SAINT LOUIS UNIVERSITY
INSTITUTE OF GEOPHYSICAL TECHNOLOGY
3621 OLIVE STREET, SAINT LOUIS 8, MO., U. S. A.

SEISMOLOGICAL BULLETIN

FLORISSANT STATION

Latitude: geographical, 38° 46' 06" N; geocentric, 38° 37' N.
Longitude: 90° 22' 12" W. Altitude: h = 160m, H+h = 4 km.
Lithologic foundation: Pennsylvanian shale.
Seismographs: Galitzin-Wilip ENZ, Wood-Anderson short period EN.
Clock: Shortt synchronome.

Bulletin for July, 1943. 17.

No.	Date	Inst.	Phase	G.M.C.T.	Remarks
93	July 11	G.W.	iPZ	$02^h24^m44^s$	32°.7 S, 178°.6 W.
		G.W.	epPZ	02 25 31	H = $02^h10^m32^s$.
		G.W.	i(P')Z	02 28 29	h = 180 km.
		G.W.	iPR_1Z	02 29 09	Δ_{PR_1-H} = 109°.2
		G.W.	e(SP)Z	02 38 39	Δ_{meas} = 108°.4
		G.W.	i(sSP)N	02 39 07	
		G.W.	F	05 33.0	
94	July 12	G.W.	eLZ	23 02 00	
		G.W.	F	23 27.0	
95	July 22	G.W.	ePZ	02 16 53	0°.7 S, 81°.3 W.
		G.W.	$e(PR_2)Z$	02 18 27	H = $02^h09^m23^s$.
		G.W.	eSE	02 22 56	Δ_{P-H} = 39°.3
		G.W.	$e(SR_2)E$	02 25 43	Δ_{meas} = 39°.9
		G.W.	F	02 53.0	
96	July 23	G.W.	iP'N	15 12 37	7°.0 S, 111°.3 E.
		G.W.	ipPN	15 13 17	H = $14^h53^m22^s$.
		G.W.	iPR_1N	15 15 56	h = 120 km.
		G.W.	$iSKP_1Z$	15 16 14	$\Delta_{P'-H}$ = 143°.0
		G.W.	$iSKP_2E$	15 16 39	Δ_{meas} = 143°.4
		G.W.	iPR_2N	15 19 09	
		G.W.	iSKSZ	15 19 54	
		G.W.	iSKKSE	15 22 46	
		G.W.	i(S)?N	15 24 24	
		G.W.	F	18 42.0	

No.	Date	Inst.	Phase	G.M.C.T.	Remarks
97	July 25	W-A W-A W-A	ePoN eN iSoN	$06^h49^m29^s.6$ 06 49 36.0 06 49 42.1	38°.05 N, 91°.3 W. H = $06^h49^m09^s.5$. Δ_{So-Po} = 71.4 miles Δ_{meas} = 71.4 miles Southeast of Cuba, Mo. For details see Trans. Amer. Geoph. Union, Vol. 27, page 320, 1946.
98	July 26	G.W.	eN	02 33 08	
99	July 28	G.W. G.W. G.W. G.W. G.W. G.W. G.W.	ePZ eZ eSE eE e(SR_2)E iE F	04 12 33 04 12 41 04 18 51 04 19 05 04 22 12 04 28 09 05 00.0	59°.6 N, 149°.0 W. H = $04^h04^m43^s$. May be slightly deeper than normal. Δ_{P-H} = 41°.8 Δ_{meas} = 41°.6
100	July 29	G.W. W-A W-A G.W.	iPZ iPR_1N iSE F	03 08 09 03 08 50 03 12 54 07 30.0	18°.7 N, 66°.9 W. H = $03^h02^m15^s$. Δ_{P-H} = 28°.0 Δ_{meas} = 28°.3
101	July 29	G.W. G.W. G.W. G.W.	eN e(S)N eLN F	11 50 08 11 53 40 11 57.0 12 55.5	Indefinite beginning. Aftershock of No. 100.
102	July 30	G.W. G.W. G.W. G.W. G.W.	ePZ ePR_1Z iSE iSR_1E F	01 08 25 01 09 04 01 13 10 01 14 34 02 54.0	18°.8 N, 66°.7 W. H = $01^h02^m30^s$. Δ_{P-H} = 28°.1 Δ_{meas} = 28°.3
103	July 30	W-A W-A G.W. G.W.	ePN eN e(S)N F	02 19 44 02 19 54 02 25 01 Lost	South America Aftershock.
104	July 30	G.W. G.W.	ePZ F	04 29 10 05 04.0	Puerto Rico Aftershock of No. 100.
105	July 30	G.W. G.W.	e(L)N F	18 33 18 18 38.0	

No.	Date	Inst.	Phase	G.M.C.T.	Remarks
106	July 30	G.W. G.W. G.W.	ePZ eSN F	$21^h26^m01^s$ 21 30 30 22 09.0	Aftershock of No. 100.
107	July 31	G.W. G.W. G.W.	ePR$_1$Z eSN F	03 28 35 03 32 43 04 35.0	Puerto Rico Aftershock of No. 100. Deep?

Minor Seismic Activity:

Date	From h. m.	To h. m.
July 1	21 36	21 48
2	07 49	07 57
8	14 54	15 21
9	03 21	03 44
15	00 33	00 51
23	10 01	10 08
24	20 37	23 49
26	08 52	08 53
26	12 17	12 37
30	20 00	20 31
31	20 14	20 18

No.	Date	Inst.	Phase	G.M.C.T.	Remarks
108	Aug. 1	G.W.	ePZ	$16^h32^m49^s$	21°.0 S, 170°.9 E.
		G.W.	eZ	16 35 41	H = $16^h18^m42^s$.
		G.W.	epPKPZ	16 37 23	h = 200 km.
		G.W.	eSKSE	16 43 02	Δ_{SKS-H} = 109°.6
		G.W.	iSKKSE	16 44 02	Δ_{meas} = 109°.8
		G.W.	iSN	16 44 46	
		G.W.	esSN	16 46 26	
		G.W.	e(SP)E	16 46 40	
		G.W.	eE	16 52 03	
		G.W.	F	18 13.0	
109	Aug. 2	G.W.	ePKPZ	01 05 33	47°.1 S, 166°.4 E.
		G.W.	ePR1Z	01 07 15	H = $00^h46^m31^s$.
		G.W.	eE	01 07 47	Δ_{PS-H} = 124°.9
		G.W.	eSKPE	01 08 42	Δ_{meas} = 124°.8
		G.W.	ePSN	01 17 23	
		G.W.	e(PPS)E	01 18 46	
		G.W.	e(PPSS)E	01 25 29	
		G.W.	eLE	01 46 44	
		G.W.	F	04 00.0	
110	Aug. 2	G.W.	eSE	04 35 35	Puerto Rico.
		G.W.	eLN	04 38.6	
		G.W.	F	04 54.0	
111	Aug. 2	G.W.	ePZ	05 44 04	Deep.
		G.W.	epPZ	05 44 32	
112	Aug. 2	G.W.	eLN	10 09 08	Puerto Rico.
		G.W.	F	10 26.0	
113	Aug. 2	G.W.	eLE	12 16 38	Puerto Rico.
		G.W.	F	12 32.0	
114	Aug. 7	W-A	e(P)N	16 04 05	Deep.
		G.W.	e(pP)Z	16 04 30	
		G.W.	eZ	16 04 47	
		G.W.	e(S)?E	16 08 05	
		G.W.	e(sS)E	16 08 50	
		G.W.	eE	16 09 11	
		G.W.	F	16 12.0	

No.	Date	Inst.	Phase	G.M.C.T.	Remarks
115	Aug. 8	W-A	ePE	$00^h44^m34^s$	18°5 N, 67°3 W.
		W-A	epPE	00 44 43	H = $00^h38^m45^s$.
		G.W.	ePR_1Z	00 44 58	h = 50 km.
		G.W.	e(S)E	00 49 23	Δ_{P-H} = 27°9
		G.W.	eSR_1E	00 50 49	Δ_{meas} = 28°2
		G.W.	$e(sSR_1)E$	00 51 50	
		G.W.	F	01 41.0	
116	Aug. 8	W-A	ePN	08 37 15	16°0 N, 96°4 W.
		W-A	ePN	08 37 18	H = $08^h32^m11^s$.
		W-A	eSN	08 41 28	Δ_{P-H} = 22°9
		G.W.	F	09 01.0	Δ_{meas} = 23°0
117	Aug. 9	G.W.	e(P)Z	17 18 14	
		G.W.	eZ	17 18 51	
		G.W.	eN	17 28 07	
		G.W.	F	17 41.0	
118	Aug. 10	G.W.	ePZ	15 24 19	55°1 N, 163°5 E
		G.W.	iPZ	15 24 21	H = $15^h13^m31^s$.
		G.W.	ePR_3Z	15 28 56	Δ_{P-H} = 66°9
		G.W.	iSE	15 33 19	Δ_{meas} = 66°7
		G.W.	eN	15 35 26	
		G.W.	eLE	15 41 54	
		G.W.	F	17 52.0	
119	Aug. 10	W-A	ePN	15 47 34	Aftershock.
		W-A	eSN	15 56 34	
		W-A	eN	15 56 51	
		W-A	F	Lost.	
120	Aug. 13	G.W.	ePZ	07 48 06	1°8 N, 30°5 W.
		G.W.	eSZ	07 56 59	H = $07^h37^m25^s$.
		G.W.	esSE	07 57 25	h = 50 km.
		G.W.	$e(sSR_2)E$	08 04 40	Δ_{P-H} = 66°3
		G.W.	eE	08 06 29	Δ_{meas} = 66°0
		G.W.	eLE	08 08 56	
		G.W.	F	08 36.0	
121	Aug. 14	G.W.	ePZ	02 45 18	Mexico.
		G.W.	$e(PR_1)Z$	02 45 37	
		G.W.	eSN	02 49 33	
		G.W.	F	03 16.0	

No.	Date	Inst.	Phase	G.M.C.T.	Remarks
122	Aug. 15	G.W.	ePZ	$00^h19^m03^s$	19°.8 N, 66°.8 W.
		G.W.	eZ	00 20 55	H = $00^h13^m12^s$.
		G.W.	eSE	00 23 53	Δ_{P-H} = 27°.6
		G.W.	eLE	00 25 44	Δ_{meas} = 27°.9
		G.W.	F	01 27.5	
123	Aug. 18	G.W.	eSE	16 46 26	20°.7 S, 68°.4 W.
		G.W.	esSE	16 47 16	H = $16^h27^m50^s$.
					h = 100±km.
					Δ_{S-H} = 62°.8
					Δ_{meas} = 63°.0
124	Aug. 20	G.W.	e(SKS)N	01 52 26	About 95°.
		G.W.	e(SKKS)N	01 53 21	
		G.W.	e(PS)E	01 54 52	
		G.W.	eSR$_1$E	01 59 04	
		G.W.	F	03 30.5	
125	Aug. 21	G.W.	ePZ	09 21 34	Probable Epicenter:
		G.W.	eSN	09 30 40	26°.4 S, 113°.6 W.
		G.W.	F	09 52.0	H = $09^h10^m33^s$.
					Δ_{P-H} = 68°.9
					Δ_{meas} = 68°.9
126	Aug. 22	G.W.	iPZ	11 13 25	51°.0 N, 174°.5 W.
		G.W.	epPZ	11 13 35	H = $11^h03^m42^s$.
		G.W.	eSE	11 21 25	h = 50±km.
		G.W.	esSE	11 21 47	Δ_{P-H} = 57°.5
		G.W.	F	12 13.5	Δ_{meas} = 57°.6
127	Aug. 29	G.W.	(ePN)	02 51 23	Indefinite beginning.
		G.W.	eSN	02 55 56	Region: 17° N, 101° W.
		G.W.	eLN	02 59 47	H = $02^h46^m.2$
		G.W.	F	03 17.0	
128	Aug. 29	G.W.	e(S)E	03 54 28	Region: 33° N, 117° W.
		G.W.	eN	03 56 52	H = $03^h45^m.2$
		G.W.	eME	03 58 43	
		G.W.	F	04 11.0	
129	Aug. 31	G.W.	ePZ	15 41 40	Time uncertain.
		G.W.	eSE	15 47 51	Region: 31° N, 42° W.
		G.W.	F	Lost.	H = $15^h34^m.0$

No.	Date	Inst.	Phase	G.M.C.T.	Remarks
130	Aug. 31	G.W.	ePZ	16 15 59	Time uncertain.
		G.W.	ipPZ	16 16 17	14°1 N, 91°3 E.
		G.W.	eE	16 19 10	H = $16^h10^m45^s$.
		G.W.	eE	16 19 53	h = 100 km.
		G.W.	iSE	16 20 17	ΔP-H = 24°7
		G.W.	isSE	16 20 46	Δ_{meas} = 24°8
		G.W.	iE	16 21 02	
		G.W.	iE	16 22 19	
		G.W.	F	17 48.5	

Minor Seismic Activity:

Date	From h. m.	To h. m.
Aug. 15	03 02	03 19
17	03 27	03 29
23	08 06	08 10
31	00 51	01 19

No.	Date	Inst.	Phase	G.M.C.T.	Remarks
131	Sept. 2	G.W.	dPZ	23 18 02	16.5 S, 100.4 W.
		G.W.	epPZ	23 18 20	H = $23^h12^m54^s$.
		G.W.	e(S)E	23 21 05	h = 100±km.
		G.W.	e(ScS)E	23 28 09	Δ_{P-H} = 24°0
		G.W.	F	23 34.0	Δ_{meas} = 24°0
132	Sept. 4	G.W.	eLE	07 51.0	
133	Sept. 5	G.W.	e(P')Z	08 53 47	Region:
		G.W.	iPR$_1$Z	08 56 10	1/2° N, 125 1/2° E.
		G.W.	i(SKP)Z	08 57 04	H = $08^h35.0^m$
		G.W.	iSKPZ	08 57 14	
		G.W.	eSKKSE	09 03 08	
		G.W.	F	11 30.0	
134	Sept. 6	G.W.	iP'Z	04 00 43	52°7 S, 159°6 E.
		W-A	eN	04 01 30	H = $03^h41^m40^s$.
		W-A	ePR$_1$N	04 03 07	Δ_{PR_1-H} = 131°3
		W-A	eSKPN	04 04 05	Δ_{meas} = 131°0
		W-A	e(PR$_2$)N	04 05 21	
		W-A	eSN	04 11 24	
		W-A	eN	04 13 47	
		G.W.	F	08 40.0	
135	Sept. 7	G.W.	eZ	19 46 21	Surface waves very sharp.
		G.W.	iLE	19 47 16	Northwest Canada. Epicentral
		G.W.	F	20 16.0	Region: 68°2 N, 137°7 W.
					H = $19^h26^m27^s$.
					Δ_{meas} = 39°4
136	Sept. 14	W-A	eE	07 34 51	C.W.'s not operating.
		W-A	ePR$_1$E	07 36 00	General Region:
		W-A	e(pPR$_1$)E	07 37 01	29° S, 178° W.
		W-A	e(SKKS)E	07 43 56	H = $07^h18.3^m$
		W-A	eSE	07 44 19	h = 100±km.
		W-A	F	09 15.5	
137	Sept. 17	G.W.	eLE	05 18.5	
138	Sept. 17	G.W.	e(SKS)E	10 33 57	15°1 S, 167°5 E.
		G.W.	e(SKKS)E	10 34 38	H = $10^h09^m37^s$.
		G.W.	eSE	10 35 35	h = 150±km.
		G.W.	eN	10 36 13	Δ_{SP-H} = 109°0
		G.W.	eSPN	10 37 15	Δ_{meas} = 108°7
		G.W.	F	Lost.	

No.	Date	Inst.	Phase	G.M.C.T.	Remarks
139	Sept. 19	G.W.	ePZ	04 59 01	30°.8 S, 113°.6 W.
		G.W.	e(pP)Z	04 59 20	H = $04^h47^m48^s$.
		G.W.	iSN	05 08 19	h = 100±km.
		G.W.	ePSE	05 08 52	ΔP-H = 72°.4
		G.W.	esSE	05 09 10	Δmeas = 72°.5
		G.W.	eSR$_1$E	05 12 54	
		G.W.	F	Uncertain	
140	Sept. 20	G.W.	ePZ	00 59 05	20°.3 N, 108°.7 W.
		G.W.	eSE	01 03 36	H = $00^h53^m52^s$.
		G.W.	isSN	01 03 51	h = 80 km.
		G.W.	iMN	01 06 28	ΔP-H = 24°.3
		G.W.	F	02 36.0	Δmeas = 23°.9
141	Sept. 21	G.W.	eLE	04 28 06	
		G.W.	F	05 33 --	
142	Sept. 22	G.W.	ePR$_1$Z	23 37 22	Region:
		G.W.	eSKSN	23 43 23	33° S, 179 1/2° E.
		G.W.	e(SKKS)N	23 44 35	H = $23^h18.6^m$
		G.W.	e(S)N	23 45 16	h = 150±km.
		G.W.	e(PS)N	23 46 50	
		G.W.	eSR$_1$E	23 51 57	
		G.W.	eSR$_2$E	23 57 15	
		G.W.	F	02 28 --	
143	Sept. 26	G.W.	iP'Z	02 28 07	EW, NS not operating.
		G.W.	eSKSZ	02 35 12	Distance about 145°, off
		G.W.	eZ	02 37 37	West coast of Madagascar.
		G.W.	ePR$_4$Z	02 38 55	
		G.W.	e(PPSS)Z	02 51 50	
		G.W.	F	04 18 --	
144	Sept. 26	G.W.	ePZ	18 21 15	Epicentral Region:
		G.W.	eSE	18 29 40	51°.0 N, 179°.7 W.
		G.W.	eSR$_1$E	18 33 19	H = $18^h11^m04^s$.
		G.W.	eSR$_2$E	18 36 11	ΔP-H = 61°.3
		G.W.	eLE	18 40.5	Δmeas = 61°.1
		G.W.	F	19 39 --	
145	Sept. 26	G.W.	eZ	22 45 00	5°.1 N, 82°.9 W.
		G.W.	eE	22 48 16	H = $22^h38^m08^s$.
		G.W.	eSE	22 50 27	ΔS-H = 33°.9
		G.W.	F	23 09.0	Δmeas = 34°.1

No.	Date	Inst.	Phase	G.M.C.T.	Remarks
146	Sept. 27	W-A	ePN	$17^h09^m40^s.5$	
		W-A	eSE	17 10 33.7	
		W-A	F	17 12.0	
147	Sept. 27	G.W.	e(P)Z	22 17 55	Epicentral Region:
		G.W.	ePR_1Z	22 22 19	31°.1 S, 176°.9 W.
		G.W.	eSKSE	22 28 27	$H = 22^h03^m47^s$.
		G.W.	eSKKSE	22 29 19	$h = 80 \pm$km.
		G.W.	ePSE	22 31 37	$\Delta_{PR_1-H} = 107°.0$
		G.W.	eZ	22 32 10	$\Delta_{meas} = 107°.0$
		G.W.	eE	22 32 36	
		G.W.	eZ	22 32 40	
		G.W.	eSR_1E	22 36 59	
		G.W.	$isSR_1E$	22 37 30	
		G.W.	eSR_2E	22 41 35	
		G.W.	F	24 42.0	
148	Sept. 28	G.W.	$e(PR_1)Z$	11 03 44	17°.9 N, 148°.2 E.
		G.W.	e(SKS)E	11 10 07	$H = 10^h45^m36^s$.
		G.W.	ePSE	11 12 21	Possibly deeper than normal.
		G.W.	F	12 32.0	$\Delta_{PS-H} = 101°.4$
					$\Delta_{meas} = 101°.5$
149	Sept. 29	G.W.	eLE	10 03.0	
		G.W.	F	10 44.0	
150	Sept. 29	G.W.	eLE	24 07.0	
		G.W.	F	24 16 --	
151	Sept. 30	G.W.	eLE	08 16.0	
		G.W.	F	08 42.0	
152	Sept. 30	G.W.	eLE	12 52.5	
		G.W.	F	13 11.0	

Minor Seismoc Activity:

Date	From h. m.	To h. m.
Sept. 6	14 59	15 06
15	07 06	07 33
16	13 35	13 41
17	00 37	00 52
20	04 28	04 40
20	07 20	08 00
21	19 40	19 48

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SEISMOLOGICAL BULLETIN

FLORISSANT STATION

Latitude: geographical, 38° 46' 06" N; geocentric, 38° 37' N.
Longitude: 90° 22' 12" W. Altitude: h = 160m, H+h = 4 km.
Lithologic foundation: Pennsylvanian shale.
Seismographs: Galitzin-Wilip EHZ, Wood-Anderson short period EN.
Clock: Shortt synchronome.

No.	Date	Inst.	Phase	G.M.C.T.	Remarks
153	Oct. 1	G.W.	e(S)E	$12^h39^m54^s$	
		G.W.	eLE	12 42 36	
		G.W.	F	12 51.0	
154	Oct. 1	G.W.	ePZ	18 02 43	9°.1 N, 37°.3 W.
		G.W.	eSE	18 10 29	$H = 17^h53^m14^s$.
		G.W.	F	18 58.0	$\Delta_{P-H} = 55°.1$
					$\Delta_{meas} = 55°.0$
155	Oct. 2	G.W.	eLE	05 46.1	
		G.W.	F	06 00.0	
156	Oct. 2	G.W.	e(S)E	07 08 34	U.S.C.G.S. gives:
		G.W.	eLE	07 11.5	40°.6 N, 124°.9 W.
		G.W.	F	07 17.0	$H = 06^h56^m41^s$.
157	Oct. 2	G.W.	e(pP)Z	11 28 06	14°.0 N, 91°.8 W.
		G.W.	e(sS)E	11 32 40	$H = 11^h22^m34^s$.
		G.W.	F	12 00.0	$\Delta_{meas} = 24°.7$
158	Oct. 3	G.W.	ePZ	01 01 40	North Atlantic Azores.
		G.W.	eSE	01 08 41	
		G.W.	eSR_1E	01 11 40	
		G.W.	eE	01 12 47	
		G.W.	F	01 50.0	

No.	Date	Inst.	Phase	G.M.C.T.	Remarks
159	Oct. 4	G.W.	ePR1Z	$10^h58^m37^s$	15°0 S, 167°9 E.
		G.W.	eSKSE	11 04 48	H = $10^h39^m46^s$.
		G.W.	eSKKSE	11 05 43	Δ_{PR_1-H} = 108°9
		G.W.	eN	11 06 32	Δ_{meas} = 108°9
		G.W.	ePSE	11 08 04	
		G.W.	ePPSE	11 09 09	
		G.W.	F	12 29.0	
160	Oct. 9	G.W.	eLE	10 43 31	
		G.W.	F	10 48.0	
161	Oct. 10	G.W.	eLE	10 08 41	
		G.W.	F	10 15.0	
162	Oct. 13	G.W.	ePZ	04 49 35	Region: 26°5 N, 110° W.
		G.W.	eSE	04 53 24	H = $04^h44^m48^s$.
		G.W.	eE	04 55 01	Δ_{S-P} = 20°6
		G.W.	iLE	04 55 53	Δ_{meas} = 20°5
		G.W.	iME	04 57 50	Surface waves very sharp.
		G.W.	F	05 43.0	
163	Oct. 16	G.W.	eLE	10 13 46	
		G.W.	F	10 27 --	
164	Oct. 16	G.W.	iPZ	13 21 27	All other phases lost changing records.
		G.W.	epPZ	13 21 48	33°9 N, 27°8 E.
					H = $13^h08^m50^s$.
					h = 100±km.
					Δ_{P-H} = 87°5
					Δ_{meas} = 87°7
165	Oct. 17	G.W.	e(SKKS)E	23 03 43	Δ = about 130°
		G.W.	eE	23 06 14	New Guinea?
		G.W.	e(PS)E	23 07 31	
166	Oct. 19	G.W.	eSE	17 48 27	Epicentral Region:
		G.W.	eLE	17 51 22	18°0 N, 104°3 W.
		G.W.	iME	17 53 48	H = $17^h38^m50^s$.
		G.W.	F	18 09.0	Δ_{S-H} = 24°1
					Δ_{meas} = 24°1
167	Oct. 20	G.W.	eSE	04 18 19	Region: 16° N, 107° W.
		G.W.	e(sS)E	04 18 40	H = 04^h08^m2
		G.W.	eLE	04 21 48	Probably deeper than normal.
		G.W.	F	04 36.0	

No.	Date	Inst.	Phase	G.M.C.T.	Remarks
168	Oct. 20	G.W. G.W. G.W.	eSE eLE F	$12^h53^m02^s$ 12 56 20 13 02 --	Region: 20° N, 109° W. H = $12^h43^m.2$
169	Oct. 21	G.W. G.W. G.W. G.W. G.W. G.W. G.W.	iPZ iPR$_1$Z iSKSE iSKKSE iSE iSP eSR$_1$	23 21 47 23 25 37 23 32 25 23 33 05 23 33 18 23 34 08 23 40 40	16°.5 S, 177°.4 W. H = $23^h08^m08^s$. ΔP-H = 98°.7 Δmeas = 98°.7
170	Oct. 22	G.W. G.W. G.W. G.W.	ePR$_1$Z eE eSR$_1$E F	16 20 26 16 30 17 16 36 08 17 42 --	Epicentral Region: 24°.1 N, 121°.8 E. H = $16^h01^m22^s$. ΔPR$_1$-H = 110°.7 Δmeas = 110°.1
171	Oct. 24	G.W. G.W. G.W. G.W. G.W.	(e)E eE e(PS)E eSR$_1$E F	14 01 46 14 02 01 14 02 18 14 06 35 14 47 --	U.S.C.G.S. gives: 48° N, 156° E. H = $13^h40^m.3$ All preceding phases lost changing records.
172	Oct. 24	G.W. G.W. G.W. G.W. G.W. G.W.	ePZ eZ ePR$_1$Z eSKSE iSKKSE F	16 18 19 16 21 34 16 22 18 16 28 54 16 29 29 18 56 --	22°0 S, 174°.6 W. H = $16^h04^m40^s$. ΔP-H = 98°.7 Δmeas = 99°.0
173	Oct. 24	G.W. G.W. G.W. G.W. G.W. G.W.	iPZ ipPZ eSE iSE esSE F	23 34 01 23 34 14 23 43 06 23 43 08 23 43 30 24 17.0	54°.2 N, 162°.0 E. H = $23^h23^m06^s$. h = 50 km. ΔP-H = 68.4 Δmeas = 68°.4
174	Oct. 26	G.W. G.W. G.W.	ePE eLE F	04 55 52 05 05 38 05 19.0	37°0 N, 123°.6 W. H = $04^h50^m20^s$. ΔP-H = 25°.8 Δmeas = 26°.0
175	Oct. 29	G.W. G.W.	eLN F	17 31 -- 17 37 --	

No.	Date	Inst.	Phase	G.M.C.T.	Remarks
176	Oct. 29	G.W. G.W. G.W.	eE eLE F	$17^h47^m30^s$ 17 50 27 18 02 --	

Minor Seismic Activity:

Date	From h. m.	To h. m.
Oct. 3	19 56	20 17
4	12 47	13 11
5	20 29	20 45
16	01 21	02 05
27	07 56	08 13
27	17 07	17 41

No.	Date	Inst.	Phase	G.M.C.T.	Remarks
177	Nov. 2	G.W.	eME	$18^h04^m00^s$	Probably the earthquake reported by Pasadena as 32° 58' N, 116° 00' W. $H = 17^h50^m41^s$.
		G.W.	F	18 10 --	
178	Nov. 2	G.W.	e(PR_1)Z	18 27 27	General Region: 59° S, 30° W. $H = 18^h08^m7$ Possibly deeper than normal.
		G.W.	eSKSE	18 33 43	
		G.W.	eE	18 34 12	
		G.W.	eSKKSE	18 34 42	
		G.W.	eSE	18 35 10	
		G.W.	eE	18 35 32	
		G.W.	ePSE	18 36 38	
		G.W.	eE	18 37 11	
		G.W.	ePPSE	18 37 43	
		G.W.	eE	18 38 10	
		G.W.	F	22 01 --	
179	Nov. 3	G.W.	ePZ	14 40 20	61°0 N, 149°0 W. $H = 14^h32^m25^s$. $\Delta_{P-H} = 42°4$ $\Delta_{meas} = 42°3$
		G.W.	iPZ	14 40 22	
		G.W.	iZ	14 40 27	
		G.W.	iZ	14 40 52	
		G.W.	i(PcP)Z	14 42 08	
		G.W.	iZ	14 43 12	
		G.W.	e(ScP)E	14 46 03	
		G.W.	iSE	14 46 46	
		G.W.	iE	14 47 31	
		G.W.	iSR_1E	14 49 13	
		W-A	iLN	14 54 --	
		G.W.	F	19 08 --	
180	Nov. 4	G.W.	ePZ	06 20 29	Epicentral Region: 57°1 N, 163°0 E. $H = 06^h09^m48^s$. $h = 50 \pm km$. $\Delta_{P-H} = 66°2$ $\Delta_{meas} = 66°3$
		G.W.	eSE	06 29 13	
		G.W.	e(PS)E	06 30 16	
		G.W.	F	07 10 --	
181	Nov. 4	G.W.	eZ	07 02 10	Region: 57° S, 28° W. $H = 06^h45^m8$
		G.W.	ePR_1Z	07 04 45	
		G.W.	ePSE	07 14 04	
		G.W.	ePPSE	07 14 32	
		G.W.	F	09 09 --	

No.	Date	Inst.	Phase	G.M.C.T.	Remarks
182	Nov. 5	G.W.	eLE	$10^h55^m0^s$	
		G.W.	F	11 15 --	
183	Nov. 6	G.W.	e(P)?Z	08 48 02	$6.^\circ1$ S, $133.^\circ1$ E.
		G.W.	eP'Z	08 50 46	H = $08^h31^m40^s$.
		G.W.	e(pP')Z	08 51 16	h = 50±km.
		G.W.	iPR_1Z	08 52 45	Δ_{PR_1-H} = 129.°6
		G.W.	$ipPR_1Z$	08 53 02	Δ_{meas} = 129.°0
		W-A	iE	08 53 14	
		W-A	iE	08 53 21	
		W-A	iSKPE	08 54 04	
		W-A	i(sSKP)E	08 54 18	
		W-A	eE	08 56 44	
		W-A	eSKSE	08 57 24	
		W-A	esSKSE	08 58 12	
		W-A	eE	09 00 10	
		W-A	eE	09 00 17	
			F	Lost	
184	Nov. 8	G.W.	e(P)Z	07 08 39	U.S.C.G.S. gives:
		G.W.	$e(PR_1)Z$	07 10 37	81° N, 2 1/2° W.
		G.W.	eSE	07 15 41	H = $06^h59^m19^s$.
		G.W.	eSR_1E	07 19 32	
		G.W.	eLE	07 23 09	
		G.W.	F	08 00 --	
185	Nov. 9	G.W.	iPZ	11 58 51	$43.^\circ8$ N, $178.^\circ2$ E.
		G.W.	iPcPZ	11 58 59	H = $11^h46^m42^s$.
		G.W.	ipPZ	11 59 11	h = 100±km.
		G.W.	ipPcPZ	11 59 19	Δ_{P-H} = 82.°2
		G.W.	iSE	12 08 57	Δ_{meas} = 82.°3
		G.W.	eSKSE	12 09 16	
		G.W.	isSE	12 09 32	
		G.W.	F	13 07 --	
186	Nov. 13	G.W.	eE	19 09 32	Time Doubtful.
		G.W.	eE	19 11 52	Epicenter by St. Louis:
		G.W.	eE	19 13 11	$19.^\circ9$ S, $169.^\circ9$ E.
		G.W.	F	21 14 --	H = $18^h43^m59^s$.
					Δ_{meas} = 109.°8
187	Nov. 16	G.W.	ePN	11 47 34	Vertical out of operation.
		G.W.	iSE	11 55 19	Epicentral Region:
		G.W.	F	13 24 --	$14.^\circ9$ S, $74.^\circ8$ W.
					H = $11^h38^m06^s$.
					h = 80 km.
					Δ_{P-H} = 55.°6
					Δ_{meas} = 55.°6

No.	Date	Inst.	Phase	G.M.C.T.	Remarks
188	Nov. 17	G.W.	ePZ	$15^h10^m10^s$	Deep. Japan?
		G.W.	ePR_1Z	15 14 08	
		G.W.	eSE	15 20 11	
		G.W.	esSE	15 20 53	
		G.W.	F	15 55 --	
189	Nov. 18	G.W.	ePZ	22 00 53	Epicentral Region:
		G.W.	eSE	22 09 01	20°8 S, 63°5 W.
		G.W.	eScSE	22 10 15	$H = 21^h50^m46^s$.
		G.W.	esSE	22 11 10	h = 300+km.
		G.W.	escScSE	22 12 37	$\Delta_{P-H} = 65°1$
		G.W.	F	22 27 --	$\Delta_{meas} = 61°8$
190	Nov. 20	G.W.	ePZ	08 30 59	Region:
		G.W.	eSE	08 35 38	15°5 N, 105°5 W.
		G.W.	eLE	08 38 55	$H = 08^h25^m3$
		G.W.	F	08 46 --	
191	Nov. 20	G.W.	ePZ	19 05 22	Time doubtful.
		G.W.	eSE	19 12 04	Region:
		G.W.	eLE	19 15 32	4° S, 106° W.
		G.W.	F	20 -- --	$H = 18^h57^m1$
192	Nov. 21	G.W.	ePZ	19 47 00	Epicentral Region:
		G.W.	eSE	19 51 12	17°0 N, 98°5 W.
		G.W.	e(sS)E	19 51 29	$H = 19^h42^m00^s$.
		G.W.	F	20 14.5	h = 50 km.
					$\Delta_{P-H} = 22°7$
					$\Delta_{meas} = 22°7$
193	Nov. 24	G.W.	ePR_1Z	13 36 27	Region:
		G.W.	e(PS)E	13 46 07	23° N, 121° E.
		G.W.	eSR_1E	13 51 55	$H = 13^h17^m2$
		G.W.	F	15 41 --	
194	Nov. 26	G.W.	ePZ	22 33 26	41°5 N, 34°2 E.
		G.W.	iSE	22 43 54	$H = 22^h20^m42^s$.
		G.W.	F	03 13 --	$\Delta_{meas} = 85°7$
					$\Delta_{P-H} = 87°3$
					$\Delta_{S-P} = 84°5$
195	Nov. 28	G.W.	$e(PR_1)Z$	06 40 27	Region:
		G.W.	e(SKKS)E	06 46 58	10° N, 129° E.
		G.W.	e(PS)E	06 49 32	$H = 22^h20^m2$
		G.W.	ePPSE	06 51 01	
		G.W.	F	08 29 --	

No.	Date	Inst.	Phase	G.M.C.T.	Remarks
196	Nov. 28	G.W. G.W. G.W.	ePZ iSE F	$17^h22^m28^s$ 17 31 44 19 31 --	Epicentral Region: 52°6 N, 153°4 E. $H = 17^h10^m58^s$. $\Delta_{P-H} = 73°7$ $\Delta_{meas} = 73°8$
197	Nov. 29	G.W. G.W. G.W. G.W.	iPZ iSE iE F	19 48 13 19 57 19 19 57 30 21 18 --	27°7 S, 67°3 W. $H = 19^h37^m05^s$. $\Delta_{P-H} = 70°0$ $\Delta_{meas} = 70°0$ Possibly deeper than normal.
198	Nov. 29	G.W. G.W. G.W.	eSE eLE F	21 38 39 21 53 39 23 25 --	Region: 57° N, 174° E. $H = 21^h19^m8$

Minor Seismic Activity:

Date	From h. m.	To h. m.
Nov. 6	07 09	07 57
7	08.0	09.0
8	23 03	23 59
18	19 30	20 00
20	00 32	00 46
20	07 56	08 20

No.	Date	Inst.	Phase	G.M.C.T.	Remarks
199	Dec. 1	G.W.	iPR$_1$Z	06^{h}25^{m}02^s	4°.5 S, 141°.7 E.
		G.W.	ipPR$_1$Z	06 25 41	H = 06^{h}04^{m}50^s.
		G.W.	eSKSE	06 30 23	h = 100±km.
		G.W.	esSKSE	06 31 21	ΔP-H = 122°.2
		G.W.	eSKKSE	06 31 47	Δmeas = 122°.1
		G.W.	iPSE	06 34 52	
		G.W.	F	08 55 --	
200	Dec. 1	G.W.	iPZ	10 45 02	Epicentral Region:
		G.W.	ipPZ	10 45 31	18°.6 S, 69°.4 W.
		G.W.	iSE	10 53 19	h = 100+km.
		G.W.	isSE	10 54 04	H = 10^{h}35^{m}00^s.
		G.W.	F	13 30 --	ΔP-H = 61°.0
					Δmeas = 61°.1
201	Dec. 2	G.W.	eSKSE	02 18 57	U.S.C.G.S. Gives:
		G.W.	eSKKSE	02 19 51	30° S, 178° W.
		G.W.	ePSE	02 22 08	H = 01^{h}54^m.0
		G.W.	F	04 40 --	
202	Dec. 2	G.W.	iZ	05 28 21	
		G.W.	eE	05 37 53	
		G.W.	F	07 18 --	
203	Dec. 3	G.W.	eSKSE	05 03 54	New Guinea.
		G.W.	eSKKSE	05 05 27	Δ = about 126°
		G.W.	e(PS)E	05 08 38	U.S.C.G.S. gives:
		G.W.	F	Lost in following	3° S, 140° E.
204	Dec. 3	G.W.	i(pP)Z	07 05 37	42°.3 N, 144°.0 E.
		G.W.	iZ	07 08 38	H = 06^{h}52^{m}50^s.
		G.W.	eSE	07 15 37	h = 50±km.
		G.W.	eSR$_1$E	07 21 24	ΔPR$_1$-H = 85°.0
		G.W.	F	07 54 --	Δmeas = 85°.4
205	Dec. 8	G.W.	iPZ	19 44 08	Epicentral Region:
		G.W.	eSE	19 48 37	14°.4 N, 96°.3 W.
		G.W.	F	20 57 --	H = 19^{h}38^{m}46^s.
					ΔP-H = 24°.5
					Δmeas = 24°.5

(No Florissant Records from Dec. 16 to Dec. 26)

Minor Seismic Activity:

Date	From h. m.	To h. m.
Dec. 9	03 50	04 10

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