

TECHNICAL UNIVERSITY OF ISTANBUL  
Institute of Seismology

S E I S M O L O G I C A L

B U L L E T I N

No.40

J U L Y 1 9 5 9

Istanbul  $41^{\circ} 02,6$  N.,  $28^{\circ} 59,1$  E. Çine  $37^{\circ} 36,0$  N.,  $28^{\circ} 05,2$  E.  
Kastamonu  $41^{\circ} 22,3$  N.,  $33^{\circ} 46,0$  E.

1 Bonin Islands region												
Kast	i P	02	39	15	C?	Kast i Pg	03	33	23			
	i X			21		i Sg			57			
	i X			24		Çine e (Pg) e (Sg)	03	33	56			
	i X			52								
	i pP	41	08					34	46			
	i pPcP			14								
	i X			22		Ist i Pg i Sg	03	54	36			
	e sP	42	14									
	i (PP)			21					55			
	e sPP	45	33			Kast i Pg i Sg	03	54	51			
	e PPPP	46	02									
	e S	48	34						55 (26)			
	e SP	49	(44)			Çine e X	03	56	16			
	e SPP	50	(09)									
D 8900 Km. ca. h 500 Km. ca.						Çine e P e S e X	03	57	52			
												59 (17)
												32
Ist	ei P	Z	02	39	31	Ist i (P) i	03	58	17			
	ei pP	Z,E	41	31								
	e SKS	Z				e S	E	04	00	00		
	e SKKS	Z	49	16		e (X)	Z	04	00	(32)		
D 9000 Km. ca. h about 550 Km.						Kast e X Peleponese, Greece. BCIS	03	59	02			
Çine	i P	02	39	42		Çine i Pg i Sg	04	52	52			
	e pP	41	43									
	e (PP)	42	44					53	08			
	e S	49	--			Çine i Pg i Sg	04	53	10			
												84
D 9500 Km. ca. h about 500 Km.						Kast e Pg e Sg	05	34	22			
												55
Ist	i Pg	Z,E	03	33	10	Ist. i Pg i Sg	03	34	08			
	i Sg	Z,E			29							

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Station	Phase	Time	Count	Station	Phase	Time	Count
1 Çine	e X	03 26 40	3	Çine	i PG	03 05 45	
					i SG		59
1 Çine	e PG e (SG)	10 04 32 48	3	Çine	e X	12 11 24	
1 Çine	e P e X	11 18 (22) 19 32	3	Çine	i PG i SG	12 55 46 55 59	
	Ist. i P	11 18 26					
1 Ist.	e Pb Z e PGPG Z e Sb Z e LG1 Z e LG2 Z e (RG) Z	12 34 39 47 35 42 49 58 36 15	3	Çine	i PG i SG	16 08 11 25	
	Çine i PG i SG	12 34 39 35 03					
1 Kast	Kast e Pn e PGPG e PGPGPG i X ei Sn e SnSn i X i LG1 e LG2 e (RG) LR	21 29 15 30 50 30 06 21 31 50 52 31 (04) 24 54	3	New-Hebrides Region			
				Kast. e PEP		18 14 37	
				New - Hebrides			
				Ist. i PKP Z		18 15 34C	
				i X Z		39D	
				e X E		18 36	
				e PP E		18 17	
				e PKS E		56	
				e PKS E		19 11	
				e X E		37	
				e PPP E		21 (24)	
				D 15500			
				New - Hebrides			
				Kast i (PKP)		18 15 (17)c	
				i (PKP)		20 C	
				Sg not clear			
				Kast e (PG)		18 40 48	
1 Çine	e P e (S)	21 29 27 30 43	4	Tongo Island Region			
2 Fiji Islands	Kast ee PKP i PKP	11 46 16 17C	4	Kast i PKP		05 13 57	
2 Çine	i X	11 53 05	4	Çine	e X	22 01 34	
2 h Goo In. Fiji Islands	Kast. i PKP i PKP e X e X e X PPKP	11 52 51D 53C? 53 18 21 44 55 14	5	Çine	i PG	00 34 52 35 07	
				Çine	i P	00 48 42	
				Çine	e PG i SG	04 12 33 13 00	
2 Çine	e X	23 04 (59)	5	Çine	e X	04 17 (51)	
3 Çine	e PG e SG	02 55 17 31	5	Ist. i PG E i SG E		04 32 33 52	

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5	Çine	i PG		14	09	45	7	Çine	e PG			09	04	16
		i SG			10	01			e SG				04	31
6	Çine	e PG		01	33	07	7	Ist.	e PG	Z		10	19	11
		i SG			33	21			i SG	Z,E				27
6	Çine	i PG		04	00	55	7							
		i SG			01	12		Kast	P			07	36	50
6	Çine	i PG		14	52	41	7	Çine	e PG			10	01	22
		i SG			53	01			i SG					43
6			Chaco, Argentina. Records obscured by strong micro.				7	Çine	e X			11	32	23
	Ist.	i X	Z	09	27	26D	7	Çine	e PG			13	34	00
		e X	Z			42			i (SG)					05
		e (PP)	Z		28	16								
		i (pPIP)	Z		29	12	7	Ist	No records at Z	after 13 h. 40 m.				
		e X	Z		36	33				till				
		e X	Z		40	40	8					08 h. 50 m.		
		e X	Z		41	22								
		e X	Z			34	7	Ist.	e (PG)	E		13	51	51
		i X	Z		42	24			i SG	E				56
		e X	Z		43	32								
		e X	Z		45	52	7	Ist.	e (PG)	E		13	57	09
		e X	Z		49	50			i SG	E				14
		e X	Z		50	52								
6			Chaco, Argentina.				7	Ist.	ii PG	E,ISP		16	13	53,9
	Kast	i PIP		09	27	48C			ii SG	ISP				58,4
		e X			28	46	7	Kast	e (Pb)			16	14	42
		e X			29	25			e (S)				15	22
		e X			31	14								
6			Chaco, Argentina.				7	Çine	e (PG)			16	14	(50)
	Kast	e PIP		09	38	(55)			i (SG)				15	23
		e (pPIP)			41	45	7	Ist.	e X	E		16	38	20
		e X			42	32								
6	Ist.	e PG	Z	11	27	11	7	Çine	i SG			16	53	40
		i SG	Z,E			20	7	Ist.	i SG	E		23	34	57
6	Çine	e PG		21	49	39	7	Çine	e X			23	35	40
		e SG				52			e X				36	02
6	Çine	i PG		27	30	06	7	Ist.	i SG	E		23	36	09
		i SG				30								
7	Çine	i PG		06	44	24	8	Ist.	e X	E		00	17	15
		i SG				39			i SG	E				24
6	Ist	i PG	Z,E	22	30	19		Çine	i PG			00	17	57
		i SG	Z,E			45			i SG				18	05



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10	New - Guinea.				11	New Hebrides.			
	Kast e (P)	13	03	33		Kast e PKP	05	10	34
10	Cyprus.				11	Indian Ocean.			
	Slight damage at Limassoll.					Kast e P	12	14	33
	BCIS					e (S)		25	(20)
	Kast e Pb	20	29	01		D about 9700 km.			
	e P <sub>G</sub>			15					
	e P <sub>G</sub> P <sub>G</sub>			18	11	Ist. e (S)	12	25	—
	e S <sub>G</sub> P <sub>n</sub> P <sub>G</sub>			23					
	i P <sub>G</sub> P <sub>G</sub> P <sub>G</sub>			40		No record at a after			
	e (P <sub>G</sub> S <sub>G</sub> )			54			10	20	till
	i Li	30	14						
	i Sb			24	11	Muril islands.			
	e S <sub>b</sub> S <sub>b</sub>			(29)		Kast i P	10	34	54
	e L <sub>G</sub>			35		i P <sub>c</sub> P		35	05
	i L <sub>G</sub> <sup>1</sup>			43		e PPP		39	33
	i S <sub>G</sub> S <sub>G</sub>			47		D 3500 km.			
	e P <sub>G</sub>	31	05		12	Fiji islands region.			
	e LR			49		Kast ei PKP	00	43	17 C
	D 730 m.					ii PKP			19 C
10	Ist e P <sub>n</sub> Z	20	29	06		ei pPKP		44	52
	e P <sub>n</sub> P <sub>n</sub> Z			13		i PP		40	24
	e Pb Z			23		D about 16500 km.			
	e P <sub>b</sub> P <sub>b</sub> Z			29	12	Seismic ?			
	i X Z			31		Kast i (P)	00	11	37
	i X Z			50					
	P <sub>G</sub> P <sub>G</sub> P <sub>G</sub> Z	50	07		12	Çine i P <sub>G</sub>	13	26	50
	e X Z			12		i S <sub>G</sub>		27	08
	e X Z			10					
	e X Z			21	12	Çine e S <sub>G</sub>	15	45	(05)
	e S <sub>n</sub> Z			31					
	e S <sub>n</sub> S <sub>n</sub> Z			39	12	Çine i (P <sub>b</sub> )	10	53	10
	i X Z			41		i P <sub>G</sub>			19
	Li Z			43		i S <sub>G</sub>			52
	e Sb Z			50					
	e S <sub>b</sub> S <sub>b</sub> Z	31	04		12	Ist. i P	10	53	59
	L <sub>G</sub> Z			08		e (S)		55	43
	e S <sub>G</sub> S <sub>G</sub> Z			19					
	e X Z			27	12	Kirghiz U.S.S.R.			
	e P <sub>G</sub> Z			37		Kast i P	19	20	00 C
	LR Z	32	17			i X			03
	D 735 km.					PP			50
10	Kast e P	22	06	54		PPP		29	00
						PPPP			17
						e X			35
						i P <sub>c</sub> P		31	09
						i X			32
						d 3200 km.			

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13	Jan Mayen Islands.				14	Çine	e X	02 40 10
	Kast e P	01 40 22			14	Çine	e PG i SG	04 29 25 33
13	Çine i PG i SG	05 40 12 20			14	Çine	i PG i SG	04 53 53 54 (07)
13	Andreasof islands.				14	Çine	e PG e SG	05 45 40 51
	Kast i P	12 41 21			14	Çine	e Pb i PG i SG	00 20 40 47 59
	PPP	40 34						
	S	51 (30)						
	PS	52 19						
	BFS	59						
	D 9300 km.							
13	Ist. i P i X	12 41 20 D 41			14	Fox islands.	Kast i P i X	00 53 24 31
13	Çine i P e X	12 41 44 D 53 -			14	Çine	ei P	00 53 53
13	Çine e PG i SG	15 01 05 24			14	Kast	e P	10 51 47
13	Kernedec islands region.				14	Alaska peninsula.	Kast i P i X e X ei PP	11 40 00 C 37 47 00 49 12
	Kast i PKP i (PKP <sub>1</sub> ) i (PKP <sub>2</sub> )	15 43 59 D? 44					D 9300 km.	
13	Çine i PG i SG	17 08 30 50			14	Çine	ei P	11 40 20
13	Çine e PG e SG	23 15 59 10 23			14	Çine	i PG i SG	12 14 17 33
13	Kast i P	03 17 30			14	New - Hebrides region.	Kast e PKP	13 19 44
					14	Çine	e PKP e X	13 19 (49) 21 (49)

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14	Çine	i Pg	15	40	55	•	SgSgSg	Z	29	14				
		i Sg		41	10	••	Bg	Z		23				
						••	LR	Z		50				
14	Ist.	e X	16	34	—	••	D about 790 km.							
		e X		37	59	••								
		e X		38	57	••	14	Çine	e Sg	20	40	13		
						••								
14	Çine	e X	16	34	52	••	14	Kast	e P	20	42	54		
						••								
14	Çine	e Pg	16	36	38	••	14	Çine	e Pg	21	13	(47)		
		i Sg			50	••			e (Sg)			52		
						••								
14	Çine	e Pg	16	38	58	••	14	Near W coast of Celebes.						
		e Sg		32	15	••	Kast	i P	22	44	08	C		
						••		i X				18		
14	Fiji Islands Region					••		i X				27		
	Kast	i PKP	18	32	26	••								
		e X		34	35	••	14	Çine	e Pg	23	14	23		
		ei X		35	44	••			e X			29		
		i pPKP			49	••			e X	15	17			
		h about 650 km.				••								
						••	14	Çine	e X	23	48	52		
14	Fiji Islands Region.					••								
	Kast	e PKP	18	38	18	••	15	Çine	e Pg	01	51	(35)		
						••			i Sg	51	41			
14	Çine	i Pg	19	49	24	••								
		i Sg			43	••								
						••								
14	Ist.	i Pg	Z	19	49	42	••	15	Çine		02	03	—	
		i Sg	Z		51	13	••	15	Ist.	Pg	Z	02	03	43
							••		e X	E			51	
14	Kast	e P		19	50	44	••		Sg	E		04	17	
							••							
14	Kast	e P		19	51	54	••	15	Kast	P		02	04	45
		e X			52	02	••		S			05	59	
							••							
14	Greece. Felt at Parga. (After Athenes)					••	15	Fore parts Quake lasts in the president.						
	Kast	i Pn	20	27	46	D	••	Çine	i Sg	02	05	14		
		i (PnPnPn)		28	02		••							
		e (PgPg)			46		••	15	Çine	e P	03	25	14	
							••							
14	Çine	i P	20	26	43		••	15	Çine	i Pb	17	14	13	
		e S		28	33		••		i Pg		14	17		
							••		i Sg			32		
							••							
14	Ist.	i Pn	Z	20	26	51	••	15	Ist.	Pb	Z	17	14	38
		i PnPn	Z			59	••		Pg	Z			37	
		e PbPb	Z,E	27	13		••		i Sg	E		15	07	
		SgPnPg	Z			33	••							
		e PgSg	Z			59	••							
		e Sn	Z,E	28	17		••	15	Kast	P		17	15	37
		Li	Z			29	••		S			16	51	
		Lgi	Z,E			46	••							



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Date	Station	Type	Time	Time	Time	Station	Type	Time	Time	Time	
15	Çine	i Pg	20	27	05	,17 Kast	e X		19	16	29
		i Sg			17		e X				47
							e X			17	10
10	Çine	i Pg	01	10	03		e X			18	04
		i Sg			13						
						,17 Ist	e X		19	16	30
10	Çine	i Pg	01	10	53						
		i Sg		11	07	,17		SG not clear.			
						Çine	ii Pg		19	37	40
10	Kast	e (P)	02	26	15						
						,17 Ist	e Pn	Z	19	30	30
10	Çine	i Pg	02	37	40		ii Pb	Z,E			40 C
		i Sg		38	00		i Pg	Z			54
							PgPg	Z			50
10	Çine	i Pg	07	08	25		i SgPnPg	Z	39		05
		i Sg			40		e PgSg	Z			21
							e X	Z			27
10	Kast	i P	11	32	41 D		e X	Z			35
							i Li	Z			39
10	Ist.	e P	11	32	50		i Sb	Z,E			40
		e X		33	17		i LG <sub>1</sub>	Z			50
							i LG <sub>2</sub>	Z			57
10	Çine	i Pg	14	06	30		i SgSg	Z	40		01
		i Sg		06	50		i Pg	Z,E			13
							i X	E			20
10		Andreasof islands region.					i LR	Z			37
	Kast	i P	15	30	01 D		d	400 km.			
		i X			13						
		i X			40	,17					
						Kast	ei Pn		19	30	50
10	Ist	e P	15	30	00		e Pg			39	21
		e PP		33	25		e PgPg				20
		e S		41	--		i PgPgPg				40
							i LG <sub>1</sub>		40		20
10	Çine	i P	15	30	23		i LG <sub>2</sub>				35
							SgSg				42
10		Loyalty islands.					Pg				54
	Kast	e PMP	19	35	31		d	310 km.			
10	Ist	e PKS	19	30	24	,17 Çine	i P		20	11	39
		e X			30						
						,17 Ist	e X	Z	20	12	00
10	Kast	e X	21	26	39		e X	Z			04
17	Ist	e X	07	12	27	,17 Çine	i Pg		02	03	10
							i Sg				37
17		Tongo islands.				,17 Ist.	e X	Z	22	09	24
	Kast	i PMP	07	54	34 E		e Pb	Z			20
17	Çine	i Pg	13	04	13		e (Sb)	Z		10	34
		i Sg			37						
						,17 Çine	e (P)		22	24	31
17	Çine	e Pg	13	05	34						
		i Sg			42	,17 Çine	e (P <sub>1</sub> )		22	20	34



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Date	Location	Phase	Time	Time	Time	Station	Phase	Time	Time	Time
17	Kast	i P	22	30	13	18 Ist.	e X	07	21	43
17	South of Alaska.					18	Luzon, Philippines.			
	Kast	e P	23	33	49		Other phases not clear.			
						Kast	i P	20	06	41
18	Ist.	i Pg Z	02	14	24					
		i (Pb) Z			27		e S		16	23
		i Sg Z,E			35		e (SKS)			43
							e PPS		17	13
18	Kast	i P	02	13	05		d about 3400 km.			
18	Kast	e P	03	44	57	18 Ist.	Deep pad SKPPKP phases are very strong.			
18	29° 1/2 N, 50° E.		03	50	10 D		ii P Z,E	20	27	00 D
	BCIS				11 C		ii PcP Z,E			08
	Kast	e P			24		ei PP Z,E		10	02
		i P			33		e X Z			14
		i PP			44		SKS Z,E		16	59
		i PPP			59 (27)		e PKPPKP Z		33	41
		i PPPP	04	02	38		e SKPPKP Z		33	53
		e S			56		d 3700 km.			
		e X			03 08					
		e X			18	18 Çine	i P	20	07	09
		e X	08	57	10		i (PcP)			15
		e X			31					
	d	2000 km.								
18	Çine	i P	08	56	(30)		i X			29
							e X			33
							i pP			49
18	Ist.	e P Z	08	50	40		i X			53
		e X Z			47		i SP	08		02
		e X Z			52		e SPcP			19
		e X Z			57 08		i X			49
							e X	09		19
18	Fiji islands region.						e X			33
	Çine	e PpP	07	19	28		e PP		10	23
		e X			38		e pPP			47
							e (SPP)		11	00
18	Kast	i Pg	08	57	16		e PPP		12	01
		i Sg			31		e PPPP		13	45
							e S		14	11
18	Kast	e X	10	03	15		e SKS			23
							e SP			53
18	Kast	e X	11	17	38		e X			59
							e PS	18		12
18	Çine	e Pg	12	23	25		e SPP			32
		i (Sg)			45		e PKPP		25	30
							e PKPPKP		33	43
18	Kast	e X	12	31	32		ei SKPPKP		36	53
							e PPKPKS		37	10
							e X		53	52
18	Fiji islands region.						D about 9000 km.			
	Kast	i PpP	19	40	53		h about 150 km.			
		e X			51 11					

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Date	Station	Type	Time	Mag	Depth (km)	Location	Phase	Time	Mag	Depth (km)		
18	Kast	e X	20	33	20	Çine	i Sg	10	22	10		
		e X		36	50							
		i X		37	04							
19	Çine	i (Sg)	00	34	06	Kast	i PKP	14	03	30		
					i pPKP			05	42			
					h about 550 km.							
19	Kast	e (P)	01	15	21	Çine	i P	45	20	04		
		e X		16	07		e pP		21	00		
		e X			14		e X		22	57		
19	Çine	i Pg	02	10	24	Çine	e X		23	03		
		i X			34		e X			37		
		i Sg			39		i PKP		24	15		
19	Kast	e X	02	11	49	Çine	i PP			35		
							e pPKP		25	09		
							e PPP			15		
19	Çine	i Pg	02	11	30	Çine	e (sPKP)			23		
		e (Sg)			46		PPP		20	40		
							e SMS		30	21		
19	Kast	Sunda strait.			03	54	20 D	i X			20	
		i X		57				24	SMS			57
		e X						52	SP		33	27
19	Ist.	e S		50	11	Ist.	PS					
							PPS		34	12		
							i PKP		35	50		
19	Ist.	i P	03	54	30 C	Ist.	e PKPKP		43	30		
		e X		57	52		e PKPKS		47	43		
							h about 250 km.					
19	Çine	i P	03	54	37 C	Ist.	e X	Z	15	23	24	
		i PcP			55		ei(PKP)	Z				44
19	Çine	e X	05	44	(50)		e X	Z	24	15		
19	Çine	e Sg	06	03	11		i (pPKP)	Z		24		
19	Ist.	i Pg	10	21	09	Ist.	ei PP	Z		34		
		i PgSg			13		e pPP	Z		50		
		i Li			22		e (SPP)	Z	25	24		
		i Lg <sub>1</sub>			38		e PPP	Z, E	20	56		
		i Sg <sub>1</sub>	Z, E		42		D about 11000 km.					
		e Rg	Z		49		(SMS - PP)					
		LR	Z	23	05		h about 200 km.					
D	200 km.				Kast	i PKP		15	24	24		
						i X				32		
						e pPKP		25	10			
19	Kast	e X	10	23	03		e PP			40		
		e S		24	04							

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		i PPP	57	.20	Çine	i P	02	53	05		
		e sPP	26	21	..	ei pP		54	54		
		e PPP	27	50	..	e (pPcP)		55	24		
		i pPPP	26	13	..	e SKS	03	02	41		
		e sPPP	(30)	..	..	e S			(55)		
		e SKS	30	37	..	ei(ScS)	03	07			
		e SKS		55	..	e X			17		
		e SKMS	31	41	..	e X			22		
		e PKMP	35	13	..	e X			30		
		i PKMP		24	..	e SP			49		
		(SPP)	36	17	..	e sPP		04	02		
		(PS)	36	37	..	e PPS		04	49		
		e SKMS	38	38	..	e SS		07	(09)		
		ei PcPPMP	39	27	..	D about 9700 km.					
		e (SS)	40	17	..	h about 450 km.					
		e PKPPMP	43	47	..						
		D about 115°			..20	Kast	e (P)	03	10	30	
		h about 200 km.			..		e (S)		21	35	
19	Çine	i (Sg)	17	14	42	..20	Çine	e (Sg)	03	44	20
19	Çine	e Pg	21	54	19	..20					
		i Sg			30	..	Kast	ei PKP	09	20	11
20	Çine	e Pg	06	02	07	..20	Kast	e (P)	13	47	00
		e (Sg)			21	..					
20		Java Sea.				..20	Kast	Fiji islands region.			
	Kast	i P	02	52	30	..	Kast	e PKP	17	12	15
		i pP		54	29	..		i PKP			10D?
		e sP		55	32	..		i pPKP		14	29
		e PP			47	..		h about 500 km.			
		i pPP		57	30	..20	Ist.	ei PKP Z	17	12	24
		e PPP			(45)	..		i (PKP) Z		14	52
		ei sPP		58	32	..		h about 500 km.			
		e PPPP		59	15	..					
		i X	03	01	13	..20	Çine	e PKP	17	12	24
		e (SKS)			57	..		i X			31
		e (S)		02	20	..		i X			42
		ei ScS			53	..		e pPKP		14	36
		e SP		03	21	..		h about 500 km.			
		e SPP			51	..					
		e (PKMP)		10	55	..20	Çine	e Sg	21	15	(42)
		H about 9100 km.				..					
		h about 500 km.				..20	Çine	e X	22	27	10
20		S losts during the hour mark.				..21	Kast	e X	00	44	13
	Ist.	i P Z,E	02	53	03	..		e X			56
		i X Z		54	13	..					
		e X Z			53	..					
		i pP Z,E			56	..21	Kast	e X	01	04	(48)
		e X Z		55	03	..					
		e PP Z		56	04	..					
		e PPP Z		53	10	..					

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Date	Time	Station	Phase	Time	Time	Time	Station	Phase	Time	Time	Time
21	Kast	New - Hebrides.	i PKP	03	02	29	Çine	e X	08	47	50
			e X			43	Çine	i P	11	28	55D
			PP		04	(42)		e X		29	06
			e X			48					
			e X			50					
			e X		05	00		Molucca passage.			
			e X			17	Kast	i P	11	28	35
			e PKS			50		i (PcP)			43
			e PPP		07	(24)		e PPP		34	07
			D					e PPPP		35	32
21	Ist.	Off coast of Tonga islands.	e PKP Z	08	02	30					
			e (PP) Z		05	06	Kast	i PKP	10	53	35C
21	Çine	Sea of Okhotsk.	ei PKP	08	02	39					
			e (PP)		05	25	Kast	i PP	19	34	42
			e (PKS)		06	14		i pP		30	49
								e PPP		39	12
								i pPP			20
								e S		43	(19)
								e SP			25
								D about 3000 km.			
								h about 600 km.			
21	Çine	Very strong micro.	e Pg	13	10	55	Ist.	i P Z,E	19	34	53D?
			e Sg		11	08					
22	Ist.	Rumania. (BCIS)	i X Z,E	01	24	09	Çine	ii P	19	35	11
			i Sg Z,E			17		i PcP			24
								ei PP		37	20
								e pPcP			38
								e PP		38	20
								e PPP		39	58
								e PPPP		41	38
								e S		44	13
								e SP		45	02
								D 8400 km.			
22	Ist.	Quake lasts during the hour, mark.	e X	03	03	53	Kast	i P	19	43	43C
22	Çine	New Britain.	e P	03	15	39	Kast	e X	23	20	41
								e X		21	06
								e (PKP)			21
								i (pPKP)		22	03
								e PP			(35)
22	Çine	About 13300 km.	e X	08	30	50					
			e X		31	17					

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23	Tonga islands region.				24	Kast	i P		30	39	47D
	Kast	i PKP	15	16	31	D					
		i X		18	07		24	Kast	e X		30 54 24
		e (PMS)		19	51						
		e PP			55				No record from 23/VII 22 <sup>h</sup> .		
		e PPP	23	(31)		24			till 09 <sup>h</sup> . 10 <sup>h</sup> .		
	D about 16500 km.										
							24	Çine	i Pg		22 05 10
23	Çine	e PKP	15	16	(47)				i Sg		35
		e X			52						
		i X		17	00		24	Kast	i (Pg)		22 15 03
									i (PgPg)		05
23	Kast	Riv							i X		19
			31	37	23	C?			i X		23
		e X			41				i X		31
		e X		30	03						
							24	Kast	e PKP		23 22 11C?
24		Off W coast of California.							i X		36
	Kast	e X	01	40	29				i X		42
24		Off E of Hokkaido, Japon.					25	Çine	e Pg		00 04 31
	Kast	i P	02	56	40	D			e Sg		50
24		Iran.					25	Kast	ei X		01 40 14
	Kast	i P	07	23	50	D					
		i PP		24	04		25	Çine	e P		07 20 (10)
		e X			34						
		S		27	(00)		25	Çine	e P		08 17 05
											17 40
24	Ist.	i Pg		00	47	21	25	Ist.	i X		03 54 47
		i Sg				27			i X		40
24	Kast	e X		10	21	20	25		Other phases not clear.		
									Felt at Urfa Turkey.		
24		India - Birmania border.						Kast	ei(Pb)		10 50 54
	Kast	i P		10	26	53			i PbPb		50
		i X			27	25			i (Pg)		57 00
		e X				40					
		e X		20	03		25	Çine	e P		10 57 24
		i PcP			13				e X		59 50
		PP			29				e X		11 00 10
		PPP			49						
		PPPP			55		25	Ist.	e Pn	Z,E	10 57 53
		PcS									59 30
		e S		34	20						
		e PMS		37	10						
		D									
							25	Kast	e P		11 22 10
24	Kast	e (PKP)		19	30	12	25	Çine	i P		12 37 47

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25	Sakhaline.								M = 5 1/4 - 5 1/2
	Kast e P	16	10	04					( Matsushiro )
25	Sakhaline.								= 5,1 ( Uppsala )
	Kast i P	19	35	09 C					Felt at Pithion. (V)
									(After Athenes )
25	Quake lasts during hour mark.								Felt at Gelibolu(VII)
	Ist. i Pg Z,E	21	02	14					till İsmir, Edirne(III)
									Çanakkale(IV)
25	Kast i Pb	21	02	36					Balıkesir(IV)
	i Pg			37					Bursa (IV)
	i Lg2		03	00					Bandırma (VII)
	i Sg.			12					Adapazarı(V)
	D 270 km.								Tekirdağ (VI)
25	Hondo, Japon.								Other phases not clear.
	Kast i P	21	32	21 B?		Kast	i P	17	00 14
	e pP			44					
	h about 100 km.								Obscured by the precedent.
25	Çine ei P	21	32	(51)		Kast	e X	17	10 42
26	Çine i Pg	00	30	41			e X		17 14
	i X			54		26	Ist.	i (Pg)	E 17 20 00
	i (S)		39	(33)				i Sg	E 20 10
26	Kast i Pg	11	00	10		26	Ist.	i Pg	Z 10 20 (02)
	i Sg			50				i Sg	Z,E 10
26	Ist. ii Pg Z,E	17	07	28					Kantchatka.
	ii Sg ISP,Z			30					Kast e P 19 40 22
	D about 100 km.								e X 29
									Khovan, Baluchistan. (BCIS)
	H, W of Turkey.								Kast e P 21 43 20
	40° 0' N, 27° 5' E.								Kast e X 22 20 50
	M = 17h 07m 00s.								26
	(BCIS)								Ist. i Pg Z,E 22 20 50
	41° N, 27° 5' E.								i Sg Z,E 21 00
	M = 17h 07m 00s.								27
	(USCGS)								Ist. e Pg Z,E 05 30 10
	Marmara sea of Turkey.								i Sg Z,E 34
	40° 0' N, 27° 0' E.								27
	M = ( U.T.I. )								Ist. e Pg E 09 00 20
	M = 17h 07m 00s.								i Sg E 40
	( Moscow )								27
									Kast e P 10 53 23
									20
									No record at Z comp. after 19 <sup>00</sup>



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31	Kast i P		15	44	08	.31			Hord - Island.			
						::			New - Zeland.			
31	Outer Mongolia.					::	Kast	ei PKP		21	00	02D/C
	Kast i P		18	31	49	C ::		i X				08
						::		i pPKP				52
31	Tadzhik Republic,					::		h about 200 km.				
	(U.S.S.R)					::						
	Kast ei P		19	58	57	C? ::		Additif :				
	e PP			59	50	::		July 22 nd 1959				
	e PPP		20	00	02	22 ::	Çine	ei PKP		23	21	15
	e PPPP				17	::		e PP			22	40
	e PcP		02	(17)		::		e X		23	20	
	D 3250 km,					::		e X				27
						::		e PPP			24	57
31	Ist. ei P Z,E		19	59	29	::		e PPPP			27	(17)
	e PP Z		20	00	33	::		D = 13200 km.				
	e PPPP E			01	09	::						
	e PcP E			02	15	::						
	e S E		06	(55)		U						
	D about 3700 km.											

A. Sadettin Kesili

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