

NATIONAL OBSERVATORY OF ATHENS



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BULLETIN
1951

ATHENS 1952

INTRODUCTION

The geographic coordinates of the seismographic station are: $37^{\circ}58'22''$ N and $23^{\circ}43'0''$ E. The instruments are standing 95 m above mean sea-level on a subsoil consisting of calcite tuff.

The Instruments are a set of seismographs with mechanical recording according to Wiechert.

One astatic horizontal seismograph, $M = 1000$ kg.

One vertical Seismograph, $M = 1300$ kg.

The mean values of the natural period of the undamped pendulum T , of the damping ratio ϵ and of the static Magnification V are for the year 1951:

Instruments	T_0	ϵ	V
Wiechert (NS Comp.)	7.2	4.2	171
" (EW Comp.)	7.3	4.2	175
" (Z Comp.)	1.6	1.7	305

The velocity of the recording paper is about 30 mm per minute.

The time is Greenwich mean time, from midnight till midnight.

Symbols and Abbreviations are the very known.

The distance of epicenter of the shallow shocks has been calculated by means of curves on the time tables of Jeffreys and Bullen (1948), and that of deep shocks by means of the "Chart of Depth, Time and distance for deep-focus Earthquakes"

by G.J.Brunner, S.J.Saint Louis University 1935. The travel time curves of near earthquakes after J.H.Hodgson (1945) were proved more satisfactory for the calculation of the Δ -distance of near normal shocks.

The maximal amplitudes measured from the medium line have been calculated in cases of strong short-distance shocks by means of the formula:

$$W = \frac{V}{\sqrt{\left[1 - \left(\frac{T}{T_0}\right)^2\right]^2 + 4\left(\frac{T_0}{2\pi\tau}\right)^2 \left(\frac{T}{T_0}\right)^2}}$$

The amplitudes have been omitted when the oscillations were too irregular.

The first part of the Bulletin contains readings of main impulses of distant shocks. Additional readings are given when possible. Data under heading remarks refer to the locations after USCGS and BCIS and in some cases according to JSA or ING. The magnitude is given ordinarily according to Pasadena and Strasbourg. Readings of local and short distance shocks are given separately in the second part. The third section contains shocks felt in the Greek area which have not been recorded, and a table with the intensities of the shocks felt in Greece.

On the annexed map are plotted the epicenters of near shocks located by BCIS and the corresponding macroseismic area according to the reports of felt shaking. Intensities are given on Mercalli-Sieberg scale. In case of two near epicenters the perceptibly shaken area of the stronger earthquake and the region of the reported highest intensity of the less important shock are given only. Epicenters marked in by $\star$ denote an initial compression at Athens and by $-$ an initial dilatation. In

doubtful cases the symbols of the epicenters are not marked. Epicenters of probably deep shocks are marked by a triangle circumscribed. The date of the shocks is noted close to the symbols of the epicenters. The arabic numbers indicate the magnitude of the shocks.

The earthquake activity in 1950 was more intense in the eastern part of the Aegean Sea. A shift of the epicenters to the Ionian Sea is to be noted in 1951. However, the earthquake activity in 1951 was stronger, between 38° and 39° parallel, on both sides of the Greek Peninsula.

The relatively large area of perceptibility of the earthquake on December 31, 1951, without a maximum near the epicenter, combined with the form of the record written at Athens indicate probably a deep-focus shock.

Athens, June 15, 1952.

Prof.Dr. A.GALANOPOULOS

A. LONG DISTANCE SHOCKS

<u>Date</u>	<u>Phase</u>	<u>Time</u>	<u>Additional Readings and Remarks</u>
Jan 6	eIP ipP	05 24 12 C 25 01	i 2512. Weak. $\Delta = 4130$ km. ~ 37.2 dg. Hindu kush region, north-western Afganistan. $36^{\circ}5$ N, $70^{\circ}5$ E, $h=250$ km., $H=05:17:19$ (USCGS & BCIS). $M=6.8$ (Pasadena).
16	eP	01 13 27	i 1343. Weak. $\Delta = 810$ km. ~ 7.3 dg. Near Southeastern coast of Italy, 42° N, $15^{\circ}8$ E, $H=01:11:47$ (Rome & BCIS). $H=01:11:48$ (USCGS).
Feb 2	iPn isP e(S)	00 00 43.4 D 01 07.8 54.0	i 0111. $\Delta = 630$ km. ~ 5.7 dg. Asia Minor, near Gulf of Adalia. $37^{\circ}3$ N, $30^{\circ}9$ E, $h=100$ km., $H=23:59:15$ (BCIS).
12	eP	17 32 41	Very weak. $\Delta = 7190$ km. ~ 64.7 dg. Near Verkhoyanski Mts., Siberia. 66° N, 136° E, $H=17:22:02$ (USCGS). $65^{\circ}6$ N, 137° E, $H=17:22:01$ (BCIS).
13	ePKP epPKP	12 15 09 16 09	i 1519, e 1619. Weak. $\Delta = 16830$ km. ~ 151.5 dg. Samoa Islands region. 15° S, 175 W, $h=250$ km., $H=11:55:50$ (USCGS & BCIS). $M=7$ (Pasadena), $6\frac{3}{4}$ (Berkeley).
13	eIP	22 25 42 C	Very weak. $\Delta = 9640$ km. ~ 86.8 dg. About 150 miles east of Alaska Peninsula 56° N, $155^{\circ}5$ W, $H=22:12:58$ (USCGS & BCIS). $M=7$ (Pasadena), $7\frac{1}{4}$ (Praha).

<u>Date</u>	<u>Phase</u>	<u>Time</u>	<u>Additional Readings and Remarks</u>
Mar 5	eP	20 23 56	Very weak. $\Delta=9200$ km. ~ 82.8 dg. Ryukyu Islands 29°N , 128°E , $h=150$ km., $H=20:11:45$ (USCGS & BCIS). $M=7$ (Pasadena).
10	PKP	22 16 47	i 1650, ei 1953. Weak. $\Delta=15600$ km., ~ 140.4 dg. New Hebrides Islands Region. 15.5°S , 167.5°E , $h=200$ km., $H=21:57:37$ (USCGS & BCIS). $M=7\frac{1}{4}$ - $7\frac{1}{2}$ (Pasadena), $7\frac{1}{2}$ (Praha).
Apr 8	eiP ei(S) eisS	21 40 33 42 59 43 07	ei 4035, i 4324. $\Delta=1210$ km. ~ 10.9 dg. Turkey. 37°N , 35°E , $h=100$ km., $H=21:38:20$ (USCGS). 36.4°N , 37.5°E , $h=100$ km., $H=21:38.0$ (BCIS). $M=5\frac{3}{4}$ (Strasbourg), $6\frac{1}{4}$ (Praha).
14	e(S)	13 52 (40)	Sintime mark. $\Delta=7340$ km. ~ 66.2 dg. Eastern Siberia. 61°N , 136°E , $H=13:32:59$ (USCGS). 62.4°N , 136.1°E , $H=13:33:01$ (BCIS). $M=6\frac{3}{4}$ (Pasa- dena), 7 (Strasbourg).
May 10	iP	09 28 32.5	Very weak. $\Delta=6380$ km. ~ 57.4 dg. Southern Mozambique, 21°S , 33°E , $H=09:18:25$ (USCGS). 19.7°S , 34.0°E , $H=09:18:36$ (BCIS). $M=6$ (Praha).
15	iS	23 00 11	Very weak. $\Delta=1440$ km. ~ 13.0 dg. Northern Italy 45°N , 9°E , $H=22:54:23$ (USCGS). 45.5°N , 9.6°E , $H=22:54:31$ (BCIS). $M=5.5$ (Rome).
27	eP	13 45 58	Very weak. Aftershock of the Earth- quake, April 8. $H=13:43.7$ (BCIS).
31	dS	21 18 38	Very weak. $\Delta=9330$ km. ~ 84.1 dg. Off north coast of Luzon, Philip- pine Islands. 19°N , 121°E , $h=100$ km., $H=20:56:00$ (USCGS & BCIS).

<u>Date</u>	<u>Phase</u>	<u>Time</u>	<u>Additional Readings and Remarks</u>
Jun			
5	iP	03 39 25	Very weak. $\Delta = 2180$ km. ~ 19.6 dg. Northwestern Iran. $H = 03:34:55$ (USCGS). $36^{\circ}\frac{1}{2}$ N, $48^{\circ}\frac{1}{2}$ E, $H = 03:34:50$ (BCIS).
5	iP eS	17 10 14 D 20 40	$\Delta = 9480$ km. ~ 85.3 dg. South of Kyu- shu, Japan. Felt in Southern Kvushu. 30° N, 132° E, $h = 100$ km., $H = 16:57:47$ (USCGS). $29^{\circ}\frac{1}{2}$ N, 131° E, $h = 100$ km., $H = 16:57:47$ (BCIS). $M = 6\frac{3}{4} - 7$ (Pasade- na), $7\frac{1}{4}$ (Strasbourg).
6	iP	16 18 07	Weak. $\Delta = 4200$ km. ~ 37.8 dg. Jan Mayen Islands region. $71^{\circ}5$ N, 8° W, $h = 60$ km., $H = 16:10:52$ (USCGS). $72^{\circ}5$ N, $8^{\circ}5$ W, $h = 60$ km, $H = 16:10:49$ (BCIS). $M = 7$ (Pasadena), 6 (Strasbourg).
9	eP eS	11 27 03 31 03	Weak. $\Delta = 2460$ km. ~ 22.1 dg. West of Persia. $H = 11:22:05$ (USCGS). 32° N, 50° W, $H = 11:22:00$ (BCIS). $M = 5.0$ (Strasbourg).
Jul			
18	eiP e S e ScS	09 16 20 C 24 17 26 10	i 2430. Weak. $\Delta = 6600$ km. ~ 59.4 dg. Mid -Atlantic Ocean. 1° N, 27° W. $H = 09:06:16$ (USCGS). $0^{\circ}8$ N, $27^{\circ}0$ W, $H = 09:06:17$ (BCIS). $M = 6\frac{1}{2}$ (Pasadena), $6\frac{3}{4}$ (Berkeley).
Aug			
8	e P eiS	20 58 46 C 21 00 28	e 0025. Weak. $\Delta = 1010$ km. ~ 9.1 dg. Italy. $42^{\circ}6$ N, $13^{\circ}5$ E, $H = 20:56:28.5$ (Rome). $42^{\circ}5$ N, $13^{\circ}4$ E, $H = 20:56:30$ (BCIS).
12	e P i(PP) e(S) ei(SS)	18 35 22 C 37 36 57 37 15	Very faint record. The recording pen were thrown off after the on- set of shear waves. $\Delta = 880$ km. $\sim$ 7.9 dg. Turkey. $40^{\circ}9$ N, $33^{\circ}2$ E, $H = 18:33:26$ (BCIS). $M = 6\frac{3}{4}$ (Pasadena), $6\frac{1}{4}$ (Strasbourg).

<u>Date</u>	<u>Phase</u>	<u>Time</u>	<u>Additional Readings and Remarks</u>
Aug 16	e P	23 58 26 D	Very weak. $\Delta = 3380$ km. ~ 30.4 dg. South of Persia. $28^{\circ}2' N$, $57^{\circ}3' E$, $H=23:52:08$ (BCIS). $M=5\frac{1}{2}-5\frac{3}{4}$ (Praha), $5\frac{3}{4}$ (Strasbourg).
Sep 1	e P e S	06 58 23 07 00 03	ei 0029. Very weak. $\Delta = 1060$ km. $\sim$ 9.5 dg. Italy. $43^{\circ}14.5' N$, $13^{\circ}35' E$. $H=06:56:01.7$ (Rome). $43^{\circ}0' N$, $13^{\circ}2' E$, $H=06:56:04$ (BCIS). $M=5.4$.
17	e(P)	21 00 22	Traces. $\Delta = 9160$ km. ~ 82.5 dg. $1^{\circ}8' S$, $102^{\circ}3' E$, $H=20:48:06$ (BCIS).
24	e(Pn) e(Pg)	03 30 51.0 31 08.0	e 3220, e 3247. $\Delta = (550 \text{ km.}) \sim (5.0$ dg.). $42^{\circ}00' N$, $21^{\circ}26' E$ (Beograd). $42^{\circ}\frac{1}{4}' N$, $21^{\circ}\frac{1}{2}' E$, $H=03:29:38$ (BCIS).
Oct 14	e P eiP	09 42 33 C 34 D	Very weak. $\Delta = 9980$ km. ~ 90 dg. Ja- va Sea. $H=09:29:39$ (USCGS). $8^{\circ}S$, $107^{\circ}E$, $H=09:29:37$ (BCIS).
18	e P e S	08 38 44 48 57	Very weak. $\Delta = 9200$ km. ~ 82.8 dg. Near south coast of Hokkaido, Japan. $42^{\circ}N$, $142^{\circ}E$, $H=08:26:25$, $h=100$ km. (USCGS). $41^{\circ}9' N$, $142^{\circ}2' E$, $H=08:26:$ 24 , $h=60$ km. (BCIS). $M=6\frac{1}{4}$ (Pasade- na, Rome).
21	e P ei(SKS)	21 46 33 56 56	ei 4634, e 4943, e 5625. Weak. $\Delta = (9160 \text{ km.}) \sim (82.5 \text{ dg.})$. Formosa. $23^{\circ}4' N$, $121^{\circ}9' E$, $H=21:34:13$ (BCIS). $24^{\circ}N$, $122^{\circ}E$, $H=21:34:13$ (USCGS). $M=6\frac{3}{4}$ (Pasadena), 7.3 (Strasbourg).
22	e P e(S)	03 41 47 52 02	e 4528, e 5705. Very weak. $\Delta = 9080$ km. ~ 81.8 dg. Off the east coast of Formosa. $24^{\circ}N$, $122^{\circ}E$, $H=03:29:$ 26 (USCGS). $23^{\circ}4' N$, $121^{\circ}9' E$, $H=03:$ $29:26$ (BCIS). $M=7.6$ (Strasbourg), 7 (Pasadena), $6\frac{1}{2}$ (Berkeley).

Date	Phase	Time	Additional Readings and Remarks
Oct 22	e P	05 55 21	ei 5527. Very weak. $\Delta = 9080$ km. ~ 81.8 dg. Formosa. Aftershock. $M = 6\frac{1}{4} - 6\frac{1}{2}$ (Pasadena), 7.2 (Strasbourg). H=05:43:01 (USCGS).
Nov 2	e P	21 59 51	Very weak. $\Delta = 2030$ km. ~18.3 dg. Caucasia. $41^{\circ}5' N$, $47^{\circ}0' E$, H=21: 55:31 (BCIS).
4	e PP	11 26 36	e 2641. Very weak. $\Delta = 10150$ km. ~ 91.4 dg. Samar Island, Philippines. $11^{\circ}\frac{1}{2}' N$, $125^{\circ} E$, H=11:09:41 (USCGS). $11^{\circ}8' N$, $125^{\circ}1' E$, H=11:09:42 (BCIS).
6	e P eiSKS	16 52 40 D 17 03 04	e? 5239, ei 5241, e 0301, ei 0316, ei 0407. $\Delta = 9290$ km. ~83.6 dg. Kurile Islands. $47^{\circ} N$, $154^{\circ} E$, H= 16:40:06 (USCGS). $47^{\circ}6' N$, $153^{\circ}6' E$, H=16:40:07 (BCIS). $M = 7 - 7\frac{1}{4}$ (Pasa- dena), $7\frac{1}{4}$ (Strasbourg).
6	e P	19 03 01	e? 0257. Very weak. Aftershock. H=18:50:27 (USCGS).
12	e P	08 22 00	ei 2203. Very weak. $\Delta = 9310$ km. ~ 83.8 dg. Kurile Islands. $47^{\circ} N$, $154^{\circ} E$, H=08:09:26 (USCGS). $47^{\circ}7' N$, $154^{\circ}0' E$, H=08:09:28 (BCIS). $M = 6\frac{1}{2} -$ $6\frac{3}{4}$ (Pasadena), $6\frac{3}{4}$ (strasbourg).
18	e P	09 36 10	Very weak. $\Delta = 5900$ km. ~53.1 dg. Eastern Tibet. H=09:26:33 (USCGS). $31^{\circ}5' N$, $89^{\circ}5' E$, H=09:26:50 (Poona).
18	e P eiS	09 45 20 D 53 01	ei 4522 C, i 5306, i 5648. $\Delta = 6170$ km. ~55.5 dg. Eastern Tibet. $31^{\circ} N$, $90^{\circ}\frac{1}{2}' E$, H=09:35:43 (USCGS). $30^{\circ}3'$ N , $91^{\circ}7' E$, H=09:35:44 (BCIS). $M = 7\frac{1}{2}$ (Pasadena), $8\frac{1}{4}$ (Strasbourg).
24	e P eiS	18 59 34 19 09 47	$\Delta = 9090$ km. ~81.8 dg. Near east coast of Formosa. H=18:47:13 (USCGS). $22^{\circ}5' N$, $121^{\circ}5' E$, H=18:47:12 (Poona). $M = 6\frac{1}{4}$ (Pasadena), $7\frac{1}{4}$ (Praha).

<u>Date</u>	<u>Phase</u>	<u>Time</u>	<u>Additional Readings and Remarks</u>
Nov 24	e P e S	19 02 40 12 51	$\Delta = 9080$ km. ~ 81.7 dg. Near east coast of Formosa. 23°N , $121^{\circ}\frac{1}{2}\text{E}$, $H=18:50:19$ (USCGS). $23^{\circ}5$ N, $121^{\circ}5$ E, $H=18:50:20$ (BCIS). $M=7\frac{1}{4}$ (Pasadena), $7\frac{3}{4}$ (Strasbourg).
Dec 8	i P ipP i(PP) e(S) isS	04 26 12 D 55 29 26 35 51 37 17	i 2624, i 2628, ei 2909, ei 3610, ei 3625, i 3628, ei 3730. $\Delta = 8650$ km. ~ 78 dg. Indian Ocean, south east of Madagascar. 34°S , $56^{\circ}\frac{1}{2}\text{E}$, $H=04:14:20$, $h=100$ km. (USCGS). $33^{\circ}6$ S, $56^{\circ}7$ E, $H=04:14:30$, $h=200$ km. (BCIS). $M=7\frac{3}{4}$ (Pasadena), $7\frac{1}{4}-7\frac{1}{2}$ (Rome).
12	e S	02 02 51	e 0145, ei 0330. Very weak. $\Delta = 11200$ km. ~ 100.8 dg. Oaxaca, Mexico. 17°N , $94^{\circ}\frac{1}{2}\text{W}$, $H=01:37:34$, $h=100$ km. (USCGS). $16^{\circ}7$ N, $94^{\circ}6$ W, $H=01:37:35$, $h=100$ km. (BCIS).
28	eiSKS eiPS	09 45 15 47 58	Very weak. $\Delta = 11420$ km. ~ 102.8 dg. Guerrero, Mexico. 17°N , $98^{\circ}\frac{1}{2}\text{W}$, $H=09:20:25$ (USCGS). $17^{\circ}4$ N, $98^{\circ}4$ W, $H=09:20:27$ (BCIS).

B. SHORT DISTANCE SHOCKS

<u>Date</u>	<u>Phase</u>	<u>Time</u>	<u>Additional Readings and Remarks</u>
Jan			
8	e Pn e Sg	23 49 21.3 50 09.2	Weak. $\Delta = 315$ km. ~ 2.8 dg. Fore-shock?
9	e Pg eiSb	00 28 34.1 06.8	i 2817, i 2842. $\Delta = 285$ km. ~ 2.8 dg. Near western coast of Leukas. $38^{\circ}7' N$, $20^{\circ}4' E$, $H=00:27:57$ (BCIS). $H=00:27:55$ (USCGS). $M=4\frac{3}{4}$ (Praha). Felt to Ithaca IV+ and Leukas IV.
9	e Pn e Sg	03 10 17.3 11 04.7	Weak. $\Delta = 315$ km. ~ 2.8 dg. After-shock. Felt to Ithaca IV.
9	i Pn e Sg	16 50 11.0 (57)	i 5017. Weak. $\Delta = 305$ km. ~ 2.8 dg. Aftershock.
10	e Pn e Sg	16 22 12.6 57.9	Very weak. $\Delta = 300$ km. ~ 2.7 dg. Aftershock.
11	eiPg i Sn e Sg	03 54 58.9 55 16.3 18.9	D Weak. $\Delta = 160$ km. ~ 1.4 dg.
13	e Pg e Sn	01 55 38.0 56 02.2	Very weak. $\Delta = 285$ km. ~ 2.6 dg. Cyclades Islands region. $36^{\circ}N$, $26^{\circ}E$, $H=01:54.8$ (BCIS).
14	e Pn eiSg	00 19 42.8 20 03.9	Strong microseisms obscure impulses. $\Delta = 160$ km. ~ 1.4 dg. Aftershock.
16	eiPb e(Sb)	12 36 50.8 27.4	$\Delta = 285$ km. ~ 2.7 dg. Near southwestern coast of Cephallonia. $38^{\circ}1' N$, $20^{\circ}\frac{1}{4}' E$, $H=12:36:05$ (BCIS). $M=4\frac{1}{2}-4\frac{3}{4}$ (Praha). Felt at Asprogherakas IV.

<u>Date</u>	<u>Phase</u>	<u>Time</u>	<u>Additional Readings and Remarks</u>
Jan 21		18 58 -	Lack of time marks. $\Delta=115$ km. ~ 1.0 dg. Near northeast coast of the Island Euboea 39°N , $23^{\circ}\frac{1}{4}\text{E}$, $H=18:51.2$ (BCIS). Felt to Euboea (Aedipsos, Vasilika V, Kymi IV) and to the provinces of Lokris (Livantes V, Martinon IV) and of Volos (Argalasti V, Platanos, An- chialos IV).
22		11 (10) -	Lack of time marks. Aftershock. Felt to Euboea (Vasilika IV) and to the region of Lokris (Livana- tes III).
Feb. 4	i Pn i Sn	14 49 24.2 D 38.8	Weak. $\Delta = 140$ km. ~1.3 dg.
8	e Pn i Sn	05 37 12.8 C 33.5	Very weak. $\Delta = 185$ km. ~1.7 dg.
9	i Pn i Sg	18 56 04.4 D 22.7	$\Delta = 145$ km. ~1.3 dg. Felt to the province of Kalavryta (Kalavryta IV).
12	i Pg i Sb	08 25 22.9 51.3	$\Delta = 250$ km. ~2.2 dg. Near western coast of Acarnania. $38^{\circ}\frac{3}{4}\text{N}$, 21°E , $H=08:24.8$ (BCIS). Felt at Amphilo- chia V, Agrinion IV ⁺ , Leukas IV, Astakos III.
13	e Pg i Sn	04 52 36.0 53 04.8	Weak. Pg in time mark. $\Delta = 370$ km. ~3.3 dg. Asia Minor (BCIS).
13	e(Pg) e Sn	20 50 49.1 51 08.2	Weak. $\Delta = 190$ km. ~1.7 dg.
15	e Pg e Sg	17 22 23.2 35.9	Very weak. $\Delta = 100$ km. ~0.9 dg.
15	e(Pg) e Sn	21 27 08.8 35.8	Very weak. $\Delta = 330$ km. ~3.0 dg. Foreshock?

<u>Date</u>	<u>Phase</u>	<u>Time</u>	<u>Additional Readings and Remarks</u>
Feb			
15	e(Pg) e Sn	22 50 02.6 28.0	Weak. $\Delta = 305$ km. ~ 2.7 dg.
16	e(Pg) i Sn	18 32 56.0 33 22.8	Weak. $\Delta = 325$ km. ~ 2.9 dg. Asia Minor. (BCIS).
17	ei(Pg) i Sn	09 38 22.6 49.9	ei 3833. Weak. $\Delta = 335$ km. ~ 3.0 dg. Aftershock?
18	e Pg i Sn	02 59 25.7 51.6	i 5939. Very weak. $\Delta = 315$ km. ~ 2.8 dg. Aftershock.
21	i Pn i Sn	07 22 15.0 48.8	Weak. $\Delta = 325$ km. ~ 2.9 dg. After- shock.
25	e Pg e Sg	21 31 01.2 10.3	Very weak. $\Delta = 75$ km. ~ 0.7 dg.
Mar			
2	e Pn i Sn	09 48 40.1 49 14.8	Weak. $\Delta = 325$ km. ~ 2.9 dg. After- shock.
4	e Pn e Sg	14 04 53.1 05 25.5	Very weak. $\Delta = 225$ km. ~ 2.0 dg. Felt to the Island Chios (Chios) IV).
5	e Pg e Sg	05 15 32.4 39.4	Very weak. $\Delta = 60$ km. ~ 0.5 dg.
6	e Pg e Sg	05 22 00.8 13.2	Very weak. $\Delta = 100$ km. ~ 0.9 dg.
7	i Pg i Sn	14 13 01.4 17.6	Weak. $\Delta = 137$ km. ~ 1.2 dg.
10	e(Pn) e Sg	23 07 00.6 12.0	Very weak. $\Delta = 105$ km. ~ 0.9 dg.
11	e(Pn) i Sg	11 43(57.3) 44 06.3	Very weak. P in time mark. $\Delta = 87$ km. ~ 0.8 dg.
13	eiPg i Sn	11 11 10.5 29.7	Very weak. $\Delta = 180$ km. ~ 1.6 dg.

<u>Date</u>	<u>Phase</u>	<u>Time</u>	<u>Additional Readings and Remarks</u>
Mar 14	e (P)	09 30 03.0	Traces. Felt to the island Scope- los.
14	e (P)	18 47 44.0	Traces. Felt to the island Scopelos.
15	e(Pn) e(Sg)	06 13 43.0 14 28.0	Very weak. $\Delta = 295$ km. ~ 2.7 dg.
15	i Pg i Sg	22 10 50.5 11 05.0	Weak. $\Delta = 117$ km. ~ 1.1 dg.
21	ei Pn e (Pb) i Sn	13 07 41.6 47.6 23.7	i 0813, i 0827. Weak. $\Delta = 410$ km. $\sim$ 3.7 dg. Off southern coast of the island Crete. H=13:06.8 (BCIS).
24	ei Pg e (Sg)	21 44 43.7 51.2	Very weak. $\Delta = 60$ km. ~ 0.5 dg.
28	i Pn i Sn	03 12 57.7 13 14.5	Very weak. $\Delta = 142$ km. ~ 1.3 dg.
28	eiPg eiSg	14 18 26.8 39.7	Very weak. $\Delta = 102$ km. ~ 0.9 dg
29	eiPg i Sg	19 21 08.5 23.2	Very weak. $\Delta = 120$ km. ~ 1.1 dg.
30	e Pg i(Sg)	02 00 16.3 46.5	Weak. $\Delta = 235$ km. ~ 2.1 dg. Felt to the island Chios (Chios III+).
Apr 4	eiPg i Sg	01 10 47.7 11 06.5	Weak. $\Delta = 148$ km. ~ 1.3 dg. 37° N, $22^{\circ}6$ E, H=01:10:18 (BCIS). Southern Peloponnesus. Felt to Laconia (Ma- goula IV+, Leonidion IV) and to Messinia (Charokopio IV).
5	eiPn e Sn	03 16 12.9 48.6	i 1702. Weak. $\Delta = 310$ km. ~ 2.8 dg. Ionian Sea. 38° N, 19° E, H=03:15:30 (USCGS). $37^{\circ}5$ N, $20^{\circ}2$ E, H=03:15: 30, h=100 km. (BCIS). Felt to the province of Acarnania (Astakos IV), to Elis (Pyrgos III+) and on Itha- ca III. M=5 (Strasbourg), 5-5 $\frac{1}{2}$ (Praha).

<u>Date</u>	<u>Phase</u>	<u>Time</u>	<u>Additional Readings and Remarks</u>
Apr 8	eiPn i Sg	03 44 11.3 31.3	Weak $\Delta = 154$ km. ~ 1.4 dg. After-shock. Southern Peloponnesus. Felt to Laconia (Magoula IV) and Arcadia (Leonidion III+).
15	i Pg i Sg	02 28 14.6 42.8	Very weak. $\Delta = 200$ km. ~ 1.8 dg.
17	i Pg i Sg	08 36 56.3 D 37 10.0	Weak. $\Delta = 110$ km. ~ 1.0 dg.
20	i(Pn) i Sg	02 43 42.5 C 58.0	$\Delta = 130$ km. $\sim 1^{\circ}2$. Foreshock. Felt to the provinces of Phtiotis (Atalanti IV, Martinon III) and Volos (Argalasti IV). H=02:43:18 (BCIS).
20	i Pg i Sg	02 53 18.1 34.4	Weak. $\Delta = 138$ km. ~ 1.2 dg. H=02:52.8 (BCIS). Foreshock. Felt to the Island Euboea (Kymi IV+) and to the provinces of Volos (Argalasti IV+) and Phtiotis (Atalanti IV, Martinon III+).
20	e Pg i Sg	04 15 28.4 44.7	Weak. $\Delta = 135$ km. ~ 1.2 dg. $39^{\circ}2$ N, $23^{\circ}6$ E, H=04:15:02 (BCIS). Felt to the Island Euboea (Kymi IV+) and to the provinces of Volos (Argalasti IV) and of Phtiotis (Atalanti IV, Livanates IV+, Martinon III+).
21	e Pg e Sn	14 25 34.9 50.9	Very weak. $\Delta = 132$ km. ~ 1.2 dg. Aftershock.
23	e Pg e Sg	14 14 22.8 43.6	Very weak. $\Delta = 162$ km. ~ 1.5 dg. Foreshock? Microseisms obscure impulses.
24	e Pg i Sn	03 24 04.6 20.7	Very weak. $\Delta = 135$ km. ~ 1.2 dg. Aftershock?

<u>Date</u>	<u>Phase</u>	<u>Time</u>	<u>Additional Readings and Remarks</u>
Apr 25	e Pn i Sg	23 47 48.0 48 09.2	Very weak. $\Delta=162$ km. ~ 1.5 dg. Foreshock. Near northern coast of Peloponnesus. Felt at Patras IV.
27	e Pn e Sg	03 11 43.1 12 01.8	Very weak. $\Delta=162$ km. ~ 1.5 dg. Fores hock.
27	i Pg e Sg	05 27 18.3 29.5	Very weak. $\Delta=90$ km. ~ 0.8 dg.
27	e(Pb) e Sg	05 36 03.5 24.3	Very weak. $\Delta=162$ km. ~ 1.5 dg. Foreshock. Felt at Patras.
27	i Pn e Sg	20 17 27.5 47.9	Weak. $\Delta=155$ km. ~ 1.4 dg. Near northern coast of Peloponnesus. 38°N , 22°E , $H=20:17.0$ (BCIS).
28	i Pn e Sg	22 37 25.4 47.2	Weak. $\Delta=165$ km. ~ 1.5 dg. After- shock? 38°N , 22°E , $H=22:37.0$ (BCIS).
29	e Pn e Sn	23 37 49.8 38 12.0	Very weak. $\Delta=200$ km. ~ 1.8 dg. $38^{\circ}5$ N, 26°E , $H=23:37.0$ (BCIS). Felt to the Island Chios (Chios IV).
30	e Pg e Sn	01 34 08.6 28.8	Very weak. $\Delta=205$ km. ~ 1.8 dg. Aftershock. Felt to Chios IV.
30	i Pg i Sg	12 32 50.7 33 02.5	Very weak. $\Delta=94$ km. ~ 0.9 dg.
May 1	e Pg e Sg	02 57 22.0 37.7	Very weak. $\Delta=128$ km. ~ 1.2 dg.
1	e Pg e Sn	05 57 48.9 58 05.1	Very weak. $\Delta=133$ km. ~ 1.2 dg. Aftershock?

<u>Date</u>	<u>Phase</u>	<u>Time</u>	<u>Additional Readings and Remarks</u>
May			
8	i Pn i Sg	19 10 03.0 D 36.0	e 1006. $\Delta=228$ km. ~ 2.1 dg. Pin- dus. $39^{\circ}5$ N, 19° E, (Probably 22° E), (BCIS). Felt to the region of Kar- ditsa (Hellinopyrgos, Karditsa V+), Arta (Lipsos V), Acarnania (Astakos IV) and Leukas (Leukas IV).
9	e(Pb) i Sg	11 05 10.7 41.3	e 0539. Very weak. $\Delta=228$ km. $\sim$ 2.1 dg. Aftershock. Felt to the region of Acarnania (Astakos V).
10	e Pg e Sg	15 30 21.5 41.3	Very weak. $\Delta=156$ km. ~ 1.4 dg.
12	e Pn e Sg	09 16 31.8 17 11.3	i 1640. Weak. $\Delta=266$ km. ~ 2.4 dg.
18	i Pg e Sg	12 17 56.6 D 18 21.5	$\Delta=195$ km. ~ 1.8 dg. $38^{\circ}5$ N, $21^{\circ}5$ E, $H=12:17:26$ (BCIS). Felt at Patras IV+ and Astakos IV.
22	e Pg e Sg	02 17 50.2 18 16.4	Very weak. $\Delta=205$ km. ~ 1.8 dg.
24	i Pn i Sg	17 37 03.4 30.9	i 3735. Weak. $\Delta=195$ km. ~ 1.8 dg. $H=17:36.6$ (BCIS). Felt at Patras IV.
26	e Pn e(Sn)	11 08 05.4 41.0	Weak. $\Delta=275$ km. ~ 2.5 dg. $H=11:$ $07:23$ (USCGS). $38^{\circ}3$ N, $20^{\circ}8$ E, $H=11:07:23$, $h=100$ km. (BCIS). Felt to the Island Ithaca (Va- thy IV).
30	e Pg e Sg	03 19 45.4 20 07.6	Very weak. $\Delta=175$ km. ~ 1.6 dg. Felt at Patras IV.
30	e Pg e Sg	05 11 15.8 28.4	Very weak. $\Delta=100$ km. ~ 0.9 dg.

<u>Date</u>	<u>Phase</u>	<u>Time</u>	<u>Additional Readings and Remarks</u>
May 30	i Pn e(Sb)	13 44 30.9 D 45 10.3	$\Delta = 290$ km. ~ 2.6 dg. Off Western coast of the Island Crete. $35^{\circ}5$ N, $22^{\circ}75$ E, H=13:43:51 (BCIS).
31	e Pg e Sn	13 43 33.3 52.6	Very weak. $\Delta = 195$ km. ~ 1.8 dg.
Jun 6	i Pg e Sg	22 04 33.5 C 52.6	Very weak. $\Delta = 150$ km. ~ 1.4 dg.
9	e Pn i Sg	03 37 39.7 51.7	i 3754. $\Delta = 110$ km. ~ 1.0 dg. Weak.
14	e(Pn) e Sg	15 58 32.2 47.0	Very weak. $\Delta = 123$ km. ~ 1.1 dg. Felt to the region of Arcadia (Leonidi-on V).
16	e Pg e Sg	00 57 44.5 58 05.2	Very weak. $\Delta = 163$ km. ~ 1.5 dg.
16	e Pg e Sg	01 07 33.1 53.7	Very weak. $\Delta = 160$ km. ~ 1.4 dg. Aftershock?
18	ei Pg e Sg	05 26 49.8 27 15.5	Very weak. $\Delta = 200$ km. ~ 1.8 dg.
21	e Pn e Sn	05 23 46.9 24 04.5	Very weak. $\Delta = 148$ km. ~ 1.3 dg. Foreshock. Near northern coast of Peloponnesus. Felt at Aeghion.
23	e Pg e Sg	04 42 30.3 49.1	Very weak. $\Delta = 148$ km. ~ 1.3 dg. Foreshock.
23	i Pg i Sn	08 25 31.7 D 48.7	Weak. Off Northern coast Peloponnesus. Felt to the province of Phokis (Amphissa V).
Jul 1	ei Pn e Sg	21 01 04.9 22.0	Very weak. $\Delta = 137$ km. ~ 1.2 dg.

<u>Date</u>	<u>Phase</u>	<u>Time</u>	<u>Additional Readings and Remarks</u>
Jul			
3	e(Pb) e Sn	18 22 01.9 17.8	Very weak. $\Delta=137$ km. ~ 1.2 dg.
3	e Pn e Sg	19 30 04.1 31 26.4	Very weak. $\Delta=167$ km. ~ 1.5 dg.
6	e Pg e Sg	19 40 23.6 31.0	Weak. $\Delta=60$ km. ~ 0.5 dg.
8	e Pn e Sg	01 45 56.0 46 10.8	Very weak. $\Delta=125$ km. ~ 1.1 dg.
8	e Pg e Sg	12 40 00.7 D 24.9	Very weak. $\Delta=185$ km. ~ 1.7 dg. Felt at Patras IV+.
10	e Pg e Sg	12 10 03.1 10.4	Very weak. $\Delta=60$ km. ~ 0.5 dg.
13	i Pg i Sg	04 00 55.4 D 01 08.2	Very weak. $\Delta=103$ km. ~ 0.9 dg.
17.	e Pg e(Sg)	09 19 29.0 20 00.7	Very weak. $\Delta=245$ km. ~ 2.2 dg.
17	e Pg e(Sg)	13 08 54.3 09 26.0	Very weak. $\Delta=245$ km. ~ 2.2 dg. Aftershock.
22	e Pn e Sg	10 26 57.6 27 11.4	Very weak. $\Delta=119$ km. ~ 1.1 dg.
26	e Pg e Sg	02 34 19.8 50.4	Very weak. $\Delta=240$ km. ~ 2.2 dg.
26	e Pn e Sg	11 16(01.0) 15.8	i 1606. Pin time mark. Very weak. $\Delta=125$ km. ~ 1.1 dg.
26	e Pg e Sb	22 51 25.3 53.2	Very weak. $\Delta=240$ km. ~ 2.2 dg.
27	e Pn e Sn	20 10 27.3 53.1	Very weak. $\Delta=240$ km. ~ 2.2 dg.

<u>Date</u>	<u>Phase</u>	<u>Time</u>	<u>Additional Readings and Remarks</u>
Jul 28	ei Pn i Sg	16 58 38.6 52.4	$\Delta = 117$ km. ~ 1.1 dg. $M_E = 20.6 \mu$, $T_E = 2.6$ sec. 38° N, $24^\circ \frac{1}{2}$ E, (Probably 39° N, $23^\circ \frac{1}{2}$ E), $H = 16:58.3$ (BCIS). Felt to the northern region of the Island Euboea (Papades VII+, Kera- sia VI, Vasilika VI-, Agdinae V+, Haghia Anna V-, Mileae, Artemision IV+, Limni IV, Oreoe III) and to the island Skopelos III. Not felt at Psachna.
28	i Pn e Sg	17 06 40.3 54.1	Very weak. $\Delta = 117$ km. ~ 1.1 dg. Aftershock. Felt at Kerasia and Agdinae V.
28	e Pg e Sg	17 17 45.3 59.9	e 1801. Very weak. $\Delta = 117$ km. ~ 1.1 dg. Aftershock. Felt at Kerasia V+ and Agdinae V-.
28	i Pn e Sg	17 28 12.1 D 26.0	Very weak. $\Delta = 117$ km. ~ 1.1 dg. Aftershock. Felt at Kerasia V+ and Agdinae IV+.
28	i Pn e(Sg)	19 49 57.9 C 50 12.2	Very weak. $\Delta = 117$ km. ~ 1.1 dg. Aftershock. Felt at Agdinae and Vlachia IV.
29	i Pg eiSn	08 26 56.4 27 11.8	Very weak. $\Delta = 122$ km. ~ 1.1 dg. Aftershock. Felt at Mileae IV+.
30	i Pg i Sn	14 00 00.4 D 15.9	$\Delta = 122$ km. ~ 1.1 dg. $M_E = 21.5 \mu$, $T_E = 2.2$ sec. Aftershock. Felt at Agdinae V+ and Mileae IV+.
30	e Pn e Sg	18 18 15.8 29.8	Very weak. $\Delta = 117$ km. ~ 1.1 dg. Aftershock.
30	i Pn e Sg	18 27 29.6 47.8	Very weak. $\Delta = 142$ km. ~ 1.3 dg.

<u>Date</u>	<u>Phase</u>	<u>Time</u>	<u>Additional Readings and Remarks</u>
Jul			
31	i Pg e Sg	02 36 08.6 25.4	Very weak. $\Delta=142$ km. ~ 1.3 dg. Aftershock.
31	i Pn i Sg	02 42 03.6 16.8	$\Delta = 115$ km. ~ 1.1 dg.
Aug			
1	i Pg e Pn	06 26 22.4 D 23.2	Weak. S in time mark. $\Delta=120$ km. ~ 1.1 dg. $M_E=25\mu$, $T_E=4.3$ sec. Felt to the northern region of the Island Euboea (Agdinae VIII-?). Aftershock.
1	i Pn e Sg	06 37 54.3 D 38 08.1	e 3810. $\Delta=117$ km. ~ 1.1 dg. $M_E=15\mu$, $T_E=4.1$ sec, Aftershock. Felt at Agdinae VII+ and Mileae IV+.
2	i Pn e Sn eiSb	09 04 05.5 D 23.0 24.1	Very weak. $\Delta=150$ km. ~ 1.3 dg.
14	eiPg e Sg	18 37 29.0 D 48.0	Very weak. $\Delta=150$ km. ~ 1.3 dg. Aftershock.
14	e Pg ei Sn	18 50 06.9 22.3	$\Delta=120$ km. ~ 1.1 dg. $M_E=23\mu$, $T_E=9.5$ sec. Aftershock. Felt to the northern region of the Island Euboea (Papades VI-).
17	i Pn i Sn	22 31 28.8 D 44.6	i 3130. Very weak. $\Delta=130$ km. ~ 1.2 dg. Aftershock?
20	i Pn i Sn	22 52 38.0 C 53 24.0	i 5319. Weak. $\Delta=452$ km. ~ 4.1 dg. Off southeastern coast of the Island Crete. $34^{\circ}6$ N, $26^{\circ}2$ E, $H=22:51:25$ (BCIS). Probably deeper than normal.
21	e Pn eiSn	12 28 44.0 29 36.0	Very weak. $\Delta=452$ km. ~ 4.1 dg. Aftershock.

<u>Date</u>	<u>Phase</u>	<u>Time</u>	<u>Additional Readings and Remarks</u>
Aug			
22	e Pn	14 15 46.0	Very weak. $\Delta = 350$ km. ~ 3.2 dg.
	i Pg	55.0	Epirus. $39^{\circ}\frac{3}{4}$ N, $20^{\circ}\frac{1}{4}$ E, H=14:14:48.
	eiSg	16 40.0	
24	i Pn	10 28 02 C	i 2807, ei 2827. $\Delta = 270$ km. ~ 2.4 dg.
	i Sn	33	$M_N = 75\mu$, $T_N = 3.1$ sec., $M_E = 62\mu$, $T_E =$ 3.1 sec. Ionian Sea. 37° N, 23° E, H=10:27:34, h=100 km. (USCGS). $37^{\circ}2$ N, $20^{\circ}9$ E, H=10:27:29, h=100 km. (BCIS). Felt to the southwestern region of Peloponnesus, mainly to the provinces of Pylia (Pyla VIII, Koryphasion, Sgrapa, Iklaena VII+, Chatzi VI+, Pylos V), Triphylia (Floka VII+, Chora VI) and Kalamae (Arios IV+, Kalamae IV, Methoni IV-).
26	e (Pn)	14 26 34.0	Very weak. $\Delta = (335 \text{ km.}) \sim (3.0 \text{ dg.})$
	e (Sg)	27 25.0	
27	e(P)	19 28 42.0	e 2907. H=19:27.3 (BCIS).
31	e(P)	07 00 53.0	Very weak. Foreshock?
31	e(P)	11 15 42.0	Very weak. Foreshock?
31	e Pg	12 30 19.1 D	i 3027, i 3103. $\Delta = 280$ km. ~ 2.5 dg.
	i Sb	51.6	Off southern coast of Peloponnesus. $36^{\circ}\frac{1}{2}$ N, 23° E, H=12:29:42 (USCGS). $35^{\circ}7$ N, $22^{\circ}4$ E, H=12:29:35 (BCIS). Felt to the province of Triphylia (Chora III+).
31	e Pn	13 05 42.6 D	ei 0610, i 0617. Very weak. $\Delta =$
	i Pb	45.2	275 km. ~ 2.5 dg. Aftershock?
	ei Sn	11.6	
	i Sb	19.2	
31	e Pn	15 05 57.7	e 0632. Very weak. $\Delta = 275$ km. ~ 2.5
	e Pb	06 00.7	dg. Aftershock.
	ei Sg	38.5	
31	e (P)	15 22 22.9	i 2231, ei 2233. Very weak. Aftershock?
31	e (P)	19 37 56.6	e 3804. Very weak. Aftershock?

<u>Date</u>	<u>Phase</u>	<u>Time</u>	<u>Additional Readings and Remarks</u>
Aug			
31	i Pn i Sg	20 19 23.8 55.2	i 1929, i 2000, i 2005. $\Delta=220$ km. ~ 2.0 dg. $M_N=58\mu$, $T_N=2.1$ sec., $M_E=59\mu$, $T_E=2.1$ sec. Near Southern coast of Peloponnesus. $36^{\circ}1$ N, $22^{\circ}9$ E, H=20:18:35 (BCIS).
31	e Pg e Sg	21 34 33.7 35 05.4	e 3516. Very weak. $\Delta=245$ km. ~ 2.2 dg. Aftershock.
Sep			
1	e Pn e Sn e Sg	03 34 53.0 35 20.0 30.0	Very weak. $\Delta=250$ km. ~ 2.3 dg.
1	e i Pg i Sb i Sg	23 53 40.7 42.8 21.3 27.1	i 5322, i 5433, ei 5438. $\Delta=340$ km. ~ 3.1 dg. Off southwestern coast of the Island Crete. 35° N, 23° E, H=23:52:48 (BCIS).
2	e Pg e Sg	17 34 54.0 35 02.0	Very weak. $\Delta=65$ km. ~ 0.6 dg. Fore-shock.
2	e Pg ei Sg	17 50 28.5 35.8	$M_E=34\mu$, $T_E=1.4$ sec. $\Delta=57$ km. ~ 0.5 dg.
5	e Pg e Sg	22 40 41.0 50.0	Very weak. $\Delta=70$ km. ~ 0.6 dg. Aftershock.
9	i Pg eiSg	08 14 33.0 C 40.9	Weak. $\Delta=64$ km. ~ 0.6 dg. After-shock.
13	eiPg e Sg	12 56 34.2 C 44.0	$\Delta=78$ km. ~ 0.7 dg. Aftershock?
15	e Pn i Sb	22 53 10.0 54 15.0	ei 5325, i 5349, i 5425, $M_E=37\mu$, $T_E=4.3$ sec., $M_N=61\mu$, $T_N=4.1$ sec. $\Delta=465$ km. ~ 4.2 dg. Turkey, $40^{\circ}21$ N, $27^{\circ}58$ E (Istanbul), $40^{\circ}3$ N, $28^{\circ}1$ E, H=22:52:07 (BCIS).

<u>Date</u>	<u>Phase</u>	<u>Time</u>	<u>Additional Readings and Remarks</u>
Sep 19	e(Pn) ei(Sn)	05 31 (50.0) 16.4	P in time mark. Very weak. $\Delta = (245 \text{ km.}) \sim (2.2 \text{ dg.})$.
20	ei Pg ei Sg	08 18 18.4 C 28.3	ei 1825. Weak. $\Delta = 80 \text{ km.} \sim 0.7 \text{ dg.}$
20	ei Pg ei Sg	08 20 02.3 C 13.3	e 2010. Weak. $\Delta = 88 \text{ km.} \sim 0.8 \text{ dg.}$ Aftershock.
21	e (Pg) e (Sg)	17 56 06.0 17.0	Traces. $\Delta = (90 \text{ km.}) \sim (0.8 \text{ dg.})$. Aftershock.
22	e (Pg) e (Sg)	23 04 43.0 54.0	Traces. $\Delta = (90 \text{ km.}) \sim (0.8 \text{ dg.})$. Aftershock.
26	e Pg ei Sg	12 12 44.5 57.5	Very weak. $\Delta = 105 \text{ km.} \sim 0.9 \text{ dg.}$
27	e Pg e Sg	22 22 24.5 36.5	Very weak. $\Delta = 95 \text{ km.} \sim 0.9 \text{ dg.}$
27	e Pg ei Sn	22 23 26.0 39.8	Very weak. $\Delta = 90 \text{ km.} \sim 0.8 \text{ dg.}$
27	e Pg e Sg	22 24 36.2 47.5	ei 2449. Very weak. $\Delta = 90 \text{ km.} \sim 0.8 \text{ dg.}$
29	e Pn e Sg	16 03 50.6 C 04 00.0	Very weak. $\Delta = 90 \text{ km.} \sim 0.8 \text{ dg.}$
Oct 1	i Pb e Pg eiSn	01 27 42.1 D 47.9 28 21.1	i 2754, i 2800, ei 2849. Weak. $\Delta = 460 \text{ km.} \sim 4.1 \text{ dg.}$ Off south- eastern coast of the Island Crete. 34°6' N, 26°7' E, H=01:26:33 (BCIS). 34°N, 26°E, H=01:26:35 (Rome). H=01:26:36 (USCGS).
1	e Pg ei Sn ei Sb	15 51 44.5 52 01.6 02.7	Very weak. $\Delta = 150 \text{ km.} \sim 1.3 \text{ dg.}$

Date	Phase	Time	Additional Readings and Remarks
Oct			
3	e Pg e Sn	08 33 39.0 34 02.0	e 3400. Very weak. $\Delta = 255$ km. ~ 2.3 dg.
3	e(Pb) e Pg e Sn	12 04 37.0 39.3 05 01.7	Very weak. $\Delta = 255$ km. ~ 2.3 dg.
4	ei Pg i Sg	11 43 25.6 C 33.2	Weak. $\Delta = 60$ km. ~ 0.5 dg.
5	e (Pb) e Pg i Sg	22 01 47.0 51.0 02 37.0	i 0233. Very weak. $\Delta = 355$ km. ~ 3.2 dg.
6	e Pg eiSn	02 22 20.5 37.7	Very weak. $\Delta = 155$ km. ~ 1.4 dg.
6	i Pg i Sn	06 01 34.5 C 58.8	i 0137, i 0139. $\Delta = 280$ km. ~ 2.5 dg. Region of the Island Crete.
7	e Pg i Sg	11 01(42.0) 57.5	Pin time mark. e 0156. Weak. $\Delta = 127$ km. ~ 1.1 dg.
7	eiPg i Pb e Sg	15 29 36.1 D 37.0 48.5	Very weak. $\Delta = 98$ km. ~ 0.9 dg.
11	e Pg e Sg	13 28 56.0 29 37.0	e 2925. Very weak. Beginning doubt- ful due the strong microseisms. $\Delta = (315 \text{ km.}) \sim (2.8 \text{ dg.})$.
12	e Pn e Sg	06 49 59.8 50 13.5	Very weak. $\Delta = 115$ km. ~ 1.0 dg.
12	e(Pb) e Sb e Sg	19 55 23.0 56 02.0 07.0	e 5528, e 5611. Very weak. Be- ginning lost in strong microseisms. $\Delta = (315 \text{ km.}) \sim (2.8 \text{ dg.})$.
13	i Pn i Sg	14 19 50.1 D 20 03.3	Very weak. $\Delta = 112$ km. ~ 1.0 dg.

<u>Date</u>	<u>Phase</u>	<u>Time</u>	<u>Additional Readings and Remarks</u>
Oot			
18	i P	00 40 56.0 C	e 4059. Very weak. Probably in the Aegean Sea.
20	e Pn e Sg	17 55 35.4 51.1	ei 5552. Very weak. $\Delta = 130$ km. ~ 1.2 dg.
21	e Pn i Sg	03 47 59.0 41.0	e 4838. Weak. $\Delta = 280$ km. ~ 2.5 dg. Felt to the Islands Samos (Samos IV-) and Ikaria (Ikaria III+).
21	e Pg e Sn	21 04 17.0 41.0	Very weak. $\Delta = 280$ km. ~ 2.5 dg. After-shock.
22	e Pg i Sg	19 41 38.0 41.8	Very weak. $\Delta = 30$ km. ~ 0.3 dg.
24	e Pg e Sb i Sg	21 10 53.8 34.7 40.6	Weak. $\Delta = 360$ km. ~ 3.2 dg.
25	e Pn e Pg eiSn	04 54 11.4 14.6 35.1	Weak. $\Delta = 215$ km. ~ 1.9 dg. Felt to the Island Ikaria (Ikaria IV).
25	i Pg i Sg	20 13 19.0 C 22.2	Very weak. $\Delta = 30$ km. ~ 0.3 dg.
Nov			
2	e(Pb) eiPg eiSg	11 08 04.6 06.5 41.0	ei 0828, ei 0836. Weak. $\Delta = 265$ km. ~ 2.4 dg.
5	e(Pb) e(Pg)	12 33 23.2 29.8	i 3343. Very weak. $\Delta = (500 \text{ km.}) \sim (4.5 \text{ dg.})$. Foreshock?
5	e Pn e(Pg) e(Sg)	13 45 02.0 17.0 46 22.0	e 4508. e 4557. $\Delta = (500 \text{ km.}) \sim (4.5 \text{ dg.})$. Off southeastern coast of Rhodes island. About 36°N , 29°E , $H=13:43.9$ (BCIS).
6	e Pn ei(Sb) e(Sg)	21 54 06.9 42.2 45.2	Very weak. $\Delta = (260 \text{ km.}) \sim (2.5 \text{ dg.})$.

Date	Phase	Time	Additional Readings and Remarks
Nov 6	e?(Pn) e Pb i Pg ei(Sb) ei Sg	08 41 44.2 46.4 47.9 42 13.4 16.9	e 4211. $\Delta=225$ km. ~ 2.0 dg.
11	ei Pg ei Sg	22 09 29.3 42.0	Very weak. $\Delta=100$ km. ~ 0.9 dg.
13	e Pn i Sb i Sg	09 46 48.3 47 16.2 18.6	e 4653. Weak. $\Delta=210$ km. ~ 1.9 dg.
13	e Pg e(Sb)	10 17 23.5 48.3	Very weak. $\Delta=210$ km. ~ 1.9 dg. Aftershock.
13	e(Pb) i Pg i Sg	11 59 14.8 15.7 40.3	e.5914, i 5933, i 5941. $\Delta=210$ km. ~ 1.9 dg. Aftershock.
14	e(Pn) i Sn	01 51 20.8 43.0	i 5142. Very weak. $\Delta=200$ km. ~ 1.8 dg. Aftershock.
14	e Pg i Sg	03 54 06.7 09.5	Very weak. $\Delta=22$ km. ~ 0.2 dg.
18	i Pn i Sg	20 21 56.6 C 11.8	ei 2210. Weak. $\Delta=128$ km. ~ 1.2 dg. Felt to the province of Parnassis (Amphissa IV+). $38^{\circ}\frac{1}{2}$ N, $22^{\circ}\frac{1}{2}$ E, H=20:21:35 (BCIS).
20	e Pn i Pg e(Sg)	09 12(23.8) 29.7 13 06.5	P in time mark. Weak. $\Delta=(285$ km.) $\sim (2.6$ dg.).
20	e(Pn) ei Sn	09 12 58.1 13 35.7	Weak. $\Delta=(360$ km.) $\sim (3.2$ dg.).
21	e Pn e Pb ei Sg	09 14 53.8 56.9 15 36.0	ei 1455, i 1528. Weak. $\Delta=280$ km. ~ 2.5 dg.
21	e?(Pg) e Sg	10 20 18.8 55.1	Very weak. $\Delta=(280$ km.) $\sim (2.5$ dg.).
22	e Pn ei Sn	10 36 41.1 57.8	Very weak. $\Delta=140$ km. ~ 1.3 dg.

<u>Date</u>	<u>Phase</u>	<u>Time</u>	<u>Additional Readings and Remarks</u>
Nov			
23	e Pn i Pg eiSb eiSg	11 05 38.6 40.7 06 04.5 06.5	ei 0540 D, ei 0602. Weak. Very strong microseisms obscure records somewhat. $\Delta=200$ km. ~ 1.8 dg.
25	e Pn e Sn	18 31 33.7 50.8	Very weak. $\Delta=145$ km. ~ 1.3 dg.
27	e Pg e Sg	11 59 09.4 18.3	Very weak. $\Delta=70$ km. ~ 0.6 dg.
28	e Pn eiSg	05 46 06.7 31.4	Very weak. $\Delta=180$ km. ~ 1.6 dg. Felt at Kalavryta IV-.
29	e (P)	13 23 44.0	Traces. Felt to the region of Arta (Agnanta IV).
30	e Pn i Pg i Sn	00 49 43.0 C 44.9 50 03.3	Weak. $\Delta=180$ km. ~ 1.6 dg. Felt to the region of Messinia (Diavolition IV+, Andritsaena IV) and Arcadia (Dimitzana IV+).
30	e Pn i Pg i Sg	01 54 01.7 03.5 32.1	ei 5433, i 5436. $\Delta=220$ km. ~ 2.0 dg.
Dec			
8	e Pn	21 31 36.0	e? 3131. Very weak. Probably Ionian Islands. H=21:30.5 (BCIS).
13	e Pg e Sn	04 07 57.8 08(22.6)	Very weak. S in time mark. $\Delta=(290$ km.) $\sim (2.6$ dg.). Foreshock?
13	e Pn eiPg i Sn	20 46 36.8 C 41.9 47 05.6	ei 4644, i 4704, i 4715. $\Delta=270$ km. ~ 2.4 dg. $M_E=26_\mu$, $T_E=3.7$ sec., $M_N=26_\mu$, $T_N=5.5$ sec. Near north coast of the Island Lemnos. $40^\circ\frac{1}{4}$ N, 25° E, H=20:46:05 (BCIS). Felt to the Islands Lemnos (Kastron IV+) and Thasos (Thasos IV). Not felt at Alexandroupolis, Kavalla, Hierissos and to Island Skopelos.

<u>Date</u>	<u>Phase</u>	<u>Time</u>	<u>Additional Readings and Remarks</u>
Dec			
14	e Pg eiSg	10 20 57.6 21 10.3	Very weak. $\Delta = 110$ km. ~ 1.0 dg.
14	e Pn e Sn	10 37 32.2 38 00.0	Very weak. $\Delta = 260$ km. ~ 2.3 dg. Aftershock.
15	e Pn i Pg eiSn	20 24 21.9 23.0 C 40.7	Very weak. Strong microseisms. $\Delta = 162$ km. ~ 1.5 dg. Felt at Kala- vryta.
18	e Pg e Sg	12 49 02.8 08.5	$\Delta = 45$ km. ~ 0.4 dg.
19	e Pg e Sb i Sg	06 44 05.6 C 13.7 16.7	$\Delta = 72$ km. ~ 0.6 dg.
19	e Pn e(Pb) e(Sg)	07 05 58.5 59.5 C (24.3)	Very weak. S in time mark. $\Delta = (187$ km.) $\sim (1.7$ dg.).
19	e Pn e Pg e Sb e Sg	08 45 37.7 39.3 C 46 00.5 02.1	i 4541. Very weak. $\Delta = 177$ km. $\sim$ 1.6 dg. Aftershock?
20	i Pg e Sb	19 12 47.1 C 13 18.4	i 1252, i 1313. $\Delta = 270$ km. ~ 2.4 dg. $M_E = 37\mu$, $T_E = 2.8$ sec., $M_N = 64\mu$, $T_N =$ 3,5 sec. Ionian Islands $38^{\circ}\frac{1}{4}$ N, $20^{\circ}\frac{3}{4}$ E, H=19:11:55 (BCIS). Felt to the Islands Cephallonia (Hag. Thekla VI, Lixourion, Assos, As- progherakas V, Argostolion IV+, Valsamata, Pharaklata, Dilinata IV), Zante (Zante V, Katastari IV), (Ithaca V), Leukas (Leukas IV) and to the provinces of Elis (Agouli- nitsa V-, Kalydona IV+, Gastouni IV), Vonitsa (Mytikas V, Astakos IV) and Mesolonghion (Aetolikon IV).

<u>Date</u>	<u>Phase</u>	<u>Time</u>	<u>Additional Readings and Remarks</u>
Dec 27	e Pg e Sb e Sg	16 27 18.1 49.2 53.5	ei 2721, e 2758. $\Delta=270$ km. ~ 2.4 dg. $M_N=16\mu$, $T_N=4.3$ sec., Aftershock. Ionian Islands. H=19:26:26 (BCIS). Felt on Cephallonia (Hag.Thekla V, Lixourion IV+, Valsamata, Dilinata, Argostolion, Asprogherakas, Assos, Pharaklata IV), Zante (Katastari, Zante IV), Leukas (Leukas III) and to the provinces of Elis (Lechaena, Gastouni, Agoulinitza IV), of Voni- tza (Mytikas III) and of Preveza (Preveza II).
27	e Pn e Pg eiSn	20 07 02.0 03.1 20.7	i 0704. Very weak. $\Delta=162$ km. ~ 1.5 dg.
28	e Pg e Sg	12 22 51.4 D 58.8	Weak. $\Delta=60$ km. ~ 0.5 dg.
28	e Pg i Sg	12 36 50.9 C 37 07.0	i 3652. Very weak. $\Delta=(135$ km.) $\sim$ (1.2 dg.). Felt at Arta IV-.
31	i! Pn i Sn	03 10 42.1 C 11 15.5	Weak. $\Delta=320$ km. ~ 2.9 dg. Probably deep-focus shock. Near northern coast of Crete. $35^{\circ}3$ N, $25^{\circ}2$ E, H=03:09:43 (BCIS). Felt on Crete (Rethymnon, Heraklion, Phourni, Merambello, Sitia, Neapolis, Hie- rapetra IV).

C. FELT SHOCKS NOT RECORDED

<u>Date</u>	<u>Time</u> h.m.	<u>Localities</u>	<u>Provinces</u>	<u>Intensities</u>
Jan				
7	01:50	Konitsa	Konitsa	IV
13	00:-	Oea	Thera	V -
21	19:30	Haghios	Istiaea	V -
		Tsangarades	Volos	IV
21	21:18	Argalasti	Volos	IV
21	21:22	Argalasti	Volos	III
Feb				
3	04:56	Konitsa	Konitsa	IV +
4	00:-	Kastellorizon	Kastellorizon	IV +
9	02:10	Katerini	Pieria	IV
9	19:07	Kalavryta	Kalavryta	IV
15	18:27	Chios	Chios	IV
15	23:30	Chios	Chios	IV +
18	04:45	Chios	Chios	IV +
20	14:55	Hierapetra	Hieranetra	IV +
Mar				
12	18:25	Galatista	Chalkidiki	IV
13	07:45	Leukas	Leukas	III
21	05:45	Konitsa	Konitsa	IV
Apr				
13	03:55	Platanousa	Philippias	III
20	03:10	Limni	Chalkis	V
		Tsangarades	Volos	IV
20	03:(55)	Tsangarades	Volos	IV
		Malesina	Lokris	IV
20	16:25	Patras	Patras	IV +
25	23:48	Patras	Patras	III +
May				
9	13:00	Emponas	Rhodes	III
9	19:16	Platanousa	Philippias	IV +
24	14:22	Kythera	Kythera	IV +
Jun				
16	12:11	Kythera	Kythera	III +
21	14:-	Aeghion	Aeghion	III

<u>Date</u>	<u>Time</u> h.m.	<u>Localities</u>	<u>Provinces</u>	<u>Intensities</u>
Jun				
22	21:09	Aeghion	Aeghion	II
23	17:41	Aeghion	Aeghion	IV
23	18:05	Aeghion	Aeghion	IV
25	08:01	Aeghion	Aeghion	II
25	09:11	Aeghion	Aeghion	IV
25	09:13	Aeghion	Aeghion	IV
27	10:55	Aeghion	Aeghion	III
28	20:03	Aeghion	Aeghion	II
29	07:12	Aeghion	Aeghion	III
Jul				
7	11:47	Pyrgos	Elis	IV -
23	11:20	Haghion Pneuma	Serrae	III
23	17:15	Haghion Pneuma	Serrae	III
25	02:32	Hierapetra	Hierapetra	V
29	02:45	Agdinae	Istiaea	IV +
29	21:-	Vlachia	Chalkis	IV -
Aug				
1	08:-	Agdinae	Istiaea	II
2	17:-	Kerasia	Chalkis	VI -
6	12:51	Kerasia	Chalkis	VI -
9	18:34	Kythera	Kythera	IV -
10	20:30	Andritsaena	Olympia	III -
17	23:25	Oreoe	Istiaea	IV +
18	21:-	Artemision	Istiaea	V
28	20:05	Andritsaena	Olympia	III +
Sep				
8	01:08	Patras	Patras	IV
Oct				
6	00:30	Ampelouzos	Heraklion	IV -
17	20:01	Trikkala	Trikkala	III +
28	23:30	Leukas	Leukas	III
Nov				
1	11:40	Haghion Pneuma	Serrae	IV -
		Pravion	Paggaeon	II
5	03:55	Leukas	Leukas	V -
25	03:-	Amphissa	Amphissa	IV

<u>Date</u>	<u>Time</u> h.m.	<u>Localities</u>	<u>Provinces</u>	<u>Intensities</u>
Nov				
29	13:25	Agnanta	Arta	IV
30	03:40	Andritsaena	Olympia	II
Dec				
1	04:45	Arnaea	Arnaea	II
12	21:-	Moustheni	Paggaeon	IV
15	20:55	Kalavryta	Kalavryta	IV
19	15:52	Galaxidion	Parnassis	III
20	07:28	Lixourion	Pali	III
20	19:20	Lixourion	Pali	III
21	03:25	Lixourion	Pali	IV
21	05:-	Lixourion	Pali	IV
22	22:25	Lixourion	Pali	IV
26	20:31	Kastro	Lemnos	II
28	02:40	Lixourion	Pali	III

TABLE
INTENSITIES OF THE SHOCKS FELT IN GREECE

Localities	Provinces	Intensities on Mercalli-Sieberg Scale							
		II	III	IV	V	VI	VII	VIII	Total
Aeghion	Aeghion	3	4	6	-	-	-	-	13
Aetolikon	Mesolonghion	-	-	1	-	-	-	-	1
Agdinae	Istiaea	1	-	3	4	-	1	1	10
Agnanta	Arta	-	-	1	-	-	-	-	1
Agoulinitza	Olympia	-	-	1	1	-	-	-	2
Agrinion	Agrinion	-	-	1	-	-	-	-	1
Alonisos	Skopelos	-	2	-	-	-	-	-	2
Ambelouzos	Heraklion	-	-	1	-	-	-	-	1
Amphilochia	Valtos	-	-	-	1	-	-	-	1
Amphissa	Amphissa	-	-	2	1	-	-	-	3
Andritsaena	Olympia	1	2	1	-	-	-	-	4
Argalasti	Volos	-	1	4	1	-	-	-	6
Argostoli	Kranaea	-	-	2	-	-	-	-	2
Arios	Kalamae	-	-	1	-	-	-	-	1
Arnaea	Arnaea	1	-	-	-	-	-	-	1
Arta	Arta	-	-	1	-	-	-	-	1
Artemision	Istiaea	-	-	1	1	-	-	-	2
Asprogherakas	Kranaea	-	-	2	1	-	-	-	3
Assos	Sami	-	-	1	1	-	-	-	2
Astakos	Vonitsa	-	1	4	1	-	-	-	5
Atalanti	Atalanti	-	-	3	-	-	-	-	3
Athamanion	Arta	-	-	-	1	-	-	-	1
Charokopio	Pylia	-	-	1	-	-	-	-	1
Chatzi	Pylia	-	-	1	-	1	-	-	1
Chios	Chios	-	1	6	-	-	-	-	7
Chora	Triphylia	-	1	-	-	1	-	-	2
Diavolitsion	Messinia	-	-	1	-	-	-	-	1
Dilinata	Kranaea	-	-	1	1	-	-	-	2
Dimitsana	Gortvnia	-	-	1	-	-	-	-	1

Localities	Provinces	Intensities on Mercalli-Sieberg Scale							
		II	III	IV	V	VI	VII	VIII	Total
Emponas	Rhodes	-	1	-	-	-	-	-	1
Galatista	Chalkidiki	-	-	1	-	-	-	-	1
Galaxidion	Parnassis	-	1	1	-	-	-	-	2
Gastouni	Elis	-	-	2	-	-	-	-	2
Haghia Anna	Chalkis	-	-	-	1	-	-	-	1
Haghia Thekla	Pali	-	-	-	-	2	-	-	2
Haghion Pneuma	Serrae	-	2	1	-	-	-	-	3
Haghios	Istiaea	-	-	-	1	-	-	-	1
Hellinopyrgos	Karditsa	-	-	-	1	-	-	-	1
Heraklion	Heraklion	-	-	-	1	-	-	-	1
Hierapetra	Hierapetra	-	-	2	1	-	-	-	3
Iklaena	Pylia	-	-	-	-	-	1	-	1
Ithaca	Ithaca	-	1	2	1	-	-	-	4
Kalavryta	Kalavryta	-	-	4	-	-	-	-	4
Kalamae	Kalamae	-	-	1	-	-	-	-	1
Kalydona	Olympia	-	-	1	-	-	-	-	1
Kastellorizon	Kastellorizon	-	-	1	-	-	-	-	1
Kastro	Lemnos	1	-	1	-	-	-	-	2
Katastari	Zante	-	-	1	1	-	-	-	2
Katerini	Pieria	-	-	1	-	-	-	-	1
Kerasia	Chalkis	-	-	-	3	3	-	-	6
Konitsa	Konitsa	-	-	3	-	-	-	-	3
Koryphasion	Pylia	-	-	-	-	-	1	-	1
Kymi	Karystia	-	-	3	-	-	-	-	3
Kythera	Kythera	-	1	2	-	-	-	-	3
Lechaena	Elis	-	-	1	1	-	-	-	2
Leonidion	Kynouria	-	-	1	1	-	-	-	2

Localities	Provinces	Intensities on Mercalli-Sieberg Scale							
		II	III	IV	V	VI	VII	VIII	Total
Leukas	Leukas	-	3	4	1	-	-	-	8
Livanates	Lokris	-	-	2	1	-	-	-	3
Vathy	Samos	-	-	1	-	-	-	-	1
Limni	Chalkis	-	-	1	1	-	-	-	2
Lixourion	Pali	-	3	4	1	-	-	-	8
Magoula	Lakedemon	-	-	2	-	-	-	-	2
Malesina	Lokris	-	-	1	-	-	-	-	1
Martinon	Lokris	-	3	1	-	-	-	-	4
Methoni	Pylia	-	-	1	-	-	-	-	1
Mileae	Volos	-	-	4	-	-	-	-	4
Moustheni	Paggaeon	-	-	1	-	-	-	-	1
Mytikas	Vonitsa	-	1	-	1	-	-	-	2
Nea Anchialos	Volos	-	-	1	-	-	-	-	1
Neapolis	Merambello	-	-	1	-	-	-	-	1
Oea	Thera	-	-	-	1	-	-	-	1
Oreoe	Istiaea	-	-	1	-	-	-	-	1
Papades	Chalkis	-	1	-	-	1	1	-	2
Patras	Patras	-	1	6	-	-	-	-	7
Pharaklata	Kranaea	-	-	2	-	-	-	-	2
Phloca	Triphylia	-	-	-	-	-	1	-	1
Phourni	Merambello	-	-	-	1	-	-	-	1
Phrantatō	Ikaría	-	1	1	-	-	-	-	2
Platanos	Almyros	-	-	1	-	-	-	-	1
Platanousa	Philippias	-	1	1	-	-	-	-	2
Preveza	Nicopolis	1	-	-	-	-	-	-	1
Pyla	Pylia	-	-	-	-	-	-	1	1
Pylos	Pylia	-	-	-	1	-	-	-	1
Pyrgos	Elis	-	1	1	-	-	-	-	2
Pravion	Paggaeon	1	-	-	-	-	-	-	1

Localities	Provinces	Intensities on Mercalli-Sieberg Scale							
		II	III	IV	V	VI	VII	VIII	Total
Rethymnon	Rethymni	-	-	1	-	-	-	-	1
Sgrapa	Pylia	-	-	-	-	-	1	-	1
Sitia	Sitia	-	-	1	-	-	-	-	1
Skopelos	Skopelos	-	1	-	-	-	-	-	1
Thasos	Thasos	-	-	1	-	-	-	-	1
Trikkala	Trikkala	-	1	-	-	-	-	-	1
Tsangarades	Volos	-	-	3	-	-	-	-	3
Vasilika	Chalkis	-	-	-	-	1	-	-	1
Valsamata	Kranaea	-	-	1	1	-	-	-	2
Vlachia	Chalkis	-	-	2	-	-	-	-	2
Zante	Zante	-	-	1	1	-	-	-	2
Total		9	34	122	36	9	6	2	218