The Pennsylvania State College

Mineral Industries Experiment Station

SEISMOGRAPHIC REPORT VII

1941

School of Mineral Industries
State College, Pa.

We thankfully acknowledge the receipt of the following reports and publications during the period from January to June 1941.

Apia	Oct.-Dec. 1940
Berkeley and aux.	July-Dec. 1938; Jan.-Sept.1939
Bur. Centr. Seism. France	Aug.-Sept. 1940; Nov. 1940
Bur. Centr. Seism. U.G.G.I.	Sept. 1940; Suppl's. Aug., Oct., Nov. 1940; 2nd Suppl's. July, Sept. 1940
Cape Girardeau	Sept.-Dec. 1939; Jan.-Mar. 1940; Sept.-Oct. 1940
Florissant	Feb.-May 1940
Fordham	Apr.-Dec. 1940
Fort de France	Jan.-Dec. 1940
Georgetown	Seism. Desp. June-Oct. 1940
Hamburg	July-Dec. 1940
Helgoland	July-Dec. 1940
Helwan	Jan.-June 1940
Hukuoka	July-Dec. 1939; Jan.-June 1940
Ivigtut	1935, 1936
Jesuit Seismol. Assoc.	Prel. Bulls. 38-51/1940; 1-16/1941
Kjobenhavn	Oct.-Dec. 1936; Jan.-June 1937
Ksara	July-Dec. 1940; Jan.-Mar. 1941
Little Rock	Oct.-Dec. 1939
Manila	Oct.-Dec. 1940; Jan.-Mar. 1941
Mizusawa	Jan.-Dec. 1940
Mt. St. Michaels	Oct.-Dec. 1939; Jan.-Dec. 1940
Ottawa and aux.	Dec. 1940; Jan.-Apr. 1941
Pasadena and aux.	Bull. July-Dec. 1939; Prel. Bull. Dec. 1940; Jan.-May 1941
Perth	Oct. 1940; Dec. 1940; Jan.-Apr. 1941
Pittsburgh	Oct.-Dec. 1940; Jan.-Apr. 1941
Riverview	Oct.-Dec. 1940; Jan.-Mar.1941
Scoresby Sund	July-Dec. 1936
Switzerland	Sept.-Dec. 1940; Jan., Feb.1941
U.S.C.G.S.	Feb.-June 1939
Wellington and aux.	S 58, P 105-110
Williamstown	Apr.-Dec. 1940

Geophysical Laboratory
State College
Pennsylvania, U.S.A.

State College, Pennsylvania

N-45-E Component, T_o = 6 sec.

	Date	Phase	G. h.	C. m.	T. s.	T	Remarks
	1941						
I	2	e	17	10	48		
I	5	e	22	36.7			
I	6	e	00	36	46		
		e	00	38	45		
I	6	e	09	54	44		
I	8	i	21	39	34		
		i			38		
I	13	L	17	19-36			Long Waves
II	9	iP	09	51	08		
		e			28		
		i		52	53		
		e		55	18		
		e			37		
		e		56	42		
		eL	10	02	35		
II	11	eL	14	54.3			
III	15	iP	05	52	48		
		e	06	01.0			
		e		02	40		
		e		03	44		
		e		05	42		
IV	1	e	11	50.1			
		e		50	38		
		e		57	19		
		eL		56.6			
IV	3	e	15	31	51		
		i			56		
		e		40	09		
IV	7	iP	23	34	27		
		i			38		
		i		38	41		
		e		39	02		
		M		42.3		18	
		C				9	
IV	8	F	00	40			
IV	15	iP	19	16	07		
		iPP		17	27		
		eS		22	26		
		eL		25.8			Merges with the following
IV	15	iP	19	52	12		
		i			54		
		eM	20	06.1			

State College, Pennsylvania

N-45-E Component, T_o = 6 sec.

	Date	Phase	G. h.	C. m.	T. s.	T	Remarks
	1941						
IV	15	e	23	50	20		
IV	16	e	00	44	35		
IV	27	i	01	31	46		Blast?
IV	30	i	00	25	57		Blast?
		i		26	02		
IV	30	i	01	07	33		Blast?
IV	30	i	22	43	51		Blast?
V	13	e	16	09	22		
		e		14	41		
		e		17.7			
		M				9	
V	17	L	03	21-58			Long waves
VI	18	i	11	15	42		
		e		16	17		
		e	11	19	05		
VI	27	i	18	17	52		

H. Landsberg

We thankfully acknowledge the receipt of the following reports and publications during the period from July to December 1940

Apia	Apr. - Sept. 1940
Berkeley and Aux.	Jan. - June 1938
Bur. Centr. Seism. France	Apr. - July 1940
Bur. Centr. Seism. U.G.G.I.	Apr. - Aug. 1940
Denver	Apr. - Dec. 1939 Jan. - June 1940
Florissant	Nov. - Dec. 1939, Jan. 1940
Georgetown	Seism. Desp. Jan. - Mar. 1940 Instr. Bull. July - Dec. 1935
Hamburg	Jan. - June 1940
Helgoland	Oct. - Dec. 1939, Jan.-June, 1940
Hukuoka	July-Dec. 1939, Jan.-June, 1940
Jesuit Seismol. Assoc.	Prel. Bulls. 50 /1939; 1-37/1940
Manila	May - Sept. 1940
Mizusawa	Jan. - Dec. 1939
Ottawa and Aux.	May - Nov. 1940
Paris	Apr. 1940
Pasadena and Aux.	Prel. Bull. May-Nov. 1940
Perth	Bull. Jan. - June 1939
Pittsburgh	May - Sept. 1940
Riverview	May - June 1940
St. Louis	Apr. - Sept. 1940
Strasbourg (Clermont-Ferrand)	Oct.-Dec. 1939, Jan.-Mar. 1940 Apr.-June 1940
Switzerland	June - Aug. 1940
U.S.C.& G. S.	June-Dec. 1938, Jan. 1939
Wellington and Aux.	Bulls. P 99-104, R-25; S-59
Williamstown	Apr.-Dec. 1938; Jan.-Dec. 1939 Jan.-Mar. 1940

State College, Pennsylvania

N-45-E Component, T_o = 6 sec.

Date	Phase	G. h.	C. m.	T. s.	T	Remarks
1940						
VII 6	eP	03	46	21		
	e			54		
	i		47	37		
	i		51	18		
	e		52	20		
	e		53.2			
VII 10	iP	06	02	05		
	i			13		
	i			30		
	i		03	46		
	i		08	38		
	i		12	10		
	e		13	53		
	e		16	03		
	e		18.8			Surface waves not pronounced.
VII 13	e	16	54.2			Begins in minute gap.
	i		54	22		
	e		59	26		
	eL		02.7		30 sec.	
VII 14	e	06	03	50		
	i		12	24		
	i		13	19		
	e		19.9			
	eL		23.1		36 sec.	
	C				14 Sec.	
	F	08				
VII 19	e	04	07	30		
VII 27	iP	13	41.4			Time marks uncertain. Felt in Honduras.
	i		42.2			
	e		44.9			
	e		49.0			
	eL		51.9			
VIII 1	eP	15	21	18		
	e		23	24		
	e		27	12		
	eS		32	01		
	e		44.9			
	eL		50.4		30	
	M		57.9		18	
	C				12-16	
	F	17				
VIII 4	i	09	02	24		Disturbance or local quake.
	i			29		
	i			34		
	i		03	20		
VIII 13	eL(?)	16	39			Traces of long waves.

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N-45-E Component, T_o = 6 sec.

Date	Phase	G. h.	C. m.	T. s.	T	Remarks
1940						
VIII 22	iP	03	37	14		
	ePeP		38	19		
	e(PP)		39	40		
	ePPP		41	20		
	e(S)		45	11		
	eSeS		48	04		
	eSS		50	22		
	M		59.5		10	
	C				8-10	
	F	05	40			
VIII 25	e	21	47	47		Disturbance?
	e			58		
IX 22	e	23	09	48		
	e		12	19		
X 1	i	09	35	47		
	i		36	13		
X 3	iP	08	05	12		
	e			54		
	e		07	34		
	i		13	26		
	eL		25.1			
	M					Not pronounced.
	F		55			
X 5	eL	14	54.2			
X 11	e	19	04.0			
X 28	eP	05	42.0			Begin in minute mark.
	e		42	22		
	e			28		
	e		47	14		
	e		49	32		
	eL		52.0			
	M		55.3		16	
XI 10	eP	01	50	12		
	i			25		
	i			51		
	e		51	17		
	eS		59	12	12	
	e	02	03	44	10	
	e	02	07	14	18	
	eL		13		44	
	M		21		20	
XI 10	i	20	45	41		
	e		46	04		
	e			14		
	e		53	31		
XI 14	i	15	09	04		
				08		

State College, Pennsylvania

N-45-E Component, T_o = 6 sec.

	Date	Phase	G. h.	C. m.	T. s.	T	Remarks
	1940						
XI	22	e	03	55	16		
XII	6	i	02	47	30		
XII	6	i	04	51	35		
		i		52	46		
XII	20	eP	07	28	54		Center in New Hampshire.
		iP		29	08		
		ePsP			17		
		iS		30	21		
		i		31.5			
XII	20	e	23	59	13		
XII	22	e	19	09	26		
				12	33		
XII	24	e	13	45	18		
		i			27		
		i			44		
		i		46	32		
		i			44		
		F	14	15			
XII	25	i	06	50	31		
XII	26	e	06	44	09		
		e		45	09		
		e		48	01		

THE PENNSYLVANIA STATE COLLEGE

MINERAL INDUSTRIES EXPERIMENT STATION

GEOPHYSICAL LABORATORY

Seismograph Report XII

1 July to 31 December 1941

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 - 390 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

Date	Phase and component	G. M. C. T.	Remarks
16 July '41			Seismic activity recognizable at 03:29:30
30 July '41			Seismic activity recorded between 02:00:- and 02:28:-
2 Aug. '41			Seismic activity recorded between 12:38- and 13:08:-
6 Aug. '41	i P e - e - e -	06:24:18 06:24:36 06:25:28 06:25:50	Epicenter: ° 55.5°N, 160°W Depth = 200 Km Dist. = 5960 Km O = 06:15:18 Courtesy U.S.C.G.S.
10 Aug. '41			Seismic activity begins at approximately 05:25·43
15 Aug. '41	i P e - e - e S	06:18:10 06:16:31 06:19:46 06:25:12	Epicenter: 19°N, 27°W Dist. = 5350 Km O = 06:09:30 Courtesy U.S.C.G.S.
13 Sept. '41			Seismic activity recognizable at 18:32:-
30 Oct. '41	i - e (L) M	16:20:08 16:29:17 16:33:05	
14 Nov. '41			Seismic activity recognizable between 09:00:- and 09:03:-
5 Dec. '41	i P e PP i S e (L) M	20:53:45 20:54:45 20:59:04 21:01:21 21:08:00	Epicenter: 8°N, 83°W Dist. = 3785 Km O = 20:46:54 Courtesy U.S.C.G.S.
6 Dec. '41	i P i - e (S) M	21:31:28 21:32:43 21:36:32 21:44:42	Epicenter: 8°N, 83°W Dist. = 3785 Km O = 21:24:36 Courtesy U.S.C.G.S.
16 Dec. '41			Seismic activity recognizable at 20:31:-

During the period covered by this report, there was one horizontal seismograph operating intermittently. It was of the Bosch-Omori type, and was sensitive to the NE-SW components of horizontal motion. The instrument recorded photographically, the distance from mirror to recording drum being 1 meter and the recording speed 1.5 cm/min. The instrument constants were:

T_o = 6 sec. E:1 = 4:1 V = 120

The time was controlled by a Spindler and Hoyer clock, which was compared twice daily with the NAA-Time signals from the U. S. Naval Observatory, Arlington, Va. The clock movement was satisfactory enough to presume a time accuracy of ± 1 sec., but as there is some uncertainity or to the amount of the time correction during the period covered by this report, the accuracy of the reported times is uncertain.

The instruments were rebuilt in 1944 to provide for recording by use of a galvanometer. This greatly increased the magnification, but no records were kept of the instrumental constants from this time until 1949.

We acknowledge with thanks receipt of the following bulletins and other publications between May 23, 1950 and May 16, 1951:

Batavia Seismological Bulletin - Meteorological and Geophysical Service ----------July-Sept., 1949
Verhandelingen No. 38 - Forecasting rainfall in the periods ----------Dec.-Feb. and Apr.-June
No. 39 - " " ---------Dec.-Feb.
Barcelona Observatorio Fabra ----------1948, 1949

California bulletin of the Seismographic Stations ----1942, 1943 Apr.-Sept., 1944 Oct.-Dec., 1948 Jan.-Sept., 1949.

California Institute of Technology - Seis. Lab.
Bulletin ---------- 1949, 1950
Pasadena Preliminary Bulletin ---------- Sept., 1949 - Oct., 1950
Pacific Science Association - Standing Committee on Seismology. Checklist No. 1 - Current bulletins reporting instrumental readings. Pasadena, Calif. Dec. 4, 1950
Cleveland Seismological Observatory - John Carroll Univ. - Seismological Bulletin ---------- Apr-Dec, 1950 Jan-Feb 1951
Copenhagen - Geodaetisk Institut - Bulletin of the Seismological Station ---------- 1942, 1944, 1945 - 1947
Djakarta Department of Communications - Meteorological and Geophysical Service ---------- Jan.-March, 1950
Dublin, Ireland Seismological Observatory - Rathfarnham Castle ---------- April-Dec., 1950

Harvard University Seismograph Station	July-Dec, 1949 1950
Helwan Seismological Bulletin - Royal Observatory	March-Dec., 1950
International Seismological Summary	July-Sept, 1938 Jan-June 1939
Japan Central Meteorological Observatory	
Seismological Report	Feb.-Nov., 1950
Seismological Bulletin	1940-1943, 1947-1950
Papers in Meteorology and Geophysics	Dec., 1950
Vol. 1, No. 2-4 Published by the Meteorological Research Institute, Tokyo	
Jesuit Seismological Association - Preliminary Bull.	Aug-Dec,1940 1950
Kandilli Rasathanesi Bulletin Seismique Preliminaire	1941 - 1944, 1949, 1950 Jan-Mar. 1951
Ksara Observatoire - Republique Libanaise	1946 - 1947
Lisboa Seismological Observatory - Instituto Geofisico Do Infante D. Luiz	1946
Milano Del Seminario Arcivescovile - Osservatorio Di Fisica Terrestre	1949
Ottawa Seismological Bulletin - Dominion Obser.	Nov-Dec., 1949 1950
Perth Observatory - Seismologic Station Bulletin -	Sept-Dec, 1949 1950
Pittsburgh Seismological Observatory Bulletin	Jan.-Dec., 1950
Praha Seismological Bulletin - Institut Geophysique National	Apr-Dec., 1950 Jan-Feb, 1951
Reykjavik, Iceland Seismological Bulletin	1945 - 1949
Riverview College Observatory - Seismological Bull.	Jan.-Oct., 1949
Rome Istituto Nazionale di Geofisica	Mar-Dec, 1950 Jan-Feb, 1951
Schweizerisches Erdbebenbulletin	Mar-Dec, 1950 Jan, 1951
Strasbourg Institut De Physique Du Globe - Bulletin Seismique	Sept.-Oct., 1950
Strasbourg Bureau Central Seismologique - Union Geodesique Et Geophysique Internationale Bulletin Mensuel	Feb-Dec., 1950 Mar-Apr, 1951
Stuttgart Erdbebendienstes - Seismicher Bericht des Wurttembergischen	Oct-Dec., 1949 Jan-Sept, 1950
Tananarive Observatorie - Bulletin Seismique	July-Dec., 1949 1950
The Geophysical Magazine Vol. XXI, No. 3	March, 1950
Vol. XXI, No. 2	March, 1950
Vol. XXI, No. 4	Aug., 1950
Vol. XXII No. 1	Oct., 1950
Vol. XXII No. 2	Nov., 1950
Journal of the Meteorological Society of Japan -	Feb-Dec, 1950 Jan-Feb, 1951
The Oceanographical Magazine	March, 1950
The Results of Marine Meteorological and Oceanographical Observations	Jan.-June, 1947
Trieste Seismological Bulletin - Osservatorio Geofisico	Aug-Dec, 1950 Jan-Mar, 1951
Uppsala Meteorologiska Institutionen - Kungl. Universitetet	Vol. 27, 1949
U. S. Coast and Geodetic Survey - Seismological Bulletin	Oct.-Dec., 1945
U. S. Coast and Geodetic Survey, preliminary determinations of epicenter	No's. 46-50 to 103-50 S20-50 to S36-50
Wellington Seismological Observatory - Provisional Bulletin	1950
Seismological Reports	1948 Jan.-June, 1949
Zurich - Jahresbericht - des Erdbebendienstes der Schweiz	1949

The Geophysical Laboratory
State College, Pennsylvania
B. F. Howell, Jr., Director
J. W. Berg, Assistant

The Earthquake Station
of
The Pennsylvania State College

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

$\Phi = 40°48'N.$ $\Lambda = 77°52'W.$ $H = 390$ m

Geocentric coordinates (according to Gutenberg and Richter):

$A = 40°36'N.$ $\Lambda = 77°52'W.$ $H = +3$ km.

Instrumental Equipment: The Station has one horizontal seismograph of the Bosch-Omori type with 5 kg mass which was designed and constructed at the School. The pendulum is orientated N45E and records photographically, the distance from mirror to recording drum being 1 m and the recording speed 1.5 cm/min. The instrument constants are:

$T_0 = 6$ sec. $E : 1 = 4 : 1$ $V = 120$

Time Service: The time is controlled by a Spindler and Hoyer clock, which is compared twice daily with the NAA-Time signals from the U. S. Naval Observatory, Arlington. The clock movement is satisfactory enough to warrant an accuracy of time within one second.

Communications: Please address all communications to the

Geophysical Laboratory
School of Mineral Industries
State College, Pennsylvania, U. S. A.