THE PENNSYLVANIA STATE UNIVERSITY

MINERAL INDUSTRIES EXPERIMENT STATION

GEOPHYSICAL LABORATORY

Seismograph Report XVIII

1 July to 31 December 1952

School of Mineral Industries
State College, Penna., U. S. A.

Locality: The station is located in a vault under the central wing of the School of Mineral Industries Building. The instruments are mounted on a concrete pillar separated from the foundations and anchored to bedrock (dolomite). The geographic coordinates are:

ϕ - 40° 48' N λ - 77° 52' W H - 354 m

The geocentric coordinates are (according to Gutenberg and Richter):

A - 40° 36' N λ - 77° 52' W H - + 3 km.

Please address all communications to:

Geophysical Laboratory
Mineral Sciences Bldg.
State College, Pennsylvania.

From 1 July to 28 October 1952 three seismographs were in operation. The vertical and north - south components were recorded photographically, the east - west motion was recorded by a pengalvanometer. The recording rate was 1.5 cm. per minute on the photographic recorder, 1.7 cm. per minute on the pen recorder. The free periods of the instruments were:

North - South	16.8 sec.
East - West	17.1 sec.
Vertical	1.86 sec.

No checks of damping and sensitivity of the instruments as adjusted during this period have been made.

Exchange

On 28 October 1952 a new photographic recording drum which runs at a rate of 1.55 cm. per minute was installed to record the north-south and vertical motions. Frequent stoppages for adjustment of the new recorder occurred until 19 November. On December 10 a new galvanometer was installed in the north - south recorder. On 16 December it was shifted to the vertical instrument. During all this period there were frequent stoppages of all instruments. Although the free periods of the seismometers were unchanged, the damping and sensitivity of the recorders underwent frequent adjustment.

The time is controlled by a Stromberg clock, which is compared daily with signals from radio station WWV. The time accuracy of the records is estimated to be about ± 1 second.

Note error in report XVII: During the first six months of 1952 it was the east-west seismometer, not the north-south, which was recorded using the pen-galvanometer.

Date	Phase and component	G.M.C.T.	Remarks
13 July '52		E	Seismic activity starting at 17:56:__
17 July '52		E,Z	Seismic activity recognizable at 16:33:__
21 July '52	iP	E,Z 11:58:56	Epicenter: 35.1°N, 118.9°W
	iPP	Z 12:00:02	O = 11:52:11.5
	i	Z 12:00:43	Δ = 3650 km.
	i	Z 12:01:09	Tulare Valley, Southern
	i	Z 12:01:26	California.
	i	Z 12:01:32	Courtesy U.S.C.G.S.
	i PcP (?)	Z 12:01:44	
	i S	E 12:04:10	
	e L	E 12:05:4_	
21 July '52	i P	Z 19:58:40	Epicenter: 35.5°N, 118.5°W
	i	Z 19:59:00	O = 17:42:47
	e	E 20:00:12	Southern California
	e PcP (?)	E 20:00:50	aftershock
	e	E 20:01:16	Courtesy U.S.C.G.S.
			Δ = 3640 km
23 July '52	i P	Z 00:45:01	Epicenter: 35.1°N, 118.9°W
	e S	E 00:50:22	O = 00:38:33
			Δ = 3650 km
			Tulare Valley, Southern
			California
			Courtesy U.S.C.G.S.
23 July '52	i P	Z 13:23:43	Epicenter: 35°N, 11°W
	e S	E 13:29:07	O = 13:17:02
	e	Z 13:34:29	Southern California
			aftershock.
			Courtesy: U.S.C.G.S.
			Δ = 3650 km
24 July '52	i P	Z 22:22:10	Epicenter: 42.5°N, 145.5°E
	e	Z 22:22:24	O = 22:09:20
	e	Z 22:22:33	Depth about 60km.
	e	Z 22:23:12	Δ = 9750 km
	e S	E 22:32:35	Off east coast of
			Hokkaido, Japan
			Courtesy U.S.C.G.S.
25 July '52	e P	Z 19:16:20	Epicenter: 35°N, 119°W
	e S	Z 19:21:18	O = 19:09:42
	e	Z 19:27:17	Southern California
			aftershock
			Courtesy U.S.C.G.S.
			Δ = 3600 km.

25 July '52	ePP	Z	19:49:49	Epicenter: 35°N, 118.5°W
	e	Z	19:51:10	0=19:43:20
				Southern California
				aftershock
				Courtesy U.S.C.G.S.
				Δ=3,600 km.
27 July '52	iPP	E,Z	08:41:48	Epicenter: 20.5°S,179°W
	eSKS	E	08:46:58	0=08:23:22
	e	E,Z	08:48:00	Δ=12,400 km
	e	E	08:50:34	Depth about 500 km
	eSP	Z	08:50:40	Fiji Islands
	ePS	Z	08:51:42	Courtesy U.S.C.G.S.
29 July '52	iP	Z	07:10:21	Epicenter: 35°N, 119°W
	e	Z	07:10:24	0=07:03:45
	eS	E	07:15:30	Southern California
	eScS(?)	Z	07:20:52	Courtesy U.S.C.G.S.
	e	E	07:21:22	Δ=3,550 km
31 July '52		E		Seismic activity between 1200 and 1300
15 Aug '52		E		Seismic activity between hours of 0000 and 0200
16 Aug '52		E		Seismic activity between hours of 1400 and 1600
17 Aug '52	eP(?)	Z	16:20:10	Epicenter: 30.5°N, 91.5°E
	ePP	Z	16:21:04	0=16:02:05
	eS	E	16:28:34	Δ=12,000 km
				Eastern Tibet
				Courtesy U.S.C.G.S.
18 Aug '52	iP	Z	13:16:16	Epicenter: Central Chile
	e	Z	13:16:34	Argentina border region
	e	Z	13:16:39	0=13:04:50
	e	Z	13:17:20	Courtesy U.S.C.G.S.
	es	E	13:25:20	Δ=8,000 km
20 Aug '52	iP	E,Z	15:32:06	Epicenter: 43°N, 127°W
	ePP	Z	15:33:31	0=15:24:59
	e	E,Z	15:34:04	Δ=4000 km
	e	E	15:37:34	Off Coast of Oregon
	eS	E,Z	15:37:55	Courtesy U.S.C.G.S.
22 Aug '52		N,E		Seismic activity recognizable about 2300

9 Sept '52	iP	Z	13:07:12	Epicenter: 9°N, 84.5°W 0=12:54:42 Δ=3550 km Near Coast of Costa Rica Courtesy U.S.C.G.S.
11 Sept '52		E		Seismic activity observed between 2300 and 0100
21 Sept '52	iP	E,Z	02:40:44	Epicenter: 22,5°S, 65°W 0=02:30:30 Argentina - Boliva border. Courtesy U.S.C.G.S. Δ=7,100 km Depth = 300 km
	i	Z	02:40:54	
	iPcP	Z	02:41:17	
	ipP	Z	02:41:47	
	i	Z	02:42:02	
	isP	Z	02:42:22	
	iS	E	02:48:54	
	i	E	02:48:58	
	i	E	02:49:02	
	isS	E	02:50:43	
22 Sept '52		E		Seismic activity recognizable at 12:00 -
24 Sept '52	eSS	E	20:49:34	Epicenter:56.5°N, 157°W 0=20:29:30 Depth=about 100 km Δ=5750 km Near South Coast of Alaska Peninsula Courtesy U.S.C.G.S.
30 Sept '52	M		12:52:00	Epicenter:28 1/2N, 102E 0=12:52:00 Δ=12,300 km Szechwan Province, China Courtesy U.S.C.G.S.
1 Oct '52		E		Seismic Activity between 1000 and 1200
3 Oct '52	iP	Z	07:43:41	Epicenter: 6.5°N, 83°W 0=07:36:45 Off South Coast of Panama Courtesy U.S.C.G.S. Δ=3,800 km
	i	Z	07:43:48	
	e	Z	07:44:14	
	e	Z	07:45:03	
	eS	E	07:49:22	
6 Oct '52		E		Seismic activity recognizable at 00:06:-

10 Oct '52	M	E	16:52:49	Epicenter:Samoa Islands region 0=15:55:35 Courtesy U.S.C.G.S. Δ=11, 400 km
10 Oct '52	M	E	19:46:20	Epicenter:30.5°N, 69°E 0=18:47:37 Δ=11,400 km Central Pakistan Courtesy U.S.C.G.S.
14 Oct '52		E		Seismic activity recognizable at 00:30:-
14 Oct '52	eS	Z	22:07:33	Epicenter: 48°N, 70°W 0=22:03:41 Southeastern Quebec, Canada Courtesy U.S.C.G.S. Δ=1000 km
	i	Z	22:08:03	
	i	Z	22:08:28	
	i	Z	22:08:45	
	i	Z	22:09:27	
	i	Z	22:09:54	
	i	Z	22:10:06	
	i	Z	22:10:50	
14 Oct '52	eP	Z	00:02:43	Epicenter: 8.5°N, 83°W 0=23:56:03 Δ=3550 km Near South Coast of Costa Rica Courtesty U.S.C.G.S.
18 Oct '52	e(S?)	E	05:49:00	Epicenter: 16°S, 168°E 0=05:22:32 Δ=13,150 km New Hebribes Courtesy U.S.C.G.S.
18 Oct '52	iP	Z	12:05:04	Epicenter: 13°N, 46°W 0=11:57:36 Δ=4250 km Atlantic Ocean Courtesy U.S.C.G.S.
	i	Z	12:05:24	
	i	Z	12:06:08	
	ePP	Z	12:06:34	
	iS	E	12:11:11	
18 Oct '52		E		Seismic activity recognizable at 21:29:12
20 Oct '52	iP	Z	01:09:24	Epicenter: 57°N, 57°W 0=01:04:35 Off Coast of Labrador Courtesy U.S.C.G.S. Δ=2400 km
	eS	E	01:13:24	
21 Oct '52		E		Surface waves recognizable at 02:29:-

21 Oct '52	M	E	02:50:19	Epicenter: 9.5°N, 84.5°W O=02:30:46 Δ=3500 km Near Coast of Costa Rica Courtesy U.S.C.G.S.
21 Oct '52		E		Surface waves recognizable at 06:53:-
22 Oct '52		E		Seismic activity recognizable at 20:02:-
25 Oct '52		E,Z		Seismic activity recognizable at 14:47:-
26 Oct '52	eSS	E	15:00:10	Epicenter: 40°N, 143.5°E O=14:30:04 Off Northeast Coast of Honshu, Japan Courtesy U.S.C.G.S. Δ=10,200 km
	eSSS	E	15:04:01	
	e	E	15:40:15	
26 Oct '52	eS	E	18:26:11	Epicenter: 39°N, 143°E O=18:02:00 Δ=10,200 km Off East Coast of Honshu, Japan Courtesy U.S.C.G.S.
27 Oct '52	e	E	03:23:03	(Seismic ?)
	e	E	03:41:23	
28 Oct '52	iP	E,Z	04:34:57	Epicenter: 18.5°N, 73.5°W O=04:29:51 Haiti Courtesy U.S.C.G.S. Δ=2550 km
	eS	E	04:39:00	
28 Oct '52	eS	E	06:55:12	Epicenter: 40°N, 144°E O=06:31:04 Δ=10,050 km Off East Coast Honshu, Japan Courtesy of U.S.C.G.S.
29 Oct '52	eS	E	19:59:43	Epicenter: 17°S, 174°W O=19:34:14 Δ=11,700 km Depth=about 150 km Tonga Islands Courtesy U.S.C.G.S.

31 Oct '52	eS	E 17:01:31	Epicenter 39°N, 143°E 0=16:37:14 Δ= 10,200 km Off East Coast Honshu, Japan Courtesy U.S.C.G.S.
4 Nov '52	iP	N,E,Z, 17:10:03	Epicenter: 52.5N,159E 0=16:58:20 Δ=8300 km Near east coast of Kamchatka. Courtesy U.S.C.G.S.
	i	E 17:10:10	
	i	N 17:10:18	
	i	E 17:12:32	
	iPP	E 17:12:57	
	i	E 17:13:14	
	iPPP	E 17:14:40	
	i	E 17:15:46	
	i	E 17:17:10	
	iS	N,E 17:19:30	
	iSS	E 17:24:19	
	i	E 17:25:21	
	eL	E 17:28:52	
4 Nov '52	iP	Z 18:40:30	Near east coast of Kamchatka 0=18:28:52 Courtesy U.S.C.G.S. Δ=8,300 km Pulses obscured by surface waves of previous quake.
4 Nov '52	iP	Z 19:53:24	Near east coast of Kamchatka 0=19:40:41 Courtesy U.S.C.G.S. Δ=8,300 km Pulses obscured by surface waves of previous quake.
	e	Z 19:52:37	
	i	Z 19:53:02	
4 Nov '52	iP	Z 21:00:42	Epicenter 50°N, 157°E 0=20:48:53 Near South Coast of Kamchatka Δ=8,500 km Courtesy U.S.C.G.S.
	i	Z 21:00:47	
	i	Z 21:01:13	
	i	Z 21:01:26	
	i	Z 21:02:14	
4 Nov '52	iP	Z 21:12:34	Epicenter: 52:5°N, 159.5° 0=21:00:53 Kamchatka aftershock Courtesy U.S.C.G.S. Δ=8350 km
	i	Z 21:12:46	
	iS	N 21:22:06	

4 Nov '52	iP	Z 22:04:43	Epicenter: 50 N, 158.5°E
	e	Z 22:05:01	0=21:52:50 South Coast of Kamchatka Courtesy U.S.C.G.S. Δ=8,600 km EW and NS components obscured by surface waves of earlier quake.
4 Nov '52	iP	Z 22:24:35	Epicenter: 52°N, 161°E
	i	Z 22:24:38	0=22:12:54
	i	Z 22:24:46	Kamchatka aftershock
	e	Z 22:25:06	Courtesy U.S.C.G.S. Δ=8,300 km
4 Nov '52	iP	Z 23:40:55	Epicenter: 50°N, 158°E
	i	Z 23:41:02	0=23:28:58 Off South Coast of Kamchatka. Courtesy U.S.C.G.S. Δ=8,600 km EW and NS components obscured by surface waves of other quake
5 Nov '52	iP	N,Z 02:31:55	Epicenter: 50.5°N, 157°E
	i	N,Z 02:32:11	0=02:19:58
	i	Z 02:32:21	Near South Coast of Kamchatka
	i	Z 02:32:32	Courtesy U.S.C.G.S.
	ePP	Z 02:34:54	Δ=8,600 km
	iS	N,E 02:41:41	
	e	N,E 02:42:13	
	ePPS	N,E 02:42:45	
5 Nov '52	iP	Z 03:41:36	Epicenter: 51°N, 159°E
	i	Z 03:41:44	0=03:29:44
	i	Z 03:42:04	Near Southeast Coast of Kamchatka
	eS	N,E 03:51:19	Courtesy U.S.C.G.S.
	e	N 03:51:52	Δ=8,500 km
5 Nov '52	iP	Z 06:09:51	Epicenter: 49°N, 156°E
	i	Z 06:10:03	0=05:57:43
	i	Z 06:10:33	Kurile Islands
	iS	N,E 06:19:45	Courtesy U.S.C.G.S.
	e	N 06:20:08	Δ=8,900 km
	i(ScS?)	N 06:20:30	

5 Nov '52	iP	Z	11:46:24	Epicenter: 51.5°N, 159°E
	i	Z	11:46:36	0=11:34:37
				Off Southeast Coast of Kamchatko
				Δ=8,500 km
5 Nov '52	iP	Z	11:58:32	Epicenter: 50°N, 157°E
				0=11:46:34
				Off South Coast of Kamchatka
				Courtesy U.S.C.G.S.
				Δ=8,700 km
5 Nov '52	iP	N,Z	13:18:08	Epicenter: 52°N, 159.5°E
	i	Z	13:18:14	0=13:06:24
	i	Z	13:18:42	Kamchatka
	i	Z	13:19:12	after shock
	iS	N,E	13:27:40	Courtesy U.S.C.G.S.
	i	N	13:28:16	Δ=8,400 km
5 Nov '52	iP	Z	15:00:41	Epicenter: 50°N, 156.5°E
				0=14:48:41
				Off South Coast of Kamchatka
				Courtesy U.S.C.G.S.
				Δ=8700 km
5 Nov '52	iP	Z	19:20:16	Epicenter: 53.5°N, 161.5°E
	e	Z	19:21:06	0=19:08:26
	eS	N,E	19:30:00	Off East coast of
	e	N,E	19:30:16	Kamchatka
				Courtesy U.S.C.G.S.
				Δ=8,600 km
5 Nov '52	eP	Z	20:42:26	Epicenter: 49°N, 159°E
	i	Z	20:42:34	0=20:30:22
				Off South Coast of Kamchatka.
				Courtesy U.S.C.G.S.
				Δ=8,700 km
5 Nov '52		Z		Seismic activity recognizable at 22:57: -
6 Nov '52	-	N,E		Seismic activity recognizable at 06:20:-
6 Nov '52	iP	Z	19:57:48	Epicenter: 51.5°N,
	e	Z	19:58:13	159.5°E
	eS	N,E	20:07:22	0=19:45:57
	eL	N	20:16:56	Off Southeast Coast of Kamchatka
				Courtesy U.S.C.G.S.
				Δ=8,500 km

6 Nov '52	eP'	Z	20:06:37	Epicenter: 5°S, 145.5°E
	e	N,E	20:07:35	0=19:47:20
	ePP	Z	20:08:31	Δ=14,100 km
	iPKS	N,Z	20:10:11	Near North Coast of New
	e(PPS?)	N	20:20:05	Courtesy U.S.C.G.S. Guinea
	eSS?	N	20:25:47	
7 Nov '52		E		Seismic Activity recognizable at 03:03:-
7 Nov '52	iP	Z	12:20:52	Epicenter: 52°N, 161°E
	i	Z	12:21:00	0=12:09:09
	i	Z	12:21:17	Off Southeast Coast
	i	Z	12:21:27	of Kamchatka
	iS	N	12:30:17	Courtesy U.S.C.G.S.
				Δ=8,350 km
7 Nov '52	iP	Z	14:20:29	Epicenter: 49°N, 157°E
	i	Z	14:20:43	0=14:08:25
	i	Z	14:20:51	Off South Coast of
	i	Z	14:21:04	Kamchatka.
	iS	N,E	14:30:13	Courtesy U.S.C.G.S.
	i	N,E	14:30:41	Δ=8,700 km
7 Nov '52	iS	N	21:06:26	Epicenter: 26°N, 110.5°W
				0=20:54:58
				Lower Gulf of California
				Courtesy U.S.C.G.S.
				Δ=3,400 km
7 Nov '52		N,E		Seismic activity between 2200 and 2400.
8 Nov '52		E		Seismic activity recognizable at 00:15:-
8 Nov '52	eP	Z	19:45:26	Epicenter: 48 1/2°N,
	iS	N,E	19:55:25	156°E
				0=19:33:18
				Kurile Islands
				Courtesy U.S.C.G.S.
				Δ=8,900 km
8 Nov '52	e	Z	22:29:14	(Seismic?)
	i	Z	22:29:30	
	e	E	22:29:38	
	i	Z	22:29:53	
	i	Z	22:30:20	
9 Nov '52	iP	Z	00:34:39	Epicenter: 48 1/2°N,
	i	Z	00:34:53	155 1/2°E
				0=00:22:15
				Kurile Islands
				Courtesy U.S.C.G.S.
				Δ=9,300 km

9 Nov '52	iP	Z	01:29:20	Epicenter: 52 1/2°N, 160°E 0=01:17:39 Near E. Coast Kamchatka Courtesy U.S.C.G.S. Δ=8,400 km
9 Nov '52	iP	E,Z	05:18:01	Epicenter: 53 1/2°N, 159 1/2°E 0=05:06:29 Near East Coast Kamchatka Courtesy U.S.C.G.S. Δ=8,200 km
9 Nov '52	eP	Z	05:44:16	Epicenter: 49 1/2°N, 156 1/2°E 0=05:32:15 Off South Coast of Kamchatka Courtesy U.S.C.G.S. Δ=8,800 km
9 Nov '52	iP	Z	06:08:56	Epicenter: 49°N, 157°E 0=05:56:54 Off South Coast Kamchatka Courtesy U.S.C.G.S. Δ=8,800 km
9 Nov '52		N,Z		Seismic activity recognizable between 1500 and 1600
9 Nov '52		N,E		Seismic activity recognizable at 21:22:-
10 Nov '52	iP e i eS	N,Z Z Z N,Z	01:06:56 01:07:08 01:07:45 01:16:40	Epicenter: 50°N, 158.5°E 0=00:55:00 Off South Coast of Kamchatka. Courtesy U.S.C.G.S. Δ=8,600 km
10 Nov '52		N,Z		Seismic activity recognizable at 06:18:-
10 Nov '52		N,E		Seismic activity recognizable at 10:30:-
10 Nov '52	iP i	N,Z Z	20:38:15 20:38:23	Epicenter: 53.5°N, 160°E 0=20:26:40 Near East Coast of Kamchatka. Courtesy U.S.C.G.S. Δ=8,200 km

11 N ov '52		N,E		Seismic activity recognizable between 0100 and 0200.
11 Nov '52		N,E		Seismic activity recognizable between 2000 and 2100
13 Nov '52	iP	Z	08:10:39	Δ=8,600 km
	i	Z	08:10:50	
	i	Z	08:11:25	
	eS	N,E	08:20:23	
	e	E	08:20:50	
	e	N	08:21:28	
13 Nov '52		E		Seismic activity recognizable at 16:01:-
13 Nov '52		E		Seismic activity recognizable at 22:10:-
15 Nov '52	i	Z	05:11:33	(Seismic?)
	i	Z	05:11:55	
	i	Z	05:12:17	
16 Nov '52		E		Seismic activity recognizable between 04:50:- and 05:11:-
16 Nov '52		E		Seismic activity recognizable between 08:48:- and 09:25:-
18 Nov '52	iP	Z	08:25:26	Epicenter: 49.5°N, 156.5°E Off South Coast of Kamchatka Courtesy U.S.C.G.S. Δ=8,800 km
	i	Z	08:25:36	
	i	Z	08:25:55	
	i	Z	08:26:39	
19 Nov '52		N,Z		Seismic activity recognizable between 18:55:- and 19:15:-
20 Nov '52		Z		Seismic activity observed from 04:03:- to 04:19:-
20 Nov '52		Z		Seismic activity observed from 13:50:- to 14:00:-

20 Nov '52	iP	N,Z	15:43:24	Epicenter: 12.5°N, 88°W
	epP	Z	15:43:36	0=15:37:17
	esP	Z	15:43:50	Depth=60 km
	ePP	N,Z	15:44:16	Off Coast of Nicaragua
	e	Z	15:44:26	Courtesy U.S.C.G.S.
	i	N	15:44:34	Δ=3,300 km
	ePcP	Z	15:46:28	
	iS	N	15:48:16	
	esS	N	15:48:43	
	i	N	15:49:24	
	iScP	N	15:49:49	
22 Nov '52	ePP	Z	07:54:44	Epicenter: 35.8°N, 121.1°W 0=07:46:37 Δ=3,850 km San Luis Obispo County, California Courtesy U.S.C.G.S.
26 Nov '52	iP	Z	13:36:56	Epicenter: 53°N, 160°E
	i	Z	13:37:04	0=13:25:18
	i	Z	13:37:15	Δ=8,300 km Near East Coast of Kamchatka.
29 Nov '52	iP	N,Z	08:34:22	Epicenter: 53°N, 160°E
	ePP	N	08:37:14	0=08:22:34
	ePPP	E	08:39:04	Near East Coast of Kamchatka.
	eS	N,E	08:43:51	Courtesy U.S.C.G.S. Δ=8,400 km
29 Nov '52	eP	Z	23:55:24	Epicenter: 56°N, 155°W
	i	Z	23:55:52	0=23:46:25
	i	Z	23:56:11	Off South Coast of Alaska Peninsula
	e	Z	23:56:22	Courtesy U.S.C.G.S.
	iPP	Z	23:57:24	Δ=5,600 km
	eS	N,E	00:02:27	
	eScS	N	00:05:11	
30 Nov '52	iP	Z	19:40:30	Epicenter: 52.5°N,159°E
	eS	N,E	19:50:00	0=19:28:44 Near East Coast of Kamchatka. Courtesy U.S.C.G.S. Δ=8,400 km
1 Dec '52		E		Weak seismic activity observed from 00:59:- to 01:18:-

2 Dec '52		E		Seismic activity observed from 09:17:- to 09:37:-
3 Dec '52		E		Seismic activity observed from 01:03:- to 01:25:-
4 Dec '52	iP	Z	04:02:22	Epicenter: 52°N, 178°E
	isP	Z	04:03:02	0=03:51:25
	iPP	Z	04:04:45	Depth=about 100 km
	eS	N,E,Z	04:10:56	Δ=7,350 km
	esS	N,E	04:11:39	Rat Islands, Aleutian Islands. Courtesy U.S.C.G.S.
4 Dec '52		E		Seismic activity recognizable from 11:31:- to 12:07:-
5 Dec '52		E		Seismic activity recognizable at 07:19:-
6 Dec '52	eP'	Z	11:00:28	Epicenter: 8°S, 157°E
	iPP	Z	11:02:11	0=10:41:14
	e	Z	11:04:14	Solomon Islands
	e(SKS?)	N,E	11:07:19	Courtesy U.S.C.G.S.
	ePS	N,E	11:11:53	Δ=13,700 km
	e	E	11:14:08	
	i	N	11:14:10	
	iSS	N,E	11:18:47	
6 Dec '52		N,E		Seismic activity recognizable at 21:55:-
7 Dec '52	iP	Z	01:01:18	Epicenter: 53°N, 172.5°E
	iS	N,E	01:10:19	0=00:50:12
				Near Islands, Aleutian Islands
				Courtesy U.S.C.G.S.
				Δ=7,600 km
7 Dec '52		E		Seismic activity observed from 17:12:- to 17:33:-
7 Dec '52		E		Seismic activity observed from 21:36:- to 21:53:-
8 Dec '52		E		Seismic activity observed from 16:13:- to 16:30:-

10 Dec '52	iP	N,Z	06:06:32	Epicenter: 71°N, 7°W
	i	Z	06:07:03	0=05:58:06
	i	Z	06:07:08	Δ=5,050 km
	ePP	Z	06:08:17	Jan Mayen Island
	i	Z	06:08:26	region
	ePPP (late)	N	06:09:11	Courtesy U.S.C.G.S.
	eS	E	06:13:02	
	i	N	06:13:32	
10 Dec '52		N,E		Seismic activity observed from 09:00:- to 09:18:-
11 Dec '52	iP	Z	09:10:21	Epicenter: 49°N, 155°E
	i	N	09:10:22	0=08:58:18
	i	Z	09:10:24	Depth = about 60 km
	e	Z	09:11:18	Δ=8,700 km
	iPP	N	09:13:24	Kurile Islands
	e	Z	09:13:39	Courtesy U.S.C.G.S.
	i	N	09:17:28	
	iS	N	09:20:06	
	i,e	N,E	09:20:13	
	e	N	09:22:34	
	i	N	09:25:56	
12 Dec '52		E		Seismic activity recognizable between 01:08:- and 01:48:-
14 Dec '52	i	Z	10:43:59	Epicenter: 19°N, 69°W
	e	Z	10:44:55	0=10:38:39
				Δ=2,500 km
				Courtesy U.S.C.G.S.
				Pulses on other records obscured by microseisms
17 Dec '52	iP	N,Z	23:15:49	Epicenter: 34.5°N, 24°E
	e	Z	23:17:15	0=23:03:58
	iS	N,E	23:25:27	Δ=8,400 km
	i	N	23:27:11	Near South Coast of
	eSS	N	23:30:18	Crete
				Courtesy U.S.C.G.S.
18 Dec '52	e(P?)	Z	09:32:01	Epicenter: 53.5°N, 162°E
				0=09:20:28
				Off East Coast of Kamchatka
				Courtesy U.S.C.G.S.
				(Δ=8,200 km?)

22 Dec '52	iP	Z	23:36:16	Epicenter: 54°N, 160.5°E
	eS	E	23:45:38	O=22:24:42
	e	E	23:46:16	Δ=8,100 km
				Near East Coast of Kamchatka
				Courtesy U.S.C.G.S.
24 Dec '52		E		Seismic activity recognizable at 09:45:-
24 Dec '52	iP	Z	18:58:41	Epicenter: 5.5°S, 151.5°E
	i	Z	19:01:20	O=18:39:33
	e(PS?)	E	19:10:03	Δ=13,650 km
				New Britain
				Courtesy U.S.C.G.S.
24 Dec '52		E		Seismic activity recognizable from 22:40:- to 23:15:-
25 Dec '52		E		Seismic activity recognizable at 03:30:-
25 Dec '52		E		Seismic activity recognizable at 23:20:-
27 Dec '52	iP	Z	01:37:34	Epicenter: 53°N, 160°E
	i	E	01:38:35	O=01:25:54
	eS	E	01:47:12	Near East Coast of Kamchatka
				Courtesy U.S.C.G.S.
				Δ=8,300 km
28 Dec '52	iP	Z	05:04:29	Epicenter: 65.5°N,167.5°W
	iSS	Z	05:15:36	O=04:55:06
				Δ=5,900 km
				Near West Coast of Seward Peninsula, Alaska
				Courtesy U.S.C.G.S.
28 Dec '52		E		Seismic activity recognizable from 16:05:- to 16:55:-
29 Dec '52	iP	Z	02:21:15	Epicenter: 49°N, 158°W
	i	Z	02:21:32	O=02:09:13
	i	Z	02:21:39	Off South Coast of
	eS	E	02:31:14	Kamchatka
				Courtesy U.S.C.G.S.
				Δ=8,700 km
30 Dec '52	iP	Z	12:13:25	Epicenter: 10.5°N, 84°W
	eS	E	12:18:32	O=12:07:02
	e	E	12:24:00	Δ=3,460 km
				Costa Rica
				Courtesy U.S.C.G.S.

We acknowledge with thanks receipt of the following bulletins and other publications between 11 July and 4 November 1953:

Bulletin	Date
Apia Observatory - Seis. Bull.	Apr.-June '53
Arkansas University - Seis. Bull. Vol. 2, Nos. 2-3	Apr.-Sept. '53
Bergen Seis. Bull.	1942-44
California University - Bulletin Seismic Station	
Vol. 21, Nos. 3-4	July-Dec. '51
Cartuja, Provisional Bulletin	June-July '53
Cheb. Preliminary Seis. Bull.	June '53
Cleveland, Seis. Bull.	Feb.-Mar. '52
	Feb.-Aug. '53
Coimbia Obsevacues Meteorologicas	'46, 47, 48
Columbia University, Seis. Bull.	June '52-May '53
Djakarta, Seis. Bull.	Jan.-Apr. '53
Dublin Seismological Observatory - Seis. Bull.	Apr.-June '53
Jesuit Seismological Association - Preliminary Bull.	Aug. '51
	July-Aug. '52
Kandilli Observatory - Seis. Bull. No. 80	Mar. '53
Kobenhavn, - Seis. Bull. - Nos. 58, 62	Dec. '48
	Jan.-Dec. '52
Manila, Seis. Bull.	Mar.-June '53
Melborne, Seis. Bull - Nos. 52/1-8/1; 53/5/1; 53/5/1; 53/6/1; 53/7/1	
Mexico, Nacional Universidad, Instituto De Geofisica	June-Sept. '53
Observatory Helwan, Egypt	Apr.-May '53
Perth, Seis. Bull.	Jan.-Mar. '53
Praha, Seis. Bull.	May-July '53
Rome, Instituto Nazionale di Geofisica Seis. Bull.	May-June '53
Santa Clara (California), Seis. Bull.	Mar. '53
Santo Domingo University - Bull. Trimestral	Apr. '52-Mar. '53
Schweizerisches Erdbebenbulletin	May - Aug. '53
Skalnate Pleso - Preliminary Seis. Bull.	June '53
Strasbourg, Institute of Physics of the Earth Bull.	May-Aug. '53
Annales, Physics of the Earth	1947-48
Bureau Central Seismologique, Bull.	Feb.-June '53
Bulletin Mensuel	Dec. '52
	Jan.-Apr. '53
Tananarive, Seis. Bull.	1952
U.S. Coast and Geodetic Survey	
Preliminary determination of epicenter 76-53 to 78-53	
81-53 to 141-53	
S25-53 to S42-53	
Washington Seismological Observatory-Seis. Bull.	May-Aug. '52
Wellington Seismological Observatory-Prov. Bull.	Dec. '52
	Feb.-Mar. '53
Seismological Report	July-Sept '50
West Virginia University - Seismograph Report	Jan.-June '53