SEISMOGRAPHIC REPORT
OF
SHUITSINGTAI SEISMIC STATION, NANKING.

Issued by the Geophysical Laboratsry,
National Geological Survey of Cninà,
942 Chukiang Road, Nanking 5, CHINA.

Jan. - Jun., 1948.

Location: λ: 118° 47.9' E, φ: 32° 02.8' N, h: 7 m.
Instruments: 1 100-kg Hori. Pendulum E-W Component,
1 100-kg Hori. Pendulum N-S Component.

Constants: T_E = 4.5 sec., M_E = 100 kg., V_{0E} = 165,

$(r/T_0^2)_E$ = 0.043, ε_E = .

T_N = 4.2 sec., M_N = 100 kg., V_{0N} = 175,

$(r/T_0^2)_N$ = 0.028, ε_N = .

T = Period of earth movement,
A = Unreduoed dcuble amplitude,
△ = Distance from epicenter.

No.	Date	Phase	Time GMT h m S	T ses	A mm.	△ deg.	Remarks
161	Jan. 15	eP	08 10 39			8.4°	
		eS	08 12 18				
		F	08 24 —				
162	Jan. 22	eP	12 58 47			8.3°	
		eS	13 00 25				
		F	13 13 —				
163	Jan. 26	P	14 15 32			21.9°	Epc.: 10°N, 122°E.
		S	14 19 31				(USCGS)
		L	14 21 05				
		F	15 12 —				
164	Jan. 27	i(P)	12 09 20				Small
		e	12 18 37				
		F	12 37 —				
165	Jan. 28	e	15 59 10				Trace
		F	16 05 —				
166	Jan. 30	e	08 50 57				Distant earthquake, only trace.
		F	09 41 —				
167	Feb. 4	eP	04 50 26			24°ca.	
		eS	04 54 42				
		eL	04 57 19				
		F	05 10 —				

No.	Date	Phase	Time GMT h m S	T sec	A mm.	△ deg.	Remarks
168	Feb. 9	P	13 09 51				
		i E	13 19 16				
		F	14 24 —				
169	Feb. 9	P	15 00 42				
		e	15 05 42				
		F	15 32 —				
170	Feb. 13	(e_1)	05 03 33				Small.
		e_1	05 14 50				
		F^2	06 53 —				
171	Mar. 1	i P_N	01 19 23			.36°	Deep-focus type, E-component lost.
		i_N	01 19 43				
		PP_N?	01 20 52				
		iS_N	01 25 01				
		$S\ S_N$	01 27 00				
		F_N	03 22 —				
172	Mar. 3	iP	09 13 06			11.2°	Felt at Hongkong.
		iS	09 15 18				
		iL	09 15 55				
		M_E	09 18 32	4	30		
		M_N	09 18 34	4	25		
		F	10 27 —				
173	Mar. 9	e	18 55 47				Trace
		eL	19 02 06				
		F	20 16 —				
174	Mar. 13	P	20 08 54			39.5°	E-W component small in comparison.
		S?	20 13 54				
		F	20 49 —				
175	Mar. 16	eP	02 46 19			19.5°	
		(S)	02 49 51				
		F	03 33 —				
176	Mar. 24	e_N	05 27 11				Trace
		F_N	06 08 —				E-W component lost.
177	Mar. 26	e	11 08 34				Small
		F	11 19 —				
178	Mar. 28	eP	06 03 18			8.8°	
		eS	06 04 57				
		F	06 13 —				
179	Apr. 12	e(P)	05 59 50				
		e(S)	06 00 56				
		F	06 10 —				
180	Apr. 12	e(P)	06 25 10				
		e(S)	06 26 16				
		F	06 35 —				

No.	Date	Phase	Time GMT h m S	T sec	A mm.	△ deg.	Remarks
181	Apr. 17	iP	16 14 51			16.7°	Felt strongly along the south coast of Japan. Epc.: 33° N, 135.5° E, (USCGS), probably further east.
		i_E	16 15 02				
		i_N	16 15 23				
		S	16 17 54				
		L_1	16 18 40				
		iL_1	16 19 10				
		M^2	16 19 34	6	39		
		M^1E	16 19 31	6	37		
		M^1N	16 20 56	8	49		
		M^2E	16 21 25	6	57		
		M^2N	16 27 00	10	12		
		M^3E	16 26 34	10	18		
		F^3N	17 53 —				
182	Apr. 19	(e_1)	16 13 30				Small near shock.
		e_2	16 14 34				
		F^2	16 22 —				
183	Apr. 20	eP	19 11 06			11°ca.	
		eS	19 13 11				
		F	19 26 —				
184	Apr. 21	(e)	00 58 49				Masked by microseisms.
		e	01 00 21				
		F	01 15 —				
185	Apr. 22	e_N	03 37 23				
		(e)	03 38 32				
		F	03 56 —				
186	Apr. 22	(e)	13 30 23				
		e_1	13 31 59				
		i_1	13 32 55				
		i_1E	13 34 15				
		F^2	13 37 —				
187	May 6	e?	02 23 32			5°ca.	
		(S)	02 24 37				
		M	02 24 42	1.2	15		
		F	02 33 —				
188	May 9	P	02 11 41			14°	Epc : 30°N, 129°E, (USCGS). Probably further north.
		S	02 14 17				
		L	02 15 08				
		M_E	02 16 45	4.5	16		
		M_N	02 15 43	4.5	21		
		F	03 02 —				
189	May 12	P	01 01 31			21.7°	Epc : 38° N, 142.5° E, (USCGS).
		S	01 05 24				
		F	01 50 —				
190	May 14	e	12 23 40				Trace
		F	13 43 —				
191	May 14	P	22 41 39			60°	Surface waves small in comparison. Epc : 54.5° N, 161° W, (USCGS).
		S	22 49 49				
		F	23 45 —				

No	Date	Phase	Time GMT h m S	T sec	A mm.	△ deg.	Remarks
192	May 23	ePn	09 12 41			6°	Epicenter near Chefoo, felt in Shantung Peninsula.
		P*	09 12 57				
		Pg	09 13 03				
		Sn	09 13 52				
		Sg	09 14 22				
		M_E	09 14 48	4	52		
		M_N	09 14 48	4	26		
		F	09 37 —				
193	May 25	P	07 15 03			18.5°	Off scale, stylus fell down. Severe earthquake near Li-hwa (30° N, 100.3° E), 800 said killed, much damage done.
		S	07 18 25				
		iL	07 19 38				
194	May 25	(e_1)	16 24 18				Small
		e_2	16 28 54				
		F	16 37 —				
195	May 25	e	19 47 02				Small
		i	19 51 46				
		F	20 03 —				
196	May 29	P	07 05 59			5.6°	Foreshock of No. 197.
		S	07 07 04				
		F	07 15 —				
197	May 29	ePn	14 03 13			5.6°	
		i(P*)	14 03 26				
		Sn	14 04 20				
		i	14 04 30				
		M_E	14 04 53	3.8	56		
		F	14 25 —				
198	Jun. 1	(e)	19 03 01				Trace
		F	19 30 —				
199	Jun. 5	(e)	08 06 54				Aftershock of No. 197.
		F	08 13 —				
200	Jun. 15	P	11 48 08			16.8°	Epc.: 33.5° N, 136° E, (USCGS).
		S	11 51 12				
		eL	11 52 17				
		F	12 22 —				
201	Jun. 27	P	00 12 27			18.6°	
		(S)	00 15 50				
		F	00 52 —				
202	Jun. 28	P	07 17 06			16°	Epicenter near Fukui(36°N, 136.3° E), thousands killed and wounded, properties severely damaged.
		eS	07 20 06				
		S	07 20 14				
		M_E	07 23 41	4	40		
		M_N	07 22 35	4.4	42		
		F	08 54 —				

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Y. S. Hsieh
Aug. 8, 1948.

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Jul. - Dec., 1948.

Location: λ: 118° 47.9' E, φ: 32° 02.8' N, h: 7 m.

Instruments: A. 1 I-type 100-kg Horizontal Pendulum E-W Component,
1 I-type 100-kg Horizontal Pendulum N-S Component,
B. 1 Wiechert 200-kg Horizontal Seismograph,
1 Wiechert 80-kg Vertical Seismograph.

Constants: A. T_E = 4.5 sec., M_E = 100 kg., V_{o_E} = 165,
$(r/T_o^2)_E$ = 0.043, ε_E = .
T_N = 4.2 sec., M_N = 100 kg., V_{o_N} = 175,
$(r/T_o^2)_N$ = 0.028, ε_N = .

B. Component	V_o	T_o		r/T_o^2
N	133	1.80	2.36	0.0046
E	133	2.03	1.02	0.0046
Z	74	1.76	2.80	0.0042

Abbreviations: I = I-type seismograph,
W = Wiechert seismograph,
T = Period of earth movement,
A = Unreduced double amplitude,
Δ = Distance from epicenter.

No.	Date	Phase	Instr., Comp.	Time GMT h m s	T sec.	A mm.	Δ deg.	Remarks
203	Jul. 7	e(P)	I,	02 22 45			15.2°	Epc.: 33°N, 136°E.(USCGS
		eS?	I,	02 25 44				
		F		02 54 --				
204	Jul. 10	e(P)	I,	07 47 16			6°ca	
		i	I,	07 48 26				
		F		07 58 --				
205	Jul. 21	e	I,	16 08 00				A train of surface wave
		F		16 15 --				
206	Jul. 30	eP	I,	21 19 54			8.5°	
		eS	I,	21 21 30				
		F		21 30 --				
207	Aug. 7	eP	I,	14 44 40			20.3°	Epc.: 34°N, 142°E.(USCG
		eS	I,	14 48 25				
		F		15 40 --				
208	Aug. 25	e	I,	07 35 19				Trace.
		F		08 14 --				

No.	Date	Phase	Instr., Comp.	Time GMT h	m	s	T sec.	A mm.	△ deg.	Remarks
209	Sept. 2	eP	I,	23	39	51			26.6°	Epc.: 10°N, 125°E. (USCGS)
	- 3	iP	I,	23	39	58				Deep-focus type: h = 700 km
		pP?	I,	23	40	20				
		PP	I,	23	40	45				
		PPP	I,	23	41	01				
		e	I,	23	44	01				
		eS	I,	23	44	13				
		iS	I,	23	44	25				
		sS	I,	23	44	58				
		F	I,	02	05	--				
210	Sept. 6	P	I,	03	46	16			1.6°ca	Local shock, epicenter
		S	I,	03	46	36				probably at Ho-Shan, Anhw
		M	I,E	03	46	44		5		
		M	I,N	03	46	43		8		
		F		04	00	--				
211	Sept. 6	e_1	I,	19	32	55				Felt at Taipeh, Taiwan.
		e_2	I,	19	34	21				
		e_3	I,	19	35	15				
		F		19	41	--				
212	Sept. 8	iP	I,	15	21	39			83.6°	Epc.: 21°S, 174°W.(USCGS)
		PcP	I,	15	21	50				South of Samoa Is.
		i	I,	15	23	14				
		iS	I,	15	32	03				
		PS	I,	15	32	44				
		L?	I,E	15	45	03				
		L?	I,N	15	43	52				
		F		16	40	--				
213	Sept.10	P	I,	13	54	05			25.2°	Epc.: 44°N, 146.5°E.(USCGS
		(PP)	I,	13	54	46				Surface waves comparativel
		(PPP)	I,	13	55	06				small.
		i	I,E	13	55	37				
		i	I,N	13	55	26				
		S	I,	13	58	32				
		L	I,	14	00	01				
		M	I,E	14	05	10	17	3		
		M	I,N	14	04	07	17	4		
		F		14	53	--				
214	Sept.16	e	I,	08	11	08			8.6°	Masked by microseisms.
		e(S)	I,	08	13	00				
		M	I,E	08	14	18	4	8		
		M	I,N	08	14	05	4	12		
		F		08	31	--				
215	Sept.24	eP	I,N	23	32	11			6.3°	Initial of E-component
		iS	I,	23	33	25				partially disturbed.
		M	I,N	23	34	42	5	9		
		F		23	58	--				
216	Sept. 25	e	I,	00	00	26				After-shock of No. 215.
		F		00	18	--				

No.	Date	Phase	Instr., Comp.	Time GMT h	m	s	T sec.	A mm.	Δ deg.	Remarks
217	Sept.26	eP	I,	04	43	13			7°	
		eS	I,	04	44	33				
		F		04	51	--				
218	Sept.28	iP	I,	21	41	53			25°	Epicenter near Sakhalin
		(pP)	I,	21	42	09				(with UCCLE eP: $02^h\ 48^m\ 12^$
		PP?	I,E	21	42	25				Surface waves relatively s
		iS	I,	21	46	12				
		i	I,	21	46	50				
		SS?	I,	21	48	04				
		L	I,	21	48	25				
		M	I,E	21	50	40	4	5		
		M	I,N	21	50	00	4	8		
		F		22	26	—				
219	Oct. 1	e(S)?	I,	03	14	46				Confused by microseisms.
		F		03	35	--				
220	Oct. 4	P	I,	05	59	01			10.3°	Off east coast of Taiwan,
		S	I,	06	00	56				strongly felt at Hwalen.
		M_1	I,E	06	01	23	4	8		
		M_1	I,N	06	01	52	4	33		
		M_2	I,E	06	02	03	4	24		
		M_2	I,N	06	02	49	4	30		
		F		06	23	—				
221	Oct. 5	P	I,	20	20	56			49.6°	Epc.: 38°N, 58°E.(USCGS)
		PcP?	I,	20	22	15				
		PP	I,	20	22	53				
		PPP?	I,	20	23	51				
		S	I,	20	28	04				
		SS?	I,	20	31	35				
		L	I,	20	36	24				
		M	I,E	20	45	13	15	25		
		M	I,N	20	44	45	15	34		
		F		22	04	—				
222	Oct. 8	eP	I,	19	05	15			15.2°	Epicenter near Chaotung
		eS	I,	19	08	04				(27.3°N, 103.1°E), Yunna
		L	I,	19	08	41				310 houses damaged, 43 pe
		M	I,E	19	11	40	5	14		injured and 3 killed, fis
		M	I,N	19	09	47	5	16		produced in mountainous r
		F		19	34	--				
223	Oct. 10	eP	I,	02	10	05			15.2°	Epicenter same as above.
		eS	I,	02	12	53				
		L	I,	02	13	49				
		M	I,E	02	15	59	4	11		
		M	I,N	02	14	29	4	18		
		F		02	38	--				
224	Oct. 18	e	I,	11	32	07				
		F		11	50	--				
225	Oct. 23	eP		04	49	05			9.4°	
		S	I,	04	50	56				
		L	I,	04	51	26				

No.	Date	Phase	Instr., Comp.	Time GMT h m s	T sec.	A mm.	deg.	Remarks
		M	I,E	04 52 18	4	23		
		M	I,N	04 52 22	4	15		
		F		05 20 --				
226	Oct. 23	e	I,	07 12 44				
		F		07 24 --				
227	Nov. 23	(eL)	W,	05 35 09				A train of surface waves.
		F		05 38 --				
228	Nov. 28	P		21 47 57				
		eS?	I,	21 51 50				
		F		22 11 --				
229	Dec. 6	e		02 27 49				Very small.
		F		02 38 --				
230	Dec. 6	P		14 11 27				8.5° Slightly felt at Tientsin.
		S		14 13 07				
		M	I,E	14 14 39	6	5		
		M	I,N	14 14 35	3	6		
		F		14 44 --				
231	Dec. 7	eP		08 20 52				8.2° Beginning masked by micro-
		eS?		08 22 29				seisms.
		F		08 34 --				
232	Dec. 14	(eS)?	I,	10 42 20				Small.
		F		10 53 --				
233	Dec. 14	eP?	I,	16 10 37				9°ca
		S?	I,	16 12 19				
		M	I,E	16 13 25	4	6		
		M	I,N	16 13 45	4	6		
		F		16 31 --				
234	Dec. 14	e?	I,	21 29 30				Trace.
		F		21 38 --				
235	Dec. 19	e		05 20 18				Very small.
		F		05 35 --				
236	Dec. 21	P_1		23 09 26				7.5° Epicenter off the east coast
		P_2		23 09 40				of Taiwan, generally felt in
		S_1		23 10 51				Taiwan Island.
		L_1		23 10 54				At least two shocks occurred
		S_2		23 11 05				almost simultaneously.
		L_2		23 11 08				
		M	I,E	23 12 30		15		
		M	I,N	23 12 12		12		
		M	W,E	23 12 25	1	8		
		M	W,N	23 12 23	1	8		
		F		23 28 --				

No.	Date	Phase	Instr., Comp.	Time GMT h m s	T sec.	A mm.	Δ deg.	Remarks
237	Dec. 23	e_1	W,E	11 16 02			7°ca	
		e_2	W,E	11 17 19				
		F		11 23 --				
238	Dec. 23	e	W,E	11 49 16				
		F		11 57 --				
239	Dec. 23	e	W,E	14 19 53				
		F		14 24 --				
240	Dec. 23	e_1	W,E	15 13 04				
		e_2	W,E	15 16 48				
		i	W,E	15 17 34				
		M	W,E	15 17 48	2	7		
		F		15 28 --				
241	Dec. 24	eP?		08 53 52			13.8°	
		eS		08 56 36				
		M	I,N	08 58 27	4	3		
		M	W,E	08 57 11	2	8		
		M	W,N	08 57 13	2	3		
		F		09 22 --				
242	Dec. 27	e?	I,	09 41 24				Trace.
		F		09 52 --				
243	Dec. 29	e	I,	08 42 47				Trace.
		F		08 55 --				
244	Dec. 29	e	W,	11 37 31				
		F		11 42 --				
245	Dec. 29	e?	I,	17 23 41				Masked by microseisms.
		e_1	W,	17 25 02				
		e_2	W,	17 26 13				
		F		17 37 --				

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