.50	11.5	10	11	-3	18	25	-4		10	52 PCP
PETROPAVLOVK	62.40	37.3	10	21	-6	18	44	-9		12	39 PP
IASI	64.66	315.6	10	37	-5	19	21	0		11	25 PP
PULKOVO	65.25	329.6	10	45	-1	19	29	0		13	13 PP
BUCHAREST	65.45	312.4	10	47K	0	19	33	2		11	19 PP
APATITY	66.26	338.2				19	45	4			
ATHENS	67.08	305.3	10	49	-8					20	49 SCS
LWOW	67.25	318.2	11	0	2	19	55	2		11	27 PCP
SOFIA	67.39	310.5	10	59	0	19	53	-2			
HELSINKI	67.97	329.4	11	2	-1					11	29 PCP
LWIRO	68.24	261.6	11	4	-1					12	16
SODANKYLA	68.71	337.2	11	6	-2	20	16	5		11	31 PCP
TIMISOARA	68.95	313.7	11	24	15	20	22	9			
WARSAW	69.30	320.7	11	12K	1	20	20	3		13	59 PP
BELGRADE	69.49	312.7	11	11A	-1	20	20	0		13	51 PP
BRISBANE	69.50	127.0	11	9	-3	20	20	0			
MELBOURNE	69.60	140.2	11	16	3	20	24	3		11	33
SKALNATE PL.	69.67	317.4	11	14	0	20	19	-3		20	44 PS
KRAKOW	69.90	318.3	11	14	-1	20	23	-2		20	51 PS
BUDAPEST	70.44	315.6	11	18	0	20	33	2		11	25 PCP
KALOCSA	70.51	314.5	11	24	5						
RACIBORZ	71.02	318.3	11	22	0	20	38	0		11	47 PCP
HURBANOVO	71.03	316.0	11	25	3	20	43	5		14	18 PP
KIRUNA	71.13	337.2	11	21K	-1	20	38	-1		11	36
RIVERVIEW	71.38	133.6	11	20	-4	20	42	0		14	5 PP
UPPSALA	71.60	328.6	11	24K	-1	20	43	-1			
BRATISLAVA	71.76	316.3	11	27	1	20	48	2		13	49
TARANTO	72.01	308.2								14	6
REGGIO CALA.	73.44	305.8	11	35	-1	21	1	-4			
PRAGUE	73.44	318.4	11	36	0	21	5	0		12	3 PCP
MESSINA	73.51	306.0	11	35	-1	21	6	0		14	22 PP
POTSDAM	74.18	320.8	11	39	-1	21	16	2		14	26
TRIESTE	74.19	313.8	11	39K	-1	21	11	-3		14	29 PP
SKALSTUGAN	74.22	332.5	11	40	-1					11	55
COPENHAGEN	74.37	324.3	11	41K	0	21	16	0		14	26 PP
CHEB	74.76	318.5	11	48	4	21	24	4		22	11 PS

JENA	75.20	319.4	11	43	-3	21	22	-3			
ROME	75.46	310.0	11	52	4				14	52	PP
HAMBURG	75.95	322.2	11	51	0						
BOLOGNA	76.01	312.8	12	0	9	21	48	14	25	39	
FLORENCE X.	76.15	312.1	11	43	-9	21	31	-4	14	54	PP
STUTTGART	76.96	317.3	11	55K	-1	21	43	-1	14	45	PP
CHUR	76.98	315.3	11	55K	-1						
TUBINGEN	77.07	317.1	11	57	0						
EBINGEN	77.18	316.7	11	56K	-1						
PAVIA	77.44	313.7	11	59	0	21	52	3	14	32	PP
KARLSRUHE	77.44	317.6	12	0	1	21	53	4	14	53	PP
BERGEN	77.74	329.5				21	52	-1			
STRASBOURG	77.92	317.3	12	1K	0	21	56	1	15	1	PP
BENSBERG	77.97	319.7	12	1	-1	22	3	8			
WITTEVEEN	78.02	321.7	12	4	2						
OROPA	78.22	314.2	11	58	-5				21	54	
NEUCHATEL	78.71	315.7	12	5	-1	22	2	-1			
MONACO	78.89	312.4	12	6K	-1	22	14	9	15	8	PP
DE BILT	79.03	321.1	12	9	1	22	9	3	27	39	SS
BESANCON	79.32	316.1	12	9	0				12	27	
KIMBERLEY	80.81	237.2	12	17K	0						
PARIS	81.33	318.1	12	20K	0	22	29	-1	15	29	PP
CLERMONT-FD.	81.54	315.0	12	20	-1	22	35	2			
ABERDEEN	82.13	327.0	12	29	5	22	46	7	15	36	PP
DURHAM	82.44	324.6	12	25	-1	22	40	-2	12	48	
KEW	82.50	321.1	12	26K	0	22	43	1	22	56	SCS
ALGIERS UNI.	83.54	306.2	12	30K	-1	22	49	-4	15	47	PP
JERSEY	84.18	319.2				23	10	11			
TAMANRASSET	84.65	292.0	12	38K	1	23	5	1	15	54	PP
SCORESBY SD.	85.25	342.6	12	40	0	23	0	-10			
RATHFARNHAM	85.51	323.9	12	29	-12						
RELIZANE	85.75	305.7	12	42	0	23	18	3	16	5	PP
ALICANTE	85.88	308.4	12	44	1	23	22	6	23	10	SKS
COLLEGE	87.72	22.5	12	49	-3	23	38	5	23	14	SKS
TERRE ADELIE	87.72	163.5				23	12	-22	13	37	
ALMERIA	87.81	307.4	12	53	1	23	49	15	18	49	PPP
TOLEDO	88.12	310.6	12	53	-1	23	35	-2			
REYKJAVIK	88.49	337.1	12	59	3						
GRANADA	88.58	308.0	12	57K	1	23	48	7	16	1	PP
ROXBURGH	89.15	137.6				23	39	-8	24	57	PS
MALAGA	89.33	307.7	12	59K	-1	23	59	11	16	33	PP
RESOLUTE	90.80	2.8	13	4	-2	23	32	-30	16	36	PP
MBOUR	107.46	290.3							18	53	PP
BUTTE	114.62	21.3							19	46	PP
BOZEMAN	115.45	20.4	18	46	2				19	46	PP
KIRKLAND LA.	117.55	356.8	18	48	0						
EUREKA	118.76	27.6							18	50	PP
RAPID CITY	119.25	15.5							18	52	PP
OTTAWA	119.91	353.0							20	18	PP
ISABELLA	120.59	32.1	18	56	2				20	28	PP
CHINA LAKE	120.91	31.3	18	58	3				20	29	PP
PASADENA	121.91	33.0				26	1	5	20	37	PP
RIVERSIDE	122.45	32.5							20	38	PP
PALOMAR	123.22	32.5	19	5	6				20	42	PP
PALISADES	123.97	350.5							20	43	PP
MORGANTOWN	126.03	355.8	19	5A	1				20	59	PP
WASHINGTON	126.48	352.9	19	49	44				21	46	PP
LUBBOCK	129.39	19.0	19	11	0						
BERMUDA	129.76	338.3	19	12	0				21	23	PP
SAN JUAN	142.75	330.6	19	30	-5						
TACUBAYA	143.30	23.9				26	53	9	23	5	
ST. VINCENT	144.28	319.2	19	32	-6						
TRINIDAD	146.31	316.6	19	45	4						
BALBOA HTS.	156.25	348.2	19	48	-8						
BOGOTA	158.48	331.0	19	59	0						
HUANCAYO	170.91	284.3	20	21	11				25	25	PP

JUNE 18 17.H 56.M 6.S EPICENTRE -25.68 169.90 DEPTH= 0.KM

A=-0.88837 B= 0.15823 C=-0.43100 D= 0.1753 E= 0.9845
G= 0.4243 H=-0.0756 K=-0.9024 HT= 3.2

SE= 2.49

	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	4.61	316.1	0	13A	-60				1	56	
ONERAHI	10.76	160.2	2	40	1				3	18	
SUVA	10.90	48.2	2	39	-2	4	8	-37			
AUCKLAND	11.91	160.6	2	54	-1				5	4	
TONGARIRO	14.29	162.0	3	26A	0						
TUAI	14.44	156.7	3	30	2				4	18	
BRISBANE	15.20	259.5	3	37	-1	6	38	10			
WELLINGTON	16.07	166.6	3	50A	1	6	52	3			
KAIMATA	16.84	176.1	4	1	2	8	43	97	4	27	
GEBBIES PASS	18.12	173.6	4	14	-1	9	39	124	8	4	
RIVERVIEW	18.18	239.1	4	18	2				4	30	PP
ROXBURGH	19.83	181.2	4	33A	-3	8	12	-2			
MELBOURNE	24.33	234.1	5	22A	1	9	46	8	6	11	PPP
RABAUL	27.31	318.5	5	47	-2				6	49	PPP
MACQUARIE I.	29.91	192.8	6	8	-4	11	4	-5			
TERRE ADELIE	44.79	195.6	8	18	0	14	46	-9			
GUAM	45.98	324.9	8	28	1						
PERTH	47.38	249.3				15	43	11	10	38	
SCOTT BASE	52.26	180.8	9	15	-1						
HONOLULU	56.09	36.5	9	50	6	17	38	6			
MANILA	62.21	304.4	10	34	8	18	54	3			
BAGUIO CITY	63.68	305.7	10	33	-3	20	37	87			
TUKUBASAN	67.69	334.3	10	57	-5						
KYOTO	68.50	330.3	11	6A	-1						
MATUSIRO	68.73	333.0	11	6	-2	20	14	3	25	7	SS
CANTON	73.19	306.6	11	35A	0						
ZO-SE	73.19	317.7	11	33A	-2						
NANKING	75.31	316.9	11	47	0	21	32	5	14	42	PP
Y.-SAKHLINSK	76.35	341.2	11	53	0						
VLADIVOSTOK	76.87	332.4	11	55	-1						
PETROPAVLOVK	79.09	353.1	12	6	-2	22	6	-1			
CHANGCHUN	80.35	329.0	12	13	-2	22	24	3			
KUNMING	82.22	302.4	12	27A	2	22	45	5			
PEKING	82.31	321.3	12	25	0	22	44	3	28	8	SS
MAGADAN	86.37	350.4	12	43	-2						
SANTA CLARA	89.58	47.7				25	14	83	13	10	
BERKELEY	89.66	47.1	13	1A	-1	23	58	6	25	6	PS
UKIAH	89.73	45.7	13	2	0						
LICK	89.78	47.8	13	1A	-1						
KING RANCH	90.01	50.4	13	4	1				13	19	
PASADENA	90.50	52.0	13	5	0	23	50	-9	16	35	PP
FRESNO	90.72	49.1	13	6	-1						
SHILLONG	90.92	297.9	13	7A	0						
RIVERSIDE	90.98	52.5	13	7	-1				16	40	PP
PALOMAR	91.03	53.3	13	8	0				16	46	PP
ISABELLA	91.06	50.6	13	6	-2				13	17	
SHASTA	91.13	44.7	13	8	0						
MINERAL	91.44	45.3	13	8A	-2						
CHINA LAKE	91.75	50.8	13	9	-2				13	24	
HAYFIELD	92.10	53.5							16	49	PP
RENO	92.17	46.8	13	17	4						
COLOMBO	92.98	276.2	13	43	26	23	47	-34			
BOULDER CITY	93.78	51.8	13	22	1						
EUREKA	94.70	48.3	13	23	-2				25	58	PS
VICTORIA	94.84	37.8	13	30	4						
TUCSON	94.96	56.7	13	42	16	25	8	30	17	17	PP
SEATTLE	94.99	38.9	13	33	7				17	10	PP
HORSESHOE B.	95.40	37.1	13	29	1						
COLLEGE	96.01	16.8	13	27	-4				13	59	
IRKUTSK	96.36	325.7	13	31	-1						
SALT LAKE C.	98.09	48.7	13	54	14				17	57	PP
BUTTE	99.98	43.7				25	41	20	17	56	PP
HUNGRY HORSE	100.15	41.1							17	57	PP
BANFF	100.58	38.1							17	55	
BOZEMAN	100.78	44.5							18	1	PP
TIKSI	101.12	347.8							24	28	SKKS
BOMBAY	104.13	284.3	17	26	199	27	56	121	29	4	PPS
RAPID CITY	105.28	48.2	17	19	777				18	32	PP
HUANCAYO	106.29	112.3	19	4	777				25	8	PPP
FAYETTEVILLE	109.15	58.5	18	58	777						
LA PAZ	109.67	120.2	18	18	777	25	30	-2	19	11	PP
FRUNSE	110.72	308.5							19	10	PP
QUETTA	113.00	293.5	18	21	-19				19	29	PP
TASHKENT	114.13	305.8							21	56	PPP
RESOLUTE	115.93	17.1	18	47	2	27	51	135	35	44	SS
KIMBERLEY	116.35	214.1	18	51	5						
SVERDLOVSK	121.58	322.5							20	25	PP
ASHKABAD	121.73	300.2	18	56	-1						

KIRKLAND LA.	121.82	47.8	18	59	2					
WASHINGTON	123.02	58.9							21	19 PKS
OTTAWA	124.63	51.3	19	1K	-1					
PALISADES	125.67	56.7	19	8	4	27	6	58	21	10 PP
BREBEUF	126.11	51.2	19	4	-1					
SHAWINIGAN	126.71	49.9	19	6	0					
WESTON	127.69	55.1	19	8A	0					
SAN JUAN	127.88	86.1	19	12	4					
SEVEN FALLS	128.03	49.1	19	8K	-1				30	57 PS
FORT FRANCE	131.13	92.6							22	44 SKP
BERMUDA	132.24	68.6	19	25	8				24	14 PPP
TIFLIS	132.39	304.0	19	20	3					
LWIRO	133.23	239.4	19	19K	0				23	5 PP
HALIFAX	133.24	52.0	19	23	4				23	1
KIRUNA	133.93	344.5	19	17	-3				23	6
PULKOVO	136.00	331.8				26	11	-22		
SKALSTUGAN	139.35	344.8	19	30	0					
KSARA	139.54	292.7	19	29	-1	26	42	3	22	38 PP
SIMFEROPOL	139.70	310.0	19	36	6					
REYKJAVIK	140.79	8.2	19	50	18					
IASI	143.35	315.7	19	42	5				19	56
BACAU	144.02	315.0	19	56	18				21	0
FOCSANI	144.15	313.5	19	48	10					
LWOW	144.31	321.5							22	38 PP
WARSAW	144.58	326.7	19	38	-1				20	2
BUCHAREST	145.33	311.9	19	42	2	26	50	2	29	22
CAMPULUNG	145.72	313.8	19	45	4				20	2
COPENHAGEN	145.81	337.3	19	42A	1				42	8 SS
KRAKOW	146.42	324.3	19	44	2				21	14
SKALNATE PL.	146.74	322.8	19	47	4				20	10
RACIBORZ	147.30	325.6	19	48	4				21	47
SOFIA	147.82	310.3	19	58	14					
TIMISOARA	147.94	316.7	20	0	15					
ABERDEEN	148.02	351.8	19	56	11	26	31	-21	20	51
POTSDAM	148.11	332.8	19	49	4					
BUDAPEST	148.34	321.0	19	52	7				43	3 SSP
HAMBURG	148.37	337.0	19	50	5				20	6
BELGRADE	148.85	315.6	19	52	6				22	46 PP
KALOCSA	148.90	319.5	19	55	9				23	54 PP
ATHENS	148.93	301.5	19	54	8					
BRATISLAVA	149.03	323.5	19	48	2				19	57 PKP2
PRAGUE	149.16	328.5	19	53	6				23	14 PP
JENA	149.81	332.3	19	47	-1					
CHEB	150.09	330.4	19	55	7				23	10 PP
WITTEVEEN	150.10	339.4	19	55	7					
DURHAM	150.27	350.0	19	44	-4					
ZAGREB	151.03	320.6	19	56	7					
DE BILT	151.19	340.3	19	54	4				23	54 PP
RATHFARNHAM	152.27	355.1	20	10K	19				21	28
TRIESTE	152.39	322.3	20	5	14	27	6	9	27	18 PPP
STUTTGART	152.45	331.8	19	51	-1				20	3 PKP2
KARLSRUHE	152.60	333.0	20	3	11				20	20
TUBINGEN	152.69	331.6	19	54	2					
EBINGEN	153.00	331.2	19	52	0					
KEW	153.19	346.4	19	59	6				20	15 PKP2
STRASBOURG	153.20	333.1	19	54	1				24	14 PP
NEUCHATEL	154.78	331.9	20	0	5				30	4
PARIS	154.90	340.1	20	12K	17	27	4	4	23	44 PP
FLORENCE X.	154.95	321.5	20	20	25				31	16 SKKS
BESANCON	154.99	333.5	19	55	0				24	0 PP
MESSINA	155.00	306.2	20	17	22	26	56	-4	24	6 PP
PAVIA	155.11	326.3	20	17	22				26	52
ROME	155.34	316.6	20	30K	35	27	35	34	24	28 PP
OROPA	155.38	328.5	20	18	23				28	32
MONACO	157.02	326.0	20	3	5				24	7 PP
CLERMONT-FD.	157.32	335.5	20	5	7				20	31 PKP2
ALGIERS UNI.	164.25	317.7	20	6	0				24	46 PP
TOLEDO	164.96	341.8	21	4	58	27	7	-2	24	50 PP
ALICANTE	164.98	329.5	20	2	-4	27	5	-4	24	44 PP
TAMANRASSET	165.46	261.8	20	10	3				24	53 PP
RELIZANE	166.42	320.2	20	12	5				21	26 PKP2
MBOUR	167.04	148.9	20	19	11				25	14 PP
ALMERIA	167.10	331.5	20	14	6				25	0 PP
GRANADA	167.27	335.8	20	10A	2	27	27	17	25	3 PP
MALAGA	167.97	337.5	20	16A	8				25	6 PP

JUNE 19 1.H 29.M 59.S EPICENTRE -24.01-176.00 DEPTH= 73.KM

DEPTH OF FOCUS= 0.006R

A=-0.91227 B=-0.06376 C=-0.40460 D=-0.0697 E= 0.9976
G= 0.4036 H= 0.0282 K=-0.9145 HT= 3.6

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
SUVA	7.81	317.2	1 53	0	3 42	21		
ONERAHI	14.38	213.2	3 27	6				
AUCKLAND	15.06	209.6			6 36	21		
TUAI	15.85	199.9	3 43	3	6 21	-12		
NOUMEA	16.23	272.5	3 11A	-34				
TONGARIRO	16.76	203.4	3 50	-2	7 9	15		
WELLINGTON	18.87	201.9	4 14	-3	7 27	-14		
COBB RIVER	19.46	206.3	5 0	36	7 42	-12		
KAIMATA	21.20	206.4	4 39	-3	8 18	-10		
GEBBIES PASS	21.74	202.7	4 41	-6	8 28	-10		
ROXBURGH	24.56	205.3	5 7	-7	9 31	4		
BRISBANE	28.07	256.3	5 47	0	10 44	19		
RIVERVIEW	30.26	243.6	6 6A	0	11 7	7	6 16	7 8 PP
MELBOURNE	35.94	238.2	6 56	1				7 9
TERRE ADELIE	50.35	200.4	8 54	2	16 9	11		
SCOTT BASE	54.52	184.4	9 24	1				
MATUSIRO	74.12	323.1	11 28A	-2	21 11	15		
KING RANCH	79.49	43.8	12 0	0				12 9
BERKELEY	79.59	40.5	11 59	-2	21 54	-1		
LICK	79.61	41.2	11 58K	-3				12 9
PASADENA	79.76	45.5	11 59	-3	22 5	8		15 1 PP
UKIAH	79.87	39.0	12 10	8				
PETROPAVLOVK	79.91	344.8	12 0	-3	22 0	1		
PALOMAR	80.14	46.8	12 2K	-2				
RIVERSIDE	80.18	46.0	12 2	-2	22 7	5		12 11
WOODY	80.28	43.9	12 3K	-2				12 12
FRESNO	80.37	42.6	12 3	-2				12 13
ISABELLA	80.50	44.2	12 4K	-2				12 14
CHINA LAKE	81.16	44.5	12 8K	-1				12 17
ZO-SE	81.35	309.5	12 10A	0				
SHASTA	81.39	38.2	12 8K	-3				12 18
MINERAL	81.61	38.9	12 10A	-2				12 20
RENO	82.13	40.4	12 13	-1				12 23
VLADIVOSTOK	82.20	324.3	12 10	-5	22 31	9		
BOULDER CITY	83.05	45.7	12 18	-1				
CANTON	83.09	298.9	12 20A	1				
CORVALLIS	83.51	34.9	12 30	9				
TUCSON	83.65	50.7	12 21	-1				
EUREKA	84.41	42.4	12 24	-2				13 46
SEATTLE	86.10	33.1	12 38	4				
VICTORIA	86.15	32.0	12 35	1				
CHANGCHUN	86.29	321.7	12 36A	1				
TACUBAYA	86.36	67.1						13 0
HORSESHOE B.	86.80	31.4	12 42	4				
SALT LAKE C.	87.73	43.2	12 41	-1				13 24
PEKING	89.67	314.7	12 54A	3				
BUTTE	90.30	38.6	12 58	4	23 46	6		16 33 PP
LUBBOCK	90.82	53.4	12 55	-2				
HUNGRY HORSE	90.85	36.1	13 0	3				16 45 PP
BOZEMAN	90.97	39.4	13 1	4				
COLLEGE	91.24	11.6	12 55	-4	23 48	0		
BANFF	91.75	33.2	12 3	-58				
KUNMING	92.59	296.2	13 8	3				
HUANCAYO	94.69	105.3	13 17	3	23 55	-23		
RAPID CITY	94.91	43.7	13 19	4				
FAYETTEVILLE	97.57	54.0	13 27A	-1				
LA PAZ	98.92	112.4	13 27	-7	24 12	-42		17 36 PP
FLORISSANT	101.42	52.6			25 28	13		24 21 SKS
ST. LOUIS 1	101.47	52.8			25 23	8		24 21 SKS
CHINCHINA	101.48	89.6			24 22	-54		
MORGANTOWN	109.36	54.5	18 38	777				
RESOLUTE	110.64	16.3			25 1	4		18 52 PP
OTTAWA	113.71	49.2	18 35	5				
PALISADES	114.17	54.2			25 15	4		35 9 SS
BREBEUF	115.18	49.4	19 9	36				20 3
SHAWINIGAN	115.93	48.3	18 44	9				
BERMUDA	119.80	65.3			25 40	9		20 4 PP
NAMANGAN	121.83	304.5			25 45	7		20 19 PP

QUETTA	124.23	291.1	18	52	1						
SCORESBY SD.	131.11	11.3							21	32	PP
SODANKYLA	134.41	348.0	19	9	-1						
KIRUNA	135.01	351.3	18	53	-18				39	43	SS
MOSCOW	139.85	330.9	19	19	-1						
SKALSTUGAN	140.06	354.2	19	14	-6						
HELSINKI	141.02	343.5	19	15	-7				23	10	PKS
TIFLIS	141.86	307.6	19	21	-3				29	29	SKKS
UPPSALA	142.93	348.6	19	21	-5				19	37	
LWIRO	144.46	226.2	19	29	1				22	48	PP
COPENHAGEN	147.76	351.0	19	38	4				19	54	PKP2
WARSAW	148.97	339.6	19	39	3				23	19	PP
DURHAM	149.00	6.3	19	41	5						
KISHINEV	149.65	325.3	19	41	4				30	14	SKKS
RATHFARNHAM	149.73	12.3	19	42	5						
HAMBURG	150.14	352.8	19	43	6				20	0	
POTSDAM	150.84	348.6	19	40	2						
KRAKOW	151.19	338.5	19	38	-1				19	56	PKP2
JERUSALEM	151.41	292.7	19	38K	-1				19	56	
RACIBORZ	151.72	340.5	19	47	7				19	57	PKP2
DE BILT	151.94	358.5	19	41	1				42	31	SS
KEW	152.38	5.8	19	41	0				20	8	PKP2
JENA	152.49	349.6	19	49	8						
PRAGUE	152.74	345.2	19	56	15				23	29	PP
CHEB	153.17	348.0	19	57	15				20	23	
BRATISLAVA	153.74	339.9	19	45	2				23	36	PP
STUTTGART	154.95	351.9	19	44	0				23	53	PP
PARIS	155.22	2.4	19	45	0				24	1	PP
STRASBOURG	155.30	354.0	19	44	-1				23	55	PP
EBINGEN	155.56	351.9	19	45	0						
BESANCON	156.75	356.6	19	49	2				20	25	PKP2
NEUCHATEL	156.94	354.8	20	42	55						
TRIESTE	157.01	342.3	19	49	2				20	31	PKP2
MBOUR	158.03	112.0	20	6	18				24	4	PP
CLERMONT-FD.	158.28	1.7	19	49	0				44	1	SS
FLORENCE X.	159.40	344.9	19	49	-1				24	11	PP
MONACO	160.13	352.7	19	52	1				20	40	PKP2
ROME	160.81	340.4	19	52A	1				24	4	PP
MESSINA	162.76	327.8	20	43	50				24	21	PP
ALICANTE	165.20	13.9	19	55	-1	26	58	7	20	56	PKP2
GRANADA	165.34	24.7	20	22A	26	27	16	25	24	56	PP
MALAGA	165.41	27.8	19	56K	0				24	48	PP
ALMERIA	166.05	22.0	19	57	0				24	43	PP
ALGIERS UNI.	167.26	3.5	19	58	1				25	2	PP
RELIZANE	167.92	13.5	20	1	3				25	3	PP
TAMANRASSET	178.14	229.1	20	4	2				25	45	PP

JUNE 19 8.H 1.M 37.S EPICENTRE -16.47 176.78 DEPTH= 52.KM

DEPTH OF FOCUS= 0.003R

A=-0.95799 B= 0.05390 C=-0.28168 D= 0.0562 E= 0.9984
G= 0.2812 H=-0.0158 K=-0.9595 HT= 5.5

SE= 2.35

	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	2.30	137.0	0	25	-12								
NOUMEA	11.34	237.6	2	41K	-1	4	49	0	2	53	5	1	SS
ONERAHI	19.35	185.9	4	27	3	8	5	11					
AUCKLAND	20.40	184.6	4	50	15	8	53	37					
TUAI	22.25	179.2	5	2	8	9	8	17					
TONGARIRO	22.68	182.5	4	57	-1								
BRISBANE	24.55	239.4	5	15	-1	9	38	7					
COBB RIVER	24.78	187.3	5	18	-1	8	58	-37					
WELLINGTON	24.79	183.6	5	15K	-4	10	15	40			6	10	PP
KAIMATA	26.37	188.9	5	37	3	10	25	24					
RABAUL	27.06	294.1	5	40	0								
GEBBIES PASS	27.37	186.5	5	39	-4								
RIVERVIEW	28.81	228.3	5	56A	0	10	40	0	6	5	6	44	PP
ROXBURGH	29.66	190.6	6	10	7	10	54	0			12	29	PCS
MELBOURNE	35.15	226.5	6	50K	-1	12	29	10			8	16	PP
GUAM	43.43	311.4	8	0	0						9	57	
HONOLULU	44.89	34.1				14	3	-42					
TERRE ADELIE	55.36	196.2	9	29	-2	17	17	7					
CAPE HALLETT	55.96	182.4	9	31	-5	17	25	7					

SCOTT BASE	61.61	182.4	10	12	-3				10	16
MANILA	63.15	296.2	10	27	2	19	35	44		
MATUSIRO	64.08	326.1	10	30	-1	19	13	11		
BAGUIO CITY	64.33	297.8	10	33	0	19	18	13		
DJAKARTA	69.07	269.6	11	5	2				15	41
Y.-SAKHLINSK	70.16	335.9	11	9	0				21	29
PETROPAVLOVK	71.05	348.6	11	14	-1				13	51 PP
ZO-SE	71.32	311.7	11	16	0					
VLADIVOSTOK	72.18	327.1	11	22	0	20	53	14		
CANTON	73.47	300.7	11	29	0	21	8	15	21	35
CHANGCHUN	76.22	324.3	11	44K	-1	21	38	14		
SANTA CLARA	78.62	45.5	12	1K	3	21	58	8		
BERKELEY	78.67	44.9	11	57K	-2	22	4	14	26	23 SS
UKIAH	78.69	43.4	11	58	-1					
LICK	78.82	45.6	12	0K	1				12	37
KING RANCH	79.16	48.2	12	1	0					
PEKING	79.57	317.1	12	5A	2	22	15	15		
PASADENA	79.73	49.8	12	5	1	22	11	10	15	2 PP
FRESNO	79.81	46.9	12	7	2				22	37
WOODY	79.96	48.2	12	4	-2				14	54 PP
SHASTA	80.06	42.4							12	24
ISABELLA	80.22	48.4	12	6	-1				12	18
RIVERSIDE	80.24	50.3	12	5	-2	22	15	8	15	5 PP
PALOMAR	80.33	51.1	12	5	-3				15	10 PP
MINERAL	80.39	43.0	12	7	-1				12	18
CHINA LAKE	80.92	48.6	12	10	-1				12	22
TINEMAHA	81.06	47.2	12	11	0	22	26	11	12	24
RENO	81.17	44.4	12	11	-1					
CORVALLIS	81.57	38.7	12	18	4					
BOULDER CITY	83.00	49.4	12	20	-1	22	55	20	15	35 PP
KUNMING	83.12	298.5	12	23	1	22	54	18	22	45 SKS
SITKA	83.36	24.1	12	32	9	22	45	6	23	10 SCS
VICTORIA	83.66	35.3	12	20	-5					
EUREKA	83.75	45.9	12	23	-2	23	13	30	15	37 PP
SEATTLE	83.81	36.5	12	25	0	23	0	17	12	42
HORSESHOE B.	84.21	34.7	12	28	1					
TUCSON	84.47	54.2	12	28	-1	23	3	13	23	47 PS
COLLEGE	85.45	14.4	12	32	-2	22	58	-1	13	1
SALT LAKE C.	87.16	46.1	12	42	0	23	22	6	28	22 SS
BUTTE	88.88	41.1	12	51	1	23	24	-8	29	35 SS
HUNGRY HORSE	88.99	38.6	12	51	0					
BANFF	89.39	35.6	12	51	-2					
BOZEMAN	89.70	41.9	12	55	1	23	35	-4	29	47 SS
TACUBAYA	89.92	69.8	13	10	15	23	51	10	16	39 PP
LUBBOCK	92.00	55.7	13	5	0					
SHILLONG	92.52	295.8	13	8K	1					
IRKUTSK	92.55	324.1	13	6A	-1				23	39 SKKS
TIKSI	93.62	346.4	13	11	-1				23	49 SKKS
RAPID CITY	94.33	45.4	13	16	1				17	0 PP
COLOMBO	98.52	274.7	11	46	-108				24	22
FAYETTEVILLE	98.75	55.0	13	37	2					
MADRAS	99.81	280.7							24	28
KODAIKANAL	101.68	277.3							24	45
FLORISSANT	102.30	53.0	13	52	0	25	39	12	18	3 PP
ST. LOUIS 1	102.38	53.2	13	54	2	24	33	-55	18	9 PP
HUANCAYO	103.29	106.9				25	59	24	17	23 PP
CHICAGO CGS.	104.91	50.4	14	3	0	24	47	-62		
RESOLUTE	105.31	16.0				24	38	0	18	25 PP
DEHRA DUN	105.51	297.5							18	30
BALBOA HTS.	105.51	85.1							19	0 PP
BOMBAY	108.05	284.9							18	45
LA PAZ	108.11	113.9				25	0	12	19	8 PP
CHINCHINA	108.26	90.1							18	51 PP
COLUMBIA	108.97	59.2				24	59	4	18	49 PP
BOGOTA	109.65	90.9							19	7 PP
MORGANTOWN	110.43	53.3							19	1 PP
CHAPEL HILL	110.80	57.3							19	0
WASHINGTON	112.61	54.3							18	57 PP
TASHKENT	113.74	308.3							19	18 PP
OTTAWA	113.78	47.2	18	38	5	25	5	-9	29	1 PP
QUETTA	115.01	296.0	18	37	1				19	35 PP
PALISADES	115.10	52.1				24	47	-32	19	35 PP
FORDHAM	115.12	52.2							29	1 SP
SHAWINIGAN	115.80	45.9	18	42	5					
WESTON	117.02	50.5							29	21 SP
SEVEN FALLS	117.09	45.2	18	45	5	25	41	14	29	38 PS
SVERDLOVSK	117.89	326.1							19	55 PP
ASHKABAD	122.25	304.7							22	47 PPP

HALIFAX	122.40	47.3	18	53	3				37	30 SS
BERMUDA	122.55	61.9							20	25 PP
FORT FRANCE	124.34	83.2				26	9	18		
SCORESBY SD.	124.80	7.6	18	59	4				20	53 PP
KIRUNA	126.45	349.1	18	54	-4					
MOSCOW	130.00	331.1	19	11	6				22	35 PKS
PULKOVO	130.36	338.5	19	10	5				27	47 SKKS
GORIS	131.31	308.4	19	11	4	25	56	-14	22	37 PKS
TIFLIS	131.85	311.7	19	12	4				22	41 PKS
UPPSALA	134.09	345.5							21	41 PP
SIMFEROPOL	137.73	320.2	19	22	3	26	30	8	22	6 PP
COPENHAGEN	139.06	346.5	19	27	6					
ABERDEEN	139.36	359.1							25	33 PPP
WARSAW	139.48	337.1	19	34	12				22	17 PP
LWOW	140.09	332.5	19	26	3				25	29 PPP
KSARA	140.89	303.7	19	20	-5				22	31 PP
FOCSANI	141.33	325.4	19	28	3					
HAMBURG	141.56	347.3	19	32	6					
KRAKOW	141.64	335.9	19	22	-4				22	35 PP
DURHAM	141.75	358.5							23	19
POTSDAM	141.92	343.8							19	45
JERUSALEM	141.97	300.7	19	25	-2					
RACIBORZ	142.27	337.4							19	53 PKP2
BUCHAREST	142.75	324.6	19	27	-1				30	59 SKKS
CAMPULUNG	142.78	326.5	19	43	14					
WITTEVEEN	142.90	350.0	19	38	10					
RATHFARNHAM	143.17	3.1	19	31	2				21	57
LWIRO	143.31	242.5	19	31K	2				22	46 PP
PRAGUE	143.57	340.8	19	30	1				21	2
JENA	143.63	344.2	19	30	1				22	4
DE BILT	143.83	351.2	19	29	-1				41	33 SS
CHEB	144.18	342.8	19	33	3				19	40
BRATISLAVA	144.25	336.6	19	32	1				22	52 PP
KEW	145.00	356.8	19	33	1				41	41 SS
SOFIA	145.39	324.5	19	37	4					
BELGRADE	145.42	329.8	19	34	1				35	39 PPS
KARLSRUHE	146.18	346.2	19	38	4				19	47
STUTTGART	146.22	345.2	19	35	1				42	10 SS
TUBINGEN	146.47	345.2	19	35	1					
STRASBOURG	146.73	346.7	19	37	2				23	11 PP
EBINGEN	146.82	345.0	19	35	0					
PARIS	147.41	353.0	19	34	-2				38	55 PS
TRIESTE	147.62	337.5	19	40	4	26	44	7	19	58 PKP2
CHUR	147.91	343.4	19	40K	3					
ATHENS	148.06	317.4	19	36	-1				19	42 PKP2
BESANCON	148.37	348.0	19	43	5				20	31
NEUCHATEL	148.41	346.7	19	43	5					
OROPA	149.46	344.5	19	31	-8				22	10
BOLOGNA	149.47	339.3	19	54	15				22	48
PAVIA	149.54	342.6	19	35	-4				34	5 PSKS
FLORENCE X.	150.13	338.7	19	42	2	26	40	-1	23	29 PP
TARANTO	150.22	327.5							19	23
CLERMONT-FD.	150.31	351.0	19	49	9					
ROME	151.28	335.1	20	2	20	27	21	39	24	15 PKS
MONACO	151.36	343.8	19	48	6				20	21
MESSINA	152.78	326.3				26	47	3	43	7 SS
REGGIO CALA.	152.80	326.1							20	13
COIMBRA	155.92	9.8	20	4	16	27	2	14	24	14 PP
TOLEDO	156.66	1.6	19	44	-5					
LISBON	157.23	12.1	20	28K	38					
ALICANTE	158.07	354.2	19	51	0	26	56	6		
ALGIERS UNI.	159.02	345.8	20	2	10				24	24 PP
GRANADA	159.36	0.9	20	16A	23	27	30	39	24	22 PP
ALMERIA	159.68	358.3	19	59	6					
MALAGA	159.80	2.7	19	58K	5				24	56 PP
RELIZANE	160.50	350.8	20	1	7				24	25 PP
MBOUR	166.58	97.0	20	5	5				24	47 PP
TAMANRASSET	169.64	308.7	20	4	2				25	12 PP

JUNE 20 1.H 6.M 41.S EPICENTRE 19.21 145.65 DEPTH= 120.KM

DEPTH OF FOCUS= 0.014R

A=-0.78020 B= 0.53317 C= 0.32712 D= 0.5642 E= 0.8256
G=-0.2701 H= 0.1846 K=-0.9450 HT= 4.9

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
OSIMA	16.46	341.5	3	43	-2	6	45	1				
MERA	16.47	342.9	4	43	58						8	1
OMAESAKI	16.69	338.2	3	47	-1							
MISIMA	16.92	340.8	3	50	0	6	54	-1				
SHIZUOKA	16.96	339.2	3	49	-2	6	47	-9				
YOKOHAMA	17.00	343.0	3	51	0	7	20	23			4	21
TOKYO C.M.O.	17.21	343.6	3	53	-1	7	0	-1				
HUNATU	17.33	340.8	3	54	-1	7	5	1				
TU	17.45	334.2	3	52	-5							
KOHU	17.51	340.5	3	57	-1	7	7	0				
KAMEYAMA	17.58	334.2	3	58	0	6	55	-14				
KAKIOKA	17.62	345.2	3	59	0	7	11	1				
TUKUBASAN	17.63	345.0	3	57	-2	7	12	2			4	58
NAGOYA	17.66	335.9	3	59	0	7	25	15				
TITIBU	17.68	342.2	3	59	-1	7	16	5				
MITO	17.70	346.1	3	59	-1	7	17	6				
KUMAGAYA	17.75	343.1	4	0	-1	7	18	6				
TOKUSIMA	17.78	328.5	4	0A	-1	7	14	1			7	34
OSAKA	17.81	331.7	4	4	3						6	53
SUMOTO	17.86	329.7	3	59	-3							
KOTI	17.92	325.2	4	3	1	7	21	6				
GIHU	17.93	335.8	4	2	-1	7	15	-1				
MIYAZAKI	18.00	317.4	4	5	2	7	27	10				
UTUNOMIYA	18.00	344.8	4	2	-2	7	15	-2				
HIKONE	18.03	334.4	4	3	-1	7	20	2				
KYOTO	18.03	332.8	4	1A	-3	7	15	-3				
IBUKISAN	18.07	334.9	4	20	16							
MAEBASI	18.07	342.7	4	3A	-1	7	20	1			5	2
ONAHAMA	18.16	347.7	4	3	-2	7	16	-4			5	40
OIWAKE	18.16	341.3	4	4	-1	7	23	3			5	1
MATUMOTO	18.27	339.8	4	7	1	7	27	4				
KAGOSIMA	18.35	315.0	4	10	3						4	33
TAKAYAMA	18.42	338.0	4	16	8	7	50	24				
SHIRAKAWA	18.46	346.2	4	9	0	7	30	3				
MATUSIRO	18.47	340.8	4	7A	-2	7	29	2				
NAGANO	18.58	340.9	4	10	0	7	32	2				
OOITA	18.77	320.8	4	12A	0	7	41	8				
TOYOOKA	18.86	331.7	4	14	1	7	37	1				
TAKADA	18.96	341.5	4	14	0							
HUKUSIMA	19.01	347.3	4	17	2	7	55	16				
KUMAMOTO	19.05	318.3	4	10	-5	7	41	2				
SENDAI	19.43	348.7	4	20	1	7	43	-4			5	41
NIIGATA	19.51	344.2	4	22	2	8	1	13				
ISINOMAKI	19.51	349.8	4	19	-1	7	57	8				
YAMAGATA	19.52	347.4	4	18	-2	7	49	0				
SAGA	19.59	318.6	4	49	28	8	53	63				
WAZIMA	19.65	338.9	4	25	4	7	44	-7				
HAMADA	19.72	325.1				7	42	-11			4	44
HUKUOKA	19.73	319.5	4	30	8	7	54	1				
TOMIE	20.18	314.7	4	51	24	8	42	40				
MIZUSAWA	20.23	349.8	4	28	1	8	10	8				
SAKATA	20.26	346.8	4	33	5							
MORIOKA	20.78	350.2	4	32	-1	8	20	7				
AKITA	20.99	348.0	4	38	3	8	26	9			4	54
AOMORI	21.94	350.1	4	46	2							
HAKODATE	22.88	350.5	4	54	0	8	55	5				
URAKAWA	22.99	354.5	4	59	4	8	58	6				
MORI	23.22	350.4	5	1	4	9	0	4			5	22
MURORAN	23.38	351.2	4	59	1							
TOMAKOMAI	23.49	352.4	5	57	58							
KUSIRO	23.72	357.7	5	24	22	9	13	8				
OBIHIRO	23.72	355.5	5	7	5							
SUTTSU	23.96	350.1	5	4	0	9	6	-3			5	33
BAGUIO CITY	24.02	267.3	5	6	2	9	50	40				
MANILA	24.04	262.7	5	9	4	9	21	11				
NEMURO	24.04	359.9	5	26	21							
RABAUL	24.13	163.9	5	5	-1						5	11
ABASHIRI	24.76	357.6	4	53	-19	8	47	-35			5	24
ZO-SE	25.05	302.9	5	14	0							
VLADIVOSTOK	26.51	337.0	5	28	0							
CANTON	30.40	283.0	6	4K	1	10	55	2				
PEKING	32.73	315.7	6	23	0	11	28	-2				
PETROPAVLOVK	35.32	13.6	6	44	-1	12	11	1				
KUNMING	40.10	286.3	7	27	2	13	24	2				
IRKUTSK	46.04	325.7	8	11	-2							

BRISBANE	46.96	171.0	8	20	0	14	56	-5				
SHILLONG	49.86	287.6	8	43K	0							
HONOLULU	52.57	77.5	9	2	-1							
RIVERVIEW	53.01	174.3	9	5K	-1	16	25	1				
TIKSI	53.34	353.4	9	7	-2	16	28	-1				
CHATRA	53.97	289.6	9	15	2						17	34
HAWAII V.OB.	55.50	79.2	9	24	0							
MELBOURNE	56.74	180.6	9	33	1							
DEHRA DUN	61.60	294.7									19	6
COLLEGE	62.84	26.1	10	12	-3	18	30	-3				
FRUNSE	63.44	309.0	10	17	-2							
LAHORE	64.62	296.5	10	25	-2				10	55		
NAMANGAN	65.72	307.0	10	34	0	19	7	-2				
SITKA	68.15	35.3	10	48	-1						11	56 PCP
QUETTA	71.10	296.2	11	4K	-3	20	7	-5	11	35	21	1 *SS
SVERDLOVSK	71.44	324.7	11	8	-1	20	14	-2				
HORSESHOE B.	76.34	42.3	11	37K	0	21	13	2				
VICTORIA	76.46	43.1	11	38K	0	21	13	1				
SEATTLE	77.40	43.8	11	45K	2	21	27	5				
CORVALLIS	77.50	47.0	11	45K	1						22	26
RESOLUTE	78.94	13.6	11	51K	-1	21	35	-4				
UKIAH	78.98	52.4	11	52	0							
SHASTA	79.17	50.7	11	53K	0							
MINERAL	79.84	50.9	11	57K	1						12	7
BERKELEY	80.05	53.4	11	58K	0	21	53	3				
BANFF	80.62	39.1	12	0K	-1							
LICK	80.68	53.8	12	1K	0							
RENO	81.40	51.2	12	6	1							
FRESNO	82.25	53.9	12	9K	0							
HUNGRY HORSE	82.48	41.5	12	11	1	22	16	1				
MAKHACH-KALA	82.89	312.9	12	11	-1							
WOODY	83.31	54.7	12	15K	1						15	27
TINEMAHA	83.35	53.2	12	16K	1	22	30	6				
ISABELLA	83.62	54.6	12	15K	-1						15	29
MOSCOW	84.01	327.3	12	15	-3	22	26	-4				
EUREKA	84.23	50.3	12	19	0						12	38
CHINA LAKE	84.24	54.2	12	20K	1							
BUTTE	84.25	43.3	12	20	1	22	29	-4			12	49
PASADENA	84.35	55.9	12	20K	0	22	29	-5			23	25 PS
KIRUNA	84.50	341.9	12	19K	-1	22	29	-6	12	49	23	23 *SS
RIVERSIDE	85.02	55.9	12	22K	-1	22	31	-9			15	40
TIFLIS	85.20	312.5	12	23	-1	22	41	-1				
BOZEMAN	85.36	43.2	12	26	1	22	26	-18			15	43 PP
PULKOVO	85.55	332.7									13	6
PALOMAR	85.65	56.3	12	27K	1						15	45
BOULDER CITY	86.30	53.3	12	31	2						15	52 PP
SALT LAKE C.	86.71	48.0	12	32	1						12	58
HELSINKI	87.58	334.5	12	33	-2				13	4		
WILKES	89.17	193.5				23	13	-7				
SKALSTUGAN	89.87	341.0	12	44K	-2						16	19 PP
SCORESBY SD.	90.12	355.9	12	45	-2	23	29	1			24	21 PS
UPPSALA	90.66	336.6	12	47K	-3				13	17	16	23 PP
TUCSON	90.77	55.5	12	51	1	23	29	-5			16	24 PP
SIMFEROPOL	90.91	318.7							13	27		
KISHINEV	93.05	322.3									25	51
KRAKOW	96.06	328.2	13	51	36						17	39
LUBBOCK	97.00	51.0	13	19	0							
HAMBURG	98.08	335.1									17	25 PP
STUTTGART	102.00	332.2	13	39	-2						17	53 PP
TRIESTE	102.10	327.7									17	50 PP
STRASBOURG	102.76	332.8				25	9	-7			17	58 PP
BESANCON	104.56	332.9									18	14 PP
FLORENCE X.	104.68	327.7									28	4
PARIS	104.75	335.8				25	47	15			24	19 SKS
ROME	105.37	325.6									27	18 PS
SHAWINIGAN	105.92	26.5	18	17	777							
MESSINA	106.15	321.1									26	39
MONACO	106.59	329.7									18	26 PP
CLERMONT-FD.	106.94	333.6									19	13
PALISADES	109.72	30.8				24	39	-3			18	47 PP
ALGIERS UNI.	114.07	327.7									19	6 PP
RELIZANE	116.12	328.8									19	36 PP
BERMUDA	121.05	29.9				25	23	-2			20	10 PP
TAMANRASSET	122.92	315.2	18	42	0						20	22 PP
SAN JUAN	131.33	41.7	18	58	0						23	7 PKS
CHINCHINA	132.80	63.6	19	1	0						22	19 SKP
HUANCAYO	139.97	85.9	19	10	-4						22	15 PP
LA PAZ	147.76	90.6	19	31K	3						23	3 PP

JUNE 21 18.H 38.M 13.S EPICENTRE 48.81 156.07 DEPTH= 33.KM

DEPTH OF FOCUS= 0.000R

A=-0.60418 B= 0.26815 C= 0.75037 D= 0.4057 E= 0.9140
G=-0.6859 H= 0.3044 K=-0.6610 HT= -5.0

SE= 1.68

	*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	4.62	19.7	1	7	-3	2	6	3			1	24	
KURILSK	6.65	240.4	1	40A	2	3	5	11					
KLYUCHI	8.04	19.1	1	56	-2						2	24	
Y.-SAKHLINSK	9.16	263.3	2	17	4						2	30	*SP
UGLEGORSK	9.22	276.9	2	20K	6	4	14	16			2	32	*SP
MAGADAN	11.19	346.1	2	42A	1	4	59	13					
VLADIVOSTOK	17.70	260.3	4	5	-1						4	17	*SP
MATUSIRO	17.90	233.4	4	7	-1								
CHANGCHUN	21.73	268.4	4	48	-2								
TIKSI	26.09	340.8	5	30	-3						11	23	SS
PEKING	29.53	267.8	6	3	-1								
ZO-SE	31.70	249.0	6	25	2								
IRKUTSK	32.49	296.1	6	28	-2						7	33	PP
NANKING	32.54	252.9	6	31A	1								
COLLEGE	33.29	40.2	6	36	-1	11	55	1			14	29	SCS
BAGUIO CITY	43.34	234.3	8	1	0								
KUNMING	47.66	260.1	8	36A	1								
RESOLUTE	48.24	19.7	8	39A	-1	15	37	1			18	14	SCS
RABAUL	52.90	184.9	9	16	1								
FRUNSE	54.50	296.8	9	26	-1								
SHASTA	55.85	65.3	9	37	0								
HUNGRY HORSE	55.96	53.6	9	38	0								
CHATRA	56.67	273.8	9	45	2								
TASHKENT	58.57	298.2	9	56	0	18	0	4					
KIRUNA	59.01	342.0	9	57	-2								
BOZEMAN	59.22	54.6	9	56	-5						10	13	
DEHRA DUN	60.29	283.1									18	36	
EUREKA	60.44	62.8	10	8	-1						10	26	
TINEMAHA	60.67	66.2	10	13	2						10	24	
KING RANCH	60.88	68.6	10	25	13								
SCORESBY SD.	61.01	359.2	10	13	0								
WOODY	61.17	67.8	10	13	-1						10	27	
ISABELLA	61.44	67.6	10	15	-1								
LAHORE	61.85	286.6	10	17	-1								
CHINA LAKE	61.86	66.9	10	18	-1						10	33	
SALT LAKE C.	61.97	59.3	10	31	12								
PASADENA	62.63	68.6	10	22	-2	19	7	19					
RIVERSIDE	63.22	68.3	10	24	-4						10	45	
MOSCOW	63.85	326.3	10	29	-3								
PALOMAR	63.97	68.5									10	49	
SKALSTUGAN	64.37	343.0	10	21	-14						10	57	PCP
RAPID CITY	64.44	51.7	10	36	0								
HAYFIELD	64.48	67.4	10	36	0						10	48	
UPPSALA	66.54	338.6	10	48	-1								
REYKJAVIK	67.39	359.0	10	56	2						11	8	
QUETTA	67.41	290.3	10	54	0	19	53	6			11	23	PCP
POONA	71.22	276.8	11	17	-1								
TIFLIS	71.46	312.6	11	20	1								
COPENHAGEN	71.52	339.3	11	20	0								
KIRKLAND LA.	71.91	35.8	11	22	0								
WARSAW	72.31	332.9	11	24	0						11	56	
GORIS	72.38	310.2	11	27	2	20	52	7					
LUBBOCK	72.69	58.8	11	27	0								
LWOW	73.44	329.9	11	33	2						11	46	PCP
SIMFEROPOL	73.74	321.1	11	33	0	20	59	-1			11	45	PCP
HAMBURG	74.03	339.7	11	36	2						11	49	
POTSDAM	74.38	337.5	11	37	1								
IASI	74.44	326.4	11	37	0								
KRAKOW	74.55	332.4	11	37	0						11	51	PCP
RACIBORZ	75.04	333.4	11	40	0								
WITTEVEEN	75.46	341.4	11	45K	2								
OTTAWA	75.85	34.8	11	44	-1								
SHAWINIGAN	75.95	32.4	11	45	-1								
JENA	76.08	337.7	11	48	2								
PRAGUE	76.12	335.7	11	47	1						15	9	PP

DE BILT	76.45	342.0	11	49K	1	21	47	17				
BREBEUF	76.55	33.5	11	49	0							
CAMPULUNG	77.01	326.9	11	53	1					12	7	
BRATISLAVA	77.08	333.2	11	53	1					12	6	
RATHFARNHAM	77.17	349.2	11	53A	1							
BUCHAREST	77.34	325.7	11	54	1					20	49	
KEW	78.08	345.2	11	58	1					12	10	
KARLSRUHE	78.64	338.9	12	1	1					12	12	
STUTTGART	78.67	338.4	12	1A	0	22	9	15		12	14	PCP
TUBINGEN	78.93	338.4	12	3	1							
STRASBOURG	79.19	339.2	12	5A	2	22	9	9		27	59	SS
EBINGEN	79.28	338.3	12	5A	1							
WESTON	80.08	33.6	12	9	1							
PARIS	80.11	342.6	12	9A	1					15	5	PP
BASLE	80.22	338.9	12	10	1							
PALISADES	80.28	36.0	9	51	-138							
TRIESTE	80.34	334.2	12	12	2					12	23	
BESANCON	80.85	339.9	12	13	1					12	46	
NEUCHATEL	80.86	339.2	12	13	1							
KSARA	82.01	313.4	12	21	3	22	29	0		15	31	PP
FLORENCE X.	82.76	335.1	12	20A	-2	22	54	18		13	4	
CLERMONT-FD.	82.89	341.3	12	20	-3	22	58	20		12	27	
MONACO	83.82	337.7	12	29	1					12	41	
TARANTO	83.94	329.7	11	3	-85					25	3	
JERUSALEM	84.00	312.7	12	30	1					12	43	
ROME	84.14	333.5	12	30A	1	22	59	9	13	9	16	1 PP
MESSINA	86.55	329.9	12	41	0							
SAN JUAN	103.29	40.9								18	35	PP
TAMANRASSET	104.03	332.1	14	3	2					17	20	

JUNE 22 6.H 19.M 13.S EPICENTRE 15.99 -93.72 DEPTH= 59.KM

DEPTH OF FOCUS= 0.004R

A=-0.06234 B=-0.95980 C= 0.27367 D=-0.9979 E= 0.0648
G=-0.0177 H=-0.2731 K=-0.9618 HT= 5.6

SE= 1.89

	DELTA DEG.	AZ. DEG.	P M	S	O-C S	S M	S	O-C S	*PP M	S	SUPP. M	S	
COMITAN	1.55	80.0				0	56	10			0	32	
OAXACA	3.10	289.8	0	49A	1	1	31	7			1	22	
VERA CRUZ	3.94	324.6	1	OK	0	1	44	-1			3	0	
SAN SALVADOR	4.88	116.7	1	17	4	2	20	11					
PUEBLA	5.24	305.9	1	21A	3	2	24	6			2	0	
SANTIAGO MA.	5.65	115.4	1	28	4	1	37	-51					
TACUBAYA	6.23	303.8	1	34A	2	2	41	-2					
MERIDA	6.28	37.6	1	28A	-4	2	40	-4			3	1	
GUADALAJARA	10.24	298.6	2	17	-10	4	17	-4			4	50	
MANZANILLO	10.57	288.3	2	27	-4	4	32	3			4	56	
MAZATLAN	13.93	302.9	3	12	-4						6	6	
BALBOA HTS.	15.48	115.1	3	35	-4	6	40	14					
CHIHUAHUA	16.99	319.9	3	45	-10	6	50	-11			9	6	
GALERAZAMBA	18.67	103.8	4	51	35	8	44	66					
LUBBOCK	19.00	338.7	4	20	0	7	56	10					
FAYETTEVILLE	20.03	358.9	4	30A	-1	8	24	16					
CHINCHINA	20.87	119.7	4	38	-1	8	37	13			5	2	PP
COLUMBIA	21.27	30.2	4	43	0	8	41	10					
BOGOTA	22.36	118.2	4	55	1	8	57	6					
TUCSON	22.45	319.2	4	56	1	9	2	9			6	26	
ST. LOUIS 1	22.78	7.1	4	58A	0	9	3	4			5	32	PP
FLORISSANT	22.92	6.7	5	1A	1	9	6	5			5	28	PP
CHICAGO CGS.	26.24	10.4	5	29	-2	10	17	20					
MORGANTOWN	26.45	24.4	5	33	0	10	58	57					
SAN JUAN	26.46	80.8	5	32	-2	10	53	52			8	59	PCP
WASHINGTON	27.10	29.4	5	39	0	10	34	23			5	54	
PALOMAR	27.12	313.8	5	40K	0				6	8			
PITTSBURGH	27.15	23.5	5	44	4	10	48	36					
BOULDER CITY	27.40	320.6	5	42	0	10	23	7					
CLEVELAND	27.50	20.1	5	43	0	10	20	2					
RIVERSIDE	27.84	314.4	5	45K	-1	10	25	2	6	15	6	38	*SP
PENNSYLVANIA	28.29	25.9	5	49	-1	10	22	-9			6	38	PP
PASADENA	28.47	313.9	5	52K	0	10	39	5	6	13	9	1	PCP
PHILADELPHIA	28.83	30.5	5	56	1	11	23	44			12	3	
CHINA LAKE	29.05	317.3	5	57K	0								

RAPID CITY	29.14	345.9	5	59	1	10	50	6		7	7 PP
SALT LAKE C.	29.28	331.1	6	0	1	10	50	4		7	29 PP
ISABELLA	29.53	316.2	6	3K	2					9	5 PCP
WOODY	29.81	315.9	6	4K	0					9	5 PCP
FORDHAM	30.16	30.8	6	5	-2					6	55 PP
TINEMAHA	30.20	318.7	6	9K	2	11	10	9	6 31	6	53
KING RANCH	30.20	314.5	6	8	1						
PALISADES	30.26	30.6	6	7A	-1	10	51	-11	6 23	6	55 PP
EUREKA	30.43	324.6	6	10	1	11	15	10		7	31 PP
BERMUDA	30.97	52.9	6	14A	0	11	33	20		8	8 PPP
FRESNO	31.04	316.8	6	16	1	11	15	1			
DOMINICA	31.11	86.8	6	13K	-2						
FORT FRANCE	31.41	87.8	6	14	-4	11	14	-6		7	22 PP
ST. VINCENT	31.51	90.8	6	16	-3					9	8 PCP
TRINIDAD	31.75	95.5	6	16	-5					9	10 PCP
WESTON	32.57	31.6	6	30A	2	11	52	14		9	15 PCP
LICK	32.58	316.1	6	29K	1						
RENO	32.70	321.0	6	30	1						
SANTA CLARA	32.79	315.9	6	31K	1	11	48	6			
BOZEMAN	32.97	337.4	6	33	2	11	49	5		7	0
OTTAWA	33.00	23.6	6	30A	-2	11	47	2	6 53	7	42 PP
BARBADOS	33.12	90.4	6	29	-4						
HUANCAYO	33.27	145.8	6	35	1	11	53	4		7	42 PP
BERKELEY	33.28	316.4	6	35K	1	11	54	5		9	14 PCP
BUTTE	33.84	336.2	6	39	0	12	0	2		8	0
BREBEUF	33.92	25.7	6	39A	-1	12	4	5			
KIRKLAND LA.	33.99	16.4	6	39A	-1	11	58	-2		6	59
MINERAL	34.29	320.6	6	43	0					7	9
UKIAH	34.60	317.6	6	45	0	12	15	5			
SHASTA	34.98	320.5	6	47K	-2						
SHAWINIGAN	35.12	25.4	6	54	4	12	17	0		8	17 PP
HUNGRY HORSE	36.33	337.0	7	1	1	12	40	4		8	40 PP
SEVEN FALLS	36.38	26.6	7	0A	-1	12	14	-23		8	27 PP
SASKATOON	37.49	346.9	7	9	-1	12	57	3			
CORVALLIS	37.89	324.9	7	14K	1	12	58	-2			
HALIFAX	38.21	35.4	7	19A	3	13	17	12		8	51 PP
SEATTLE	39.40	329.4	7	27	1	13	27	4		7	55
VICTORIA	40.55	329.5	7	35K	0	13	39	-1			
LA PAZ	40.98	140.8	7	39	0	13	43	-3		9	27 PP
HORSESHOE B.	41.07	330.6	7	39K	-1	13	48	0			
ANTOFAGASTA	45.50	149.4	7	57	-18	14	46	-6			
SITKA	51.52	332.4	9	1	-1	16	21	5		10	29 PCP
IVIGTUT	55.55	24.8	9	32	0	17	13	2		22	41 SSS
RESOLUTE	58.70	359.6	9	53A	-1	17	51	-1		13	25 PPP
COLLEGE	60.77	336.6	10	6	-2	18	15	-4		12	26 PP
HONOLULU	60.88	285.7	10	6	-3					10	26
ANGRA DO HO.	61.92	54.5	10	17	1	19	0	26			
REYKJAVIK	67.81	26.8	10	55K	1				11 36	11	48
SCORESBY SD.	68.97	20.0	11	0	-1	20	4	4		39	7 PKPPKP
MBOUR	73.67	79.4	11	26	-3	21	22	28		14	13 PP
RATHFARNHAM	75.83	38.2	11	42A	0				12 9		
LISBON	76.01	53.4	11	42K	-1	21	49	29		11	56 PCP
COIMBRA	76.32	51.8	11	43	-1	21	23	0			
EDINBURGH	77.22	35.3	11	50	0	21	47	14		21	55 SKS
ABERDEEN	77.60	33.9	11	50	-2	21	45	8		15	25
DURHAM	78.33	36.2	11	55	-1	22	1	16		15	19 PP
JERSEY	79.12	41.9	12	2	2	22	11	18		26	49 SS
TOLEDO	79.68	51.5	12	1	-2	22	0	1			
KEW	79.75	39.4	12	3A	0	22	8	8	12 42	22	16 SKS
MALAGA	80.09	54.6	12	5	0	22	5	2		23	5 PS
GRANADA	80.61	54.1	12	11K	3	22	11	2		14	51 PP
ALMERIA	81.57	54.2	12	10	-3	22	22	3		15	22 PP
PARIS	82.15	41.6	12	16A	0	22	26	1		15	33 PP
ALICANTE	82.74	52.3	12	18	-1	22	28	-3			
SKALSTUGAN	82.75	25.7	12	19	0				12 40		
TORTOSA	82.85	49.7	12	18	-2	22	32	0			
DE BILT	82.90	37.9	12	21A	1	22	37	5		23	19 PS
CLERMONT-FD.	83.38	44.4	12	21	-1	22	32	-5		23	48 PS
WITTEVEEN	83.55	36.9	12	24	1					15	15 PP
KIRUNA	84.04	20.4	12	26A	0	22	51	7	12 44	22	42 SKS
RELIZANE	84.20	54.6	12	26K	0	22	50	5			
BENSBERG	84.43	38.6	12	28A	0	22	47	-1			
BESANCON	84.84	42.4	12	31	1	22	55	3		13	52
HAMBURG	85.19	35.6	12	32	1	23	15	20		23	2 SKS
NEUCHATEL	85.55	42.4	12	33	0	22	54	-4			
STRASBOURG	85.56	40.7	12	34A	1	23	7	8		15	44 PP
COPENHAGEN	85.76	33.1	12	35A	1	23	9	8		22	55 SKS
BASLE	85.78	41.8	12	35A	1	22	53	-8			
KARLSRUHE	85.82	40.2	12	35A	1	23	9	8		15	55 PP

ALGIERS UNI.	85.86	53.1	12	34	-1	23	8	6			15	51 PP
SODANKYLA	86.31	19.6	12	36	-1	23	14	8	12	56	22	53 SKS
STUTTGART	86.39	40.3	12	38K	1	23	0	-7			15	57 PP
TUBINGEN	86.39	40.5	12	39	2							
EBINGEN	86.45	40.9	12	38A	1						13	15
ZURICH	86.47	41.7	12	38	0						14	19
UPPSALA	86.59	28.1	12	38A	0	23	13	4	12	59	22	57 SKS
OROPA	86.66	43.5	12	40	1	23	1	-8			33	14 SSS
MONACO	86.92	45.4	12	39A	-1						14	11
JENA	87.06	37.7	12	41	1	23	18	5			16	4 PP
CHUR	87.26	42.0	12	42A	1	23	5	-10				
POTSDAM	87.37	36.0	12	44	2	23	21	5			23	3 SKS
PETROPAVLOVK	87.55	324.9	12	41	-2	23	3	-15	13	4	16	11 PP
PAVIA	87.61	43.6	12	43A	0	23	5	-13			14	14
CHEB	87.85	38.3	12	45	1	23	7	-13			25	12 PPS
TIKSI	87.99	347.6	12	43	-2	23	2	-20			16	12 PP
APATITY	88.30	17.8	12	46	0	23	26	1	13	8	16	12 PP
MAGADAN	88.58	332.6	12	48	0				13	11	23	12 SKKS
PRAGUE	89.07	37.8	12	51A	1	23	35	3			15	59 PP
BOLOGNA	89.28	43.7	12	53	2	23	41	7			23	19 SKS
FLORENCE X.	89.50	44.4	12	52A	0	23	17	-19	13	26	18	32 PPP
HELSINKI	89.65	26.0	12	54	1	23	42	5	13	14	16	30 PP
TRIESTE	90.43	42.0	12	57	1	23	50	6			16	37 PP
ROME	91.04	45.8	12	59A	0	23	28	-22	13	5	16	31 PP
RACIBORZ	91.26	36.7	13	2	2	24	1	10			16	41 PP
BRATISLAVA	91.46	38.8	13	1	0	23	57	4			16	36 PP
DABROWA	91.73	36.2	13	2	0							
WARSAW	91.82	34.0	13	3A	0	24	3	7			16	28 PP
PULKOVO	92.08	24.8	13	4	0	23	31	-28	13	25	16	42 PP
TAMANRASSET	92.13	65.7	13	5	1	24	7	8			16	43 PP
KRAKOW	92.26	36.2	13	4	-1	24	4	4			23	34 SKS
SKALNATE PL.	92.86	36.9	13	11	3	24	13	7			23	38 SKS
BUDAPEST	92.96	38.8	13	10	2	23	36	-30				
KALOCSA	93.34	39.6	13	12	2	23	41	-29			24	7 SCS
LWOW	94.67	35.1	13	16	0				13	38	23	44 SKS
MESSINA	94.68	48.3	13	14	-2	24	24	3			17	4 PP
TARANTO	94.91	45.6	13	9	-8	23	51	-32			33	47
BELGRADE	95.05	40.7	13	19A	1	24	32	8			16	55 PP
TIMISOARA	95.08	39.6	13	19	1	24	33	8			23	50 SKS
CAMPULUNG	97.64	38.7	13	33	4	24	9	-37			24	34 PS
MOSCOW	97.69	25.4	13	28	-2	24	2	-45	13	50	17	30 PP
IASI	98.07	36.1	13	35	4	24	1	-49			13	52
BUCHAREST	98.73	39.0	13	35K	1	24	5	-50			24	48 PS
ATHENS	100.52	45.5				24	13	-57			24	40 SKKS
SIMFEROPOL	103.08	35.2	13	53A	-1	24	18	-74	14	15	18	12 PP
SVERDLOVSK	104.36	14.2	13	57	-2						24	22 SKS
MATUSIRO	108.38	318.1	18	22	777						18	47 PKP2
IRKUTSK	110.25	348.3				24	52	-6			18	56 PP
TIFLIS	110.98	32.1	14	30	-237						28	36 PS
KSARA	111.02	43.4	14	31	-236						19	21 PP
JERUSALEM	111.80	45.5	17	52	-36						19	26
GORIS	113.40	32.8									19	21 PP
RIVERVIEW	119.45	239.9									30	13 PS
ASHKABAD	120.28	25.4	18	48	3	25	31	-5			20	21 PP
FRUNSE	120.45	10.0							19	8	30	2 PS
TASHKENT	120,85	14.9	18	47	1				19	9	30	7 PS
KIMBERLEY	122.27	114.1	18	48	-2							
GRAHAMSTOWN	123.76	119.6	19	0	8							
PRETORIA	125.21	110.4	18	56	2							
QUETTA	130.47	22.1	18	55	-9	26	10	4	19	28	21	20 PP
LAHORE	131.37	13.6	19	8	2						21	27 PP
DEHRA DUN	133.29	9.8									19	25
BAGUIO CITY	133.29	312.0	19	8	-2							
CHATRA	137.43	358.8	19	21	4							
SHILLONG	138.34	352.4	19	10	-9							
TANANARIVE	142.98	100.3	19	31	4						22	38 PP

JUNE 22 23.H 50.M 27.S EPICENTRE -1.95 136.73 DEPTH= 0.KM

A=-0.72778 B= 0.68499 C=-0.03371 D= 0.6854 E= 0.7282
G= 0.0245 H=-0.0231 K=-0.9994 HT= 7.2

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

MAMBAJAO	15.71	315.2	1	46	-116	4	58	-98			
BAGUIO CITY	24.24	319.4	5	17	0	9	33	1			
HENGCHUN	28.46	327.6	5	55	-1	10	20	-22			
TAWU	28.67	328.2	5	55	-3	11	4	19			
TAITUNG	28.87	329.1	6	3	3						
HSINKONG	29.05	329.8	6	0	-1	11	23	32			
TAINAN	29.56	327.9				11	24	25	6	13	
HWALIEN	29.66	331.2	6	9	2	9	50	-71			
ALISHAN	29.69	329.4							6	12	
BRISBANE	29.80	149.9	6	6	-2	11	7	4			
DJAKARTA	30.12	261.1	6	8	-3	11	9	1			
TAICHUNG	30.27	329.9							6	25	
ILAN	30.28	332.2	6	4	-8						
TAIPEI	30.61	332.1				11	23	7	6	15	
HSINCHU	30.67	331.0							6	9	
TORISIMA	32.42	5.7	6	35	4				13	54	
YAKUSIMA	32.76	350.0	6	19	-15	11	59	10			
CANTON	33.78	318.8	6	40A	-3	12	5	0	7	54	PP
KAGOSIMA	33.84	350.5	6	44	0	12	7	1	13	56	
MIYAZAKI	34.05	351.9	6	48	3	12	24	15	8	4	
RIVERVIEW	34.47	158.5	6	49A	0	12	28	12			
SIMIDU	34.72	354.4	6	49	-2	12	22	2	8	8	
HATIDYOZIMA	34.98	4.5							15	1	
UNZENDAKE	35.03	350.5	6	56A	2						
KUMAMOTO	35.04	351.1	6	50	-4	12	17	-8	8	11	
ASOSAN	35.07	351.7	6	49	-5						
MUROTO	35.09	356.3	7	8	14	12	34	9	8	26	PP
TOMIE	35.19	348.3	6	55K	0	12	25	-2	8	14	
UWAZIMA	35.21	353.9	6	52	-3				8	8	
SIOMISAKI	35.22	358.6	6	55	0	12	25	-2			
NOUMEA	35.26	127.3	6	54K	-2				8	41	PPP
OOITA	35.32	352.6	6	57	1	12	25	-4	8	17	
KOTI	35.43	355.4	6	58	1	12	33	2	8	18	PP
SAGA	35.53	350.7	7	1	3	12	45	13	8	29	PP
PERTH	35.76	211.3	7	7	7	12	56	20	8	24	PP
MATUYAMA	35.78	354.3	6	59	-1	12	34	-2	8	25	PP
OWASE	35.83	359.2	6	59	-2	12	48	11	8	23	PP
HUKUOKA	35.83	351.0	7	0A	-1	11	59	-38	8	7	
TOKUSIMA	35.88	356.9	7	2	1	12	33	-5	8	26	PP
ZO-SE	36.04	337.0	6	59A	-3	12	34	-6	8	26	PP
SUMOTO	36.14	357.4	7	3	0	12	35	-7	8	34	PP
TAKAMATU	36.16	356.2	7	2	-1	12	28	-14	8	23	PP
HIMEJI	36.32	356.7	7	9	4	12	56	12	15	36	
HIROSIMA	36.35	354.0	7	6	1	12	39	-6	8	35	PP
OMAESAKI	36.38	2.1	7	6	1				8	39	PP
OSAKA	36.42	358.3	7	9	3	12	44	-2	8	53	
KOBE	36.46	357.8	7	10	4	12	27	-20	13	57	
TU	36.48	359.7	7	6	0						
MELBOURNE	36.50	169.0	7	5A	-1	12	57	10	8	43	PP
KAMEYAMA	36.60	359.6	7	10	3	12	40	-9			
OSIMA	36.61	3.7	7	2	-5	12	39	-10	8	37	PP
ITUHARA	36.63	349.6	7	15	8						
SHIZUOKA	36.75	2.3	7	7	-1	12	13	-38			
KYOTO	36.78	358.6	7	2A	-7	12	46	-6			
MERA	36.79	4.2	7	4	-5	12	57	5			
AJIRO	36.87	3.2	7	3	-6				8	55	
HAMADA	36.91	353.6	7	8	-2	12	41	-13	8	34	PP
NAGOYA	36.92	0.3	7	10	0	12	55	1			
MISIMA	36.93	3.0	7	9K	-1	12	51	-3	8	37	PP
HIKONE	37.02	359.3	7	11	0				8	49	PP
IBUKISAN	37.13	359.5	7	8	-4						
GIHU	37.15	0.0	7	11	-1				8	39	PP
YOKOHAMA	37.28	3.9	7	14	1	13	3	4	8	52	PP
IIDA	37.28	1.5	7	17	4				15	41	
HUNATU	37.30	2.7	7	12	-1				8	38	PP
YONAGO	37.31	355.4	7	11	-2				9	58	
TOYOOKA	37.32	357.4	7	13	0	12	53	-7	8	42	PP
TOTTORI	37.32	356.6	7	17	4						
MATSUE	37.36	355.1	7	13	0				15	48	
TSURUGA	37.40	359.1	7	6	-8						
KOHU	37.42	2.5	7	13	-1						
TOKYO C.M.O.	37.54	4.0	7	15	0	13	3	0	8	57	PP
TITIBU	37.79	3.1	7	12	-5				15	49	
NANKING	37.85	334.8	7	15A	-3	13	1	-7	7	31	8 45 PP
KUMAGAYA	37.98	3.5	7	21	2	13	21	11			
MATUMOTO	38.02	1.6	7	23	4				7	53	
TUKUBASAN	38.10	4.4	7	16A	-4				7	44	8 48 PP
KAKIOKA	38.11	4.5	7	18	-2				15	51	

OIWAKE	38.12	2.4	7	28	8	13	9	-3			8	58 PP
MAEBASI	38.21	3.0	7	19	-2	12	51	-22			8	53 PP
KANAZAWA	38.28	359.9	7	23	2							
MITO	38.29	4.9	7	21	0	13	17	3			9	9 PP
MATUSIRO	38.32	1.9	7	20A	-2	13	10	-5			8	42 PP
FUTZELING	38.35	331.2	7	24	2							
UTUNOMIYA	38.41	4.1	7	22	0	13	22	6			7	36
NAGANO	38.44	1.9	7	24	2	13	51	34			9	12 PP
TOYAMA	38.45	0.6	7	25	2	13	33	16				
TAKADA	38.87	1.9	7	23	-3							
ONAHAMA	38.89	5.3	7	25	-1	13	23	-1			15	59
SHIRAKAWA	39.00	4.4	7	26	-1	13	25	0			8	55 PP
WAZIMA	39.13	0.2	7	29	1	13	34	7				
HUKUSIMA	39.65	4.6	7	36	3	13	35	0				
NIIGATA	39.72	2.9	7	37	4						12	0
AIKAWA	39.79	1.9	7	35	1	13	36	-1				
YAMAGATA	40.13	4.4	7	38	1	13	49	7				
SENDAI	40.20	5.1	7	35	-2	13	38	-5			8	6
ISINOMAKI	40.40	5.6	7	37	-2	13	42	-4			9	13 PP
SAKATA	40.74	3.7	7	48	6	14	10	19				
TSINGTAU	40.80	339.5	7	44	2							
MIZUSAWA	41.07	5.2	7	44	0	13	55	-1				
AKITA	41.58	3.9	7	50	2	14	8	4			9	18 PP
MORIOKA	41.64	5.2	7	47	-2	13	59	-6				
MIYAKO	41.67	6.1	7	45	-4	14	0	-5				
HATINOHE	42.50	5.4	7	55	-1	14	14	-3				
KUNMING	42.54	311.3	7	55	-1	14	14	-4	8	12	9	40 PP
AOMORI	42.72	4.5	8	1	3	14	24	3				
DAIREN	42.96	342.6	7	57	-3							
HAKODATE	43.67	4.3	8	11	5						9	57
SUVA	43.94	114.3	8	26	18	14	54	16			10	51 PPP
MORI	43.98	4.1	8	8	0	14	25	-14			9	9 PP
URAKAWA	44.23	6.4	8	11	1	14	35	-8			16	45
TOMAKOMAI	44.48	5.1	8	17	5							
SIAN	44.49	326.5	8	13	1							
LINFEN	44.56	330.5	8	11	-2							
SUTTSU	44.65	3.7	8	15	2	14	49	0			10	3 PP
SAPPORO	45.00	4.8	8	14	-2	14	48	-6			9	50 PP
OBIHIRO	45.04	6.7	8	18	1							
VLADIVOSTOK	45.07	355.0	8	17	0	14	56	1				
KUSIRO	45.25	7.9	8	20	2	14	57	0			16	22
TAIYUAN	45.42	332.9	8	18	-2							
NEMURO	45.77	9.0	8	23	1	14	58	-7			17	42 SS
PORT BLAIR	45.79	288.3	8	26	3	15	1	-4				
ASAHIGAWA	45.80	5.7	8	25	2							
PEKING	45.82	337.9	8	20A	-3				8	38	8	44 *SP
KWANTING	46.21	337.5	8	26	0							
ABASHIRI	46.26	7.5	8	29	3	15	0	-12				
CHANGCHUN	46.71	348.6	8	27	-3	15	7	-11				
TATUNG	47.03	335.3	8	35	3							
ONERAHI	48.45	138.4	8	53	10						10	43
PAOTOW	48.84	333.0	8	48	2							
Y.-SAKHLINSK	48.97	5.4	8	50	3	15	56	6				
YINCHUAN	49.06	328.2	8	51	3							
SUIHWA	49.12	351.1	8	48	-1							
AUCKLAND	49.37	139.3	8	53	2	16	3	7			11	36 PPP
SINING	50.28	323.2	9	0	2							
WUWEI	50.67	325.0	9	1	1							
COBB RIVER	50.70	145.0	8	58	-3							
TONGARIRO	51.21	141.3	9	4	-1							
SHILLONG	51.29	305.3	9	5A	0	16	16	-6			12	2 PP
ROXBURGH	52.00	151.3	9	14	3	16	39	7			19	15 SCS
WELLINGTON	52.01	143.9	9	8	-3	16	9	-23			19	8 SCS
APIA	52.22	105.9	9	5	-7	16	42	7				
GEBBIES PASS	52.39	147.5	9	11	-2							
CHANGYEH	52.53	324.6	9	14	-1							
YUMEN	55.51	323.6	9	36	0							
CHATRA	55.66	304.5	9	37	0	17	18	-3				
BOKARO	55.72	300.6	9	38	0	17	24	2			11	31 PP
COLOMBO	57.43	279.4	9	53	3	17	53	8				
PETROPAVLOVK	57.87	15.4	9	51	-2						17	55 PS
MADRAS	58.04	286.5	9	53A	-1	17	43	-10			12	4 PP
IRKUTSK	60.54	337.8	10	11A	-1	18	26	1				
HYDERABAD	60.56	291.2	10	10K	-2	18	24	-1			12	26 PP
TERRE ADELIE	64.83	178.0	10	36	-4	19	13	-6				
WILKES	66.76	191.2	10	57	4	19	45	2			27	11 SSS
HONOLULU	67.71	66.2	10	57K	-2	19	58	4			13	48 PP
LAHORE	67.81	305.2	10	57	-2	19	55	0			11	22 PCP

FRUNSE	71.32	316.7	11	20A	-1	20	36	-1	13 56 PP
KARACHI	72.66	297.7	11	27	-2	20	50	-2	14 1 PP
CAPE HALLETT	73.33	169.8	11	31	-2	21	3	4	
QUETTA	73.61	302.1	11	34	0	21	7	4	14 14 PP
TIKSI	73.62	357.4	11	30	-4	20	56	-7	11 49 PCP
TASHKENT	74.55	313.8	11	41	1	21	15	2	25 51 SS
SCOTT BASE	77.51	173.8	11	56	0	21	50	4	
ASHKABAD	82.04	308.6	12	23	2				22 44 SCS
SVERDLOVSK	84.04	327.6	12	29	-2	22	52	-1	15 47 PP
COLLEGE	85.60	24.5	12	35A	-4	22	59	-10	16 5 PP
TANANARIVE	88.61	251.2	12	58A	5	23	51	14	16 24 PP
SITKA	90.50	33.1	13	2	0	23	56	2	23 39 SKS
GORIS	91.54	309.3	13	7	0	24	4	0	23 32 SKS
TIFLIS	92.73	311.5	13	11	-1				23 56 SKKS
MOSCOW	96.73	325.8	13	29	-2				19 26 PPP
APATITY	96.86	337.9	13	30K	-1	24	46	-3	23 51 SKS
HORSESHOE B.	97.98	40.5	13	37	1	24	18	-41	17 37 PP
VICTORIA	97.98	41.4	13	29	-7				
CORVALLIS	98.46	45.4	13	22	-17				
SEATTLE	98.82	42.2	13	47	7	24	53	-13	17 44 PP
UKIAH	99.02	50.8	13	50	9				
SODANKYLA	99.44	338.4	13	40	-3	25	7	-4	17 43 PP
SHASTA	99.51	49.2	13	46	3				
BERKELEY	99.88	52.1	13	47	2	24	31	-44	17 55 PP
KSARA	100.10	303.9	13	45	-1	24	19	-58	17 43 PP
MINERAL	100.15	49.5	13	49	3				17 50 PP
SANTA CLARA	100.17	52.6	13	40	-6	24	32	-45	
SIMFEROPOL	100.30	315.2	13	45	-2	25	15	-3	24 22 SKS
LICK	100.42	52.5	13	48A	1				
RESOLUTE	101.39	12.3	13	48K	-4	24	37	-50	18 3 PP
KIRUNA	101.50	339.7	13	49	-3	25	32	4	18 3 PP
RENO	101.61	50.2							18 2 PP
FRESNO	101.94	53.0	13	58	4				18 11 PP
KING RANCH	102.15	54.4	13	51	-4				18 13 PP
HELSINKI	102.38	331.6	13	57	1	25	32	-4	18 11 PP
WOODY	102.82	54.0	13	57	-1				18 17 PP
TINEMAHA	103.16	52.5	14	1	1				18 23 PP
PASADENA	103.57	55.5	13	58	-3				18 23 PP
HUNGRY HORSE	104.17	40.5	14	14	10				18 25 PP
RIVERSIDE	104.24	55.5	14	2	-2				18 23 PP
EUREKA	104.55	49.8	14	9	3				18 25 PP
PALOMAR	104.76	56.1	14	9	2				18 26 PP
BUTTE	105.68	42.6	14	16A	777	26	38	61	24 56 SKS
UPPSALA	105.93	332.7	14	9	777	24	47	2	18 37 PP
LWOW	106.00	321.6	14	15	777	24	47	1	18 38 PP
BUCHAREST	106.02	315.8	14	13	777	24	54	8	25 23 S
BOULDER CITY	106.03	53.2	14	13	777	25	9	23	18 39 PP
SKALSTUGAN	106.45	337.4	14	12	777				18 6 PP
BOZEMAN	106.80	42.7	14	22	777	24	59	-6	18 28 PP
WARSAW	107.06	324.6	14	19	777	24	56	0	18 38 PP
SALT LAKE C.	107.40	47.8	14	23	777	25	0	0	18 43 PP
SASKATOON	107.62	35.3	14	27	777	24	57	3	18 47 PP
LWIRO	107.83	267.0	14	31	777				28 13 PS
SOFIA	108.39	314.5	14	23	777				19 14
KRAKOW	108.44	322.7	14	26	777	26	26	8	18 47 PP
SKALNATE PL.	108.54	321.7				25	11	-45	18 49 PP
TIMISOARA	109.00	318.1	14	20	777	25	7	14	19 27
ATHENS	109.24	309.6	18	30	777				29 27 PPS
SZEGED	109.56	318.8							28 48 PP
BELGRADE	109.80	317.3	18	59A	777				20 40 PP
BUDAPEST	109.85	320.3				25	14	10	18 55 PP
TUCSON	109.94	56.4	14	37	777				28 23 PS
SCORESBY SD.	110.16	352.5	14	32	-239				26 18 SKKS
KALOCSA	110.23	319.4							29 4 PS
HURBANOVO	110.27	320.9							19 13 PP
COPENHAGEN	110.28	330.1	14	32	-239	25	5	-4	19 3 PP
BRATISLAVA	110.85	321.5	14	38	-234	24	50	-21	19 12 PP
BERGEN	110.95	336.5				25	11	0	19 16 PP
HERMANUS	111.26	231.9				25	30	17	19 27 PP
VIENNA-H.	111.27	321.8	18	39	6	25	9	-4	19 17 PP
POTSDAM	111.48	326.7	14	39	-234				18 54
PRAGUE	111.71	324.1							19 15 PP
ZAGREB	112.43	319.4	19	28	53				
HAMBURG	112.57	328.8	14	46	-229	25	30	12	18 26 PP
RAPID CITY	112.60	42.5	18	30	-5				14 48 P
CHEB	112.90	324.7							19 30 PP
JENA	112.97	325.8	14	45	-231				19 28 PP
TARANTO	113.40	313.6							19 28 PP
TRIESTE	113.93	319.9	14	40	-238	27	13	110	18 40 PKP

WITTEVEEN	114.66	329.3							19	33 PP
CHIHUAHUA	114.67	59.4	18	35	-5				30	23 PPS
REGGIO CALA.	115.33	311.6							19	47 PP
STUTTGART	115.35	324.5	14	55	-226	27	24	115	19	42 PP
MESSINA	115.37	311.8	18	40	-1	25	48	19	19	48 PP
TUBINGEN	115.54	324.3							19	40 PP
KARLSRUHE	115.69	325.0	19	22A	41	27	33	123	19	46 PP
EBINGEN	115.77	324.0							19	44 PP
DE BILT	115.82	329.1	14	57	-225				19	51 PP
BOLOGNA	115.97	319.5							20	0 PP
ABERDEEN	115.98	336.5	19	50	68	29	41	250	22	43 PP
REYKJAVIK	116.02	349.8	18	47	5				19	54 PP
CHUR	116.06	322.5	19	49	67				27	45
ROME	116.26	316.5	15	0	-223	25	11	-21	19	40 PP
STRASBOURG	116.27	324.8	14	57	-226	27	33	121	19	49 PP
FLORENCE X.	116.33	318.8	15	2	-221	25	33	1	19	48 PP
BASLE	116.90	323.9	19	57	73				29	49
LUBBOCK	116.97	53.1	18	52	8	25	42	7	19	59 PP
PAVIA	117.05	321.0	14	59	-225				19	57 PP
DURHAM	117.39	334.3	19	58	73				23	0 PP
NEUCHATEL	117.54	323.6	19	54	69				27	46
OROPA	117.59	321.9	14	57	-228				19	48 PP
MANZANILLO	117.93	69.5							43	45
BESANCON	117.98	324.2	18	54	8				20	5 PP
MONACO	118.83	320.2							20	11 PP
KEW	118.94	330.9	18	54	6	27	8	86	19	38 PP
PARIS	119.10	327.2	15	3	-225	25	39	-3	20	13 PP
RATHFARNHAM	120.41	335.2	18	59	8	25	41	-6	20	13 PP
CLERMONT-FD.	120.44	324.0	18	58	7	25	42	-5	20	22 PP
IVIGTUT	120.78	2.8							20	25 PP
JERSEY	121.28	329.6							20	37 PP
FAYETTEVILLE	122.01	47.9	18	57	2					
TACUBAYA	122.65	68.2	18	53	-2				20	33 PP
FLORISSANT	123.55	43.4	19	4	7				20	41 PP
ST. LOUIS 1	123.72	43.5	18	59	2	25	52	-5	20	42 PP
CHICAGO CGS.	123.85	39.0	20	31	94				30	47 PS
KIRKLAND LA.	124.13	29.0	19	0	2				20	46
TORTOSA	124.73	320.3	19	8	9				23	15 PP
ALGIERS UNI.	125.06	314.8	19	2K	2	26	9	8	20	53 PP
OAXACA	125.35	70.6							37	9 SS
VERA CRUZ	125.54	67.8							20	48 PP
ALICANTE	126.69	318.2	19	1	-2				21	0 PP
RELIZANE	127.32	314.9	19	10	6				21	6 PP
CLEVELAND	127.73	36.0	19	8	3				21	3 PP
TOLEDO	128.13	321.8	19	12	6				21	14 PP
OTTAWA	128.18	28.7	19	5	-1				21	8 PP
TAMANRASSET	128.37	297.7	18	57	-9				21	14 PP
SHAWINIGAN	128.66	25.8	19	6	-1					
ALMERIA	128.83	317.7	19	9	2	26	12	0	21	18 PP
SEVEN FALLS	129.03	24.0	19	7	0				21	20 PP
BREBEUF	129.09	27.3	19	8	1				22	30 PKS
GRANADA	129.40	318.7	19	12K	4	28	54	160	21	18 PP
MORGANTOWN	129.82	36.9	19	9	0				20	59 PP
COMITAN	129.86	70.5	19	17	8				20	57 PP
MALAGA	130.19	318.7	19	9K	0				21	23 PP
PENNSYLVANIA	130.27	34.4	19	15	5				21	26 PP
COIMBRA	130.54	324.8	19	14	4	26	17	0	21	31 PP
MERIDA	131.05	63.8							21	39
LISBON	131.93	323.9	19	21A	8				22	45 PKS
WASHINGTON	132.00	35.7	19	17	4	26	53	33	21	37 PP
PALISADES	132.28	31.4	19	17	4				21	39 PP
PHILADELPHIA	132.36	33.4	19	37	23				22	37 PKS
FORDHAM	132.41	31.6	19	19	5				21	41 PP
COLUMBIA	132.47	43.6	19	14	0				28	49 SKKS
WESTON	132.54	28.2	19	13K	-1					
SAN SALVADOR	133.08	73.0							26	6
HALIFAX	133.86	20.1	19	21	5				21	47 PP
LOME	135.45	276.7							22	2 PP
BALBOA HTS.	143.23	77.7	19	32	-1					
BERMUDA	143.63	31.4	19	34	0				21	56
HUANCAYO	145.24	114.4	19	39	2				23	8 PP
GALERAZAMBA	147.04	73.2	20	35	55					
CHINCHINA	147.57	83.8	19	42	1					
BOGOTA	149.13	84.3	19	48	5				19	55 PKP2
LA PAZ	149.36	127.7	19	47	3				23	3 PP
SAN JUAN	152.27	52.4	19	52A	4	26	39	-13	23	42 PP
FORT FRANCE	158.25	53.3	20	2	6				32	4

JUNE 23 3.H 27.M 3.S EPICENTRE 57.92-137.71 DEPTH= 16.KM

A=-0.39481 B=-0.35914 C= 0.84566 D=-0.6729 E= 0.7397
G=-0.6256 H=-0.5690 K=-0.5337 HT= -8.2

SE= 2.49

	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	
SITKA	1.56	123.0	0	23	-3	0	41	-5					
COLLEGE	8.49	329.5	2	2	-2	3	38	-2			2	40	
HORSESHOE B.	12.07	128.9	2	58	5	5	55	47					
VICTORIA	12.70	131.7	3	1	-1	5	59	36					
SEATTLE	13.84	131.3	3	19A	2						6	39	
CORVALLIS	16.06	140.0	3	52	6	7	8	25					
HUNGRY HORSE	17.05	114.0	3	59	1	7	28	22			6	23	
SASKATOON	18.62	94.7	4	16	-2	7	53	11					
ARCATA	19.15	147.0	4	30	6								
BUTTE	19.40	117.0	4	32	5	8	16	17					
SHASTA	19.83	143.7	4	31	-1						8	55	
BOZEMAN	20.38	115.4	4	37	-1	8	39	19			8	6	
MINERAL	20.40	142.5	4	33A	-5	8	15	-5					
UKIAH	21.02	147.2	4	47	3								
RENO	21.73	140.1	4	52	1								
BERKELEY	22.47	146.5	5	0	1	8	13	-46					
LICK	23.15	145.9	5	7A	2	8	44	-27					
RESOLUTE	23.17	27.3	5	6A	0	9	27	15					
EUREKA	23.19	133.3	5	7	1						8	19	PCP
SALT LAKE C.	23.81	124.9	5	14	2	9	44	21					
FRESNO	24.24	143.0	5	18	2								
TINEMAHA	24.50	140.0	5	22	4								
RAPID CITY	25.42	107.9	5	28	1	10	8	18			6	10	
WOODY	25.52	142.4	5	28A	0						9	5	PCP
KING RANCH	25.58	144.3	5	30	1								
BOULDER CITY	26.69	135.4	5	40	1				6	22			
PASADENA	27.17	142.6	5	44	1	10	31	12					
RIVERSIDE	27.57	141.4	5	47	0								
PALOMAR	28.33	141.1	5	55	1								
TUCSON	31.52	132.9	6	23	1						6	52	
LUBBOCK	34.24	119.6	6	46	0	12	20	10					
KIRKLAND LA.	34.99	80.6	6	54A	2								
PETROPAVLOVK	35.15	290.3	6	53	-1	12	23	-1					
CHICAGO CGS.	35.18	95.1				12	23	-2					
FAYETTEVILLE	35.96	108.2	7	0A	-1						8	24	
TIKSI	37.63	328.8	7	14	-1	13	8	5					
CLEVELAND	38.63	90.1	7	25	2								
OTTAWA	39.04	81.0	7	24	-2	13	33	9			8	56	PP
SHAWINIGAN	39.83	77.5	7	34	1						9	13	
BREBEUF	40.08	79.3	7	36K	1	13	57	17					
SEVEN FALLS	40.46	75.4	7	39	1	13	40	-5			17	7	SSS
PENNSYLVANIA	41.06	87.8	7	47	4	14	5	11			9	19	PP
WASHINGTON	42.86	89.1	7	57	-1	14	41	20			9	52	PCP
PALISADES	43.02	84.4	8	0	1	14	37	14			9	48	PP
PHILADELPHIA	43.11	86.5	7	55	-5	14	31	7					
WESTON	43.42	81.0	8	5	3								
SCORESBY SD.	44.07	25.8	8	7	-1	14	52	14			9	52	PP
COLUMBIA	44.42	97.3	8	9	-1						10	5	PP
HALIFAX	45.87	73.1	8	28	6								
TACUBAYA	47.67	127.3	8	38	2						10	13	
REYKJAVIK	48.85	31.6	8	47K	2						10	8	
KIRUNA	53.53	10.1	9	21A	0	17	1	10					
BERMUDA	54.37	84.7	9	26	-1	17	26	24			21	13	SS
SODANKYLA	54.49	7.4	9	27	-1						10	18	
SKALSTUGAN	56.66	15.5	9	43	-1						13	20	
MATUSIRO	56.92	287.1	9	46A	1								
CHANGCHUN	57.55	301.6	9	49	-1								
UPPSALA	60.98	13.9	10	13A	-1								
HELSINKI	61.47	9.8	10	16	-1						12	35	PP
PULKOVO	62.28	6.8	10	22	0								
RATHFARNHAM	62.33	30.5	10	23	0								
COPENHAGEN	64.23	18.2	10	36	1	19	21	11			20	39	SCS
PEKING	64.66	305.3	10	39	1	19	23	8					
SAN JUAN	64.84	95.5	10	12	-27								
KEW	65.54	27.7	10	44	0								
HAMBURG	65.81	20.5	10	48	3						11	2	
WITTEVEEN	65.87	22.8	10	49	3								

DE BILT	66.23	24.0	10	51	3	19	47	13				
MOSCOW	66.65	2.9	10	51	0						19	52 PS
POTSDAM	67.51	18.9	10	57	1							
BENSBERG	67.73	23.2	10	59	2						11	5 PCP
JENA	68.63	20.3	11	4	1						21	39
PARIS	68.69	27.0	11	5A	2	20	15	11			13	35 PP
WARSAW	68.85	13.8	11	5A	1						13	37 PP
ZO-SE	69.73	296.2	11	10	0	20	26	10				
KARLSRUHE	69.84	23.0	11	19A	9							
PRAGUE	69.96	18.7	11	13	2						11	35
NANKING	70.07	298.6	11	14	2							
STRASBOURG	70.11	23.6	11	14A	2						11	32
STUTTGART	70.23	22.6	11	14A	1	20	32	10			13	49 PP
TUBINGEN	70.43	22.7	11	15	1							
RACIBORZ	70.56	16.2	11	17	2						30	57 PKKP
KRAKOW	70.84	15.0	11	7	-9							
BESANCON	70.97	25.3	11	19	2						12	1
BASLE	71.06	24.1	11	30	12							
NEUCHATEL	71.43	24.7	11	21	1							
CLERMONT-FD.	71.68	27.8	11	23	1							
BRATISLAVA	72.25	17.4	11	26	1						12	32
PAVIA	73.64	23.8	11	21	-12						16	28
MONACO	74.63	25.5	11	41	2							
KISHINEV	74.84	9.5	11	40	0							
TOLEDO	75.14	35.2	11	43	1							
FLORENCE X.	75.42	22.7	11	45A	2	21	47	26	12	10		
FRUNSE	76.01	336.1	11	48	1	21	36	9				
BELGRADE	76.03	15.8	11	42A	-5							
SIMFEROPOL	77.27	5.9	11	55	1	21	53	12				
ROME	77.47	22.3	11	55A	0	21	57	14	12	13	12	56
GRANADA	77.75	35.9	12	43K	46							
MALAGA	77.92	36.7	11	59K	2							
ALMERIA	78.41	35.2	12	1	1							
NAMANGAN	78.44	337.7	12	2	2	22	1	7				
SOFIA	78.50	14.1	11	11	-50						14	43
TARANTO	79.76	19.2				22	25	18				
ALGIERS UNI.	80.09	31.0	12	10	1	22	13	2			15	13 PP
CANTON	80.24	297.9	12	9	-1							
RELIZANE	80.33	33.3	12	11	0							
HONG KONG	80.49	296.8	12	13K	2							
MESSINA	81.65	21.0	12	11	-6	22	12	-15	12	21	15	15 PP
KUNMING	83.29	307.4	12	26	0							
SUVA	84.03	221.5	12	19	-11							
HUANCAYO	86.18	119.7	12	44	4						16	9 PP
KSARA	88.46	5.3	12	53	2						18	15 PPP
QUETTA	89.83	338.8	13	0A	2	23	52	6			23	31 PCP
LA PAZ	93.44	115.8	13	15	0						17	12 PP
TAMANRASSET	93.96	33.6	13	19	2						17	9 PP
MELBOURNE	115.07	238.5	12	12K	-387							
PRETORIA	146.32	23.4	19	42	5							
KIMBERLEY	148.38	30.3	19	46	5							
GRAHAMSTOWN	153.19	30.2	19	57	9							

JUNE 24 9.H 49.M 58.S EPICENTRE 16.08 -93.76 DEPTH= 92.KM

DEPTH OF FOCUS= 0.009R

A=-0.06310 B=-0.95929 C= 0.27529 D=-0.9978 E= 0.0656
G=-0.0181 H=-0.2747 K=-0.9614 HT= 5.5

SE= 1.83

	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	
COMITAN	1.58	83.7	0	30K	2	0	54	6					
OAXACA	3.03	288.3	0	46	-1						1	18	
VERA CRUZ	3.84	324.3	0	56K	-2	1	39	-4			2	8	
SAN SALVADOR	4.97	117.5	1	13A	-1	2	15	4					
PUEBLA	5.15	305.4	1	22	6	2	20	5			2	13	
TACUBAYA	6.14	303.3	1	30K	0	2	50	11			1	36	
GUADALAJARA	10.16	298.2				4	18	1			4	28	
MANZANILLO	10.50	287.9				4	24	-2					
BALBOA HTS.	15.56	115.4	3	32	-3								
CHIHUAHUA	16.89	319.8									6	11	
LUBBOCK	18.89	338.7	4	17	1	7	52	12					
FAYETTEVILLE	19.93	359.0	4	27A	0	8	17	16	4	43			
CHINCHINA	20.95	119.8	4	36	-1	8	37	17			16	36	SCS

COLUMBIA	21.21	30.4	4 40	0	8 33	8			5 2	
TUCSON	22.34	319.1	4 52	1	9 8	22			6 20	PCP
BOGOTA	22.44	118.4	4 52	0	9 2	15				
CHAPEL HILL	23.72	30.8	5 4	0						
BOULDER	25.89	339.4	5 38	13						
MORGANTOWN	26.38	24.5	5 31	1	11 17	83				
SAN JUAN	26.49	81.0	5 32	1					7 14	PP
PALOMAR	27.02	313.7	5 35K	-1			5 52		6 5	
WASHINGTON	27.04	29.5	5 51	15						
BOULDER CITY	27.29	320.5	5 38	0	10 32	23			5 52	
RIVERSIDE	27.74	314.3	5 42	0			5 59		6 7	
PASADENA	28.38	313.9	5 47	-1	10 34	8	6 3		6 20	
PHILADELPHIA	28.77	30.6							7 29	PP
CHINA LAKE	28.95	317.3	5 52K	-1						
RAPID CITY	29.03	345.9	5 54	0	10 46	9			6 11	
SALT LAKE C.	29.17	331.1	5 55	0					9 21	PCP
ISABELLA	29.43	316.1	5 55K	-2			6 11			
WOODY	29.71	315.8	5 59K	-1			6 15			
TINEMAHA	30.10	318.6	6 3K	0						
PALISADES	30.20	30.7	6 2	-2	10 46	-9			6 32	PP
EUREKA	30.32	324.6	6 6	1					6 46	
FRESNO	30.94	316.7	6 8	-2						
BERMUDA	30.95	53.1	6 9	-2	11 30	23				
LICK	32.48	316.1	6 23K	-1					6 41	
WESTON	32.52	31.8	6 44	20					13 52	
RENO	32.60	320.9	6 26K	1						
BOZEMAN	32.87	337.4	6 29	2					7 10	
OTTAWA	32.93	23.7	6 24	-4						
BERKELEY	33.18	316.4			11 51	9			16 38	
HUANCAYO	33.37	145.8	6 32	0	11 27	-18			8 7	PPP
BUTTE	33.74	336.1	6 35	0	11 58	8				
BREBEUF	33.85	25.8	6 36K	0						
KIRKLAND LA.	33.91	16.5	6 33A	-3					7 14	
MINERAL	34.18	320.6	6 38K	-1						
SHASTA	34.88	320.4	6 41	-3						
SHAWINIGAN	35.05	25.5	6 45	-1						
HUNGRY HORSE	36.23	337.0	6 57	1	12 35	6				
SEVEN FALLS	36.32	26.7	6 55	-2						
CORVALLIS	37.79	324.9							7 28	
HALIFAX	38.16	35.5	7 33	21						
BANFF	39.11	338.3	7 19	-1						
VICTORIA	40.44	329.5	7 47	16						
HORSESHOE B.	40.96	330.6							7 52	
LA PAZ	41.08	140.8	7 38	2	13 52	10			17 2	SS
RESOLUTE	58.61	359.6	9 57	7	17 43	-2				
COLLEGE	60.67	336.6	10 1	-3					10 21	
SCORESBY SD.	68.89	20.0	10 55	-2	19 58	6				
RATHFARNHAM	75.79	38.2	11 38	0			12 2			
KEW	79.71	39.4	11 59A	0			12 38			
PARIS	82.11	41.6	12 12A	0	22 24	7			15 33	PP
SKALSTUGAN	82.68	25.7	12 15A	0			12 36			
CLERMONT-FD.	83.34	44.4	12 18	0						
WITTEVEEN	83.50	36.9	12 21K	2						
KIRUNA	83.96	20.4	12 22	1	22 45	9	12 42		22 39	SKS
BENSBERG	84.38	38.6	12 24	1					12 44	
BESANCON	84.80	42.4	12 25	0						
HAMBURG	85.14	35.6	12 29A	2						
NEUCHATEL	85.50	42.4	12 29	0						
STRASBOURG	85.52	40.7	12 30A	1						
COPENHAGEN	85.71	33.1	12 32	2	23 5	12			22 53	SKS
BASLE	85.74	41.8	12 31K	1						
STUTTGART	86.35	40.2	12 34A	1	22 50	-9			12 55	PCP
TUBINGEN	86.35	40.5	12 34	1						
EBINGEN	86.40	40.9	12 34A	1						
UPPSALA	86.52	28.1	12 34A	0	23 8	7			13 10	
MONACO	86.89	45.4	12 36K	0						
JENA	87.01	37.7	12 33	-3						
RACIBORZ	91.21	36.7	12 52	-3						
BRATISLAVA	91.41	38.7	12 59	2	23 59	13			23 29	SKS
TAMANRASSET	92.13	65.7	13 1	1					17 9	PP
LWIRO	121.86	82.5	18 48	4						
QUETTA	130.39	22.1	18 53	-7					21 18	PP

JUNE 26 2.H 47.M 37.S EPICENTRE -7.34 85.01 DEPTH= 0.KM

A= 0.08631 B= 0.98816 C=-0.12684 D= 0.9962 E=-0.0870
G=-0.0110 H=-0.1264 K=-0.9919 HT= 6.8

SE= 2.59

	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	
DJAKARTA	21.70	88.3	4	53	-2	8	59	8					
KUNMING	36.50	27.6	7	16	7	12	50	-2					
TANANARIVE	38.16	248.7	7	26K	3						8	59	PP
LAHORE	39.99	345.7	7	37	-1	13	37	-8					
CANTON	40.97	41.7	7	44	-2								
HONG KONG	41.03	43.4	7	54	7								
QUETTA	41.13	335.9	7	48K	0	13	59	-3			9	23	PP
BAGUIO CITY	42.38	55.9	7	57	-1								
WARSAK DAM	43.04	343.5	8	1	-2								
NAMANGAN	49.62	346.7	8	55	-1	15	54	-10					
PEKING	55.22	28.9	9	42	5	17	16	-4					
PIETERMZBURG	55.76	239.2	9	43A	2								
LWIRO	56.21	272.2	9	46A	1								
KIMBERLEY	60.45	241.2	10	14K	0								
TIFLIS	61.12	326.5	10	17	-2	18	33	-4					
IRKUTSK	61.63	13.4	10	19	-3	18	30	-14					
KSARA	61.96	314.5	10	29	5	18	47	-1			14	21	PP
SOTCHI	65.16	325.3	10	55	10								
RIVERVIEW	66.15	123.7	10	52	0	19	52	12					
MATUSIRO	66.23	44.8	10	51	-1	19	44	3			24	4	SS
SVERDLOVSK	67.00	345.7	10	54	-3	19	42	-8					
BRISBANE	67.17	116.6	10	58	0	20	5	13					
SIMFEROPOL	69.20	323.9	11	10	-1	20	9	-8					
TERRE ADELIE	70.50	159.5	11	16	-3								
KISHINEV	73.43	323.6									11	46	PCP
BUCHAREST	73.82	320.3	11	49	10	21	4	-6					
MOSCOW	74.02	334.3	11	38	-2	21	2	-10					
IASI	74.26	323.3	11	44	3								
BELGRADE	77.63	318.9	12	12K	12	21	45	-7					
PULKOVO	79.59	335.2	12	8	-3	22	5	-8					
KRAKOW	80.07	323.6	12	13	-1						12	29	PCP
WARSAW	80.35	325.9									27	51	SS
ROME	82.07	314.0				22	33	-5					
HELSINKI	82.08	334.1	12	20	-4								
TAMANRASSET	83.21	294.0	12	31A	1	22	49	-1			15	45	PP
PRAGUE	83.36	322.3	12	31	0						13	32	
FLORENCE X.	83.48	315.6				22	44	-9			10	28	
SODANKYLA	85.16	340.7	12	38	-2						12	55	
UPPSALA	85.23	332.1	12	39A	-1	23	1	-9			12	48	
PETROPAVLOVK	86.15	35.4	12	47	2	23	14	-5					
EBINGEN	86.22	319.4	12	45A	0						12	56	PCP
STUTTGART	86.23	320.0	12	45A	0	23	15	-5			12	56	PCP
TUBINGEN	86.25	319.7	12	45	0								
COPENHAGEN	86.34	327.2				23	33	12			23	16	SKS
BASLE	86.96	318.5	12	47	-1								
HAMBURG	87.08	324.8	12	49	0	23	23	-5			13	11	
STRASBOURG	87.10	319.6	12	51	2	23	20	-8			29	17	SS
NEUCHATEL	87.25	317.9	12	50	0	23	24	-5					
KIRUNA	87.46	339.9	12	49	-2	23	27	-4			23	14	SKS
ALGIERS UNI.	87.95	307.3	12	52	-1								
BESANCON	87.95	318.0	12	53	0								
SKALSTUGAN	88.95	334.7	12	57	-1								
DE BILT	89.53	322.6				23	47	-4					
CLERMONT-FD.	89.58	316.1				23	51	0					
PARIS	90.56	319.0	13	6	0	24	0	0			16	42	PP
KEW	92.78	321.4				24	14	-6					
COLLEGE	111.75	21.5	19	15	38								
RESOLUTE	112.71	360.0									33	5	SS
HUNGRY HORSE	136.05	18.3									21	58	PKS
RAPID CITY	142.70	9.8	19	34	-2								
EUREKA	142.86	27.3	19	33	-3						22	52	PP
TINEMAHA	143.63	32.2	19	36	-1								
WOODY	144.29	34.4	19	37	-1						22	41	PP
LA PAZ	144.40	228.1	19	41	2						22	59	PP
MORGANTOWN	145.12	339.5	19	40K	0								
PASADENA	145.80	35.5	19	43	2						23	19	PP
BOULDER CITY	146.20	29.7	19	43	1								
RIVERSIDE	146.37	34.8	19	44	2						19	52	
PALOMAR	147.13	35.1	19	46	3						19	54	
BARRETT	147.73	35.7	19	48	4						19	55	
SAN JUAN	149.84	294.1	19	53	5								
COLUMBIA	150.50	336.0	19	49	0								

TUCSON	151.16	28.6	19 57	7			
FAYETTEVILLE	151.37	358.6	19 50K	0	19 56		
HUANCAYO	152.56	225.6	19 58	6		20 5	PKP2
LUBBOCK	153.12	12.7	20 0	8			

JUNE 27 0.H 9.M 31.S EPICENTRE 56.35 116.54 DEPTH= 0.KM

A=-0.24872 B= 0.49802 C= 0.83073 D= 0.8946 E= 0.4468
G=-0.3712 H= 0.7432 K=-0.5567 HT= -7.7

SE= 2.46

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S	
KABANSK	7.22	237.5	1 45K	-2					
IRKUTSK	8.23	245.3	1 59	-2				2 41	
KYAKHTA	8.50	229.4	2 2	-3					
SUIHWA	11.71	142.0	2 48	-1					
CHANGCHUN	13.73	152.3	3 14	-2	5 54	5			
KWANTING	16.15	182.6	3 47	-1					
PEKING	16.34	181.0	3 45A	-5					
PAOTOW	16.35	197.9	3 48	-2					
TATUNG	16.41	188.9	3 49	-2					
VLADIVOSTOK	16.50	136.9	3 52	0					
UGLEGORSK	17.02	104.5	3 58	-1				7 23	SS
DAIREN	17.79	166.9	4 8	0					
MAGADAN	18.33	65.7	4 14	-1	7 58	22			
Y.-SAKHLINSK	18.67	109.2	4 18	-1				7 59	SS
TAIYUAN	18.76	189.8	4 21	1					
WAKKANAI	19.15	114.2	4 27K	2	8 0	5			
YINCHUAN	19.15	205.2	4 27	2					
RUMOE	20.17	117.4	4 51	15	8 44	27		10 43	
SUTTSU	20.35	121.8	4 35	-3	8 36	15		5 39	
CHANGYEH	20.39	218.0	4 41	3					
TSINGTAU	20.45	171.2	4 37	-2					
YUMEN	20.53	226.8	4 41	1					
LINFEN	20.54	191.6	4 43	3					
WUWEI	20.64	212.6	4 40	-1					
ASAHIGAWA	20.66	116.6	4 43	2	8 46	19		11 27	
SAPPORO	20.68	119.5	4 38K	-4	8 38	11		5 55	
MORI	21.05	122.5	4 42K	-3	8 48	14		5 35	
MURORAN	21.06	121.4	4 43	-2	8 41	6		10 35	
TOMAKOMAI	21.21	120.1	4 51	4	8 45	8			
HAKODATE	21.37	122.8	4 51	2	8 52	12		5 31	PP
ABASHIRI	21.45	113.3	4 50	1	8 50	8		6 4	
OBIHIRO	21.70	117.0	4 48	-4	8 55	8			
URAKAWA	22.07	119.0	4 53	-3	9 9	16		8 37	
SINING	22.11	213.0	4 58	2					
AOMORI	22.15	124.3	4 54	-2	9 7	12			
KUSIRO	22.26	115.1	4 59	2	9 13	16			
KURILSK	22.51	106.3	4 59	-1					
NEMURO	22.61	112.9	4 56	-5	9 5	2		5 29	PP
SIAN	22.72	196.5	5 7	5	9 21	16			
HATINOHE	22.73	123.6	4 59	-3	9 17	12		8 2	
AKITA	22.73	127.1	5 1	-1	9 21	16		5 48	PP
MORIOKA	23.23	125.4	5 6A	-1	9 18	4		6 59	
SAKATA	23.29	128.7	5 12	4	9 33	18			
AIKAWA	23.36	132.5	5 8	0	9 20	3			
WAZIMA	23.38	135.7	5 10	2	9 28	11		6 8	
MIYAKO	23.64	124.2	5 11	0	9 24	3		10 36	
MIZUSAWA	23.68	126.3	5 9	-2	9 29	7			
MATSUE	23.74	144.8	5 15	3	9 42	19			
NIIGATA	23.78	131.3	5 17	5	9 36	12			
ITUHARA	23.82	153.1	5 17	4	9 34	9			
YONAGO	23.85	144.3	5 12	-1	9 31	6			
HAMADA	23.94	147.1	5 13K	-1	9 39	12		5 52	PP
KANAZAWA	24.02	137.1	5 19	4	9 41	13			
YAMAGATA	24.06	128.8	5 15	0	9 25	-4			
TOTTORI	24.08	142.6	5 13	-2	9 46	17			
TOYAMA	24.09	136.0	5 19	4	9 43	14			
TAKADA	24.15	133.7	5 18	2	9 31	1			
KLYUCHI	24.21	71.4	5 18	2				5 54	PP
PETROPAVLOVK	24.24	79.8	5 18	1	9 48	16		8 52	PCP
TOYOOKA	24.25	141.5	5 13	-4	9 40	8		7 17	
SENDAI	24.28	127.9	5 18	1	9 39	6		11 53	
HUKUI	24.31	138.3	5 14	-3	9 32	-1			

ISINOMAKI	24.33	127.0	5	14	-4	9	45	12		
NANKING	24.35	175.3	5	18	0	9	41	7		
SIMONOSEKI	24.49	150.1	5	19	0	9	48	12		
NAGANO	24.50	134.3	5	20	1	9	44	8		
HUKUSIMA	24.53	129.2	5	20	0	9	50	13		
MAIZURU	24.53	140.4	5	19	-1	9	50	13		
HIROSIMA	24.54	146.9	5	17K	-3	9	38	1		
TAKAYAMA	24.59	136.5	5	21	1	10	7	29	5	46
TSURUGA	24.59	139.1	5	17	-3	9	51	13		
MATUSIRO	24.62	134.4	5	17A	-3	9	22	-16		
HUKUOKA	24.70	151.4	5	22A	1	9	47	7	6	22 PP
OKAYAMA	24.72	143.9	5	21	0	9	59	19	6	16 PP
MATUMOTO	24.78	135.2	5	18	-4	9	50	9		
OIWAKE	24.94	134.1	5	25	1	10	4	20		
IBUKISAN	24.94	138.9	5	28	4	9	55	11	6	17 PP
SHIRAKAWA	24.95	130.4	5	23	-1	9	44	0	17	0 SCS
SAGA	24.98	151.8	5	35	11				7	57
HIKONE	24.99	139.2	5	23	-1	9	53	8	6	15
KYOTO	25.03	140.4	5	23	-1	10	2	17	5	59 PP
HIMEJI	25.05	143.2	5	21	-4	9	55	9		
FUTZELING	25.05	180.5	5	24	-1					
GIHU	25.07	138.2	5	21	-4	10	0	14	5	46
MAEBASI	25.09	133.2	5	23K	-2	9	55	9	11	4
TAKAMATU	25.09	144.0	5	27	2	10	7	21	6	14 PP
MATUYAMA	25.14	146.8	5	28	3	10	5	18	9	48
KOBE	25.15	141.7	5	25	-1	9	55	8	6	27 PP
TOMIE	25.20	155.2	5	30	4	9	55	7	12	59
UTUNOMIYA	25.29	131.7	5	24	-3	9	53	3	6	12 PP
OSAKA	25.29	141.1	5	36	9	9	42	-8	7	11
SUMOTO	25.34	142.5	5	32	5	9	58	7		
NAGOYA	25.35	138.1	5	31	4	10	5	14		
OOITA	25.36	149.4	5	25	-3	10	3	12		
IIDA	25.36	136.3	5	26	-2	10	0	9		
NARA	25.37	140.6	5	29	1	10	10	19		
ONAHAMA	25.38	129.6	5	26	-2	9	54	3	7	24
KUMAGAYA	25.43	133.0	5	27	-1	10	3	11		
KAMEYAMA	25.45	139.3	5	19A	-9	9	31	-21	6	4 PP
ZO-SE	25.45	170.7	5	28A	0	9	59	7		
TITIBU	25.45	133.7	5	29	1	9	59	7		
UNZENDAKE	25.46	152.3	5	32	3	10	5	12		
KUMAMOTO	25.50	151.4	5	27	-2	10	9	16		
TOKUSIMA	25.50	143.3	5	28	-1	9	52	-1		
ASOSAN	25.52	150.7	5	30	1	10	11	18		
WAKAYAMA	25.55	142.1	5	26	-3	10	11	17		
KOHU	25.56	134.9	5	28	-1	10	1	7	6	13 PP
TU	25.58	139.3	5	27	-3	10	12	18	6	11 PP
UWAZIMA	25.63	147.7	5	29	-1	10	4	9	6	24 PP
KOTI	25.64	145.7	5	27	-3	9	53	-2	6	51 PP
MITO	25.68	130.9	5	29	-2	9	41	-15		
KAKIOKA	25.69	131.6	5	29	-2	10	1	5		
HUNATU	25.75	134.7	5	30	-1	10	11	14		
TOKYO C.M.O.	25.99	132.9	5	28K	-5	9	52	-9	10	16
HAMAMATU	26.03	137.3	5	39	5	10	12	10	11	49
OWASE	26.05	140.5	5	30	-4	10	7	5	5	55
SHIZUOKA	26.07	135.9	5	25	-9	10	14	11	6	15 PP
MUROTO	26.12	144.8	5	24	-11	10	11	8	6	37
MISIMA	26.15	134.8	5	31A	-4	10	2	-2	8	21
YOKOHAMA	26.16	133.4	5	34	-1	10	18	14	6	31 PP
SIMIDU	26.18	147.3	5	34	-1	10	9	5		
AJIRO	26.27	134.7	5	36	0	10	15	9		
OMAESAKI	26.32	136.6	5	33	-4	10	18	11		
TYOSI	26.41	131.1	5	36	-1					
SIOMISAKI	26.47	141.8	5	45	7	10	21	12	6	45 PP
MIYAZAKI	26.54	150.7	5	38	-1	10	20	10	12	2
NAGATURO	26.57	135.6	5	56	17					
OSIMA	26.63	134.5	5	36	-3	10	16	4	7	1
KAGOSIMA	26.64	152.6	5	41	2	10	16	4	9	40
MERA	26.68	133.6	5	36	-4	10	17	4		
YAKUSIMA	27.70	153.4	5	53	4	10	42	13	13	31
HATIDYOZIMA	28.27	135.5	5	57	3				13	57
FRUNSE	29.83	261.1	6	8K	0					
SVERDLOVSK	30.06	294.7	6	10	0				7	10 PP
TORISIMA	30.78	137.2	6	12	-5	11	17	-1	14	53
TAIPEI	31.50	171.3	6	31A	8	11	27	-3		
HSINCHU	31.69	172.3	6	30	6					
HWALIEN	32.56	171.3	6	41	9	10	35	-71		
KUNMING	32.86	203.6	6	32	-3	12	0	9	6	36
PENGHU	32.86	174.9				13	2	71	6	52

ALISHAN	32.94	172.8	6	34	-2					
CANTON	33.32	185.5	6	38A	-1					
TAINAN	33.42	173.8				12	17	18	7	6
TAITUNG	33.73	172.3	6	47	4					
TASHKENT	33.80	264.0							8	33
KAOHSIUNG	33.80	173.8							7	5
HONG KONG	34.05	183.9	6	47	2	11	29	-40		
TAWU	34.11	172.8	6	50	4					
HENGCHUN	34.45	173.1	6	52	2	12	9	-6		
APATITY	37.56	321.3	7	15K	0	13	4	1	8	5 PP
WARSAK DAM	37.86	253.1	7	17	-1					
LAHORE	38.32	247.7	7	19K	-2	12	59	-16		
SODANKYLA	39.97	323.0	7	34	-1	13	41	1	9	10 PP
BAGUIO CITY	39.98	174.0	7	34	-1	16	56	196		
KIRUNA	41.75	325.5	7	50	0	14	8	2	9	26 PP
MOSCOW	41.79	303.6	7	50	0				8	0 *SP
MANILA	41.83	173.5	7	56	6	14	8	1		
ASHKABAD	42.21	269.5	7	54	1				10	3 PPP
PULKOVO	42.68	311.9	7	57	0	14	20	0	8	7 *SP
QUETTA	43.28	254.1	8	1K	-1	14	32	3	9	47 PP
COLLEGE	43.30	38.3	8	2A	0	14	36	7	9	45
HELSINKI	44.62	314.6	8	12	-1	14	59	11	10	2 PP
KARACHI	46.70	250.3	8	36	6	15	41	23	10	33 PP
SKALSTUGAN	47.03	323.7	8	31	-1					
RESOLUTE	47.58	10.8	8	34	-2	15	41	11	10	33 PP
UPPSALA	47.65	317.6	8	36K	-1	15	37	6	10	31 PP
GORIS	47.77	280.5	8	38	0				10	39 PP
SCORESBY SD.	50.04	343.1	8	55	0	16	0	-5	10	57 PP
SIMFEROPOL	50.43	294.0	8	58K	0				10	57 PP
WARSAW	51.53	308.6	9	7K	0	16	36	11	10	28 PCP
BERGEN	51.61	323.8	9	6	-1	16	37	11	11	8 PP
IASI	52.09	300.2	9	11	0	16	43	10	20	21 SS
COPENHAGEN	52.56	316.2	9	14	-1	16	44	5	11	21 PP
BACAU	52.86	300.1	8	51	-26	16	29	-14	20	22
SITKA	53.06	40.5	9	19A	1	16	59	13	10	15 PCP
FOCSANI	53.34	299.1	9	22	2	17	4	14	21	17
AKUREYRI	53.56	338.5	9	29	7	17	5	12	11	29 PP
KRAKOW	53.58	307.3	9	20	-2					
DABROWA	53.68	307.9	9	21	-2					
ZABRZE	53.89	308.1	9	25	1					
SKALNATE PL.	54.07	306.3	9	29	3	16	57	-3	11	41 PP
RACIBORZ	54.31	308.3	9	27	-1	17	7	4	11	51
CAMPULUNG	54.70	300.1	9	32	2	17	22	14	11	42
BUCHAREST	54.80	298.7	9	31A	0	17	13	3	10	31 PCP
HAMBURG	55.10	315.8	9	33	0	17	20	6	11	33 PP
REYKJAVIK	55.68	339.4	9	37K	0	17	36	14	13	0 PPP
BUDAPEST	55.85	305.6	9	37	-2	17	37	13	12	34 PPP
PRAGUE	55.94	310.5	9	39	0	17	29	4	11	54 PP
HURBANOVO	55.95	306.5	9	50	11	18	2	37	11	7
KECSKEMET	55.98	304.8	9	44	4	17	34	8	13	22 PPP
TIMISOARA	56.15	302.9	9	46	5	17	34	6	11	44 PP
BRATISLAVA	56.22	307.4	9	42A	1	17	40	11	11	57 PP
SZEGED	56.29	304.0	9	44	2	17	25	-5	11	50 PP
JENA	56.48	312.8	9	43	0	17	41	9	12	1 PP
VIENNA-H.	56.48	307.9	9	43K	0	17	44	12	11	57 PP
ABERDEEN	56.54	325.0	9	45	1	17	41	8	11	51 PP
KALOCSA	56.61	304.9	9	46	2	19	50	136	11	57 PP
CHEB	56.80	311.7	9	46	1	17	34	-2	11	52 PP
WITTEVEEN	56.95	317.1	9	46	-1				9	52
BELGRADE	57.21	302.7	9	49	1	18	1	19	21	57 SS
SOFIA	57.43	299.1	9	51	1	17	56	11	12	7 PP
KSARA	57.63	283.4	9	51A	0	17	49	2	11	58 PP
EDINBURGH	57.91	324.8	9	54	1	17	54	3	12	4 PP
DE BILT	58.08	317.4	9	56	2	18	11	18		
BENSBERG	58.21	315.4	9	54	-1	18	7	12		
DURHAM	58.33	323.1	9	58	2	18	4	8	12	5 PP
ZAGREB	58.50	306.3	9	56	-1				10	10
STUTTGART	59.12	312.6	10	1K	-1	18	11	4	12	21 PP
KARLSRUHE	59.26	313.3	10	2K	-1	18	19	10	12	26 PP
TUBINGEN	59.37	312.5	10	3	0					
JERUSALEM	59.54	282.4	10	17A	12	18	46	34		
TRIESTE	59.63	307.5	10	3K	-2	18	22	9	13	23 PP
EBINGEN	59.68	312.3	10	3K	-3				12	21 PP
RAVENSBURG	59.73	311.7	10	11	4					
STRASBOURG	59.86	313.4	10	6K	-1	18	13	-3	12	23 PP
ZURICH	60.49	312.0	10	11	0	18	34	10	33	40
CHUR	60.50	311.1	10	11K	0	18	32	7		
KEW	60.60	320.2	10	11K	-1	18	41	15	12	34 PP
BASLE	60.77	312.7	10	12K	-1	18	31	3		

ATHENS	60.83	295.3	10	14A	0				
RATHFARNHAM	61.09	324.8	10	14K	-1	18	31	-1	12 40 PP
NEUCHATEL	61.45	312.8	10	16	-2	18	39	2	12 36
BOLOGNA	61.59	308.3	10	20	1	19	0	22	13 52 PPP
BESANCON	61.64	313.5	10	17	-2				11 2 PCP
PARIS	61.75	316.7	10	19	-1	18	43	3	12 39 PP
PAVIA	61.98	310.1	10	20K	-1	18	55	12	12 48 PP
TARANTO	62.06	301.5	10	20	-2	18	54	10	
OROPA	62.14	311.2	10	18	-4	18	45	0	14 8 PPP
IVIGTUT	62.17	351.7	10	22	-1	19	0	14	12 41 PP
FLORENCE X.	62.20	307.8	10	22K	-1	18	59	13	14 1 PP
DJAKARTA	62.82	190.9	10	31	4	18	59	5	
JERSEY	63.14	319.8	10	32	3	19	5	7	14 33 PPP
ROME	63.14	305.7	10	26K	-3	18	58	0	14 32
HORSESHOE B.	63.52	39.1	10	31K	0	19	13	10	12 59 PP
MONACO	63.89	310.3	10	32K	-2	19	5	-2	12 57 PP
CLERMONT-FD.	64.00	314.4	10	34	-1	18	30	-39	13 10 PP
VICTORIA	64.20	39.7	10	35K	-1	19	5	-6	12 59 PP
BANFF	64.33	33.4	10	34K	-4				
MESSINA	64.66	301.2	10	35	-4	19	11	-6	12 57 PP
REGGIO CALA.	64.69	301.0	10	39	0	19	28	11	14 41
SEATTLE	65.34	39.5	10	45K	2	19	39	14	
SASKATOON	66.18	27.5	10	48	-1	19	38	3	15 23
RABAUL	66.99	140.9	10	53	-1	19	47	2	13 9 PP
HUNGRY HORSE	67.48	33.9	10	58K	1	20	5	14	39 13 PKPPKP
CORVALLIS	67.59	41.9	10	59K	1	19	59	7	
BARCELONA	68.01	312.4	11	1	1	20	13	16	13 38 PP
HONOLULU	70.00	81.5	11	12A	0	20	29	8	24 46 SS
BUTTE	70.01	34.1	11	14K	1	20	37	16	39 15 PKPPKP
ARCATA	70.46	44.5	11	5	-10	20	35	9	
BOZEMAN	70.79	33.2	11	18K	1	20	49	19	15 45 PPP
SHASTA	71.27	43.4	11	21K	1	20	49	13	
ALGIERS UNI.	71.52	309.1	11	21K	-1	20	48	9	14 4 PP
ALICANTE	71.67	312.4	11	25	2	20	42	2	14 14 PP
TOLEDO	71.79	315.8	11	23K	0	20	53	11	14 12 PP
MINERAL	71.87	43.1	11	24K	0				11 42
UKIAH	72.30	44.9	11	25A	-1	21	6	18	14 15 PP
HAWAII V.OB.	73.07	80.4	11	31	0	21	3	7	
COIMBRA	73.16	319.0	13	3	92	22	32	95	15 39 PP
RENO	73.25	42.2	11	33K	1				21 22
RELIZANE	73.45	310.3	11	34	1	21	12	11	14 28 PP
BERKELEY	73.76	44.8	11	36K	1	21	13	9	14 29 PP
ALMERIA	73.77	313.1	11	34	-1	21	1	-3	14 25 PP
GRANADA	73.94	314.0	11	36A	0	21	16	10	14 34 PP
SANTA CLARA	74.34	44.9	11	40K	2	21	19	8	
LICK	74.47	44.7	11	40K	1				11 55
RAPID CITY	74.49	28.6	11	38A	-1	21	14	2	39 7 PKPPKP
MALAGA	74.66	314.4	11	21A	-19	21	3	-11	14 25 PP
EUREKA	74.70	39.5	11	41K	1				22 32 SCS
LISBON	74.72	318.8	11	39K	-1	21	2	-13	14 19 PP
KIRKLAND LA.	74.95	11.4	12	41K	59	21	20	3	
SALT LAKE C.	74.95	36.0	11	42K	0	21	24	7	26 28
FRESNO	75.68	43.6	11	46	0	21	27	2	20 7
TINEMAHA	76.02	42.3	11	50K	2	21	41	12	14 43 PP
SEVEN FALLS	76.71	5.2	11	52K	0	21	42	5	30 15 SSS
ISABELLA	77.16	43.2	11	52	-2				
SHAWINIGAN	77.17	6.6	11	54K	0	21	27	-15	14 52 PP
OTTAWA	78.10	8.8	11	59K	0	21	57	5	14 55 PP
BREBEUF	78.16	7.3	11	59K	-1	22	5	13	
BOULDER CITY	78.23	40.3	12	1K	1	22	15	22	18 14
PASADENA	78.61	43.7	12	3K	1	22	3	6	15 4 PP
DALTON	78.73	43.4	12	4K	1				
RIVERSIDE	79.05	43.2	12	5K	0	22	9	7	38 57 PKPPKP
HALIFAX	79.40	0.1	12	7K	0	22	11	5	12 13
PALOMAR	79.82	43.1	12	10K	1				15 18 PP
HAYFIELD	79.96	42.0	12	11K	1				
CHICAGO CGS.	80.13	18.1	12	9K	-1	22	13	0	15 17 PP
BUFFALO L.	80.32	11.3	12	11	0				
BARRETT	80.49	43.2	12	5K	-7	22	23	6	
ANGRA DO HO.	80.50	332.0	12	17	5	22	37	20	
CLEVELAND	81.34	13.6	12	17	0	22	31	5	
WESTON	81.41	5.9	12	19K	2	22	33	6	28 1 SS
TAMANRASSET	82.21	299.6	12	20K	-1	22	34	-1	15 32 PP
PENNSYLVANIA	82.45	11.0	12	25	2	22	40	3	17 26 PPP
FLORISSANT	82.50	20.9	12	23K	0	22	41	3	
PITTSBURGH	82.57	12.6	12	23	0	22	37	-1	17 23 PPP
PALISADES	82.60	8.0	12	23K	0	22	41	2	15 43 PP
ST. LOUIS 1	82.68	20.8	12	23K	-1	22	39	-1	15 34 PP

FORDHAM	82.77	7.9	12	24K	0	22	46	6			
TUCSON	83.01	38.9	12	27K	1	22	51	8	38	51	PKPPKP
MORGANTOWN	83.37	12.7	12	28K	1						
PHILADELPHIA	83.55	9.0	12	31	3	22	53	5	15	49	PP
FAYETTEVILLE	84.28	24.6	12	32	0	22	59	3			
WASHINGTON	84.41	10.6	12	30K	-3	23	14	17	15	56	PP
LUBBOCK	84.66	31.4	12	34	0	23	11	12			
CHAPEL HILL	87.14	12.6	12	48	2						
CHIHUAHUA	87.94	36.6	12	48	-2	23	26	-5	16	20	PP
PERTH	87.95	180.6	12	56	6	24	0	29	13	25	
COLUMBIA	88.77	14.5	12	53K	-1	23	41	3	23	11	SKS
NOUMEA	88.94	134.9	12	56K	1	23	57	17			
BRISBANE	89.07	148.1	12	55	0	23	59	18			
SUVA	90.45	123.0	13	8	6	23	41	-13	29	52	SS
LWIRO	90.60	266.9	13	2K	0	23	50	-5			
BERMUDA	91.61	1.0	13	8	1	24	12	8	16	53	PP
MAZATLAN	92.86	38.9							24	35	
TANANARIVE	94.52	242.4	13	20A	0	24	14	-15	17	19	PP
RIVERVIEW	94.53	151.7	13	22A	1	24	29	0	17	7	PP
GUADALAJARA	96.23	37.1							16	33	
MELBOURNE	96.88	157.7	13	33	2	24	31	-18	17	28	PP
MANZANILLO	97.39	38.6							26	21	
TACUBAYA	98.76	33.9	13	43K	3	24	16	-49	17	25	PP
MBOUR	99.58	314.5	13	47	4	24	20	-52	17	47	PP
VERA CRUZ	99.86	31.2	13	45	0				17	45	PP
MERIDA	99.89	24.7	13	51	6	24	29	-46	17	56	PP
COMITAN	103.78	28.3				24	40	-67	18	28	PP
ONERAHI	104.03	134.8	18	33	270				19	3	
SAN JUAN	105.53	2.6	13	49K	777	26	17	-14	24	49	SKS
TONGARIRO	107.46	135.7	18	28	777						
WELLINGTON	108.97	137.3	19	4	777	24	49	0	21	40	PPP
FORT FRANCE	109.16	357.6	18	30	777				28	32	PS
ROXBURGH	110.76	143.2	19	3	31	25	17	6	35	17	SS
PIETERMZBURG	112.08	249.6	18	41	7						
GALERAZAMBA	112.40	12.6							21	35	PP
BALBOA HTS.	113.57	17.4	19	38	61						
KIMBERLEY	114.36	254.5	18	38	-1						
MACQUARIE I.	115.79	154.1	18	44	2	25	43	13	19	55	PP
GRAHAMSTOWN	117.00	250.0	18	45	0						
CHINCHINA	118.08	13.8	18	54	8				20	3	PP
BOGOTA	118.62	12.1	15	20	-207				20	10	PP
HERMANUS	121.73	254.6							20	29	PP
WILKES	122.33	182.9	18	56	2				20	39	PP
TERRE ADELIE	124.26	168.4							20	39	PP
HUANCAYO	134.85	16.5	19	16	-2				22	2	PP
SCOTT BASE	137.43	166.1	19	21	-2						
LA PAZ	140.06	7.0	19	30	2	27	1	27	22	26	PP

JUNE 28 21.H 23.M 24.S EPICENTRE 36.03 1.31 DEPTH= 0.KM

A= 0.81037 B= 0.01855 C= 0.58562 D= 0.0229 E=-0.9997
G= 0.5855 H= 0.0134 K=-0.8106 HT= -0.2

SE= 2.41

	DELTA DEG.	AZ. DEG.	P M	S	O-C S	S M	S	O-C S	*PP M	S	SUPP. M	S	
RELIZANE	0.68	245.8	0	17A	1								
ALGIERS UNI.	1.58	61.7									0	26	PG
ALICANTE	2.72	328.8	0	41	-4	1	15	-5					
ALMERIA	3.16	286.1	0	51	-1	1	29	-2					
GRANADA	4.11	287.6	1	6K	1	1	59	4			1	14	PG
MALAGA	4.66	280.2	1	12A	-1	2	8	-1					
BARCELONA	5.42	6.5									2	18	
TOLEDO	5.72	313.8	1	27	-1	2	1	-34			2	25	
COIMBRA	8.73	301.4				4	13	22					
LISBON	8.75	291.0	2	9A	-1								
MONACO	9.01	29.6	2	10	-4						2	24	
CLERMONT-FD.	9.83	7.4	2	28	3	4	15	-3			2	54	
ROME	10.48	52.6				4	48	14			2	23	
PAVIA	10.91	30.7									5	17	
MESSINA	11.57	75.0									2	43	PG
BESANCON	11.74	15.8	2	54	3						3	56	
NEUCHATEL	11.74	19.3	2	50	-2						6	14	
BASLE	12.40	20.2	3	4	4						6	16	
PARIS	12.80	3.5	3	4	-2						3	14	PP
JERSEY	13.38	350.3									3	16	PP

EBINGEN	13.40	22.6	3	11	-3						
STRASBOURG	13.41	18.8	3	14	0					3	42
TRIESTE	13.44	40.6	3	38	24	6	12	26			
TAMANRASSET	13.70	163.4	3	16	-2	5	45	-7			
TUBINGEN	13.74	22.2	3	16	-2						
STUTTGART	13.99	22.1	3	18	-4						
KEW	15.48	356.2	3	47	6						
BENSBERG	15.51	14.0	3	44	3						
JENA	16.63	23.2	3	55	-1	7	6	5			
BRATISLAVA	16.82	39.0	4	0	2					4	21
BELGRADE	16.98	53.0	4	0A	0					7	46
WITTEVEEN	17.21	11.0	4	6	3						
HAMBURG	18.56	16.4	4	20	0						
KRAKOW	19.46	38.2	4	29	-1					4	55 PP
COPENHAGEN	21.08	17.7				8	46	7			
WARSAW	21.39	34.7	4	46	-5					6	6
KISHINEV	23.23	53.3								5	7
UPPSALA	26.07	18.8	5	35	-2						
SIMFEROPOL	26.35	60.1				10	22	10			
MBOUR	27.08	221.9								11	15 SS
JERUSALEM	28.38	88.7	6	23	25						
SKALSTUGAN	28.39	10.3	5	58	0						
KIRUNA	33.65	13.0	6	41	-3						
NAMANGAN	53.92	61.9	9	26	-1						
QUETTA	54.38	76.0	9	33	2						
BREBEUF	55.63	304.6	9	38	-2						
SAN JUAN	61.38	272.7	10	21	1						
RAPID CITY	74.95	313.7	11	47	3						
COLLEGE	76.56	347.0	11	54	0						
BOZEMAN	78.39	318.5	12	6	2						
BUTTE	78.97	319.5	12	10	3						
EUREKA	85.22	316.3	12	40	1					13	19
MATUSIRO	97.44	33.7	14	5	28						

JUNE 29 7.H 48.M 15.S EPICENTRE 51.71-166.64 DEPTH= 0.KM

A=-0.60532 B=-0.14380 C= 0.78289 D=-0.2311 E= 0.9729
G=-0.7617 H=-0.1809 K=-0.6222 HT= -6.0

SE= 1.72

	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	16.38	29.2	3	51	-2	7	5	9			4	50	
SITKA	18.90	61.3	4	27	2	8	5	12			5	1	PP
PETROPAVLOVK	21.10	287.6	4	47	-2								
HORSESHOE B.	27.35	77.6	5	51K	2	10	35	7					
VICTORIA	27.59	79.4	5	52K	1						9	8	
SEATTLE	28.63	80.4	6	4	3	11	10	21					
CORVALLIS	29.42	86.7	6	5	-3								
HONOLULU	31.08	164.4	6	22	0								
BANFF	31.32	70.5	6	23K	-1								
SHASTA	32.07	92.4	6	33K	2						9	20	
MINERAL	32.76	92.3	6	37	0						9	20	
Y.-SAKHLINSK	32.80	282.1	6	35	-2	11	55	1					
HUNGRY HORSE	33.35	74.6	6	43	1	12	6	3			9	27	PCP
BERKELEY	33.85	96.4	6	47	1	12	16	5					
TIKSI	34.16	329.4	6	48	-1	12	12	-4					
RENO	34.35	92.0	6	53K	2	12	24	6					
LICK	34.56	96.6	6	54K	1						7	4	
BUTTE	35.32	77.4	6	59	0	12	40	7			9	28	PCP
FRESNO	36.06	95.8	7	7	2								
RESOLUTE	36.24	25.3	7	7K	0	12	50	2			9	31	PCP
BOZEMAN	36.42	77.0	7	9	1						7	53	
EUREKA	36.78	89.0	7	13	2	12	55	-1			8	38	PP
TINEMAHA	36.85	94.1	7	11K	-1	13	4	7			8	31	PCP
ISABELLA	37.60	96.0	7	20K	2	13	12	4			7	29	
CHINA LAKE	38.03	95.1	7	24K	2	13	19	4					
SALT LAKE C.	38.58	84.3	7	28	1						7	50	
PASADENA	38.78	97.6	7	25	-3	13	28	2					
RIVERSIDE	39.37	97.1	7	34K	1	13	38	3			9	44	PCP
BOULDER CITY	39.65	92.6	7	37	1	13	44	4			8	26	
PALOMAR	40.12	97.4	7	41K	2						9	47	PCP
BARRETT	40.69	98.0	7	45K	1	14	0	5			9	45	PCP
VLADIVOSTOK	41.34	283.1	7	47	-2	14	5	0					
MATUSIRO	41.36	270.7	7	49K	-1								

RAPID CITY	41.99	74.5	7	57	2				9	49 PCP
TUCSON	44.60	93.5	8	17	1	14	57	5	10	2 PCP
CHANGCHUN	44.88	288.0	8	17K	-1					
LUBBOCK	49.29	85.1	8	52	-1	16	3	4	18	47
IRKUTSK	51.39	308.2	9	9	0	16	31	3		
FAYETTEVILLE	52.33	77.3	9	14A	-2					
PEKING	52.60	289.5	9	17K	-1	16	47	2		
KIRKLAND LA.	52.68	57.2	9	17K	-2					
SCORESBY SD.	55.48	13.6	9	39	0					
ZO-SE	55.55	278.0	9	38K	-2	17	27	3		
NANKING	56.35	280.5	9	44K	-1	17	37	2		
OTTAWA	56.73	57.4	9	47K	-1				10	44 PCP
BREBEUF	57.76	56.1	9	53K	-2					
SEVEN FALLS	58.07	53.2	9	55K	-3					
PENNSYLVANIA	58.68	62.7	10	2	0	18	0	-6		
APATITY	60.11	351.3	10	12	0	18	25	1	12	24 PP
WASHINGTON	60.44	63.8	10	11	-3					
KIRUNA	60.66	356.9	10	15K	-1	18	25	-6	39	39 PKPPKP
PALISADES	60.70	60.1	10	15K	-1	18	35	3	12	5 PP
PHILADELPHIA	60.76	61.7				18	34	1		
TACUBAYA	61.06	95.1	10	23	5				12	6
WESTON	61.12	57.4	10	18	-1					
COLUMBIA	61.62	70.3	10	20	-2					
HALIFAX	63.40	51.1	10	32K	-2					
SEMIPALATNSK	63.56	318.9	10	34	-1	19	9	1		
SVERDLOVSK	65.05	333.6	10	46	1	19	30	4		
SKALSTUGAN	65.05	0.5	10	44K	-1				39	28 PKPPKP
RABAUL	65.80	226.1	10	49	0					
CANTON	66.18	277.4	11	13K	21					
CHENGTU	66.22	289.7	10	52K	0					
BAGUIO CITY	66.63	267.0	10	52	-3					
PULKOVO	68.03	350.8	11	3	-1	20	3	0		
UPPSALA	68.74	357.7	11	7K	-1	20	13	2	39	18 PKPPKP
MOSCOW	71.05	345.8	11	22	0	20	39	1		
KUNMING	71.16	286.6	11	22K	-1	20	39	0		
FRUNSE	71.91	317.3	11	28	1	20	52	4		
BERMUDA	72.05	60.5	11	28	0	20	52	2	16	25 PPP
COPENHAGEN	72.97	0.5	11	34K	0	21	4	4	21	52 SKS
RATHFARNHAM	74.07	12.1	11	45	5					
NAMANGAN	74.69	318.1	11	45	1	21	25	6		
HAMBURG	75.05	2.1	11	47	1					
WITTEVEEN	75.69	4.2	11	50	1					
WARSAW	76.23	355.2	11	53K	1	21	41	5	12	7
DE BILT	76.33	5.2	11	50	-3	21	45	7		
KEW	76.54	8.8	11	54	0	21	46	6	22	6
BENSBERG	77.57	4.0	12	0	0				12	18
KRAKOW	78.46	355.7	12	5	0	21	59	-2	12	15 PCP
RACIBORZ	78.50	356.8	12	7	2	22	14	13		
PRAGUE	78.59	359.3	12	6	1				14	9
PARIS	79.43	7.3	12	11K	1	22	11	0	15	11 PP
STUTTGART	79.83	2.8	12	13K	1	22	12	-3	12	33 PCP
STRASBOURG	79.97	3.8	12	15K	2	22	22	5	15	15 PP
TUBINGEN	80.07	2.9	12	15	2					
EBINGEN	80.42	3.0	12	16K	1				12	27
BRATISLAVA	80.44	357.5	12	14	-1	22	5	-16	15	5 PP
WARSAK DAM	80.60	314.3	12	16	0					
KISHINEV	80.75	349.3	12	17	0					
BASLE	81.01	4.0	12	19K	1					
BESANCON	81.21	5.1	12	21	2				15	24 PP
LAHORE	81.38	311.0	12	20	0	22	25	-6		
NEUCHATEL	81.51	4.4	12	23	2					
CHUR	81.76	2.7	12	24K	2					
SIMFEROPOL	82.06	345.3	12	24	0					
SAN JUAN	82.10	70.5	12	23	-1					
SOTCHI	82.38	341.0	12	26	1	22	45	4		
CLERMONT-FD.	82.50	7.2	12	28	2					
TIFLIS	83.01	336.8	12	30	1	22	54	6		
TRIESTE	83.02	359.7	12	25K	-4				22	52
PAVIA	83.42	3.0	12	33	3					
MONACO	84.80	4.3	12	38K	0				15	52 PP
FLORENCE X.	84.87	1.5	12	36K	-2				12	50
QUETTA	85.88	315.7	12	44K	1	23	13	-3	16	1 PP
BRISBANE	86.44	215.2	12	48	2					
ROME	86.76	0.7	12	49	1	23	32	7	23	38
CHINCHINA	86.77	86.1	12	47	-1	23	26	1		
TOLEDO	87.53	13.3	13	33	42					
GRANADA	90.24	13.5	13	11K	7	24	11	14	16	41 PP
MALAGA	90.33	14.4	13	48	-2	23	46	-14	16	46 PP

ALGIERS UNI.	91.43	8.3	13	9K	-1	24	17	9	16	47 PP
RELIZANE	92.18	10.4	13	12	-1					
KSARA	92.57	341.4	13	17	2	24	18	0	17	3 PP
JERUSALEM	94.67	341.5	13	25	0				17	19
TAMANRASSET	105.51	7.5	14	14	777				18	37 PP
LWIRO	129.03	340.0	19	13A	3					
SCOTT BASE	130.34	187.2	19	13	0				22	34 PP
PRETORIA	151.73	330.9	19	51	1					
PIETERMZBURG	154.55	323.6	20	4	10					
KIMBERLEY	155.52	335.2	19	57K	2					

JUNE 29 22.H 33.M 52.S EPICENTRE 56.40 116.71 DEPTH= 0.KM

A=-0.24992 B= 0.49669 C= 0.83117 D= 0.8933 E= 0.4495
G=-0.3736 H= 0.7425 K=-0.5560 HT= -7.7

SE= 1.57

	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	
KABANSK	7.33	237.8	1	53A	2						3	38	SG
IRKUTSK	8.34	245.5	2	6	1						4	23	SG
KYAKHTA	8.60	229.7	2	10	1						4	29	SG
CHANGCHUN	13.72	152.9	3	16	-3								
PEKING	16.38	181.5	3	54	1	7	4	8					
TATUNG	16.46	189.3	3	59	5								
VLADIVOSTOK	16.47	137.4	3	52	-2						7	2	SS
UGLEGORSK	16.94	104.9	4	2	2						7	26	SS
MAGADAN	18.23	65.9	4	16	0						7	50	SS
Y.-SAKHLINSK	18.59	109.6	4	18	-3						8	2	SS
YINCHUAN	19.24	205.6	4	31	2								
SEMIPALATNSK	22.35	269.9	5	1	0						9	10	
KURILSK	22.43	106.6	4	59	-3								
SIAN	22.79	196.9				9	22	11			5	42	
KLYUCHI	24.10	71.6	5	20	1						7	49	
PETROPAVLOVK	24.14	80.0	5	19	0						6	11	PPP
NANKING	24.39	175.7	5	21	0	9	45	6					
MATUSIRO	24.58	134.8	5	20	-3	9	35	-7					
ZO-SE	25.48	171.1	5	29	-3	9	59	2					
FRUNSE	29.93	261.2	6	14	2						13	2	SSS
SVERDLOVSK	30.13	294.7	6	14	0								
TASHKENT	33.90	264.1									8	6	PP
APATITY	37.59	321.3	7	21	3	13	13	5			14	59	SS
WARSAK DAM	37.97	253.2	7	22	0								
LAHORE	38.42	247.8	7	26	1								
SODANKYLA	39.99	323.0	7	38	-1						9	17	PP
KIRUNA	41.76	325.5	7	53	0						9	37	PP
MOSCOW	41.84	303.6	7	56	2								
ASHKABAD	42.30	269.6	7	59	2						23	12	
COLLEGE	43.20	38.4	7	15	-50						9	30	
QUETTA	43.38	254.2	8	6K	0						9	49	PP
SKALSTUGAN	47.05	323.7	8	35	-1						8	50	
TIFLIS	47.13	283.8	8	37	1						19	32	SSS
RESOLUTE	47.52	10.9	8	37	-2	15	34	0			10	8	PCP
UPPSALA	47.69	317.6	8	40	-1								
GORIS	47.85	280.6	8	45	3	15	45	6			19	20	SS
SCORESBY SD.	50.02	343.2	9	0	1	16	14	5					
SIMFEROPOL	50.50	294.1	9	2K	0						20	8	SS
WARSAW	51.58	308.6									20	42	
LWOW	51.94	304.8	9	15	2						16	40	PS
COPENHAGEN	52.60	316.3	9	19	1	16	50	5			11	20	PP
SITKA	52.96	40.6	9	22	1								
KRAKOW	53.62	307.3	9	25	-1								
RACIBORZ	54.36	308.4									17	25	
HAMBURG	55.13	315.9	9	38	1								
BRATISLAVA	56.27	307.5	9	46	1	17	26	-8			11	13	
JENA	56.51	312.9	9	45	-2						12	19	
KSARA	57.71	283.5	9	59	4	18	8	15			13	19	
STUTTGART	59.16	312.7	10	4	-1						10	53	PCP
EBINGEN	59.72	312.4	10	10	1								
STRASBOURG	59.90	313.4	10	11	1	18	26	4			22	20	SS
KEW	60.63	320.3	10	16	1								
RATHFARNHAM	61.11	324.9	10	17	-2								
NEUCHATEL	61.49	312.9									11	21	
BESANCON	61.68	313.6	10	21	-1								
PARIS	61.78	316.8	10	23	0								

MONACO	63.93	310.4	10 36	-2	
BANFF	64.44	33.5	10 39	-2	
HUNGRY HORSE	67.39	34.0	11 0	0	
BUTTE	69.92	34.2	11 15	0	
BOZEMAN	70.70	33.4	11 20	0	
RENO	73.15	42.4	11 36	1	
GRANADA	73.98	314.2	11 17K	-23	
RAPID CITY	74.41	28.7	11 42	0	
KIRKLAND LA.	74.89	11.5	11 44	-1	
TINEMAHA	75.92	42.5	11 50	-1	
SEVEN FALLS	76.66	5.3	11 55A	0	
ISABELLA	77.06	43.3	11 58K	1	
SHAWINIGAN	77.12	6.7	11 57	0	
CHINA LAKE	77.25	42.6	11 59K	1	15 30 PP
OTTAWA	78.04	8.9	12 2	0	
BOULDER CITY	78.13	40.5	12 4	1	15 40
PASADENA	78.51	43.8	12 3	-2	20 8
RIVERSIDE	78.96	43.3	12 6	-2	
HALIFAX	79.35	0.2	12 10	0	
PALOMAR	79.72	43.2	12 13K	1	
HAYFIELD	79.87	42.1	12 13	1	
BARRETT	80.39	43.4	12 15K	0	
TAMANRASSET	82.27	299.7	12 26	1	15 35 PP
MBOUR	99.61	314.7			14 18

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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.