

	Z	35.2	5.96	?	.013
due	N	99.5	5.37	..5	.0065
Jan.10	E	98.0	5.43	5.3	.0044

	Z	11.05	10.6	7.03	.002
due	N				
Nov.16	E				
1932.					

January 1933.

--1--

No.	Date	Comp.	Phase	G. M. T. h m s	Tp s	A μ	Δ km	Remark
277	1, I	IIr	iP iPP iPP?? i1 i2 i3 F	8 59 57 9 00 29 45 03 02 50 04 45 10 49 --	6 7 8	+3 -5 -9	3097	condensation
278	3, I	IIr	iP iPP? S L M1 M2 M3 F	15 31 45 32 11 35 46 37 58 40 21 41 28 42 34 15 56 --	5 5 14 14 12	+2 -3 -25 +26 -20	2468	condensation
279	3, I	IV	iP i(L)? F	22 44 29 47 23 23 00 --				dilatation
280	4, I	IIr	P iS L F	1 30 29 35 23 39 04 3 23 --			3319	dilatation Light too weak, main phase uncertain.
281	4, I	Ia	P S i F	4 09 30 17 20 58 5 16 --			5155	dilatation Light too weak, main phase uncertain.
282	5, I	Ir	e i F	13 58 48 14 02 19 15 --				
283	5, I	Ir	e eS? F	18 08 00 12 38 26 --			2959	
284	7, I	IIIr	P iP iP? iS I M1 M2 F	4 11 17 26 42 15 17 17 25 19 25 20 00 6 58 --	5 19 15	+3 -109 -85	2456	condensation. At Minute eclipse. At minute eclipse. Out of paper on + side.
285	7, I	Iv	P iS(L)? F	8 16 04 17 02 27 --			578	Masked by micro.

Pei-An-Ho, W. of Peiping,
China
λ: 116° 5' 45"; φ: 46° 3' 55"
h: 115m; Foundation: Granite

THE CHUFENG SEISMIC STATION
of the
GEOLOGICAL SURVEY OF CHINA

Instruments: 200 kg. horiz.,
80 kg. vert.
Weichert;
Galitzin-Wilip.

Weichert	V	T ₀	ε	γ/T ₀ ²
Z	85.2	5.96	?	.013
due N	99.5	5.27	3.5	.0065
Jan. 10 E	98.0	5.43	3.8	.0044

Galitzin-Wilip	T ₁	T	μ ²	πl/kA
Z	11.05	10.5	7.03	.002
due N				
Nov. 16 1932. E				

January 1933.

--2--

No.	Date	Comp. char.	Phase	G. M. T. h m s	Tp s	A μ	Δ km	Remark
286	3, I	IIr	iP PP S L M ₁ M ₂ F	6 33 33 34 00 37 30 40 02 42 23 43 36 7 48 --	3 14 13	+2 -6 -7	2417	condensation after shock of 284.
287	8, I	Ir	eL F	18 40 15 58 --				Initials masked by micro.
288	9, I	IIr	iP iPP i iS? iSS i ₂ F	2 08 21 09 34 10 45 13 43 15 57 16 19 3 40 --	7 8 8 8 16	+5 -5 -3 -16		condensation May be a twin-earth- quake after i ₂ undistin- guishably Superposed.
289	10, I	Ir	eP S? I M F	3 11 37 14 17 47 19 40 --	 11	 -2	1768	
290	14, I	Iv	P i i F	5 14 41 15 45 17 31 27 --				dilatation Masked by micro.
291	15, I	Iv	e i F	2 38 19 59 44 --				Masked by micro.
292	15, I	Iu	iP i iS i ₁ i ₂ L ₁ L ₂ F	18 11 16 52 19 24 20 03 23 25 30 29 21 19 08 --	5 7	+2 +1	6476	condensation
293	17, I	Iv	e iS i iL M F	0 43 30 45 59 46 20 41 47 31 1 00 --	 4 4 8	 +4 +3 +3	1471	Masked by micro.
294	17, I		eL F	5 27 21 40 --				I wave of small amplitude.

Per-An-Ho, W. of Peiping,

China

$\lambda: 116^{\circ} 5' 45''$; $\phi: 46^{\circ} 3' 55''$

h: 115m; Foundation: Granite

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of the

GEOLOGICAL SURVEY OF CHINA

Instruments: 200 kg. horiz.,

80 kg. vert.

Weichert;

Galitzin-Wilip.

Weichert	V	T ₀	ϵ	τ/T_0^2
Z	85.2	5.96	?	.013
due N	99.5	5.37	3.5	.0088
Jan. 10 E	98.0	5.43	3.8	.0044

Galitzin-Wilip	T ₁	T	μ^2	$\pi l/kA$
Z	11.05	10.6	-.03	.002
due N				
Nov. 16 1932. E				

January 1933.

--3--

No.	Date	Comp. char.	Phase	G. M. T. h m s	Tp s	A μ	Δ km	Remark
295	17, I	IV	e S L F	16 03 25 06 11 07 34 27 --			1628	
296	17, I	Iu	P PP? el? F	19 00 46 04 31 33 13 20 11 --				After PP, the seismogram becomes very flat. L, of very small amplitude also.
297	17, I	IIr	iP S L M F	22 20 58 24 44 26 13 27 15 23 08 --	4 6	+2 +5	2290	condensation
298	18, I	I?	e F?	8 57 04 9 30 --				Masked by micro.
299	18, I		eL F	10 00 44 11 00 --				L wave of very small amplitude, may be the same earthquake of 298.
300	18, I	IV	e F	17 23 22 37 --				
301	21, I	IIr	iP S L M F	16 28 21 32 10 34 19 36 10 17 20 --	10	+14	2321	dilatation
302	21, I	Iu	P' PP PcPcS i PPP ScPcS i ScPcSP? ScPcPcS PS PPP SS eL M W2? F	19 34 12 37 38 05 39 47 40 46 41 37 42 44 33 46 29 47 57 48 41 57 06 20 05 57 17 59 50 18 23 10 --	 10 12 16 16	 -2 +3 -40	ca. 16300	condensation Greater than 180°
303	23, I		e? F	8 53 57 9 00 --				

Pei-An-Ho, W. of Peiping,
China

$\lambda: 116^{\circ} 5' 45''$; $\phi: 46^{\circ} 3' 55''$

h: 115m; Foundation: Granite

THE CHIUFENG SEISMIC STATION

of the

GEOLOGICAL SURVEY OF CHINA

Instruments: 200 kg. horiz.,

80 kg. vert.

Weichert;

Galitzin-Wilip.

Weichert	V	T ₀	ξ	γ/Γ_0^*
Z	85.2	5.96	?	.013
due N	99.5	5.37	3.5	.0065
Jan. 10 E	98.0	5.43	3.8	.0044

Galitzin-Wilip	T ₁	T	μ^*	$\pi l/kA$
Z	11.05	10.6	-.03	.002
due N				
Nov. 15 1932. E				

January 1933.

--4--

No.	Date	Comp. char.	Phase	G. M. T. h m s	T _p s	A μ	Δ km	Remark
304	23, I	Iv	1P e3? F	18 25 14 23 29 57 --	5	-2	1344	dilatation
305	23, I	Ir	eP e3? M F	19 45 42 49 35 52 43 20 00 --	13	+3	2369	
306	24, I		e F	10 51 58 11 00 --				Very small
307	27, I		e? F	13 45 07 58 --				Very small
308	27, I	Iu	1P i is F	22 49 17 48 23 00 00 0 30?--			9711	dilatation Min. marks failed; arrival times probable.
309	29, I	Iv	P e3? eL M F	18 09 05 12 26 14 20 16 46 37 --	13	+5	2033	
310	30, I		e F	20 40 40 52 --				Very small
N.B. The data were taken from Galitzin-records, otherwise mentioned.								
B. P. Lee Seismologist								

China
λ: 116° 5' 45"; φ: 46° 3' 55"
h: 115m; Foundation: Granite

of the
GEOLOGICAL SURVEY OF CHINA

80 kg. verr.
March 1933

Ref 3202

Weichert		V	T ₀	ξ	γ/T ₀ ²
	Z	86.0	5.93	---	.0153
due	N	96.5	5.36	3.4	.0071
Mar. 1	E	95.8	5.39	3.8	.0000

Galitzin-Wilip	T ₁				
	Z	11.05	10.6	-.03	.002
due	N				
Nov. 16	E				
1932.					

March 1933.3

--8--

No.	Date	Comp. char.	Phase	G. M. T. h m s	Tp s	A μ	Δ km	Remark
336	1, III	Ir	eP S i1 i2 F	16 17 05 21 38 22 38 23 09 46 --			2889	19h-0hGali., no service due to bulb burnt up.
337	2, III		F	4 30 44 45 --				Trace of surface wave.
338		IIIr	P iPE,N iSE,N eLN eLE ME MN	17 35 47 54 39 49 41 29? 33 44 16 21 19	5 5 19 19	-18 -71	2481	Dilatation Galitzin out, shortly after P. Disater earthquake of Japan. Az. N80.5°E Epi. 40°N, 145°E. M, Ca. 4 mm. Wiechert, out of limit.
339		I	eP? S eL? M F	22 39 31 43 20 46 10 47 42 0 00 --	18		1859	Masked by moda.
340	3, III		eL? M F	0 30 08 32 29 1 26 --	12	+2		Initials undistinct.
341		Ir	eP i S F	2 24 53 25 24 29 13 3 12 --	6	-3	2723	
342		IIr	iP S L M1 M2 F	4 42 36 46 30 48 10 51 51 52 47 6 09 --	5 14 12	+13 +12	2382	Condensation At minute eclipse.
343		Iv	e S(L)? F	6 17 23 19 00 30 --			906	
344		IIIr	iP iS iL M1 M2	9 17 32 21 13 23 15 24 51 25 59	15 12	-56 +30	2222	Condensation Dilatation

Weichert	V	T ₀	ϵ	γ/Γ_0^2
Z	96.0	5.93	---	.0153
due N	96.5	5.36	3.4	.0071
Mar. 1 E	95.8	5.39	3.8	.0100

Galitzin-Wilip	T ₁	T	μ^2	$\pi l/kA$
Z	11.05	10.6	-.03	.002
due N				
Nov. 16 E				
1932.				

March 1933.

--9--

No.	Date	Comp. char.	Phase	G. M. T. h m s	T _p s	A μ	Δ km	Remark
345	3, III	IIr	P S L M ₁ M ₂	9 43 23 47 06 49 03 51 49 53 36	15 12	-19 -12	2247	Dilatation Masked by coda.
346		Ir	eP S M	10 36 59 40 37 45 26	15	+7	2185	Masked by coda.
347		Ir	eP? S? M	12 01 17 05 09 09 36	16	+6	2358	Masked by coda.
348		Ir	iP S? M F	12 18 41 22 29 28 04 17 08 --	13	+3	2318	Condensation At minute eclipse.
349		Ir	eP eS iL? M F	15 06 53 10 43 12 22 15 14	11	-5	2333	
350		I	e M	15 55 31 16 04 17				Masked by micro.
351		Ir	eP S M F	16 16 35 20 29 25 42 17 02 --			2382	At minute eclipse.
352		Ir	e eS? M	18 52 02 55 49 19 00 49			2299	
353		Ir	P S eL M ₁ M ₂	19 12 07 16 01 18 35 20 29 21 47	16 11	+9 -4	2382	Condensation
354			e M F	19 55 14 20 03 30 18 --				
355		Ir	e eS? M F	20 25 05 29 02 33 40 21 04 --	15	+3	2419	
356	4, III	Ir	e? eS? M F	6 49 02 53 06 57 41 7 32 --			2506	Very small amplitude.

Pei-An-Ho, W. of Peiping,
China

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h: 115m; Foundation: Granite

THE CHUFGENG SEISMIC STATION
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GEOLOGICAL SURVEY OF CHINA

Instruments: 200 kg. horiz.,
80 kg. vert.
Weichert;
Galitzin-Wilip.

Weichert	V	T ₀	ϵ	τ/Γ_0^2
Z	86.0	5.93	---	.0153
due N	96.5	5.36	3.4	.0071
Mar. 1 E	95.8	5.39	3.8	.0100

Galitzin-Wilip	T ₁	T	μ^2	$\pi l/kA$
Z	11.05	10.6	-.03	.002
due N				
Nov. 16 1932. E				

March 1933.

--10--

No.	Date	Comp. char.	Phase	G. M. T. h m s	T _p s	A μ	Δ km	Remark
357	4, III		F	8 35 18 42 --				Trace of surface wave.
358		IV	e? eS? F	18 14 49 17 18 19 02 --			1472	
359		IV	e? F	20 36 27 50 --				At minute eclipses
360			eL F	22 27 04 39 --				Very small amplitude.
361	5, III		eL F	1 37 45 46 --				Very small amplitude.
362		IV	P i F	8 27 51 29 34 9 38 --	8			Dilatation
363		I	e M F	20 55 51 21 01 09 13 --	15			
364	6, III	IIr	P i iS i iL? M F	13 11 03 15 15 40 16 07 18 40 21 46 58 --	5 6 7 8 10	+3 +4 +2 +2 +7	2945	3 ^h -8 ^h Gal., no service due to clockwork stopping.
365			e F	22 55 55 23 04 --				Very small waves.
366	10, III	Ir	e? eL M F	7 39 40 47 04 48 42 8 06 --	15			5 ^h (7th)-3 ^h (8th) Gal., no service due to bulb burnt out.
367	11, III	IIu	P SoPcS PS eL1? L2 M1 M2 M3 M4 M5 F	2 07 16 17 52 20 28 39 30 43 07 49 32 54 13 56 57 42 3 03 13 4 09 --	6 15 17 15 16 15	ca. 10000 +6 +6 -6 +7 +7		Condensation Disater earthquake of Los angeles, U. S. A.
368			F	7 41 23 8 09 --				Surface wave of very small amplitude.

Pei-An-Ho, W. of Peiping,
China
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THE CHUFENG SEISMIC STATION
of the
GEOLOGICAL SURVEY OF CHINA

Instruments: 200 kg. horiz.,
80 kg. vert.
Weichert;
Galitzin-Wilip.

Weichert		V	T _o	ξ	γ/T _o ²
due Mar. 12	Z	86.5	5.93	---	.0048
	N	101	5.33	3.4	.0060
	E	95.0	5.41	3.5	.0096

Galitzin-Wilip	T ₁	T	μ ²	πl/kA
Z	11.05	10.6	-.03	.002
N				
E				

due
Nov. 16
1932.

March 1933.

--11--

No.	Date	Comp. char.	Phase	G. M. T. h m s	Tp s	A μ	Δ km	Remark
369	11, III	IIr	iP i1 i2 S L? M1 M2 M3 M4 M5 M6 F	14 27 17 41 29 35 31 29 33 25 37 44 39 54 40 53 43 21 44 36 45 51 17 ? --	7 8 7 14 14 14 13 12 12	-4 +5 +2 -21 +23 -24 -17 -12 -10	2623	Condensation
370		Iv	PE SE LE F	19 37 30 39 56 41 34 20 ? --			1444	Galitzin record missed. 19 ^h -21 ^h Gali., no service due to bulb burnt out.
371	12, III	Iv	eP F	0 21 54 40 --				
372		Ir	eP? S M F	5 10 29 14 31 19 08 6 15 --	15	+4	2481	Masked by micro.
373	13, III	Ir	eP S M1 M2 F	7 19 44 23 33 29 03 30 44 8 06 --	14 12	+3 +3	2321	
374			e? F	16 05 37 27 --				Very small amplitude.
375	14, III		e? F	1 43 50 3 ? --				Very small amplitude.
376			e? F	13 08 37 36 --				4 ^h -8 ^h Gali., no service due to clockwork stopping.
377		Ir	eP S(L)? F	16 13 35 17 13 39 --				
378	15, III	Iu	iP ScPcS? F	5 11 15 22 12 6 50 --			ca. 10000	Condensation 9 ^h -13 ^h Gali., no service due to clockwork stopping.
379		Iu	e? L F	16 13 29 25 56 17 06 --				Very small amplitude.

Pei-An-Ho, W. of Peiping,
China
 $\lambda: 116^{\circ} 5' 45''$; $\phi: 46^{\circ} 3' 55''$
h: 115m; Foundation: Granite

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of the
GEOLOGICAL SURVEY OF CHINA

Instruments: 200 kg. horiz.,
80 kg. vert.
Weichert;
Galitzin-Wilip.

Weichert	V	T ₀	ξ	γ/Γ_0^2
Z	86.5	5.93	---	.0048
due N	101	5.33	3.4	.0060
Mar. 12 E	95.0	5.41	3.5	.0096

Galitzin-Wilip	T ₁	T	μ^2	$\pi 1/kA$
Z	11.05	10.6	-.03	.002
Novduel 6 N				
1932. E				

March 1933.

--12--

No.	Date	Comp. char.	Phase	G. M. T. h m s	Tp s	A μ	Δ km	Remark
380	16, III	Ir	e? M? F	9 09 32 17 26 47 --				Masked by micro.
381	17, III	IIIr	iP i iPP iS i eL? M ₁ M ₂ M ₃ M ₄ M ₅ F	16 02 01 03 27 43 08 45 10 10 12 40 16 11 17 11 47 18 28 20 04 19 30 --	10 10 8 12 18 18 16 12 15	-3 -5 +3 +13 -71 -89 +86 +45 -53	4945	Condensation
382		IIr	P i1 i2 S i1 i2 eL M ₁ M ₂ M ₃ M ₄ M ₅ F	19 39 15 40 51 41 49 44 36 46 13 51 49 21 54 25 55 33 57 44 58 59 20 01 47 22 56 --	10 11 17 16 17 15 17	-5 +5 -21 +28 +33 -24 +28	3575	Condensation At minute eclipse.
383	18, III	Iu	eP ScPcS? M ₁ M ₂ F	3 25 01 36 10 4 18 06 23 42 5 35 --	28 20	ca.	10000	Masked by micro.
384		Ir	iP i S i eL? M ₁ ? M ₂ F	15 55 55 56 28 59 35 16 00 25 02 21 03 45 05 19 46 --	6 6 11 11 12	+3 +3 -4 +4 -4	2210	Dilatation At minute eclipse.
385		Iv	eP iS(L) F	17 37 42 39 09 54 --				Masked by micro.
386			F	21 38 31 53 --				Surface wave of small amplitude.

The Chiofeng Seismic Station acknowledge with thanks the receipt of the following publications, from March to May, 1933.

U.S. Survey, Hawaii	The Volcano Letter Jan.-March 1933.
Zi-Ka-Wei	Bulletin: Feb.-March 1933.
	Nota Su una onda Lunga. By E. Gherzi S. C.
	Note Sur Les ondes Longues Z. By E. Gherzi S. J.
Uccle	Bulletin: July-Dec. 1932.
Wien	" : May-Dec. 1932, Jan. 1933.
Graz	" : April-June 1932.
Stuttgart	" : July-Dec. 1932.
Zürich	Jahresbericht 1931.
Göttingen	Bulletin. Aug.-Dec. 1932.
Scoresby Sund	" : Jan.-Dec. 1929, Jan.-June, 1930.
Tananarive	" : July-Sept. 1932.
Apia	" : Feb.-Mar., Oct., 1931, Jan.-Mar. 1933.
Ivigtut	" : Aug.-Dec., 1929, Jan.-Dec. 1930.
Riverview	" : Feb.-March 1933.
Batavia	" : Jan.-March 1933.
Wellington	" : Jan.-March 1933.
Osaka	" : Jan. 1933.
Kobe	" : July-Sept. 1932.
Nanking	" : Oct.-Dec. 1932.
Hongkong	" : Feb.-April 1933.
	Meteorological report of March 1933.
Iamberg	Bulletin: May-Sept. 1932.
Pasadena	" : Jan.-Feb. 1933.
	Preliminary notice earthquake of March 10, 1933.
Kew	Bulletin. March 1933.
Jena	Seis. Registrierungen 1931-1932.
	Beziehungen Zwischen Erdbebenforschung und
	Geologie. Von A. Sieberg
	Für Mechanik tektonischer Vorgänge. Von
	A. Sieberg
Manila	Bulletin: Jan.-June 1932.
	Corrections to wireless times signals cavite
	P.F. Jan.-April 1932.
Georgetown	Bulletin: March 1933.
Buffalo	" : Sept.-Dec. 1932.
La Paz	" : Jan.-Aug. 1932.
Little rock	" : Oct.-Dec. 1932.
Florissant	" : Dec. 1932, Jan. 1933.
St. Louis	" : Jan.-Feb. 1933.
J.S.A.	" : March-April 1933.
Ottawa	" : March- 1933.
Oxford	Seismological Summary Jan. March 1929.
Paris St. Maur	Bulletin: Feb. 1933.
Strasbourg	" : Feb. 1933.
Hamburg	Einige Korrelationen Zwischen seismischer Bodenbewegungen in Hamburg und der Brandung in West und Nordenropa. Von E. Rams
Uni. Tokyo	The S. Atlantic Earthquake of June 27, 1929, as Registered at Tokyo-An Observation of Rigid waves transmitted Across the Earth's Inner core. By A. Imamura
	Japanese Journal of Astronomy and geophysics. Vol. X No. 2 & 3.
	A portable Horizontal Pendulum Seismometer. By Fuykino Kishimoto.
	On the Tsunamis of N-E. Japan, of March 2, 1933. By A. Imamura, M.I.A.
	On coastal deformation in West-central Kii Peninsula. By A. Imamura, M.I.A.
	On the Incidence of the Initial Motion observed angle at Fongo and Mitaka. By Tekeo Suzuki
	On crustal deformations Preceding Earthquakes. By A. Imamura (2 copies)

June 7, 1933.

S. P. Lee, Superintendent.

Pei-An-Ho, W. of Peiping,
China

 $\lambda: 116^{\circ} 5' 45''$; $\phi: 40^{\circ} 3' 55''$
h: 115m; Foundation: Granite

THE CHIU-FENG SEISMIC STATION

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GEOLOGICAL SURVEY OF CHINA

Instruments: 200 kg. horiz.,
80 kg. vert.
Weichert;
Galitzin-Wilip.

Weichert	V	T ₀	ξ	γ/T_0^2
due Z	00.7	5.38	2.3	.0066
N	96.1	5.40	3.7	.0110
May 3 E	14			

Galitzin-Wilip	T ₁	T	μ^2	$\pi l/kA$
due Z	1.05	10.88	-0.04	207 ⁻⁵
N				
May 15 1933 E				

May - Dec 1933.

Ref 3223

May, 1933.

No.	Date	Char. Char.	Phase	G. M. T. h m s	T _p s	A μ	Δ km	Remark
419	1, V		e F	10 34 39 53 --				Trace
420		Ir	iP eS eL? M ₁ M ₂ F, overlapped by next quake.	18 35 31 39 56 42 51 45 35 46 56	15 12	-4 -3	2790	Condensation
421		Iu	iP eS? eL? M F, overlapped by next quake.	18 58 39 19 05 41 14 01 19 36	20	-9	5278	Dilatation
422		Ir	iP S eL M ₁ M ₂ M ₃ F	19 56 30 20 00 56 04 36 06 10 55 07 53 21 37 --	18 15 14	-13 +11 -10	2803	Condensation
423		Ir	P eS M F	23 17 49 21 42 28 00 0 00 --			2370	Condensation
424	2		e F	16 38 13 17 05 --				Very small
425	3	Iv	e? M F	13 02 37 08 25 26 --	10	-2		
426		Iv	iP eS i i(M) F	23 34 51 38 08 40 20 41 58 0 06 --	12	-4	1934	Condensation
427	5		e? F	4 52 21 5 15 --				Trace Masked by micro.
428			e? F	11 59 39 12 05 --				Trace
429	6		e? F	5 55 05 6 04 --				Trace Masked by micro.
430	7		e F	16 19 53 57 --				Trace

The Chiufong Seismological Bulletin (Cont.)

May, 1933

18

No.	Date	Char.	Phase	G.M.T.	Tp	Amu	km.	Remark
431	8,V	Iu	eP i(M) F	10 53 14 11 48 17 12 36 --	18	+6		
432	12	Ir	eP S eL? M1 M2 M3 F	16 15 28 19 23 21 44 24 05 25 05 27 14 58 --	9 10 8	-3 +3 +2	2395	
433	16	IIu	eP iPP? S PS M1? M2 M3 M4 F	1 19 40 21 33 23 01 25 35 23 37 03 37 11 38 00 6 00?--	12 12 12 14	-30 +36 -18 +21	6649	
434			eP F	16 49 18 17 ? --				Trace
435	18	Iu	eP i eS? L M1 M2 M3 F	0 01 59 03 24 09 46 14 26 17 08 18 56 20 23 1 38 --	16 13 15	+11 -7 -7	6095	
436		Iv	eP F	10 41 08 56 --				
437	19		e F	17 28 51 49 --				Trace
438		Iu	P i eL? M1 M2 M3 F	18 18 30 30 12 59 30 19 14 03 16 38 21 07 20 21 --	19 17 17	-13 +13 -10		Condensation
439	20	Iu	iP F	4 51 15 6 21 --				Condensation
440			e F	19 21 11 48 --				Trace
441	21	Ir	e eS F	12 00 09 04 24 49 --			2633	
442			e F	22 01 15 23 --				Trace

The Chungking Seismological Bulletin (Cont.)

May, 1933 to June, 4

19

No.	Date	Char.	Phase	G.M.T.	T _p	Amu	km.	Remark
443	23, V	Iv	eP e(S)? eL M F, overlapped by next quake.	16 40 07 43 14 44 58 47 55	14	+12	1879	Initials, very small.
444		Iv	eP eL? M F	16 55 25 17 00 12 02 24 23 --	14	+9		
445	24		e F	4 40 18 57 --				Trace
446	27		e F	4 46 44 5 23 --				Trace
447			eP? M F	22 46 53 57 41 23 34 --	17			Initials uncertain.
448	30		e(L) F	12 56 02 13 28 --				Trace of surface waves.
449		Iv	eP eS? M F	13 57 46 14 01 06 05 21 22 --	12	+3	1978	
450	1, VI		e? F	17 40 36 18 11 --				Trace
451	2	IIIV	iP iS L M ₁ M ₂ F	7 42 23 45 31 47 09 49 25 52 14 8 25 --	5 15 13	+3 -115 +13	1849	Condensation Out of paper on side.
452		Iu	e F	12 29 08 13 14 --				Trace
453	4	IIv	iP i ₁ i ₂ iS iL M ₁ M ₂ M ₃ F	17 12 50 13 16 59 15 42 17 21 19 26 21 26 24 22 19 03 --	8 5 7 7 14 9 10	+4 +4 +4 +2 -25 +19 +11	1687	Condensation

P.S. The above data are taken from Gali., if not specially mentioned.

June 7, 1933.

S. P. Lee, Superintendent.

Pei-An-Ho, W. of Peiping,
China

$\lambda: 116^{\circ} 5' 45''$; $\phi: 40^{\circ} 3' 55''$

h: 115m; Foundation: Granite

THE CHIU-FENG SEISMIC STATION

of the

GEOLOGICAL SURVEY OF CHINA

Instruments: 200 kg. horiz.,
80 kg. vert.
Weichert;
Galitzin-Willip.

Weichert	V	T ₀	ξ	γ/T_0^2
due Z	--	--	--	--
N	101.7	5.36	3.8	.0070
June 1 E	100.1	5.29	3.7	.0104

Galitzin-Willip	T ₁	T	μ^2	$\pi l/kA$
due -Z	11.05	10.88	-0.04	207 ⁻⁵
N				
May 15 1933 E				

June, 1933

20

No.	Date	Char.	Phase	G. M. T. h m s	T _p s	A μ	Δ km	Remark
454	4, VI		e F	13 49 27 14 35 --				Very small
455	6	IIr	iP S L ₁ L ₂ M ₁ M ₂ F	2 34 03 38 54 41 27 42 19 46 08 48 16 4 10 --	18 12	+25 -8	3131	Condensation Felt in Manila.
456			e? M F	6 50 17 7 02 17 30 --	17			Masked by micro.
457	7		e F	6 00 09 7 00 --				Very small
458		IIIr	iP PP i iS iL M ₁ M ₂ M ₃ F	11 50 22 39 51 01 53 52 55 54 57 47 58 36? 59 45 13 34 --	6 6 7 8? 6? 6?	-3 -6 -3 -45 +41 +27	2100	Dilatation Azimuth: W 47°S. Epi.: 25.2°N, 101.9°E.
459	8	Ir	iP S L M ₁ M ₂ M ₃ F	18 15 33 19 29 22 11 24 25 25 25 26 23 20 10 --	16 13 14	-19 -11 -9	2407	Condensation.
460	11		e F	13 21 59 46 --				Trace
461			eL F	13 54 50 14 30 --				Train of surface waves.
462	12	Iv	e? M F	15 55 24 59 13 16 27 --	10	+2		Initial uncertain
463		Ir	P eS eL M F	21 12 48 16 25 18 21 21 03 58 --	14	+6	2173	Condensation

The Chiufeng Seismological Bulletin (Cont.)

June, 1933

21

No.	Date	Char.	Phase	G.M.T.	T _p	A _{mu}	km.	Remark
464	13, VI	Iir	iP S L M ₁ M ₂ F	20 38 07 42 01 44 34 46 13 47 49 22 18 --	17 12	+30 +12	2382	Condensation No time mark.
465		Iu	P e eL? M ₁ M ₂ M ₃ M ₄ F	22 29 31 37 38 46 58 52 22 55 10 56 30 58 32 0 05 --	8 11 15 14	-3 -5 -8 +7		Condensation No time mark. Probably two shocks superposed each other. Main phase showing the same type of the above one.
	14							
466			e? M F	20 48 08 55 55 21 20 --	13	+2		Very small
467	18		e F	1 51 35 2 15 --				Very small
468			P i e(L) F	4 06 34 17 19 35 47 5 50 --				Condensation Followed by train of sinusoid waves.
469		Ir	eP eS? eL? M F	13 16 16 20 14 23 54 26 36 14 18 --	16	+9	2432	
470		IIIr	iP i iS i L M F	21 42 08 30 45 50 46 18 47 45 50 39 1 32 --	8 17 15	+10 +170	2233	Condensation
	19							Main phase out of paper on both sides.
471			P e? M ₁ M ₂ F	18 57 32 19 15 31 23 25 24 28 20 10 --	10 13	+4 +4		P small but sharp, perhaps not belong- ing to the same quake of the phase followed.
472	21	Iu	eP eL? M F	13 49 30 14 04 07 11 42 36 --	15	+4		
473	24		e? e F	14 02 22 18 56 ? ? --				Initial phase uncertain.
474	25		Initials lost M F	0 35 33 2 13 --	14	+7		West coast of U.S.A.

The Chiufeng Seismological Bulletin (Cont.)

June to July 3, 1933

22

No.	Date	Char.	Phase	G.M.T.	T _p	Amu	km.	Remark
475	25, VI	Iu	e? eS M F	5 51 45 6 02 18 14 41 46 --	14		9488	.
476			e F	10 07 50 34 --				A train of surface waves.
477			e e F	20 58 14 21 29 49 22 40 --				Initial phase uncertain.
478	29		e? M F	1 34 06 58 18 2 22? --	20			Initial uncertain.
479			eL F	3 00 01 34 --				A train of surface waves.
480	1, VIII		e F	20 41 23 21 06 --				Initial uncertain.
481	2		e F	16 59 31 17 13 --				A train of surface waves.
482			e F	17 18 10 18 02 --				Trace
483	3		e L F	12 43 59 49 56 13 00 --				
484		IV	P eS? L M F	15 19 56 22 13 24 13 26 59 16 20 --			1351	Dilatation

P.S. The above data are taken from Gali., if not specially mentioned.

July 7, 1933.

S. P. Lee, Superintendent.

Pei-An-Ho, W. of Peiping,
China

λ : $116^{\circ} 5' 45''$; ϕ : $40^{\circ} 3' 55''$

h: 115m; Foundation: Granite

THE CHIUFENG SEISMIC STATION

of the

GEOLOGICAL SURVEY OF CHINA

Instruments: 200 kg. horiz.,
80 kg. vert.
Weichert;
Galitzin-Wilip.

Weichert	V	T ₀	ξ	γ/T_0^2
due Z	--	7.60	--	--
N	101.0	5.36	3.6	.0070
July 1 E	102.4	5.24	3.3	.0102

Galitzin-Wilip	T ₁	T	μ^2	$\pi l/kA$
due Z	11.05	10.88	-0.04	207-5
N				
May 15 1933 E				

July, 1933

23

No.	Date	Char.	Phase	G. M. T. h m s	T _p s	A μ	Δ km	Remark
485	4, VII		e F	7 20 15 40 --				Trace
486	5		e(L) F	15 57 57 16 14 --				Very small.
487	7		e e F	7 39 17 58 56 8 29 --				A train of surface waves.
488	9	IIr	iPE,N PP? iSE,N i eL M ₁ M ₂ M ₃ F	1 35 31 36 10 40 01 21 10? 42 34 45 48 19 47 47 16 49 30 15 4 00?--	7 8 10?	+7 +5 -17	2821	Condensation Az: N 63°E. Kurile Is.
489		Ir	e eS? M F Overlapped by next quake.	9 04 18? 08 47 14 25 19			2811	No time mark.
490		Ir	P S eL M F Overlapped by next quake.	9 33 25? 37 58 40 24 43 46 19		-30	2863	Condensation No time mark.
491		Ir	P eS? S M F Overlapped by next quake.	11 27 02? 31 12 35 37 19 20		-8	2555	Condensation
492		IIIr	iPE,N iSE,N L M ₁ M ₂ M ₃ F Overlapped by next quake.	12 36 07 40 38 11 43 36 45 43 19 51 27 14 53 12 14	8 11	+9 +10	2834	Condensation Az: N 63°E. Kurile Is.
493		Ir	iP S eL? M ₁ M ₂ M ₃ F Overlapped by next quake.	16 12 33 17 07 19 47 22 50 19 27 36 12 30 06 13	7	+2 +14 +7 -7	2867	Condensation

The Chiufeng Seismological Bulletin (Cont.)

July, 1933

24

No.	Date	Char.	Phase	G.M.T.	T _p	A _{mu}	km.	Remark
494	9, VII	Ir	P eS eL M F Overlapped by next	17 57 01 18 01 37 04 01 07 10	19	+6	2890	
495		Ir	e eS? M F	19 24 17 23 56 34 27 20 00 --	20		2945	Initial, very small.
496		Ir	P eS eL M ₁ M ₂ F	22 20 19 24 51 27 33 33 16 37 39 23 58 --	12 16	-4 +6	2849	Condensation
497	10	Ir	iP eS iS SS? i eL M ₁ M ₂ F	0 26 27 30 22 26 56 31 26 32 26 35 08 36 04 1 55 --	15 14	+10 +8	2372	Condensation
498		Iu	e ePP? eL? M ₁ M ₂ F	3 36 38 41 09 4 18 36 35 58 41 58 5 49 --	18 16	+8 +6		A very small initial.
499		Ir	e eS? M F	6 27 10 31 45 37 32 7 01 --	18		2890	
500		Iu	iP i PP iS i e eL? F	10 41 59 42 18 43 32 48 58 49 13 53 06 57 04 12 10 --	6 8	-3 -2	5222	Dilatation Amplitudes of preliminary greater than those of main phase.
501		Ir	eP eS? M F	13 34 52 39 28 45 12 14 15 --			2903	At minute eclipse.
502	11	Ir	e? eS? M F	6 04 31 08 16 13 32 40 --	14	+2	2246	Initial uncertain.

The Chiufeng Seismological Bulletin (Cont.)

July, 1933

25

No.	Date	Char.	Phase	G.M.T.	T _p	A _{mu}	km.	Remark
503	11, VII	Ir	eP eS? eL M ₁ M ₂ F	6 54 37 58 30 7 01 16 04 16 05 41 58 --	14 12	+5 +3	2347	
504			F	8 19 02 28 --				A few sinusoid waves.
505	12		e F	14 56 20 15 10 --				A train of surface waves.
506	13	Ir	iP ₁ iP ₂ iS ₁ eS ₂ eL ₁ eL ₂ ? i M ₁ M ₂ F	8 01 41 02 38 05 06 06 02 07 33 08 35 56 11 12 12 08 9 00 --	7 11 9 11	+4 +5 +6 +5	2000	Condensation Perhaps two earthquakes.
507			e e(L) M F	14 32 03 48 27 55 59 15 32 --	17			Very small.
508			e ₁ e ₂ F	23 13 58 18 04 33 --				Very small.
509	14		P F	1 50 03 2 44 --				Condensation
510			e F	5 09 04 25 --				A train of surface waves.
511		Iv	iP iS i F	16 06 13 08 20 10 08 40 --	7 7	-6 -3	1150	Dilatation Surface waves badly developed while P and S phase prominent.
512			e? F	21 37 58 56 --				
513	15		e? e(L)? F	19 22 56 31 28 52 --				Very small.
514	18		e? i(M) F	4 14 43 17 11 50 --				Very small.
515			e M F	9 57 03 10 08 26 14 --				Very small.

The Chiufeng Seismological Bulletin (Cont.)

July, 1933

26

No.	Date	Char.	Phase	G.M.T.	Tp	Amu	km.	Remark
516	18, VII	Iv	iP S F	10 28 26 31 20 50 --			1645	Dilatation Preliminary, prominent; surface waves not developed
517		Ir	iP S L ₁ L ₂ M F	18 12 18 16 50 20 32 23 38 29 51 19 40 --	4 16	+2 +7	2931	Condensation
518			e F	21 35 46 22 08 --				Very small.
519	19	Iu	iP i PP eS? L ₁ L ₂ M F	13 41 03 17 43 00 48 02 51 45 55 14 14 01 16 F Overlapped by next	6 6 21	+2 +3 -19	5258	Condensation
520		Iu	iP PP eS eL ₁ ? eL ₂ M F	15 08 35 10 30 15 30 18 48 22 51 28 10 16 25 --	4 20	+3 +18	5183	Condensation
521		Iu	P e F	20 17 40 48 08 F Overlapped by next				Very distance quake.
522		Iv	P i(M) F	20 52 59 21 01 04 40 --				
523	20	Ir	P iS eL M F	23 18 53 22 53 25 24 23 30 0 28 --	14	+10	2433	Dilatation
524	21	Iu	P i i eL? L ₂ F	20 26 32 30 02 35 18 21 19 24 28 16 23 21 --			>1200	Condensation Followed by sinusoid waves of nearly same amplitude.
525	22	I	e F	6 40 18 7 02 --				A train of surface waves.

The Chiufeng Seismological Bulletin (Cont.)

July, 1933

27

No.	Date	Char.	Phase	G.M.T.	T _p	A _{mu}	km.	Remark
526	22, VII	IIIu	iP i iPP i iS i M ₁ M ₂ M ₃ M ₄ F	21 04 15 31 06 15 07 27 11 19 18 35 22 55 27 13 29 05 30 56 1 08 --	10 9 11 11 11 24? 19 18 16	48 -10 -11 -7 -3 +105 -106 +171 -70	5353	Condensation Az: N 30° E. Beeling sea.
527	24	Iv	iP iS F	8 40 31 42 38 9 00 --			1268	Dilatation
528		Iu	P eS? P3 eL? M F	19 08 17 18 31 55 32 46 38 05 22 08 --	25	-11	9111	Condensation
529	26	I	e? e(L) i F	4 27 19 30 03 33 01 5 09 --				Initial uncer- tain.
530	27	I	e1 e2 eL F	21 38 01 39 17 51 05 22 29 --				Initial uncer- tain.
531	28	IV	e1? e2 i(M) F	16 47 17 50 30 54 17 17 09 --				Initial uncer- tain.
532	30	Iu	P i e(S) F	17 26 45 27 22 35 58 18 20 -			7704	Condensation

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Aug. 8 1933
S P Lee
Superintendent

Pei-An-Ho, W. of Peiping,
China

$\lambda: 116^{\circ} 5' 45''$; $\phi: 40^{\circ} 3' 55''$
h: 115m; Foundation: Granite

THE CHIU-FENG SEISMIC STATION
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GEOLOGICAL SURVEY OF CHINA

Instruments: 200 kg. horiz.,
80 kg. vert.
Weichert;
Galitzin-Wilip.

Weichert	V	T ₀	ξ	r/T_0^2
due Z	--	7.53	--	--
N	103.0	5.38	3.6	.0055
Aug. 1 E	103.8	5.36	3.4	.0104

Galitzin-Wilip	T ₁	T	μ^2	$\pi l/kA$
due Z	11.05	10.38	-0.04	207
N				
May 15 1933 E				

August, 1933.

26

No.	Date	Char.	Phase	G. M. T. h m s	T _p s	A μ	Δ km	Remark
533	7, VIII	Ir	e e(S)? M F	0 46 39 50 34 55 20 1 12 --	16		2395	
534			e? F	3 17 07 29 --				A very small near shock.
535			e? e F	12 41 03 45 54 13 49 --				Trace
536	8		e F	0 38 48 56 --				Trace
537	9		e(M) F	1 17 17 37 --				
538			eL F	12 23 03 38				A train of surface waves.
539	10		e e(L) F	4 50 57 5 16 36 43 --				Trace
540	11	IIr	iP i iS LN, E. M ₁ M ₂ M ₃ F	8 53 43 59 26 9 02 41 04 04 06 11 07 17 10 49 10 56 --	7 12 12 9	-5 -18 -31 -44 +24	2432	Dilatation Az: W 45°S
541		Ir	e? e(S)? i eL? M F	11 17 38 21 33 23 56 24 32 26 42 58 --	10	+2	2395	
542	12	Ir	e? e i F	7 33 43 37 43 40 57 8 15 --				
543			e? F	17 19 49 41 --				Trace
544	13	Iu	iP PP PPP?	9 41 07 44 46 46 39	6		>90°	Dilatation

The Chiufeng Seismological Bulletin (Cont.)

August, 1933

29

No.	Date	Char.	Phase	G.M.T.	T _p	A _{mu}	km.	Remark
544	13	Iu	PS? eL M ₁ M ₂ F	9 53 17 10 10 30 17 15 24 37 12 05 --	23 16	+6 +4		
545	14		e F	20 08 46 22 --				Trace
546		Iv	P S L M ₁ M ₂ F	22 19 32 22 21 23 40 25 12 26 02 23 02 --	9 7	+8 +5	1658	Dilatation
547	15	Ir	iP PP? eS i eL M F	3 03 19 04 03 07 43 58 11 06 15 42 4 48 --	6 7 16	-2 +2 -6	2778	Dilatation
548		Ir	e e(S)? F	10 42 26 46 28 11 13 --			2431	Initial, very small.
549	18	Iv	eP eS? L M F	9 23 28 26 32 28 40 31 13 10 54 --	13	+5	1808	
550	19		e F	6 13 23 20 --				Trace
551	20	Iv	P i i eL M F	11 50 56 54 09 56 18 59 56 12 03 05 14 00 --	19	+12		Condensation Probably more than one shock superposed each other.
552	22		e(L) F	11 57 57 12 58 --				A train of surface waves.
553		Ir	P i F	13 18 46 23 37 14 38 --				Condensation
554	23		e(L) F	13 37 06 50 --				A train of surface waves.
555	25	IIIv	P iP S? iSE LE Main phase over scale on three components. W2? Over lapped by next quake.	7 53 32 37 56 15 26 57 00 11 03 00			1535	Condensation Dilatation AZ: W 40°S. Epi.: 30.5°N, 103.5°E. Destructive near Chengtu, Szechwan.

The Chiufeng Seismological Bulletin (Cont.)

August, 1933

30

No.	Date	Char.	Phase	G.M.T.	T _p	A _{mu}	km.	Remark
556	25, VIII	Ir	P M Over lapped by next	11 13 36 21 22 13		-4		quake.
557		Ir	e e L M F	11 42 03 45 05 36 46 47 12 20 --	10	+13		
558			e F	15 31 13 39 --				Very small.
559			e i F	18 06 42 08 44 25 --	9	+5		Initial, very small.
560			e F	18 43 49 55 --				Very small.
561		Ir	e e i M F	23 22 20 25 33 29 25 30 13 40 --	12			Initial, very small.
562	26	Iv	eP eS? eL M F	1 34 29 37 46 40 29 42 23 2 02 --	12	+4	1945	
563		Iu	e e M F	5 17 46 24 31 34 33 53 --				
564			e F	21 07 44 34 --				Trace
565	27		e(L)? F	0 30 27 46 --				A train of surface waves.
566	28		ePE SZ? FE	22 39 27 43 02 0 44 --			2148	
567		Ir	e i F	12 36 08 40 04 13 00 --				
568		Iv	iP S iS F	15 11 14 13 36 43 16 38 --			1407	Dilatation

P.S. The above data are taken from Gali., if not specially mentioned.

September 5, 1933

S. P. Lee Superintendent

The Chiufeng Seismic Station of the Geological Survey of China begs to acknowledge with thanks the receipt of the following bulletins and publications, from June to Aug. 1933:

U. S. C. G. S.	July to Dec. 1932
Pasadena	April, 1933
St. Louis	March to May, 1933
Florissant	Feb. and March, 1933
J. S. A.	Pre. Bulletin, April to June, 1933
	Preliminary note on new travel time tables & The tables, by J. B. Macolwano S. J.
Ottawa	Aug. 1932; April and May 1933
Kow	April to June, 1933
Bacelona	May to Dec., 1932
Cartuja	Aug. to Sept., 1932
Tananarivo	Oct. to Dec., 1932
Riverview	June, 1932; April to June, 1933
Wellington	April to June, 1933
Osaka	July to Sept., 1932; Jan. to April, 1933
Ei-Ka-Wei	March to June, 1933
Taihoku	Feb. to May, 1933
	Pre. Report, May 3 to May 30, 1933
Hongkong	Pre. Report, May to July, 1933
	Meteorological Report, May to July, 1933
Batavia	April to July, 1933
Nanking	Jan. to March, 1933
Göttingen	Jan. to March, 1933
La Paz	Aug. to Dec., 1932
Georgetown	May & June, 1933 (with despatch)
Kobe	April to June, Oct. to Dec., 1932
Cocle	Jan. to March 15, 1933
Strasbourg)	
Paris)	April and May, 1933
Bureau Central)	
Zagreb	July to Dec., 1932
Karlsruhe	Jan. to Dec., 1932
Manila	Time signal corrections to May and June 1933
Melbourne	April to June, 1933
Apia	April to June, 1933
Denver	Feb. 23 to May 8, 1933
Hawaii	Volcano Letter, Jan. to June, 1933
Madrid	May and June, 1932
Uni. Chile	No. XXIII, 1931
Hukuoka	Jan. to Dec., 1932
Ebro	Boletín Mensual, Oct. to Dec., 1932
Parc St. Maur	April and May, 1933

September 5, 1933

Pei-An-Ho, W. of Peiping,
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h: 115m; Foundation: Granite

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GEOLOGICAL SURVEY OF CHINA

Instruments: 200 kg. horiz.,

80 kg. vert.

Weichert;

Galitzin-Wilip.

Weichert	V	T ₀	ξ	τ/T_0^2	Galitzin-Wilip	T ₁	T	μ^2	$\pi l/kA$
due Z	--	7.24	--	--	Sept. 28, '33 Z	11.05	11.02	.005	.00196
N	108.7	5.22	3.6	.0138	Oct. 13, '33 N	11.28	11.01	.029	.00131
Sept. 1 E	106.3	5.31	4.0	.0099	Oct. 17, '33 E	11.10	10.60	.038	.00118

Sept., & Oct., 1933.

31

No.	Date	Char.	Phase	G. M. T. h m s	T _p s	A μ	Δ km	Remark
569	2, IX	IIv	PEN SEN eLN iLE M F	16 45 30 47 23 48 40 46 49 06 18 32 --	10	45mm.	ca. 1000	
570		Ir	PE eS?E eLE ME F	21 19 58 23 43 27 33 29 52 54 --	16		2271	
571	3	Or	PE SA F	3 59 12 4 03 29 29 --			2681	
572	6	Iu	PEN i(S)EN F	22 20 12 29 37 23 08 --			7962	From Wiechert record.
573	9	IIv	eP iS F	5 05 02 07 04 37 --	3.5		1228	From Wiechert record
574	15	Iv	eP eS eLN MZ MN F	16 23 56 27 17 28 31 32 33 36 17 00 --	14 14		1189	
575	17	Or	e(P)Z eZ MZ F	4 04 08 07 44 12 31 33 --	16			After the first small impulse the trace quite flat until e.
576	20	O	e e F	0 14 06 16 13 40 --				Masked by micro.
577		Ir	iPNZ eS?N (L1)N L2 M1Z M2Z F	23 39 13 43 49 46 30 49 34 52 45 54 23 0 32 --	14 14		2835	Dilatation
578	21	Iv	ePZ iPZ iSN	5 13 22 25 21 44	10		1965	

The Chiufeng Seismological Bulletin (Cont.)

Sept., & Oct., 1933.

32

No.	Date	Char.	Phase	G.M.T.	Tp	Amm.	km.	Remark
578	21, IX	Iv	LN MN MZ F	3 23 14 25 29 59 4 36 --	11 12	12 29		
579		IIr	iPZ SZN LN MN M1Z M2Z F	9 52 39 56 33 58 35 10 00 52 01 27 02 36 11 46 --	6 14 14 12		2355	Condensation
580		Ir	PZ eSZN eLZN MZ F	13 47 01 50 51 53 07 56 24 14 32 --	12	10	2333	do
581		Ir	PZ eS?Z MZ F	19 43 20 52 16 57 43 20 28 --	13	8	2384	do
582	22	Ou	PZN i F	11 49 36 59 44 12 41 --				
583	23		e e F	0 37 20 38 48 1 15 --				Trace
584	24	IIr	iP i(PP)Z iSEN (SS)E (SS)Z LE M1E M1Z M2E M2Z F	15 23 05 29 54 34 49 37 50 38 41 40 32 45 10 46(17) 47 21 36 17 39 --	7 8 7 24 21 21 21	20 24 30 30	5000	Condensation
585	25	IIr	eP eS eL F	18 56 24 19 00 40 03 11 20 10 --			2667	From Wiechert record.
586	27	Iu	PZ e(S)Z MZ F	21 51 40 59 44 22 14 32 23 58 --	18		6412	Condensation
587	28		e F	19 02 54 33 --				Trace
588	30, IX	Iu	iP iSEN	14 29 35 36 26			5063	Condensation

The Chiufeng Seismological Bulletin (Cont.)

Sept., & Oct., 1933

83

No.	Date	Char.	Phase	G.M.T.	T _p	Amm.	km.	Remark
583	30, IX	Iu	eL?EN EN M ₂ Z M ₁ E F	14 42 48 01 15 41 16 10 --	19 20 17	9 9 18		
589		IV	P ₁ NZ (P) ₁ NZ S ₁ NZ i ₁ Z F	22 59 14 26 39 23 00 45 08 --			ca.100	Local
590	1, X	IV	eP ₁ Z (P) ₁ N ₂ S ₁ N ₂ E F	9 35 32 41 52 44 --				do
591		Ir	e ₂ N e ₂ Z M ₂ Z M ₁ E F	14 39 37 43 50 48 45 49 15 08 --	15 13			
592		IV	eP ₁ ?E (P) ₁ S ₁ E i(M) ₂ Z i(M) ₁ N F	17 18 27 38 49 19 47 51 24 --				Local
593	2	Iu	e(P) eS M ₁ E M ₂ E M ₂ E F	14 10 11 19 11 27 33 35 51 36 53 15 21 --	16 22 20		7482	
594		IIu	P ₁ Z (m) i ₁ Z iPP ₁ Z iPP ₁ EN ScPcSEN ScPcPcSN eLZE eLN M ₁ N M ₁ Z M ₁ E F	15 48 45 56 51 39 52 30 31 58 37 16 00 17 34 18 35 30 55 21 25 56 33 19 08 --	6 7 7 10 20 20 20	18 16 17	ca.1200	Condensation
595	3		iP ₁ iS F	10 27 25 30 32 --			ca. 20	Condensation Felt at Chiufeng. R.F.II.
596			(e) ₂ Z e ₂ Z M ₂ Z F	10 44 02 23 11 47 00 12 51 --	19			Trace Very distant earthquake.

The Chiufeng Seismological Bulletin (Cont.)

Sept., & Oct., 1933

34

No.	Date	Char.	Phase	G.M.T.	T _p	A _{mm}	km.	Remark
587	3,X	Iv	iPEN SEN eLEN M ₁ N M ₁ E M ₂ N M ₂ E F	18 43 03 46 32 48 53 50 02 43 51 25 52 10 20 14 --	13 13 13 11	9.4 20 13 27	1385	GZ missed.
598	5	Iu	eP (PP)Z SN (SS)N eL M ₁ N M ₁ Z M ₂ N M ₂ Z F	13 38 12 40 03 45 01 48 06 55 17 57 20 58 55 59 15 14 01 06 15 24 --	14 11 12 12	25 14 31 18	5079	
599	9	Iv	e(P)E (P)E SE i(M)N i(M)Z F	20 53 55 54 05 35 55 44 46 58 --	9 10			Local
600	14	Iu	P SN eLN MN MZ F	22 28 21 36 09 43.6 50 59 52 16 0 08 --	19 19		6128	Condensation
601	16		eL MN MZ F	3 13 32 16 18 18 48 40 --	18 19			A group of shallow waves.
602		Or	ePNZ eSZ F	4 42 20 48 42 5 30 --			4592	
603		Ov	e i(S)N F	11 19 09 21 44 32 --			1445	
604		O	(e) eL?N F	18 05 42 14 25 35 --				Masked by micro.
605	17	Ou	iP SE eSN iN F	12 32 22 39 12 24 40 01 13 08 --	5 10		5094	Condensation
606	19	Ov	(P) F	5 32 45 44 --				Confused by strong microseism.

The Chiufeng Seismological Bulletin (Cont.)

Sept., & Oct., 1933

35

No.	Date	Char.	Phase	G.M.T.	T _p	A _{mm}	km.	Remark
607	20		MN F	7 05 10 09 --	13			A group of shallow waves.
608			MN F	7 58 58 8 02 --	14			A group of shallow waves.
609			MN F	8 11 39 15 --	14			A group of shallow waves.
610	21	Ir	P1ZE (P2)ZE S1ZE (S2)ZE (oL) M1E M1Z M2Z M2E F	2 49 03 27 53 03 33 56 25 58 28 33 59 34 36 4 25 --	15 15 13 13	7 9 11 9	2258 2434	Condensation Probably two earthquakes.
611	22	Ir	oP S oL ME MN MZ F	12 00 16 05 02 08 41 13 41 (42) 14 03 13 19 --	12 12 12	27 19 16	3047	No time eclipse.
612	23		o(P) e MN MZ ME F	0 46 36 50 08 53 39 55 26 30 1 28 --	14 13 13			Trace
613			eEN F	4 19 30 5 19 --				Trace
614		O	eP F	13 00 53 15 --				Local
615			e ME MZ MN F	13 53 04 14 22 53 23 13 42 58 --	21 24 24			
616	24	Ov	ePEN e(S) MZ F	5 36 54 39 31 42 03 56 --	10		1467	
617			MZ MN ME F	22 02 43 51 58 15 --	14 12 12			A train of shallow waves.

The Chiufeng Seismological Bulletin (Cont.)

Sept., & Oct., 1933

36

No.	Date	Char.	Phase	G.M.T.	T _p	A _{mm}	km.	Remark
618	25,X	Iu	iP	23 47 54				Dilatation
			iNZ	48 46				
			iZ	49 34				
			i	52 30				
			iNZ	53 30				
			iNZ	56 16				
	26		iN	59 01				
			iEN	0 02 54				
			iE	12 36	16	23		Corresponding of
			iN	40	12	8		N and Z are small.
			F	2 04 --				
619		Iv	eN	8 19 16				
			ME	25 56	14			
			MN	58	14			
			MZ	26 02	14			
			F	45 --				
620		Iu	P	12 27 07				As No. 618.
			iN	28 32				
			iNZ	29 32	8			
			iE	42 32				
			F	14 56 --				
621	30	Ou	P	7 11 29			8044	
			(S)	20 57				
			F	8 36 --				

P.S. In September, owing to installation of the horizontal components of Galitzin, GZ was frequently put off, and its constants were disturbed. In this report, phases are taken from Galitzin records, and the numbers given in the amplitude column are mms. directly measured from the seismogram.

Nov. 7, 1933

Superintendent S. P. Lee

Pei-An-Ho, W. of Peiping,
China
λ: 116° 5' 45"; φ: 40° 3' 55"
h: 115m; Foundation: Granite

THE CHIUFENG SEISMIC STATION
of the
GEOLOGICAL SURVEY OF CHINA

Instruments: 200 kg. horiz.,
80 kg. vert.
Weichert;
Galitzin-Wilip.

Weichert	V	T ₀	ε	r/T ₀ ²	Galitzin-Wilip	T ₁	T	μ ²	πl/kA
due Z	--	7.40	--	--	Sept. 28, '33 due Z	11.05	11.02	.005	.00190
N	98.9	5.44	3.7	.0105	Oct. 13, '33 N	11.28	11.01	.029	.00137
Nov. 1 E	99.2	5.42	3.4	.0092	Oct. 17, '33 E	11.10	10.60	.038	.00118

November, 1933.

37

No.	Date	Char.	Phase	G. M. T. h m s	T _p s	A μ	Δ km	Remark
622	1, XI	O	O e(P)N e(S)N SN i(M)Z i(M)E i(M)N F	20 53 49 59 44 21 00 20 28 01 32 37 02 23 17 --	 8 6 6			Small local shock. E, Z comp. no min., eclipse.
623	2	IIu	O iP pP (PP)E iPPPE iS SSN (L1)E L2 M1E M1N M2 M2E M2N F	12 27 13 35 30 47 37 09 51 42 17 45 11 22 49 26 52 24 54 04 36 47 55 58 14 34 --	 7 28E 24 21 21 21 19	 -22 +23 -38 -24 +21	5047	Condensation Epi: 52°N, 176°W (USS) E, Z comp. no time mark.
624	5	IIr	O P S iLEN M1E MN M1Z M2E M2Z F	20 27 14 31 57 35 49 38 13 39 13 29 30 40 13 33 21 25 --	 10 10 13 8 12	 -6 +8 -6	2338	
625	14	Or	O iP i(pP) i i eS F	14 16 (44) 25 05 37 26 29 27 09 30 17 13 21 --	 12		3665	Dilatation Deep focus type.
626	16	O	(e)N M2 MN F	22 10 59 17 40 53 35 --	12 12			
627	17	ev	O e(P) S F	9 43 22 46 13 48 35 10 10 --			1312	

38

[illegible]

The Chiufeng Seismological Bulletin (Cont.)

November, 1933

39

No.	Date	Char.	Phase	C.M.T.	T _p	A _{max}	km.	Remark
632	21, XI	IIIU	M ₄ Z M ₃ N M ₅ Z M ₄ E M ₆ Z M ₄ N M ₅ N F	0 06 53 07 14 08 14 30 11 26 38 16 50 3 43 --	15 12 15 14 13 13 14	-113 +49 +67 -100 +59 +50		Out of limit.
633	22	0	eL ₂ M ₂ F	0 57 45 1 09 20 44 --	18			
634		0	eEN Over lapped by next quake.	12 27 40				
635		IIu	0 iPEN i iSEN LE M ₁ E M ₁ Z M ₁ N M ₂ N M ₂ Z M ₂ E F	12 42 35 52 01 27 59 46 13 6.5 12 39 46 49 17 55 18 09 37 15 00 --	20 20 20 18 18 17	-15 +38 +18 +19 +38 +11	6079	Initial phases, of Z missed.
636		Iv	0 P eSEN eLEN M ₁ E M ₂ M ₁ N F	18 59 27 19 03 01 05 58 07 43 11 21 24 30 37 --	10 10 10	+2 -3 -1	1677	Dilatation
637		Iv	0 P iP S iS LE F	22 31 48 35 27 36 38 28 41 40.3 23 36 --			1723	Condensation May be two shocks.
638	23		e(L)Z M ₂ F	20 08 49 19.9 46 --				
639	24	0	eP (S)EN iEN F	12 29 23 41 30 23 40 --			1307	Local
640	25	0	e(P)EN iN F	1 18 35 53 28 --				Local

The Chiufeng Seismological Bulletin (Cont.)

November, 1933

40

No.	Date	Char.	Phase	G.M.T.	T _p	Amu	km.	Remark
641	26, XI	O	eNZ iN F	22 56 29 23 00 59 33 --				
642	27	O	e(P)N i iN iEZ F	6 54 12 30 55 18 28 7 08 --				Local
643		Or	O eEZ eSEZ MZ F	19 14 15 19 04 23 01 27.5 46 --			2396	Masked by micro.
644	28	IIu	O ePEZ iPPEZ PPN SEN SS?N SS?E eLEN MZ MN ME F	11 09 37 18 09 20 11 14 25 09 28 53 56 33 42 40 08 28 33 12 53 --			5264	
645	29	O	e(L)E ME F	6 11 48 21 09 40 --	20			
646		O	eLE ME F	20 20 47 23 04 52 --	14	+2		

November 11, 1933

S. P. Lee, Superintendent.

The Chinese Seismological Bureau of China beg to acknowledge with thanks the receipt of the following bulletins and publications, from September to November 1933:

Riverview	July-Sept. 1933
Taihoku	June-Aug., 1933, Prel. Aug.-Oct. 1933.
Manila	Cavite time signal corr., July-Oct. 1933
	Seis. Bulletin July-Dec. 1932
	Prel. Bulletin Jan.-Sept. 1933
	Jan.-April 1931
Innsbruck	
Strasbourg	)
Paris	)
Bureau Central)	June to Sept. 1933
Ottawa	June-Sept. 1933
	Bibliography of Seismology Vol. X No. 18 April-June 1933.
	Smoothed time-Dist. Table, by S. Gold.
J. S. A.	No. 22-35 1933
Little Rock	Jan.-May 1933
Kew	July-Sept. 1933
Athènes	Jan.-March 1933
Zagreb	Jan.-March 1933
Institut Seis. URSS	Bulletin stns. 1 ^{re} Classe Nov.-Dec. 1931, Jan.-Dec. 1932.
	Bulletin, Crimée July-Dec. 1931
Ebro	Bulletin Resumen Vol. XXIII 1932.
	Prólogo al Vol., XXIII 1932.
Instituto Geológico de Mexico	Carta Sismica de Mexico. Por Manuel Munoz Lumbier.
	El Temblor del 14 de Enero de 1931. Por El ing. D. Tomas Barrera
	Catalogo de Los Temblores. From 1920 to 1930.
Nanking	Vol. 1 No 4, Vol II No. 1.
Cartuja	Jan.-March, Oct.-Dec. 1932
Karlsruhe	Jan.-May 1933
Osaka	Jan.-March, '32; Prel. May-Oct. 1933
Hongkong	Meteo. report: Aug.-Oct. 1933
	Sept.-Oct. 1933
Copenhagen	July-Dec. 1930, 1931, July-Sept. 1931
Upsala	1930-1931
Zi-Ka-Wei	July-Sept. 1933
	Bulletin Aérologique: Juillet-Décembre, '32
	Bulletin Aérologique: Janvier-Juillet, '33
	Bulletin Aérologique Supplément Pour 1932
	Bulletin Aérologique Température 1932
	Revue Mensuelle: No. 318-333.
Oxford	Seis. Summary April to September, 1929
Pananarive	Jan.-March 1932
Wellington	Seismological Report July-Dec. 1931
	Extract from Annual Report 1930-31, '31-32.
	Prel. July-Sept. 1933
Zsara	Annales, (Section Seis.) 1932
St. Louis	June 1933
Pasadena	July-Sept. 1933
Georgetown	July-Sept. 1933
Hawaii	The Volcano letter: July-Aug. 1933
Apia	July-Sept. 1933
Hamburg	May-Sept. 1933
Barcelona	Resumen de las Observaciones Meteorológicas Correspondientes al año 1932.
Kobe	Jan.-March 1933
Trieste	Contributo allo studio delle onde P.
	II terremoto Istriano del 29 Agosto 1931.
Toledo	July Aug. 1932

Dec. 10 1933

Pei-An-Ho, W. of Peiping,
China

$\lambda: 116^{\circ} 5' 45''$; $\phi: 40^{\circ} 3' 55''$

h: 115m; Foundation: Granite

THE CHIU FENG SEISMIC STATION

of the

GEOLOGICAL SURVEY OF CHINA

Instruments: 200 kg. horiz.,

80 kg. vert.

Weichert;

Galitzin-Wilip.

Weichert	V	T ₀	ϵ	γ/T_0^2	Galitzin-Wilip	T ₁	T	μ^2	$\pi l/kA$
due Z					Sept. 28, '33 due Z	11.05	11.02	.005	.00196
N					Oct. 13, '33 N	11.28	11.01	.029	.00131
E					Oct. 17, '33 E	11.10	10.60	.038	.00118

December, 1933

41

No.	Date	Char.	Phase	G. M. T. h m s	T _p s	A μ	Δ km	Remark
647	1, XII		e(P)EZ S F	10 38 05 33 44 --			200ca	Local
648	2	Ov	(e)EZ eS? eLEZ F	2 33 33 35 38 38 21 54 --			1131	
649		Ou	PZ e(S) F	5 27 42 35 08 7 02 --			5742	Condensation
650		Ir	O eP SE iS eLE F	8 42 56 47 43 51 38 50 53.7 9 41 --			2366	
651		Ou	eP'Z i i(PP) SKKS? iE iE iE eLE eL M1Z? M2Z F	20 25 15 26 10 29 54 37 50 51 07 30 46 21 13 ca 26 ca 44.5 52 ca 22 57 --			1600ca	Very distant quake.
652	3		e(L)EN MZ F	12 55 32 13 03 09 25 --				Trace of surface waves.
653	4	IIr	O iP PPZ iS iL? F	19 35 51 38 18 39 24 41 54 43 35 20 25 --			220ca	Dilatation Azi. 65.5° Epi. La Perouse str. Very deep focus (about 600 km.)
654	5	O	(e)N M1 M2 F	23 39 10 46 ca 48 ca 0 08 --				
655	6		e(M)E e(M)NZ	15 43 07 44.7				Small successive shocks of short dist

The Chiufeng Seismological Bulletin (Cont.)

December, 1933

42

No.	Date	Char.	Phase	G.M.T.	T _p	A _{mu}	km.	Remark
655	6, XII		e(M) _{NZ} e(M) F	15 58.5 16 09.5 19 --	11			
656	7		(e) _{EN} e(M) F	18 43 19 48 ca 19 03 --				Very small
657	8		e i eS _{EN} F	3 29 41 30 01 17 37 --				Local
658			P S F	13 27 22.5 26.5 ? --			8ca	Felt at Chiufeng, R.F.II. coming from NW.
659	9	0	e(P) e M F	8 04 50 11 40 15.9 58 --				
660	12		e F	5 49 26 6 03 --				
661		Iu	O iP PPN iS SS _{EN} L M _{NZ} F	14 11 28 20 50 22 57 28 31 32 16 37 ca 45 23 16 08 --	5 18		6015	Condensation Azi. 132.8°
662	13	Ov	e(P) _E iN (S) F	1 53 42 53 59 58 --			100ca	Local
663		Iu	eP iPP PS eL M F	21 38 17 42 51 52 26 22 29 ca 36.8 23 44 --	 18		113°	Epi. 18°N, 104°W. (USS)
664	14	0	(e) M F	8 14.3 30.4 9 17 --	18			
665			(e) _{EN} F	12 51 17 13 07 --				Very small
666		Iu	PEZ iEZ iE iE (L) ME F	19 00 29 02 26 07 41 11 12 19 11 23.3 20 11 --	 15			Dilatation

The Chiuteng Seismological Bulletin (Cont.)

December, 1933

43

No.	Date	Char.	Phase	G.M.T.	T _p	A _{mu}	km.	Remark
667	15,XII	Ou	(e)NZ e(L)N (M)N F	7 54 20 8 28 00 38.2 9 19 --	15			
668	17		(e)EN iN iE iN iZ F	23 19 12 32 20 32 38 21 43 32 --				Masked by micro. Local
669	19	Ou	ePNZ i(S)EN F	5 48 51 56 01 6 48 --			5456	At minute eclipse.
670			eLNZ F	18 28 40 52 --				Irregular surface waves of very small amplitude.
671	21	Ir	e(P)EZ eEZ e(S)E eLE MEZ F	23 14 02 57 17 58 22 ca 24 27 48 --			2401	
672	24	Iu	C eP eSNZ SEZ eLNZ MZ MN F	10 46 05 55 02 11 02 28 28 10 54 17 44 46 12 05 --	18 16		5742	
673	26	Ov	e(P)EN i(S)EN iN F	22 39 38 40 56 41 06 46 --			600ca	
674	27	Ou	e iN F	11 44 31 52 12 12 23 --				
675	30	O	eEN i(M)N F	8 50 00 57 39 9 08 --				

Jan. 8, 1934

S. P. Lee Superintendent.