The International Seismological Summary for 1927 January, February, March.

FORMERLY THE BULLETIN OF THE BRITISH ASSOCIATION SEISMOLOGY COMMITTEE.

The present number deals with 140 epicentres, 37 of which are new and 103 repetitions from old epicentres. In addition there are 605 minor repetitions from the epicentre of March 7d. 9h. (*viz.*, 35°·7N. 134°·8E.) registered chiefly at Toyooka. The series extends beyond March into the next number of the Summary, and further remarks on it are deferred.

Deep Focus.

Cases of abnormal focus in the present number are as follows :

Date.	Epicentre.		Depth.
d. h. m. s.	°	°	
Jan. 15 14 31 16	36·2N.	134·5E.	+0·060
Jan. 20 10 56 18	21·0S.	67·0W.	+0·010
Feb. 1 17 56 34	7·0S.	155·0E.	+0·020

The shock of Jan. 15 was discussed by Mr. Wadati in the Tokyo Geoph. Maga., Vol. II, No. 1 (1929 March). His estimate of the depth is 420 km.=·066 of the radius below the *surface* : the above assumed +·060 is reckoned below the depth of the normal or average earthquake.

There have now been 141 cases of abnormally deep focus discussed in the Summary, and 17 cases of high focus. The latter are in several ways more doubtful in character and will presently be rediscussed as a whole. But there can be little doubt about the numerous cases of deep focus. Their positions have been marked on a map (Mercator's projection) and show a pronounced restriction to certain regions ; most of them, and especially the deepest, seem to affect the boundary of an oval region about 180° long, centred with fair accuracy on the Equator, and including a considerable part of the Pacific Ocean, though its eastern boundary intrudes into S. America. The suggestion has more than once been made that the moon came out of the Pacific Ocean ; does this tolerably symmetrical curve indicate the scar which is even not yet quite healed ? In the rough diagram on page 108 of this bulletin the depths are indicated approximately by the size of the small discs. But for many epicentres there were several shocks at different dates, usually (though not always) at the same

depth. No attempt has been made to show these repetitions, but the size of disc has been fitted to the deepest shock when the depth has varied.

A question pressing for solution (but which has not yet been investigated) is that of the allowance to be made for [P] and [S] in cases of deep focus. In the last number of the Summary for instance, on Oct. 30d. 13h. there was a case of deep focus (·070) which gave a series of [S] residuals of about [−93s.] from $\Delta=89°$ to 102°. These are readily seen to be approximately of the right value for this focal depth, but it seemed better to await determination of the proper correction than to apply an approximate one. In the present number there is a case of moderate depth (·015) wherein it seems possible to apply a sufficiently accurate correction in some cases by using the correction to Δ as for P and S.

Instruments out of Action to be noted.

During the year 1927 there was some trouble which frequently put the seismographs at Irkutsk out of action—light failed, etc. These occasions were carefully noted; and it was brought to our attention how important these notes were. There were occasions when it would have been unreasonable to assign an epicentre near Irkutsk when Irkutsk itself gave no record, had we not seen from one of these notes that the instruments were out of action. We hope that this good example may be followed elsewhere: such information may be of the greatest importance.

Some individual Shocks.

On Jan. 24d. 5h. 18m. 24s. there was a shock in 58°·5N. 6°·0E. felt in South Norway, all over Scotland, and as far south as Loughborough. Mrs. Barlow, of Loughborough, wrote to *The Times*:

> On Monday last, the 24th, I woke up suddenly just before 5.30 and in a few minutes felt a very slight but distinct earth tremor, lasting about 5—6 seconds. I asked my family and others in my household later if they had felt anything, but I seem to have been the only one who did so."

By a curious coincidence there was a considerable shock a few hours earlier in 18°·5S. 168°·5E., so that both the Hebrides and the New Hebrides felt earthquake shocks on the same day.

With regard to the two shocks on Feb. 3 at 32°·7N. 120°·7E. the following note appeared in *The Times* of Feb. 4, from their Shanghai correspondent:

> The effect of the tremors on the Chinese, with their psychology, is very important, as whenever unusual manifestations of nature occur during the Chinese New Year holidays, they believe that a dynastic change is inevitable, and that the gods are thus displaying their anger at man's conduct. With war rumours current and British troops actually *en route* the Chinese fear that an overwhelming calamity will soon befall the country.

The shock on Feb. 14d. 3h. 43m. 15s. at 42°·3N. 17°·8E. was destructive over a considerable area in Jugoslavia. Near Sarajevo a mountain-side broke away and boulders thundered into the streets, killing several people. Whole villages in Dalmatia were in ruins. The *Daily Chronicle* (Feb. 16) correspondent records that

> Although the sky was clear and the night still and starlit at the time of the catastrophe the earthquake was accompanied by thunder and lightning.

Terrible damage was done in Western Japan by the shock of Mar. 7d. 9h. 27m. 36s. at 35°·7N. 134°·8E., which was followed, as above noted, by hundreds of aftershocks, including two on March 10 and 31 of some severity. Our deepest sympathies are evoked by this second disaster following so soon after the great destruction in 1923.

Names of Stations.

Some trouble has arisen in deciding on the best names for stations. An obvious rule is to take that used by the station itself unless it cuts across other rules, such as that of uniformity. Thus where there is an island station, although the island may be so small that it is unlikely to have more than one station, it would seem to be a good rule to use the name of the town where the seismograph is erected than that of the whole island. Thus though the Isle of Wight was small John Milne did not use its name in any form for his station, but that of Shide, the minute village where his observatory stood : and it would seem better to use Agana, the name of the town, than that of the whole island, Guam, in which it is situated. The station itself, however, seems to prefer to use Guam. For the present we have put in our list both names thus :—Agana (Guam).

The case of Honolulu is more complicated. The instruments were formerly at Ewa (21°19′N. 158°4′W.) but at the end of 1926 they were moved to 21°18′W. 157°50′W., and to avoid confusion in the reductions it seems better to have a new name. In a letter to us dated April 23, 1929, the new station is described as that of the University of Hawaii : but it is alternatively described as Honolulu University, and moreover the name Hawaii is already bespoken by the Volcanic Station, which is about to set up some seismographs. We have for the present adopted the name Honolulu T.H. for the new station, though not until some trouble had been caused by using for a time the name Honolulu University.

H. H. TURNER.

University Observatory, Oxford.
1930 May 11.

1927 JANUARY, FEBRUARY, MARCH.

Jan. 1d. 8h. 16m. 35s. (I) } **Epicentre 29°·0N. 115°·0W.**
9h. 13m. 20s. (II) }

A = −·370, B = −·793, C = +·485 ; D = −·906, E = +·423 ; G = −·205, H = −·439, K = −·875.

The epicentre 31°·0N. 116°·0W. used on 1926 April 19d. suits Lick and Berkeley better, but other stations not so well.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
I Tucson		4·9	46	1 20	+ 4	e 2 20	+ 6	2·8	2·8
II		4·9	46	e 1 22	+ 6	e 2 19	+ 5	2·6	2·8
I Lick	N.	10·0	328	e 2 31	+ 1	i 3 59	−30	e 4·6	6·1
II	N.	10·0	328	e 2 31	+ 1	i 4 1	−28	i 4·8	6·1
I Berkeley		10·8	327	e 3 41	+60	e 4 24	−26	e 5·1	—
II	E.	10·8	327	—	—	e 4 34	−16	—	—
I Tacubaya		17·3	120	e 5 14	+65	(8 25?)	+60	11·5?	15·0
II		17·3	120	—	—	—	—	11·5	13·8
I Spokane		18·7	355	e 3 54	−31	e 7 5	−50	e 8·6	9·7
II	N.	18·7	355	e 3 58	−27	—	—	e 8·3	9·9
I Victoria	E.	20·4	344	6 26	+100	—	—	9·6	11·3
II		20·4	344	8 41	?S	(8 41)	+ 9	9·7	11·5
I Loyola		21·7	81	—	—	—	—	e 12·5	—
I St. Louis	N.	22·6	58	—	—	—	—	i 12·1	14·4
II	N.	22·6	58	—	—	—	—	i 12·4	13·9
I Chicago		25·6	53	—	—	e 10 7	− 7	13·0	15·2
II		25·6	53	—	—	e 11 10	+56	13·1	15·0
I Ann Arbor	N.	28·5	54	—	—	—	—	e 14·7	15·9
II	N.	28·5	54	—	—	—	—	i 14·8	16·1
I Toronto	E.	31·9	53	—	—	—	—	16·7	19·3
II	E.	31·9	53	—	—	—	—	16·7	19·4
II Cheltenham		32·9	62	—	—	—	—	17·0	18·8
I Ithaca		33·6	56	—	—	—	—	e 17·4	—
II		33·6	56	—	—	—	—	e 17·5	—
I Ottawa		34·9	51	—	—	e 16 13	?	e 17·4	20·2
II		34·9	51	—	—	e 16 10	?	e 17·2	20·3
I Fordham	N.	35·4	60	—	—	e 12 2	−59	e 17·7	18·7
II		35·4	60	—	—	—	—	e 16·9	21·1
I Harvard		37·6	58	—	—	—	—	e 19·2	19·7
II		37·6	58	—	—	—	—	e 19·2	22·3
I Kew		81·3	35	—	—	—	—	e 40·4	—
II		81·3	35	—	—	—	—	e 43·7	—
I De Bilt		83·6	32	—	—	—	—	e 43·4	—
II		83·6	32	—	—	—	—	e 43·7	—
I Uccle		84·0	34	—	—	—	—	e 41·4	—
II		84·0	34	—	—	—	—	—	51·7
I Paris		84·4	36	—	—	—	—	e 43·4	—
II		84·4	36	—	—	—	—	e 43·7	—
I Strasbourg		87·2	34	—	—	—	—	e 47·4	—
II		87·2	34	—	—	—	—	e 47·7	—
I Granada		87·8	48	—	—	—	—	e 44·4	—
II		87·8	48	—	—	—	—	e 43·2	—
I Irkutsk		91·8	337	—	—	—	—	e 50·4	—
II		91·8	337	—	—	—	—	e 40·7	—
I Ekaterinburg		94·9	3	—	—	—	—	41·4	—
II		94·9	3	—	—	—	—	41·7	—
I Makeyevka		99·3	18	—	—	—	—	e 53·5	—
I Baku		109·2	12	—	—	—	—	e 51·9	59·9
II		109·2	12	—	—	—	—	e 56·7	61·4
I Tashkent		109·6	357	—	—	—	—	e 61·4	80·2
II		109·6	357	—	—	—	—	e 63·7	69·3

Additional readings: Tucson I PE = +1m.25s., iP = +1m.38s., and many other readings, II P = +1m.39s., SE = +2m.32s. and many other readings. Lick I eN = +2m.44s., +2m.59s., and +3m.9s., iN = +4m.7s. and +4m.21s., II iN = +4m.9s. and +4m.28s. Berkeley I ePNZ? = +3m.42s., eSE? = +4m.27s. and many other e's, II eN = +4m.1s., eE = +4m.3s., eSN = +4m.38s. Victoria II PN = +9m.11s. St. Louis I eN? = +10m.37s., eN = +11m.44s., iN = +11m.50s., II eN? = +10m.34s., eN = +11m.44s., iN = +11m.52s. Chicago I eN = +12m.41s., MN = +14·2m., eLE (Rayleigh) = +14·8m., II eN = +10m.29s., eN = +12m.25s., MN = +13·9m., iLE (Rayleigh) = +14·8m. Ann Arbor I iN = +14m.37s., eE = +14m.55s., ME = +17·0m., II eN = +14m.10s., iE? = +14m.34s., ME = +17·4m. Ottawa I MN = +19·2m., II MN = +19·2m. Fordham I eN = +18m.55s. and other values, II i = +18m.0s., MN = +18·8m. Baku I MN = +62·0m., MZ = +72·7m., II MN = +63·7m., MZ = +71·9m.

Jan. 1d. 12h. 58m. 20s. Epicentre 29°·0N. 115°·0W. (as at 9h.).

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Tucson		4·9	46	1 22	+ 6	2 2	−12	2·3	2·4
Lick		10·0	328	2 30	0	e 3 41	−68	e 5·8	—
Berkeley	E.	10·8	327	—	—	e 4 16	−34	—	—
Victoria	E.	20·4	344	—	—	—	—	10·0	11·0
Chicago	N.	25·6	53	—	—	e 12 52	?L	i 13·3	13·5
Ann Arbor	N.	28·5	54	—	—	—	—	e 14·9	—
Toronto		31·9	53	—	—	—	—	17·9	—
Ottawa		34·9	51	—	—	—	—	e 17·5	—

Additional readings: Tucson eE = +1m.15s., S = +2m.14s., and several other readings. Lick iN = +4m.10s. Berkeley eN = +4m.24s. Ann Arbor eN = +14m.16s., eE = +14m.46s., and +15m.16s.

Jan. 1d. 18h. 51m. 20s. Epicentre 8°·5N. 126°·0E.

A = −·581, B = +·800, C = +·148; D = +·809, E = +·588; G = −·087, H = +·120, K = −·989.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Manila	7·8	321	e 1 57	− 1	(i 3 34)	+ 3	i 3·6	—
Hong Kong	17·9	322	3 58	−18	—	—	—	11·7
Batavia	24·1	233	i 5 31	+ 2	i 9 50	+ 4	—	—
Irkutsk	47·2	343	e 10 14	?PR_1	—	—	e 23·7	—
Tashkent	59·6	315	e 11 40?	+91	(e 18 40?)	+22	e 18·7	39·0
Ekaterinburg	69·5	329	i 11 2	−12	e 20 4	−16	34·7	—
Baku	73·9	310	—	—	—	—	e 38·7	47·1
Pulkovo	85·5	330	—	—	—	—	e 52·2	—
Leningrad	85·5	330	—	—	—	—	e 56·2	—

Additional readings and notes: Batavia readings are given as i simply. Tashkent MN = +36·8m. Ekaterinburg e = +20m.19s.

Jan. 1d. Readings also at 0h. (La Paz), 1h. (Ekaterinburg), 4h. (Nagasaki and Ksara), 6h. (Cheltenham and near Ksara), 7h. (Nagasaki), 9h. (Chicago and near Tucson (3)), 10h. (Chicago (2), near Lick (2), and near Tucson (4)), 11h. (2), 12h. (4) (near Tucson), 13h. (near Tucson and near Athens), 15h. (La Paz), 16h. (Zagreb, Naples, Athens, Rocca di Papa, and Ekaterinburg), 17h. (La Paz and Sucre), 18h. (Leningrad and Athens), 20h. (near Pompeii), 22h. (near Ksara).

Jan. 2d. 0h. 17m. 24s. Epicentre 8°·5N. 126°·0E. (as on 1d.).

Very uncertain. Probably T_e should be increased by 1min.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Manila	7·8	321	i 1 58	0	(i 3 13)	−18	i 3·2	3·3
Hong Kong	17·9	322	5 17	+61	—	—	—	6·1
Irkutsk	47·2	343	e 10 39	?PR_1	—	—	21·6	—
Tashkent	59·6	315	—	—	e 20 12	+114	e 27·6	33·9
Ekaterinburg	69·5	329	e 11 40	+26	—	—	31·6	—
Pulkovo	85·5	330	—	—	—	—	e 44·6	—
Leningrad	85·5	330	—	—	—	—	e 51·1	—
Upsala N.	91·7	331	—	—	—	—	45·6	—
Uccle	102·3	327	—	—	—	—	52·6	—

Additional readings: Manila MN = +3·8m. Tashkent MN = +31·2m. Ekaterinburg i = +11m.52s., e = +12m.12s,

Jan. 2d. 14h. 44m. 39s. Epicentre 51°·2N. 176°·0W. (as on 1926 Oct. 15d.).

A = −·625, B = −·044, C = +·779; D = −·070, E = +·998; G = −·777, H = −·054, K = −·627.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Honolulu	N.	32·9	150	—	—	—	—	14·0	—
Irkutsk		46·8	305	e 7 51	−55	—	—	28·3	31·6
Ottawa		61·5	52	—	—	—	—	e 28·3	—
Ekaterinburg		62·4	330	i 10 29	+ 1	e 18 55	− 2	28·3	44·4
Leningrad		66·8	347	—	—	e 17 58	−110	38·1	—
Pulkovo		67·0	347	—	—	e 19 48	+ 2	35·3	—
Kucino		69·4	340	—	—	—	—	e 33·0	43·4
Tashkent		71·5	315	—	—	e 21 0	+16	e 34·3	44·9
Makeyevka		76·6	338	—	—	—	—	42·3	50·0
De Bilt		76·7	359	—	—	—	—	e 41·3	—
Kew		77·3	3	—	—	—	—	e 44·3	—
Uccle		78·0	0	—	—	—	—	e 37·3	—
Paris		80·0	1	—	—	—	—	e 45·3	—
Baku		80·1	326	e 12 16	− 4	e 22 13	−11	40·3	52·4
Tiflis		80·6	331	—	—	e 22 25	− 5	e 42·4	57·8
Granada		91·5	6	—	—	—	—	e 47·3	51·3
San Fernando		91·9	9	—	—	—	—	—	57·3

Additional readings: Irkutsk e = +18m.41s. = SR_1 − 25s. and +20m.6s. = SR_2 − 12s. Ottawa eE = +17m.21s.? Ekaterinburg ePS = +19m.20s., e = +19m.55s. and +20m.0s., eSR_1 = +23m.9s., eSR_2 = +26m.20s., MN = +43·6m. Pulkovo e = +27m.21s. = SR_2 − 14s. Kucino e = +28m.36s. = SR_2 + 3s. MN = +47·8m. Tashkent e = +21m.18s., +21m.49s., +21m.51s., +25m.21s. = SR_1 − 52s., and +28m.19s. = SR_2 − 43s., MN = +45·6m. Makeyevka e = +35m.37s., MN = +49·1m., MZ = +49·2m. Baku MN = +53·7m., MZ = +57·9m. Tiflis MN = +48·7m. San Fernando MN = +53·8m.

Jan. 2d. Readings also at 1h. (Phu-Lien and near Tucson), 3h. (Tucson), 6h. (La Paz), 7h. (Tashkent), 8h. (near Tucson), 10h. (Toronto and Tashkent), 11h. (Nagasaki), 12h. (La Paz and Tucson), 13h. (Tucson and Nagasaki), 14h. (Nagasaki and near Tucson), 22h. and 23h. (Manila).

Jan. 3d. 12h. 31m. 5s. Epicentre 42°·3N. 17°·8E. (as on 1926 April 26d.).

A = +·704, B = +·226, C = +·673; D = +·306, E = −·952; G = +·641, H = +·206, K = −·740.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Naples	E.	3·0	241	e 0 48	+ 1	—	—	—	—
Rocca di Papa		3·8	264	e 0 58	− 1	i 1 42	− 2	2·6	3·5
Zagreb		3·8	341	e 1 34	?S	(e 1 34)	−10	e 1·9	—
Venice		5·0	310	0 57	−20	—	—	—	—
Florence		5·0	290	− e 0 35?	−112	—	—	—	3·4
Budapest		5·2	9	e 2 25	?S	(e2 25)	+ 3	—	—
Athens		6·4	131	0 52	−46	e 1 38	−77	e 1·8	1·9
Strasbourg		9·4	315	—	—	e 3 55?	−18	—	—
Granada		17·2	260	—	—	—	—	e 10·6	12·9

Additional readings: Rocca di Papa eZ = 12h.31m.2s. assumed to be a misprint for 12h.32m.2s. Granada L = +12·2m.

Jan. 3d. 22h. 9m. 55s. Epicentre 23°·0N. 121°·7E. (as on 1926 July 15d.).

A = −·484, B = +·783, C = +·391; D = +·851, E = +·526; G = −·205, H = +·332, K = −·921.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Taihoku	N.	1·9	359	e 0 39	+10	—	—	1·1	1·3
Hong Kong		7·0	266	3 15	?S	(3 15)	+ 5	5·7	7·2
Zi-ka-wei		8·2	358	e 2 21	+17	e 4 52	?L	(e 4·9)	9·7
Manila		8·4	185	e 2 27	+20	—	—	i 6·0	—
Phu-Lien		14·2	264	e 3 15	−14	e 6 5?	− 8	7·6	—

Continued on next page.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Irkutsk	32·2	341	e 6 52	+ 2	e 12 51	+40	18·1	—
Bombay	45·6	275	15 16	?S	(15 16)	− 6	27·1	—
Tashkent	47·2	308	—	—	i 16 30	+46	e 25·1	32·2
Ekaterinburg	55·2	326	e 9 40	0	i 17 23	− 1	28·1	35·3
Kucino	67·7	324	—	—	—	—	e 37·0	—
Makeyevka	69·0	316	—	—	—	—	e 37·1	45·4
Leningrad	70·9	330	—	—	—	—	e 35·4	46·4
Pulkovo	71·0	330	e 11 14	− 9	—	—	41·1	45·1
De Bilt	86·8	326	—	—	—	—	e 47·1	48·8
Strasbourg	87·4	321	—	—	—	—	51·1	—
Uccle	88·0	325	—	—	—	—	e 47·1	—
Kew	89·9	328	—	—	—	—	e 47·1	—
Granada	100·8	320	—	—	—	—	e 60·1	68·1

Additional readings and notes: Hong Kong ? = +5m.56s., L is given as merely ? Irkutsk e = +14m.35s. Tashkent ePR_1 = +11m.46s. = PR_3 +2s., e = +16m.17s. =S +33s., i = +17m.0s., eSR_1 = +18m.23s., eSR_2 = +19m.53s., eZ = +21m.5s.?, MN = +29·8m. Ekaterinburg i = +9m.59s., +10m.6s., PS = +17m.40s., PPS = +17m.51s., e = +19m.23s. eSR_1 = +21m.51s., MN = +30·2m., MZ = +35·6m. Kucino reading has been diminished by 1h. Makeyevka L = +41·1m. Leningrad MZ = +45·9m. De Bilt MN = +48·9m., MZ = +56·7m. Kew L = +54·1m.

Jan. 3d. Readings also at 0h. (Nagasaki and near Ksara), 1h. (Tiflis), 2h. (Nagasaki), 6h. (Makeyevka, Tashkent, Kew, Paris, De Bilt, Uccle, Strasbourg, and Granada), 7h. (Tashkent and near Malabar), 9h. (near La Paz), 12h. (Moncalieri and near Malabar), 13h. (Batavia and Ekaterinburg), 14h. (Tacubaya), 17h. (Santiago), 23h. (Tacubaya and near Tucson).

Jan. 4d. Readings at 0h. (Toronto, Ottawa, Chicago, Victoria, Granada, Pulkovo, Leningrad, Tashkent, Makeyevka, Ekaterinburg, and Irkutsk), 2h. (Ekaterinburg), 3h. (Nagasaki (2)), 4h. (Rocca di Papa, Tashkent, and near Athens), 5h., 7h., 8h., 10h., 11h., and 12h. (Nagasaki), 14h. (La Plata and near Santiago), 17h. (La Paz, Sucre, and La Plata), 18h. (Granada, Strasbourg, Uccle, De Bilt, Baku, Tiflis, Tashkent, Ekaterinburg, Irkutsk, and near Sumoto), 22h. (Rio de Janeiro), 23h. (near Sumoto and near Mazatlan).

Jan. 5d. 7h. 43m. 0s. Epicentre 17°·0S. 63°·0W.

A = +·434, B = −·852, C = −·292; D = −·891, E = −·454; G = −·133, H = +·261, K = −·956.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Sucre	2·9	226	i 0 51	+ 6	i 1 30	+10	1·6	1·7
La Paz	4·9	276	e 1 16	0	2 11	− 3	2·6	3·7
La Plata	18·5	167	4 16	− 7	(7 24)	−27	7·4	—

La Paz gives also iP = +1m.18s.

Jan. 5d. 13h. 24m. 0s. Epicentre 18°·5S. 168°·5E. (as on 1925 March 22d.).

A = −·929, B = +·189, C = −·317; D = +·199, E = +·980; G = +·311, H = −·063, K = −·948.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Riverview	21·8	222	e 5 0	− 3	i 8 59	− 2	e 11·0	12·0
Melbourne	28·2	221	—	—	—	—	—	17·0
Irkutsk	89·8	326	e 13 17	+ 2	e 23 52	−20	—	—
Ekaterinburg	115·1	325	—	—	e 25 59	[+30]	e 47·0	—
Strasbourg	146·1	337	e 19 46	[− 4]	e 23 0?	?PR_1	—	—

Additional readings: Riverview MN = +13·5m. Irkutsk PS = +25m.4s. Ekaterinburg e = +29m.26s. =PS − 27s. Strasbourg S? = +20m.18s., SR_1? = +20m.35s., SR_1 = +20m.53s.

Jan. 5d. 16h. 24m. 12s. Epicentre 17°·0N. 118°·0E.

A = −·449, B = +·844, C = +·292 ; D = +·883, E = +·469; G = −·137, H = +·258, K = −·956.

	△	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Manila	3·7	130	i 0 56	− 2	(i 1 39)	− 3	i 1·6	2·4
Hong Kong	6·4	327	1 48	+10	—	—	3·6	5·1
Phu-Lien	11·4	291	2 48?	− 2	—	—	—	—
Zi-ka-wei	14·5	12	e 3 32	− 1	6 17	− 3	—	9·4
Irkutsk	36·9	346	e 7 25	− 4	—	—	21·8	—
Tashkent	48·2	312	—	—	—	—	e 21·8	30·5
Ekaterinburg	58·2	328	e 10 17	+17	—	—	29·3	—
Baku	62·5	307	—	—	—	—	e 34·8	—

Additional readings: Manila MN = +2·6m. Irkutsk e = +3m.55s. and +7m.49s. Tashkent eL = +29·1m., MN = +31·1m.

Jan. 5d. Readings also at 0h. (near La Paz and Sucre), 1h. (Nagasaki and Tashkent), 4h. (Nagasaki), 5h. (Agana and Nagasaki (9)), 6h. (near Toyooka), 10h. (near Tacubaya), 12h. (Nagasaki (2)), 13h. (near Oaxaca), 15h. (3) and 17h. (Nagasaki), 18h. (Nagasaki and near Toyooka), 19h. (Ekaterinburg), 20h. (near Toyooka), 22h. (Agana (2)), 23h. (Ottawa and Toronto and near Tucson (3)).

Jan. 6d. Readings at 2h. (Agana and Nagasaki), 4h. (Agana (4)), 5h. (Nagasaki), 6h. (Zi-ka-wei Phu-Lien, Irkutsk, Tashkent, and Ekaterinburg), 7h. (3) and 8h. (Agana), 9h. (Santiago), 13h. (near Sumoto), 14h. and 15h. (Nagasaki), 16h. (near Tucson), 19h. (near Toyooka), 20h. (Mizusawa), 21h. (Nagasaki (2) and Strasbourg), 22h. (Almeria and Nagasaki), 23h. (Rocca di Papa).

Jan. 7d. 10h. 43m. 0s. Epicentre 80°·5N. 113°·0E.

A = −·064, B = +·152, C = +·986 ; D = +·921, E = +·391 ; G = −·385, H = +·908, K = −·165.

	△	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Ekaterinburg	28·2	246	6 13	+ 3	i 11 14	+11	16·0	21·0
Irkutsk	28·4	191	e 6 12	0	i 10 54	−12	15·0	22·1
Leningrad	30·1	280	6 31	+ 2	e 11 42	+ 6	15·0	—
Pulkovo	30·4	280	6 27	− 5	11 36	− 5	17·0	21·8
Upsala	32·3	290	—	—	—	—	—	22·0
Kucino	32·9	270	e 7 59	+63	e 14 21	+119	18·3	21·1
Prague	42·2	287	—	—	—	—	e 26·0	28·0
Uccle	43·0	299	—	—	—	—	26·0	—
Budapest	44·0	283	—	—	—	—	e 26·0	—
Strasbourg	44·7	295	e 8 0?	−31	—	—	—	—
Tiflis	45·4	259	e 9 31	+55	e 15 30	+10	e 26·0	31·6
Baku	45·9	251	—	—	e 15 50	+23	27·0	28·7
Victoria	47·4	50	—	—	—	—	27·0	27·4
Ottawa	54·0	7	—	—	e 16 0?	−69	e 25·5	—
Toronto E.	55·6	11	—	—	—	—	29·5	—
Phu-Lien	59·8	189	—	—	—	—	32·0	—

Additional readings and notes: Ekaterinburg MZ = +22·0m. Kucino gives P and S as "e" only. Tiflis eN = +10m.10s. = PR_1 −16s., eE = +10m.20s. = PR_1 −6s., eN = +21m.8s., MN = +29·7m. Baku gives S as e only, also e = +19m.17s., MZ = +34·1m.

Jan. 7d. 18h. 40m. 17s. Epicentre 43°·1N. 0°·3E. (Bagnères de Bigorre).

A = +·731, B = +·004, C = +·683.

	△	P.	O−C.	S.	O−C.	L.
	°	m. s.	s.	m. s.	s.	m.
Bagnères	0·0	0 0	0	0 1	+ 1	—
Barcelona	2·1	1 9	+36	—	—	(1·2)
Tortosa N.	2·2	0 40	+ 6	1 9	+ 9	1·2

Tortosa gives also PZ = +39s. Strasbourg (△ = 7°·5), SR_1? = +4m,13s., SR_1 = +4m,28s.

Jan. 7d. 18h. 58m. 0s. Epicentre 20°·5S. 36°·5W.

$A = +·753$, $B = -·557$, $C = -·350$; $D = -·595$, $E = -·804$; $G = -·282$, $H = +·208$, $K = -·937$.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
La Plata	23·7	224	5 24	− 1	9 36	− 2	12·9	—
Sucre	27·1	268	5 53	− 6	13 31	?L	22·0	25·0
La Paz	30·2	272	6 36	+ 6	—	—	—	—
Baku	100·4	50	—	—	—	—	e 57·0	—

No additional readings.

Jan. 7d. 22h. 10m. 10s. Epicentre 40°·0N. 138°·0E. (as on 1922 April 27d.).

$A = -·569$, $B = +·513$, $C = +·643$; $D = +·669$, $E = +·743$; $G = -·478$, $H = +·430$, $K = -·766$.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Mizusawa	2·6	110	0 41	0	1 12	0	—	—
Nagoya	4·9	190	e 1 16	0	1 52	−22	2·3	(2·6)
Osaka	5·7	202	1 42	+14	(3 3)	+27	3·0	4·0
Kobe	5·8	204	—	—	—	—	—	3·4
Sumoto	6·2	205	e 1 23	−12	e 2 21	−28	e 3·3	3·6
Irkutsk	26·0	309	e 5 46	− 2	—	—	15·8	—
Tashkent	50·7	295	—	—	—	—	e 30·6	33·9
Ekaterinburg	50·9	317	e 9 38	+26	—	—	31·3	—
Baku	64·2	303	—	—	—	—	e 42·8	43·9
Tiflis	66·7	306	—	—	—	—	e 42·8	—

Additional readings and notes: Mizusawa SN = +1m.13s. Nagoya MN = (+2·7m.), both M's have been increased by 1m. Osaka MN = +3·6m.

Jan. 7d. Readings also at 0h. (Agana), 1h. (Christchurch, Melbourne, Riverview, and Sydney), 2h. (Agana (3) and Baku), 3h. (Agana), 5h. (near Mizusawa), 6h. (Tiflis), 7h. and 8h. (Nagasaki), 9h. (Ottawa, Chicago, Toronto, Ann Arbor, Victoria, Tucson (2), Tacubaya, and near Athens), 10h. (Loyola and Nagasaki), 11h. (Chicago), 12h. (Bombay and Nagasaki), 19h. (2), 20h. and 21h. (Nagasaki), 22h. (near Sumoto), 23h. (Tiflis).

Jan. 8d. 7h. 16m. 53s. Epicentre 46°·7N. 7°·2E. (as on 1926 Dec. 15d.).

$A = +·680$, $B = +·086$, $C = +·728$.

	Δ	Az.	P.	O−C.	S.	O−C.
	°	°	m. s.	s.	m. s.	s.
Besançon	0·9	304	—	—	i 0 25	0
Zurich	1·1	55	i 0 15	− 2	i 0 31	0
Chur	1·6	85	i 0 25	+ 1	i 0 46	+ 1
Strasbourg	1·9	12	0 55	?S	(0 55)	+ 2

Strasbourg gives also $PR_1 = +1m.6s.$, $PR_2 = +1m.11s.$, $S = +1m.22s.$, $SR_2 = +1m.54s.$

Jan. 8d. Readings also at 0h. and 1h. (Matuyama), 4h. (La Paz and near Athens), 6h. (Nagasaki), 11h. (near Mizusawa (2) and Nagoya (2)), 14h. (Nagasaki), 15h. (Tiflis), 16h. (Nagoya and near Mizusawa), 17h. (Santiago), 19h. (Nagasaki), 20h. (Santiago and near Toyooka), 21h. (near Mizusawa), 23h. (Nagoya).

Jan. 9d. Readings at 0h. (near Mizusawa), 1h. (near Manila), 2h. (Nagasaki and near Amboina), 3h. (Nagasaki), 7h. (near Mizusawa and Nagoya), 9h. (Agana), 11h. and 14h. (near Nagasaki), 15h. (near Nagasaki (2) and Hukuoka), 18h. (Baku and near Toyooka), 20h. (near Tacubaya), 22h. (Baku).

Jan. 10d. Readings at 0h. (near Mizusawa), 2h. (Ksara and La Plata), 4h. (Manila, near Almeria, and Malaga), 5h. (Strasbourg), 6h. (Irkutsk, Taihoku, and near Manila), 7h. (Manila (2)), 9h. (Irkutsk, Ekaterinburg, and near Mizusawa), 10h. (La Plata), 13h. (near Granada), 15h. (near Manila), 17h. (Agana).

Jan. 11d. 19h. 45m. 40s. Epicentre 15°·0S. 78°·3W.

A = +·196, B = −·946, C = −·259 ; D = −·979, E = −·203 ; G = −·052, H = +·253, K = −·966.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
La Paz		0·9	100	i 2 28	− 1	i 4 24	− 2	5·0	5·8
Sucre		13·1	110	i 3 13	− 1	i 5 43	− 3	6·7	8·7
Pilar	E.	21·2	144	5 44	−49	(9 14)	−26	9·2	10·5
La Plata		27·0	141	6 13	+15	10 40	− 1	13·9	—
Malaga		86·6	50	12 57	0	e 23 47	+10	e 31·9	—
Granada		87·3	50	i 12 57	− 4	—	—	e 46·3	—
Toledo		88·0	48	i 13 13	+ 8	e 24 4	+12	—	—
Almeria		88·1	50	e 12 59	− 7	e 23 53	0	41·9	—
Kew		94·5	37	—	—	—	—	e 51·3	—
Ekaterinburg		128·0	27	—	—	—	—	30·8	—
Irkutsk		142·7	357	e 19 56	[+12]	i 23 1	?PR_1	—	—

Additional readings : La Paz i = +3m.26s., +4m 1s., and +5m.16s. ; T_g = 19h.45m.41s. Pilar LN = +9·3m., MN = +10·1m. Granada PS = +12m.53s. Almeria PR_1 = +16m.42s.

Jan. 11d. Readings also at 1h. (La Paz), 2h. and 3h. (Nagasaki), 4h. (near Mizusawa), 7h. (Nagasaki (2)), 9h. (Tiflis), 11h. (Nagasaki), 18h. (Strasbourg).

Jan. 12d. 0h. 5m. 22s. Epicentre 17°·0N. 122°·0E. (as on 1923 August 24d.).

A = −·507, B = +·811, C = +·292 ; D = +·848, E = +·530 ; G = −·155, H = +·248, K = −·956.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Manila	2·6	202	i 0 31	−10	(i 0 51)	−21	i 0·9	—
Hong Kong	9·1	307	2 17	− 1	4 10	+ 4	—	5·0
Phu-Lien	15·1	287	e 2 1	−99	e 4 58	−96	5·8	—
Batavia	27·6	214	i 5 31	−33	—	—	—	—
Irkutsk	38·0	342	7 33	− 5	13 30	− 8	19·6	—
Hyderabad	41·5	278	—	—	—	—	—	14·0
Bombay	46·7	280	13 49	?S	(13 49)	−108	—	—
Ekaterinburg	60·2	327	i 10 21	+ 8	19 32	+66	28·1	37·9
Baku	65·6	309	—	—	e 19 34	+ 2	36·1	41·6
Tiflis	69·4	310	e 11 42	+29	e 20 16	− 3	e 39·6	46·0
Kucino	72·7	325	—	—	—	—	44·3	—
Makeyevka	73·5	318	—	—	e 20 38?	−30	38·6	48·0
Leningrad	76·2	330	—	—	—	—	44·3	48·5
Pulkovo	76·3	330	i 11 58	+ 1	—	—	46·4	—
Cheb	89·0	324	—	—	—	—	e 50·6	56·1
De Bilt	92·0	328	—	—	—	—	e 47·6	58·0
Strasbourg	92·4	324	—	—	—	—	e 52·6	—
Uccle	93·1	325	—	—	—	—	e 48·6	—
Paris	95·1	326	—	—	—	—	e 57·6	—
Kew	95·2	330	—	—	—	—	e 59·6	—

Additional readings : Batavia reading is given simply as iN. Baku e = +27m.9s. = SR_2 +2s., MN = +42·0m. Tiflis eN = +28m.23s. = SR_2 +0s., eLN = +35·6m. Makeyevka MN = +45·1m. Leningrad MN = +45·5m., MZ = +49·4m. Pulkovo MZ = +48·3m. De Bilt MN = +58·2m., MZ = +58·5m.

Jan. 12d. 21h. 34m. 30s. Epicentre 20°·0S. 176°·5E. (as on 1923 Jan. 22d.).

$A = -\cdot938$, $B = +\cdot057$, $C = -\cdot342$; $D = +\cdot061$, $E = +\cdot998$; $G = +\cdot341$, $H = -\cdot021$, $K = -\cdot940$.

It seems impossible to reconcile the observations as they stand. The hypothesis of two shocks, about 1 min. apart, would explain some of the anomalies. The epicentre 11°·0S. 167°·0E. used on 1925 Jan. 14 would suit the observations almost equally well.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Christchurch		23·8	187	4 42	−44	9 42	+ 2	21·2	22·6
Riverview		26·4	233	e 6 6	+14	10 47	+17	e 12·0	13·3
Sydney	E.	26·4	233	5 45	− 7	10 24	− 6	12·3	14·5
Melbourne		32·6	230	—	—	i 13 6	+48	i 17·5	18·9
Adelaide		36·6	239	8 45?	+78	14 57	+99	17·1	20·2
Batavia		68·8	273	e 11 6	− 4	i 22 3	+111	—	—
Victoria		86·8	38	25 56	?	—	—	42·4	51·1
Irkutsk		95·5	324	e 25 4	?S	(e 25 4)	− 7	e 46·5	—
Bombay		108·7	283	—	—	—	—	e 59·5	—
Toronto	E.	113·7	50	—	—	(25 50)	[+25]	25·8	—
Ottawa	E.	116·4	48	—	—	—	—	e 58·5	—
Ekaterinburg		120·7	324	—	—	e 28 11	−44	60·5	72·1
Baku		130·4	307	—	—	—	—	e 60·5	—
Kucino		132·8	330	—	—	—	—	68·0	—
Leningrad		133·4	337	—	—	—	—	68·5	78·2
Pulkovo		133·5	337	—	—	—	—	66·5	76·3
Makeyevka		136·5	320	e 73 30?	?L	—	—	77·5	84·2
Upsala	N.	137·4	344	—	—	—	—	e 46·8	—
Hamburg	Z.	144·9	346	e 20 45	[+57]	—	—	—	—
De Bilt		147·2	349	—	—	—	—	e 76·5	—
Vienna	Z.	147·5	335	e 20 47	[+55]	—	—	—	—
Uccle		148·6	350	—	—	—	—	e 77·5	—
Strasbourg		150·0	343	—	—	—	—	—	85·5
Granada		162·8	1	—	—	—	—	e 87·0	90·7
San Fernando	E.	163·4	8	—	—	—	—	—	113·5

Additional readings: Riverview eS? = +10m.18s., MN = +13·7m. Melbourne e = +3m.6s. Adelaide MN = +20·5m. Victoria PN = +26m.6s. Irkutsk eS = +32m.12s. Makeyevka MZ = +84·4m. San Fernando MN = +106·0m.

Jan. 12d. Readings also at 2h. (Manila), 3h. (Granada and Manila), 5h. (Taihoku) 9h. (near Algiers and near Lick), 10h. (near Lick), 14h. (Riverview), 15h. (Matuyama), 16h. (Matuyama and Perth), 18h. (Rio de Janeiro), 20h. (La Plata and Strasbourg).

Jan. 13d. Readings at 1h. (Agana and near Lick), 2h. (Kodaikanal), 10h. and 11h. (Tucson), 14h. (Matuyama), 18h. (Baku and near Tiflis (2)).

Jan. 14d. 8h. 35m. 18s. Epicentre 37°·5N. 140°·0E. (as on 1924 Sept. 24d.).

$A = -\cdot608$, $B = +\cdot510$, $C = +\cdot609$; $D = +\cdot643$, $E = +\cdot766$; $G = -\cdot466$, $H = +\cdot391$, $K = -\cdot793$.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Mizusawa	1·9	28	0 31	+ 2	0 49	− 4	—	—
Nagoya	3·4	227	(e 1 20)	+27	(1 42)	+ 8	(2·2)	(2·6)
Osaka	4·6	233	1 8	− 3	—	—	2·5	3·9
Kobe	4·8	235	e 1 28	+14	—	—	e 2·9	3·2
Irkutsk	28·9	312	—	—	—	—	e 16·7	—

Additional readings: Mizusawa PN = +33s. Nagoya readings have been increased by 4m. Osaka MN = +3·8m.

Jan. 14d. Readings also at 2h. (Ottawa, Toronto, Chicago, Victoria, and near Tucson), 4h. (near Santiago, near La Paz, and Sucre), 7h. (Bombay and Kodaikanal), 8h. (Baku, Ekaterinburg, Irkutsk, and Tiflis), 9h. (Irkutsk), 11h. (Nagasaki), 13h. (Tashkent), 16h. (Nagasaki), 17h. (Amboina and Tashkent), 18h. (Irkutsk), 20h. and 21h. (Tiflis).

Jan. 15d. 14h. 31m. 16s. Epicentre 36°·2N. 134°·5E. (given by K. Wadati in Geophysical Magazine, Vol. II, No. 1 (Tokyo) for 1929 March, p. 10).

A = −·566, B = +·576, C = +·591; D = +·713, E = +·701; G = −·414, H = +·421, K = −·807.

A depth of focus 0·060 is assumed, in good accordance with Mr. Wadati's estimate (*loc. cit.*) of 420 km.

	Corr. for Focus	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	°	m. s.	s.	m. s.	s.	m.	m.
Toyooka	+2·3	0·7	159	0 53	+ 6	(1 34)	+11	1·6	1·6
Osaka	+1·9	1·7	154	0 55	− 1	(1 38)	− 1	1·6	2·3
Kobe	+1·9	1·8	150	0 57	− 1	(1 40)	− 2	1·7	1·7
Sumoto	+1·9	1·9	170	1 1	+ 2	(1 46)	+ 2	1·8	1·8
Nagoya	+1·7	2·2	117	0 59	− 2	(1 58)	+11	2·0	2·0
Hukuoka	+0·8	4·2	233	1 19	+ 2	2 18	+ 1	—	2·4
Mizusawa	+0·3	6·0	59	1 34	− 2	2 45	− 7	—	—
Manila	−3·1	24·8	213	e 8 6	?S	(e 8 6)	−53	9·0	—
Irkutsk	−3·3	26·6	317	e 6 20	+60	e 9 10	−21	—	—
Tashkent	−5·5	50·0	297	—	—	i 13 56	−73	—	—
Ekaterinburg	−5·6	51·9	319	i 8 33	− 9	i 15 23	− 9	e 21·4	—
Tiflis	−6·6	66·7	307	e 10 20	+ 7	e 18 29	+ 5	—	—
Strasbourg	−7·3	83·0	328	11 44?	− 9	—	—	—	—
Florence	−7·4	84·9	323	e 11 44	−20	e 23 44	+109	—	—

Additional readings: Osaka MN = +2·0m. Kobe P = +58s. Sumoto MZ = +2·0m. Nagoya MNZ = +2·1m. Irkutsk i = +11m.28s., S is given simply as e. Tiflis e? = +10m.26s.

Jan. 15d. 15h. 53m. 54s. Epicentre 42°·3N. 17°·8E. (as on Jan. 3d.).

A = +·704, B = +·226, C = +·673; D = +·306, E = −·952; G = +·641, H = +·206, K = −·740.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Pompeii		2·9	238	e 1 1	+16	e 1 51	+31	—	—
Naples	E.	3·0	241	e 0 16	−31	—	—	—	2·1
Rocca di Papa	E.	3·8	264	e 1 3	+ 4	—	—	—	2·8
Zagreb		3·8	341	e 0 52	− 7	e 1 58	+14	i 2·8	—
Graz		5·0	341	e 1 19	+ 2	e 2 19	+ 2	—	3·2
Venice		5·0	310	e 2 0	+43	e 2 50	+33	—	—
Florence		5·0	290	e 1 16?	− 1	—	—	—	3·4
Budapest		5·2	9	2 23	?S	(2 23)	+ 1	—	—
Vienna	z.	6·0	351	e 1 23	− 9	—	—	—	—
Athens		6·4	131	e 0 31	−67	—	—	e 1·7	2·0
Innsbruck		6·7	320	e 2 40	?S	(e 2 40)	−22	—	—
Ravensburg		8·0	316	—	—	—	—	e 4·5	4·7
Strasbourg		9·4	315	—	—	4 6?	− 7	—	—

Additional readings: Rocca di Papa iPN = 3h.53m.51s., MN = +2·6m. Zagreb e = +1m.25s.; all readings are given for 14h. Venice eP = 15h.53m.36s.

Jan 15d. 20h. 47m. 35s. Epicentre 42°·3N. 17°·8E. (as at 15h.).

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Naples	E.	3·0	241	−0 5	−52	e 1 0	−23	—	1·9
Zagreb		3·8	341	e 1 5	+ 6	e 2 6	+22	i 2·2	3·0
Rocca di Papa		3·8	264	e 0 49	−10	—	—	2·7	3·2
Venice		5·0	310	e 1 21	+ 4	3 5	+48	—	5·2
Florence		5·0	290	e 1 10	− 7	e 2 10	− 7	—	4·4
Graz		5·0	341	e 1 17	0	e 2 44	+27	3·2	3·3
Budapest		5·2	9	1 21	+ 1	—	—	—	—
Vienna		6·0	351	e 1 29	− 3	2 40	− 4	i 3·4	4·5
Athens		6·4	131	e 0 49	−49	e 1 34	−81	e 1·7	2·3
Innsbruck		6·7	320	e 1 42	0	3 18	+16	i 3·6	—
Moncalieri		7·8	294	e 0 52	−66	4 27	+56	6·4	—
Ravensburg		8·0	316	e 2 31	+30	e 4 1	+24	e 4·8	5·3
Prague		8·1	345	e 5 25?	?	e 5 54	?	—	6·4
Strasbourg		9·4	315	e 3 5	+43	e 5 49	?L	(e 5·8)	—
Hamburg		12·4	338	—	—	—	—	e 7·4	—
Uccle		12·5	317	—	—	—	—	6·4	—
De Bilt		13·0	323	—	—	—	—	e 7·4	—
Makeyevka		15·3	61	—	—	—	—	7·4	—
Kew		15·3	313	—	—	—	—	e 9·4	—
Upsala	E.	17·5	0	—	—	—	—	e 11·3	—

Additional readings: Zagreb e = +1m.15s., +1m.18s., +1m.27s., +1m.38s., and +1m.54s. Rocca di Papa iPE = +1m.10s., iPN = +1m.19s., MN = +3·7m. Venice eP = +0m.53s. Vienna iZ = +1m.44s., P = +1m.49s., iN = +2m.0s., iN = +4m.0s. Innsbruck i = +2m.9s. and several other readings. Strasbourg SR_1? = +5m.54s., SR_2? = +6m.7s. Makeyevka e = 20h.44m.

Jan. 15d. Readings also at 2h. (Bagnères and Tortosa), 4h. (Ksara), 8h. (near Tacubaya), 9h. (Nagasaki), 12h. (near Toyooka), 13h. (Agana), 14h. (Zagreb and Florence), 15h. (Pulkovo, Ksara, Tiflis, Baku, Strasbourg, and near Athens), 16h. (Tacubaya and Oaxaca), 22h. (Rocca di Papa, Zagreb, and Athens (4)), 23h. (Ksara, Tiflis, and near Matuyama).

Jan. 16d. Readings at 3h. (Agana), 7h. (Tashkent), 8h. (Tiflis and near Ksara), 9h. (Athens), 10h. (Zi-ka-wei and near Mizusawa), 11h. (Irkutsk and Phu-Lien), 14h. (Toronto), 16h. (Tiflis and La Plata), 17h. (near Tucson), 19h. (Ottawa and near Tucson), 22h. (Irkutsk).

Jan. 17d. 21h. 58m. 4s. Epicentre 38°·5N. 143°·0E.

A = −·625, B = +·471, C = +·623; D = +·602, E = +·799; G = −·497, H = +·375, K = −·783.

Deduced from 37°·5N. 142°·5E., as on 1926 Nov. 5d. and 39°·0N. 143°·5E., as on 1923 Feb. 5d.

In Bull. Equake Res. Inst. (Tokyo), VII, p. 241 (1929), 38°40′N. 142°14′E. is given.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m s.	s.	m.	m.
Mizusawa	1·6	307	0 34	+10	0 48	+ 3	—	—
Nagoya	5·9	238	1 43	+12	(2 40)	− 1	2·7	3·3
Toyooka	7·1	249	1 51	+ 3	(3 5)	− 8	3·1	3·2
Osaka	7·2	240	1 55	+ 6	(3 20)	+ 5	3·3	4·4
Kobe	7·4	241	1 53	+ 1	3 2	−19	3·5	4·1
Sumoto	7·8	240	1 59	+ 1	(3 45)	+14	3·7	4·0
Ootomari	8·1	359	1 49	−14	(3 17)	−23	3·3	5·7
Hukuoka	11·3	248	2 48	− 1	(5 6)	+ 4	5·1	6·9
Nagasaki	12·1	246	e 2 54	− 6	(e 5 34)	+13	e 5·6	7·0

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Zi-ka-wei		19·1	254	i 4 25	− 5	i 8 21	+17	—	12·3
Taihoku	N.	22·6	240	—	—	—	—	7·7	—
Hong Kong		29·5	245	6 13	−10	11 16	−10	14·3	19·8
Irkutsk		30·0	310	i 6 16	−18	i 11 11	−23	15·9	18·7
Manila		30·8	225	e 6 31	− 5	(12 56)	+68	12·9	—
Phu-Lien		35·9	252	e 7 6	−15	e 12 37	−32	—	23·7
Simla	E.	53·4	284	e 16 56	?S	(16 56)	− 5	—	—
Ekaterinburg		54·7	320	i 9 41	+ 4	i 17 18	+ 1	26·9	35·2
Tashkent		54·9	300	i 9 37	− 1	i 17 12	− 8	e 27·9	33·1
Hyderabad		59·5	271	10 7	− 2	18 12	− 5	30·8	37·6
Bombay		63·1	275	10 35	+ 2	19 5	+ 3	33·1	37·7
Victoria		64·4	48	19 37	?S	(19 37)	+19	27·1	37·9
Kodaikanal		64·6	263	39 32	?L	—	—	(39·5)	—
Kucino		66·4	324	10 57	+ 3	19 42	0	32·1	42·7
Leningrad		67·2	330	11 3	+ 4	19 54	+ 2	33·1	43·7
Pulkovo		67·3	330	11 5	+ 5	19 57	+ 3	34·9	42·6
Baku		68·2	306	i 11 8	+ 3	—	—	36·4	38·6
Helsingfors		69·1	333	—	—	e 25 56?	?SR_1	33·9	39·9
Tiflis		70·7	310	11 22	+ 1	e 20 31	− 3	36·9	46·6
Makeyevka		70·9	317	11 24	+ 2	20 39	+ 2	33·9	44·2
Upsala		71·9	335	e 11 12	−17	e 20 46	− 3	e 36·9	45·8
Konigsberg		74·5	330	—	—	e 21 28	+ 8	e 41·9	46·9
Hamburg		79·3	335	e 12 17	+ 2	e 22 34	+19	e 41·9	48·9
Potsdam		79·3	331	—	—	—	—	e 47·3	—
Dyce		79·9	343	—	—	22 22	0	—	43·8
Budapest		80·6	326	10 42	−101	22 34	+ 4	e 42·9	51·6
Prague		80·6	330	—	—	e 22 26	− 4	e 41·9	49·9
Ksara		81·0	308	e 12 23	− 2	e 22 28	− 7	42·9	—
Vienna		81·2	328	12 23	− 3	e 23 22	?PS	—	54·9
Edinburgh		81·3	343	—	—	—	—	e 44·9	—
Cheb		81·4	331	—	—	e 22 56	+17	e 42·9	50·4
De Bilt		82·3	336	12 35	+ 3	—	—	e 37·9	51·7
Graz		82·4	328	e 12 37	+ 5	e 22 48	− 2	41·9	53·5
Stonyhurst		82·9	340	e 14 56?	+141	—	—	e 42·9	—
Uccle		83·6	336	—	—	e 22 59	− 6	e 38·9	53·1
Hohenheim		83·6	331	—	—	—	—	e 45·1	53·7
Innsbruck	N.E.	84·0	330	e 12 40	− 2	—	—	—	—
Strasbourg		84·3	332	i 12 40	− 4	e 23 2	− 9	41·9	56·4
Ravensburg		84·3	331	—	—	—	—	e 44·9	48·1
Kew		84·5	339	—	—	e 21 56?	−78	39·9	52·1
Oxford		84·6	340	—	—	i 23 4	−11	37·9	53·7
Chur		85·1	331	e 11 48	−61	—	—	e 27·9	—
Athens		85·4	316	—	—	—	—	e 44·1	54·8
Paris		85·9	336	—	—	—	—	e 44·9	53·9
Besançon		86·1	333	—	—	—	—	e 45·9	—
Moncalieri		87·3	330	13 1	0	23 6	[− 5]	46·9	58·2
Rocca di Papa		87·9	325	e 6 46	?	—	—	i 51·6	57·3
Ottawa		89·2	27	—	—	i 23 58	− 7	e 37·9	—
Toronto	E.	89·3	30	—	—	i 23 56	−10	46·7	—
Toledo	N.W.	96·0	336	—	—	—	—	e 47·2	61·5
Algiers		96·1	329	—	—	—	—	58·9	62·4
Granada		98·3	335	—	—	—	—	e 41·9	64·9
Rio Tinto		98·7	338	54 56?	?L	—	—	(54·9)	66·9
San Fernando		99·8	336	—	—	—	—	58·4	63·9
La Paz		145·0	60	19 52	[+ 3]	—	—	—	—

Additional readings and notes: Osaka MN = +4·3m. Kobe MN = +3·8m., MN = +5·9m. Hong Kong ? = +10m.58s., SR_1 = +12m.36s. Irkutsk i = +8m.10s., MN = +19·1m. Simla eN = +20m.14s. Ekaterinburg i = +10m.34s. and +13m.22s. = PR_2 −5s., iPR_1 = +11m.46s., e = +17m.9s., +19m.50s., and +23m.14s. = SR_2 −1s., PS = +17m.33s., SR_1 = +21m.6s., MN = +34·2m. Tashkent e = +10m.40s., PR_1 = +11m.41s., ePR_2 = +12m.43s., SR_1 = +21m.8s., eSR_2 = +22m.50s., MNZ = +33·6m. Kucino e = +11m.34s., PR_1 = +13m.22s., PS = +20m.6s., SR_1 = +24m.12s., SR_2 = +27m.11s. Leningrad PR_1 = +13m.42s., SR_1 = +24m.20s., MZ = +42·5m. Pulkovo PR_1 = +13m.41s., MZ = +42·5m., MN = +43·4m.; epicentre 38°41′N. 142°38′E. Baku iPS = +20m.54s., SR_1 = +25m.2s., SR_2 = +29m.43s., MNZ = +43·4m. Tiflis ePR_1N = +14m.4s., eN = +14m.13s., e = +32m.18s., MN = +50·6m. Makeyevka PR_1 = +14m.5s. Konigsberg iPR_1 = +14m.56s., iSR_2 = +28m.32s., iN = +33m.56s., eLN = +39·9m. De Bilt MN = +52·5m., MZ = +52·6m. Graz MN = +53·6m. Ravensburg MN = +54·0m. Kew MN = +51·6m. Athens MN = +54·5m. Paris MN = +51·9m. Ottawa eN = +23m.36s. = [S] +13s. Toledo MNE = +61·9m. San Fernando MN = +64·4m.

Jan. 17d. Readings also at 7h. (Kucino), 8h. (near Manzanillo), 9h. (near Tacubaya), 10h. (Kucino), 11h. (near Sumoto), 17h. (Ekaterinburg and near Algiers), 23h. (Tashkent).

Jan. 18d. 22h. 26m. 9s. Epicentre 47°·0N. 13°·2E. (given by Chur and Vienna).

A = +·664, B = +·156, C = +·731.

		△	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Innsbruck		1·3	282	e 0 23	+ 3	0 36	0	e 1·4	—
Graz		1·6	87	e 0 19	− 5	e 0 37	− 8	—	0·8
Chur		2·5	267	i 0 31	− 8	i 1 7	− 2	—	1·2
Vienna	z.	2·5	60	e 1 7	?S	(e 1 7)	− 2	—	—
Zurich		3·2	277	0 51?	+ 1	—	—	—	—
Strasbourg		4·0	296	e 1 21	+19	1 31	−19	—	—

Additional readings: Innsbruck i = +28s. Strasbourg PR_1? = +1m.31s., SR_1? = +2m.11s., SR_2? = +2m.21s.

Jan. 18d. Readings also at 0h. (Tiflis), 3h. (Nagasaki), 4h. (Nagasaki and Tiflis), 5h. (Nagasaki and near La Paz), 6h. (Kucino), 8h. (near Athens), 10h. (Manila), 13h. (near Tucson), 14h. (Simla), 18h. (Ekaterinburg, La Paz, and Tashkent), 20h. (Irkutsk), 23h. (Berkeley and near Tucson (2)).

Jan. 19d. 1h. 16m. 40s. Epicentre 16°·0N. 103°·0W. (as on 1923 Nov. 9d.).

A = −·216, B = −·937, C = +·276; D = −·974, E = +·225;
G = −·062, H = −·269, K = −·961.

		△	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Manzanillo		3·3	337	(1 8)	+16	(1 24)	− 7	(1·4)	(1·5)
Guadalajara		4·7	354	1 14	+ 1	(1 30)	−39	1·5	1·5
Tacubaya		4·9	47	0 57	−19	(1 45)	−29	1·8	2·5
Puebla		5·5	56	(1 16?)	− 9	(2 6)	−25	(2·1)	(2·5)
Oaxaca		6·0	79	1 55	+23	3 10	+26	3·3	3·4
Vera Cruz		7·2	63	(1 29)	−20	(3 2?)	−13	(3·0)	(4·4)
Mazatlan		7·9	337	(1 48)	−12	(2 55)	−39	(2·9)	(3·8)
Merida		13·6	67	3 32	+11	6 2	+ 4	6·2	9·4
Loyola		18·2	38	3 35	−44	(6 25)	−79	6·4	—
Denver	E.	23·7	356	—	—	9 39	+ 1	12·8	—
Chicago	E.	29·0	24	—	—	e 11 47	+30	e 14·1	15·4
	N.	29·0	24	—	—	i 10 55	−22	e 14·0	15·4
Ann Arbor		31·0	28	e 7 14	+36	e 12 14	+23	—	—
Toronto	N.	34·1	31	—	—	e 12 26	−16	18·8	—
Fordham		35·4	39	—	—	—	—	e 19·8	21·1
Victoria	E.	36·4	338	8 37	?PR_1	—	—	13·8	15·8
Ottawa		37·2	32	—	—	e 13 32	+ 5	e 20·0	22·8
La Paz		47·3	132	8 55	+ 6	—	—	19·8	23·6
Uccle		88·1	37	—	—	—	—	e 40·3	—
Pulkovo		95·3	21	—	—	—	—	e 47·8	—
Ekaterinburg		106·1	10	e 18 15	[+ 7]	e 27 55	?PS	e 58·3	—
Makeyevka		107·1	25	—	—	—	—	61·3	—
Irkutsk		107·7	342	—	—	—	—	e 60·3	—
Tiflis		115·1	25	—	—	e 29 4	+53	e 61·3	62·5

Additional readings and notes: Manzanillo readings have been increased by 3min. Puebla readings have been diminished by 4min. Vera Cruz readings have been increased by 5min. Mazatlan readings have been increased by 3min. Loyola readings are given for 18d. Denver iEN = +10m.7s. and +11m.59s., iE = +10m.48s. Ann Arbor e = +12m.50s. and +13m.50s. Ottawa eE = +12m.20s.

Jan. 19d. Readings also at 0h. (Ottawa (2), Toronto, Fordham, Victoria, and near Tucson), 1h. (Victoria, near Tucson (3), Berkeley, and Lick), 2h. (Ottawa, Toronto, Chicago, Ann Arbor, Fordham, Victoria, and near Tucson (3)), 3h. (near Tucson (2)), 4h. (Ekaterinburg, La Paz, Tacubaya, Vera Cruz, and near Tucson (3)), 5h. (Ottawa and near Apia), 7h., 9h., and 11h. (near Tucson), 12h. (Nagasaki and near Tiflis (2)), 13h. (Kobe and Sumoto), 14h. (near Tucson), 18h. (Nagasaki), 21h. (Agana).

Jan. 20d. 8h. 46m. 45s. Epicentre 39°·0N. 73°·0E. (as on 1926 Aug. 26d.).

$A = +\cdot227$, $B = +\cdot743$, $C = +\cdot629$; $D = +\cdot956$, $E = -\cdot292$; $G = +\cdot184$, $H = +\cdot602$, $K = -\cdot777$.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Tashkent		3·7	310	i 1 14	+16	i 1 28	−14	—	3·5
Simla	N.	8·6	156	e 5 3	+173	e 5 57	+124	—	—
Baku		17·8	282	e 4 29	+14	e 8 27	+51	e 11·2	13·4
Ekaterinburg		19·6	340	i 4 37	+ 1	i 8 6	− 9	i 9·7	10·4
Bombay		20·1	181	9 21	?S	(9 21)	+56	14·0	—
Tiflis		21·6	286	5 12	+12	e 9 28	+31	e 13·2	15·7
Hyderabad		22·1	166	9 46	?S	(9 46)	+39	14·2	—
Irkutsk		25·3	48	e 5 42	+ 1	i 10 11	+ 2	12·2	13·1
Makeyevka		26·7	301	5 58	+ 3	e 10 42	+ 7	13·2	18·9
Kucino		28·6	317	—	—	e 11 22	+12	e 16·2	—
Pulkovo		33·8	322	6 57	− 6	(13 12?)	+34	13·2	20·5
Helsingfors	E.	36·4	321	e 14 35	+430	e 18 25	+309	e 21·4	—
	N.	36·4	321	e 14 41	+436	e 18 41	+325	—	—
Upsala	N.	40·0	321	—	—	—	—	e 20·2	—
Cheb		43·3	305	—	—	—	—	e 25·2	27·8
Hamburg		44·3	312	—	—	—	—	e 23·2	—
De Bilt		47·4	310	—	—	—	—	e 26·2	—
Uccle		48·2	309	—	—	—	—	27·2	—

Additional readings: Tashkent MZ = +2·5m. Simla eE = +5m.21s. Baku iP = +4m.33s., MZ = +14·3m. Ekaterinburg ePR_1 = +4m.55s., i = +8m.0s., e = +8m.55s., MZ = +10·3m., MN = +12·2m. Tiflis eL? = +10·2m., MN = +15·5m. Makeyevka ePR_1 = +6m.41s., MZ = +18·8m., MN = +20·5m. Kucino eSR_1 = +12m.45s., e = +15m.6s. Pulkovo MN = +20·7m. Helsingfors eN = +16m.58s., eSZ = +18m.22s., eZ = +22m.19s.

Jan. 20d. 10h. 56m. 18s. Epicentre 21°·0S. 67°·0W. (as on 1922 Mar. 28d.).

$A = +\cdot365$, $B = -\cdot860$, $C = -\cdot358$; $D = -\cdot920$, $E = -\cdot391$; $G = -\cdot140$, $H = +\cdot330$, $K = -\cdot934$.

The focal depth 0·010 of 1922 Mar. 28d. is retained. For residuals in [P] and [S] the focal correction to Δ has been applied when given in the text.

		Corr. for Focus	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	°	m. s.	s.	m. s.	s.	m.	m.
La Paz		0·0	4·6	345	i 1 17	+ 6	i 2 17	+11	2·5	3·0
Pilar		−0·1	11·1	166	2 48	+ 4	5 18	+24	6·9	11·6
Santiago		−0·2	12·9	194	3 3	− 6	5 14	−23	5·7	—
La Plata		−0·2	16·1	152	i 3 59	+ 8	e 7 24	+31	9·3	—
Rio de Janeiro	E.	−0·6	22·2	101	e 4 10	−50	8 15	−42	9·4	15·2
	N.	−0·6	22·2	101	i 4 10	−50	7 57	−60	9·3	16·3
Ann Arbor		−1·2	65·1	347	i 19 6	?S	(i 19 6)	− 6	e 29·4	—
Toronto		−1·2	65·6	350	e 11 7	+26	i 19 9	− 9	29·9	—
Ottawa		−1·2	66·9	354	e 11 17	+28	i 19 23	−10	e 29·5	—
Tucson		−1·3	67·8	322	10 51	− 4	19 36	− 8	—	—
Cape Town		−1·3	74·9	121	—	—	(21 38)	+29	—	21·6
San Fernando		−1·3	81·2	46	—	—	i 22 27	+ 5	—	24·2
Rio Tinto		−1·3	81·6	44	23 42?	?PS	—	—	—	28·7
Victoria	N.	−1·4	85·7	327	12 58	+14	(22 48)	[− 4]	22·8	23·7
Oxford		−1·4	92·6	34	i 23 35	?S	(i 23 35)	[0]	—	—
Kew		−1·4	92·8	34	—	—	e 23 40	[+ 4]	38·7	—
Edinburgh		−1·4	93·7	30	—	—	—	—	—	50·7
Moncalieri		−1·4	94·3	43	—	—	(23 47)	[+ 2]	23·8	—
Dyce		−1·4	95·0	29	—	—	i 23 8	[−42]	e 31·0	—
Uccle		−1·4	95·1	38	—	—	i 23 54	[+ 4]	e 43·7	—
De Bilt		−1·4	96·1	36	e 17 24	$?PR_1$	e 24 1	[+ 6]	e 48·7	55·1
Strasbourg		−1·4	96·1	40	—	—	—	—	e 21·7	—
Hamburg		−1·5	99·4	36	e 17 48	$?PR_1$	e 24 15	[+ 3]	e 51·7	—
Cheb		−1·5	99·4	40	—	—	i 24 20	[+ 8]	—	—
Upsala	E.	−1·5	105·4	31	—	—	e 24 36	[− 6]	—	—

Continued on next page.

	Corr. for Focus	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	°	m. s.	s.	m. s.	s.	m.	m.
Konigsberg	−1·5	105·6	37	—	—	e 25 39	[+56]	—	—
Helsingfors	−1·5	109·0	31	e 18 53	[+34]	—	—	—	—
Leningrad	−1·6	111·6	28	—	—	26 1	[+51]	49·9	66·8
Pulkovo	−1·6	111·7	28	—	—	25 6	[− 4]	51·7	64·6
Ksara	−1·6	111·8	60	e 19 13	?PR_1	26 6	[+55]	34·7	—
Makeyevka	−1·6	115·3	44	e 19 49	?PR_1	—	—	62·7	74·0
Kucino	−1·6	115·5	36	—	—	i 26 18	[+52]	—	—
Tiflis	—	119·8	52	e 20 5	?PR_1	—	—	e 57·7	75·0
Baku	—	123·6	53	i 21 52	?PR_1	—	—	e 61·7	76·6
Ekaterinburg	—	127·7	33	i 19 10	[− 3]	28 52	−53	55·7	73·3
Tashkent	—	138·0	50	e 19 14	[−22]	—	—	63·7	72·0
Irkutsk	—	147·9	9	e 19 48	[− 5]	—	—	41·7	—
Hyderabad	—	147·2	88	19 47	[− 4]	—	—	—	34·3
Batavia	—	152·2	167	i 20 48	[+49]	—	—	42·1	—
Manila	—	170·1	239	e 20 12	[− 3]	—	—	—	—
Phu-Lien	—	174·0	91	e 27 42	?PR_1	—	—	—	—

Additional readings: La Paz i = +2m.2s. Pilar MN = +8·3m. Ann Arbor eN = +19m.36s., +20m.54s., and +26m.42s. = SR_2 +12s., iE = +19m.54s. and +21m.12s., eSR_1 = +27m.0s. Toronto iN = +11m.20s., iEN = +19m.57s. Ottawa i = +20m.12s., iE = +21m.20s. Tucson P_cPE = +11m.34s., P_cPN = +11m.35s., PR_4N? = +15m.23s., P_cSN? = +16m.0s., SN = +19m.34s., PSE = +20m.19s., PSN = +20m.22s., PSE? = +20m.39s., S_cSE? = +21m.17s. and +21m.29s., S_cSN = +21m.30s.; T_g = 10h.56m.26s. and 10h.56m.31s. San Fernando MN = +23·7m. Oxford i = +24m.10s. De Bilt eLN = +40·7m., MZ = +55·2m. Hamburg i = +25m.15s. Upsala eE = +25m.31s. Konigsberg iE = +25m.50s. Helsingfors gives many other "e" readings. Pulkovo PR_1 = +19m.7s., S = +26m.1s., PPS = +28m.30s., SR_1 = +34m.18s., SR_2 = +38m.32s. Leningrad PR_1 = +19m.10s., PPS = +28m.28s. Makeyevka ePR_2 = +22m.45s., iPS = +29m.25s., iPPS = +30m.19s., MZ = +69·7m. Kucino PR_1 = +19m.48s., e = +25m.22s., eS = +27m.31s., PPS = +29m.54s. Tiflis eE = +25m.43s., and +30m.7s., MN = +74·4m. Baku MZ = +77·1m. Ekaterinburg iP = +19m.38s., iPR_1 = +21m.11s. and +21m.38s., iP_4P_4S = +22m.18s., PS = +31m.17s., PPS = +32m.45s., SR_1 = +38m.21s. Tashkent P = +18m.34s., iP = +22m.17s. = PR_1 −5s., and +22m.48s., iPR_1 = +23m.26s., PR_1 = +24m.17s., PR_2 = +26m.10s. and +27m.0s., PPS = +34m.42s., SR_1 = +40m.12s., and +41m.6s., MZ = +71·4m., MN = +86·8m. Irkutsk e = +22m.58s. = PR_1 −21s., and +28m.42s.?

Jan. 20d. Readings also at 2h. (Nagasaki and Tashkent), 3h. (Nagasaki), 4h. (Ksara), 7h. (Tiflis and near Lick), 9h. (near La Paz), 10h. (Santiago), 11h. (near Granada and Almeria), 18h. (La Paz), 20h. (Leningrad and Pulkovo), 21h. (Ekaterinburg, Kucino, Pulkovo, Leningrad, and near Algiers), 22h. (Tiflis, Kucino, Pulkovo, Leningrad, and Ekaterinburg).

Jan. 21d. 8h. 53m. 6s. Epicentre 32°·0S. 179°·0W. (as on 1923 Oct. 1d.).

A = −·848, B = −·015, C = −·530; D = −·017, E = +1·000;
G = +·530, H = +·009, K = −·848.

The epicentre of Jan. 24d. 15h. (viz., 18°·5S. 168°·5E.), or one near it (say 16°·0S. 168°·0E.) would suit some of these observations, but the values of L for European stations seem decisive against it.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Riverview	25·1	258	e 5 18	−21	—	—	e 12·7	14·1
Sydney E.	25·1	258	5 24	−15	—	—	14·1	15·2
Melbourne	30·0	249	e 6 54	+26	—	—	i 16·0	19·1
Kodaikanal	106·8	272	65 12	[L]	—	—	(65·2)	—
Irkutsk	107·5	320	e 19 0	?[illegible]	e 29 21	+135	e 49·9	—
Tashkent	125·8	300	i 19 9	[+ 1]	—	—	e 62·9	72·8
Ekaterinburg	132·7	319	i 19 20	[− 4]	—	—	67·9	74·3

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Baku		140·2	295	—	—	—	—	e 71·9	83·2
Tiflis	E.	144·1	297	e 19 37	[−10]	—	—	e 78·0	81·2
Kucino		145·0	322	—	—	—	—	75·4	—
Pulkovo		146·1	334	i 20 39	[+49]	e 24 21	?PR_1	71·9	—
Makeyevka		147·9	310	i 19 48	[− 5]	—	—	78·9	83·0
Ksara		150·8	283	e 20 3	[+ 6]	—	—	—	—
Uccle		161·0	353	—	—	—	—	—	100·9

Additional readings: Irkutsk ePR_1 = +25m.20s. = [S] +21s.—If the readings are diminished by 1min., then P = (18m.0s.) = [P] −13s., eS = (+28m.21s.) = PS −8s., ePR_1 = (+24m.20s.) = [S] −39s. Tashkent i = +20m.55s. = PR_1 −7s., iPR_1 = +24m.7s. = PR_2 −24s., PR_2 = +26m.36s. = PR_3 −24s., $S_4P_4P_4S_4$ = +30m.40s., MN = +72·2m. Ekaterinburg iP_4P_4S = +22m.46s., ePPS = +33m.44s., MZ = +72·7m. Baku MN = +86·1m., MZ = +86·9m. Kucino e = +62m.0s., +64m.36s., and +67m.12s. Pulkovo e = +41m.29s. = SR_1 −36s.

Jan. 21d. Readings also at 0h. (Pulkovo and Leningrad), 1h. (Pulkovo and Leningrad), 2h. (Pulkovo, Tiflis, Kucino, Ekaterinburg, and Nagasaki), 3h. (near Balboa Heights (2) and near Manila), 4h. (near Balboa Heights), 9h. (La Paz (2), near Balboa Heights, and near Mizusawa), 11h. (Taihoku, near Mizusawa and near Algiers), 15h. (Azores), 16h. (near Tacubaya), 19h. (near Tucson), 20h. (Apia), 22h. (near Oaxaca, Tacubaya, and Vera Cruz), 23h. (Tashkent).

Jan. 22d. Readings at 3h. (near La Paz), 5h. (Nagasaki), 6h. (Nagasaki (2) and near Manzanillo).

Jan. 23d. 3h. 23m. 33s. Epicentre 43°·5N. 17°·0E. (as on 1926 June 14d.).

A = +·694, B = +·212, C = +·688; D = +·292, E = −·956; G = +·658, H = +·201, K = −·725.

The above is the nearest old epicentre to the point 43°51′N. 17°0′E., which is suggested by Chur.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Zagreb		2·4	342	e 0 27?	−10	—	—	—	—
Rocca di Papa	z.	3·6	243	e 1 1	+ 5	—	—	—	—
Graz		3·8	344	e 0 43	−16	e 1 43	− 1	—	2·1
Vienna		4·8	355	1 0	−14	2 21	+10	—	3·6
Innsbruck		5·5	316	e 1 15	−10	e 2 14	−17	i 2·8	—
Chur		6·2	304	1 28	− 7	2 32	−17	—	—
Strasbourg		8·2	312	2 19	+15	4 3	+21	—	—

Additional readings: Zagreb gives many i readings., viz., +33s., 35s., 41s., 49s., 59s., 69s., 71s., 85s. Rocca di Papa eE = +1m.10s., iN = +1m.55s., iE = +2m.4s. Vienna P = +1m.22s., PR_1 = +1m.28s., PS = +2m.14s., SR_2 = +2m.41s. Innsbruck e = +3m.55s. Strasbourg SR_1? = +4m.49s.

Jan. 23d. Readings also at 0h. (near Athens), 2h. (Loyola and Nagasaki), 3h. (Nagasaki), 4h. (Kucino and Nagasaki). 5h. and 8h. (Nagasaki), 9h. (Fordham), 10h. and 12h. (Nagasaki), 13h. (Pulkovo, Leningrad, and Nagasaki), 14h. and 19h. (Nagasaki), 22h. (Tiflis).

Jan. 24d. 1h. 5m. 33s. Epicentre 18°·5S. 168°·5E.

(as on 1927 Jan. 5d.).

A = −·929, B = +·189, C = −·317; D = +·199, E = +·980; G = +·311, H = −·063, K = −·948.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Apia		19·5	79	4 42	+ 7	8 41	+28	10·4	15·1
Riverview		21·8	222	i 5 0	− 3	i 9 4	+ 3	—	11·8
Sydney	E.	21·8	222	1 27	−216	5 3	−238	9·0	9·8
Christchurch		25·3	173	6 3	+22	(9 51)	−18	9·8	14·4
Melbourne		28·2	221	i 6 9	− 1	i 11 3	0	14·4	17·4
Adelaide		31·2	233	e 6 25	−15	i 11 31	−23	i 13·8	20·1
Amboina		42·1	285	i 8 41	+29	i 14 53	+17	22·4	26·4
Perth		49·0	243	i 9 17	+17	e 15 47	−19	25·4	26·4
Honolulu	N.	51·6	42	e 9 20	+ 3	16 40	+ 1	21·2	28·4
Manila		57·3	303	i 10 1	+ 7	(e 17 36)	−14	e 17·6	18·9
Malabar		60·2	274	10 19	+ 6	i 18 52	+26	23·8	33·8
Batavia		61·2	274	i 10 25	+ 5	—	—	33·9	36·0
Nagoya		61·4	332	e 10 7	−14	—	—	—	—
Osaka		61·7	330	10 19	− 4	18 42	− 2	26·8	28·3
Sumoto		61·7	330	e 10 35	+12	(e 18 45)	+ 1	e 18·8	—
Mizusawa	E.	63·0	339	10 44	+12	18 59	− 2	—	—
	N.	63·0	339	10 43	+11	18 57	− 4	27·0	—
Taihoku	N.	63·1	314	10 17	−16	(18 29)	−33	18·5	—
Nagasaki		63·2	325	e 10 34	+ 1	e 19 2	− 1	e 23·1	32·4
Hukuoka		63·5	326	10 16	−19	19 8	+ 1	26·8	—
Hong Kong		67·0	307	11 2	+ 4	(19 39)	−11	19·6	34·3
Zi-ka-wei		67·1	320	i 10 58	− 1	e 20 33	+42	32·5	40·2
Phu-Lien		72·2	300	e 11 33	+ 2	e 20 50	− 2	—	—
Berkeley		85·9	48	e 12 31	−22	e 23 0	[− 1]	e 36·0	—
Lick	N.	86·2	49	e 12 54?	0	e 23 36	+ 4	e 36·0	42·0
Calcutta	E.	88·4	294	13 36	+29	(23 35)	−21	23·6	—
	N.	88·4	294	13 34	+27	(23 36)	−20	23·6	—
Sitka	N.	88·8	28	—	—	—	—	e 41·0	49·8
Irkutsk		89·8	326	12 59	−16	i 22 37	[−50]	43·4	64·0
Victoria	E.	90·2	37	13 35	+18	23 35	[+ 6]	—	52·4
	N.	90·2	37	13 33	+16	24 10	− 6	37·1	55·6
Colombo		90·9	277	13 57	+36	24 32	+ 9	50·4	64·4
Tucson	E.	92·2	56	13 20	− 8	23 33	[− 8]	45·3	57·4
	N.	92·2	56	13 22	− 6	24 37	0	42·0	56·0
Kodaikanal		94·2	280	13 51	+12	—	—	55·6	82·2
Hyderabad		95·5	286	13 35	−11	24 9	[+ 9]	43·4	65·4
Tacubaya		98·1	75	14 2?	+ 1	26 59	?PS	48·4	61·2
Denver		99·1	51	—	—	23 58	[−21]	45·4	57·4
Simla		100·5	300	e 24 33	?[S]	(e 24 33)	[+ 7]	—	65·8
Vera Cruz		100·8	73	—	—	27 27	?PS	45·0	59·9
Bombay		101·0	286	13 2	−73	24 36	[+ 7]	52·7	67·2
Pilar	E.	109·1	135	29 3?	?PS	—	—	52·6	68·0
St. Louis	N.	110·1	53	e 18 17	[− 5]	e 28 55	+86	e 45·4	56·4
La Plata		110·8	140	—	—	—	—	45·8	—
Ann Arbor		111·6	51	(e 15 51)	+46	(e 26 21)	−81	(e 44·4)	(55·4)
Chicago	N.	112·4	51	—	—	26 37	−72	e 47·4	52·6
La Paz		114·2	120	18 43	[+ 9]	i 29 36	?PS	48·3	56·6
Ekaterinburg		115·1	325	e 14 59	−22	i 26 52	−79	48·4	68·3
Sucre		115·3	122	e 19 19	[+40]	i 29 52	+100	47·6	56·3
Toronto	E.	118·5	49	e 20 12	?PR_1	e 25 49	[+ 8]	e 56·8	64·7
Cape Town		120·3	209	20 22	?PR_1	—	—	50·8	75·3
Cheltenham	E.	120·4	56	—	—	—	—	e 65·0	69·4
Ithaca		120·6	50	e 30 27?	?PS	e 37 33	?SR_1	60·5	—
Ottawa		121·0	47	e 20 12	?PR_1	e 25 57	[+ 9]	e 56·4	66·4
Fordham		122·7	53	e 20 55	?PR_1	—	—	e 51·4	73·6
Harvard	E.	124·6	50	—	—	—	—	e 58·8	74·0
Tiflis		127·2	308	e 19 21	[+ 9]	—	—	54·4	75·3
Kucino		127·5	328	—	—	e 25 59	[− 6]	—	72·4
Rio de Janeiro	E.	128·4	141	20 27	?PR_1	—	—	52·8	64·7
Leningrad		128·9	335	19 19	[+ 3]	26 14	[+ 7]	59·2	70·4
Pulkovo		129·1	335	19 16	[0]	26 12	[+ 3]	58·0	68·6
Makeyevka		130·4	317	e 19 20	[+ 1]	e 25 56	[−15]	—	78·6
Helsingfors		130·9	336	e 19 16	[− 5]	—	—	54·4	75·4
Entebbe		133·1	250	e 16 31	?	e 21 23	?PR_1	36·5	41·0
Upsala		133·7	341	e 22 27?	?PR_1	—	—	e 57·4	73·3
Ksara		135·2	299	19 42	[+12]	—	—	59·4	—

Continued on next page.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Konigsberg	136·3	334	e 19 38	[+ 5]	—	—	e 70·4	78·4
Lemberg N.	137·7	324	e 19 51	[+16]	—	—	—	—
Helwan	139·6	294	e 19 37	[− 2]	22 27	?PR$_1$	—	113·2
Potsdam	141·1	336	e 18 50	[−51]	—	—	e 59·4	—
Hamburg	141·2	340	e 19 37	[− 4]	—	—	e 60·4	75·4
Budapest	141·8	326	19 27?	[−16]	e 25 57	?PR$_2$	e 38·4	82·6
Edinburgh	142·1	353	—	—	—	—	e 59·4	—
Prague	142·3	331	e 19 47	[+ 3]	e 35 7	?	e 61·4	78·4
Vienna	142·6	330	e 19 36	[− 8]	—	—	e 73·4	80·0
Johannesburg	142·8	221	—	—	—	—	56·4	—
Cheb	143·1	333	e 19 50	[+ 5]	e 34 57	?	e 55·4	73·4
Athens	143·7	310	e 19 49	[+ 3]	—	—	e 58·6	82·5
Graz	143·9	329	i 19 54	[+ 7]	e 33 19	?	62·4	76·8
Stonyhurst	143·9	350	19 12	[−35]	e 28 35	?	—	—
De Bilt	144·0	341	i 19 42	[− 5]	i 23 18	?PR$_1$	e 61·4	112·6
Bidston	144·5	350	19 9	[−38]	42 53?	?SR$_1$	65·8	76·0
Zagreb	144·5	326	e 19 41	[− 6]	e 24 42	?	e 63·4	79·3
Feldberg	144·5	336	(i 19 43)	[− 4]	—	—	(e 65·0)	(75·4)
Oxford	144·8	351	i 19 45	[− 3]	—	—	e 56·0	107·2
Uccle	145·3	341	e 19 38	[−11]	—	—	e 58·4	113·4
Hohenheim	145·4	335	e 19 42	[− 7]	—	—	e 65·4	114·2
Innsbruck	145·7	334	e 19 26	[−23]	e 21 0	?	62·4	—
Kew	145·9	349	e 19 47	[− 3]	—	—	58·4	119·4
Ravensburg	146·0	337	19 43	[− 7]	—	—	e 67·6	114·9
Strasbourg	146·1	337	i 19 41	[− 9]	e 27 22	?PR$_2$	60·4	116·4
Venice	146·6	330	19 52	[+ 1]	20 39	?	—	—
Zurich	146·8	334	e 19 49	[− 2]	e 29 17	?PR$_2$	—	—
Chur	146·9	333	e 19 46	[− 5]	—	—	—	—
Paris	147·6	344	e 19 52	[0]	—	—	61·4	114·4
Besançon	147·9	339	e 19 51	[− 2]	—	—	64·4	102·4
Florence	148·3	327	19 57	[+ 4]	28 37	?	63·4	77·4
Pompeii	148·5	320	e 19 17	[−36]	e 27 27	?PR$_2$	87·4	107·4
Naples	148·6	320	e 18 27?	[−87]	—	—	40·4	49·4
Rocca di Papa	148·9	322	e 19 49	[− 5]	—	—	e 78·0	109·6
Moncalieri E.	149·0	333	19 52	[− 2]	32 0	?	64·6	129·6
N.	149·0	333	19 56	[+ 2]	32 19	?	67·2	94·4
Grenoble	149·7	336	e 19 58	[+ 3]	—	—	e 55·4	79·6
Puy de Dôme	150·2	340	e 19 55	[− 1]	—	—	e 72·4	—
Bagnères	153·5	340	e 20 27?	[+27]	—	—	e 54·4	110·4
Barcelona	154·3	336	—	—	—	—	e 75·0	91·6
Tortosa N.	155·4	338	20 3	[+ 1]	—	—	e 49·4	109·6
Azores	157·1	30	37 27	?	—	—	(84·2)	96·0
Algiers	157·7	328	e 20 10	[+ 4]	32 5	?	e 59·4	107·4
Toledo	157·7	345	e 20 18	[+12]	e 31 40	?PR$_2$	e 50·0	105·2
Alicante	158·0	336	e 20 33	[+27]	32 47	?PR$_2$	61·9	114·4
Almeria	159·9	388	20 25	[+17]	e 31 52	?PR$_2$	53·3	72·4
Granada	160·1	341	i 20 8	[0]	i 34 32	?	80·4	104·2
Rio Tinto	160·3	348	25 27?	?PR$_1$	—	—	—	63·4
Malaga	160·7	343	e 20 9	[0]	e 32 5	?PR$_2$	e 43·6	105·4
San Fernando	161·5	347	20 30	[+21]	32 10	?PR$_2$	—	104·4

Additional readings: Apia MZ = +10·7m., MN = +12·4m.; T$_e$ = 1h.5m.10s. Riverview PR$_1$ = +5m.28s., PR$_2$ = +5m.36s., PR$_3$ = +5m.44s., iS = +9m.28s., SR$_1$ = +9m.54s., MZ = +12·1m., MN = +12·3m. Christchurch S = +8m.15s. Adelaide MN = +15·2m. Amboina i = +8m.53s. Perth eS = +16m.17s., eSR$_1$ = +20m.52s., eSR$_2$ = +22m.47s. Honolulu PSN = +17m.26s., SR$_1$N = +19m.57s., eLN (Rayleigh) = +23·4m.; T$_e$ = 1h.5m.36s. and 1h.5m.40s. Manila iPR$_1$N = +11m.2s., iPR$_1$E = +11m.23s., eS = +14m.32s., iSR$_1$N = +16m.22s., MN = +19·4m. Batavia i = +10m.28s., iE = +10m.54s. Sumoto eS = +13m.23s. = PR$_1$ +10s., eSR$_1$ = +16m.19s. Hong Kong S = +15m.56s. = PR$_2$ +28s. Zi-ka-wei PR$_1$ = +14m.19s., PR$_2$ = +17m.8s., PS = +21m.28s., SR$_1$ = +24m.32s., SR$_2$ = +28m.26s. = PR$_2$ +24s. Berkeley ePZ = +12m.40s., ePEN? = +13m.3s. Lick ePN = +12m.51s., eSN = +24m.50s., and several eN readings. Sitka PSE = +25m.27s., eLE = +43·4m. Irkutsk PR$_1$ = +15m.59s., i = +19m.59s. = PR$_2$ +37s., MZ = +56·2m., MN = +68·2m. Tucson PE? = +13m.4s. and +13m.16s., ePR$_1$N = +16m.52s., PSN = +25m.43s., PSE = +25m.47s., SR$_1$E = +30m.36s., SR$_1$N = +30m.45s., SR$_2$N? = +37m.9s. Denver eE? = +16m.34s., eN? = +16m.58s., S$_c$P$_c$SE = +22m.53s. = SR$_1$ +26s. Simla MN = +72·0m. Pilar MN = +77·8m. St. Louis eN = +21m.23s. and +21m.58s. = PR$_2$ −26s. Ann Arbor ePR$_1$ = (+19m.33s.) = PR$_1$ +3s., ePS = (+27m.15s.) = S −27s., eLN = (+44·0m.), MN = (+52·6m.); the readings have all been diminished by 10 min. Chicago ePR$_1$E = +19m.30s., PSN = +28m.44s., PSE = +28m.59s., P$_c$P$_c$P$_c$PN? =

Continued on next page.

+29m.21s., iSR_1E = +35m.43s., SR_2E = +38m.51s., SR_3E = +43m.21s., eLE = +59·4m., ME = +64·4m. La Paz PR_1 = +21m.40s., PR_2 = +26m.3s. =[S] +33s., iSN = +29m.38s., i = +32m.40s., SR_1 = +35m.50s. Ekaterinburg eP = +18m.50s. =[P] +12s., PR_1 = +19m.46s., PR_2 = +22m.15s., S_4P_4S = +25m.37s., iPS = +29m.17s., iPPS = +29m.43s., iSR_1 = +35m.39s., iSR_2 = +39m.50s., MN = +57·7m., MZ = +64·8m. Sucre i = +49m.9s. Toronto eE = +30m.2s. =PS −26s., and several other readings, MN = +64·2m. Cheltenham eLN = +64·6m. Ottawa eN = +28m.27s. =S −30s., eE = +30m.17s. =PS −37s., eSR_1? = +36m.51s., eLN = +50·8m., MN = +70·4m. Fordham eN = +22m.32s., eE = +24m.37s., +27m.7s., and +33m.37s., eSR_1? = +37m.42s., MN = +64·4m. Harvard ePSE? = +32m.45s., SR_1E = +37m.49s., and +38m.33s. Tiflis eE = +21m.7s. =PR_1 −5s., eN = +21m.57s., +29m.9s. =S −32s., and +31m.39s. =PS −17s., MN = +97·6m. Kucino ePR_1 = +21m.13s., iPR_2 = +23m.22s., PS = +30m.33s., SR_1 = +38m.25s. Rio de Janeiro L = +36m.42s. and +36m.55s., MN = +65·4m. Leningrad PR_1 = +21m.25s., $S_4P_4P_4S$ = +28m.14s., PS = +31m.47s., SR_1 = +38m.42s., MN = +75·4m., MZ = +75·6m. Pulkovo PR_1 = +21m.17s., i = +22m.35s., PS = +30m.55s., PPS = +32m.39s., SR_1 = +38m.41s., MN = +65·3m., MZ = +75·3m. Makeyevka PR_1 = +21m.31s., i = +22m.44s., MZ = +106·1m. Helsingfors eEN = +21m.1s. =PR_1 −34s., eZ = +21m.30s. =PR_1 −5s. and many e and i readings. Entebbe i = +23m.8s. Upsala PR_1 = +22m.51s., MN = +72·1m. Ksara PE = +23m.13s. Konigsberg ePR_1 = +22m.10s., e = +23m.18s., +27m.34s., and +29m.7s., iZ = +47m.8s., eLN = +58·4m., eLZ = +72·4m., MZ = +77·4m. ; T_0 =1h.5m.28s. Lemberg eE = +20m.3s. Hamburg MZ = +81·4m., MN = +82·4m. Vienna iZ = +19m.56s., i = +23m.19s. =PR_1 +29s. Athens PN = +20m.14s., iE = +23m.40s., e = +24m.45s., +34m.57s., +41m.57s., and +46m.57s., LE = +63·9m., LN = +64·4m., MN = +108·3m. Graz i = +29m.3s. =PR_2 −24s., MN = +82·8m. De Bilt MN = +79·4m., MZ = +81·8m. Bidston +42m.53s. Zagreb eS? = +29m.53s. =PR_2 +20s., and very many e readings. Feldberg eE =(+19m.45s.) =[P] −2s., eN = (+21m.3s.), (+23m.8s.) =PR_1 +1s., and (+23m.49s.) =PR_1 +42s., eE = (+25m.7s.) and (+29m.22s.) =PR_2 −14s., MN =(+105·4m.); all the readings have been diminished by 1 min. Uccle i = +19m.45s., PR_1 = +23m.52s. Hohenheim i = +20m.11s. Innsbruck i = +19m.47s. and +20m.3s., e = +21m.6s., +22m.32s., and +23m.54s. =PR_1 +44s. Kew PR_1 = +23m.28s., MZ = +114·0m., MN = +115·0m. Ravensburg eE = +49m.43s., eLN = +63·4m., MN = +117·1m. Strasbourg $PR?_1$ = +23m.7s., SR_1 = +42m.6s., MZ = +100·4m., MN = +124·4m. Paris MN = +110·4m. Rocca di Papa ePE = +19m.51s., iPN = +20m.0s. Barcelona MN = +112·2m. Tortosa eLE = +52·4m., ME = +107·3m. Algiers alternative S = +33m.47s. Toledo iNE = +24m.15s. =PR_1 −9s., MZ = +100·9m., MNW = +105·7m. Alicante MN = +99·0m. Almeria i = +21m.26s., PR_1 = +23m.37s., MN = +82·7m. Granada PR_1 = +24m.31s., i = +24m.52s., and +25m.55s., PR_2 = +30m.52s., PR_4 = +32m.39s., SR_1 = +44m.19s. Malaga MN = +101·0m. San Fernando MN = +102·4m.

Jan. 24d. 5h. 18m. 24s. Epicentre 58°·5N. 6°·0E.

A = +·520, B = +·055, C = +·853 ; D = +·105, E = −·995 ; G = +·848, H = +·089, K = −·522.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Bergen		1·9	350	0 19	−10	(0 36)	−17	0·6	0·8
Hamburg		5·4	154	e 1 48	+25	e 2 55	+27	e 3·1	4·8
Edinburgh		5·6	246	1 54	+27	2 13	−21	—	2·8
Upsala	E.	6·1	73	e 1 41	+ 8	e 2 53	+ 7	e 3·6	4·0
De Bilt		6·4	185	1 45	+ 7	3 6	+11	e 4·0	—
Stonyhurst		6·6	229	—	—	2 34	−26	—	—
Bidston		7·2	229	1 34	−15	2 51	−24	—	4·1
Potsdam		7·3	144	e 2 24	+33	—	—	i 5·7	—
Uccle		7·7	187	i 1 57	0	i 3 31	+ 2	e 4·6	—
Oxford		7·9	215	i 3 11	?S	(i 3 11)	−23	—	—
Kew		7·9	210	e 1 50	−10	e 3 25	− 9	i 4·0	5·6
Feldberg		8·4	169	—	—	i 3 13	−34	i 4·9	5·8
Konigsberg		8·8	109	1 2 28	+15	e 3 52	− 6	e 4·6	5·6
Cheb		9·2	153	—	—	e 4 27	+19	—	6·6
Prague		9·7	146	(e 2 41)	+15	(i 4 39)	+18	(e 6·1)	(6·6)
Helsingfors		9·8	73	4 24	?S	(4 24)	+ 1	6·8	—

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Paris		9·9	193	e 2 26	− 3	e 4 21	− 5	5·2	7·6
Hohenheim		9·9	167	i 2 36	+ 7	i 4 36	+10	—	4·9
Strasbourg		10·0	173	e 2 36	+ 6	i 4 42	+13	6·6	7·1
Zurich		11·2	171	e 2 52	+ 5	i 5 11	+12	—	—
Besançon		11·3	180	e 2 46	− 3	4 56	− 6	—	—
Innsbruck		11·6	161	e 3 15	+22	—	—	e 5·9	—
Chur		11·9	168	e 3 7	+ 9	5 21	+ 4	—	—
Vienna		12·0	145	3 8	+ 9	6 37	?L	(6·6)	9·6
Pulkovo		12·4	74	i 3 4	− 1	5 30	+ 1	7·1	8·5
Leningrad		12·4	73	i 3 7	+ 2	i 5 33	+ 4	6·2	7·5
Graz		12·7	150	e 5 53	?S	(e 5 53)	+16	(i 7·1)	8·4
Puy de Dôme		12·8	189	e 3 6	− 4	5 33	− 6	e 7·5	—
Budapest		13·5	139	3 37	+17	—	—	(8·3)	—
Lemberg		13·6	122	e 3 36	+15	—	—	—	8·9
Moncalieri	E.	13·6	175	3 1	−20	6 4	+ 6	8·2	12·6
	Z.	13·6	175	2 36	−45	4 37	−81	—	—
Venice		13·6	161	e 6 8	?S	(6 8)	+10	—	—
Zagreb		14·0	150	e 3 43	+17	e 6 50	+42	e 10·8	—
Bagnères		15·8	195	—	—	6 36?	−14	—	—
Rocca di Papa		17·3	163	e 4 4	− 5	—	—	e 10·9	14·8
Kucino		17·4	85	4 44	+34	e 8 26	+59	10·1	—
Tortosa		18·0	193	i 4 14	− 3	7 39	− 1	—	—
Toledo		19·7	203	i 4 27	−10	e 8 21	+ 4	e 9·0	—
Makeyevka		21·5	105	e 5 3	+ 4	—	—	—	14·9
Granada		22·2	200	i 4 55	−12	e 8 52	−17	—	15·7
Almeria		22·3	198	i 5 1	− 8	e 16 14	+423	—	23·9
Malaga		22·8	202	e 5 56	+41	—	—	—	—
San Fernando		23·5	205	5 4	−19	—	—	—	—
Tiflis	E.	29·4	108	e 6 26	+ 4	—	—	e 16·8	—
Irkutsk		51·1	51	e 6 42	?	—	—	e 28·6	—

Additional readings and notes: Hamburg iSN = +2m.59s., eLN = +3·6m., MZ = +6·3m. Kew iNZ = +3m.38s. Feldberg e = +4m.51s. Konigsberg iPE = +2m.29s., iE = +3m.26s., eEZ = +4m.36s., eN = +4m.37s.; T_0 = 5h.18m.8s. Prague readings have all been diminished by 2m. Helsingfors e = +5m.10s., eZ = +5m.34s., iE = +5m.51s., iZ = +5m.55s. Hohenheim MN = +4·7m. Strasbourg PR_1 = +3m.25s., PR_2 = +3m.30s., SR_1 = +5m.49s., SR_2 = +5m.53s., MN = +7·4m. Innsbruck i = +6m.25s., +6m.50s., and +7m.23s. Vienna iEN = +5m.32s., SR_1 = +7m.19s.; epicentre 58°·5′N. 1°·5′E. Pulkovo gives epicentre 59°·0N. 5°·6E. Leningrad MZ = +7·6m. Graz gives S as P and L as S. Budapest gives its readings as separate P's. Lemberg eE = +4m.6s. Zagreb eN = +3m.58s., eSNW = +6m.52s. Rocca di Papa eN = +4m.10s., e = +4m.16s. Makeyevka e = +6m.42s., +9m.35s., +12m.7s., +13m.7s., and +14m.27s. Granada PR_1 = +5m.25s.; epicentre 58°·5N. 1°·5E. Tiflis e = +7m.12s. and +7m.44s. and +19m.45s. Irkutsk e = +18m.37s., +23m.25s., +26m.29s., and +27m.32s.

Jan. 24d. 6h. 42m. 10s. Epicentre 18°·5S. 168°·5E. (as at 1h.).

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Apia		19·5	79	4 50	+15	—	—	11·1	12·1
Riverview		21·8	222	e 5 8	+ 5	i 9 7	+ 6	e 10·3	13·0
Sydney	E.	21·8	222	5 2	− 1	9 8	+ 7	12·8	13·1
Christchurch		25·3	173	1 8	?	(10 8)	− 1	10·1	20·8
Melbourne		28·2	221	—	—	i 10 50	−13	—	17·2
Adelaide		31·2	233	6 48?	+ 8	i 11 32	−22	i 13·3	19·2
Honolulu	N.	51·6	42	—	—	e 17 14	+35	e 21·8	30·3
Manila		57·3	303	e 4 50?	?	—	—	—	—
Taihoku	N.	63·1	314	—	—	—	—	e 26·3	—
Irkutsk		89·8	326	13 8	− 7	i 24 8	− 4	41·8	—
Victoria	E.	90·2	37	23 55	?S	(23 55)	−21	42·2	49·4
Colombo		90·9	277	13 55	+34	23 50	[+17]	—	64·3
Kodaikanal		94·2	280	24 32	?S	(24 32)	−26	—	—
Hyderabad		95·5	286	—	—	—	—	—	26·4
Bombay		101·0	286	23 35	?	36 20	?	65·9	66·9
La Plata		110·8	140	—	—	—	—	66·3	—
Chicago	E.	112·4	51	—	—	—	—	—	63·3
La Paz		114·2	120	—	—	—	—	59·7	70·1

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Toronto	E.	118·5	49	—	—	e 25 58	[+17]	59·8	—
Ithaca		120·6	50	—	—	—	—	e 66·8	—
Ottawa	E.	121·0	47	—	—	e 26 5	[+17]	e 56·8	66·8
Tiflis		127·2	308	e 21 6	?PR_1	—	—	62·8	67·0
Leningrad		128·9	335	—	—	—	—	e 62·9	—
Pulkovo		129·1	335	e 21 25	?PR_1	—	—	67·8	76·0
Makeyevka		130·4	317	—	—	—	—	e 68·8	102·1
Helsingfors		130·9	336	(e 22 50?)	?PR_1	—	—	—	—
Entebbe		133·1	250	21 58	?PR_1	—	—	—	—
Upsala	N.	133·7	341	—	—	—	—	e 71·8	—
De Bilt		144·0	341	e 19 50?	[+ 3]	—	—	e 75·8	—
Uccle		145·3	341	—	—	—	—	e 62·8	—
Kew		145·9	349	—	—	—	—	e 79·8	—
Strasbourg		146·1	337	e 19 49	[− 1]	—	—	—	—
Chur		146·9	333	19 50	[− 1]	—	—	—	—
Paris		147·6	344	—	—	—	—	e 81·8	—
Rocca di Papa		148·9	322	e 18 18	?	e 20 3	?[P]	—	—
Moncalieri	Z.	149·0	333	e 19 15	[−39]	20 2	?[P]	—	—
Granada		160·1	341	e 19 17	[−51]	—	—	—	—
San Fernando		161·5	347	—	—	—	—	—	112·8

Additional readings: Riverview iS = +9m.15s., MN = +12·2m. Adelaide MN = +19·0m. Irkutsk e = +19m.36s. = PR_2 +14s., S_4P_4S = +23m.30s. = [S] +3s., PS = +25m.20s., PPS = +25m.44s., e = +28m.3s. Victoria PN = +23m.47s. = [S] +28s., S = +30m.37s. Chicago PSE = +29m.10s., SR_1E = +35m.50s. Toronto eE = +30m.0s. = PS −27s. and +37m.12s., eN = +53m.5s. Ottawa eE = +30m.20s. = PS −34s., e = +37m.20s. = SR_1 +20s., eLN = +50·8m. Tiflis eN? = +22m.50s., MN = +66·9m. Pulkovo i = +22m.37s., e = +32m.23s., and +38m.20s., MN = +79·1m. Makeyevka L = +75·8m. Strasbourg e = +20m.20s., +20m.25s., +20m.31s., and +20m.45s. Rocca di Papa ePE = +18m.48s. San Fernando MN = +109·8m.

Jan. 24d. Readings also at 0h. (Mizusawa, Simla, near Manila, near La Paz, and Sucre), 1h. (Tiflis, Ekaterinburg, Hyderabad, and Nagasaki), 2h. (La Paz and Nagasaki), 3h. (Ekaterinburg and Irkutsk), 4h. (Nagasaki, Entebbe, Cape Town, Kobe, and near Nagoya), 5h. (La Plata, near La Paz, and near Port au Prince), 8h. (Adelaide, Riverview, La Paz, and near Athens), 9h. and 10h. (Nagasaki), 11h. (Nagasaki, Mazatlan, Tacubaya, and Oaxaca), 13h. (Nagasaki), 15h. (Nagasaki and near Balboa Heights), 16h. (near Athens), 19h. (Tacubaya and Oaxaca).

Jan. 25d. 7h. 52m. 35s. Epicentre 18°·5S. 168°·5E. (as on 24d.).

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Apia		19·5	79	e 4 45	+10	—	—	12·0	12·6
Riverview		21·8	222	e 5 3	0	i 9 8	+ 7	e 10·9	13·0
Sydney	E.	21·8	222	4 25	−38	9 13	+12	10·0	11·7
Melbourne		28·2	221	—	—	i 10 31	−32	e 14·3	15·7
Adelaide		31·2	233	6 29?	−11	11 25	−29	13·6	20·7
Honolulu	N.	51·6	42	—	—	—	—	e 23·0	—
Manila		57·3	303	e 13 25?	?PR_2	—	—	—	—
Hong Kong		67·0	307	—	—	(19 50)	0	—	19·8
Irkutsk		89·8	326	e 13 9	− 6	23 51	−21	e 41·4	—
Victoria	N.	90·2	37	23 54	?S	(23 54)	−22	47·5	58·2
Hyderabad		95·5	286	—	—	(24 19)	[+19]	—	24·3
Chicago	E.	112·4	51	—	—	—	—	e 61·7	—
Ekaterinburg		115·1	325	—	—	e 27 33	−38	51·4	73·2
Toronto	E.	118·5	49	—	—	—	—	63·4	—
Ottawa	E.	121·0	47	—	—	—	—	e 69·4	—
Tiflis		127·2	308	—	—	e 38 0	?SR_1	65·4	76·4
Leningrad		128·9	335	—	—	—	—	70·0	—
Chur		146·9	333	18 47	[−64]	—	—	—	—
Rocca di Papa		148·9	322	e 19 54	[0]	—	—	—	—
San Fernando		161·5	347	—	—	82 1	?L	(82·0)	102·9

Additional readings: Riverview MN = +11·6m. Adelaide MN = +17·4m. Irkutsk PS = +25m.5s. Victoria SN = +30m.29s., ME = +58·4m., Chicago PSE = +29m.28s., SR_1E = +35m.43s. Ekaterinburg e = +31m.25s. Tiflis MN = +66·8m. San Fernando MN = +103·4m.

Jan. 25d. 23h. 10m. 35s. Epicentre 18°·5S. 168°·5E. (as at 7h.).

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Apia		19·5	79	4 41	+ 6	8 44	+31	11·2	14·2
Riverview		21·8	222	e 4 54	− 9	i 9 0	− 1	e 10·5	12·0
Sydney	E.	21·8	222	4 43	−20	9 13	+12	10·8	12·1
Melbourne		28·2	221	—	—	i 11 49	+46	e 14·8	17·6
Adelaide		31·2	233	5 38	−62	i 11 23	−31	13·3	22·0
Perth		49·0	243	—	—	e 15 50	−16	i 25·8	29·4
Honolulu	N.	51·6	42	—	—	16 55	+16	23·5	24·9
Manila		57·3	303	e 9 53	− 1	—	—	e 19·8	—
Batavia	Z.	61·2	274	10 15	− 5	—	—	—	—
Osaka		61·7	330	(13 14)	?PR_1	(18 30)	−14	(24·6)	(33·6)
Taihoku	E.	63·1	314	—	—	—	—	26·4	—
Hong Kong		67·0	307	—	—	—	—	—	29·2
Berkeley		85·9	48	—	—	—	—	e 45·3	—
Irkutsk		89·8	326	e 13 0	−15	i 23 53	−19	42·4	—
Victoria	E.	90·2	37	23 35	?[S]	(23 35)	[+ 6]	—	57·8
Kodaikanal		94·2	280	25 1	?S	(25 1)	+ 3	—	—
Hyderabad		95·5	286	17 38	?PR_1	24 3	[+ 3]	31·3	36·3
Bombay		101·0	286	20 29	?PR_2	—	—	—	—
Pilar	E.	109·1	135	28 49	?S	(28 49)	+89	—	75·5
La Plata		110·8	140	30 21	?	—	—	—	—
Chicago	E.	112·4	51	—	—	—	—	e 61·4	63·9
La Paz		114·2	120	e 19 12	[+37]	i 30 45	?PS	61·7	67·7
Ekaterinburg		115·1	325	i 19 42	?PR_1	—	—	56·4	75·8
Sucre		115·3	122	19 32	?PR_1	i 30 47	?	61·4	71·2
Toronto	N.	118·5	49	—	—	—	—	57·4	63·0
Ithaca		120·6	50	—	—	—	—	e 57·4	—
Ottawa	E.	121·0	47	—	—	e 30 25?	?PS	e 57·4	66·4
Fordham	E.	122·7	53	—	—	e 38 13	?SR_1	e 41·6	80·1
Tiflis	N.	127·2	308	e 18 16	[−56]	e 26 57	[+53]	e 62·4	76·4
Leningrad		128·9	335	—	—	—	—	64·4	80·0
Pulkovo		129·1	335	—	—	—	—	e 65·8	—
Ksara	E.	135·2	299	e 19 29	[− 1]	—	—	e 33·8	—
Vienna	Z.	142·6	330	e 19 13	[−31]	—	—	—	—
De Bilt		144·0	341	—	—	—	—	e 78·4	—
Kew		145·9	349	—	—	—	—	e 77·4	—
Strasbourg		146·1	337	i 19 43	[− 7]	—	—	—	—
Chur		146·9	333	e 19 49	[− 2]	e 24 51	?PR_1	—	—
Florence		148·3	327	e 19 10	[−43]	23 55	?PR_1	34·4	—
Pompeii		148·5	320	e 20 15	[+21]	e 23 55	?PR_1	—	—
Rocca di Papa		148·9	322	e 19 42	[−12]	(e 24 52)	?PR_1	—	—
Moncalieri	Z.	149·0	333	20 19	[+25]	25 50	?PR_1	—	—
Granada		160·1	341	e 23 25?	?	e 29 25?	?	94·4	—
Rio Tinto		160·3	348	81 25?	?L	—	—	(81·4)	99·4
San Fernando		161·5	347	32 10	?PR_2	—	—	88·9	103·4

Additional readings: Apia MN = +12·0m. Riverview PR_1 = +5m.18s., PR_2 = +5m.27s. and +5m.39s., MZ = +11·4m., MN = +14·0m. Melbourne i = 23h.2m.48s. Adelaide MN = +23·3m. Batavia PE = +10m.19s. = P − 1s., i = +12m.49s. = PR_1 − 19s. Osaka MN = +28·8m. All the readings have been increased by 8min. Berkeley eE = +59m.49s., eZ = +60m.19s. Irkutsk eP = +18m.9s., PS = +24m.57s., eS_1P_2S = +23m.28s. and +28m.35s., eS = +29m.7s., PS = +30m.10s. = SR_1 − 18s. Victoria SE = +30m.43s. = SR_1 +11s. Pilar MN = +73·3m. La Paz SR_1 = +36m.39s. Ekaterinburg i = +27m.27s., +29m.32s. = PS − 21s., and +32m.41s. Tiflis eN? = +47m.50s. = SR_2 − 30s., MN = +70·9m. Ksara eE = +22m.11s. = PR_1 +8s., +23m.9s., and +27m.54s. = PR_2 − 18s. Strasbourg iPR_1 = +24m.44s., Florence readings are given for 24d. Rocca di Papa e = +20m.10s. Moncalieri SZ? = +20m.56s., ePZ = +25m.4s. San Fernando MN = +104·4m.

Jan. 25d. Readings also at 0h. (La Paz and Sucre), 2h. (Nagasaki), 3h. (Kodaikanal and La Paz), 5h., 7h., and 8h. (Nagasaki), 13h. (Ottawa, Toronto, and Nagasaki), 19h. (near Mizusawa), 23h. (Florence).

Jan. 26d. 11h. 6m. 45s. Epicentre 18°·5S. 168°·5E. (as on Jan. 25d.).

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Riverview		21·8	222	e 5 2	− 1	e 9 2	+ 1	—	11·9
Sydney	E.	21·8	222	3 33	−90	9 3	+ 2	11·6	12·2
Melbourne		28·2	221	e 6 51	+41	i 11 51	+48	e 15·4	16·4
Adelaide		31·2	233	—	—	9 15?	?	13·1?	20·9
Irkutsk		89·8	326	—	—	—	—	e 8·2	—
San Fernando	E.	161·5	347	—	—	—	—	—	104·2

Additional readings: Riverview MN = +11·4m. Adelaide MN = +17·8m.
San Fernando MN = +102·8m.

Jan. 26d. 15h. 36m. 30s. Epicentre 18°·5S. 168°·5E. (as at 11h.).

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Apia		19·5	79	4 57	+22	8 49	+36	10·2	18·8
Riverview		21·8	222	e 4 49	−14	i 8 51	−10	e 10·1	11·2
Sydney	E.	21·8	222	4 36	−27	8 54	− 7	10·6	11·7
Melbourne		28·2	221	i 5 36	−34	i 10 24	−39	—	16·3
Adelaide		31·2	233	—	—	i 11 10?	−44	12·3	20·9
Perth		49·0	243	—	—	—	—	—	28·5
Honolulu	N.	51·6	42	—	—	16 54	+15	e 23·1	26·5
Manila		57·3	303	e 9 55	+ 1	(e 18 0)	+10	e 18·0	—
Taihoku		63·1	314	—	—	e 18 21	−41	—	—
Hong Kong		67·0	307	10 50	− 8	(19 32)	−18	19·5	19·8
Irkutsk		89·8	326	13 9	− 6	i 23 43	−29	46·5	—
Victoria	E.	90·2	37	24 26	?S	(24 26)	+10	44·4	—
	N.	90·2	37	24 6	?S	(24 6)	−10	45·6	49·2
Colombo		90·9	277	21 35	?	—	—	—	66·5
Hyderabad		95·5	286	15 52	+126	24 0	[0]	36·5	39·3
Bombay		101·0	286	e 16 30?	+135	—	—	—	—
Chicago	E.	112·4	51	—	—	—	—	e 54·5	65·5
La Paz		114·2	120	—	—	31 16	?	65·3	69·8
Ekaterinburg		115·1	325	—	—	e 27 21	−50	53·5	—
Sucre		115·3	122	e 19 43	?PR_1	32 51	?	63·5	71·1
Toronto	E.	118·5	49	—	—	—	—	60·5	62·9
Ottawa	E.	121·0	47	—	—	e 30 12	?PS	e 56·5	—
Tiflis		127·2	308	e 19 43	[+31]	—	—	e 62·5	77·2
Kucino		127·5	328	—	—	e 25 52	[−14]	62·8	—
Leningrad		128·9	335	—	—	—	—	72·9	—
Ksara	E.	135·2	299	e 19 49	[+19]	e 22 57	?PR_1	33·5	—
De Bilt		144·0	341	—	—	—	—	e 75·5	—
Strasbourg		146·1	337	19 37	[−13]	—	—	—	—
Chur		146·9	333	19 37	[−14]	—	—	—	—
Paris		147·6	344	e 19 30?	[−22]	—	—	—	—
Rocca di Papa		148·9	322	19 44	[−10]	—	—	—	—
San Fernando	E.	161·5	347	—	—	—	—	—	103·0

Additional readings: It seems possible that P and S for Apia are PR_1 and SR_1. Riverview MN = +11·1m. Adelaide MN = +17·2m. Perth P? = 15h.22m.0s. Honolulu eN = +22m.24s. = SR_2 +18s. Irkutsk S_4P_4S = +23m.35s. Chicago SR_1E = +44m.36s. = SR_2 +32s., eLN = +57·5m., MN = +63·0m. La Paz PR_2 = +25m.36s. = [S] +9s. Ottawa eLN = +52·5m. Tiflis eE = +20m.2s., MN = +63·4m., MZ = +80·2m. Kucino e = +38m.19s. = SR_1 −1s., +40m.44s., and +55m.20s. Strasbourg P = +17m.52s. San Fernando MN = +104·5m.

Jan. 26d. Readings also at 1h. (Agana and Nagasaki), 2h. (near Tashkent), 3h. (Nagasaki), 5h. (Nagasaki and Riverview), 6h. and 7h. (Nagasaki), 10h. (Makeyevka), 18h. (Granada),

Jan. 27d. 8h. 13m. 30s. Epicentre 6°·0S. 60°·0E.

$A = +·497$, $B = +·861$, $C = -·105$; $D = +·866$, $E = -·500$; $G = -·052$, $H = -·091$, $K = -·995$.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Colombo	23·6	57	9 20?	?S	(9 20)	−16	—	10·8
Kodaikanal	23·8	47	2 0	?	(8 42)	−58	8·7	10·3
Bombay	28·0	27	6 7	− 1	—	—	—	11·3
Hyderabad	29·7	38	6 30	+ 5	10 26	−63	12·4	16·3
Ksara E.	45·9	332	e 11 30?	?PR_2	—	—	—	—
Ekaterinburg	62·8	0	—	—	—	—	32·5	—
Irkutsk	69·4	27	e 11 13	0	e 20 17	− 2	e 34·5	—

No additional readings.

Jan. 27d. Readings also at 0h. (near Nagoya), 1h. (Nagasaki and Sydney), 2h. (2), 3h., and 11h. (Nagasaki), 15h. (Batavia), 16h. (Tiflis), 18h. (Melbourne, Riverview, Sydney, La Paz, and Strasbourg), 19h. (Ottawa, San Fernando, Irkutsk, and Ekaterinburg), 22h. (Tiflis and Athens).

Jan. 28d. Readings at 6h. (Batavia, Phu-Lien, Hong Kong, Nagasaki, Irkutsk, and near Tacubaya), 11h. (near Santiago), 12h. (La Paz), 13h. (Balboa Heights and Nagasaki), 15h. (Manila and Santiago), 16h. (Nagasaki), 17h. (near Tucson (2)), 18h. (Nagasaki), 21h. (Agana and Entebbe), 22h. (Algiers, Ksara, and Cape Town).

Jan. 29d. 18h. 37m. 27s. Epicentre 44°·0S. 37°·5E.

$A = +·571$, $B = +·438$, $C = -·695$; $D = +·609$, $E = -·793$; $G = -·551$, $H = -·423$, $K = -·719$.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Cape Town	17·8	298	4 14	− 1	8 6	+30	—	10·5
Hyderabad	72·1	41	—	—	—	—	—	49·4
Baku	85·2	10	—	—	i 23 14	− 7	36·6	48·6
Sucre	85·7	247	e 12 56	+ 4	i 23 38	+11	35·2	38·3
Tiflis	86·0	6	e 12 58	+ 5	e 23 18	−12	e 37·6	46·2
La Paz	89·4	247	13 8	− 4	e 23 58	− 9	39·5	48·8
San Fernando	89·7	327	—	—	—	—	—	55·6
Tashkent	90·0	24	—	—	—	—	e 70·6	97·8
De Bilt	100·0	341	—	—	—	—	e 45·6	—
Ekaterinburg	102·7	14	—	—	e 25 35	−46	40·6	—
Irkutsk	112·1	37	—	—	e 28 33?	+46	e 46·6	—
Ottawa E.	133·8	296	—	—	—	—	e 56·6	—
Victoria E.	166·1	295	—	—	—	—	79·3	94·8

Additional readings: Baku MN = +41·3m. Tiflis MN = +51·4m. La Paz iSE = +24m.18s. Ekaterinburg e = +32m.48s. $=SR_1 - 23s$.

Jan. 29d. Readings also at 1h. (Entebbe), 7h. (Batavia, Nagasaki, and near Tucson), 10h. (Nagasaki), 14h. (Strasbourg), 15h. (Adelaide, Nagasaki, Riverview, Florence, and Strasbourg), 17h. (Bombay and Cape Town), 18h. (Agana), 20h. (Baku, Ekaterinburg, Tiflis, and De Bilt).

Jan. 30d. 8h. 54m. 0s. Epicentre 31°·2N. 70°·3E. (as on 1923 Oct. 15d.).

$A = +\cdot288$, $B = +\cdot805$, $C = +\cdot518$; $D = +\cdot941$, $E = -\cdot337$; $G = +\cdot175$, $H = +\cdot488$, $K = -\cdot855$.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Simla		5·9	89	1 42	+11	2 42	+ 1	—	—
Bombay		12·5	169	2 20	−46	4 56	−36	6·2	8·1
Hyderabad		15·6	150	3 36	−11	6 28	−18	7·5	10·5
Calcutta	E.	18·2	114	4 19	0	7 31	−13	9·8	—
	N.	18·2	114	3 51	−28	6 50	−54	9·1	—
Baku		18·9	305	i 4 35	+ 7	i 8 7	+ 7	12·0	14·7
Kodaikanal		22·0	161	—	—	—	—	11·9	13·9
Colombo		25·9	158	10 20	?S	(10 20)	0	(13·5)	16·5
Ekaterinburg		26·5	348	i 5 53	0	10 30	− 2	14·0	15·8
Ksara	N.	29·0	284	6 18	0	(11 5)	−12	17·7	—
Makeyevka		29·7	314	—	—	e 13 2	+93	20·0	22·6
Irkutsk		32·4	40	6 46	− 6	e 11 48	−26	21·0	—
Phu-Lien		34·0	102	e 6 53	−12	—	—	19·0	—
Athens		38·5	293	e 8 48	+66	—	—	—	—
Pulkovo		39·0	330	e 7 44	− 2	—	—	23·0	27·7
Leningrad		39·1	330	—	—	—	—	22·1	28·2
Helsingfors		41·5	329	e 23 54	?L	—	—	e 26·3	—
Upsala	N.	44·9	326	—	—	—	—	e 25·0	—
Taihoku	E.	45·2	86	—	—	—	—	25·0	—
Cheb		46·4	313	—	—	—	—	e 27·0	32·0
De Bilt	E.	51·0	315	—	—	—	—	e 32·0	—
Kew		54·4	315	—	—	—	—	e 31·0	—
Ottawa		97·4	337	—	—	—	—	e 46·0	—
La Paz		139·6	282	e 23 24	?PR_1	—	—	81·9	—

Additional readings: Simla SE = +3m.0s. Baku MN = +14·1m. Kodaikanal P = 8h.44m.48s. Colombo S is given as P and L as S, also L = +16·0m. Ekaterinburg i = +6m.17s. = PR_1 −16s., iPS = +6m.21s. = PR_1 −12s., e = +10m.41s., SP = +11m.22s. = SR_1 −18s., i = +12m.20s., MNZ = +17·7m. Ksara SN = +16m.8s., true S is given as PR_1N. Pulkovo MZ = +28·2m. De Bilt eLN = +29·0m.

Jan. 30d. Readings also at 1h. (Nagasaki (2)), 2h. (near Manzanillo), 3h. (Taihoku), 6h. (La Paz), 8h. (La Paz and Tiflis), 9h. (near Nagasaki), 10h. (La Paz), 14h. (Nagasaki and near Athens), 16h. (Apia), 21h. (near Tucson).

Jan. 31d. 0h. 23m. 15s. Epicentre 54°·0N. 161°·0E. (as on 1926 Feb. 26d.).

$A = -\cdot556$, $B = +\cdot191$, $C = +\cdot809$; $D = +\cdot326$, $E = +\cdot946$; $G = -\cdot765$, $H = +\cdot263$, $K = -\cdot588$.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Mizusawa	E.	20·1	230	4 34	− 8	7 4	−81	—	—
Irkutsk		33·2	290	e 6 57	− 1	12 10	−17	19·8	21·1
Zi-ka-wei		36·2	248	7 2	−22	—	—	e 18·6	21·7
Ekaterinburg		51·7	318	i 9 17	− 1	i 16 41	+ 1	25·2	34·4
Leningrad		59·4	335	—	—	—	—	34·4	40·2
Pulkovo		59·6	335	e 10 11	+ 2	—	—	33·8	39·2
Kucino		60·8	328	—	—	e 19 3	+30	31·2	—
Makeyevka		67·2	324	—	—	e 31 35	?	40·8	47·7
Baku		68·8	311	e 9 8	−122	e 20 15	+ 3	37·8	40·4
Ottawa		69·5	40	—	—	e 20 21	+ 1	e 38·8	—
Tiflis		69·9	315	(e 11 25)	+ 9	(e 20 2)	−23	(31·8)	(32·6)
De Bilt	E.	72·0	346	—	—	—	—	e 40·8	—
Cheb		72·7	340	—	—	—	—	e 36·8	45·8
Kew		73·4	350	—	—	—	—	e 45·8	—

Continued on next page.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Bombay	73·8	281	—	—	—	—	e 37·8	—
Strasbourg	75·0	344	i 11 50	+ 1	—	—	e 42·8	—
Chur	76·3	342	11 59	+ 2	—	—	—	—
Florence	78·9	340	e 12 15	+ 3	—	—	—	—
San Fernando E.	88·9	350	—	—	—	—	—	55·2

Additional readings: Irkutsk $PR_2 = +8$m.3s. $= PR_1 + 3$s. Ekaterinburg $iPR_1 = +11$m.33s., $eSR_1 = +20$m.39s., MN $= +34·9$m. Kucino e $= +22$m.51s. $= SR_1 - 31$s.; S is given simply as e. Makeyevka MZ $= +41·3$m. Baku e $= +28$m.28s., MN $= +45·6$m. Tiflis eE $= (+25$m.29s.$) = SR_1 - 20$s., MN $= (+37·7$m.). The readings have all been diminished by 9m. De Bilt eLN $= +43·8$m. San Fernando MN $= +60·2$m.

Jan. 31d. 3h. 43m. 36s. Epicentre 35°·0N. 137°·2E.

A = −·601, B = +·557, C = +·574.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Nagoya	0·3	311	0 4	− 1	(0 11)	+ 3	0·2	—
Kobe	1·7	259	0 26	0	(0 45)	− 3	0·8	0·9
Toyooka	2·0	285	0 32	+ 1	(0 56)	+ 1	0·9	1·0

Jan. 31d. 6h. 2m. 12s. Epicentre 38°·0N. 17°·5E. (as on 1925 Oct. 13d.).

A = +·752, B = +·237, C = +·616; D = +·301, E = −·954; G = +·587, H = +·185, K = −·788.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Pompeii	3·6	322	i 1 18	+22	—	—	—	2·6
Athens	4·9	88	e 1 13	− 3	2 14	0	2·4	2·7
Rocca di Papa	5·3	317	e 1 20	− 2	e 2 45	+20	—	3·7
Florence	7·4	323	e 1 48	− 4	—	—	e 3·8	4·3
Zagreb	7·9	352	e 2 3	+ 3	i 3 15	−19	—	—
Graz	9·2	351	e 1 56	−23	e 3 14	−54	—	3·9
Budapest	9·5	6	2 43	+20	—	—	—	—
Vienna Z.	10·3	356	e 2 18	−16	—	—	—	—
Innsbruck	10·3	336	e 1 57	−37	e 4 16	−21	e 5·1	—
Chur	10·6	328	e 2 12	−26	4 48?	+ 3	—	—
Prague	12·3	351	—	—	e 4 48?	−38	—	5·8
Cheb	12·6	345	—	—	e 4 48?	−46	—	5·8
Strasbourg	12·7	329	e 4 35	?S	(e 4 35)	−62	e 7·1	—
Uccle	15·8	328	—	—	—	—	7·8	—
De Bilt	16·5	332	—	—	—	—	e 9·8	—
Granada	16·7	273	—	—	—	—	e 10·8	13·8
Kew	18·4	323	—	—	—	—	e 8·8	—
San Fernando E.	18·9	273	—	—	—	—	—	13·8
Rio Tinto	19·0	277	18 48?	?	—	—	—	23·8
Pulkovo	23·2	16	—	—	—	—	e 11·8	—
Leningrad	23·4	16	—	—	—	—	11·0	—
Baku	25·1	74	—	—	—	—	e 8·8	—
Ekaterinburg	33·9	42	e 5 35	−89	e 10 47	−112	15·8	—
Irkutsk	59·1	45	—	—	—	—	e 34·8	—

Additional readings and notes: Athens iP $= +1$m.28s. Rocca di Papa eSE $= +2$m.50s., eSN $= +2$m.55s. Zagreb eNE $= +2$m.8s. and $+2$m.34s., eNW $= +2$m.14s., $eSR_2 = +2$m.57s., iNW $= +3$m.8s.; all readings are given for 5h. Graz readings are given for 30d. Innsbruck e $= +3$m.30s., $+4$m.8s., and $+4$m.39s.; all readings except eP are given simply as e. Strasbourg e $= +5$m.26s., $+6$m.21s., and $+6$m.36s.; all readings except eP are given simply as e. San Fernando MN $= +12·8$m. Ekaterinburg P and S are given simply as e.

Jan. 31d. Readings also at 2h. (La Paz), 3h. (Ksara and Tiflis), 6h. (near La Paz and Sucre), 8h. (Chicago, Victoria, and near Tucson (2), 10h. (Tucson (2)), 11h. (Nagasaki and near Tucson (4)), 12h. (near Tucson), 14h. (Agana), 15h. (Taihoku), 20h. (Agana and near Tucson), 21h. (Entebbe, near Tucson, and near Toyooka), 22h. (Moncalieri‡),

Feb. 1d. 17h. 56m. 34s. Epicentre 7°·0S. 155°·0E.

(as on 1926 March 20d.).

$A = -\cdot900$, $B = +\cdot420$, $C = -\cdot122$; $D = +\cdot423$, $E = +\cdot906$; $G = +\cdot111$, $H = -\cdot052$, $K = -\cdot993$.

A depth of focus 0·020 has been assumed. For [P] and [S] the focal correction has been used when given in the text.

		Corr. for Focus	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	°	m. s.	s.	m. s.	s.	m.	m.
Suva	E.	−1·1	25·4	118	6 8	+37	10 38	+48	12·5	—
	N.	−1·1	25·4	118	6 2	+31	10 50	+60	—	—
Amboina		−1·2	26·9	276	i 5 20	−25	i 10 32	+16	—	—
Riverview		−1·2	27·1	187	e 5 46	− 1	i 10 23	+ 3	i 12·1	15·0
Sydney	E.	−1·2	27·1	187	5 26	−21	10 14	− 6	14·6	15·0
Adelaide		−1·5	31·8	206	i 6 26	− 5	i 11 35	− 4	14·3	17·8
Melbourne		−1·5	32·1	195	6 44	+10	i 12 2	+18	16·0	17·5
Wellington	E.	−1·7	38·6	156	e 7 21	− 8	e 13 9	−13	e 15·9	23·4
	N.	−1·7	38·6	156	e 7 24	− 5	e 13 11	−11	e 15·9	16·7
Christchurch		−1·7	39·7	160	—	—	—	—	17·6	24·7
Manila		−1·7	40·1	303	i 7 35	− 6	(i 13 39)	− 5	i 13·6	15·1
Perth		−1·9	44·1	230	e 8 16	+ 4	i 14 41	+ 3	i 21·1	26·9
Osaka		−1·9	45·6	337	8 17	− 7	11 21	? PR_2	18·6	20·4
Kobe		−1·9	45·7	337	e 7 39	−45	—	—	—	23·1
Taihoku	E.	−1·9	45·7	316	8 21	− 3	14 54	− 5	19·5	—
Malabar		−2·0	47·0	267	i 8 36	+ 3	i 15 21	+ 6	—	—
Batavia		−2·0	47·9	267	i 8 40	+ 1	i 15 18	− 9	24·3	—
Mizusawa	E.	−2·0	47·9	345	8 34	− 5	15 21	− 6	21·9	—
	N.	−2·0	47·9	345	8 33	− 6	15 19	− 8	—	—
Hong Kong		−2·1	49·6	309	8 46	− 5	15 49	+ 1	24·1	25·6
Honolulu, T.H.		−2·3	54·2	57	i 9 26	+ 7	17 0	+17	22·9	27·5
Phu-Lien		−2·3	55·1	301	9 30	+ 5	i 17 9	+15	26·4	—
Calcutta	E.	−2·6	71·6	298	11 1	−10	20 27	+13	—	—
	N.	−2·6	71·6	298	10 54	−17	20 14	0	—	—
Irkutsk		−2·6	73·3	330	i 11 28	+ 7	i 20 44	+10	32·4	45·9
Hyderabad		−2·7	79·4	290	12 3	+ 4	21 56	+11	39·0	42·2
Simla		−2·7	83·3	303	12 2	−21	(22 38)	+ 8	—	—
Bombay		−2·7	85·0	290	12 35	+ 3	22 56	+ 7	44·4	49·1
Berkeley		−2·8	88·6	52	e 12 52	0	e 23 14	−14	e 40·3	48·4
Lick	N.	−2·8	89·0	52	e 12 44	−10	—	—	—	—
Victoria	E.	−2·8	89·8	41	12 55	− 4	23 40	− 1	41·1	44·1
	N.	−2·8	89·8	41	13 10	+11	23 35	− 6	—	—
Tashkent		−2·8	91·4	313	i 13 5	− 3	i 23 54	− 5	e 42·4	52·6
Spokane	E.	−2·8	93·5	43	13 9	−11	e 24 29	+ 8	i 43·4	49·2
Tucson	N.	−2·9	97·3	58	13 41	+ 1	—	—	e 45·8	—
Ekaterinburg		−2·9	98·2	326	i 13 34	−11	i 24 45	−24	43·4	61·1
Baku		−2·9	106·0	310	14 11	−15	e 25 34	−51	48·9	62·8
Tiflis		−3·0	109·7	312	e 14 24	−19	25 53	−65	e 53·4	64·3
Kucino		−3·0	110·7	327	—	—	25 3	[+ 3]	48·4	67·6
Leningrad		−3·0	112·8	333	e 14 41	−15	25 14	[+ 5]	46·1	69·7
Pulkovo		−3·0	113·0	333	14 38	−19	25 8	[− 2]	45·4	71·5
Makeyevka		−3·0	113·0	320	—	—	—	—	43·4	69·4
Chicago	N.	−3·1	114·9	47	—	—	—	—	e 55·9	58·9
Helsingsfors	E.	−3·1	115·0	334	e 18 53	[+26]	e 30 11	? PS	e 50·4	63·4
Ann Arbor		−3·1	117·7	45	—	—	e 29 50	? PS	e 55·9	61·2
Ksara		−3·1	117·9	303	e 18 46	[+ 9]	—	—	65·4	—
Upsala		−3·1	118·2	337	—	—	e 25 31	[+ 2]	e 57·4	71·6
Konigsberg		—	120·0	331	—	—	—	—	e 62·4	83·4
Toronto		—	120·1	43	e 20 11	? PR_1	—	—	57·4	65·1
Ottawa		—	121·9	40	i 20 26	? PR_1	—	—	e 56·4	65·8
Cape Town		—	121·9	222	20 50	? PR_1	—	—	—	65·4
Ithaca		—	122·6	43	—	—	—	—	58·4	—
Potsdam		—	125·0	337	—	—	—	—	e 60·4	—
Budapest		—	125·0	325	e 18 56	[−10]	e 30 26	?	e 64·4	73·8
Fordham		—	125·0	44	i 20 43	? PR_1	—	—	e 51·6	59·6
Hamburg		—	125 5	335	i 19 1	[− 6]	i 35 56	?	e 55·4	61·4
Prague		—	125·8	330	e 17 56	[−72]	e 31 26?	? PS	e 58·4	69·4
Vienna		—	126·0	327	i 19 0	[− 8]	29 52	+19	e 66·4	72·4
Harvard	N.	—	126·3	41	—	—	—	—	e 59·4	67·3
Cheb		—	126·8	330	e 18 0	[−70]	e 30 56	? PS	e 58·4	66·4
Zagreb		—	127·6	325	e 19 6	[− 7]	e 24 1	? PR_2	e 67·4	—
La Plata		—	127·9	145	21 9	? PR_1	—	—	65·4	—

Continued on next page.

	Corr. for Focus	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	°	m. s.	s.	m. s.	s.	m.	m.
Edinburgh	—	128·1	345	—	—	—	—	e 70·4	—
De Bilt	—	128·6	337	i 19 6	[− 9]	—	—	e 56·4	73·2
Innsbruck	—	129·1	329	e 19 4	[−12]	—	—	—	—
Uccle	—	129·9	336	e 19 8	[−10]	—	—	e 56·4	78·8
Strasbourg	—	130·1	331	i 19 6	[−12]	35 35	?	e 60·4	71·4
Bidston	—	130·3	343	22 26	?PR_1	—	—	—	75·9
Oxford	—	131·1	340	i 21 27	?PR_1	i 35 14	?	50·4	68·0
Kew	—	131·1	340	e 19 10	[−11]	—	—	57·4	73·3
La Paz	—	131·3	119	18 39	[−43]	31 32	?	61·9	70·0
Florence	—	131·4	323	19 11	[−11]	—	—	65·4	68·4
Rocca di Papa	—	131·7	322	i 19 11	[−11]	e 32 2	?	70·3	86·1
Besançon	—	131·8	332	—	—	—	—	e 55·4	—
Paris	—	132·1	337	i 19 14	[− 9]	—	—	58·4	72·4
Moncalieri E.	—	132·6	329	21 33	?PR_1	27 10	?PR_2	31·4	—
N.	—	132·6	329	21 31	?PR_1	33 28	?	57·5	81·7
Barcelona	—	137·9	329	—	—	—	—	e 70·2	83·5
Tortosa	—	139·2	330	e 19 20	[−18]	e 28 30	?PR_2	e 40·4	83·6
Algiers	—	140·7	323	19 22	[−18]	e 28 26?	?PR_2	e 76·4	80·9
Alicante	—	141·6	329	e 19 52	[+10]	29 22	?PR_2	41·3	71·8
Toledo	—	142·1	334	e 19 23	[−20]	—	—	e 46·1	81·8
Almeria	—	143·7	331	i 19 33	[−13]	—	—	—	79·1
Granada	—	144·1	330	i 19 38	[− 9]	30 45	?	e 73·4	79·8
Malaga	—	144·8	331	19 31	[−17]	e 28 59	?	e 39·4	88·0
Rio de Janeiro N.	—	145·2	150	e 18 41	[−67]	—	—	—	—
San Fernando	—	145·9	332	19 38	[−12]	33 18	?	71·9	89·4

Additional readings and notes: Amboina iN = +5m.38s., iS = +9m.2s. Riverview PR_1 = +6m.34s., iS = +10m.29s., MN = +14·8m. Adelaide iPR_2 = +7m.28s., MN = +18·4m. Wellington iPE = +7m.26s., iPN = +7m.28s., iSE = +13m.14s., iSN = +13m.15s.; T_0E = 17h.56m.33s.; T_0N = 17h.56m.38s. Manila MN = +15·2m. Perth PR_1 = +10m.1s., iSR_1 = +18m.4s., iSR_2 = +18m.18s., iSR_3 = +18m.56s. Osaka MN = +26·0m. Kobe MN = +22·8m. Malabar i = +15m.18s. and +18m.2s. = SR_1 − 28s. Batavia iE = +8m.38s., i = +10m.6s. = PR_1 − 27s. Hong Kong PR_1 = +10m.39s., SR_1 = +19m.31s. Honolulu LN (Love) = +22·4m., LE (Rayleigh) = +25·0m.; T_0 = 17h.56m.28. and 17h.56m.32s. Irkutsk MZ = +43·6m. Simla two readings are given as PE and PN respectively. Berkeley eEZ = +16m.16s. = PR_1 − 18s. Lick eN = +12m.54s., eSN? = +13m.1s. Tashkent ePR_1 = +16m.26s., iPR_2 = +19m.6s., PR_2 = +19m.54s., eSR_1 = +30m.8s., SR_2 = +34m.26s., SR_3 = +36m.44s., e = +41m.2s., MN = +44·9m., MZ = +76·4m. Spokane iPN = +13m.7s., ePR_2 = +19m.32s., ePSE = +24m.56s. Ekaterinburg iPR_1 = +17m.29s., ePR_2 = +19m.28s., iS_4P_4S = +24m.5s., iPS = +26m.23s., iPPS = +27m.5s., SR_1 = +31m.32s., SR_2 = +34m.45s., MN = +52·6m., MZ = +61·2m. Baku PR_1 = +18m.33s., e = +27m.46s. = PS − 27s., SR_1 = +33m.5s., i = +34m.17s., SR_5 = +43m.44s., MN = +55·4m. Tiflis PR_1 = +18m.53s., eS_4P_4S = +25m.0s., PPS = +28m.21s., eSR_1 = +33m.41s., MN = +58·3m. Kucino PR_1 = +19m.2s., e = +19m.7s., PR_2 = +21m.26s., iPS = +27m.33s., SR_1 = +34m.39s., MN = +56·0m. Leningrad iPR_1 = +19m.20s., PR_2 = +21m.50s., $S_4P_4P_4S$ = +26m.20s., i = +28m.44s., MN = +67·8m., MZ = +69·6m. Pulkovo P = +18m.34s. = [P] +3s., PR_1 = +19m.19s., PR_2 = +21m.48s., $S_4P_4P_4S$ = +26m.10s., ePS = +28m.2s., SR_1 = +35m.8s., MNZ = +67·7m. Makeyevka ePR_1 = +19m.16s., e = +19m.23s., and +20m.48s., PR_2 = +21m.58s., ePS = +28m.53s., ePPS = +29m.35s., MZ = +67·8m., MN = +76·5m. Helsingfors ePR_2N = +25m.20s. = [S] − 9s., eE = +26m.47s., eN = +28m.51s., eSR_1E = +35m.20s. = SR_1 +13s., eSR_1N = +35m.53s. = SR_1 +46s., eSR_2N = +39m.29s., eSR_2E = +39m.31s., eLN = +48·4m., MN = +64·4m. Ann Arbor eE = +47m.50s., eN = +54m.20s. Ksara e = +19m.57s. = PR_1 +6s., PR_1E? = +23m.52s. = PR_2 +52s., PR_2? = +26m.54s. Upsala MN = +72·8m. Konigsberg eLZ = +66·4m. Toronto eE = +25m.34s. = [S] − 11s., eN = +30m.4s., iE = +30m.10s., eE = +31m.51s. and +36m.59s. = SR_1 +13s., MN = +61·1m. Ottawa eE = +25m.45s. = [S] − 5s., eN = +27m.14s., eE = +30m.0s. and +31m.56s. = PS +53s., e = +36m.56s. = SR_1 − 15s., MN = +67·4m. Fordham iE = +21m.10s., eE = +22m.6s., eN = +23m.53s. = PR_2 − 33s. and +26m.38s. = [S] +39s., eE = +27m.18s., +29m.38s. = S +12s., and +31m.26s. = PS − 8s., MN = +63·4m. Hamburg MZ = +75·4m. Harvard eLE = +62·2m. Cheb readings have all been diminished by 2h. La Plata PN = +21m.15s. De Bilt iZ = +21m.10s. = PR_1 − 10s., eEN = 22m.30s., MN = +70·6m. MZ = +70·8m. Innsbruck e = +19m.49s., +20m.36s., and +21m.23s. = PR_1 − 1s. Uccle i = +21m.19s. = PR_1 − 10s., iPR_1 = +22m.30s., e = +31m.14s. and +39m.8s. Strasbourg PR_1 = +21m.12s., P_6P_6S? = +22m.24s., S_6P_6S = +35m.35s., MZ = +81·1m., MN = +81·4m. Kew

Continued on next page.

iPR$_1$Z = +22m.28s., iEN = +22m.34s., MN = +68·8m., MZ = +76·4m. La Paz iPR$_1$ = +22m.41s., SN = +31m.44s., SR$_1$ = +37m.53s., SR$_2$ = +40m.44s., MN = +72·6m.; T$_0$ = 17h.56m.21s. Florence e = +22m.11s., i = +22m.41s. Rocca di Papa PR$_1$E = +22m.33s., PR$_1$N = +22m.38s. Paris PR$_1$ = +22m.39s., MN = +81·4m. Barcelona MN = +83·3m. Tortosa MN = +89·4m. Algiers PR$_1$ = +23m.5s. Alicante MN = +68·8m. Toledo MNW = +81·6m. Almeria PR$_1$ = +22m.55s., MN = +87·1m. Granada i = +20m.38s. Malaga MN = +86·2m. Rio de Janeiro eE = +18m.44s. San Fernando MN = +89·9m.

Feb. 1d. Readings also at 0h. (Tiflis and Moncalieri), 1h. (Ekaterinburg, Baku, Tashkent, San Fernando, and near La Paz), 2h. (Ekaterinburg and near Nagasaki), 3h. (Merida and Vera Cruz), 4h. (Ekaterinburg, Ottawa, Toronto, Tucson (2), near Tacubaya, and near Nagasaki), 5h. (Ksara and Nagasaki), 6h. (Suva), 8h. (Taihoku), 10h. (near Granada), 11h. (Nagasaki), 12h. (La Paz), 14h. (Nagasaki), 16h. (Taihoku), 17h. (Nagasaki), 18h. (La Paz), 19h. (La Plata), 20h. (Denver and near Taihoku), 21h. (Denver), 23h. (Loyola and Moncalieri).

Feb. 2d. Readings at 1h. (Nagasaki (2) and Denver), 4h. (Nagoya and near Mizusawa), 5h. (Nagasaki), 6h. (near Sucre), 7h. (Tashkent, Ekaterinburg, and near Manila), 8h. (Baku, Makeyevka, and near Sucre), 10h. (Ekaterinburg, Kucino, Makeyevka, Pulkovo, Leningrad, near Tacubaya, and Vera Cruz), 11h. (Baku), 12h. (Nagasaki), 13h. (Manila), 14h. (Ekaterinburg and Tashkent), 15h. (Irkutsk, Ekaterinburg, Tashkent, Zi-ka-wei and near La Paz), 16h. and 17h. (La Paz), 21h. (Ekaterinburg and La Paz).

Feb. 3d. 3h. 53m. 5s. Epicentre 32°·7N. 120°·7E.

A = −·430, B = +·724, C = +·540; D = +·860, E = +·511; G = −·276, H = +·465, K = −·842.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Zi-ka-wei		1·6	158	i 0 45	+21	i 1 7	+22	—	—
Tsingtau	E.	3·4	355	0 47	− 6	1 25	− 9	—	1·7
Nagasaki		7·7	87	2 11	+14	3 44	+15	4·2	5·6
Taihoku		7·7	174	e 2 10	+13	—	—	4·0	5·1
Hukuoka		8·2	81	2 39	+35	3 45	+ 3	4·8	5·5
Matuyama	N.	10·2	80	e 4 37	?S	(e 4 37)	+ 2	e 5·3	5·6
Hong Kong		11·8	211	3 10	+14	—	—	6·1	7·3
Sumoto		11·9	78	e 5 29	?S	(e 5 29)	+12	6·2	6·9
Toyooka		12·1	72	(e 2 40)	−20	(5 12)	− 9	5·2	—
Kobe		12·2	77	e 0 3	−179	—	—	6·5	6·9
Osaka		12·4	77	4 1	+56	—	—	6·6	8·8
Nagoya		13·7	75	3 11	−11	—	—	7·0	8·1
Phu-Lien		17·3	230	e 4 17	+ 8	e 7 52	+27	8·9	11·6
Mizusawa		17·7	63	(4 12)	− 1	(7 26)	− 7	7·4	—
Manila		18·1	179	e 4 49	+31	—	—	e 9·4	—
Ootomari		21·9	44	7 40	?	(9 25)	+22	9·4	—
Irkutsk		22·9	334	i 5 8	− 8	i 9 18	− 5	12·9	—
Simla	E.	36·7	282	e 13 13	?S	(e 13 13)	− 7	20·6	21·7
	N.	36·7	282	e 15 49	?SR$_1$	—	—	20·1	21·0
Hyderabad		40·9	263	14 4	?S	(14 4)	−16	22·8	27·9
Batavia		41·0	205	i 7 56	− 7	i 14 18	− 3	e 23·6	25·9
Bombay		44·8	268	15 12	?S	(15 12)	0	e 20·7	28·5
Kodaikanal		45·6	254	26 43	?L	—	—	31·4	—
Ekaterinburg		47·0	321	i 8 37	−10	i 15 27	−14	21·9	26·5
Baku		55·9	302	e 9 46	+ 1	17 41	+ 8	26·6	38·0
Tiflis		59·2	305	—	—	—	—	35·9	39·5
Kucino		59·6	321	e 10 7	− 2	e 18 19	+ 1	28·4	37·2
Makeyevka		61·8	314	10 26	+ 2	e 18 49	+ 3	29·9	38·6
Pulkovo		62·4	328	10 27	− 1	i 18 51	− 2	31·9	40·3
Leningrad		62·4	328	10 29	+ 1	i 18 54	+ 1	28·9	40·2

Continued on next page.

		Δ	Az.	P.	Q−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Helsingfors	E.	64·8	329	e 9 31	−73	e 19 18	− 5	e 33·1	36·4
	N.	64·8	329	e 10 49	+ 5	e 19 22	− 1	e 33·0	36·4
Upsala		68·3	330	e 11 10	+ 4	e 20 1	− 5	e 36·9	38·7
Ksara	N.	68·7	297	—	—	e 20 17	+ 7	39·9	—
Konigsberg		69·1	324	i 11 22	+10	e 20 9	− 6	e 36·4	37·9
Budapest		73·6	318	—	—	—	—	e 36·9	46·2
Potsdam		74·3	324	—	—	—	—	e 38·8	40·0
Vienna		74·7	320	11 46	− 1	—	—	—	40·9
Prague		74·8	321	—	—	—	—	e 36·9	46·9
Suva	E.	74·9	126	e 16 7	?PR_1	—	—	—	—
Hamburg		75·1	326	e 11 50	0	e 21 29	+ 2	e 38·9	42·8
Graz		75·8	320	—	—	—	—	37·9	41·9
Cheb		75·9	322	—	—	e 21 30	− 6	e 37·9	47·4
Feldberg	E.	77·8	324	—	—	—	—	e 41·9	48·9
Innsbruck	E.	78·0	320	—	—	—	—	—	43·2
Hohenheim	E.	78·3	323	—	—	—	—	e 40·2	48·8
De Bilt		78·4	326	e 12 10	+ 1	e 22 7	+ 2	e 39·9	50·5
Venice		78·5	319	16 55?	?	—	—	—	—
Ravensburg		78·7	323	—	—	—	—	e 40·9	49·3
Strasbourg		79·2	323	e 12 15	+ 1	e 22 31	+17	e 34·9	49·8
Edinburgh		79·4	334	—	—	—	—	e 41·9	—
Uccle		79·5	326	—	—	e 22 15	− 3	e 37·9	44·9
Florence		80·4	317	e 3 55?	?	—	—	e 28·9	41·9
Besançon		80·4	322	—	—	—	—	41·9	—
Oxford		80·4	330	—	—	—	—	e 40·9	45·9
Rocca di Papa		80·5	315	e 12 21	− 1	e 20 10	−139	e 42·8	55·5
Stonyhurst		80·5	331	—	—	—	—	e 43·9	—
Victoria	E.	80·9	39	—	—	—	—	42·9	49·0
Bidston		81·1	331	—	—	—	—	45·0	47·2
Kew		81·3	330	e 12 21	− 6	e 22 32	− 6	40·9	46·0
Moncalieri	E.	81·5	320	e 11 36	−52	25 12	+151	42·8	51·7
	N.	81·5	320	e 10 19	−129	22 14	−27	41·1	51·6
Paris		81·7	325	—	—	—	—	e 42·9	45·9
Puy de Dôme		83·5	324	—	—	—	—	36·9	—
Barcelona		86·8	320	—	—	—	—	e 46·6	54·7
Tortosa	E.	88·2	321	—	—	—	—	e 42·9	49·6
Alicante		90·4	320	e 20 33	?PR_3	—	—	—	55·4
Toledo	N.W.	91·3	322	—	—	e 20 25	−242	e 43·1	50·9
Granada		93·0	320	(e 17 32)	?PR_1	(i 23 41)	[− 6]	(49·9)	(57·0)
Malaga		93·8	320	14 12	+35	e 27 15	?	45·6	60·0
Rio Tinto		94·2	323	55 55?	?L	—	—	(55·9)	61·9
San Fernando		94·9	321	—	—	—	—	50·9	55·4
Ottawa	E.	100·5	12	—	—	—	—	e 43·9	—
Chicago	E.	101·2	22	—	—	—	—	e 53·1	58·1
Toronto	E.	101·4	16	—	—	—	—	e 50·9	—
Ithaca		103·2	14	—	—	—	—	54·9	—
Fordham		105·3	13	—	—	—	—	e 52·2	—
La Paz		162·0	28	e 20 16	[+ 7]	—	—	—	—
La Plata		177·5	207	(21 55?)	?	—	—	21·9	—

Additional readings and notes: Hukuoka MN = +4·9m. Sumoto MN = +6·4m., MZ = +6·7m. Toyooka P = +0m.34s., ePR$_1$ = +2m.40s., S = +3m.51s. Taken with Kobe P a shock earlier by about 3min. is suggested. Kobe MN = +6·8m. Osaka MN = +9·5m. Phu-Lien MN = +10·6m. Mizusawa SN = +4m.18s. =PR$_1$ −10s.; P is given as S and S as L. Irkutsk e = +6m.21s., epicentre 32°·1N. 119°·6E. Simla eSE = +18m.19s. Batavia e = +8m.3s., i = +15m.9s., LZ = +24·6m. Bombay S = +18m.22s. =SR$_1$ −4s. Ekaterinburg i = +9m.2s., iPR$_1$ = +10m.30s., i = +16m.7s. =PS +13s., iSR$_1$ = +18m.54s., MN = +26·4m., MZ = +29·4m. Baku MN = +34·3m., MZ = +40·4m. Kucino MN = +34·3m. Makeyevka e = +10m.53s., +2?m.54s., and +27m.33s., PS = +19m.14s., SR$_1$ = +23m.29s., MN = +36·?m., MZ = +38·3m. Pulkovo SR$_1$ = +23m.1s., SR$_2$ = +26m.1s., MN = +34·8m. Leningrad SR$_1$ = +23m.7s. Helsingfors ePR$_1$E = +12m.37s., eSR$_1$E = +26m.39s. Upsala eLN = +35·9m., MN = +38·6m. Konigsberg iZ = +11m.27s. and +11m.51s., eLZ = +38·9m. Budapest eL = +38·9m., MN = +40·4m. Prague eL = +40·9m., MN = +41·9m. Suva eN = +16m.19s. Hamburg SR$_1$ = +29m.55s.?, MZ = +48·9m. Feldberg MN = +42·9m. De Bilt MN = +45·1m. Strasbourg ePR$_1$ = +16m.54s., MN = +45·8m., MZ = 50 8m. Kew MN = +45·6m., MZ = +52·6m. Paris MN = +44·9m. Tortosa eLN = +41·9m., MN = +48·2m. Alicante MN = +50·2m. Toledo MNE = +58·0m. Granada: All the readings have been increased by 2min. San Fernando MN = +53·4m. Chicago LN = +53·3m., MN = +64·9m.

Feb. 3d. 4h. 52m. 5s. Epicentre 32°·7N. 120°·7E. (as at 3h.).

		△	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Zi-ka-wei		1·6	158	i 0 41	+17	i 1 1	+16	—	2·0
Tsingtau	E.	3·4	355	0 40	−13	1 16	−18	—	1·5
Nagasaki		7·7	87	2 11	+14	3 48	+19	3·9	4·3
Taihoku	E.	7·7	174	e 2 17	+20	—	—	4·0	—
Hukuoka		8·2	81	2 22	+18	3 45	+ 3	4·8	5·8
Matuyama	N.	10·2	80	e 4 46	?S	(e 4 46)	+11	e 5·4	5·5
Hong Kong		11·8	211	3 12	+16	5 40	+26	6·6	7·3
Sumoto		11·9	78	e 5 26	?S	(e 5 26)	+ 9	6·2	6·8
Toyooka		12·1	72	e 1 35	−85	e 4 54	−27	e 6·6	—
Kobe		12·2	77	e 1 10	−112	—	—	6·4	7·1
Osaka		12·4	77	3 50	+45	—	—	6·3	8·9
Nagoya		13·7	75	e 3 21	− 1	—	—	7·1	8·1
Phu-Lien		17·3	230	e 4 24	+15	7 55	+30	9·1	10·5
Mizusawa		17·7	63	(4 8)	− 5	(7 14)	−19	7·2	—
Manila		18·1	179	e 4 43	+25	—	—	9·2	—
Irkutsk		22·9	334	e 5 6	−10	i 9 17	− 6	12·9	—
Simla	E.	36·7	282	e 14 19	?S	(e 14 19)	+59	21·4	—
	N.	36·7	282	e 14 37	?S	(e 14 37)	+77	20·5	21·6
Batavia		41·0	205	e 8 37	+34	—	—	25·2	—
Kodaikanal		45·6	254	27 43	?L	—	—	(27·7)	—
Ekaterinburg		47·0	321	i 8 35	−12	i 15 26	−15	22·9	26·5
Tiflis		59·2	305	—	—	—	—	37·9	38·8
Kucino		59·6	321	—	—	—	—	27·7	33·3
Makeyevka		61·8	314	—	—	—	—	—	38·6
Pulkovo		62·4	328	—	—	—	—	30·9	40·2
Helsingfors		64·8	329	—	—	e 19 48	+25	e 34·1	36·4
Upsala	E.	68·3	330	—	—	—	—	e 36·9	38·7
Konigsberg		69·1	324	—	—	—	—	e 37·1	43·4
Budapest		73·6	318	—	—	—	—	e 37·9	40·4
Potsdam		74·3	324	—	—	—	—	e 16·2	—
Vienna		74·7	320	e 11 51	+ 4	—	—	—	41·9
Prague		74·8	321	—	—	—	—	e 38·9	41·9
Hamburg		75·1	326	—	—	—	—	e 38·9	42·9
Graz		75·8	320	—	—	—	—	e 37·9	41·6
Cheb		75·9	322	—	—	—	—	e 38·9	42·9
Zagreb		76·2	318	e 13 9	+73	e 22 38	+59	e 40·9	—
Innsbruck		78·0	320	—	—	—	—	—	43·2
De Bilt		78·4	326	—	—	—	—	e 38·9	45·2
Strasbourg		79·2	323	—	—	—	—	e 37·9	49·8
Edinburgh		79·4	334	—	—	—	—	44·9	—
Uccle		79·5	326	—	—	—	—	e 37·9	44·9
Florence		80·3	317	e 9 55?	?	—	—	39·9	44·9
Oxford		80·4	330	—	—	—	—	e 42·9	46·2
Besançon		80·4	322	—	—	—	—	42·9	—
Rocca di Papa		80·5	315	—	—	—	—	e 42·7	—
Kew		81·3	330	—	—	—	—	39·9	46·0
Paris		81·7	325	—	—	—	—	e 43·9	44·9
Tortosa	N.	88·2	321	—	—	—	—	e 43·9	52·1
Toledo	N.W.	91·3	322	—	—	—	—	e 45·2	50·7
Granada		93·0	320	—	—	e 31 44	?SR_1	49·9	55·5
Rio Tinto		94·2	323	55 55?	?L	—	—	(55·9)	60·9
San Fernando	E.	94·9	321	—	—	—	—	—	54·9
Ottawa	E.	100·5	12	—	—	—	—	49·9	—
Fordham		105·3	13	—	—	—	—	e 54·9	—

Additional readings and notes: Zi-ka-wei P = +49s. Hukuoka MN = +4·8m. Matuyama eSN = +5m.15s. Sumoto MZ = +6·6m. Osaka MN = +9·5m. Phu-Lien MN = +11·2m. Mizusawa gives P as S and S as L. Batavia P is given simply as eE. Ekaterinburg SR_1 = +19m.47s., MZ = +29·2m. Makeyevka MN = +35·4m., MZ = +38·2m. Pulkovo MN = +34·7m. Helsingfors ePR_1? = +14m.42s., eLN = +33·9m. Upsala eLN = +36·0m., MN = +38·6m. Konigsberg eLN = +37·9m. eLZ = +42·9m. Budapest eL = +39·9m. Prague eLN = +40·9m. Hamburg MZ = +48·9m. De Bilt MN = +45·0m., MZ = +50·5m. Strasbourg MN = +46·4m., MZ = +49·9m. Kew MN = +45·9m. Toledo MNE = +52·4m. San Fernando MN = +53·4m.

Feb. 3d. Readings also at 2h. (Colombo), 3h. (Kodaikanal and near Nagasaki), 4h. (near Santiago), 5h. and 7h. (Tashkent), 8h. (Sucre), 16h. (near Oaxaca), 17h. (Tashkent, La Paz, and near Toyooka), 20h. (La Paz).

Feb. 4d. 2h. 49m. 17s. Epicentre 18°·5S. 168°·5E. (as on Jan. 26d.).

A = − ·929, B = + ·189, C = − ·317 ; D = + ·199, E = + ·980 ; G = + ·311, H = − ·063, K = − ·948.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Suva	E.	9·4	89	3 7	+45	4 43	+30	5·3	6·1
	N.	9·4	89	3 19	+57	5 7	+56	5·6	11·0
Apia		19·5	79	5 16	+41	7 31	−42	9·0	16·6
Riverview		21·8	222	i 5 26	+23	i 9 16	+15	e 11·7	13·5
Sydney	E.	21·8	222	(5 1)	− 2	5 1	?P	12·2	13·7
Wellington		23·4	168	i 5 55	?PR_1	e 10 26	?SR_1	19·7	—
Christchurch		25·3	173	(5 43)	+ 2	5 43	?P	11·2	18·7
Melbourne		28·2	221	i 6 19	+ 9	—	—	—	16·0
Adelaide		31·2	233	e 6 49	+ 9	i 11 51	− 3	14·0	19·6
Amboina		42·1	285	i 8 7	− 5	i 9 37	?PR_1	20·3	—
Perth		49·0	243	e 9 38	+38	i 16 3	− 3	i 24·5	29·7
Honolulu, T.H.		51·6	42	—	—	e 16 13	−26	20·6	21·3
Manila		57·3	303	e 10 2	+ 8	(i 17 32)	−18	i 17·5	—
Malabar		60·2	274	e 10 7	− 6	i 18 46	+20	—	—
Batavia		61·2	274	10 15	− 5	i 18 58	+20	—	—
Nagoya		61·4	332	e 9 48	−33	—	—	—	—
Osaka		61·7	330	10 24	+ 1	(18 24)	−20	18·4	18·5
Sumoto		61·7	330	10 3	−20	—	—	10·4	10·5
Kobe	E.	61·9	330	—	—	—	—	—	11·6
Mizusawa	E.	63·0	336	10 12	−20	10 32	?	—	—
Hukuoka		63·5	326	10 35	0	(18 43)	−24	18·7	—
Hong Kong		67·0	307	11 2	+ 4	(19 18)	−32	19·3	19·7
Zi-ka-wei		67·1	320	e 10 58	− 1	—	—	—	—
Irkutsk		89·8	326	i 13 10	− 5	i 23 8	[−19]	39·7	—
Victoria	E.	90·2	37	—	—	(23 46)	[+17]	23·8	43·2
Colombo		90·9	277	1 33	?	—	—	—	24·7
Simla	E.	100·5	300	e 24 13	?S	(e 24 13)	[−13]	—	—
Bombay		101·0	286	17 11	?PR_1	24 59	[+30]	·36·7	—
Tashkent		108·9	308	i 14 41	−12	i 24 54	[−12]	e 43·7	45·9
Chicago	E.	112·4	51	—	—	—	—	e 54·0	57·7
La Paz		114·2	120	19 41	?PR_1	e 25 46	[+19]	29·8	31·3
Ekaterinburg		115·1	325	e 18 53	[+15]	—	—	56·7	58·0
Sucre		115·3	122	61 17	?L	—	—	(61·3)	—
Toronto	N.	118·5	49	—	—	—	—	53·1	—
Ottawa	E.	121·0	47	—	—	e 26 7	[+19]	e 50·7	—
Fordham	E.	122·7	53	—	—	i 37 48	?SR_1	e 60·7	—
Baku		123·5	307	e 20 12	?PR_1	—	—	e 58·7	—
Tiflis		127·2	308	—	—	—	—	e 61·7	68·6
Kucino		127·5	328	e 20 59	?PR_1	—	—	45·1	—
Leningrad		128·9	335	—	—	i 31 20	?PS	57·1	—
Pulkovo		129·1	335	—	—	e 31 18	?PS	56·7	—
Makeyevka		130·4	317	i 19 35	[+16]	e 21 25	?PR_1	69·7	—
Helsingfors		130·9	336	—	—	e 32 43	?	e 60·7	72·2
Upsala	N.	133·7	341	—	—	—	—	e 65·7	—
Ksara		135·2	299	e 20 7	[+36]	—	—	39·2	—
Konigsberg		136·3	334	i 22 8	?PR_1	—	—	—	—
Hamburg	Z.	141·2	340	e 19 48	[+ 7]	i 21 43	?PR_1	—	—
Vienna		142·6	330	e 19 53	[+ 9]	i 22 43?	?PR_1	—	—
Athens		143·7	310	e 19 52	[+ 6]	e 22 50	?PR_1	—	—
De Bilt		144·0	341	e 20 17	[+30]	e 22 56	?PR_1	e 64·7	80·8
Zagreb		144·5	326	e 20 0	[+13]	e 22 50	?PR_1	—	—
Oxford		144·8	351	—	—	—	—	e 67·7	86·2
Uccle		145·3	341	e 20 5	[+16]	—	—	e 65·7	—
Innsbruck		145·7	334	e 19 55	[+ 6]	e 23 3	?PR_1	—	—
Kew		145·9	349	e 20 47?	?	—	—	41·7	—
Strasbourg		146·1	337	e 19 50	[0]	i 23 52	?PR_1	70·7	—
Paris		147·6	344	e 19 49	[− 3]	—	—	77·7	—
Florence		148·3	327	e 19 43	[−10]	—	—	60·7	71·7
Rocca di Papa		148·9	322	19 51	[− 3]	—	—	—	—
Moncalieri	E.	149·0	333	e 19 33	[−21]	20 10	?	—	—
	Z.	149·0	333	19 49	[− 5]	20 9	?	—	—
Grenoble		149·7	336	e 19 50	[− 5]	—	—	—	—
Puy de Dôme		150·2	340	e 19 54	[− 2]	—	—	—	—
Tortosa	N.	155·4	338	20 29	[+27]	e 29 43?	?	e 71·7	85·0
Algiers		157·7	328	e 20 24	[+18]	e 27 43	?PR_2	35·7	—
Toledo		157·7	345	—	—	30 43	?PR_2	e 51·1	—
Almeria		159·9	338	e 20 37	[+29]	e 32 21	?	—	—
Granada		160·1	341	e 20 5	[− 3]	—	—	73·5	81·4
Malaga		160·7	343	e 19 40	[−29]	30 32	?	e 39·7	—
San Fernando		161·5	347	21 42	?	35 8	?	78·2	114·2

For Notes see next page.

NOTES TO FEB. 4d. 2h. 49m. 17s.

Additional readings and notes: Apia P = +5m.42s. Riverview PR_1 = +5m.59s., iS = +9m.52s., SR_1 = +10m.32s., MN = +12·6m. Wellington iPE = +5m.56s., PR_1E = +6m.11s., PR_1N = +6m.19s., PR_2N = +6m.28s., PR_2E = +6m.35s., iN = +6m.46s., iE = +7m.1s.; T_0N = 2h.49m.29s., T_0E = 2h.49m.30s. Adelaide iPR_2 = +7m.46s., MN = +16·3m. Amboina i = +9m.55s. and +17m.19s. = SR_1 −11s. Perth eP = +9m.43s., ePR_1 = +11m.53s., iS = +16m.43s., iSR_1 = +20m.43s. Honolulu ePR_1E? = +11m.43s., SR_1N = +19m.25s., MN = +21·7m. Batavia iP = +10m.18s., iZ = +10m.33s., i = +10m.38s., iE = +18m.20s., i = +18m.59s., S is given as iZ. Osaka S = +15m.7s. = PR_2 +9s. Kobe MN = +11·9m. Sumoto and Mizusawa readings are given as local shocks. Hong Kong S = +15m.50s. = PR_2 −16s. Irkutsk PR_1 = +16m.10s.; epicentre 10°·2S. 160°·3E. Simla PN = +24m.49s. Tashkent ePR_1 = +17m.59s., e = +18m.3s., PR_2 = +19m.57s., i = +25m.18s., e = +27m.55s. = PS −51s., MN = +51·5m. Chicago PS?E = +29m.7s., SR_1E = +35m.7s. Ekaterinburg e = +19m.33s. = PR_1 −19s., i = +25m.17s. = [S] −12s., and +27m.31s., e = +28m.36s. = S +25s., and several other i readings. Ottawa eE = +36m.58s. = SR_1 −2s. Baku i = +20m.48s. = PR_1 +1s. Tiflis PR_1 = +21m.11s., e = +26m.2s. = [S] −2s., +27m.41s. = PR_2 +40s., and +29m.22s. = S −19s., PS = +31m.2s., SR_1 = +38m.19s., MN = +66·6m. Kucino e = +26m.2s. = [S] −3s., +27m.38s. = PR_2 +35s., +30m.34s. = [S] +50s., and several other values. Helsingfors eN = +37m.43s., eLN = +58·7m. Ksara eN = +20m.39s., eEN = +22m.13s. = PR_1 +10s. Konigsberg iZ = +22m.13s. = PR_1 +3s., eZ = +22m.49s., De Bilt MN = +78·9m., MZ = +79·5m. Uccle PR_1 = +23m.4s. Strasbourg iPR_1? = +23m.10s., i = +23m.52s., ePPS = +35m.43s. Florence eP = +41m.43s.? = SR_1 −48s., S = +49m.43s.? = SR_2 +68s.; readings given as for 2 shocks. Rocca di Papa eN = +19m.39s., eE = +19m.44s., iP = +19m.55s. Grenoble i = +20m.16s. Puy de Dôme i = +20m.16s. Tortosa PE = +20m.33s. Granada i = +20m.28s., +24m.34s. = PR_1 −5s., +27m.59s. = PR_2 −27s., +29m.25s., +32m.17s. = PR_2 +36s., +33m.3s., and +35m.2s. San Fernando MN = +83·7m.

Feb. 4d. Readings also at 1h. (near Toyooka), 3h. (Moncalieri and La Paz), 5h. (Apia), 6h. (near Nagasaki), 10h. (Berkeley and near Lick), 14h. and 15h. (Nagasaki), 16h. (Wellington, Nagasaki, and near Mizusawa), 17h., 18h., and 19h. (Nagasaki).

Feb. 5d. 0h. 0m. 36s. Epicentre 36°·0N. 84°·5E. (as on 1926 July 17d.).

A = +·078, B = +·805, C = +·588; D = +·995, E = −·096; G = +·056, H = +·585, K = −·809.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Tashkent	13·0	299	3 46	+ 33	i 7 10	+86	e 7·2	9·7
Irkutsk	21·4	35	e 5 3	+ 5	e 9 1	+ 8	12·4	—
Ekaterinburg	26·2	330	e 5 56	+ 6	10 14	−12	i 13·9	16·6
Baku	27·3	290	—	—	—	—	e 15·4	—
Kucino	36·0	318	—	—	—	—	e 19·4	—

Additional readings: Tashkent MZ = +10·1m. Irkutsk e = +12m.14s. and +12m.21s. Ekaterinburg MZ = +16·7m.

Feb. 5d. 7h. 36m. 18s. Epicentre 13°·7N. 128°·0E. (as on 1926 Jan. 23d.).

A = −·598, B = +·766, C = +·237; D = +·788, E = +·616; G = −·146, H = +·187, K = −·972.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Manila	6·8	278	e 1 54	+10	(i 3 7)	+ 2	i 3·1	5·6
Hong Kong	15·7	305	3 48	0	6 48	0	8·0	9·2
Zi-ka-wei	18·5	342	e 4 38	+15	e 8 17	+26	—	—
Batavia	28·9	228	e 5 44	−33	i 11 13	− 2	—	—
Irkutsk	43·0	340	e 8 13	− 5	14 43	− 5	e 20·7	—
Tashkent	57·6	312	i 9 54	− 2	i 18 56	+62	e 29·7	34·2

Continued on next page.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Ekaterinburg	66·2	327	i 10 56	+ 3	19 39	− 1	34·7	38·2
Baku	72·2	310	e 11 31	0	e 20 52	0	36·4	44·0
Tiflis	75·9	311	e 12 5	+11	e 21 32	− 4	e 42·7	51·8
Kucino	78·8	325	—	—	—	—	e 42·8	—
Makeyevka	79·9	318	—	—	e 22 42?	+20	47·7	—
Pulkovo	82·0	330	—	—	—	—	e 49·7	—
Leningrad	82·0	330	—	—	—	—	e 47·9	—
De Bilt	97·8	329	—	—	—	—	e 54·7	—
Uccle	99·0	328	—	—	—	—	54·7	—
Kew	100·9	331	—	—	—	—	e 47·7	—

Additional readings and notes: Manila MN = +4·3m. Batavia readings are given as e and i. Irkutsk SR_2 = +18m.13s. Tashkent i = +10m.42s. and +12m.19s. = PR_1 − 13s., SR_1 = +22m.42s., MN = +35·1m., MZ = +37·7m. Ekaterinburg e = +27m.8s. = SR_2 − 11s., MZ = +42·6m. Baku MN = +40·7m., MZ = +55·4m. Tiflis MN = +44·6m.

Feb. 5d. Readings also at 0h. (San Juan), 1h. and 2h. (Nagasaki), 3h. (Nagasaki (2) and La Paz), 4h. (Nagasaki, San Juan, and La Paz), 6h. (La Paz and Manila), 7h. (Zagreb), 14h. (Nagasaki), 16h. (Nagasaki (2), La Plata, and Santiago), 17h., 19h., 20h., 21h., and 22h. (Nagasaki), 23h. (Nagasaki (2) and near Balboa Heights).

Feb. 6d. Readings at 0h. (Nagasaki and Simla), 1h. (Nagasaki), 2h. (La Paz and Sucre), 3h. (Nagasaki, near Algiers, and near Manila), 4h. (La Paz and Sucre), 5h. (Nagasaki), 6h. (Strasbourg, Suva, Wellington, Riverview, Adelaide, near Athens, and near Christchurch), 7h. (near Santiago), 8h. (Baku), 10h. and 13h. (Nagasaki), 15h. (Manila and Nagasaki), 20h. (near La Paz), 21h. (Suva and Nagasaki), 22h. (Rocca di Papa), 23h. (Nagasaki, Wellington, and near Christchurch).

Feb. 7d. 6h. 4m. 36s. Epicentre 39°·0N. 31°·0E. (as on 1926 Dec. 20d.).

A = +·666, B = +·400, C = +·629; D = +·515, E = −·857; G = +·539, H = +·324, K = −·777.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Athens	5·8	261	e 1 22	− 8	e 2 38	− 1	i 2·9	3·7
Ksara	6·5	141	—	—	—	—	3·2	—
Makeyevka	10·3	27	—	—	—	—	e 7·4	—
Tiflis	10·8	71	2 54	+13	e 5 49	+59	6·7	8·4
Budapest	12·2	318	(e 3 24?)	+22	(e 5 24)	0	—	(5·6)
Vienna	14·1	316	e 3 27	0	—	—	i 7·8	8·6
Baku	14·5	79	e 4 21	+48	7 50	+30	8·7	10·8
Prague	16·1	319	—	—	—	—	e 9·4	11·4
Innsbruck	16·5	306	e 4 1	+ 2	—	—	—	10·8
Cheb	17·2	316	—	—	—	—	e 11·4	12·1
Kucino	17·4	13	—	—	e 7 36	+ 9	—	—
Moncalieri	18·2	297	e 7 29	?S	(e 7 29)	−15	(10·1)	—
Zurich	18·3	304	5 24?	+63	—	—	—	—
Pulkovo	20·7	359	i 4 52	+ 3	i 8 53	+15	12·4	—
Leningrad	21·0	359	—	—	—	—	e 11·7	—
De Bilt	22·1	315	—	—	—	—	e 12·4	—
Uccle	22·1	311	—	—	—	—	e 12·9	—
Kew	25·0	310	—	—	—	—	e 15·4	—
Irkutsk	50·6	50	—	—	—	—	e 3·4	—

Additional readings: Athens MN = +3·3m. Makeyevka L = +12·4m. Tiflis MN = +7·2m. Budapest S given as eP, MN = (+5·9m.); all readings have been diminished by 3 min. Vienna i = +8m.29s. Baku MN = +10·5m. Moncalieri gives S as P and L as S, also L = +11·8m.

Feb. 7d. Readings also at 0h. (near Christchurch), 4h. (Nagasaki and Suva), 5h. (Ekaterinburg, Tashkent, and near La Paz), 6h. (Nagasaki), 7h. (near Nagoya), 10h. and 12h. (Nagasaki), 13h. (Nagasaki and near Sumoto), 14h. (Nagasaki), 16h. (Taihoku and near Zurich (4)), 17h. (Manila and Nagasaki), 19h. (Suva, Strasbourg, and near Zurich).

Feb. 8d. Readings at 5h. (near Batavia and Malabar), 6h. (Baku), 7h. (near Santiago), 9h. (near Suva), 11h. (near Nagasaki), 12h. (Nagoya and near Mizusawa), 13h. (Ekaterinburg, Irkutsk, and Nagasaki), 14h. (Baku, Kucino, Taihoku, and Tashkent), 15h. (near Sumoto), 17h. (Tiflis), 19h. (Nagasaki and near La Paz), 20h. (Baku, Ekaterinburg, Suva, Irkutsk, and Tiflis).

Feb. 9d. Readings at 3h. (Tashkent, Agana, and Suva), 4h. (Agana), 5h. (Adelaide, Sydney, Riverview, Wellington, Agana, and near Mizusawa), 7h. (Manila, Agana, and near Zurich), 8h. (near Nagasaki (2) and near Matuyama), 11h. (Wellington), 13h. (Azores), 15h. (Suva, Melbourne, Sydney, Wellington, and Tashkent), 16h. (Entebbe), 17h. (near Nagasaki), 18h. (Agana), 19h. (Suva), 21h. (near Matuyama), 23h. (Suva).

Feb. 10d. Readings at 3h. (Suva), 4h. (Nagasaki), 5h. (near Toyooka), 6h. (Nagasaki, Riverview, and Wellington), 7h. (Irkutsk, Tiflis, and near Prague), 8h. (near Malabar), 10h. (Nagasaki, La Plata, La Paz, and Sucre), 13h. (Baku, Irkutsk, Tashkent, Tiflis, and Nagasaki), 14h. (Strasbourg, and near Zurich), 15h. (Strasbourg, Tiflis, and near Nagasaki), 16h. (near Nagasaki and near Sumoto), 17h. (Nagasaki), 18h. (Makeyevka), 19h. (near Mizusawa), 20h. (La Paz), 21h. (Nagasaki), 22h. (La Paz and Tiflis).

Feb. 11d. 10h. 21m. 12s. Epicentre 56°·0N. 115°·0E. (as on 1917 April 29d.).
A = −·236, B = +·507, C = +·829 ; D = +·906, E = +·423 ;
G = −·350, H = +·751, K = −·559.

Very doubtful.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Irkutsk	7·3	244	e 1 54	+ 3	i 3 14	− 4	—	—
Ekaterinburg	29·2	294	5 31	−49	10 37	−43	15·4	16·1
Tashkent	32·8	263	—	—	e 14 24	?SR_1	e 17·0	17·5
Kucino	40·9	305	—	—	—	—	e 19·7	—
Baku	44·2	279	—	—	e 19 39	?SR_2	23·6	—
Tiflis	46·1	284	e 11 24	?PR_2	e 21 14	?SR_3	e 25·8	30·1
De Bilt	57·5	317	—	—	—	—	e 35·8	—

Ekaterinburg e = +13m.28s., MZ = +18·4m. Tashkent e = +14m.32s., i = +16m.59s., MN = +17·8m. Baku e = +21m.30s. Tiflis MN = +26·8m. De Bilt gives " near Irkutsk."

Feb. 11d. Readings at 0h. (Moncalieri, Agana, and Tiflis), 1h. (Azores, Cheb, De Bilt (2), Fordham, Granada, Toronto, Ottawa, Paris, Moncalieri, Reykjavik, Strasbourg, Kew, Uccle (2), and Tiflis), 2h. (Tiflis and Reykjavik), 3h. (Taihoku, Tacubaya, Ottawa, Toronto, and near Tucson), 4h. (La Paz and Santiago), 5h. (Taihoku and near Nagasaki), 6h. (Nagasaki), 7h. (Nagasaki, Suva, near Zurich, near La Paz, and Sucre), 9h. near Tashkent), 10h. (Ekaterinburg), 11h. (Strasbourg, Riverview, and Wellington), 13h. (Suva and La Plata), 14h. (Edinburgh, Irkutsk, Nagasaki, near Sucre, and La Paz), 15h. (near Sumoto), 16h. (Melbourne, Riverview, Wellington, near Mizusawa, and near La Paz), 17h. (Baku, Granada, De Bilt, Sucre, La Paz, Toronto, Ottawa, and Nagasaki), 18h. (Suva).

Feb. 12d. 7h. 7m. 54s. Epicentre 16°·0N. 96°·0W. (as on 1919 Jan. 17d.).

A = −·100, B = −·956, C = +·276; D = −·995, E = +·105; G = −·029, H = −·274, K = −·961.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Oaxaca		1·2	324	0 9	− 9	(0 33)	0	0·6	0·6
Vera Cruz		3·2	358	(0 26)	−24	(1 26)	− 2	(1·4)	(1·7)
Puebla		3·7	327	2 1	+63	—	—	2·7	2·9
Tacubaya		4·6	318	1 12	+ 1	(1 57)	− 9	2·0	2·3
Merida		7·8	50	—	—	(2 41)	−50	2·7	2·9
Guadalajara		8·5	304	—	—	(3 55)	+ 5	3·9	4·0
Tucson	E.	21·0	323	4 51	− 2	8 40	− 4	10·8	—
Fordham		31·3	33	—	—	e 10 16	−100	e 17·8	—
Ottawa		33·9	26	—	—	e 12 44	+ 5	e 22·1	—
Irkutsk		109·4	347	—	—	—	—	e 66·1	—

Additional reading and note: Vera Cruz readings have been increased by 3m. Tucson gives PN? = +4m.49s.

Feb. 12d. Readings also at 1h. (Agana and near Granada), 2h. (Toronto), 7h. (Tacubaya and near Victoria), 8h. (near Tucson), 9h. (Agana, Toronto, Ottawa, Chicago, Nagasaki, near Lick, and near Victoria), 16h. (Agana), 17h. (La Paz), 19h. (Phu-Lien, Irkutsk, Granada, and near Malaga), 20h. (Reykjavik and near Irkutsk), 23h. (Strasbourg, Hohenheim, Chur, and near Zurich).

Feb. 13d. 3h. 33m. 20s. Epicentre 25°·5N. 93°·5E.

A = −·055, B = +·901, C = +·431; D = +·998, E = +·061; G = −·026, H = +·430, K = −·903.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Calcutta	E.	5·6	239	1 26	− 1	(2 40)	+ 6	2·7	—
	N.	5·6	239	1 29	+ 2	(2 33)	− 1	2·6	—
Phu-Lien		12·9	108	e 3 6	− 6	—	—	7·6	9·2
Simla		15·4	295	6 22	?S	(6 22)	−19	(e 7·7)	—
Hong Kong		19·2	95	8 0	?S	(8 0)	− 6	—	11·2
Bombay		20·2	255	4 48	+ 5	8 30	+ 3	10·2	11·3
Taihoku	E.	25·3	85	—	—	e 10 40?	+31	—	—
Tashkent		25·5	314	i 5 54	+11	i 10 9	− 4	e 14·7	16·2
Baku		39·0	305	e 7 50	+ 4	e 13 58	+ 6	e 23·5	28·4
Ekaterinburg		39·1	331	i 7 39	− 8	13 41	−12	21·7	25·4
Tiflis		43·0	307	e 8 19	+ 1	e 14 45	− 3	—	23·2
Makeyevka		48·5	314	—	—	—	—	e 25·7	—
Kucino		50·0	323	—	—	—	—	e 20·5	—
Pulkovo		54·8	328	—	—	—	—	27·2	—
Leningrad		54·8	328	—	—	—	—	27·7	—
Vienna	Z.	62·9	315	e 10 44	+13	—	—	—	—
Chur		67·8	314	e 11 4	+ 1	—	—	—	—
Zurich		68·2	314	e 11 7	+ 2	—	—	—	—
De Bilt		69·2	319	—	—	—	—	e 36·7	45·6
Uccle		70·0	318	—	—	—	—	e 35·7	—
Kew		72·5	320	—	—	—	—	e 38·7	—
Oxford		73·1	320	—	—	—	—	e 42·7	48·2

Additional readings: Phu-Lien MN = +7·8m. Simla readings are given as PN and ePE respectively. Tashkent iPR_1 = +6m.13s., PR_2 = +6m.40s., iSR_1 = +10m.41s., iSR_2 = +11m.23s., MN = +15·5m., MZ = +17·1m. Irkutsk (Δ = 28°·0); light out from 1h.3m. to 8h.6m. Baku e = +9m.21s. = PR_1 +11s. and +16m.53s. = SR_1 +27s., MN = +25·4m. Ekaterinburg i = +7m.52s. and +14m.5s. = PS +7s., SR_2 = +16m.56s. Tiflis e = +10m.41s. = PR_2 +9s., +15m.3s. = PS +7s., and +17m.41s. = SR_1 −9s., MN = +18·7m. Makeyevka L = +33·7m. Chur eS = +11m.18s. De Bilt MN = +40·9m.

Feb. 13d. Readings also at 1h. (Tiflis), 4h. (Nagasaki), 5h. (Nagasaki and near Malabar), 6h. (near Santiago), 14h. (Victoria, Ekaterinburg, and Irkutsk), 15h. (Baku and Suva), 19h. (Reykjavik), 20h. (near Nagasaki), 22h. (Manila and Tashkent), 23h. (Ekaterinburg, Irkutsk, Tiflis, and Suva).

Feb. 14d. 3h. 43m. 15s. Epicentre **42°·3N. 17°·8E.**

(as on 1927 Jan. 15d.).

A = +·704, B = +·226, C = +·673 ; D = +·306, E = −·952 ;
G = +·641, H = +·206, K = −·740.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Pompeii		2·9	238	e 1 2	+17	e 1 45	+25	(e 1·8)	2·8
Naples	E.	3·0	241	i 1 4	+17	e 1 54	+31	(e 1·9)	2·6
Rocca di Papa		3·8	264	e 1 14	+15	—	—	2·6	2·8
Zagreb		3·8	341	i 1 1	+ 2	i 1 53	+ 9	i 1·9	2·0
Graz		5·0	341	i 1 19	+ 2	—	—	—	2·8
Florence		5·0	290	1 26	+ 9	2 20	+ 3	—	3·2
Venice		5·0	310	1 28	+11	1 48	−29	—	2·5
Budapest		5·2	9	1 13	− 7	(e 2 15)	− 7	e 2·2	3·0
Vienna		6·0	351	1 31	− 1	—	—	i 3·1	3·6
Athens		6·4	131	1 41	+ 3	e 3 9	+14	3·3	4·1
Innsbruck		6·7	320	i 1 44	+ 2	—	—	—	3·7
Chur		7·4	310	e 1 55	+ 3	i 3 36	+15	—	—
Moncalieri		7·8	294	2 12	+14	3 22	− 9	4·6	5·7
Ravensburg		8·0	316	i 2 1	0	i 3 43	+ 6	i 4·1	4·7
Prague		8·1	345	i 1 57	− 6	i 3 28	−12	—	4·2
Zurich	N.	8·3	311	e 2 6	0	3 48	+ 3	—	—
Cheb		8·6	336	i 2 8	− 2	e 3 44	− 9	i 4·7	5·0
Lemberg	E.	8·7	28	e 2 11	− 1	e 4 3	+ 7	e 5·6	6·0
	N.	8·7	28	e 2 13	+ 1	e 3 59	+ 3	—	6·0
Hohenheim		8·8	320	i 2 12	− 1	i 4 4	+ 6	i 4·8	5·0
Grenoble		9·2	293	e 3 27	+68	—	—	5·7	7·0
Strasbourg		9·4	315	e 2 19	− 3	4 14	+ 1	—	6·3
Besançon		9·7	305	2 27	+ 1	4 25	+ 4	6·2	—
Feldberg		10·2	324	e 2 23	−10	—	—	—	5·4
Potsdam		10·6	344	i 2 35	− 3	4 14	−31	e 4·6	6·2
Puy de Dôme		11·2	294	e 2 48	+ 1	4 44	−15	—	—
Barcelona		11·7	271	e 3 6	+11	e 5 39	+27	—	10·0
Hamburg		12·4	338	i 3 0	− 5	e 5 18	−11	e 5·5	9·2
Uccle		12·5	317	3 3	− 3	i 5 40	+ 8	i 6·4	—
Paris		12·5	307	e 3 13	+ 7	e 5 25	− 7	6·8	8·8
Algiers		12·6	249	3 15	+ 8	6 4	+30	e 6·9	8·8
Konigsberg		12·6	7	i 3 0	− 7	e 5 9	−25	5·8	7·0
Bagnères		12·8	280	e 3 21	+11	—	—	e 7·7	—
De Bilt		13·0	323	3 16	+ 3	5 56	+12	6·6	8·8
Tortosa	N.	13·0	269	3 29	+16	e 6 39	+55	7·2	8·7
Alicante		14·5	260	3 58	+25	i 6 45	+25	9·1	15·3
Makeyevka		15·3	61	3 43	0	e 6 33	− 6	7·8	9·8
Kew		15·3	313	i 3 48	+ 5	6 46	+ 7	8·0	9·8
Oxford		16·0	313	3 53	+ 1	6 54	− 1	8·3	8·8
Almeria		16·4	258	i 4 12	+15	i 7 22	+18	9·9	14·5
Ksara		16·5	115	4 5	+ 6	7 13	+ 6	10·5	—
Helwan		16·5	134	e 4 3	+ 4	7 14	+ 7	—	—
Toledo		16·6	269	e 4 1	+ 1	i 7 41	+32	e 8·7	10·8
Plymouth		17·1	306	4 15	+ 9	—	—	—	—
Granada		17·2	260	i 5 16	+69	i 8 42	+80	11·6	—
Upsala		17·5	0	i 4 1	−10	e 7 13	−16	e 9·8	10·2
Stonyhurst		17·7	318	e 4 9	− 4	e 7 36	+ 3	8·7	9·5
Bidston		17·7	316	4 14	+ 1	7 35	+ 2	8·8	10·4
Malaga		18·0	260	4 24	+ 7	e 7 46	+ 6	11·1	—
Helsingfors	E.	18·4	11	e 4 15	− 7	i 7 33	−16	8·0	12·4
	N.	18·4	11	i 4 11	−11	—	—	8·0	12·4
	Z.	18·4	11	i 4 10	−12	e 7 32	−17	8·0	—
Kucino		18·7	37	i 4 21	− 4	7 44	−11	8·0	11·4
Pulkovo		19·1	20	i 4 20	−10	i 7 45	−19	9·8	11·0
Rio Tinto		19·2	265	13 45?	?	—	—	—	20·8
Edinburgh		19·2	322	4 32	+ 1	10 40	?L	12·1	14·4
Leningrad		19·3	19	i 4 25	− 8	i 7 49	−19	8·8	12·2
San Fernando		19·4	261	4 49	+15	8 27	+17	10·2	11·8
Bergen		19·6	342	3 28	−68	—	—	11·8	—
Tiflis		20·0	83	4 37	− 4	8 19	− 4	e 12·8	17·1
Baku		24·0	84	i 5 21	− 7	i 9 38	− 6	13·8	17·0
Ekaterinburg		30·7	47	i 6 16	−19	—	—	12·8	18·6
Tashkent		37·8	74	(i 7 25)	−11	(13 11)	−24	(e 19·8)	(28·1)
Irkutsk		55·9	47	9 40	− 5	e 17 26	− 7	30·8	34·9
Ottawa		63·5	309	—	—	e 19 11	+ 4	31·8	—
Toronto	N.	66·5	309	—	—	i 19 51	+ 7	33·8	40·8
Victoria	E.	83·1	335	—	—	—	—	47·2	50·9

Continued on next page.

NOTES TO FEB. 14d. 3h. 43m. 15s.

Additional readings and notes: Rocca di Papa N = +1m.53s., Z = +2m.24s., MNZ = +3·2m. Zagreb iP = +1m.2s. and +1m.10s., iPR$_1$Z = +1m.20s.; all readings have been diminished by 1h. Graz iP = +20s., MN = +3·1m. Vienna i = +1m.37s., +2m.39s. = S −5s., +2m.41s., and +2m.45s., P = +1m.45s. and +1m.55s., epicentre 43°·7N. 17°·5E. Athens SN = +3m.5s. = S +10s., MN = +4·2m. Innsbruck i = +1m.50s. Chur i = +2m.4s., +2m.16s., +3m.22s., and +4m.16s. Moncalieri MN = +5·2m. Ravensburg MN = +4·4m. Prague PR$_1$ = +2m.7s. Cheb MN = +5·4m. Grenoble e = +5m.5s. Strasbourg PR$_1$ = +3m.5s., SR$_1$ = +5m.19s., SR$_2$ = +5m.25s., MNZ = +6·1m. Feldberg iPE = +2m.25s., MN = +6·0m., and many e readings. Puy de Dôme i = +3m.24s., +4m.29s., and +5m.54s. Barcelona MN = +7·7m. Hamburg MZ = +8·4m. Uccle i = +3m.10s., and +6m.4s. Konigsberg eE = +3m.41s., eN = +4m.8s., MZ = +7·6m., MN = +9·4m. Bagnères e = +8m.26s. De Bilt MN = +7·8m., MZ = +8·7m. Tortosa ME = +12·2m. Alicante MN = +14·2m. Makeyevka SR$_1$ = +6m.42s., MZ = +9·5m., MN = +10·6m. Kew MZ = +8·5m., MN = +8·7m. Almeria MN = +14·0m. Toledo i = +4m.16s. = PR$_1$ +14s., MNW = +12·9m. Upsala MN = +11·6m. Bidston S = +6m.52s. Pulkovo MZ = +11·2m., MN = +11·6m., epicentre 43°·2N. 18°·2E. Leningrad MZ = +12·3m., MN = +12·4m. San Fernando MN = +12·2m.; readings have been diminished by 1h. Tiflis PR$_1$ = +4m.56s., L = +14·2m., MN = +18·4m. Baku MN = +18·2m., MZ = +18·8m. Ekaterinburg i = +6m.24s., +6m.58s., +7m.5s. = PR$_1$ −23s., +11m.12s., and +11m.30s. = S −16s., MZ = +18·7m. Tashkent PR$_1$ = (+8m.35s. = PR$_1$ −21s.), PR$_2$ = (+8m.47s.) = PR$_2$ −34s., PR$_3$ = (+8m.59s.) = PR$_3$ −31s., i = (+9m.17s.), e = (+9m.55s.), iSR$_1$ = (+15m.7s.) = SR$_1$ −43s., SR$_2$ = (+15m.51s.) = SR$_2$ −51s., MZ = (+27·0m.), MN = (+27·6m.); all the readings have been diminished by 3min. Irkutsk PR$_2$ = +13m.2s., e = +21m.16s. = SR$_1$ −40s., MZ = +35·2m.

Feb. 14d. 4h. 49m. 50s. Epicentre 36°·5N. 23°·0E.

A = +·740, B = +·314, C = +·595; D = +·391, E = −·921; G = +·548, H = +·232, K = −·804.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Athens	N.	1·5	21	i 0 43	+20	—	—	i 1·1	1·3
Rocca di Papa		9·5	307	e 2 31	+ 8	—	—	—	5·5
Ksara	E.	10·9	100	2 46	+ 3	4 40	−12	7·6	—
Zurich		15·2	320	e 3 47	+ 5	—	—	—	—
Strasbourg		16·4	322	e 4 10?	+13	—	—	—	—
Tiflis		17·6	66	e 4 17	+ 5	e 7 40	+ 9	e 10·2	11·8
Uccle		19·6	323	—	—	—	—	e 11·2	—
De Bilt		20·0	327	—	—	e 8 10?	−13	—	—
Kew		22·3	319	—	—	—	—	e 11·2	—
Pulkovo		23·7	9	5 24	− 1	e 9 43	+ 5	13·2	—
Leningrad		23·9	9	e 5 22	− 5	—	—	13·7	—

Additional readings: Athens ME = +1·2m. Rocca di Papa eE = +2m.0s., eN = +2m.6s. Tiflis PR$_1$ = +5m.35s., e = +8m.3s. = SR$_1$ +7s., MN = +11·7m.

Feb. 14d. Readings also at 0h. and 1h. (Suva), 3h. (Nagasaki (3)), 4h. (Nagasaki (13), La Paz, and near Santiago), 5h. (Nagasaki (8)), 6h. (Wellington, Suva, and Nagasaki), 7h. (La Paz, Nagasaki (2), Irkutsk, and near Phu-Lien), 9h. (near Tacubaya (2)), 10h. (Wellington), 11h. (Manila), 14h. (Prague), 15h. (Riverview and Wellington), 16h. (Azores), 17h. (Agana), 18h. (Phu-Lien), 20h. (La Paz), 21h. (near Tacubaya and near Tashkent), 22h. (Suva and near Tacubaya), 23h. (Suva (2)).

Feb. 15d. Readings at 3h. (Tiflis), 6h. (Tucson), 7h. (Riverview, Adelaide, Wellington, Suva, and near Lick), 11h. (near La Paz, and Sucre), 14h. (Suva), 15h. (Wellington, Ottawa, Ekaterinburg, and Tashkent), 16h. (Tiflis and Baku), 17h. (near Tacubaya, Oaxaca, and near Nagasaki), 18h. (Pulkovo, Leningrad, Ekaterinburg, and Tashkent), 19h. (Nagasaki), 20h. (Suva), 23h. (Tucson, near Berkeley, and Lick).

Feb. 16d. 1h. 35m. 12s. Epicentre **46°·0N. 154°·0E.**

(as on 1926 Nov. 23d.).

A = −·624, B = +·305, C = +·719 ; D = +·438, E = +·899 ;
G = −·647, H = +·315, K = −·695.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Ootomari		7·8	279	2 2	+ 4	(3 33)	+ 2	3·6	4·9
Mizusawa	E.	11·7	239	2 56	+ 1	5 0	−12	—	—
	N.	11·7	239	2 57	+ 2	5 1	−11	7·5	—
Nagoya		16·8	236	e 4 9	+ 7	7 39	+26	10·3	—
Toyooka		17·8	241	4 19	+ 4	—	—	9·6	13·0
Osaka		18·0	238	4 19	+ 2	—	—	9·4	11·6
Kobe		18·2	238	4 24	+ 5	7 53	+ 9	11·3	13·6
Sumoto		18·6	238	4 28	+ 4	6 7	−106	10·1	12·1
Hukuoka		21·8	244	5 3	0	9 13	+12	12·6	14·4
Nagasaki		22·7	243	5 15	+ 2	9 33	+14	12·4	16·5
Zi-ka-wei		29·1	251	6 16	− 3	i 11 9	−10	16·0	20·3
Irkutsk		32·4	300	i 6 36	−16	11 50	−24	18·8	19·8
Taihoku	E.	33·3	242	6 57	− 2	13 24	+55	18·7	21·7
Hong Kong		39·4	246	7 45	− 5	12 55?	−62	16·9?	26·1
Manila		41·8	232	e 8 7	− 2	—	—	i 30·2	—
Sitka	E.	43·2	49	8 21	+ 1	i 14 52	+ 1	18·3	—
	N.	43·2	49	e 8 31	+11	e 14 55	+ 4	19·3	31·8
Phu-Lien		45·9	255	8 35	− 4	15 25	− 2	21·9	30·1
Honolulu, T.H.	E.	46·2	104	i 8 46	+ 5	e 15 17	−14	e 19·8	26·1
	N.	46·2	104	e 8 46	+ 5	e 15 31	0	e 20·7	23·4
Victoria	E.	53·4	55	9 33	+ 4	17 4	+ 3	25·9	37·1
	N.	53·4	55	9 33	+ 4	17 6	+ 5	24·4	37·2
Ekaterinburg		54·5	319	i 9 35	− 1	i 17 7	− 8	26·8	—
Amboina		54·6	214	9 24	−13	i 17 6	−10	36·8	—
Calcutta	E.	57·3	270	10 8	+14	18 0	+10	—	—
Tashkent		58·5	300	i 10 6	+ 4	i 18 13	+ 8	30·8	36·0
Dehra Dun		59·4	284	11 10	+62	19 4	+48	31·1	40·5
Simla	E.	59·5	285	10 6	− 3	18 24	+ 7	32·2	39·2
	N.	59·5	285	10 6	− 3	18 30	+13	32·9	39·9
Berkeley		59·9	66	e 10 22	+11	e 18 36	+14	e 25·7	—
Saskatoon		60·1	46	i 10 19	+ 6	i 18 33	+ 9	38·8	—
Lick		60·7	66	e 9 24?	−53	—	—	e 26·1	34·9
Leningrad		64·5	332	i 10 46	+ 4	i 19 32	+13	31·8	40·6
Pulkovo		64·7	332	i 10 45	+ 2	i 19 30	+ 9	29·8	43·1
Kucino		65·0	326	9 48	−57	18 28	−57	28·8	39·2
Helsingfors		66·0	336	e 10 43	− 8	e 20 1	+24	e 33·8	40·8
Batavia		66·9	232	11 3	+ 6	i 20 14	+25	45·8	—
Apia		67·3	143	11 54	+54	—	—	31·6	—
Suva	E.	67·8	156	12 18	+75	21 18	+78	35·3	—
	N.	67·8	156	12 30	+87	21 42	+102	36·6	—
Upsala		68·3	339	e 11 4	− 2	e 20 2	− 4	e 32·8	45·2
Baku		70·3	309	i 11 24	+ 5	i 20 48	+18	35·1	—
Bombay		70·4	277	11 23	+ 4	20 41	+10	37·8	47·9
Tucson		70·6	64	11 32	+11	20 48	+15	e 30·0	42·5
Makeyevka		70·6	321	11 25	+ 4	20 48	+15	30·8	44·9
Bergen		70·6	345	i 11 18	− 3	20 45	+12	—	44·8
Konigsberg	E.	71·8	334	i 11 35	+ 7	e 21 1	+13	e 40·8	44·8
	N.	71·8	334	i 11 33	+ 5	e 20 44	− 4	e 41·6	46·8
	Z.	71·8	334	i 11 32	+ 4	—	—	e 43·0	44·8
Tiflis		72·1	313	11 32	+ 1	21 0	+ 9	e 35·4	45·8
Kodaikanal		73·3	269	9 42	−116	—	—	41·9	48·1
Colombo		74·0	265	11 48	+ 6	22 13	+59	51·0	55·5
Lemberg	E.	74·8	329	e 17 18	+330	e 28 12	+408	e 33·7	49·1
	N.	74·8	329	—	—	e 28 18	+414	e 35·3	50·4
Hamburg		75·8	340	11 55	+ 1	i 21 39	+ 4	e 36·8	45·2
Potsdam		76·1	337	i 12 0	+ 4	i 21 32	− 6	e 36·5	47·2
Edinburgh		76·3	348	e 11 54	− 3	i 21 46	+ 5	39·8	49·9
Chicago	E.	76·5	43	11 29	−29	i 21 9	−34	35·7	47·2
	N.	76·5	43	i 11 29	−29	e 21 16	−27	e 35·3	46·9
St. Louis	N.	77·7	47	e 12 1	− 4	e 21 58	+ 1	e 24·8	—
Prague		77·8	335	i 12 4	− 2	i 21 53	− 5	e 36·8	47·8
Ann Arbor		77·9	40	e 12 24	+18	i 22 6	+ 7	e 37·5	44·6
Stonyhurst		78·1	347	12 4	− 4	i 22 8	+ 7	e 35·8	50·6
Cheb		78·3	335	i 12 10	+ 1	e 22 1	− 3	e 36·8	45·8
De Bilt		78·3	341	12 10	+ 1	22 7	+ 3	e 34·8	49·5
Budapest		78·5	331	12 10	0	22 5	− 1	e 40·3	54·9

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		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Toronto	E.	78·6	37	e 12 15	+ 4	e 22 6	− 1	37·5	50·8
	N.	78·6	37	e 12 14	+ 3	i 22 13	+ 6	—	49·9
Bidston		78·7	347	12 9	− 2	22 7	− 1	37·3	54·9
Ottawa		78·7	33	e 12 7	− 4	i 22 7	− 1	i 37·8	54·8
Vienna		78·8	333	e 12 10	− 2	22 33	+23	e 38·8	53·8
Ste. Anne		79·0	29	i 12 17	+ 4	i 22 12	0	e 37·8	56·8
Feldberg		79·3	339	e 12 14	− 1	e 22 14	− 1	e 36·8	42·8
Uccle		79·7	341	e 12 15	− 2	i 22 21	+ 1	e 34·8	50·0
Riverview		79·9	183	e 13 36	+78	22 26	+ 4	e 37·4	40·8
Sydney	E.	79·9	183	15 0	?PR_1	22 30	+ 8	37·2	38·2
Graz		80·0	333	e 12 18	− 1	e 22 25	+ 2	38·8	45·4
Oxford		80·0	346	i 12 19	0	i 22 19	− 4	i 39·1	56·2
Kew		80·1	346	i 12 19	− 1	22 21	− 3	35·8	46·7
Hohenheim		80·4	338	i 12 20	− 1	i 22 28	0	e 37·4	55·5
Ithaca		80·8	36	—	—	22 38	+ 5	e 37·8	—
Strasbourg		81·0	339	i 12 23	− 2	i 22 30	− 5	37·8	49·5
Zagreb		81·0	331	(12 24)	− 1	(e 22 28)	− 7	(e 32·8)	(56·4)
Innsbruck		81·1	336	e 12 31	+ 5	e 22 28	− 8	e 38·6	56·9
Ravensburg	E.	81·1	339	i 12 20	− 6	i 22 37	+ 1	e 36·8	53·3
	N.	81·1	339	i 12 30	+ 4	—	—	e 38·8	56·1
Zurich		81·8	338	e 12 27	− 2	e 22 41	− 3	—	—
Plymouth		81·8	346	12 53	+24	23 16	+32	—	—
Paris		82·0	342	i 12 31	+ 1	i 22 42	− 4	43·8	54·8
Chur		82·1	338	e 12 31	0	e 22 45	− 2	—	—
Adelaide		82·1	194	e 12 32	+ 1	21 48?	−59	34·0	45·5
Ksara	N.	82·6	314	12 35	+ 1	22 49	− 4	42·0	—
Besançon		82·7	339	12 32	− 2	22 47	− 7	37·8	—
Harvard	E.	83·0	32	—	—	22 53	− 4	e 47·0	58·6
	N.	83·0	32	—	—	i 22 59	+ 2	e 47·8	57·8
Fordham		83·2	35	e 12 39	+ 2	i 23 2	+ 3	e 39·1	54·0
Cheltenham		83·8	38	—	—	e 23 0	− 7	53·4	—
Melbourne		84·1	187	e 14 0	+77	i 23 30	+21	—	54·8
Florence		84·3	334	12 46	+ 2	21 50	−81	37·8	47·8
Moncalieri	N.	84·3	337	12 40	− 4	23 0	−11	32·7	53·1
Loyola		84·5	52	12 53	+ 8	22 3	−71	—	54·0
Puy de Dôme		84·8	341	e 12 40	− 7	23 17	0	e 43·8	51·8
Athens	E.	85·0	323	12 50	+ 2	i 23 9	−10	e 45·8	50·8
Perth		85·2	211	i 23 18	?S	(i 23 18)	− 3	—	—
Rocca di Papa		85·7	332	i 12 52	0	e 23 19	− 8	e 42·8	60·7
Pompeii		86·0	330	e 13 19	+26	e 21 54	?	46·8	50·8
Naples	E.	86·0	330	e 12 48	− 5	e 23 48	+18	38·8	50·8
Tacubaya		87·2	66	13 3	+ 3	23 30	−13	—	—
Bagnères		87·9	341	e 13 8	+ 4	e 23 35	−16	e 42·8	—
Helwan		88·1	313	13 1	− 5	23 28	[+12]	—	58·1
Barcelona		89·0	339	e 13 9	− 1	23 55	− 8	e 44·8	54·0
Wellington	N.	89·2	165	e 13 28	+17	e 23 28	[+ 5]	41·9	66·0
Tortosa	E.	90·0	341	—	—	24 1	−13	e 40·8	55·4
	N.	90·0	341	13 4	−12	23 43	[+15]	e 39·8	61·5
Toledo		91·9	345	e 13 19	− 7	i 23 57	[+18]	e 40·4	65·2
Alicante		92·6	340	e 13 12	−18	24 2	[+18]	e 40·3	68·5
Algiers		93·2	337	e 13 20	−13	e 23 58	[+11]	44·8	56·3
Rio Tinto		94·4	345	25 48?	?PS	(25 48?)	+48	—	72·8
Granada		94·5	342	13 22	−19	24 28	[+34]	47·6	59·6
Almeria		94·5	342	e 13 6	−35	24 6	[+12]	e 49·6	60·7
Malaga		95·0	343	e 13 35	− 8	e 24 43	−23	e 36·1	63·6
San Fernando		95·6	344	13 36	−11	24 15	[+15]	47·8	60·3
Azores		96·3	0	25 6	?S	(25 6)	−13	—	—
Entebbe		111·2	294	i 14 15	−48	i 25 23	[+ 8]	e 55·2	68·6
La Paz		134·3	63	e 19 35	[+ 6]	33 25	?	65·7	88·9
Sucre		138·0	63	19 48	[+12]	—	—	74 3	83·5
Cape Town		144·3	275	—	—	—	—	—	92·6
Pilar		147·7	77	20 6	[+14]	—	—	—	83·3
Rio de Janeiro	E.	153·1	37	e 19 0	[−60]	—	—	42·2	42·6
	N.	153·1	37	e 19 2	[−58]	—	—	42·1	42·6
La Plata		153·6	77	20 14	[+13]	—	—	72·8	—

Additional readings and notes: Ootomari MN = +4·5m. Toyooka MN = +13·2m. Osaka MN = +12·2m. Kobe MN = +13·3m. Sumoto SR_1 = +8m.8s., MN = +13·4m., MZ = +17·9m. Zi-ka-wei MN = +20·0m. Irkutsk e = +10m.6s. and +10m.26s., MN = +20·9m. Taihoku SN = +13m.30s. Sitka eE = +10m.1s. = PR_1 +1s. Phu-Lien PR_1 = +10m.23s., SR_1 = +18m.29s. Honolulu iSE = eSN, iSN = +15m.40s., eE = +17m.18s., eN = +18m.30s. = SR_1 −24s.; T_0 = 1h.35m.20s. and 1h.35m.27s. Ekaterinburg i = +10m.24s., iPR_1 = +11m.20s., iPR_2 = +12m.28s., iPR_3 = +12m.57s., i = +13m.45s. = PR_2 +20s., iPS = +17m.19s.,

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i = +19m.17s., iSR_1 = +20m.54s., iSR_2 = +22m.23s. Tashkent e = +10m.22s., i = +10m.42s., iPR_1 = +12m.20s., iPR_2 = +13m.40s., PR_2 = +14m.10s., PS = +18m.42s., iSR_1 = +22m.48s., eSR_2 = +24m.42s., SR_2 = +26m.24s., MN = +36·6m. Berkeley eN = +10m.24s., eE = +10m.35s., eSN = +18m.41s., eSZ = +18m.43s. Lick eN? = +10m.24s.? = P+7s., eE = +20m.42s., eN = +20m.48s., MN = +35·9m. Leningrad iPR_1 = +13m.12s., iPR_2 = +14m.44s., i = +19m.10s., iPS = +20m.0s., SR_1 = +24m.28s., iSR_2 = +26m.16s., MZ = +43·7m., MN = +44·0m. Pulkovo PR_1 = +13m.9s., PR_2 = +14m.39s., i = +19m.9s., PS = +20m.8s., SR_1 = +24m.30s., SR_2 = +26m.12s., MN = +42·0m., MZ = +44·0m. Kucino PR_1 = +12m.13s., PR_2 = +13m.43s., PS = +19m.14s., PPS = +19m.47s., iSR_1 = +22m.47s., SR_2 = +25m.29s., MNZ = +41·4m. Helsingfors iP = +10m.55s., $ePKP$ = +12m.2s., ePR_1 = +13m.49s., ePR_2 = +15m.3s., eSR_1 = +24m.37s., e = +26m.45s. = SR_2 −30s., eSR_2 = +28m.22s. = SR_2 −6s. Batavia i = +11m.6s. and +40m.35s. Apia i = +36m.4s., +40m.14s., L = +52·6m. Upsala eLN = +33·8m., MN = +42·4m. Baku PR_1 = +14m.5s., PR_2 = +17m.24s., i = +18m.19s. Tucson SR_1N = +25m.24s., MN = +32·0m.; T_0 = 1h.35m.27s. and 1h.35m.36s. Makeyevka e = +14m.4s. = PR_1 −28s., +15m.37s., +19m.47s., and +22m.49s., PS = +21m.29s., MZ = +45·8m., MN = +54·2m. Bergen ePN = +11m.36s. Konigsberg ePR_1Z = +16m.0s. = PR_2 −22s., ePSZ = +21m.20s., $ScP_cS?N$ = +21m.50s. and several e and i readings; T_0 = 1h.35m.35s. Tiflis PR_1 = +14m.47s., $PR_2?$ = +15m.55s., ePS? = +21m.45s., SR_1 = +26m.41s., SR_2 = +29m.20s., MN = +46·4m., and several e readings. Hamburg PN = +11m.56s., ePR_1Z = +14m.48s., ePSN = +22m.15s., iPSZ = +22m.26s., eSR_1 = +26m.48s.?, iSR_2E = +30m.25s., eSR_2N = +30m.38s., MZ = +50·3m., MN = +55·5m. Potsdam MN = +52·1m. Chicago SR_1 = +26m.0s.; T_0 = 1h.34m.59s. and 1h.35m.8s. St. Louis PS = +22m.34s. Ann Arbor ePR_2 = +17m.36s., eSR_1 = +27m.48s., eSR_2 = +31m.0s.; T_0 = 1h.35m.54s. Stonyhurst PR_1 = +15m.14s., PR_2 = +16m.0s. De Bilt eSR_1N = +27m.36s., MN = +53·2m., MZ = +53·3m. Budapest MN = +51·2m. Toronto iSE = +22m.11s.; T_0 = 1h.35m.25s. Ottawa SR_2 = +31m.16s., MN = +56·8m.; T_0 = 1h.35m.17s. Vienna iPZ = +12m.12s., PR_1 = +15m.18s., PR_2 = +17m.41s., S_4P_4S = +22m.22s., PS = +23m.33s., SR_1 = +28m.45s., iEN = +31m.37s. = SR_2 +15s., SR_2 = +32m.55s. = SR_2 −13s., iN = +33m.40s. Feldberg eE = +12m.17s., +14m.12s. and +18m.8s., MN = +48·8m. Uccle PR_1 = +15m.18s., SR_1 = +27m.34s. Riverview MN = +43·7m.; the reading entered as P is given as e simply. Graz e = +18m.33s. = PR_2 −11s., PS = +23m.17s., SR_1 = +28m.19s., SR_2 = +32m.29s., MN = +54·8m. Oxford PR_1 = +15m.26s., PR_2 = +16m.58s. Kew PR_1 = +15m.18s., PR_2 = +18m.47s. = PR_2 +2s., SZ = +22m.32s., SR_1 = +28m.8s., MNZ = +55·4m. Hohenheim ePN = +12m.24s., ePSE = +23m.28s., eLN = +47·3m., MN = +56·3m. Strasbourg iPR_1 = +15m.29s., PR_2 = +17m.36s., iPS = +23m.15s., MN = +52·8m., MZ = +53·3m. Zagreb e = (+12m.27s.) and (+22m.56s.); all readings have been increased by 1m. Innsbruck MNW = +48·0m. Ravensburg iPR_2E = +18m.47s., iPSN = +23m.24s. Paris MN = +58·8m. Adelaide MN = +47·8m. Fordham iPS = +23m.44s., PPS = +24m.22s., SR_1N = +27m.55s., SR_1E = +29m.7s., SR_2N = +32m.28s., SR_2E = +34m.38s., MN = +51·0m. Moncalieri L = +53·1m., MN = +54·9m. Athens eLN = +40·3m., MN = +55·7m. Rocca di Papa iPE = +13m.26s., eS = +23m.8s., eLN = +42·0m. Helwan PR_1 = +19m.58s. = PR_2 −23s. Barcelona MN = +51·9m. Wellington SR_1N = +29m.50s. Toledo MNW = +62·1m. Alicante MN = +61·5m. Granada PR_1 = +17m.20s., PR_2 = +20m.11s., PS = +26m.4s., and several other i readings. Almeria MN = +59·5m. San Fernando MN = +63·3m. Entebbe i = +19m.20s. = PR_1 −6s. La Paz PR_1 = +23m.14s., i = +24m.54s. = PR_2 −39s., MN = +89·8m. Sucre PR_1 = +23m.48s. Pilar PE = +20m.18s La Plata PN = +20m.23s.

Feb. 16d. 2h. 56m. 20s. Epicentre 46°·0N. 154°·0E. (as at 1h.).

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Ootomari		7·8	279	2 1	+ 3	(3 42)	+11	3·7	5·4
Mizusawa	E.	11·7	239	2 56	+ 1	5 2	−10	—	—
Nagoya		16·8	236	e 4 23	+21	7 39	+26	10·5	—
Toyooka		17·8	241	4 16	+ 1	7 51	+15	9·4	25·1
Osaka		18·0	238	4 29	+12	—	—	9·3	11·9
Kobe		18·2	238	4 25	+ 6	7 51	+ 7	11·6	25·6
Sumoto		18·6	238	4 31	+ 7	5 38	?	10·4	12·0
Hukuoka		21·8	244	5 4	+ 1	8 50	−11	11·7	15·0
Nagasaki		22·7	243	5 13	0	9 25	+ 6	12·2	13·0
Zi-ka-wei		29·1	251	e 6 11	− 8	11 8	−11	16·4	21·1

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Taihoku	E.	33·3	242	e 3 26	?	—	—	—	21·1
Phu-Lien		45·9	255	e 8 34	− 5	e 15 22	− 5	22·0	40·2
Amboina		54·6	214	10 16	+39	i 17 16	0	—	—
Helsingfors		66·0	336	e 9 44	−67	e 19 54	+17	—	42·7
Batavia		66·9	232	i 11 0	+ 3	—	—	56·7	—
Hyderabad		67·6	274	—	—	21 5	+68	36·4	47·1
Upsala		68·3	339	e 11 5	− 1	e 20 7	+ 1	e 33·7	50·1
Bergen		70·6	345	e 11 40	+19	—	—	—	—
Tucson		70·6	64	e 11 28	+ 7	—	—	—	—
Konigsberg	E.	71·8	334	11 35	+ 7	—	—	e 39·2	45·7
	N.	71·8	334	11 31	+ 3	e 16 43	?PR_2	e 41·7	45·7
	Z.	71·8	334	11 30	+ 2	—	—	e 42·7	45·7
Tiflis		72·1	313	e 11 43	+12	e 21 7	+16	36·7	48·3
Hamburg		75·8	340	11 54	0	e 21 40	+ 5	e 37·7	68·1
Vienna		78·8	333	e 12 10	− 2	22 13	+ 3	—	57·2
Uccle		79·7	341	e 12 17	0	—	—	—	—
Hohenheim	E.	80·4	338	—	—	—	—	e 46·0	53·9
Strasbourg		81·0	339	12 22	− 3	—	—	—	—
Innsbruck		81·1	336	e 12 25	− 1	—	—	—	61·0
Ravensburg		81·1	339	e 12 16	−10	e 21 40	−56	e 40·7	52·9
Zurich		81·8	338	e 12 27	− 2	i 22 46	+ 2	—	—
Chur		82·1	338	i 12 38	+ 7	—	—	—	—
Ksara	N.	82·6	314	12 59	+25	i 22 53	0	45·2	—
Besançon		82·7	339	12 29	− 5	22 52	− 2	47·7	—
Florence		84·3	334	12 40	− 4	—	—	—	—
Rocca di Papa	E.	85·7	332	e 12 2	−50	e 22 54	[− 6]	e 50·9	65·4
Algiers		93·2	337	e 13 25	− 8	23 55	[+ 8]	—	59·7
Granada		94·5	342	9 40?	?	—	—	58·7	66·7
La Paz		134·3	63	19 50	[+21]	—	—	35·7	41·0
Sucre		138·0	63	20 0	[+24]	—	—	—	—
La Plata		153·6	77	—	—	—	—	81·7	—

Additional readings: Ootomari MN = +6·2m. Mizusawa SN = +5m.0s. Toyooka MN = +24·9m. Osaka MN = +12·9m. Kobe MZ = +23·9m. Sumoto SR_1 = +6m.57s., SR_2 = +8m.4s., MZ = +13·1m., MN = +17·3m. Nagasaki MN = +15·8m. Zi-ka-wei MN = +21·0m., P is given as e simply. Helsingfors eP_4P? = +10m.55s., eSR_1? = +22m.58s., eSR_2 = +26m.52s. Hyderabad SR_1 = +24m.30s. Upsala eLN = +34·7m., MN = +46·8m. Konigsberg eN = +13m.34s., PR_1N = +14m.34s., PR_2E = +15m.59s., eN = +16m.43s. = PR_2 − 24s., ePSZ? = +21m.51s. Tiflis ePR_1 = +15m.10s., i = +28m.40s. = SR_2 − 34s. Hamburg MZ = +45·7m., MN = +53·8m. Vienna iPZ = +12m.18s. Innsbruck e = +13m.20s. and +13m.25s., MNW = +61·3m. Rocca di Papa eLN = +54·5m.

Feb. 16d. 8h. 36m. 35s. Epicentre 46°·0N. 154°·0E. (as at 2h.).

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Ootomari	7·8	279	1 53	− 5	(3 24)	− 7	3·4	—
Mizusawa	11·7	239	2 54	− 1	4 52	−20	7·1	—
Osaka	18·0	238	3 41	−36	(8 14)	+34	8·2	11·4
Irkutsk	32·4	300	6 35	−17	12 1	−13	16·4	20·4
Hong Kong	39·4	246	7 45	− 5	13 48	− 9	—	24·2
Phu-Lien	45·9	255	11 25?	?PR_2	—	—	—	—
Ekaterinburg	54·5	319	i 9 34	− 2	(e 17 20)	+ 5	25·4	36·8
Tashkent	58·5	300	i 10 6	+ 4	18 7	+ 2	27·4	34·4
Leningrad	64·5	332	i 10 45	+ 3	—	—	e 34·5	40·7
Pulkovo	64·7	332	i 10 45	+ 2	19 19	− 2	31·4	41·4
Kucino	65·0	326	(e 10 51)	+ 6	(e 19 37)	+12	(32·8)	(38·7)
Helsingfors	66·0	336	—	—	e 19 38	+ 1	e 34·4	39·4
Upsala N.	68·3	339	11 7	+ 1	—	—	—	—
Baku	70·3	309	i 11 23	+ 4	20 45	+15	36·3	44·8
Bombay	70·4	277	11 22	+ 3	20 36	+ 5	e 37·3	47·2
Makeyevka	70·6	321	11 23	+ 2	—	—	39·4	45·0
Konigsberg Z.	71·8	334	i 11 31	+ 3	—	—	—	—
Tiflis	72·1	313	11 31	0	e 20 54	+ 3	e 37·4	46·6
Kodaikanal	73·3	269	37 37	?L	—	—	(37·6)	—
Hamburg	75·8	340	i 11 56	+ 2	—	—	e 40·4	—
Prague	77·8	335	—	—	—	—	e 43·4	49·4
De Bilt	78·3	341	12 10	+ 1	22 11	+ 7	e 41·4	49·2

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Toronto	E.	78·6	37	—	—	e 22 3	− 4	50·4	—
Ottawa		78·7	33	—	—	e 22 5	− 3	e 37·4	—
Uccle		79·7	341	12 13	− 4	e 22 17	− 3	e 41·4	—
Graz		80·0	333	—	—	—	—	e 42·4	47·2
Oxford		80·0	346	—	—	—	—	—	55·4
Kew		80·1	346	e 12 18	− 2	—	—	e 42·4	—
Strasbourg		81·0	339	i 12 22	− 3	—	—	42·4	54·7
Zurich		81·8	338	e 12 27	− 2	—	—	—	—
Paris		82·0	342	e 12 31	+ 1	e 22 22	−24	46·4	50·4
Ksara	N.	82·6	314	—	—	e 22 25?	−28	45·4	—
Besançon		82·7	339	12 32	− 2	—	—	—	—
Moncalieri		84·3	337	e 12 17	−27	21 40	−91	45·6	—
Rocca di Papa		85·7	332	e 12 50	− 2	—	—	e 51·1	55·7
Granada		94·5	342	—	—	—	—	57·9	64·7
Rio Tinto		94·4	345	63 25?	?	—	—	—	66·4
San Fernando	E.	95·6	344	—	—	—	—	—	62·9
Rio de Janeiro	E.	153·1	37	—	—	—	—	e 50·2	—

Additional readings: Osaka MN = +8·8m. Irkutsk PR_1 = +7m.29s., PR_2 = +7m.39s., e = +13m.15s., SR_2 = +14m.20s., MN = +18·7m., MZ = +20·5m. Hong Kong SR_1? = +16m.50s. Ekaterinburg i = +10m.39s. and +14m.41s., ePS = +17m.20s., e = +19m.24s., SR_1 = +20m.54s., MN = +34·6m., MZ = +36·8m., S is given as ePS. Tashkent e = +10m.29s. and +11m.47s., PR_1 = +12m.15s., PR_2 = +13m.43s., PS = +18m.27s., e = +19m.51s., SR_1 = +22m.50s., SR_2 = +24m.59s., MN = +33·5m., MZ = +36·1m. Leningrad MN = +42·8m., MZ = +43·6m. Pulkovo PS = +19m.48s., MNZ = +42·8m. Kucino PR_1 = (+13m.7s.), PR_2 = (+15m.9s.), SR_1 = (+23m.54s.), MN = (42·0m.), MZ = (+42·2m.); all readings increased by 1m. Helsingfors eE = +29m.12s. and +33m.25s., MN = +40·4m. Baku MZ = +45·1m., MN = +45·2m. Makeyevka MN = +45·5m., MZ = +45·8m. Tiflis PS = +21m.43s., e = +24m.19s., SR_2 = +29m.18s., MN = +46·9m. De Bilt MNZ = +52·8m. Uccle eSR_1 = +29m.25s.? Strasbourg i = +14m.32s. Fordham (Δ = 83°·2), eLE = 8h.32m.9s. Rocca di Papa ePZ = +11m.31s., ePN = +12m.22s., ePE = +12m.49s. San Fernando MN = +61·9m.

Feb. 16d. 9h. 22m. 48s. Epicentre 27°·6S. 66°·3W. (as on 1924 Oct. 20d.).

A = +·356, B = −·811, C = −·463; D = −·916, E = −·402; G = −·186, H = +·424, K = −·886.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Pilar	E.	4·6	153	1 54	+43	—	—	2·9	4·8
Santiago		7·0	211	1 45	− 1	2 49	−21	3·6	—
Sucre		8·6	7	2 3	− 7	3 24	−29	4·3	5·4
La Plata		10·2	137	2 37	+ 4	4 34	− 1	5·6	—
La Paz	N.	11·2	350	i 2 34	−13	i 5 10	+11	6·2	7·1

Additional readings: Pilar LN = +2·8m., MN = +4·3m. La Paz iSE = +4m.55s., ME = +7·4m.

Feb. 16d. 11h. 52m. 25s. Epicentre 46°·0N. 154°·0E. (as at 8h.).

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Ootomari		7·8	279	1 51	− 7	(2 51)	−40	2·8	—
Mizusawa		11·7	239	3 1	+ 6	5 9	− 3	7·6	—
Nagoya		16·8	236	e 4 36	+34	—	—	—	—
Osaka		18·0	238	3 51	−26	(7 17)	−23	7·3	12·5
Irkutsk		32·4	300	6 37	−15	12 0	−14	16·6	20·4
Hong Kong		39·4	246	7 48	− 2	—	—	—	24·6
Phu-Lien		45·9	255	8 35?	− 4	—	—	—	—
Victoria		53·4	55	—	—	(16 51)	−10	16·8	—
Ekaterinburg		54·5	319	i 9 33	− 3	e 17 7	− 8	27·6	37·3
Tashkent		58·5	300	i 10 4	+ 2	—	—	e 27·6	36·4
Simla	E.	59·5	285	—	—	—	—	e 33·3	—
Leningrad		64·5	332	i 10 45	+ 3	19 29	+10	27·1	41·1
Pulkovo		64·7	332	10 45	+ 2	19 31	+10	31·6	41·2
Kucino		65·0	326	9 49	−56	e 19 48	+23	31·7	38·8

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Helsingfors		66·0	336	—	—	—	—	e 34·6	36·6
Hyderabad		67·6	274	—	—	—	—	—	47·9
Upsala		68·3	339	e 11 7	+ 1	—	—	e 35·6	45·0
Baku		70·3	309	i 11 25	+ 6	20 47	+17	34·9	44·4
Bombay		70·4	277	11 24	+ 5	20 36	+ 5	e 36·9	44·9
Makeyevka		70·6	321	11 25	+ 4	—	—	40·6	50·5
Konigsberg		71·8	334	i 11 30	+ 2	—	—	—	45·6
Tiflis		72·1	313	11 33	+ 2	e 20 57	+ 6	e 39·6	46·9
Kodaikanal		73·3	269	29 11	?L	—	—	(29·2)	—
Hamburg		75·8	340	i 11 53	− 1	—	—	e 40·6	48·6
Edinburgh		76·3	348	—	—	—	—	e 47·6	—
Prague		77·8	335	—	—	—	—	e 40·6	43·6
De Bilt		78·3	341	12 8	− 1	22 6	+ 2	e 40·6	45·6
Cheb		78·3	335	—	—	—	—	e 39·6	44·6
Budapest		78·5	331	12 8	− 2	—	—	e 42·1	—
Toronto	N.	78·6	37	—	—	e 22 13	+ 6	49·6	—
Ottawa		78·7	33	—	—	22 1	− 7	e 42·6	—
Vienna		78·8	333	12 8	− 4	—	—	e 40·6	54·6
Uccle		79·7	341	e 12 15	− 2	e 22 12	− 8	e 41·6	—
Graz		80·0	333	e 12 13	− 6	e 22 38	+15	41·6	52·7
Oxford		80·0	346	—	—	—	—	e 42·6	52·1
Kew		80·1	346	e 12 17	− 3	e 22 35?	+11	41·6	—
Strasbourg		81·0	339	i 12 23	− 2	—	—	40·6	51·6
Innsbruck		81·1	336	e 12 22	− 4	—	—	—	—
Zurich		81·8	338	e 12 26	− 3	—	—	—	—
Paris		82·0	342	i 12 31	+ 1	i 22 41	− 5	43·6	54·6
Chur		82·1	338	e 12 31	0	—	—	—	—
Ksara	N.	82·6	314	e 12 34	0	e 23 15	+22	44·6	—
Besançon		82·7	339	12 29	− 5	—	—	—	—
Fordham		83·2	35	—	—	e 22 25	−34	e 47·6	—
Moncalieri		84·3	337	i 12 13	−31	23 5	− 6	37·4	—
Florence		84·3	334	i 12 38	− 6	22 35	−36	—	45·1
Rocca di Papa		85·7	332	e 12 51	− 1	—	—	e 51·7	73·2
Tortosa	N.	90·0	341	—	—	—	—	e 48·6	59·0
Toledo	N.W.	91·9	345	—	—	—	—	e 48·3	61·6
Rio Tinto		94·4	345	64 35?	?	—	—	—	71·6
Granada		94·5	342	—	—	e 27 35?	?SR_1	52·6	59·1
San Fernando	E.	95·6	344	—	—	—	—	—	60·6

Additional readings: Osaka MN = +13·1m. Irkutsk PR_1 = +7m.24s., PR_2 = +7m.37s., e = +13m.17s., SR_2 = +14m.30s., MZ = +20·4m., MN = +21·0m. Ekaterinburg i = +10m.50s., e = +14m.38s. and +20m.28s., eSR_1 = +20m.49s., e = +23m.47s. = SR_2 − 8s., MN = +31·6m., MZ = +35·3m. Tashkent i = +10m.8s., MZ = +36·6m., MN = +37·3m. Simla eN = +32m.23s. Leningrad MZ = +42·6m., MN = +43·0m. Pulkovo MN = +42·1m., MZ = +42·4m. Kucino e = +13m.46s. = PR_1 +0s., and +22m.53s., MN = +36·4m. Baku MN = +45·3m., MZ = +45·4m. Makeyevka MN = +41·4m., MZ = +46·2m. Konigsberg MZ = +46·6m. Tiflis PS? = +21m.29s., MN = +46·6m. Prague MN = +49·6m., De Bilt MZ = +53·2m., MN = +54·6m. Ottawa e = +31m.20s. = SR_1 +0s., ePN = +40·2m. Uccle eSR_1 = +27m.43s. Strasbourg ePS? = +23m.10s. Innsbruck e = +12m.33s. and +13m.5s. Fordham eE = +33m.5s. = SR_2 +22s. Florence eP = +12m.25s. Rocca di Papa eE = +12m.21s. Toledo MNE = +62·6m. San Fernando MN = +61·6m.

Feb. 16d. 13h. 26m. 42s. Epicentre 38°·5N. 22°·5E. (as on 1926 July 2d.).

A = +·723, B = +·299, C = +·623; D = +·383, E = −·924; G = +·575, H = +·238, K = −·783.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Athens	1·2	116	i 0 19	+ 1	(0 33)	0	i 0·5	0·6
Rocca di Papa	8·1	296	e 2 25	+22	(e 4 3)	+23	—	3·9
Zagreb	8·7	329	—	—	e 4 7	+11	—	—
Budapest	9·3	346	—	—	5 48	+98	—	—
Zurich	13·4	316	e 3 22	+ 4	e 5 50	− 3	—	—
Strasbourg	14·6	318	—	—	6 18?	− 4	—	—
De Bilt	18·1	324	—	—	e 6 18?	−84	—	—

Additional readings and notes: Rocca di Papa P is given as eZ, S as ePE, PNZ = +3m.25s. Zagreb S is given as e simply, eS? = +4m.56s. = L? Strasbourg and De Bilt S is given without identification, and to minutes only. Budapest gives eN = +5m.48s., as above, eE = +6m.48s. Probably both these refer to M.

Feb. 16d. 13h. 57m. 48s. Epicentre 46°·0N, 154°·0E. (as at 11h.).

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Mizusawa		11·7	239	3 0	+ 5	5 0	−12	—	—
Osaka		18·0	238	5 16	+59	—	—	9·6	11·0
Irkutsk		32·4	300	e 6 34	−18	12 1	−13	16·2	20·6
Hong Kong		39·4	246	7 47	− 3	—	—	—	—
Phu-Lien		45·9	255	—	—	—	—	17·2	—
Ekaterinburg		54·5	319	9 34	− 2	e 17 7	− 8	27·2	31·6
Tashkent		58·5	300	i 10 8	+ 6	18 6	+ 1	e 29·2	33·4
Leningrad		64·5	332	e 10 49	+ 7	—	—	35·2	43·8
Pulkovo		64·7	332	10 46	+ 3	—	—	33·2	43·1
Kucino		65·0	326	e 9 51	−54	—	—	31·5	36·6
Helsingfors		66·0	336	—	—	—	—	e 32·2	—
Upsala	E.	68·3	339	—	—	—	—	e 36·2	—
Baku		70·3	309	e 11 26	+ 7	e 20 50	+20	35·0	39·4
Bombay		70·4	277	e 8 12?	?	—	—	—	—
Tiflis		72·1	313	e 11 7	−24	e 20 15	−36	39·2	50·4
Hamburg		75·8	340	—	—	—	—	e 40·2	43·2
Prague		77·8	335	—	—	—	—	e 44·2	46·2
De Bilt		78·3	341	—	—	e 22 10	+ 6	e 41·2	45·6
Cheb		78·3	335	—	—	—	—	e 39·2	45·2
Budapest		78·5	331	—	—	—	—	e 43·7	—
Ottawa		78·7	33	—	—	—	—	e 40·2	—
Uccle		79·7	341	—	—	e 22 12?	− 8	e 41·2	—
Graz		80·0	333	e 11 50	−29	—	—	e 42·2	47·3
Kew		80·1	346	—	—	—	—	e 43·2	—
Strasbourg		81·0	339	e 12 25	0	—	—	38·2	—
Paris		82·0	342	—	—	—	—	e 45·2	52·2
Fordham		83·2	35	—	—	—	—	e 57·2	—
Moncalieri		84·3	337	e 11 15	−89	22 3	−68	32·0	—
Florence		84·3	334	—	—	—	—	e 33·2	52·2
Rocca di Papa		85·7	332	e 9 19	?	—	—	e 34·1	55·6
Granada		94·5	342	—	—	—	—	56·2	66·7

Additional readings: Osaka MN = +10·4m. Irkutsk ePR$_3$ = +7m.40s. = PR$_1$ −10s., MN = +20·7m. Ekaterinburg PR$_3$ = +12m.24s., e = +19m.25s., eSR$_1$ = +20m.46s., i = +21m.31s. =SR$_1$ +0s., MN = +32·0m., MZ = +37·0m. Tashkent e = +10m.54s., PR$_3$ = +13m.36s., PR$_3$ = +14m.30s., PS = +18m.22s., e = +19m.54s., SR$_1$ = +22m.12s., SR$_3$ = +24m.30s., SR$_3$ = +25m.56s., MN = +33·6m., MZ = +36·4m. Kucino e = +14m.3s. and +22m.54s., MN = +41·0m. Baku MN = +43·2m., MZ = +45·3m. Tiflis e = +11m.34s., MN = +46·8m. Hamburg readings have been diminished by 2h. Prague MN = +53·2m. Ottawa e = +32m.12s.? Uccle e = +28m.18s. =SR$_1$ +10s.

Feb. 16d. Readings also at 0h. (Ottawa and Victoria), 4h. (near Manila), 5h. (Edinburgh), 6h. (Nagasaki), 7h. (Nagasaki), 8h. (Edinburgh), 9h. (near Tacubaya), 11h. (Nagasaki), 12h. (Nagasaki, Graz, and Tashkent), 14h. (Nagasaki), 15h. (Tashkent), 22h. (Reykjavik), 23h. (Suva).

Feb. 17d. 13h. 49m. 10s. Epicentre 46°·0N. 154°·0E. (as on 16d.).

A = −·624, B = +·305, C = +·719; D = +·438, E = +·899; G = −·647, H = +·315, K = −·695.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Irkutsk	32·4	300	e 6 50?	− 2	—	—	e 17·8	—
Ekaterinburg	54·5	319	9 35	− 1	—	—	26·8	—
Tashkent	58·5	300	—	—	e 18 50?	+45	e 31·8	35·7
Pulkovo	64·7	332	19 24	?S	(19 24)	+ 3	41·8	51·7
Kucino	65·0	326	—	—	—	—	e 36·4	—
Baku	70·3	309	—	—	—	—	e 36·3	45·2
Tiflis	72·1	313	e 11 30	− 1	e 20 53	+ 2	e 38·8	50·0

Additional readings: Tashkent e = +28m.50s.?, MZ = +36·0m., MN = +36·3m. Baku MN = +45·4m., MZ = +45·6m.

Feb. 17d. 16h. 17m. 48s. Epicentre 38°·5N. 22°·5E. (as on Feb. 16d.).

A = +·723, B = +·299, C = +·623.

Very doubtful. An epicentre to the south-east of Athens would suit most of the observations better.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Athens	1·2	116	i 0 16	− 2	(i 0 22)	−11	i 0·4	0·5
Rocca di Papa	8·1	296	e 2 47	+44	(4 14)	+34	—	5·3
Moncalieri	12·8	305	—	—	—	—	6·1	—
Strasbourg	14·6	318	—	—	—	—	e 9·2	—
Tiflis	17·3	335	—	—	—	—	e 9·2	10·2
Uccle	17·7	320	—	—	—	—	—	10·2
De Bilt	18·1	324	—	—	—	—	e 11·2	12·7
Baku	21·2	76	—	—	—	—	e 13·0	—

Rocca di Papa ePN = +3m.26s. =P −14s., S is given as ePE. Moncalieri gives e at 16h.13m.35s.

Feb. 17d. 23h. 17m. 40s. Epicentre 49°·2N. 1°·7W. (as on 1926 July 30d.).

A = +·653, B = −·019, C = +·757; D = −·030, E = −·1·000; G = +·757, H = −·022, K = −·653.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Kew	2·4	21	e 0 40	+ 3	—	—	e 1·2	—
Oxford	2·6	6	1 10	?S	(1 10)	− 2	—	—
Paris	2·8	98	e 0 44	0	e 1 18	+ 1	1·4	—
Uccle	4·2	66	e 0 55	−10	e 1 40	−15	e 2·1	—
De Bilt	5·2	54	—	—	—	—	e 2·7	—
Besançon	5·5	108	2 20?	?S	(2 20?)	−11	—	—
Strasbourg	6·2	92	e 1 21	−14	—	—	—	—
Zurich	7·0	100	e 1 34	−12	e 2 50	−20	—	3·6
Chur	7·8	104	e 3 12	?S	(e 3 12)	−19	(e 4·1)	—

Additional readings and note: Kew eE = +59s. =S −7s. Uccle iP = +1m.15s., e = +1m.42s. Strasbourg PR_1 = +1m.51s., PR_2 = +2m.55s., SR_1 = +3m.19s., SR_2 = +3m.32s. Chur gives S as P and L as S.

Feb. 17d. Readings also at 1h. (Nagasaki), 2h. (Tashkent), 4h. (Suva), 6h. (Irkutsk), 7h. (Irkutsk and near Mizusawa), 8h. (Baku, Tashkent, and Ekaterinburg), 9h. (Ekaterinburg, Tiflis, and Zi-ka-wei), 12h. (Baku and Suva, and Wellington), 13h. and 14h. (Nagasaki), 15h. (Nagasaki and Zagreb), 23h. (Batavia).

Feb. 18d. 12h. 11m. 40s. Epicentre 32°·7N. 131°·9E. (as on 1921 April 18d.).

A = −·562, B = +·626, C = +·540; D = +·744, E = +·668; G = −·361, H = +·402, K = −·842.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Matuyama	1·3	32	i 0 19	− 1	—	—	—	0·7
Hukuoka	1·5	305	0 22	− 1	0 40	− 2	—	0·7
Nagasaki	1·7	271	0 20	− 6	(0 35)	−13	0·6	—
Sumoto	3·0	56	0 50	+ 3	(1 30)	+ 7	1·5	1·5
Kobe	3·3	54	e 0 55	+ 3	(1 39)	+ 8	1·6	1·8
Osaka	3·5	56	1 40	+45	(1 40)	+ 3	2·1	2·5
Nagoya	4·8	58	e 1 59	?S	(e 1 59)	−12	—	—
Almeria	98·4	325	—	—	—	—	—	37·6

Additional readings and notes: Sumoto gives also MZ = +1·6m. Kobe MN = +1·7m. Osaka MN = +3·0m.

Feb. 18d. 22h. 56m. 12s. Epicentre 6°·5N. 128°·0E. (as on 1926 March 6d.).

$A = -\cdot612$, $B = +\cdot783$, $C = +\cdot113$; $D = +\cdot788$, $E = +\cdot616$; $G = -\cdot070$, $H = +\cdot089$, $K = -\cdot994$.

		△	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Manila		10·7	320	e 3 1	+21	—	—	i 5·4	—
Taihoku	N.	19·5	342	—	—	e 8 30	+17	—	—
Hong Kong		20·7	322	4 58	+ 9	—	—	9·1	10·1
Phu-Lien		25·2	307	e 5 24	−16	e 10 1	− 6	12·1	—
Kobe	N.	28·9	12	—	—	—	—	—	7·9
Osaka		29·0	13	6 26	+ 8	14 3	+166	18·7	20·4
Perth		40·1	196	i 7 23	−33	—	—	—	—
Melbourne		47·0	161	—	—	i 14 54	−47	—	19·4
Hyderabad		49·6	288	8 55	− 9	—	—	—	19·9
Irkutsk		49·8	341	i 9 8	+ 2	i 16 21	+ 5	24·8	—
Bombay		55·0	290	e 12 42	?PR_1	e 17 2	−19	—	—
Tashkent		62·5	315	i 11 50	+81	i 20 22	+87	e 32·8	39·9
Ekaterinburg		72·3	329	i 11 36	+ 4	20 55	+ 1	34·8	46·3
Baku		76·8	310	i 11 57	− 3	i 21 45	− 2	38·1	44·1
Tiflis		80·7	313	12 19	− 4	e 22 19	−12	e 39·8	50·5
Kucino		84·8	326	12 43	− 4	23 12	− 5	39·9	51·0
Makeyevka		85·2	319	12 42	− 7	23 3	−18	44·8	53·4
Ksara	N.	88·2	305	e 12 50	−16	23 15	[− 1]	—	—
Leningrad		88·2	330	e 13 1	− 5	i 23 43	−11	45·0	55·2
Pulkovo		88·3	330	i 12 58	− 9	23 39	−16	41·8	58·5
Helsingfors	E.	90·8	331	—	—	e 23 36	[+ 3]	55·6	—
Vienna	Z.	99·2	322	13 50	−16	—	—	—	—
Prague		99·7	324	—	—	—	—	e 45·8	53·8
Graz		100·2	321	—	—	—	—	e 58·8	—
Hamburg		100·8	329	—	—	—	—	e 48·8	53·8
Cheb		100·9	324	—	—	—	—	e 43·8	65·8
De Bilt		104·0	329	—	—	e 24 48	[+ 5]	e 50·8	56·0
Chur		104·0	323	19 40	?	24 43	[0]	—	—
Strasbourg		104·3	323	—	—	e 24 52	[+ 8]	e 53·8	—
Zurich		104·3	323	—	—	e 24 47	[+ 3]	—	—
Uccle		105·1	327	—	—	e 24 48?	[0]	e 50·8	—
Moncalieri	E.	105·9	321	e 18 34	?PR_1	(27 3)	+12	56·8	—
Edinburgh		105·9	333	—	—	—	—	e 49·8	—
Paris		107·1	327	—	—	—	—	e 56·8	—
Kew		107·2	330	—	—	e 23 48?	[−70]	52·8	—
Oxford		107·5	330	—	—	—	—	e 51·3	63·8
Granada		117·2	317	—	—	e 32 48	?	e 57·8	67·6
San Fernando	N.	119·4	318	—	—	—	—	—	79·8
Ottawa		123·9	18	—	—	e 37 48?	?SR_1	e 56·8	—

Additional readings: Melbourne i = +17m.0s. Irkutsk PR_1 = +11m.9s., e = +19m.3s. Tashkent PS = +21m.0s., e = +22m.16s., SR_1 = +23m.48s., SR_2 = +25m.48s., MN = +36·9m., MZ = +40·6m. Ekaterinburg i = +11m.53s. and +21m.3s. =[S]−26s., e =+15m.8s. =PR_1 +21s., iPS = +21m.33s., S_4P_4S = +21m.46s., eSR_2 = +29m.32s. Baku MN = +43·0m., MZ = +52·8m. Tiflis e = +13m.21s., S_4P_4S = +22m.28s., PS = +23m.9s., MN = +45·3m. Kucino PR_1 = +16m.10s., e = +23m.1s. and +23m.37s., SR_1 = +28m.42s., SR_2 = +31m.57s., MN = +46·6m. Makeyevka e = +24m.12s., PS = +24m.41s., MN = +52·6m., MZ = +52·9m. Leningrad S_4P_4S = +23m.26s., MN = +57·5m. Pulkovo S_4P_4S = +23m.23s., i = +24m.10s., MN = +49·1m., MZ = +58·6m. Helsingfors iN = +24m.1s., =S−21s., MN = +48·6m. De Bilt MN = +56·2m., epicentre 7°·5N. 128°·0E.

Feb. 18d. Readings also at 2h. (Suva), 3h. (Suva), 4h. (Zagreb), 5h. (La Plata), 7h. (Suva), 9h. (Tiflis), 13h. (La Paz), 14h. (Strasbourg), 15h. (Manzanillo), 20h. (Suva).

Feb. 19d. 3h. 55m. 0s. Epicentre 50°·5N. 159°·0E. (as on 1921 March 24d.).

A = −·594, B = +·228, C = +·772 ; D = +·358, E = +·934 ;
G = −·720, H = +·276, K = −·636.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Irkutsk		33·4	294	e 7 0	0	12 26	− 4	e 17·0	19·8
Ekaterinburg		53·5	318	9 15	−15	—	—	27·0	35·4
Tashkent		59·3	300	—	—	e 19 0?	+45	31·5	37·2
Leningrad		62·1	333	i 2 55	?	—	—	29·9	41·7
Pulkovo		62·2	333	e 10 25	− 1	e 18 47	− 4	30·0	38·8
Kucino		63·1	327	—	—	e 19 0	− 2	34·0	39·2
Helsingfors		63·3	336	e 16 55	?	e 19 0?	− 5	—	39·8
Makeyevka		69·2	322	e 11 6	− 6	e 21 6	[0]	39·0	45·7
Baku		70·1	310	e 11 6	−12	e 21 4	[− 8]	36·8	44·8
Suva	E.	70·7	160	—	—	—	—	e 36·3	—
Tiflis		71·4	315	e 11 12	−14	e 21 12	[−10]	38·0	46·3
Hamburg		72·8	343	—	—	—	—	e 42·0	—
Ottawa		73·1	36	—	—	—	—	e 42·0	—
De Bilt		75·0	344	e 11 48	− 1	e 21 35	+ 9	e 40·0	—
Prague		75·0	336	—	—	—	—	e 37·0	47·0
Cheb		75·5	338	—	—	—	—	e 36·0	43·0
Uccle		76·4	345	—	—	—	—	e 40·0	—
Kew		76·5	348	—	—	—	—	e 39·0	—
Strasbourg		77·9	341	e 12 2	− 4	e 22 41	?PS	e 39·0	—
Paris		78·7	346	—	—	—	—	e 45·0	—
Zurich		78·9	340	e 12 6	− 6	—	—	—	—
Chur		79·2	340	(e 12 10)	− 4	e 12 10	?P	—	—
Florence		81·6	337	—	—	—	—	e 49·0?	61·0
San Fernando	N.	92·1	349	—	—	—	—	—	60·5

Additional readings: Irkutsk $ePR_1 = +8m.2s.$, $PR_2 = +8m.30s.$, e = +15m.54s., MNZ = +20·2m. Ekaterinburg i = +10m.24s., e = +21m.13s. $=SR_1+1s.$ Tashkent e = +21m.0s.?, +24m.0s.?, +25m.54s. $=SR_2+3s.$, and +28m.18s., MZ = +36·1m., MN = +37·0m. Pulkovo e = +14m.44s. $=PR_2-22s.$, and +26m.3s. $=SR_2+7s.$, MZ = +40·5m., MN = +44·2m. Kucino MN = +41·2m. Helsingfors e = +13m.42s. $=PR_1+15s.$ Makeyevka e = +28m.36s. $=SR_2+17s.$ Baku MZ = +45·1m. Tiflis e = +28m.27s. $=SR_2-33s.$, and +34m.48s. Strasbourg eP = +12m.11s.

Feb. 19d. 23h. 35m. 28s. Epicentre 37°·0N. 28°·7E. (as on 1921 May 22d.).

A = +·700, B = +·383, C = +·602 ; D = +·480, E = −·877 ;
G = +·528, H = +·289, K = −·799.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Athens	4·0	286	1 2	0	—	—	1·3	1·7
Ksara	6·7	116	e 6 37	?	—	—	—	—
Budapest	12·6	329	5 44	?S	(5 44)	+10	—	—
Zagreb	12·9	317	e 5 59	?S	(e 5 59)	+17	—	—
Makeyevka	12·9	29	—	—	—	—	e 8·5	—
Tiflis	13·3	64	—	—	—	—	8·9	10·6
Prague	16·6	326	—	—	—	—	e 7·9	9·5
Baku	16·8	72	—	—	—	—	e 9·2	—
Cheb	17·5	323	—	—	—	—	e 8·7	9·2
Moncalieri	17·6	304	—	—	—	—	9·9	—
Strasbourg	19·1	314	e 4 16	−14	—	—	9·5	—
Kucino	19·7	15	—	—	e 8 26	+ 9	e 9·6	—
Hamburg	21·0	328	—	—	—	—	e 10·5	—
Uccle	22·1	316	—	—	—	—	e 10·5	—
Paris	22·3	310	—	—	—	—	e 11·5	—
De Bilt	22·4	320	—	—	e 8 32?	−41	e 11·0	12·0
Pulkovo	22·7	4	5 14	+ 1	9 20	+ 1	11·5	—
Leningrad	23·0	2	5 14	− 3	9 20	− 5	11·4	—
Kew	25·0	315	e 5 32?	− 6	—	—	11·5	—
Ekaterinburg	29·0	37	e 6 31	+13	e 11 53	+36	16·5	—

Additional readings: Zagreb i = +6m.27s. Makeyevka e = +11m.5s. Baku e = +12m.26s.

Feb. 19d. Readings also at 0h. (Moncalieri), 1h. (Suva (2) and Wellington), 3h. (Irkutsk), 6h. (Helsingfors and Zi-ka-wei), 7h. (Helsingfors), 8h. (Agana), 12h. (Tashkent and near Mizusawa), 14h. (near Wellington), 15h. (near Nagasaki (2)), 16h. (Suva and near Nagasaki), 18h. (near Tashkent), 20h. (La Paz).

Feb. 20d. 2h. 0m. 30s. Epicentre 24°·0N. 121°·0E. (as on 1924 July 22d.).

$A = -\cdot470$, $B = +\cdot783$, $C = +\cdot407$; $D = +\cdot857$, $E = +\cdot515$; $G = -\cdot210$, $H = +\cdot349$, $K = -\cdot914$.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Taihoku	N.	1·1	24	0 19	+ 2	—	—	0·8	1·2
Hong Kong		6·5	257	—	—	—	—	—	4·0
Manila		9·4	180	e 2 18	− 4	—	—	3·1	—
Tashkent		46·0	307	8 24	−16	e 14 57	−31	e 24·5	33·5
Ekaterinburg		54·0	325	9 34	+ 1	—	—	29·5	36·3
Baku		60·7	306	—	—	—	—	e 35·5	—
Tiflis		64·3	308	—	—	—	—	e 35·5	—
Kucino		66·5	323	—	—	—	—	e 34·8	—
Leningrad		69·7	328	—	—	—	—	45·9	46·0
Pulkovo		69·8	328	—	—	—	—	e 44·0	45·8
De Bilt		85·6	326	—	—	—	—	e 46·5	—
Uccle		86·7	326	—	—	—	—	e 46·5	—
Kew		88·6	328	—	—	—	—	e 57·5	—

Additional readings: Tashkent iPS = +15m.12s., SR_1 = +19m.0s., MN = +29·9m., MZ = +32·4m. Pulkovo MZ = +45·9m.

Feb. 20d. 6h. 47m. 42s. Epicentre 46°·3N. 16°·8E. (given by Zagreb).

$A = +\cdot661$, $B = +\cdot200$, $C = +\cdot723$; $D = +\cdot289$, $E = -\cdot957$; $G = +\cdot692$, $H = +\cdot209$, $K = -\cdot691$.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Zagreb	0·8	230	0 9	− 3	i 0 22	0	—	0·5
Graz	1·1	310	i 0 18	+ 1	—	—	—	1·0
Budapest	1·9	53	0 22	− 7	—	—	—	—
Vienna	1·9	351	0 31	+ 2	—	—	i 1·2	1·6
Innsbruck	3·9	287	e 1 4	+ 3	e 1 52	+ 5	—	—
Zurich	5·8	284	e 0 18?	−72	—	—	—	—
Strasbourg	6·5	294	e 2 16	+37	3 58	+61	—	—

Additional readings: Zagreb i = +10s. and +13s., iPR_1 = +12s., iPSR = +17s., iSR_1 = +24s. Graz MN = +0·8m. Vienna P? = +39s. Innsbruck eNE = +2m.4s. and = +3m.23s. Strasbourg PR_2 = +2m.53s., SR = +4m.52s., and +4m.58s.

Feb. 20d. Readings also at 1h. (Wellington), 5h. (Batavia and near Sumoto), 7h. (Zagreb), 8h. (near Nagasaki), 9h. (Tashkent), 12h. (near Sumoto (2)), 16h. (Nagasaki), 21h. (Makeyevka), 22h. (near Kobe, Sumoto, and Toyooka), 23h. (Florence).

Feb. 21d. 12h. 24m. 57s. Epicentre 0°·0, 122°·4E. (as on 1923 April 24d.).

$A = -\cdot536$, $B = +\cdot844$, $C = \cdot000$; $D = +\cdot844$, $E = +\cdot536$; $G = \cdot000$, $H = \cdot000$, $K = -1\cdot000$.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Amboina	6·8	123	i 1 45	+ 1	i 3 9	+ 4	i 4·0	—
Manila	14·7	354	i 3 48	+13	—	—	i 10·0	10·7
Malabar	16·5	244	4 1	+ 2	—	—	—	—
Batavia	16·7	248	3 57	− 4	i 8 41	?L	(i 8·7)	—
Hong Kong	23·7	341	5 30	+ 5	9 50	+12	—	—

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Taihoku	E.	25·0	358	e 4 45	−53	—	—	—	—
Phu-Lien		25·9	324	5 44	− 3	e 10 14	− 6	—	—
Zi-ka-wei		31·2	358	i 6 37	− 3	11 26	−28	16·5	20·3
Perth		32·5	190	—	—	i 11 38	−38	15·8	—
Adelaide		38·0	158	i 7 24	−14	i 13 11	−27	16·5?	22·4
Colombo		43·0	280	8 28	+10	14 28	−20	—	30·4
Melbourne		43·1	153	e 7 15	−64	i 13 45	−64	i 22·6	28·0
Riverview		43·3	143	e 6 27	−113	—	—	e 22·4	24·5
Kodaikanal		45·9	284	26 27	?L	—	—	(26·4)	—
Hyderabad		46·6	295	8 37	− 7	15 27	− 9	23·4	29·0
Bombay		52·2	295	9 15	− 6	16 39	− 7	27·2	40·7
Simla	E.	52·9	311	—	—	e 16 45	−10	—	—
Irkutsk		54·4	347	9 40	+ 5	i 17 24	+10	27·0	—
Suva	E.	57·8	112	e 12 15	?PR_1	—	—	—	—
Wellington	N.	62·7	139	—	—	e 19 29	+32	—	—
Tashkent		63·2	319	i 10 39	+ 6	i 19 13	+10	33·0	34·9
Ekaterinburg		75·0	331	i 11 49	0	e 21 20	− 6	35·0	49·6
Baku		76·8	312	i 12 5	+ 5	i 21 52	+ 5	37·8	48·5
Tiflis		81·0	312	13 23	+58	23 28	+53	e 49·0	53·8
Upsala		82·6	331	—	—	—	—	—	51·0
Makeyevka		86·3	319	12 51	− 4	23 26	− 7	42·0	64·8
Kucino		86·9	326	12 54	− 4	i 23 31	− 9	42·0	51·9
Ksara	E.	87·1	305	—	—	23 37	− 5	—	—
Pulkovo		91·1	330	13 15	− 7	24 12	−13	47·0	58·5
Leningrad		91·1	330	i 13 15	− 7	e 24 12	−13	47·8	59·0
Prague		101·4	321	—	—	e 24 3?	[−28]	e 55·0	70·0
Cheb		102·7	321	—	—	e 24 3?	[−34]	e 57·0	68·0
Hamburg		103·3	326	e 18 28	?PR_1	i 25 58	−29	e 58·0	—
Strasbourg		106·0	322	e 14 29	−10	—	—	e 53·0	—
De Bilt		106·6	326	18 53	?PR_1	e 26 23	−34	e 54·0	71·0
Uccle		107·5	325	e 18 52	?PR_1	e 26 33	−33	e 54·0	—
Edinburgh		109·2	330	—	—	e 25 3?	[− 4]	—	—
Paris		109·4	324	i 19 12	?PR_1	—	—	63·0	74·0
Kew		109·7	326	—	—	—	—	e 58·0	71·0
Oxford		110·1	325	—	—	—	—	e 56·0	74·0
Granada		118·0	311	20 46	?PR_1	—	—	66·0	75·0
San Fernando	N.	120·1	313	—	—	—	—	—	83·0
Ottawa		131·8	15	—	—	—	—	e 58·0	—
Toronto	N.	132·2	20	—	—	—	—	e 65·0	—
Sucre		159·5	159	20 13	[+ 5]	—	—	—	—
La Paz		160·4	148	i 20 15	[+ 7]	—	—	—	—

Additional readings: Amboina i = +4m.45s. Manila MN = +12·9m. Batavia i = +4m.45s. Zi-ka-wei PR_1 = +7m.53s., SR_1 = +12m.40s. Perth iSR_1? = +13m.48s. Adelaide MN = +20·3m. Melbourne readings are given for 22d. Riverview MN = +25·0m. Simla eN = +13m.21s. = PR_2 +16s. Irkutsk PR_1 = +11m.56s., PR_2 = +12m.45s., PS = +17m.44s. Suva eN = +15m.39s.? Tashkent i = +11m.0s. and +11m.8s., PR_1 = +13m.15s., ePR_2 = +15m.3s., iPS = +19m.32s., i = +20m.6s., SR_1 = +23m.15s. = SR_1 −47s., iSR_2 = +27m.27s. = SR_2 +7s., SR_2 = +29m.52s., MN = +33·3m., MZ = +41·7m. Ekaterinburg i = +11m.51s., iPR_1 = +14m.36s., iPR_2 = +16m.26s., i = +21m.30s. = [S] −19s., PS = +22m.0s., e = +24m.49s., SR_1 = +26m.29s., SR_2 = +29m.36s. Tiflis e = +14m.11s., ePS? = +24m.29s., SR_1 = +32m.51s., MN = +54·2m. Makeyevka PR_1 = +16m.24s., e = +28m.26s., MZ = +60·8m., MN = +62·7m. Kucino PR_1 = +16m.23s., PR_2 = +18m.19s., e = +23m.19s. = [S] +11s., MN = +51·7m., MZ = +62·4m. Pulkovo S_4P_4S = +23m.49s. = [S] +14s., MZ = +59·5m. Leningrad MN = +53·8m., MZ = +59·3m. Strasbourg PR_1 = +18m.45s., PR_2 = +21m.8s., PS = +28m.10s. De Bilt MN = +67·9m., MZ = +69·6m.

Feb. 21d. Readings also at 2h. (Sucre), 3h. (Nagasaki), 9h. (Agana, Baku, Irkutsk, and Kew), 10h. (Irkutsk), 15h. (Nagasaki), 16h. (Tucson), 17h., 18h., and 19h. (Nagasaki), 21h. (Apia, Suva, and Tucson), 22h. (Tucson (2), Tashkent (2), Ekaterinburg (2), Pulkovo, Zi-ka-wei, near Hukuoka, and Nagasaki).

Feb. 22d. 19h. 54m. 6s. Epicentre 26°·0N. 143°·0E. (as on 1919 June 7d.).

A = −·718, B = +·541, C = +·438; D = +·602, E = +·799; G = −·350, H = +·264, K = −·899.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Osaka		10·9	325	2 41	− 2	—	—	5·2	7·3
Sumoto		10·9	322	e 2 44	+ 1	—	—	6·2	—
Kobe		11·0	324	e 3 1	+17	—	—	—	10·2
Mizusawa		13·2	354	1 38	−98	5 9	−40	8·6	—
Hukuoka		13·3	308	3 22	+ 5	5 50	− 1	7·9	—
Taihoku	E.	19·4	272	—	—	—	—	e 19·5	—
Zi-ka-wei		19·6	290	e 4 49	+13	8 25	+10	12·6	14·1
Manila		23·5	245	e 5 22	− 1	—	—	i 11·4	15·0
Irkutsk		39·1	323	e 7 33	−14	e 13 32	−21	19·9	24·2
Batavia		47·6	233	—	—	—	—	i 26·2	—
Hyderabad		60·0	276	17 33	?	—	—	—	22·4
Tashkent		61·4	311	i 10 21	0	i 18 48	+ 7	27·7	28·6
Ekaterinburg		64·4	324	i 10 43	+ 2	19 19	+ 1	32·9	41·5
Bombay		64·6	280	19 13	?S	(19 13)	− 7	—	24·6
Baku		75·8	309	—	—	e 21 38	+ 3	38·2	48·5
Kucino		76·7	326	—	—	e 21 34	−11	39·6	48·6
Leningrad		78·2	332	e 11 44	−24	—	—	41·9	47·9
Pulkovo		78·3	332	11 47	−22	i 21 59	− 5	41·9	47·8
Tiflis		78·8	311	e 12 21	+ 9	e 22 1	− 9	e 41·9	50·2
Makeyevka		80·2	319	e 36 54?	?	—	—	46·9	49·8
Upsala		83·3	336	—	—	—	—	44·9	—
Hamburg		90·7	334	—	—	—	—	e 49·9	—
Budapest	N.	90·9	326	—	—	—	—	e 47·9	—
Prague		91·4	329	—	—	—	—	e 45·9	52·9
Cheb		92·3	330	—	—	—	—	e 44·9	50·9
De Bilt		93·7	336	—	—	—	—	e 48·9	—
Uccle		95·0	336	—	—	—	—	e 49·9	—
Strasbourg		95·4	332	—	—	—	—	e 53·9	—
Kew		96·1	339	—	—	—	—	e 48·9	—
Florence		97·4	327	—	—	—	—	45·9	52·9
Ottawa		100·3	27	—	—	—	—	e 48·9	—
Rio Tinto		110·2	335	76 54?	?	—	—	—	79·9
La Paz		149·6	79	e 19 58	[+ 3]	—	—	—	—

Additional readings: Kobe MN = +9·7m. Mizusawa SN = +5m.8s. Manila MN = +13·9m. Irkutsk MN = +25·1m. Tashkent e = +13m.53s. = PR_1 +43s., PS = +19m.31s., e = +20m.15s., eSR_1 = +21m.21s., SR_2 = +25m.24s., MN = +28·7m., MZ = +37·0m. Ekaterinburg i = +10m.55s., e = +18m.14s., +24m.52s. = SR_1 +30s., and +28m.28s. = SR_2 +40s. Baku e = +27m.4s. = SR_1 −10s., and +33m.10s., MN = +41·9m., MZ = +46·0m. Kucino e = +24m.40s. and +29m.26s., MN = +42·7m., MZ = +48·5m. Leningrad MZ = +48·6m. Pulkovo MN = +45·6m., MZ = +48·6m. Tiflis S_4P_4S = +22m.26s., MN = +45·9m. Budapest eE = +48m.24s.

Feb. 22d. Readings also at 4h. (Oaxaca and Tacubaya), 5h. (Apia), 8h. (near La Paz), 13h. (La Paz), 16h. (Baku), 17h. (near Santiago), 19h. (Nagoya), 20h. (near Phu-Lien), 21h. (Baku), 22h. (Baku, Ekaterinburg, Irkutsk, Kucino, La Paz, Tiflis, and near Mizusawa), 23h. (Tiflis).

Feb. 23d. 2h. 43m. 24s. Epicentre 0°·0 145°·0E. (as on 1919 Oct. 8d.).

A = −·819, B = +·574, C = ·000; D = +·574, E = +·819; G = ·000, K = ·000, K = −1·000.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Manila	27·9	303	e 6 23	+16	(11 13)	+16	11·2	—
Riverview	34·3	171	—	—	—	—	e 17·7	23·9
Adelaide	35·5	189	e 11 46	?S	(e 11 46)	−77	17·2?	18·9
Melbourne	37·8	180	—	—	e 13 12	−23	i 18·8	20·4
Perth	42·2	218	—	—	—	—	20·2	24·9

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	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Tashkent	79·3	312	i 12 8	− 7	i 22 7	− 8	e 38·6	44·4
Ekaterinburg	86·9	327	i 12 51	− 7	—	—	—	—
Baku	93·8	311	—	—	e 24 36?	−18	—	—
Tiflis	97·6	313	—	—	e 28 8	?	e 49·6	—
Kucino	99·5	327	—	—	—	—	e 49·6	—
De Bilt	118·0	333	—	—	—	—	e 59·6	—
Ottawa	122·1	33	—	—	—	—	e 61·6	—
La Paz	143·4	120	19 51	[+ 5]	—	—	—	—

Additional readings: Riverview MN = +20·2m. Adelaide S = +15m.45s.? = SR_2 +0s., MN = +20·6m. Perth +20m.36s. Tashkent SR_1 = +27m.12s., SR_2 = +31m.12s., SR_3 = +33m.6s. Ekaterinburg e = +16m.7s. = PR_1 −36s.

Feb. 23d. Readings also at 2h. (near Bagnères), 4h. (La Paz and Loyola), 6h. (near Mizusawa), 9h. (Tacubaya (2) and near Amboina), 14h. (Baku, Tashkent, and Zagreb), 19h. (Tashkent), 20h. (Hong Kong), 21h. and 23h. (Suva).

Feb. 24d. 4h. 13m. 52s. Epicentre 14°·5N. 91°·0W. (as on 1920 Dec. 11d.).

A = −·017, B = −·968, C = +·250; D = −1·000, E = +·017; G = −·004, H = −·250, K = −·968.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Oaxaca		6·1	296	1 24	− 9	(2 29)	−17	2·5	2·8
Merida		6·6	11	2 31	+50	4 7	+67	4·3	5·2
Puebla		8·3	304	—	—	—	—	4·2	4·4
Tacubaya		9·3	304	2 30	+10	(4 15)	+ 5	4·2	4·9
Tucson	E.	25·4	318	5 39	− 3	10 14	+ 3	e 18·6	—
	N.	25·4	318	5 39	− 3	10 8	− 3	e 16·3	—
Chicago	E.	27·4	6	—	—	e 11 44	+56	e 18·0	—
	N.	27·4	6	—	—	10 43	− 5	e 18·2	—
Ann Arbor	E.	28·5	12	—	—	—	—	e 13·7	—
Fordham	E.	30·3	28	e 6 28	− 3	e 11 8	−31	e 16·9	20·6
Toronto	N.	30·8	17	—	—	11 58	+10	20·1	22·4
Ottawa		33·5	20	—	—	e 12 20	−12	e 18·6	21·3
La Paz		38·3	143	7 44	+ 4	—	—	19·1	24·0
Sucre		42·0	142	—	—	—	—	18·6	22·7
Victoria	E.	43·1	329	—	—	—	—	23·7	26·9
Kew		79·2	39	—	—	—	—	e 42·1	—
De Bilt		82·3	38	—	—	—	—	e 44·1	—
Strasbourg		84·9	41	—	—	—	—	e 44·1	—
Leningrad		92·0	26	—	—	—	—	44·0	58·3
Pulkovo		92·1	26	—	—	—	—	43·1	57·8
Kucino		97·8	26	—	—	e 27 14	+100	e 47·3	—
Makeyevka		102·9	32	—	—	—	—	52·1	65·4
Ekaterinburg		104·9	14	—	—	—	—	56·1	68·0
Irkutsk		112·0	350	—	—	—	—	66·1	—
Baku		114·2	29	—	—	—	—	e 54·1	—
Tashkent		121·3	15	e 20 41	?PR_1	—	—	e 57·6	72·8

Additional readings: Tucson eE = +13m.14s., eN = +13m.43s. Chicago eE = +15m.44s. Ann Arbor eN = +15m.26s. Fordham e = +9m.58s., eE = +12m.48s. = SR_1 −23s., MN = +19·5m. Toronto eE = +14m.21s. Ottawa eN = +16m.8s., MN = +22·5m. Leningrad MNZ = +57·8m. Ekaterinburg e = +44m.13s. Tashkent e = +42m.44s. = SR_2 +4s., MZ = +66·8m., MN = +67·1m.

Feb. 24d. Readings also 1h. (near Mizusawa), 3h. (Suva), 4h. (Suva and Fordham), 6h. (La Paz), 7h. (near Tucson), 9h. (Wellington), 11h. and 13h. (Nagasaki), 16h. (San Fernando, Nagasaki, and near Irkutsk), 18h. (Tiflis), 19h. (Malabar), 21h. (Suva), 22h. (Adelaide and Nagasaki), 23h. (La Paz).

Feb. 25d. 8h. 6m. 36s. Epicentre 41°·0N. 44°·0E. (as on 1926 Oct. 23d.).

A = +·543, B = +·524, C = +·656; D = +·695, E = −·719; G = +·472, H = +·456, K = −·755.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Tiflis	0·9	40	e 1 9	+55	—	—	—	—
Baku	4·5	85	e 2 41	?L	e 3 54	?	(e 2·7)	—
Makeyevka	8·2	331	—	—	—	—	i 4·4	—
Ksara	9·6	224	e 0 53	−91	e 5 44	+86	—	—
Kucino	15·3	347	—	—	—	—	e 8·3	—
Tashkent	19·0	81	4 35	+ 6	8 19	+17	11·4	—
Ekaterinburg	19·1	29	4 28	− 2	e 8 4	0	10·4	—
Pulkovo	20·6	340	—	—	—	—	e 10·4	—

Additional readings: Tiflis i = +1m.20s., e = +1m.31s. Makeyevka e = +5m.58s. Tashkent e = +9m.24s.

Feb. 25d. 11h. 25m. 12s. Epicentre 28°·0S. 163°·5W. (as on 1926 Aug. 10d.).

A = −·846, B = −·251, C = −·469; D = −·289, E = +·959; G = +·450, H = +·133, K = −·883.

This is the nearest old epicentre which will give an approximate solution, but if the Suva times are in error, it might be much improved.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Suva	E.	19·4	297	4 18	−16	8 6	− 4	10·5	—
	N.	19·4	297	4 42	+ 8	8 48	+38	—	—
Wellington	E.	22·2	227	e 7 5	+118	—	—	—	—
Riverview		39·0	250	—	—	—	—	e 15·6	17·4
Ekaterinburg		137·7	325	20 51	[+76]	24 15	?PR_1	66·8	78·5
Leningrad		146·7	347	i 21 15	[+85]	—	—	81·4	—
Pulkovo		146·9	347	i 21 13	[+83]	—	—	79·8	—
Makeyevka		153·9	326	i 21 24	[+84]	—	—	—	—
Ksara		162·4	296	21 38	[+89]	—	—	—	—

Additional readings: Wellington eN = +7m.19s. Ekaterinburg i = +24m.32s. = PR_1 +132s.

Feb. 25d. 15h. 41m. 20s. Epicentre 38°·0S. 178°·0E.

A = −·787, B = +·028, C = −·616; D = +·035, E = +·999; G = +·615, H = −·021, K = −·788.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Wellington		4·1	216	1 2	− 2	1 57	+ 4	—	—
Christchurch		6·8	215	2 40	+56	2 58	− 7	3·7	5·1
Suva	E.	19·9	1	4 22	−18	8 52	+31	—	—
	N.	19·9	1	4 40	0	8 22	+ 1	—	—
Riverview		22·0	273	i 5 1	− 4	9 1	− 4	e 10·6	11·0
Sydney	E.	22·0	273	4 52	−13	—	—	10·7	12·0
Melbourne		25·9	260	e 5 58	+11	i 10 40	+20	13·6	16·3
Apia		25·9	23	5 40?	− 7	—	—	—	6·7
Adelaide		31·5	267	e 7 52?	+69	e 12 44	+44	15·0	22·8
Manila		74·9	303	e 11 36	−12	(e 21 8)	−17	—	—
Nagasaki		83·8	322	32 26	?SR_2	—	—	—	—
Zi-ka-wei		87·0	316	e 12 44	−15	e 23 5	[− 4]	41·8	44·4
Sucre		97·7	122	13 46	−12	24 13	[+ 2]	46·1	49·2
Irkutsk		110·6	321	e 18 24	[+ 1]	e 28 33	+60	e 48·7	—
Toronto	E.	123·4	59	—	—	—	—	61·1	—
Fordham		126·1	63	—	—	e 38 50	?SR_1	e 61·3	—
Ottawa		126·4	57	e 32 10	?PS	e 38 4	?SR_1	e 55·7	—
Tashkent		126·6	298	i 19 26	[+16]	31 2	?	58·7	73·6
Ekaterinburg		135·5	316	i 19 15	[−16]	—	—	62·7	83·1
Baku		140·3	290	22 31	?PR_1	e 37 50	?	66·7	79·8

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Tiflis		144·3	291	e 19 32	[−15]	—	—	e 67·7	80·1
Kucino		148·1	317	19 43	[−10]	—	—	62·3	94·3
Ksara	N.	149·2	273	e 19 52	[− 2]	—	—	76·7	—
Makeyevka		149·5	302	i 19 35	[−20]	—	—	64·7	86·7
Leningrad		150·1	327	i 19 48	[− 8]	—	—	68·4	91·6
Pulkovo		150·2	327	19 47	[− 9]	—	—	71·7	88·4
Helsingfors		152·1	331	—	—	—	—	e 60·7	—
Upsala		154·9	337	—	—	—	—	87·7	—
Prague		163·2	321	—	—	—	—	e 88·7	95·7
Cheb		164·2	324	—	—	—	—	e 83·7	97·7
De Bilt		165·1	343	—	—	e 50 40	?	e 82·7	95·8
Uccle		166·4	343	—	—	—	—	e 83·7	—
Kew		166·5	355	—	—	—	—	e 85·7	—
Strasbourg		167·3	329	—	—	—	—	e 78·7	—
Florence		168·4	304	20 8	[− 6]	25 7	?PR_1	85·7	88·7
Paris		168·7	345	—	—	—	—	e 87·7	—
Granada		178·5	123	22 51	?	—	—	86·1	94·5

Additional readings and notes: Wellington iPE = +1m.5s. Riverview MN = +12·4m. Apia readings have been diminished by 1h. Adelaide SR_1 = +14m.1s., MN = +17·3m. Manila readings given as separate P's. Zi-ka-wei PR_1 = +16m.2s. Irkutsk eSR_1 = +34m.56s. Fordham e = +57m.50s. Tashkent i = +20m.50s. = PR_1 − 18s., and +22m.19s., PR_1 = +23m.24s., PR_2 = +25m.55s. = [S] − 8s., PR_3 = +27m.4s., S_4P_4S = +30m.2s. $S_4P_4P_4S$ = +30m.40s., e = +31m.24s. = PS − 26s., iPS = +32m.40s., PPS = +33m.22s., eSR_1 = +37m.40s., MZ = +67·5m., MN = +73·5m. Ekaterinburg iPR_1 = +21m.50s., i = +22m.24s., P_4S_4S = +22m.44s., i = +23m.15s., ePS = +32m.9s., ePPS = +33m.53s., eSR_1 = +39m.40s., MZ = +75·6m. Baku MN = +79·4m., MZ = +80·9m. Tiflis e = +22m.51s. = PR_1 − 11s., +30m.14s., and +32m.52s., MN = +81·4m. Kucino eP = +23m.6s., PR_1 = +23m.53s., PR_2 = +27m.6s., PS = +33m.22s., MN = +80·3m. Makeyevka e = +23m.51s. = PR_1 + 16s., and +38m.40s.?, MZ = +86·8m. Leningrad i = +20m.21s. and +24m.11s. = PR_1 + 32s. Pulkovo i = +20m.19s., P = +23m.19s. = PR_1 − 21s., PR_1 = +24m.12s., PS = +33m.30s., MZ = +84·4m. De Bilt MN = +87·0m., MZ = +97·7m. Granada i = +25m.59s. = PR_1 − 24s., and +29m.22s.

Feb. 25d. Readings also at 0h. (Suva and near Tashkent), 1h. (Suva), 2h. (Nagasaki (2) and Strasbourg). 3h. (Nagasaki and San Fernando), 5h. (Nagasaki), 6h. (Ksara and Sucre), 7h. (near La Paz), 8h. (Ekaterinburg), 9h. (Nagasaki, Taihoku, Nagoya, and near Mizusawa), 10h. (Suva), 11h. (Suva, Riverview, Sydney, Wellington, Makeyevka, Ekaterinburg, Pulkovo, Leningrad, and Ksara), 12h. (Baku, Tashkent, Irkutsk, Tiflis, and Nagoya), 13h. (La Paz), 15h. (Nagasaki), 17h. (La Paz and Sucre), 19h. (Agana and Sucre), 22h. (Suva), 23h. (Nagasaki and near Mizusawa).

Feb. 26d. 2h. 4m. 40s. Epicentre 20°·0S. 176°·5E. (as on 1927 Jan. 12d.).

A = −·938, B = +·057, C = −·342; D = +·061, E = +·998; G = +·341, H = −·021, K = −·940.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Suva	E.	2·6	45	0 26	−15	1 8	− 4	1·7	—
Apia		12·8	63	3 36	+26	—	—	6·4	8·0
Wellington	E.	21·4	184	i 5 17	+19	9 22	+29	—	—
	N.	21·4	184	i 5 13	+15	9 20	+27	12·0	—
Christchurch		23·8	187	8 40	+194	12 34	+174	15·1	16·4
Riverview		26·4	233	e 7 44	?	10 29	− 1	—	14·1
Sydney	N.	26·4	233	5 38	−14	10 30	0	13·8	15·3
Melbourne		32·6	230	—	—	i 12 8	−10	i 16·8	19·6
Adelaide		36·6	239	e 7 55	+28	e 12 54	−24	15·3	23·8
Honolulu T.H.	E.	48·3	34	—	—	—	—	19·9	—
Manila		64·7	300	e 10 39	− 4	—	—	—	—
Batavia		68·8	273	i 11 47	+37	i 20 5	− 7	—	—

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Zi-ka-wei		73·6	315	—	—	e 28 38	?	—	35·2
Victoria	E.	86·8	38	—	—	—	—	39·9	42·3
Irkutsk		95·5	324	e 13 50	+ 4	e 24 1	[+ 1]	e 39·3	—
La Paz		106·8	117	—	—	28 29	?PS	59·3	61·3
Toronto		113·7	50	—	—	—	—	62·3	63·3
Tashkent		115·8	308	e 19 19	?PR_1	—	—	e 54·3	63·4
Ottawa		116·4	48	—	—	e 36 35	?SR_1	e 51·3	—
Fordham		117·6	53	—	—	e 33 10	?	e 39·2	—
Ekaterinburg		120·7	324	e 19 1	[+ 7]	—	—	52·3	76·9
Baku		130·4	307	—	—	e 33 53	?	57·3	71·9
Leningrad		133·3	337	—	—	e 22 48	?PR_1	59·3	72·9
Pulkovo		133·5	337	—	—	i 22 46	?PR_1	57·3	63·3
Tiflis		134·0	310	e 20 27	?	e 22 50	?PR_1	e 61·3	65·0
Makeyevka		136·5	320	e 21 20?	?	—	—	71·3	77·0
De Bilt		147·2	349	—	—	—	—	e 70·3	73·1
Vienna	Z.	147·5	335	e 19 44	[− 8]	—	—	—	—
Kew		148·4	358	—	—	—	—	e 74·3	—
Uccle		148·6	350	—	—	—	—	e 71·3	—
Strasbourg		150·0	343	e 19 49	[− 7]	—	—	78·3	—
Paris		150·8	352	—	—	—	—	e 87·3	—
Zurich		150·9	343	e 20 45	[+48]	—	—	—	—
Rocca di Papa		154·3	331	e 20 33	[+32]	—	—	—	—
Granada		162·8	1	—	—	—	—	e 89·3	96·9

Additional readings: Suva PN = −46s., LN = +1·8m. Christchurch SR_1 = +13m.40s. Riverview MN = +14·3m. Adelaide MN = +17·8m. Honolulu LE?(Rayleigh) = +22·9m., MN(Rayleigh) = +23·0m. Batavia i = +22m.2s.; readings given as i simply. Zi-ka-wei eZ = +20m.52s. = S −17s. Irkutsk eSR_1 = +30m.41s. Tashkent i = +19m.21s., +19m.31s. =PR_1 −25s., and +28m.5s. =S −11s., e = +21m.20s. +23m.43s., +28m.44s., +47m.50s., and +50m.26s. Baku MN = +63·8m. Pulkovo MZ = +70·5m., MN = +72·5m. Tiflis e = +31m.47s., MN = +65·2m. Rocca di Papa eN = +20m.57s., eZ = +21m.39s., eZ = +22m.36s. Vienna iPZ = +19m.49s., iZ = +21m.16s.

Feb. 26d. 13h. 24m. 24s. Epicentre 30°·1N. 131°·6E. (as on 1926 Aug. 6d.).

A = −·574, B = +·647, C = +·502; D = +·748, E = +·664; G = −·333, H = +·375, K = −·865.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Nagasaki	3·0	332	0 45	− 2	1 25	+ 2	2·0	3·2
Hukuoka	3·6	344	1 3	+ 7	1 50	+11	—	1·8
Sumoto	5·1	33	1 20	+ 1	(2 22)	+ 2	2·4	2·4
Zi-ka-wei	8·8	278	e 2 15	+ 2	4 1	+ 3	—	7·4
Manila	18·4	214	e 4 36	+14	—	—	—	—
Irkutsk	29·8	325	e 6 20	− 6	e 11 36?	+ 5	e 14·8	—
Tashkent	50·7	302	e 9 6	− 5	—	—	e 27·6	35·4
Ekaterinburg	54·9	321	9 35	− 3	—	—	22·6	36·7
Kucino	67·4	323	—	—	—	—	34·4	44·4
Tiflis	68·3	309	e 8 13	?	—	—	e 39·6	45·9
Leningrad	69·5	328	—	—	—	—	e 42·4	46·6
Pulkovo	69·6	328	—	—	—	—	e 40·6	46·6
Makeyevka	70·3	316	—	—	—	—	44·6	—
Vienna Z.	82·6	323	12 23	−11	—	—	—	—
De Bilt	85·4	330	—	—	—	—	e 45·6	—

Additional readings: Nagasaki MN = +5·2m. Sumoto P and S are recorded as the P's of two shocks very close to Sumoto (L − P = 3s.). Irkutsk e = +16m.49s. Tashkent eSR_1 = +23m.34s., e = +24m.34s., and +26m.36s., MN = +33·6m., MZ = +34·4m. Kucino MN = +39·7m. Tiflis e = +20m.7s. =S +1s., and +27m.46s. =SR_1 −15s., MN = +45·3m. Pulkovo MZ = +46·5m.

Feb. 26d. 23h. 54m. 24s. Epicentre 13°·5N. 50°·0E. (as on 1923 Dec. 10d.).

$A = +·625$, $B = +·745$, $C = +·233$; $D = +·766$, $E = -·643$; $G = +·150$, $H = +·179$, $K = -·972$.

Very doubtful. It seems hopeless to reconcile these observations, especially those of Ksara, with others.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Ksara	E.	24·0	330	e 16 8	?	—	—	61·6	—
Baku		26·9	0	—	—	e 11 36	+57	—	—
Tiflis		28·6	352	—	—	e 11 8	− 2	e 12·1	22·2
Tashkent		32·5	27	—	—	e 11 25	−51	e 15·6	20·4
Ekaterinburg		44·1	9	—	—	—	—	17·6	—
Irkutsk		57·9	36	—	—	—	—	e 32·6	—

Tiflis: S is given simply as e, and L as eL_1?, eL = +17·6m., MN = +23·9m.

Feb. 26d. Readings also at 0h. (Suva, Ekaterinburg, and near Mizusawa), 1h. (Suva), 5h. (Tiflis), 7h. (Taihoku), 8h. (Fordham), 10h. (Taihoku), 13h. (Strasbourg), 14h. (Mizusawa, Manila, Irkutsk, and Tiflis), 16h. (Tashkent, Irkutsk, Tiflis, and Ekaterinburg), 17h. (Nagasaki), 18h. (Nagasaki and Tiflis), 19h. (Tiflis), 23h. (Tashkent).

Feb. 27d. 3h. 53m. 45s. Epicentre 26°·3N. 121°·5E. (as on 1924 July 14d.).

$A = -·468$, $B = +·764$, $C = +·443$; $D = +·853$, $E = +·522$; $G = -·231$, $H = +·378$, $K = -·896$.

		Δ	Az.	P.	O−C.	L.	M.
		°	°	m. s.	s.	m.	m.
Taihoku	E.	1·3	179	0 29	+ 9	0·8	1·0
	N.	1·3	179	0 28	+ 8	0·8	1·1
Hong Kong		7·8	240	2 55	+57	—	4·6
Manila		11·7	182	e 2 44	−11	3·5	—
Tashkent		45·2	305	e 8 37	+ 3	e 26·2	29·0
Ekaterinburg		52·4	323	9 14	− 8	27·2	—
Kucino		65·0	323	—	—	e 35·8	—
Leningrad		68·0	328	—	—	39·0	45·3
Pulkovo		68·1	328	—	—	e 27·2	45·1
De Bilt		84·0	326	—	—	e 43·2	—
Strasbourg		84·6	324	—	—	e 54·2	—
Uccle		85·1	325	—	—	47·2	—

Additional readings and notes: Irkutsk (Δ =29°·0); failed to register from 0h.0m. to 9h.6m. Tashkent e = +24m.13s. and +25m.16s., MN = +27·5m. MZ = +57·4m. Kucino e = +27m.21s. = SR_3 +26s. Leningrad MZ = +45·2m. Pulkovo MN = +38·8m., MZ = +45·8m.

Feb. 27d. 3h. 20m. 0s. Epicentre 48°·0N. 105°·0E. (as on 1925 June 24d.).

$A = -·173$, $B = +·646$, $C = +·743$; $D = +·966$, $E = +·259$; $G = -·192$, $H = +·718$, $K = -·669$.

Very doubtful; the absence of any observation from Irkutsk (Δ =4°·3) is due to the temporary extinction of the light 0h.36m. to 8h.35s.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Tashkent	**26·1**	**266**	e 5 44	− 5	e 10 36	+12	—	20·3
Ekaterinburg	**27·9**	**305**	—	—	—	—	15·0	18·3
Baku	**39·4**	**279**	—	—	—	—	e 21·8	—
Kucino	**40·4**	**307**	—	—	—	—	e 19·4	—
Pulkovo	**43·0**	**315**	—	—	—	—	e 21·0	—
Leningrad	**43·0**	**315**	—	—	—	—	19·4	—

Tashkent MN = +19·0m.

Feb. 27d. 3h. 57m. 50s. Epicentre 40°·0N. 129°·5W.

A = −·487, B = −·591, C = +·643 ; D = −·772, E = +·636 ;
G = −·409, H = −·496, K = −·766.

		Δ	Az.	P.	O−C.	S.	O−C.		L.	M.
		°	°	m. s.	s.	m. s.	s.		m.	m.
Berkeley		6·0	109	1 35	+ 3	e 2 43	− 1		—	—
Victoria	N.	9·5	26	4 16	?S	(4 16)	0		5·5	7·6
Tucson		16·9	111	4 2	− 2	7 13	− 3	e	9·8	10·2
Honolulu T.H.	E.	30·5	241	—	—	—	—	e	16·2	—
Chicago	E.	31·4	76	—	—	—	—		16·2	18·4
Ann Arbor	N.	34·1	73	—	—	—	—	e	15·6	—
Toronto	N.	36·9	69	—	—	—	—		17·8	22·6
Ottawa		39·1	64	—	—	e 13 23	−30	e	17·7	22·8

Additional readings : Berkeley gives many other e readings. Victoria LE = +4·2m., ME = +6·8m. Tucson eLN = +9·4m. Ottawa MN = +21·3m.

Feb. 27d. Readings also at 1h. (Nagasaki), 2h. (Azores, Zi-ka-wei, and near Mizusawa), 3h. (near Mizusawa), 4h. (near Tacubaya), 7h. (Suva and near Tucson), 8h. (near Amboina), 9h. (Suva, Apia, and Ksara), 10h. (Baku, Irkutsk, Leningrad, Ekaterinburg, Kucino, Ksara, and near Athens), 14h. (Santiago), 16h. (Baku and Suva), 20h. (Santiago), 21h. and 23h. (Suva).

Feb. 28d. 3h. 32m. 32s. Epicentre 46°·7N. 7°·2E. (as on 1927 Jan. 8d.).

A = +·680, B = +·086, C = +·728.

	Δ	Az.	P.	O−C.	S.	O−C.
	°	°	m. s.	s.	m. s.	s.
Zurich	1·1	55	e 0 17	0	i 0 31	0
Chur	1·6	85	—	—	0 51	+ 6
Strasbourg	1·9	12	—	—	0 31	−22
Hohenheim	2·4	34	i 0 12	−25	—	—

Strasbourg SR_1 = +45s.

Feb. 28d. 14h. 7m. 45s. Epicentre 29°·0S. 71°·0W. (as on 1923 March 9d.).

A = +·285, B = −·827, C = −·485 ; D = −·946, E = −·326 ;
G = −·158, H = +·458, K = −·875.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Santiago		4·5	177	0 20	−50	(1 12)	−52	1·2	—
Pilar		6·7	115	2 9	+27	—	—	—	7·0
Sucre		11·3	29	i 2 50	+ 1	i 5 20	+18	6·4	7·8
La Plata		12·6	121	i 3 8	+ 1	5 33	− 1	6·8	—
La Paz		12·8	13	e 2 59	−11	i 5 46	+ 7	6·9	10·0
Rio de Janeiro	E.	25·7	83	i 4 38	−67	9 3	−73	12·2	13·6
	N.	25·7	83	i 4 36	−69	9 5	−71	11·5	13·8
Tacubaya		55·5	328	9 51	+ 8	17 36	+ 0	26·4	32·3
Fordham	E.	69·9	358	e 11 37	+21	i 20 19	− 6	e 33·8	—
St. Louis	N.	70·0	346	i 11 17	0	i 20 20	− 6	—	35·2
Ithaca		71·7	356	—	—	20 35	−11	e 32·2	—
Tucson		72·0	325	11 27	− 3	20 41	− 9	e 34·8	38·2
Ann Arbor		72·3	351	e 10 27	−65	i 20 45	− 9	e 38·2	38·6
Chicago	E.	72·5	348	—	—	i 20 37	−19	e 44·2	36·2
	N.	72·5	348	i 11 34	+ 1	i 20 34	−22	35·2	41·8
Toronto	N.	73·0	354	e 11 41	+ 5	e 20 45	−17	36·7	39·7
Cape Town		73·9	120	11 44	+ 3	21 21	+ 8	—	37·2
Ottawa		74·5	357	i 11 45	− 1	i 21 12	− 8	e 35·2	—
Azores		79·0	36	19 15	?	—	—	—	—
Wellington	E.	87·1	225	—	—	i 23 9	[− 1]	—	—
San Fernando		89·3	46	10 15	?	23 45	−21	45·2	50·2
Rio Tinto		89·9	45	29 15?	?	—	—	—	57·2

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Victoria	E.	90·5	329	23 24	?[S]	(23 24)	[− 7]	44·3	50·6
Granada		91·4	47	—	—	e 18 20	?PR$_1$	—	34·2
Almeria		92·1	49	—	—	—	—	45·6	53·3
Apia		92·5	254	—	—	—	—	42·2	45·2
Toledo		92·8	45	—	—	e 36 53	?	e 43·8	52·4
Algiers		95·6	50	e 13 32	−15	e 24 49	−23	e 47·2	52·2
Tortosa	N.	96·2	46	—	—	—	—	e 32·2	59·9
Barcelona		97·5	46	—	—	—	—	e 45·0	53·4
Honolulu T.H.		97·5	290	—	—	—	—	e 44·8	—
Bidston		101·2	35	20 29	?PR$_1$	25 33	−34	41·2	58·2
Oxford		101·4	37	—	—	—	—	41·6	55·6
Kew		101·5	37	—	—	e 24 15?	[−16]	e 50·2	54·2
Paris		101·6	40	—	—	e 25 29	−42	52·2	54·2
Stonyhurst		101·7	35	—	—	e 26 2	−10	e 53·2	61·6
Entebbe		101·7	95	e 17 26	[−26]	i 24 38	[+ 6]	e 52·0	59·5
Edinburgh		102·5	32	—	—	e 24 15?	[−21]	52·2	63·2
Besançon		102·8	42	—	—	—	—	52·2	—
Moncalieri		102·8	45	e 13 33	−51	24 34	[− 3]	55·5	58·9
	N.	102·8	45	e 16 5	?PR$_1$	24 52	[+15]	55·4	59·2
Uccle		103·6	39	—	—	e 24 33	[− 8]	e 50·2	58·3
Zurich		104·4	44	—	—	e 26 1	−36	(e 53·7)	—
Strasbourg		104·5	42	—	—	e 24 15?	[−30]	52·2	—
Florence		104·5	47	e 19 15?	?PR$_1$	—	—	e 53·2	59·2
Rocca di Papa		104·5	50	e 18 9	[+ 6]	e 19 15	?PR$_1$	e 57·8	65·6
De Bilt		104·7	39	—	—	e 25 57	[+71]	e 51·2	60·1
Ravensburg		105·3	43	—	—	—	—	e 53·2	—
Pompeii		105·3	51	17 39	[−26]	26 39	− 6	—	—
Cheb		107·9	43	—	—	e 34 15?	?SR$_1$	e 55·2	59·2
Hamburg		108·0	38	—	—	—	—	e 52·2	62·2
Graz		108·6	46	i 19 44	?PR$_1$	e 25 24	[+20]	56·2	61·0
Prague		109·1	44	e 26 45	?S	(e 26 45)	−35	e 57·2	60·2
Potsdam		109·2	40	—	—	—	—	e 64·2	—
Vienna		109·6	44	19 2	?PR$_1$	—	—	e 54·2	62·2
Athens		110·7	59	18 18	[− 6]	26 59	−35	45·2	—
Budapest		111·0	46	e 18 15	[−10]	e 33 15?	?SR$_1$	e 59·2	66·0
Helwan		113·8	69	e 19 40	?PR$_1$	29 20	?PS	—	71·0
Upsala	N.	114·1	33	—	—	e 27 17	−46	e 52·2	74·0
Konigsberg	E.	114·2	39	—	—	—	—	60·2	65·2
Ksara	E.	118·7	66	(15 11)	−26	—	—	(57·2)	—
Pulkovo		120·3	35	e 15 25	−19	e 28 15	−36	58·2	63·8
Leningrad		120·3	35	i 20 20	?PR$_1$	—	—	56·6	66·1
Kucino		124·1	40	—	—	—	—	51·8	70·0
Tiflis		127·1	57	e 19 28	[+17]	—	—	e 60·2	84·4
Baku		130·9	60	e 19 21	[0]	—	—	58·2	105·8
Ekaterinburg		136·4	36	i 19 26	[− 7]	i 26 15	?SR$_2$	59·2	83·8
Colombo		144·7	122	19 55	[+ 7]	—	—	—	86·4
Batavia		144·7	174	i 19 44	[− 4]	—	—	e 54·5	—
Kodaikanal		145·0	117	33 33	?	—	—	85·0	89·0
Bombay	N.	145·6	97	e 64 36	?L	—	—	(e 64·6)	76·8
Tashkent		145·6	59	i 19 45	[− 4]	27 9	?PR$_2$	63·2	89·0
Hyderabad		149·7	105	19 56	[+ 1]	30 14	?PR$_2$	52·6	80·2
Simla	E.	152·5	78	—	—	—	—	e 74·8	—
Dehra Dun		153·1	79	80 25	?L	84 55	?	90·9	93·9
Irkutsk		156·5	7	e 20 0	[− 4]	—	—	76·2	104·1
Manila		161·8	220	e 20 15?	[+ 6]	—	—	—	—
Hong Kong		171·9	216	—	—	—	—	—	106·7

Additional readings and notes: Pilar MN = +5·0m. Sucre iS = +5m.32s.; epicentre 29°·5S. 70°·5W. La Paz i = +3m.19s. =PR$_1$ +3s. and +3m.46s., MN = +7·6m.; T$_e$ =14h.7m.25s.; epicentre 29°·5S. 70°·5W. Fordham iPSE = +20m.43s., SR$_1$E = +24m.32s., SR$_2$E = +27m.55s. St. Louis PSN = +20m.47s. Tucson MN = +39·2m.; T$_e$ =14h.7m.57s. and 14h.8m.6s. Ann Arbor ePR$_2$ = +16m.9s., ePS = +21m.33s. Chicago eN = +20m.15s., eSR$_2$E = +28m.45s., eSR$_2$N = +29m.15s., eN = +32m.39s.; T$_e$ =14h.8m.0s. and 14h.8m.27s. Toronto iSN = +20m.48s., iSE = +20m.51s., SR$_1$E? = +26m.21s., eN = +29m.39s. =SR$_2$ +7s.; T$_e$ = 14h.8m.21s. Ottawa eE = +25m.45s., SR$_1$N = +26m.39s., SR$_1$? = +29m.42s.; T$_e$ =14h.8m.1s. Wellington iN = +23m.16s. San Fernando MN = +53·2m. Victoria PN = +23m.32s. Almeria MZ = +50·2m., MN = +52·1m. Barcelona MN = +59·6m. Oxford MN = +59·6. Zurich gives S as e and L as eS; T$_e$ =14h.7m.28s. Strasbourg e = +27m.15s.? =PS −40s. Rocca di Papa eP = +18m.25s. De Bilt eLN = +46·2m., MN = +59·8m., MZ = +60·3m. Hamburg MN = +57·2m., MZ = +60·2m. Graz eS = +29m.30s., MN = +71·1m., [S] is

Continued on next page.

given as e. Prague eS? = +38m.15s.?, MN = +68·2m. Budapest eN = +20m.15s. Upsala eE = +29m.17s., eN = +35m.17s. = SR_1 −16s., ME = +63·1m. Konigsberg LN = +57·2m., LZ = +62·2m., MN = +64·2m. Ksara PR_1E = (+21m.32s.) = PR_1 +77s., PR_2E = (+23m.57s.) = PR_2 +24s., PR_3E = (+25m.32s.) = PR_3 −7s.; all the readings have been diminished by 6m. Pulkovo P = +18m.55s. = [P] +2s., PR_1 = +20m.20s., e = +26m.12s. = [S] +26s., PS = +29m.46s., SR_1 = +36m.9s., MZ = +63·6m., MN = +75·9m. Leningrad MN = +72·1m., MZ = +74·0m. Kucino ePR_1 = +20m.43s., e = +22m.12s., +26m.22s. = PR_3 −11s., +28m.0s., +28m.50s. = S −30s., +30m.51s. = PS −34s., and +36m.56s., MN = +66·0m. Tiflis e = +21m.8s. = PR_1 −3s., +22m.25s., +31m.1s., and +38m.13s. = SR_1 −2s., eSR_1 = +41m.23s., MN = +90·6m. Baku e = +21m.48s. = PR_1 +13s., i = +22m.41s., +39m.38s. = SR_1 −23s., and +45m.23s. = SR_2 +33s., MN = +69·4m., MZ = +90·9m. Ekaterinburg i = +20m.35s., iPR_1 = +22m.6s., iP_4P_4S = +22m.54s., iPR_2 = +25m.9s., $S_4P_4P_4S$ = +29m.14s., iS_4P_4SP = +32m.18s., PPS = +34m.55s., SR_1 = +40m.7s., eSR_2 = +45m.4s., MN = +78·9m., MZ = +85·2m. Tashkent iPR_1 = +23m.13s., $S_4P_4P_4S$ = +29m.51s. = PR_2 +11s., S_4P_4SP = +33m.35s., PPS = +35m.49s., SR_1 = +42m.16s., SR_2 = +47m.45s., MN = +92·4m. Simla eN = +83m.21s. Irkutsk i = +24m.18s. = PR_1 +1s., and +45m.50s., MZ = +93·4m., MN = +97·0m.

Feb. 28d. Readings also at 0h. (Suva), 2h. (Suva and Nagasaki), 3h. (Nagasaki, Riverview, and Santiago), 4h. (Suva, Tiflis, San Fernando, and near Malaga), 5h. (Irkutsk and Nagasaki), 7h. (Nagasaki), 9h. (Johannesburg and Nagasaki), 10h. (Pulkovo), 12h. (Simla), 15h. (La Paz), 20h. (Pilar and near La Plata), 23h. (Tiflis).

March 1d. 3h. 7m. 0s. Epicentre 19°·0N. 68°·0W. (as on 1920 Feb. 12d.).

A = +·354, B = −·877, C = +·326; D = −·927, E = −·375; G = +·122, H = −·302, K = −·946.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Port au Prince		4·1	268	1 48	?S	(1 48)	− 5	2·3	3·1
Fordham		22·5	348	e 5 36	+25	e 9 30	+15	e 14·3	—
Toronto	E.	26·4	341	e 5 10	−42	e 10 27	− 3	—	20·6
Ann Arbor	N.	26·8	334	—	—	—	—	15·9	16·6
Ottawa		27·2	348	e 5 48	−12	e 10 40	− 5	e 13·0	—
Chicago		28·2	328	—	—	10 24	−39	13·4	14·4
La Paz		35·5	180	7 26	+ 8	—	—	—	—
Tiflis		93·2	44	—	—	25 0	+13	e 61·9	—
Tashkent		107·8	34	—	—	e 27 0?	− 8	e 54·0	61·2

Additional readings: Fordham eE = +13m.15s. Ottawa eLN = +14·0m. Ann Arbor eE = +13m.6s. and +13m.24s., eN = +14m.6s., eLE = +14·3m. Chicago iE = +13m.8s. Kingston (Jamaica) records a shock for 3h.

March 1d. Readings also at 0h. (La Paz and Sucre), 3h. (Nagasaki (2)), 5h. (Agana and near La Paz), 10h. (Nagasaki and near Mizusawa), 11h. (near Mizusawa), 13h. (La Paz and Suva), 14h. (Tiflis), 15h. (La Paz), 16h. (near Toyooka), 21h. (La Paz), 23h. (Fordham).

March 2d. Readings at 1h. (Fordham), 2h. (La Plata), 5h. (Ekaterinburg and Irkutsk), 7h. (near Taihoku).

March 3d. 1h. 4m. 57s. Epicentre 6°·3S. 122°·5E.

(given by Batavia).

A = −·534, B = +·838, C = −·110; D = +·843, E = +·537; G = +·059, H = −·093, K = −·994.

See special note about P[S] at end.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Amboina		6·2	65	(i 1 15)	−20	(i 3 3)	+14	(i 3·2)	—
Malabar		14·8	266	i 3 36	0	—	—	—	—
Batavia		15·6	269	i 3 46	− 1	—	—	—	—
Manila		21·0	356	i 5 3	+10	i 10 1	+77	i 12·8	14·2
Perth		26·4	193	5 50	− 2	10 13	−17	11·6	16·5
Hong Kong		29·8	344	6 23	− 3	—	—	—	16·0
Phu-Lien		31·3	330	e 6 33	− 8	e 11 50	− 6	15·0	26·5
Taihoku	N.	31·4	359	7 2	+20	12 14	+16	15·8	—
Adelaide		32·3	154	6 38?	−13	i 11 53	−20	i 15·6	21·0
Melbourne		37·5	150	i 8 27	+53	13 45	+14	20·6	24·6
Zi-ka-wei		37·5	0	7 31	− 3	i 13 15	−16	—	36·8
Riverview		38·2	141	e 7 38	− 2	e 13 22	−19	e 16·9	20·2
Sydney		38·2	141	6 33	−67	13 33	− 8	21·6	24·6
Nagasaki		39·7	10	6 46	−66	14 0	− 2	17·2	19·2
Hukuoka		40·6	11	7 56	− 4	12 54	−81	17·6	19·4
Sumoto		42·3	16	8 10	− 3	(14 48)	+ 9	17·8	18·1
Kobe		42·7	16	8 13	− 3	11 5	?	17·8	18·0
Osaka		42·8	16	8 12	− 5	(14 48)	+ 3	14·8	18·3
Toyooka		43·5	15	8 19	− 3	14 48	− 7	18·1	—
Calcutta	E.	44·1	314	8 19	− 8	14 59	− 4	21·3	26·0
	N.	44·1	314	8 18	− 9	15 4	+ 1	—	—
Colombo		44·6	287	8 23	− 7	14 53	−17	21·6	27·9
Mizusawa	E.	48·6	21	9 1	+ 3	13 22	−99	—	—
	N.	48·6	21	8 57	− 1	13 24	−97	—	—
Bombay	N.	55·0	300	11 34	+115	17 34	+13	23·9	31·1
Suva	N.	55·6	109	e 10 27	+44	—	—	—	69·8
Ootomari		55·9	18	10 6	+21	—	—	19·1	—
Simla	E.	57·2	315	9 57	+ 4	17 45	− 4	26·8	32·6
	N.	57·2	315	10 3	+10	17 51	+ 2	27·2	31·8
Christchurch		57·5	139	10 15	+19	18 21	+28	30·0	39·0
Wellington	E.	58·0	136	10 15	+16	18 33	+34	30·1	36·2
	N.	58·0	136	10 23	+24	i 18 3	+ 4	27·8	33·8
Irkutsk		60·6	349	i 10 21	+ 5	i 18 40	+ 9	31·0	40·6
Apia		64·9	102	11 29	+45	21 52	?	36·2	40·0
Tashkent		68·0	320	i 11 5	+ 1	i 20 6	+ 4	30·6	37·2
Ekaterinburg		80·5	331	i 12 18	− 4	22 19	−10	39·0	51·4
Baku		81·1	314	e 12 25	− 1	i 22 42	+ 6	37·8	58·2
Honolulu, T.H.	E.	82·8	68	13 3	+28	23 45	+50	i 39·2	41·6
Tiflis		85·1	315	e 12 43	− 6	23 17	− 3	e 44·0	60·2
Entebbe		90·1	272	13 6	−11	23 44	[+15]	e 35·3	44·3
Ksara		90·7	305	13 13	− 7	24 12	− 9	36·0	—
Makeyevka		91·1	320	e 13 13	− 9	23 45	[+10]	44·0	63·5
Kucino		92·2	326	e 13 18	−10	i 24 39	+ 2	42·2	55·3
Helwan		94·2	300	e 13 34	− 5	e 23 56	[+ 3]	—	58·8
Pulkovo		96·6	330	13 39	−13	25 1	−21	45·0	62·3
Leningrad		96·6	330	13 41	−11	25 4	−18	39·6	62·5
Cape Town		98·0	235	18 10	?PR_1	25 13	−23	57·0	—
Helsingfors	E.	99·3	330	e 16 55	?	e 24 44	[+24]	e 37·0	53·6
Lemberg	E.	100·3	320	(e 17 57)	[+ 9]	(e 24 9)	[−16]	(e 54·6)	—
	N.	100·3	320	e 16 33	?	e 22 51	?	e 51·2	55·4
Athens		100·7	309	e 13 48	−26	24 33	[+ 6]	42·0	56·0
Konigsberg	E.	102·1	325	—	—	25 3	[+29]	e 49·0	53·0
	N.	102·1	325	—	—	25 33	−43	e 42·4	51·0
Upsala	E.	102·9	330	e 18 17	[+19]	—	—	e 51·0	61·8
Budapest		103·7	319	18 18	[+18]	24 0	[−41]	e 48·0	69·0
Vienna		105·4	320	e 14 1	−35	25 4	[+15]	—	66·0
Zagreb		106·0	316	e 18 47	?PR_1	e 25 16	[+24]	e 47·0	—
Graz		106·2	319	e 18 53	?PR_1	i 29 28	?P[S]	50·0	65·0
Prague		106·4	321	e 18 53	?PR_1	e 29 13	?P[S]	e 43·0	57·0
Copenhagen		106·5	327	14 39	− 3	25 12	[+18]	48·0	69·4
Potsdam		106·8	324	i 18 36	?PR_1	e 25 53	[+57]	e 53·2	66·8
Pompeii		107·7	313	e 18 22	[+ 8]	e 25 22	[+22]	—	—
Cheb		107·7	321	e 18 59	?PR_1	e 29 23	?P[S]	e 51·0	58·0
Naples		107·9	313	e 19 29	?PR_1	e 26 9	−60	—	58·0

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Hamburg		108·3	325	e 18 57	?PR$_1$	e 25 21	[+18]	e 50·0	54·0
Bergen		108·6	333	—	—	—	—	e 55·0	—
Rocca di Papa		108·9	313	e 18 39	?PR$_1$	e 30 16	?P[S]	e 56·9	78·4
Innsbruck	N.E.	108·9	318	e 18 43	[+24]	—	—	e 54·2	55·9
	N.W.	108·9	318	e 18 23	[+ 4]	—	—	e 50·6	60·2
Florence		109·7	314	e 19 28	?PR$_1$	27 43	+18	50·0	59·0
Ravensburg		110·0	320	e 19 37	?PR$_1$	e 30 3	?P[S]	e 54·0	66·4
Hohenheim		110·0	320	e 19 25	?PR$_1$	e 29 51	?P[S]	e 55·0	64·9
Feldberg	E.	110·1	321	e 19 3	?PR$_1$	—	—	e 56·0	64·0
Chur		110·2	318	19 6	?PR$_1$	29 49	?P[S]	—	—
Victoria	E.	110·6	40	19 33	?PR$_1$	28 43	?PS	45·9	53·0
	N.	110·6	40	—	—	29 38	?P[S]	45·9	46·9
Zurich		110·7	318	e 18 16	[− 8]	e 27 8	−26	—	—
Strasbourg		111·0	320	e 14 49	−13	i 27 38	+ 1	e 48·0	68·3
De Bilt		111·6	324	i 19 35	?PR$_1$	e 29 17	+95	e 54·0	57·1
Moncalieri		111·9	316	19 22	?PR$_1$	30 18	?P[S]	51·1	69·4
Uccle		112·5	323	e 19 36	?PR$_1$	e 29 21	+91	e 35·0	57·5
Besançon		112·5	319	e 19 46	?PR$_1$	e 30 19	?P[S]	55·0	59·0
Berkeley	Z.	113·7	50	e 19 46	?PR$_1$	e 29 36	?PS	e 54·6	—
Paris		114·2	321	e 19 12	?PR$_1$	e 30 11	?P[S]	52·0	62·0
Edinburgh		114·6	330	e 20 3	?PR$_1$	i 28 53	+46	53·0	66·6
Kew		114·9	325	e 15 41	+21	e 30 13	?P[S]	48·0	62·0
Stonyhurst		115·1	327	20 6	?PR$_1$	e 30 21	?P[S]	e 45·0	—
Oxford	E.	115·4	325	20 1	?PR$_1$	i 27 36	−37	32·8	62·0
	N.	115·4	325	20 33	?PR$_1$	i 27 45	−28	i 35·9	63·0
Bidston		115·7	327	20 41	?PR$_1$	—	—	35·6	64·2
Barcelona		116·7	314	e 19 8	[+25]	—	—	50·3	71·4
Algiers		117·2	309	e 20 44	?PR$_1$	31 10	?P[S]	49·0	66·6
Tortosa	N.	118·0	314	19 23	[+36]	—	—	e 47·0	65·0
Alicante		119·6	312	19 2	[+11]	e 30 37	?	e 50·7	52·6
Almeria		121·2	310	19 0	[+ 4]	e 30 33	?P[S]	65·6	72·3
Toledo		121·7	314	19 9	[+12]	e 30 40	?P[S]	e 50·6	53·9
Granada		122·2	310	e 20 0	?PR$_1$	—	—	64·6	74·0
Malaga		123·0	310	e 19 12	[+11]	e 31 6	?P[S]	e 40·8	—
Tucson	N.	124·1	54	19 16	[+13]	—	—	e 58·8	—
Rio Tinto		124·3	313	32 3?	?	—	—	—	85·0
San Fernando		124·4	310	21 3	?PR$_1$	34 8	?	60·0	69·0
Chicago		135·6	32	—	—	e 26 27	?	57·6	60·2
Ann Arbor	E.	137·2	29	—	—	—	—	e 58·4	71·4
Tacubaya		137·4	68	19 53	[+18]	—	—	65·4	—
Ottawa		137·8	19	e 23 33	?PR$_1$	—	—	e 51·0	66·0
Toronto		138·0	24	e 23 23	?PR$_1$	—	—	e 45·9	75·7
Rio de Janeiro	N.	147·6	205	e 18 43	[−69]	—	—	41·4	—
Sucre		153·5	163	20 8	[+ 7]	—	—	68·0	74·5
La Paz		154·9	155	20 8	[+ 6]	33 20	?	68·2	80·8

Additional readings: Amboina i=(+1m.33s.); all readings having been diminished by 7m. Malabar i=+4m.4s. Batavia i=+3m.57s.=PR$_1$+1s. Manila MN=+13·6m. Perth P=+6m.23s.=PR$_1$−9s., PR$_1$=+7m.8s. Zi-ka-wei MN=+37·0m. Riverview iP=+7m.48s., PR$_1$=+9m.24s.=PR$_2$−4s., PS=+13m.35s., and +14m.4s., MZ=+25·8m. Nagasaki MN=+20·7m. Sumoto S=+10m.8s.=PR$_2$−13s., SR$_1$=+12m.12s., MN=+18·9m., S is given as SR$_2$. Kobe MN=+21·5m. Osaka MN=+27·2m. Christchurch SR$_2$=+25m.3s.=SR$_2$−6s. Wellington SR$_2$N=+24m.35s.; T$_0$N=1h.5m.43s. Irkutsk PR$_1$=+13m.0s., MN=+39·8m., MZ=+49·0m. Apia +28m.42s.=SR$_2$+40s. Tashkent i=+11m.31s., ePR$_1$=+13m.47s., PR$_2$=+15m.18s.?, PS=+20m.32s., SR$_1$=+25m.21s., SR$_2$=+27m.5s., MN=+36·2m., MZ=+36·4m. Ekaterinburg i=+12m.32s., PR$_1$=+15m.24s., PR$_2$=+17m.12s., iPR$_2$=+18m.35s., i=+21m.6s. and +22m.24s., iS$_4$P$_4$S=+22m.45s., iSR$_1$=+28m.5s., SR$_2$=+31m.32s., MN=+48·4m., MZ=+48·5m. Baku iP=+12m.26s., i=+13m.0s. Honolulu S$_6$P$_6$SE=+23m.21s., PPSE=+25m.15s.; T$_0$=1h.5m.16s. Tiflis i=+13m.14s., e=+14m.23s., PR$_1$=+16m.25s., ePR$_2$=+18m.53s., PPS?=+24m.47s., SR$_2$?=+33m.33s., MN=+56·4m. Ksara PN=+13m.18s.; T$_0$=1h.5m.5s. Makeyevka PR$_1$=+16m.51s., e=+17m.47s., PPS=+26m.9s., e=+27m.45s., MN=+52·2m., MZ=+53·9m. Kucino e=+14m.54s., PR$_1$=+16m.59s., e=+18m.17s., S$_4$P$_4$P$_6$S=+24m.17s., PS=+25m.35s., PPS=+26m.6s., SR$_1$=+30m.45s., SR$_2$=+35m.9s., e=+37m.57s.=SR$_2$+15s., MN=+46·4m. Pulkovo PR$_1$=+17m.41s., S$_4$P$_6$S=+24m.31s., SR$_1$=+31m.39s., SR$_2$=+35m.15s., MN=+50·8m., MZ=+63·4m. Leningrad iPR$_1$=+17m.43s., PR$_2$=+20m.9s., iPS=+26m.27s., iPPS=+28m.3s.,

Continued on next page.

$iSR_1 = +32m.15s.$, $SR_2 = +36m.33s.$, $MN = +57{\cdot}6m.$, $MZ = +62{\cdot}3m.$ Helsingfors $ePZ = +16m.58s.$, $eP_4PE = +18m.1s.$, $ePR_2N = +20m.58s.$ $ePSN = +25m.26s.$, $ePPSZ = +25m.55s.$, $eS_4SE = +27m.28s.$, $eSR_2E = +31m.28s.$, $MN = +54{\cdot}6m.$ It seems probable that all the times should be increased by 1min. Lemberg, the readings have been increased by 1min. Athens $PR_1E = +18m.19s.$, $PR_1N = +18m.31s.$, $MN = +53{\cdot}0m.$ Konigsberg $ePR_1?N = +18m.3s.$, $ePR_1?E = +18m.33s.$, $iN = +27m.48s. = PS + 20s.$ Upsala $eLN = +45{\cdot}0m.$, $MN = +55{\cdot}9m.$ Budapest $MN = +71{\cdot}7m.$ Vienna $eZ = +14m.48s.$, $PR_1 = +19m.40s.$, $SR_1 = +30m.37s.$ Graz $SR_1 = +36m.30s.$, $MN = +55{\cdot}0m.$ Copenhagen $P = +18m.45s.$, $PR_1 = +19m.2s.$, $e = +19m.32s.$, $PS = +28m.9s.$, $PPS = +29m.9s.$, $SR_1 = +34m.3s.?$, $MN = +52{\cdot}0m.$ Rocca di Papa $PE = +20m.39s.$, $eL = +49{\cdot}8m.$ Innsbruck $eNE = +19m.42s. = PR_1 + 31s.$, $eNW = +20m.2s.$ Florence $S = +28m.48s. = PS - 7s.$ Ravensburg $ePR_2E = +25m.33s. = [S] + 23s.$, $MN = +57{\cdot}3m.$ Hohenheim $ePR_2N = +24m.19s.$, $eLN = +57{\cdot}0m.$, $MN = +60{\cdot}0m.$ Feldberg $eE = +21m.50s. = PR_2 + 26s.$, $+24m.19s. = PR_2 + 6s.$, $+24m.50s. = [S] - 20s.$, and $+30m.3s.$ Zurich $e = +19m.29s. = PR_1 + 6s.$ Strasbourg $iPR_1 = +19m.19s.$, $PS = +29m.28s.$, $iPPS = +30m.1s.$, $SR_1 = +34m.49s.$, $SR_2 = +40m.13s.$, $MN = +69{\cdot}6m.$ De Bilt $MN = +58{\cdot}0m.$, $MZ = +67{\cdot}6m.$ Moncalieri $SE = +29m.26s. = PS + 7s.$, $MN = +70{\cdot}5m.$ Paris $MN = +59{\cdot}0m.$ Kew $eP = +19m.42s. = PR_1 - 4s.$, $SR_1 = +35m.59s.$, $SR_2 = +40m.31s.$, $e = +45m.3s.? = SR_2 + 27s.$, $MN = +63{\cdot}0m.$, $MZ = +71{\cdot}9m.$ Barcelona $MN = +66{\cdot}3m.$ Tortosa $ME = +71{\cdot}5m.$ Alicante $MN = +55{\cdot}0m.$ Almeria $PR_1 = +24m.42s. = PR_2 + 48s.$, $PR_2 = +29m.17s. = S + 19s.$, $MZ = +73{\cdot}4m.$, $MN = +75{\cdot}8m.$ Toledo $MNW = +53{\cdot}4m.$ Granada $i = +20m.51s. = PR_1 + 11s.$, $+21m.22s.$, $+25m.22s. = [S] - 29s.$, $+26m.58s. = PR_2 + 44s.$, $+29m.47s. = S + 41s.$, and $+32m.37s.$ Tucson $PR_1N = +21m.3s.$, $ePSN = +28m.39s.$ San Fernando $SR_1 = +41m.20s.$, $MN = +77{\cdot}0m.$ Chicago $eSR_1 = +40m.27s.$, $LE?(\text{Raleigh}) = +67{\cdot}0m.$, $MN = +60{\cdot}4m.$ Ann Arbor $eLN = +63{\cdot}6m.$ Ottawa $MN = +72{\cdot}0m.$ Toronto $MN = +75{\cdot}8m.$ Rio de Janeiro $ePE = +18m.48s.$ Sucre $PR_1 = +24m.20s.$, $PR_2 = +27m.59s.$, $SR_2 = +44m.38s. = SR_1 + 66s.$ La Paz $PR_1 = +24m.40s.$, $SR_2 = +39m.21s.$, $MN = +81{\cdot}4m.$

NOTE ON P[S] IN THE OBSERVATIONS OF 1927 MAR. 3d. 1h.

In a paper "Revised Seismological Tables and the Earth's Liquid Core" (Geoph-Supp. to M.N.R.A.S., p. 438, Dec. 1926) it was shown that many observations tabulated as S fit a combination P[S], taking [S] from Gutenberg. Over the range in Δ there given, the times for P[S] fit closely the empirical formula $C_1 = 15m.56s. + \Delta^\circ \times 7{\cdot}4sec.$, or $C_1 = 28m.16s. + (\Delta - 100^\circ) \times 7{\cdot}4sec.$

The following are the observations of P[S] compared with the formula quoted:

	Δ	O.	C_1	O−C_1		Δ	O.	C_1	O−C_1
	°	m. s.	m. s.	s.		°	m. s.	m. s.	s.
Graz	106·2	i 29 28	29 2	+26	Besançon	112·5	e 30 19	29 49	+30
Prague	106·4	e 29 13	29 3	+10	Paris	114·2	e 30 11	30 3	+ 8
Cheb	107·7	e 29 23	29 12	+11	Kew	114·9	e 30 13	30 6	+ 7
Rocca di Papa	108·9	e 30 16	29 22	+54	Stonyhurst	115·1	e 30 21	30 8	+13
Ravensburg	110·0	e 30 3	29 30	+33	Algiers	117·2	31 10	30 23	+47
Hohenheim	110·0	e 29 51	29 30	+21	Almeria	121·2	e 30 33	30 53	−20
Chur	110·2	e 29 49	29 31	+18	Toledo	121·7	e 30 40	30 57	−17
Victoria, N.	110·6	29 38	29 36	+ 2	Malaga	123·0	e 31 6	31 6	0
Moncalieri	111·9	30 18	29 44	+34					

It will be seen that the mean value of O − C. is about 16sec., though a little uncertain from the fact that one or two errors of 1min. are suggested by the residuals. A discrepancy of about this value was suggested in the paper above quoted (p. 439)—even a little larger (say 20sec.)—and the reason for it was assigned in the sensible depth of the normal earthquake focus, which implies a positive correction to the tables needed twice over (or more) in composite waves. In 1928 Gutenberg issued in diagram form his calculated values for [S] and many other waves, adjusted to a depth of 25km. for the P Wave, in connection with his paper "Theorie der Erdbebenwellen und verwandter erscheinungen, etc., etc." (Gustav Fischer, Jena, 1923).

It seems doubtful, however, how far these are applicable to the observations collated in this Summary, for the following reason: On p. 319 of the paper quoted Gutenberg reproduces the Upsala Seismogram of an earthquake in the Tonga deep, pointing out the waves eP, ePP, eS_4P_4P, etc. Without questioning the correctness of his identifications, it is nevertheless clear that many of them show so slightly on the trace that few observatories would

Continued on next page.

notice them. The readings published by the vast majority of observatories are those of conspicuous disturbances of the trace, sometimes wrongly identified, but selected chiefly because they are conspicuous. At present we can often assign their true character *ex post facto*, but it is still an open question which of the many waves identified by Gutenberg are likely to appear among the readings as they are at present made. If, after the epicentre has been determined, an observatory would go over the trace again, with Gutenberg's tables in hand, it would probably be possible to identify many of these smaller disturbances, but at present there does not seem to be much disposition to undertake these more elaborate readings, or even to revise the readings published for correction of suggested errors. We must be content to identify such readings as are published, and it appears that [S]P or P[S] is liable to be published in mistake for S, as on the present occasion.

Gutenberg's values for S_cP_cSP or [S]P, as shown in the diagram mentioned, begin only at $\Delta = 113°$. It seems clear from the evidence of the present shock that the phase P[S] is liable to be read at $\Delta = 106°$, and in the discussion of the S readings generally (p. 437 of paper in Geop. Sup., Dec. 1926) there are indications at values of Δ back to 98°. From $\Delta = 113°$ to $\Delta = 180°$ Gutenberg's diagram shows a nearly straight line for [S]P, represented by the formula :

$$C_2 = 30\text{m}.0\text{s}. + (\Delta - 113°) \times 6{\cdot}0\text{s}.$$
$$\text{or } C_2 = 28\text{m}.42\text{s}. + (\Delta - 100°) \times 6{\cdot}0\text{s}.$$

The formulæ C_1 and C_2 compare with the above observations (collected into 4 groups of Δ) as below :—

No. of stations	Mean Δ	O.	C_1	C_2	$O-C_1$	$O-C_2$
		m. s.	m. s.	m. s.	s.	s.
4	107·3	29 35	29 10	29 26	+25	+ 9
6	110·9	30 0	29 37	29 47	+23	+13
3	114·7	30 15	30 5	30 10	+10	+ 5
4	120·8	30 52	30 50	30 47	+ 2	+ 5

Gutenberg's formula C_2 is clearly the better, but the improvement is chiefly due to his own revision of the times for [S] from $\Delta = 50°$ to 70°. The formula C_1 was found from the values he published in 1914 ; he modified them sensibly in 1928 In the Summary we have not found occasion to use the values of [S] for values of Δ less than 70° ; between 70° and 120° we have used the formula :—

$$[S] = S + (80 - \Delta) \times 4{\cdot}6\text{s}. = C_1,$$

which accorded well, except for a constant difference, with Gutenberg's values of 1914 and also with his new values of 1928. We may show the new relationship as below, denoting by C_1 the values calculated from the formula just given, and by G Gutenberg's 1928 values.

Δ	G.	$C_1-G.$	Δ	G.	$C_1-G.$	Δ	G.	$C_1-G.$
°	m. s.	s.	°	m. s.	s.	°	m. s.	s.
50	18 57	−18	85	23 1	−15	120	26 0	−12
55	19 37	−16	90	23 19	− 4	125	26 14	−14
60	20 19	−21	95	23 44	− 4	130	26 26	−14
65	20 58	−23	100	24 17	− 5	135	26 36	−16
70	21 36	−24	105	24 49	− 8	140	26 47	−19
75	22 12	−23	110	25 18	− 8	145	26 56	−20
80	22 42	−19	115	25 41	−11	150	27 2	−25

March 3d. 16h. 50m. 4s. Epicentre 45°·3N. 153°·5E. (as on 1925 Dec. 29d.).

$A = -{\cdot}630$, $B = +{\cdot}314$, $C = +{\cdot}711$; $D = +{\cdot}446$, $E = +{\cdot}895$;
$G = -{\cdot}636$, $H = +{\cdot}317$, $K = -{\cdot}703$.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Ootomari		7·6	284	2 2	+ 7	(3 26)	0	3·4	5·6
Mizusawa	E.	11·0	240	2 42	− 2	4 26	−28	—	—
	N.	11·0	240	2 50	+ 6	4 28	−26	—	—
Toyooka		17·2	242	4 5	− 2	(7 24)	+ 2	e 10·0	—
Osaka		17·4	239	4 9	− 1	(7 28)	+ 1	7·5	11·4
Kobe		17·6	239	4 7	− 5	7 31	0	11·0	12·2
Sumoto		17·9	239	4 13	− 3	7 33	− 5	10·4	12·9

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Nagasaki		22·1	244	4 53	−13	8 56	−11	12·6	16·7
Zi-ka-wei		28·6	252	i 6 3	−11	10 56	−14	—	22·7
Irkutsk		32·5	300	6 37	−16	i 11 52	−24	16·9	21·9
Taihoku	E.	32·7	242	—	—	—	—	12·9	—
Hong Kong		39·4	245	7 31	−19	13 36	−21	19·9	22·4
Manila		41·2	233	e 7 56?	− 9	—	—	—	—
Honolulu, T.H.	E.	46·1	103	—	—	i 15 23	− 6	e 20·8	21·6
Ekaterinburg		54·9	319	i 9 35	− 3	17 15	− 5	25·9	37·8
Tashkent		58·6	300	i 10 1	− 2	i 18 0	− 6	27·9	32·9
Simla		59·4	285	e 18 20	?S	(e 18 20)	+ 4	—	—
Leningrad		65·0	333	i 10 48	+ 3	i 19 32	+ 7	30·6	41·8
Pulkovo		65·2	333	10 48	+ 2	i 19 31	+ 4	31·9	35·9
Kucino		65·4	326	10 52	+ 5	19 34	+ 4	33·7	39·2
Hyderabad		67·3	274	11 3	+ 3	19 56	+ 2	35·1	45·1
Upsala		68·9	338	e 11 11	+ 1	e 20 14	+ 1	e 34·9	40·8
Baku		70·5	310	11 22	+ 2	20 39	+ 7	36·2	47·7
Makeyevka		71·0	321	11 1	−22	20 41	+ 3	35·9	47·0
Tiflis		72·3	313	e 11 30	− 2	i 20 58	+ 4	e 37·9	45·6
Konigsberg	N.	72·3	334	—	—	i 20 58	+ 4	e 39·9	45·9
Kodaikanal		73·0	269	43 32	?L	—	—	(43·5)	—
Copenhagen		73·8	339	e 11 41	0	21 8	− 4	36·9	38·3
Hamburg		76·4	339	12 2	+ 5	—	—	e 37·5	43·9
Prague		78·3	334	e 22 11	?S	(e 22 11)	+ 7	e 45·9	49·9
Cheb		78·9	336	e 22 13	?S	(e 22 13)	+ 2	39·9	46·1
De Bilt		78·9	340	12 14	+ 2	22 17	+ 6	e 39·9	45·4
Budapest		79·1	330	12 11	− 3	22 9	− 4	e 41·9	51·2
Vienna		79·3	333	12 12	− 3	—	—	e 40·9	54·9
Ottawa		79·5	32	—	—	—	—	e 42·9	—
Feldberg	E.	79·8	339	—	—	—	—	e 53·9	—
Uccle		80·3	341	e 12 15	− 6	e 22 26	− 1	e 42·9	—
Graz		80·5	333	i 15 6	?PR_1	e 22 27	− 2	41·9	60·9
Oxford		80·6	346	—	—	—	—	40·8	55·9
Kew		80·6	345	i 12 20	− 3	e 22 36	+ 6	41·9	46·9
Zagreb		81·5	331	e 12 28	0	e 22 40	− 1	e 45·9	—
Strasbourg		81·6	338	i 12 25	− 3	e 22 36	− 6	39·9	49·3
Innsbruck		81·6	336	e 12 18	−10	—	—	—	54·9
Zurich		82·4	336	e 12 29	− 3	—	—	—	—
Paris		82·6	342	i 12 31	− 3	i 22 54	+ 1	45·9	46·9
Chur		82·6	336	e 12 34	0	22 59	+ 6	—	—
Ksara		82·9	313	12 33	− 2	22 56	0	43·9	—
Moncalieri		84·8	337	e 11 34	−73	23 15	− 2	42·6	—
Florence		84·9	334	e 11 56	−51	21 56	−82	50·9	52·9
Athens		85·4	323	—	—	—	—	46·3	56·4
Rocca di Papa		86·3	332	e 9 29	?	—	—	52·6	56·9
Tortosa	N.	90·6	341	—	—	—	—	e 33·9	43·6
Toledo	N.W.	92·5	345	—	—	e 37 24	?SR_2	e 47·4	53·4
Almeria		95·0	341	—	—	—	—	e 52·8	53·6
Granada		95·0	343	i 10 59	?	—	—	48·9	61·9
San Fernando		96·3	345	—	—	—	—	51·4	58·9
La Paz		134·9	62	e 19 27	[− 3]	—	—	22·9	—

Additional readings: Toyooka S has been increased by 3m. Osaka MN = +8·3m. Kobe MN = +12·3m. Sumoto MN = +12·0m. Zi-ka-wei SR_1 = +11m.25s. Irkutsk PR_2 = +7m.51s., MN = +21·7m., MZ = +22·2m. Hong Kong SR_1 = +16m.28s. Honolulu SR_1E (or Love wave) = +19m.8s. Ekaterinburg i = +10m.33s., iPR_1 = +11m.37s., PR_2 = 12m.43s., e = +19m.33s., SR_1 = +20m.59s., MN = +30·2m., MZ = +37·5m. Tashkent PR_1 = +12m.14s., ePR_2 = +13m.28s., PS = +18m.34s., SR_1 = +21m.56s., e = +25m.32s., SR_2 = +26m.44s., MN = +32·6m., MZ = +32·8m. Leningrad iPR_1 = +13m.12s., MN = +41·9m., MZ = +45·8m. Pulkovo PR_1 = +13m.11s., SR_1 = +23m.32s., MN = +44·5m., MZ = +44·7m. Kucino PR_2 = +14m.48s., SR_1 = +23m.48s., e = +29m.56s. Upsala MN = +46·8m. Baku MN = +47·1m., MZ = +47·4m. Makeyevka PR_1 = +14m.1s., PR_2 = +15m.50s., PS = +21m.15s., e = +24m.19s., MN = +45·3m., MZ = +47·2m. Tiflis e = +12m.22s., PR_2? = +16m.0s., PS? = +21m.41s., eSR_2 = +29m.14s., MN = +38·8m. Konigsberg LE = +40·9m., ME = +41·9m. Copenhagen PR_1 = +14m.32s., SR_1 = +26m.2s., e = +32m.56s.?, MN = +44·8m. Prague eS? = +31m.43s. = SR_2 +31s. Cheb eS? = +31m.50s. = SR_2 +26s. De Bilt MZ = +56·0m., MN = +56·2m. Budapest MN = +56·3m. Uccle e = +27m.54s. = SR_1 −24s. Graz MN = +54·6m. Strasbourg PR_1 = +15m.39s., ePR_2 = +71m.32s., PS = +23m.24s. Innsbruck ePNE = +12m.25s., eNE = +15m.41s. = PR_1 −21s. Florence i = +13m.26s. = P +39s. Rocca di Papa 1E = +13m.35s. = P +40s. Toledo MNE = +53·9m. Almeria MZ = +56·8m. Granada PR_1 = +13m.27s. = P −16s., i = +17m.23s. = PR_1 −19s., +19m.8s., and +20m.6s. = PR_2 −5s.

March 3d. Readings also at 0h. (Suva), 1h. (Strasbourg and near Zurich), 7h. (Mizusawa), 9h. (Calcutta), 12h. (Amboina and Suva), 13h. (Kodaikanal and Ekaterinburg), 15h. (Budapest), 21h. (La Plata).

March 4d. Readings at 2h. (near Batavia and Malabar), 3h. (Nagasaki), 4h. (Wellington and near Sumoto), 5h. (Amboina, Tiflis, and near Nagasaki), 6h. (Agana, Nagasaki, Budapest, Strasbourg, and Vienna), 8h. (near Wellington), 9h. (Nagasaki and near Oaxaca), 10h. (Tashkent), 12h. (La Paz), 15h. (Nagasaki), 16h. (near Mizusawa), 18h. and 23h. (2) (Nagasaki).

March 5d. 4h. 12m. 30s. Epicentre 20°·5N. 68°·0W.

A = +·351, B = −·869, C = +·350 ; D = −·927, E = −·375 ;
G = +·131, H = −·325, K = −·937.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Port au Prince		4·5	245	1 12	+ 2	—	—	1·7	2·0
Toronto	E.	25·0	340	—	—	e 9 52	−11	12·6	15·2
Ann Arbor		25·5	332	—	—	—	—	e 13·8	15·9
Ottawa		25·7	348	—	—	i 10 19	+ 3	e 13·0	—
Chicago		27·0	325	—	—	e 10 12	−29	13·0	15·9
La Paz		37·0	180	i 7 29	− 1	10 51	?	23·9	30·6
Sucre		39·6	177	7 51	0	—	—	25·3	30·0
La Plata		56·2	171	—	—	—	—	27·5	—
Ekaterinburg		91·6	26	—	—	—	—	59·5	—
Baku		96·1	43	—	—	—	—	e 82·5	—
Tashkent		106·6	32	—	—	e 47 11	?	e 55·5	—
Irkutsk		107·0	6	—	—	—	—	e 63·5	—

Additional readings and notes : Toronto iE = +10m.5s. =S +3s. Ann Arbor eE= +11m.48s. and +12m.18s., iE=eN= +13m.6s. Chicago eL (Rayleigh)= +15·4m., MN = +16·0m. La Paz MN = +31·4m. ; it is doubtful whether Ekaterinburg and Baku readings are connected with this epicentre. Kingston gives 4h.20m.

March 5d. Readings also at 0h. (near Manila), 1h. (Ekaterinburg, Irkutsk, and Tashkent), 2h. (Baku, Kucino, and Tiflis), 3h. (near Tacubaya), 4h. (Sucre, La Paz (2), and near Victoria), 5h. (Tashkent, Irkutsk, and near Nagasaki), 6h. (Sucre, Irkutsk, and Nagasaki), 8h. (Agana), 9h. (La Plata), 10h. (Nagasaki), 11h. (Nagasaki and near Sumoto), 12h. and 13h. (Nagasaki), 14h. (near Tacubaya), 17h. (Tashkent), 19h. (Baku, Ekaterinburg, Tashkent, Irkutsk, and Tiflis), 23h. (Baku, Tiflis, and near Ksara).

March 6d. 1h. 33m. 30s. Epicentre 26°·0N. 45°·5W.

A = +·630, B = −·641, C = +·438 ; D = −·713, E = −·701 ;
G = +·307, H = −·313, K = −·899.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
San Juan	E.	20·5	253	4 37	−10	—	—	11·2	—
Ottawa		31·0	319	e 7 30?	+52	e 11 45	− 6	e 13·7	—
Toronto	E.	32·6	312	—	—	i 12 15	− 3	15·6	—
Rio Tinto		34·8	60	21 30?	?L	—	—	(21·5)	31·5
San Fernando		34·9	62	—	—	—	—	15·5	17·5
Ann Arbor	E.	35·2	309	—	—	e 12 54	− 4	e 18·0	—
Granada		37·1	62	—	—	e 12 30	−55	17·1	18·3
Chicago	E.	37·9	306	7 38	+ 1	i 13 38	+ 1	e 17·7	20·1
Almeria		38·0	62	—	—	—	—	18·0	19·6
Tortosa	N.	40·7	56	—	—	—	—	e 16·5	20·9
Kew		42·5	40	—	—	—	—	e 16·5	—
Paris		43·5	45	—	—	—	—	e 20·5	21·5
Uccle		45·1	43	—	—	—	—	e 18·5	—
De Bilt		45·9	41	—	—	e 15 15	−12	e 20·5	—
La Paz		47·8	210	9 4	+11	i 16 40	+49	22·5	26·1

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Sucre		48·9	206	e 9 8	+ 9	i 16 40	+35	25·5	29·0
Rio de Janeiro	E.	48·9	179	—	—	—	—	e 24·0	—
Cheb		50·0	45	—	—	—	—	e 21·5	26·0
Copenhagen		50·9	38	e 9 8	− 4	16 19	−11	23·5	—
Pulkovo		60·7	34	10 19	+ 2	e 18 22	−10	28·5	35·4
Leningrad		60·7	34	—	—	—	—	e 28·7	41·7
Victoria	N.	63·0	314	31 29	?L	—	—	(31·5)	36·4
Kucino		65·2	39	e 10 26	−20	e 19 1	−26	28·6	34·7
Makeyevka		66·9	46	e 11 30?	+33	e 20 30?	+41	35·5	36·3
Tiflis		73·3	50	e 11 50	+12	e 21 10	+ 4	e 36·5	43·8
Ekaterinburg		76·7	33	—	—	e 21 49	+ 4	35·5	44·9
Baku		77·3	50	e 12 7	+ 4	e 22 1	+ 9	39·0	43·2
Tashkent		89·7	43	i 13 10	− 4	e 23 44	[+18]	e 42·5	50·3

Additional readings: Toronto iN = +12m.10s. = S − 8s. Chicago PR_1E = +9m.0s., eLN = +18·5m.; T_o = 1h.33m.22s., and 1h.33m.44s. Almeria MZ = +18·4m. Copenhagen PR_2 = +12m.12s. Pulkovo MZ = +35·2m., MN = +35·6m. Leningrad MZ = +35·0m. Victoria PE = +32m.31s. Ekaterinburg e = +24m.20s. Baku MN = +48·2m., MZ = +48·4m. Tashkent ePR_1 = +17m.6s., PR_2 = +19m.3s., i = +24m.27s. = S +16s., PS = +25m.8s., iPPS = +25m.30s., i = +28m.4s., SR_1 = +29m.32s., SR_2 = +33m.18s., MZ = +50·8m., MN = +52·8m. Irkutsk (Δ = 97°·4) failed to register from 0h. 34m. to 8h.20m.

March 6d. Readings also at 1h. (Ekaterinburg and Nagasaki), 3h., 5h., 7h., 9h., 10h. (2), and 11h. (Nagasaki), 12h. (near Sumoto), 13h. (La Paz, Nagasaki, near Chur, and Zurich), 14h., 16h., and 17h. (Nagasaki), 21h. (Nagasaki), 22h. (Nagasaki), 23h. (near Sumoto).

March 7d. 9h. 27m. 36s. Epicentre 35°·7N. 134°·8E.

(as on 1926 July 19d.).

A = −·572, B = +·576, C = +·584; D = +·710, E = +·705; G = −·411, H = +·414, K = −·812.

In *Bull. Earthquake Res. Inst., Tokyo, Vol. IV, p.* 179, 1928, Prof. Imamura gives 35°39′N. 135°·1′E. as the position of the epicentre. This is 0°·2 east of the position given for the shock of 1925, May 23d. Direct comparison between the two indicates that the present shock is 0°·3 nearer Europe, viz., further N.W.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Toyooka		0·2	175	0 8	+ 4	—	—	—	—
Kobe		1·1	163	0 22	+ 5	—	—	—	—
Osaka		1·2	154	0 21	+ 3	(0 35)	+ 2	0·6	—
Sumoto		1·4	177	0 22	+ 1	(e 0 40)	+ 1	e 0·7	—
Nagoya		1·8	107	0 39	+11	0 51	0	1·1	1·5
Matuyama		2·5	222	e 0 52	+13	—	—	e 1·5	—
Hukuoka		4·3	240	1 7	0	(2 8)	+10	2·1	2·3
Nagasaki		5·1	235	1 30	+11	2 34	+14	2·8	3·5
Mizusawa		6·0	54	1 36	+ 4	2 54	+10	—	—
Tsingtau	E.	11·7	276	3 12	+17	5 45	+33	6·4	7·5
Zi-ka-wei		12·0	252	e 3 1	+ 2	i 5 33	+14	6·2	8·2
Ootomari		12·4	26	3 7	+ 2	(5 24)	− 5	5·4	9·9
Taihoku	N.	15·6	231	4 15	+28	(7 19)	+33	7·3	—
Hong Kong		22·4	239	5 10	0	8 15	−58	—	10·9
Manila		24·5	214	i 5 22	−11	i 9 56	+ 2	i 13·8	18·4
Irkutsk		27·1	317	i 5 49	−10	i 10 31	−12	13·4	15·8
Phu-Lien		28·8	246	i 6 8	− 8	i 10 49	−24	13·4	17·4
Amboina		39·9	192	i 7 14	−40	13 24	−41	16·3	—
Calcutta	E.	42·3	267	8 5	− 8	14 9	−30	21·3	—
	N.	42·3	267	8 3	−10	14 15	−24	21·3	—
Dehra Dun		47·2	280	9 44	+56	16 44	+60	24·7	33·4
Simla		47·6	281	8 48	− 3	15 48	− 1	26·0	31·1
Batavia		49·5	220	8 57	− 7	i 16 12	− 1	24·5	33·0
Tashkent		50·4	298	i 9 5	− 4	i 16 20	− 4	37·4	42·9

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Ekaterinburg		52·4	319	i 9 19	− 3	16 45	− 4	—	—
Hyderabad		52·8	267	9 25	0	16 56	+ 2	25·8	32·2
Bombay	E.	56·6	271	9 53	+ 3	17 55	+14	29·6	35·7
	N.	56·6	271	9 47	− 3	17 41	0	29·4	36·8
Kodaikanal		57·7	260	10 0	+ 3	17 54	− 1	—	40·3
Colombo		57·8	255	10 4	+ 6	18 4	+ 8	28·4	39·9
Honolulu, T.H.		59·6	85	i 10 20	+11	e 18 24	+ 6	24·6	28·6
Sitka	N.	60·6	39	—	—	e 18 36	+ 5	34·8	43·4
Baku		64·3	303	i 10 45	+ 5	i 19 26	+ 9	—	67·9
Kucino		64·7	322	i 10 46	+ 3	i 19 26	+ 5	31·5	34·1
Pulkovo		66·2	328	i 10 52	− 1	19 40	0	30·9	53·4
Leningrad		66·2	328	i 10 55	+ 2	19 44	+ 4	29·2	37·4
Tiflis		67·2	306	e 11 0	+ 1	i 19 56	+ 4	—	—
Suva	N.	67·8	136	11 12	+ 9	i 20 24	?PS	34·4	47·1
Makeyevka		68·3	314	11 3	− 3	20 8	+ 2	33·4	53·6
Helsingfors	E.	68·3	330	e 11 6	0	e 20 4	− 2	e 30·4	40·8
	N.	68·3	330	e 11 4	− 2	e 20 14	+ 8	—	40·7
	Z.	68·3	330	e 11 5	− 1	e 20 16	+10	e 32·4	41·8
Perth		70·0	197	e 11 24	+ 7	i 20 24	− 2	i 32·1	41·0
Apia		70·7	124	11 44	+23	20 47	+13	33·4	43·4
Adelaide		70·8	177	e 11 23	+ 1	i 20 36	0	32·3?	40·6
Victoria	E.	71·0	43	11 25	+ 2	22 24	+106	36·9	45·6
	N.	71·0	43	11 25	+ 2	20 41	+ 3	—	45·3
Riverview		71·2	167	i 11 29	+ 5	e 20 38	− 2	e 30·3	31·3
Sydney		71·2	167	11 30	+ 6	20 48	+ 8	33·7	34·3
Upsala		71·5	332	e 11 23	− 4	i 20 42	− 2	e 32·4	41·1
Konigsberg	E.	73·4	327	11 41	+ 3	20 58	− 9	—	44·4
	N.	73·4	327	11 39	+ 1	21 2	− 5	—	42·4
	Z.	73·4	327	11 32	− 6	—	—	e 40·2	42·4
Melbourne		74·2	173	—	—	21 36	[− 7]	34·5	39·4
Lemberg		74·9	321	e 12 36	+48	e 21 24	− 1	e 36·2	42·1
Copenhagen		76·3	330	11 56	− 1	i 21 41	0	34·4	49·6
Ksara	E.	77·3	303	i 12 3	0	i 21 54	+ 2	—	—
Berkeley		77·5	52	12 2	− 2	e 21 55	0	e 32·5	34·0
Lick		78·3	52	12 9	0	22 10	+ 6	e 32·2	34·3
Potsdam		78·4	328	e 12 9	0	i 22 4	− 1	e 35·5	46·0
Hamburg		78·8	330	e 11 59	−13	i 22 7	− 3	e 40·4	46·0
Budapest		78·9	322	12 11	− 1	22 17	+ 6	e 31·4	45·4
Prague		79·4	324	i 12 13	− 2	i 22 15	− 1	e 36·4	47·4
Vienna		79·7	324	i 12 14	− 3	22 19	− 1	—	51·4
Belgrade	N.	80·0	320	e 12 21	+ 2	e 22 28	+ 5	e 37·5	46·3
Cheb		80·3	326	e 12 18	− 3	i 22 25	− 2	e 37·7	47·7
Graz		80·9	323	e 12 22	− 2	22 35	+ 1	37·4	51·5
Edinburgh		81·4	338	—	—	i 22 47	+ 8	33·4	65·0
Zagreb		81·6	322	12 24?	− 4	e 22 53	+11	—	45·1
Sarajevo		81·7	319	e 12 41	+12	—	—	—	—
De Bilt		81·8	331	12 26	− 3	22 40	− 4	e 38·4	49·3
Feldberg	E.	81·9	329	e 12 26	− 4	e 22 40	− 5	e 37·4	46·4
Laibach		82·2	324	e 12 40	+ 9	i 22 42	− 6	—	—
Hohenheim		82·6	328	i 12 30	− 4	i 22 49	− 4	e 37·4	48·9
Athens		82·6	312	12 31	− 3	e 22 43	−10	39·6	50·8
Helwan		82·7	301	12 31	− 3	i 22 46	− 8	—	58·8
Innsbruck		82·8	325	i 12 28	− 7	e 22 57	+ 2	e 31·0	47·3
Uccle		83·1	331	i 12 31	− 6	i 22 51	− 7	37·4	46·7
Stonyhurst		83·1	336	12 28	− 9	22 53	− 5	e 37·4	53·6
Ravensburg		83·2	328	i 12 38	+ 1	—	—	e 40·7	49·6
Strasbourg		83·5	329	i 12 32	− 7	i 22 50	[+ 4]	37·4	47·8
Venice		83·6	324	e 12 44	+ 4	23 9	+ 4	43·7	46·4
Bidston		83·7	336	12 37	− 3	22 56	−10	35·4	55·4
Zurich		84·0	326	i 12 36	− 6	i 22 58	−10	—	—
Chur		84·0	326	e 12 36	− 6	i 23 2	− 6	—	—
Kew		84·3	334	i 12 38	− 6	i 23 4	− 7	39·4	47·0
Oxford		84·5	335	i 12 41	− 4	i 22 55	[+ 2]	e 34·4	42·4
Wellington	E.	85·3	150	e 12 44	− 6	e 22 59	[+ 1]	36·3	37·2
	N.	85·3	150	e 12 44	− 6	23 1	[+ 3]	36·2	38·2
Florence		85·4	323	i 12 54	+ 4	23 17	− 6	39·4	44·4
Besançon		85·4	328	12 44	− 6	23 12	−11	35·4	48·4
Paris		85·4	331	i 12 45	− 5	i 23 8	−15	38·4	57·4
Pompeii		85·9	319	e 12 49	− 4	e 23 39	+10	39·4	61·4
Naples		86·0	319	e 13 57	+64	e 24 24	+54	36·4	52·4
Rocca di Papa		86·2	321	12 48	− 6	i 23 24	− 8	e 34·2	47·2
	E.	86·2	321	i 12 46	− 8	e 23 19	−13	e 42·4	—
Moncalieri		86·2	326	12 46	− 8	23 14	−18	33·8	49·0
Christchurch		86·4	153	e 16 18	?PR_1	23 36	+ 2	36·9	48·6

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		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Plymouth		86·6	335	13 6	+ 9	23 54	+17	—	—
Denver	E.	86·7	42	e 12 52	− 5	23 29	− 9	e 39·7	49·8
Grenoble		86·9	327	e 12 57	− 1	23 27	−13	41·4	49·5
Le Mans		87·0	331	e 22 24?	?S	—	—	48·4	53·4
Tucson	E.	88·3	50	12 59	− 8	23 46	− 9	e 40·2	48·8
	N.	88·3	50	13 7	0	i 23 56	+ 1	e 39·6	40·4
Bagnères		91·0	330	e 13 21	0	e 24 14	−10	e 43·4	52·2
Barcelona		91·5	326	e 12 59	−25	e 24 14	−15	e 41·0	52·5
Tortosa	E.	92·7	328	13 16	−15	23 59	[+15]	—	53·9
	N.	92·7	328	13 20	−11	24 1	[+17]	40·7	55·4
Chicago		93·3	30	—	—	i 24 32	−16	44·7	56·1
Ann Arbor		94·4	27	e 13 36	− 4	i 24 48	−12	e 45·7	57·0
Ottawa		94·4	20	e 13 31	− 9	i 24 39	−21	e 43·9	53·9
Toronto	N.	94·8	24	e 13 15	−27	i 24 2	[+ 6]	43·5	60·5
St. Louis	N.	94·8	35	24 41	?S	24 41	−23	e 43·8	64·0
Algiers		94·8	323	13 28	−14	24 14	−20	38·4	53·4
Alicante		95·2	327	e 13 36	− 8	24 30	−38	e 40·6	60·6
Toledo		95·4	330	e 13 29	−16	i 24 44	−26	e 38·2	54·7
Ithaca		96·7	23	e 17 46	?PR_1	e 24 29	[+23]	e 44·4	59·4
Almeria		97·2	327	i 13 39	−16	25 14	−14	45·9	59·7
Granada		97·5	328	i 13 42	−15	25 21	−10	47·4	59·2
Malaga		98·2	328	e 13 18	−43	24 16	[+ 2]	42·1	56·6
Rio Tinto		98·3	331	14 24?	+22	—	—	—	—
Harvard	E.	98·4	20	—	—	e 25 24	−16	e 44·7	56·0
Fordham	E.	99·0	22	—	—	i 25 21	−25	e 42·4	60·9
	N.	99·0	22	e 13 41	−24	i 25 28	−18	e 42·4	56·1
San Fernando		99·3	330	—	—	24 24	[+ 4]	40·4	57·4
Entebbe		99·9	277	13 57	−13	23 46	[−37]	e 41·6	58·6
Cheltenham	E.	100·0	25	—	—	—	—	e 44·2	57·3
Loyola		101·9	39	—	—	—	—	38·6	60·8
Azores		104·4	345	26 27	?S	(26 27)	−10	—	62·4
Johannesburg		117·9	257	—	—	—	—	—	98·4
Tacubaya		104·8	53	24 21	?S	(24 21)	[−25]	46·2	69·8
San Juan	N.	122·3	24	—	—	—	—	e 65·6	69·6
Cape Town		128·7	252	21 21	?PR_1	30 11	+19	62·1	71·7
La Paz	E.	152·0	53	e 20 2	[+ 3]	e 32 51	?	73·4	81·2
	N.	152·0	53	e 19 58	[− 1]	—	—	72·4	87·9
Sucre		155·7	52	e 19 57	[− 6]	—	—	67·4	88·1
Santiago		159·0	91	—	—	—	—	76·2	—
Pilar		164·0	81	(29 36)	?PR_2	—	—	—	—
Rio de Janeiro	E.	167·0	352	18 9	[−124]	28 34	?PR_2	66·4	103·2
	N.	167·0	352	18 14	[−119]	28 24	?PR_2	68·4	90·2
La Plata		169·6	89	19 56	[−19]	—	—	70·4	—

Additional readings: Hukuoka MN = +2·2m. Nagasaki MZ = +3·3m., MNW = +3·2m. Tsingtau PR_1 = +3m.18s., PR_2 = +3m.24s., SR_1 = +6m.2s., MN = +8·4m. Zi-ka-wei iP = +3m.7s., PR_1 = +3m.15s., MZ = +8·0m. Ootomari MN = +10·4m. Manila MN = +20·0m. Phu-Lien MN = +15·0m. Simla LN = +25·4m., MN = +28·0m. Batavia iP = +9m.0s., L = +27·0m. Ekaterinburg i = +10m.37s., iPR_1 = +11m.25s., iPR_2 = +12m.33s., PS = +17m.1s. Honolulu S_0SN = +20m.11s., eLN = +28·2m., MN = +29·0m.; T_0 = 9h.27m.55s. Sitka ePSE? = +18m.54s., eLE = +31·2m., ME = +42·7m. Kucino PR_1 = +13m.15s., PR_2 = +14m.48s., e = +20m.31s., i = +21m.42s., and +23m.29s., SR_1 = +26m.43s. = SR_2 − 6s., MZ = +41·6m. Pulkovo PR_1 = +13m.25s., PR_2 = +14m.59s., SR_1 = +24m.19s., SR_2 = +27m.2s., MZ = +57·1m., MN = +57·7m. Leningrad PR_1 = +13m.24s., PR_2 = +14m.54s., SR_1 = +24m.18s., SR_2 = +27m.12s., MN = +35·1m., MZ = +41·3m. Tiflis i = +11m.8s., PR_1 = +15m.16s., e = +16m.39s. = PR_2 +31s., PS = +20m.58s., e = +24m.44s., SR_1? = +25m.9s., SR_2? = +27m.6s. Suva PR_2E = +15m.24s., SE = +20m.30s. Makeyevka PR_1 = +13m.48s. PR_2 = +15m.22s., e = +16m.18s. = PR_2 − 5s., PS = +20m.41s., SR_1 = +24m.46s., MZ = +40·6m., MN = +44·7m. Helsingfors iPZ = +11m.14s. ePR_1E = +13m.34s., ePR_1Z = +13m.41s., ePR_2EZ = +15m.10s., eSR_1E = +24m.43s., eSR_1Z = +25m.30s., eSR_2E = +27m.40s., eSR_2Z = +27m.42s. Apia S = +31m.51s. Adelaide e = +13m.17s., MN = +44·3m. Riverview eS = +20m.48s., PS = +21m.30s., SR_1 = +25m.46s., SR_2 = +27m.8s., MN = +31·7m., MZ = +36·0m. Sydney SR_1 = +27m.36s., SR_2 = +29m.42s.; readings have been increased by 12h. Upsala iP = +11m.31s., MN = +41·2m. Konigsberg PR_2EZ = +16m.10s., PR_2N = +16m.13s., PSN = +21m.50s., PPSZ = +22m.0s., SPS?N = +27m.8s., eSR_2E = +29m.5s. eSR_2N = +29m.35s., and several other readings. Melbourne e = +15m.36s. = PR_1 +34s. Copenhagen PR_1 = +14m.43s., PR_2 = +16m.41s.,

Continued on next page.

$PR_3 = +17m.41s.$, e = +25m.54s., $SR_1 = +26m.30s.$, $SR_3 = +31m.6s.$, L (Rayleigh) = +43·4m. Ksara $PR_1E = +14m.58s.$; $T_0 = 9h.27m.54s.$ Berkeley ePE = +12m.7s., ePN = +12m.8s., $ePcPZ? = +12m.39s.$, eSE = +21m.57s. Lick ePN = +12m.11s., eN = +12m.16s., +26m.39s., and +32m.14s. $=SR_3 - 44s.$ Hamburg $iPZ = +12m.7s.$, $ePR_1Z = +15m.12s.$, $ePR_2Z = +17m.4s.$, $iPR_2Z = +18m.32s.$, iSN = +22m.8s., $SR_1N = +27m.34s.$, $iSR_2N = +32m.22s.$, $iSR_3E = +33m.55s.$, eZ = +36m.7s., MN = +46·1m., MZ = +49·8m. Prague MN = +45·4m. Vienna i = +12m.23s., $PR_1 = +15m.22s.$, $PR_2? = +18m.21s. = PR_3 - 22s.$, PPS = +23m.49s., $SR_1 = +27m.49s.$, $SR_2? = +33m.6s. = SR_3 - 20s.$, MN = +45·4m. Graz iP = +12m.30s., $ePR_1 = +15m.44s.$, $iSR_1 = +28m.43s.$, $iSR_2 = +31m.49s.$, MN = +45·2m. Zagreb e = +12m.33s., +13m.9s., +13m.31s., +15m.39s. = $PR_1 - 23s.$, and +16m.48s. De Bilt MN = +48·9m., MZ = +56·0m.; $T_0 = 9h.27m.36s.$ Feldberg iE = +12m.34s. and +22m.49s., $iPR_1E = +16m.9s.$, eE = +24m.48s., $eSR_3 = +31m.54s.$ Hohenheim $ePR_1E = +15m.49s.$, eE = +19m.8s. $= PR_3 - 6s.$, $eSR_1 = +33m.24s. = SR_2 + 52s.$, eLN = +39·7m., MN = +48·8m. Athens $PR_1 = +15m.54s.$, eS = +22m.23s., $SR_1N = +28m.9s.$, $SR_1E = +28m.16s.$, $SR_2N = +31m.47s.$, LE = +34·6m., MN = +56·4m. Innsbruck i = +12m.47s., +12m.53s., and +13m.51s. Uccle MN = +49·1m., MZ = +50·6m. Stonyhurst $PR_1 = +15m.54s.$, $PR_2 = +18m.25s.$, $eSR_1? = +28m.35s.$ Ravensburg $iPR_1 = +15m.52s.$, eN = +19m.0s. $= PR_3 - 24s.$, $eSR_1N = +28m.26s.$, $eSR_2? = +34m.8s. = SR_3 - 32s.$, MN = +49·9m. Strasbourg $iPR_1 = +15m.54s.$, i = +16m.27s., $iPR_3 = +18m.31s. = PR_3 + 12s.$, PS = +23m.10s., MN = +48·6m., MZ = +53·8m. Kew $PR_1 = +15m.57s.$, iE = +34m.30s. = $SR_3 - 30s.$, MN = +50·0m., MZ = +54·8m. Paris e = +15m.56s. $= PR_1 - 36s.$, MN = +50·4m. Rocca di Papa eE = +12m.25s., iPZ = +12m.47s., iPN = +12m.50s., eSN = +23m.18s., eLN = +44·0m. Moncalieri MN = +54·8m. Christchurch +32m.0s. Denver $S_cP_cSE = +22m.41s.$, $SR_1E = +29m.30s.$ Barcelona MN = +53·5m. Chicago $S_cP_cSEN = +23m.42s.$, ePSN = +25m.36s., ePSE = +25m.42s., $SR_1N = +30m.48s.$, $eSR_1E = +31m.6s.$, LE (Rayleigh) = +49·5m., MN = +61·1m. Ann Arbor $ePR_1 = +17m.12s.$, $ePR_3 = +20m.0s.$, iPS = +25m.48s., $eSR_1 = +31m.12s.$, MN = +56·0m.; $T_0 = 9h.27m.54s.$ Ottawa iN = +23m.58s. = [S] + 4s., i = +25m.52s. = PS − 9s., $SR_1 = +31m.4s.$, $SR_2N = +35m.34s.$, iLN = +44·8m., MN = +52·6m.; $T_0 = 9h.27m.54s.$ Toronto $PR_1N = +17m.14s.$, iSN = +24m.41s., LE = +43·4m., ME = +59·4m., and several i readings. St. Louis ePSN = +25m.50s., ePPSN = +26m.41s., $eSR_1 = +31m.22s.$ Algiers $PR_1 = +17m.24s.$, MN = +56·4m. Alicante MN = +56·3m. Toledo iP = +13m.38s., MZ = +57·3m. Ithaca e = +31m.55s. $= SR_1 - 2s.$ Almeria $PR_1 = +17m.30s.$, $PR_2 = +21m.20s.$, $SR_1 = +31m.43s.$, $SR_2 = +35m.45s.$, MN = +58·0m., MZ = +59·3m. Granada $PR_1 = +17m.46s.$, $PR_2 = +20m.23s.$, $PR_3 = +22m.9s.$, PS = +26m.19s., PPS = +27m.31s., i = +29m.21s., $SR_1 = +32m.36s.$, and +35m.59s., i = +40m.7s. Malaga MN = +57·8m., MZ = +58·2m. Fordham $ePR_1 = +17m.57s.$, $PR_2E = +22m.41s.$, PS = +26m.48s., $SR_2 = +40m.4s.$, and several other readings; $T_0 = 9h.27m.55s.$ San Fernando $PR_1 = +17m.44s. = [P] + 0s.$ Entebbe i = +17m.59s. = [P] + 13s. Cheltenham eLN = +50·0m., MN = +62·3m. La Paz iPN = +20m.4s., $iPR_1 = +23m.46s.$, $iPR_2 = +26m.30s.$, $SR_1 = +35m.18s.$, $SR_2 = +43m.0s. = SR_1 - 14s.$, and $+43m.10s.$, $SR_3 = +47m.28s.$ La Plata iPZ = +20m.11s. $= [P] - 4s.$

March 7d. The following is a list of the times at origin of the repetitions of the shock at 9h.27m.36s. from epicentre 35°·7N. 134°·8E. recorded at Toyooka T, Kobe K, Osaka O, Sumoto S, Gihu G ($\Delta = 1·7°$), Nagoya N, Matuyama M, Hukuoka H, and Nagasaki (N). The time given is obtained by deducting the value for P of March 7d. 9h. from the reading of the earliest recording station.

h.	m.	s.		h.	m.	s.	
9	27	42	TK	9	49	17	T
9	28	22	TK	9	49	32	TN
9	32	25	TK	9	50	47	TS
9	35	22	TK	9	52	16	TSN
9	35	52	TK	9	52	58	T
9	38	25	TK	9	53	59	T
9	39	12	TK	9	56	3	T
9	41	22	TK	9	57	31	TN
9	41	25	T	10	1	2	KN
9	43	50	TN	10	6	38	TK
9	44	10	TKS	10	10	29	TK
9	45	49	T	10	12	32	TK
9	48	37	T	10	13	52	TKOSN

Continued on next page.

h.	m.	s.	
10	14	32	N
10	16	2	T
10	18	50	TKO
10	20	3	N
10	22	5	TK
10	22	26	TKOSN
10	24	47	TK
10	27	28	TK
10	31	43	T
10	32	29	TKOSNH(N)
10	36	48	TKSN
10	37	52	TKOS
10	38	34	TKN
10	39	20	K
10	41	3	TKO
10	43	2	TK
10	45	13	T
10	46	22	K
10	46	42	TKOSNMH(N)
10	49	8	T
10	50	1	T
10	51	48	TK
10	52	9	TKN
10	53	18	T
10	54	1	T
11	0	23	T
11	0	50	TKOSN
11	2	22	TK
11	9	57	K
11	13	3	K
11	22	4	TKOSNH
11	22	17	TK
11	25	18	O
11	26	59	TKO
11	27	50	K
11	37	4	K
11	42	18	TKOS
11	42	37	T
11	43	0	TK
11	49	50	TKOS
11	53	21	KON
11	54	7	TK
11	59	15	TK
12	1	54	TK
12	8	7	TK
12	16	32	KO
12	20	34	KN
12	21	22	TKOS
12	22	29	TKS
12	33	58	TKON
13	0	57	TK
13	3	47	TKOS
13	20	2	T
13	23	42	TKOSNMH(N)
13	24	17	TKO
13	25	14	K
13	27	17	T
13	27	40	TKSN
13	45	27	TKOS
13	45	43	TK
13	52	9	KO
14	11	19	TKOSNMH(N)
14	15	35	O
14	17	38	TK
14	20	17	TKOS
14	27	43	K
14	30	52	TKO
14	37	1	TKO
14	40	2	T
14	41	45	T
14	44	59	TKON
14	45	42	TK
14	49	18	K
14	50	22	TK
15	3	9	KON
15	7	39	KO
15	18	57	T
15	19	54	T
15	29	21	KON
15	31	42	KO
15	34	37	TK
15	36	11	TKOSGNMH(N)
15	37	3	T
15	42	38	T
15	44	25	TKO
15	48	41	TKOSNMH
16	2	39	TK
16	4	41	TKO
16	9	4	TKO
16	9	35	T
16	15	4	KON
16	21	57	T
16	24	0	T
16	24	41	T
16	33	50	TKOSN
16	53	29	TKO
16	56	32	T
17	3	59	TKOSN
17	10	7	T
17	10	37	T
17	25	1	O
18	3	7	TKO
18	20	39	O
18	40	42	KO
18	43	2	TKON
18	47	5	TKON
18	57	54	T
18	59	23	T
19	7	55	T
19	18	39	T
19	26	5	T
19	27	31	T
19	31	27	T
19	34	44	TKOSN
19	40	59	TO
19	44	8	TKON
19	50	27	T
19	53	37	TKOSN
19	54	26	T
20	4	27	T
20	15	33	T
20	30	14	O
20	34	38	N
20	44	23	N
20	54	31	N
21	2	50	T
21	21	28	TKOSN
21	53	11	TKOSN
22	15	5	TKOSN
22	31	58	TKO
22	33	54	TON
23	3	16	KO
23	34	57	KON
23	49	31	T
23	52	27	K

March 7d. Readings also at 1h. (Nagasaki, Tashkent, Ekaterinburg, and Irkutsk) 2h. (Baku, Nagasaki, Kucino, Leningrad, Pulkovo, and Tiflis), 6h. (Tashkent), 7h. (Agana), 8h. (Tiflis), 15h. (Irkutsk), 16h. (Baku, Ekaterinburg, Tashkent, and Tiflis), 17h. (near Matuyama), 18h. (Tiflis (2) and near Santiago), 21h. (Suva and Tashkent).

March 8d. Continuation of the list of after-shocks of March 7d., from epicentre 35°·7N. 134°·8E.

h.	m.	s.		h.	m.	s.	
0	2	16	T	14	45	46	T
0	7	7	T	14	50	25	T
0	13	35	TKOSNMH	14	50	38	T
0	19	29	TKO	14	59	59	T
0	22	28	T	15	0	46	T
0	24	36	T	15	1	10	T
1	7	16	T	15	7	12	T
1	14	27	TKOS	15	7	31	T
1	32	41	TKO	15	8	0	T
1	36	34	O	15	10	23	T
2	3	40	T	15	18	40	T
2	7	1	TK	15	29	16	T
2	16	52	TKO	15	51	15	T
3	7	25	T	15	55	50	T
3	35	32	T	15	57	56	T
3	38	34	KO	16	2	46	T
3	47	43	T	16	15	42	T
4	26	42	T	16	23	6	T
5	13	20	TK	16	47	28	T
5	49	14	T	16	52	56	T
6	29	26	T	17	19	30	T
7	2	52	T	17	21	8	T
7	28	4	TK	17	40	35	T
7	29	27	TKO	17	42	28	T
7	39	16	TK	17	48	51	T
7	59	2	TK	17	51	53	T
9	10	27	TKS	18	0	31	TK
9	20	0	T	18	7	5	T
10	32	51	TKOSN	18	24	2	T
10	40	56	T	18	25	10	T
11	50	21	T	18	41	25	T
12	4	48	TKON	19	24	42	T
12	20	21	T	19	27	29	T
12	25	35	T	19	40	25	T
12	53	45	T	19	45	24	T
12	53	48	T	19	45	54	T
12	57	24	TK	19	47	12	T
12	58	13	T	19	51	40	T
13	6	43	TKO	19	59	37	T
13	18	24	T	20	18	8	TK
13	24	43	T	20	24	9	T
13	25	38	T	20	50	34	T
13	37	18	T	21	9	54	T
13	44	45	TK	21	33	36	TK
13	45	29	T	22	19	31	T
14	23	26	T	23	3	42	T
14	25	28	T	23	3	50	T
14	26	22	T	23	4	6	T
14	28	7	T	23	6	54	TKS
14	28	43	T	23	16	4	N
14	35	55	T	23	22	38	T
14	43	43	TKOSNMH	23	36	23	T
14	45	33	T				

March 8d. Readings also at 2h., 5h., and 8h. (Tiflis), 9h. (near Berkeley and Lick), 10h. (Tiflis), 11h. (Graz), 12h. (Taihoku, near Nagoya, and near Santiago), 13h. (Tiflis and Tashkent), 14h. (Irkutsk, Tashkent, and near Nagasaki), 15h. (Ekaterinburg, Tashkent (2), and Tiflis), 21h. (near Port au Prince), 23h. (Tiflis, Tashkent, and Ekaterinburg).

March 9d. 16h. 13m. 15s. Epicentre 9°·5N. 84°·0W. (as on 1924 Nov. 1d.).

$A = +\cdot 103$, $B = -\cdot 981$, $C = +\cdot 165$; $D = -\cdot 995$, $E = -\cdot 105$; $G = +\cdot 017$, $H = -\cdot 164$, $K = -\cdot 986$.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Balboa Hts.	E.	4·4	96	0 9	−59	1 17	−44	1·4	2·2
	N.	4·4	96	0 10	−58	1 17	−44	1·6	—
Merida		12·6	335	(2 36)	−31	(5 49)	+15	(6·4)	—
Tacubaya		17·7	305	4 32	+19	8 35	+62	9·8	11·1
St. Louis		29·7	350	e 6 23	− 2	e 11 12	−17	14·8	—
Chicago		32·4	355	e 6 49	− 3	i 12 18	+ 4	17·8	20·0
Fordham		32·6	15	—	—	e 12 22	+ 4	17·3	18·8
Ann Arbor		32·8	0	e 6 57	+ 2	i 12 21	0	e 17·2	19·0
Ithaca		33·5	10	—	—	i 12 38	+ 6	16·8	—
Tucson	E.	33·7	316	7 3	+ 1	12 55	+19	e 19·2	21·8
Sucre		34·0	148	i 6 5	−60	e 11 15	−85	16·8	19·4
Toronto	N.	34·4	6	—	—	—	—	42·0	—
Ottawa		36·6	10	e 7 30	+ 3	i 13 19	+ 1	e 17·0	20·8
La Plata		50·8	153	e 8 33	−39	—	—	26·8	—
Rio de Janeiro	N.	51·5	131	e 14 35	?S	(e 14 35)	−123	26·5	—
Honolulu T.H.	E.	71·8	289	—	—	—	—	34·6	40·8
San Fernando		74·5	55	—	—	23 20	+120	—	35·2
Granada		76·6	55	i 11 54	− 5	—	—	36·2	38·2
Edinburgh		77·1	35	—	—	—	—	45·8	—
Oxford		78·1	40	—	—	—	—	e 33·8	40·2
Kew		78·7	39	e 12 16	+ 5	e 22 6	− 2	33·8	—
Paris		80·6	42	e 12 27	+ 4	e 22 24	− 6	37·8	38·8
Uccle		81·6	40	—	—	e 22 37	− 5	e 34·8	—
De Bilt		82·0	38	—	—	e 22 42	− 4	e 35·8	43·1
Strasbourg		84·1	42	—	—	—	—	e 36·8	—
Hamburg		84·7	37	e 15 45?	?PR_1	e 23 14	− 2	e 38·8	—
Copenhagen		85·8	34	—	—	e 23 21	− 7	e 39·8	40·8
Cheb		86·8	40	—	—	e 23 19	[+11]	e 39·8	44·8
Upsala	N.	87·6	29	—	—	—	—	e 40·8	—
Prague		88·1	40	—	—	—	—	e 39·8	41·8
Rocca di Papa		88·6	48	—	—	e 21 49	−130	e 51·6	56·8
Helsingfors		90·9	28	e 16 45?	?PR_1	—	—	—	—
Leningrad		93·4	27	—	—	—	—	e 33·0	52·0
Pulkovo		93·5	27	e 17 18	?PR_1	e 25 50	?PS	40·8	48·6
Kucino		99·0	29	—	—	—	—	e 55·6	—
Makeyevka		103·1	36	e 16 20	+114	e 27 35	?PS	38·8	49·6
Cape Town		105·6	123	—	—	—	—	—	58·8
Ekaterinburg		107·6	19	e 18 59	?PR_1	e 25 22	[+23]	43·8	60·1
Tiflis		110·6	39	e 19 47	?PR_1	e 28 46	?PS	e 48·8	57·3
Baku		114·5	36	e 19 51	?PR_1	e 29 18	?PS	49·2	62·9
Irkutsk		117·8	354	—	—	e 28 12	−20	48·8	—
Hyderabad		148·0	33	—	—	—	—	—	83·6

Additional readings and note: Merida readings have been increased by 4m. Chicago $PR_1N = +8m.7s. = PR_2 - 5s.$, $SR_1 = +15m.3s. = SR_2 + 23s.$, $MN = +21\cdot 2m.$; $T_0 = 16h.12m.54s.$ and 16h.13m.9s. Fordham $eN = +12m.28s.$, $SR_1E = +14m.55s. = SR_2 + 11s.$, $SR_2E = +16m.15s.$ Ann Arbor $e?E = +7m.57s. = PR_1 + 3s.$, $eSR_1 = +14m.33s. = SR_2 - 15s.$, $MN = +21\cdot 6m.$; $T_0 = 16h.12m.12s.$ Tucson $PR_1E = +8m.33s. = PR_2 + 3s.$; $T_0 = 16h.12m.41s.$ and 16h.12m.54s. Ottawa $iN = +9m.0s.$, $SR_2E = +16m.9s.$, $eLN = +17\cdot 8m.$, $MN = +23\cdot 8m.$; $T_0 = 16h.13m.24s.$ Rio de Janeiro $ePE = +14m.40s.$, $LE = +26\cdot 2m.$ De Bilt $MN = +37\cdot 1m.$ Copenhagen $e = +28m.9s.$, $MN = +40\cdot 0m.$ Leningrad $MN = +55\cdot 7m.$ Pulkovo $MN = +44\cdot 6m.$, $MZ = +48\cdot 9m.$ Makeyevka $MZ = +72\cdot 1m.$ Ekaterinburg $e = +26m.39s. = S - 27s.$, $+28m.23s. = PS - 8s.$, and $+34m.6s. = SR_1 - 6s.$, $MN = +60\cdot 6m.$, $MZ = +60\cdot 9m.$ Tiflis $e = +40m.11s. = SR_2 + 6s.$, $MN = +59\cdot 2m.$ Baku $MN = +63\cdot 7m.$, $MZ = +75\cdot 6m.$ Irkutsk $e = +35m.59s. = SR_1 - 21s.$

March 9d. Continuation of the list of after-shocks from epicentre 35°·7N. 134°·8E. of March 8d.

h.	m.	s.		h.	m.	s.	
0	20	52	T	12	1	27	T
1	3	52	T	12	24	16	KOS
1	9	56	T	13	29	12	TKS
1	10	2	TK	13	30	14	T
1	10	10	T	13	51	46	T
1	12	58	T	14	3	4	TK
1	30	0	T	14	4	38	T
1	49	14	TKN	15	0	31	T
2	1	31	T	15	5	58	T
2	4	23	T	15	18	47	TK
2	54	7	TK	17	34	8	T
4	2	17	T	17	58	47	T
4	24	44	TKS	18	53	58	TKOS
4	34	27	T	18	55	20	TKS
4	55	1	TK	19	5	6	N
4	55	12	T	19	45	45	TKS
5	54	33	T	19	50	3	TKO
5	57	24	T	19	53	7	K
6	1	49	T	20	5	20	N
6	31	10	T	20	19	46	T
7	25	22	T	20	26	30	TKOSH
7	41	51	T	21	1	40	TK
9	3	47	T	21	8	4	O
10	36	46	T	22	23	9	T
10	42	47	T	22	27	16	T
10	43	14	T	22	36	0	T
11	14	50	H	22	42	6	TK
11	25	44	T	22	45	18	TK
11	44	31	TKOSM	23	5	30	T
11	51	37	N	23	18	46	T

March 9d. Readings also at 1h. (Tashkent), 2h. (Ekaterinburg), 3h. (Apia), 4h. (Tiflis (2)), 10h. (Tashkent), 11h. (Baku and Tiflis), 20h. (Baku and Tiflis (2)), 23h. (Moncalieri and Tiflis).

March 10d. 22h. 35m. 55s. Epicentre 35°·7N. 134°·8E. (as on 1927 March 7d., with many after-shocks).

$A = -\cdot572$, $B = +\cdot576$, $C = +\cdot584$; $D = +\cdot710$, $E = +\cdot705$; $G = -\cdot411$, $H = +\cdot414$, $K = -\cdot812$.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Toyooka	0·2	175	0 5	+ 1	—	—	—	—
Kobe	1·1	163	0 22	+ 5	—	—	0·6	0·7
Osaka	1·2	154	0 23	+ 5	—	—	0·6	1·3
Sumoto	1·4	177	0 26	+ 5	—	—	0·7	0·7
Nagoya	1·8	107	(0 35)	+ 7	—	—	(0·9)	—
Matuyama	2·5	222	(0 38)	− 1	(1 11)	+ 2	(1·2)	(1·3)
Hukuoka	4·3	240	1 19	+12	—	—	2·3	2·5
Zi-ka-wei	12·0	252	—	—	—	—	e 6·4	15·8
Hong Kong	22·4	239	—	—	—	—	—	21·6
Irkutsk	27·1	317	—	—	e 11 3	+20	14·1	—
Phu-Lien	28·8	246	—	—	—	—	14·1	—
Tashkent	50·4	298	—	—	e 16 5?	−19	e 24·1	30·3
De Bilt	81·8	331	—	—	—	—	e 46·1	—

Additional readings and notes: Kobe MNZ = +0·6m. Osaka MN = +1·5m. Sumoto MZ = +0·8m. Nagoya readings have been increased by 1m. Matuyama readings have been increased by 2m.

March 10d. Continuation of the list of after-shocks from the epicentre 35°·7N. 134°·8E. of March 9d. The shock T_0 =22h.35m.55s. written out in full above is not included.

h.	m.	s.		h.	m.	s.	
0	19	16	T	10	53	20	T
0	21	51	T	11	19	23	T
0	22	13	T	11	41	36	TS
0	28	47	T	11	50	36	T
1	43	47	T	11	57	44	TS
2	21	34	T	12	10	56	T
2	41	42	T	12	17	0	T
2	43	45	T	13	21	15	T
2	47	9	TKOS	13	29	0	T
3	1	7	TKOS	13	43	47	T
3	19	2	T	14	20	24	T
3	26	24	T	16	39	44	T
4	59	16	TS	17	20	44	T
5	2	20	T	18	12	32	T
5	51	16	TK	18	25	7	T
7	2	8	T	18	47	47	T
7	2	16	TS	21	38	20	TS
7	8	35	T	22	4	44	T
8	48	56	T	22	45	13	H
9	0	51	TK	23	43	17	S
10	10	12	T				

March 10d. Readings also at 0h. (Ekaterinburg, Kobe, and Mizusawa (2)), 1h. (La Paz, Ekaterinburg, and Moncalieri), 2h. (Makeyevka, Tiflis, and La Plata), 4h. (Loyola), 6h. (Kobe), 10h. (Ekaterinburg and Tacubaya), 13h. (near Port au Prince), 14h. (Baku, Ekaterinburg, Tashkent, and Granada), 16h. (Almeria and near Lick), 17h. (Apia), 20h. (Kobe), 22h. (Irkutsk and Ekaterinburg), 23h. (Makeyevka, Pulkovo, Leningrad, Baku, Tashkent, Strasbourg, Uccle, De Bilt, Kew, and Granada).

March 11d. Continuation of the list of after-shocks from the epicentre 35°·7N. 134°·8E. of March 10d.

h.	m.	s.		h.	m.	s.	
0	36	47	TKS	11	38	22	T
0	50	12	TKOS	13	20	33	T
0	51	44	TK	13	46	33	T
1	27	9	TKS	14	43	1	TKOS
3	18	37	T	16	57	9	T
4	59	28	T	18	52	30	T
6	14	8	TKOS	20	29	43	TKOSNMH
8	18	54	T	22	44	37	T
8	59	8	TK				

Matuyama gives the 20h. shock as at 21h.

March 11d. Readings also at 1h. (Apia), 3h. (Wellington), 5h. (Tacubaya (2), Oaxaca, and Vera Cruz), 7h. (Sucre), 8h. (Ekaterinburg), 10h. (Makeyevka and Nagasaki), 12h. and 14h. (Nagasaki), 15h. (near Athens), 16h. (Toronto and Athens (3)), 17h. (near Athens (2)), 20h. (Makeyevka, Tashkent, Irkutsk, Suva, and Wellington), 21h. (Ottawa and near Nagasaki), 22h. (Irkutsk, Tiflis, and near Nagasaki).

March 12d. 1h. 13m. 36s. Epicentre 50°·5S. 161°·0E. (as on 1926 Oct. 3d.).

A = −·601, B = +·207, C = −·772 ; D = +·326, E = +·946 ; G = +·730, H = −·251, K = −·636.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Wellington	E.	13·3	51	i 3 14	− 3	i 5 59	+ 8	—	8·8
	N.	13·3	51	i 3 11	− 6	i 7 39	?L	(i 7·6)	8·4
Melbourne		17·1	312	—	—	i 6 42	−38	i 8·8	—
Riverview		18·2	333	e 4 17	− 2	—	—	e 8·3	9·1
Adelaide		22·5	305	e 5 14?	+ 3	e 9 28	+13	10·8	15·0
De Bilt		164·9	285	—	—	—	—	e 94·4	—

Additional readings : Melbourne i = +10m.0s. Adelaide MN = +12·9m.

March 12d. 12h. 7m. 45s. Epicentre 16°·0N. 148°·0E. (as on 1918 Dec. 3d.).

A = −·815, B = +·509, C = +·276; D = +·530, E = +·848;
G = −·234, H = +·146, K = −·961.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Manila	26·2	271	e 6 15?	+25	—	—	—	—
Irkutsk	50·0	326	e 9 4	− 3	e 16 19	0	e 19·2	—
Tashkent	71·2	310	—	—	i 20 43	+ 3	e 36·2	45·7
Ekaterinburg	75·2	325	i 11 55	+ 5	21 34	+ 6	35·2	54·6
Baku	85·6	311	—	—	e 23 17	− 9	e 42·8	58·2
Tiflis	88·9	314	—	—	e 23 30	[+ 9]	e 50·2	57·3
Leningrad	89·1	334	—	—	—	—	e 50·4	—
Pulkovo	89·2	334	—	—	e 24 2	− 3	49·2	—
Copenhagen	99·2	337	—	—	—	—	52·2	—
De Bilt	104·7	338	—	—	—	—	e 56·2	—
Strasbourg	106·4	335	—	—	—	—	e 63·2	—

Additional readings: Tashkent i = +21m.17s. =[S]−3s., MNZ = +45·3m.
Ekaterinburg MN = +48·4m. Baku MN = +52·8m., MZ = +64·4m.
Tiflis e? = +14m.20s.

March 12d. 18h. 44m. 22s. Epicentre 42°·0S. 104°·0W.

A = −·180, B = −·721, C = −·669; D = −·970, E = +·242;
G = +·162, H = +·649, K = −·743.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Pilar	E.	33·4	87	6 56	− 4	12 20	−10	17·1	19·9
	N.	33·4	87	—	—	12 32	+ 2	17·0	20·8
La Plata		36·4	95	7 37	+12	13 8	− 8	17·6	—
La Paz		39·9	62	i 7 55	+ 1	i 14 4	− 1	19·0	20·9
Sucre		40·0	69	i 7 43	−12	i 13 51	−16	18·3	20·4
Rio de Janeiro	E.	53·6	90	e 8 50	−40	16 28	−36	26·0	29·9
	N.	53·6	90	e 8 50	−40	16 24	−40	25·6	29·8
Wellington	E.	58·2	240	i 10 27	+27	18 28	?PS	27·5	28·1
	N.	58·2	240	i 10 25	+25	i 18 28	?PS	26·7	—
Suva	N.	68·9	266	e 11 14	+ 4	—	—	—	—
Tucson	N.	74·5	354	11 43	− 3	e 20 35	−45	—	—
Melbourne		78·5	229	—	—	e 21 56	−10	—	42·2
Ottawa		91·0	20	—	—	e 23 46	[+12]	e 40·6	—
San Fernando		119·5	66	—	—	30 8	?PS	—	72·1
Granada		120·8	67	i 20 44	?PR_1	—	—	57·6	66·3
Almeria		121·4	68	i 20 40	?PR_1	32 16	?	e 59·4	66·1
Algiers		125·1	70	—	—	—	—	67·6	—
Oxford		128·8	51	—	—	—	—	e 54·6	75·6
Edinburgh		129·2	45	—	—	e 28 38?	−77	e 62·6	78·6
Kew		129·3	51	e 19 28	[+11]	—	—	61·6	—
Paris		130·0	56	19 26	[+ 8]	e 40 46	?SR_1	64·6	—
Uccle		131·8	54	e 22 53	?PR_1	—	—	e 61·6	—
Moncalieri		131·9	63	e 21 41	?PR_1	—	—	68·2	—
De Bilt		132·7	52	i 19 34	[+10]	e 23 1	?PR_1	e 63·6	67·4
Strasbourg		133·1	59	e 19 37	[+12]	—	—	60·6	—
Hamburg		135·9	51	e 22 26	?PR_1	—	—	e 65·6	—
Prague		137·7	58	—	—	—	—	e 73·6	75·6
Graz		137·7	61	—	—	—	—	e 72·6	—
Copenhagen		137·7	48	19 44	[+ 9]	—	—	57·6	69·2
Athens	E.	140·4	79	e 19 47	[+ 7]	i 23 26	?PR_1	—	—
Helsingfors		144·4	41	—	—	—	—	e 81·6	—
Leningrad		147·0	41	19 58	[+ 7]	—	—	67·6	86·2
Pulkovo		147·1	41	19 55	[+ 4]	33 34	?	70·6	82·3
Ksara		147·7	90	—	—	—	—	79·6	—
Kucino		151·9	48	e 43 20	?SR_1	—	—	72·2	83·4
Makeyevka		152·8	64	e 23 38?	?PR_1	e 39 38?	?	48·6	86·9
Tiflis		156·9	80	e 20 24	[+19]	—	—	e 72·6	105·7
Irkutsk		158·4	308	i 20 14	[+ 8]	—	—	73·6	—
Baku		160·4	86	e 18 24	[−104]	27 7	?	78·1	104·4
Ekaterinburg		162·2	28	i 20 20	[+11]	i 31 17	?	65·6	90·9
Tashkent		174·9	96	i 20 32	[+16]	38 42	?	e 79·6	98·3

For Notes see next page.

NOTES TO MARCH 12d. 18h. 44m. 22s.

Additional readings: Tucson iPEN = +11m.46s., PSN? = +21m.35s. Ottawa eN? = +33m.38s.? San Fernando MN = +68·1m. Almeria PR_1 = +24m.5s., PR_2 = +27m.55s. De Bilt MZ = +67·2m., MN = +74·8m. Strasbourg e = +22m.6s. = PR_1 +16s. and +23m.19s. Copenhagen PR_1 = +22m.14s., P_cP_cS = +23m.14s., SR_1 = +40m.20s., SR_2 = +45m.56s., MN = +80·4m. Athens eE = +29m.33s. and +33m.3s. Leningrad P_4P_4S = +23m.30s. = PR_1 +12s., i = +25m.46s. and +28m.14s., MZ = +85·0m. Pulkovo P_4P_4S = +23m.30s. = PR_1 +11s., SR_1 = +42m.8s., MZ = +82·7m., MN = +87·4m. Kucino e = +48m.20s. and +54m.8s., MN = +85·4m. Makeyevka MZ = +89·8m. Tiflis e = +31m.18s. = PR_2 −12s. and +50m.22s. = SR_2 −2s., MN = +88·8m. Irkutsk i = +20m.45s. and +24m.21s. = PR_1 −8s., e = +30m.53s. = PR_2 −31s., +31m.37s., +34m.41s., and +44m.21s. = SR_1 −7s. Baku iP = +20m.25s. = [P] +17s., PR_1 = +24m.53s., PR_2 = +28m.35s., e = +30m.18s., $S_4P_4P_4S$ = +31m.4s., e = +33m.11s. and +34m.14s., S_4P_4SP = +35m.20s., PPS = +38m.28s., SR_1 = +45m.50s., SR_2 = +51m.11s., MN = +103·3m., MZ = +103·8m. Ekaterinburg i = +21m.4s., P_4P_4S = +23m.57s., PR_1 = +24m.45s., PR_2 = +28m.4s., i = +30m.36s., PPS = +38m.16s., MN = +93·5m., MZ = +95·9m. Tashkent iP = +22m.8s., P_4P_4S = +24m.24s. and +25m.58s. = PR_1 −5s., PR_1 = +26m.50s., S_4P_4S = +27m.53s. and +29m.16s., PR_2 = +30m.21s., $iS_4P_4P_4S$ = +32m.52s., S_4P_4SP = +36m.56s., PPS = +39m.32s., and +40m.32s., iSR_1 = +45m.3s., SR_1 = +47m.30s., SR_2 = +54m.41s., MN = +94·7m., MZ = +97·1m.

March 12d. 20h. 35m. 36s. Epicentre 42°·3N. 2°·5E.

A = +·739, B = +·032, C = +·673; D = +·044, E = −·999; G = +·672, H = +·029, K = −·740.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Barcelona		0·9	197	−i 0 8	−22	−i 0 2	−27	—	0·1
Bagnères		1·8	288	i 0 31	+ 3	i 1 0	+ 9	—	1·1
Tortosa	E.	2·1	225	0 21	−12	0 45	−13	0·8	1·0
	N.	2·1	225	0 25	− 8	0 46	−12	—	—
Puy de Dôme		3·5	6	e 1 10	+15	2 0	+23	i 2·2	2·4
Alicante		4·6	212	2 19	?S	(2 19)	+13	(3·1)	—
Moncalieri	Z.	4·6	52	e 2 11	?S	(e 2 11)	+ 5	(3·2)	—
Besançon		5·5	26	—	—	e 2 33	+ 2	—	—
Algiers		5·5	175	2 1	+36	—	—	—	—
Toledo		5·5	246	1 29	+ 4	2 33	+ 2	i 3·1	3·3
Paris		6·5	1	e 2 14	+35	e 3 36	+39	3·9	4·4
Almeria		6·6	217	e 1 45	+ 4	2 52	− 8	3·3	5·2
Zurich		6·7	38	e 1 35	− 7	i 3 16	+14	i 3·9	—
Chur		6·7	45	e 1 42	0	e 2 55	− 7	—	—
Granada		6·9	225	e 1 44	− 1	3 2	− 5	3·6	3·6
Strasbourg		7·3	28	—	—	e 3 7	−11	e 3·6	—
Malaga		7·7	226	3 58	?L	5 11	?	(4·0)	—
Uccle		8·6	8	e 4 6	?S	(e 4 6)	+13	e 4·7	—
San Fernando		8·9	232	—	—	4 50	?L	(4·8)	5·4
Kew		9·4	349	—	—	—	—	e 5·0	—
Oxford		9·8	346	i 5 25	?L	—	—	(i 5·4)	—
De Bilt		10·0	9	—	—	—	—	e 5·6	—
Stonyhurst		12·0	346	—	—	—	—	e 6·4	—
Hamburg		12·3	21	—	—	—	—	e 7·4	9·4
Edinburgh		14·1	347	—	—	—	—	i 8·2	—

Additional readings: Bagnères MN = +1·2m. Tortosa PZ = +20s. (O−C = −13s.). Alicante gives S as P and L as S. Moncalieri e = +2m.21s., L = +2·7m.; For Z component S is given as P and L as S. Toledo P = +1m.46s., PR_1 = +2m.24s., S = +2m.51s. Almeria MN = +4·6m., MZ = +4·8m. Chur gives S as e and eS? = +4m.1s. Granada i = +2m.30s. and +2m.39s., PR_2 = +2m.52s., i = +3m.24s. Strasbourg e = +4m.30s. and +5m.25s. Kew eE = +5m.10s., e = +5m.23s.

March 12d. Continuation of the list of after-shocks from the epicentre 35°·7N. 134°·8E. of March 11d.

h.	m.	s.		h.	m.	s.	
0	7	54	T	8	51	17	T
0	30	18	T	9	12	30	T
0	37	9	T	9	41	8	T
1	30	32	T	11	3	14	T
2	3	15	T	12	54	16	T
2	22	45	T	15	23	46	T
2	23	4	T	17	5	7	T
2	30	15	T	17	10	30	T
3	19	26	T	17	40	15	T
3	20	48	TK	19	10	36	T
5	6	30	T	19	42	54	T
5	26	52	T	21	30	2	T
6	27	52	TKOSN	21	58	6	T
7	44	12	T	22	44	6	T
8	14	38	K	22	55	38	T
8	37	16	T	23	35	20	T

March 12d. Readings also at 7h. (Ottawa), 14h. (Baku), 16h. (Nagasaki and near Amboina), 17h. (La Paz and Nagasaki), 18h. (Nagasaki), 19h. (near Ksara), 22h. (Agana).

March 13d. 5h. 32m. 16s. Epicentre 6°·5S. 81°·5W. (as on 1925 Dec. 27d.).

A = +·147, B = −·983, C = −·113 ; D = −·989, E = −·148 ; G = −·017, H = +·112, K = −·994.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
La Paz	E.	16·4	128	i 4 10	+13	i 7 27	+23	9·2	11·0
	N.	16·4	128	—	—	i 7 25	+21	8·9	10·0
Sucre		20·2	130	i 4 39	− 4	i 8 28	+ 1	12·5	16·4
Pilar	E.	30·1	149	—	—	11 20	−16	17·0	23·5
	N.	30·1	149	—	—	11 8	−28	—	25·2
La Plata		35·8	146	7 19	− 1	e 12 50	−17	20·1	—
Rio de Janeiro	E.	40·4	120	e 6 59	−59	13 14	−59	20·5	24·8
	N.	40·4	120	e 6 54	−64	13 4	−69	21·2	24·4
Chicago	E.	48·6	354	—	—	—	—	e 24·6	—
Ann Arbor	N.	48·8	358	—	—	—	—	e 27·7	—
Toronto	N.	50·2	1	—	—	e 15 59	−22	26·1	—
Ottawa		52·1	5	e 9 18	− 3	e 16 29	−16	e 22·7	—
Victoria	E.	66·0	331	—	—	—	—	35·4	39·4
San Fernando	E.	82·2	52	—	—	—	—	—	61·2
Rio Tinto		82·2	50	51 44?	?	—	—	—	68·7
Malaga		83·6	52	12 54	+14	22 0	−65	—	—
Granada		84·4	52	i 12 43	− 1	22 11	−61	37·7	—
Almeria		85·3	52	i 12 45	− 5	—	—	39·9	42·2
Edinburgh		88·9	35	—	—	e 23 44?	−18	e 46·7	—
Oxford		89·1	38	i 23 55	?S	(i 23 55)	− 9	e 39·7	50·7
Kew		89·6	38	e 13 9	− 5	—	—	41·7	—
Paris		91·0	41	i 13 15	− 6	—	—	45·7	—
Uccle		92·4	40	—	—	—	—	e 45·7	—
De Bilt		93·0	38	13 27	− 5	e 24 33	−12	e 43·7	47·3
Strasbourg		94·3	42	e 17 48	?PR_1	—	—	e 44·7	—
Wellington		95·9	228	—	—	—	—	e 43·7	—
Copenhagen		97·5	35	—	—	e 24 44?	[+34]	55·7	—
Graz		99·5	44	—	—	—	—	e 56·7	—
Pulkovo		106·4	29	—	—	—	—	e 52·7	—
Leningrad		106·4	29	—	—	—	—	e 47·9	70·3
Kucino		111·6	32	—	—	e 28 56	?PS	54·1	—
Makeyevka		114·2	38	—	—	e 27 44	−20	64·7	65·8
Ekaterinburg		121·6	23	—	—	—	—	49·7	66·9
Baku		125·0	43	i 21 0	?PR_1	e 31 8	?PS	56·7	73·4
Tashkent		136·5	32	e 19 39	[+ 6]	—	—	e 60·7	73·1
Hyderabad		157·6	59	—	—	—	—	—	92·9

Additional readings : Chicago SR_1N = +19m.44s., eLN?(Rayleigh) = +26·4m. Ottawa iE = +19m.6s., eN = +20m.44s.? San Fernando MN = +54·7m. Almeria MZ = +47·4m. De Bilt MN = +51·8m., MZ = +54·4m. Kucino e = +39m.26s. Ekaterinburg MN = +62·8m. Baku MN = +75·3m. Tashkent e = +22m.9s. = PR_1 − 2s., i = +22m.15s., e = +23m.2s., +35m.44s.?, +39m.2s., and +57m.44s.?, MZ = +73·2m., MN = +79·6m. Irkutsk (Δ = 134°·0) failed to register from 0h.31m. to 9h.18m.

March 13d. Continuation of the list of after-shocks from the epicentre 35°·7N. 134°·8E. of March 12d.

h.	m.	s.		h.	m.	s.	
0	13	0	T	11	23	10	T
1	20	22	T	11	34	49	TK
2	9	18	T	14	27	30	T
2	24	55	T	16	11	13	T
2	46	30	KS	17	14	23	T
3	47	44	T	18	53	3	T
4	2	42	T	21	46	21	TKS
4	36	56	TKOSN	21	58	11	T
6	34	33	T	22	35	26	T
6	50	21	T	22	51	20	T
7	6	33	TK	22	52	48	T
7	19	42	T	23	35	23	T
10	32	31	T				

March 13d. Readings also at 1h. (Christchurch), 2h. (Tortosa (2) and near Barcelona (2)), 8h. (Chicago), 14h. (Ekaterinburg), 16h. (La Plata), 19h. (Irkutsk and Tashkent). 20h. (Baku), 21h. (Irkutsk, Ekaterinburg, and Tashkent), 22h. (Pompeii, Naples (2), Copenhagen, Kucino, and Baku).

March 14d. 0h. 0m. 20s. Epicentre 37°·0N. 4°·5W. (as on 1926 June 25d.).

A = +·796, B = −·063, C = +·602.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Malaga	0·2	166	0 2	− 2	0 19	+13	—	—
Granada	0·8	76	e 0 34	+22	0 53	+31	i 0·9	1·1
San Fernando	1·5	249	0 22	− 1	0 35	− 7	—	—
Almeria	1·7	95	e 0 17	− 9	0 39	− 9	—	1·0

Granada gives i = +43s. and +50s.

March 14d. 4h. 11m. 48s. Epicentre 13°·5S. 68°·5E. (as on 1925 July 8d.).

A = +·356, B = +·905, C = −·233; D = +·930, E = −·366;
G = −·086, H = −·217, K = −·972.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Tashkent	54·8	1	e 9 34	− 4	e 17 25	+ 6	e 29·2	32·7
Baku	56·6	345	—	—	—	—	e 38·2	45·0
Tiflis	59·3	340	—	—	—	—	e 13·2	46·0
Ekaterinburg	70·6	356	—	—	e 20 24	− 9	28·2	—
Irkutsk	72·6	23	(e 11 12?)	−22	—	—	e 11·2	—
Kucino	73·9	344	e 5 36	?	—	—	—	—
Copenhagen	83·5	332	—	—	—	—	39·2	—
Uccle	85·0	326	—	—	—	—	—	53·2

Additional readings: Tashkent eSR_1 = +21m.25s., MN = +32·8m., MZ = +35·4m. Baku MN = +44·7m.

March 14d. 7h. 42m. 55s. Epicentre 25°·0S. 71°·0W. (as on 1925 May 15d.).

A = +·295, B = −·857, C = −·423.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Sucre		8·0	43	i 2 0	− 1	(3 29)	− 8	3·5	4·1
Santiago		8·4	178	2 41	+34	—	—	4·2	—
La Paz		8·9	18	e 2 22	+ 7	i 4 13	+12	4·5	4·9
Pilar	E.	9·1	138	—	—	—	—	5·0	5·7
La Plata		15·0	134	i 3 33	− 6	6 30	− 2	8·0	—
Ottawa	N.	70·6	357	—	—	—	—	e 39·1	—

Additional readings: Sucre iS = +3m.7s. La Paz i = +2m.30s.; T_0 = 7h.42m.55s.

March 14d. 15h. 20m. 40s. Epicentre 7°·0S. 121°·5E. (as on 1926 Dec. 15d.).

A = −·519, B = +·846, C = −·122.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Manila		21·6	359	e 4 57	− 3	(8 59)	+ 2	9·0	—
Melbourne		37·4	149	—	—	—	—	—	21·5
Irkutsk		61·1	349	—	—	e 18 35	− 2	—	—
Ekaterinburg		80·7	330	i 12 24	+ 1	22 35	+ 4	37·3	—

Ekaterinburg gives also i = +22m.41s.

March 14d. 17h. 37m. 32s. Epicentre 26°·0N. 102°·5E.

A = −·195, B = +·878, C = +·438; D = +·976, E = +·216;
G = −·095, H = +·428, K = −·899.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Phu-Lien		6·4	143	i 1 34	− 4	2 50	− 5	i 3·1	3·6
Hong Kong		11·3	106	4 48?	?S	(4 48?)	−14	5·6	6·0
Taihoku	E.	17·2	91	—	—	e 7 3	−19	9·2	11·1
Zi-ka-wei		17·4	68	e 4 11	+ 1	7 33	+ 6	9·4	10·7
Manila		20·7	120	e 4 47	− 2	—	—	11·5	—
Simla	E.	22·8	289	9 40	?S	(9 40)	+19	13·8	—
	N.	22·8	289	9 28	?S	e 10 28	+67	13·6	—
Hyderabad		23·9	254	5 27	0	9 41	− 1	12·7	16·3
Irkutsk		26·3	2	i 5 47	− 4	10 25	− 3	14·5	15·1
Kodaikanal		28·5	241	10 46	?S	(10 46)	−22	17·7	20·7
Osaka		29·6	65	11 33	?S	(11 33)	+ 6	14·7	18·6
Tashkent		31·4	309	6 32	−10	e 11 28?	−30	e 17·5	22·3
Batavia		32·4	175	—	—	e 10 28?	?	17·6	—
Ekaterinburg		42·9	328	i 8 12	− 5	14 37	−10	22·5	27·4
Baku		45·6	304	e 8 36	− 1	e 15 27	+ 5	23·1	28·5
Tiflis		49·5	305	e 9 2	− 2	e 16 11	− 2	e 28·5	36·8
Makeyevka		54·3	313	—	—	e 16 28?	−45	29·5	37·5
Kucino		54·6	322	e 9 46	+ 9	e 17 22	+ 6	27·5	34·1
Ksara	N.	57·3	296	e 10 3	+ 9	e 18 2	+12	33·5	—
Pulkovo		58·9	327	10 11	+ 7	18 21	+11	30·5	37·6
Leningrad		58·9	327	e 10 12	+ 8	e 18 22	+12	27·5	38·2
Helsingfors	E.	61·6	327	—	—	—	—	e 33·7	38·8
	N.	61·6	327	—	—	—	—	e 32·7	35·8
Upsala	N.	65·3	327	—	—	—	—	e 36·4	38·3
Budapest	N.	66·9	315	—	—	—	—	e 37·5	—
Copenhagen		68·8	324	—	—	22 28?	?	37·5	48·9
Prague		69·2	318	—	—	e 33 28?	?	e 38·5	43·5
Cheb		70·5	318	—	—	—	—	e 32·5	45·2
Strasbourg		73·9	318	—	—	—	—	e 36·5	—
De Bilt		74·1	321	—	—	—	—	e 39·5	48·1
Melbourne		75·2	147	—	—	—	—	—	52·5
Paris		76·9	319	—	—	—	—	e 43·5	48·5
Edinburgh		76·9	326	—	—	—	—	e 44·5	—
Kew		77·4	322	—	—	—	—	e 41·5	—
Oxford		77·9	322	—	—	—	—	38·8	48·0
Toledo	N.E.	85·2	312	—	—	—	—	e 41·6	—
Granada		86·2	310	—	—	—	—	e 47·5	54·5
San Fernando		88·4	311	—	—	—	—	48·5	54·0
Victoria	E.	95·0	29	—	—	—	—	51·2	53·4
Ottawa	E.	108·6	359	—	—	e 47 2	?	e 53·5	—

Additional readings: Hong Kong ? = +5m.26s. Taihoku MN = +9·8m. Irkutsk MN = +15·4m., MZ = +15·6m. Osaka MN = +19·3m. Tashkent PR_1 = +7m.19s., ePR_2 = +7m.40s., iSR_1 = +12m.29s., iSR_2 = +13m.15s., i = +14m.23s., e = +15m.56s., MN = +19·8m., MZ = +20·6m. Ekaterinburg i = +8m.28s., +10m.10s., and +14m.57s., iPR_1 = +9m.54s., SR_1 = +18m.2s., MN = +25·8m., MZ = +28·6m. Baku iP = +8m.38s., PR_1 = +10m.25s., PR_2 = +11m.10s., SR_1 = +19m.23s., MN = +26·6m., MZ = +28·6m. Tiflis e = +9m.16s., +9m.36s., +11m.2s. = PR_1 − 9s., +21m.45s. = SR_2 + 24s., and +22m.23s. = SR_2 + 30s. Makeyevka MZ = +36·6m., MN = +36·8m. Kucino eSR_1 = +21m.52s. Ksara eN = +25m.35s. = SR_2 + 32s.; T_2 = 17h.37m.37s. Pulkovo MN = +35·2m., MZ = +37·8m. Leningrad MN = +37·2m. Upsala ME = +41·7m. Budapest eE = +38m.28s.? Copenhagen MN = +40·0m. De Bilt MN = +45·5m. Ottawa eLN = +55·5m.

tinuation of the list of after-shocks from the epicentre 35°·7N.
March 13d.

s.		h.	m.	s.	
0	TKS	11	12	36	TK
27	TKOSN	13	13	0	TS
51	T	13	30	10	T
3	T	18	8	20	T
48	T	21	43	57	T
58	T	22	9	14	T

adings also at 0h. (near Almeria), 1h. (Granada, Malaga, and
n Fernando), 2h. (Florence), 3h. (Sucre), 4h. (La Paz (2)), 5h.
, 6h. (near Ksara), 10h. (Hamburg), 14h. (near Amboina), 16h.
antiago), 20h. (near Tashkent).

57m. 25s. (I))
21m. 45s. (II)
2m. 58s. (III
26m. 46s. (IV)
} Epicentre 24°·0N. 123°·0E. (as on 1925 June 21d.).

)8, B = +·766, C = +·407 ; D = +·839, E = +·545 ;
G = −·224, H = +·341, K = −·913.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
	1·7	308	0 26	0	—	—	0·8	0·8
	1·7	308	0 26	0	—	—	0·8	0·8
	1·7	308	0 26	0	—	—	0·7	0·8
N.	1·7	308	0 26	0	—	—	0·8	0·8
	7·3	349	—	—	—	—	e 3·8	—
	7·3	349	—	—	e 3 4	−14	—	—
	7·3	349	—	—	—	—	e 3·7	—
	31·7	338	—	—	e 11 35?	−28	e 19·6	20·2
	31·7	338	—	—	e 12 15?	+12	19·2	20·2
	31·7	338	—	—	—	—	e 17·0	—
	47·6	307	—	—	—	—	e 24·6	29·8
	47·6	307	—	—	—	—	e 22·2	28·2
	55·1	325	—	—	—	—	27·6	—
	55·1	325	—	—	—	—	26·2	—
	62·3	307	—	—	—	—	e 36·6	—
	65·8	309	—	—	—	—	e 42·4	—
	65·8	309	—	—	—	—	e 38·8	—
	86·7	327	—	—	—	—	e 54·6	—
	86·7	327	—	—	—	—	e 54·2	—
	86·7	327	—	—	—	—	e 55·0	—
	87·5	323	—	—	—	—	55·6	—
	87·5	323	—	—	—	—	54·2	—

dings : Taihoku I MN = +0·9m. Tashkent I MZ = +30·3m.,
3·4m., MZ = +29·2m.

38m. 54s. Epicentre 7°·5N. 79°·0W. (as on 1925 Mar. 29d.).

39, B = −·973, C = +·130 ; D = −·982, E = −·191 ;
G = +·025, H = −·128, K = −·991.

of 0·010 for depth of focus used on 1925 Mar. 29 has *not* been
he observations must contain some mistakes and the solution is
value. Washington suggests T_0 = 10h.38·3m., 8°·0N.? 82°·0W.?

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
E.	1·6	346	0 11	−13	0 47	+ 2	1·0	1·3
N.	1·6	346	0 8	−16	0 44	− 1	0·8	1·1
	26·3	156	e 6 34	?PR_1	I 12 19	+111	15·6	18·6
	29·8	152	6 23	− 3	—	—	—	—
	35·1	350	—	—	—	—	14·4	—

Continued on next page.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Toronto	36·1	0	—	—	15 21	?SR_1	18·4	—
Ottawa	38·0	4	e 7 30	− 8	e 13 6	−32	18·1	—
Granada	73·8	53	i 11 58	+17	e 16 27	?PR_2	19·1	—
Baku	113·0	39	—	—	—	—	e 61·1	—
Tashkent	123·2	28	—	—	—	—	e 61·1	67·0

Additional readings and notes: La Paz MN = +23·1m. Chicago eLqE = +19·0m., LrN = +21·4m. Toronto eLN = +22·4m. and +25·2m. Ottawa eN = +8m.51s. = PR_1 −7s., LE = +22·1m., LN = +22·2m.

Mar. 15d. 16h. 56m. 27s. Epicentre 26°·0N. 96°·0E. (as on 1926 Aug. 6d.).

A = −·094, B = +·894, C = +·438; D = +·995, E = +·105; G = −·046, H = +·436, K = −·899.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Calcutta	E.	7·9	245	1 16	−44	1 43	?	2·4	—
	N.	7·9	245	1 34	−26	—	—	2·5	—
Phu-Lien		11·0	116	i 2 45	+ 1	4 54	0	5·6	7·7
Hong Kong		17·0	99	4 6	+ 1	—	—	—	12·4
Simla		17·3	292	4 3	− 6	(7 3)	−22	7·0	—
Hyderabad		18·4	246	3 42	−40	6 51	−58	8·6	11·0
Zi-ka-wei		22·9	71	e 5 27	+11	e 9 42	+19	—	—
Taihoku	E.	23·0	87	—	—	—	—	e 11·0	—
Kodaikanal		23·6	232	4 51	−33	—	—	—	—
Colombo		24·5	222	5 3	−30	—	—	—	9·6
Manila		26·0	111	e 6 1	+13	—	—	11·6	—
Tashkent		26·8	312	i 5 49	− 7	10 24	−13	14·6	15·8
Irkutsk		27·0	11	e 5 50	− 8	i 10 58	+17	16·6	—
Batavia	E.	33·8	164	i 8 7	+64	—	—	—	—
Ekaterinburg		39·8	330	8 33?	+40	i 14 44	+41	19·6	—
Baku		40·7	303	e 8 7	+ 6	i 13 53	−24	16·6	16·9
Tiflis		44·6	305	e 8 15	−15	i 14 43	−27	e 33·6	—
Makeyevka		49·9	314	e 9 28	+22	i 16 4	−14	23·6	—
Ksara		52·0	295	9 10	−10	i 16 27	−17	—	—
Pulkovo		55·6	327	i 9 43	0	i 17 28	− 1	26·6	—
Leningrad		55·7	327	i 9 46	+ 2	i 17 30	0	27·6	36·3
Helsingfors	E.	58·3	327	e 10 30	+29	e 17 48	−15	—	37·8
Upsala		62·0	326	i 10 54	+29	i 18 49	+ 1	e 26·6	—
Vienna	Z.	64·2	315	i 11 5	+26	—	—	—	—
Copenhagen		65·2	322	—	—	—	—	33·6	—
Hamburg		67·1	320	i 11 28	+29	e 20 33	?PS	e 32·6	—
Rocca di Papa		68·3	307	—	—	—	—	e 22·6	23·6
Chur		69·1	314	e 11 6	− 6	i 20 5	−10	—	—
Zurich		69·5	314	e 11 8	− 6	e 14 18	?PR_1	—	—
Strasbourg		69·8	316	i 11 35	+19	—	—	33·6	—
De Bilt		70·3	320	i 11 47	+28	e 20 26	− 4	e 35·6	41·9
Uccle		71·2	319	e 11 51	+27	e 20 34	− 6	e 37·6	—
Paris		72·9	318	i 12 3	+28	—	—	41·6	—
Kew		73·7	321	i 12 8	+28	—	—	e 29·6	—
Algiers		77·0	305	e 11 43	−18	e 21 33	−16	—	—
Granada		81·6	308	12 48	+20	e 24 8	+86	47·6	54·6

Additional readings: Phu-Lien MN = +7·8m. Simla PN = +4m.9s. = P ±0s. Tashkent i = +6m.13s., PR_1 = +6m.30s., PR_2 = +6m.49s., i = +7m.23s., +10m.43s., and +10m.57s., SR_1 = +11m.12s., MZ = +19·2m. Irkutsk PR_1 = +6m.34s., PR_2 = +6m.57s., SR_1 = +12m.13s., SR_2 = +13m.13s., SR_3 = +13m.59s. Batavia iN = +9m.19s. Ekaterinburg i = +8m.43s.?, and +9m.12s.? = PR_1 −8s., iPR_1 = +10m.21s.? = PR_2 +23s., iPS = +14m.51s.?, i = +15m.38s.?, iSR_1 = +16m.51s.?, iSR_2 = +17m.47s.? = SR_3 −3s. Baku iPR_2 = +9m.49s., iPR_3 = +10m.33s., MN = +17·0m. Tiflis e = +8m.30s., PR_2 = +10m.1s. = PR_1 −17s., SR_2 = +18m.21s. = SR_1 −1s. Makeyevka PR_2 = +12m.3s., e = +17m.9s., SR_1 = +20m.17s. Ksara PR_1E = +9m.39s., PR_2E = +12m.19s.; T_0 = 16h.56m.25s. Pulkovo SR_1 = +22m.57s. Leningrad i = +10m.12s. Helsingfors iE = +18m.6s. Chur e = +11m.40s. De Bilt eN = +21m.26s. = [S] +12s., MZ = +47·8m. Algiers i = +12m.23s.

Mar. 15d. 21h. 48m. 25s. Epicentre 37°·5N. 99°·0E.

A = −·124, B = +·784, C = +·609; D = +·988, E = +·156;
G = −·095, H = +·601, K = −·793.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Irkutsk		15·2	13	i 3 40	− 2	i 6 26	−11	7·6	10·0
Calcutta	E.	17·6	212	4 17	+ 5	—	—	10·4	—
	N.	17·6	212	4 24	+12	—	—	10·4	—
Phu-Lien		18·0	156	4 39	+22	8 16	+36	9·6	—
Dehra Dun		18·8	254	4 37	+10	7 43	−15	10·9	12·2
Simla		19·1	257	4 29	− 1	7 59	− 5	11·0	11·9
Zi-ka-wei		19·5	102	5 4	+29	9 0	+47	—	13·6
Hong Kong		20·0	135	5 3	+22	—	—	9·0	—
Taihoku	E.	22·9	117	—	—	e 9 59	+36	13·6	—
Tashkent		23·2	289	i 5 5	−14	i 9 12	−17	11·9	15·7
Hukuoka		25·8	89	e 6 38	+52	—	—	17·1	—
Hyderabad		27·0	228	5 53	− 5	10 50	+ 9	14·8	17·2
Sumoto		29·1	85	11 1	?S	(11 1)	−18	18·6	18·8
Kobe	E.	29·2	85	—	—	—	—	—	20·0
Osaka		29·4	84	11 21	?S	(11 21)	− 3	16·5	20·2
Manila		30·1	134	e 11 43	?S	(e 11 43)	+ 7	18·1	—
Ekaterinburg		31·8	320	i 6 35?	−10	11 35?	−30	16·2	—
Kodaikanal		33·5	222	15 11	?SR_3	—	—	20·5	21·0
Colombo		35·2	216	13 5	?S	(13 5)	+ 7	—	24·0
Baku		37·8	290	i 7 23	−13	i 13 11	−24	21·6	32·2
Tiflis		41·3	293	9 35?	+90	15 47	+82	e 24·6	29·2
Kucino		44·0	315	8 10	−16	14 30	−32	22·1	31·1
Makeyevka		44·8	304	i 8 17	−15	14 49	−23	21·4	34·0
Pulkovo		47·9	321	i 8 39	−14	i 15 29	−24	22·6	28·7
Leningrad		47·9	321	i 8 41	−12	15 31	−22	22·8	26·8
Ksara		50·4	286	9 5	− 4	11 3	?PR_1	21·0	—
Konigsberg		53·9	316	—	—	—	—	29·0	36·6
Upsala		54·1	321	e 9 27	− 7	e 16 55	−15	27·6	33·0
Budapest		57·2	308	9 53	0	—	—	e 27·6	31·5
Copenhagen		58·0	319	9 59	0	17 57	− 2	28·6	35·9
Vienna		58·5	310	i 10 2	0	e 18 10	+ 5	—	31·3
Prague		59·0	311	e 18 8	?S	(e 18 8)	− 3	e 33·6	36·6
Graz		59·5	309	—	—	—	—	e 30·6	—
Hamburg		60·2	317	e 10 13	0	i 18 28	+ 2	e 29·6	42·0
Cheb		60·2	311	—	—	e 18 29	+ 3	e 31·6	37·0
Innsbruck	N.E.	62·0	310	e 10 23	− 2	—	—	—	—
Ravensburg	E.	62·8	312	—	—	—	—	e 32·4	—
Chur		63·4	310	i 10 34	0	—	—	e 32·0	—
De Bilt		63·4	317	10 36	+ 2	19 5	− 1	e 33·6	39·1
Strasbourg		63·6	312	10 26	−10	e 18 58	−10	31·6	—
Florence		63·6	304	e 10 35	− 1	—	—	—	—
Rocca di Papa		63·7	303	e 10 35	− 1	e 19 7	− 2	e 35·9	44·9
Zurich		63·7	310	e 10 36	0	e 13 19	?PR_1	—	—
Uccle		64·5	316	10 42	0	—	—	—	—
Besançon		65·3	311	10 48	+ 1	—	—	39·6	—
Moncalieri		65·3	309	e 10 51	+ 4	19 31	+ 2	34·0	—
Edinburgh		65·8	323	—	—	—	—	e 34·6	—
Paris		66·5	315	i 10 55	0	—	—	36·6	42·6
Kew		66·6	319	e 10 55	0	e 19 47	+ 2	33·6	42·1
Oxford		67·0	319	—	—	e 19 45	− 5	—	—
Tortosa	N.	72·0	309	11 31	+ 1	e 20 35?	−15	e 35·6	40·3
Algiers		72·6	303	11 35	+ 1	15 44	?PR_1	18·6	—
Toledo		75·4	310	e 11 4	−47	e 21 28	− 2	e 37·7	41·2
Granada		76·7	307	i 11 58	− 1	—	—	44·6	46·7
Rio Tinto		78·2	310	50 35	?L	—	—	(50·6)	54·6
San Fernando	E.	78·8	309	—	—	—	—	—	51·6
Victoria	E.	86·3	26	23 29	?S	(23 29)	− 4	42·0	53·1
Ottawa		97·0	356	—	—	e 24 13	[+ 5]	e 45·1	—
Toronto	E.	98·9	358	—	—	—	—	46·8	—

Additional readings: Simla LN = +10·8m. Zi-ka-wei PR_1 = +5m.13s., MN = +13·7m. Hong Kong ? = +12m.8s. Tashkent iP = +5m.11s., PR_1 = +5m.32s., i = +8m.52s., iS = +9m.30s., i = +11m.32s., MN = +13·0m., MZ = +14·6m. Kobe MN = +20·8m. Osaka MN = +19·9m. Ekaterinburg iPR_1 = +7m.26s.?, iPR_2 = +7m.45s.?, e = +11m.2s.? Baku iPR_1 = +8m.36s., PR_2 = +10m.0s., SR_2 = +16m.46s., MZ = +25·5m., MN = +25·9m. Tiflis SR_2 = +19m.5s. Kucino PR_1 = +9m.46s., SR_1 = +17m.40s., MN = +23·3m. Makeyevka PR_1 = +9m.55s., SR_1 =

Continued on next page.

+18m.6s., MN = +27·1m., MZ = +30·8m. Pulkovo PR_1 = +10m.27s., SR_1 = +18m.29s., MN = +26·8m. Leningrad PR_1 = +10m.29s., SR_1 = +21m.38s. = SR_3 +24s., MZ = +29·2m. Ksara L = +15·6m. Upsala MN = +30·2m. Copenhagen SR_1 = +22m.53s., MN = +31·3m., MZ = +34·8m. Vienna PR_1 = +12m.12s. Prague eS? = +24m.25s. = SR_2 −24s. Graz ? = +21m.8s. Hamburg MN = +33·4m. Ravensburg eN = +32m.59s., eE = +33m.21s. De Bilt MN = +35·7m., MZ = +39·8m. Strasbourg SR_4 = +25m.25s. Rocca di Papa eN = +10m.29s., iPN = +10m.39s. Paris MN = +47·6m. Kew e = +26m.35s.?, MN = +37·5m. Toledo MNW = +41·3m. San Fernando MN = +53·1m. Ottawa eE? = +34m.59s.

Mar. 15d. Continuation of the list of after-shocks from the epicentre 35°·7N. 134°·8E. of Mar. 14d.

h.	m.	s.		h.	m.	s.	
4	40	4	TS	11	34	34	T
4	46	36	T	12	19	54	T
5	24	52	T	13	39	15	T
5	24	54	T	18	24	8	T
7	20	16	T	19	34	39	T
7	39	34	T	21	36	21	T
7	55	15	T				

Mar. 15d. Readings also at 2h. (near Athens), 11h. (near Nagasaki), 13h. (Bagnères and near Tortosa), 14h. (Tiflis, Wellington, and La Paz), 15h. (Ekaterinburg, Tashkent, and Nagasaki), 18h. (Nagasaki), 19h. (Nagasaki, Potsdam, Ksara, and Tiflis), 20h. (2) and 21h. (Nagasaki), 22h. (Nagasaki and near Ootomari), 23h. (Nagasaki).

Mar. 16d. 6h. 52m. 30s. Epicentre 40°·0N. 144°·5E. (as on 1920 Sept. 20d.).

A = −·624, B = +·445, C = +·643 ; D = +·581, E = +·814 ; G = −·523, H = +·373, K = −·766.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Mizusawa		2·8	252	0 45	+ 1	1 5	−12	—	—
Ootomari		6·8	350	0 53	−51	(2 28)	−37	2·5	—
Nagoya		7·7	233	1 55	− 2	(3 42)	+13	3·7	4·2
Osaka		8·9	236	2 18	+ 3	(4 29)	+28	4·5	4·8
Kobe		9·1	237	2 18	0	3 49	−17	4·5	5·7
Sumoto		9·5	237	2 26	+ 3	(4 12)	− 4	4·2	—
Irkutsk		30·0	310	i 6 12	−16	i 10 55	−39	15·5	—
Hong Kong		31·2	244	—	—	—	—	—	19·0
Ekaterinburg		54·4	319	i 9 25	−10	i 16 53	−21	24·5	34·5
Tashkent		55·2	299	i 9 38	− 2	i 17 5	−19	e 26·5	33·1
Kucino		66·0	324	—	—	e 19 35	− 2	33·7	41·4
Leningrad		66·5	330	i 11 1	+ 6	—	—	32·5	41·6
Pulkovo		66·6	330	11 0	+ 5	e 19 51	+ 6	31·5	41·9
Baku		68·3	305	i 11 9	+ 3	e 20 16	+10	33·1	42·7
Makeyevka		70·6	318	11 23	+ 2	20 52	+19	33·5	44·5
Tiflis		70·7	310	e 10 30	−51	e 19 48	−46	37·5	48·0
Upsala	N.	71·1	335	—	—	—	—	e 43·5	—
Copenhagen		76·0	334	e 11 57	+ 2	22 0	[+ 4]	39·5	47·8
Hamburg		78·6	335	e 12 14	+ 3	—	—	e 42·5	48·5
Vienna		80·6	328	i 12 23	0	—	—	e 39·5	49·5
Ksara		81·1	308	e 12 27	+ 1	—	—	—	—
De Bilt		81·4	337	e 12 29	+ 2	—	—	e 39·5	48·2
Innsbruck		83·3	330	e 12 36	− 2	—	—	—	—
Strasbourg		83·6	332	e 12 30?	−10	—	—	49·5	—
Kew		83·6	340	—	—	—	—	43·5	—
Zurich		84·3	331	i 12 42	− 2	—	—	—	—
Chur		84·4	330	i 12 46	+ 2	—	—	—	—
Florence		86·2	327	e 12 51	− 3	—	—	—	—
Rocca di Papa		87·4	326	e 13 53	+52	e 23 53	+ 8	e 48·7	—
Ottawa		87·4	26	—	—	—	—	e 43·5	—
Granada		97·4	335	e 14 29	+33	—	—	51·5	57·2
San Fernando		98·9	337	—	—	—	—	—	62·5
La Paz		143·2	60	19 57	[+12]	—	—	—	—

For Notes see next page.

NOTES TO MARCH 16d. 6h. 52m. 30s.

Additional readings and notes: Mizusawa. SN = +1m.7s. Nagoya S = +2m.55s. Osaka MN = +5·5m. Kobe MN = +5·5m. Sumoto S = +3m.24s. Irkutsk readings are given for 17d. Ekaterinburg i = +9m.42s., iPR_1 = +12m.27s., iPS = +17m.5s., e = +19m.28s., SR_1 = +20m.52s., MZ = +34·6m., MN = +34·8m. Tashkent i = +10m.47s., PR_1 = +11m.42s., PR_2 = +12m.48s., i = +19m.47s., SR_1 = +20m.51s., SR_2 = +21m.30s. = SR_1 −14s., MZ = +33·3m., MN = +33·4m. Kucino e = +20m.42s. and +21m.4s., MN = +41·6m. Leningrad MZ = +41·8m. Pulkovo MNZ = +41·7m. Baku MN = +43·1m., MZ = +43·2m. Makeyevka PR_2 = +16m.14s., e = +21m.30s.? = [S] +14s. Copenhagen MN = +47·6m. De Bilt MN = +51·6m., MZ = +51·8m. Innsbruck eNE = +12m.53s., +13m.5s., eNW = +12m.56s., and +13m.26s. Rocca di Papa eSN = +22m.53s. = [S] −18s. Granada PR_1 = +17m.41s.

Mar. 16d. 15h. 16m. 0s. Epicentre 41°·0N. 38°·0E.

A = +·595, B = +·465, C = +·656; D = +·616, E = −·788; G = +·517, H = +·401, K = −·755.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Tiflis	5·1	80	e 1 18	− 1	e 2 15	− 5	e 2·5	3·4
Ksara	7·3	194	1 48	− 3	i 3 15	− 3	—	—
Baku	9·0	90	1 52	−24	e 4 13	+10	5·6	—
Ekaterinburg	21·6	35	—	—	e 8 39	−18	11·0	—

Baku gives also e = +4m.46s.(?L).

Mar. 16d. Continuation of the list of after-shocks from the epicentre 35°·7N. 134°·8E. of Mar. 15d.

h.	m.	s.		h.	m.	s.	
0	31	26	T	8	55	0	T
1	53	7	T	12	25	2	T
2	7	44	T	14	55	38	T
2	24	22	T	15	9	30	T
3	7	16	T	17	32	6	T
3	31	32	T	19	17	12	T
4	40	34	T	19	53	30	TKS
7	4	5	T	21	18	28	T
8	5	36	T	21	52	26	T
8	12	38	T	22	40	37	TO
8	36	29	T	22	40	40	T

Mar. 16d. Readings also at 3h. (Nagasaki), 4h. (Taihoku), 5h. (near Nagasaki and Taihoku), 6h. (near Nagasaki), 7h. (Nagasaki and near Mizusawa and Osaka), 8h. (Nagasaki and Tiflis), 11h. (Ekaterinburg), 14h. (Tiflis), 17h. (near Dehra Dun), 18h. (near Manila), 19h. and 23h. (Ekaterinburg).

Mar. 17d. Continuation of the list of after-shocks from the epicentre 35°·7N. 134°·8E. of Mar. 16d.

h.	m.	s.		h.	m.	s.	
5	14	6	T	15	8	8	T
8	22	0	T	17	42	26	T
8	23	0	T	18	5	54	T
11	4	48	T	18	44	12	T
13	40	43	T	20	13	32	T
14	41	27	T	21	35	23	T

Mar. 17d. Readings also at 0h. (Irkutsk), 2h. (Taihoku), 4h. (La Paz), 5h. (Agana), 8h. (Vienna and near Budapest), 9h. (La Paz, Agana, Baku, and Tashkent), 17h. (Tashkent, Baku (2), Ekaterinburg, and Tiflis), 18h. (near Sumoto), 21h. (Makeyevka, Tiflis, and near Mizusawa), 22h. (Apia and Tiflis), 23h. (Tiflis).

Mar. 18d. 21h. 27m. 0s. Epicentre 6°·0N. 125°·0E. (as on 1926 Jan. 18d.).

A = −·571, B = +·815, C = +·104 ; D = +·819, E = +·574 ;
G = −·060, H = +·085, K = −·995.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Manila		9·5	335	e 2 42	+19	(4 30)	+14	4·5	—
Hong Kong		19·4	328	—	—	—	—	—	9·0
Batavia		22·0	237	i 5 1	− 4	—	—	—	—
Phu-Lien		23·2	312	e 5 13	− 6	e 9 21	− 8	—	—
Irkutsk		49·5	344	—	—	—	—	e 64·0	—
Tashkent		60·7	315	i 10 13	− 4	i 18 25	− 7	e 32·0	73·4
Ekaterinburg		71·2	330	i 11 21	− 3	e 20 29	−11	37·0	—
Baku		74·9	311	—	—	e 21 16	− 9	e 42·0	—
Victoria	E.	99·6	39	—	—	—	—	63·3	66·6
Ottawa		125·4	18	—	—	—	—	e 81·0	—

Additional readings: Tashkent i = +10m.41s. and +19m.6s. =PS+3s., eSR_1 = +23m.18s., eSR_2 = +26m.18s. =SR_2−7s., eSR_4 = +28m.0s., MZ = +39·2m. Ekaterinburg e = +26m.5s. =SR_1−3s., and +29m.33s. = SR_2+37s. Baku e = +30m.57s. =SR_2+50s.

Mar. 18d. Continuation of the list of after-shocks from the epicentre 35°·7N. 134°·8E. of Mar. 17d.

h.	m.	s.		h.	m.	s.	
4	42	37	T	14	55	35	T
6	17	11	TS	20	7	32	T
8	28	55	T	20	18	27	KS
12	47	43	TKOSNH	21	29	8	TKO
14	44	2	T	23	10	46	T

Mar. 18d. Readings also 1h. (Tiflis, Baku, Ekaterinburg, and Tashkent), 3h. (Nagasaki (2)), 7h. (Nagasaki and near Barcelona), 9h. (Nagasaki), and 10h. (Nagasaki and near Merida), 12h. (Agana), 14h. (Nagasaki), 15h. (Manila), 18h. (near Amboina), 22h. (Nagasaki).

Mar. 19d. 10h. 40m. 36s. Epicentre 27°·8S. 70°·2W. (as on 1924 Jan. 29d.).

A = +·300, B = −·832, C = −·466 ; D = −·941, E = −·339 ;
G = −·158, H = +·439, K = −·885.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Pilar	E.	6·7	127	—	—	—	—	3·9	4·9
Sucre		9·8	28	2 0	−27	3 57	−26	4·4	4·9
La Paz	E.	11·4	10	e 2 51	+ 1	4 44	−20	5·4	—
	N.	11·4	10	e 2 51	+ 1	5 2	− 2	5·5	5·8
La Plata		12·6	127	—	—	e 5 42	+ 8	6·7	—

No additional readings.

Mar. 19d. 19h. 51m. 30s. Epicentre 42°·0N. 142°·0E. (as on 1926 May 26d.).

A = −·586, B = +·458, C = +·669 ; D = +·616, E = +·788 ;
G = −·527, H = +·412, K = −·743.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Mizusawa	2·9	193	0 52	+ 7	1 11	− 9	—	—
Irkutsk	27·2	305	e 5 52	− 8	e 10 31	−14	e 13·5	—
Ekaterinburg	51·6	318	1 9 18	+ 1	e 16 40	+ 1	26·5	33·6
Tashkent	52·6	297	9 22	− 2	16 45	− 6	e 27·1	33·2
Kucino	63·2	323	—	—	—	—	e 35·4	—
Baku	65·7	305	—	—	—	—	e 37·5	—
Makeyevka	67·9	317	—	—	—	—	42·5	—
Tiflis	68·0	309	—	—	—	—	e 40·5	—

Additional readings: Mizusawa PN = +54s. Ekaterinburg MZ = +33·7m. Tashkent eSR_1 = +20m.30s., eSR_2 = +22m.18s., e = +27m.30s., MN = +32·7m.

Mar. 19d. 20h. 30m. 30s. Epicentre 2°·8N. 96°·0E. (as on 1926 Sept. 23d.).

A = −·104, B = +·993, C = +·049 ; D = +·995, E = +·105 ;
G = −·005, H = +·049, K = −·999.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Batavia		14·1	130	—	—	—	—	e 7·1	—
Colombo		16·6	285	9 0	?L	—	—	(9·0)	13·1
Kodaikanal		19·8	293	9 54	?L	—	—	(9·9)	—
Phu-Lien	N.	20·7	29	e 4 44	− 5	—	—	12·0	—
Hong Kong		26·0	41	—	—	—	—	—	17·5
Tashkent		45·3	332	i 8 26	− 9	i 15 15	− 4	e 22·8	34·0
Irkutsk		49·9	7	e 9 11	+ 5	e 16 12	− 6	26·5	—
Baku		56·2	320	—	—	—	—	e 29·5	—
Ekaterinburg		60·9	340	i 10 20	+ 2	e 18 43	+ 8	28·5	—
Kucino		70·2	330	—	—	e 20 30	+ 2	e 37·9	—

Additional readings: Tashkent i = +8m.41s., e = +9m.52s. = PR_1 −33s., iPS = +15m.31s., SR_1 = +18m.43s., SR_2 = +20m.54s., MZ = +28·4m., MN = +37·1m.

Mar. 19d. Continuation of the list of after-shocks from the epicentre 35°·7N. 134°·8E. of Mar. 18d.

h.	m.	s.		h.	m.	s.	
3	51	11	T	10	55	37	T
6	50	21	TK	17	36	26	T
9	58	55	T	18	20	30	T
10	54	39	TS				

Mar. 19d. Readings also at 1h. (2), 2h. (2), 3h., 5h., 6h., and 7h. (Nagasaki), 9h. and 11h. (Makeyevka), 12h. (Baku), 15h. (near Rocca di Papa), 19h. (near Ksara), 20h. (near Tacubaya), 21h. (Taihoku).

March 20d. 16h. 13m. 0s. Epicentre 48°·0N. 178°·0W. (as on 1925 Dec. 11d.).

A = −·669, B = −·023, C = +·743 ; D = −·035, E = +·999 ;
G = −·743, H = −·026, K = −·669.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Honolulu, T.H.	E.	31·1	142	—	—	—	—	e 14·5	17·7
	N.	31·1	142	—	—	—	—	e 16·0	17·9
Victoria		35·7	68	—	—	(11 22)	?	11·4	27·6
Irkutsk		47·5	306	8 46	− 5	15 50	+ 2	26·0	29·2
Chicago	E.	60·6	60	—	—	—	—	42·0	—
Ekaterinburg		64·4	329	i 10 45	+ 4	e 19 9	− 9	32·0	38·5
Ottawa		64·6	49	—	—	e 18 56	− 24	e 29·0	—
Leningrad		69·6	345	—	—	—	—	35·3	46·6
Pulkovo		69·8	345	e 11 47	+31	e 20 28	+ 4	37·0	46·2
Kucino		72·0	340	e 9 12	?	e 21 4	+14	37·1	40·7
Tashkent		72·8	314	—	—	i 21 58	[+25]	e 35·0	31·0
Copenhagen		75·9	355	—	—	e 22 12	+36	41·0	—
Makeyevka		79·0	336	e 6 0?	?	—	—	30·0	44·8
De Bilt		79·9	357	e 12 19	+ 1	—	—	e 38·0	52·3
Kew		80·5	1	—	—	—	—	e 48·0	—
Uccle		81·2	359	—	—	e 22 0?	−37	e 37·0	—
Cheb		81·6	353	—	—	—	—	e 37·0	52·0
Baku		82·0	325	e 12 30	0	e 22 52	+ 6	42·5	46·2
Tiflis		82·7	330	e 19.21	?PR_2	e 22 37	−17	e 43·0	50·4
Paris		83·2	0	e 12 29	− 8	—	—	53·0	—
Strasbourg		83·3	357	e 12 0?	−38	—	—	37·0	—
Graz		84·2	351	—	—	—	—	e 55·0	—
Hyderabad		85·8	292	—	—	—	—	—	55·7
Rocca di Papa		89·8	353	12 42	−33	—	—	e 22·7	25·7
Ksara	E.	92·7	332	—	—	e 23 51	[+ 7]	e 54·0	—
Granada		94·8	4	—	—	—	—	7·0	11·0
San Fernando	E.	95·2	7	—	—	—	—	—	68·5
Santiago		125·2	103	—	—	—	—	53·7	—

For Notes see next page.

NOTES TO MARCH 20d. 16h. 13m. 0s.

Additional readings: Irkutsk $PR_1 = +10m.38s.$, $SR_1 = +18m.57s.$, $SR_2 = +19m.30s.$, $MNZ = +32{\cdot}5m.$ Chicago $eSR_1E? = +32m.48s.$, $eSR_2E = +36m.12s.$ Ekaterinburg $PR_1 = +13m.12s.$, $SR_1 = +23m.44s.$, $SR_2 = +25m.56s.$, $MZ = +43{\cdot}9m.$, $MN = +44{\cdot}0m.$ Leningrad $MZ = +47{\cdot}7m.$ Pulkovo $MN = +45{\cdot}9m.$, $MZ = +50{\cdot}7m.$ Kucino $e = +25m.6s.$ and $+28m.54s. = SR_2 - 18s.$, $MN = +48{\cdot}9m.$ Tashkent $MN = +44{\cdot}8m.$, $MZ = +50{\cdot}6m.$ Copenhagen $e = +27m.30s. = SR_1 + 15s.$ De Bilt $MN = +53{\cdot}5m.$, $MZ = +57{\cdot}3m.$ Baku $MN = +54{\cdot}7m.$, $MZ = +59{\cdot}5m.$ Tiflis $e = +27m.51s.$ Rocca di Papa $e = +13m.32s.$ Granada $e = 16h.13m.$ San Fernando $MN = +60{\cdot}0m.$

March 20d. 21h. 13m. 37s. Epicentre 2°·5N. 126°·7E. (as on 1925 May 13d.).

$A = -{\cdot}597$, $B = +{\cdot}801$, $C = +{\cdot}044$; $D = +{\cdot}802$, $E = +{\cdot}598$; $G = -{\cdot}026$, $H = +{\cdot}035$, $K = -{\cdot}999$.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Amboina		6·4	166	0 49	−49	1 57	−58	—	—
Manila		13·3	335	e 3 23	+ 6	—	—	4·8	—
Batavia		21·0	246	i 5 2	+ 1	i 8 59	0	—	—
Hong Kong		23·2	329	5 15	− 4	(9 28)	− 1	9·5	9·6
Phu-Lien		26·8	315	e 5 49	− 7	10 53	+16	12·1	—
Irkutsk		53·1	344	i 9 27	0	i 16 57	0	28·4	—
Tashkent		64·3	316	i 10 45	+ 5	i 19 23	+ 6	e 31·9	44·3
Ekaterinburg		75·0	330	i 11 52	+ 3	21 27	+ 1	33·4	—
Baku		78·4	311	i 12 11	+ 2	i 22 8	+ 3	38·5	51·5
Tiflis		82·3	313	i 12 30	− 2	e 22 35	−14	48·4	—
Kucino		87·3	325	—	—	—	—	e 42·3	—
Ksara	E.	89·3	305	e 13 2	−10	e 23 57	− 9	—	—
Pulkovo		91·0	330	e 13 12	− 9	e 24 3	−21	—	—
De Bilt		106·7	327	—	—	—	—	e 56·4	—
Uccle		107·7	326	—	—	—	—	56·4	—
Ottawa		128·1	18	—	—	—	—	e 62·4	—

Additional readings: Irkutsk $e = +18m.10s.$ and $+19m.12s.$ Tashkent $i = +11m.4s.$ and $+11m.26s.$, $MZ = +43{\cdot}3m.$ Ekaterinburg $i = +12m.7s.$ Baku $MN = +56{\cdot}5m.$

March 20d. Continuation of the list of after-shocks from the epicentre 35°·7N. 134°·8E., of March 19d.

h.	m.	s.		h.	m.	s.	
0	51	53	T	13	57	4	T
1	54	8	TS	14	9	9	S
2	27	6	T	15	11	45	T
4	45	6	TKOSNH	17	42	4	TKOS
5	11	45	O	17	54	14	T
13	47	7	KS	18	17	19	S
13	55	47	T	18	54	42	T
13	56	1	T				

March 20d. Readings also at 3h. (Taihoku), 6h. (Nagasaki), 9h. (near Mizusawa), 13h. (near La Paz), 14h. (Baku, Ekaterinburg, Tashkent, and Tiflis), 15h. (Nagasaki, Ekaterinburg, Irkutsk, Ottawa, and near Honolulu), 16h. (Nagasaki, Tashkent, and Baku), 17h. (Nagasaki and Santiago), 18h. (Simla, Ekaterinburg, and near Amboina), 23h. (near Ksara and Athens).

March 21d. 8h. 46m. 12s. (I) } Epicentre 48°·0N. 178°·0W. (as on March 20d.).
9h. 58m. 27s. (II) }

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
I	Honolulu, T.H.	31·1	142	—	—	—	—	e 16·5	—
II		31·1	142	—	—	—	—	14·6	17·6
II	Victoria E.	35·7	68	—	—	—	—	e 14·7	28·3
I	Irkutsk	47·5	306	e 8 50	− 1	e 15 44	− 4	24·8	—
II		47·5	306	8 49	− 2	15 47	− 1	25·6	32·5
I	Zi-ka-wei	48·2	271	e 9 15	+20	e 16 38	?PS	—	32·6
II		48·2	271	9 13	+18	e 16 28	?PS	—	32·2
I	Toronto N.	63·9	53	—	—	i 28 36	?	37·0	—
II	N.	63·9	53	—	—	e 18 52	−20	36·2	39·4
II	Ekaterinburg	64·4	329	—	—	—	—	51·6	—
I	Ottawa	64·6	49	—	—	e 19 0	−20	e 31·8	—
II		64·6	49	—	—	e 19 3	−17	e 28·6	—
I	Leningrad	69·6	345	—	—	—	—	39·4	47·4
II		69·6	345	—	—	—	—	40·3	47·8
I	Pulkovo	69·8	345	—	—	—	—	38·8	48·2
II		69·8	345	—	—	—	—	42·6	48·1
I	Kucino	72·0	340	—	—	e 23 15	?	36·9	49·6
II		72·0	340	—	—	e 21 2	+12	37·4	41·1
I	Tashkent	72·8	314	i 11 43	+ 8	22 0	+60	e 35·8?	45·0
II		72·8	314	i 11 28	− 7	20 45	−15	e 35·6	40·1
I	Copenhagen	75·9	355	—	—	—	—	48·8	—
II		75·9	355	—	—	—	—	43·6	—
I	Makeyevka	79·0	336	e 10 48?	−85	—	—	40·8	51·3
II		79·0	336	—	—	—	—	43·6	51·5
I	De Bilt	79·9	357	—	—	—	—	e 49·8	—
II		79·9	357	—	—	—	—	e 47·6	52·4
II	Kew	80·5	1	—	—	—	—	e 51·6	—
II	Uccle	81·2	359	—	—	—	—	e 31·6	—
II	Prague	81·4	351	—	—	—	—	e 46·6	55·6
II	Cheb	81·6	353	—	—	—	—	e 46·6	51·6
II	Baku	82·0	325	i 12 31	+ 1	e 22 55	+ 9	43·8	46·3
II		82·0	325	12 31	+ 1	e 22 53	+ 7	43·2	48·5
I	Paris	83·2	0	—	—	—	—	e 53·8	—
II		83·2	0	e 12 34	− 3	—	—	49·6	—
I	Strasbourg	83·3	357	—	—	—	—	—	70·8
II		83·3	357	e 11 33?	−65	—	—	41·6	—
I	Granada	94·8	4	—	—	—	—	e 57·8	63·5
II		94·8	4	—	—	—	—	e 36·6	62·4
II	San Fernando E.	95·2	7	—	—	—	—	—	65·6

Additional readings: Honolulu II LN = +16·8m., MN = +19·6m. Irkutsk I ePR_1 = +10m.39s., SR_1 = +19m.28s., II PR_1 = +10m.43s., SR_1 = +19m.27s. Toronto II LE = +38·7m. Leningrad I MZ = +46·2m., II MN = +45·5m., MZ = +48·4m. Pulkovo I MZ = +47·9m., II MZ = +48·2m. Kucino II MN = +49·5m. Tashkent I ePR_1 = +14m.42s., ePR_2 = +16m.24s., e = +21m.48s. =[S] +15s., i = +23m.25s., eSR_1 = +28m.30s., eSR_2 = +31m.48s., MN = +45·2m., MZ = +45·3m., II i = +21m.4s., e = +25m.9s. and +28m.21s., MN = +45·2m., MZ = +45·3m. Makeyevka I MZ = +51·0m., II MZ = +51·1m. De Bilt II MN = +53·6m. Baku I SR_1 = +19m.6s. = PR_2 − 2s., SR_2 = +23m.21s. = PS − 10s., MN = +46·5m., MZ = +59·4m., II SR_1 = 29m.5s., SR_2 = +33m.4s., MN = +59·2m., MZ = +59·4m. San Fernando II MN = +56·6m.

March 21d. 15h. 5m. 24s. Epicentre 34°·0S. 57°·0E.

(as on 1926 Dec. 29d.).

A = +·452, B = +·695, C = −·559; D = +·839, E = −·545; G = −·305, H = −·469, K = −·829.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Cape Town	31·7	262	6 42	− 2	11 45	−18	15·6	24·2
Entebbe	41·1	321	e 7 50	−14	e 14 0	−22	e 16·6	—
Colombo	46·3	32	—	—	15 11	−21	22·3	25·4
Kodaikanal	48·3	26	17 0	?S	(17 0)	+62	23·1	27·1
Batavia	53·7	70	i 9 30	− 1	i 17 10	+ 5	24·2	—

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Bombay	N.	55·0	19	e 16 57	?S	(e 16 57)	−24	—	29·1
Hyderabad		55·4	25	9 38	− 4	17 23	− 3	22·3	26·7
Adelaide		65·2	116	—	—	i 19 34	+ 7	—	29·1
Simla	E.	67·9	19	e 20 0	?S	(e 20 0)	− 1	31·5	—
Helwan		68·3	337	11 10	+ 4	20 10	+ 4	—	39·2
Melbourne		68·6	122	—	—	i 20 24	+15	i 33·5	37·1
Ksara		70·6	341	11 28	+ 7	20 42	+ 9	33·8	37·2
Phu-Lien		72·3	49	e 11 32	0	e 20 54	0	33·6	—
Baku		74·7	355	i 11 49	+ 2	21 27	+ 5	26·3	—
Riverview		74·9	121	e 12 30	+42	e 21 24	− 1	e 35·8	39·0
Sydney		74·9	121	21 42	?[S]	(21 42)	[− 6]	37·6	40·0
Tashkent		76·1	10	i 11 56	0	i 21 36	− 2	e 35·6	37·7
Tiflis		76·5	351	e 11 56	− 2	i 21 42	− 1	e 33·6	44·0
Manila		77·8	64	i 12 10	+ 4	(21 36)	−22	21·6	—
Athens		78·3	335	12 9	0	i 22 2	− 2	39·1	51·1
Hong Kong		78·3	53	12 7	− 2	(21 56)	− 8	21·9	36·6
Makeyevka		83·8	349	12 39	− 2	22 57	−10	38·6	45·5
Pompeii		84·4	330	e 12 36	− 8	e 22 36	[−16]	—	37·6
Wellington	E.	85·5	139	—	—	i 23 24	− 1	e 37·2	—
Rocca di Papa		85·9	329	i 12 52	− 1	e 22 46	−43	e 50·9	—
Algiers		86·8	320	12 54	− 4	23 21	−18	43·6	47·1
La Plata		88·0	229	13 8?	+ 3	—	—	36·6	—
Budapest		88·2	337	12 59	− 7	23 39	−15	e 45·5	—
Florence		88·2	330	13 1	− 5	—	—	—	—
Zi-ka-wei		89·0	50	i 13 6	− 4	23 42	[+20]	44·0	49·6
Venice		89·0	331	e 13 1	− 9	23 57	− 6	—	—
Graz		89·2	335	e 13 7	− 4	e 23 35	[+12]	48·6	60·6
Vienna		89·8	335	13 7	− 8	23 30	[+ 3]	e 38·6	—
Alicante		89·8	320	e 13 21	+ 6	24 6	− 6	e 45·0	52·7
Almeria		89·8	318	13 17	+ 2	24 10	− 2	e 47·3	49·2
Barcelona		90·7	324	13 16	− 4	e 23 44	[+12]	e 48·2	58·2
Moncalieri		90·7	328	e 13 21	+ 1	22 31	[−61]	29·3	—
Granada		90·8	317	i 13 17	− 3	i 23 33	[0]	i 47·2	55·7
Ekaterinburg		90·9	3	i 13 14	− 7	i 24 6	−17	40·6	52·4
Malaga		90·9	317	13 16	− 5	24 18	− 5	—	—
Innsbruck		91·0	331	e 13 17	− 4	e 23 36?	[+ 2]	—	—
Tortosa	N.	91·1	321	13 18	− 4	23 52	[+17]	e 40·6	57·3
Kucino		91·2	350	e 13 28	+ 6	24 9	−17	39·6	56·2
Chur		91·4	330	e 13 16	− 7	i 24 10	−18	—	—
San Fernando		91·8	315	13 29	+ 3	24 1	−32	42·1	58·1
Prague		92·1	333	e 13 26	− 2	e 24 11	−25	e 40·6	49·6
Zurich		92·2	330	e 13 19	− 9	e 23 26	[−15]	—	—
Cheb		92·8	333	e 13 29	− 2	e 24 1	[+16]	e 37·6	51·6
Toledo		92·8	319	e 13 26	− 5	i 24 35	− 8	e 43·1	53·1
Rio Tinto		92·9	316	19 36?	?PR_2	—	—	—	59·6
Besançon		93·2	329	e 13 32	− 1	e 23 59	[+12]	49·6	—
Strasbourg		93·5	330	e 13 23	−12	e 23 57	[+ 8]	39·6	61·2
Irkutsk		95·6	27	12 54	−53	i 24 4	[+ 4]	49·6	—
Paris		95·9	329	e 13 41	− 7	i 23 18	[−44]	47·6	50·6
Pulkovo		96·3	348	13 45	− 6	i 24 11	[+ 7]	44·6	56·2
Leningrad		96·5	348	e 13 46	− 6	i 24 18	[+13]	40·2	56·9
Hamburg		96·5	335	e 17 42	?PR_1	e 24 58	−23	e 47·6	69·5
Uccle		96·6	330	e 13 45	− 7	e 22 42	?	e 42·6	—
De Bilt		97·3	332	—	—	e 24 23	[+14]	e 43·6	49·3
Copenhagen		97·4	338	—	—	i 25 10	−20	e 45·6	50·4
Helsingfors	N.	97·8	346	—	—	—	—	e 45·8	61·0
Kew		99·1	328	14 4	− 2	e 24 35	[+16]	43·6	55·2
Upsala	N.	99·3	343	—	—	e 24 31	[+11]	—	58·5
Oxford		99·7	328	18 25	?PR_1	—	—	e 40·6	70·8
Stonyhurst		101·7	329	(18 42)	?PR_1	24 49	[+17]	—	—
Edinburgh		103·4	330	—	—	e 24 36?	[− 4]	—	—
Sucre		103·6	235	e 17 19	?	27 29	?PS	44·6	51·7
La Paz		107·4	235	18 20	[+ 7]	i 28 29	?PS	45·3	58·9
Harvard	E.	139·0	298	—	—	—	—	e 74·2	—
Fordham		140·9	294	i 22 40	?PR_1	i 23 45	?	i 68·0	77·1
Ottawa	N.	142·5	302	i 22 51	?PR_1	—	—	72·6	83·6
Ithaca		143·0	298	—	—	—	—	75·6	—
Toronto	N.	145·1	299	—	—	—	—	68·2	85·0
Honolulu, T.H.	E.	146·7	102	—	—	—	—	e 99·4	—
Ann Arbor	E.	148·3	296	—	—	—	—	e 75·0	—
Chicago		151·2	296	—	—	—	—	74·9	88·1
Victoria	E.	165·6	1	—	—	—	—	73·6	96·8

For Notes see next page.

NOTES TO MARCH 21d. 15h. 5m. 24s.

Additional readings: Batavia i = +10m.12s. Hyderabad P = +11m.59s. = PR_1 −11s. Adelaide MN = +31·2m. Simla S = +24m.24s. = SR_1 −55s., LN = +33·6m. Melbourne i = +29m.36s. = SR_1 +12s. Baku PR_1 = +14m.28s., SR_1 = +26m.12s. Riverview MN = +40·8m. Tashkent i = +12m.22s., PR_1 = +14m.57s., PR_2 = +16m.18s., PR_3 = +17m.45s., PS = +22m.15s., SR_2 = +29m.36s.?, SR_3 = +31m.36s.?, MNZ = +38·5m. Tiflis P = +12m.3s., ePR_1? = +15m.29s., SR_1 = +26m.34s., SR_2 = +30m.7s., e = +31m.23s. Athens PR_1 = +15m.13s., MN = +56·8m. Makeyevka PR_1 = +15m.53s., PR_2 = +18m.17s., PS = +24m.3s., e = +24m.53s., SR_1 = +28m.28s., MZ = +48·2m. Wellington iN = +23m.26s., LN = +40·6m. Rocca di Papa iPZ = +12m.53s., iPE = +12m.54s., iN = +12m.58s., eSE = +23m.10s. Zi-ka-wei PR_1 = +16m.34s., PS = +24m.11s. = S +8s. Venice eP = +13m.14s. Graz i = +23m.51s. = S −14s. Vienna iPZ = +13m.8s., PR_1 = +16m.46s., PR_2? = +19m.49s., S = +23m.57s., PS? = +25m.16s., PPS? = +26m.23s. Almeria PR_1 = +17m.56s., SR_1 = +30m.16s., MN = +55·6m. Barcelona MN = +64·1m. Granada PR_1 = +16m.56s., PR_2 = +19m.9s., and many i readings. Ekaterinburg PR_1 = +16m.54s., S_4P_4S = +23m.42s., PS = +25m.8s., SR_1 = +30m.5s., MN = +53·5m., MZ = +53·6m. Tortosa SE = +23m.46s. = [S] +11s. Kucino ePR_1 = +17m.31s., e = +30m.4s. = SR_1 −40s., MN = +46·8m. San Fernando MN = +45·1m. Zurich iPZ = +13m.25s. Strasbourg PS = +24m.36s. = S −15s., i = +27m.54s. Irkutsk ePR_1 = +17m.8s., iPPS = +26m.6s., SR_1 = +31m.42s., SR_2 = +35m.28s., e = +38m.52s. = SR_3 +4s. Paris MN = +60·6m. Pulkovo PR_1 = +17m.28s., $S_4P_4P_4S$ = +24m.47s. = S −32s., PS = +26m.18s., e = +30m.54s., MZ = +53·6m. Leningrad PR_1 = +17m.30s., PS = +26m.18s. Hamburg MNZ = +63·6m. De Bilt e = +25m.5s. = S −24s. +32m.0s. = SR_1 −3s., and +41m.12s., MN = +55·1m., MZ = +69·2m. Copenhagen eS_6P_6S = +24m.23s., e = +30m.12s., SR_1 = +32m.11s., SR_2 = +35m.30s., e = +41m.36s., MN = +50·9m. Kew MN = +60·5m., MZ = +64·2m. Upsala eE = +24m.35s., ME = +64·2m. Sucre iP = +17m.39s. = [P] −21s. La Paz PR_1 = +21m.44s. = PR_2 −16s., L = +47·3m., MN = +54·4m. Harvard eLN = +76·3m. Ottawa e = +41m.0s. = SR_1 −22s., eN = +46m.36s. = SR_2 −48s., LE = +77·6m., MN = +82·6m. Honolulu eLN = +101·2m. Chicago LN(Love) = +65·7m., LE?(Love) = +66·1m., MN = +85·6m.; the L's entered are "Rayleigh" waves. Victoria readings have been increased by 1h.

Mar. 21d. Continuation of the list of after-shocks from the epicentre 35°·7N. 134°·8E. of Mar. 20d.

h.	m.	s.		h.	m.	s.	
2	49	34	T	20	16	36	T
13	21	28	T	21	53	53	T
18	17	8	T				

Mar. 21d. Readings also at 1h. (Nagasaki (3) and Lick), 4h. (Nagasaki, Rocca di Papa, and near Belgrade), 5h. and 6h. (Nagasaki), 11h. (Rocca di Papa (2) and Rio Tinto), 12h. (Ekaterinburg), 14h. (Tashkent), 15h. (Ekaterinburg, Baku, Strasbourg, La Paz, and near Belgrade), 16h. (Santiago, Tashkent, Makeyevka, and Ekaterinburg), 17h. (Baku, Kucino, Tiflis, Pulkovo, Leningrad, and near Malabar), 18h. (Colombo and near Nagasaki), 22h. (Manila, Ekaterinburg, and Tashkent).

Mar. 22d. 0h. 59m. 0s. Epicentre 48°·0N. 178°·0W. (as on Mar. 21d.).

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Honolulu, T.H.	E.	31·1	142	—	—	—	—	e 14·5	—
Victoria	E.	35·7	68	—	—	(12 27)	−39	12·4	34·8
Irkutsk		47·5	306	8 50	− 1	15 59	+11	24·0	—
Zi-ka-wei		48·2	271	i 9 13	+18	e 16 25	+29	—	32·0
Chicago		60·6	60	—	—	18 10	−21	28·0	42·0
Ann Arbor	N.	62·4	57	—	—	—	—	e 32·1	—
Toronto	E.	63·9	53	—	—	e 18 54	−18	30·6	38·8
Ekaterinburg		64·4	329	i 10 48	+ 7	19 15	− 3	33·0	46·2
Ottawa		64·6	49	—	—	e 19 4	−16	e 29·0	40·0
Ithaca		66·3	52	—	—	—	—	e 29·0	—

Continued on next page.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Fordham	68·7	52	—	—	i 19 58	−12	37·0	42·5
Leningrad	69·6	345	—	—	—	—	37·5	48·2
Pulkovo	69·8	345	11 19	+ 3	—	—	38·0	48·0
Upsala	71·5	353	—	—	—	—	39·0	—
Kucino	72·0	340	—	—	e 20 32	−18	37·6	46·0
Tashkent	72·8	314	i 11 45	+10	i 21 1	+ 1	e 35·0	45·2
Copenhagen	75·9	355	—	—	e 21 0?	−36	40·0	—
Edinburgh	76·0	3	—	—	—	—	50·0	—
Makeyevka	79·0	336	e 12 8	− 5	—	—	39·0	51·2
De Bilt	79·9	357	e 12 14	− 4	22 6	−16	e 37·0	52·4
Oxford	80·2	3	—	—	i 22 20	− 5	e 44·0	51·0
Kew	80·5	1	e 12 0?	−22	—	—	40·0	—
Uccle	81·2	359	e 12 19	− 7	(e 22 0?)	−37	e 22·0	—
Cheb	81·6	353	—	—	—	—	e 31·0	51·0
Baku	82·0	325	i 12 33	+ 3	22 53	+ 7	43·0	46·3
Tiflis	82·7	330	e 12 42	+ 8	e 22 55	+ 1	e 43·0	50·0
Paris	83·2	0	e 12 32	− 5	—	—	53·0	—
Strasbourg	83·3	357	i 12 32	− 6	(21 0?)	−120	21·0	—
Hyderabad	85·8	292	—	—	—	—	—	56·1
Rocca di Papa	89·8	353	e 13 7	− 8	(23 30)	[+ 3]	23·5	—
Tortosa N.	91·2	1	—	—	—	— e	52·0	—
Ksara	92·7	332	13 23	− 8	e 23 54	[+10]	53·0	—
Granada	94·8	4	i 13 15	−27	—	—	46·0	61·6
San Fernando	95·2	7	—	—	—	—	—	60·5

Additional readings: Honolulu eLN? = +15·2m. Irkutsk PR_1 = +10m.42s., e = +18m.44s. = SR_1 − 34s., SR_1 = +19m.29s. Zi-ka-wei PR_1 = +11m.11s. Chicago LN(Rayleigh) = +36·2m., LE = +36·6m., MN = +37·0m. Ekaterinburg MN = +44·0m., MZ = +44·2m. Ottawa e = +23m.48s. = SR_1 − 38s. Leningrad MZ = +48·1m. Pulkovo SR_1 = +24m.42s., MZ = +46·0m. Kucino e = +21m.14s. = [S] − 13s., +23m.19s., +25m.41s. = SR_1 − 39s., and +28m.59s. = SR_2 − 13s., MN = +47·7m. Tashkent ePR_1 = +14m.45s., ePR_2 = +16m.0s., ePR_3 = +18m.0s., iPS = +21m.47s., iS_4P_4S = +22m.1s., eSR_1 = +25m.42s., SR_2 = +27m.53s., SR_3 = +29m.24s., e = +31m.41s., MN = +40·8m., MZ = +45·3m. Makeyevka e = +12m.38s., +23m.18s. = PS + 25s., and +32m.58s. = SR_2 − 14s., MZ = +51·1m. De Bilt eSR_1N = +27m.36s., MN = +53·7m., MZ = +58·1m. Baku SR_1 = +28m.19s., SR_2 = +32m.53s., MN = +46·5m., MZ = +59·3m. Tiflis ePR_2? = +16m.18s. Rocca di Papa ePN = +13m.8s., ePE = +13m.9s. Ksara eSE = +23m.56s. = [S] + 12s.; T_0 = 0h.59m.37s.

Mar. 22d. 7h. 31m. 36s. Epicentre 22°·0S. 114°·7E. (as on 1919 Nov. 21d.).

A = −·387, B = +·842, C = −·375; D = +·908, E = +·418; G = +·157, H = −·340, K = −·927.

There are unfortunately no readings from Batavia, Malabar, and Amboina from Mar. 22 to Mar. 31. They would have given material help in identifying this epicentre, which should probably be further north.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Perth	10·0	175	—	—	i 4 39	+10	12·4	—
Adelaide	24·5	127	—	—	e 12 0	?L	15·9	22·3
Melbourne	30·4	128	—	—	—	— e	15·5	24·2
Riverview	34·1	118	—	—	e 9 54	−168 e	14·6	14·9
Sydney	34·1	118	—	—	11 36	−66	15·6	16·9
Manila	37·1	9	—	—	e 12 24?	−61	—	—
Phu-Lien	43·5	348	—	—	—	—	18·4	—
Hong Kong	44·4	358	15 49	?S	(15 49)	+42	—	20·9
Christchurch	52·0	129	(10 0)	+40	—	—	10·0	27·9
Zi-ka-wei	53·6	7	e 9 20	−10	—	—	—	25·2
Irkutsk	74·9	354	11 49	+ 1	21 21	− 4	37·4	—
Tashkent	76·0	326	—	—	—	—	e 28·4	53·8
Baku	86·7	317	e 18 50	?PR_2	e 28 12	?SR_1	49·4	65·3
Tiflis	90·7	316	—	—	—	—	e 59·8	69·4
Ekaterinburg	91·0	334	—	—	e 23 57	−27	41·9	47·3
Honolulu, T.H. E.	95·6	69	—	—	—	—	e 29·9	32·4
Kucino	101·0	326	—	—	e 26 48	+43	49·7	—
Pulkovo	106·2	330	—	—	—	—	e 55·4	—

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Cheb		114·5	316	—	—	—	—	e 61·4	76·4
Strasbourg		117·4	314	—	—	—	—	e 63·4	75·4
De Bilt		119·1	318	—	—	—	—	e 62·4	76·9
Uccle		119·6	316	—	—	—	—	e 63·4	—
Paris		120·8	314	—	—	—	—	e 72·4	78·4
Kew		122·5	317	—	—	—	—	e 58·4	—
Oxford		123·1	317	—	—	—	—	e 67·4	—
Granada		125·2	300	—	—	—	—	82·4	91·1
San Fernando	E.	127·3	300	—	—	—	—	—	85·9
Victoria	E.	127·3	44	—	—	—	—	49·6	59·2
Ottawa		155·1	18	—	—	e 39 36?	?	72·4	—
Toronto	E.	155·4	25	—	—	—	—	69·4	—
Fordham	E.	159·8	19	—	—	—	—	75·2	—

Additional readings: Adelaide MN = +21·8m. Melbourne i = +19m.6s. Riverview MN = +21·1m. Tashkent i = 7h.21m.40s., e = +3m.24s., +13m.41s., +16m.24s.?, +18m.57s., and +23m.41s., MN = +45·6m., MZ = +54·0m. Baku MN = +51·4m., MZ = +90·2m. Kucino e = +29m.6s. De Bilt MN = +76·4m., MZ = +76·7m. San Fernando MN = +86·4m.

Mar. 22d. 22h. 53m. 0s. Epicentre 56°·0N. 34°·5W.? (a possible anticipation of the shock on Mar. 25d. 3h.).

The only observations are those of L, which compare with the L of Mar. 25d. 3h. as below.

	Δ	L. 22d.	L. 25d.		Δ	L. 22d.	L. 25d.
	°	m.	m.		°	m.	m.
De Bilt	23·3	11	e 11·5	Ekaterinburg	48·2	25·5	22·5
Uccle	23·4	10	e 11·5	Tiflis	51·0	e 30	e 27·5
Copenhagen	25·8	11	12·5	Baku	54·7	e 30	e 28·5
Strasbourg	26·4	e 10	13·5	Tashkent	63·5	e 36	e 24·0

Mar. 22d. Continuation of the list of after-shocks from the epicentre 35°·7N. 134°·8E. of Mar. 21d.

h.	m.	s.		h.	m.	s.	
3	57	37	TKOSN	19	48	32	T
6	18	11	T	20	55	31	T
11	55	20	T				

Mar. 22d. Readings also at 0h. (Ksara), 3h. (Tacubaya), 4h. (Oaxaca), 6h. (Irkutsk), 7h. (Nagasaki, La Plata, near La Paz, and Sucre), 9h. (Nagasaki), 10h. (Baku and Nagasaki), 13h. (Nagasaki and near Mizusawa), 14h. (Nagasaki), 15h. (Tiflis), 21h. (Nagasaki, Tiflis (2), and Tucson), 22h. (near Athens).

March 23d. 7h. 37m. 25s. Epicentre 12°·0S. 177°·0W. (as on 1926 June 22d.).

A = −·977, B = −·051, C = −·208; D = −·052, E = +·999; G = +·208, H = +·011, K = −·978.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Apia		5·4	110	—	—	—	—	e 2·8	4·2
Suva	N.	7·6	215	1 59	+ 4	3 23	− 3	—	6·0
Manila		67·0	292	e 18 21	?S	(e 18 21)	−89	—	—
Tashkent		115·5	310	i 19 0	[+21]	—	—	—	—
Ekaterinburg		117·4	329	e 19 35?	?PR_1	—	—	47·6	—
Pulkovo		128·1	342	i 20 41	?PR_1	—	—	—	—
Baku		130·1	313	—	—	—	—	e 37·6	—
De Bilt	Z.	139·9	357	i 19 29	[−10]	—	—	—	—
Vienna	Z.	142·1	345	19 28	[−15]	—	—	—	—
Zurich	Z.	144·3	353	19 28	[−19]	—	—	—	—
Florence		147·4	345	19 35	[−17]	21 55	?	—	—

Additional readings: Suva iE = +3m.23s.; T_0N = 7h.38m.54s. Tashkent i = +19m.57s. = PR_1 +2s., e = +32m.32s. and +35m.31s. = SR_1 −20s. Pulkovo i = +22m.34s.

ch 23d. 9h. 13m. 30s. Epicentre 63°·0S. 180°·0.

$A = -\cdot454$, $B = \cdot000$, $C = -\cdot981$; $D = \cdot000$, $E = +1\cdot000$; $G = +\cdot891$, $H = \cdot000$, $K = -\cdot454$.

ery doubtful and unsatisfactory. The epicentre 50°·5S. 161°·0E. of March 12 will apparently not fit the observations at all.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
lington	N.	22·1	350	5 5	− 1	i 9 6	− 1	—	14·3
bourne		32·9	305	—	—	i 12 36	+14	—	21·2
erview		34·3	316	—	—	e 11 36	−68	—	18·5
ney		34·3	316	11 30	?S	(11 30)	−74	18·5	19·0
laide		37·9	300	—	—	e 14 20?	+43	19·3	27·7
a	N.	44·9	358	e 6 30	−122	i 15 36	+22	i 18·3	20·7
a		49·5	11	—	—	(15 30)	−43	15·5	20·2
olulu, T.H.		86·1	20	—	—	—	—	e 31·5	—
ila		89·9	304	—	—	—	—	27·5	—
oria	E.	120·0	40	—	—	—	—	39·8	46·6
ago	E.	127·4	70	—	—	—	—	e 67·5	—
tsk		129·5	309	—	—	—	—	e 53·5	—
nto	E.	132·5	75	—	—	—	—	57·1	—
wa		135·4	77	—	—	e 31 30?	?	65·5	—
u		143·1	256	e 16 29	?	—	—	66·5	101·4
s		146·4	251	e 18 23	?	—	—	e 89·5	99·7
terinburg		140·2	286	e 17 30?	?	i 21 57?	?	—	—
Fernando	E.	153·2	169	—	—	—	—	—	118·5
eyevka		154·4	252	e 23 30?	?PR_1	—	—	75·5	96·0
ino		159·7	267	—	—	—	—	82·0	92·4
gue		164·9	218	—	—	—	—	e 91·5	101·5
sbourg		165·0	200	—	—	—	—	e 87·5	—
kovo		165·3	271	e 17 22	?	—	—	76·5	88·6
le		167·6	193	—	—	—	—	e 86·5	—
Bilt		168·8	196	—	—	—	—	e 82·5	89·2

dditional readings: Wellington iE = +7m.25s. and +8m.47s., ME = +14·4m. Riverview MN = +19·0m. Adelaide MN = +23·8m. Suva iE = +16m.42s., P and S for North are given as e and i simply. Baku SR_1 = +40m.26s., SR_2 = +46m.55s., MN = +96·5m., MZ = +103·8m. Tiflis MN = +105·7m. San Fernando MN = +116·0m. Makeyevka e = +31m.30s.?, MZ = +90·8m. Kucino e = +28m.23s., +29m.42s., +32m.3s., and +44m.30s., MN = +88·7m. Pulkovo e = +22m.39s., +29m.33s., +36m.0s., and +43m.18s., MZ = +86·6m., MN = +87·6m.

ch 23d. Continuation of the list of after-shocks from the epicentre 35°·7N. 134°·8E. of March 22d.

h.	m.	s.		h.	m.	s.	
3	30	25	T	16	56	14	T
9	52	23	T	21	50	46	SN
12	58	34	T	23	41	29	TK
13	50	20	TSN				

ch 23d. Readings also at 2h. (Nagasaki), 4h. (near Ksara), 5h. (La Paz), 6h. (Nagasaki (3), Baku, and Tashkent), 8h. (near Granada and Malaga), 9h. (La Paz and Sucre), 11h. (Pilar, Nagasaki, and near Mizusawa), 12h. (Nagasaki), 15h. (Baku), 17h. and 19h. (Nagasaki), 20h. (Tashkent), 21h. (Irkutsk), 22h. (Irkutsk and Santiago), 23h. (Nagasaki).

ch 24d. 7h. 42m. 34s. Epicentre 40°·0N. 78°·0E. (as on 1925 Aug. 5d.).

$A = +\cdot159$, $B = +\cdot749$, $C = +\cdot643$; $D = +\cdot978$, $E = -\cdot208$; $G = +\cdot134$, $H = +\cdot629$, $K = -\cdot766$.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Tashkent	6·7	284	e 0 57	−45	i 2 45	−17	—	3·7
Ekaterinburg	20·2	332	i 4 44	+ 1	8 27	0	i 10·4	12·0
Baku	21·4	280	e 5 1	+ 3	e 9 10	+17	13·2	14·8
Irkutsk	21·7	47	e 5 3	+ 2	e 9 1	+ 2	(i 11·3)	—

Continued on next page.

		△	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Tiflis		25·0	285	e 5 36	− 2	e 10 24	+21	e 14·6	17·4
Makeyevka		29·5	299	—	—	—	—	18·4	19·8
Kucino		30·5	315	—	—	—	—	e 15·0	—
Pulkovo		35·4	320	7 5	−12	—	—	15·4	—
Leningrad		35·5	320	—	—	—	—	16·4	—
De Bilt	E.	49·8	310	—	—	—	—	e 31·4	—

Additional readings: Tashkent i = +1m.9s., +1m.19s., +1m.25s., +1m.49s., and +2m.35s. Baku e = +12m.21s., MN = +14·5m. Irkutsk L is given as iP, P and S are given as simply eS. Tiflis e = +5m.58s. and +12m.19s. Makeyevka MN = +19·9m., MZ = +21·8m. Kucino i = +16m.24s., e = +18m.21s. De Bilt eLN = +27·4m.

March 24d. 14h. 46m. 35s. Epicentre 35°·0N. 26°·0E.

A = +·736, B = +·359, C = +·574; D = +·438, E = −·899; G = +·516, H = +·251, K = −·819.

Felt in S.E. of Crete. Comparison with the solution of 1926 June 26 with epicentre 35°·0N. 28°·0E. shows that the present epicentre is distinctly to be preferred for this shock.

		△	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Athens		3·4	330	i 1 6	+13	1 52	+18	2·1	2·9
Ksara		8·3	95	e 2 5	− 1	3 29	−16	3·8	—
Belgrade		10·7	339	e 2 42	+ 2	i 4 36	−12	e 11·5	—
Pompeii		10·7	306	e 4 52	?S	(e 4 52)	+ 4	(e 7·9)	—
Rocca di Papa		12·4	307	e 3 28	+23	—	—	e 7·7	9·8
Zagreb		13·2	328	e 4 22	+66	e 7 25?	?L	(e 7·4)	—
Budapest		13·5	340	3 46	+26	—	—	e 7·4	10·1
Laibach		14·0	325	e 4 23	+57	7 39	?L	(7·6)	10·2
Florence		14·3	311	(e 3 55)	+25	(e 6 25)	+10	—	9·9
Graz		14·4	330	e 3 56	+24	e 7 16	+58	8·4	8·8
Venice		14·7	319	3 25?	−10	—	—	—	—
Lemberg	E.	14·9	355	e 3 49	+11	e 6 43	+13	—	10·2
	N.	14·9	355	e 3 25	−13	e 6 49	+19	—	10·4
Vienna		15·0	335	e 3 46	+ 7	8 53	?L	(8·9)	11·9
Makeyevka		15·8	31	3 46	− 3	6 51	+ 1	9·4	14·2
Tiflis		16·1	60	3 53	0	i 7 10	+13	e 8·4	11·1
Innsbruck		16·4	323	e 4 3	+ 6	e 8 35	+91	(e 8·6)	—
Moncalieri		17·1	311	e 4 1	− 5	9 3	?L	11·0	13·4
Chur		17·1	319	e 4 11	+ 5	i 7 52	+32	—	—
Prague		17·2	334	e 4 25?	+18	e 7 35	+14	e 9·4	12·4
Ravensburg		17·7	321	e 5 33	+80	—	—	e 9·9	13·1
Zurich		17·9	319	e 4 23	+ 7	e 7 52	+14	—	11·9
Cheb		18·0	331	e 4 40	+23	e 7 48	+ 8	e 9·6	10·7
Algiers		18·6	282	e 4 33	+ 9	—	—	10·9	—
Strasbourg		19·1	321	e 4 32	+ 2	e 8 11	+ 7	10·4	—
Besançon		19·3	315	e 4 36	+ 3	8 27	+19	—	—
Baku		19·6	67	4 39	+ 3	i 8 20	+ 5	10·6	14·3
Hamburg		21·7	334	e 5 25?	+24	—	—	e 11·4	15·4
Paris		22·1	316	—	—	—	—	e 12·4	—
Uccle		22·2	322	e 5 6	− 1	e 9 11	+ 2	e 11·4	—
Kucino		22·3	18	5 21	+12	i 9 14	+ 3	11·0	12·8
De Bilt		22·6	325	—	—	e 9 21	+ 4	e 12·4	13·5
Copenhagen		22·7	340	e 5 49	+36	e 9 13	− 6	12·4	16·7
Granada		23·9	284	i 5 15	−12	e 9 22	−20	e 15·4	17·9
Pulkovo		24·9	5	5 30	− 7	9 52	− 9	12·4	14·3
Kew		25·0	319	—	—	e 10 9	+ 6	13·4	17·5
Leningrad		25·1	5	e 5 30	− 9	e 9 54	−11	11·7	16·0
Helsingfors	N.	25·1	359	e 5 49	+10	—	—	—	—
Upsala		25·4	350	e 6 7	+25	e 10 43	+32	e 13·4	16·0
Oxford		25·7	319	—	—	—	—	—	15·4
San Fernando		26·1	283	—	—	—	—	—	24·4
Rio Tinto		26·3	286	8 25?	?	—	—	—	11·4
Ekaterinburg		31·9	36	i 6 40	− 6	i 11 46	−21	15·9	22·6
Tashkent		34·2	66	6 54	−13	i 12 20	−23	e 17·2	22·1
Irkutsk		56·3	46	e 9 50	+ 2	17 40	+ 2	29·4	—
Cape Town		69·3	187	—	—	—	—	—	38·6

For Notes see next page.

NOTES TO MARCH 24d. 14h. 46m. 35s.

Additional readings and notes: Athens MN = +2·6m. Rocca di Papa iL = +8·9m. Florence P and S have been increased by 8m.; S is given as e simply. Vienna PR_1 = +4m.25s., PR_2 = +5m.17s. Makeyevka PR_1 = +3m.59s., SR_1 = +7m.26s., MZ = +10·7m., MN = +12·8m. Tiflis SR_1 = +7m.34s., MN = +12·5m. Innsbruck eNE = +7m.34s., iNW = +7m.39s., eS = +8m.40s. Moncalieri MN = +12·6m. Ravensburg eN = +5m.45s., MN = +10·6m. Zurich e = +5m.2s. Baku MN = +14·1m. Kucino P = +5m.30s., PR_1 = +6m.2s., e = +9m.6s. De Bilt MN = +13·4m., MZ = +17·2m. Copenhagen e = +8m.37s., MN = +16·1m. Granada PR_1 = +6m.42s. Pulkovo MZ = +15·8m. Kew MN = +13·9m. Leningrad MZ = +15·8m., MN = +15·9m. Ekaterinburg MN = +19·0m., MZ = +25·4m. Tashkent e = +8m.10s. = PR_1 −2s., i = +10m.38s., PR_1 = +10m.56s., i = +11m.33s., SR_1 = +14m.8s. = SR_1 −32s., i = +15m.58s. = SR_2 +46s., MN = +21·7m. Irkutsk eSR_1 = +21m.32s.

March 24d. Continuation of the list of after-shocks from the epidentre 35°·7N. 134°·8E. of March 23d.

h.	m.	s.		h.	m.	s.	
0	48	32	KS	15	34	31	TKSN
1	18	29	T	19	14	3	T

March 24d. Readings also at 0h. (Irkutsk, Ekaterinburg, Tashkent, Baku, Tiflis, and De Bilt), 1h. (Tiflis, Baku, Kucino, and Nagasaki), 5h. (Nagasaki and near Manila), 7h. (Tashkent and Nagasaki), 8h. (near Port au Prince), 12h. (Agana and San Fernando), 13h. (Harvard, Tiflis, and Baku), 15h. (Zagreb), 16h. (Tiflis (2)), 17h. (San Juan), 18h. (Nagasaki), 19h. (La Paz), 22h. (Nagasaki), 23h. (Athens).

March 25d. 3h. 46m. 28s. Epicentre 56°·0N. 34°·5W.

A = +·461, B = −·317, C = +·829; D = −·566, E = −·824;
G = +·683, H = −·470, K = −·559.

The epicentre 57°·0N. 34°·5W. of 1926 Oct. 8 was tried and found not so suitable as that adopted. Perhaps 55°·0N. would be even better. See also Mar. 22d. 22h.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Edinburgh		17·4	77	—	—	—	—	e 9·5	—
Stonyhurst		18·4	83	—	—	—	—	e 13·5	—
Oxford		19·8	88	—	—	—	—	—	10·8
Kew		20·5	88	e 4 55	+ 8	e 8 47	+13	10·0	11·2
De Bilt		23·3	84	—	—	9 38	+ 7	e 11·5	14·1
Uccle		23·4	86	—	—	e 9 32	− 1	e 11·5	—
Paris		23·4	92	—	—	—	—	e 12·5	13·5
Hamburg		25·3	77	e 5 32?	− 9	—	—	e 12·5	15·5
Toledo	N.E.	25·7	116	—	—	e 11 40	+84	—	—
Copenhagen		25·8	71	—	—	10 26	+ 8	12·5	15·5
Rio Tinto		26·1	123	10 32?	?S	(10 32?)	+ 8	—	23·5
Besançon		26·2	92	—	—	—	—	16·5	—
Strasbourg		26·4	89	e 5 32?	−20	—	—	13·5	—
San Fernando	E.	27·3	124	—	—	—	—	—	17·0
Ottawa		27·7	265	—	—	e 11 2	+ 8	e 13·5	—
Granada		28·0	119	—	—	i 10 52	− 7	—	18·5
Cheb		28·3	82	—	—	e 9 32?	−92	—	16·5
Moncalieri		28·5	93	e 5 6	−67	11 10	+ 2	14·0	17·3
Prague		29·4	81	—	—	e 8 32?	?	—	17·5
Helsingfors	N.	30·6	58	—	—	e 10 56	−48	—	13·0
Toronto	E.	30·8	266	—	—	—	—	18·0	—
Algiers		31·6	110	e 5 37	−66	—	—	—	—
Leningrad		33·2	57	e 6 53	− 5	e 12 16	−11	16·8	23·2
Pulkovo		33·3	57	e 6 53	− 6	e 12 18	−11	16·5	22·1
Ann Arbor	N.	33·9	269	—	—	—	—	e 18·2	—
Chicago	E.	36·6	271	—	—	—	—	21·6	21·8

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Kucino		38·7	59	—	—	e 13 38	−10	19·7	—
Athens		42·2	90	—	—	e 14 32	− 6	24·2	—
Makeyevka		43·2	70	e 8 16	− 4	e 18 16	?SR_1	20·5	24·4
Ekaterinburg		48·2	47	8 58	+ 3	e 16 3	+ 7	22·5	27·5
Tiflis		51·0	71	—	—	e 16 41	+10	e 27·5	31·7
Victoria	E.	51·2	301	—	—	—	—	27·1	31·7
Baku		54·7	69	e 9 48	+11	e 17 33	+16	e 28·5	34·4
Tashkent		63·5	55	—	—	—	—	e 24·0	40·5

Additional readings: Kew MN = +10·7m. De Bilt MNZ = +14·5m. Copenhagen e = +8m.14s., MN = +16·7m. San Fernando MN = +15·0m. Chicago LEN? (Love wave) = +19·5m. Kucino e = +16m.14s. = SR_1 −4s. and +18m.8s. Baku MN = +35·2m., MZ = +37·0m. Tashkent e = 3h.37m.15s., e = +27m.32s. = SR_3 +3s., MN = +36·9m., MZ = +40·6m.

Mar. 25d. 12h. 54m. 50s. Epicentre 54°·5N. 156°·5W. (as on 1923 May 4d.).

A = −·533, B = −·232, C = +·814; D = −·399, E = +·917; G = −·747, H = −·325, K = −·581.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Sitka	E.	12·1	69	3 19	+19	—	—	6·9	9·4
Victoria	E.	21·3	93	5 9	+12	—	—	9·2	11·7
Berkeley		28·4	114	—	—	e 10 58	− 8	e 12·5	14·2
Lick	E.	29·2	111	—	—	—	—	e 14·7	—
Honolulu, T.H.	N.	33·2	183	—	—	—	—	i 15·8	17·3
Tucson	N.	38·9	105	7 52	+ 7	13 56	+ 5	e 20·5	—
Chicago		45·7	78	—	—	i 15 19	− 5	21·7	—
St. Louis		46·3	83	—	—	e 15 31	− 1	27·2	—
Ann Arbor		47·5	75	—	—	e 15 46	− 2	26·4	28·3
Toronto		49·0	70	—	—	i 16 5	− 1	24·6	30·2
Ottawa		49·8	65	—	—	i 16 14	− 2	e 24·2	30·8
Ithaca		51·4	70	—	—	—	—	e 25·2	—
Irkutsk		54·1	312	i 9 26	− 8	17 10	0	30·2	33·8
Ekaterinburg		64·7	339	i 10 46	+ 3	i 19 20	− 1	30·2	43·4
Helsingfors		65·4	359	e 10 34	−13	e 19 34	+ 4	e 35·6	39·7
Leningrad		65·4	357	i 10 50	+ 3	19 29	− 1	26·2	45·5
Upsala	N.	65·6	4	e 10 50	+ 1	e 19 39	+ 7	—	47·0
Pulkovo		65·7	357	i 10 50	+ 1	19 30	− 3	29·2	44·4
Kucino		69·2	352	i 11 12	0	20 11	− 5	33·8	43·9
Copenhagen		69·4	7	11 16	+ 3	20 34	+15	35·2	50·2
Hamburg		71·4	9	—	—	—	—	e 44·2	—
Hong Kong		71·6	282	20 40	?S	(20 40)	− 5	—	47·2
Oxford		71·8	17	—	—	—	—	e 38·2	40·7
Uccle		73·5	12	—	—	—	—	e 38·2	—
Manila		73·9	273	e 11 40	− 1	—	—	—	—
Cheb		75·1	7	—	—	e 21 10?	−17	—	47·2
Prague		75·2	7	—	—	—	—	e 35·2	51·2
Strasbourg		76·1	10	—	—	—	—	35·2	—
Tashkent		76·7	327	i 11 55	− 4	i 21 35	− 9	e 34·8	44·0
Makeyevka		76·8	351	e 11 57	− 3	e 21 39	− 8	36·2	50·3
Phu-Lien		77·1	287	—	—	e 21 41	− 9	—	—
Budapest		78·0	3	12 16	+ 9	22 3	+ 3	e 46·2	—
Tiflis		82·2	345	13 10?	+39	23 28	?PS	e 43·2	54·7
Baku		82·6	340	i 12 31	− 3	22 57	+ 4	40·5	55·6
Simla	N.	82·8	318	—	—	e 22 40	[− 2]	—	—
Rio Tinto		84·2	24	21 10?	?	—	—	—	72·2
San Fernando		85·6	24	—	—	23 28	+ 2	45·2	53·2
Almeria		86·0	21	—	—	—	—	e 47·0	56·2
Athens		87·7	0	—	—	e 23 18	[+ 5]	40·7	—
Hyderabad		94·2	310	23 56	?[S]	(23 56)	[+ 3]	—	57·8
Cape Town		159·1	12	—	—	—	—	—	96·2

Additional readings: Sitka eE = +4m.12s., eN? = +4m.58s., eE = +5m.18s., eLN = +7·0m. Victoria PN = +5m.13s.; T_e = 12h.54m.58s. Honolulu iLE (Love wave) = +15·5m. Tucson SR_1N = +17m.40s.; T_e = 12h.54m.51s. and 12h.55m.2s. Chicago iSN = +15m.22s., iSR_1 = +18m.23s. St. Louis eE = +18m.30s. = SR_1 −26s.; S is given as eEN. Ann Arbor e = +18m.22s., eE = +23m.22s., eLN = +26·1m. Ottawa e = +18m.48s.

Continued on next page.

and +20m.18s. =SR_1 +16s., MN = +30·2m.; S is given simply as i. **Irkutsk** i = +14m.31s. and +14m.39s., e = +19m.15s., SR_1 = +21m.31s., SR_2 = +23m.17s., e = +25m.37s., i = +26m.39s. Pulkovo MZ = +37·9m., MN = +45·5m. Ekaterinburg iPR_1 = +13m.6s., iPR_2 = +14m.35s., iPS = +20m.17s., SR_1 = +24m.3s., MN = +42·0m., MZ = +42·2m. Helsingfors P and S are given as eZ and eN respectively. Leningrad MZ = +44·5m. Kucino PR_1 = +13m.47s., PS = +20m.56s., SR_1 = +25m.36s., MN = +44·1m. Copenhagen MN = +48·8m. Tashkent i = +12m.13s., PR_1 = +14m.19s., PR_2 = +16m.16s., ePR_2 = +17m.37s., iPS = +22m.17s., eSR_1 = +26m.46s., SR_2 = +30m.10s., MZ = +48·2m., MN = +48·3m. Makeyevka e = +12m.9s., PR_1 = +15m.15s., PR_2 = +17m.1s., S_4P_4S = +22m.7s., PS = +22m.41s., SR_1 = +27m.59s., MN = +44·1m., MZ = +52·1m. Baku PR_1 = +15m.41s., MZ = +59·5m. San Fernando MN = +52·2m. **Almeria** MZ = +53·8m. Athens eE = +23m.31s. =S −16s.

Mar. 25d. 20h. 47m. 54s. Epicentre 75°·0N. 85°·0W.

A = +·023, B = −·258, C = +·966.

Very rough and doubtful.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Ottawa	29·9	167	—	—	—	—	e 28·1	—
Leningrad	38·6	46	—	—	—	—	19·2	—
Pulkovo	38·8	46	e 7 43	− 1	13 50	+ 1	20·1	21·8
Copenhagen	38·8	63	—	—	—	—	20·1	—
Kucino	44·0	43	—	—	—	—	22·5	24·3
Ekaterinburg	46·2	26	—	—	—	—	26·1	—
Makeyevka	51·4	46	—	—	e 23 6	?	27·1	30·1
Tiflis	58·7	42	—	—	—	—	e 36·6	37·1
Baku	60·9	39	—	—	—	—	e 35·1	—
Tashkent	62·5	22	—	—	—	—	e 32·1	37·5

Additional readings: Makeyevka MN = +28·7m., MZ = +28·9m. Tashkent MN = +37·6m., MZ = +37·6m.

Mar. 25d. Continuation of the list of after-shocks from the epicentre 35°·7N. 134°·8E. of Mar. 24d.

h.	m.	s.		h.	m.	s.	
0	17	0	T	10	13	23	TKSN
4	36	4	T	10	41	50	T
5	16	0	T	10	43	20	T
8	40	34	T	14	16	21	T

Mar. 25d. Readings also at 0h. (Nagasaki), 1h. (Tashkent and near Sumoto), 3h. (2) and 4h. (3) (Nagasaki), 9h. (Santiago (2)), 10h. (La Plata), 11h. (Nagasaki and Pilar), 12h. (Nagasaki), 14h. (Nagasaki and Vienna), 15h. (Ekaterinburg), 17h. (Agana and Nagasaki), 18h. (Tashkent and Ekaterinburg), 19h. (near Wellington), 20h. (Nagasaki), 22h. (Tiflis), 23h. (near Manila).

Mar. 26d. 2h. 26m. 40s. Epicentre 25°·0S. 167°·0W.

A = −·883, B = −·204, C = −·423; D = −·225, E = +·974;
G = +·412, H = +·095, K = −·906.

Very rough.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Apia		12·1	337	2 57	− 3	4 18	−63	4·8	12·0
Suva	E.	15·2	294	i 3 44	+ 2	i 6 50	+13	—	—
	N.	15·2	294	e 3 38	− 4	i 6 20	−17	6·9	7·9
Wellington		22·2	218	—	—	—	—	e 11·3	—
Ottawa		108·3	48	—	—	e 45 56	?	59·3	—
Irkutsk		108·8	320	—	—	28 20?	?PS	e 56·3	—
Ekaterinburg		133·5	325	—	—	—	—	69·3	—
Leningrad		143·0	345	—	—	—	—	78·3	—
Baku		145·7	305	—	—	—	—	e 76·3	—
Tiflis		148·9	310	—	—	—	—	e 89·3	—

Ottawa gives also eN = +52m.8s.

Mar. 26d. 18h. 32m. 40s. Epicentre 85°·0N. 85°·0E. (as on 1926 Aug. 6d.).

A = +·008, B = +·087, C = +·996 ; D = +·996, E = −·087 ;
G = +·087, H = +·992, K = −·087.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Ekaterinburg	28·7	208	6 18	+ 3	e 11 8	− 4	15·3	—
Irkutsk	33·0	158	—	—	—	—	e 17·3	—
Kew	38·4	273	—	—	—	—	—	39·3
Tashkent	43·9	197	—	—	—	—	e 22·3	26·6
Tiflis	44·6	223	—	—	e 18 34	?SR_1	e 25·4	27·7
Baku	45·6	219	e 10 11	?PR_1	—	—	25·3	33·1

Additional readings and notes: Irkutsk e = +24m.31s. Tashkent e = +18m.20s. = SR_1 +12s., MN = +33·7m. Baku e = 18h.32m.21s., MN = +31·5m., MZ = +32·3m.

Mar. 26d. Continuation of the list of after-shocks from the epicentre 35°·7N. 134°·8E. of Mar. 25d.

h.	m.	s.		h.	m.	s.	
15	24	24	T	16	41	33	T

Mar. 26d. Readings also at 0h. (Nagasaki, near Kobe, and Sumoto), 2h. (Nagasaki), 3h. (Apia and Nagasaki), 4h. (Nagasaki), 13h. (Victoria), 14h. (near Sumoto), 15h. (Nagasaki), 19h. (Nagasaki, Baku, Ksara, and Wellington), 20h. (Tiflis and Manila), 22h. (Victoria), 23h. (Ottawa, Tiflis, and near Sumoto).

Mar. 27d. Continuation of the list of after-shocks from the epicentre 35°·7N. 134°·8E. of March 26d.

h.	m.	s.		h.	m.	s.	
22	7	27	T	23	53	39	T

Mar. 27d. Readings also at 0h. (Ekaterinburg), 2h. (Nagasaki (3)), 3h. (Nagasaki (2)), 6h. (Tashkent), 7h. (La Plata), 8h. (La Plata, La Paz, and Sucre), 9h. (Tacubaya, Oaxaca, and Vera Cruz), 10h. (Athens and near Nagasaki), 12h. (Simla), 13h. (Nagasaki and near Wellington), 14h. (Nagasaki), 15h. (Baku and Tashkent), 16h. (Manila), 18h. (La Paz), 19h. (Nagasaki), 21h. (La Plata, La Paz, and Sucre).

Mar. 28d. 7h. 56m. 4s. Epicentre 46°·0N. 130°·0W. (as on 1926 May 12d.).

A = −·447, B = −·532, C = +·719 ; D = −·766, E = +·643 ;
G = −·462, H = −·552, K = −·695.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Victoria	E.	5·2	59	1 18	− 2	—	—	2·6	3·3
Tucson	E.	20·1	126	4 44	+ 2	8 24	− 1	12·3	—
Chicago	N.	30·5	82	—	—	11 3	−40	16·7	18·3
Ann Arbor		33·0	79	—	—	—	—	e 16·2	—
Honolulu, T.H.	N.	33·6	232	—	—	—	—	e 15·6	—
Toronto	N.	35·3	75	—	—	—	—	i 17·1	—
Ottawa		37·1	71	—	—	e 16 11	?SR_2	e 17·9	—
Fordham		40·2	77	—	—	—	—	e 17·3	—
Leningrad		72·8	10	—	—	—	—	e 41·9	—
Ekaterinburg		76·8	355	1 42 40	?L	—	—	52·9	—
Tashkent		91·1	346	e 18 20	?PR_1	—	—	e 44·9	55·1
Baku		93·6	0	—	—	—	—	e 51·9	—

Additional readings : Victoria MN = +4·8m. ; T_e = 7h.55m.48s. Ann Arbor eE = +17m.2s. and +17m.44s. Ekaterinburg e = +48m.18s.

Mar. 28d. Continuation of the list of after-shocks from the epicentre 35°·7N. 134°·8E. of Mar. 27d.

h.	m.	s.		h.	m.	s.	
5	3	33	T	20	6	36	TKO
15	52	35	T				

Mar 28d. Readings also at 0h. (2) and 3h. (Nagasaki), 4h. (Nagasaki, Tashkent, La Plata, and Santiago), 5h., 6h., 8h., 9h., 10h. (2), and 11h. (Nagasaki), 12h. (Nagasaki, Tashkent, and near Athens), 19h. (Nagasaki).

Mar. 29d. 18h. 5m. 24s. Epicentre 40°·0N. 78°·0E. (as on Mar. 24d. 7h.).

$A = +\cdot159$, $B = +\cdot749$, $C = +\cdot643$; $D = +\cdot978$, $E = -\cdot208$; $G = +\cdot134$, $H = +\cdot629$, $K = -\cdot766$.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Tashkent	6·7	284	3 0	?S	(3 0)	− 2	e 6·9	8·3
Ekaterinburg	20·2	332	e 5 4	+21	e 8 23	− 4	10·6	12·9
Baku	21·4	280	e 4 47	−11	—	—	—	—
Irkutsk	21·7	47	—	—	—	—	e 19·6	—
Tiflis	25·0	285	e 5 22	−16	e 7 29	?	—	—
Pulkovo	35·4	320	—	—	—	—	e 19·6	—
Leningrad	35·5	320	—	—	—	—	e 18·1	—

Additional readings and notes: Tashkent iPP = +3m.25s., ePPPP = +3m.52s., iS = +5m.45s., iSS = +5m.54s., MN = +8·0m.; epicentre 39°·8N. 88°·0E. If we may suppose all these readings 4min. too large, then iS = +1m.45s. = P +3s. and eL = +2m.53s. = S −7s., the earlier readings belonging to a previous (local ?) shock.

March 29d. 22h. 34m. 6s. (I)
23h. 8m. 40s. (II)
23h. 16m. 15s. (III) } **Epicentre 35°·0N. 26°·0E. (as on March 24d.).**

$A = +\cdot736$, $B = +\cdot359$, $C = +\cdot574$; $D = +\cdot438$, $E = -\cdot899$; $G = +\cdot516$, $H = +\cdot251$, $K = -\cdot819$.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
I	Athens	3·4	330	(e 0 49)	− 4	(e 1 43)	+ 9	(e 1·9)	(2·9)
II		3·4	330	(e 0 53)	0	(e 1 47)	+13	(2·0)	(2·3)
III		3·4	330	—	—	—	—	(2·3)	(3·1)
I	Ksara	8·3	95	—	—	e 3 46	+ 1	(5·9)	—
II		8·3	95	e 2 5	− 1	e 3 38	− 7	4·6	—
I	Belgrade	10·7	339	e 2 26	−14	i 2 40	?	—	2·9
II	E.	10·7	339	e 2 8	−32	i 2 22	?	—	2·6
III		10·7	339	e 2 19	−21	—	—	—	—
I	Zagreb	13·2	328	e 3 45	+29	—	—	—	—
II		13·2	328	e 3 18	+ 2	—	—	—	—
I	Budapest	13·5	340	e 4 24	+64	—	—	—	—
II		13·5	340	e 4 18	+58	—	—	—	—
I	Tiflis	16·1	60	—	—	—	—	e 5·9	6·3
II		16·1	60	—	—	—	—	e 5·3	7·2
III		16·1	60	—	—	(e 6 30)	−27	e 6·5	7·5
I	Strasbourg	19·1	321	—	—	7 54	−10	—	—
II	Baku	19·6	67	—	—	—	—	9·3	—
I	Uccle	22·2	322	—	—	(9 24)	+15	9·4	—
II		22·2	322	—	—	(8 48)	−21	8·8	—
III		22·2	322	—	—	(9 18)	+ 9	9·3	—

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
I	Kucino	22·3	18	—	—	e 8 6	−65	—	—
II		22·3	18	—	—	e 8 24	−47	—	—
I	De Bilt	22·6	325	—	—	(e 9 18)	+ 1	e 9·3	10·1
II		22·6	325	—	—	(e 9 6)	−11	e 9·1	10·0
III		22·6	325	—	—	(e 9 30)	+13	e 9·5	10·4
I	Copenhagen	22·7	340	—	—	(8 54)	−25	8·9	—
II		22·7	340	—	—	(9 18)	− 1	9·3	—
III		22·7	340	—	—	(9 42)	+23	9·7	—
I	Pulkovo	24·9	5	—	—	(e 8 54)	−67	e 8·9	—
II		24·9	5	e 5 41	+ 4	—	—	e 16·8	19·0
I	Kew	25·0	319	—	—	e 10 54	+51	—	—
II		25·0	319	—	—	e 10 18	+15	—	—
III		25·0	319	—	—	e 10 42	+39	—	—
I	Leningrad	25·1	5	—	—	—	—	6·9	—
II		25·1	5	—	—	—	—	8·8	—
I	Upsala	25·4	350	—	—	9 54	−17	—	—
II		25·4	350	—	—	—	—	e 10·3	11·7
I	Ekaterinburg	31·9	36	—	—	—	—	e 16·3	—
I	Tashkent	34·2	66	e 3 39	?	e 12 54	+11	e 16·9	30·9
II		34·2	66	—	—	—	—	—	19·6

Additional readings and notes: Athens I MN = (+2·4m.), II MN = (+2·2m.), III MN = (+2·7m.); all the readings have been increased by 2 min. Ksara I S is given as eE, and L as SE, II P is given as eE. Tiflis I MN = +6·4m., II MN = +6·3m., III MN = +6·7m. Tashkent I Readings are given as e's simply; The M for No. II might possibly be as S for No. III.

March 29d. Continuation of the list of after-shocks from the epicentre 35°·7N. 134°·8E. of March 28d.

h.	m.	s.		h.	m.	s.	
4	21	21	T	19	23	20	T
13	2	23	T				

March 29d. Readings also at 5h. (La Plata and Nagasaki (2)), 7h. (Ekaterinburg, Tashkent, and Nagasaki (2)), 9h. (Athens and Santiago), 10h. and 11h. (Nagasaki), 12h. (Ekaterinburg and La Paz), 13h. (Tashkent), 14h. (Nagasaki and Tashkent), 15h. (La Paz, Riverview, Ekaterinburg, Irkutsk, and Tashkent), 16h. (Leningrad and Nagasaki), 20h. (Nagasaki) 21h. (Rocca di Papa), 22h. (Victoria), 23h. (Athens).

March 30d. 7h. 17m. 18s. Epicentre 20°·0S. 1°·0W.

A = +·940, B = −·016 C = −·342; D = −·017, E = −1·000; G = −·342, H = +·006, K = −·940.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
San Fernando	E.	56·7	356	—	—	—	—	—	33·7
Sucre		60·2	260	10 11	− 2	—	—	27·7	—
La Paz		63·5	261	1 10 36	+ 1	e 19 10	+ 3	26·2	28·3
De Bilt	E.	72·3	5	—	—	—	—	e 33·7	—
Makeyevka		76·5	27	—	—	—	—	e 34·7	54·5
Pulkovo		83·7	15	—	—	—	—	e 39·7	50·1
Leningrad		84·0	15	—	—	—	—	e 42·7	—
Tashkent		89·3	46	—	—	e 30 42?	?SR_1	—	37·0

Additional readings: San Fernando MN = +36·2m. De Bilt eLN = +36·7m. Makeyevka e = +39m.42s.? L = +50·7m.

March 30d. 7h. 55m. 36s. Epicentre 62°·0N. 150°·0W. (given in Washington Seismological report).

A = −·407, B = −·235, C = +·883; D = −·500, E = +·866; G = −·765, H = −·441, K = −·469.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Victoria		20·2	120	(4 45)	+ 2	—	—	(9·4)	(15·8)
Chicago	E.	41·4	90	—	—	—	—	i 22·4	—
Ann Arbor	E.	42·8	86	—	—	—	—	e 21·2	—
Toronto	E.	43·8	82	—	—	—	—	20·8	—
Ottawa		44·1	77	—	—	e 18 4	?SR_1	e 22·4	24·4
Ithaca		46·0	79	—	—	—	—	e 24·4	—
Irkutsk		51·7	313	e 8 49	−29	e 16 28	−12	e 24·4	—
Ekaterinburg		58·8	341	10 7	+ 3	e 18 13	+ 4	31·4	—
Makeyevka	Z.	69·8	356	—	—	—	—	—	60·4
Tashkent		72·0	330	e 10 45	−45	i 20 47	− 3	—	54·2

Additional readings and notes: Victoria readings have been increased by 7m. Ann Arbor eN = +23m.12s. and several other e's. Irkutsk e = +12m.52s., S is given as e simply. Ekaterinburg i = +19m.47s., S is given as e simply. Tashkent MN = +26·9m., P is given as e? simply.

March 30d. 8h. 15m. 27s. Epicentre 23°·2S. 62°·2W.

A = +·429, B = −·813, C = −·394; D = −·885, E = −·466; G = −·184, H = +·348, K = −·919.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Sucre	5·1	325	i 1 18	− 1	i 2 23	+ 3	2·6	3·0
La Paz	8·7	319	2 12	0	3 53	− 3	4·4	5·9
La Plata	12·3	163	—	—	—	—	8·2	—
Santiago	12·7	214	(3 7)	− 2	—	—	3·1	—

La Paz gives also i = +4m.2s., MN = +4·8m.

March 30d. 14h. 10m. 10s. Epicentre 36°·0S. 113°·0W.

A = −·316, B = −·745, C = −·588; D = −·921, E = +·391; G = +·230, H = +·541, K = −·809.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Pilar		40·6	99	13 8?	?S	(13 8?)	−67	—	22·6
La Paz		44·2	77	e 8 29	+ 2	i 14 59	− 6	20·2	25·2
La Plata		44·3	105	15 1	?S	(15 1)	− 5	20·7	—
Sucre		45·1	81	8 6	−28	i 14 42	−34	18·7	24·5
Wellington	E.	55·0	241	—	—	—	—	e 25·8	—
Riverview		75·1	239	—	—	—	—	—	42·8
Victoria	E.	84·9	354	23 22	?S	(23 22)	+ 4	41·9	45·2
Toronto	N.	85·3	24	—	—	e 23 24	+ 2	47·8	—
Ottawa		88·1	26	—	—	i 23 50	− 3	e 35·8	—
San Fernando	E.	122·5	66	—	—	—	—	—	73·8
De Bilt		134·3	50	—	—	—	—	e 71·8	—
Leningrad		146·4	33	—	—	—	—	e 71·8	—
Pulkovo		146·5	33	—	—	—	—	e 72·8	83·8
Irkutsk		149·1	312	—	—	—	—	e 70·8	—
Ekaterinburg		158·7	10	e 21 15	?	e 44 34	?SR_1	78·8	—
Tiflis		161·8	65	—	—	—	—	e 93·9	99·1
Baku		165·9	67	—	—	—	—	e 83·6	101·9
Tashkent		174·4	343	e 21 0	?	—	—	e 74·8	78·6

Additional readings: La Paz iP = +8m.36s.; T_o = 14h.10m.23s. La Plata S = +18m.30s. = SR_1 +14s. Wellington eN = +23m.50s. ? = SR_2 −18s. Ottawa e? = +29m.32s. = SR_1 −33s. San Fernando MN = +67·8m. Baku MN = +102·4m., MZ = +102·8m. Tashkent e = +27m.23s., +31m.50s. e, +47m.20s. = SR_1 −6s., +48m.50s.

March 30d. Continuation of the list of after-shocks, from the epicentre 35°·7N. 134°·8E. of March 29d.

h.	m.	s.		h.	m.	s.	
7	23	44	T	13	56	53	TK
13	30	38	TKOSNH	18	34	41	TK

March 30d. Readings also at 0h. (Ekaterinburg and near Taihoku), 1h., 2h., and 3h. (Nagasaki), 4h. (Santiago), 7h. (Agana, Nagasaki, Ottawa, Chicago, and Mizusawa), 10h. (Irkutsk and Tashkent), 12h. (Ekaterinburg and Tashkent), 19h. and 21h. (Nagasaki).

March 31d. 21h. 8m. 35s. Epicentre 35°·7N. 134°·8E. (as on 1927 March 10d.)

A = −·572, B = +·576, C = +·584; D = +·710, E = +·705; G = −·411, H = +·414, K = −·812.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Toyooka		0·2	175	0 8	+ 4	—	—	0·2	—
Kobe		1·1	163	0 17	0	(0 30)	− 1	0·5	0·5
Osaka		1·2	154	0 16	− 2	(0 31)	− 2	0·5	0·8
Sumoto		1·4	177	0 22	+ 1	(0 40)	+ 1	0·7	0·7
Nagoya		1·8	107	i 0 32	+ 4	(0 54)	+ 3	0·9	1·0
Matuyama	E.	2·5	222	e 1 5	+26	—	—	e 1·8	—
Hukuoka		4·3	240	1 12	+ 5	—	—	2·3	2·8
Nagasaki		5·1	235	1 33	+14	1 40	+40	2·9	3·0
Mizusawa		6·0	54	1 35	+ 3	2 47	+ 3	—	—
Zi-ka-wei		12·0	252	3 2	+ 3	e 7 23	?L	(e 7·4)	11·4
Ootomari		12·4	26	2 57	− 8	—	—	5·0	—
Taihoku	E.	15·6	231	—	—	—	—	e 8·0	—
Hong Kong		22·4	239	9 15	?S	(9 15)	+ 2	—	12·9
Manila		24·5	214	e 5 25	− 8	—	—	—	—
Irkutsk		27·1	317	5 54	− 5	10 35	− 8	13·4	15·5
Phu-Lien		28·8	246	—	—	—	—	14·4	—
Tashkent		50·4	298	e 9 6	− 3	i 16 24	0	e 24·4	33·4
Ekaterinburg		52·4	319	9 19	− 3	16 52	+ 3	27·4	32·1
Baku		64·3	303	e 10 42	+ 2	19 27	+10	32·4	39·8
Kucino		64·7	322	—	—	e 20 13	?PS	32·5	41·2
Pulkovo		66·2	328	i 10 55	+ 2	—	—	33·4	40·1
Leningrad		66·2	328	—	—	—	—	34·9	41·6
Tiflis		67·2	306	e 11 8	+ 9	e 19 55	+ 3	e 34·4	38·7
Makeyevka		68·3	314	—	—	—	—	36·4	40·4
Upsala		71·5	332	—	—	—	—	e 40·4	—
Copenhagen		76·3	330	—	—	—	—	41·4	43·6
Hamburg		78·8	330	—	—	—	—	e 43·4	—
Budapest		78·9	322	—	—	—	—	e 42·4	—
Prague		79·4	324	—	—	—	—	e 43·9	47·4
Cheb		80·3	326	—	—	—	—	e 44·4	46·4
De Bilt		81·8	331	—	—	—	—	e 44·4	49·7
Athens		82·6	312	—	—	—	—	47·1	—
Uccle		83·1	331	—	—	—	—	e 44·4	—
Strasbourg		83·5	329	—	—	—	—	e 46·4	—
Kew		84·3	334	—	—	—	—	e 43·4	—
Ottawa		94·4	20	—	—	—	—	e 47·4	—
Toronto		94·8	24	—	—	—	—	53·9	—
Granada		97·5	328	—	—	—	—	e 41·4	58·9
Rio Tinto		98·3	331	55 25?	?L	—	—	(55·4)	59·4
San Fernando		99·3	330	—	—	—	—	—	57·4
La Paz		152·0	53	i 20 12	[+13]	—	—	—	—
La Plata		169·6	89	—	—	—	—	48·4	—

Additional readings: Osaka MN = +1·3m. Sumoto MN = +0·8m. Hukuoka MN = +2·5m. Irkutsk MN = +15·2m. Tashkent ePR_1 = +11m.13s., ePR_2 = +12m.25s., iPS = +16m.44s., eSR_1 = +19m.58s., MN = +30·6m. Ekaterinburg MZ = +38·4m. Baku MN = +40·0m., MZ = +43·3m. Kucino MN = +36·6m. Pulkovo MN = +39·4m. Leningrad MN = +38·7m., MZ = +43·6m. Tiflis MN = +37·3m. Makeyevka MN = +38·0m., MZ = +42·5m. Copenhagen MN = +43·9m.

March 31d. Continuation of the list of after-shocks from the epicentre 35°·7N. 134°·8E. of 30d.

h.	m.	s.	
0	9	26	T
0	13	26	T
2	45	12	TKS
3	13	58	T
5	53	40	T
7	35	46	T
21	8	35	(Many)
21	22	56	T
21	23	1	T
21	29	8	T
21	29	30	T
21	31	30	T
21	34	7	T
21	35	52	T
21	36	11	T
21	46	35	T
21	49	8	T
21	55	12	T
22	1	18	T
22	2	27	T
22	13	38	T
22	15	5	T
22	23	16	T
22	23	25	T
22	29	32	T
22	32	25	T
22	41	42	T
22	52	32	T
23	12	52	T
23	23	2	T
23	26	52	T

March 31d. Readings also at 0h. (Nagasaki, Barcelona, and Tortosa), 1h. (Nagasaki (2), Ksara, and Tiflis), 2h. (near Tacubaya), 3h. (Nagasaki, Irkutsk, and near Taihoku), 5h. and 6h. (Nagasaki), 7h. (Nagasaki, Apia and Suva), 9h. (Algiers), 10h. (Nagasaki), 14h. (near Lick), 15h. (near Sumoto), 16h. (Sucre and near La Paz), 17h. (Tiflis).

Adopted Tables for Complex Phases.

In 1928 Gutenberg published a very complete diagram of the complex phases which he had deduced from theoretical considerations and identified on seismograms. We have had reason to admire the soundness and accuracy of these curves in several instances, but our standpoint is a little different. We are concerned to identify such phases as appear in published records, some of which (especially [P] or Gutenberg's P^1) were recognised before Gutenberg's diagram was available, and were compared with purely empirical formulæ. It seems desirable to retain these formulæ for a time sufficient to allow of an adequate study of the residuals on a uniform plan, rather than to change over at present to Gutenberg's values, though these latter may really be better approximations. And, further, it seems desirable to collect them here for reference. Not much use has been made of P[S] or [S]P, called by Gutenberg S_cP_cSP, for it does not seem to occur often, as noted at bottom of p. 438 of the *Revised Seismological Tables, etc.* (Geop. Sup. to Mon. Not R.A.S., 1926). Hence it has not been tabulated here. But the phase $S_cP_cP_cS$, where P is reflected within the core, has been found to occur oftener. For convenience the short symbol Σ has been used for it. No formula had been used for it until it was identified from Gutenberg's diagram, which is here used.

TABLE FOR [P].

The values used in forming our residuals have been derived from the empirical formula

$$20\text{m.}17\text{s.} - (180° - \Delta)^2 \times 0{\cdot}0235\text{s.},$$

given in Geop. Sup. to Mon. Not R.A.S., Vol. I, p. 1. Originally the adopted constant was found to be 20m.27s., see the discussion in the introduction to the B.A. Bulletin for March and April, 1917. It is of interest to show how this formula accords with the figures deduced by Gutenberg from theoretical considerations as to the constitution of the earth's nucleus. We give below the detailed figures for the formula as used.

Δ	0°	1°	2°	3°	4°	5°	6°	7°	8°	9°
°	m. s.	s.	s.	s.	s.	s.	s.	s.	s.	s.
100	17 47	50	54	58	61	65	68	72	75	79
110	18 22	25	28	31	34	38	41	44	47	50
120	18 52	55	58	61	63	66	68	71	74	76
130	19 18	21	23	25	28	30	32	34	36	38
140	19 39	41	43	45	47	48	50	51	53	54
150	19 56	57	59	60	61	62	63	65	66	67
160	20 8	9	9	10	11	12	12	13	14	14
170	20 15	15	16	16	16	16	17	17	17	17

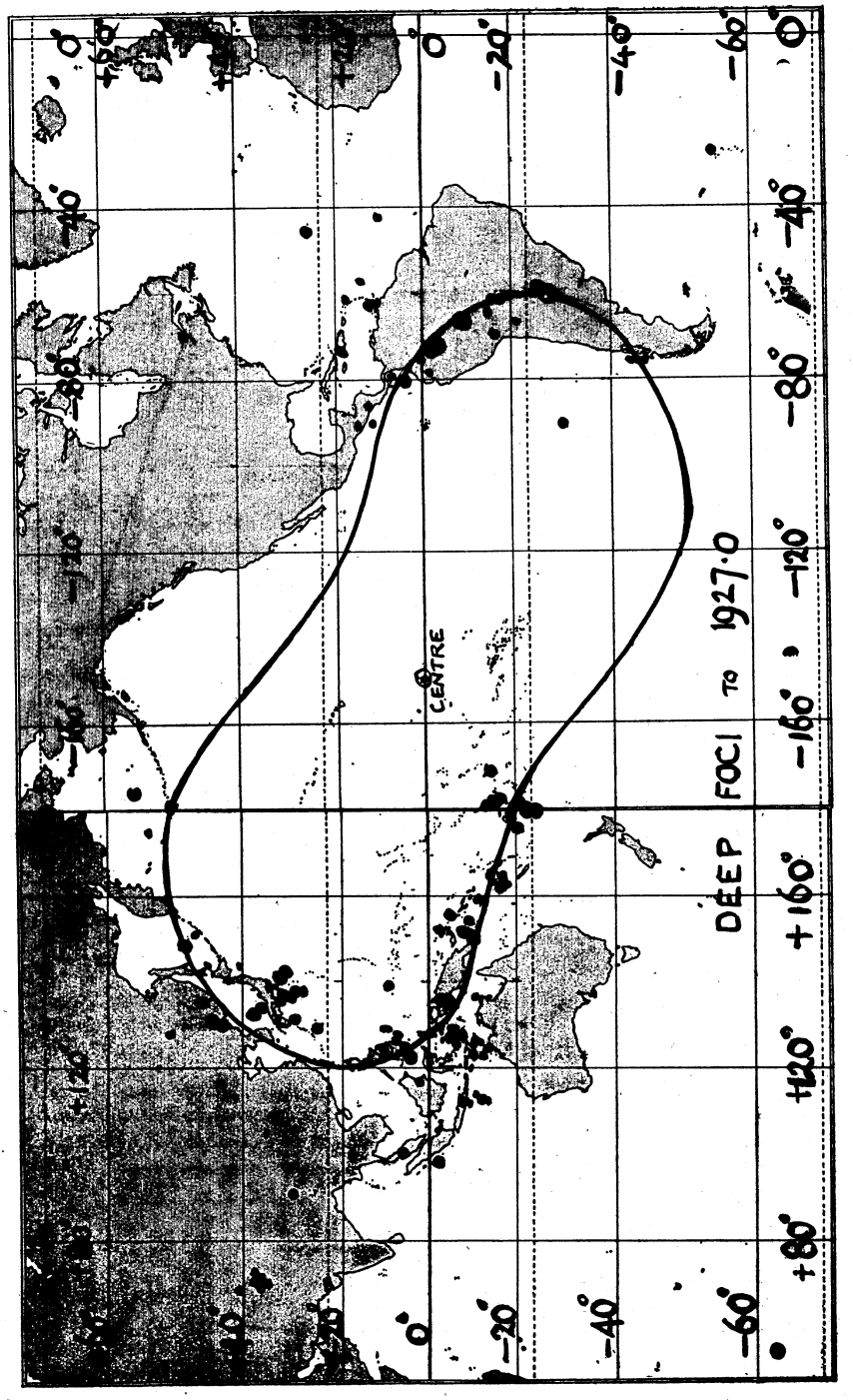
The differences Gutenberg—Formula are as follows:—

Δ =	100°	110°	120°	130°	140°	150°	160°	170°
	s.	s.	s.	s.	s.	s.	s.	s.
Diff.	+1	+12	+8	+6	−4	+2	+2	+8

Gutenberg's curve has a slight discontinuity labelled as a "Brennpunkt" at $\Delta = 143°$.

Tables for PS, [S] = S_cP_cS, and $\Sigma = \overline{S_cP_c}\ \overline{P_cS}$.

Δ	PS	[S]	Σ	Δ	PS	[S]	Σ	Δ	[S]	Σ
°	m. s.	m. s.	m. s.	°	m. s.	m. s.	m. s.	°	m. s.	m. s.
51	16 54	18 44	19 8	91	25 20	23 34	24 6	131	26 14	28 20
52	17 6	18 52	19 15	92	25 31	23 40	24 13	132	26 16	28 26
53	17 20	19 0	19 22	93	25 43	23 46	24 20	133	26 17	28 32
54	17 33	19 8	19 31	94	25 55	23 52	24 28	134	26 18	28 38
55	17 47	19 16	19 40	95	26 7	23 57	24 36	135	26 20	28 44
56	18 1	19 24	19 50	96	26 19	24 2	24 42	136	26 22	28 49
57	18 14	19 32	20 0	97	26 30	24 8	24 48	137	26 24	28 55
58	18 27	19 40	20 10	98	26 42	24 13	24 55	138	26 25	29 1
59	18 40	19 48	20 19	99	26 53	24 19	25 2	139	26 27	29 7
60	18 54	19 55	20 28	100	27 5	24 24	25 9	140	26 28	29 13
61	19 7	20 2	20 37	101	27 17	24 29	25 16	141	26 30	29 19
62	19 19	20 10	20 46	102	27 27	24 34	25 23	142	26 31	29 25
63	19 33	20 18	20 54	103	27 38	24 38	25 29	143	26 32	29 30
64	19 45	20 26	21 2	104	27 49	24 43	25 36	144	26 33	29 36
65	19 58	20 33	21 10	105	28 1	24 47	25 42	145	26 34	29 42
66	20 11	20 41	21 18	106	28 13	24 52	25 48	146	26 35	29 47
67	20 23	20 49	21 26	107	28 24	24 57	25 54	147	26 36	29 53
68	20 36	20 57	21 34	108	28 36	25 1	26 0	148	26 37	29 59
69	20 48	21 5	21 42	109	28 47	25 6	26 6	149	26 38	30 5
70	21 1	21 12	21 48	110	28 58	25 10	26 13	150	26 39	30 11
71	21 14	21 19	21 54	111	29 9	25 14	26 19	151	26 40	30 17
72	21 26	21 27	22 0	112	29 20	25 18	26 25	152	26 41	30 23
73	21 39	21 34	22 6	113	29 31	25 22	26 32	153	26 43	30 29
74	21 51	21 42	22 12	114	29 42	25 26	26 38	154	26 44	30 35
75	22 4	21 49	22 19	115	29 52	25 29	26 44	155	26 45	30 40
76	22 16	21 56	22 26	116	30 3	25 32	26 50	156	26 47	30 46
77	22 28	22 3	22 33	117	30 13	25 36	26 56	157	26 48	30 52
78	22 41	22 10	22 40	118	30 23	25 39	27 2	158	26 49	30 57
79	22 53	22 17	22 47	119	30 34	25 42	27 8	159	26 50	31 3
80	23 6	22 23	22 53	120	30 44	25 45	27 14	160	26 51	31 9
81	23 19	22 30	22 59	121	30 54	25 48	27 19	161	26 52	31 14
82	23 31	22 37	23 5	122	31 4	25 51	27 25	162	26 53	31 19
83	23 43	22 43	23 11	123	31 14	25 54	27 32	163	26 54	31 24
84	23 55	22 50	23 17	124	31 24	25 57	27 38	164	26 55	31 30
85	24 7	22 56	23 24	125	31 34	25 59	27 44	165	26 57	31 35
86	24 19	23 2	23 32	126	31 44	26 2	27 50	166	26 58	31 40
87	24 31	23 9	23 39	127	31 54	26 4	27 56	167	26 59	31 45
88	24 43	23 15	23 46	128	32 4	26 6	28 2	168	27 0	31 51
89	24 55	23 22	23 52	129	32 14	26 9	28 8	169	27 1	31 56
90	25 7	23 28	24 0	130	32 24	26 11	28 14	170	27 2	32 0



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