

Washington, D. C.

Seismological Bulletin

of the Georgetown University Department of Geology



$\phi = 38^\circ 54' 25''$ N

$\lambda = 77^\circ 4' 24''$ W

$h = 42.4$ m

Sub-Soil, Decayed Diorite

Instruments: Astatic pendulums after Wiechert, 200 kg. (horizontal), 80 kg. (vertical). Astatic pendulums after Mainka, 130 kg. and two Bosch-Omori pendulums 25 kg.

		V	T ₀	ε			V	T ₀	ε			V	T ₀	ε
W	A _N	143	5.2	3.4	W	A _N				M	A _N			
	A _E	165	5.4	2.6		A _E					A _E			
	A _Z					A _Z					A _N			
										B-O	A _E			

Date	Character	Phase	Time	Periods	Amplitude			Δ	Remarks
					A _N	A _E	A _Z		
Jan. 5/15	IIIr	iP _N	23 52 45.4						E-W not discernible. Vertical instrument in repair.
		S _N ?	23 57 18						
		L _N	23 57 40.6	10	161			1800?	
Jan. 13/15	Ir	L _N	7 28 40	15	500	290		?	Phases not discernible, lost in microseisms. Reported in Rome.
		L _E	7 23 20	15					
		F _N	7 36 40	?					
		F _E	7 33 0	?					

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200	W	A_N	V	T_0	ϵ	W	Vert.	A_N	V	T_0	ϵ	M	A_N	V	T_0	ϵ		
		A_E	143	5.2	un-			A_E	In Repair	A_E					A_E			
		A_Z	165	5.4	damped			A_Z		A_Z					A_Z			
													B-O	A_N	V	T_0	ϵ	
														A_E				

Date	Character	Phase	Time	Periods	Amplitude			Δ	Remarks
					A_N	A_E	A_Z		
April 23	I_r	iP _N i S L _N L? F	15 36 57 15 42 42 15 43 36 15 49 10 15 49 42 16 5 54	10 10	11			E-W not discernible.	
May 1st.	I_r	iP _N S _N M _N F _N iP _E S _E M _E F _E	5 12 24.3 5 22 29.8 5 44 42 7 2 32? 5 12 34 5 22 40 5 45 2? ?	15:18 20	6 11			P _E less distinct than P _N S _E much more discernible.	
May 5th.	II_r	eP _N S L _N L _N ? L _N F _N P _N S _N S _E F _E E	12 25 42 12 29 50 12 31 43 12 32 47 12 39 50 ? 12 29 24 12 32 24 12 45 40	10 10	5 4				

Francis Taylor

No.

From June 1st. to July 1st. 1915.

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W	A_N	V	T_0	ϵ	W	A_N	V	T_0	ϵ	M	A_N	V	T_0	ϵ	
	A_E	143	5.2	3.4		A_E					A_E				
	A_Z	165	5.4	2.6		A_Z					A_Z				
										B-O	A_N	V	T_0	ϵ	
											A_E				

Date	Character	Phase	Time	Periods	Amplitude			Δ	Remarks
					A_N	A_E	A_Z		
1915. June 1.		ePE	15:01:07	3"				3726 mi.	
		ePN	15:01:08	4.2"	1				
		PR ₁ N	15:03:09						
		PR ₂ N	15:03:30	4.2"					
		SN	15:08:07	6"	2				
		SN?	15:08:14						
		LN	15:14:35						
		LN	15:16:42						
		ME	15:18:48	23"		33			
		ME	15:25:33	12"	6				
		FN	15:40:00						
	FN	15:50:00							
June 6.		ePN	21:47:22	2.5"				2888mi. ?	
		PE	21:47:58						
		SN?	21:52:55	6.3"	2				
		LN?	21:59:24	19"					
		LE	22:00:09						
		ME	22:03:06	21"		11			
		FN	22:23:00						
	FN	22:37:00							

Continued on the next page.

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Instruments: Astatic pendulums after Wiechert, 200 kg. (horizontal), 80 kg. (vertical). Astatic pendulums after Mainka, 130 kg. and two Bosch-Omori pendulums 25 kg.



				V	T ₀	ε						
W	A _N	143	5.2	3.4	W	A _N			M	A _N		
	A _E	165	5.4	2.6		A _E				A _E		
	A _Z					A _Z				B-O	A _N	
							A _E					

Date	Character	Phase	Time	Periods	Amplitude			Δ	Remarks
					A _N	A _E	A _Z		
1915. June 23.		P P L L F F F	4:10:01? 4:11:19 4:23:07 4:23:11 4:33:00 4:34:00	7"				Imperial Valley, Cal.	
June 23.		P P L L L M M F F F	5:08:12 5:09:24 5:19:30 5:19:39 5:20:32 5:21:21 5:30:00 5:35:00	4" 3.2"	6	2		Imperial Valley, Cal.	

Francis H. Taylor, Jr.
Dir.

No.

From July 1st to August 1st 1915.

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		V	T ₀	ε			V	T ₀	ε			V	T ₀	ε
W	A _N	143	5.2	3.4	W	A _N				M	A _N			
	A _E	165	5.4	2.6		A _E					A _E			
	A _Z					A _Z					A _N			
						B-O								
												A _E		

Date	Character	Phase	Time	Periods	Amplitude			Δ	Remarks
					A _N	A _E	A _Z		
1915. July 31.	I	eP S _N S _H L _N M _N F _N eP S _E S _E	1:56:46 1:46:24 2: 7:40 2:11:46? 2:57:16 1:56:45 1:46:15	3 12 20 18			280*		Time mark- ings mis- sing for I _E , M _E , F _E
									* Instrumental trace.

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Francis Jones, 3

Act Not Entered

No.

From

Sept. 1st

to

Oct. 1st

1915

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		V	T_0	ϵ			V	T_0	ϵ			V	T_0	ϵ	
W	A_N	143	5.2	5.4	W	A_N				M	A_N				
	A_E	165	5.4	2.6		A_E					A_E				
	A_Z					A_Z					A_N				
										B-O	A_E				

Date	Character	Phase	Time	Periods	Amplitude			Δ	Remarks	
					A_N	A_E	A_Z			
1915. Sept. 7.	I_r	eP _E	1:26:27	4						
		S _E	1:31:12	10						
		L _E	1:34:40	40	56.9	m.m.*				
		M _E	1:37:11	20	76.9					
		F _E	2: 2:18							
		eP _N	1:26:32	4						
		S _N	1:31:20	9						
		L _N	1:34:36	40	43.3					
		M _N	1:37:16	20	102.3					
		F _N	2:45:22							
		Vertical	I_r	eP	1:26:33					
				iP	1:26:44					
				L	1:35: 7	10		17.4		
				M	1:37:24	20		45.9		
				F	2:46:30					

* Instrumental Trace.

F. A. TONDORF, S.J.

T/gjl

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Instruments: Astatic pendulums after Wiechert, 200 kg. (horizontal), 80 kg. (vertical). Astatic pendulums after Mainka, 130 kg. and two Bosch-Omori pendulums 25 kg.

W				W				B-O						
	V	T ₀	ϵ		V	T ₀	ϵ		V	T ₀	ϵ			
W	A _N	143	5.2	3.4	A _N				M	A _N				
	A _E				A _E					A _E				
	A _Z	165	5.4	2.6	A _Z					A _N				
												A _E		

Date	Character	Phase	Time	Periods	Amplitude			Δ	Remarks
					A _N	A _E	A _Z		
1915 Oct. 2d.	III _r	ePN?	23 55 23	5					No distinct M.
		SN	23 56 18						
		LN	23 57 19						
Oct. 3d.	III _r	FN	0 5 44	9					Not discernible
Oct. 2d.		PE							
		SE	23 55 46						
		LE?	23 58 31						
		LE	23 59 51						
Oct. 3d.		FE	0 7 19						
Oct. 3d.	II _r	ePN	1 59 41	12					SN?
		LN	2 5 19						
		FN	2 15 20						
		ePE	2 1 21						
		LE	2 7 38						
		FE	2 20 19						
Oct. 3d.	I _r	ePE?	6 59 44	5					P masked in micro-seisms. Reported in Utah, Idaho and Oregon.
		iSE	7 4 41		12				
		LE	7 10 1		12				
		ME1	7 12 41		9	25.9mm*			
		ME2	7 12 52		9	26.6mm			
		FE	8 46 31						
		ePN?	6 59 47		5				
		SN	7 4 43		10				
		LN	7 8 45		12				
		MN1	7 9 46		9	29.1mm			
		MN2	7 10 20		9	38.2mm			
		PN	8 48 13						

*Instrumental trace.

Acc. Not Exchd.

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From

to

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W	A_N	V	T_0	ϵ	W	A_N	V	T_0	ϵ	M	A_N	V	T_0	ϵ	
	A_E					A_E					A_E				
	A_Z					A_Z					A_Z				
										B-O	A_N	V	T_0	ϵ	
											A_E				

Date	Character	Phase	Time	Periods	Amplitude			Δ	Remarks
					A_N	A_E	A_Z		
Vertical) Oct. 5d.	I _r	M _{V1}	7 10 18	9			5.5mm		
		M _{V2}	7 13 50	8			9.6mm		
		F _V	7 20 4						
Oct. 11th.	II _r	iP _N	19 37 53	4					
		S _N	19 41 51	7					
		I _N	19 45 11	9-10					
		M _N	19 47 56	10	0.70mm				
		F _N	20 23 15						
		P _N	19 37 55	4					
		S _E	19 42 3	6					
		I _E	19 45 54	10					
		M _E	19 48 20	10	0.55mm				
		F _E	20 17 8						

F. A. TONDORF, S.J.,
Director.

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No. 9

From Nov. 1st to Dec. 1st 1915.

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		V	T ₀	ε			V	T ₀	ε			V	T ₀	ε	
W	A _N	143	5.2	3.4	W	A _N				M	A _N				
	A _E	165	5.4	2.6		A _E					A _E				
	A _Z					A _Z					A _Z				
										B-O	A _N				
											A _E				

Date	Character	Phase	Time	Periods	Amplitude			Δ	Remarks		
					A _N	A _E	A _Z				
1915 Nov. 1	II _r	eP	7 36 34	20	0.50mm				Heavy mi- croseisms for 24 hrs. All phases masked in micro- seisms.		
		eS	7 48 19								
		eS	8 8 45								
		eS	8 22 26								
		eS	10 17 50								
		eS	7 37 1								
		eS	7 48 39								
		eS	8 9 18								
		eS	8 24 38							17	0.45mm
		eS	10 20 29								
Nov. 21	VI	eP	0 25 3	5.5				Masked in mi- croseisms. For Press reports see extra sheets.			
		eS	0 30 42								
		eS	0 31 11								
		eS	0 35 28						10	3.42mm	
		eS	0 34 42								6.99 "
		eS	0 55 27								8.57 "
		eP	0 24 51						9		
		eS	0 30 41								7
		eS	0 31 1						10		
		eS	0 32 1								9.31mm
		eS	0 32 53						9.05 "		
		eS	0 33 42						10.66 "		
		eS	1 50 (ca)								

F. A. TONDORF, S. J.,
Director.

FAT-GJL

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		V	T ₀	ε			V	T ₀	ε			V	T ₀	ε	
W	A _N	143	5.2	3.4	W	A _N				M	A _N				
	A _E	165	5.4	2.6		A _E					A _E				
	A _Z					A _Z					A _Z				
										B-O	A _N				
											A _E				

Date	Character	Phase	Time	Periods	Amplitude			Δ	Remarks
					A _N	A _E	A _Z		
1915. Dec. 7	V	eP _N ? eP _E ? S _E ? S _N ? L _E ? L _N ? M _E ? F _N	18 41 23 18 40 57 18 45 5 18 44 31 18 45 28 18 45 30 18 45 35 19 15 (ca)	5 5			0.8mm*		Heavy microseisms. P and S very doubtful. No distinct M _E . Reported by Press. See extra sheets.
Dec. 12	II _r	iP _N eP _E S _N ? S _E eL _N L _E F _E	21 8 32 21 8 37 21 12 21 21 12 30 21 15 58 21 14 37 21 40 (ca)	15 15					Heavily masked with microseisms. No distinct M.
Dec. 31	II _r	eP eL _N M _N F _N	12 30 48 12 40 13 12 44 20 13 5 (ca)	20			0.9mm*		Microseisms. E-W illegible. Gram poor because of poor paper accidentally used. Mainka seismograph shows eP 12 29 13.

* Instrumental trace.

F. A. TONDORF, S.J.
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