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STATION CONSTANTS AND INSTRUMENTS

Latitude—40° 26.7′ North.

Longitude—79° 57.2′ West.

Lithological foundation—Birmingham Shale—Pennsylvania age.

Elevation—273 meters above sea level.

Instruments

Two Wenner horizontal seismographs (Orientation N 30° W and N 60° E)

One Benioff vertical seismograph (long-period recording only)

(The above instruments operate with photographic recording.)

Time Service and Control

Time marks are given by two Observatory master clocks. One is a special astronomical type (used as stand-by) while the other is a Frodsham astronomical clock (used for routine work).

Time signals are recorded automatically (or manually, depending on weather conditions) several times daily. These signals are transmitted from Washington, D. C. via Stations NSS and WWV.

The average clock drift is one-half second per day.

Instrument Constants

Magnification curves for the Wenner seismographs were given in No. 1, Vol. 1 of this Bulletin. The magnification curve for the Benioff is not yet completed. The "nominal" magnification for this instrument is approximately 24,000.

New Instrument Vault

A new instrument vault has been built in the Cathedral of Learning to house the mechanically recording pendula. Included in this vault will be an interferometer-type tiltmeter and a well-gage recorder.

Visual Recorder

A visual recorder, adapted to the Wenner seismometer, is being used currently on an experimental basis.

MICROSEISMIC ACTIVITY

These data have been evaluated according to the following scale:

HORIZONTAL AMPLITUDE	DESIGNATION
Less than 2 microns	Below normal
Between 2 and 3 microns	Normal
More than 3 microns	Above normal

	DATE	EVALUATION
January	1 – 9	Above normal
	9 – 11	Considerably above normal
	11 – 14	Above normal
	14 – 16	Slightly above normal
	16 – 17	Normal
	17 – 18	Above normal
	18 – 19	Considerably above normal
	19 – 22	Above normal
	22 – 28	Considerably above normal
	28 – 31	Above normal
February	1 – 6	Above normal
	6 – 7	Considerably above normal
	7 – 18	Above normal
	18 – 21	Slightly above normal
	21 – 28	Above normal
March	1 – 3	Above normal
	3 – 4	Considerably above normal
	4 – 7	Above normal
	7 – 8	Considerably above normal
	8 – 11	Above normal
	11 – 12	Considerably above normal
	12 – 20	Above normal
	20 – 23	Slightly above normal
	23 – 29	Above normal
	29 – 31	Considerably above normal

	DATE	EVALUATION
April	1 – 5	Above normal
	5 – 8	Slightly above normal
	8 – 9	Above normal
	9 – 10	Slightly above normal
	10 – 11	Normal
	11 – 13	Slightly below normal
	13 – 21	Above normal
	21 – 22	Slightly below normal
	22 – 28	Normal
	28 – 29	Slightly above normal
	29 – 30	Normal
May	1 – 7	Slightly above normal
	7 – 10	Normal
	10 – 12	Slightly above normal
	12 – 14	Above normal
	14 – 15	Slightly above normal
	15 – 21	Normal
	21 – 22	Slightly above normal
	22 – 30	Below normal
June	1 – 5	Slightly above normal
	5 – 17	Normal
	17 – 20	Slightly above normal
	20 – 23	Above normal
	23 – 24	Slightly above normal
	24 – 26	Normal
	26 – 30	Station closed
July	1 – 6	Station closed
	6 – 13	Below normal
	13 – 16	Normal
	16 – 18	Below normal
	18 – 21	Normal
	21 – 24	Below normal
	24 – 28	Normal

	DATE	EVALUATION
August	1 – 6	Below normal
	6 – 7	Normal
	7 – 9	Above normal
	9 – 12	Normal
	12 – 15	Above normal
	15 – 24	Station closed
	24 – 26	Slightly above normal
	26 – 31	Below normal
September	1 – 3	Normal
	3 – 9	Above normal
	9 – 12	Normal
	12 – 30	Above normal
October	1 – 3	Slightly above normal
	3 – 8	Above normal
	8 – 9	Considerably above normal
	9 – 20	Above normal
	20 – 21	Considerably above normal
	21 – 23	Above normal
	23 – 24	Slightly above normal
	24 – 31	Above normal
November	1 – 5	Above normal
	5 – 8	Considerably above normal
	8 – 11	Slightly above normal
	11 – 30	Above normal
December	1 – 2	Slightly above normal
	2 – 7	Above normal
	7 – 10	Considerably above normal
	10 – 11	Above above normal
	11 – 13	Considerably above normal
	13 – 17	Above normal
	17 – 18	Slightly above normal
	18 – 23	Above normal
	23 – 27	Considerably above normal
	27 – 29	Above normal
	29 – 31	Slightly above normal

SECTION ON SEISMIC DATA

Earthquakes for which preliminary phases have been identified or for which preliminary epicenters have been worked out are numbered in the left-hand column as of No. 1, September 8, 1939. It was on this date that our new station was placed in operation.

	GNWCH DATE	COMPNT.	PHASE	GMT	
360	Jan 7	Z	iP	12-06-56	Δ (S-P) = 3035 Km = 30° H = 12h 00m 44s
		H	iS	12-12-01	
361	Jan 12	Z	iP	17-35-20	Δ(S-P) = 77.8° = 8645 km H = 17h 23m 25s G.C.T.
		H	i	17-36-21	U.S.C.G.S. gives H = 17h 23m 39s G.C.T.
		H	iS	17-45-16	Lat. 49½°N Long. 156° E
	Jan. 15	Seismic activity centering about 12h 45m G.C.T.			
	Jan. 19	NE	i	05-21-09	
	Jan. 20	Z	i	17-52-22	
		H	i	17-56-12	
	Jan. 21	Z	i	01-55-03	
	Jan. 25	H	i?	19-57-15	
		Other phases indiscernible due to microseisms.			
	Jan. 27	Seismic activity centering about 04h 10m G.C.T.			
	Feb. 6	Z	i	13-24-55?	
		NE	i	13-36-38	
	Feb. 12	NE	i	01-47-43	
		Z	i	04-52-09	U.S.C.G.S. gives H = 04h 31m 16s G.C.T.
		NW	i	04-54-17?	Lat. 65° N
		NW	i	04-58-28	Long. 133°W
362	Feb. 19	Z	iP	15-28-50	Δ(S-P) = 68.4° = 7600 Km H = 15h 17m 52s G.C.T.
		H	iS	15-37-56	
363	Feb. 25	Z	1P	21-25-13	Δ(S-P) = 52.4° = 5820 Km H = 21h 16m 03s G.C.T.
		H	eS	21-32-44	
		H	i	21-33-51	

	GNWCH DATE	COMPNT.	PHASE	GMT	
	Feb. 26	H	i	12-08-17	U.S.C.G.S. gives H = 11h 42m 26s G.C.T. Lat. 11° S Long. 164½°E
	Feb. 28	Seismic activity centering about 04h 48m G.C.T. Seismic activity centering about 22h 15m G.C.T.			
	Mar. 3	Seismic activity centering about 12h 32m G.C.T.			
	Mar. 4	NW	i	01-17-34	
	Mar 5	Z	i	20-13-15?	
364	Mar 18	Z	iP	02-18-06	Δ(S-P) = 75.6° = 8400 Km
		H	iS	02-27-51	H = 19h 06m 24s G.C.T.
	Mar. 19	Z	iP?	08-33-59	U.S.C.G.S. gives
		H	i	08-38-40	H = 08h 27m 57s G.C.T. Lat. 14°N Long. 61°W
		Other phases indiscernible because of overlaping trace			
	Mar. 27	Seismic activity centering about 07h 45m G.C.T.			
	Apr. 1	Z	i	07-59-40	
		Seismic activity centering about 11h 40m G.C.T.			
	Apr. 6	Z	i	00-55-40	U.S.C.G.S. gives
		H	i	00-59-11	H = 00h 36m 12s G.C.T. Lat. 7°S Long. 132° E
365	Apr 14	Z	iP	13-37-18	Δ (S-P) = 41° = 4555Km
		H	iS	13-43-38	H = 13h 29m 35s G.C.T.
		H	i	13-46-01	
	Apr. 23	H	e	16-45-03	U.S.C.G.S. gives
		H	i	16-51-09	H = 16h 24m 17s GCT Lat. 4° S Long. 154° E
	May 4	H	i	15-10-43	
		NE	i	15-45-12	

	GNWCH DATE	COMPNT.	PHASE	GMT	
365	May 6	H	iP	17-28-33	Δ(S-P) = 76.5° = 8500Km
		H	iPP	17-31-31	H = 17h 46s G.C.T.
		H	iS	17-38-22	
		H	iSS	17-43-11	
366	May 19	Z	iP	03-22-43	Δ(S-P) = 73°9 = 8210Km
		H	iS	03-32-19	H = 03h 11m 11s G.C.T. U.S.C.G.S. gives H = 03h 11m 06s G.C.T. Lat. 51° N Long. 159° E
	May 20	Seismic activity centering about 23h 40m G.C.T.			
	June 2	Z	P phase indiscernible		
		H	iS	22-25-03	U.S.C.G.S. gives H = 22h 15m 54s G.C.T. Lat. 19½° N Long. 70° W
	June 8	H	i	12-01-36	
	June 9	NW	e	01-50-41?	
		H	i	02-00-03	
	June 10	Seismic activity centering about 19h 10m G.C.T.			
367	June 15	Z	iP	17-56-08	Δ (S-P) = 48.7° = 5410Km
		H	iS	18-03-16	H = 17h 47m 24s G.C.T.
		H	i	18-05-53	U.S.C.G.S. gives H = 17h 47m 14s G.C.T. Lat. 56½°N Long. 154°W
	June 16	Seismic activity centering about 20h 35m G.C.T.			
	June 19	Seismic activity centering about 22h 58m G.C.T.			
	June 21	Seismic activity centering about 21h 10m G.C.T.			
368	June 23	Z	iP	14-05-19	Δ(S–P) = 73.9° = 8210 Km
		H	eS	14-14-55	H = 13h 53m 46s G.C.T.
		H	i	14-15-11	
	June 25	NW	i	11-04-32	U.S.C.G.S. gives
		NW	i	11-08-16	H = 10h 44m 57s G.C.T. Lat. 8½° S Long. 123½° E

	GNWCH DATE	COMPNT.	PHASE	GMT	
377	Oct. 16	Z	iP	09-59-09	Δ (S-P) = 28.9° = 3210Km
		Z	i	09-59-18	H = 09h 53m 06s G.C.T.
		H	iS	10-04-07	U.S.C.G.S. gives
					H = 09h 53m 15s G.C.T.
					Lat. 16° N
					Long. 96½° W
378	Oct. 21	Z	eP	18-51-36	Δ(S-P) = 73.° = 8110Km
		H	iS	19-01-21	H = 18h 39m 59s G.C.T.
					U.S.C.G.S. gives
					H = 18h 39m 59s G.C.T.
					Lat. 38°N
					Long. 20½° E
	Oct 27	Z	e	18-30-31	
		H	i	18-38-26	
	Nov. 4	H	ePP?	04-08-48	U.S C.G S. gives
		H	i	04-18-47	H = 03h 09m 04s G.C.T.
		H	eL	04-44-40	Lat. 12½°S
		H	eM	04-53-19	Long. 166½° E
		Seismic activity centering about 06h 45m G.C.T.			
		Seismic activity centering about 13h 35m G.C.T.			
379	Nov. 9	Z	iP	17-37-15	Δ(S-P = 73.3° = 8145Km
		H	iS	17-46-48	H = 17h 25m 47s G.C.T.
380	Nov. 10	Z	iP	23-52-09	Δ(S-P) = 75.2° = 8355Km
		H	iS	24-01-52	H = 23h 40m 29s GCT
					U.S.C.G.S. gives
					H = 23h 40m 20s G.C.T.
					Lat. 50½° N
					Long. 157° E
	Nov. 13	Scismic activity centering about 20h 45m G.C.T.			
381	Nov. 17	Z	iP	13-35-52	Δ(S-P) = 29.1° = 3235Km
		H	iS	13-40-47	H = 13h 29m 48s G.C.T.
					U.S.C.G.S. gives
					H = 13h 29m 52s G.C.T.
					Lat. 14° N
					Long. 92° W

	Nov. 25	Z	iP	18-02-22	U.S.C.G.S. gives
		Z	i	18-02-26	H = 17h 48m 49s G.C.T.
		Z	iPP	18-06-16	Lat. 34° N.
		H	i	18-12-58	Long. 141° E
		H	i	18-13-33	
	Nov. 26	Z	eP?	08-27-43?	
		Z	iPP?	08-31-33	
	Dec. 2	H	cL	05-25-24	
		H	eM	05-32-39	
	Dec. 4	H	iM	15-14-25	
382	Dec. 7	Z	iP	02-15-57	Δ(S-P) = 60.7° = 6745Km
		Z	i	02-16-24	H = 02h 05m 50s GCT
		H	iS	02-24-21	
	Dec. 24	Seismic activity centering about 00h 45m G.C.T.			