

ATHENS etc (Network)
Sept. 1965.

NATIONAL OBSERVATORY - SEISMOLOGICAL INSTITUTE
SEISMOLOGICAL STATIONS NETWORK - GREECE
PRELIMINARY BULLETIN

Station	Location	Type of instruments		Mass Kgr	T _b sec.	T _g sec.	$\gamma:1$	V	Drum speed mm/min.
ATHENS (ATH) (Attica)	37°58'20"N 23°43'0"E h=95m Cretaceous Limestone	Benioff	Z	107.5	1	0.25		12,500	60
		"	N-S	107.5	1	0.25		12,500	60
		"	E-W	107.5	1	0.25		12,500	60
		Sprengnether	Z	11.2	15	100		1,500	30
		"	N-S	10.75	15	100		1,500	30
		"	E-W	10.75	15	100		1,500	30
		Wood-Anderson	N-S		0.8		50	2,800	60
		"	E-W		0.8		50	2,800	60
		Hiller	Z	1	0.82	0.25	10	5,000	60
		"	N-S	1	0.82	0.25	10	5,000	60
		"	E-W	1	0.82	0.25	10	5,000	60
		Wiechert	Z	1300	1.5		1.2	115	30.5±0.
		"	N-S	1000	5.6		6.2	116	30.5±0.
		"	E-W	1000	5.6		6.0	120	30.5±0.
		Mainka	N-S	135	3.5		2.0	40	30 - 32
		"	E-W	135	3.5		9.0	52	30 - 32
		Kritikos	N-S	40	2.0		2.8	4	38 - 42
PATRAS (PAT) (North Pe- loponnesus)	38°14'11"N 21°44'148"E h=40m Alluvium	Wiechert	Z	80	2.8		2.9	130	29 - 31
ST. PARASKEVI (STP) (Lesbos Is- land)	39°14'146"N 26°16'18"E h=100m Rhyolite	Spengnether	Z	1.14	0.5	0.5		20,000	60
		"	N-S	1.14	0.5	0.5		20,000	60
		"	E-W	1.14	0.5	0.5		20,000	60
VALSAMATA (VAL) (Cephalonia Island)	38°10'36"N 20°35'24"E h=405m Cretaceous Limestone	"	Z	1.14	0.5	0.5		20,000	60
		"	N-S	1.14	0.5	0.5		20,000	60
		"	E-W	1.14	0.5	0.5		20,000	60

SHOCKS IN THE AREA OF GREECE

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N°	Date	Station	Phase		h	m	s	D	Km	Remarks
1	Sept. 2	STP	ZNE	eiPg	05	29	49.9		85	
			E	iSg		30	04.4			
		ATH	Z	ePn	05	30	18.5		345	
			Z	ei			23.2			
			Z	e			25.7			
			E	e			45.5			
			E	ei			49.6			
			NE	e			53.8			
			NE	ei			58.6			
			NE	eiSy		31	05.1			
		VAL	N	ePn	05	30	49.0		480	
2	4	ATH	Z	eiPg	11	55	13.8D		100	
			NE	eiSg			28.7			
		STP	Z	ePn	11	55	25.8		230	
			Z	ePg			30.3			
			Z	e			34.5			
			N	eSy			56.5			
			E	e(Sg)			58.3			
		VAL	Z	ePn	11	55	39.4		350	
			Z	ePb			42.4			
			N	e		56	10.4			
			N	eSn			22.0			
3	4	STP	Z	ePg	21	20	14.2		110	
			NE	eiSg			30.7			
4	5	STP	Z	ePn	15	03	46.8		370	
			Z	ePb			50.2			
			Z	ePg			58.4			
			E	e		04	08.6			
			Z	e			38.1			
			N	e			40.1			
			E	ei			42.6			
			Z	eiSg			43.5			
			N	ei			44.1			
5	5	ATH	Z	ePn	16	35	23.6		325	
			Z	e			30.1			
			N	e			42.1			
			E	e			46.0			
			N	e			57.1			
			E	eSb		36	04.2			
			N	e			05.9			
			E	e(Sy)			08.3			
		STP	Z	ePn	16	35	39.0		430	
			E	e			39.9			
			E	e			42.0			
			E	e			45.5			
			E	ePy			48.5			
			E	eSb		36	31.8			
6	5	ATH	Z	eiPg	20	26	27.9D		85	
			Z	ei			31.3			
			Z	ei			33.4			
			Z	eiSg			40.6			
			NE	ei			41.7			
			N	ei			45.8			
			E	ei			48.5			
		STP	Z	ePn	20	26	36.2		170	

Note : Magnitudes determined from Standard Wood-Anderson records are marked by Ms.

Magnitudes determined from Macroseismic data are marked by M. M.-

No.	Date	Station	Phase	h	m	s	D	Km	Remarks
7	6	STP	NE ePg			37.5			
			Z e			38.5			
			E e			40.0			
			N e			40.5			
			Z e			41.7			
			E e			44.0			
			E e			56.3			
			Z eiSg			59.0			
			E ei	27		01.0			
			E ei			02.0			
			N e			02.5			
8	6	STP	ZNE eiPg	01	06	50.6	110		H=01:06:23.5.-39:0N 27.5E
			Z ei			53.2			
			Z ei			54.2			
			E eiSg	07		07.0			
			N ei			07.5			
		PAT	Z ePg	23	07	13.2	135		H=23:06:48.5.-39:3N 21.9E Ms < 3.6
			Z eSg			29.5			
			Z e			33.7			
		VAL	Z ePn	23	07	17.8	170		
			Z e			18.2			
			ZN ePg			18.8			
			Z e			20.8			
			Z e			23.2			
9	7	STP	N eiSn			38.8			H=06:34:45.-37:8E 29.2E
			N eiSg			40.3			
			N ei			42.8			
			N i!			45.6			
			N i!			45.6			
		ATH	Z ePn	23	07	23.2	215		H=01:22:26.5.- Probably 36° 1/4 N, 21° E. Ms < 4.0
			Z ePb			24.1			
			Z i			26.2			
			Z ei(Pg)			26.6			
			NE ei			47.3			
10	8	STP	N iSn			48.4			H=06:34:45.-37:8E 29.2E
			ZNE eiPn	06	35	30.7	300		
			N eiSn		36	04.0			
			E ei			05.3			
			NE eiSb			07.9			
		VAL	E ei			09.7			H=01:22:26.5.- Probably 36° 1/4 N, 21° E. Ms < 4.0
			Z ePn	01	23	00.8	215		
			Z eiPy			02.3			
			Z eiPg			04.4			
			Z ei			06.8			
10	8	VAL	Z ei			08.7			H=01:22:26.5.- Probably 36° 1/4 N, 21° E. Ms < 4.0
			N ei			23.8			
			Z eiSn			25.8			
			Z eiSy			29.5			
			Z ei			34.3			
		PAT	Z ePn	01	23	05.5	250		H=01:22:26.5.- Probably 36° 1/4 N, 21° E. Ms < 4.0
			Z eSy			35.2			
			Z eSg			37.3			
		ATH	Z ePn	01	23	10.3	290		H=01:22:26.5.- Probably 36° 1/4 N, 21° E. Ms < 4.0
			Z ei(Py)			15.4			
			Z eiPg			18.4			
			E e			38.6			

N°.	Date	Station	Phase	h	m	s	D	Km	Remarks
11	8	STP	E ei(Sy)			49.2			
			N eiSg			54.5			
			E ei			55.8			
			N ei			57.0			
			N ei	24		00.3			
		ATH	ZNE eiPg	04	26	56.2	130		H=04:26:31.- Epicenter
			ZE ei			56.0			Northwestern Turkey.
			N ei!			57.4			Ms < 4.6 .
			N i!Sg	27		12.4			
			Z ePn	04	27	33.1	430		
			Z e			36.4			
			Z ei			44.9			
			NE ei	28		08.1			
			E ei			13.6			
			E ei			19.3			
12	8	STP	Z ePg	10	41	30.4	140		H=10:41:04.- Epicenter
			ZNE e			31.1			Northwestern Turkey.
			NE eiSg			47.9			
13	9	STP	Z ePg	03	01	00.7	135		H=03:00:35.- Epicenter
			ZNE ei			01.2			Northwestern Turkey.
			E ei			02.2			
			N iSg			17.2			
			E i			17.7			
14	10	STP	Z ePn	13	15	45.5	200		H=13:15:13.-Epicenter
			NE e(Py)			46.0			Northwestern Turkey.
			E e(Pb)			46.8			
			E e			47.8			
			Z ePg			48.4			
			NE eSn	16		09.3			
			NE eSy			11.8			
			NE e(Sg)			13.8			
15	11	PAT	Z ePg	04	49	24.5	100		H=04:49:05.5.- 39°1/4 N, 22° E. Ms = 3.7 . Felt in Phthiotis (V at Leukas IV at Makrakomi) and in Evrytania (IV+ at Phourna, Karpenisi). Area at felt shaking a- bout 5.000 Km ² . M.M=3.8*.
			Z ei			34.6			
			Z eiSg			39.4			
		VAL	ZN ePn	04	49	36.9	190		
			ZN eiPy			38.0			
			Z iPg			39.8			
			N iSn	50		00.0			
		ATH	Z eiPg	04	49	41.2C	195		
			Z i!			45.1			
			N iSn	50		01.7			
		STP	Z ePn	04	50	03.3	385		
			E e			05.8			
			N e			06.7			
			Z e			09.7			
			N e			59.2			
			N e	51		02.8			
			NE eSg			04.8			
16	13	STP	ZE ePg	21	36	14.6	135		H=21:35:49.- Epicenter
			N e			15.1			Northwestern Turkey.
			E eiSg			31.5			
17	14	PAT	Z ePn	08	15	25.6	135		H=08:15:05.5.- 37°3 N , 21°0 E. Ms = 3.8 . Felt on Zante Island
			Z eiPg			27.8			
			Z eSg			44.8			

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Nº.	Date	Station	Phase	h	m	s	D Km	Remarks
15		ATH	Z ei			47.8		(IV at Zante) and in the region of Elis (III at Strophil).
			Z eil			50.0		
			Z il			57.0		
			Z eipn	08	15	45.78	260	Area of felt shaking about 15,000 Km².
			Z il(Py)			46.50		
			Z il			47.2		
			Z il			47.3		
			Z il			47.3		
			N ei(Sn)	13		47.3		
			E isy			21.0		
			E isy			43.5		
		STP	Z ePg	08	16	27.9	505	
			Z ePg			27.1		
18	15	ATH	Z eipg	19	52	14.00	115	
			NE isg			27.8		
			N i			30.6		
		STP	Z ePn	19	52	22.3	135	
			N e			23.4		
			ZE ePg			24.6		
			N e			26.1		
			E ei			28.8		
			E ei			43.8		
			E eiSg			47.3		
			Z e			48.0		
			E ei			49.0		
			E ei			50.8		
19	16	STP	Z ePg	10	31	14.0	150	
			NE e			47.0		
			E eiSg			01.4		
			E ei			03.4		
20	16	STP	ZNE ePg	16	22	26.5	135	
			NE ei!Sg			43.1		
21	16	STP	ZNE ePg	17	50	16.8	145	
			N e			29.8		
			N e			33.3		
			E eiSg			34.8		
			N ei			35.8		
22	17	VAL	Z ePn	22	16	37.9		
		ATH	Z ePn	22	16	49.1		
23	18	VAL	ZN ePn	03	06	50.1	140	
			Z ei			51.8		
			Z e			53.3		
			Z ei			55.2		
			N iSn	07		06.1		
		ATH	Z ePn	03	07	01.0	170	
			NE eiSn			20.1		
			E i			22.2		
24	18	STP	ZE ePg	13	04	42.4	125	
			N e			42.8		
			N eiSg			57.8		
			N ei			59.8		
			E ei	05		00.8		

ATH
 H=08:15:04.-37°5'
 19°5'E. h=33 KM.
 M=4.2 (3300 L.7)
 USCGS
 estimate

H=19:51:52.-39°N
 24 1/4 E. Ms=3.5

H=10:31:15.- Epicenter
 Northwestern Turkey.

H=16:22:01.-Epicenter
 Northwestern Turkey.

H=17:49:49.-Epicenter
 Northwestern Turkey.

H=03:06:26.-Epicenter
 Northern Peloponnesus.
 Ms < 3.4
 Felt in Achaia (II+ at
 Patras).

H=13:04:18.-Epicenter
 Northwestern Turkey.

No.	Date	Station	Phase	h	m	s	D	Km	Remarks
			E ei	05	00	.8			
			N ei			02.8			
25	18	VAL ATH	ZN i(Pg)	21	58	56.9			Felt in Cephalonia
			N ei(Sg)	21	59	18.7			Island (III at Argo- stoli).
26	19	STP	ZE iPg	14	03	56.7	155		H=14:03:27.2.-38°8N, 27°9E. Ms <4.3
			N ei			57.2			
		ATH	Z ePg	14	04	37.9	365		H=14:03:34.- 38°8N, 28°0E. (BCIS).
			Z ei			46.1			H=14:03:34.6.-38°9N, 27°9E: h about 33 Km. M=4.5(USCGS).
			Z ei			52.0			
			N e(Sn)	05	06	.5			
			E e(Sy)			17.0			
			N e			18.4			
			N ei			20.4			
			E eiSg			22.6			
			N ei			25.6			
27	19	STP	ZNE ePg	14	08	26.8	140		H=14:08:00. Aftershock of Sept. 19.
			E ei			43.7			H=14:08:05.- Aftershock of Sept. 19. (BCIS).
			N eiSg			44.1			H=14:10:33. Aftershock of Sept. 19.
28	19	STP	Z ePg	14	10	59.6	140		H=14:10:39.- Aftershock of Sept. 19. (BCIS).
			NE eiSg	11	17	.2			
			Z ei			17.6			
			Z ei			19.7			
29	19	STP	Z ePg	14	15	20.2	140		H=14:14:53.- Aftershock of Sept. 19.
			NE eiSg			37.8			
30	19	STP	ZNE ePg	17	56	18.6	140		H=17:55:52. Aftershock of Sept. 19.
			N eiSg			35.7			H=17:55:58.- Aftershock of Sept. 19. (BCIS).
			E i			36.6			H=21:40:28.- Aftershock of Sept. 19.
31	19	STP	ZE ePg	21	40	55.0	140		H=21:40:34. Aftershock of Sept. 19. (BCIS).
			N e			55.5			
			N iSg	41	11	.2			
			E i			12.4			
32	20	STP	Z ePg	00	57	05.5	140		H=00:56:39.- Aftershock of Sept. 19.
			NE iSg			23.2			
33	20	ATH	Z ePn	02	46	26.4	395		H=02:45:29.- 35°4 N , 26°5 E. Ms <4.4 . Felt on Crete Island ; especially in the region of Lasithi (IV at Zakros). Area of felt shaking about 5.000 Km ² . M. M. =3.7*.
			Z ei(Pb)			30.2			
			Z ei(Py)			34.0			
			Z ei			35.5			
			N ei	47	04	.4			
			E ei			05.7			
			E e			12.2			
			N ei			12.7			
			E eiSb			15.3			
			N ei			18.3			
			E eiSy			21.1			
		STP	Z e?(Pn)	02	46	27.5	405		
			E e			33.0			
			Z e			33.5			
			N e(Py)			35.3			
			E eSn	47	10	.6			

Nº.	Date	Station	Phase	h	m	s	D	Km	Remarks
			N e			21.5			
			E eSy			23.0			
		VAL	Z ePy	02	47	10.5	620		
			N e			12.5			
			N e			52.2			
			N e		48	06.1			
			N eSb			12.0			
34	21	VAL	ZN e(Pn)	06	27	21.0			
		ATH	Z e(Pn)	06	27	25.2			
35	22	VAL	Z e	17	54	45.7			Epicentre in Ionian Sea.
		ATH	Z ePn	17	55	14.5			
		STP	Z ePn	17	55	34.1			
36	22	STP	ZE ePg	18	40	24.3	140		H=18:39:57.7.-38°6N, 27°7E.
			E eiSg			41.3			
37	23	PAT	Z ePg	01	59	28.6	125		H=01:59:05.5.-37°0N, 22°0E. Ms=3.6 Felt in Messenia (V at Kopanaki, IV at Zev- golatio, Kalamae, III+ at Dorion, II+ at Ari- os) and Laconie (IV at Longanikos). Area of felt shaking about 5.000 Km ² . M. M. = 3.8* .
			Z e			32.0			
			Z eSg			43.6			
			Z e			45.0			
		ATH	Z eiPg	01	59	37.7D	180		
			E iSy			59.4			
		VAL	ZN ePn	01	59	38.2	190		
			ZN eiPg			40.9			
			Z ei			43.6			
			N ei			44.4			
			Z ei			44.9			
			Z ei			47.6			
			N ei(Sn)	02	00	02.1			
			N eiSg			05.6			
		STP	E ePb	02	00	15.9	460		
			N e			19.3			
			E e			24.8			
			N eiPg			27.3			
			E ei			29.2			
38	23	VAL	ZN e(Pn)	20	37	17.7			
		ATH	Z e(Pn)	20	37	47.3			
39	24	STP	Z e	13	41	21.8	280		H=13:40:36.- 37°8N, 29°0E.
			Z ePg			26.3			
			N e			26.8			
			E e			28.3			
			E e			59.0			
			N e		42	00.8			
40	24	PAT	Z ePg	14	56	38.9	20		H=16:56:35.0.-38°4N, 21°7E. Ms<3.4 Felt in Achaia (IV at Patras
			Z eSg			42.4			
		VAL	ZN eiPg	14	56	53.2	95		
			N iSg		57	08.5			
		ATH	Z ePg	14	57	06.1	180		
			Z e			07.1			
			Z e			09.1			
						./.			

No.	Date	Station	Phase	h	m	s	D	Km	Remarks
			E ei Z eiSn 25.3 26.1						
41	25	ATH VAL	Z eiPn 10 09 19.00 ZN e(Sg) 10 09 37.0						
	25	ATH	Z eiPg 22 34 57.90 NE iSg 35 13.6				130		H=22:34:33.5.-39:3N, 23:9E.- Ms = 3.7.
		STP	Z ePn 22 35 07.5 ZNE eiPg 11.5 ZN ei 12.6 E e 13.7 Z ei 14.5 Z ei 16.6 NE eiSb 34.4 H eiSy 36.0 E eiSg 38.0 N ei 39.5 E ei 44.6				215		
		VAL	Z e?Pn 22 35 20.7 ZN ePb 23.7 ZN ePg 29.7 N eSn 55.2				305		
43	26	STP	ZN ePn 01 59 08.5 E e 08.9 E e 09.5 Z eiPg 10.0 NE iSb 29.9 E iSg 30.9				170		H=01:58:36.5.-37:8N, 26:8E
44	26	STP	ZNE ePn 12 55 03.5 ZE eiPg 05.1 N ei 05.4 E ei 06.4 N iSn 18.4 E eiSg 20.3 N i 21.3 E i 23.3				125		H=12:54:42.- 38°3/4N, 27° 1/2 E.
45	27	ATH	ZNE eiPg 21 05 29.8CSW Z ei 30.3 Z i!! 32.1 Z i!! 32.4 E iSg 44.5				120		H=21:05:07.0.-39:1 N, 23:9 E. Ms = 3.7.
		STP	Z ePn 21 05 41.0 E e 41.5 ZN ePy 42.7 Z ei 45.0 E ePg 45.5 NE ei 46.0 ZN ei 47.0 N ei 48.0 Z i 49.3 N i 50.8 E i 52.0 N eiSn 06 05.9 N iSg 10.8 E i 12.5				210		

Nº.	Date	Station	Phase	h	m	s	D Km	Remarks
		VAL	ZN ePn	21	05	52.5	300	
			N ePb			55.4		
			N ePy			57.0		
			N e			59.4		
			Z iPg		06	00.4		
			N ei			00.9		
			N ei			23.8		
			N eiSn			25.6		
			Z ei			27.9		
			Z ei			29.2		
			Z eiSb			30.9		
			Z iSg			37.4		
			N ei			37.8		
46	28	VAL	Z e	09	09	23.1		
		ATH	Z ePn	09	10	04		
47	28	VAL	Z e	18	04	25.6		
		ATH	Z e(Pn)	18	04	38.8		
48	30	STP	ZE iPg	19	37	01.8	120	
			N ei			02.3		
			E iSg			16.4		
			N i			17.0		
		ATH	Z e	19	37	40.7	370	
			Z eiPy			43.2		
			Z e			44.8		
			Z e			52.0		
			N eSy		38	26.6		
			E e			29.8		
			E eiSg			32.7		

H=19:37:40.- 38°9N,
27°9E, Ms < 4.3.-

LONG DISTANCE SHOCKS

ATHENS

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Nº.	Date	Station	Phase	h	m	s	D	Remarks
1	Sept. 1	STP VAL	Z eP Z eP	04 04	40 40	23.5 39.9		
2	1	STP ATH VAL	Z eP Z eP Z eP	06 06 06	57 57 57	38.8 43.0 43.3		
3	2	STP ATH	Z eiP Z eP Z e Z ePP E e E e N eS Z ePPS	04 04 42 48 49 51	39 39 42 48 49 51	12.7 19.7 19.8 42.4 46.8 10.0 42.2 05.2	84°5	
		VAL	Z eP	04	39	23.6		
4	4	STP VAL	Z eP Z eiP	10 10	32 32	06.7 28.3		
5	4	STP VAL ATH	Z eiP ZN eiP N eiSKS Z eiP ZNE i E e Z iiPP Z ei Z ei E i!S N e N i!SKS N eiPS Z i	14 14 55 14 48 49 55 56 58	45 45 55 45 48 49 55 56 58	11.8 17.5 39.9 18.1C 18.4CS 27.6 37.0C 48.0 37.4 40.2 44.8 45.2 36.8 49.0	83°5 82°5	
6	8	STP ATH VAL	Z eP Z eP N eS NE eiSKKS Z eP	03 03 03	38 38 49 38	48.5 53.7 15.7 20.7 55.6	85°	
7	9	ATH	Z eiP Z ei Z e N eiSKS E ei N eiPS	10 29	16 19 26 29	11.6D 18.6 44.4 51.8 18.2 24.0	100°5	
8	11	STP ATH	Z eP Z e Z eiPKP Z ei Z ei! Z e E iSKS E i Z i!PS E i	07 07 23 23	11 11 13 14 18 20 23 23	36.7 49.3 53.0D 53.6n 51.2 43.8 52.2 30.8 30.4 31.2	124°	

N°.	Date	Station	Phase	h	m	s	D	Remarks
9	12	VAL STP ATH	Z e Z ePKP Z eiPKP Z e Z iPP E eSKS E eiSKKS E eiPS Z i	07 08 08 09 06 07 10	11 59 59 00 11 32 35	59.5 02.8 06.4D 06.8 41.4 11.4 32.4 35.8 40.4	122°	
		VAL	Z e	09	00	23.6		
10	12	STP ATH	Z eiP Z eiP ZE i! N ei Z ei!PcP Z ei Z eiPPS NE ei	22 22 13 14 21	12 12 33 17 14	48.4 53.6D 54.0DE 54.6 33.6D 17.6 14.0 16.6	65°	
		VAL	Z ei	22	13	08.8		
11	12	STP ATH	Z ePKP Z ePKP	22 22	42 42	10.7 11.1		
12	13	STP VAL ATH	Z eP Z eP Z eP Z e Z ePP E e N eS E e	13 13 13 23 30 34	19 20 20 24 14 26 41	55.5 09.7 11.1 12.3 24.1 14.1 26.1 41.5	85°	
13	13	ATH	Z eP	16	36	28.0		
14	14	ATH	Z eP E eiSKS N eS E eiPS	08 51 53	40 08 49 18	29.0 08.4 49.4 18.0	97°5	
15	17	VAL ATH	Z eP Z eP Z e Z ei Z ei ZE eiPP Z ei E ei E i!SKS	11 11 31 32 37	27 27 26 06 27 41	10.6 20.8 21.6 07.0C 07.8 26.6C 06.6C 27.2 41.8E	99°	
16	17	STP ATH	Z eP Z i!P Z ei Z i!PP Z iPPP NE eiS	16 16 44	33 33 16	46.0 57.6C 57.0 20.1C 25.7D 16.5	85°	

Nº.	Date	Station	Phase	h	m	s	D	Remarks
		VAL	Z eP Z eiPP	16	34 37	06.5 43.0	85°5	
17	18	ATH	Z eiP E e N e	20 21	59 09	07.2D 19.8 20.6		
18	18	ATH	Z eP Z e	22	18 27	10.2 09.0		
19	19	ATH	Z eP Z ei	01	46 50	41.2 55.2D		
20	19	ATH	Z e(P)	02	42	30.0		
21	21	STP	Z eP Z ei	01	50 51	21.2 11.2		
		ATH	Z i!P E ei N ei Z iPP NE eiS E i N ei E ei N ei N i	01 02	50 53 58 00 01 02	33.3D 34.1E 34.7N 48.7 06.7 33.3 05.7 38.3 56.7 47.3	57°	
		VAL	Z eiP	01	50	43.9		
22	21	VAL	Z eP	03	35	53.9	53°	
		ATH	Z eP	03	36	11.6	55°	
		STP	Z eP	03	36	15.8	55°	H=03:26:37.2 .- North Atlantic Ocean 40°7N, 50°0W ; h about 23 Km. M = 5.3 (USCGS).
23	21	ATH	Z e	15	58	15		
24	22	ATH	Z eP E ei	04	47 49	29.2 10.6W		
25	22	ATH	Z eP	20	22	18.7		
26	22	STP	Z eP Z e	22	20	27.8 41.2		
		ATH	Z iP Z i!PP NE eiSKS E eiSS	22	20 24 30 37	38.1D 02.1D 58.1 05.1	87°5	
		VAL	Z eP	22	20	47.5		
27	24	ATH	Z e(P)	04	37	12.0		
28	25	ATH	Z ei(P)	00	18	25.1D		
29	25	ATH	Z e	11	13	45		

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No.	Date	Station	Phase	h	m	s	D	Remarks
		ATH	Z eP	14	49	42.1	84°	
			Z e		52	05.2		
			Z e		54	00.1		
			NE eSKS	15	00	09.9		
			E e		05	28.3		
		VAL	Z eP	14	49	55.2		
		ATH	Z eP	20	18	23.7	42°5	H=20:10:06.6.- North Atlantic Ocean 54°1 N, 35°2W. h about 33 Km. M = 4.8 (USCGS).
			ZE e		20	27.7		
			Z e			31.7		
32	26	ATH	Z eP	10	11	15.4	42°5	H=10:03:18.4.- North Atlantic Ocean 54°3 N, 35°2W; h about 33 Km. M = 4.8 (USCGS).
			E eS		17	43.4		
			E e			45.4		
33	26	ATH	Z eP	21	48	08.9		
			ZNE ei		52	30.5C		
			NE e		58	45.5		
			N e	22	02	18.1		
			E e			27.5		
34	27	ATH	Z eP	01	21	30.1	64°	H=01:10:59.- Eastern Siberia 67°5N, 140°1E; h about 33 Km. M=4.6 (USCGS).
35	27	STP	Z eP	05	21	43.0		
		ATH	Z eP	05	21	55.2		
36	28	ATH	Z ePKP1	05	26	35.1	157°5	H=05:06:36.8.-Kermadec Islands 28°0 S, 178°1W; h about 33 Km. M = 5.2 (USCGS).
			Z e		28	13.2		
			Z e		38	17.1		
			Z e		44	25.7		
		STP	Z ePKP1	05	27	09.4		
37	29	ATH	ZN eP	21	21	14.5		
			N e			18.2		
			Z e			46.0		
			E e			49.0		
			E e		26	40.0		
38	29	ATH	Z eiP	23	27	43.0	39°	H=23:20:19.0.- North Atlantic Ridge. 45°1 N, 28°2 W. h about 33 Km. M = 5.4 (USCGS).
			Z ePP		29	11.0		
			N eS		33	41.0		
			E e			44.6		
		STP	Z eP	23	27	54.2	40°	
39	30	ATH	Z eP	08	27	41.1		

The Director
of the Seismological Institute

Prof. A. Galanopoulos

The Assistant
P. Korninakis.

ATHENS
 & Associated Stns. } Oct 65.

NATIONAL OBSERVATORY - SEISMOLOGICAL INSTITUTE
 SEISMOLOGICAL STATIONS NETWORK - GREECE
 PRELIMINARY BULLETIN

Station	Location	Type of instruments		Mass Kgr	T ₀ sec.	T _g sec.	r:l	V	Drum speed mm/min.
ATHENS (ATH) (Attica)	37°58'20"N	Benioff	Z	107.5	1	0.25		12,500	60
	23°43'0E	"	N-S	107.5	1	0.25		12,500	60
	h=95m	"	E-W	107.5	1	0.25		12,500	60
	Cretaceous	Sprengnether	Z	11.2	15	100		1,500	30
	Limestone	"	N-S	10.75	15	100		1,500	30
		"	E-W	10.75	15	100		1,500	30
		Wood-Anderson	N-S		0.8		50	2,800	60
		"	E-W		0.8		50	2,800	60
		Hiller	Z	1	0.82	0.25	10	5,000	60
		"	N-S	1	0.82	0.25	10	5,000	60
		"	E-W	1	0.82	0.25	10	5,000	60
		Wiechert	Z	1300	1.5		1.7	124	30.5±0.5
		"	N-S	1000	5.4		8.0	128	30.5±0.5
		"	E-W	1000	5.5		9.0	154	30.5±0.5
		Mainka	N-S	135	3.5		2.7	62	30 - 32
		"	E-W	135	3.5		3.6	79	30 - 32
		Kritikos	N-S	40	2.0		2.2	3	38 - 42
PATRAS (PAT) (Northern Peloponnese)	38°14'11"N 21°44'48"E h=40m Alluvium	Wiechert	Z	80	2.8		2.9	129	29 - 31
ST. PARASKEVI (STP) (Lesbos Island)	39°14'46"N 26°16'18"E h=100 m Rhyolite	Sprengnether	Z	1.14	0.5	0.5		20,000	60
		"	N-S	1.14	0.5	0.5		20,000	60
		"	E-W	1.14	0.5	0.5		20,000	60
VALSAMATA (VAL) (Cephalonia Island)	38°10'36"N 20°35'24"E h=405m Cretaceous Limestone	Sprengnether	Z	1.14	0.5	0.5		20,000	60
		"	N-S	1.14	0.5	0.5		20,000	60
		"	E-W	1.14	0.5	0.5		20,000	60
VAMOS (VAM) (Crete Island)	35°24'26"N 24°11'59"E h=225 m Marly Limestone	Sprengnether	Z	1.14	0.5	0.5		20,000	60
		"	N-S	1.14	0.5	0.5		20,000	60
		"	E-W	1.14	0.5	0.5		20,000	60

SHOCKS IN THE AREA OF GREECE

ATHENS

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N ^o .	Date	Station	Phase	h	m	s	D	Km	Remarks
1	Oct. 2	STP	Z e Z ePg E ei NE eiSg	01	41	39.0 40.7 57.5 58.3	145		H=01:41:13.5.-39°1 N, 27°9 E.
2	2	STP	ZNE eiPg NE iSg	19	17 18	52.9 10.4	145		H=19:17:36.-39°N, 28° E. -H=19:17:35.- 39°0 N, 28° 1/4 E. (BCIS).
3	4	STP	Z ePn NE eiSy N eiSg N ei E ei N ei	01	50 51	56.1 26.9 29.1 37.1 38.6 39.1	230		H=01:50:19.5.-38°3 N, 28°8 E. H=01:50:12.-37° 3/4 N, 29° E. (BCIS).
4	4	STP ATH	ZNE iPg Z e?(Pn) Z e N ePb Z eiPy Z ei N eiPg E ei Z ei N ei E ei E ei E ei!Sn E ei! NE ei N iSy E i E i N iSg	12	55 55	04.3 42.5 45.0 45.5 47.0 49.7 51.0 52.4 53.4 55.2 56 10.2 15.5 17.5 20.0 23.9 25.5 26.1 28.5 29.1	45 310		H=12:54:55.5.-39°6 N, 26°5 E. M _L = 4.1 Felt on Lesbos Island (IV at Petra, III+ at Ippios). Area of felt shaking about 5,000 Km ² . M. M. = 3.7 *.
		VAM	Z e?(Pn) Z e N e N e N eiPy N ePg E ei N ei E ei E ei E ei N eiSn E eiSb N ei E eiSy E ei E ei N eiSg N ei	12	56 57	05.6 07.4 13.7 15.1 17.6 24.7 29.1 30.6 34.6 44.0 54.1 57.0 06.1 13.6 14.6 18.8 23.1 26.0 29.6	500		
5	6	ATH	Z ePg Z e	19	05	50.4 52.6	180		Felt in Magnesia (IV+ at Volos, Drakia).

Note : Magnitudes determined from Standard Wood-Anderson records are marked by M_L.
Magnitudes determined from Macroscopic data are marked by M. M.-

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Nº.	Date	Station	Phase	h	m	s	D	Km	Remarks
6	6	ATH	E	ei	06	07.5	290	H=22:26:25.-38°N, 20°1/2E. M_L < 4.0 Felt on Cephalonia Is- land (IV+ at Lixouri, IV at Valsamata).	
			N	eSn		10.7			
			E	eiSb		11.1			
			N	ei		12.5			
			E	eiSg		12.9			
			N	ei		15.6			
			Z	ePn	23	27			06.1
			Z	ePb					10.1
			Z	e					17.2
			Z	e					18.5
			Z	ei					21.1
			N	ei					34.3
			E	ei!					35.2
			N	ei					47.6
			E	eiSg					48.6
		VAM	Z	ePn	23	27	27.4		435
			E	eSn		28	13.1		
			E	e			14.9		
			E	e			42.7		
7	7	ATH	Z	ePg	05	01	05.9	140	H=05:00:39.-37°9 N, 22°1E. M_L = 3.3 Felt in Achaia (IV+ at Kalavryta).
			Z	ei!			06.7		
			Z	ei			07.8		
			Z	ei!			09.3		
			N	e			22.2		
			NE	i!Sg			23.2		
			N	i!			23.8		
		VAM	Z	ePg	05	01	38.1	330	
			E	eSb		02	09.5		
			N	e			11.7		
			E	ei			12.5		
			N	ei			13.0		
			E	eiSg			17.8		
8	9	STP	Z	eiPg	22	46	53.9	145	H=22:46:26.- Probably 38° 3/4 N, 27° 3/4 E.
			E	eiSg		47	12.0		
9	10	VAM	ZNE	ePn	14	49	53.1	120	H=14:49:31.5.- 34°9 N, 22°9 E. M_L < 4.3
			ZN	ei			54.2		
			ZNE	i!Pg			54.6		
			E	i		50	08.4		
			N	i!Sg			09.7		
			Z	i!			11.0		
		VAL	Z	ePn	14	50	27.6	400	
			ATH	Z	ePg	14	50		
		E		e			59.6		
		N		eiSn		51	04.6		
		E		e			14.7		
		N		eiSy			15.3		
		N		ei			19.1		
		N		ei			30.5		
10	10	VAM		ZNE	e	19	17	53.5	125
			ZNE	eiPg			53.9		
			Z	i		18	08.9		
			N	iSg			09.2		
			Z	i!			12.0		

H=22:26:25.-38°N, 20°1/2E.
M_L < 4.0
Felt on Cephalonia Is-
land (IV+ at Lixouri, IV
at Valsamata).

H=05:00:39.-37°9 N, 22°1E.
M_L = 3.3
Felt in Achaia (IV+ at
Kalavryta).

H=22:46:26.- Probably
38° 3/4 N, 27° 3/4 E.

H=14:49:31.5.- 34°9 N,
22°9 E. M_L < 4.3

H=19:17:29.0.-35°N,
25° 1/2 E. M_L < 4.3
Felt on Crete Island;
especially in Lasithi
(II+ at Kato-Chorio).

Nº.	Date	Station	Phase	h	m	s	D	Km	Remarks
		ATH	Z ePg	19	18	36.1	370		H=19:17.7 About 35°0 N, 26° 1/2 E. (BCIS).
			Z e			44.3			
			Z e			50.7			
			E eiSb	19		09.4			
			E ei			10.8			
			NE ei			22.4			
			E ei			31.0			
			NE ei			41.9			
11	12	VAM	ZN ePn	18	34	20.5	280		H=18:33:37.5.-34° 1/4 N, 27° E. M _L 4.8.
			E e			21.0			
			ZN eiPb			22.3			H=18:33:44.- 34° N, 26°0E. (BCIS).
			N ei			23.4			H=18:33:45.-34°4 N, 26°3E; h about 33 Km.
			E eiPy			24.0			M=4.3 (USCGS).
			ZNE ei			25.0			
			Z iPg			27.6			
			E i			29.2			
			E i			46.0			
			N i			48.1			
			E i			49.8			
			E i!Sn			51.9			
			N i!			53.6			
			E i!Sb			55.5			
			N i!			55.8			
			N i!			57.6			
			E i!Sy			58.5			
			E i!Sg	35		02.3			
			E i!			03.0			
		ATH	Z eiPn	18	34	50.8C	520		
			N e			51.1			
			ZE ei!			52.1			
			Z e			53.7			
			E eiPb			57.4			
			Z ei			58.2			
			ZE eiPy	35		02.8			
			ZN eiPg			05.6			
			E ei(Sn)			46.0			
			N eiSg			58.1			
		STP	Z ePn	18	34	54.8	550		
			E e			55.7			
			N e			56.3			
			Z e			57.1			
			NE e	35		02.7			
			Z e			04.6			
			ZN e			07.2			
			E ei			10.5			
			N ei			12.2			
			Z e			12.7			
			E ei			41.3			
			N e			55.6			
			E e			56.8			
			E ei			59.7			
			E e(Sb)	36		02.7			
			NE e			12.1			
		VAL	Z ePn	18	35	14.5	710		
			E e	36		22.2			
12	13	VAM	Z ePn	17	38	09.8	200		H=17:37:23.- Probably 36° 3/4 N, 25° 3/4 E.
			N e			31.3			
			E eiSg			37.5			
			N ei			38.4			
			E ei			42.0			
			N ei			42.4			

Nº.	Date	Station	Phase	h	m	s	D	Km	Remarks
		STP	E ei			43.9			
			N ei			44.4			
			E ei			45.9			
		STP	Z ePn	17	38	12.2	290		
			ZNE e			13.8			
			E e(Pb)			15.0			
		STP	Z e			15.5			
			ZN e			17.0			
			E ePg			20.0			
		STP	E e			39.5			
			E eSn			44.3			
			E e			46.9			
		STP	N eSy			51.3			
			NE ei			53.4			
			E ei			54.0			
		STP	N ei			54.6			
			E eiSg			55.0			
			N ei	39		01.0			
13	14	VAM	ZN ePn	00	39	55.6	240		
			E ei			56.3			
			N eiPb			56.9			
		VAM	NE ei(Py)			58.6			
			E ei(Pg)	40		01.2			
			E eiSn			22.8			
		VAM	N ei			24.0			
			E ei			24.7			
			E eiSb			25.4			
		VAM	E ei			27.2			
			N eiSy			27.8			
			NE ei			28.3			
		STP	ZN ePn	00	40	01.7	290		
			ZE ePb			03.8			
			ZN ePy			06.3			
		STP	E e			07.2			
			N e			07.9			
			Z e			08.1			
		STP	N eiPg			09.4			
			Z e			10.2			
			E eSn			33.6			
		STP	N e			35.2			
			E e			36.4			
			NE eSb			37.9			
		STP	NE ei			39.9			
			E ei			43.6			
			N eiSg			44.9			
		STP	E ei			46.7			
14	16	VAM	ZNE iPg	10	45	58.1	80		
		ATH	Z ePn	10	46	37.0	370		
			Z e(Pg)			49.6			
			N e	47		17.0			
		ATH	E ei			19.5			
			N ei(Sb)			22.1			
			E eiSy			27.5			
		ATH	N eiSg			33.9			
		VAL	Z ePn	10	46	54.7	510		
			E e	47		41.8			
			ZE ei			43.7			
		VAL	Z eiSn			46.2			
		STP	ZNE ePn	10	47	57.4	530		

H=00:39:17.5.- Probably
36° 17'2" N, 26° 1'2" E.

H=10:45:42.5.- 34°7' N,
24.4 E.

N°.	Date	Station	Phase	h	m	s	D	Km	Remarks
15	16	STP	ZNE ePn	15	46	02.6	255		H=15:45:23.5.-Probably 40° N, 29° E.
			Z e			07.4			
			Z e			10.2			
			N eiSn			31.3			
			E eiSy			37.3			
			E ei			38.9			
			N ei			39.3			
			N eiSg			41.3			
			NE ei			42.8			
16	17	VAM	ZE ePn	07	54	29.4	250		H=07:53:50.- 36°4 N, 26°5 E.
			N e			30.1			
			NE eiSb		55	00.5			
			E eiSy			02.7			
			E eiSg			05.5			
		ATH	Z ePn	07	54	34.3	285		
			Z ePb			36.8			
			Z e			39.4			
			Z eiPg			41.8			
			N eiSn		55	05.8			
			E ei			06.8			
			E ei			08.8			
			N eiSb			09.8			
			N ei			11.3			
			NE ei			11.6			
		STP	ZN ePb	07	54	39.6	335		
			N ePy			43.1			
			Z ePg			45.6			
			E e		55	07.6			
			N eiSn			12.6			
			N ei			17.1			
			E eiSb			17.7			
			E eiSy			22.3			
			E ei			25.6			
17	17	ATH	Z ePn	09	53	12.7	160		H=09:52:44.5.-39° 1/2 N, 22° 1/2 E.
			N eiSg			35.6			
		VAL	Z ePn	09	53	24.5	260		
			ZE e			25.5			
			Z ei			25.9			
		STP	Z ePn	09	53	35.6	345		
			N e			59.9			
18	18	STP	ZNE i!Pg	14	33	09.1	130		H=14:32:44.0.-39°0 N, 27°8 E. M _L =4.6
		ATH	Z ePn	14	33	48.3C	360		H=14:32:45.- 39°0 N, 28°0 E. (BCIS).
			ZNE ei			52.6DW			H=14:32:45.- 38°8 N, 27°7 E; h about 33 Km. M = 4.6 (USCGS).
			Z ei			55.0C			
			N e			55.8			
			Z ei			58.0C			
			Z eiPy			58.5D			
			N ei		34	09.7			
			N ei			25.0			
			N ei!			30.1			
			E e			31.0			
			E ei			33.6			
			N i			34.3			
			N i			35.7			
			NE iSn			36.2			
			NE i			37.5			
			E i			40.2			
			E i			41.6			
			N i			42.0			

Nº.	Date	Station	Phase	h	m	s	D	Km	Remarks
19	19	VAM	Z	ePn	14	33	56.3	510	
			NE	e			57.4		
			N	ei		34	04.8		
			E	e			06.0		
			E	ei			07.0		
			E	eiPy			08.8		
			N	ei			09.6		
			NE	ei			13.1		
			N	eiPg			14.3		
			E	ei			38.5		
			N	ei			38.9		
			E	ei			43.0		
			N	ei			46.0		
			E	ei			50.2		
			N	ei			50.8		
			E	ei			53.5		
			N	ei			54.6		
			NE	ei			57.2		
			E	eiSb			59.0		
			N	ei		35	00.2		
		N	ei			11.0			
		E	ei			11.5			
		E	eiSg			17.3			
		N	ei			18.5			
		ATH	ZE	e	17	08	50.0C	120	
			ZNE	eiPg			51.0CSE		
			ZN	i!			51.9D		
			N	ei		09	04.3		
E	iSg				04.9				
E	i				05.2				
VAL	Z		ePn	17	09	00.9	190		
	E		ePb			01.4			
	E		ePg			03.4			
	Z		e			03.7			
	ZE	ei			05.3				
	E	ei			20.5				
	E	eiSn			23.9				
	E	eiSb			25.4				
	E	eiSy			26.4				
	E	eiSg			27.9				
E	ei			30.9					
VAM	ZE	ePn	17	09	24.4	365			
	N	e			25.3				
	N	ePb			28.1				
	Z	ePy			31.3				
	NE	e			31.8				
	N	e			34.8				
	N	e			38.1				
	Z	ePg			44.8				
	N	eSn		10	03.8				
	E	e			05.8				
	NE	eiSb			08.8				
	N	ei			10.4				
	E	e			11.3				
	N	eSy			14.3				
	N	eiSg			20.3				
STP	Z	ePn	17	09	27.4	390			
	N	ePb			32.5				
	E	ePg			40.8				
	N	e		10	01.1				
	N	e			05.0				
	E	e			07.4				
	E	eSn			09.5				
./.									

Nº.	Date	Station	Phase	h	m	s	D	Km	Remarks
20	19	VAL ATH	N e			10.4			H=18:53:47.5.- About 38° N, 20° 1/2 E. M_L < 4.0. Felt on Cephalonia Island (IV at Lixouri, Valsamata).
			E e			13.9			
			ZE iPg	18	53	49.7	10		
			Z ePn	18	54	30.4C	295		
			Z e(Py)			33.9D			
			E e			34.7			
			NE ei			36.0W			
			Z eiPg			38.0			
			N e			39.9			
			E eSn		55	02.9			
			E eSb			07.0			
			E ei			08.4			
			N ei			09.4			
			E ei			11.5			
			N ei			11.9			
			N ei			12.9			
			E eiSg			14.0			
			NE ei			14.9			
			N i			16.9			
			E ei			18.4			
21	19	VAM	Z ePn	18	54	47.9	420		
			E eSn		55	31.9			
			E e			34.6			
			N e			35.2			
			E ei			36.1			
			N e			39.5			
			E eiSb			39.9			
			E eiSy			45.9			
		STP	Z ePn	18	55	01.3	525		
			Z ePn	22	04	20.3	210		H=22:03:46.3.-39°7 N, 19°1 E M < 4.6.
			E e(Pb)			20.7			
			Z eiPy			21.8			
			Z ei			24.9			
			ZE eiSn			44.8			
			E eiSb			46.2			
			Z ei			48.9			
			E eiSg			49.3			
			Z ePn	22	04	47.9	435		
			Z ePb			52.4			
			Z e			55.9			
			Z e		05	02.4			
			Z ei			03.9			
			E ei			25.2			
			E ei			28.2			
			E ei			30.9			
			NE eiSn			33.4			
			NE ei			34.4			
			E eiSb			41.9			
			E ei			44.2			
			N ei			44.6			
			N eiSy			47.1			
			N ei			51.9			
			N ei			53.1			
			E ei!Sg			56.4			
		STP	Z ePn	22	05	12.5	620		
		VAM	Z ePn	22	05	15.3	650		
			E eSn		06	20.9			
			N e			24.6			
			E ei			30.3			

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Nº.	Date	Station	Phase	h	m	s	D Km	Remarks
22	20	STP	ZNE iPg 03 15 39.7 Z i!!Sg 50.2				85	H=03:15:23.5.-Probably 39°9 N, 25°5 E.
		ATH	Z ePn 03 16 04.2 Z e 14.0 E e 29.7 N eiSb 37.5				265	
23	21	ATH	Z ePg 18 29 14.6C E iSg 22.1				60	H=18:29:03.- Probably 38° 1/4 N, 24° E.M<2.8.
		STP	NE e 18 29 41.6 Z e 42.6 N ePg 43.1 N eSn 30 05.3 NE eiSb 07.0 E e (Sy) 09.8				225	
24	21	ATH	Z ePg 22 59 54.6D NE iSg 23 00 10.1 N i 11.0				125	Felt in Phthiotis (IV at Tithorea) and Boe- otia (IV at Davlia).
25	23	VAL	ZE eiPg 04 13 39.7 E iSg 45.9				50	H=04:13:30.5.- About 37° 3/4 N, 20° 3/4 E. M _L < 3.8.
		ATH	Z eiPb 04 14 12.0C E eiPy 13.3W Z i(Pg) 14.9C Z i 17.2D NE ei(Sb) 41.1 NE ei 43.1 N ei 44.0 E i! 46.8 N i!Sg 47.4				255	Felt on Zante Island (III at Zante).
26	23	ATH	Z ePn 19 33 18.6D ZE eiPb 20.2D Z e(Py) 21.7 Z ePg 24.2D Z e 25.7 N ei 43.5 N eiSn 46.2 NE ei(Sb) 49.3 NE eiSy 50.7 E eiSg 53.2				240	H=19:32:40.5 .-40°2 N, 23°3E. M _L < 3.7 . Felt in Salónica (IV+ at Gerakarou, IV at Va- silika). Area of felt shaking about 5,000 Km ² . M. M. = 3.7* .
		STP	Z e(Pn) 19 33 21.2 ZE ei(Py) 26.2 N e 27.0 E ei 27.7 Z eiPg 28.7 N ei 29.7 N ei 31.5 N ei 32.2 E ei 50.2 E eiSb 55.4 NE ei 34 00.5 E eiSg 02.4 N ei 03.3 E i 04.6 E i 05.7 E ei 06.4				275	

Nº.	Date	Station	Phase	h	m	s	D Km	Remarks	
27	24	VAL	Z ePn	19	33	29.3	325	H=05:54:46.5.- 37°8 N, 20°9 E.	
			Z e			30.6			
			E e			33.8			
			Z eiPy			35.1			
			Z ei	34		07.7			
			ZE eiSb			09.3			
		VAL	Z ePg	05	54	54.2	40		
			ZE i			54.9			
			E i!	55		00.2			
		ATH	ZNE	eiPn	05	55	26.5D		250
eiPb					27.6				
ei!Py					29.2				
ei					30.2				
ei!Pg					31.8D				
ei!					35.5				
eiSn					54.7				
ei					56.2				
ei					58.2				
ei					58.7				
i(Sy)					59.4				
ei	56				01.2				
i!Sg					02.2				
VAM	ZE			ePn	05	55	45.0	400	
		e			45.9				
		e			48.4				
		e			50.0				
		e			53.7				
		e	56		21.5				
		ei			28.7				
		ei			29.8				
		eSy			30.8				
		eiSg			36.3				
		ei			38.3				
		ei			40.5				
		ei			42.3				
		ei			45.5				
ei			50.0						
28	24	VAL	ZE ei!Pg	16	41	18.7	55	H=16:41:10.-37°6 N, 20°9 E. M=4.2. H=16:41:05.-37° 1/2 N, 20° 1/2 E (BCIS). H=16:41:11.4- 37°9 N , 20°6 E; h about 33 Km. M = 4.2 (USCGS).	
			E i!Sg			25.7			
		ATH	ZNE	ei!Pn	16	41	50.2C		260
				ei!			51.0		
				ei!			52.6D		
				eiPy			53.5C		
				ei!			55.0C		
				iPg			56.2C		
				i	42		13.0		
				ei!			14.3		
ei!					15.0				
ei					16.9				
ei					18.0				
i					18.5				
iSn					19.5				
i					21.0				
iSb			22.5						
i			26.5						
i!Sg			27.7						
VAM	ZNE	ePn	16	42	06.9	385			
		NE ei			09.4				
		E e(Pb)			11.6				
		E e			16.6				
./.									

Nº.	Date	Station	Phase	h	m	s	D Km	Remarks
29	24	VAL	N ei			38.2		
			E ei			44.5		
			N eiSn			47.7		
			E ei			49.0		
			E ei			50.5		
			E ei			56.5		
			E ei	43		08.5		
			N ei			09.7		
			N ei			14.5		
			Z ePn	22	21	42.0	215	
			Z eiPb			43.5		
			Z ei(Pg)			44.2		
			E eiSb	22		08.5		
			ZE iSg			12.0		
			E ei			19.0		
30	26	ATH	Z ePn	22	22	08.2	420	
			Z ePb			12.3		
			Z ei			15.1		
			N ei			44.1		
			E ei			44.6		
			N ei			45.6		
			E ei			47.0		
			E ei			49.7		
			E eiSn			52.1		
			E ei			54.1		
		VAM	N eSn	22	23	37.0	620	
			Z e			40.5		
		VAL	Z ePg	00	51	23.6	100	
			Z e			24.6		
			Z i			25.3		
			Z i			26.1		
			E iSg			36.1		
31	28	ATH	Z e(Py)	00	51	46.8	260	
			Z e			49.0		
			Z e(Pg)			50.6		
			ZNE eiSn	52		12.8		
			E ei			14.3		
			N ei			14.8		
			E ei			15.1		
			N eiSb			15.8		
			E e			16.4		
			N ei			17.3		
			E ei			17.7		
			E eiSy			18.3		
			N eiSg			21.8		
		VAM	Z ePn	00	52	05.8	440	
		ATH	Z eiPn	04	27	32.2D	135	
			Z i!!			35.1		
			E i			45.7		
			E i!!Sn			47.9		
		VAL	E ePn	04	27	35.6	150	
			E ei			37.0		
			E i			39.2		
			E i			41.0		
			E iSn			52.8		
		VAM	ZE eiPn	04	27	01.3	340	
			N e			01.8		

H=22:21:07.5.-39°9N,
19°7E. M. = 4.5.
H=22:21:18.-40° 1/4 N
21° 1/4 E. (BCIS) .

H=00:51:04.- 38°6 N,
21°0 E.

H=04:27:10.5.-38°4 N,
22°5 E. M. = 4.1.
Felt in Corinthia (V
at Derveni, IV+ at Ne-
mea), Fokis (V at It-
ea, IV+ at St.-Euthy-
mia, IV at Kastellia),
Boeotia (IV+ at Davli-
a), Aetolia (IV at Pa-
laeochoraki). Area of
felt shaking about
15,000 Km². M.M.=4.4*.
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No.	Date	Station	Phase	h	m	s	D	Km	Remarks
			Z ei			02.2			H=04:27:13.- 38°3 N,
			NE ei			02.7			22°4 E. (BCIS).
			E ei			05.0			H=04:27:10.6.-38°4 N,
			N ei			05.7			22°3 E; h about 15 Km.
			E ei(Pb)			06.2			M=4.5 (USCGS).
			Z ei			06.5			
			N ei(Py)			06.8			
			Z ei			08.7			
			E ei			10.2			
			E ei			14.4			
			N i			31.2			
			N i			35.2			
			N i			36.7			
			N iSn			37.9			
			N i			38.7			
			E i			39.2			
			N i			41.2			
			E i			41.7			
			N iSb			43.2			
			E i			44.2			
			E i			45.9			
			E i			50.9			
		STP	ZN ePn 04	28		01.6		340	
			E e			02.7			
			Z eiPb			04.3			
			N ei			06.2			
			Z eiPy			07.6			
			N ei			08.3			
			E eiPg			11.7			
			ZN ei			12.2			
			Z ei			13.9			
			NE ei			14.2			
			N ei			17.5			
			E eiSn			38.3			
			N ei			41.7			
			E eiSb			42.3			
			E eiSy			47.4			
			E ei			55.3			
			E ei		29	00.6			
32	28	VAL	Z ePn 14	40		23.8		300	H=14:39:38.- 40°9 N,
			E e			24.5			20°0 E. M _L 4.6.
			Z eiPb			26.5			H=14:39:30.- 41°8 N,
			E ei			29.9			19°6 E. (BCIS).
			Z ei	41		05.1			H=14:39:25.- 41°7 N,
			E eiSg			08.4			19°2 E; h about 14 Km.
			Z ei			08.9			M = 4.5 (USCGS).
		ATH	Z ePn 14	40		44.3D		460	
			Z ei			47.3D			
			Z eiPb			49.6D			
			Z ei			52.2C			
			Z eiPy			53.7D			
			E ei(Sn)	41		33.2			
			N ei			40.9			
			E eSb			41.4			
			N ei			42.2			
			E ei			43.7			
			NE ei			46.0			
			E eiSy			47.7			
			NE ei			51.3			
			NE eiSg			55.7			
			E ei			58.2			
			NE ei	42		03.7			

Nº.	Date	Station	Phase	h	m	s	D	Km	Remarks		
33	30	STP	ZNE ePn	14	40	56.4	560				
		VAM	Z	ePn	14	41	15.2	710			
			NE	e			17.6				
			Z	e			19.3				
			Z	e			20.4				
			N	e			22.3				
			E	ePb			24.7				
			N	e			32.3				
			E	ei			32.7				
			E	e(Sn)	42		37.2				
			N	e			40.9				
			E	eSb			42.5				
			E	ei			46.7				
			N	e			47.2				
			E	ei			48.7				
34	30	ATH	Z	e	03	46	40.2C	110	H=03:46:20.- 39°N. 23°5 E. M _L < 3.1 .		
		ZN	i!Pg			40.7CS					
			E	e			41.1				
			N	i			41.6S				
			ZE	ei			42.5				
			Z	i			42.9				
			E	ei!Sg			54.0				
			N	ei			54.6				
			N	i			55.3				
			N	i			55.9				
			E	i!			57.0				
			STP	Z	ePn	03	46	56.7	230		
			VAM	Z	e(Pn)	03	47	18.9	400		
		35	31	ATH	Z	eiPn	04	47	34.5D	145	H=04:47:10.-39°1 N, 23°0 E. M _L < 3.3 .
				ZN	ei			35.6D			
	E			e			36.1				
	Z			ei			36.7				
	N			eiPg			37.6				
	E			ei			39.6				
	E			ei			40.7				
	N			ei			44.7				
	N			eiSn			51.2				
	E			i			53.6				
	NE			iSg			54.8				
	N			ei			56.8				
	E			i			59.0				
	N			ei!	48		00.8				
36	31				N	ei!			02.8		
			N	i			05.6				
		STP	E	eSg	04	48	33.8	275			
			N	ei			34.5				
		VAM	Z	ePn	04	48	11.6	425			
		ATH	Z	ePn	06	27	42.8				
		VAM	Z	ePn	06	27	51.1				
		ATH	ZNE iPn	09	58	01.1DNW	145	H=09:57:37.- 38°2 N, 22°2 E.			
		E	i			01.7					
			Z	i			02.5C				
			Z	iPg			04.0				
							./.				

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Nº.	Date	Station	Phase	h	m	s	Km	D	Remarks
			Z	i		35.5			
			Z	i		03.0			
			ME	iSn		17.1			
			EE	i!		20.6			
			E	iISg		21.5			
		VAM	Z	ePn	09	58	27.5	335	
		STP	Z	ePn	09	58	30.2	360	

LONG DISTANCE SHOCKS

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Nº.	Date	Station	Phase	h	m	s	D	Remarks
1	Oct. 1	STP	Z eP	09	04	52.2	87°5	H=08:52:05.8.- Rat Islands, Aleutian Is-
		ATH	Z i!P	09	05	00.0D	89°	lands 50°1 N, 178°3 E;
			Z i!PP		08	35.2D		h about 32 Km. M=6.3
			Z i!PPP		10	30.3D		(USCGS).
			NE iSKS		15	32.8		
			N iPPS		16	54.2		
			E i			58.4		
2	1	STP	Z e?(PKP)	13	40	09.7		
		ATH	Z ePKP	13	41	11.2	130°	
			Z ei			14.4		
			Z e			15.4		
			Z e			21.6		
			Z e	44		18.0		
			Z eSKS	47		42.2		
3	1	ATH	Z eP	22	48	38.5	105°	H=22:34:25.5.-South
			Z e		52	38.5		Sandwich Islands; region
			Z e(PP)			54.7		60°7 S, 24°9 W; h about
			E ePS	23	02	12.7		33 Km. M=6.0 (USCGS).
			N e			18.1		
4	3	ATH	Z eP	05	24	27.2	81°5	H=05:12:22.5.-Atlantic- Indian Rise. 38°2 S,
						29.8		48°4 E; h about 20 Km. M=5.5 (USCGS).
5	3	STP	Z..eiP	14	57	41.2	81°5	H=14:45:26.8.- Kurile Islands 49°5 N, 156°5 E; h about 33 Km. M=5.9 (USCGS) ..
		ATH	Z eP	14	57	51.3	83°	
			Z i			51.7		
			Z eiPP	15	01	06.3		
			Z eiS		08	07.1		
6	3	ATH	Z eiPP	16	35	17.1D	121°	H=16:14:54.9.- Off coast of Southern Chile 42°9 S, 75°4 W; h about 28 Km. M = 6.0 (USCGS).
			E e		42	28.7		
			Z ei		44	57.7		
			N eiPS		45	02.7		
			E ei			03.8		
			E ei			16.5		
7	7	STP	Z eP	03	48	14.0	81°	H=03:35:59.6.- Shouth China sea 12°6 N, 114°5 E; h about 17 Km. M=4.6 (USCGS).
		ATH	Z eiP	03	48	24.8C		
			Z eiPS		59	45.4	83°5	
		VAM	ZNE eP	03	48	27.6	84°	
8	8	VAM	Z ePKP ₁	22	20	22.4	159°	H=21:59:45.7.-South of Fiji Islands 25°7 S,
		VAL	Z ePKP ₁	22	20	25.5	159°	176°5 W; h about 33 Km. M=5.6 (USCGS).
9	12	VAL	Z eP	13	53	38.4	86°	H=13:40:55.9.- Kodiak Island region 56°3 N,
		ATH	Z eiP	13	53	39.6	86°	153°7 W; h about 11 Km. M = 5.3 (USCGS).
			Z e		57	12.0		

N°	Date	Station	Phase	h	m	s	D	Remarks
			N e	14	04	02.0		
			E ei			12.0		
			N ei		05	32.0		
		VAM	Z eP	13	53	51.5	89°	
10	13	STP	Z ePKP ₁	15	06	02.2	144°5	H=14:46:25.0.- Loyalty Islands region 22°6 S, 171°0 E; h about 24 Km. M = 5.6 (USCGS).
		ATH	Z ePKP ₁	15	06	10.3	145°	
		VAM	Z ePKP ₁	15	06	14.3	145°5	
11	16	VAL	Z eP	20	14	05.6	81°	H=20:01:52.5.- Komandorsky Islands region 56°2 N, 164°7 E; h about 33 km. M=5.3 (USCGS).
		VAM	Z eP	20	14	27.8	85°	
12	17	STP	Z eP	02	12	37.5	117°	H=01:53:42.7.- Solomon Islands 8°0 S, 155°9E; h about 93 Km. M.=5.5 (USCGS).
		VAM	Z eP	02	12	43.0	117°5	
		VAL	Z eP	02	12	45.6	118°	
13	18	ATH	E eP	22	09	25.9		
			E e			33.9		
			E e		11	20.9		
			E ei		14	24.3		
			E ei			35.1		
			E e		16	09.9		
			E ei			32.1		
14	19	STP	Z eiP	21	01	17.6	85°	H=20:48:47.4.-Aleutian Islands 52°3 N, 174°3E; h about 48 Km. M=5.6 (USCGS).
		ATH	Z ei!P	21	01	28.3C	86°	
			Z ei		04	51.6C		
			Z e		06	39.7		
			N ei		11	48.3		
			E ePS			59.5		
			N ei		12	07.5		
			E ei			21.9		
			E ei		13	15.7		
			E ei			16.1		
		VAM	Z e	21	01	40.5	89°5	
15	21	ATH	Z e(P)	00	12	30.1		
			E ei		18	29.5		
			Z ei		20	59.1		
16	24	STP	Z iP	18	27	18.3	80°5	H=18:15:04.9.-Kurile Islands 49°7 N, 156°1 E; h about 30 Km. M=5.7 (USCGS).
		ATH	Z ei!P	18	27	28.3C	83°	
			Z ei			28.9		
			N ei		28	58.1		
		VAL	Z iP	18	27	34.1	84°5	
		VAM	Z eP	18	27	34.7	84°5	
17	24	VAM	Z e(P)	18	57	14.3		
		VAL	Z e(P)	18	58	10.6		
			Z ei			22.5		
18	24	STP	Z ei(P)	21	28	36.4		

Nº.	Date	Station	Phase	h	m	s	D	Remarks
19	25	STP	Z eP	22	46	17.4	78°5	H=22:34:24.3.-Hokkaido, Japan region 44°2 N, 145°3 E; h about 180 Km. M=6.2 (USCGS).
			N ei(S)		56	18.4		
		ATH	Z eiP	22	46	28.8D	80°	
			E e		52	41.9		
			E eS		56	27.7		
			N ei			32.0		
		VAL	Z eiP	22	46	35.4	81°	
			E eS		56	42.8		
		VAM	Z eP	22	46	38.8	81°	
			N eS		56	44.6		
20	26	ATH	Z iPKP	10	41	20.0D	143°	H=10:21:46.1.-Loyalty Islands 20°1 S, 168°8 E; h about 37 Km. M=5.2 (USCGS).
			Z i			26.4		
		VAM	Z ePKP	10	41	23.4	143°	
		VAL	Z ePKP	10	41	28.3	141°	
21	29	VAM	Z e?(P)	16	04	14.0		
			Z e			15.1		
		VAL	Z e?(P)	16	04	38.0		
22	29	STP	Z eP	21	12	41.7	86°5	Nuclear Explosion. H=21:00:00.1.-Rat Islands, Aleutian Is- lands 51° 26' 17"N, 179° 10' 57"E; h=0 Km. M=6.1 (USCGS).
		VAL	Z eiP	21	12	51.8	88°5	
		VAM	Z eP	21	13	02.0	91°	
23	30	STP	Z e(PKP)	07	16	39.4		
24	31	STP	Z eiP	17	36	32.9	83°5	H=17:24:06.4.- South Indian Ocean 14.2 S, 95°2 E; h about 33 Km. M = 5.4 (USCGS).
		ATH	Z eP	17	36	44.0	85°	
			Z e		38	42.0		
			NE eiS		47	02.4		
			E ei		53	03.0		
		VAL	Z eP	17	36	50.0	86°5	

The Director
of the Seismological Institute

Prof. A. Galanopoulos

The Assistant
P. Comninakis

ATHENS
Nov. 65

NATIONAL OBSERVATORY - SEISMOLOGICAL INSTITUTE
SEISMOLOGICAL STATIONS NETWORK - GREECE
PRELIMINARY BULLETIN

Station	Location	Type of instruments		Mass Kgr	T ₀ sec.	T _g sec.	$\gamma:1$	V	Drummm speed
ATHENS (ATH) (Attica)	37°58'20"N 23°43'0"E h=95 m Cretaceous Limestone	Benioff	Z	107.5	1	0.25		12,500	60
		"	N-S	107.5	1	0.25		12,500	60
		"	E-W	107.5	1	0.25		12,500	60
		Sprengnether	Z	11.2	15	100		1,500	30
		"	N-S	10.75	15	100		1,500	30
		"	E-W	10.75	15	100		1,500	30
		Wood-Anderson	N-S		0.8		50	2,800	60
		"	E-W		0.8		50	2,800	60
		Hiller	Z	1	0.82	0.25	10	5,000	60
		"	N-S	1	0.82	0.25	10	5,000	60
		"	E-W	1	0.82	0.25	10	5,000	60
		Wiechert	Z	1300	1.5		1.2	130	30.5±0.5
		"	N-S	1000	5.4		8.0	129	30.5±0.5
		"	E-W	1000	5.5		6.8	140	30.5±0.5
		Mainka	N-S	135	3.5		2.5	44	30 - 32
		"	E-W	135	3.5		4.4	80	30 - 32
		Kritikos	N-S	40	2.0		3.7	4	38 - 42
ST. PARASKEVI (PRK) (Lesbos Island)	39°14'46"N 26°16'18"E h=100 m Rhyolite	Sprengnether	Z	1.14	0.5	0.5		20,000	60
		"	N-S	1.14	0.5	0.5		20,000	60
		"	E-W	1.14	0.5	0.5		20,000	60
VALSAMATA (VLS) (Cephalonia Island)	38°10'36"N 20°35'24"E h=405 m Cretaceous Limestone	Sprengnether	Z	1.14	0.5	0.5		20,000	60
		"	N-S	1.14	0.5	0.5		20,000	60
		"	E-W	1.14	0.5	0.5		20,000	60
VAMOS (VAM) (Crete Island)	35°24'26"N 24°11'59"E h=225 m Marly Limestone	Sprengnether	Z	1.14	0.5	0.5		20,000	60
		"	N-S	1.14	0.5	0.5		20,000	60
		"	E-W	1.14	0.5	0.5		20,000	60
RHODES (RHD) (Rhodes Island)	36°26'14"N 28°13'25"E h=45 m Alluvium	Sprengnether	Z	1.14	0.5	0.5		10,000	60
		"	N-S	1.14	0.5	0.5		5,000	60
		"	E-W	1.14	0.5	0.5		5,000	60
PATRAS (PAT) (Northern Pe- loponnesus)	38°14'11"N 21°44'48"E h=40 m. Alluvium	Wiechert	Z	80.	2.8		3.1	133	29-31

SHOCKS IN THE AREA OF GREECE

ATHENS

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N°.	Date	Station	Phase	h	m	s	D	Km	Remarks
1	2	PRK	ZNEi!Pg	03	27	24.8	85		H=03:27:08.5.- 39°25' N, 25°30' E. M _L =5.2
		ATH	SPZi!Pn HZ i! HZ i!Pg HZ i!! HNEi!	03	27	40.3C 42.9 44.2 53.9 11.6	195		H=03:27:12.- 39°3' N, 25°5' E (B.C. I.S.). H=03:27:07.2.- 39°6' N, 25°2' E; h=11 Km M=4.6 (USCGS). Felt on the Islands of St. Eustratios (IV+ at St. Eustratios), Lesbos (IV at Methymna, Skalochoi, Kalloni, Stypsi, and Kapi), Lemnos (IV at Myrina) Skyros (IV at Skyros) and in the region of Attica (III+ at Cholargos). Area of felt shaking about 120,000 Km ² . M, M. = 5.7
		PAT	Z ePn Z ePy Z eSg	03	27	56.8 02.5 46.4	325		
		VLS	ZE eiPn Z eiPb Z eiPg Z eiSn	03	28	09.6 14.9 24.0 59.5	420		
		VAM	Z ePn ZE e Z ei Z ei N ei ZN ei E ei E ei N ei!Sb E i E iSg	03	28	11.7 13.3 15.5 26.0 26.5 29.3 37.4 05.0 07.5 16.4 20.5	440		
2	2	PRK	Z ePn NE eiSg	13	10	32.1 11 32.4	395		H=13:09:35.- 40°5' N, 30°6' E (BCIS).
3	4	VLS	ZE iPg ZE iSg	10	29	51.2 55.0	30		H=10:29:45.0 37°8' N, 20°5' E. M _L ≤ 4.0
		ATH	SPZ ePn SPE i SPNE i!!Sy SPN iSg SPE i SPE i!	10	30	28.6 05.9 07.6 11.0 15.1 18.6	290		
		VAM	Z e N eSn E eiSg	10	30	56.5 31 30. 51.5	420		
		PRK	Z e?Pb E eSn	10	31	01.7 57.8	540		
4	4	VLS	ZeP22P Ze iPg EeiSg	10	40	25.1 25.9 39.4	115		H=10:40:00, 37° 1/4 N, 19° 3/4 E.
		ATH	ZePn	10	40	55.0	350		
		VAM	ZePn	10	41	04.5	420		

Note : Magnitudes determined from Standard Wood-Anderson records are marked by M_L
 Magnitudes determined from Macroseismic data are marked by M. M.-

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Nº.	Date	Station	Phase	h	m	s	D	Km	Remarks
5	4	VLS	Z ePg Z eiSg	16	32	29.5 38.6	50		Felt on the Island of Ithaka (IV at Ithaka).
6	4	PRK	Z ePn N eiSn	17	04	40.9 57.5	440		
7	5	ATH	Z eiPg N i!Sg	23	01	19.60 26.4	55		H=23:01:09 37° 3/4 N, 23° 1/4 E. M _L = 3.3 .
		VLS	Z ePn Z e Z ePy 7 e iSb	23	01	52.2 53.7 56.0 27.0	275		
		VAM	Z eiPn Z eiPy N eiSy E ei	23	01 02	53.8 58.7 33.7 36.2	300		
		PRK	Z e?(Pb) Z e N eSb E e(Sg)	23	02	01.2 06.7 44.1 46.9	(320)		
8	5	VAM	Z eiPn Z iPg Z ei! E ei E eiSn	23	14 15	56.2 58.1 00.7 17.2 18.3	200		H=23:14:26.0.- 36° 2 N , 22° 1 E. M _L < 3.8
		ATH	SPZ eiPn SPZ eiPb SPZ iPg SPN i SPN iSn SPE i SPN iSb SPNE ei!Sg	23	15	06.4 08.6 12.2 31.8 36.7 37.4 38.8 44.6	260		
		VLS	Z ePn Z ePb Z ei(Pg) E eiSg E ei	23	15	07.2 08.6 13.9 38.3 44.5	260		
		PRK	Z ePn	23	15	36.4	500		
9	7	VAM	Z ePn E i!Sn	05	25 26	58.0 16.8	160		H=05:25:31 34° 3/4 N, 25° 3/4 E. Felt on Crete Island especially in the region of Lasithi (IV+ at Anato- li, IV at Kato-Chorion).
		ATH	SPZ ePn SPE eiSn SPE eiSb SPN eiSy SPE ei SPN ei	05	26 27	32.1 15.4 20.9 26.1 29.6 30.9	425		
		PRK	Z ePn	05	26	42.1	505		
10	8	VAM	Z ePn Z ei Z eiPy N ei E iSg	19	13 14	23.6 29.2 31.6 07.6 14.2	300		H=19:12:37.- 36° N, 27° E. M _L < 4 .

Nº.	Date	Station	Phase	h	m	s	D Km	Remarks		
11	8	PRK	Z ePn	19	13	26.5	410			
			Z eiPy			35.3				
			N ei	14		12.5				
			NE iSb			16.7				
			E i			18.6				
		ATH	SPZEeiPg	19	13	40.6CW	350			
			SPZ ei			42.6C				
			SPE eiSb	14		12.0				
			SPN ei			13.0				
			SPN ei			15.9				
			SPE ei			19.0				
			SPN i!			20.6				
			SPE i			21.7				
		SPN i!Sg			22.4					
VAM	Z ePn	23	03	11.7	300	H=23:02:27.- Probably 35° 1/4N, 27° 1/2.E.				
	Z eiPy			15.8						
	Z i			21.0						
	E ei			48.7						
	E iSg			54.7						
PRK	Z ePn	23	03	31.5	450					
	ZE eiSy			32.7						
	N ei			36.2						
12	9	VAM	Z iPn	23	29	21.5	160	H=23:28:55.5.- 36°5 N, 23°2 E . M _L <3.1 .		
			E i!Sn			39.3				
			E i!Sg			44.4				
		ATH	SPZ ePn	23	29	24.3	170			
			SPZ ei			26.3				
			SPZ i			28.7				
			SPN i			40.8				
			SPNE iSn			43.3				
			SPN i!			45.9				
		SPE i!			46.8					
		VLS	Z ePn	23	29	37.3	290			
			Z e			41.4				
			N eiSn	30	08.9					
		PRK	Z ePn	23	29	54.2	405			
			N eSn	30	36.3					
		13	10	ATH	SPZ iPg	20	25	21.8C	70	H=20:25:08.4.- 38° 1/2 N, 23° 1/4 E. M _L = 3.1 .
SPZ i						23.1				
SPZ i						26.1				
SPZ iSg						30.4				
SPN i						31.8				
SPE i!!						33.3				
PRK	Z ePn			20	25	49.3	260			
	Z e(Ig)					53.2				
	N ei			26		25.5				
	E eiSg					26.4				
VAM	E eSg			20	26	47.7	330			
14	11			VAM	Z ePn	18	57	59.1	350	Souther coast of Turkey.
					Z ePb		58	01.9		
					Z e			11.1		
		N eiSn				36.4				
		N eiSb				42.6				

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Nº.	Date	Station	Phase	h	m	s	D Km	Remarks
			E eiSg N ei			45.8 47.1		
	11	PRK	Z ePn N eSn	18	58 59	15.4 19.3	480	
15	11	VAM	Z ePn Z eiPb Z iPg N i N i!	21	49 50	50.7 52.7 55.1 15.5 19.1	315	Southern coast of Turkey.
	11	PRK	E eSg	21	51	23.4	470	
16	16	VAM	Z ePn Z iPg NE i!Sg N i	18	45 46	54.0 56.2 12.3 16.3	135	H=18:45:31 34° 3/4 N, 25° 1/2 E.
		ATH	SPZ e?(Pn)	18	46	32.4	425	
		PRK	Z ePn N e N eSn	18	46 47	35.7 13.4 21.1	445	
		VLS	Z ePn	18	46	54.2	600	
17	17	VAM	Z e?(Pn) Z eiPy Z eiPg N eiSn E eiSg	19	49 50	44.8 45.9 47.9 08.9 11.9	200	H=19:49:12 Probably in the south of Crete Island.
		ATH	SPZ e?(Pn)	19	50	11.0	405	
18	20	VAM	Z ePn Z ei(Pg) Z ei N iSg E i	03	40 41	41.9 43.7 47.5 00.3 02.8	130	H=03:40:20 Probably in the south of Crete Island.
		PRK	Z ePn	03	41	23.0	475	
19	20	VAM	Z ePn E eiSg N ei	05	15	21.3 39.5 40.3	130	Felt on Rhodes Island (IV+ at Malon)
20	20	PAT	Z ePn Z eiSg	19	58	33.2 58.0	180	H=19:58:03.0.- 39° 80' N, 22° 25' E. M _L 4.0 Felt in Larisa (V at A- mouri), Grevena (IV+ at Deskati). Area of felt shaking about 5,000 Km ² . M. M = 3.8 *
		VLS	Z ePn Z i E iSg	19	58 59	39.7 41.2D 12.7	230	
		ATH	SPZ iPn SPZ i SPZ i SPE i SPN i SPE i SPN i!	19	58 59	40.7D 48.6 52.7 18.8 19.6 21.6 25.1	240	
		PRK	Z ePn Z i	19	58	55.0 56.6	350	

Nº.	Date	Station	Phase	h	m	s	D	Km	Remarks
21	22	VAM	Z ei		59	0.01			
			E ei			08.0			
			N ei			19.5			
			N eiSn			33.5			
			N eiSg			40.5			
		VAM	Z ePn	19	59	15.8	520		
			N ei			45.3			
			E eSn	20	00	11.8			
			E ei			27.8			
			N eiSg			43.3			
		RHD	Z ePn	05	24	03.7	140		H=05:23:36.6, -37°25' N, 27°00' E. M _L = 4.2
		PRK	Z iPg	05	24	12.1	230		H=05:23:42.5 -37°2' N, 27°0' E. (BCIS).
			Z i			14.3			H=05:23:41.-
			Z eiPy			15.8			37°4' N, 27°1' E;
			Z i			17.9			h = 33 Km. (USCGS).
			Z iSy			42.8			Felt on Kalymnos Is-
			NE i!Sg			45.2			land (IV+ at Kalymnos).
		ATH	SPZ iPn	05	24	22.1D	300		
			SPZ iPg			30.3C			
			SPZ i			33.5			
			SPZ i!Sy		25	03.0			
			SPN i!			03.6			
			SPN i!			09.3			
		VAM	Z ePn	05	24	25.4	330		
			Z ei			28.0			
			Z ei			32.8			
			Z ei			37.0			
			N eiSn		25	02.2			
			N eiSy			07.4			
			E ei			09.5			
			N iSg			16.7			
		VLS	Z ePn	05	24	59.0	600		
			Z ePy		25	14.7			
			Z ePg			24.0			
22	24	RHD	Z e?(Pn)	23	35	32.5	160		Southwestern Turkey.
			NE e			53.1			
		PRK	ZN eiPn	23	35	36.5	180		
			ZN ei			37.5			
			Z ei			41.5			
			N eSn			58.9			
			NE eiSg		36	01.4			
			N i			02.5			
23	26	VLS	Z ePg	03	30	19.8			Felt in Aetolia (IV+ at Palaeochoraki)
24	26	ATH	LPZNE eiPn	09	04	13.2	110		H=09:03:51.2, -39°0' N, 24°2' E. M _L = 4.4
			SPZNE i!			13.3	CSW		H=09:03:52.-
			HZ eiPg			14.0			39°0' N, 24°1/2' E (BCIS).
			LPZ i			17.0			H=09:03:56, -38°8' N, 24°6' E.
			LPNE iSg			27.4			h=33 Km. M=3.8 (USCGS).
			LPE i!			31.0			Felt on Skyros Island (IV at Skyros).

N°	Date	Station	Phase	h	m	s	D Km	Remarks
25	26	PRK	Z	. / .				
			N	iPn	09	04	21.4	140
			E	i			25.6	
		VLS		eiSg			44.6	
			Z	eiPn	09	04	40.8C	320
			Z	eiPb			43.1C	
			Z	ei!Pg			49.3C	
			Z	eiSn		05	14.8	
			N	ei(Sy)			24.8	
			E	eiSg			28.3	
		VAM	Z	ePn	09	04	49.1	400
			Z	eiPb			53.0	
			Z	ei			55.9	
			Z	eiPg		05	02.9	
			N	eiSn			31.6	
			E	eiSy			43.8	
			N	ei!Sg			49.9	
			E	ei!			51.3	
		VAM	Z	eiPn	13	13	54.5	200
			Z	eiPg			57.6	
			E	eiSy		14	21.1	
			N	eiSg			22.1	
		ATH	SPZ	ePn	13	14	09.5	320
			SPE	ei			48.2	
		VLS	Z	ePn	13	14	11.7	340
			Z	ei			28.2	
			Z	ei			38.3	
			Z	eiSn			48.4	
	26	VAM	Z	eiPn	16	33	21.5	190
			Z	ei			23.3	
			Z	ei			25.5	
			Z	ei			28.1	
			NE	ei			41.8	
			E	ei!Sg			47.1	
		ATH	SPZ	eiPn	16	33	22.0C	190
			SPE	i			44.0	
		VLS	Z	e(Pn)	16	33	40.9	340
			Z	ei			45.8	
			Z	ei		34	08.9	
27	26	PRK	Z	ePn	16	35	50.4	315
			N	eiSg		36	37.3	South of Turkey
28	27	PRK	Z	eiPn	02	34	56.3	315
			N	ei!Sg		35	22.8	South of Turkey
29	27	ATH	SPZ	ePn	04	56	55.1	120
			SPE	iSn		57	09.1	
		PRK	Z	ePn	04	57	03.5	180
			Z	eiPy			04.5	
			Z	ei			09.2	
			N	ei			17.3	
			E	eiSg			28.1	

H=13:13:21.8.- 35°4 N,
22°1 E.

H=16:32:50

South of Turkey

South of Turkey

H=04:56:33. Probably
39° N, 24° 1/4 E. M_L 3.1

N°	Date	Station	Phase	h	m	s	D Km	Remarks	
30	27	ATH	SPZ eiPn	08	06	31.7C	145	H=08:06:06.0.- 39°2 N, 24°0 E. M _L = 3.7	
			SPZ i!			32.3			
			SPN i!			45.2			
			SPN i!			46.5			
		PRK	Z eiPn	08	06	38.7	200		
			Z eiPg			40.4			
			Z ei!			46.6			
			N eiSn	07		02.2			
			E eiSb			03.8			
			N ei!Sy			05.1			
			NE ei!Sg			06.5			
		VAM	Z eiPn	08	07	06.5	420		
			Z ei(Pg)			22.6			
			E eiSy	08		02.9			
31	27	RHD	ZNE eiPg	11	03	11.3	120	H=11:02:47.8.- 35°9 N, 29°4 E. M _L = 4.8	
			ZNE ei			12.0			
			E ei			13.8			
			N i			27.1			
		PRK	ZNE eiPn	11	03	57.4	460		
			Z ei			59.0			
			ZN eiPy	04		04.1			
			E eiSn			43.5			
			N i			57.6			
			N iSg	05		08.1			
		VAM	ZN eiPn	11	03	55.0	480		
			ZNE ei			56.1			
			Z iP ₆	04		00.5			
			N i			39.5			
			N i			44.5			
			E iSn			45.5			
		ATH	SPZ iPn	11	04	06.6	560		
			SPZ i			09.2			
			SPZ i			17.3			
			SPNE i	05		00.4			
			SPE i			07.5			
			SPN i			08.8			
			SPN i			13.0			
			SPN i			15.5			
		VLS	Z eiPn	11	04	39.2C	820		
			Z e	05		00.9			
			E eSn	06		06.2			
32	27	VLS	Z ePn	13	53	57.0	550	H=13:52:40.- about 43° 1/2 N, 18° 3/4 E. (BCIS). H=13:52:38.8.- 43°3 N, 18°5 E ; h 29 Km. M=3.7 (USCGS).	
			N e	54		56.5			
			Z ei			57.0			
		VAM	Z ePn	13	54	45.5	930		
			N e	56		25.0			
			NE ei			37.2			
33	28	RHD	ZNE iP	05	26	21.5	55	H=05:26:02.0.-35°9 N, 27°9 E. M _L = 5.4	
		PRK	ZNE i!!P	05	26	56.6	395	H=05:26:05.0.- 36°1 N, 27°7 E; h about 90 Km. M=6.2 (Pruhonice), 5.6 (Ksara), BCIS 5 1/4 - 5 1/2 (Strasbourg) (B.C.I.S). H=05:26:05.6.- 36°1 N, 27°7 E. h=89 Km. M=5.9 (CGS); 5 1/4 - 5 1/2 (PAL) (USCGS). ./.	
		ATH	SPZNE iP	05	27	0.07DSE	430		
			LPZNE i!			0.09			
			LPZN i!			02.3			
			LPN i			13.7			
			LPNE iS			34.1			
			LPN i!			38.5			
			LPN i!			46.1			
						./.			

No.	Date	Station	Phase	h	m	s	D	Km	Remarks
		PAT	Z eiP	05	27	21.40		610	Felt on the Islands of Rhodes (VI at Kapadia, V at Rhodes), Tilos (V at Livadia), Karpalthos (IV at Olympos), Kasos (IV at Kasos), Kos (II+ at Kardamaeni), Symi (III+ at Symi) and Crete; particularly in Lasithi (VI at Limnae, Phourni, III at St. Nikolaos), and Heraklion (III at Heraklion). It was reported from Cyprus Island (III+ at Lemesos). Area of felt shaking about 635,000 Km ² . M. M. = 6.8* .- Area of felt shaking about H=16:18:10.1. M. M. = 6.8* .-
			Z eiS		28	26.4			
		VLS	Z eP	05	27	31.8		720	
			Z ei!			34.4			
			Z ei			59.8			
			N ei		28	15.8			
			N ei!			26.0			
			N ei!			34.9			
			E ei!			36.3			
			E ei!			39.8			
33	28	PRK	ZNE ei!Pg	16	18	18.8		40	
			NE iSg			23.4			
34	28	PRK	Z eiPn	20	57	42.2		250	
			Z ei			49.4			
			NE eiSg		58	18.72		250	
35	29	VLS	Z ePn	02	15	13.6		240	H=02:14:36. M _L < 3.4 .
			Z eiPb			15.4D			
			Z ei			21.6		240	H=02:14:36. M _L < 3.4 .
			E eiSn			41.44D			
			N eiSy			45.8			H=14:34:07.9.- 39.4 N, 22.0E. Felt on Karditsa (IV at Anavra, II+ at Kedros)
		ATH	SPZ iPn	02	15	18.4		280	
			SPE ei			39.1			
36	29	VLS	Z eiPn	14	34	37.5		190	
			Z ei			39.3			
			N eiSg		35	03.3		190	
		ATH	SPZ ePn	14	34	41.3		205	
			SPZ ei			46.2			
			SPE ei		35	03.7		205	
			SPE i(Sn)			06.4			
			SHE iSg			09.4			H=04:00:09.
		PRK	Z ePn	14	35	04.2		375	
			E eiSn			46.0			H=10:54:36.5.- 37.7 N, 22.0E. M _L < 3.8 .
37	30	PRK	Z ePn	04	00	33.5		120	
			Z ei			34.9			
			NE eiSg			49.4		120	H=10:54:36.5.- 37.7 N, 22.0E. M _L < 3.8 .
38	30	PAT	Z ePg	10	54	48.0		60	
			Z e			55.7			
			Z eSg			57.3		60	
		VLS	Z eiPn	10	54	59.2		130	
			Z ei		55	01.0			
			N eiSg			14.3		130	
			E ei			15.0			
			N ei			17.6			
		ATH	SPZ eiPn	10	55	02.0		150	
			SPE eiSn			17.5			

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N°.	Date	Station	Phase	h	m	s	D Km	Remarks
39	30	VAM	Z ePy	10	55	29.2	315	H=13:12:38.- South-west of Turkey.
			Z ei			31.3		
			E eSb		56	03.6		
			N ei			09.9		
		PRK	Z ePn	13	13	07.2	170	
			Z eiPg			08.7		
			E eiSn			38.4		
			N iSg			38.9		
40	30	PAT	Z ePg	20	50	22.7	60	H=20:50:11.2.- 37° 3/4 N, 22° 1/4 E. M _L 3.3
			Z ei			28.3		
			Z ei			33.1		
		VLS	Z eiPn	20	50	36.2	150	
			Z ei			40.6		
			N eiSn			57.3		
			E iSg			57.9		
		ATH	SPZ eiPn	20	50	37.8C	160	
			SPE ei			55.1D		
			SPN i!Sn			55.8		
		PRK	Z e(Pn)	20	51	08.4	390	

LONG DISTANCE SHOCKS

ATHENS

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Nº	Date	Station	Phase	h	m	s	D	Remarks
1	1	PRK	Z ePKP	18	22	01.3	155°	H=18:03:09.6.- South of Fiji Islands. 24°1 S, 178°9 E; h about 546 Km. M = 5.6 (USCGS).
	1	VAM	Z ePKP	18	22	12.7	156°	
	1	VLS	Z e?	18	22	33.2		
2	3	VAM	Z eP	01	51	45.2	101°	H=01:39:02.5.- Peru-Brazil Border re- gion 9°1 S, 71°4 W; h about 583 Km. M=6.2 (USCGS).
	3	ATH	SPZE eiP	01	51	45.4DW	101°	
			LPZE ei!			45.6		
			LPZ ei		53	53.4		
			SPZ ei			53.4		
			SPE iSKS02	01		25.1		
			LPNE i!			25.8		
			LPE i!		02	24.6		
			LPZ ei!		04	05.4		
	3	PRK	Z e	01	56	32.5		
			Z e	02	07	58.0		
3	3	ATH	LPZ ePP	08	07	03.0	42°	H=07:57:34.9.-North Atlantic Ocean 58°4 N, 32°2 W; h about 33 Km. M=4.8 (USCGS).
4	3	ATH	LPZ ePKP	18	40	35.2	142°	H=18:21:05.0.- Eastern Island region 22°3 S, 114°1 W; h about 12 Km. M=5.8 (USCGS).
5	4	ATH	LPZ e(R)	07		42.2		
6	5	ATH	LPZ e(R)	11		35.1		
7	5	ATH	LPZ e(R)	28		50.0		
8	7	PRK	Z eiPKP	21	47	12.0		
			N e		53	09.3		
	7	ATH	SPZ eiPKP	21	47	17.2		
	7	VAM	Z eiPKP	21	47	20.3		
	7	VLS	Z e?(PKP)	21	47	23.8		
9	8	PRK	Z eP	02	03	12.0	28°	H=01:57:25.0.- Southern Iran 27°9 N, 57°0 E; h about 38 Km. M=5.1 (USCGS).
	8	VAM	Z eP	02	03	22.0	29°0	
	8	ATH	Z eSS	02	09	08.2	30°0	
	8	VLS	Z eiP	02	03	47.5	31°5	
10	9	ATH	LPZ e(R)	12		32.2		
11	9	ATH	LPZ e(R)	15		42.1		
12	10	ATH	LPZ e(R)	10		14.5		
13	11	ATH	LPZ e(R)	03		08.1		

Nº.	Date	Station	Phase	h	m	s	D	Remarks
14	12	ATH	LPZ e(R)	18	15.5			
15	12	ATH	LPZ e(R)	00	48.5			
16	12	ATH	LPZ e(R)	03	03.2			
17	12	PRK	Z eiP	18	05	08.1	86°	H=17:52:24.1.- South of Honshu, Japan 30°5' N, 140°2' E; h about 40 Km. M=6.6 (USCGS).
	12	ATH	Z ei			15.2	88°5	
			LPZ iP	18	05	21.6C		
			LPZ iPP		08	41.2		
			LPN ei		16	12.4		
			LPN eiPPS		17	12.2		
	12	VAM	Z eP	18	05	25.8	90°5	
18	13	PRK	Z iP	04	42	08.1C	44°5	H=04:33:53.0.-Northern Sinkiang Prov., China 43°8' N, 87°8' E; h about 53 Km. M=6.3 (USCGS).
			Z i			48.0		
	13	ATH	SPZNE iP	04	42	25.2CSW	46°5	
			LPZE i!!			26.1CW		
			LPN i			26.5S		
			LPZ i!PP	44		17.1		
			LPZNE i!!S	49		20.9		
			LPZ i!			33.1		
	13	VAM	Z eiP	04	42	32.0	47°	
	13	PAT	Z eiP	04	42	37.1	47°5	
	13	VLS	Z eiP	04	42	39.4	48°	
19	13	ATH	LPZ e(R)	18	53.1			
20	14	ATH	LPZ e(R)	04	03.1			
21	14	VAM	Z eP	06	06	57.0	80°	H=05:54:16.7.- Near east coast of Honshu, Japan 36°8' N, 140°8' E; h about 67 Km. M=5.9 (USCGS).
	14	ATH	LPZ e(R)	06	55	34.2		
22	14	ATH	LPZ e(R)	17	32.4			
23	15	VLS	Z eP	11	28	03.5	52°5	H=11:18:49.9.-Central Mid-Atlantic Ridge 0.3°S, 18°7' W; h about 24 Km. M=5.6 (USCGS).
	15	VAM	Z eP	11	28	10.4	53°	
	15	ATH	LPZNE i!	11	28	18.0CNE	54°5	
			LPZ i		31	26.2		
			LPNE i!S			56.0		
		PRK	Z eiP	11	28	35.2	57°	
24	16	VLS	Z eiP	15	33	45.0	50°5	H=15:24:42.9.- North Atlantic Ridge 31°0' N, 41°5' W; h about 17 Km. M = 6 (USCGS).
	16	ATH	SPZ eP	15	34	03.1	53°	
			LPZ ei			03.2D		
			LPZ iPP		35	47.4D		
			LPNE eiS		41	38.0		
			LPZ i			42.4		
	16	VAM	Z eP	15	34	09.9	53°5	
	16	PRK	Z eiP	15	34	16.6	54°5	

Nº.	Date	Station	Phase	h	m	s	D	Remarks
25	16	VAM	Z eP	17	18	01.7		
	16	VLS	Z eiP	17	18	06.8		
26	18	PRK	Z eiPKP Z i!	20	19	23.1C 35.0D	154°	H=20:00:19.0.-Fiji Islands region 18°8 S, 179°9 W; h about 421 Km. M=5.6 (USCGS).
	18	RHD	Z ei	20	19	25.4C		
	18	ATH	SPZ iPKP LPZ i	20	19	29.1D 42.1		
		VAM	Z eiPKP Z ei	20	19	33.0D 50.8		
		VLS	Z ePKP Z i!			34.0 51.0D		
27	18	PRK	Z eiP NE ei	22	10	19.0 19.7	79°5	H=21:58:12.4.-Near east coast of Kamchatka 53°9 N, 160°7 E; h about 12 Km. M=6.0 (USCGS).
	18	ATH	SPZ iP LPZ i	22	10	29.3C 29.7C	80°0	
	18	RHD	Z eiP	22	10	29.4	80°0	
	18	VLS	ZN, eiP	22	10	34.1	81°5	
	18	VAM	Z ei	22	10	40.2	83°5	
28	20	ATH	LPZ e(R)	09	23	30.0		
29	20	ATH	LPZ ePKP LPZ ei	15	23 24	45.0 03.0	107°	H=15:05:39.0.- Banda Sea 7°3 S, 129°2 E; h about 132 Km. M=6,1 (USCGS).
	20	VAM	Z ePKP	15	23	50.5	110°	
30	21	PRK	Z ei!P	05	05	17.8	39°	H=04:57:57.9.-Eastern Kazakh S S R 49°8 N, 78°1 E; h about 0 Km. M=5.8 (USCGS).
	21	VAM	Z eP	05	05	45.7	41°	
	21	VLS	Z ei!P	05	05	51.0	43°	
31	21	PRK	Z eiPKP Z e Z ei	10	45 49 50	47.2 49.5 00.9	105°	H=10:31:49.7.- Banda Sea 6°1 S, 130°4 E; h about 93 Km M=6.3 (USCGS).
	21	ATH	LPZ eiP LPZ ei LPZ eiPKP LPE ei LPE i LPN eiS LPE i	10	45 46 50 56 57 59	55.6C 37.0D 12.0C 20.0 24.0 41.2 49.0	106°	
	21	VAM	Z e?(P) Z e	10	45 50	56.2 07.8	106°	
	21	VLS	Z eP Z e Z ei	10	46 47	15.6 11.8 39.3	109°	
32	22	ATH	LPZ e(R)	12	48	3		

Nº.	Date	Station	Phase	h	m	s	D	Remarks
33	22	ATH	LPZ e(R)	14	51.3			
34	22	ATH	LPZ eiP	20	38	21.30	86°5	H=20:25:30.4.- Andreanof Islands, Aleutian Islands
			LPZ eiPP	41	48.1			51°3 N, 179°4 W; h about 40 Km. M=5.9 (USCGS).
			LPN eS	46	53.1			
			LPE ei	49	08.1			
35	23	ATH	LPZ eP	01	32	43.1		
			LPZ e	37	42.5			
			LPN e	46	08.1			
36	25	PRK	Z eP	02	08	32.3	8°	H=02:06:30.- 37°6 N, 36°6 E. (BCIS).
	25	VAM	Z eP	02	08	46.9	9°5	
	25	ATH	LPZ eS	02	11	05.1	11°	
37	25	ATH	LPZ e(P)	02	11	05.1		
38	27	PRK	Z eiP	03	17	05.0	87°	H=03:04:20.6.-South of Honshu Japan 30°6 N, 140°2E ; h about 60 Km. M=5.2 (USCGS).
	27	ATH	LPZ e(P)	03	17	11.0	88°5	
			LPZ e			29.0		
	27	VAM	Z e(P)	03	17	18.7	90°	
39	27	ATH	LPZ eiPP	12	23	35.60	141°5	H=12:01:51.9.- Solomon Islands 9°7 S, 159°7 E; h about 51 Km. M=6.3 (USCGS).
			LPZ ei	24	26.20			
			LPE ei		30.0			
	27	VAM	Z eP	12	24	29.0		
40	29	VLS	Z eiP	09	12	25.9	82°	H=09:00:08.3.- Kurile Islands 41°1N, 146°5 E h about 153 Km. M=5.3 (USCGS).
41	29	ATH	LPZ e(R)	18	07.2			

The Director
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ATHENS etc.

Dec. 1965

NATIONAL OBSERVATORY - SEISMOLOGICAL INSTITUTE

SEISMOLOGICAL STATIONS NETWORK - GREECE

PRELIMINARY BULLETIN

Station	Location	Type of instruments		Mass Kgr	T ₀ sec.	T _g sec.	$\gamma:1$	V	Drum speed - mm/m
ATHENS (ATH) (Attica)	37°58'20"N 23°43'10"E h=95 m Cretaceous Limestone	Benioff Sprengnether " Wood-Anderson Hiller Wiechert " " Mainka " Kritikos	Z,N,E Z N,E S,E Z,S,E Z S E N E N	107,5 11,2 10,75 1 1300 1000 1000 135 135 40	1 15 15 0.8 0.82 1.5 5.6 5.7 3.6 3.5 2.0	0,25 100 100 0.25 	 50 10 	12,500 1,500 1,500 2,800 5,000 130 125 128 39 63 4	60 30 30 60 60 30.5±0.5 30.5±0.5 30.5±0.5 30 ± 32 30 ± 32 38 ± 42
ST. PARASKEVI (PRK) (Lesbos Island)	39°14'46"N 26°16'18"E h=100 Rhyolite	Sprengnether	Z,N,E	1.14	0.5	0.5		20,000	60
VALSAMATA (VLS) (Cephalonia Island)	38°10'36"N 20°35'24"E h=405 m Cretaceous Limestone	Sprengnether	Z,S,W	1.14	0.5	0.5		20,000	60
VAMOS (VAM) (Crete Island)	35°24'26"N 24°11'59"E h=225 Marly Limestone	Sprengnether " "	Z N-S E-W	1.14 1.14 1.14	0.5 0.5 0.5	0.5 0.5 0.5		20,000 20,000 20,000	60 60 60
RHODES (RHD) (Rhodes Island)	36°26'14"N 28°13'25"E h=45 m Alluvium	Sprengnether " "	Z N-S E-W	1.14 1.14 1.14	0.5 0.5 0.5	0.5 0.5 0.5		10,000 5,000 5,000	60 60 60
PATRAS (PAT) (Northern Pe- loponnesus)	38°14'11"N 21°44'48"E h=40 m Alluvium	Wiechert	Z	80	2.8		3.1	133	29-31

SHOCKS IN THE AREA OF GREECE

ATHENS

DECEMBER 1965

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Nº	Date	Station	Phase	h	m	s	D Km	Remarks
1	1	VAM	Z eiPg	08	36	04.2	130	H=08:35:39
			Z eiPn			06.3		
			NE i			17.2		
			E iISg			19.6		
2	1	RHD	Z eiPg	14	16	53.5	70	H=14:16:39.8.- 36°9N, 28°5 E.
			Z i			54.7		
			E iSg		17	02.5		
		PRK	Z eiPn	14	17	30.1	330	
			NE eiSn		18	04.4		
		VAM	Z ePn	14	17	40.7	420	
			N ei		18	21.1		
			N eiSn			23.9		
3	1	ATH	SPZ iISg	14	54	04.9C	35	H=14:53:58.0.- 38°3 N, 23°6 E. M _L =2.9
			SPE iISg			09.5		
		VLS	Z eiPn	14	54	38.9D	265	
			Z ei		55	10.1		
			Z eiSb			11.5		
		VAM	Z ePn	14	54	46.8	325	
			Z e			47.6		
			N ei		55	20.4		
			N eiSn			22.3		
			N eiSb			27.3		
4	1	VLS	Z ePn	17	27	11.7	260	H=17:26:31
			Z eiPy			14.9C		
			E eiSn			41.0		
			E eiSb			44.3		
			E eiSy			46.2		
5	2	RHD	Z iPn	06	46	22.4	160	H=06:45:54.4.- 37°7 N, 29°0 E.
			E iISn			42.9		
		PRK	Z eiPn	06	46	37.3	280	H=06:45:54.- 37°6 N, 29°4 E (BCIS). H=06:45:55.- 37°7 N, 29°4 E; h=41 Km. M=4.6 (USCGS).
			Z iPg			43.9		
			N iSg		47	21.0		
			N i			27.3		
		ATH	SPZ ei	06	47	37.0C	470	
			SPZ eiSn			51.4		
		VAM	Z ePn	06	47	07.1	520	
			Z e			11.2		
			Z ei			14.1		
			E eiSn		48	09.0		
			E ei(Sb)			14.9		
			E eiSy			20.2		
6	2	VLS	Z ePg	14	54	34.1	130	Felt in Thesprotia (IV at Philatae).
			Z eiSg			50.1		

Note : Magnitudes determined from Standard Wood-Anderson records are marked by M_L
Magnitudes determined from Macroseismic data are marked by M. M.-

ATHENS

DECEMBER 1965

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N°	Date	Station	Phase	h	m	s	D	Km	Remarks
7	2	VAM	Z eiPn	23	06	38.0		255	H=23:05:58
			Z eiPb			39.3			
			N eiSn	07		07.2			
			E eiSy			11.5			
			N eiSg			14.9			
8	4	ATH	LPZNE	11Pg	04	08	43.6	15	H=04:08:39.7.-38°1 N, 23°7 E.
			LPE	11Sg			45.8		The shock was felt in
		PRK	Z ePn	04	09	19.3		260	Attica (V at Ano-Liosia, Av-
			Z eiPg			25.5			lon, IV+ at Neon-Phaliron,
			N i(Sn)			48.3			Philothai, Taurus, Kallithea,
			N iSb			52.1			Daphni, Aspropyrgos, Ste-Var-
			N i			58.6			vara, Kalamaki, Raphina, Pe-
		VLS	Z ei(Py)	04	09	24.7		265	rama, Nea-Makri, IV at Ampe-
			N eiSy			57.1			lakia, Marathon, Peuki, Kou-
			E eiSg			59.8			kouvaounes, Koropi, Megara,
		VAM	E eiPn	04	09	25.4		300	Kiphisia, Palaeon-Phaliron,
			Z ei(Py)			31.3			Athens, Eleusis, Mandra, A-
			E i			55.1			marousion, Vyrion, Stamata,
			N iSn			56.8			Hymettos, Grammatikon, Nea-
			E iSb	10		03.7			Liosia, Nea-Erythraea, Aph-
			N iSy			06.0			idnae, Keratsini, Nea-Pala-
									tia, Paeania, III+ at Pirae-
									us, Melissia, Nea-Smyrni,
									III at Kapandriti), Boeotia
									(IV at Thebes), and on the
									Island of Aeghina (III at
									Aeghina).
									Not felt at Nea-Pera-
									mos, Vilia, St.-Stephanos,
									Lavteoyiki, Kalamos, Kaly-
									via-Thorikou, Ste-Paraskevi
									(of Attica) and Kypseli
									(of Aeghina Island).
									Macroseismic Epicenter
									about 38° 1/4 N, 23° 3/4 E.
									Area of felt shaking
									about 5.000 Km ² . M. M.=3,7*.
9	4	VAM	Z eiPn	16	40	34.2		240	H=16:39:56.2.- 34°1 N, 26°1 E.
			Z iPy			35.3			M _L = 4.7
			Z iPg			38.8			H=16:40:01.- 34°3 N, 26°2 E
			N iSn	41		01.3			(BCIS). H=16:39:58.4.- 34°2N,
			E i(Sg)			09.6			26°2 E; h=21 Km. M= 4.9 (US
		RHD	Z ePn	16	40	46.8		340	CGS).
			E i	41		21.2			
			E iSb			29.2			
		ATH	SPZ eiPn	16	41	05.3	D	480	
			SPZ eiPy			15.0	D		
			SPE ei	42		01.3			
		PRK	Z ePn	16	41	15.5		570	
			Z e			18.6			
		VLS	Z iPn	16	41	30.3		680	
			N iSn	42		38.1			
			N i			44.2			

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Nº.	Date	Station	Phase	h	m	s	D	Km	Remarks
10	5	VLS	ZNE 1!Pg NE 1!Sg	17	52	43.8 46.0	10		Felt on Cephalonia Island (IV at Valsamata)
11	6	ATH	SPZ eiPn SPZ 1!Pg SPE 1 SPE 1 SPN 1!Sg	05	34	05.3C 07.4D 18.8 22.5 23.7	130		H=05:33:41.5.- 39°2 N, 23°8 E. $M_L=3.8$
		PRK	Z 1Pn Z 1Pg N 1Sb N 1!Sg	05	34	16.5D 21.2C 45.1 50.5	225		
		VLS	Z ePn Z eiPb Z 1Pg Z 1 N 1Sn	05	34	28.4 30.7D 36.3 38.3 03.0	310		
		VAM	Z ePn Z eiPb NE ei E 1Sg	05	34	43.4 47.0 28.7 48.2	420		
12	6	VLS	Z 1Pn Z 1!Pg NE 1Sg	07	46	11.9D 14.3C 29.8	130		H=07:45:48.3 -- 37°0 N, 20°9 E. Felt on Messenia (III+ at Kyparissia).
		PAT	Z ePn Z ei(Sn) Z e	07	46	15.0 31.4 37.3	150		
		VAM	Z ePn Z eiPy E 1 E 1 N 1Sg	07	46	39.5 45.6 23.8 29.4 30.3	350		
13	6	RHD	Z eiPn Z 1 Z 1 Z 1 NE 1Sg	21	29	57.1 58.3 59.4 02.6 10.6	105		H=21:29:37.8.- 36°4 N, 27°0 E. $M_L < 4.3$
		VAM	Z ePn Z eiPy Z 1Pg N eiSb E 1Sg	21	30	21.1 24.3 27.7 55.5 01.3	280		
		PRK	Z ePn Z eiPb N ei	21	30	26.7 29.5 22.4	325		

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N°	Date	Station	Phase	h	m	s	D	Km	Remarks
14	7	ATH	SPZ eiPg	21	30	40.1D	350		
			SPE eiSg		31	21.9			
			SPE i			25.4			
		RHD	Z eiPg	01	01	18.5	120		H=01:00:57.- 36° 1/4 N, 27° E. $M_L < 4.3$
			Z ei			20.3			
			Z ei			22.7			
			NE i			32.3			
			E iSg			34.6			
		VAM	Z eiPn	01	01	42.6	300		
			Z eiPg			49.6			
			N iSn		02	15.6			
			E i			17.0			
			N iSg			26.3			
		PRK	Z eiPn	01	01	48.5	350		
			Z eiPy			55.4D			
			Z eiPg			58.9D			
			Z ei		02	00.0D			
			N iSg			44.1			
15	7	ATH	SPZ eiPg	01	02	01.6D	360		
			SPE eiPy			41.1			
			SPE i			45.2			
			SPE iSg			47.1			
		RHD	Z eiPn	08	25	23.0	110		H=08:25:03.2.- 35° 6 N, 27° 5 E. $M_L < 4.6$
			Z ei			24.4			
			N iSn			36.0			
			N i			36.4			
			E iSg			37.0			
		VAM	Z eiPn	08	25	46.5	290		
			Z ei(Pg)			52.9			
			E eiSb		26	22.0			
			E ei			29.4			
			N iSg			30.4			
		PRK	Z eiPn	08	26	03.4	420		
			N eiSn			49.0			
		ATH	SPZE eiPn	08	26	06.3DE	430		
			SPE ei			44.0			
			SPN e			45.0			
			SPE ei			45.7			
			SPN ei			48.5			
			SPN eiSn			50.0			
16	7	VAM	Z eiPn	08	45	55.7	105		H=08:45:36.4.- 35° 8 N, 25° 2 E. $M_L < 3.9$
			E ei		46	07.3			
			N iSg			08.9			
		./.							

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No.	Date	Station	Phase	h	m	s	D	Km	Remarks			
17	7	ATH	SPZ	ePg	08	46	23.8	270				
			SPZ	ei			31.6D					
			SPN	eiSn			58.8					
			SPN	ei		47	05.5					
			SPE	e			07.7					
			SPE	ei			10.8					
			SPE	ei			12.2					
		VLS	Z	eiPn	08	46	46.2	490				
			Z	ei			49.5C					
			Z	i			51.0					
			E	ei		47	31.6					
			N	i			35.7					
N	iSn			36.5								
ATH	SPZ	eiPn	15	04	40.2D	155	H=15:04:14.5.- M _L < 3.3					
	SPZ	ei			43.2							
	SPE	iSn			58.4							
VLS	Z	ePn	15	04	59.1	295						
	Z	e		05	02.5							
	N	eSn			33.1							
	N	ei			34.4							
18	8	RHD	Z	eiPg	11	22		23.6	100	H=11:22:05.0.- 37°3 N, 28°5 E. M _L < 4.5		
			N	iSg				35.6				
			N	ii				38.8				
		PRK	Z	eiPn	11	22		51.5D	300			
			Z	iPg		23		00.4D				
			N	i			59.4					
			E	i		24	00.8					
		ATH	SPZ	eiPn	11	23	05.2D	420				
			SPZ	ei			08.2D					
			SPZ	ei			17.3					
			SPN	ei			36.0					
			SPNE	ei			43.1					
SPE	eiSn				51.0							
SPE	iSy			24	03.4							
VAM	Z	ePn	11	23	07.3	440						
	Z	eiPb			12.6							
	Z	eiPy			16.2							
	E	ei			39.8							
	NE	ei			48.9							
	N	ei		24	08.9							
19	10	RHD	Z	eiPn	06	09	54.6	120	H=06:09:33.3.- 37°2 N, 29°0 E.			
			Z	i			55.4					
			Z	iPg			56.3					
			N	iSg		10	10.5					
		PRK	Z	eiPn	06	10	21.9	320				
			Z	eiPb			24.0					
		./.										

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Nº.	Date	Station	Phase	h	m	s	D	Km	Remarks
20	12	ATH	Z	1Pg	.	30.9	460		
			SPZ	ePn	06	10			
			SPZ	ePy					
			SPN	e	11	12.9			
			SPE	e		13.9			
			SPE	eISn		27.4			
			SPE	i		33.4			
			SPN	eISb		34.9			
		VAM	Z	ePn	06	10	480		
			Z	ePb					
			E	e	11	28.0			
			N	eSn		30.6			
			N	eSb		40.3			
		VAM	Z	ePn	04	05	105		H=04:04:52.- 35° 1/4 N, 23° E.
			ZN	eIPg					
			Z	i		13.8			
			N	iP ₃₃ S		16.7			
			E	iISg		24.6			
		ATH	SPZ	ePg	04	05	330		
			SPZ/i			52.8			
			SPE	ei	06	06.6			
			SPZ	ei		07.3			
			SPN	ei		21.6			
			SPE	i		38.8			
			SPN	ei		42.2			
			SPN	ei		52.8			
21	13	VLS	Z	e?(Pn)	04	05	(405)		
			N	eSn		06			
		PRK	Z	ePn	04	06	06.0	525	
		PRK	ZN	i11Pn	00	07	115		H=00:07:22.4 -38°3 N, 25°7E. M _L < 3.4
			E	iIS ₂₃ P					
			E	i1		52.4			
			N	i		54.8			
			N	iSn		57.1			
			E	iISg		58.9			
		ATH	SPZ	eiPn	00	07	170		
			SPZ	eiIPg					
			SPZ	i	08	00.2			
			SPN	iSg		14.5			
			SPE	ei		14.9			
			SPN	i		21.4			
			SPE	ei		23.1			
			SPE	i		24.2			
		VAM	Z	ePn	00	08	350		
			E	eISg	09	05.7			

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N°.	Date	Station	Phase		h	m	s	D	Km	Remarks
			N	ei	.	.	08.1			
		VLS	Z	ePn	00	08	25.8	445		
22	13	ATH	SPZ	iPg	11	19	55.60	25		H=11:19:50.7.-38°0 N, 24°0E.
			SPE	iISg			59.0			M _L = 2.7 .
		VAM	Z	ePn	11	20	34.3	285		Felt in Attica (IV à Paeania).
			Z	e			41.9			
			Z	e			43.2			
			E	e		21	03.2			
			E	e(Sy)			10.9			
			E	eiSg			15.4			
		VLS	Z	ePn	11	20	36.2	300		
			Z	e			40.0			
23	13	VLS	Z	ePn	13	26	49.0	125		H=13:26:27.- West coast of Peloponnesus.
			Z	eiPg			50.7			
			Z	ei			52.6			
			N	ei		27	05.6			
			E	eiSg			06.2			
			E	ei			07.3			
		VAM	Z	ePn	23	27	14.1	315		
24	13	VLS	Z	eiPn	17	44	44.20	265		H=17:44:03.4.- 40°4 N, 19°3E.
			Z	iPy			48.1			M _L < 4.7 . H=17:44:07.-
			Z	iPg			50.8			
			Z	i		45	00.3			40°0 N, 19°3 E. (BCIS).
			E	ei			13.2			H=17:44:12.- 40°3 N, 20°0E;
			N	eiSn			13.9			h=33 Km. M=4.5 (USCGS).
			E	ei			15.3			
			E	ei(Sb)			16.3			
			N	eiSy			19.6			
			N	eiSg			23.4			
		PAT	Z	e	17	44	57.0	310		
			Z	e		45	08.0			
			Z	eiSg			35.8			
		ATH	SPZ	ePn	17	45	07.8	450		
			SPZ	e			09.0			
			SPZ	ei			11.2			
			SPZ	i			19.7			
			SPZ	i			22.0			
			SPN	iSn			54.8			
			SPE	i			55.5			
			SPE	iSb		46	03.6			
			SPN	i			16.0			
		PRK	Z	eiPn	17	45	27.7	605		
			Z	ei			32.7			
							./.			

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N°	Date	Station	Phase	h	m	s	D	Km	Remarks
25	15	VAM	Z	ePn	17	45	36.7	680	
			E	e		46	43.9		
			N	eSn			44.9		
			N	ei			50.7		
		RHD	Z	ePn	04	17	03.3	106	H=04:16:46.4.-35.9 N, 27°2 E.
			Z	eiS ₃₃ ^P			06.6		
			Z	ei!			10.5		
			E	ei!			11.6		
			NE	eiSn			14.6		
			NE	iSg			16.2		
26	15	VAM	Z	ePn	04	17	28.0	275	
			Z	eiPg			34.5		
			N	eiSg		18	09.2		
			N	ei			18.6		
		PRK	Z	ePn	04	17	42.7	385	
		PRK	Z	i!Pn	04	45	32.9	115	H=04:45:12.3.-
			NE	i!Sg			47.9		
27	16	VAM	ZNE	i!iPg	12	33	05.8	95	Northwestern of Turkey. H=12:32:47.- 35° N, 23° E. M _L < 4.3 .
			E	i!			16.8		
			N	i!iSg			18.1		
		ATH	SPZ	ePn	12	33	41.1	360	
			SPZ	ePb			44.1		
			SPN	ei			45.9		
			SPZ	ei			48.7		
			SPE	e		34	10.3		
			SPN	ei			18.8		
			SPN	eiSn			20.0		
28	17	VLS	Z	ePn	12	33	43.1	380	
			N	eSn		34	23.6		
			N	ei			26.2		
		ATH	SPZ	eiPn	00	50	03.7D	130	H=00:49:40.2.- 36°9N, 23°2 E. M _L < 3.2 .
			SPZ	ei			07.2D		
			SPZ	ei!			12.8D		
			SPNE	ei(S ₃₃ ^S)			19.5		
			SPE	eiSg			21.2		
			SPE	ei			24.0		
			SPN	ei			24.6		
		VAM	Z	ePn	00	50	07.8	165	
			Z	ei			09.6		
			Z	ei			11.9		
			Z	e			14.3		
			E	eiSg			30.9		
			E	ei			35.4		
			N	ei			37.1		
			E	ei			40.2		
		VLS	Z	ePn	00	50	21.2	265	
			Z	ei		./.	35.8		

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ATHENS									
Nº.	Date	Station	Phase	h	m	s	D	Km	Remarks
29	17	PRK	Z ePn	00	50	35.1	375		
		VLS	Z iPg E iSg	04	48	07.6 13.5	50		H=04:47:58.4.-38° 1/2 N, 21° E.
		PAT	Z ePg Z eiSg	04	48	11.2 26.4	70		
		ATH	SPZ e(Sn)	04	49	05.7	(240)		
30	19	PRK	Z e(Sg)	20	02	28.0			Felt in Chalkidike (IV+ at Arnaea).
31	20	PRK	ZNE i!Pn	00	08	38.0	150		H=00:08:11.6. 40°1 N , 24°8 E.
		ATH	LPZNE i!Pn	00	08	49.6	CSW 240		An=130 µ Tn=2 s. M=5.9
			LPZ ei!		09	20.6			Ae=210 µ Te=2 s.
			LPE iSg			23.8			H=00:08:11.- 39°9 N ,
			LPN ei!			30.4			25°0 E. M= 5 3/4 - 6
									(BCIS). H=00:08:15.2.-
		PAT	Z ePn	00	09	02.0	340		40.2 N, 24.8 E; h=33Km.
			Z ei			09.6			M=5.3 (USCGS).
			Z eiSb			43.6			Felt on the Islands
		VLS	Z ePn	00	09	12.2	420		of <u>Thasos</u> (V at Kastron,
			Z ei!(Pb)			17.9			Panaghia, Potamia, IV+ at
			Z ei			22.9			Limenaria, Theologos, Tha-
			E i			34.5			sos, Prinos), <u>Lemnos</u> (IV+
			N ei			37.8			at Myrina, Kontopoulion,
			N i			41.8			Moudron, IV at Kontia),
			N i	10	06.9				<u>Samothraki</u> (IV+ at Samo-
			N i			15.4			thraki), <u>Lesbos</u> (IV at
			E i			19.0			Kalloni, III+ at Kerami-
			N i(Sg)						on, Ippios, Polychnitos,
		RHD	Z ePn	00	09	22.4	500		Stypsi, Petra, Kliou,
			Z e			27.2			Philia, III at Antissa,
			ZN eiPy			33.3			Palaeochori), <u>Chios</u>
			E ei			36.5			(III at Volissos), <u>St-</u>
			Z ei			39.5			<u>Eustratios</u> (IV at St-
			E i			50.8			<u>Eustratios</u>), <u>Skyros</u> (III
			N ei			54.5			at Skyros), <u>Skopelos</u> (III
			N ei	10	09.2				at Skopelos), and <u>Skia-</u>
			N i			18.9			<u>thos</u> (II+ at Skiathos).
			N i(Sg)			42.9			The shock was farther
VAM		Z ePn	00	09	23.7	510		felt in Thrace and Macedo-	
		Z ei			26.8			nia particularly in the	
		Z eiPb			29.0			regions of <u>Evros</u> (V+ at	
		Z i			40.7			Avantos ,V at Sykorachi ,	
		Z i			53.7			Petroton, Phylakton, IV+	
		E i	10	00.0				at Alexandroupolis, Hel-	
		N i			02.3			linochori, IV at Asprone-	
		N i			11.4			ri, Pentalophos, Pherrae;	
		E iSn			16.6			Mikron-Derion, Mani, Ar-	
		E i			21.8			danion, Didymotichon,	
./.				./.					
				./.					

No.	Date	Station	Phase	h	m	s	D	Km	Remarks
			E	1		28.8			Protoklision, Peplon, Loutron, Lavara,
			N	1		29.0			Zone, Metaxades, III at Kyprinos, Di-
			N	1		38.2			kaea, Tycheron, Paliouri, Thourion, Ri- zia, Amorion, II+ at Elaphochori), <u>Rhodope</u> (V at Proskynites, Aeghiros, Thrillorion, IV+ at Krovylis, IV at Mira- nae, Arisvi, Komotini, Lophari, Poly- anthos, Iasmos, Pagairia, Asomatoe, Organi, Ariana, III+ at Maronia, Sappae, Amvrosia, Amaranta, III at Kosmion, Xy- lagani, II+ at Pandrosos), <u>Xanthi</u> (IV+ at Neochori, Gerakas, Orae- on, Daphnon, Stavroupolis, Mandra, Eras- mion, Diomidia, IV at Genisea, Kotylli, Kimeria, Polysiton, Nea-Kessani, Satrae, Therma, Xanthi, Evlalou, Evmoeiron, III+ at Exochi, III at Koutson, Tokotae, II+ at Myki), <u>Kavala</u> (V+ at Nea-Karvala, Moustheni, IV+ at Lekani, Chrysoupolis, Perni, Zy- gos, Georghiani, Amisia, Aghiasma, Nea-Peramos, Mesoropi, IV at Sidirocho- ri, Eleutheroupolis, Kipia, Kechrokam- pos, Kavala, Nikisiani, Philipoe, Chry- sochori, Eleutherae, Podochori, Domatia, III+ at Kryoneri, Zarkadia), <u>Drama</u> (V at Choristi, Kato-Nevrokopi, IV at Kalliphyton, Tholos, Platania, Doxaton, Adriani, Photolivios, Kallithe- a, Nikiphoros, Volax, III+ at Leukoghi- a, Kyria, St.-Athanasios, Kalos-Agros, III at Koudounia, Perithori, Ochyrion), <u>Serrae</u> (IV+ at Emmanouel-Papas, Ali- strati, Proti, Angista, Palaeokomi, Draviskos, IV at Terpni, Nea-Zichni, Achladochori, Podolivios, Daphnoudi, Tholos, Provata, III+ at Chryson, Neo- Skopos, Karperi, Nigrita, III at Eu- karpia, Strimonikon, Sidirokastron, St.- Pnevma, Toumpa), <u>Chalkidike</u> (IV+ at Arnaea, St.-Niko- laos, IV at Hierrisos, Vrastama, Kry- nni, Palaeochori, Megali-Panaghia, III+ at Taxiarchis, III at Polygyiros, II+ at Neochori), <u>Salonica</u> (IV+ at Skepaston, Stavros, Kalamoton, IV at Sochos, Vrasna, III+ at Zagliveri, Arethousa, Philadelphia, Vasilika, III at Nea-Madytos, Kato- Scholari, II+ at Kryoneri), <u>Kilkis</u> (IV at Plaghia, III at Megali- Vrysi) and southwards in <u>Magnesia</u> (IV+ at St.-Lavrentios, IV at Seskoulon, Promyri, Volos, III+ at Euxinoupolis, Agria, Zagora, III at Drakia, Kanalia, Ano-Lechonia). Not felt at Agra, Vatousa, Parakoe- la, Eresos, Skopelos, Skoutaros (of . / .

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No.	Date	Station	Phase	h	m	s	D	Km	Remarks
32	20	PRK	Z	111Pn	00	31	19.6	150	Lesbos), Avlonari, Psachna, Politi- tika, (of Euboea), Eratini, Aratos, Strymni, Sostis, Kechron (of Rho- dope), Kavyli, Orestias, Nea-Vyssi, Kastaneae, (of Evros), Pentapolis, Kerkini, Skotousa, Phylabouron, Am- moudia, Rhodopolis (of Serrae), Nea-Kalikratia, Nea-Moudania, Nea- Trigla, Vavdos, (of Chalkidike), Chortiatas, Lagada, Askos, Sindos, Asiros, Epanomi, Nea-Apollonia, Thermi, (of Salonika), Sourpi, Platanos, Almyros, Trikeri, Pteleos, Stephanoviki, Keramidi, Velastinon, (of Magnesia), Aghioneri, Vaphio- chori, Axioupolis, Pedinon, Goume- nitsa, Kilkis, Europos, Polykastron, (of Kilkis). Area of felt shaking about 140.000 Km ² . M. M. = 5.8*
			N	111			21.5		H=00:30:53.4 . 40°N, 24°9 E. Aftershock of Dec. 20
			N	111Sg			41.9		H=00:30:55.- Aftershock of Dec. 20 (BCIS). H=00:30:56.- 40°2N, 24°9 E ; h=33 Km. M=4.3 (USCGS).
		ATH	SPZNE	1Pn				245	Felt on the Islands Thasos (III+ at Limenaria) and Lemnos (II+ at Myrina), and in the regions of Kavala (III+ at Ka- vala, III at Lekani) and Drama (III at Platania).
					00	31	32.30SW		
			SPZ	1			37.5		
			SPE	1Sn	32		02.2		
			SPNE	1			09.2		
			SPN	1			11.2		
		PAT	Z	ePg	00	31	56.5	350	
			Z	eSn	32		24.5		
		VLS	Z	ePn	00	31	54.9	425	
			Z	ei		32	06.6		
			Z	ei			13.2		
			Z	ei			21.7		
			N	ei(Sn)			37.9		
			N	ei			55.4		
			E	ei		33	02.4		
		VAM	Z	ePn	00	32	05.9	515	
			E	ei		33	34.3		
			N	ei			42.5		
		RHD	E	e1Sg	00	33	196	490	
33	20	PRK	Z	e1Pn	01	05	34.00	150	H=01:05:07.- 40° N, 25° E. Aftershock of Dec. 20
			Z	1Pg			35.4		
			N	1Sn			53.4		
			E	11			56.3		
			N	11			56.6		

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ATHENS									
No.	Date	Station	Phase	h	m	s	D	Km	Remarks
34	20	ATH	SPZ	eiPn	01	05	44.7C	235	H=03:30:01.- 40°N , 25°E. Afterschock of Dec. 20.
			SPZ	ei			51.7D		
			SPE	ei			58.9		
			SPE	ei	06		22.2		
			SPE	i			24.9		
		VLS	Z	ePb	01	06	15.4	440	
			Z	ePy			19.7		
			Z	ePg			25.9		
			N	e			27.4		
			Z	eSn			56.9		
			Z	e	07		07.4		
		PRK	Z	eiPn	03	30	26.4C	155	
			Z	i			27.9		
			E	ii			48.1		
			N	iiiSg			49.4		
ATH	SPZ	ePn	03	30	37.7	235			
	SPZ	eiPb			39.1D				
	SPZ	ei			43.2C				
	SPZ	eiPg			44.2D				
	SPE	i	31		14.5				
	SPN	i			15.4				
	SPE	i			16.4				
	SPN	i			22.0				
	SPE	i			23.5				
	SPN	i			24.6				
VLS	Z	eiPg	03	31	19.7	440			
	Z	ei			26.1				
35	20	PRK	Z	eiPn	06	09	52.4C	150	H=06:09:27.5.-40°0 N, 24°8 E. Afterschock of Dec. 20. Felt in Xanthi (III+ at Xanthi).
			N	iSg	10		13.7		
		ATH	SPZ	eiPn	06	10	04.3C	235	
			SPZ	i			10.5C		
			SPE	i			30.8		
			SPN	eiSb			32.8		
			SPE	i			40.1		
			SPN	i			40.8		
		VLS	Z	ePn	06	10	27.7	420	
			Z	e			36.2		
			Z	ei			44.4		
		VAM	Z	eiPg	06	10	59.5	515	
		PRK	Z	ePn	07	04	35.3	145	
			N	iiSg			56.4		
		ATH	SPZ	ePn	07	04	47.6	235	
SPZ	ePb				49.6				
SPZ	ei				53.2C				
SPN	e		05		07.3				
./.									

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N°.	Date	Station	Phase	h	m	s	D	Km	Remarks
41	24	VAM	Z ePn	08	44	42.4	400		
			Z ePb			47.2			
		ATH	SPZ eiPn	08	44	42.7	400		
			SPZ eiPg			55.2			
			SPZ ei(Sy)	45	36.2				
		ATH	SPZ iPg	01	10	10.2C	86		H=01:09:54.2.- 38°4 N, 22°8 E.
			SPZ iSg			20.7			
		VLS	Z eiPn	01	10	26.4	195		
			Z eiPy			27.5			
			Z iPg			28.8			
42	24		N eiSy			52.0			
			N eiSg			52.7			
		PRK	Z ePn	01	10	40.5	305		
			Z eiPg			48.5			
			N eiSy	11	20.5				
		VAM	Z ePn	01	10	41.7	315		
			Z ePb			45.9			
			Z eiPy			48.4			
			E ei(Sn)	11	26.1				
			E ei(Sg)			34.0			
43	25	PRK	Z iPg	18	46	53.4	50		
			E eiSg			59.9			
		PRK	Z iPn	12	15	55.7	145		H=12:15:31.2.- 39°8 N, 24°7 E. M _L = 4.3
			E iP ₃₃ ^P			57.3			
			N iPg			58.3			
			N iSg	16	16.5				H=12:15:28.- 39°8 N, 24°8 E. (BCIS).
		ATH	SPZ eiPn	12	16	06.9C	225		
			SPZ eiPb			08.6			
		VLS	Z ePn	12	16	30.1	405		
			N eiSy	17	26.0				
44	25	VAM	Z eiPn	12	16	41.0	495		
		VLS	Z iPn	15	10	51.6	120		H=15:10:30.0.- 37°2 N, 20°8 E. M _L = 4.1
			E iPg			53.2			
			E iSn	11	06.1				
			E iS ₂₃ ^S			07.0			H=15:10.6.- About 37° 1/2 N, 21° 1/2 E. (BCIS).
		ATH	SPZ ePn	15	11	11.6	270		
		VAM	Z ePn	15	11	23.9	365		H=15:10:29.4.- 37°3 N, 21°1 E; h=5 Km.
		PRK	Z ePn	15	11	40.9	525		M=4.3 (USCGS).
			Z eiPg	12	03.1				

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Nº.	Date	Station	Phase	h	m	s	D	Km	Remarks
45	26	PRK	Z E	1Pg iSg	14	58	32.7 43.7	90	
46	26	VLS	Z NE	1Pg iSg	16	13	48.5 53.7	40	
47	26	VLS	Z NE	1Pg iSg	20	43	41.7 47.3	40	
48	27	VAM	Z N	ePn eISn	01	12	17.2 47.6	270	H=01:11:37.- 35°1/4 E, 21°0 E .
		VLS	Z N	ePn eSn	01	12 13	25.2 00.2	320	
		ATH	SPZ SPZ	ePn eiPb	01	12	38.0 44.7	420	
49	27	VAL	Z	e(Pn)	03	23	34.4		
		ATH	SPZ	e(Pn)	03	23	34.8		
50	27	VAM	Z Z	eiPg eiSg	23	37	49.7 57.8	65	
		ATH	SPZ	ePn	23	28	16.7	285	
51	28	PRK	Z	1Pg	02	36	28.7		
52	28	ATH	SPZ SPZ SPE SPE	iPn eiPb eiSb iSg	08	47	06.00 08.1 41.2 47.3	275	H=08:46:23.8.- 37° 1/2 N, 26° 3/4 E. M _L < 3.9
		VAM	Z Z Z N E	ePn eiPb eiPy eISn eISg	08	47 48	14.3 17.6 19.9 50.8 05.4	340	Felt on Samos Island (IV+ at Spatharia, IV at Vourliotes, Pythago- rion).
		VLS	Z	ePn	08	47	43.3	570	
53	29	VLS	Z Z	ePn eiSg	20	28	15.2 31.9	115	Felt in Akarnania (IV+ at Perdikaki).
54	30	VLS	Z NE	eiPg eiSg	05	30	05.4 10.9	40	
55	30	ATH	SPZ SPE	ePn eISn	10	04 05	45.3 03.5	140	H=10:04:21.2.- 36°8 N, 23°4 E. M _L < 3.2

LONG DISTANCE SHOCKS

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No.	Date	Station	Phase	h	m	s	D	Remarks
1	3	ATH	LPZ e(R)	08	06.1			
2	3	PRK	Z eiP	21	24	19.80	34°5	H=21:17:33.6.- Hindu Kush region 36°3 N, 69°5 E; h=19 Km M=5.5 (USCGS).
		ATH	SPZ eiP	21	24	39.20	36°5	
			LPZ e			39.6		
		VAM	Z eiP	21	24	41.10	37°0	
		VLS	Z eP	21	24	57.1	39°0	
3	5	PRK	Z eiP	18	27	19.20	84°0	H=18:14:50.2.- Near Islands Aleutian Islands 52°6 N, 173°2E; h=36 Km. M=5.5 (USCGS).
		ATH	LPZ eP	18	27	27.0	85°5	
			LPZ e		30	15.2		
			LPN eS		38	11.2		
		VLS	Z eP	18	27	30.6	86°0	
		VAM	Z eP	18	27	40.1	88°5	
4	6	ATH	LPZ ei(P)	11	49	29.30	110°	H=11:34:53.7.- Off coast of Jalisco, Mexico 18°9N, 107°1 W; h=37 Km. M=5.9 (USCGS). M = 6 3/4 (Pas.).
			LPZ e		52	20.3		
			LPZ eiPKP		53	34.9		
			LPE eiSKKS	12	01	12.1		
			LPE i		02	53.3		
			LPZ i			56.9		
5	6	ATH	LPZ ePP	19	10	54.7	88°5	H=18:54:25.7.- Andrianof Islands, Aleutian Islands. 51°6N, 178°5 E; h=72 Km. M=4.4 (USCGS).
			LPZ e		16	48.7		
6	7	ATH	LPZ e(R)	11	45.1			
7	7	PRK	Z eiPKP	22	37	48.50	118°0	H=22:19:14.8.- East new Guinea region 6°4 S, 146°3 E; h=109 Km. M=6.4 (US- CGS)
		ATH	LPZ e pPKP	22	39	16.6	119°5	
		VAM	Z e PKP	22	37	54.6	120°5	
		VLS	Z ei PKP	22	37	57.6	122°	
8	8	PRK	Z e	18	25	15.5	161°0	H=18:05:26.1.- Off E. coast of N. Islands, N. Z. 37°1 S, 177°5 E; h = 165 Km. M = 5.8 (USCGS) .
			Z ei pPKP			34.70		
		VAM	Z e	18	25	20.6	161°5	
			Z e pPKP			40.4		
		ATH	LPZ eiPKP	18	25	02.00	162°0	
			LPZ ei			42.0		
			SPZ ei			42.3		
			LPZ eiPP		29	23.6		
		VLS	Z e pPKP	18	25	54.7	165°0	

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No.	Date	Station	Phase	h	m	s	D	Remarks
9	9	ATH	LPZ eP SPZ e SPZ e SPZ e LPZ eS	03	05	04.4 04.5 19.7 34.7 16.8	82°0	H=02:52:43.8.- Prince Edward Islands region. 43°5 S, 39°0 E ; h=33 Km. M=5.3 (USCGS).
10	9	ATH	LPZ eiP LPZ iPP	06	21 26	45.1C 08.1C	103°	H=06:07:48.6.-Guerrero , Mexico 17°3 N, 100°0 W; h=57 Km. M=6.0 (USCGS).
11	9	PRK	Z ePKP	13	31	34.9	149°0	H=13:12:55.5. Fiji Islands 18°0 S , 178°2W ; h=650 Km . M=5.6 . (USCGS).
		RHD	Z ePKP	13	31	37.8	149°5	
		ATH	SPZ eiPKP SPZ ei SPZ ei	13	31	39.9D 45.5C 52.7C	150°5	
		VAM	Z ePKP	13	31	45.8	151°5	
		VLS	Z ePKP Z e	13 32	31 02	47.9 02.4	152°0	
12	10	ATH	LPZ e(R)	22	28	2		
13	13	VLS	Z eiP	05	57	52.8C	86°	H=05:45:12.7.- Kurile Islands region 44°1 N, 150°2 E ; h=33 Km . M=5.4 (USCGS).-
		VAM	Z eP	05	57	58.5	87°	
14	13	PRK	Z eiP	11	04	29.7	83°	H=10:52:08.5.- Kurile Islands region
		ATH	LPZ iP SPZ i SPZ i LPZ eiS	11	04 15	39.5C 39.7D 52.4 05.9	85°	44°7 N, 150°1 E ; h=35 Km. M=5.7 (USCGS).
		PAT	Z eP Z ei	11	04	44.4 56.8	86°	
		VLS	Z eP	11	04	44.8	86°	
		RHD	Z e?(P)	11	04	46.5	86°	
		VAM	Z eP	11	04	49.6	86°5	
15	13	PRK	Z e	14	58	32.0	83°	H=14:46:10.2.- Kurile Islands region
		VLS	Z ei	14	58	48.7D	86°	44°7 N, 150°2 E ; h=33 Km. M=5.4 (USCGS).
		VAM	Z eP Z ei	14	58	51.7 53.9D	87°	
16	13	ATH	LPZ ei LPZ ei	15	19 33	25.9D 22.1D		
17	13	VLS	Z eiP Z ei	22	50 58	15.4C 59.5	86°	H=22:37:37.2.- Kurile Islands region 44°7 N,

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N°.	Date	Station	Phase	h	m	s	D	Remarks
								150°0 E; h=33 Km. M=5.0 (USCGS).
18	13	PRK	Z eP	23	05	40.4	83°	H=22:53:17.1.- Kurile Islands 44°7 N, 149°9E; h=33 Km M=5.0 (USCGS).
		VLS	Z eP	23	05	55.3	85°	
		VAM	Z eP	23	06	02.2	86°	
		ATH	LPZ eS	23	06	17.5	85°	
19	14	ATH	LPZ e(R)	18	24	23		
20	15	ATH	LPZ e(R)	02	57	18		
21	15	ATH	LPZ eiP	23	18	58.00	98°	H=23:05:20.7.- South of Panama 7°5 N, 82°2 W; h=15 Km. M=6.0 (USCGS).
			LPZ ei		20	43.2		M=6 3/4 (Pas.).
			LPZ eiPP		22	56.0		
			LPE ei SKS		29	35.6		
			LPN eiSKKS		30	19.8		
22	16	PRK	Z eiPKP ₁	22	36	59.3	145°	H=22:17:19.8.- Loyalty Islands region 23°0 S, 171°8 E; h=24 Km. M=4.6 (USCGS).
		VAM	Z eiPKP ₁	22	37	07.3	150°	
		VLS	Z eiPKP ₁	22	37	10.9	151°5	
23	16	PRK	Z eiPKP	23	25	26.90	154°	H=23:06:42.4.- Fiji Islands region 17°5 S, 179°1 W; h=573 Km. M=5.5 (USCGS).
			Z ei			33.3		
		VLS	Z eiPKP	23	25	32.90	154°	
			Z e		27	27.3		
		ATH	SPZ eiPKP	23	25	33.80	154°	
		VAM	Z ePKP	23	25	37.7	155°	
			Z e			52.2		
24	18	VLS	Z eiP	08	43	24.10	85°	H=08:30:45.8.-Kurile Islands 44°7N, 149°9E; h=33 Km. M=5.5 (USCGS).
		VAM	Z eP	08	43	27.6	86°	
25	18	VLS	Z eiP	13	33	02.30	85°	H=13:20:23.4.-Kurile Islands region 44°3 N, 150°2 E; h=36 Km. M=5.1 (USCGS).
		VAM	Z eP	13	33	05.5	86°	
		ATH	LPZ eS	13	43	23.0	85°	
26	19	VLS	Z iPn	09	15	25.60	4°	H=09:14:18.6 39° 1/2 W, 15° 3/4 E.
			N eiSn		16	11.1		
			E e			13.1		
			E ei			14.1		
		VAM	Z ePn	09	16	12.7	7°5	
		PRK	Z ePn	09	16	16.6	7°5	

Nº.	Date	Station	Phase	h	m	s	D	Remarks
27	19	VAM	Z eP	22	19	05.7	85°	H=22:06:32.7 Mid-Indian Rise 32°2 N, 78°8 E; h=33 Km. M=5.8 (USCGS).
		PRK	Z eP	22	19	11.9	86°	
			Z e			15.7		
		VLS	Z eP	22	19	23.6	87°	
		ATH	LPZ ei	22	19	35.2D	86°	
			LPE eiS		29	50.2		
28	20	VLS	Z eiP	07	25	00.7C	83°	H=07:12:33.7.-Kurile Islands 50°4 N, 156°6E; h=33 Km. M=5.1 (USCGS).
		VAM	Z ei(P)	07	25	08.5	85°	
29	21	PRK	Z eP	00	44	01.6	78°5	H=00:32:00.7.-
		VLS	Z iP	00	44	12.7C	80°5	Near east coast of Kam-
		VAM	Z eP	00	44	23.8	82°	chatka . 52°6 N, 158°8 E; h=67 Km. M=5.0 (USCGS).
30	22	PRK	Z eP	00	41	00.5	80°5	H=00:28:46.2.-
		ATH	LPZ eP	00	41	09.2D	83°	Off east coast of Kam-
			LPE eiSS		57	34.2		chatka. 52°4 N, 160°5E; h=5 Km. M=5.1 (USCGS).
		VLS	Z eP	00	41	15.1	84°5	
		VAM	Z eP	00	41	21.8	85°0	
31	22	VLS	Z eP	07	39	44.8	83°5	H=07:27:20.8.-
		VAM	Z eP	07	39	50.9	85°	Off east coast of Kam-
								chatka. 52°5 N, 160°2 E; h=33 Km. M=5.1 (USCGS).
32	22	ATH	LPZ e(R)	08	14	28		
33	22	PRK	Z eP	19	53	42.7	82°	H=19:41:23.0 Kodiak Island region
	22	VLS	Z eiP	19	53	48.3C	83°	58°4N, 153°0 W; h=50 Km. M=6.5 (USCGS).
		ATH	LPZ iP	19	53	48.5C	83°	
			LPE eiS	20	04	05.5		
			LPE eiSKS			08.5		
		VAM	Z eP	19	54	02.0	85°5	
		E	eiS	20	04	20.4		
34	23	VLS	Z 1P	15	30	25.8C	5°	H=15:29:07.-
			N eiS		31	26.8		Tyrrhenian Sea
		ATH	SPZ 1P	15	30	53.8C	7°5	40°5 N, 14°9 E ; h=320 Km. (BCIS).
			SPNE iS		32	19.5		
		PRK	Z eP	15	31	12.5	9°	
35	23	PRK	Z eiP	20	59	45.2	80°	H=20:47:37.5.-
		VLS	Z eiP	20	59	48.5C	80°5	Southeastern Alaska, 60°5 N, 141°0 W ; h=33 Km. M=5.4 (USCGS).

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Nº.	Date	Station	Phase	h	m	s	D	Remarks
		ATH	LPZ e1P	20	59	50.7C	81°	
			LPE e1ScS	21	10	17.7		
			LPN e1PPS	11	01.9			
		VAM	Z eP	21	00	04.4	84°	
36	23	ATH	LPZ e(R)	22	58	14.2		
37	25	PRK	Z e1PKP	03	16	39.0	148°	H=02:57:57.9.-
			Z e1pPKP	19	07.3			Fiji Islands region.
		RHD	Z e1PKP	03	16	40.7	148°5	18°0 S, 179°2 W;
								h=625 Km. M=5.5
		ATH	SPZ e1PKP	03	16	43.3D	149°	(USCGS). M=6 (Pas).
		VAM	Z e1PKP	03	16	47.3	150°	
			Z e1pPKP	19	14.4			
		VLS	Z e1PKP	03	16	48.8D	150°5	
38	25	ATH	LPZ e1(P)	10	22	16.1D		
39	26	PRK	Z epPKP	04	12	29.0	123°	H=03:53:16.6.-
								New Britain region,
		VAM	Z ePKP	04	13	01.4	123°5	5°5 S, 151°4 E;
								h=133 Km. M=6.0
		ATH	LPZ e1PP	04	13	39.6D	124°	(USCGS)
		VLS	Z ePKP	04	12	04.7	125°	
40	27	ATH	SPZ e(P)	18	10	35.1		
41	28	ATH	LPZ e1P	20	45	31.9C	91°	H=20:32:31.-
			LPZ e1PP		49	18.3		
		VAM	Z eP	20	45	40.1	93°	
		VLS	Z e1P	20	45	41.2	93°5	
42	30	VLS	Z eP	02	19	19.8	100°	H=02:05:39
		ATH	LPZ e1P	02	19	21.2C	100°5	
			LPN eSKS		30	04.8		

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