Exchange desired

三井地球物理研究所
觀測報告

REPORTS OF
GEOPHYSICAL OBSERVATIONS
IN THE
MITSUI GEOPHYSICAL OBSERVATORY

No. 2.

(Jan. 1—June 30, 1934)

Mitsui Geophysical Observatory,
Susaki, Kamo-gun, Siduoka-ken, Japan.

International Seismological Centre

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All communications relating to this report should be addressed to the Director of the Mitsui Geophysical Observatory, Susaki, Kamo-gun, Siduoka-ken, Japan.

本觀測報告ハ年二回發行ス

本觀測報告ニ關スル照會ハ靜岡縣賀茂郡濱崎村須崎、三井地球物理研究所長ヘ宛テラレ度シ

International Seismological Centre

1. *Seismometrical Observation.*

(January 1—June 30, 1934)

(1) *Co-ordinate of the station.*

Longitude	(E)	138° 58′ 50″
Latitude	(N)	34° 39′ 54″
Height above mean sea level		+2·5 m

(2) *Instruments.*

List I.

No.	Name or type component	Weight of the bob (kg.)	Magnification	Natural period (sec.)	Damping ratio	Time scale mm./min.	Remarks
1.	Horizontal pendulum.						
	(N.S.)	32	25	15	4	30	With magnetic damper
	(E.W.)	32	25	15	4	30	With magnetic damper
2.	Ishimoto's acceleration seismograph (E.W.,N.S.,Vert.)	16·5	—	0·15	∞	77	1 mm. deviation of the index end=1 gal. ca. With air damper.
3.	Horizontal pendulum.						
	(N.S.)	7	50	6	1·3	60	
	(E.W.)	7	50	6	1·3	60	

(3) *Sensible and non-sensible earthquakes in Japan and her vicinity registered by the seismographs at Susaki for the period January 1—June 30, 1934.*

List II.

Time = Central standard time of Japan (Civil mean time of the meridian 135°E.).

Notations :

Prel. tr. = Preliminary tremor.
N.S. = North-south component.
E.W. = East-west component.
2 A = Range of motion.
T = Period of the earthquake motion.
λ = Longitude
φ = Latitude
D = Depth of the earthquake focus.

Intensity : 0 (insensible), I (slight), II (rather weak), III (weak), IV (rather strong), V (strong), VI (violent).

No.	Date	Time of Commencement	Duration		Maximum Motion				Initial Motion		Epicentre		Depth	Intensity
			Prel. tr.	Total	N.S.		E.W.				λ (E)	φ (N)		
					2A	T	2A	T	N(+) S(−)	E(+) W(−)				
		h m s	s	m	mm	s	mm	s	μ	μ	°	°	km	
1	Jan. 2	14 51 30·8	11·3	1·5	—	—	0·024	1·0	—	—	NE from Oosima Is.		Deep	0
2	Jan. 9	08 08 19·6	52·–	6	0·056	5·4	0·026	3·2	—	—	133·9	34·0		0
3	Jan. 25	06 42 48·8?	29·4	2	0·008	0·85	0·010	1·2	—	—	141·1	37·0		0
4	Jan. 29	21 35 55·7	60·–	7	0·007	2·4	0·008	3·0	—	—	143·8	37·6		0
5	Feb. 1	09 16 16·8	13·2	3	0·016	0·99	0·040	0.99	—	—	139·41	35·27	80	0
6	Feb. 3	03 31 59·3	10·2	0·5	0·004	0·4	0·012	0·8	—	—	Sagami Bay			0
7	Feb. 10	10 36 2·7	7·4	1	0·006	0·4	0·004	0·4	—	—	N from Oosima Is.			0
8#	Feb. 11	07 02 47·2	55·5	7	0·036	2·33	0·038	1·94	—	—	142·09	37·40		0
9	Feb. 13	00 09 55·6	20·8	1	0·004	0·8	0·010	0·8	—	—	S from Oosima Is.			0
10#	Feb. 13	06 44 56·5	20·9	5	0·036	1·95	0·036	1·28	—	—	139·9	33·7		0
11	Feb. 17	12 10 58·7?	29·2	5	—	—	0·016	1·9	—	—	141·30	36·29		0
12	Feb. 17	18 17 05·4?	28·1	6	—	—	0·028	1·9	—	—	141·16	36·30	60	0
13	Feb. 17	21 06 —	24·2	4	—	—	0·010	2·66	—	—	141·09	36·32	50	0
14	Feb. 21	15 48 06·4	23·8	1	—	—	0·006	0.35	—	—	140·00	36·00	60	0

(*to be continued*)

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List II. (*continued*)

No.	Date	Time of Commen-cement	Duration		Maximum Motion				Initial Motion		Epicentre		Depth	Intensity
			Prel. tr.	Total	N.S.		E.W.		N(+) S(−)	E(+) W(−)	λ (E)	φ (N)		
					2A	T	2A	T						
		h m s	m s	m	mm	s	mm	s	μ	μ	°	°	km	
15	Feb. 22	10 50 29·2	25·2	1·5	—	—	0·010	0·8	—	—	141·16	36·07	45	0
16	Feb. 24	15 26 42·7	2 56·5	20	—	—	0·260	16·0	—	—	143·0	24·5	Deep	0
17	Mar. 18	03 37 28·8	20·7	2	0·004	1·0	0·008	1·2	—	—	Off the Coast of Kuzyukûri			0
18#	Mar. 21	12 39 55·2	2·7	12·5	3·700	1·4	>2·080	1·4	+910 (downward)	−156	138·92	34·85	4	*1 III
19	Mar. 21	12 42 33·6	—	0·5	0·016	0·4	0·008	0·4	—	—	138.9	34·9	—	0
20	Mar. 21	18 23 47·7	2·7	0·5	0·036	0·3	0·044	0·4	+ 8	− 4	140·00	34·82	4	0
21	Mar. 22	00 08 40·4	2·7	1·0	0·064	4·6	0·088	5·5	—	—	138·92	34·85	3	0
22	Mar. 22	00 56 56·1	2·4	0·5	0·020	2·4	0·016	2·4	+Sli-ght	—	140·03	34·84	3	0
23	April 4	07 33 49·3	2 14·7	15	—	—	0·044	10·0	—	—	NW from Titizima			0
24	April 5	17 57 28·2	21·0	5	0·012	1·2	0·012	2·8	—	—	140·86	35·33	50	0
25	April 7	04 10 —	39.0	18	0·300	5·0	0·308	6·0	− 6	− 4	141·50	37·11	60	0
26	April 11	19 54 11·8	16·7	3	0·008	0·8	0·008	0·4	—	—	140·05	35·61	60	0
27#	April 15	19 33 37·4	14·7	21	1·725	5·0	0·930	4·0	− 4	+ 12·4	140·00	34·52	60	*2 II
28#	April 18	20 00 42·4	8·7	6	0·048	0·5	0·032	0·7	+ 3	—	NE from Oosima Is.			0
29#	April 19	11 37 46·6	6.2	8	0·096	1·2	0·080	1·2	−Sli-ght	− 1·2	SE from Oosima Is.			0
30#	April 20	01 14 51·6	62·4	11	0·252	6·0	0·140	4·8	+ 24	− 2	139·5	30·0	350	0
31	April 24	07 22 49·9	7·7	2	0·006	0·4	0·003	0·4	—	—	Near Itô in Idu Peninsula			0
32#	April 27	07 47 46·9	10·5	10	0·104	0·61	0·112	0·81	—	—	139·84	34·65	30	I
33#	May 17	20 53 59·3	15·3	2·5	0·032	0·36	0·020	0·38	+ 3·2	+ 2·8	139·87	35·41	60	I
34#	May 31	08 04 29·1	27·0	10	0·060	1·2	0·044	1·1	—	+Sli-ght	140·52	36·25	60	0
35#	June 1	10 35 57·7	14·4	11	0·280	4·0	0·132	2·0	− 1·6	+ 1·6	140·08	34·31	70	0
36	June 3	10 59 40·1	16·0	1	0·008	1·0	0·004	1·0	—	—	Near Ôtaki in Tiba Prefecture			0
37#	June 3	16 17 41·2	17·0	7	0·040	1·6	0·040	1·6	—	—	140·25	35·94	35	0
38	June 6	03 46 06·4	34·0	7	0·006	1·6	0·007	1·7	—	—	139·8	37·4		0
39	June 7	03 47 46·9	24·0	2	0·008	0·8	0·012	1·0	—	—	NNW from Hatizyûzima			0
40	June 13	10 53 36·4	1 55·5	9	0·012	1·0	0·014	1·0	—	—	146·7	43·8		0

(*to be continued*)

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List II. (*continued*)

No.	Date	Time of Commencement	Duration: Prel. tr.	Duration: Total	Maximum Motion N.S. 2A	Maximum Motion N.S. T	Maximum Motion E.W. 2A	Maximum Motion E.W. T	Initial Motion N(+) S(−)	Initial Motion E(+) W(−)	Epicentre λ (E)	Epicentre φ (N)	Depth	Intensity
		h m s	m s	m	mm	s	mm	s						
41#	June 15	14 32 03·4	18·2	6	0·040	0·7	0·028	0·8	—	—	139·81	36·21	40	0
42#	June 20	00 48 29·1	1 02·0	7	0·048	3·6	0·076	3·4	—	—	S from Hatizyôzima		Deep	0
43#	June 27	05 39 55·9	24·8	7	0·020	4·4	0·024	3·2	—	—	141·29	36.53	40	0

(investigated by T. Fukutomi)

*1 (E.W. 115·4 gal, Vert. 8·4 gal) (maximum acceleration)

*2 (E.W. 1·3 gal, Vert. 0·22 gal) (maximum acceleration)

Mark # attached to the earthquake number in List II indicates that the corresponding seismogram is shown in figure.

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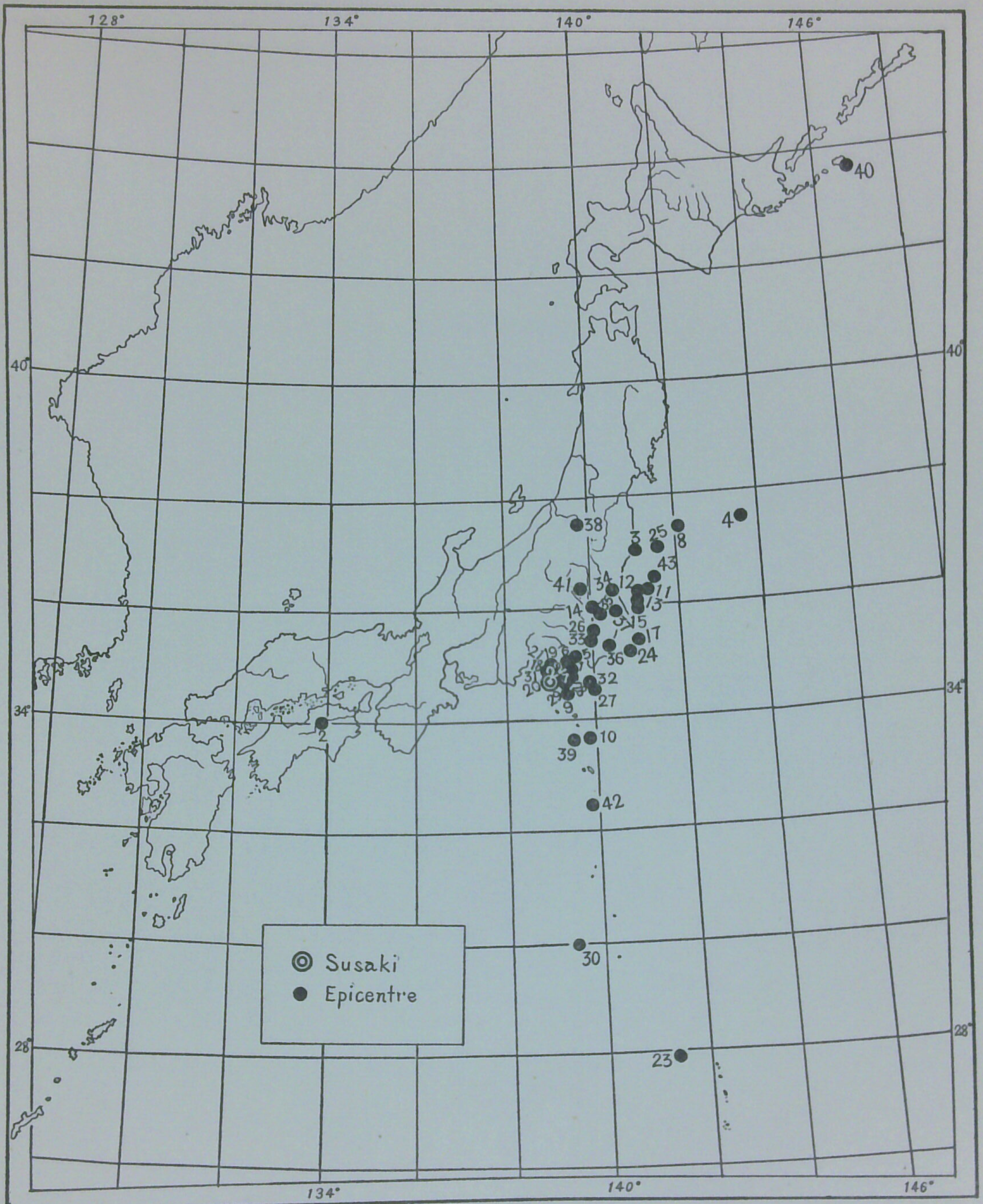

Fig. 1. Distribution of sensible and non-sensible earthquakes that originated in Japan and in her vicinity and were registered by the seismographs at Susaki for the period January 1–June 30, 1934.

(Figures attached to each epicentre indicate the earthquake number in List II.)

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(4) *Inportant distant earthquakes as oberved at Susaki.*

List III.

No.	Date	Phase	Time of Commencement (G. M. T.) h	m	s	Amplitude 2A (mm.)	Period (s)	Probable Epicentre
1#	1934 Jan. 3	eP	9	47	08·2	(E.W.) —	1·6	
		PP	9	47	55·0	(E.W.) 0·020	4·0	S. W. off from Kamchatka Peninsula.
		S	9	50	59·9	(E.W.) 0·092	4·4	
		SS	9	52	29·9	(E.W.) 0·052	6·0	
2#	Jan. 15	eP	8	51	48·1	—	—	
		PP	8	53	51·5	(N.S.) 0·060	8.0	Destructive Indian earthquake.
		S	8	58	21·0	(N.S.) 0·100	12·0	
		SS	9	01	25·5	(N.S.) 0·328	16·0	λ = 86°E φ = 25°N } (U.S.C.G.S.)
		L	9	03	05·5	(N.S.) 0·240	60·—	
		M	9	12	08·5	(N.S.) 0·777	15·—	
3#	Feb. 14	P	4	05	09·4?	W 0·028 S 0·038	— 4·0	W from Luzon Is.
		S	4	09	22·5	(E.W.) 0·040 (N.S.) 0·100	7·0 6·0	λ = 118°E φ = 18° N } (U.S.C.G.S)
		L	4	10	31·0	(E.W.) 0·200 (N.S.) 0·300	32·—	
4#	Mar. 24	P	12	08	25·9	(E.W.) 0·004	3·5	
		S	12	15	20·3	(E.W.) 0·048	5·4	
5	Mar. 18	P	—	—	—	—	—	
		S	04	37	43·2	(E.W.) 0·060 (N.S.) 0·040	6·0 6·0	Southern sea of Okhotsk
6#	April 15	P	22	21	27·4	—	—	
		S	22	27	14·8	(E.W.) 0·060	18·—	Mindanao Is.
		L	22	29	10·4	(E.W.) 0·180	22·—	
		M	22	33	57·4	(E.W.) 0·320	13·0	
7#	May 4	P	04	45	13·5	—	—	
		S	04	52	42·7	(E.W.) 0·028 (N.S.) 0·100	6·0 8·0	Alaska.
8#	June 9	P	13	06	16·1	—	—	New Guinea Is. (E147°. S4°)
		S	13	12	23·0	(E.W.) 0·088	4·8	
9	June 24	P	08	07	28·1	—	—	
		S	08	13	10·2	(E.W.) 0·060	10·0	Celebes Is. (.E127·5, N0°)

(investigated by T. Fukutomi)

Mark # attached to the earthquake number in List III indicates that the seismogram is shown in figure.

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2. *Observation of Tilting Motion of the Earth Crust.*

(September 9, 1933—May 29, 1934)

(*1*) *Co-ordinate of the station.*

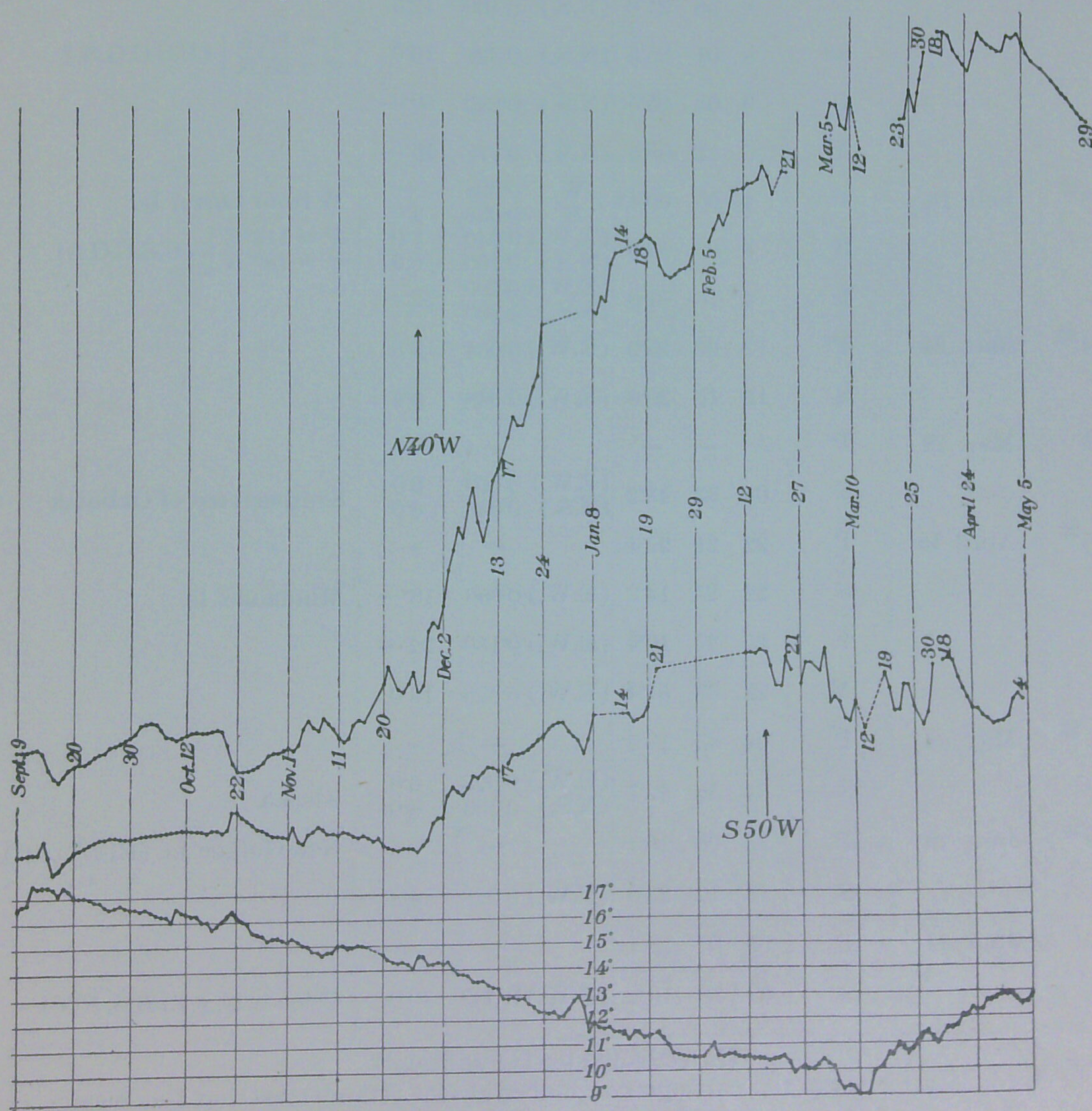
Longitude	(E)	138° 58′ 46″
Latitude	(N)	34° 39′ 46″
Height above mean sea-level		+19m

(*2*) *Instruments.*

1. Ishimoto's Silica Tiltmeter with Photographic Recorder.
   Comp. I. (N40°W—S50°E comp.) Period = 14·75 sec.
   Sensibility = 1cm/1second of tilt.
   Comp. II. (N50°E—S50°W comp.) Period = 14·50 sec.
   Sensibility = 1cm/1second of tilt.
2. Negretti's Recording Thermometer (for measurement of earth temperature).

The instruments were installed in a small underground room with concrete wall which is situated at the depth of about 17 metres in the horizontal gallery from the entrance on the hill-side.

(*3*) *Diurnal mean of tilt of the earth crust and of earth temperature in 10cm depth.* (List IV & Fig. 2)



(10 seconds of tilt = 14.0 mm.)

Fig. 2.

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List IV.

Date	Diurnal mean of tilt		Diurnal mean of earth temperature in 10cm depth	Date	Diurnal mean of tilt		Diurnal mean of earth temperature in 10cm depth
	+direction =N40°W	+direction =S50°W			+direction =N40°W	+direction =S50°W	
1933	second	second	degree C		second	second	degree C
Sept. 9	2·54	2·22	16·5	Oct. 7	4·13	3·93	—
10	2·53	2·33	16·7	8	3·59	3·99	—
11	2·56	2·40	16·75	9	3·42	4·02	—
12	2·63	2·45	17·5	10	3·29	4·10	1·65
13	2·80	2·45	17·4	11	3·46	4·14	16·35
14	2·27	3·42	17·45	12	3·64	4·13	16·25
15	1·05	2·17	17·45	13	3·81	4·08	16·2
16	0·33	0·96	17·35	14	3·90	4·04	16·2
17	0·13	1·15	17·1	15	3·87	4·01	16·0
18	0·48	1·76	17·4	16	3·83	3·93	16·0
19	1·05	2·15	17·25	17	3·87	4·07	15·7
20	1·37	2·55	17·0	18	4·00	4·10	15·8
21	1·46	2·78	17·0	19	3·98	3·94	16·0
22	1·49	2·98	17·0	20	2·79	4·14	16·2
23	1·76	3·15	16·95	21	1·42	5·53	16·35
24	2·00	3·35	16·80	22	0·71	5·58	16·15
25	2·26	3·58	16·8	23	0·69	5·05	16·0
26	2·37	3·60	16·6	24	0·79	4·83	15·9
27	2·79	3·64	16·5	25	0·97	4·53	15·5
28	2·91	3·66	16·6	26	1·16	4·14	15·45
29	3·06	3·56	16·65	27	1·44	4·03	15·4
30	3·29	3·56	16·55	28	1·97	3·82	15·2
Oct. 1	3·56	3·59	16·5	29	2·20	3·64	15·3
2	3·85	3·71	16·5	30	2·19	3·60	15·3
3	4·41	3·77	19·4	31	2·35	3·54	15·2
4	4·57	3·82	—	Nov. 1	2·50	3·42	15·15
5	4·66	3·86	—	2	2·34	4·27	15·25
6	4·53	3·89	—	3	2·72	3·13	15·1

(to be continued)

List IV. *(continued)*

Date	Diurnal mean of tilt		Diurnal mean of earth temperature in 10cm depth	Date	Diurnal mean of tilt		Diurnal mean of earth temperature in 10cm depth
	+direction =N40°W	+direction =S50°W			+direction =N40°W	+direction =S50°W	
	second	second	degree C		second	second	degree C
Nov. 4	4·00	2·98	15·0	Dec. 2	13·42	4·93	14·2
5	4·65	3·70	14·9	3	16·22	6·61	14·3
6	4·00	3·96	14·7	4	18·02	7·27	14·0
7	3·80	4·23	14·7	5	20·13	6·92	13·8
8	4·86	4·00	14·55	6	19·13	6·56	13·8
9	4·35	3·78	14·7	7	21·91	7·16	13·7
10	3·95	3·75	14·7	8	23·32	8·08	13·5
11	3·31	3·73	15·0	9	20·50	7·95	13·5
12	2·98	3·82	15·0	10	18·61	8·30	13·5
13	3·21	3·77	14·9	11	20·52	8·76	13·3
14	4·23	3·54	14·9	12	23·73	8·69	13·2
15	4·62	3·41	15·0	13	24·62	8·50	13·2
16	4·49	3·50	15·0				
17	—	3·35	—	17	27·25	9·00	12·8
18	—	3·18	—	18	28·99	9·70	12·9
19	—	3·29	—	19	28·19	9·73	12·8
20	7·50	2·68	14·6	20	28·13	9·91	12·8
21	8·88	2·49	14·4	21	29·98	10·19	12·6
22	7·79	2·41	14·3	22	31·11	10·40	12·5
23	6·86	2·27	14·3	23	32·17	10·66	12·3
24	6·67	2·50	14·3	24	36·37	11·18	—
25	7·32	2·48	14·2	25	—	11·76	12·2
26	8·32	2·44	14·0	26	—	12·03	12·3
27	6·57	2·19	14·5	27	—	12·31	12·1
28	7·09	2·72	14·5	28	—	12·29	12·15
29	11·62	3·06	14·2	29	—	11·48	12·4
30	12.27	4·47	14·2	30	—	11·13	12·7
Dec. 1	11·97	4·83	14·3	31	—	10·88	12·9

(to be continued)

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List IV. *(continued)*

Date	Diurnal mean of tilt		Diurnal mean of earth temperature in 10cm depth	Date	Diurnal mean of tilt		Diurnal mean of earth temperature in 10cm depth
	+direction =N40°W	+direction =S50°W			+direction =N40°W	+direction =S50°W	
1934	second	second	degree C		second	second	degree C
Jan. 1	37·47	9·59	12·5	Feb. 6	44·13	—	10·5
2	—	10·94	11·5	7	45·08	—	10·5
				8	44·31	—	10·6
8	37·54	12·97	11·9	9	45·25	—	10·6
9	37·22	—	11·7	10	47·11	—	10·5
10	38·56	—	11·6	11	47·25	—	10·45
11	38·17	—	11·7	12	47·35	17·70	10·5
12	41·20	—	11·5	13	47·69	17·79	10·4
13	42·15	—	11·5	14	47·74	17·63	10·4
14	42·24	12·96	11·5	15	48·06	18·03	10·4
15	—	12·93	11·2	16	49·18	17·81	10·3
16	—	12·30	11·5	17	48·27	16·68	10·4
17	—	12·59	11·5	18	46·80	15·08	10·4
18	43·08	12·44	11·3	19	—	15·06	10·5
19	43·50	13·45	11·3	20	48·72	17·42	10·2
				21	48·53	16·34	9·8
21	42·86	16·51	11·5				
22	41·16	—	11·25	27	—	15·32	10·1
23	40·39	—	11·0	28	—	16·96	10·0
24	40·06	—	10·7	Mar. 1	—	16·97	10·0
25	40·40	—	10·6	2	—	16·69	10·2
26	40·76	—	10·55	3	—	16·25	10·4
27	40·84	—	10·5	4	—	18·09	10·25
28	41·09	—	10·5	5	53·05	13·76	10·1
29	42·48	—	10·5	6	54.23	14·26	9·5
30	—	—	10·5	7	54·13	13·80	9·2
				8	52·41	12·46	9·3
Feb. 5	42·98	—	11.0	9	52·00	12·30	9·3

(to be continued)

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List IV. *(continued)*

Date	Diurnal mean of tilt		Diurnal mean of earth temperature in 10cm depth	Date	Diurnal mean of tilt		Diurnal mean of earth temperature in 10cm depth
	+direction =N40°W	+direction =S50°W			+direction =N40°W	+direction =S50°W	
	second	second	degree C		second	second	degree C
Mar. 10	54·74	13·82	9·0	Apr. 25	58·35	13·30	12·2
				26	59·90	12·62	12·6
12	50·56	11·62	9·0	27	59·33	12·50	12·6
13	—	—	9·85	28	58·88	12·05	12·7
				29	58·61	12·21	12·8
18	—	—	10·1	30	58·36	12·32	12·8
19	—	16·15	10.6	May 1	58·36	12·62	12·8
20	—	14·84	10.5	2	59·56	14·02	12·6
21	—	13·17	10·9	3	59·40	14·64	12·45
22	—	13·16	10·8	4	59·72	14·08	12·5
23	52·84	15·19	10·6	5	59·00	—	12·8
24	52·86	15·16	10·75	6	58·15	—	—
25	55.26	13·34	11·0	7	57·58	—	—
26	53·46	—	11·3	8	57·18	—	—
				9	56·92	—	—
28	56·16	11·95	11·4				
29	58·26	12·80	11·2	22	56·00	—	—
30	—	16·80	10·9	23	55·50	—	—
				24	54·90	—	—
Apr. 18	59·96	17·14	11.5	25	54·52	—	—
19	59·92	17·28	11·5	26	53·86	—	—
20	59·62	17·12	11·6	27	53·26	—	—
21	58·54	15·70	11·95	28	52·80	—	—
22	57·88	14·80	12·0	29	52·55	—	—
23	57·35	14·10	12·3				
24	56·75	13·38	12·2				

(investigated by T. Fukutomi and M. Nakada.)

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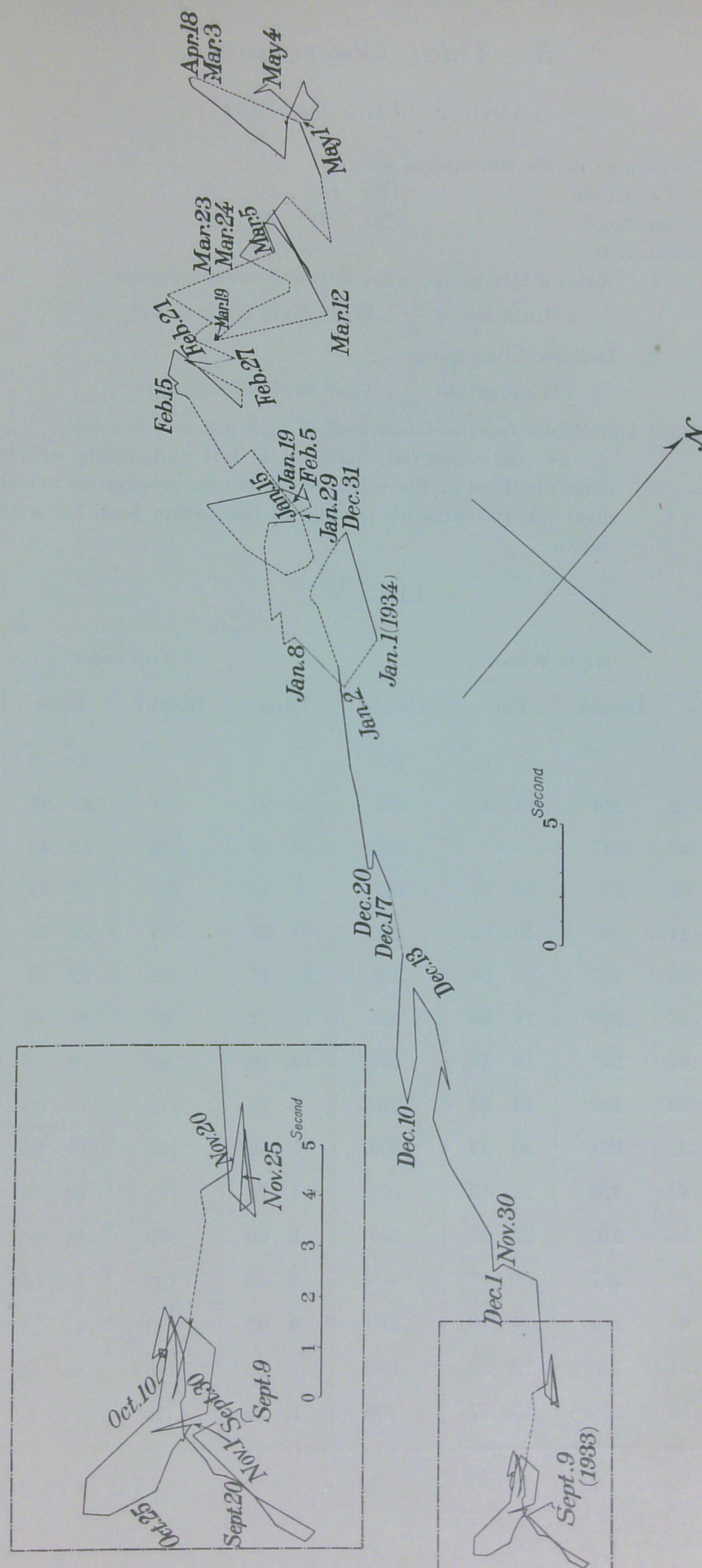
(4) *Vector diagram of tilt of the earth crust.* (Fig. 3)



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3. *Tidal Observation.*

(April 9—June 30, 1934)

(*1*) *Co-ordinate of the mareograph station.*

Longitude	(E)	138° 59′ 0″
Latitude	(N)	34° 39′ 54″

(*2*) *Instruments.*

1. Gurley's tide gauge with selsyn devices recorder (Minification $\frac{1}{20}$, Time scale 20.4cm/day)
2. Tamaya's tide gauge (Minification $\frac{1}{30}$, Time scale 27cm/day)

(*3*) *Times and heights from a datum level of high tide and low tide.*

As the observed material is not sufficiently ample for the determination of the mean sea-level, we employ an arbitrary fixed level for the present instead of the datum level for soundings in Japan.

List V.

Date	High Water				Lowwater			
	Time	Height	Time	Height	Time	Height	Time	Height
	h m	cm	h m	cm	h m	cm	h m	cm
April 9			13 12	189			20 10	112
10	3 12	214	14 20	235	8 50	159	21 05	110
11	3 40	217	—	209	9 35	133	21 45	113
12	4 08	221	16 19	227	9 52	120	22 22	128
13	4 24	235	17 12	241	10 35	114	22 55	140
14	4 50	237	17 55	228	11 27	98	23 27	137
15	5 16	230	18 28	233	11 53	87	23 49	156
16	5 43	241	19 18	237	12 18	99	* *	. .
17	6 03	238	19 58	220	0 29	173	13 06	95
18	6 31	224	20 34	209	0 58	165	13 35	91
19	6 43	220	21 13	203	1 28	171	14 18	101
20	7 15	216	22 42	205	2 06	179	14 46	114
21	8 05	227	* *	. .	2 15	198	16 03	143
22	0 44	211	8 13	210	4 45	174	17 22	139
23	1 31	202	10 59	186	8 22	185	18 32	136
24	2 32	209	13 37	199	8 24	179	19 45	146

(*to be continued*)

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List V. (*continued*)

Date	High water						Low water					
	Time		Height	Time		Height	Time		Height	Time		Height
	h	m	cm	h	m	cm	h	m	cm	h	m	cm
April 25	2	36	219	14	28	204	8	56	159	20	36	135
26	3	03	214	15	39	204	9	25	132	21	14	131
27	3	38	220	16	13	224	9	39	122	21	56	143
28	4	02	229	16	58	229	10	22	108	22	28	145
29	4	14	232	17	39	243	11	06	97	23	01	162
30	4	38	248	18	25	247	11	55	94	23	41	167
May 1	5	05	241	19	15	232	12	15	72	*	*	. .
2	5	43	235	20	08	229	0	13	168	12	53	74
3	6	13	230	21	12	212	1	00	177	13	42	72
4	7	00	219	22	13	207	1	50	177	14	33	82
5	7	43	216	23	38	211	2	40	183	15	55	101
6	8	45	204	*	*	. .	4	13	186	16	46	110
7	0	45	202	10	30	188	5	57	169	18	03	120
8	1	30	204	12	51	189	7	25	155	19	14	129
9	2	09	207	14	18	198	8	20	140	20	18	137
10	2	41	213	15	23	206	9	04	120	21	10	145
11	3	09	219	16	22	217	9	40	107	21	46	157
12	3	33	229	17	03	224	10	15	99	22	22	166
13	4	02	238	17	45	242	10	36	104	22	59	179
14	4	31	244	18	40	239	11	30	98	23	40	180
15	5	02	241	19	12	237	*	*	. .	12	07	92
16	5	35	238	19	50	226	0	04	183	12	48	92
17	6	09	230	20	23	220	0	57	180	13	19	94
18	6	30	228	21	27	216	1	19	183	13	55	103
19	7	12	220	21	54	211	2	07	184	14	36	110
20	7	47	208	22	40	205	2	53	182	15	18	118
21	8	45	197	23	41	207	3	54	180	16	07	128
22	10	52	195	*	*	. .	5	24	176	17	16	147

(*to be continued*)

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List V. (*continued*)

Date	High water				Low water			
	Time	Height	Time	Height	Time	Height	Time	Height
	h m	cm	h m	cm	h m	cm	h m	cm
May 23	0 31	217	11 53	198	6 55	169	18 25	154
24	1 06	221	14 01	207	7 50	155	19 33	162
25	1 46	225	15 11	218	8 27	139	20 27	168
26	2 14	233	16 01	230	9 06	122	21 19	174
27	2 46	237	16 43	235	9 58	115	22 00	174
28	3 28	239	17 35	244	10 36	87	22 42	180
29	4 02	244	18 23	247	11 25	79	23 33	186
30	4 42	247	19 07	240	* *	. .	12 07	71
31	5 24	241	19 56	232	0 15	180	12 45	64
June 1	6 03	241	21 03	230	0 54	182	13 40	81
2	7 14	237	21 44	227	1 50	186	14 25	94
3	7 52	226	22 35	231	2 47	183	15 19	114
4	9 26	224	23 21	232	3 58	186	16 13	140
5	10 52	213	23 54	232	5 23	175	17 04	155
6	* *	. .	12 33	209	6 16	162	18 12	140
7	0 40	229	14 15	209	7 32	140	19 15	177
8	1 21	230	15 32	217	8 25	127	20 12	186
9	2 04	233	16 16	225	9 11	114	21 22	188
10	2 36	234	17 04	230	10 02	104	22 08	190
11	3 28	234	17 46	238	10 33	104	22 41	193
12	4 08	244	18 13	239	11 09	100	23 27	192
13	4 39	245	18 50	241	12 12	96	23 58	193
14	5 12	247	19 19	241	* *	. .	12 07	101
15	5 45	242	19 57	235	0 38	192	13 05	105
16	6 21	239	20 25	241	0 57	186	13 34	113
17	6 56	235	21 03	226	1 36	190	14 11	118
18	7 56	216	21 45	221	2 32	174	14 40	125
19	8 46	209	22 18	226	3 29	172	15 35	139

(*to be continued*)

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List V. *(continued)*

Date	High water						Low water					
	Time		Height	Time		Height	Time		Height	Time		Height
	h	m	cm	h	m	cm	h	m	cm	h	m	cm
June 20	10	08	214	22	50	232	4	09	176	16	02	159
21	12	04	205	23	24	227	5	13	163	17	17	168
22	*	*	. .	13	13	199	6	38	146	18	20	171
23	0	19	220	14	56	208	7	52	125	19	29	184
24	1	17	229	16	00	227	8	41	118	20	40	198
25	2	07	238	16	49	239	9	32	105	21	41	199
26	2	48	244	17	37	248	10	20	90	22	35	201
27	3	40	254	18	32	262	11	12	85	23	28	205
28	4	46	265	19	09	257	*	*	. .	12	21	82
29	5	36	265	19	59	253	0	11	198	12	45	85
30	6	14	259	20	26	251	0	50	188	△	△	△△

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(4) *Approximate height of the mean sea-level and of the datum level for soundings in Japan above the fixed level above mentioned.*

To obtain the approximate height of the mean sea-level and of the datum level for soundings in Japan above the fixed level above mentioned, taking in ordinate the height Y of high water and low water at Susaki which are shown in List V and in abscissa, the corresponding height X of high water and low water at Yokosuka which are shown in "Tide Table" published by the Hydrographic Department we examined the relation between them as shown in Fig. 26.

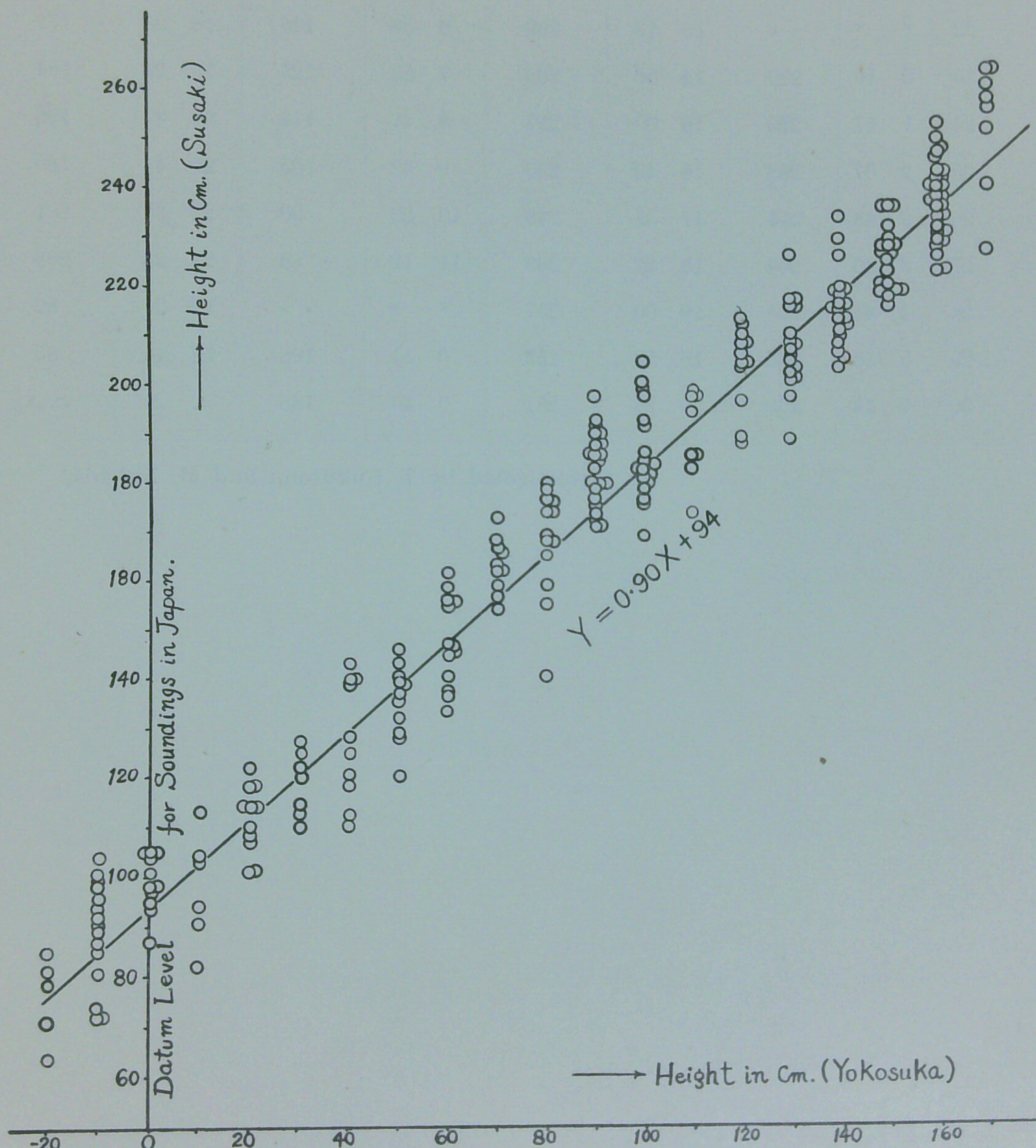

Fig. 26 Comparison of the height of high or low water at Susaki with the corresponding height at Yokosuka.

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We can see that the following linear relation exists between them,

$$Y_{cm} = 0{\cdot}90\, X_{cm} + 94_{cm}.$$

Then we obtain approximately

Height of the datum level for soundings in Japan above the fixed level above quoted $\Big\} = 94$ cm

Coefficient of height correction for Arasidomari at Susaki $\Big\} = 0{\cdot}90.$

Further the height 106 cm of the mean sea-level at Yokosuka from the datum level is taken into consideration, we get 95 cm for the height of the mean sea-level at Susaki above the datum level.

Additionally, frequency of the time difference of the same phase of tide between Susaki and and Yokosuka is examined as shown in Fig. 27 and we obtained 9 minutes as the most probable value of the time difference between these two places. Positive sign means that 9 minutes are to be added to the values at Yokosuka to get correct time at Susaki.

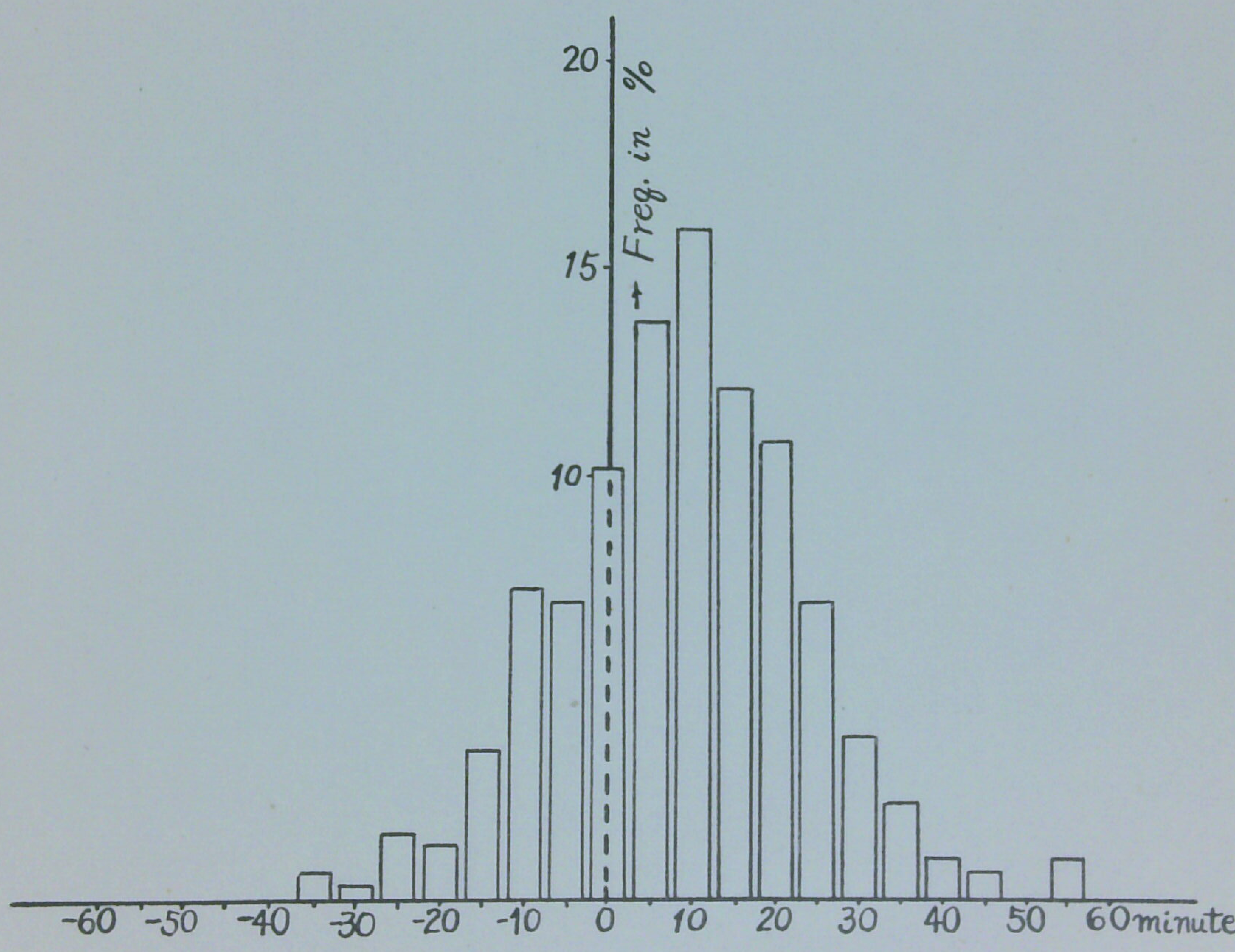

Fig. 27 Frequency distribution of the Time difference of the same phase of tide between Susaki and Yokosuka

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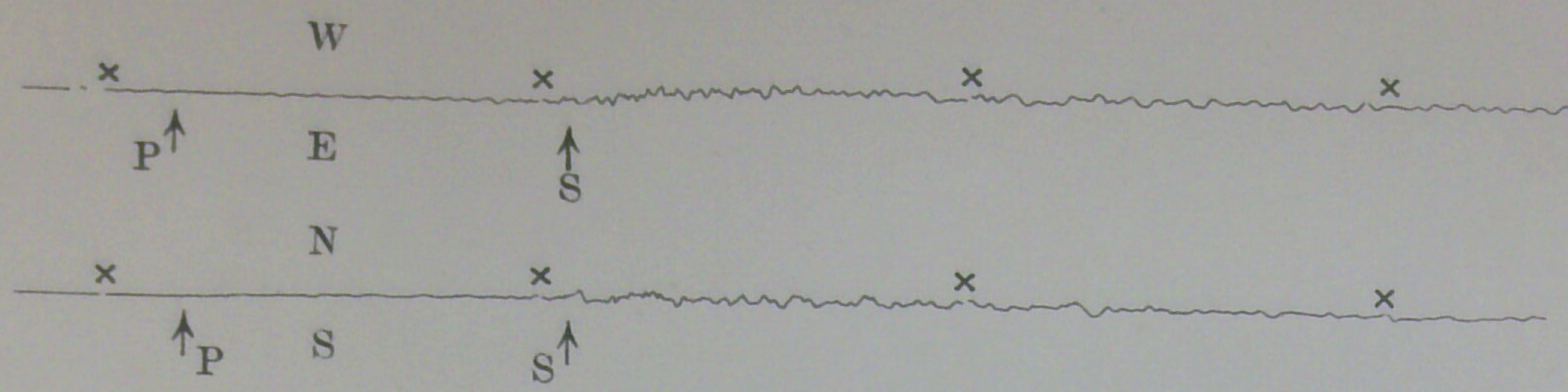

Fig. 2. Seismograms due to the earthquake of Feb. 11, 1934. (8) (The first minute mark $= 7^h 2^m 37^s.0$, $\times 25$)
Numeral in bracket denotes earthquake number in List II.

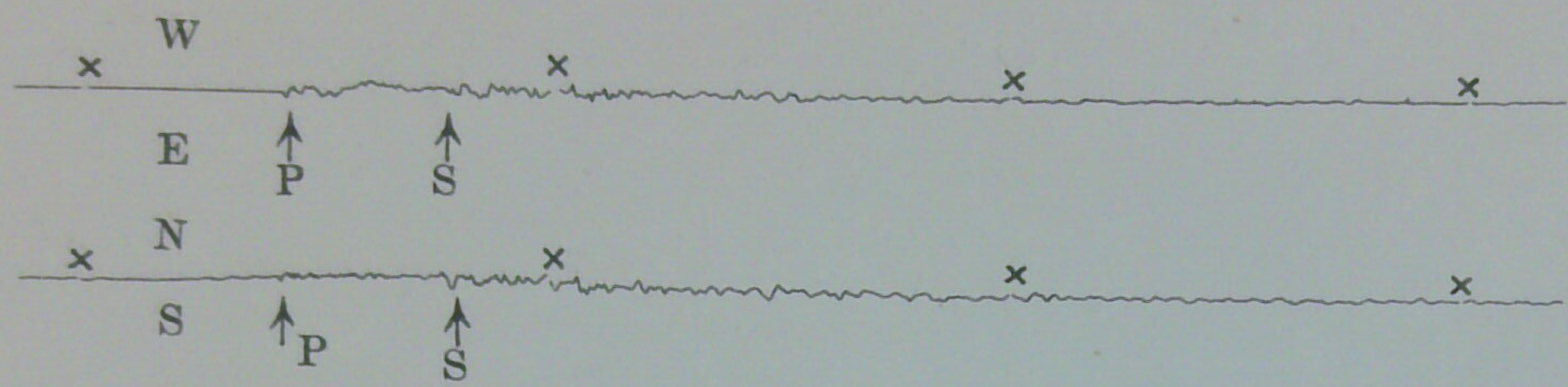

Fig. 3. Seismograms due to the earthquake of Feb. 13, 1934. (10) (The first minute mark $= 6^h 44^m 30^s.9$, $\times 25$)

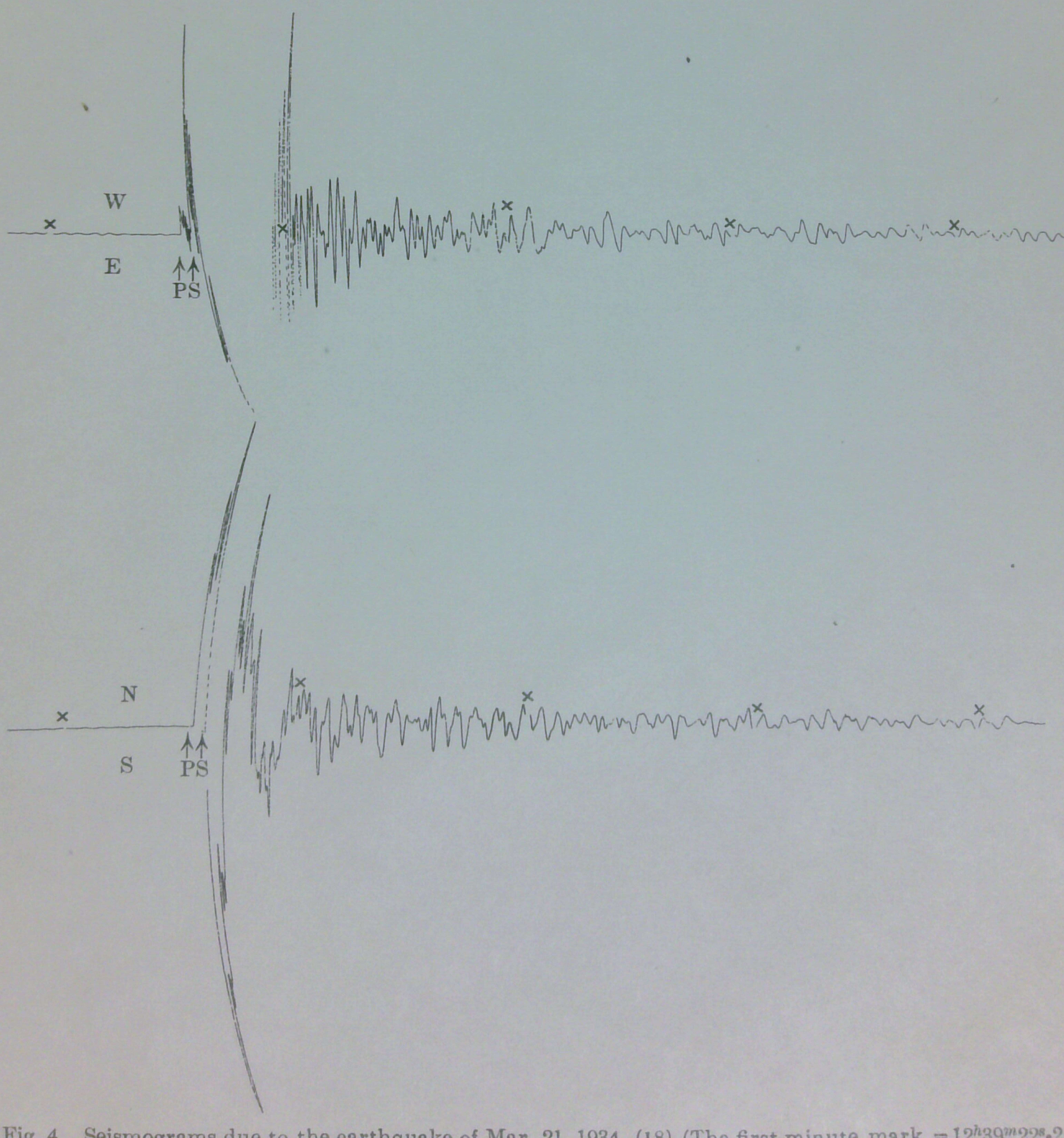

Fig. 4. Seismograms due to the earthquake of Mar. 21, 1934. (18) (The first minute mark $= 12^h 39^m 22^s.2$, $\times 25$)

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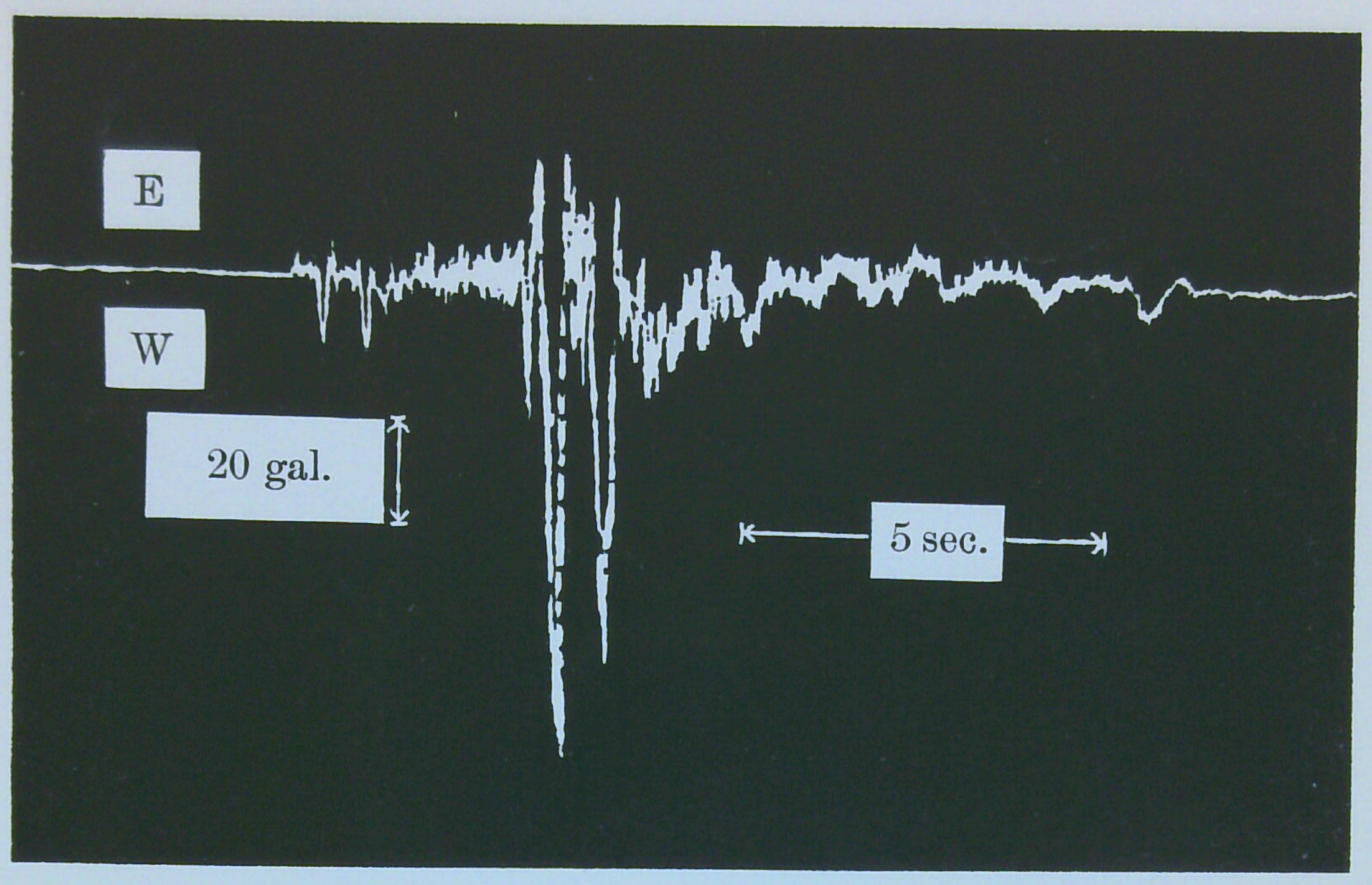

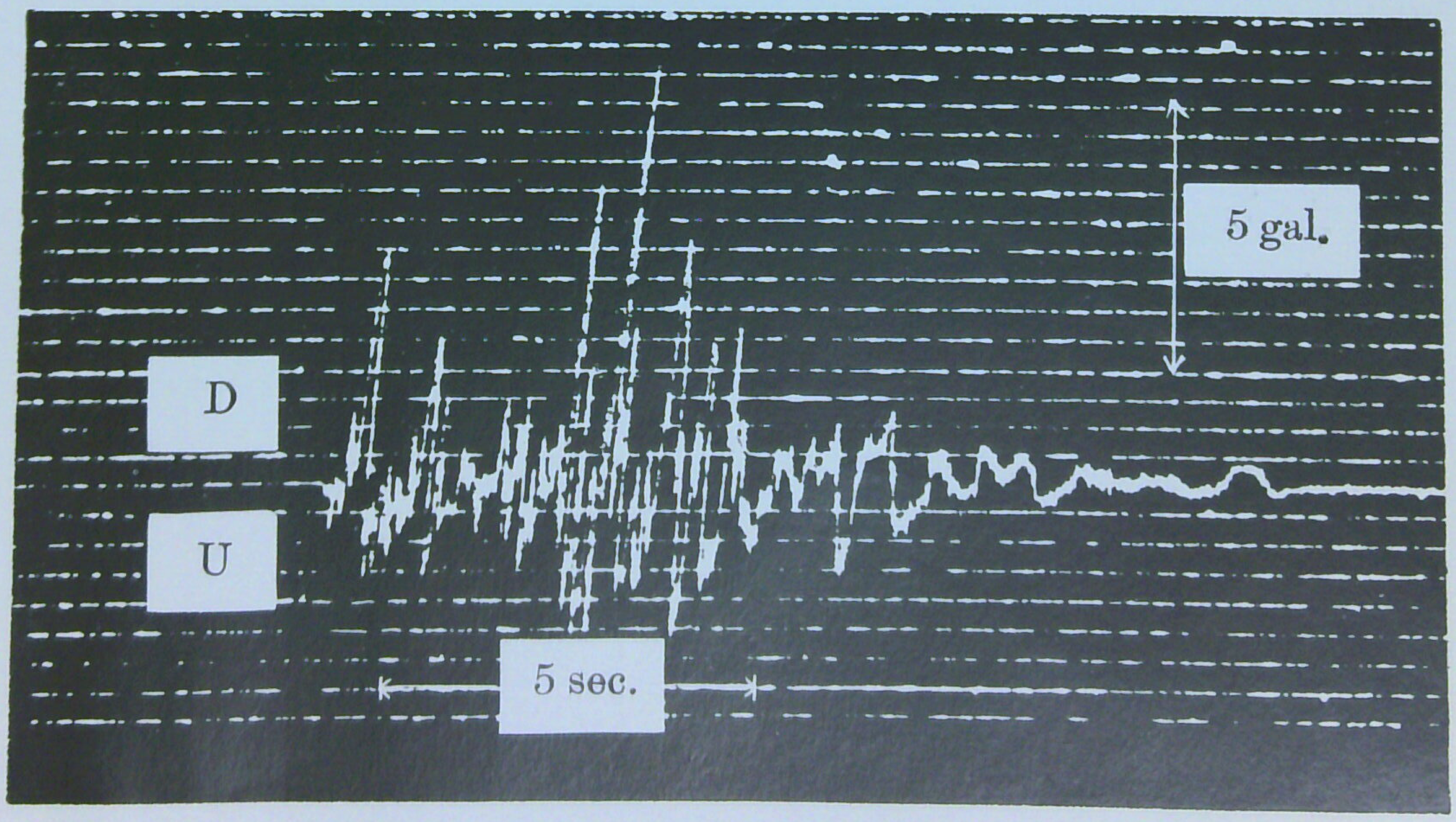

Fig. 5. Ishimoto acceleration seismograph diagrams of the strong earthquake of March 21, 1934.

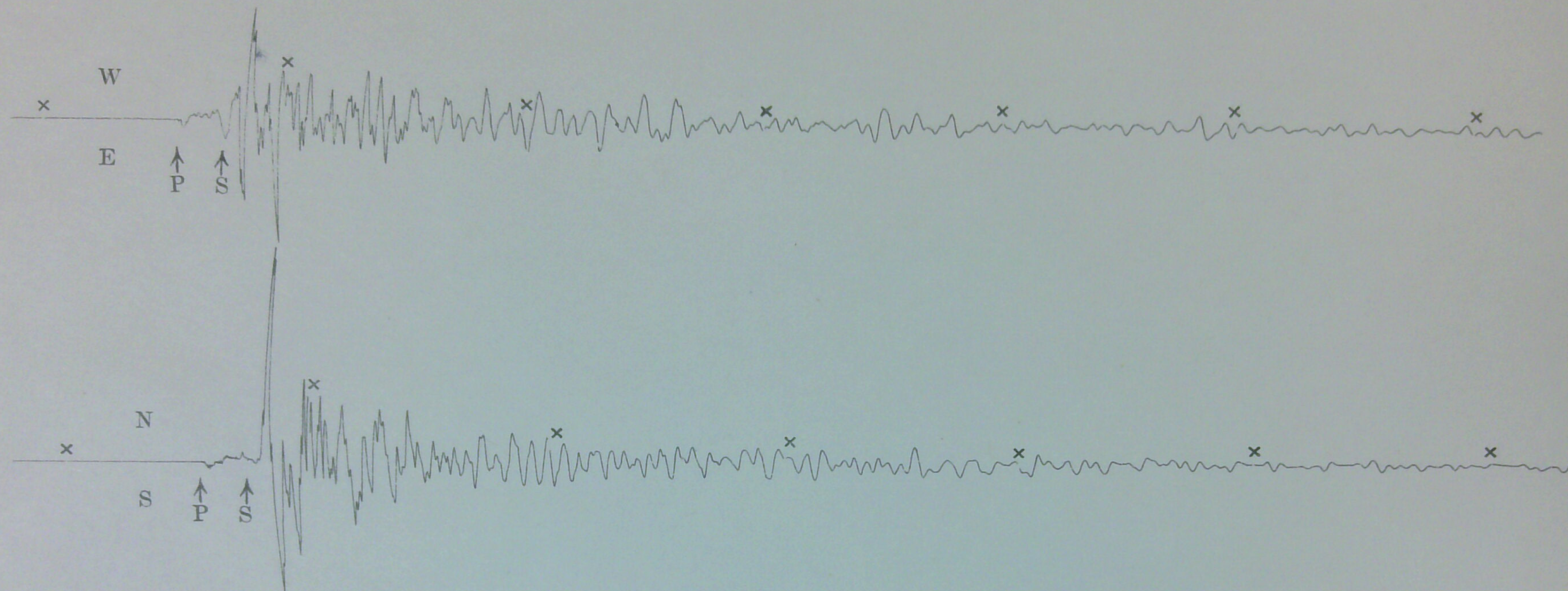

Fig. 6. Seismograms due to the earthquake of April 15, 1934. (27) (The first minute mark $=19^h 33^m 3^s{\cdot}9$, $\times 25$)

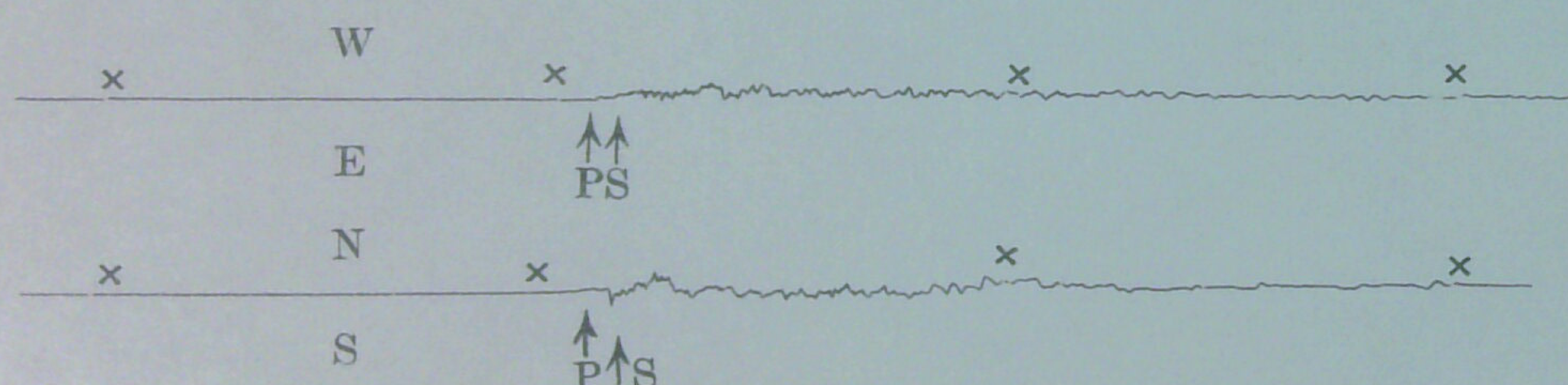

Fig. 7. Seismograms due to the earthquake of April 18, 1934. (28) (The first minute mark $=19^h 59^m 42^s{\cdot}4$, $\times 25$)

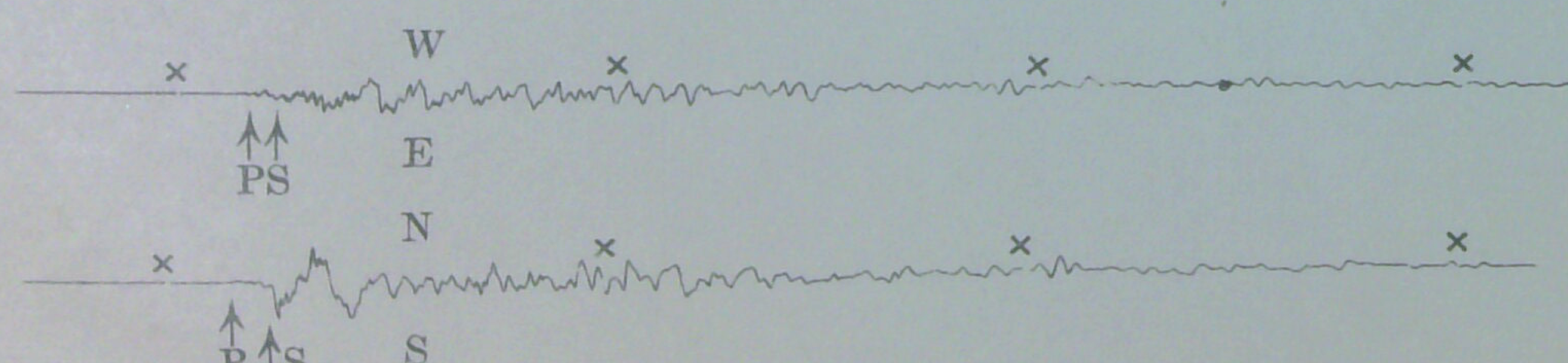

Fig. 8. Seismograms due to the earthquake of April 19, 1934. (29) (The first minute mark $=11^h 37^m 37^s{\cdot}8$, $\times 25$)

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Fig. 9. Seismograms due to the earthquake of April 20, 1934. (30) (The first minute mark $=1^h14^m33^s\cdot7$, $\times 25$)

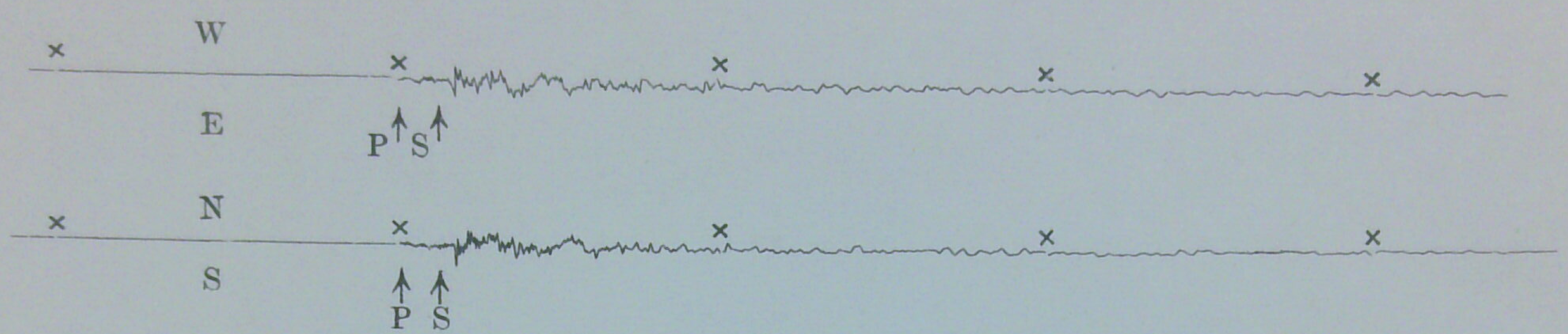

Fig. 10. Seismograms due to the earthquake of April 27, 1934. (32) (The first minute mark $=7^h46^m46^s\cdot9$, $\times 25$)

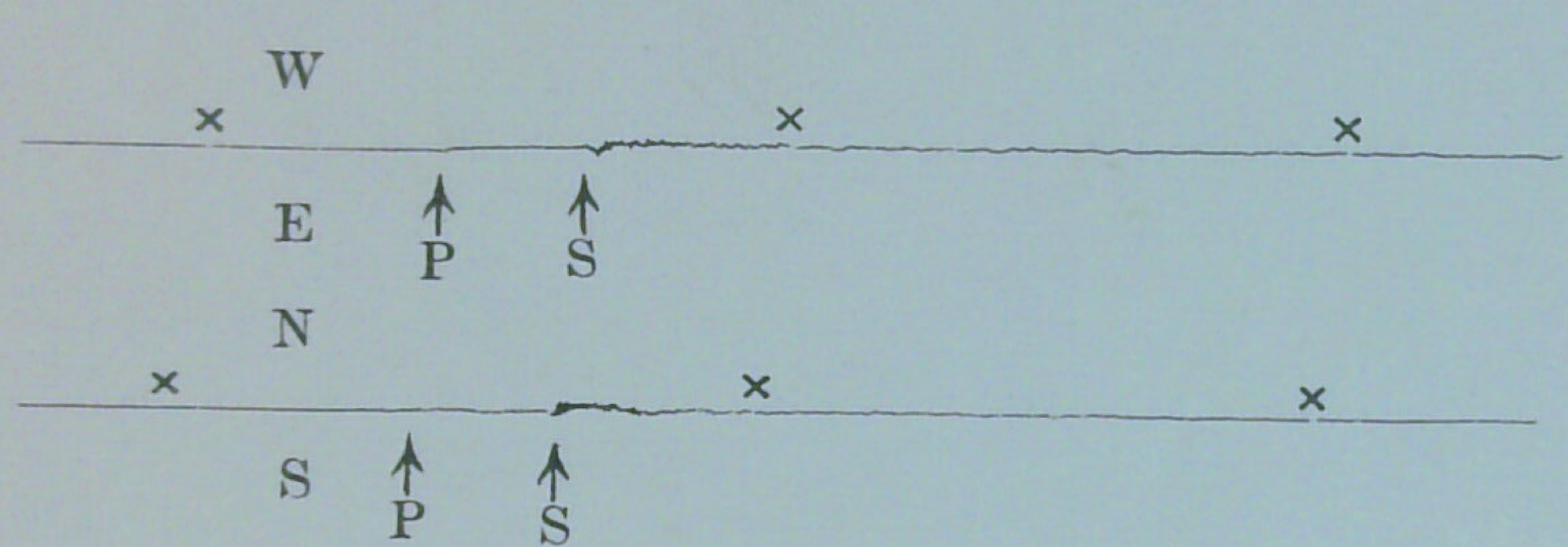

Fig. 11. Seismograms due to the earthquake of May 17, 1934. (33) (The first minute mark $=20^h53^m35^s\cdot8$, $\times 25$)

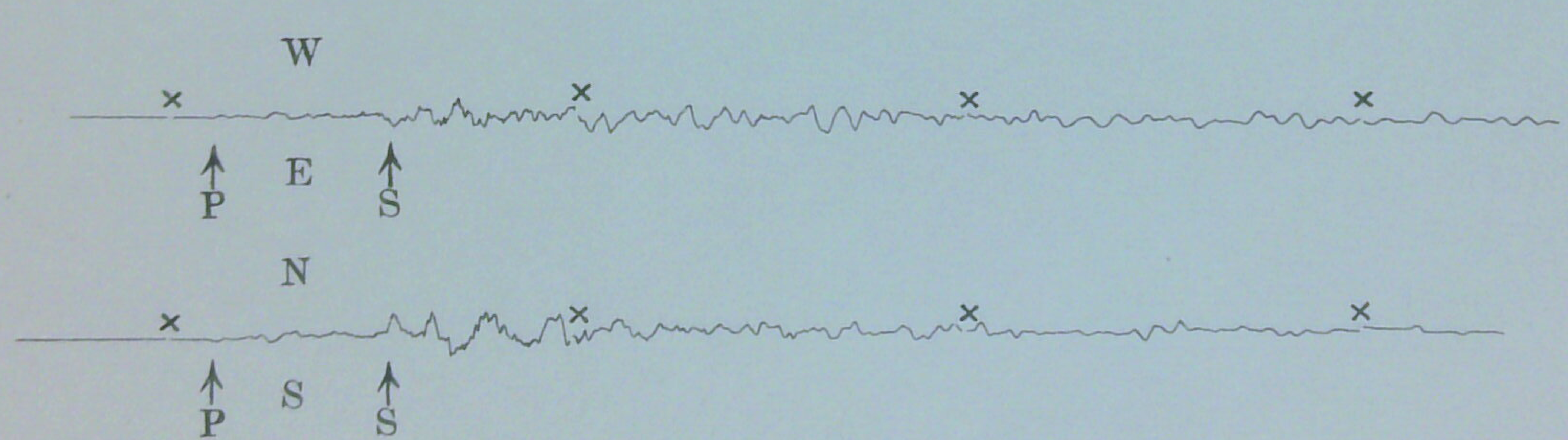

Fig 12. Seismograms due to the earthquake of May 31, 1934. (34) (The first minute mark $=8^h4^m24^s\cdot1$, $\times 25$)

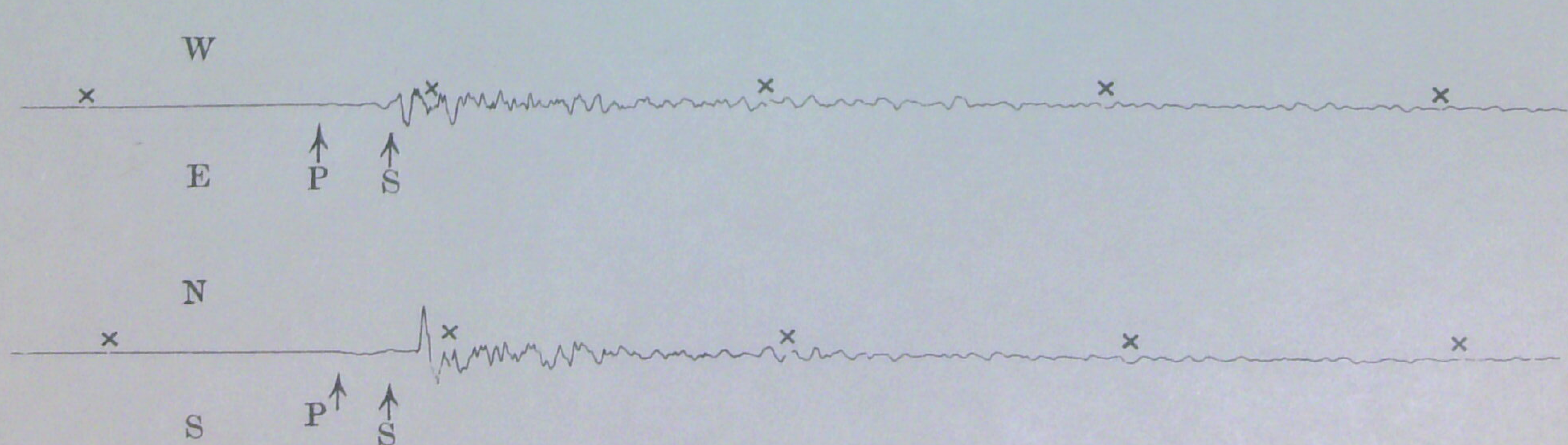

Fig. 13. Seismograms due to the earthquake of June 1, 1934. (35) (The first minute mark $=10^h35^m17^s\cdot6$, $\times 25$)

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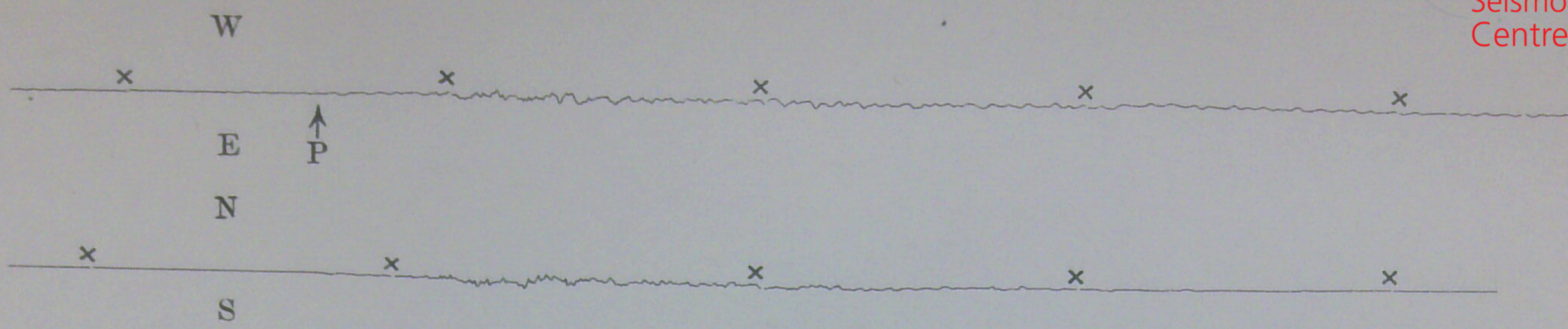

Fig. 14. Seismograms due to the earthquake of June 3, 1934. (37) (The first minute mark $=16^h17^m5^s\cdot6$, $\times 25$)

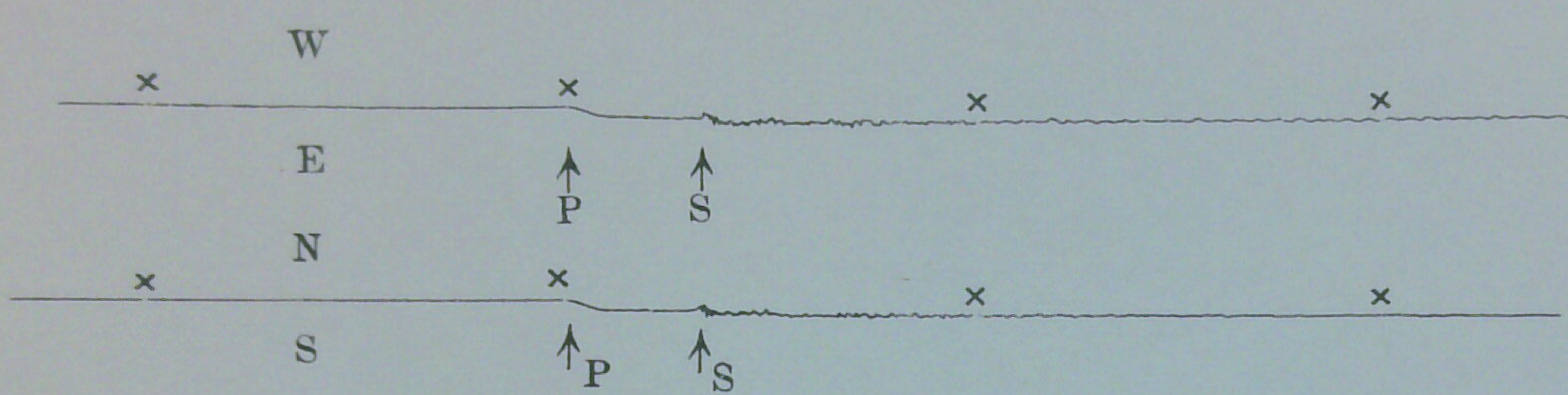

Fig. 15. Seismograms due to the earthquake of June 15, 1934. (41) (The first minute mark $=14^h31^m2^s\cdot8$, $\times 25$)

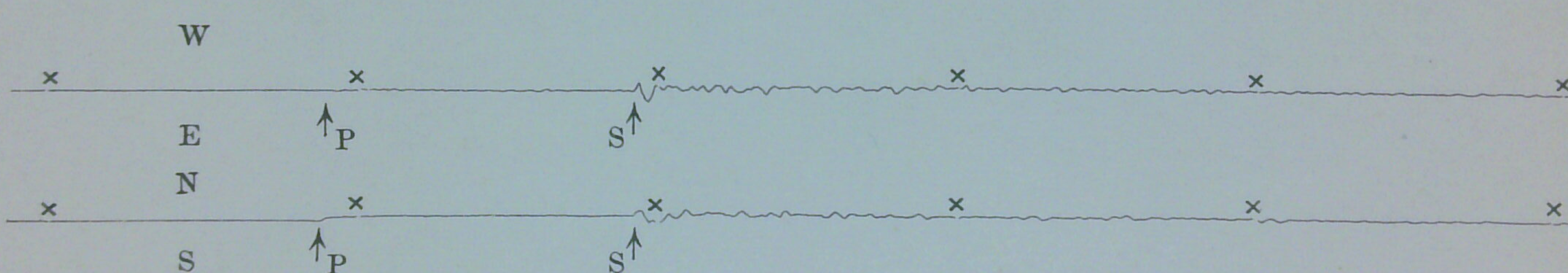

Fig. 16. Seismograms due to the earthquake of June 20, 1934. (42) (The first minute mark $=0^h47^m36^s\cdot5$, $\times 25$)

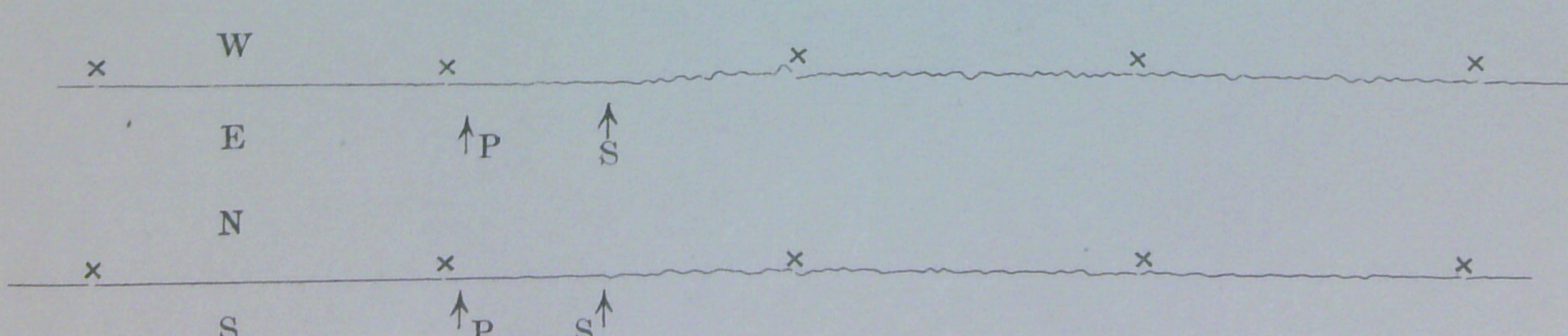

Fig. 17. Seismograms due to the earthquake of June 27, 1934. (43) (The first minute mark $=5^h38^m53^s\cdot7$, $\times 25$)

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