FLORISSANT

SEISMOGRAPHIC STATION, ST. LOUIS UNIVERSITY, ST. LOUIS, MO., U. S. A.

Three Galitzin-Wilip, two Wood-Anderson short-period seismographs, Shortt synchronome clock

Bulletin for 1935

No.	Date	Inst.	C/D	Phase	G.M.C.T.	H--Remarks
1	Jan. 1	W-G		iP_Z	13-33-55	Epicenter: 14°8 S, 175°0 W. Depth of Focus = 300 kms. H = 13h-21m-10s. Δ = 95°0
		W-G		epP_Z	13-35-08	
		W-G		iPR_1Z	13-37-50	
		W-G		$iSKS_{EN}$	13-44-05	
		W-G		iS	13-44-41	
		W-G		isS	13-46-50	
		W-G		iSR_1	13-51-17	
2	Jan. 2	W-G		eP_Z	22-46-43	Epicenter: 40°9 N, 124°3 W. H = 22h-41m-06s. Δ = 26°2
		W-G		eS_{EN}	22-51-20	
		W-G		eL_{EN}	22-53-13	
		W-G		iM_{EN}	22-56-03	
3	Jan. 23	W-G		iP_Z	07-33-30	Epicenter: 52°4 N, 166°0 W. Depth of Focus = 40 kms. H = 07h-24m-18s. Δ(meas)=52°4; Δ(S-P)=52°7
		W-G		ipP_Z	07-33-39	
		W-G		iPR_1Z	07-35-47	
		W-G		iS_{EN}	07-41-04	
		W-G		isS_{EN}	07-41-20	
		W-G		iSR_1EN	07-43-16	
		W-G		iSR_2EN	07-44-46	
		W-G		F	10-30±	

Minor Seismic Movements: Jan. 3, 2h40m; Jan. 4, 15h30m, 17h; Jan. 17, 3h.

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No.	Date	Inst.	C/D	Phase	G.M.C.T	Remarks
4	Feb. 6.	G-W G-W G-W G-W		iP_Z eS eL F	02h01m37s 02 07 51 02 14 10 02 25±	
5.	Feb. 13	G-W G-W G-W G-W		iP_Z ipP_Z eS esS	17h32m44s 17 33 09 17 41 23 17 42 05	Δ = 64°1 Depth of focus 100 km.
6.	Feb. 20	G-W G-W G-W		iPZ $i(pP)_Z$ eS	11h31m53s 11 31 59 11 36 17	Δ = 24°9
7.	Feb. 22	G-W G-W G-W G-W G-W		iP_Z ePR_{1Z} eS_{EN} L M	17h16m21s 17 18 45 17 25 00 17 36.5 17 43 00	Δ = 63°0 H = 17-05-59 Tentative Epicenter: 50°5N., 176°6E.
8.	Feb. 24	W-A W-A W-A W-A		ePN eP_Z eS_{EN} eL_{EN}	01h49m30s 01 50 01 01 54 12 01 56 40	Δ = 23°1
9.	Feb. 25	G-W G-W G-W G-W		eP_Z epP_Z eS_{EN} eeS_{EN}	03h03m55s 03 04 13 03 14 06 03 14 41	Δ = 82°2 Depth of focus approximately 75 Km.

Minor Seismic Movements: Feb. 3, about 3h.; Feb. 4, 18h.30m.; Feb.10 about 20h.; Feb. 24, about 12h.; Feb. 28, about 7h.

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10	March 1	W-A W-A W-A W-A G-W G-W W-A		iPn_{EN} iP^*_E iPg_E iSn_E iL_{EN} iM_N F	11h00m53.6s 11 01 08.4 11 01 10.9 11 01 47.8 11 02 09 11 02 14 11 12 30	$\Delta S_n-P_n = 4°55$ H = 10h.59m.43.7 Tentative Epicenter: 40° 13'N. 95° 47'W. Felt in N.W. Missouri S.W. Iowa, S.E. Nebraska and N.E. Kansas
11	March 2	G-W G-W G-W G-W		eP_{EN} eL_{EN} eM_{EN} F	13h15m18s 13 23 56 13 26 59 13 30±	
12	March 8	G-W G-W G-W G-W		iP_E e_E e_E F	12h07m16s 12 13 42 12 17 04 12 25±	
13	March 17	W-A G-W G-W G-W G-W		eP_N eS_E eL_{EN} eM_E F	10h07m21s 10 11 07 10 12 45 10 14 21 10 30±	$\Delta = 20°3$
14	March 17	G-W W-A G-W W-A G-W W-A G-W W-A G-W G-W	C	iP_{NZ} ipP_{NZ} iS_N isS_{EN} eL_N F	21h38m32s 21 38 52 21 42 51 21 43 30 21 45 25 22 30±	$\Delta S-P = 25°1$ Tentative Epicenter: 13°9N. 92°8W. Depth of focus = 120 km. by Brunner Depth Chart H = 21h33m15s.
15	March 26	G-W G-W G-W G-W G-W G-W	C	iP_{ENZ} ipP_{ENZ} eS_{EN} esS_E iM_E F	21h37m15s 21 37 45 21 41 15 21 42 07 21 45 07 22 00	$\Delta S-P = 23°$ H = 21h.32m.26s. Depth of focus about 200 km. by Brunner Depth Chart

Florissant Bulletin for 1935

No.	Date	Inst.	C/D	Phase	G.M.C.T.	Remarks
16	March 29	G-W		e_E	12h49m15s	
		G-W		e_{EN}	12 50 37	
		G-W		e_E	13 12 07	
		G-W		eM_E	13 20 07	
		G-W		F	15 00±	
17	March 30	G-W		eP_{NZ}	21h32m42s	ΔS-P = 89°
		G-W		ePR_{1NZ}	21 36 12	H = 21h.19m.49s.
		G-W		$eSKS_{EN}$	21 43 05	Tentative Epicenter
		G-W		iS_{EN}	21 43 32	about 49.5 N.141 E
		G-W		eSR_{1N}	21 49 36	Northeastern Hondo.
		G-W		F	24 00±	Surface waves relatively small and indistinct.

Minor Seismic Movements

March 5	11h.23m.to 12h.
March 5	23h.20m.to 23h.45m.
March 12	14h.12m.to 14h.45m.
March 13	19h.15m.to 20h.30m.
March 14	16h. to 17h.30m.
March 20	23h.12m.to 24h.
March 26	5h.1[illegible]m. to 5h. 30m.
March 26	20h.04m to 20h.1[illegible]m.
March 30	3h. .to 4h..
March 31	3h.30m. to 4h.30m.
March 31	23h.45m.to 24h10m.

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18	April 1	G-W G-W G-W G-W G-W G-W		e_{EN} e_{EN} e_{N} e_{N} eM_{E} F	2h44m00s 2 45 08 3 05 12 3 09 20 3 12 15 4 30±	
19	April 1	G-W G-W G-W G-W G-W		eP_{NZ} eS_{N} eL_{E} eM_{EN} F	9h21m50s 9 26 14 9 29 10 9 29 54 9 45±	Δ = 24°6
20	April 3	W-A W-A		eP_{EN} F	8h46m20s 9 00±	
21	April 3	G-W G-W G-W G-W G-W		e_{EN} eSP_{Z} $ePPS_{N}$ eL_{E} F	11h35m53s 11 38 38 11 39 53 11 55 30 13 45 ±	Δ = ca 101°
22	April 3	W-A W-A		eP_{EN} F	12h14m37s 12 20 ±	
23	April 5	G-W W-A G-W W-A G-W G-W G-W G-W G-W	C D	iP_{ENZ} ipP_{ENZ} iPR_{1Z} iS_{N} iS_{E} isS_{EN} F	17h53m42s 17 54 00 17 54 38 17 57 43 17 57 49 17 58 10 18 30 ±	No surface waves Δ = 22° Depth of focus 100 Km. by Brunner Depth Chart
24	April 10	G-W W-A G-W G-W		iP_{ENZ} eL_{E} F	22h39m39s 22 47 50 23 10 ±	
25	April 10	W-A G-W G-W		iP_{E} eL_{N}? F	00h31m23s 00 41 10 01 10 ±	

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No.	Date	Inst.	D/D	Phase	G.M.C.T.	Remarks
26	April 11	G-W	D	iPZ	23h28m25s	Δ = 97°5
		G-W		ePR_{1Z}	23 32 14	H = 23h14m51s
		G-W		iPR_{1NZ}	23 32 25	Tentative Epicenter;
		G-W		ePR_{2Z}	23 34 22	37°2N 53°5E
		G-W		$iSKS_N$	23 39 09	Destructive in Mezandaran
		G-W		iS_N	23 39 53	Province in northern
		G-W		iPS_{EN}	23 41 12	Persia.
		G-W		eL_{EN}	23 57 20	
		G-W		eM_E	24 07 45	
		G-W		F	27 30 ±	
27	April 17	W -A		iP_{EN}	4h45m08s	No surface waves.
		G-W W-A		iS_{EN}	4 52 28	
		G-W		esS?E	4 54 47	
		G-W		F	5 05 ±	
28	April 18	W-A		iP_N	22h22m13s	Δ = 42°2
		G-W		eS?E	22 28 41	
		G-W W-A		i_E	22 32 41	
		G-W		i_N	22 32 58	
		G-W W-A		i_{ENZ}	22 33 03	
		G-W W-A		iM_{ENZ}	22 35 07	
		G-W		F	23 00 ±	
29	April 19	G-W W-A	(D)	eP_{EZ}	15h35m43s	Δ = 81°5
		G-W W-A	D	iP_Z	15 35 45	H = 15h23m32s
		G-W		ipP_{EZ}	15 35 53	Tentative Epicenter 32°N
		G-W W-A		iPR_{1EZ}	15 38 46	15°E.
		G-W		iPR_{2Z}	15 40 39	Depth of focus: 40km
		G-W W-A		iS_{ENZ}	15 45 51	by the Brunner Depth
		G-W		isS_N	15 46 09	Chart.
		G-W		iSP_Z	15 46 45	
		G-W W-A		iPS_{EN}	15 46 48	
		G-W W-A		iSR_{1EN}	15 51 30	
		G-W		iSR_{2E}	15 54 53	
		W-A		eL_{EN}	16 02 40	
		G-W		iM_{EZ}	16 06 10	
		G-W		F	Lost in following quakes.	
30.	April 19	W-A		eP_{EN}	18h10m10s	Δ = 81°8
		G-W		eS_N	18 20 25	Aftershock of preceeding
		G-W		F	Covered by following earthquake.	earthquake
31	April 19	W-A		eP_{EN}	20h44m04s	Δ = 79°6
		G-W W-A		iS_{EN}	20 54 08	Aftershock.
		G-W		eL_E	21 09 56	
		G-W		eM_E	21 16 30	
		G-W		F	22 30 ±	

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No.	Date	Inst.	C/D	Phase	G.M.T.C.	Remarks
32	April 20	G-W W-A	(C)	eP_{ENZ}	5h23m14s	Aftershock of earthquake of April 19 at 15 hours. Δ = 80°8 H = 5h11m04s Depth of focus about 35 km. by the Brunner Depth Chart
		G-W W-A	D	ipP_{ENZ}	5 23 22	
		G-W		ePR_{1Z}	5 26 17	
		G-W W-A		iS_{EN}	5 33 23	
		G-W		isS_{ENZ}	5 33 37	
		G-W		iSR_{1E}	5 39 00	
		G-W		eL_{N}	5 48 40	
		G-W		eM_{EN}	5 57 00	
		G-W		F	7 30 ±	
33	April 20	G-W		ePR_{1EN}	22h21m07s	Δ_{S-H} = 110°8 H = 22h01m55s Epicenter: 24°2N. 120°6E. Destructive in Formosa
		G-W		eS_{EN}	22 28 50	
		G-W		iPS_{EN}	22 30 34	
		G-W		iSR_{1E}	22 36 43	
		G-W		eL_{EN}	22 52 30	
		G-W		F	25 00 ±	
34	April 24	G-W W-A	C	$iP_{NZ(E)}$	18h56m52s	Δ_{S-P} = 24° H = 18h51m41s Epicenter: 5°6N. 82°W. Depth of focus 60 km. by Brunner Depth Chart.
		G-W W-A	D	ipP_{Z}	18 57 02	
		G-W W-A		eS_{EN}	19 01 04	
		G-W		esS_{EN}	19 01 23	
		G-W		i_{E}	19 01 27	
		G-W		eL_{EN}	19 03 50	
		G-W		F	20 15 ±	
35	April 29	G-W W-A		iP_{E}	20h13m05s	Δ = 23°2 Probably an aftershock of earthquake of April 24.
		G-W W-A		iS_{N}	20 17 17	
		G-W		eL_{N}	20 19 52	
		G-W		F	20 50 ±	

Minor Seismic Movements: April 3, 21h35m to 22h35m; April 4, 10h34m to 11h45m; April 5, 3h42m to 4h12m; April 5, 6h20m to 6h30m; April 5, 9h48m to 10h00m; April 9, 10h16m to 11h10m; April 11 2h to 3h30m; April 12, 13h to 13h30m; April 13, 4h to 5h; April 15 2h45m to 3h 30m; April 19, 8h to 9h; April 20, 8h 15m to 9h45m; April 21, 18h to 18h30m; April 22, 18h 50m to 19h30m.

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36	May 1	G-W		ePR$_1$?E	10h41m03s	ΔS-H = 90°
		G-W		eS$_N$	10 48 36	Epicenter: 40.°7N.
		G-W		eL$_E$	11 06 40	42.6E.
		G-W		F	12 30 ±	H = 10h24m44s.
37	May 14	G-W		eP'$_Z$	23h41m50s	Δmeas = 111.°3
		G-W		iPR$_1$NZ	23 42 11	Epicenter in the
		G-W		i$_Z$	23 42 35	vicinity of 58°S.
		G-W		i$_{NZ}$	23 43 09	25°W.
		G-W		eSKS$_N$	23 48 00	H = 23h23m00s.
		G-W		iSKKS?	23 48 50	South Sandwich Trench
		G-W		iSK$_N$	23 49 29	
		G-W		ePS$_N$	23 51 40	
		G-W		i$_{NZ}$	23 51 58	
		G-W		iSR$_1$	23 57 24	
		G-W		eL	24 10 30	
		G-W		F	26 00 ±	
38.	May 23	G-W W-A		eP$_{EZ}$	18h08m50s	ΔS-P = 40.°1
		G-W		eS$_N$	18 13 05	H = 17h59m13s
		G-W		iSR$_{2N}$	18 16 09	Epicenter: 24.°5N
		G-W		e$_N$	18 17 20	46°W.
		G-W		eL$_Z$	18 19 30	
		G-W		F	19 00 ±	
39	May 24	G-W		eP$_Z$	05h51m55s	ΔPR$_1$-H = 118.°8
		G-W		eP'$_Z$	05 55 29	H = 05h36m42s
		G-W		ePR$_1$(Z N)	05 56 44	Epicenter: 12.°8N.
		G-W		eSKP$_{NZ}$	05 58 00	12.°5E.
		G-W		eSKS$_Z$	06 02 18	Felt in the Visayas
		G-W		eSKKS$_N$	06 03 42	(Eastern Philippines)
		G-W		eS?$_Z$	06 04 38	Surface waves small
		G-W		ePS$_N$	06 06 45	compared with pre-
		G-W.		ePPS$_N$	06 07 52	liminaries.
		G-W		eSR$_1$N	06 13 00	
		G-W		eSR$_{2N}$	06 17 56	
		G-W		F	09 10 ±	

No.	Date	Inst.	C/D	Phase	G.M.C.T.	Remarks
40	May 30	G-W	(D)	eP_Z	21h47m21s	ΔP-H = 107°9
		G-W		iPR_{1Z}	21 51 51	H = 21h32m58s
		G-W		$eSKS_{NZ}$	21 57 56	Epicenter in the
		G-W		$iSKKS_N$	21 58 21	vicinity of 30°.2N.
		G-W		iS_N	21 59 21	66°.9E.
		G-W		ePS_{NZ}	22 00 56	Destructive at Quetta,
		G-W		$ePPS_N$	22 01 55	British Baluchistan
		G-W		i_Z	22 02 31	
		G-W		$iPKKP_N$	22 02 47	
		G-W		iS_{2N}	22 11 15	
		G-W W-A		iL_{NE}	22 34 17	
		G-W W-A		iL_{1N}	22 39 46	
		G-W		iM_{2N}	22 33 20	
		G-W		F	23 40 ±	
41	May 31	W -A G-W	(C)	$iP_{Z(N)}$	8h31m03s	Δ = 93°.6
		G-W		ipP_Z	8 32 46	H = 8h18m35s
		G-W		ePR_{1Z}	8 34 49	Depth of focus about
		G-W		e_{NZ}	8 38 43	480 km by the Brun-
		G-W		$iSKS_N$	8 40 51	ner Depth Chart.
		G-W		iS_N	8 41 32	Epicenter in vicinity
		G-W		i_{NZ}	8 42 48	of 37°.3N. 134°.2E
		G-W		$esSKS_N$	8 44 06	Japan Sea. Epicenter
		G-W		isS_N	8 44 37	based on data from
		G-W		F	9 30 ±	Florissant, Chiufeng
						Taihoku and Zurich.

Minor Seismic Activity: May 2, 21h26m to 21h35m; May 5, 23h44m to 24h; May 6, 20h15m to 20h35m; May 7, 6h30m to 8h; May 11, 19h20m to 20h; May 12, 20h 35m to 21h45m; May 13, 20h30m to 22h 10m; May 14, 00h15m to 1h30m; May 15, 3h to 3h 30m; May16, 5h25m to 5h40m; May 16, 21h 05m to 23h10m; May 18, 17h39m to 18h; May 21, 7h 11m to 9h20m; May 25, 00h25m to 2h30m May 26, 22h24m to 24h 15m; May 27, 3h38m to 5h40m.

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42.	June 2	W -A W-A G-W W-A G-W W-A G-W G-W G-W	D	iP_{EN} ipP_{ENZ} iS_{ENZ} isS_{N} eM_{N} F	11h02m45s 11 03 01 11 11 39 11 12 00 11 23 00 12 10 ±	ΔS-P = 66°.5 H = 10h52m05s Depth of focus about 70km by the Brunner Depth Chart.
43	June 5	G-W W-A G-W W-A G-W W-A G-W W-A G-W W-A		$iP_{N(E)}$ $ipP_{N(E)}$ eS_{EN} isS_{EN} F	6h29m56s 6 30 12 6 33 56 6 34 23 6 45 ±	ΔS-P = 22°.5 Depth of focus about 100km by the Brunner Depth Chart.
44	June 11	G-W G-W G-W G-W G-W G-W G-W	D	iP_{Z} ipP_{NZ} e_{NZ} e_{Z} e_{NZ} isS_{NZ} F	22h02m57s 22 04 13 22 05 34 22 08 06 22 08 23 22 10 20 24 10 +	ΔS-P = 35°.4 H = 21h56s37m Depth of focus 420km by the Brunner Depth Chart.
45.	June 24	G-W G-W G-W W-A G-W G-W W-A G-W G-W W-A G-W G-W G-W W-A G-W W-A G-W G-W G-W G-W G-W	(C) (C)	eP_{ENZ} epP_{ENZ} i_{ENZ} e_{Z} iPR_{1ENZ} e_{EZ} $iSKS_{EN}$ iS_{N} $isS_{..}$ $iP_{S}E$ $iSPP_{ENZ}$ iSR_{1E} iSR_{2E} i_{N} eL_{E} iM_{E} F	23h37m26s 23 38 01 23 39 31 23 40 52 23 41 58 23 42 17 23 48 59 23 49 29 23 50 32 23 51 25 23 52 04 23 57 14 24 01 30 24 08 52 24 15 00 24 21 30 27 30 ±	ΔS-P = 110°.3 Epicenter 19°S 168°.5 E. H = 23h23m06s Depth of focus about 140km by the Brunner Depth Chart.

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46	June 25	G-W	C	iP_{ENZ}	12h45m47s	ΔS-P = 79°
		G-W		iPR_{1Z}	12 48 52	H = 12h33m47s
		G-W		iS_{EN}	12 55 48	Possibly somewhat
		G-W		iPS_{EN}	12 56 34	deep.
		G-W		iSR_{1N}	13 01 10	
		G-W		iSR_{2N}	13 04 18	
		G-W		eL_{E}	13 11 40	
		G-W		iM_{E}	13 17 50	
		G-W		F	15 00 ±	
47	June 28	G-W	D	iP_{ENZ}	2h12m12s	ΔS-P = 75°8
		G-W	C	i_{Z}	2 12 14	H = 2h00m34s
		G-W		ipP_{Z}	2 12 24	Depth of focus 50km
		G-W		eS_{E}	2 21 53	by the Brunner Depth
		G-W		i_{N}	2 21 58	Chart.
		G-W		esS_{E}	2 22 15	No surface waves
		G-W		eSR_{1E}	2 26 54	
		G-W		F	4 00 ±	
48	June 28			eP_{EZ}	19h40m03s	ΔS-P = 57°9
				iS_{N}	19 48 08	Epicenter 21°N.
				eSP_{E}	19 48 36	155°E.
				i_{N}	19 49 53	H=19h30m14s
				eL_{N}	19 57 44	
				F	21 15 ±	
49	June 29	G-W W-A	C	iP_{ENZ}	6h45m00s	ΔS-P = 23°2
		G-W W-A	D	iPR_{1ENZ}	6 45 27	Epicenter 18°2N
		G-W	D	$iPcP_{Z}$	6 57 42	103°3W
		G-W W-A		iS_{N}	6 58 12	H = 6h48m53s
		G-W		iSR_{1N}	6 58 48	
		G-W		iSR_{2N}	6 58 56	
		G-W		iL_{N}	7 00 56	
		G-W W-A		iM_{1N}	7 01 20	
		W -A		iM_{2N}	7 01 30	
		W-A		iM_{3EN}	7 03 28	
		G-W		F	10 40 ±	

Minor Seismic Activity: June 2, 16h,30m to 17h45m; June 16, 7h, 10m to 8h; June 19, 23h to 24h40m; June 22, 16h30m to 18h; June 29 00h48m to 1h30m.

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FLORISSANT

SEISMOGRAPHIC STATION, ST. LOUIS UNIVERSITY, ST. LOUIS, MO., U. S. A.

Three Galitzin-Wilip, two Wood-Anderson short-period seismographs, Shortt synchronome clock

Bulletin for 1935

No.	Date	Inst.	C/D	Phase	G.M.C.T.	Remarks
50	July 5	W-A G-W		ePE_NZ	3-18-58	
		G-W		eE_NZ	3-19-56	
		G-W		e_N	3-26-22	
		G-W		eE_NZ	3-27-30	
		G-W		F	3-40±	
51	July 5	G-W		ePR_1NZ	18-19-53	Δ = ca 92°
		G-W		eSR_1N	18-34-00	
		G-W		$e(L)_EN$	18-41-30	
		G-W		eM_NZ	18-52-25	
		G-W		F	20-00±	
52	July 7	G-W		e_Z	13-43-10	
		G-W		e_E	13-51-00	
		G-W		eE_NZ	13-52-50	
		G-W		eE_N	13-59-15	
		G-W		eE_N	14-02-50	
		G-W		e_E	14-04-00	
		G-W		eL_E	14-16-30	
		G-W		F	15-30±	
53	July 9	W-A G-W	(C)	iPE_NZ	6-52-02	Δ_{S-P} = 66°3
		W-A G-W		iSE_N	7-00-58	Surface waves
		G-W		e_E	7-02-00	negligible.
		G-W		F	8-15±	
54	July 9	W-A G-W	C	ePE_NZ	12-32-27	Δ = 67°7
		G-W		ePR_1Z	12-35-02	
		W-A G-W		iSE_N	12-41-30	
		G-W		$iE(N)$	12-42-30	
		G-W		eSR_1EN	12-45-45	
		G-W		eL_N	12-54-50	
		G-W		F	14-20±	
55	July 13	G-W		ePZ	15-42-22	
		W-A G-W		eE	15-43-10	
		G-W		eE_N	15-43-36	
		G-W		eE_NZ	15-45-56	
		G-W		F	16-00±	

Florissant Bulletin for 1935

No.	Date	Inst.	C/D	Phase	G.M.C.T.	Remarks
56	July 16	G-W	C	ePZ	16-33-32	Δ = ca 112°
		G-W	D	iPR_1ENZ	16-38-06	Formosa ?
		G-W		ePR_2NZ	16-40-26	
		G-W		$ePSENZ$	16-47-35	
		G-W		eEN	16-47-58	
		G-W		$ePPSENZ$	16-48-45	
		G-W		eSR_1N	16-53-48	
		G-W		eLE	17-14-55	
		G-W		eME	17-21-07	
		G-W		F	19-00±	
57	July 17	W-A G-W		$eENZ$	12-32-17	Practically no surface waves.
		W-A G-W		iEN	12-32-32	
		G-W		eE	12-40-08	
		G-W		iEN	12-40-11	
		G-W		iEN	12-40-26	
		W-A G-W		eEN	12-42-06	
		G-W		eEN	12-46-23	
		G-W		eN	12-52-38	
		G-W		F	14-00±	
58	July 17	G-W	(D)	ePZ	11-00-50	Δ = ca 111°
		G-W	(C)	ePR_1ENZ	11-05-20	Formosa ?
		G-W		$eSKS_N(E)$	11-11-33	
		G-W		$eSKKS_N(E)$	11-12-32	
		G-W		eS_{EN}	11-13-07	
		G-W		iPS_{ENZ}	11-15-00	
		G-W		$iPPS_N(E)$	11-16-10	
		G-W		eSR_1E	11-21-15	
		G-W		eL_E	11-36-45	
		G-W		eM_E	11-42-25	
		G-W		F	Lost in changing record.	
59	July 19	G-W		$ePENZ$	1-02-49	Δ= 92°5
		G-W		$epPZ$	1-03-30	H = 00h49m56s
		G-W		ePR_1Z	1-06-18	Depth of focus
		G-W		$eSKS_{EN}$	1-13-25	180 km by the
		G-W		iS_E	1-13-42	Brunner Depth
		G-W		iEN	1-13-49	Chart.
		G-W		$esSKS_N$	1-14-32	Japan?
		G-W		esS_N	1-14-54	
		G-W		eSR_1EN	1-19-48	
		G-W		eL_{EN}	1-30-30	
		G-W		eM_N	1-36-55	
		G-W		F	4-00±	

Florissant Bulletin for 1935

No.	Date	Inst.	C/D	Phase	G.M.C.T.	Remarks
60	July 21	G-W G-W G-W		eS_{EN} eM_{EN} F	15-20-12 15-23-00 15-30±	
61	July 26	W-A G-W W-A G-W G-W G-W G-W G-W G-W G-W G-W G-W	D C D	eP_{EN} epP_{N} ePR_{1N} iS_{EN} isS_{E} i_{N} i_{E} iSR_{1E} $isSR_{1E}$ eL_{N} F	4-49-49 4-50-11 4-50-44 4-54-56 4-55-30 4-56-02 4-56-16 4-56-52 4-57-26 4-58-45 6-15±	$\Delta S-P = 31°$ H = 4-43-37 Depth of focus 100 km by the Brunner Depth Chart.
62	July 26	W-A G-W W-A G-W G-W G-W		eP_{EN} iS_{EN} e_{EN} F	8-15-02 8-24-29 8-27-30 9-00±	Preliminaries rather large. No surface waves.
63	July 29	G-W G-W G-W G-W G-W G-W G-W G-W G-W G-W G-W G-W G-W G-W G-W G-W G-W G-W G-W G-W G-W G-W G-W G-W G-W G-W G-W G-W G-W		iP_{ENZ} ipP_{ENZ} isP_{EZ} e_{ENZ} eP'?Z iPR_{1ENZ} ipP'?Z esP'? i_{EZ} e_{EN} $iSKS_{EN}$ $iSKKS_{E}$ iS_{EN} $isSKS_{EN}$ isS_{EN} i_{E} iSR_{1EN} i_{EN} i_{E} iSR_{2E} iN i_{E} e_{N} i_{N} i_{N} i_{E} F	7-51-55 7-53-45 7-54-40 7-55-18 7-55-48 7-56-12 7-57-26 7-58-20 7-58-39 8-01-42 8-01-55 8-02-38 8-03-00 8-05-14 8-06-16 8-07-32 8-10-07 8-12-18 8-13-30 8-14-18 8-15-04 8-16-12 8-20-44 8-23-09 8-28-55 8-30-32 11-30±	H = 07-38-47 Epicenter: 22°9 S 178°.2 W Depth of focus 490 km by the Brunner Depth Chart.

Florissant Bulletin for 1935

Minor Seismic Activity: July 6, 3h48m to 4h30m; July 10, 19h18m to 19h30m, July 11, 8h47m to 10h 15m; July 11, 13h30m to 14h30m; July 12, 10h30m to 11h30m; July 15, 12h29m to 13h 30m; July 15, 18h30m to 19h30m; July 17, 4h50m to 6h; July 19 19h30m to 20h30m; July 26 11h to 12h30m; July 30 oh10m to oh40m; July 30 6h to 8h10m; July 30, 12h15m to 13h; July 31, 10h40m to 11h15m.

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E R R A T A

In the Saint Louis and Florissant Bulletins for April 24, 1935 substitute: Epicenter 15°N, 93°5W, for Epicenter 5°6N, 82°W.

FLORISSANT

SEISMOGRAPHIC STATION, ST. LOUIS UNIVERSITY, ST. LOUIS, MO., U. S. A.

Three Galitzin-Wilip, two Wood-Anderson short-period seismographs, Shortt synchronome clock 16.

Bulletin for 1935

No.	Date	Inst. C/D	Phase	G.M.C.T.	Remarks
64	Aug 1	G-W	eP_{NZ}	14h26m53s	Δ_{S-P} = 46°.3
		G-W	eS_{EN}	14 33 46	
		G-W	e_{ENZ}	14 36 38	
		G-W	eL_{EN}	14 40 25	
		G-W	eM_{EN}	14 42 40	
		G-W	F	(Lost in changing records)	
65	Aug 1	W-A	eP_{N}	16h14m16s	Δ_{S-P} = 27°.9
		W-A	eS_{E}	16 19 05	Epicenter 11°.1 N,
		W-A	iE	16 19 45	86°.1 W.
		W-A	i_{E}	16 20 46	H = 16h08m17s.
		(All Phases on Galitzin Wilip lost in changing records)			
66	Aug 3	G-W W-A D	iP'_{EZ}	01h29m27s	Δ_{meas} = 136°.3
		G-W	ePR_{1Z}	01 32 04	Tentative Epicenter:
		G-W W-A	e_{NZ}	01 32 24	4°.7 N, 97°.0 E.
		G-W W-A	$iSKP_{ENZ}$	01 32 57	H = 01h10m09s.
		G-W	i_{ENZ}	01 34 02	
		G-W	ePR_{2Z}	01 35 08	
		G-W	$eSKS_{E}$	01 36 30	
		G-W	$ePSKS_{N}$	01 42 37	
		G-W	iE	01 45 20	
		G-W	iZ	01 45 34	
		G-W	eSR_{1EN}	01 50 12	
		G-W	eSR_{2E}	01 55 18	
		G-W	eL_{E}	02 11 00	
		G-W	eM_{EN}	02 21 00	
		G-W	iN	02 27 12	
		G-W	i_{N}	02 30 47	
		G-W	F	05 35 ±	
67	Aug 4	G-W W-A	eP_{ENZ}	02h29m25s	Δ_{S-P} = 23°.5
		G-W	ePR_{1ENZ}	02 29 53	
		G-W	eS_{EN}	02 33 40	
		G-W	eM_{EN}	02 37 40	
		G-W	F	03 40 ±	
68	Aug 4	G-W W-A D	iP_{ENZ}	09h44m43s	
		G-W	$eS?_{N}$	09 50 54	
		G-W	eM_{E}	09 59 15	
		G-W	F	10 30 ±	
69	Aug 6	G-W W-A	eP_{ENZ}	00h02m10s	Δ_{S-P} = 71°.9
		G-W	eS_{ENZ}	00 11 35	
		G-W	eSR_{1EN}	00 16 16	
		G-W	eL_{E}	00 25 10	
		G-W	F	01 20 ±	

No.	Date	Inst.	C/D	Phase	G.M.C.T.	Remarks
70	Aug 6	G-W W-A G-W G-W G-W		eP_N iS_{EN} e_E F	21h54m37s 22 02 53 22 04 12 22 30 ±	No surface waves.
71	Aug 7	G-W W-A G-W W-A G-W G-W G-W G-W G-W	C	eP_{NZ} epP ePR_{1NZ} iS_{EN} esS_E i_{EN} F	09h09m42s 09 10 02 09 11 15 09 15 44 09 16 20 09 18 40 10 30 ±	ΔS-P = 39°5 Epicenter: 1°.0 N, 77°.5 W. H = 09h02m18s. Focal depth about 95 km. by Brunner Depth Chart.
72	Aug 10	G-W G-W G-W G-W G-W G-W G-W G-W G-W G-W G-W G-W G-W		eP'_Z e_N $eSKS_{EN}$ $eSKKS_{EN}$ e_{ENZ} e_{EN} eS_{EN} $ePPS_N$ e_N eSR_{1E} eSR_{1N} eM_E F	17h51m25s 17 52 58 17 58 30 18 00 58 18 01 06 18 01 57 18 02 18 18 06 40 18 07 20 18 11 30 18 11 42 18 32 00 20 10 ±	Interpretation doubtful. Perhaps an aftershock of earthquake of August 3. Δ = 136°. ?
73	Aug 11	G-W G-W G-W G-W G-W G-W		e_Z e_{ENZ} e_{EN} e_{EN} e_{EN} F	07h40m42s 07 47 20 07 50 48 07 55 00 07 58 48 09 10 ±	
74	Aug 15	G-W G-W G-W G-W		$iE(N)$ iE eL_{EN} F	15h10m17s 15 11 02 15 14 30 15 30 ±	

No.	Date	Inst	C/D	Phase	G.M.C.T.	Remarks
75	Aug 17	G-W		ePZ	01h59m11s	$\Delta S-P = 108°5$
		G-W		iZ	01 59 16	Tentative Epicenter:
		G-W		$epPZ$	01 59 41	20°0 S, 171°5 E.
		G-W		ePR_1Z	02 03 30	H = 01h44m57s.
		G-W		iZ	02 03 49	Depth of focus 120km.
		G-W		$iSKSE(N)$	02 09 44	Brunner Depth Chart.
		G-W		iS_N	02 11 11	
		G-W		isS_N	02 12 06	
		G-W		iZ	02 13 19	
		G-W		$iPPS_{EZ}$	02 13 51	
		G-W		iE	02 14 41	
		G-W		iSR_1N	02 19 06	
		G-W		iSR_2N	02 23 12	
		G-W		eLE	02 36 48	
		G-W		iM_1E	02 41 47	
		G-W		iM_2E	02 44 47	
		G-W		F	06 00 ±	
76	Aug 20	G-W	W-A	iP_{ENZ}	00h04m59s	$\Delta S-P = 24°2$
		G-W	W-A	iP_{ENZ}	00 06 32	Two shocks from
		G-W		eS_N	00 09 20	same source.
		G-W		eS_N	00 10 52	Surface waves very
		G-W		F	00 43 ±	small.
77	Aug 21	G-W	W-A	iEZ	14h01m57s	
		G-W		eZ	14 05 39	
		G-W		eZ	14 13 28	
		G-W		eL_Z	14 33 00	
		G-W		F	(Lost in changing records)	
78	Aug 22	G-W	W-A	iP_{NZ}	20h37m54s	$\Delta P-H = 36°2$
		G-W		iPR_1NZ	20 39 14	H = 20h30m49s.
		G-W		ePR_2Z	20 39 37	Epicenter: 73°0 N.
		G-W		$iPcPZ$	20 40 18	66°0 W.
		G-W		e_{NZ}	20 43 31	Baffin Bay
		G-W		eS_N	20 43 ±8	
		G-W		eSR_1N	20 45 54	
		G-W		eSR_2N	20 46 21	
		G-W		iL_N	20 48 56	
		G-W		iM_N	20 52 00	
		G-W		F	22 30 ±	
79	Aug 23	W-A		$ePEN$	10h16m20s	
		G-W		eL_{NZ}	10 31 00	
		G-W		F	10 45 00	
80	Aug 23	G-W		eZ	12h04m16s	
		G-W		eZ	12 09 12	
		G-W		i_{NZ}	12 11 39	
		G-W		F	12 20 ±	

No.	Date	Inst C/D	Phase	G.M.C.T.	Remarks
81	Aug 23	G-W W-A G-W G-W	i_{ENZ} i_Z F	14h17m19s 14 20 34 (Lost in changing records)	
82	Aug 25	G-W G-W G-W G-W G-W G-W G-W	eP_{NZ} iPR_{1NZ} eS_N eSR_{1N} eL_N eM_N F	05h17m09s 05 19 19 05 24 39 05 28 13 05 33 28 05 37 00 07 10 ±	Δ_{S-P} = 52°3 Epicenter: 79°7 N, 0°0 W. H = 05h07m59s. Northwest of the island of Spitzbergen.
83	Aug 31	G-W G-W G-W G-W G-W G-W G-W	$e(P)_Z$ e_Z $i(S)_E$ e_N eL_E eM_E F	17h52m19s 17 52 50 18 02 19 18 02 36 18 18 00 18 25 00 19 30 ±	

Minor Seismic Activity: Aug 5, 19h10m to 19h25m; Aug 6, 17h to 20m; Aug 11, 20h to 21h; Aug 12, 4h to 5h; Aug 20, 23h50m to 24h; Aug 21, 9h50m to 10h10m; Aug 22, 5h45m to 5h55m; Aug 23, 11h10m to 11h50m; Aug 24, 10h45m to 11h; Aug 24, 13h40m to 14h; Aug 26, 13h12m to 14h; Aug 26, 16h50m to 17h15m; Aug 31, 13h50m to 14h15m.

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Three Galitzin-Wilip, two Wood-Anderson short-period seismographs, Shortt synchronome clock

BULLETIN FOR 1935

No.	Date	Inst	C/D	Phase	G.M.C.T.	Remarks
84	Sept 1	G-W W-A G-W G-W G-W		ePE_{NZ} eS_{EN} iSR_{1EN} M_{EN} F	0h54m30s 0-58-49 0-59-32 1-03-00 1-30±	Δ_{S-P} = 24°0 Tentative H = 0h49m15s Epicenter probably in vicinity of 15°0 N, 92°0 W.
85	Sept 4	G-W W-A G-W G-W G-W W-A G-W W-A G-W G-W G-W G-W G-W	C	iP_{ENZ} e_Z iPR_{1ENZ} $ePcP_{ENZ}$ iS_{ENZ} $e(SR_1)_{EN}$ iSR_{2EN} eL_E iM_{EN} F	1h35m50s 1-36-30 1-37-33 1-37-46 1-42 22 1 45 33 1 46 11 1 48 33 1 51 32 6 00±	Δ_{S-P} = 43°0 H = 1h27m51s Epicenter 63°0 N, 151°0 W.
86	Sept 9	G-W G-W G-W G-W G-W G-W G-W		iPR_{1Z} $ipPR_{1Z}$ eS_N iPS_E $iPPS_E$ iSR_{1N} F	6h37m14s 6 37 50 6 44 52 6 46 50 6 47 56 6 52 56 9 30±	Δ_{PR_1-H} = 116°7 H = 6h17m40s Epicenter 59°8 N, 139°0 E. Depth of focus 160 km. by Brunner Depth Chart. Surface waves small.
87	Sept 10	G-W W-A G-W W-A G-W G-W G-W	C	iP_{EZ} $eS_{N(E)}$ eL_{EN} eM_{EN} F	6h35m37s 6 40 06 6 43 02 6 44 17 7 05±	Δ_{S-P} = 25°2 H = 6h30m10s Epicenter about 17°5 N, 106°C W. by Pasadena and Florissan
88	Sept 10	G-W W-A G-W W-A G-W G-W G-W		ePE_{NZ} eS_{EN} eL_{EN} iM_E F	7h10m49s 7 15 18 7 18 16 7 18 58 Covered by	Repetition of preceding Δ_{S-P} = 25°2 following earthquake.

Florissant Bulletin for 1935

No	Date	Inst	C/D	Phase	G.M.C.T.	Remarks
89	Sept 10	G-W W-A		eP_{ENZ}	7h40m17s	Repetition of preceding
		G-W		eS_{EN}	7 44 46	Δ_{S-P} = 25°2
		G-W		eL_{EN}	7 47 42	
		G-W		iM_{EN}	7 48 22	
		G-W		F	8 18±	
90	Sept 11	G-W W-A	C	iP_{ENZ}	14h16m26s	Δ_{P-H} = 82°6
		G-W W-A		ipP_{ENZ}	14 16 42	H = 14h04m12s
		G-W W-A		iPR_{1ENZ}	14 19 40	Epicenter 44°5 N.
		G-W W-A		$ipPR_{1Z}$	14 19 56	147°0 E.
				Interval during which records were changed		
		G-W		iSR_{1N}	14 32 14	Depth of focus 60 km
		G-W		iL_{N}	14 42 02	by Brunner Depth
		G-W		iM_{EN}	14 48 12	Chart.
		G-W		F	18 30±	
91	Sept 15	G-W		iPR_{1ENZ}	11h35m02s	Tentative H = 11h15.5m.
		G-W		eS_{EN}	11 42 22	
		G-W		ePS_{EN}	11 44 40	Δ_{PS-PR_1} = 114°4
		G-W		iE	11 44 46	Provisional Epicenter
		G-W		$ePPS_{E}$	11 45 43	in vicinity of 5°0 S,
		G-W		iSR_{1N}	11 51 02	150°0 E.
		G-W		eSR_{2N}	11 55 22	Bismarck Archipelogs.
		G-W		eL_{E}	12 09 00	
		G-W		iM_{ENZ}	12 16 00	
		G-W		F	14 00±	
92	Sept 15	G-W		epP_{Z}	14h20m36s	Beginning lost in
		G-W		eS_{EN}	14 29 14	changing record
		G-W		esS_{E}	14 30 07	H = 14h09m10s
		G-W		e_{EN}	14 33 52	Tentative epicenter
		G-W		e_{E}	14 37 26	28°0 S, 113°3 W.
		G-W		eL_{EN}	14 40 57	Focal depth 110 km
		G-W		F	18 00±	by Brunner Depth
						Chart. Surface waves
						small.
93	Sept 18	G-W W-A	D	iP_{NZ}	5h04m54s	H = 4h58m07s
		G-W		iPR_{2N}	5 06 17	Tentative epicenter
		G-W		iS_{N}	5 10 27	in vicinity 7°0 N,
		G-W		iSR_{1N}	5 12 14	77°0 W.
		G-W		eSR_{2E}	5 13 17	Possibly somewhat
		G-W		eM_{N}	5 18 30	deep.
		G-W		F	6 20±	

No	Date	Inst	C/D	Phase	G.M.C.T.	Remarks
94	Sept 18	G-W W-A	C	iP_{ENZ}	8h36m33s	Δ_{P-H} = 86°5
		G-W		iZ	8 36 48	H = 8h23.9m
		G-W		iPR_1NZ	8 40 08	Tentative epicenter
		G-W		$eSKS_N$	8 46 48	42°0 N, 142°0 E.
		G-W		iS_{NZ}	8 47 03	Surface waves small.
		G-W		iPS_N	8 48 01	Possibly somewhat
		G-W		eSR_1N	8 52 42	deep.
		G-W		eM_N	9 10 15	
		G-W		F	10 00±	
95	Sept 19	G-W		iPR_1Z	2h46m02s	Repetition of earth-
		G-W		ePS_{ENZ}	2 55 42	quake of Sept 15 at
		G-W		eSR_1NZ	3 02 06	11h.
		G-W		e_N	3 03 12	Epicenter 5°0 S,
		G-W		eSR_2N	3 06 32	150°0 E.
		G-W		eL_N	3 21 02	Tentative H = 02h26.5m.
		G-W		eM_N	3 24 02	Δ_{PR_1-H} = 114°5
		G-W		eM_{EZ}	3 26 47	
		G-W		F	5 10±	
96	Sept 20	G-W		$eP_{Z(E)}$	2h02m03s	Δ_{PR_1-H} = 122°6
		G-W		eZ	2 03 54	Revised H = 1h46m34s
		G-W		$i(P)_Z$	2 05 38	Epicenter 4°0 S,
		G-W		iZ	2 05 49	140°5 E.
		G-W		iZ	2 06 15	Central New Guinea.
		G-W W-A		iPR_1ENZ	2 07 03	
		G-W W-A		$iSKS_{EN}$	2 12 39	
		G-W W-A		$iSKKS_{EN}$	2 14 10	
		G-W		eS_{EN}	2 15 05	
		G-W W-A		iPS_{EZ}	2 17 03	
		G-W W-A		$iPPS_{EZ}$	2 18 33	
		G-W W-A		i_E	2 22 30	
		G-W		iSR_1N	2 23 47	
		G-W W-A		iSR_1EZ	2 24 03	
		G-W		i_E	2 27 33	
		G-W W-A		iSR_2EN	2 28 16	
		G-W		iSR_3N	2 32 17	
		G-W		eL_N	2 39 03	
		W-A		eM_E	2 47 18	
		G-W		F	Covered by	following earthquake.

No.	Date	Inst	C/D	Phase	G.M.C.T.	Remarks
97	Sept 20	G-W G-W W-A G-W G-W G-W G-W G-W G-W G-W G-W G-W G-W	C	eP?Z iPR$_1$ENZ iSKS$_E$N iSKKS$_N$ iS$_N$ iPS$_E$(N) iPS$_N$ iPPS$_E$ iSR$_1$N iSR$_2$N iLE F	5h38m11s 5 43 21 5 48 57 5 50 28 5 51 23 5 53 05 5 53 09 5 54 55 5 59 53 6 04 31 6 22 53 10 30±	Δ_{PR_1} H = 122°6 H = 5h22m52s Epicenter 4°0 S, 140°5 E. New Guinea. After shock of preceding earthquake. Note: This epicenter and origin time are to replace the epicenter and origin time given in J.S.A. Preliminary Bulletin No. 27.
98	Sept 20	G-W G-W G-W G-W G-W G-W G-W		eNZ eZ iZ eEN eLNZ eM$_{NZ}$ F	21h10m45s 21 21 57 21 24 21 21 34 13 21 00 03 22 05 53 23 20±	
99	Sept 23	G-W G-W W-A G-W W-A G-W G-W G-W G-W G-W G-W G-W G-W G-W G-W G-W G-W	D	eP?Z iP'Z iPR$_1$EZ iSKS$_E$N iSKKS$_E$N iS$_N$ iPS$_E$ iSP$_Z$ iSR$_1$EN iSR$_1$E iSR$_2$EN e(L)E iM$_E$ F	9h33m35s 9 37 08 9 38 31 9 44 10 9 45 33 9 46 33 9 48 19 9 48 33 9 54 59 9 55 26 9 59 41 10 15 00 10 18 09 11 30±	New Guinea. Revised epicenter 4°0 S, 140°5 E. Revised H = 9h18m04s. Aftershock of earthquake of Sept 20 at 02h. This epicenter and origin time is to replace the epicenter and origin time given in J. S. A. Preliminary Bulletin No. 28.
100	Sept 24	G-W G-W G-W G-W G-W G-W G-W		iPR$_1$Z iSKS$_E$ iPS$_E$ ePPS$_E$ eSR$_1$E eME F	5h21m25s 5 26 53 5 31 17 5 32 43 5 42 21 6 01 50 7 30±	Aftershock of preceding New Guinea quake. Δ=ca 122°6

No.	Date	Inst	C/D	Phase	G.M.C.T.	Remarks
101	Sept 24	G-W		eP_Z	22h18m26s	Δ_{S-P} = 29°3
		G-W		i_Z	22 18 28	H = 22h12m21s.
		G-W		iPR_1ENZ	22 19 11	Epicenter = 50°0 N,
		G-W		$e(S)N$	22 23 19	129°0 W.
		G-W		$iSEN$	22 23 24	
		G-W		iSR_1EN	22 24 55	
		G-W		eL_E	22 26 36	
		G-W		i_{EN}	22 28 23	
		G-W		iM_{EN}	22 30 28	
		G-W		F	25 00±	
102	Sept 26	G-W		e?Z	3h08m23s	
		G-W		i_{EZ}	3 09 03	
		G-W		e_{EZ}	3 17 00	
		G-W		F	4 00±	

Minor Seismic Activity: Sept 2, 01h35m to 02h and 07h45m to 09h00m; Sept 11, 12h35m to 14h15m; Sept 14, 20h55m to 21h10m and 23h25m to 23m50m; Sept 15, 04h10m to 05h25m and 07h00m to 07h40m; Sept 21, 22h15m to 22h30m; Sept 23, 02h55m to 03h20m; Sept 25, 10h40m to 13h00m; Sept 26, 22h 30m to 24h45m; Sept 27, 13h45m to 14h30m, and 19h15m to 19h35m; Sept 30, 19h15m to 20h00m.

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Three Galitzin-Wilip, two Wood-Anderson short-period seismographs, Shortt synchronome clock

No.	Date	Inst	C/D	Phase	G.M.C.T.	Remarks
103	Oct 2	G-W W-A G-W G-W W-A G-W W-A G-W G-W G-W G-W G-W	C	iP_{ENZ} ipP_Z iPR_{1Z} iS_{EN} i_E isS_N ePS_{EN} iM_{EN} F	5h45m21s 5 45 40 5 48 31 5 55 37 5 56 04 5 56 12 5 56 32 6 18 57 7 30±	Δ_{S-P} = 83°0 H =05h33m06s Epicenter: 43°8 N, 146°5 E. Focal depth about 80 km. by the Bmunner Depth Chart. Aftershock of Sept 11 at 14h.
104	Oct 7	G-W G-W G-W G-W G-W G-W		eP_{NZ} iS_{EN} i_{EN} e_E eM_E F	5h03m54s 5 08 24 5 08 56 5 10 32 5 16 47 5 55±	Δ_{S-P} = 25°3 H = 04h58m24s.
105	Oct 9	G-W G-W G-W G-W G-W G-W		eP_N eS_E i_{EN} eL_{EN} iMEN F	22h17m12s 22 24 06 22 28 02 22 31 17 22 34 47 23 30±	Δ_{S-P} = 46°5 H = 22h08m39s Epicenter: 65°0 N, 22°0 W. Reported felt in Iceland.
106	Oct 11	G-W G-W G-W G-W G-W G-W G-W G-W G-W G-W G-W G-W		ePR_{1Z}(EN iPR_{2Z} i_Z $e(SKS)_E$ $eSKKS_{EN}$ ePS_E $e(PPS)_{EN}$ i_Z e_E e_N $eM_{E(N)}$ F	22h35m56s 22 37 58 22 38 59 22 41 48 22 42 58 22 44 36 22 45 36 22 47 14 22 51 20 22 52 16 25 14 31 25 30±	Δ = ca 100°0 Distant
107	Oct 12	G-W W-A G-W W-A G-W G-W G-W W-A G-W W-A G-W		eP_{ENZ} iPR_{1E} eS_N e_{EN} eL_{EN} iMEN F	7h54m47s 7 54 58 7 58 07 7 59 17 7 59 53 8 00 06 9 00±	Δ_{S-P} = 17°4 H = 07h50m45s Destructive at Helena, Montana.

No.	Date	Inst.	C/D	Phase	G.M.C.T.	Remarks
108	Oct 12	G-W		$e(P)_Z$	16h58m16s	Δ_{S-H} = 86°8
		G-W		i_Z	16 58 56	H = 15h45.3m.
		G-W		i_Z	16 59 49	Revised epicenter
		G-W		eS_{EN}	17 08 40	vicinity of 40.4 N,
		G-W		iS_E	17 08 50	143.3 E.
		G-W		$iSR_{1E(N)}$	17 14 42	(Zinsen Station
		G-W		iSR_{2E}	17 18 08	Bulletin)
		G-W		eL_{EN}	17 25 06	Possibly somewhat
		G-W		iM_E	17 28 36	deep.
		G-W		F	20 30±	
109	Oct 13	G-W		eP_Z	2h10m23s	Aftershock of Oct 12
		G-W		iS_E	2 20 48	at 16h. Surface
		G-W		iSR_{1E}	2 26 36	waves small.
		G-W		F	4 00±	
110	Oct 18	W-A		eP_{EZ}	0h24m49s	Δ_{S-P} = 83°0
		G-W		i_Z	0 24 52	H = 00h12m34s.
		G-W		ipP_Z	0 25 08	Epicenter: 43°8 N,
		G-W		eS_{EN}	0 35 05	147°0 E.
		G-W		i_E	0 35 18	Depth of focus 80 km.
		G-W W-A		isS_E	0 35 33	by Brunner Depth
		G-W		i_E	0 36 35	Chart.
		G-W		i_N	0 37 26	Probably an aftershock
		G-W		iSR_{1EN}	0 41 09	of earthquakes of
		G-W		iSR_{2EN}	0 44 35	Sept. 11 at 14 hr.
		G-W		eL_E	0 51 25	and Oct 2 at 05h.
		G-W		eM_E	0 59 00	
		G-W		F	4 30±	
111	Oct 18	G-W W-A		eP_Z	11h19m53s	Δ = ca 109°0
		G-W W-A		iPR_{1ENZ}	11 24 23	Epicenter in vicinity
		G-W		iPS_{EN}	11 33 44	of 13°0 N, 143°0 E.
		G-W		i_{EN}	11 34 00	Surface waves rela-
		G-W		$iPPS_Z$	11 34 57	tively small.
		G-W		F	14 00±	
112	Oct 18	G-W	D	iP_Z	15h06m39s	Δ_{S-P} = 84°0
		G-W		iPR_{1Z}	15 10 05	Epicenter in vicinity
		G-W		iS_{EZ}	15 17 15	of 44°5 N, 143°0 E.
		G-W		iM_Z	15 42 50	
		G-W		F	Lost in changing records.	

No.	Date	Inst	C/D	Phase	G.M.C.T.	Remarks
113	Oct 19	G-W W-A G-W W-A G-W G-W G-W G-W G-W	C D	iP_Z ipP_Z iS_{EN} isS_N eL_{EN} iM_E F	0h51m10s 0 53 05 0 57 35 1 01 07 1 03 05 1 05 05 1 45±	Δ_{S-P} = 49°.5 H = 00h43m26s Epicenter possibly in the Atlantic Ocean in the neighborhood of 21.0 N, 36.0 W. Depth of focus about 700 km. by Brunner Depth Chart.
114	Oct 19	G-W W-A G-W G-W G-W G-W G-W G-W G-W	C	eP_{EZ} iP_{EZ} iS_E iS_N iSR_1EN iL_{EN} iM_{EN} F	4h52m05 4 52 07 4 55 24 4 55 26 4 56 02 4 56 38 4 57 35 6 30±	Δ_{S-P} = 17°.3 H = 04h48m04s. Destructive at Helena, Montana.
115	Oct 24	G-W W-A G-W G-W G-W G-W	C	iP_{EZ} eS_E eL_E iM_{EZ} F	14h53m02s 14 57 11 14 59 10 15 01 22 15 30±	Δ_{S-P} = 22°.8 H = 14h47m59s
116	Oct 29	G-W G-W G-W G-W		eP_{EZ} eS_E iM_{EN} F	10h22m41s 10 26 59 10 30 29 10 50±	Δ_{S-P} = 23°.8 H = 10h17m28s
117	Oct 31	G-W W-A G-W G-W G-W G-W G-W G-W G-W G-W		iP_1ENZ iPR_1Z iS_{EN} iL_{EN} iM_{EN} $iPcS_E$ i_{EN} $i(ScS)_{EN}$ F	18h41m52s 18 42 09 18 45 11 18 46 05 18 47 13 18 49 59 18 50 39 18 53 31 20 35±	Δ_{S-P} = 17°.3 H = 18h37m51s Destructive at Helena, Montana.

Minor Seismic Activity: Oct. 1, 06h00m to 06h15m and 10h55m to 11h10m and 11h55m to 12h05m; Oct 4, 05h30m to 06h30m; Oct 6, 05h00m to 06h50m and 22h10m to 22h30m; Oct 8, 10h00m to 11h10m; Oct 14, 10h45m to 11h25m; Oct,15, 21h00m to 21h45m; Oct 25, 00h30m to 02h00m; Oct 27, 01h20m to 01h50m.

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Three Galitzin-Wilip, two Wood-Anderson short-period seismographs, Shortt synchronome clock

Bulletin for 1935

No.	Date	Inst	C/D	Phase	G.M.C.T.	Remarks
118	Nov 1	G-W W-A		ePENZ	6h06m19s	H = 06h03m35s
		G-W		iS_E	6 08 23	Epicenter: 46°.6 N,
		G-W		i_N	6 08 34	79°.3 W.
		G-W		iSR_1EN	6 08 57	Felt in Eastern
		G-W		L	6 09 15	Canada and the United
		G-W		M	6 09 45	States.
		G-W		F	9 00±	
119	Nov 1	G-W		eS_E	16h50m09s	Δ = 119°.5
		G-W		ePS_N	16 52 12	Northwestern part of
		G-W		$ePPS_{EN}$	16 53 13	French Indo-China.
		G-W		eSR_1N	16 58 42	
		G-W		eL_{EN}	17 19 00	
		G-W		eM_E	17 25 55	
		G-W		F	19 10±	
120	Nov 4	W-A		eP_E	4h00m55s	Foreshock of the
		G-W		eM_E	4 07 29	following earthquake.
		G-W		iM_N	4 07 48	
		G-W		F	4 25±	
121	Nov 4	W-A		eP_E	10h17m46s	Δ_{S-P} = 21°.3
		W-A		i_{EN}	10 17 49	H = 10h12m58s
		G-W		$iENZ$	10 17 55	Epicenter: 25°0 N,
		G-W		eS_{EN}	10 21 41	110°0 W. By Pasadena
		G-W		eL_{EN}	10 23 49	and Florissant.
		G-W		iM_{EN}	10 24 35	
		G-W		F	11 05±	
122	Nov 4	G-W W-A	C	iP_{EZ}	13h58m00s	Δ_{S-P} = 21°.3
		G-W		$eSEZ$	14 01 55	H = 13h53m12s
		G-W W-A		eL_E	14 04 12	Epicenter: 25°0 N,
		G-W		iM_E	14 04 41	110.0 W, by Pasadena
		G-W		F	Lost in changing record.	and Florissant. Aftershock of preceding.

No.	Date	Inst	C/D	Phase	G.M.C.T.	Remarks
123	Nov 7	G-W G-W G-W G-W G-W G-W G-W G-W G-W		eP_Z epP_Z ePR_1EZ $epPR_1EZ$ eS_EZ esS_E eSR_1E eL_E F	21h17m56s 21 18 14 21 19 30 21 19 50 21 24 02 21 24 33 21 27 14 21 29 18 22 00±	Δ_{S-P} = 40°0 H = 21h10m26s Depth of focus 75 km. by the Brunner Depth Chart.
124	Nov 10	G-W W-A W-A G-W G-W G-W G-W G-W G-W G-W G-W	D	iP_{ENZ} iPR_{1EN} iZ iS_N eSR_{1N} iSR_{1N} i_N iL_{EN} iM_E F	18h34m14s 18 35 19 18 35 45 18 39 29 18 41 05 18 41 19 18 41 59 18 43 19 18 46 35 20 45±	Δ_{S-P} = 31°3 H = 18h27m49s Revised epicenter 19°0 N, 62°5 W. Lesser Antilles.
125	Nov 23	G-W G-W G-W G-W G-W G-W G-W G-W	D	iP_{NZ} ipP_{NZ} iPR_{1NZ} iS_E isS_N iSR_1E eL_E F	7h59m46s 8 00 23 8 01 16 8 05 36 8 06 48 8 08 18 8 10 51 10 10±	Δ_{S-P} = 38°9 H = 07h52m34s Epicenter 0°0 N, 85°0 W. Depth of focus 170 km by Brunner Depth Chart.
126	Nov 28	W-A W-A G-W G-W W-A G-W G-W		eP_{EN} $eS?_{EN}$ iZ i_{EN} eM_Z F	14h45m53s 14 49 16 14 50 54 14 51 01 14 52 12 15 10±	

No.	Date	Inst	C/D	Phase	G.M.C.T.	Remarks
127	Nov 30	G-W W-A		eP_{NZ}	3h45m59s	Δ_{S-P} = 29°.0
		G-W		iP_{NZ}	3 46 01	H = 03h39m59s
		G-W		$epP?_{Z}$	3 46 11	Epicenter 11°.0 N,
		G-W		$iPR_{1}NZ$	3 46 51	80°.5 W.
		G-W W-A		iS_{NZ}	3 50 53	Focal Depth about
		G-W W-A		iE	3 51 01	50 km.
		G-W		isS_{N}	3 51 13	
		G-W		$iSR_{1}Z$	3 52 38	
		G-W		i_{NZ}	3 54 47	
		G-W		iM_{N}	3 57 13	
		G-W		F	6 00±	

Minor Seismic Activity: Nov 7, 05h20m to 05h30m; Nov 11, 06h30m to 06h50m and 14h00m to 15h00m; Nov 12, 22h45m to 23h10m; Nov 14, 00h00m to 00h50m; Nov 16, 08h00m to 09h40m; Nov 19, 06h50m to 07h15m; Nov 22, 11h30m to 12h40m; Nov 25, 10h40m to 12h30m; Nov 26, 14h05m to 14h55m.

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Three Galitzin-Wilip, two Wood-Anderson short-period seismographs, Shortt synchronome clock

Florissant Bulletin for 1935

No.	Date	Inst.	C/D	Phase	G.M.C.T.	Remarks
128	Dec 3	G-W W-A		ePZ	2h23m06s	Δ_{S-P} = 21°3
		G-W		eSN	2 27 00	H = 02h18m19s
		G-W		eLN	2 29 23	Epicenter probably in
		G-W		iMEN	2 30 05	vicinity of 26°5 N,
		G-W		F	3 15±	111°0 W, by Pasadena
						and Florissant.
						Gulf of California.
129	Dec 3	W-A		ePE	6h00m10s	Δ_{S-P} = 21°0
		G-W		eSEN	6 04 02	H = 05h55m26s
		G-W		eLN	6 06 31	Aftershock.
		G-W		iMN	6 07 09	
		G-W		F	6 30±	
130	Dec 14	G-W W-A	D	iPNZ	1h39m21s	Δ_{S-P} = 47°1
		G-W W-A	C	iNZ	1 39 23	H = 01h31m24s
		G-W		ipPZ	1 40 31	Tentative epicenter:
		G-W		ePR1Z	1 41 17	5°5 S, 73°3 W.
		G-W		iPR2NZ	1 42 24	Depth of focus about
		G-W W-A		iSN	1 45 48	350 km by Brunner
		G-W W-A		iN	1 45 57	Depth Chart.
		G-W		eeSN	1 47 58	
		G-W W-A		iesSN	1 48 07	
		G-W		iSR1N	1 49 07	
		G-W		F	3 00±	
131	Dec 14	W-A		iEN	11h36m02s	
		W-A		iE	11 36 07	
		W-A		iEN	11 37 43	
		W-A		F	11 38±	
132	Dec 14	G-W W-A	C	iPNZ	22h10m34s	Δ_{P-H} = 23°9
		G-W W-A	C	iNZ	22 10 38	H = 22h05m20s
		G-W	D	iSR1NZ	22 11 08	Epicenter 15°0 N,
		G-W W-A		iE	22 14 42	92°9 W.
		G-W W-A		iSE	22 15 02	
		G-W		iSR1E	22 15 37	
		G-W		iLE	22 17 00	
		G-W		iME	22 18 14	
		G-W		F	26 00±	

No.	Date	Inst.	C/D	Phase	G.M.C.T.	Remarks
133	Dec 15	G–W		eP_Z	7h22m24s	$\Delta_{PR_1-H} = 111°.4$
		G–W		eP'_Z	7 26 11	H = 07h07m49s
		G–W		iPR_{1Z}	7 26 58	Epicenter: 10°.7 S,
		G–W		$eSKS_E$	7 33 04	160°.7 E.
		G–W		iS_N	7 34 54	Reported felt in
		G–W		iPS_E	7 36 36	Solomon Islands.
		G–W		$iPPS_E$	7 37 31	
		G–W		iSR_{1E}	7 42 24	
		G–W		iE	7 43 47	
		G–W		iN	7 44 59	
		G–W		iSR_{1EN}	7 46 54	
		G–W		iL_N	7 58 24	
		G–W		iL_E	8 00 24	
		G–W		M_E	8 07 40	
		G–W		F	11 00±	
134	Dec 16	G–W. W–A	D	iP_{ENZ}	17h05m32s	$\Delta_{S-P} = 48°.0$
		G–W		ipP_Z	17 06 36	H = 17h57m22s
		G–W		iPR_{2Z}	17 08 37	Depth of focus 300–350 km by Brunner Depth Chart.
		G–W W–A		iS_{ENZ}	17 12 01	
		G–W W–A		isS_{EN}	17 14 13	
		G–W		F	17 35±	Aftershock of the earthquake of Dec. 14 at 1 hr.
135	Dec 17	G–W		eP_Z	19h32m15s	$\Delta_{P-H} = 110°.8$
		G–W		ePR_{1Z}	19 36 36	H = 19h17m38s
		G–W		$eSKS_{EN}$	19 42 42	Epicenter: 22°.0 N,
		G–W		$eSKKS_N$	19 43 45	125°.0 E.
		G–W		eS_{EN}	19 44 18	
		G–W		ePS_{EN}	19 45 54	
		G–W		iSR_{1EN}	19 52 21	
		G–W		iSR_{2EN}	19 55 51	
		G–W		$e(L)_E$	20 04 54	
		G–W.		$e(M)_E$	20 16 54	
		G–W.		F	21 45±	
136	Dec 20	W–A		eP_Z	7h50m27s	$\Delta_{S-P} = 21°.7$
		G–W		eS_E	7 54 23	H = 07h45m35s
		G–W		eL_{EN}	7 56 15	Epicenter given by
		G–W		iM_N	7 57 01	Pasadena, 33°.2 N,
		G–W		F	8 30±	115°.5 W. Reported felt in Imperial Valley.

No.	Date	Inst	C/D	Phase	G.M.C.T.	Remarks
137	Dec 20	G–W G–W G–W G–W G–W G–W G–W G–W G–W G–W		eP_Z e_Z ePR_{1Z} $eSKS_E$ $eSKKS_{EN}$ eS_N iPS_Z iL_E eM_E F	18h51m42s 18 55 58 18 56 10 19 02 09 19 03 17 19 03 59 19 05 40 19 30 20 19 34 55 21 30±	$\Delta_{meas} = 111.°8$ H = 18h36m56s Tentative Epicenter: 10.°0 S, 160.°0 E. Solomon Islands.
138	Dec 21	W–A W–A G–W		i_N i_N F	5h25m04s 5 32 59 6 00±	
139	Dec 21	W–A W–A G–W G–W		e_{EN} e_E i_N F	7h29m11s 7 31 16 7 33 39 8 00±	
140	Dec 21	G–W W–A G–W G–W G–W G–W G–W G–W		iP_{ENZ} i_E eS_{EN} i_N eL_{EZ} eM_Z F	11h56m25s 11 58 47 12 00 50 12 01 08 12 05 55 12 07 50 13 00±	$\Delta_{S-P} = 24.°7$ H = 11h51m03s Epicenter in vicinity of 14.°0 N, 92.°0 W.
141	Dec 22	W–A W–A W–A		eP_{EN} i F	1h59m49s 2 02 50 2 05±	
142	Dec 23	W–A W–A W–A		e ?N e_{EN} F	12h34m35s 12 36 55 12 40±	
143	Dec 24	G–W W–A G–W W–A G–W G–W G–W G–W		eP_{ENZ} ePR_{1ENZ} iS_N eSR_{1EN} eL_{NZ} F	12h31m21s 12 32 53 12 37 15 12 39 25 12 42 25 13 30±	

No.	Date	Inst	C/D	Phase	G.M.C.T.	Remarks
144	Dec 28	G-W	D	eP_Z	2h52m26s	Tentative
		G-W		iP_{ENZ}	2 54 53	H = 02h35m30s
		G-W W-A		iPR_{1ENZ}	2 57 57	Epicenter in the
		G-W W-A		i_{ENZ}	2 58 05	general vicinity of
		G-W W-A		i_E	2 58 32	2°5 S, 99°5 E.
		G-W W-A		iPR_{2E}	3 01 10	
		G-W		i_E	3 03 07	
		G-W		iN	3 05 20	
		G-W		iS_E	3 06 46	
		G-W		$iPSKS_E$	3 08 16	
		G-W		$i(E)N$	3 10 16	
		G-W		$iPPS_{EN}$	3 10 46	
		G-W		iSR_{1E}	3 16 10	
		G-W		iSR_{2E}	3 21 23	
		G-W		i_E	3 24 11	
		G-W		eL_E	3 40 30	
		G-W		F	(Covered by following quake.)	
145	Dec 28	W-A		iP_{EN}	4h58m59s	Probably deep.
		W-A		iN	4 59 22	No surface waves.
		W-A		iS_{EN}	5 05 26	
		W-A		i_E	5 07 44	
		W-A		F	5 10±	

Minor Seismic Activity: Dec 2, 0h30m to 1h40m and 17h30m to 18h30m;
Dec 3, 23h35m to 24h00m; Dec 5, 18h20m to 19h30m;
Dec 8, 18h40m to 19h00m also 22h40m to 23h15m;
Dec 9, 8h00m to 9h10m; Dec 16, 18h33m to 18h36m;
Dec 17, 14h00m to 15h30m; Dec 22, 10h00m to 10h30m.

J. B. Macelwane, S.J.
Director

C. G. Dahm
Instructor