



SEISMOLOGICAL SERVICE OF CANADA

SEISMOLOGICAL BULLETIN  
January  
1942

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DOMINION OBSERVATORY  
OTTAWA, CANADA

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SEISMOLOGICAL SERVICE OF CANADA  
DOMINION OBSERVATORY, OTTAWA

R. Meldrum Stewart, Dominion Astronomer  
Ernest A. Hodgson, Seismologist  
W. W. Doxsee, Station Superintendent

S T A T I O N S

OTTAWA

$\phi = 45^{\circ}23'38''$  N.  $\lambda = 75^{\circ}42'57''$  W.  $h = 83$ m.

Time correction within 0.10s.

Foundation: boulder clay over limestone

Instruments: Milne-Shaw NS and EW components, designated 23 and 17, respectively, each with photographic registration, magnetic damping, paper speed of 15 mm. per min., mass 1 lb.

Benioff Vertical, short and long period, designated BS and BL, respectively, photographic registration, BS a paper speed of 60 mm. per min., BL a paper speed of 30 mm. per min., mass 235 lbs.

HALIFAX

Dalhousie University

$\phi = 44^{\circ}38'$  N.  $\lambda = 63^{\circ}36'$  W.  $h = 46$ m.

Time correction from recorded radio time signals

Foundation: Carbonaceous slate

Instruments: Bosch NS and EW components, designated HN and HE, respectively, each with photographic registration, magnetic damping, paper speed of 15 mm. per min., mass 200g.

SEVEN FALLS

Quebec Power Company

$\phi = 47^{\circ}07'4''$  N.  $\lambda = 70^{\circ}49'6''$  W.  $h = 232$ m. ca.

Time correction from recorded radio time signals

Foundation: Solid granite of Canadian Shield

Instruments: Wood-Anderson and Milne-Shaw, both EW component, designated SF and SM, respectively, each with photographic registration, magnetic damping, SF a paper speed of 60 mm. per min. and mass 15g., SM a paper speed of 8 mm. per min. and mass 1 lb.

VICTORIA

Dominion Astrophysical Observatory

$\phi = 48^{\circ}31'14''$  N.  $\lambda = 123^{\circ}24'56''$  W.  $h = 197$ m.

Time correction from recorded radio time signals

Foundation: rock

Instruments: Milne-Shaw NS and EW components, designated 21 and 20, respectively, each with photographic registration, magnetic damping, paper speed of 8 mm. per min., mass 1 lb.

Wiechert Vertical, designated WV, smoked sheet registration, air damping, paper speed of 15 mm. per min., mass 80 kg.

SHAWINIGAN FALLS

Shawinigan Water and Power Company

$\phi = 46^{\circ}33'11''$  N.  $\lambda = 72^{\circ}45'18''$  W.  $h = 60$ m. ca.  
 Time correction from recorded radio time signals  
 Foundation: solid granite of Canadian Shield  
 Instrument: Wood-Anderson NS component, designated SA, photographic registration, magnetic damping, paper speed of 60 mm. per min., mass 15g.

SASKATOON

University of Saskatchewan

$\phi = 52^{\circ}08'$  N.  $\lambda = 106^{\circ}38'$  W.  $h = 515$ m.  
 Time correction from radio time signals  
 Foundation: clay and sand  
 Instruments: Mainka NS and EW components, designated SN and SE, respectively, each with smoked sheet registration, air damping, paper speed of 15 mm. per min., mass 139 kg.

TORONTO

$\phi = 43^{\circ}40'$  N.  $\lambda = 79^{\circ}24'$  W.  $h = 111$ m.  
 Time correction from radio time signals  
 Foundation: sand and clay  
 Instrument: Milne-Shaw NS component, designated 18, photographic registration, magnetic damping, paper speed of 8 mm. per min., mass 1 lb.

KIRKLAND LAKE

Lake Shore Mines

$\phi = 48^{\circ}09'$  N.  $\lambda = 80^{\circ}03'$  W.  $h = 320$ m.  
 Time correction from recorded radio time signals  
 Foundation: rock  
 Instrument: Converted Heiland Field Seismometer, vertical component, designated KL, photographic registration, paper speed of 30 mm. per min.

DETERMINED CONSTANTS

INSTRUMENT	$T_0$	V	$\epsilon$	DISPLACEMENT FOR 1" ARC TILT	DISPLACEMENT FOR $10^{-6}$ g
17 (Ottawa)	12.0	300	20:1	50 mm.	
23 (Ottawa)	12.0	300	20:1	50 mm.	
BS (Ottawa)	1.0				5 mm.
BL (Ottawa)	1.0				16 mm.
HN (Halifax)	5.0	125	20:1		
HE (Halifax)	5.0	125	20:1		
SA (Shawinigan)	1.0	2200			
18 (Toronto)	10.0	165	20:1	20 mm.	
20 (Victoria)	12.0	300	20:1		
21 (Victoria)	12.0	300	20:1		
WV (Victoria)	4.0	120	15:1		
SF (Seven Falls)	1.0	2500			
SM (Seven Falls)	12.0	300	20:1	50 mm.	
SN (Saskatoon)	9.1	65	Aper.		
SE (Saskatoon)	9.1	67	"		
KL (Kirkland Lake)	1/30	$2 \times 10^4$	at 30 cycles		

NOTE:- Universal Time used throughout.

SEISMOLOGICAL SERVICE OF CANADA  
 DOMINION OBSERVATORY, OTTAWA

FROM January 1, 1942 to January 20, 1942 No. 1

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Ottawa		
13 Jan. 12	eZ	16 24 55		
	eZ	16 26 13		
	LZ	17 08		
	F	17 30		
		Ottawa		
16 Jan. 20	H	6 25.7	4040	USCGS. gives: φ = 17°5 N. λ = 106° W.
	P	6 32 51		
	PPRZ	6 34 15		
	eS	6 38 41		
	SSSN	6 41.5		
	eL	6 45		
	F	7 27		
		Seven Falls		
	H	6 25.7	4510	
	P	6 33 24		
	S	6 39 42		
	L	6 47		
	F	7 35		
		Shawinigan Falls		
	H	6 25.8	4280	
	P	6 33 11		
	S	6 39 16		
	L	6 45		
	F	7 02		
		Ottawa		
17 Jan. 20	iZ	14 04 55		
	eZ	14 06 42		
	LZ	14 20		
	F	14 27		
		Seven Falls		
	e	14 06.1		
	L	14 20		
	F	14 24		
		Shawinigan Falls		
	e	14 04 59		
	L	14 19		
	F	14 26		

SEISMOLOGICAL SERVICE OF CANADA  
 DOMINION OBSERVATORY, OTTAWA

FROM January 20, 1942 to January 27, 1942 No. 2

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS	
		h m s	km.		
20 Jan. 27		Ottawa			
	H	13 29 ca.	14,700	USCGS. gives: $\phi = 2^{\circ}$ S. $\lambda = 135^{\circ}$ E. approx.	
	P <sup>1</sup> Z	13 48 22			
	PP	13 50.6			
	SKP	13 51 46			
	SKS	13 55 34			
	PPS	14 02.6			
	SS	14 08			
	e	14 16.5			
	eL	14 27			
	F	16 18			
		Victoria			
	H	13 29 ca	11,100		
	PPE	13 46 45			
	SKKS	13 53 46			
	PPS	13 56.3			
	SS	14 01.6			
	SSS	14 05			
	L	14 12			
	F	16 22			
		Saskatoon			
	e	13 57.7			
	e	14 04			
	L	14 19			
	F	15 02			
		Halifax			
	e	14 05			
L	14 23				
F	15 04				
	Seven Falls				
H	13 29 ca.	14,500			
e	13 48.7				
PP	13 50.6				
SKP	13 51 49				
PS	14 00 43				
SS	14 08 18				
SSS	14 14				
e	14 19.6				
L	14 26				
F	16 27				
	Shawinigan Falls				
e	13 48.5				
e	13 51 48				
L	14 35				
F	14 56				

SEISMOLOGICAL SERVICE OF CANADA  
 DOMINION OBSERVATORY, OTTAWA

FROM January 27, 1942 to January 31, 1942 No. 3

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
24 Jan. 29		Ottawa		
	H	9 23.3	14,200	
	PZ	9 42 26		
	SKP	9 45 50		
	PS	9 54 30		
	SS	10 01		
	eL	10 14		
	F	11 46		
		Victoria	10,200	
	H	9 23.4		
	P	9 35.5		
	PP	9 40 12		
	SKS	9 47 01		
	SS	9 53.6		
eL	10 01			
F	10 54			
	Seven Falls			
	H	9 23.3	14,500	
	P'	9 42 33		
	PS	9 55 00		
	SS	10 02 04		
	L	10 20		
	F	10 42		
25 Jan. 30		Ottawa		
	e	13 02		
	L	13 11		
	F	14 10		
		Victoria		
	e <sub>E</sub>	12 47.5		
	e <sub>N</sub>	12 53		
L	13 09			
F	13 50			
28 Jan. 31		Ottawa		
	H	4 11.9	175	
	P <sub>2</sub>	4 12 23		
	S <sub>2</sub>	4 12 43		
F	4 14			
29 Jan. 31		Ottawa		
	eZ	6 55 39		
	L	7 06		
F	7 16			

SEISMOLOGICAL SERVICE OF CANADA  
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FROM	January 31, 1942		to	January 31, 1942		No. 4	
NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS			
29 Jan. 31 (Cont'd)		h m s	km.				
					Victoria		
		H	6 49.0	265	Felt at Victoria and Vancouver, B.C.		
		P <sub>2</sub>	6 49 46				
		S <sub>2</sub>	6 50 16				
		F	7 04				
					Saskatoon		
		e	6 53 10				
		e <sup>N</sup>	6 54 19				
		L	6 55				
		F	7 03				
					Seven Falls		
		e	6 56 01				
		L	7 06				
		F	7 14				
				Shawinigan Falls			
	e	6 55 51					
	L	7 06					
	F	7 16					
				<i>W. W. Doysee.</i>			







## CORRELATION OF EARTHQUAKES

 January, 1942
 

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 N O T E S
 

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A :	Ottawa	$\Delta = 4040$ km.	$H = 6^h 25^m.7$ U.T.
	Seven Falls	$\Delta = 4510$ km.	$H = 6\ 25.7$ U.T.
	Shawinigan Falls	$\Delta = 4280$ km.	$H = 6\ 25.8$ U.T.
B :	Ottawa	$\Delta = 14,700$ km.	$H = 13^h 29^m$ U.T.
	Victoria	$\Delta = 11,100$ km.	$H = 13\ 29$ U.T.
	Seven Falls	$\Delta = 14,500$ km.	$H = 13\ 29$ U.T.
C :	Ottawa	$\Delta = 14,200$ km.	$H = 9^h 23^m.3$ U.T.
	Victoria	$\Delta = 10,200$ km.	$H = 9\ 23.4$ U.T.
	Seven Falls	$\Delta = 14,500$ km.	$H = 9\ 23.3$ U.T.
E :	Ottawa	$\Delta = 175$ km.	$H = 4^h 11^m.9$ U.T.
G :	Victoria	$\Delta = 265$ km.	$H = 6^h 49^m.0$ U.T.

Dominion Observatory,  
Ottawa, Canada,  
March 25, 1942.

SEISMOLOGICAL SERVICE OF CANADA

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SEISMOLOGICAL SERVICE OF CANADA  
 DOMINION OBSERVATORY, OTTAWA

FROM February 1, 1942 to February 17, 1942 No. 5

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
38 Feb. 11	eZ L F	11 27.9 11 39 11 46		
40 Feb. 13	eN eE eE eL F	6 45.8 6 47.6 6 53.5 7 05 8 20		
		Seven Falls		
	e L F	6 47.9 7 15 8 19		
45 Feb. 16	H P2Z S <sub>n</sub> Z S2Z F	10 20.9 15 21 29.5 15 21 53 15 21 55.5 15 22.5	225	
46 Feb. 16	eZ eE eE e L F	18 26 50 18 37.8 18 45.2 18 54 19 15 19 50		
		Victoria		
	H P <sub>E</sub> S P <sub>S</sub> <sub>N</sub> eL F	18 08.2 18 20 43 18 31 13 18 32 07 18 44 19 27	9420	
		Seven Falls		
	e L F	18 38.1 18 45 44 19 08 19 47		
47 Feb. 17	eZ L F	4 30 40 5 12 5 43		
		Victoria		
	eE L F	4 35.2 4 52 5 36		

SEISMOLOGICAL SERVICE OF CANADA  
 DOMINION OBSERVATORY, OTTAWA

FROM February 17, 1942 to February 28, 1942 No. 6

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Ottawa		
48 Feb. 18	H P2Z S2Z F	7 55.2 7 55 37 7 55 56 7 57	165	
		Ottawa		
50 Feb. 21	H P SKSN S SS eL F	7 07.8 7 20 41 7 31.0 7 31 29 7 37 38 7 51 9 30	9850	
		Victoria		
	H P S e L F	7 08.1 7 18 30 7 27 06 7 28 20 7 35 9 07	6980	
		Toronto		
	e L F	7 31.2 7 54 8 36		
		Seven Falls		
	e e e L F	7 31 30 7 37.6 7 44.5 7 52 9 12		
		Ottawa		
53 Feb. 23	eZ e L F	2 50 44 3 00.0 3 05 3 20		
		Ottawa		
54 Feb. 23	eZ e L F	6 34 10 6 44 6 48 6 57		

*W. W. Doxsee.*





CORRELATION OF EARTHQUAKES  
February, 1942

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N O T E S  
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A : Ottawa	$\Delta = 225$ km.	H = 14 <sup>h</sup> 20 <sup>m</sup> .9 U.T.
B : Victoria	$\Delta = 9420$ km.	H = 18 <sup>h</sup> 08 <sup>m</sup> .2 U.T.
C : Ottawa	$\Delta = 165$ km.	H = 7 <sup>h</sup> 55 <sup>m</sup> .2 U.T.
E : Ottawa	$\Delta = 9850$ km.	H = 7 <sup>h</sup> 07 <sup>m</sup> .8 U.T.
Victoria	$\Delta = 6980$ km.	H = 7 08.1 U.T.

Dominion Observatory,  
Ottawa, Canada,  
March 25, 1942.

## SEISMOLOGICAL BULLETINS RECEIVED

January and February, 1942

We acknowledge, with thanks, the receipt of the following seismological publications and bulletins:-

STATIONS	BULLETINS	RECEIVED
Berkeley and Auxiliary Stations	October 1/39 to December 31/39	January 8
Weston	November and December, 1941	" 9
Pasadena	Local Shocks for June-Aug., 1941	" 12
New Zealand Stations	Provisional for November, 1941	" 26
Brisbane	November, 1941	" 26
Sydney	September, 1941	February 5
Perth	April, 1941	" 6
Mexico and Auxiliary Stations	January 1 to June 30, 1940	" 11
Weston	Preliminary for January, 1942	" 19
Santa Clara	November, 1941	" 23
Pasadena	Preliminary Bulletin No. 32 for November-December, 1941	" 24
Perth	October and November, 1941	" 27

DOMINION OBSERVATORY,  
OTTAWA - CANADA.

## SEISMOLOGICAL SERVICE OF CANADA

## SEISMOLOGICAL BULLETIN

March

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		h m s	km.				
58 March 1	H PZ S <sup>1</sup> eL F	Ottawa	3800	USCGS. gives: $\phi = 13^{\circ}$ N. $\lambda = 91^{\circ}$ W.			
		9 52.1					
		9 58 52					
		10 04 26					
		10 10					
	11 15						
	Victoria	e e eL F	10 06.9		3950		
	10 10.2						
	10 16.5						
	11 01						
	Toronto	e L F	10 05			8680	
	10 08						
	10 52						
	Seven Falls	H P S SS L F	9 52.3				USCGS. gives: $\phi = 48^{\circ}$ S. $\lambda = 98^{\circ}$ W. Depth = 250-300 km.
	9 59 20						
10 05.1							
10 07.5							
10 12							
11 04							
Shawinigan Falls	P L F	9 59 10	6820				
10 14							
10 30							
Ottawa	H P S eL F	19 48.4		USCGS. gives: $\phi = 48^{\circ}$ S. $\lambda = 98^{\circ}$ W. Depth = 250-300 km.			
20 00 24							
20 10 21							
20 23							
21 10							
Victoria	e? iN eE F	20 00			8650		
20 06 09							
20 06 54							
20 40							
Saskatoon	H P S F	19 48.6				USCGS. gives: $\phi = 48^{\circ}$ S. $\lambda = 98^{\circ}$ W. Depth = 250-300 km.	
19 58 52							
20 07 20							
20 18							
Seven Falls	H P iS L F	19 48.5	6820				
20 00 23							
20 10 19							
20 15							
21 04							

SEISMOLOGICAL SERVICE OF CANADA  
 DOMINION OBSERVATORY, OTTAWA

FROM March 5, 1942 to March 19, 1942 No. 8

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Shawinigan Falls		
61 March 5 (Cont'd)	H	19 48.4	8720	
	P	20 00 22		
	S	20 10 21		
	F	20 21		
		Ottawa		
64 March 6	e	20 38.7		
	eL	21 04		
	F	22 00 ca.		
		Victoria		
	e	20 32 05		
	L	20 50		
	F	21 38		
		Seven Falls		
	e	20 36.8		
	L	21 07		
	F	22 24		
		Ottawa		
65 March 8	eZ	4 57.0		
	e	5 05.3		
	eL	5 12		
	F	5 30		
		Victoria		
	eE	5 10.8		
	L	5 28		
	F	5 41		
		Ottawa		
66 March 9	iZ	10 25 22		
	e	10 30.2		
	L	10 36		
	F	10 53		
		Ottawa		
67 March 19	H	11 59.4	4010	USCGS. gives: $\phi = 53^{\circ} \text{ N.} \pm$ $\lambda = 136^{\circ} \text{ W} \pm$
	P	12 06 28		
	S	12 12 16		
	L	12 17.5		
	F	13 05		
		Victoria		
	H	11 59.1	750	
	P	12 00 44		
	S	12 02 00		
	L	12 02 15		
	F	14 00 ca.		

SEISMOLOGICAL SERVICE OF CANADA  
 DOMINION OBSERVATORY, OTTAWA

FROM	March 19, 1942	to	March 20, 1942	No. 9	
NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS	
		h m s	km.		
67 March 19 (Cont'd)		Toronto			
	eP	12 06 26			
	e	12 11 49			
	L	12 17			
	F	13 10			
		Saskatoon			
	eE	12 02 54			
	eN	12 03 15			
	L	12 08			
	F	13 00 ca.			
		Halifax			
	eN	12 15.6			
	eE	12 17.6			
	L	12 21			
	F	12 51			
	Seven Falls		4280		
H	11 59.4				
P	12 06 46				
S	12 12 51				
e	12 17 32				
eL	12 19				
F	13 44				
	Shawinigan Falls				
P	12 06 38				
L	12 19				
F	12 50				
	Ottawa		6180		
H	1 13.3				
P	1 22 47				
S	1 30 38				
L	1 43				
F	3 36				
	Victoria		2980		
H	1 13.3				
P	1 19 03				
S	1 23 45				
L	1 26				
F	3 39				
	Toronto				
e	1 30 21				
L	1 43				
F	2 59				
69 March 20					



SEISMOLOGICAL SERVICE OF CANADA  
 DOMINION OBSERVATORY, OTTAWA

FROM	March 20, 1942		to	March 21, 1942		No. 10	
NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS			
		h m s	km.				
69 March 20 (Cont'd)		Saskatoon					
	H	11 13.5	3790				
	P	1 20.3					
	S	1 25 52					
	L	1 30					
	F	2 16					
			Seven Falls				
	H	1 13.3	6330				
	P	1 22 58					
	S	1 30 57					
	L	1 43					
	F	3 31					
			Shawinigan Falls				
	H	1 13.2	6280				
	P	1 22 50					
S	1 30 46						
F	1 53						
71 March 21		Ottawa					
	H	23 20.5	11,600				
	Pz	23 34 39					
	PP	23 38 48					
	SKS	23 45 14					
	SKKS	23 46 16					
	PS	23 47 50					
	SS	23 58					
	eL	0 07					
	F	1 23					
			Victoria				
	H	23 20.4	9130				
	P	23 32 43					
	S	23 43 00					
	L	23 59					
	F	1 17					
			Toronto				
	e	23 45 11					
	L	0 15					
	F	1 06					
			Seven Falls				
e	23 43.7						
e	23 46 10						
e	23 52 02						
L	0 11						
F	1 34						

SEISMOLOGICAL SERVICE OF CANADA  
DOMINION OBSERVATORY, OTTAWA

FROM		March 21, 1942		to	March 31, 1942		No. 11		
No. AND DATE	PHASE	TIME	DISTANCE	REMARKS					
		h m s	km.						
72 March 22	H	2 08.5	9900	Ottawa					
	PZ	2 21 27							
	PPZ	2 25 09							
	SKS	2 31.7							
	PSN	2 33 05							
	L	2 48							
	F	3 12							
75 March 26			4660	Ottawa					
	H	19 12.8							
	PZ	19 20 40							
	eS	19 27 06							
	eL	19 35							
	F	20 06							
					Victoria				
	e	19 27.1							
L	19 33								
F	19 48								
78 March 30			3490	Ottawa					
	H	9 09.0							
	P	9 15 25							
	S	9 20 40							
	SS	9 22							
	eL	9 24							
	F	10 11							
					Victoria				
	e	9 28							
	L	9 39							
	F	10 21							
					Seven Falls				
	e	9 14 54							
	L	9 20							
F	10 05								
			Shawinigan Falls						
e	9 15 15								
L	9 24								
F	9 28								

*W. W. Doxsee.*

EARTHQUAKE CORRELATION TABLE  
Month March, 1942

No.	Date	Ottawa	Victoria	Toronto	Saskatoon	Halifax	Seven Falls		Shawinigan	***
							M. S.	W. A.		
57	1	1 59+0 01P*	10 07+0 54r	10 05+0 47r	.....	10 11+0 20L	.....	.....	.....	A
58	1	9 59+1 16r	.....	.....	.....	.....	.....	9 59+0 22r	9 59+0 30r	.....
59	1	.....	.....	.....	18 18+0 15L	.....	.....	.....	.....	.....
60	4	4 41+0 19L	4 30+0 08L	.....	.....	.....	.....	.....	.....	B
61	5	20 00+1 10u	20 00+0 40u	.....	19 59+0 19u	.....	.....	20 00+0 16u	20 00+0 20u	.....
62	5	20 27+0 03P	.....	.....	.....	.....	.....	.....	.....	.....
63	6	15 46+0 07L	.....	.....	.....	.....	.....	.....	.....	.....
64	6	20 39+1 21u	20 32+1 06u	.....	.....	.....	.....	.....	.....	.....
65	8	4 57+0 33u	5 11+0 30u	.....	.....	.....	.....	.....	.....	.....
66	9	10 25+0 28r	10 45+0 10L	.....	.....	.....	.....	.....	.....	C
67	19	12 06+0 59R	12 01+1 59V	12 06+1 04R	12 03+0 57R	12 16+0 35u	.....	.....	12 07+0 43R	.....
68	19	16 54+0 08L	.....	.....	.....	.....	.....	.....	.....	E
69	20	1 23+2 13u	1 19+2 20u	1 30+1 29u	1 20+0 54u	1 44+0 23L	.....	.....	1 23+0 30u	.....
70	20	1 31+0 01P	.....	.....	.....	.....	.....	.....	.....	.....
71	21	23 35+1 48u	23 33+1 44u	23 45+1 21u	.....	0 14+0 21L	.....	.....	23 39+0 08P	F
72	22	2 21+0 51u	2 33+0 29L	.....	.....	.....	.....	.....	2 21+0 08P	G
73	25	7 43+0 05P*	.....	.....	.....	.....	.....	.....	.....	.....
74	25	.....	11 45+0 05L	.....	.....	.....	.....	.....	.....	.....
75	26	19 21+0 25r	19 27+0 21u	.....	.....	.....	.....	.....	.....	.....
76	28	6 04+0 04L	.....	.....	.....	.....	.....	.....	.....	.....
77	29	.....	.....	.....	.....	.....	.....	.....	.....	.....
78	30	9 15+0 56r	9 28+0 53u	9 25+0 11L	.....	.....	.....	.....	9 15+0 13r	.....
79	30	16 43+0 0.4P*	.....	.....	.....	.....	.....	.....	.....	.....
80	31	.....	.....	.....	.....	.....	.....	.....	0 25+0 03P	.....

## CORRELATION OF EARTHQUAKES

March, 1942

## N O T E S

A :	Ottawa	$\Delta = 3800$ km.	H = $9^h52^m.1$ U. T.
	Seven Falls	$\Delta = 3950$ km.	H = $9\ 52.3$ U. T.
B :	Ottawa	$\Delta = 8680$ km.	H = $19^h48^m.4$ U. T.
	Saskatoon	$\Delta = 6820$ km.	H = $19\ 48.6$ U. T.
	Seven Falls	$\Delta = 8650$ km.	H = $19\ 48.5$ U. T.
	Shawinigan Falls	$\Delta = 8720$ km.	H = $19\ 48.4$ U. T.
C :	Ottawa	$\Delta = 4010$ km.	H = $11^h59^m.4$ U. T.
	Victoria	$\Delta = 750$ km.	H = $11\ 59.1$ U. T.
	Seven Falls	$\Delta = 4280$ km.	H = $11\ 59.4$ U. T.
E :	Ottawa	$\Delta = 6180$ km.	H = $1^h13^m.3$ U. T.
	Victoria	$\Delta = 2980$ km.	H = $1\ 13.3$ U. T.
	Saskatoon	$\Delta = 3790$ km.	H = $1\ 13.5$ U. T.
	Seven Falls	$\Delta = 6330$ km.	H = $1\ 13.3$ U. T.
	Shawinigan Falls	$\Delta = 6280$ km.	H = $1\ 13.2$ U. T.
F :	Ottawa	$\Delta = 11,600$ km.	H = $23^h20^m.5$ U. T.
	Victoria	$\Delta = 9130$ km.	H = $23\ 20.4$ U. T.
G :	Ottawa	$\Delta = 9900$ km.	H = $2^h08^m.5$ U. T.
J :	Ottawa	$\Delta = 4660$ km.	H = $19^h12^m.8$ U. T.
K ;	Ottawa	$\Delta = 3490$ km.	H = $9^h09^m.0$ U. T.

Dominion Observatory,  
 Ottawa, Canada,  
 May 7, 1942.

## SEISMOLOGICAL BULLETINS RECEIVED

March and April, 1942

We acknowledge, with thanks, the receipt of the following seismological publications and bulletins:-

STATIONS	BULLETINS	RECEIVED
Santa Clara	January, 1942	March 2
Leningrad and Auxiliary Stations	August, 1941	" 2
Weston	Preliminary for February, 1942	" 5
Ksara	July, 1941	" 7
Perth	December, 1941	" 9
Perth	January, 1942	" 17
Pasadena	Local Shocks Oct.-Dec., 1941	" 23
Bureau and U.G.G.I.	September, 1941	" 30
New Zealand Stations	December, 1941	April 7
New Zealand Stations	January and February, 1942	" 8
Brisbane	December, 1941 and January, 1942	" 8
Zurich	October, 1941 to January, 1942	" 15
Sydney	November and December, 1941	" 21
Perth	February, 1942	" 27
Brisbane	February, 1942	" 30

Dominion Observatory,  
Ottawa - Canada.

## SEISMOLOGICAL SERVICE OF CANADA

SEISMOLOGICAL BULLETIN

April

1942



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DOMINION OBSERVATORY  
OTTAWA, CANADA

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SEISMOLOGICAL SERVICE OF CANADA  
DOMINION OBSERVATORY, OTTAWA

R. Meldrum Stewart, Dominion Astronomer  
Ernest A. Hodgson, Seismologist  
W. W. Doxsee, Station Superintendent

S T A T I O N S

OTTAWA

$\phi = 45^{\circ}23'38''$  N.  $\lambda = 75^{\circ}42'57''$  W.  $h = 83$ m.

Time correction within 0.10s.

Foundation: boulder clay over limestone

Instruments: Milne-Shaw NS and EW components, designated 23 and 17, respectively, each with photographic registration, magnetic damping, paper speed of 15 mm. per min., mass 1 lb.

Benioff Vertical, short and long period, designated BS and BL, respectively, photographic registration, BS a paper speed of 60 mm. per min., BL a paper speed of 30 mm. per min., mass 235 lbs.

HALIFAX

Dalhousie University

$\phi = 44^{\circ}38'$  N.  $\lambda = 63^{\circ}36'$  W.  $h = 46$ m.

Time correction from recorded radio time signals

Foundation: Carbonaceous slate

Instruments: Bosch NS and EW components, designated HN and HE, respectively, each with photographic registration, magnetic damping, paper speed of 15 mm. per min., mass 200g.

SEVEN FALLS

Quebec Power Company

$\phi = 47^{\circ}07'4''$  N.  $\lambda = 70^{\circ}49'6''$  W.  $h = 232$ m. ca.

Time correction from recorded radio time signals

Foundation: Solid granite of Canadian Shield

Instruments: Wood-Anderson and Milne-Shaw, both EW component, designated SF and SM, respectively, each with photographic registration, magnetic damping, SF a paper speed of 60 mm. per min. and mass 15g., SM a paper speed of 8 mm. per min. and mass 1 lb.

VICTORIA

Dominion Astrophysical Observatory

$\phi = 48^{\circ}31'14''$  N.  $\lambda = 123^{\circ}24'56''$  W.  $h = 197$ m.

Time correction from recorded radio time signals

Foundation: rock

Instruments: Milne-Shaw NS and EW components, designated 21 and 20, respectively, each with photographic registration, magnetic damping, paper speed of 8 mm. per min., mass 1 lb.

Wiechert Vertical, designated WV, smoked sheet registration, air damping, paper speed of 15 mm. per min., mass 80 kg.

## STATIONS (Cont'd)

SHAWINIGAN FALLS

Shawinigan Water and Power Company

$\phi = 46^{\circ}33'11''$  N.  $\lambda = 72^{\circ}45'18''$  W.  $h = 60$  m. ca.  
 Time correction from recorded radio time signals  
 Foundation: solid granite of Canadian Shield  
 Instrument: Wood-Anderson NS component, designated SA, photographic registration, magnetic damping, paper speed of 60 mm. per min., mass 15 g.

SASKATOON

University of Saskatchewan

$\phi = 52^{\circ}08'$  N.  $\lambda = 106^{\circ}38'$  W.  $h = 515$  m.  
 Time correction from radio time signals  
 Foundation: clay and sand  
 Instruments: Mainka NS and EW components, designated SN and SE, respectively, each with smoked sheet registration, air damping, paper speed of 15 mm. per min., mass 139 kg.

TORONTO

$\phi = 43^{\circ}40'$  N.  $\lambda = 79^{\circ}24'$  W.  $h = 111$  m.  
 Time correction from radio time signals  
 Foundation: sand and clay  
 Instrument: Milne-Shaw NS component, designated 18, photographic registration, magnetic damping, paper speed of 8 mm. per min., mass 1 lb.

KIRKLAND LAKE

Lake Shore Mines

$\phi = 48^{\circ}09'$  N.  $\lambda = 80^{\circ}03'$  W.  $h = 320$  m.  
 Time correction from recorded radio time signals  
 Foundation: rock  
 Instrument: Converted Heiland Field Seismometer, vertical component, designated KL, photographic registration, paper speed of 30 mm. per min.

DETERMINED CONSTANTS

INSTRUMENT	$T_0$	V	$\epsilon$	DISPLACEMENT FOR 1" ARC TILT	DISPLACEMENT FOR $10^{-6}$ g
17 (Ottawa)	12.0	300	20:1	50 mm.	
23 (Ottawa)	12.0	300	20:1	50 mm.	
BS (Ottawa)	1.0				5 mm.
BL (Ottawa)	1.0				16 mm.
HN (Halifax)	5.0	125	20:1		
HE (Halifax)	5.0	125	20:1		
SA (Shawinigan)	1.0	2200			
18 (Toronto)	10.0	165	20:1	20 mm.	
20 (Victoria)	12.0	300	20:1		
21 (Victoria)	12.0	300	20:1		
WV (Victoria)	4.0	120	15:1		
SF (Seven Falls)	1.0	2500			
SM (Seven Falls)	12.0	300	20:1	50 mm.	
SN (Saskatoon)	9.0	72	Aper.		
SE (Saskatoon)	9.0	56	"		
KL (Kirkland Lake)	1/30	$2 \times 10^4$	at 30	cycles	

NOTE:- Universal Time used throughout.



SEISMOLOGICAL SERVICE OF CANADA  
 DOMINION OBSERVATORY, OTTAWA

FROM April 1, 1942 to April 8, 1942 No. 12

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS		
		h m s	km.			
		Ottawa				
85 Apr. 8	H	15 40.4	13,350			
	P'Z	15 59 16				
	PPZ	16 00 34				
	SKPZ	16 02 07				
	PPP	16 03 12				
	PS	16 10 32				
	ez	16 13.0				
	SS	16 17 06				
	SSS	16 21.5				
	eL	16 32				
	F	18 54				
				Victoria		
		H		15 40.3	11,000	
		P		15 53 59		
	PP	15 57 32				
	SKS	16 04 32				
	PS	16 06.5				
	SS	16 12.5				
	L	16 21				
	F	19 01				
		Toronto				
	H	15 40.4	13,500			
	PP	16 00 48				
	SKKS	16 07.7				
	PS	16 10 45				
	SS	16 17 39				
	L	16 31				
	F	18 26				
		Saskatoon				
	e	15 59 02				
	e	16 08.9				
	e	16 18				
	L	16 24				
	F	17 36				
		Seven Falls				
	H	15 40.4	13,350			
	PP	16 00 37				
	S	16 08.4				
	PS	16 10 03				
	PPS	16 11.4				
	SS	16 16 33				
	SSS	16 21.4				
	L	16 31				
	F	19 11				

SEISMOLOGICAL SERVICE OF CANADA  
 DOMINION OBSERVATORY, OTTAWA

FROM April 8, 1942 to April 13, 1942 No. 13

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS	
		h m s	km.		
85 Apr. 8 (Cont'd)	H	15 40.4	13,350		
	P'	15 59 20			
	PP	16 00 34			
	PS	16 10.4			
	F	17 21			
		Ottawa			
89 Apr. 11	i	1 31 42	7920	USCGS. gives: $\phi = 15^{\circ}0$ N. $\lambda = 91^{\circ}5$ W. Depth 100 km. ca.	
	e	1 33 05			
	e <sub>E</sub>	1 37.8			
	e	1 40			
	L	1 45			
	F	1 56			
					Seven Falls
	e	1 32 11			
	e	1 33.8			
	L	1 43			
F	1 47				
		Shawinigan Falls			
90 Apr. 13	e	1 32 00	7920	USCGS. gives: $\phi = 3^{\circ}$ S. $\lambda = 13^{\circ}$ W	
	e	1 33.5			
	L	1 41			
	F	1 47			
					Ottawa
	H	7 46.3			
	PZ	7 57 37			
	S	8 06 58			
	SS	8 11.5			
	SSS	8 15			
	L	8 19			
	F	9 18			
					Victoria
	e	8 10.4			
	e	8 19 26			
L	8 34				
F	9 32				
		Halifax			
e	8 04.6				
L	8 11				
F	8 23				
		Seven Falls			
e	7 57.6				
e	8 06.6				
L	8 16				
F	9 10				

SEISMOLOGICAL SERVICE OF CANADA  
 DOMINION OBSERVATORY, OTTAWA

FROM April 13, 1942 to April 25, 1942 No. 14

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Ottawa		
92 Apr. 14	eZ eZ F	18 22 59 18 23 06 18 23 20		Nearby quake
		Ottawa		
95 Apr. 18	eZ L F	22 27 51 22 38 22 48		
		Ottawa		
97 Apr. 20	eZ eZ eZ e eE F	8 53 18 8 56 32 8 57 10 9 03 18 9 06 23 9 37		
		Victoria		
	e e e F	8 51 16 9 00 09 9 03 17 9 32		
		Seven Falls		
	e e L F	9 04 03 9 06 26 9 12 9 52		
		Shawinigan Falls		
	e e e F	8 53 19 8 57.2 9 03 20 9 06		
		Ottawa		
99 Apr. 22	eZ L F	23 27 28 23 36 0 03		
		Seven Falls		
	e L F	23 33 58 23 39 0 13		
		Ottawa		
100 Apr. 25	eZ L F	19 42 47 19 49 20 07		

SEISMOLOGICAL SERVICE OF CANADA  
DOMINION OBSERVATORY, OTTAWA

FROM April 25, 1942 to April 30, 1942 No. 15

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
101 Apr. 27	H	9 16.7	3680	
	PZ	9 23 24		
	PPE	9 24.3		
	SE	9 28 51		
	L	9 33		
	F	9 57		
				Seven Falls
	e	9 27.1		
	L	9 31		
	F	10 02		
103 Apr. 29		Ottawa		
	eZ	11 59 40		
	e	12 06.5		
	eE	12 11.3		
	e	12 18.0		
	L	12 33		
	F	12 45+		
		Victoria		
	e	12 04 32		
	e	12 06 43		
	L	12 18		
	F	12 40		
104 Apr. 30		Ottawa		
	eZ	1 45.8		
	L	2 36		
	F	2 58		
105 Apr. 30		Ottawa		
	eZ	6 49 51		
	F	6 50.4		Rockburst at Lake Shore Mines, Kirkland Lake, Ontario.

*W. W. Dopsee.*

EARTHQUAKE CORRELATION TABLE

Month April, 1942

No.	Date	Ottawa	Victoria	Toronto	Saskatoon	Halifax	Seven Falls			Shawinigan	**
							M. S.	W. A.			
81	1	2 26+0 02P*									
82	5								14 28+0 01P		
83	6								4 20+0 02P		
84	7	3 28+0 05L									
85	8	15 59+2 55U	15 54+3 07U	16 01+2 25U	15 59+1 37U			16 01+1 20U	15 59+1 22U	A	
86	8	20 30+0 43L	19 56+1 06L								
87	9										
88	9	5 46+0 31L	5 37+0 34L								
89	11	1 32+C 24R	1 39+0 30L	1 36+0 16L							
90	13	7 58+1 20u	8 10+1 22u		8 31+0 13L	8 05+0 18u		1 32+0 15R	1 32+0 15R		
91	13	11 52+0 28L	12 10+0 25L					7 58+0 02P	7 58+0 02P	B	
92	14	18 23+0 03v									
93	16		13 23+0 13L								
94	18										
95	18	22 28+0 20u						19 32+0 15L			
96	19	2 39+0 32L	3 05+0 13L								
97	20	8 53+0 44u	8 51+0 41u					2 37+0 39L			
98	22	12 03+0 21L						9 04+0 48u			
99	22	23 27+0 36R		23 40+0 16L							
100	25	19 43+0 24R						23 34+0 39R			
101	27	9 23+0 34R	9 48+0 17L					19 50+0 14L			
102	28	10 39+0 04P						9 27+0 35R			
103	29	12 00+0 45u	12 05+0 35u						10 39+0 05P		
104	30	1 46+1 12u						12 39+0 41L			
105	30	6 50+0 0.6v*						2 39+0 30L			
									6 50+0 0.8v		

## CORRELATION OF EARTHQUAKES

 April, 1942
 

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 N O T E S
 

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A :	Ottawa	$\Delta = 13,350$ km.	$H = 15^h 40^m 4$ U.T.
	Victoria	$\Delta = 11,000$ km.	$H = 15\ 40.3$ U.T.
	Toronto	$\Delta = 13,500$ km.	$H = 15\ 40.4$ U.T.
	Seven Falls	$\Delta = 13,350$ km.	$H = 15\ 40.4$ U.T.
	Shawinigan Falls	$\Delta = 13,350$ km.	$H = 15\ 40.4$ U.T.
B :	Ottawa	$\Delta = 7,920$ km.	$H = 7^h 46^m 3$ U.T.
C :	Ottawa	$\Delta = 3,680$ km.	$H = 9^h 16^m 7$ U.T.

Dominion Observatory,  
Ottawa, Canada,  
May 21, 1942.

SEISMOLOGICAL SERVICE OF CANADA

SEISMOLOGICAL BULLETIN

May

1942



DOMINION OBSERVATORY  
OTTAWA, CANADA



SEISMOLOGICAL SERVICE OF CANADA  
DOMINION OBSERVATORY, OTTAWA

R. Meldrum Stewart, Dominion Astronomer  
Ernest A. Hodgson, Seismologist  
W. W. Doxsee, Station Superintendent

S T A T I O N S

OTTAWA

$\phi = 45^{\circ}23'38''$  N.  $\lambda = 75^{\circ}42'57''$  W.  $h = 83$ m.

Time correction within 0.10s,

Foundation: boulder clay over limestone

Instruments: Milne-Shaw NS and EW components, designated 23 and 17, respectively, each with photographic registration, magnetic damping, paper speed of 15 mm. per min., mass 1 lb.

Benioff Vertical, short and long period, designated BS and BL, respectively, photographic registration, BS a paper speed of 60 mm. per min., BL a paper speed of 30 mm. per min., mass 235 lbs.

HALIFAX

Dalhousie University

$\phi = 44^{\circ}38'$  N.  $\lambda = 63^{\circ}36'$  W.  $h = 46$ m.

Time correction from recorded radio time signals

Foundation: Carbonaceous slate

Instruments: Bosch NS and EW components, designated HN and HE, respectively, each with photographic registration, magnetic damping, paper speed of 15 mm. per min., mass 200g.

SEVEN FALLS

Quebec Power Company

$\phi = 47^{\circ}07'4''$  N.  $\lambda = 70^{\circ}49'6''$  W.  $h = 232$ m. ca.

Time correction from recorded radio time signals

Foundation: Solid granite of Canadian Shield

Instruments: Wood-Anderson and Milne-Shaw, both EW component, designated SF and SM, respectively, each with photographic registration, magnetic damping, SF a paper speed of 60 mm. per min. and mass 15g., SM a paper speed of 8 mm. per min. and mass 1 lb.

VICTORIA

Dominion Astrophysical Observatory

$\phi = 48^{\circ}31'14''$  N.  $\lambda = 123^{\circ}24'56''$  W.  $h = 197$ m.

Time correction from recorded radio time signals

Foundation: rock

Instruments: Milne-Shaw NS and EW components, designated 21 and 20, respectively, each with photographic registration, magnetic damping, paper speed of 8 mm. per min., mass 1 lb.

Wiechert Vertical, designated WV, smoked sheet registration, air damping, paper speed of 15 mm. per min., mass 80 kg.



## STATIONS (Cont'd)

SHAWINIGAN FALLS

Shawinigan Water and Power Company

$\phi = 46^{\circ}33'11''$  N.  $\lambda = 72^{\circ}45'18''$  W.  $h = 60$  m. ca.  
 Time correction from recorded radio time signals  
 Foundation: solid granite of Canadian Shield  
 Instrument: Wood-Anderson NS component, designated SA, photographic registration, magnetic damping, paper speed of 60 mm. per min., mass 15 g.

SASKATOON

University of Saskatchewan

$\phi = 52^{\circ}08'$  N.  $\lambda = 106^{\circ}38'$  W.  $h = 515$  m.  
 Time correction from radio time signals  
 Foundation: clay and sand  
 Instruments: Mainka NS and EW components, designated SN and SE, respectively, each with smoked sheet registration, air damping, paper speed of 15 mm. per min., mass 139 kg.

TORONTO

$\phi = 43^{\circ}40'$  N.  $\lambda = 79^{\circ}24'$  W.  $h = 111$  m.  
 Time correction from radio time signals  
 Foundation: sand and clay  
 Instrument: Milne-Shaw NS component, designated 18, photographic registration, magnetic damping, paper speed of 8 mm. per min., mass 1 lb.

KIRKLAND LAKE

Lake Shore Mines

$\phi = 48^{\circ}09'$  N.  $\lambda = 80^{\circ}03'$  W.  $h = 320$  m.  
 Time correction from recorded radio time signals  
 Foundation: rock  
 Instrument: Converted Heiland Field Seismometer, vertical component, designated KL, photographic registration, paper speed of 30 mm. per min.

DETERMINED CONSTANTS

INSTRUMENT	$T_0$	V	$\epsilon$	DISPLACEMENT FOR 1" ARC TILT	DISPLACEMENT FOR $10^{-6}$ g
17 (Ottawa)	12.0	300	20:1	50 mm.	
23 (Ottawa)	12.0	300	20:1	50 mm.	
BS (Ottawa)	1.0				5 mm.
BL (Ottawa)	1.0				16 mm.
HN (Halifax)	5.0	125	20:1		
HE (Halifax)	5.0	125	20:1		
SA (Shawinigan)	1.0	2200			
18 (Toronto)	10.0	165	20:1	20 mm.	
20 (Victoria)	12.0	300	20:1		
21 (Victoria)	12.0	300	20:1		
WV (Victoria)	4.0	120	15:1		
SF (Seven Falls)	1.0	2500			
SM (Seven Falls)	12.0	300	20:1	50 mm.	
SN (Saskatoon)	9.0	72	Aper.		
SE (Saskatoon)	9.0	56	"		
KL (Kirkland Lake)	1/30	$2 \times 10^4$	at 30	cycles	

NOTE:- Universal Time used throughout.

SEISMOLOGICAL SERVICE OF CANADA  
DOMINION OBSERVATORY, OTTAWA

FROM May 1, 1942 to May 14, 1942 No. 16

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
106 May 2	eZ	20 29 56		
	L	20 39		
	F	20 50		
		Ottawa		
107 May 2	eZ	21 52 46		
	e	22 02		
	L	22 07		
	F	22 18		
		Ottawa		
111 May 6	eZ	22 57.3		
	e	23 02.8		
	L	23 05		
	F	23 48		
		Seven Falls		
	e	23 03 06		
	L	23 06		
	F	23 41		
		Victoria		
119 May 13	e <sup>E</sup>	20 53 17		
	e	20 55 26		
	L	21 13		
	F	21 42		
		Ottawa		
120 May 14	H	2 13.4	4980	USCGS. gives:- φ = 1° S. λ = 79° W.
	iP	2 21 40		
	PPP	2 23 35		
	iS	2 28 23		
	i <sup>N</sup>	2 28 40		
	SS <sup>N</sup>	2 31 00		
	SSS	2 32 10		
	L	2 35		
	F	7 06		
	H	2 13.6	6640	
	P	2 23 40		
	iS	2 31 57		
	eL	2 40		
	F	6 55		

SEISMOLOGICAL SERVICE OF CANADA  
 DOMINION OBSERVATORY, OTTAWA

FROM	May 14, 1942	to	May 14, 1942	No. 17
NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Toronto		
120 May 14 (Cont'd)	H	2 13.8	4660	
	P	2 21 38		
	PPP	2 23 38		
	S	2 28 04		
	L	2 35		
	F	6 00 ca.		
		Saskatoon		
	H	2 13.7	6100	
	P	2 23 12		
	PP	2 25.3		
	iS	2 30 58		
	SSS	2 36		
	L	2 40		
	F	5 30		
		Halifax		
	H	2 13.6	5080	
	P	2 21 55		
	PPP	2 23.8		
	S	2 28 44		
	SS	2 31.8		
	SSS	2 32.6		
	L	2 37		
	F	5 59		
		Seven Falls		
	H	2 13.5	5240	
	P	2 22 01		
	PP	2 23 45		
	PPP	2 24 19		
	iS	2 28 59		
	SS	2 32.0		
	L	2 36		
	F	7 28		
		Shawinigan Falls		
	H	2 13.5	5170	
	P	2 21 57		
	S	2 28.8		
	SS	2 32		
	L	2 37		
	F	5 13		
		Ottawa		
122 May 14	eZ	8 47 10		USCGS. gives:- φ = 1°5 N. λ = 81°5 W.
	eN	8 49.1		
	eE	8 53 52		
	eF	8 57 07		
	L	9 01		
	F	9 36		

SEISMOLOGICAL SERVICE OF CANADA  
 DOMINION OBSERVATORY, OTTAWA

FROM	May 14, 1942	to	May 15, 1942	No. 18	
NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS	
		h m s	km.		
122 May 14 (Cont'd)	e e L F	Victoria			
		8 49.1			
		8 57 26			
		9 10			
	e e L F	Seven Falls			
		8 54 30			
		8 57 28			
		8 59			
124 May 14	eZ eZ L F	Ottawa			
		15 54 42			
		15 55 01			
		16 02			
125 May 15	eZ L F	Ottawa			
		2 58 13			
		3 03			
		3 27			
127 May 15	H P PPN S SS <sup>E</sup> SSS <sup>N</sup> L F	Ottawa			
		10 50.9	4820		
		10 58 55			
		11 00 40			
		11 05 30			
		11 08 50			
		11 09.5			
	e L F	Victoria			
		11 09 12			
		11 21			
		11 50			
		Seven Falls			
		10 50.9	5110		
		10 59 14			
11 06 05					
11 10					
12 07					

SEISMOLOGICAL SERVICE OF CANADA  
 DOMINION OBSERVATORY, OTTAWA

FROM May 15, 1942 to May 17, 1942 No. 19

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
128 May 15		Ottawa		
	H	11 51.6	4280	
	P	11 59 37		
	PPP	12 01 26		
	S	12 06 12		
	e <sup>E</sup>	12 09 34		
	L <sup>E</sup>	12 14		
	F	12 55+		
		Victoria		
	H	11 51.7	6550	
	P	12 01 41		
	S	12 09 53		
	e	12 11 24		
	L	12 18		
	F	13 37		
	Saskatoon			
e	12 08 52			
L	12 21			
F	12 39			
	Seven Falls			
H	11 51.7	5050		
P	12 00.0			
S	12 06 47			
L	12 11			
F	13 14			
	Ottawa			
133 May 16	e <sup>Z</sup>	19 39 40		
	L <sup>Z</sup>	19 48		
	F	20 12		
	Ottawa			
134 May 17	H	15 14.6	4790	
	P	15 22 36		
	PPN	15 24 10		
	PPP <sup>N</sup>	15 24 48		
	i <sup>S</sup>	15 29 09		
	i <sup>E</sup>	15 32 30		
	L <sup>E</sup>	15 36		
	F	17 04		
		Victoria		
	H	15 14.6	6635	
	P	15 24.6		
	S	15 32 50		
e <sup>E</sup>	15 34.2			
L <sup>E</sup>	15 45			
F	16 51			

SEISMOLOGICAL SERVICE OF CANADA  
 DOMINION OBSERVATORY, OTTAWA

FROM May 17, 1942 to May 20, 1942 No. 20

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS	
		h m s	km.		
		Toronto			
134 May 17 (Cont'd)	H	15 14.4	4850		
	P	15 22 28			
	S	15 29.1			
	L	15 36			
	F	16 10			
		Saskatoon			
	e	15 31 46			
	L	15 38			
	F	16 02			
		Halifax			
	e	15 22.9			
	L	15 29			
F	16 02				
	Seven Falls				
e	15 22.1				
i	15 29 40				
L	15 39				
F	17 37				
	Ottawa				
135 May 19	eZ	11 55 44			
	L	12 09			
	F	12 16			
	Shawinigan Falls				
e	11 55 48				
L	12 10				
F	12 14				
	Ottawa				
138 May 20	H	12 19.3	90		
	P <sub>1</sub>	12 19 37			
	S <sub>1</sub>	12 19 48			
	F <sub>1</sub>	12 24			
		Seven Falls			
	H	12 19.4	305		
	P <sub>1</sub>	12 20 04			
	S <sub>1</sub>	12 20 39.5			
	F <sub>1</sub>	12 22			
		Shawinigan Falls			
	H	12 19.4	150		
	P <sub>1</sub>	12 19 52.5			
S <sub>1</sub>	12 20 09.5				
F <sub>1</sub>	12 23				

SEISMOLOGICAL SERVICE OF CANADA  
DOMINION OBSERVATORY, OTTAWA

FROM May 20, 1942 to May 24, 1942 No. 21

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Ottawa		
143 May 22	H P <sub>Z</sub> S SSS <sub>N</sub> L F	10 30.7 10 38 24 10 44 45 10 48.0 10 51 11 12	4565	
		Ottawa		
146 May 23	e <sub>Z</sub> L F	13 08 16 13 36 15 09		
		Victoria		
	e L F	13 12 57 13 34 14 03		
		Seven Falls		
	e L F	13 21.3 13 45 15 17		
		Ottawa		
149 May 24	e e <sub>N</sub> L F	3 45.6 4 05 32 4 31 5 32		
		Victoria		
	H P S SS L F	3 33.9 3 46.3 3 56.4 4 02.3 4 27 5 04	8890	
		Seven Falls		
	e e L F	3 55.3 4 03.3 4 19 5 49		
		Ottawa		
150 May 24	H P <sub>2</sub> S <sub>2</sub> e F	7 15.1 7 15 39.5 7 15 59.5 7 16 05 7 17.5	170	

SEISMOLOGICAL SERVICE OF CANADA  
 DOMINION OBSERVATORY, OTTAWA

FROM	May 24, 1942	to	May 28, 1942	No. 22
NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Shawinigan Falls		
150 May 24 (Cont'd)	H	7 15.1	220	
	P <sub>1</sub>	7 15 49		
	S <sub>1</sub>	7 16 15		
	F	7 18		
		Ottawa		
151 May 24	H	11 33.9	170	
	P <sub>2</sub>	11 34 23		
	S <sub>2</sub>	11 34 43		
	e	11 34 49		
	F	11 37		
		Seven Falls		
	i	11 35 31		
	e	11 35 36		
	F	11 37		
		Shawinigan Falls		
156 May 27	H	11 33.9	220	
	P <sub>1</sub>	11 34 32.5		
	S <sub>1</sub>	11 34 58.5		
	F	11 38		
			Ottawa	
	e <sub>Z</sub>	6 50.7		
	e <sub>E</sub>	6 55		
	e <sub>N</sub>	7 00		
	e	7 02		
	e	7 09		
	L	7 35		
	F	9 19		
		Victoria		
	e	6 55 54		
	L	7 17		
	F	8 53		
		Seven Falls		
	e	6 52.9		
	e	7 02.4		
	e	7 09.4		
	L	7 32		
	F	9 33		
		Ottawa		
157 May 28	e <sub>Z</sub>	0 47.1		
	L	0 59		
	F	1 10		



SEISMOLOGICAL SERVICE OF CANADA  
DOMINION OBSERVATORY, OTTAWA

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FROM May 28, 1942 to May 28, 1942 No. 23

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS	
		h m s	km.		
		Ottawa			
158 May 28	H	1 01.6	15,000		
	P'	1 20 56			
	e <sub>Z</sub>	1 21 28			
	PP	1 23 17			
	SKP	1 24 13			
	e	1 25.0			
	e <sub>E</sub>	1 28.8			
	PS	1 33			
	PPS	1 35.1			
	SS	1 41			
	L	2 06			
	F	3 45			
		Victoria			
	H	1 01.7		11,780	
P	1 15 58				
PP	1 20 12				
SKKS	1 27 14				
PS	1 29 17				
PPS	1 30 05				
SS	1 35.2				
L	1 44				
F	3 59				
	Toronto				
e	1 23.3				
i	1 24 22				
e	1 33.5				
L	2 06				
F	3 00				
	Saskatoon				
e	1 20 46				
e	1 30.7				
F	2 00 ca				
	Halifax				
e	1 21.0				
e <sub>N</sub>	1 23 35				
e	1 24 32				
e	1 53				
L	2 07				
F	2 27				
	Seven Falls				
e	1 20 58				
e	1 23 09				
i	1 24 22				
e	1 40				
L	1 57				
F	3 50				

SEISMOLOGICAL SERVICE OF CANADA  
 DOMINION OBSERVATORY, OTTAWA

FROM	May 28, 1942	to	May 31, 1942	No. 24
NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Shawinigan Falls		
158	e	1 20 57		
May	e	1 23.1		
28	i	1 24 22		
(Cont'd)	e	1 25.0		
	F	1 45		
		Ottawa		
161	H	5 32.2	4580	
May	P	5 39 56		
29	S	5 46 18		
	SSN	5 49.3		
	eL	5 51		
	F	6 19		
		Seven Falls		
	e	5 45.0		
	L	5 50		
	F	6 19		
		Ottawa		
162	H	14 28.4	185	
May	P <sub>1</sub>	14 28 57		
29	S <sub>1</sub>	14 29 19		
	L <sub>1</sub>	14 29 35		
	F	14 30		
		Ottawa		
163	P	7 26 42		
May	L	7 37		
30	F	8 20		
		Victoria		
	e	7 30.5		
	L	7 33		
	F	8 23		
		Saskatoon		
	e	7 35.0		
	L	7 37		
	F	7 49		
		Ottawa		
166	H	2 42.9	4560	
May	PZ	2 50 39		
31	S	2 57.0		
	L	3 04		
	F	3 39		

SEISMOLOGICAL SERVICE OF CANADA  
DOMINION OBSERVATORY, OTTAWA

FROM May 31, 1942 to May 31, 1942 No. 25

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Victoria		
166	e	3 01		
May	L	3 05		
31	F	3 34		
		Ottawa		
167	H	5 20.9	6380	
May	PZ	5 30 38		
31	S	5 38 40		
	L	5 52		
	F	6 27		
		Victoria		
	e	5 28		
	e	5 32 02		
	L	5 35		
	F	6 50		
		Seven Falls		
	e	5 38 59		
	L	5 51		
	F	6 50		
		Victoria		
169	e	13 04		
May	e	13 10.1		
31	L	13 24		
	F	14 22		
			<i>W. W. Doysee.</i>	





## CORRELATION OF EARTHQUAKES

May, 1942

## N O T E S

A	Ottawa	$\Delta = 4930$ km.	H = $2^{\text{h}}13^{\text{m}}.4$ U.T.
	Victoria	$\Delta = 6640$ km.	H = $2\ 13.6$ U.T.
	Toronto	$\Delta = 4660$ km.	H = $2\ 13.8$ U.T.
	Saskatoon	$\Delta = 6100$ km.	H = $2\ 13.7$ U.T.
	Halifax	$\Delta = 5080$ km.	H = $2\ 13.6$ U.T.
	Seven Falls	$\Delta = 5240$ km.	H = $2\ 13.5$ U.T.
	Shawinigan Falls	$\Delta = 5170$ km.	H = $2\ 13.5$ U.T.
B	Ottawa	$\Delta = 4820$ km.	H = $10^{\text{h}}50^{\text{m}}.9$ U.T.
	Seven Falls	$\Delta = 5110$ km.	H = $10\ 50.9$ U.T.
C	Ottawa	$\Delta = 4820$ km.	H = $11^{\text{h}}51^{\text{m}}.6$ U.T.
	Victoria	$\Delta = 6550$ km.	H = $11\ 51.7$ U.T.
	Seven Falls	$\Delta = 5050$ km.	H = $11\ 51.7$ U.T.
E	Ottawa	$\Delta = 4790$ km.	H = $15^{\text{h}}14^{\text{m}}.6$ U.T.
	Victoria	$\Delta = 6635$ km.	H = $15\ 14.6$ U.T.
	Toronto	$\Delta = 4850$ km.	H = $15\ 14.4$ U.T.
F	Ottawa	$\Delta = 90$ km.	H = $12^{\text{h}}19^{\text{m}}.3$ U.T.
	Seven Falls	$\Delta = 305$ km.	H = $12\ 19.4$ U.T.
	Shawinigan Falls	$\Delta = 150$ km.	H = $12\ 19.4$ U.T.
G	Ottawa	$\Delta = 4565$ km.	H = $10^{\text{h}}30^{\text{m}}.7$ U.T.
J	Victoria	$\Delta = 8890$ km.	H = $3^{\text{h}}33^{\text{m}}.9$ U.T.
K	Ottawa	$\Delta = 170$ km.	H = $7^{\text{h}}15^{\text{m}}.1$ U.T.
	Shawinigan Falls	$\Delta = 220$ km.	H = $7\ 15.1$ U.T.
N	Ottawa	$\Delta = 170$ km.	H = $11^{\text{h}}33^{\text{m}}.9$ U.T.
	Shawinigan Falls	$\Delta = 220$ km.	H = $11\ 33.9$ U.T.
Q	Ottawa	$\Delta = 15,000$ km.	H = $1^{\text{h}}01^{\text{m}}.6$ U.T.
	Victoria	$\Delta = 11,780$ km.	H = $1\ 01.7$ U.T.
R	Ottawa	$\Delta = 4580$ km.	H = $5^{\text{h}}32^{\text{m}}.2$ U.T.
S	Ottawa	$\Delta = 185$ km.	H = $14^{\text{h}}28^{\text{m}}.4$ U.T.
T	Ottawa	$\Delta = 4560$ km.	H = $2^{\text{h}}42^{\text{m}}.9$ U.T.
V	Ottawa	$\Delta = 6380$ km.	H = $5^{\text{h}}20^{\text{m}}.9$ U.T.

Dominion Observatory,  
 Ottawa, Canada,  
 July 18, 1942.

SEISMOLOGICAL BULLETINS RECEIVED  
May and June, 1942

We acknowledge, with thanks, the receipt of the following seismological publications and bulletins:-

STATIONS	BULLETINS	RECEIVED
Florissant	July to October, 1941	May 6
Saint Louis and Auxiliary Stations	Supplement to preliminary of November 6, 1941	" 6
United States Coast and Geodetic Survey	March and April, 1940	" 7
Perth	March, 1942	" 15
Ksara	October to December, 1941	" 18
Brisbane	March, 1942	" 20
New Zealand Stations	March, 1942	" 22
Santa Clara	February and March, 1942	" 26
Zurich	February and March, 1942	June 9
Pasadena	Local Shocks December to March, 1942	" 9
Pasadena	Local Shocks February to April, 1942	" 18
New Zealand Stations	Distant and Local Earthquakes for April, 1942	" 22

DOMINION OBSERVATORY,  
OTTAWA - CANADA.

## SEISMOLOGICAL SERVICE OF CANADA

## SEISMOLOGICAL BULLETIN

June

1942

DOMINION OBSERVATORY  
OTTAWA - CANADA



SEISMOLOGICAL SERVICE OF CANADA  
DOMINION OBSERVATORY, OTTAWA

R. Meldrum Stewart, Dominion Astronomer  
Ernest A. Hodgson, Seismologist  
W. W. Doxsee, Station Superintendent

S T A T I O N S

OTTAWA

$\phi = 45^{\circ}23'38''$  N.  $\lambda = 75^{\circ}42'57''$  W.  $h = 83$ m.

Time correction within 0.10s.

Foundation: boulder clay over limestone

Instruments: Milne-Shaw NS and EW components, designated 23 and 17, respectively, each with photographic registration, magnetic damping, paper speed of 15 mm. per min., mass 1 lb.

Benioff Vertical, short and long period, designated BS and BL, respectively, photographic registration, BS a paper speed of 60 mm. per min., BL a paper speed of 30 mm. per min., mass 235 lbs.

HALIFAX

Dalhousie University

$\phi = 44^{\circ}38'$  N.  $\lambda = 63^{\circ}36'$  W.  $h = 46$ m.

Time correction from recorded radio time signals

Foundation: Carbonaceous slate

Instruments: Bosch NS and EW components, designated HN and HE, respectively, each with photographic registration, magnetic damping, paper speed of 15 mm. per min., mass 200g.

SEVEN FALLS

Quebec Power Company

$\phi = 47^{\circ}07'4''$  N.  $\lambda = 70^{\circ}49'6''$  W.  $h = 232$ m. ca.

Time correction from recorded radio time signals

Foundation: Solid granite of Canadian Shield

Instruments: Wood-Anderson and Milne-Shaw, both EW component, designated SF and SM, respectively, each with photographic registration, magnetic damping, SF a paper speed of 60 mm. per min. and mass 15g., SM a paper speed of 8 mm. per min. and mass 1 lb.

VICTORIA

Dominion Astrophysical Observatory

$\phi = 48^{\circ}31'14''$  N.  $\lambda = 123^{\circ}24'56''$  W.  $h = 197$ m.

Time correction from recorded radio time signals

Foundation: rock

Instruments: Milne-Shaw NS and EW components, designated 21 and 20, respectively, each with photographic registration, magnetic damping, paper speed of 8 mm. per min., mass 1 lb.

Wiechert Vertical, designated WV, smoked sheet registration, air damping, paper speed of 15 mm. per min., mass 80 kg.

## STATIONS (Cont'd)

### SHAWINIGAN FALLS

Shawinigan Water and Power Company

$\phi = 46^{\circ}33'11''$  N.     $\lambda = 72^{\circ}45'18''$  W.     $h = 60$  m. ca.  
 Time correction from recorded radio time signals  
 Foundation: solid granite of Canadian Shield  
 Instrument: Wood-Anderson NS component, designated SA, photographic registration, magnetic damping, paper speed of 60 mm. per min., mass 15 g.

### SASKATOON

University of Saskatchewan

$\phi = 52^{\circ}08'$  N.     $\lambda = 106^{\circ}38'$  W.     $h = 515$  m.  
 Time correction from radio time signals  
 Foundation: clay and sand  
 Instruments: Mainka NS and EW components, designated SN and SE, respectively, each with smoked sheet registration, air damping, paper speed of 15 mm. per min., mass 139 kg.

### KIRKLAND LAKE

Lake Shore Mines

$\phi = 48^{\circ}09'$  N.     $\lambda = 80^{\circ}03'$  W.     $h = 320$  m.  
 Time correction from recorded radio time signals  
 Foundation: rock  
 Instrument: Converted Heiland Field Seismometer, vertical component, designated KL, photographic registration, paper speed of 30 mm. per min.

### DETERMINED CONSTANTS

INSTRUMENT	$T_0$	V	$\epsilon$	DISPLACEMENT FOR 1" ARC TILT	DISPLACEMENT FOR $10^{-6}$ g
17 (Ottawa)	12.0	300	20:1	50 mm.	
23 (Ottawa)	12.0	300	20:1	50 mm.	
BS (Ottawa)	1.0				5 mm.
BL (Ottawa)	1.0				16 mm.
HN (Halifax)	5.0	125	20:1		
HE (Halifax)	5.0	125	20:1		
SA (Shawinigan)	1.0	2200			
20 (Victoria)	12.0	300	20:1		
21 (Victoria)	12.0	300	20:1		
WV (Victoria)	4.0	120	15:1		
SF (Seven Falls)	1.0	2500			
SM (Seven Falls)	12.0	300	20:1	50 mm.	
SN (Saskatoon)	9.0	72	Aper.		
SE (Saskatoon)	9.0	56	"		
KL (Kirkland Lake)	1/30	$2 \times 10^4$	at 30	cycles	

NOTE: Universal Time used throughout.

SEISMOLOGICAL SERVICE OF CANADA  
 DOMINION OBSERVATORY, OTTAWA

FROM June 1, 1942 to June 7, 1942 No. 26

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Ottawa		
171 June 2	e	1 00.2		
	e	1 07.1		
	eL	1 25		
	F	2 06		
		Victoria		
	eN	0 51.3		
	eE	0 54.5		
	L	1 42		
	F	2 42		
		Seven Falls		
	e	0 59.6		
	e	1 06.6		
	L	1 21		
	F	2 47		
		Ottawa		
174 June 6	eZ	10 47 42		
	L	10 54		
	F	11 08		
		Ottawa		
175 June 6	eZ	15 12 13		
	e	15 23.8		
	e	15 31		
	eL	15 50		
	F	16 22		
			Victoria	
	e	(15 12)		
	L	(15 16)		
	F	(16 03)		
		Seven Falls		
	e	15 16.2		
	e	15 24.4		
	L	15 42		
	F	16 20		
		Ottawa		
177 June 7	H	10 48.2	5,000	
	P	10 56 26		
	S	11 03 10		
	SS	11 06.4		
	F	11 23		
		Victoria		
	e	10 58.4		
	e	11 06.7		
	L	11 22		
	F	11 38		

SEISMOLOGICAL SERVICE OF CANADA  
 DOMINION OBSERVATORY, OTTAWA

FROM June 7, 1942 to June 10, 1942 No. 27

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS	
		h m s	km.		
180 June 9	H P <sub>Z</sub> S <sub>Z</sub> L F	Ottawa	3020		
		9 26.0			
		9 31 47			
		9 36 32			
		9 39 26			
	e L F	Seven Falls	9 36.7		
		9 38 29			
		9 45			
	e e L F	Shawinigan Falls	9 31 37		
		9 36.6			
		9 38 49			
		9 51			
	181 June 9	e <sub>Z</sub> e L F	Ottawa		
			11 13 48		
11 19.6					
11 26					
e L F		Saskatoon	11 13.5		
		11 16			
		11 30			
e L F		Shawinigan Falls	11 14.6		
		11 27			
		11 39			
182 June 10		e <sub>Z</sub> e <sub>N</sub> e <sub>E</sub> L F	Ottawa		
			1 18 55		
			1 27 52		
	1 37				
	1 43				
	e L F	Seven Falls	2 09		
		1 27.9			
		1 42			
	e <sub>Z</sub> e <sub>N</sub> e <sub>E</sub> L F	Ottawa			
		10 40 11			
10 42					
10 48					
10 59					
L F		11 04			
		12 30			

SEISMOLOGICAL SERVICE OF CANADA  
DOMINION OBSERVATORY, OTTAWA

FROM June 10, 1942 to June 12, 1942 No. 28

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS	
		h m s			km.
183 June 10 (Cont'd)	e <sub>N</sub> e <sub>E</sub> L F	Victoria			
		10 46 36			
		10 49 11			
		11 02			
	e L F	Seven Falls			
		10 48.9			
		11 16			
		12 28			
184 June 10	e <sub>Z</sub> L F	Ottawa			
		14 09 36			
		15 05			
	15 50				
190 June 12	e <sub>Z</sub> e e e F	Ottawa			
		2 09 02			
		2 19.2			
		2 21 42			
	e L F	Victoria			
		2 05.1			
		2 08			
		2 42			
	e eL F	Seven Falls			
		2 19.8			
		2 23			
		2 44			
	e L F	Shawinigan Falls			
		2 18.4			
2 22					
2 32					
191 June 12	H P S SSS eL F	Ottawa			
		10 21.7	5180	USCGS. gives:- φ = 2°5 S. λ = 77° W.	
		10 30 09			
		10 37 04			
		10 41 00			
		10 45			
	11 41				
	H P S L F	Victoria		7100	
		10 21.7			
		10 32.1			
10 40 51					
		10 52			
		11 55			

SEISMOLOGICAL SERVICE OF CANADA  
DOMINION OBSERVATORY, OTTAWA

FROM June 12, 1942 to June 15, 1942 No. 29

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
191 June 12 (Cont'd)		Seven Falls		
	e	10 37 30		
	L	10 43		
	F	11 35		
		Shawinigan Falls		
	e	10 30 20		
	e	10 37.6		
	F	10 40		
193 June 13		Ottawa		
	eN	20 06.5		
	eE	20 09.5		
	L	20 13		
	F	20 38		
194 June 14		Victoria		
	e	19 37.2		
	L	19 55		
	F	20 31		
		Ottawa		
eZ	3 28 21			
	e	3 34 50		
	e	3 38 18		
	L	3 58		
	F	4 50		
		Victoria	8500	
	H	3 10.1		
	P	3 21 51		
	S	3 31 40		
	L	3 42		
	F	4 53		
		Seven Falls		
	e	3 35.0		
	e	3 38.4		
	L	3 59		
	F	5 22		
195 June 14		Ottawa		
	eZ	14 49 47		
	L	15 40		
	F	16 00		
199 June 15		Seven Falls		
	e	22 06 53		
	e	22 07 00		
	F	22 07.4		Local origin - probably within 50 km. of Seven Falls.

SEISMOLOGICAL SERVICE OF CANADA  
 DOMINION OBSERVATORY, OTTAWA

FROM June 15, 1942 to June 16, 1942 No. 30

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS	
		h m s	km.		
200 June 16	eZ eL F	Ottawa			
		4 59 13			
		5 24			
201 June 16	eZ eN L F	Ottawa			
		5 53.8			
		6 03			
	Victoria	6 15			
		6 39			
		e L F	6 06.1		
202 June 16	eZ eN eN eN e L F	Ottawa			
		7 51 09			
		7 53.0			
		7 57.9			
		8 01			
	Victoria	8 05			
		8 23			
		e L F	7 53.1		
	203 June 16	H P PPP iZ S SSS eL F  H P S L F  e e L F	Ottawa		
			21 05.4	4880	USCGS. gives:- $\phi = 0^\circ$ N. $\lambda = 81^\circ$ W.
			21 13 30		
21 15 20					
21 17 14					
21 20 08					
21 23.8					
21 26					
22 12					
Victoria				6690	
21 05.3					
21 15 23					
21 23 43					
21 36					
22 17					
Seven Falls					
21 17.1					
21 20 54					
21 24					
22 21					

SEISMOLOGICAL SERVICE OF CANADA  
 DOMINION OBSERVATORY, OTTAWA

FROM June 16, 1942 to June 19, 1942 No. 31

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS	
		h m s	km.		
205 June 18		Ottawa			
	H	9 31 ca.	13,000ca		
	P <sup>z</sup>	9 49 46			
	PP	9 50 50			
	SKS	9 56 38			
	PS	10 00 32			
	SS	10 06.1			
	SSS	10 11.4			
	e	10 20			
	L	10 26			
	F	12 38			
			Victoria		
	H	9 31.0	9610		
	P	9 43 42			
	PP <sub>E</sub>	9 47 26			
	S	9 54 20			
	e <sub>N</sub>	10 06 54			
	L	10 12			
	F	12 27			
			Saskatoon		
	e <sub>E</sub>	9 48 17			
	e <sub>N</sub>	9 56.4			
	L	10 13			
	F	10 54			
			Halifax		
	e	9 51.8			
	L	10 25			
	F	11 22			
			Seven Falls		
	e	9 51.2			
	e	9 58.2			
	e	10 06 40			
	L	10 18			
	F	12 18			
			Shawinigan Falls		
	e	9 50 50			
	e	10 00.6			
	L	10 26			
F	10 58				
		Ottawa			
e <sub>Z</sub>	19 49 48				
e	19 59 54				
e <sub>L</sub>	20 13				
F	20 55				
		Victoria			
e	19 55.1				
L	20 13				
F	20 36				
206 June 19					



SEISMOLOGICAL SERVICE OF CANADA  
 DOMINION OBSERVATORY, OTTAWA

FROM June 19, 1942 to June 22, 1942 No. 32

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Seven Falls		
206 June 19 (Cont'd)	e L F	20 00.3 20 18 21 15		
		Ottawa		
207 June 20	H P i PPP S e SS eL F	10 02.3 10 08 45 10 09 05 10 10 02 10 14 03 10 14 32 10 15 50 10 20 11 00	3540	USCGS. gives:- $\phi = 17^{\circ}7' N.$ $\lambda = 101^{\circ}0' W.$ Depth 50 km. ca.
		Victoria		
	H P S e L F	10 02.4 10 08 55 10 14.2 10 17 24 10 21 11 05	3570	
		Saskatoon		
	e e L F	10 09.7 10 17.2 10 20 10 32		
		Seven Falls		
	H P e PPP S eL F	10 02.5 10 09 21 10 09 39 10 10 36 10 15 00 10 17 11 06	3860	
		Shawinigan Falls		
	e e e L F	10 09 07 10 10.4 10 18.0 10 22 10 35		
		Ottawa		
209 June 22	e <sup>Z</sup> e <sup>N</sup> e <sup>E</sup> L <sup>E</sup> F	20 01 34 20 07 20 10.5 20 14 20 46		

SEISMOLOGICAL SERVICE OF CANADA  
DOMINION OBSERVATORY, OTTAWA

FROM June 22, 1942 to June 24, 1942 No. 33

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS		
		h m s			km.	
211 June 23	eZ	9 02 48				
	eN	9 08				
	L	9 11				
	F	9 26				
213 June 24		Ottawa	14,450ca.			
	H	11 13.4 ca.				
	P <sup>i</sup> Z	11 35 35				
	PP	11 37 45				
	SKP	11 39 00				
	S	11 46				
	SS	11 55 10				
	L	12 12				
	F	14 40				
		Victoria			13,100ca.	
	H	11 13.4 ca.				
	SKP	11 34 55				
	S	11 41 13				
	PS	11 42 29				
SS	11 49 47					
SSS	11 54.4					
L	12 04					
F	14 35					
	Halifax					
e	11 39 24					
e	11 57.1					
L	12 20					
	Seven Falls					
F	13 34					
e	11 35 48					
e	11 38 12					
e	11 39 11					
e	11 56.5					
L	12 13					
F	14 52					
	Shawinigan Falls					
e	11 36					
e	11 39.1					
L	12 23					
	Ottawa					
F	12 36					
F	23 38 44					
214 June 24	eZ	23 38 44				
	L	23 52				
	F	23 58				

SEISMOLOGICAL SERVICE OF CANADA  
DOMINION OBSERVATORY, OTTAWA

FROM June 24, 1942 to June 30, 1942 No. 34

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS	
		h m s	km.		
223 June 29	H	6 26.7	8500	USCGS. gives:- $\phi = 34^{\circ}5' S.$ $\lambda = 70^{\circ}5' W.$	
	P	6 38 29			
	PP	6 41.2			
	S	6 48 18			
	SSE	6 53.0			
	SSSN	6 57.5			
	eL	7 02			
	F	7 36			
		Victoria	6 39.9		
	e <sub>N</sub>	6 40 28			
	e <sub>E</sub>	6 50 17			
	L	7 09			
	F	7 37			
		Seven Falls	6 26.8		8560
	H	6 38 42			
P	6 48 34				
S	6 53.7				
SS	7 55				
F					
	Shawinigan Falls	6 26.8	8520		
H	6 38 35				
P	6 48 25				
S	6 53				
F					

*W. W. Doxsee.*

EARTHQUAKE CORRELATION TABLE

Month June, 1942

No.	Date	Ottawa	Victoria	Saskatoon	Halifax	Seven Falls		Shawinigan	**
						M. S.	W. A.		
170	1								
171	1	00+1 06u	0 51+1 51u			9 40+0 22L			
172	3		6 04+0 09L			1 00+1 47u			
173	4					5 43+0 23L		10 11+0 03L	
174	6	10 48+0 20u	11 46+0 07L						
175	6	15 12+1 10u	15 12+0 51u						
176	6					15 16+1 04u			
177	7	10 56+0 27r	10 58+0 40u			16 56+0 06L			
178	7		13 25+0 10L			11 04+0 27L			A
179	7								
180	9	9 32+0 15r	9 43+0 05L			16 29+0 04L			
181	9	11 14+0 39r	11 08+0 48L		9 39+0 02L	9 38+0 02L	9 37+0 08r	9 32+0 19r	B
182	10	1 19+0 50u	1 22+0 30L	11 14+0 16r	11 29+0 13L	11 27+0 30L	11 27+0 08L	11 15+0 25r	
183	10	10 40+1 50u	10 47+1 12u			1 28+0 43u		1 19+0 03P	
184	10	14 10+1 40u	14 55+0 11L			10 49+1 39u			
185	11					15 08+0 49L			
186	11					11 28+0 17L			
187	11					16 25+0 13L			
188	11					17 07+0 30L			
189	11					18 29+0 33L			
190	12	2 09+0 33r	2 05+0 37r		2 25+0 09L	19 23+0 03L			
191	12	10 30+1 11u	10 32+1 23u		10 37+0 29L	2 21+0 23r	2 20+0 11r	2 18+0 14r	C
192	13	17 15+0 14L	19 37+0 54u			10 37+0 58u		10 30+0 10P	
193	13	20 06+0 32u	19 37+0 54u			17 17+0 24L			
194	14	3 28+1 22u	3 22+1 31u		4 10+0 08L	20 16+0 48L			E
195	14	14 50+1 10u	14 54+0 43L			3 35+1 47u			
196	15	6 14+0 10L	6 29+0 08L			15 26+0 41L			
197	15	14 05+0 03P				6 12+0 12L			
198	15	16 59+0 15L	16 53+0 18L						
199	15					<b>17 03+0 10L</b>			
200	16	4 59+0 32u				22 07+0 0.1d	22 07+0 0.5d	4 59+0 02P	

## EARTHQUAKE CORRELATION TABLE

Month June, 1942

No.	Date	Ottawa	Victoria	Saskatoon	Halifax	Seven Falls		Shawinigan	**
						M. S.	W. A.		
201	16	5 54+0 45u	6 06+0 41u			6 16+0 22L			
202	16	7 51+0 32u	7 53+0 41u			7 58+0 23L			
203	16	21 13+0 59r	21 15+1 02u			21 17+1 04r		21 14+0 03P	F
204	17					16 52+0 20L			
205	18	9 50+2 48u	9 44+2 43u	9 48+1 06u	9 52+1 30u	9 51+2 27u	10 27+0 26L	9 51+1 07u	G
206	19	19 50+1 05u	19 55+0 41u			20 00+1 15u			
207	20	10 09+0 51r	10 09+0 56r	10 10+0 22r		10 10+0 57r	10 09+0 26r	10 09+0 26r	J
208	21						4 50+0 11P	4 50+0 13P	
209	22	20 02+0 44u	20 21+0 22L			20 10+0 58L			
210	23	7 26+0 10L							
211	23	9 03+0 23u				9 11+0 16L			
212	24					9 21+0 22L			
213	24	11 36+3 04U	11 35+3 00U		11 39+1 55U	11 36+3 16U	11 38+1 50U	11 36+1 00U	K
214	24	23 39+0 19u							
215	25					21 36+0 08L			
216	26	5 30+0 04L	5 17+0 07L			5 31+0 05L	5 31+0 03L		
217	26		11 19+0 09L						
218	27	1 31+0 03P*							
219	27	2 57+0 06P*							
220	27								
221	28	0 14+0 08P	0 34+0 09L			15 37+0 14L			
222	28					0 20+0 19L			
223	29	6 38+0 58u	6 40+0 57u			16 17+0 16L			
224	29	17 43+0 02F	18 04+0 07L			6 39+1 16u	6 39+0 14u	6 39+0 14u	N
225	29					17 55+0 17L			
226	30					19 26+0 05L			
227	30					6 10+0 24L			
228	30					7 10+0 07L			
229	30					8 22+0 26L			
229	30					10 34+0 03L			

## CORRELATION OF EARTHQUAKES

June, 1942

## N O T E S

A	: Ottawa	$\Delta = 5,000$ km.	H = 10 <sup>h</sup> 48 <sup>m</sup> 2 U.T.
B	: Ottawa	$\Delta = 3,020$ km.	H = 9 <sup>h</sup> 26 <sup>m</sup> 0 U.T.
C	: Ottawa	$\Delta = 5,180$ km.	H = 10 <sup>h</sup> 21 <sup>m</sup> 7 U.T.
	Victoria	$\Delta = 7,100$ km.	H = 10 21.7 U.T.
E	: Victoria	$\Delta = 8,500$ km.	H = 3 <sup>h</sup> 10 <sup>m</sup> 1 U.T.
F	: Ottawa	$\Delta = 4,880$ km.	H = 21 <sup>h</sup> 05 <sup>m</sup> 4 U.T.
	Victoria	$\Delta = 6,690$ km.	H = 21 05.3 U.T.
G	: Ottawa	$\Delta = 13,000$ km. ca.	H = 9 <sup>h</sup> 31 <sup>m</sup> ca.U.T.
	Victoria	$\Delta = 9,610$ km.	H = 9 31.0 U.T.
J	: Ottawa	$\Delta = 3,540$ km.	H = 10 <sup>h</sup> 02 <sup>m</sup> 3 U.T.
	Victoria	$\Delta = 3,570$ km.	H = 10 02.4 U.T.
	Seven Falls	$\Delta = 3,860$ km.	H = 10 02.5 U.T.
K	: Ottawa	$\Delta = 14,450$ km. ca.	H = 11 <sup>h</sup> 13 <sup>m</sup> 4 ca.U.T.
	Victoria	$\Delta = 13,100$ km. ca.	H = 11 13.4 ca.U.T.
N	: Ottawa	$\Delta = 8,500$ km.	H = 6 <sup>h</sup> 26 <sup>m</sup> 7 U.T.
	Seven Falls	$\Delta = 8,560$ km.	H = 6 26.8 U.T.
	Shawinigan Falls	$\Delta = 8,520$ km.	H = 6 26.8 U.T.

Dominion Observatory,  
 Ottawa, Canada,  
 October 14, 1942.

## SEISMOLOGICAL BULLETINS RECEIVED

June and July, 1942

We acknowledge, with thanks, the receipt of the following seismological publications and bulletins:-

STATIONS	BULLETINS	RECEIVED
Zurich	February and March, 1942	June 9
Pasadena	Local Shocks December - March/42	" 9
Pasadena	Local Shocks February - April/42	" 18
New Zealand Stations	Distant and Local quakes April/42	" 22
United States Coast and Geodetic Survey	May and June, 1940	July 7
Brisbane	April, 1942	" 8
Pasadena and Auxiliary Stations	October to December, 1940	" 15
Saint Louis and Auxiliary Stations	Preliminary October 3 and Supplement to October; preliminary November 8 and 24th and Supplement to December/41	" 15
New Zealand Stations	May, 1942	" 20
Perth	April and May, 1942	" 27
Santa Clara	April to June, 1942	" 28
Zurich	April and May, 1942	" 31

Dominion Observatory,  
Ottawa - Canada.

## SEISMOLOGICAL SERVICE OF CANADA

SEISMOLOGICAL BULLETIN

July

1942



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DOMINION OBSERVATORY  
OTTAWA - CANADA

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SEISMOLOGICAL SERVICE OF CANADA  
DOMINION OBSERVATORY, OTTAWA

R. Meldrum Stewart, Dominion Astronomer  
Ernest A. Hodgson, Seismologist  
W. W. Doxsee, Station Superintendent

S T A T I O N S

OTTAWA

$\phi = 45^{\circ}23'38''$  N.  $\lambda = 75^{\circ}42'57''$  W.  $h = 83$ m.

Time correction within 0.10s.

Foundation: boulder clay over limestone

Instruments: Milne-Shaw NS and EW components, designated 23 and 17, respectively, each with photographic registration, magnetic damping, paper speed of 15 mm. per min., mass 1 lb.

Benioff Vertical, short and long period, designated BS and BL, respectively, photographic registration, BS a paper speed of 60 mm. per min., BL a paper speed of 30 mm. per min., mass 235 lbs.

HALIFAX

Dalhousie University

$\phi = 44^{\circ}38'$  N.  $\lambda = 63^{\circ}36'$  W.  $h = 46$ m.

Time correction from recorded radio time signals

Foundation: Carbonaceous slate

Instruments: Bosch NS and EW components, designated HN and HE, respectively, each with photographic registration, magnetic damping, paper speed of 15 mm. per min., mass 200g.

SEVEN FALLS

Quebec Power Company

$\phi = 47^{\circ}07'4''$  N.  $\lambda = 70^{\circ}49'6''$  W.  $h = 232$ m. ca.

Time correction from recorded radio time signals

Foundation: Solid granite of Canadian Shield

Instruments: Wood-Anderson and Milne-Shaw, both EW component, designated SF and SM, respectively, each with photographic registration, magnetic damping, SF a paper speed of 60 mm. per min. and mass 15g., SM a paper speed of 8 mm. per min. and mass 1 lb.

VICTORIA

Dominion Astrophysical Observatory

$\phi = 48^{\circ}31'14''$  N.  $\lambda = 123^{\circ}24'56''$  W.  $h = 197$ m.

Time correction from recorded radio time signals

Foundation: rock

Instruments: Milne-Shaw NS and EW components, designated 21 and 20, respectively, each with photographic registration, magnetic damping, paper speed of 8 mm. per min., mass 1 lb.

Wiechert Vertical, designated WV, smoked sheet registration, air damping, paper speed of 15 mm. per min., mass 80 kg.

## S T A T I O N S (Cont'd)

SHAWINIGAN FALLS

Shawinigan Water and Power Company

$\phi = 46^{\circ}33'11''$  N.  $\lambda = 72^{\circ}45'8''$  W.  $h = 60$  m. ca.  
 Time correction from recorded radio time signals  
 Foundation: solid granite of Canadian Shield  
 Instrument: Wood-Anderson NS component, designated SA, photographic registration, magnetic damping, paper speed of 60 mm. per min., mass 15 g.

SASKATOON

University of Saskatchewan

$\phi = 52^{\circ}08'$  N.  $\lambda = 106^{\circ}38'$  W.  $h = 515$  m.  
 Time correction from radio time signals  
 Foundation: clay and sand  
 Instruments: Mainka NS and EW components, designated SN and SE, respectively, each with smoked sheet registration, air damping, paper speed of 15 mm. per min., mass 139 g.

KIRKLAND LAKE

Lake Shore Mines

$\phi = 48^{\circ}09'$  N.  $\lambda = 80^{\circ}03'$  W.  $h = 320$  m.  
 Time correction from recorded radio time signals  
 Foundation: rock  
 Instrument: Converted Heiland Field Seismometer, vertical component, designated KL, photographic registration, paper speed of 30 mm. per min.

DETERMINED CONSTANTS

INSTRUMENT	$T_0$	V	$\epsilon$	DISPLACEMENT FOR 1" ARC TILT	DISPLACEMENT FOR $10^{-6}$ g
17 (Ottawa)	12.0	300	20:1	50 mm.	5 mm. 16 mm.
23 (Ottawa)	12.0	300	20:1	50 mm.	
BS (Ottawa)	1.0				
BL (Ottawa)	1.0				
HN (Halifax)	5.0	125	20:1		
HE (Halifax)	5.0	125	20:1		
SA (Shawinigan)	1.0	2200			
20 (Victoria)	12.0	300	20:1		
21 (Victoria)	12.0	300	20:1		
WV (Victoria)	4.0	120	15:1		
SF (Seven Falls)	1.0	2500			
SM (Seven Falls)	12.0	300	20:1	50 mm.	
SN (Saskatoon)	9.0	72	Aper.		
SE (Saskatoon)	9.0	56	"		
KL (Kirkland Lake)	1/30	$2 \times 10^4$	at 30	cycles	

NOTE: Universal Time used throughout.

SEISMOLOGICAL SERVICE OF CANADA  
 DOMINION OBSERVATORY, OTTAWA

FROM July 1, 1942 to July 4, 1942 No. 35

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
233 July 3	e L F	Ottawa 3 14.5 3 38 4 37		
		Victoria		
	e L F	3 20 3 44 4 30		
		Seven Falls		
	e L F	3 15 3 32 4 37		
236 July 3	ez L F	Ottawa 23 53 36 0 01 0 25		
237 July 4	H P PP S SS L F	Ottawa 1 53.2 2 01 21 2 03 08 2 08 02 2 11.6 2 15 3 01	4940	USCGS. gives:- $\phi = 0^{\circ}6' N.$ $\lambda = 80^{\circ}9' W.$
		Victoria		
	H P S L F	1 53.4 2 03 24 2 11 36 2 25 3 02	6560	
		Seven Falls		
	H P S L F	1 53.1 2 01.7 2 08 40 2 12 3 15	5280	
238 July 4	ez L F	Ottawa 5 07 46 5 15 5 31		

SEISMOLOGICAL SERVICE OF CANADA  
DOMINION OBSERVATORY, OTTAWA

FROM July 4, 1942 to July 5, 1942 No. 36

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS	
		h m s	km.		
239 July 4		Ottawa			
	H	6 08.6	5000	USCGS. gives:- $\phi = 0^{\circ}7' N.$ $\lambda = 80^{\circ}9' W.$	
	P	6 16 50			
	S	6 23 34			
	SSS	6 27.2			
	L	6 31			
	F	7 18			
			Victoria		
	H	6 08.7	6740		
	P	6 18 50			
	S	6 27 13			
	L	6 40			
	F	7 17			
			Seven Falls		
	H	6 08.9	5200		
P	6 17 22				
S	6 24.3				
L	6 28				
F	7 20				
242 July 4		Ottawa			
	H	18 50.4	6540		
	P	19 00 21			
	PPP	19 04.2			
	S	19 08 32			
	L	19 17			
	F	20 00			
			Seven Falls		
	e	19 04.5			
	L	19 19			
	F	20 23			
			Ottawa		
	243 July 5	H	10 30.0	4830	USCGS. gives:- $\phi = 1^{\circ}4' N.$ $\lambda = 80^{\circ}5' W.$
		P	10 38 05		
		PPP	10 40 04		
S		10 44 40			
SS		10 46 40			
L		10 50			
F		11 13			
			Victoria		
e		10 40 06			
e		10 50.2			
L		11 05			
F		11 21			
			Ottawa		
245 July 5		eZ	14 19 26		
		L	14 26		
	F	14 42			

SEISMOLOGICAL SERVICE OF CANADA  
DOMINION OBSERVATORY, OTTAWA

FROM July 5, 1942 to July 8, 1942 No. 37

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS	
		h m s	km.		
246 July 5	eZ e L F	Ottawa			
		23 21 45			
		23 26.4			
		23 30			
249 July 7	e e L F	Ottawa			
		(3 11.5)			
		(3 22)			
		(3 27)			
250 July 7	e e e L F	Victoria			
		3 05 45			
		3 07 21			
		3 15 31			
	e e e L F	Seven Falls			
		3 13.7			
		3 18.0			
		3 22.2			
		3 31			
		5 25			
251 July 8	H P S L F	Victoria			
		12 37.8	6580		
		12 48 03			
		12 56 17			
	H P S L F	Seven Falls			
		12 37.9	5150		
		12 46.3			
		12 53 11			
		12 57			
		14 17			
H iP i iS i SS SSS L F		Ottawa			
		6 55.8	7660	USCGS. gives:- $\phi = 25^{\circ}5$ S. $\lambda = 79^{\circ}5$ W.	
		7 06 49			
		7 06 53			
		7 15 58			
		7 16 50			
		7 21.4			
		7 24			
		7 27			
		10 13			

SEISMOLOGICAL SERVICE OF CANADA  
DOMINION OBSERVATORY, OTTAWA

FROM July 8, 1942 to July 8, 1942 No. 38

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
251 July 8 (Cont'd)		Victoria		
	H	6 56.0	9335	
	P	7 08 27		
	S	7 18 53		
	SS	7 24		
	e	7 31.3		
	L	7 35		
	F	9 47		
		Seven Falls		
	H	6 55.9	7800	
	P	7 07 02		
	S	7 16 17		
	SS	7 24.2		
	L	7 27		
F	10 26			
	Shawinigan Falls			
H	6 55.7	7920		
P	7 06 56			
i	7 07 00			
S	7 16.3			
L	7 27			
F	7 50			
	Ottawa			
253 July 8	eZ	21 35 31		
	L	22 04		
	F	22 37		
		Ottawa		
254 July 8	H	22 31.0	4920	
	P	22 39 12		
	PPP	22 41 04		
	S	22 45 52		
	SS <sub>N</sub>	22 48.5		
	SSS	22 49 30		
	L	22 52.5		
	F	23 45		
		Victoria		
	H	22 31.2		6635
	P	22 41 11		
	S	22 49 28		
	L	23 04		
	F	23 51		
		Seven Falls		
	H	22 31.1	5155	
	P	22 39 33		
	S	22 46 26		
	SS	22 50.2		
	L	22 55		
	F	0 03		

SEISMOLOGICAL SERVICE OF CANADA  
DOMINION OBSERVATORY, OTTAWA

FROM	July 8, 1942	To	July 12, 1942	No. 39	
NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS	
		h m s	km.		
256 July 10	e L F	Ottawa			
		4 58 10			
		5 04			
	e L F	Victoria			
		5 00 17			
		5 25			
259 July 12	H P e iS SS <sub>E</sub> L F	Ottawa			
		5 05.4	4920	USCGS. gives:- φ = 0°8 N. λ = 80°5 W.	
		5 13 37			
		5 15 28			
		5 20 17			
		5 23 32			
	5 28				
	H P iS e <sub>N</sub> L F	Victoria		6700	
		5 05.5			
		5 15 35			
		5 23 56			
		5 25 25			
		5 34			
	H P S L F	Saskatoon		6150.	
		5 05.6			
		5 15 07			
		5 22 56			
		5 35			
5 53					
H P S SS L F	Halifax		5080		
	5 05.3				
	5 13 46				
	5 20 35				
	5 23 35				
	5 26				
H P iS SS L F	Seven Falls		5180		
	5 05.5				
	5 13 56				
	5 20 51				
	5 23 49				
	5 28				
H P PP S SS F	Shawinigan Falls		5100		
	5 05.5				
	5 13 50				
	5 15.7				
	5 20.7				
	5 23 44				
		5 42			

SEISMOLOGICAL SERVICE OF CANADA  
 DOMINION OBSERVATORY, OTTAWA

FROM July 12, 1942 to July 25, 1942 No. 40

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Ottawa		
260 July 13	eZ L F	0 26 23 1 05 1 42		
		Victoria		
	e <sub>EF</sub> L <sub>EF</sub> F <sub>EF</sub>	0 31 42 0 53 1 13		
		Seven Falls		
	e L F	0 45.3 0 59 2 06		
		Ottawa		
264 July 21	H P S SSS L F	8 44.3 8 53 54 9 01.8 9 08 9 12 9 34	6240	
		Victoria		
	H P S L F	8 44.1 8 55.7 9 05 16 9 23 9 38	8220	
		Seven Falls		
	H P S L F	8 44.2 8 54.2 9 02 24 9 11 9 34	6570	
		Victoria		
266 July 24	e L F	5 19.4 6 10 6 50		
		Victoria		
268 July 25	e <sub>E</sub> e <sub>N</sub> L F	0 06.9 0 08.7 0 16 0 43		
		Ottawa		
269 July 25	eZ L F	1 26 24 1 35 1 49		



SEISMOLOGICAL SERVICE OF CANADA  
 DOMINION OBSERVATORY, OTTAWA

FROM July 25, 1942 to July 29, 1942 No. 41

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Ottawa		
270 July 25	H	6 22.4	13,500ca.	
	P <sub>i</sub> Z	6 41 20		
	PP	6 42 47		
	PPP	6 45 26		
	SKS <sub>N</sub>	6 48 11		
	SE	6 50.5		
	PS	6 52 20		
	SS	6 59 08		
	eL	7 20		
	F	8 28		
		Victoria		
	e	6 36.3		
	e	6 40.2		
	i	6 46 22		
	e	6 53.7		
	L	7 06		
	F	8 51		
		Seven Falls		
	e	6 42.9		
	e	6 50 29		
	e	6 58 51		
	L	7 19		
	F	8 36		
		Ottawa		
271 July 25	eZ	15 28 28		
	e	15 36 08		
	e	15 38.3		
	L	15 46		
	F	16 07		
		Seven Falls		
	e	15 37		
	L	15 47		
	F	16 12		
		Ottawa		
273 July 29	H	22 53.2 ca.	13,350ca.	
	P	23 08 30		
	e	23 11.0		
	P <sub>i</sub>	23 11 58		
	S	23 21 06		
	PPS	23 24.0		
	SSS	23 34		
	L	23 45		
F	1 55			

SEISMOLOGICAL SERVICE OF CANADA  
 DOMINION OBSERVATORY, OTTAWA

FROM July 29, 1942 to July 31, 1942 No. 42

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS	
		h m s	km.		
		Victoria			
273 July 29 (Cont'd)	H	22 53.5 ca.	8600ca.		
	P	23 03 24			
	PPP	23 07 46			
	PS	23 14 04			
	L	23 27			
	F	1 55			
			Seven Falls		
	H	22 53.2ca.	13,350ca.		
	P	23 08.5			
	e	23 11 00			
i	23 12 00				
SKS	23 18 46				
SS	23 28.4				
L	23 46				
F	1 55				
		Shawinigan Falls			
	e	23 08 40			
	e	23 10 41			
	e	23 11 58			
	L	23 21			
	F	23 35			

W. W. Doxsee.

## EARTHQUAKE CORRELATION TABLE

Month July, 1942

No.	Date	Ottawa	Victoria	Saskatoon	Halifax	Seven Falls		Shawinigan	**
						M. S.	W. A.		
230	1	8 00+0 01P*	22 08+0 16L						
231	2		8 27+0 08L						
232	2		14 30+0 03L						
233	3	3 14+1 23u	3 20+1 10u						
234	3	17 21+0 0.2P*							
235	3	18 22+0 0.6P*							
236	3	23 54+0 31u	0 04+0 31L						
237	4	2 01+1 00r	2 03+0 59u				2 02+0 02P	2 02+0 03P	A
238	4	5 08+0 23r	5 34+0 13L				5 15+0 23L		
239	4	6 17+1 01r	6 19+0 58u				6 17+1 03u	6 17+0 04P	B
240	4	7 39+0 0.5P							
241	4	18 56+0 04P						18 56+0 01P	
242	4	19 00+1 00u	18 57+1 29u					19 00+0 03P	C
243	4								
244	5	10 38+0 35r	10 40+0 41u					10 38+0 05P	E
245	5	14 19+0 22r							
246	5	23 22+0 22r						23 22+0 10P	
247	6	16 29+0 0.6P							
248	6								
249	7	3 12+1 18u	3 06+1 24u						
250	7	12 46+1 14u	12 48+1 13u					12 46+0 04P	F
251	8	7 07+3 06U	7 08+2 39U					7 07+0 43U	G
252	8	19 31+0 03P							
253	8	21 36+1 01u	21 58+0 24L						
254	8	22 39+1 06r	22 41+1 10u					22 39+0 04P	J
255	9		18 56+0 08L						
256	10	4 58+0 32u	5 00+0 39u						
257	11	0 54+0 05L							
258	11	16 59+0 04L							
259	12	5 14+3 06R	5 16+2 47U	5 15+0 38U	5 14+0 47U	5 14+3 27U	5 14+0 22U	5 14+0 28U	K

EARTHQUAKE CORRELATION TABLE

Month July, 1942

No.	Date	Ottawa	Victoria	Saskatoon	Halifax	Seven Falls		Shawinigan	**
						M. S.	W. A.		
260	13	0 26+1 16u	0 32+0 41u	.....	.....	0 45+1 21u	.....	.....	..
261	20	13 44+0 01P*	.....	.....	.....	14 05+0 24L	.....	.....	..
262	20	.....	.....	.....	.....	16 44+0 27L	.....	.....	..
263	21	7 59+0 05P	.....	.....	.....	.....	7 59+0 04P	7 59+0 06P	..
264	21	8 54+0 40u	8 56+0 42u	.....	.....	9 02+0 31u	8 54+0 03P	8 54+0 04P	..
265	22	17 22+0 03P	.....	.....	.....	.....	.....	.....	N
266	24	6 12+0 18L	5 19+1 31u	.....	.....	6 12+0 25L	.....	.....	..
267	24	12 25+0 20L	12 10+0 23L	.....	.....	12 27+0 30L	.....	.....	..
268	25	.....	0 07+0 36u	.....	.....	.....	.....	.....	..
269	25	1 26+0 23r	1 48+0 17L	.....	.....	1 40+0 12L	.....	.....	..
270	25	6 41+1 47u	6 36+2 15u	.....	.....	6 43+1 43u	.....	6 41+0 10P	Q
271	25	15 28+0 39u	.....	.....	.....	15 37+0 35u	.....	.....	..
272	29	.....	21 54+0 07L	.....	.....	.....	.....	.....	..
273	29	23 08+2 47u	23 03+2 52u	.....	.....	23 08+2 47u	23 08+1 10u	23 09+0 26u	R
274	30	18 11+0 0.5P	.....	.....	.....	.....	.....	.....	..
275	31	21 26+0 05v	.....	.....	.....	.....	21 29+0 02v	21 28+0 02v	..



## EARTHQUAKE CORRELATION TABLE

July, 1942

## N O T E S

A	: Ottawa	$\Delta = 4,940$ km.	H = 1 <sup>h</sup> 53 <sup>m</sup> 2 U.T.
	Victoria	$\Delta = 6,560$ km.	H = 1 53.4 U.T.
	Seven Falls	$\Delta = 5,280$ km.	H = 1 53.1 U.T.
B	: Ottawa	$\Delta = 5,000$ km.	H = 6 <sup>h</sup> 08 <sup>m</sup> 6 U.T.
	Victoria	$\Delta = 6,740$ km.	H = 6 08.7 U.T.
	Seven Falls	$\Delta = 5,200$ km.	H = 6 08.9 U.T.
C	: Ottawa	$\Delta = 6,540$ km.	H = 18 <sup>h</sup> 50 <sup>m</sup> 4 U.T.
E	: Ottawa	$\Delta = 4,830$ km.	H = 10 <sup>h</sup> 30 <sup>m</sup> 0 U.T.
F	: Victoria	$\Delta = 6,580$ km.	H = 12 <sup>h</sup> 37 <sup>m</sup> 8 U.T.
	Seven Falls	$\Delta = 5,150$ km.	H = 12 37.9 U.T.
G	: Ottawa	$\Delta = 7,660$ km.	H = 6 <sup>h</sup> 55 <sup>m</sup> 8 U.T.
	Victoria	$\Delta = 9,335$ km.	H = 6 56.0 U.T.
	Seven Falls	$\Delta = 7,800$ km.	H = 6 55.9 U.T.
	Shawinigan Falls	$\Delta = 7,920$ km.	H = 6 55.7 U.T.
J	: Ottawa	$\Delta = 4,920$ km.	H = 22 <sup>h</sup> 31 <sup>m</sup> 0 U.T.
	Victoria	$\Delta = 6,635$ km.	H = 22 31.2 U.T.
	Seven Falls	$\Delta = 5,155$ km.	H = 22 31.1 U.T.
K	: Ottawa	$\Delta = 4,920$ km.	H = 5 <sup>h</sup> 05 <sup>m</sup> 4 U.T.
	Victoria	$\Delta = 6,700$ km.	H = 5 05.5 U.T.
	Saskatoon	$\Delta = 6,150$ km.	H = 5 05.6 U.T.
	Halifax	$\Delta = 5,080$ km.	H = 5 05.3 U.T.
	Seven Falls	$\Delta = 5,180$ km.	H = 5 05.5 U.T.
	Shawinigan Falls	$\Delta = 5,100$ km.	H = 5 05.5 U.T.
N	: Ottawa	$\Delta = 6,240$ km.	H = 8 <sup>h</sup> 44 <sup>m</sup> 3 U.T.
	Victoria	$\Delta = 8,220$ km.	H = 8 44.1 U.T.
	Seven Falls	$\Delta = 6,570$ km.	H = 8 44.2 U.T.
Q	: Ottawa	$\Delta = 13,500$ km. ca.	H = 6 <sup>h</sup> 22 <sup>m</sup> 4 U.T. ca.
R	: Ottawa	$\Delta = 13,350$ km. ca.	H = 22 <sup>h</sup> 53 <sup>m</sup> 2 U.T. ca.
	Victoria	$\Delta = 8,600$ km. ca.	H = 22 53.5 U.T. ca.
	Seven Falls	$\Delta = 13,350$ km. ca.	H = 22 53.2 U.T. ca.

Dominion Observatory,  
 Ottawa, Canada,  
 October 30, 1942.

## SEISMOLOGICAL BULLETINS RECEIVED

August and September, 1942

 We acknowledge, with thanks, the receipt of the following  
seismological publications and bulletins:-

STATIONS	BULLETINS	RECEIVED
Ksara	January to March, 1942	August 3
Coimbra	September to December, 1941	" 10
Santa Clara	July, 1942	" 12
Pasadena	Preliminary Bulletin May-June, 1942	" 12
Brisbane	June, 1942	" 13
Sydney	January and February, 1942	" 15
Perth	June, 1942	" 15
Saint Louis and Auxiliary Stations	Supplement to January and March/42 and preliminaries January 20, 27, March 1, 5, 19, April 8, 11, 1942	" 17
Pasadena and Auxiliary Stations	October to December, 1940	" 17
United States Coast and Geodetic Survey	July, 1940	" 20
Weston	Preliminary March to July, 1942	" 22
Sydney	March, 1942	" 26
Brisbane	May, 1942	" 27
Weston	Preliminary August, 1942	September 4
New Zealand	July, 1942	" 8
Santa Clara	August, 1942	" 14
New Zealand	June, 1942	" 14
United States Coast and Geodetic Survey	August, 1940	" 17
Zurich	June, 1942	" 19
La Paz	Year 1939	" 25

 Dominion Observatory,  
Ottawa - Canada.

SEISMOLOGICAL SERVICE OF CANADA



SEISMOLOGICAL BULLETIN

August

1942

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DOMINION OBSERVATORY  
OTTAWA - CANADA

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SEISMOLOGICAL SERVICE OF CANADA  
DOMINION OBSERVATORY, OTTAWA

R. Meldrum Stewart, Dominion Astronomer  
Ernest A. Hodgson, Seismologist  
W. W. Doxsee, Station Superintendent

S T A T I O N S

OTTAWA

$\phi = 45^{\circ}23'38''$  N.  $\lambda = 75^{\circ}42'57''$  W.  $h = 83$ m.

Time correction within 0.10s.

Foundation: boulder clay over limestone

Instruments: Milne-Shaw NS and EW components, designated 23 and 17, respectively, each with photographic registration, magnetic damping, paper speed of 15 mm. per min., mass 1 lb.

Benioff Vertical, short and long period, designated BS and BL, respectively, photographic registration, BS a paper speed of 60 mm. per min., BL a paper speed of 30 mm. per min., mass 235 lbs.

HALIFAX

Dalhousie University

$\phi = 44^{\circ}38'$  N.  $\lambda = 63^{\circ}36'$  W.  $h = 46$ m.

Time correction from recorded radio time signals

Foundation: Carbonaceous slate

Instruments: Bosch NS and EW components, designated HN and HE, respectively, each with photographic registration, magnetic damping, paper speed of 15 mm. per min., mass 200g.

SEVEN FALLS

Quebec Power Company

$\phi = 47^{\circ}07'4''$  N.  $\lambda = 70^{\circ}49'6''$  W.  $h = 232$ m. ca.

Time correction from recorded radio time signals

Foundation: Solid granite of Canadian Shield

Instruments: Wood-Anderson and Milne-Shaw, both EW component, designated SF and SM, respectively, each with photographic registration, magnetic damping, SF a paper speed of 60 mm. per min. and mass 15g., SM a paper speed of 8 mm. per min. and mass 1 lb.

VICTORIA

Dominion Astrophysical Observatory

$\phi = 48^{\circ}31'14''$  N.  $\lambda = 123^{\circ}24'56''$  W.  $h = 197$ m.

Time correction from recorded radio time signals

Foundation: rock

Instruments: Milne-Shaw NS and EW components, designated 21 and 20, respectively, each with photographic registration, magnetic damping, paper speed of 8 mm. per min., mass 1 lb.

Wiechert Vertical, designated WV, smoked sheet registration, air damping, paper speed of 15 mm. per min., mass 80 kg.



## S T A T I O N S (Cont'd)

### SHAWINIGAN FALLS

Shawinigan Water and Power Company

$\phi = 46^{\circ}33'1''$  N.     $\lambda = 72^{\circ}45'8''$  W.     $h = 60$  m. ca.  
 Time correction from recorded radio time signals  
 Foundation: solid granite of Canadian Shield  
 Instrument: Wood-Anderson NS component, designated SA, photographic registration, magnetic damping, paper speed of 60 mm. per min., mass 15 g.

### SASKATOON

University of Saskatchewan

$\phi = 52^{\circ}08'$  N.     $\lambda = 106^{\circ}38'$  W.     $h = 515$  m.  
 Time correction from radio time signals  
 Foundation: clay and sand  
 Instruments: Mainka NS and EW components, designated SN and SE, respectively, each with smoked sheet registration, air damping, paper speed of 15 mm. per min., mass 139 kg.

### KIRKLAND LAKE

Lake Shore Mines

$\phi = 48^{\circ}09'$  N.     $\lambda = 80^{\circ}03'$  W.     $h = 320$  m.  
 Time correction from recorded radio time signals  
 Foundation: rock  
 Instrument: Converted Heiland Field Seismometer, vertical component, designated KL, photographic registration, paper speed of 30 mm. per min.

### DETERMINED CONSTANTS

INSTRUMENT	$T_0$	V	$\epsilon$	DISPLACEMENT FOR 1" ARC TILT	DISPLACEMENT FOR $10^{-6}$ g
17 (Ottawa)	12.0	300	20:1	50 mm.	
23 (Ottawa)	12.0	300	20:1	50 mm.	
BS (Ottawa)	1.0				5 mm.
BL (Ottawa)	1.0				16 mm.
HN (Halifax)	5.0	125	20:1		
HE (Halifax)	5.0	125	20:1		
SA (Shawinigan)	1.0	2200			
20 (Victoria)	12.0	300	20:1		
21 (Victoria)	12.0	300	20:1		
WV (Victoria)	4.0	120	15:1		
SF (Seven Falls)	1.0	2500			
SM (Seven Falls)	12.0	300	20:1	50 mm.	
SN (Saskatoon)	9.0	72	Aper.		
SE (Saskatoon)	9.0	56	"		
KL (Kirkland Lake)	1/30	$2 \times 10^4$	at 30	cycles	

NOTE: Universal Time used throughout.

SEISMOLOGICAL SERVICE OF CANADA  
 DOMINION OBSERVATORY, OTTAWA

FROM August 1, 1942 to August 1, 1942 No. 43

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s		
		Ottawa		
276	eZ	5 06 53		
Aug.	eT	5 09		
1	L	5 50		
	F	6 15		
		Ottawa		
277	H	12 33.8	14,800 ca.	
Aug.	P'	12 53 08		
1	PP	12 55 20		
	SKP	12 56 24		
	PS	13 06 12		
	SS	13 13 07		
	SSS	13 18.0		
	eL	13 30		
	F	15 00+		
		Victoria		
	H	12 34 ca.	11,700 ca.	
	P	12 48 09		
	PP	12 52 25		
	SKS	12 58 39		
	PS	13 01.4		
	SS	13 07 18		
	L	13 22		
	F	14 54		
		Halifax		
	e	12 53.4		
	e	12 56 54		
	L	13 42		
	F	14 42		
		Seven Falls		
	H	12 33.9	15,100	
	P'	12 53 16		
	PP	12 55 45		
	SKP	12 56 44		
	PPS	13 08.7		
	SS	13 14.1		
	F	14 55+		
		Ottawa		
278	eZ	14 50 14		
Aug.	eZ	14 52 04		
1	e	14 56.0		
	e	14 59.3		
	e	15 17.2		
	L	15 41		
	F	17 14		

SEISMOLOGICAL SERVICE OF CANADA  
DOMINION OBSERVATORY, OTTAWA

FROM August 1, 1942 to August 6, 1942 No. 44

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS	
		h m s	km		
278 Aug. 1 (Cont'd)		Victoria			
	e	14 49.7			
	e	14 53.4			
	e <sub>F</sub>	15 12.4			
	L <sub>F</sub>	15 32			
	F	17 22			
		Seven Falls			
	e	14 55.1			
	L	15 16			
	F	17 49			
279 Aug. 1		Ottawa	150		
	H	21 13.7			
	P <sub>1</sub>	21 14 08			
	S <sub>1</sub>	21 14 25			
	e <sub>1</sub>	21 14 36			
F	21 15				
280 Aug. 3		Victoria			
	e	20 21.4			
	L	20 31			
F	20 39				
281 Aug. 3		Ottawa			
	eZ	23 08 27			
	L	23 25			
	F	23 45			
		Victoria			
	e	23 04.4			
	L	23 08			
	F	23 47			
283 Aug. 6		Ottawa	3740		
	H	23 36.9		Compression N.E.	
	iP	23 43 41		USCGS. gives:	
	PPP	23 45 08		$\phi = 14^{\circ}4$ N.	
	iS	23 49 12		$\lambda = 90^{\circ}9$ W.	
	SS	23 51 22		Deeper than normal.	
	L	23 54			
	F	4 12ca.			
		Victoria		4600	
	H	23 37.3			
P	23 45 07				
PPP	23 46 59				
S	23 51 30				
SSS	23 54.9				
L	23 57				
F	4 08				

SEISMOLOGICAL SERVICE OF CANADA  
 DOMINION OBSERVATORY, OTTAWA

FROM August 6, 1942 to August 7, 1942 No. 45

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
283 Aug. 6 (Cont'd)		Saskatoon		
	H	23 37.3	4260	
	P	23 44 37		
	PP	23 46 21		
	S	23 50 41		
	SSS	23 53.6		
	L	23 55		
	F	1 52		
		Halifax		
	H	23 37.1	4200	
	P	23 44 23		
	PPP	23 46 00		
	S	23 50 23		
	SSS	23 53.3		
	L	23 55		
	F	2 39		
		Seven Falls		
	H	23 36.9	4140	
P	23 44 06			
PPP	23 45 52			
S	23 50 02			
SSS	23 53.3			
L	23 55			
F	4 03			
	Shawinigan Falls			
H	23 36.9	4020		
P	23 43 56			
S	23 49 45			
L	23 55			
F	1 34			
	Ottawa			
H	6 04.4	3980		
PZ	6 11 28			
S	6 17 14			
SS	6 19.2			
L	6 24			
F	6 44			
	Victoria			
e	6 18.4			
L	6 29			
F	7 07			
	Seven Falls			
e	6 13.5			
L	6 25			
F	6 54			
285 Aug. 7				

SEISMOLOGICAL SERVICE OF CANADA  
 DOMINION OBSERVATORY, OTTAWA

FROM August 7, 1942 to August 8, 1942 No. 46

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
289 Aug. 8	eZ e F	Ottawa		
		0 32 52		
		0 43		
290 Aug. 8	H P PPP S L F	Ottawa	3720	
		7 19.5		
		7 26 10		
		7 27 40		
		7 31 40		
	H P S L F	Victoria	4800	
		7 19.4		
		7 27.5		
		7 34 01		
		7 43		
H P S L F	Seven Falls	4000		
	7 19.6			
	7 26 39			
	7 32.4			
	7 40			
292 Aug. 8	H P PPP S SS L F	Ottawa	3690	
		22 36.6		
		22 43 16		
		22 44 42		
		22 48 44		
	H P S SSS L F	Victoria	4740	
		22 36.7		
		22 44 39		
		22 51 09		
		22 53.5		
e L F	Halifax			
	22 45.5			
	22 58			
		23 21		

USCGS. gives:  
 $\phi = 14^{\circ}4' N.$   
 $\lambda = 90^{\circ}9' W.$

SEISMOLOGICAL SERVICE OF CANADA  
DOMINION OBSERVATORY, OTTAWA

FROM August 8, 1942 to August 11, 1942 No. 47

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
292 Aug. 8 (Cont'd)		Seven Falls		
	H	22 36.6	4090	
	P	22 43 43		
	PPP	22 45 26		
	S	22 49 36		
	SS	22 52.3		
	L	22 54		
	F	0 49		
		Shawinigan Falls		
	H	22 36.6	3960	
	P	22 43 34		
	S	22 49 19		
	SS	22 53.2		
	F	23 21		
294 Aug. 11		Ottawa		
	H	4 48.2	3800	
	P	4 55 02		
	PPP	4 56.3		
	S	5 00 37		
	L	5 05		
	F	5 41		
		Victoria		
	e	4 56 21		
	L	5 08		
F	5 48			
	Seven Falls			
H	4 48.0	4400		
P	4 55 29			
S	5 01 41			
L	5 08			
F	5 38			
295 Aug. 11		Ottawa		
	H	7 11.6	3690	
	P	7 18 16		
	S	7 23 44		
	L	7 27		
	F	7 53		
		Victoria		
	e	7 26.1		
	L	7 36		
	F	8 00		
	Seven Falls			
e	7 24 33			
L	7 32			
F	8 00			

SEISMOLOGICAL SERVICE OF CANADA  
 DOMINION OBSERVATORY, OTTAWA

FROM August 11, 1942 to August 15, 1942 No. 48

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Ottawa		
296 Aug. 15	H P <sub>Z</sub> PP SKS PSE L F	15 45 ca. 16 03 40 16 05.3 16 10 36 16 15 08 16 38 18 08	13,600 ca	
		Victoria		
	e L F	16 08 15 16 23 17 51		
		Ottawa		
298 Aug. 13	e e F	19 37 42 19 45 23 20 08		
		Seven Falls		
	e L F	19 45 53 19 55 20 11		
		Ottawa		
302 Aug. 14	H P S SSS L F	20 50.7 20 57 46 21 03.6 21 06.1 21 08 22 00 ca.	4040	
		Seven Falls		
	e e L F	20 59.9 21 07 43 21 11 21 56		
		Ottawa		
305 Aug. 15	e e <sub>N</sub> e <sub>E</sub> e L F	6 42 17 6 47 44 6 48 09 6 50 6 54 7 13		
		Ottawa		
306 Aug. 15	e <sub>Z</sub> e L F	15 21.3 15 29 15 50 17 20		

SEISMOLOGICAL SERVICE OF CANADA  
 DOMINION OBSERVATORY, OTTAWA

FROM August 15, 1942 to August 20, 1942 No. 49

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s		
306 Aug. 15 (Cont'd)	e	15 38.6		
	L	15 58		
	F	17 27		
		Ottawa		
307 Aug. 16	i	11 40 08		
	F	12 18		
		Victoria		
	e	11 40		
	L	11 48		
	F	12 03		
		Ottawa		
309 Aug. 16	H	20 07.9	3660	
	P	20 14 34		
	PPN	20 15.7		
	S	20 20 00		
	SSS	20 22 36		
	L	20 25		
	F	20 58		
		Victoria		
	H	20 08.0	4740	
	P	20 15 54		
	S	20 22 24		
	L	20 32		
	F	20 59		
		Seven Falls		
	H	20 07.9	4010	
	P	20 15 01		
	PPP	20 16 31		
	S	20 20 49		
	SSS	20 24 11		
	L	20 29		
	F	21 03		
		Shawinigan Falls		
	H	20 08.0	3800	
	P	20 14 52		
	S	20 20 27		
	F	20 34		
		Ottawa		
317 Aug. 20	H	16 43.3	3600	
	PZ	16 49 55		
	S	16 55 17		
	L	16 58.3		
	F	17 10		



SEISMOLOGICAL SERVICE OF CANADA  
DOMINION OBSERVATORY, OTTAWA

FROM August 20, 1942 to August 23, 1942 No. 50

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS	
		h m s Ottawa	km.		
319 Aug. 20	H	22 37.2	3630		
	P	22 43.47			
	PPPN	22 45.0			
	S	22 49 11			
	L	22 52.0			
	F	23 14			
			Victoria		4640
	H	22 37.4			
	P	22 45 15			
	S	22 51 40			
	L	23 01			
	F	23 17			
			Seven Falls		
	e	22 45.8			
	e	22 53.0			
L	22 57				
F	23 19				
		Shawinigan Falls	3840		
H	22 37.2				
P	22 44 04				
S	22 49 41				
F	23 00				
		Ottawa			
320 Aug. 22	ez	8 40 53			
L	8 57				
		Ottawa			
321 Aug. 22	F	9 07			
ez	9 14 31				
e	9 25.0				
		Ottawa			
322 Aug. 22	L	9 47			
F	10 22				
		Ottawa			
322 Aug. 22	ez	19 59 20			
L	20 05				
		Ottawa	7550		
324 Aug. 23	F	20 14			
H	6 35.5	USCGS. gives:- $\phi = 51^{\circ}5$ N. $\lambda = 163$ E.  No chronometer signals on Victoria records but S-P interval gives a $\Delta$ of 4600 km. ca.			
P	6 46 26				
PP	6 49.0				
PPP	6 50 42				
S	6 55 30				
SS	7 00 10				
SSS	7 03.0				
L	7 07				
F	8 56				

SEISMOLOGICAL SERVICE OF CANADA  
 DOMINION OBSERVATORY, OTTAWA

FROM August 23, 1942 to August 24, 1942 No. 51

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
324 Aug. 23 (Cont'd)		Saskatoon		
	H	6 35.5	5580	
	P	6 44 23		
	S	6 51 40		
	SS	6 55.4		
	L	7 00		
	F	7 31		
		Seven Falls		
	H	6 35.5	7600	
	P	6 46 30		
	S	6 55 36		
	SSS	7 03.6		
	L	7 08		
	F	9 11		
		Shawinigan Falls		
H	6 35.5	7600		
P	6 46 29			
S	6 55 35			
L	7 20			
F	7 10			
	Ottawa			
H	22 50.6	6570	Compression N. USCGS. gives:- $\phi = 14^{\circ}5$ S, $\lambda = 75^{\circ}5$ W. Depth 50-100 km.	
P	23 00 35			
PP	23 03.0			
PPP	23 04 12			
S	23 08 48			
PS	23 09 24			
SS	23 13 05			
SSS	23 15.0			
L	23 19			
F	4 05			
	Victoria			
S-P	9 56	8650	No chronometer signals on record.	
	Saskatoon			
H	22 50.8	7880		
P	23 02 00			
e	23 02 26			
S	23 11 19			
PS	23 12			
SS	23 16			
L	23 21			
F	2 13			

SEISMOLOGICAL SERVICE OF CANADA  
DOMINION OBSERVATORY, OTTAWA

FROM August 24, 1942 to August 25, 1942 No. 52

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Halifax		
325 Aug. 24 (Cont'd)	H	22 50.4	6640	
	P	23 00 23		
	PPP	23 03 20		
	S	23 08 40		
	PS	23 09.3		
	SSS	23 15.2		
	L	23 20		
	F	2 33		
		Seven Falls		
	H	22 50.7	6790	
	P	23 00 51		
	iS	23 09 17		
	SSS	23 15.4		
	L	23 17		
	F	4 34		
		Shawinigan Falls		
	H	22 50.6	6780	
	P	23 00 42		
	S	23 09 07		
	L	23 20		
	F	1 50		
		Ottawa		
333 Aug. 25	iZ	13 36 57		
	eZ	13 42.3		
	L	13 48		
	F	14 00		
		Ottawa		
335 Aug. 25	H	20 16.0	6580	
	P	20 25 58		
	S	20 34 12		
	SSS	20 41 00		
	L	20 44		
	F	21 20+		
		Victoria		
	H	20 16.1	8320	
	P	20 27 47		
	S	20 37 28		
	L	20 52		
	F	22 14		
		Seven Falls		
	e	20 34 35		
	L	20 42		
	F	22 47		

SEISMOLOGICAL SERVICE OF CANADA  
DOMINION OBSERVATORY, OTTAWA

FROM August 25, 1942 to August 26, 1942 No. 53

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Ottawa		
336 Aug. 25	H	20 51.5	6600	
	P	21 01 27		
	S	21 09 42		
	L	21 19		
	F	22 11		
		Ottawa		
339 Aug. 26	H	12 08.7	6640	
	P	12 18 41		
	iZ	12 18 52		
	PPP	12 22.4		
	S	12 26 58		
	SSS	12 34.0		
	L	12 37		
	F	13 08		
		Victoria		
340 Aug. 26	H	12 08.7	8450	
	P	12 20.5		
	S	12 30 15		
	L	12 46		
	F	13 03		
		Seven Falls		
341 Aug. 26	e	12 27 25	6700	
	L	12 37		
	F	13 15		
		Ottawa		
340 Aug. 26	H	14 18.4	6700	
	P <sup>Z</sup>	14 28 27		
	S	14 36 48		
	L	14 47		
	F	15 10		
		Victoria		
341 Aug. 26	e	14 40.2	215	
	L	15 01		
	F	15 26		
		Ottawa		
341 Aug. 26	H	17 54.3	215	
	P <sub>2</sub>	17 54 54.5		
	S <sub>2</sub>	17 55 19		
	F	18 00		
		Seven Falls		
341 Aug. 26	e	17 56 27	215	
	e	17 56 47		
	F	17 58		

SEISMOLOGICAL SERVICE OF CANADA  
 DOMINION OBSERVATORY, OTTAWA

FROM August 26, 1942 to August 31, 1942 No. 54

NO. AND DATE	PHASE	TIME	DISTANCE km.	REMARKS
		h m s		
Shawinigan Falls				
341 Aug. 26 (Cont'd)	e	17 55 43		
	e	17 55 55		
	e	17 56 03		
	F	17 58		
Ottawa				
344 Aug. 27	H	6 14.4	7220	
	P	6 24 59		
	S	6 33.8		
	L	6 44		
	F	7 12		
Victoria				
	e	6 37 18		
	L	7 01		
	F	7 24		
Seven Falls				
	H	6 14.4	6920	
	P	6 24 39		
	PP	6 26 57		
	S	6 33 12		
	L	6 43		
	F	7 23		
Ottawa				
348 Aug. 29	H	12 24.1	3610	
	P	12 30 39		
	S	12 36 02		
	L	12 43		
	F	13 06		
Victoria				
	e	12 32 00		
	e	12 38 30		
	L	12 50		
	F	13 09		
Shawinigan Falls				
	H	12 24.1	3850	
	P	12 30 56		
	S	12 36.6		
	F	12 45		
Ottawa				
349 Aug. 29	H	21 40.5	3600	
	P	21 47 02		
	S	21 52 24		
	e	21 55.0		
	L	21 58		
	F	22 17		

*W. W. Doxsee*



EARTHQUAKE CORRELATION TABLE  
 Month August, 1942

No.	Date	Ottawa	Victoria	Saskatoon	Halifax	Seven Falls		Shawinigan	**
						M. S.	W. A.		
311	18	22 12+0 13L							
312	19	0 01+0 01P*				22 14+0 30L			
313	19					6 54+0 12L			
314	19	8 19+0 02P*				8 46+0 16L			
315	19	10 20+0 01P*							
316	20	15 59+0 03P							
317	20	16 50+0 20r				16 59+0 10L		16 50+0 01P	S
318	20		18 22+0 07L						
319	20	22 44+0 30r	22 45+0 32r			22 46+0 33r	22 50+0 09L		T
320	22	8 41+0 26u				9 02+0 07L			
321	22	9 15+1 07u				9 50+0 43L			
322	22	19 59+0 15u						20 00+0 07P	
323	23					5 13+0 05L			
324	23	6 46+2 10U	6 50+2 00U	6 44+0 47U	7 14+0 29L	6 47+2 24U	6 47+0 50U	6 46+0 28U	U
325	24	23 01+5 04U		23 02+3 11U	23 00+3 33U	23 01+5 33U	23 01+2 53U	23 01+2 49U	V
326	25	1 55+0 02P						1 55+0 02P	
327	25	2 13+0 02P						2 13+0 01P	
328	25	2 41+0 01P*						3 13+0 03P	
329	25	3 13+0 03P							
330	25	6 05+0 01P*							
331	25	7 50+0 01P*							
332	25	8 56+0 03P							
333	25	13 37+0 23u						8 56+0 02P	
334	25					13 46+0 15L			
335	25	20 26+0 54u	20 28+1 46u			15 51+0 09L			W
336	25	21 01+1 10u				20 35+2 12u		21 01+0 03P	X
337	25					23 52+0 05L			
338	26	1 43+0 01P*							
339	26	12 19+0 49u	12 20+0 42u			12 27+0 48u		12 19+0 04P	Y
340	26	14 28+0 42u	14 40+0 46u			14 48+0 29L			Z
341	26	17 55+0 05v						17 56+0 02v	AA
342	26		18 19+0 12L						
343	26	22 21+0 01P*							
344	27	6 25+0 47u	6 37+0 47u			6 25+0 58u	6 25+0 02P		BB





CORRELATION OF EARTHQUAKES  
August, 1942

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N O T E S

A	Ottawa	$\Delta = 14,800$ km.	H = 12 <sup>h</sup> 33 <sup>m</sup> 8 U.T.
	Victoria	$\Delta = 11,700$ km.	H = 12 34 U.T.
	Seven Falls	$\Delta = 15,100$ km.	H = 12 33.9 U.T.
B	Ottawa	$\Delta = 150$ km.	H = 21 <sup>h</sup> 13 <sup>m</sup> 7 U.T.
C	Ottawa	$\Delta = 3,740$ km.	H = 23 <sup>h</sup> 36 <sup>m</sup> 9 U.T.
	Victoria	$\Delta = 4,600$ km.	H = 23 37.3 U.T.
	Saskatoon	$\Delta = 4,260$ km.	H = 23 37.3 U.T.
	Halifax	$\Delta = 4,200$ km.	H = 23 37.1 U.T.
	Seven Falls	$\Delta = 4,140$ km.	H = 23 36.9 U.T.
	Shawinigan Falls	$\Delta = 4,020$ km.	H = 23 36.9 U.T.
E	Ottawa	$\Delta = 3,980$ km.	H = 6 <sup>h</sup> 04 <sup>m</sup> 4 U.T.
G	Ottawa	$\Delta = 3,720$ km.	H = 7 <sup>h</sup> 19 <sup>m</sup> 5 U.T.
	Victoria	$\Delta = 4,800$ km.	H = 7 19.4 U.T.
	Seven Falls	$\Delta = 4,000$ km.	H = 7 19.6 U.T.
J	Ottawa	$\Delta = 3,690$ km.	H = 22 <sup>h</sup> 36 <sup>m</sup> 6 U.T.
	Victoria	$\Delta = 4,740$ km.	H = 22 36.7 U.T.
	Seven Falls	$\Delta = 4,090$ km.	H = 22 36.6 U.T.
	Shawinigan Falls	$\Delta = 3,960$ km.	H = 22 36.6 U.T.
K	Ottawa	$\Delta = 3,800$ km.	H = 4 <sup>h</sup> 48 <sup>m</sup> 2 U.T.
	Seven Falls	$\Delta = 4,400$ km.	H = 4 48.0 U.T.
N	Ottawa	$\Delta = 3,690$ km.	H = 7 <sup>h</sup> 11 <sup>m</sup> 6 U.T.
O	Ottawa	$\Delta = 13,600$ km. ca.	H = 13 <sup>h</sup> 45 <sup>m</sup> ca. U.T.
Q	Ottawa	$\Delta = 4,040$ km.	H = 20 <sup>h</sup> 50 <sup>m</sup> 7 U.T.
R	Ottawa	$\Delta = 3,660$ km.	H = 20 <sup>h</sup> 07 <sup>m</sup> 9 U.T.
	Victoria	$\Delta = 4,740$ km.	H = 20 08.0 U.T.
	Seven Falls	$\Delta = 4,010$ km.	H = 20 07.9 U.T.
	Shawinigan Falls	$\Delta = 3,800$ km.	H = 20 08.0 U.T.
S	Ottawa	$\Delta = 3,600$ km.	H = 16 <sup>h</sup> 43 <sup>m</sup> 3 U.T.
T	Ottawa	$\Delta = 3,630$ km.	H = 22 <sup>h</sup> 37 <sup>m</sup> 2 U.T.
	Victoria	$\Delta = 4,640$ km.	H = 22 37.4 U.T.
	Shawinigan Falls	$\Delta = 3,840$ km.	H = 22 37.2 U.T.
U	Ottawa	$\Delta = 7,550$ km.	H = 6 <sup>h</sup> 35 <sup>m</sup> 5 U.T.
	Victoria	$\Delta = 4,600$ km. ca.	Time uncertain
	Saskatoon	$\Delta = 5,580$ km.	H = 6 35.5 U.T.
	Seven Falls	$\Delta = 7,600$ km.	H = 6 35.5 U.T.
	Shawinigan Falls	$\Delta = 7,600$ km.	H = 6 35.5 U.T.
V	Ottawa	$\Delta = 6,570$ km.	H = 22 <sup>h</sup> 50 <sup>m</sup> 6 U.T.
	Victoria	$\Delta = 8,650$ km.	
	Saskatoon	$\Delta = 7,880$ km.	H = 22 50.8 U.T.
	Halifax	$\Delta = 6,640$ km.	H = 22 50.4 U.T.
	Seven Falls	$\Delta = 6,790$ km.	H = 22 50.7 U.T.
	Shawinigan Falls	$\Delta = 6,780$ km.	H = 22 50.6 U.T.
W	Ottawa	$\Delta = 6,580$ km.	H = 20 <sup>h</sup> 16 <sup>m</sup> 0 U.T.
	Victoria	$\Delta = 8,320$ km.	H = 20 16.1 U.T.

## CORRELATION OF EARTHQUAKES

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August, 1942

## N O T E S

X	: Ottawa	$\Delta = 6,600$ km.	H = 20 <sup>h</sup> 51 <sup>m</sup> .5 U.T.
Y	: Ottawa	$\Delta = 6,640$ km.	H = 12 <sup>h</sup> 08 <sup>m</sup> .7 U.T.
	Victoria	$\Delta = 8,450$ km.	H = 12 08.7 U.T.
Z	: Ottawa	$\Delta = 6,700$ km.	H = 14 <sup>h</sup> 18 <sup>m</sup> .4 U.T.
AA	: Ottawa	$\Delta = 215$ km.	H = 17 <sup>h</sup> 54 <sup>m</sup> .3 U.T.
BB	: Ottawa	$\Delta = 7,220$ km.	H = 6 <sup>h</sup> 14 <sup>m</sup> .4 U.T.
	Seven Falls	$\Delta = 6,920$ km.	H = 6 14.4 U.T.
CC	: Ottawa	$\Delta = 3,610$ km.	H = 12 <sup>h</sup> 24 <sup>m</sup> .1 U.T.
	Shawinigan Falls	$\Delta = 3,850$ km.	H = 12 24.1 U.T.
EE	: Ottawa	$\Delta = 3,600$ km.	H = 21 <sup>h</sup> 40 <sup>m</sup> .5 U.T.

Dominion Observatory,  
 Ottawa - Canada,  
 December 2, 1942.

SEISMOLOGICAL BULLETINS RECEIVED  
October and November, 1942

We acknowledge, with thanks, the receipt of the following seismological publications and bulletins:-

STATIONS	BULLETINS	RECEIVED
Saint Louis and Auxiliary Stations	Preliminaries for May 14, June 12, 15, 16, 20, 29, July 4, 5, 7, 8, 12, August 6, November 16, 18; Supplement to February and November; preliminaries for December 5, 6.	October 2
Pasadena	Preliminary for July and August, 1942	" 2
Weston	Preliminary for September, 1942	" 7
Pasadena	Local Shocks April to June, 1942	" 15
Brisbane	July, 1942	" 16
Riverview	October to December, 1941	" 16
Santa Clara	August and September, 1942	" 26
New Zealand Stations	Provisional for August, 1942	" 26
Perth	July, 1942	" 26
Weston	Preliminary for October, 1942	November 4
New Zealand Stations	Provisional for September, 1942	" 10
Brisbane	August, 1942	" 11
Santa Clara	October, 1942	" 16
Berkeley and Auxiliary Stations	April to June, 1940	" 18
Zürich	July and August, 1942	" 23
Helwan	Year 1941	" 25
Pasadena	Local Shocks July to September, 1942	" 27

DOMINION OBSERVATORY,  
OTTAWA - CANADA.

SEISMOLOGICAL SERVICE OF CANADA



SEISMOLOGICAL BULLETIN  
September  
1942

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DOMINION OBSERVATORY  
OTTAWA - CANADA

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SEISMOLOGICAL SERVICE OF CANADA  
DOMINION OBSERVATORY, OTTAWA

R. Meldrum Stewart, Dominion Astronomer  
Ernest A. Hodgson, Seismologist  
W. W. Doxsee, Station Superintendent

S T A T I O N S

OTTAWA

$\phi = 45^{\circ}23'38''$  N.  $\lambda = 75^{\circ}42'57''$  W.  $h = 83$ m.

Time correction within 0.10s.

Foundation: boulder clay over limestone

Instruments: Milne-Shaw NS and EW components, designated 23 and 17, respectively, each with photographic registration, magnetic damping, paper speed of 15 mm. per min., mass 1 lb.

Benioff Vertical, short and long period, designated BS and BL, respectively, photographic registration, BS a paper speed of 60 mm. per min., BL a paper speed of 30 mm. per min., mass 235 lbs.

HALIFAX

Dalhousie University

$\phi = 44^{\circ}38'$  N.  $\lambda = 63^{\circ}36'$  W.  $h = 46$ m.

Time correction from recorded radio time signals

Foundation: Carbonaceous slate

Instruments: Bosch NS and EW components, designated HN and HE, respectively, each with photographic registration, magnetic damping, paper speed of 15 mm. per min., mass 200g.

SEVEN FALLS

Quebec Power Company

$\phi = 47^{\circ}07'4''$  N.  $\lambda = 70^{\circ}49'6''$  W.  $h = 232$ m. ca.

Time correction from recorded radio time signals

Foundation: Solid granite of Canadian Shield

Instruments: Wood-Anderson and Milne-Shaw, both EW component, designated SF and SM, respectively, each with photographic registration, magnetic damping, SF a paper speed of 60 mm. per min. and mass 15g., SM a paper speed of 8 mm. per min. and mass 1 lb.

VICTORIA

Dominion Astrophysical Observatory

$\phi = 48^{\circ}31'14''$  N.  $\lambda = 123^{\circ}24'56''$  W.  $h = 197$ m.

Time correction from recorded radio time signals

Foundation: rock

Instruments: Milne-Shaw NS and EW components, designated 21 and 20, respectively, each with photographic registration, magnetic damping, paper speed of 8 mm. per min., mass 1 lb.

Wiechert Vertical, designated WV, smoked sheet registration, air damping, paper speed of 15 mm. per min., mass 80 kg.

## S T A T I O N S (Cont'd)

SHAWINIGAN FALLS

Shawinigan Water and Power Company

 $\phi = 46^{\circ}33.1$  N.  $\lambda = 72^{\circ}45.8$  W.  $h = 60$ m. ca.

Time correction from recorded radio time signals

Foundation: solid granite of Canadian Shield

Instrument: Wood-Anderson NS component, designated SA, photographic registration, magnetic damping, paper speed of 60 mm. per min., mass 15g.

KIRKLAND LAKE

Lake Shore Mines

 $\phi = 48^{\circ}09'$  N.  $\lambda = 80^{\circ}03'$  W.  $h = 320$ m.

Time correction from recorded radio time signals

Foundation: rock

Instrument: Converted Heiland Field Seismometer, vertical component, designated KL, photographic registration, paper speed of 30 mm. per min.

DETERMINED CONSTANTS

INSTRUMENT	$T_0$	V	$\epsilon$	DISPLACEMENT FOR 1" ARC TILT	DISPLACEMENT FOR $10^{-6}$ g
17 (Ottawa)	12.0	300	20:1	50 mm.	
23 (Ottawa)	12.0	300	20:1	50 mm.	
BS (Ottawa)	1.0				5 mm.
BL (Ottawa)	1.0				16 mm.
HN (Halifax)	5.0	125	20:1		
HE (Halifax)	5.0	125	20:1		
SA (Shawinigan)	1.0	2200			
20 (Victoria)	12.0	300	20:1		
21 (Victoria)	12.0	300	20:1		
WV (Victoria)	4.0	120	15:1		
SF (Seven Falls)	1.0	2500			
SM (Seven Falls)	12.0	300	20:1	50 mm.	
KL (Kirkland Lake)	1/30	$2 \times 10^4$	at 30	cycles	

NOTE:- Universal Time used throughout.

SEISMOLOGICAL SERVICE OF CANADA  
DOMINION OBSERVATORY, OTTAWA

FROM September 1, 1942 to September 4, 1942 No. 55

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS	
		h m s	km.		
355 Sept. 1		Ottawa			
	H	9 42.0	8320		
	PZ	9 53 36			
	S	10 03 17			
	SSN	10 08.0			
	L	10 17			
	F	10 53			
			Seven Falls		
	H	9 42.4	7640		
	P	9 53 24			
S	10 02 32				
L	10 17				
F	11 02				
356 Sept. 1		Ottawa			
	eZ	19 12 14			
	L	19 41			
	F	20 06			
358 Sept. 2		Ottawa			
	H	3 17.6	6120	USCGS. gives:- $\phi = 52^{\circ}5$ N. $\lambda = 170^{\circ}$ W.	
	P	3 27 04			
	S	3 34 52			
	SSS	3 40.2			
	L	3 44			
	F	4 44			
			Victoria		
	H	3 17.6	2990		
	P	3 23 21			
	S	3 28 04			
	L	3 30			
	F	4 52			
			Seven Falls		
e	3 27.6				
e	3 35 12				
L	3 47				
F	5 03				
359 Sept. 2		Ottawa			
	eZ	16 22 12			
	L	16 30.5			
	F	16 46			
362 Sept. 4		Ottawa			
	H	2 53.4	4090	USCGS. gives:- $\phi = 12^{\circ}5$ N. $\lambda = 91^{\circ}$ W.	
	P	3 00 34			
	S	3 06 27			
	SSS	3 09			
	L	3 12			
	F	3 43			

SEISMOLOGICAL SERVICE OF CANADA  
DOMINION OBSERVATORY, OTTAWA

FROM September 4, 1942 to September 6, 1942 No. 56

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
362 Sept. 4 (Cont'd)		Seven Falls		
	e	3 02.7		
	e	3 07.0		
	e	3 10		
	L	3 14		
	F	3 59		
		Shawinigan Falls		
	e	3 00.9		
	L	3 16		
	F	3 21		
363 Sept. 4		Ottawa	6170	USCGS. gives:- $\phi = 52^{\circ}8' N.$ $\lambda = 169^{\circ}2' W.$
	H	17 46.5		
	P	17 56 03		
	S	18 03 53		
	L	18 14		
	F	19 10		
		Victoria		
	e <sub>E</sub>	17 52.5		
	L	17 57 01		
	F	17 59 18 55		
		Seven Falls		
	e	18 04 06		
	L	18 16		
	F	19 10		
		Shawinigan Falls	6290	
	H	17 46.5		
	P	17 56 08		
	S	18 04 05		
F	18 07			
	Seven Falls	50		
H	14 30.4			
P <sub>1</sub>	14 30 32			
S <sub>1</sub>	14 30 38			
F	14 32			
	Shawinigan Falls			
e	14 30 54			
F	14 31.3			
366 Sept. 6		Ottawa		
	i <sub>Z</sub>	16 04 55		
	i <sub>N</sub>	16 05 12		
	e	16 14 22		
	L	16 38		
	F	16 47		



SEISMOLOGICAL SERVICE OF CANADA  
 DOMINION OBSERVATORY, OTTAWA

FROM September 6, 1942 to September 9, 1942 No. 57

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS	
		h m s	km.		
366 Sept. 6 (Cont'd)	e L F	Seven Falls			
		16 05.1			
		16 14 38			
		16 34			
368 Sept. 7	e <sub>Z</sub> e <sub>N</sub> L F	Ottawa			
		4 58 24			
		5 04.0			
		5 11			
369 Sept. 8	H P <sub>Z</sub> S e L F	Ottawa			
		16 07.6	9960		
		16 20 33			
		16 31 26			
		16 44			
	H P <sub>E</sub> S F	Victoria		7240	
		16 07.7			
		16 18.3			
		16 27 08			
		16 46			
370 Sept. 9	e L F	Seven Falls			
		16 31.4			
		16 52			
		17 07			
	H P PP S SS L F	H P PP S SS L F	Ottawa		6020
			1 25.5		
			1 34 52		
			1 37.0		
			1 42 34		
H P S L F		Victoria		2865	
		1 25.5			
		1 31 02			
		1 35 36			
		1 38			
e L F	Halifax				
	1 44.1				
	1 56				
		2 19			

 USCGS. gives:-  
 $\phi = 53^{\circ}1' N.$   
 $\lambda = 165^{\circ} W.$

SEISMOLOGICAL SERVICE OF CANADA  
 DOMINION OBSERVATORY, OTTAWA

FROM September 9, 1942 to September 11, 1942 No. 58

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
370 Sept. 9 (Cont'd)		Seven Falls		
	H	1 25.6	6100	
	P	1 35 03		
	S	1 42 49		
	SS	1 46.4		
	L	1 52		
	F	3 30		
		Shawinigan Falls		
	H	1 25.6	6000	
	P	1 34 59		
S	1 42.7			
L	1 54			
F	2 03			
371 Sept. 10		Ottawa		
	eZ	5 06 47		
	L	5 46		
	F	6 17		
		Victoria		
	e	5 12 06		
	L	5 35		
	F	6 05		
		Seven Falls		
	e	5 25.5		
L	5 44			
F	6 47			
372 Sept. 10		Ottawa		
	eZ	23 46 36		
	L	23 55		
	F	0 08		
		Victoria		
	eN	23 44.5		
	L	23 51		
	F	0 21		
		Ottawa		
	e	11 06 51		Nearby quake,
i	11 08 13			
i	11 08 46			
F	11 13			
	Seven Falls			
e	11 07 01			
e	11 07 51			
e	11 07 55			
F	11 10			
	Shawinigan Falls			
e	11 07.2			
F	11 09			

SEISMOLOGICAL SERVICE OF CANADA  
 DOMINION OBSERVATORY, OTTAWA

FROM September 11, 1942 to September 16, 1942 No. 59

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
375 Sept. 12	H P S L F	h m s Ottawa 5 40.6 5 50 30 5 58 44 6 09 6 40	km. 6580	
		Victoria 6 02 09 6 21 6 45		
	e L F			
		Seven Falls 5 59.6 6 11 6 51		
	e L F			
376 Sept. 14	e L <sup>Z</sup> F	Ottawa 11 49 41 12 18 13 00 ca.		
		Victoria 11 31.4 11 44.1 11 54 50 11 55 55 12 01.0 12 08 12 56	9720	
	H P S PS SS L F			
		Seven Falls 12 01.7 12 09 13 25		
	e L F			
377 Sept. 15	H P <sub>1</sub> S <sub>1</sub> i F	Ottawa 22 32.8 22 33 11 22 33 30 22 33 37 22 35	160	
378 Sept. 15 and 16	e L <sup>Z</sup> F  e L <sup>E</sup> F	Ottawa 23 56 32 0 36 1 01  Victoria 0 01.3 0 21 0 57		

SEISMOLOGICAL SERVICE OF CANADA  
 DOMINION OBSERVATORY, OTTAWA

FROM September 16, 1942 to September 24, 1942 No. 60

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s		
		Victoria		
379	e	11 49.2		
Sept.	L	12 28		
17	F	12 40		
		Ottawa		
382	H	22 29.3	145	
Sept.	P <sub>1</sub>	22 29 46		
18	S <sub>1</sub>	22 30 03		
	i	22 30 07		
	F	22 30.5		
		Seven Falls		
384	H	13 26.9	30	
Sept.,	P <sub>1</sub>	13 27 01		
19	S <sub>1</sub>	13 27 05		
	F	13 28		
		Victoria		
385	e	23 55.1		
Sept.,	e <sub>E</sub>	0 05.7		
20	L	0 28		
	F	0 45		
		Victoria		
386	e	6 13.1		
Sept.	L <sub>E</sub>	6 25		
21	F	6 58		
		Ottawa		
389	H	0 46.5	9200	
Sept.	P <sub>Z</sub>	0 58 52		
22	S	1 09 12		
	SS	1 14.8		
	SSS	1 18.2		
	L	1 27		
	F	2 10		
		Victoria		
	e	1 09 58		
	L	1 24		
	F	2 09		
		Seven Falls		
	e	1 09 42		
	L	1 22		
	F	2 16		
		Ottawa		
391	e <sub>N</sub>	4 04		
Sept.	e	4 07 04		
24	e <sub>N</sub>	4 13.6		
	L	4 26		
	F	5 33		

SEISMOLOGICAL SERVICE OF CANADA  
DOMINION OBSERVATORY, OTTAWA

FROM September 24, 1942m to September 26, 1942 No. 61

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
391 Sept. 24 (Cont'd)	e	Victoria		
	e	3 51 44		
	L	4 02 11		
	F	4 13		
	F	5 30		
		Seven Falls		
	e	4 16		
	L	4 27		
	F	5 32		
392 Sept. 25		Ottawa	6100	
	H	8 14.6		
	P	8 24 04		
	S <sub>Z</sub>	8 31 50		
	L	8 42		
	F	9 48		
		Victoria		
	e <sup>E</sup>	8 20.5		
	L <sup>E</sup>	8 25		
	F	9 56		
	Seven Falls			
	e	8 32.1		
L	8 44			
F	10 05			
393 Sept. 26		Ottawa	3650	USCGS. gives:- φ = 12°8 N. λ = 87°5 W.
	H	4 00.4		
	P	4 07 02		
	PPP	4 08 22		
	iS	4 12 27		
	e	4 14.8		
	L	4 17		
	F	5 18		
		Victoria	5060	
	H	4 00 ca.		
	P	(4 08.3)		
	S	(4 15.1)		
	SS	(4 18.2)		
	L	(4 25)		
	F	(5 14)		
	Halifax	4100		
H	4 00.5			
P	4 07.7			
S	4 13.6			
L	4 19			
F	4 37			

SEISMOLOGICAL SERVICES OF CANADA  
 DOMINION OBSERVATORY, OTTAWA

FROM September 26, 1942 to September 30, 1942 No. 62

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
393 Sept. 26 (Cont'd)	H	4 00.5	3950	
	P	4 07 28		
	PPP	4 09.0		
	S	4 13 12		
	SS	4 16		
	L	4 17		
	F	5 27		
		Shawinigan Falls		
	H	4 00.4	3850	
	P	4 07 19		
	S	4 12 57		
	L	4 17		
	F	4 33		
		Ottawa		
395 Sept. 27	e	13 35.7		
	e <sup>N</sup>	13 42		
	L	13 48		
	F	14 19		
		Victoria		
	e	13 37.9		
	L <sup>E</sup>	13 55		
	F	14 50		
		Seven Falls		
	e	13 36.5		
	e	13 42.7		
	L	13 49		
	F	15 18		
		Ottawa		
396 Sept. 27	e <sup>Z</sup>	17 08 52		
	e	17 14		
	L	17 17		
	F	17 38		
		Seven Falls		
	e	17 15.1		
	e	17 18.1		
	L	17 21		
	F	17 35		
		Ottawa		
398 Sept. 30	e	16 14 38		
	L <sup>Z</sup>	16 36		
	F	16 49		
			<i>W W. Doysee.</i>	

EARTHQUAKE CORRELATION TABLE  
 Month September, 1942

No.	Date	Ottawa	Victoria	Halifax	Seven Falls		Shawinigan	**
					M. S.	V. A.		
355	1	9 54+0 59u	10 31+0 21L	.....	10 03+1 00u	9 53+0 11u	9 54+0 03P	A
356	1	19 12+0 54u	19 37+0 16L	.....	19 42+0 22L	.....	.....	..
357	1	.....	.....	.....	21 17+0 10L	.....	.....	..
358	2	3 27+1 17u	3 23+1 29r	3 49+0 14L	3 35+1 28u	3 28+0 30u	.....	B
359	2	16 22+0 24u	.....	.....	.....	.....	.....	..
360	2	20 53+0 01P*	.....	.....	.....	.....	.....	..
361	3	.....	.....	.....	8 44+0 11L	.....	.....	..
362	4	3 01+0 42*	3 19+0 18L	.....	3 03+0 56r	.....	3 01+0 20r	C
363	4	17 56+1 14u	17 52+1 03r	.....	18 04+1 06u	.....	17 56+0 11u	E
364	5	.....	.....	.....	.....	14 31+0 01d	14 31+0 0.4v	F
365	5	21 47+0 01P*	.....	.....	.....	.....	.....	..
366	6	16 05+0 42u	.....	.....	16 15+0 38u	16 05+0 03P	16 05+0 06P	..
367	6	20 35+0 01P*	.....	.....	.....	.....	.....	..
368	7	4 58+0 25u	.....	.....	5 12+0 18L	.....	.....	..
369	8	16 21+0 47u	16 18+0 28u	.....	16 31+0 36u	.....	.....	G
370	9	1 35+1 48u	1 31+2 16r	1 44+0 35u	1 35+1 55u	1 35+0 36u	1 35+0 28u	J
371	10	5 07+1 10u	5 12+0 53u	.....	5 25+1 22u	.....	.....	..
372	10	23 47+0 21u	23 44+0 37u	.....	23 57+0 14L	.....	.....	..
373	11	2 04+0 0.5P	.....	.....	.....	.....	.....	..
374	11	11 07+0 06v	.....	.....	.....	11 07+0 03v	11 07+0 02v	..
375	12	5 50+0 50u	6 02+0 43u	.....	6 00+0 51u	.....	.....	..
376	14	11 50+1 10u	11 44+1 12u	.....	12 02+1 23u	.....	.....	N
377	15	22 33+0 02v	.....	.....	0 39+0 39L	.....	22 34+0 0.5v	P
378	15	23 57+1 04u	0 01+0 56u	.....	.....	.....	.....	..
379	17	11 52+0 10P	11 49+0 51u	.....	.....	11 52+0 04P	11 52+0 03P	..
380	18	1 31+0 01P*	.....	.....	.....	.....	.....	..
381	18	5 32+0 01P*	.....	.....	.....	.....	.....	..
382	18	22 30+0 01v*	.....	.....	.....	.....	.....	..
383	19	7 39+0 01P*	.....	.....	.....	.....	.....	..
384	19	.....	.....	.....	.....	.....	.....	..
385	20	.....	23 55+0 50u	.....	.....	13 27+0 01d	.....	Q
386	21	.....	6 13+0 45u	.....	6 43+0 13L	.....	.....	R

## EARTHQUAKE CORRELATION TABLE

Month September, 1942

No.	Date	Seven Falls						Shawinigan	**
		Ottawa	Victoria	Halifax	M. S.	W. A.	W. A.		
387	21	.....	.....	.....	8.05+0.04L	.....	.....	..	
388	21	10 05+0 02P*	.....	.....	.....	.....	.....	..	
389	22	0 59+1 11u	1 10+0 59u	.....	1 10+1.06u	.....	.....	S	
390	23	10 38+0 01P*	.....	.....	.....	.....	.....	..	
391	24	4 04+1 29u	3 52+1 38u	.....	4 16+1 16u	.....	.....	..	
392	25	8 24+1 24u	8 20+1 36u	.....	8.32+1.33u	.....	.....	T	
393	26	4 07+1 11r	4 08+1 06u	4 08+0 29u	4 07+1 20r	4 07+0 24r	4 07+0 26r	U	
394	26	10 41+0 02P*	.....	.....	.....	.....	.....	..	
395	27	13 36+0 43u	13 38+1 12u	.....	13 37+1 41u	.....	.....	..	
396	27	17 09+0 29r	.....	.....	17 15+0 20r	.....	.....	..	
397	29	12 53+0 01P	13 15+0 12L	.....	13 03+0 14L	.....	.....	..	
398	30	16 15+0 34u	.....	.....	.....	.....	.....	..	



## CORRELATION OF EARTHQUAKES

September, 1942

## N O T E S

A	Ottawa	$\Delta = 8320$ km.	H = $9^h42^m0$ U.T.
	Seven Falls	$\Delta = 7640$ km.	H = $9\ 42.4$ U.T.
B	Ottawa	$\Delta = 6120$ km.	H = $3^h17^m6$ U.T.
	Victoria	$\Delta = 2990$ km.	H = $3\ 17.6$ U.T.
C	Ottawa	$\Delta = 4090$ km.	H = $2^h53^m4$ U.T.
E	Ottawa	$\Delta = 6170$ km.	H = $17^h46^m5$ U.T.
	Shawinigan Falls	$\Delta = 6290$ km.	H = $17\ 46.5$ U.T.
F	Seven Falls	$\Delta = 50$ km.	H = $14^h30^m4$ U.T.
G	Ottawa	$\Delta = 9960$ km.	H = $16^h07^m6$ U.T.
	Victoria	$\Delta = 7240$ km.	H = $16\ 07.7$ U.T.
J	Ottawa	$\Delta = 6020$ km.	H = $1^h25^m5$ U.T.
	Victoria	$\Delta = 2865$ km.	H = $1\ 25.5$ U.T.
	Seven Falls	$\Delta = 6100$ km.	H = $1\ 25.6$ U.T.
	Shawinigan Falls	$\Delta = 6000$ km.	H = $1\ 25.6$ U.T.
K	Ottawa	$\Delta = 6580$ km.	H = $5^h40^m6$ U.T.
N	Victoria	$\Delta = 9720$ km.	H = $11^h31^m4$ U.T.
P	Ottawa	$\Delta = 160$ km.	H = $22^h32^m8$ U.T.
Q	Ottawa	$\Delta = 145$ km.	H = $22^h29^m3$ U.T.
R	Seven Falls	$\Delta = 30$ km.	H = $13^h26^m9$ U.T.
S	Ottawa	$\Delta = 9200$ km.	H = $0^h46^m5$ U.T.
T	Ottawa	$\Delta = 6100$ km.	H = $8^h14^m6$ U.T.
U	Ottawa	$\Delta = 3650$ km.	H = $4^h00^m4$ U.T.
	Victoria	$\Delta = 5060$ km.	H = $4\ 00$ ca. U.T.
	Halifax	$\Delta = 4100$ km.	H = $4\ 00.5$ U.T.
	Seven Falls	$\Delta = 3950$ km.	H = $4\ 00.5$ U.T.
	Shawinigan Falls	$\Delta = 3850$ km.	H = $4\ 00.4$ U.T.

Dominion Observatory,  
 Ottawa, Canada,  
 December 22, 1942.

SEISMOLOGICAL SERVICE OF CANADA

SEISMOLOGICAL BULLETIN  
October  
1942

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DOMINION OBSERVATORY  
OTTAWA - CANADA

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SEISMOLOGICAL SERVICE OF CANADA  
DOMINION OBSERVATORY, OTTAWA

R. Meldrum Stewart, Dominion Astronomer  
Ernest A. Hodgson, Seismologist  
W. W. Doxsee, Station Superintendent

S T A T I O N S

OTTAWA

$\phi = 45^{\circ}23'38''$  N.  $\lambda = 75^{\circ}42'57''$  W.  $h = 83$ m.

Time correction within 0.10s.

Foundation: boulder clay over limestone

Instruments: Milne-Shaw NS and EW components, designated 23 and 17, respectively, each with photographic registration, magnetic damping, paper speed of 15 mm. per min., mass 1 lb.

Benicoff Vertical, short and long period, designated BS and BL, respectively, photographic registration, BS a paper speed of 60 mm. per min., BL a paper speed of 30 mm. per min., mass 235 lbs.

HALIFAX

Dalhousie University

$\phi = 44^{\circ}38'$  N.  $\lambda = 63^{\circ}36'$  W.  $h = 46$ m.

Time correction from recorded radio time signals

Foundation: Carbonaceous slate

Instruments: Bosch NS and EW components, designated HN and HE, respectively, each with photographic registration, magnetic damping, paper speed of 15 mm. per min., mass 200g.

SEVEN FALLS

Quebec Power Company

$\phi = 47^{\circ}07'4''$  N.  $\lambda = 70^{\circ}49'6''$  W.  $h = 232$ m. ca.

Time correction from recorded radio time signals

Foundation: Solid granite of Canadian Shield

Instruments: Wood-Anderson and Milne-Shaw, both EW component, designated SF and SM, respectively, each with photographic registration, magnetic damping, SF a paper speed of 60 mm. per min. and mass 15g., SM a paper speed of 8 mm. per min. and mass 1 lb.

VICTORIA

Dominion Astrophysical Observatory

$\phi = 48^{\circ}31'14''$  N.  $\lambda = 123^{\circ}24'56''$  W.  $h = 197$ m.

Time correction from recorded radio time signals

Foundation: rock

Instruments: Milne-Shaw NS and EW components, designated 21 and 20, respectively, each with photographic registration, magnetic damping, paper speed of 8 mm. per min., mass 1 lb.

Wiechert Vertical, designated WV, smoked sheet registration, air damping, paper speed of 15 mm. per min., mass 80 kg.

## S T A T I O N S (Cont'd)

SHAWINIGAN FALLS

Shawinigan Water and Power Company

 $\phi = 46^{\circ}33.1$  N.  $\lambda = 72^{\circ}45.8$  W.  $h = 60$ m. ca.

Time correction from recorded radio time signals

Foundation: solid granite of Canadian Shield

Instrument: Wood-Anderson NS component, designated SA, photographic registration, magnetic damping, paper speed of 60 mm. per min., mass 15g.

KIRKLAND LAKE

Lake Shore Mines

 $\phi = 48^{\circ}09'$  N.  $\lambda = 80^{\circ}03'$  W.  $h = 320$ m.

Time correction from recorded radio time signals

Foundation: rock

Instrument: Converted Heiland Field Seismometer, vertical component, designated KL, photographic registration, paper speed of 30 mm. per min.

DETERMINED CONSTANTS

INSTRUMENT	$T_0$	V	$\epsilon$	DISPLACEMENT FOR 1" ARC TILT	DISPLACEMENT FOR $10^{-6}$ g
17 (Ottawa)	12.0	300	20:1	50 mm.	
23 (Ottawa)	12.0	300	20:1	50 mm.	
BS (Ottawa)	1.0				5 mm.
BL (Ottawa)	1.0				16 mm.
HN (Halifax)	5.0	125	20:1		
HE (Halifax)	5.0	125	20:1		
SA (Shawinigan)	1.0	2200			
20 (Victoria)	12.0	300	20:1		
21 (Victoria)	12.0	300	20:1		
WV (Victoria)	4.0	120	15:1		
SF (Seven Falls)	1.0	2500			
SM (Seven Falls)	12.0	300	20:1	50 mm.	
KL (Kirkland Lake)	1/30	$2 \times 10^4$	at 30	cycles	

NOTE:- Universal Time used throughout.

SEISMOLOGICAL SERVICE OF CAN  
DOMINION OBSERVATORY, OTTAWA



From the ISC collection scanned by SISMOS

FROM October 1, 1942 to October 8, 1942 No. 63

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS		
		h m s	km.			
400 Oct. 1	H	20 58.3	250			
	P <sub>2</sub>	20 58 59				
	S <sub>2</sub>	20 59 27.5				
	F	21 00				
405 Oct. 6	Ottawa		3960			
	H	2 53.4				
	P <sub>Z</sub>	3 05 22				
	PPP	3 06 45				
	S <sub>E</sub>	3 11 07				
	L	3 17				
	F	4 06				
	Seven Falls					
	e	3 12.0				
	L	3 20				
	F	4 12				
	Ottawa					
	e <sub>Z</sub>	12 19 11				
L	12 54					
408 Oct. 6	F	13 22				
	Victoria					
e <sub>E</sub>	12 14					
L	12 32					
	F	13 15				
	Ottawa				4280	
410 Oct. 8	H	3 02.8				
	P <sub>Z</sub>	3 10 14				
	PP <sub>N</sub>	3 11.7				
	S	3 16 19				
	SS	3 19.0				
	L	3 23				
	F	4 07				
	Victoria					
	e	3 20				
	L	3 31				
	F	3 53				
	Seven Falls				4580	
H	P	3 02.9				
	S	3 10 42				
	L	3 17 04				
	F	3 20				
	F	4 04				
	Ottawa					
413 Oct. 8	e <sub>Z</sub>	20 21 26				
	L	21 04				
	F	21 30				

SEISMOLOGICAL SERVICE OF CANADA  
 DOMINION OBSERVATORY, OTTAWA

FROM October 8, 1942 to October 16, 1942 No. 64

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
413 Oct. 8 (Cont'd)	e L F	Victoria 20 25 20 44 21 12		
		Ottawa		
414 Oct. 9	eZ e L F	0 53.5 1 04 1 16 1 32		
		Ottawa		
415 Oct. 9	eZ eE L F	16 04 46 16 15.2 16 35 18 05		
		Seven Falls		
	e e e L F	16 03.1 16 05 07 16 14.4 16 39 18 12		
		Ottawa		
417 Oct. 12	eZ eE L F	1 26 40 1 34 50 1 42 2 10		
		Seven Falls		
	e L F	1 35 17 1 46 2 08		
		Ottawa		
418 Oct. 12	H PZ eS L F	6 10.2 6 22 36 6 33.0 6 45 7 05	9300	
		Ottawa		
422 Oct. 15	eZ L F	15 00 09 15 11 15 21		
		Ottawa		
423 Oct. 16	H P2 S2 e F	18 30.0 18 30 23 18 30 40 18 30 50 18 31.2	145	

SEISMOLOGICAL SERVICE OF CANADA  
DOMINION OBSERVATORY, OTTAWA



From the ISC collection scanned by SISMOS

FROM October 16, 1942 to October 21, 1942 No. 65

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS		
		h m s	km.			
427 Oct. 18	eZ LN LF	Ottawa				
		5 31 52				
		5 37.3				
		LF	5 42			
			6 20			
			Victoria			
	e LF	5 35.7				
		5 40				
		6 30				
428 Oct. 18	eZ LF	Ottawa				
		11 44 58				
		11 58				
		12 05				
429 Oct. 20 and 21	H P' PP SKS PS PPS SS SSS L F	Ottawa	14,000			
		23 21.7				
		23 40 45				
		23 42 32				
		23 48.1				
		23 52.6				
		23 54.5				
		23 59 27				
		0 05.4				
		0 16				
		2 16				
		Victoria	H PE PP PPP SKS PPS L F	11,200		
				23 21.8		
				23 35 43		
				23 39 43		
23 41.6						
23 46 19						
23 49 12						
0 07						
2 30						
Halifax	eN e LF			23 42.8		
		23 58.8				
		0 19				
		1 11				
		Seven Falls				
	e e e e LF	23 43.1				
		23 48.6				
		23 55 49				
		23 59 16				
		0 14				
		2 00				
430 Oct. 21	H PS SS iN LF	Ottawa	3700			
		16 22.2				
		16 28 55				
		16 34 24				
		16 36 45				
		16 37 22				
		16 39				
		18 27				

USCGS. gives:-  
φ = 33°1 N.  
λ = 116°0 W.

SEISMOLOGICAL SERVICE OF CANADA  
 DOMINION OBSERVATORY, OTTAWA

FROM October 21, 1942 to October 25, 1942 No. 66

NO. AND DATE	PHASE	TIME	DISTANCE km.	REMARKS	
		h m s			
430 Oct. 21 (Cont'd)		Victoria	1910		
	H	16 22.2			
	P	16 26 11			
	S	16 29 29			
	L	16 31			
	F	17 47			
			Seven Falls	4090	
	H	16 22.3			
	P	16 29 28			
	S	16 35 21			
	SSS	16 38.9			
	L	16 42			
	F	18 10			
			Shawinigan Falls		
	e	16 29 15			
L	16 38				
F	17 18				
431 Oct. 22		Ottawa	3600		
	H	1 50.8			
	PZ	1 57 20			
	S	2 02 42			
	L	2 07			
	F	3 12			
			Victoria		
	e	1 57 50			
	e	1 59.6			
	L	2 02			
	F	2 57			
			Seven Falls		
	e	2 03.7			
	e	2 06.6			
	L	2 10			
F	3 38				
435 Oct. 24		Ottawa	145		
	H	16 47.2			
	P <sub>1</sub>	16 47 40			
	S <sub>1</sub>	16 47 57			
	e	16 48 07			
F	16 48.4				
437 Oct. 25		Ottawa			
	eZ	2 42 30			
	L	2 56			
F	3 00				
440 Oct. 25		Ottawa			
	eZ	8 53 50			
	L	9 49			
	F	10 13			



SEISMOLOGICAL SERVICE OF CAN.  
DOMINION OBSERVATORY, OTTAWA



From the ISC collection scanned by SISMOS

FROM October 25, 1942 to October 28, 1942 No. 67

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS	
		h m s	km.		
441 Oct. 26		Ottawa			
	H	21 09.4	8650	USCGS. gives:- $\phi = 45^{\circ}0' N.$ $\lambda = 152^{\circ} E.$	
	P	21 21 18			
	PP	21 24.2			
	S	21 31 14			
	SS	21 37.0			
	L	21 45			
	F	23 32			
		Victoria			
	H	21 09.4	6000		
	P	21 18 43			
	S	21 26 23			
	e <sup>N</sup>	21 28 28			
	SS	21 30.0			
	L	21 35			
	F	23 26			
		Seven Falls			
	H	21 09.6	8560		
	P	21 21 29			
	S	21 31 21			
	SS	21 36 23			
SSS	21 39.4				
L	21 45				
F	0 00				
	Shawinigan Falls				
H	21 09.4	8700			
P	21 21 19				
S	21 31 17				
F	21 35				
	Ottawa				
442 Oct. 27	e <sup>Z</sup>	17 50 05			
	e	17 55.5			
	L	18 03			
	F	18 09			
	Ottawa				
443 Oct. 28	e <sup>Z</sup>	2 34 08			
	L	2 55			
	F	3 16			
		Ottawa			
444 Oct. 28	H	10 44.8	3760	USCGS. gives:- $\phi = 15^{\circ}5' \pm N.$ $\lambda = 96^{\circ}4' \pm W.$	
	P	10 51 32			
	S	10 57 04			
	SSS	10 59.8			
	L	11 03			
	F	11 58			
		Victoria			
	H	10 45.1	4240		
	P	10 52 25			
	S	10 58 27			
SSS	11 01.9				
L	11 04				
F	12 05				

SEISMOLOGICAL SERVICE OF CANA  
DOMINION OBSERVATORY, OTTAWA



From the ISC collection scanned by SISMOS

FROM October 28, 1942 to October 31, 1942 No. 68

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
444 Oct. 28 (Cont'd)		Seven Falls		
	H	10 44.8	4120	
	P	10 52 02		
	PPP	10 53 31		
	S	10 57 57		
	L	11 03		
	F	11 54		
		Shawinigan Falls		
	P	10 51 49		
	L	11 06		
F	11 16			
445 Oct. 29		Ottawa		
	eZ	21 49 26		
	e	21 56 10		
	e	22 05		
	L	22 20		
	F	22 40		
		Seven Falls		
	e	21 57.0		
L	22 20			
F	22 32			
448 Oct. 31		Ottawa		
	eZ	15 30 16		
	L	15 42		
	F	15 51		

*W. W. Doxsee.*

EARTHQUAKE CORRELATION TABLE  
 Month October, 1942

No.	Date	Ottawa	Victoria	Halifax	Seven Falls		Shawinigan	**
					M. S.	W. A.		
399	1	19 32+0 01P*	.....	.....	.....	.....	.....	..
400	1	20 59+0 01V*	.....	.....	.....	.....	.....	A
401	2	20 17+0 01P*	.....	.....	.....	.....	.....	..
402	2	20 31+0 0.6V*	.....	.....	.....	.....	.....	..
403	3	.....	10 32+0 06L	.....	.....	.....	.....	..
404	5	1 11+0 02P*	.....	.....	.....	.....	.....	..
405	6	3 05+1 00R	3 01+0 21L	.....	.....	.....	.....	..
406	6	.....	3 40+0 24L	.....	.....	.....	.....	B
407	6	12 09+0 02P	.....	.....	.....	12 09+0 02P	.....	..
408	6	12 19+1 03u	12 14+1 01u	.....	.....	.....	.....	..
409	6	14 34+0 04P	.....	.....	.....	.....	.....	..
410	8	3 10+0 57R	3 20+0 32R	.....	.....	.....	.....	..
411	8	14 14+0 0.6P*	.....	.....	.....	3 17+0 47R	3 11+0 03P	C
412	8	17 49+0 0.5P*	.....	.....	.....	.....	.....	..
413	8	20 21+1 09u	.....	.....	.....	.....	.....	..
414	9	0 54+0 38u	20 25+0 47u	.....	.....	.....	.....	..
415	9	16 05+2 00u	1 24+0 20L	.....	.....	.....	.....	..
416	9	20 31+0 01P*	17 05+0 28L	16 40+0 14L	.....	.....	.....	..
417	12	1 27+0 53u	.....	.....	.....	.....	.....	..
418	12	6 23+0 42u	.....	.....	.....	.....	.....	..
419	14	0 32+0 19L	.....	.....	.....	.....	.....	..
420	14	5 04+0 01P*	.....	.....	.....	.....	0 33+0 03L	E
421	15	4 00+0 01P*	.....	.....	.....	.....	.....	..
422	15	15 00+0 21u	.....	.....	.....	.....	.....	..
423	16	18 30+0 01V*	.....	.....	.....	.....	.....	..
424	16	23 48+0 08L	.....	.....	.....	.....	.....	F
425	17	4 00+0 03P	.....	.....	.....	.....	.....	..
426	17	20 21+0 02P	.....	.....	.....	.....	.....	..
427	18	5 32+0 48u	5 36+0 54u	5 47+0 12L	.....	.....	.....	..
428	18	11 45+0 20u	.....	.....	.....	.....	5 44+0 08L	..
429	20	23 41+2 35U	23 36+2 54U	.....	.....	.....	.....	G
430	21	16 29+1 58R	16 26+1 21R	23 43+1 28U	.....	.....	.....	J
431	22	1 57+1 15R	1 58+0 59R	2 12+0 20L	.....	.....	.....	K

EARTHQUAKE CORRELATION TABLE

Month October, 1942

No.	Date	Ottawa	Victoria	Halifax	Seven Falls		Shawinigan	**
					M. S.	W. A.		
432	22	3 19+0 01P	6 25+0 04L					
433	22	..						
434	22	18 31+0 05L						
435	24	16 48+0 0.7v*						M
436	24	17 29+0 0.7v*						
437	25	2 42+0 18u						
438	25	3 09+0 02P*						
439	25	..						
440	25	8 54+1 19u			7 58+0 10L			
441	26	21 21+2 11u			9 46+0 57L			
442	27	17 50+0 19r	21 19+2 07u		21 21+2 39u	21 31+0 02P		N
443	28	2 34+0 42u	3 12+0 24L		18 02+0 03L			
444	28	10 52+1 06r	10 52+1 13r	11 05+0 20L	2 54+0 30L			
445	28	..			10 52+1 02r	10 52+0 06P	10 52+0 24r	Q
446	29	21 49+0 51u			16 23+0 05L			
447	30	..			21 57+0 35u			
448	31	15 30+0 21r			..	23 25+0 0.3d		R
					15 44+0 17L		15 31+0 02P	

## CORRELATION OF EARTHQUAKES

October, 1942

## N O T E S

A : Ottawa	$\Delta = 250$ km.	H = 20 <sup>h</sup> 58 <sup>m</sup> 3 U.T.
B : Ottawa	$\Delta = 3960$ km.	H = 2 <sup>h</sup> 58 <sup>m</sup> 4 U.T.
C : Ottawa	$\Delta = 4280$ km.	H = 3 <sup>h</sup> 02 <sup>m</sup> 8 U.T.
Seven Falls	$\Delta = 4580$ km.	H = 3 02.9 U.T.
E : Ottawa	$\Delta = 9300$ km.	H = 6 <sup>h</sup> 10 <sup>m</sup> 2 U.T.
F : Ottawa	$\Delta = 145$ km.	H = 18 <sup>h</sup> 30 <sup>m</sup> 0 U.T.
G : Ottawa	$\Delta = 14,000$ km.	H = 23 <sup>h</sup> 21 <sup>m</sup> 7 U.T.
Victoria	$\Delta = 11,200$ km.	H = 23 21.8 U.T.
J : Ottawa	$\Delta = 3700$ km.	H = 16 <sup>h</sup> 22 <sup>m</sup> 2 U.T.
Victoria	$\Delta = 1910$ km.	H = 16 22.2 U.T.
Seven Falls	$\Delta = 4090$ km.	H = 16 22.3 U.T.
K : Ottawa	$\Delta = 3600$ km.	H = 1 <sup>h</sup> 50 <sup>m</sup> 8 U.T.
M : Ottawa	$\Delta = 145$ km.	H = 16 <sup>h</sup> 47 <sup>m</sup> 2 U.T.
N : Ottawa	$\Delta = 8650$ km.	H = 21 <sup>h</sup> 09 <sup>m</sup> 4 U.T.
Victoria	$\Delta = 6000$ km.	H = 21 09.4 U.T.
Seven Falls	$\Delta = 8560$ km.	H = 21 09.6 U.T.
Shawinigan Falls	$\Delta = 8700$ km.	H = 21 09.4 U.T.
Q : Ottawa	$\Delta = 3760$ km.	H = 10 <sup>h</sup> 44 <sup>m</sup> 8 U.T.
Victoria	$\Delta = 4240$ km.	H = 10 45.1 U.T.
Seven Falls	$\Delta = 4120$ km.	H = 10 44.8 U.T.
R : Origin probably within 50 km, of Seven Falls station.		

Dominion Observatory,  
 Ottawa, Canada,  
 January 5, 1943.

SEISMOLOGICAL SERVICE OF CANADA

SEISMOLOGICAL BULLETIN

November

1942

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DOMINION OBSERVATORY  
OTTAWA - CANADA

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SEISMOLOGICAL SERVICE OF CANADA  
DOMINION OBSERVATORY, OTTAWA

R. Meldrum Stewart, Dominion Astronomer  
Ernest A. Hodgson, Seismologist  
W. W. Doxsee, Station Superintendent

S T A T I O N S

OTTAWA

$\phi = 45^{\circ}23'38''$  N.  $\lambda = 75^{\circ}42'57''$  W.  $h = 83$ m.

Time correction within 0.10s.

Foundation: boulder clay over limestone

Instruments: Milne-Shaw NS and EW components, designated 23 and 17, respectively, each with photographic registration, magnetic damping, paper speed of 15 mm. per min., mass 1 lb.

Benioff Vertical, short and long period, designated BS and BL, respectively, photographic registration, BS a paper speed of 60 mm. per min., BL a paper speed of 30 mm. per min., mass 235 lbs.

HALIFAX

Dalhousie University

$\phi = 44^{\circ}38'$  N.  $\lambda = 63^{\circ}36'$  W.  $h = 46$ m.

Time correction from recorded radio time signals

Foundation: Carbonaceous slate

Instruments: Bosch NS and EW components, designated HN and HE, respectively, each with photographic registration, magnetic damping, paper speed of 15 mm. per min., mass 200g.

SEVEN FALLS

Quebec Power Company

$\phi = 47^{\circ}07'.4$  N.  $\lambda = 70^{\circ}49'.6$  W.  $h = 232$ m. ca.

Time correction from recorded radio time signals

Foundation: Solid granite of Canadian Shield

Instruments: Wood-Anderson and Milne-Shaw, both EW component, designated SF and SM, respectively, each with photographic registration, magnetic damping, SF a paper speed of 60 mm. per min. and mass 15g., SM a paper speed of 8 mm. per min. and mass 1 lb.

VICTORIA

Dominion Astrophysical Observatory

$\phi = 48^{\circ}31'14''$  N.  $\lambda = 123^{\circ}24'56''$  W.  $h = 197$ m.

Time correction from recorded radio time signals

Foundation: rock

Instruments: Milne-Shaw NS and EW components, designated 21 and 20, respectively, each with photographic registration, magnetic damping, paper speed of 8 mm. per min., mass 1 lb.

Wiechert Vertical, designated WV smoked sheet registration, air damping, paper speed of 15 mm. per min., mass 80 kg.

## S T A T I O N S (Cont'd)

### SHAWINIGAN FALLS

Shawinigan Water and Power Company

$\phi = 46^{\circ}33'.1$  N.     $\lambda = 72^{\circ}45'.8$  W.     $h = 60$ m. ca.  
 Time correction from recorded radio time signals  
 Foundation: solid granite of Canadian Shield  
 Instrument: Wood-Anderson NS component, designated SA, photographic registration, magnetic damping, paper speed of 60 mm. per min., mass 15g.

### SASKATOON

University of Saskatchewan

$\phi = 52^{\circ}08'$  N.     $\lambda = 106^{\circ}38'$  W.     $h = 515$ m.  
 Time correction from radio time signals  
 Foundation: clay and sand  
 Instrument: Milne-Shaw NE component, designated SN, photographic registration, magnetic damping, paper speed of 8 mm. per min., mass 1 lb.  
 Note: This replaces Mainka instruments dismantled in August.

### KIRKLAND LAKE

Lake Shore Mines

$\phi = 48^{\circ}09'$  N.     $\lambda = 80^{\circ}03'$  W.     $h = 320$ m.  
 Time correction from recorded radio time signals  
 Foundation: rock  
 Instrument: Converted Heiland Field Seismometer, vertical component, designated KL, photographic registration, paper speed of 30 mm. per min.

### DETERMINED CONSTANTS

INSTRUMENT	$T_0$	V	$\epsilon$	DISPLACEMENT FOR 1" ARC TILT	DISPLACEMENT FOR 10 <sup>-6</sup> g
17 (Ottawa)	12.0	300	20:1	50 mm.	
23 (Ottawa)	12.0	300	20:1	50 mm.	
BS (Ottawa)	1.0				5 mm.
BL (Ottawa)	1.0				16 mm.
HN (Halifax)	5.0	125	20:1		
HE (Halifax)	5.0	125	20:1		
SA (Shawinigan)	1.0	2200			
20 (Victoria)	12.0	300	20:1		
21 (Victoria)	12.0	300	20:1		
WV (Victoria)	4.0	120	15:1		
SF (Seven Falls)	1.0	2500			
SM (Seven Falls)	12.0	300	20:1	50 mm.	
SN (Saskatoon)	10.0	150	20:1	18 mm.	
KL (Kirkland Lake)	1/30	2x10 <sup>4</sup>	at 30	cycles	

NOTE:- Universal Time used throughout.



SEISMOLOGICAL SERVICE OF CANADA  
 DOMINION OBSERVATORY, OTTAWA

FROM November 1, 1942 to November 6, 1942 No. 69

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s		
		Ottawa		
449 Nov. 1	eZ L F	15 46 28 15 54 16 03		
		Ottawa		
451 Nov. 1	eZ L F	18 55.7 19 02 19 12		
		Ottawa		
452 Nov. 2	H P <sub>2</sub> S <sub>2</sub> F	18 05.7 18 06 04.5 18 06 22 18 06.9	150	
		Ottawa		
455 Nov. 3	e e <sub>E</sub> L <sub>E</sub> F	0 26.4 0 28.6 0 46 2 33		
		Seven Falls		
	e e L F	0 24.4 0 28 56 0 52 2 38		
		Ottawa		
460 Nov. 5	eZ e <sub>N</sub> L F	2 44 47 2 51.6 2 58 3 26		
		Ottawa		
463 Nov. 5	eZ e <sub>N</sub> e e <sub>E</sub> L <sub>E</sub> F	11 54 06 11 59 26 12 00 00 12 02.5 12 05 12 40		
		Ottawa		
464 Nov. 6	H P S PS SS L F	13 31.3 13 40 05 13 47 17 13 48 06 13 52 13 56 14 11	5500	
		Victoria		
	H P S F	13 31.3 13 41 57 13 50 50 13 55	7300	

SEISMOLOGICAL SERVICE OF CANADA  
 DOMINION OBSERVATORY, OTTAWA

FROM November 6, 1942 to November 10, 1942 No. 70

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
464 Nov. 6 (Cont'd)		Seven Falls		
	H	13 31.5	5800	
	P	13 40 20		
	S	13 47 50		
	PS	13 48 41		
	L	13 53		
	F	14 14		
		Shawinigan Falls		
	H	13 31.3	5650	
	P	13 40 15		
	S	13 47 36		
	F	13 50		
465 Nov. 7		Ottawa		
	e <sub>Z</sub>	7 51 24		
	e	7 54 58		
	e <sub>N</sub>	8 01 05		
	L	8 38		
	F	9 33		
		Seven Falls		
	e	8 13		
	L	8 40		
	F	9 29		
466 Nov. 7		Ottawa		
	H	16 29.3	210	
	P <sub>2</sub>	16 29 50		
	S <sub>2</sub>	16 30 14		
	F	16 30.7		
468 Nov. 8		Ottawa		
	e <sub>Z</sub>	10 26 58		
	L	10 53		
	F	11 00		
471 Nov. 10		Ottawa		
	H	11 41.3	15,000	USCGS. gives:- $\phi = 35^{\circ} \text{ S.}$ $\lambda = 46^{\circ} 5 \text{ E.}$
	P'	12 00 38		
	i <sub>Z</sub>	12 00 44		
	PP	12 03 06		
	SKP	12 04 06		
	PPP	12 06 05		
	S	12 11 20		
	PS	12 13 24		
	PPS	12 15 08		
	SS	12 20 42		
	SSS	12 25 28		
	L	12 35		
	F	17 11		

SEISMOLOGICAL SERVICE OF CAN  
DOMINION OBSERVATORY, OTTAWA



From the ISC collection scanned by SISMOS

FROM November 10, 1942 to November 11, 1942 No. 71

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
471 Nov. 10 (Cont'd)		Victoria		
	H	11 41.3	18,700	
	P <sub>1</sub>	12 01 27		
	e	12 02 02		
	P <sub>2</sub>	12 02 40		
	PP	12 06 21		
	SS	12 27 30		
	SSS	12 33 23		
	L	12 47		
	F	15 46		
		Halifax		
	H	11 41.7	13,900	
	PP	12 02 28		
	SKP	12 04.0		
SKKS	12 09 09			
S	12 10 24			
PS	12 12 32			
SS	12 19.0			
SSS	12 23 33			
L	12 37			
F	14 37			
	Seven Falls			
H	11 41.3	15,000		
P'	12 00 39			
PP	12 03 06			
SKP	12 03 59			
S	12 11 17			
SS	12 20.3			
e	12 35			
L	12 42			
F	17 08			
	Shawinigan Falls			
H	11 41.3	15,000		
P'	12 00 41			
PP	12 03.2			
SKP	12 04.2			
PPP	12 05.9			
SS	12 19.9			
SSS	12 25.4			
L?	12 36			
F	14 38			
	Ottawa			
H	13 06.3	3850		
PZ	13 13 08			
PPP	13 14 52			
S	13 18 46			
SSS	13 22			
L	13 25			
F	13 40			
	Seven Falls			
e	13 19.4			
L	13 22			
F	13 37			
472 Nov. 11				

SEISMOLOGICAL SERVICE OF CANADA  
DOMINION OBSERVATORY, OTTAWA



From the ISC collection scanned by SISMOS

FROM November 11, 1942 to November 12, 1942 No. 72

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS	
		h m s			km.
474 Nov. 12		Ottawa			
	H	4 55.7	3400	USCGS. gives:- $\phi = 16^{\circ}8 \pm N.$ $\lambda = 94^{\circ}2 \pm W.$	
	PZ	5 01 57			
	eZ	5 02 16			
	i	5 02 24			
	e	5 03 08			
	S	5 07 06			
	e <sub>E</sub>	5 07 42			
	SS	5 09 16			
	L	5 11			
	F	6 11			
		Victoria			
	H	4 55.9			4240
	P	5 03 14			
S	5 09 16				
SSS	5 12.9				
L	5 17				
F	6 10				
	Seven Falls				
H	4 55.8	3840			
P	5 02 26				
PPP	5 04 02				
S	5 08 04				
L	5 11				
F	6 13				
	Shawinigan Falls				
P	5 02 16				
e	5 09.4				
F	5 20				
	Ottawa				
H	15 26.2	5150			
P	15 34 39				
PP	15 36 31				
S	15 41 32				
SS	15 45 12				
L	15 49				
F	16 52				
	Victoria				
H	15 26.5	6720			
P	15 36 35				
S	15 44 57				
L	15 56				
F	16 36				
	Seven Falls				
e	15 35.0				
L	15 42				
F	17 20				

SEISMOLOGICAL SERVICE OF CANADA  
 DOMINION OBSERVATORY, OTTAWA

FROM November 12, 1942 to November 16, 1942 No. 73

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS	
		h m s	km.		
479 Nov. 14	iZ eN eE eN L F	Ottawa			
		5 40 10			
		5 52.0			
		5 53.8			
		5 59.3			
		6 20			
	eE L F	Victoria			
		(5 47.9)			
		(6 01)			
	e e L F	Seven Falls			
		5 52.1			
		6 00			
		6 18			
480 Nov. 14	eZ e L F	Ottawa			
		18 07 14			
		18 14			
		18 21			
		18 48			
483 Nov. 15	H P S SS SSS L F	Ottawa		10,040	
		17 12.1			
		17 25 08			
		17 36 04			
		17 42.4			
		17 45.9			
	H P S L F	Victoria			7120
		17 12.5			
		17 23 03			
		17 31 47			
		17 40			
e i e L F	Seven Falls				
	17 28.1				
	17 36 06				
	17 49.7				
	17 57				
484 Nov. 16	H P <sub>1</sub> S <sub>1</sub> e F	Ottawa		95	
		0 13.5			
		0 13 48			
		0 13 59			
		0 14 04			
		0 19			

SEISMOLOGICAL SERVICE OF CANADA  
DOMINION OBSERVATORY, OTTAWA



From the ISC collection scanned by SISMOS

FROM November 16, 1942 to November 19, 1942 No. 74

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS	
		h m s	km.		
484 Nov. 16 (Cont'd)		Seven Falls			
	H	0 13.5	320		
	P <sub>2</sub>	0 14 25			
	S <sub>2</sub>	0 15 01			
	F	0 16.4			
			Shawinigan Falls		
	H	0 13.5	190		
	P <sub>2</sub>	0 14 00.5			
S <sub>2</sub>	0 14 22				
F	0 17				
486 Nov. 17		Ottawa			
	e	10 21 03			
	L <sub>Z</sub>	10 57			
	F	11 30			
487 Nov. 17		Ottawa			
	H	23 19.7	6650		
	P <sub>Z</sub>	23 29 45			
	S <sub>E</sub>	23 38 03			
	L	23 48			
	F	0 13			
			Victoria		
	e	23 41 22			
	L <sub>N</sub>	0 02			
	F	0 17			
		Seven Falls			
e	23 38 25				
L	23 48				
F	0 10				
490 Nov. 19		Ottawa			
	H	8 51.8	5100	USCGS, gives:- $\phi = 1^{\circ} \text{ S.}$ $\lambda = 81^{\circ} \text{ W.}$	
	P	9 00 14			
	PP	9 02 08			
	S	9 07 05			
	SSS	9 11.2			
	L	9 14			
	F	10 33			
			Victoria		
	S-P	8 22	6720	No chronometer signals.	
			Halifax		
	H	8 52.2	5150		
	P <sub>N</sub>	9 00 39			
	S	9 07 32			
	L	9 18			
F	9 40				
		Seven Falls			
e	9 00 49				
S	9 07 30				
SSS	9 11.8				
L	9 16				
F	11 08				

SEISMOLOGICAL SERVICE OF CANADA  
 DOMINION OBSERVATORY, OTTAWA

FROM November 19, 1942 to November 25, 1942 No. 75

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS	
		h m s	km.		
493 Nov. 19	H PZ PPN SN SS L F	Ottawa	5050		
		14 40.0			
		14 48 19			
		14 50 16			
		14 55 06			
		14 58.5			
		15 03			
		15 21			
		Seven Falls			
		14 55 44			
		15 00			
		15 16			
		499 Nov. 21		H P <sub>2</sub> S <sub>2</sub> F	Seven Falls
15 07.4					
15 07 50					
15 08 08					
15 09					
500 Nov. 22	eZ L F	Ottawa			
		16 23 26			
		17 06			
		18 00			
501 Nov. 25	H P PPN S SS L F	Ottawa	3850	Tacubaya gives:- $\phi = 16^{\circ}16' N.$ $\lambda = 97^{\circ}48' W.$	
		1 17.9			
		1 24 47			
		1 26 17			
		1 30 25			
		1 32 33			
		1 36			
		2 47			
		Victoria	4190		
		1 18.0			
		1 25 20			
		1 31 19			
		1 35 35			
		1 38			
		2 22			
Saskatoon	3865				
1 18.2					
1 25 06					
1 30 45					
1 33 39					
1 35					
2 29					
Seven Falls	4260				
1 17.9					
1 25 19					
1 26 57					
1 31 23					
1 38					
2 34					

SEISMOLOGICAL SERVICE OF CANADA  
 DOMINION OBSERVATORY, OTTAWA

FROM November 25, 1942 to November 27, 1942 No. 76

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
501 Nov. 25 (Cont'd)		Shawinigan Falls		
	H	1 17.8	4200	
	P	1 25 06		
	S	1 31.1		
	L	1 44		
	F	1 55		
502 Nov. 26		Ottawa		
	H	14 27.6	8700	
	P	14 39 34		
	S	14 49 32		
	L	15 03		
	F	16 05		
		Victoria		
	H	14 27.7	6020	
	P	14 37 04		
	S	14 44 46		
SSS	14 50.7			
L	14 54			
F	16 00 ca.			
		Saskatoon		
	H	14 28.3	6420	
	P	14 38 07		
	S	14 46 12		
	SS	14 50.2		
	SSS	14 53		
	L	14 56		
	F	15 34		
		Seven Falls		
	H	14 27.7	8620	
P	14 39 37			
S	14 49 32			
PS	14 50 19			
e	14 58 41			
L	15 03			
F	15 29			
		Shawinigan Falls		
	H	14 27.6	8780	
	P	14 39 37		
	S	14 49 39		
	F	14 53		
		Ottawa		
	H	14 18.4	145	
	P <sub>1</sub>	14 18 49		
	S <sub>1</sub>	14 19 06		
	e	14 19 17		
F	14 19.6			
504 Nov. 27				



SEISMOLOGICAL SERVICE OF CANADA  
 DOMINION OBSERVATORY, OTTAWA

FROM November 27, 1942 to November 30, 1942 No. 77

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS	
		h m s	km.		
505 Nov. 28		Ottawa			
	H	10 39.0	5550		
	P	10 47 51			
	PP	10 50 02			
	S	10 55 07			
	e	10 57 20			
	SS	10 58 44			
	SSS	11 00 30			
	L	11 03			
	F	12 47+			
			Victoria		
	H	10 38.9	9180		
	P	10 51 14			
	S	11 01 33			
	L	11 15			
	F	13 33			
			Saskatoon		
	H	10 39.1	7880		
	P	10 50 19			
	S	10 59 38			
	SS	11 04			
	SSS	11 08			
	L	11 10			
	F	13 16			
		Seven Falls			
H	10 39.0	5400			
P	10 47 39				
S	10 54 46				
SS	10 58.5				
SSS	10 59.8				
L	11 02				
F	13 52				
		Shawinigan Falls			
H	10 38.9	5540			
P	10 47 42				
S	10 54 57				
SS	10 58.6				
SSS	11 00.3				
L	11 07				
F	11 22				
		Ottawa			
H	0 48.1	7120			
PZ	0 58 34				
S	1 07 18				
F	1 12+				
		Seven Falls			
H	0 48.1	7180			
P	0 58 42				
S	1 07 29				
F	1 09				

*W. W. Doxsey.*

EARTHQUAKE CORRELATION TABLE  
 Month November, 1942

No.	Date	Ottawa	Victoria	Saskatoon	Halifax	Seven Falls		Shawinigan	**
						M. S.	W. A.		
449	1	15 46+0 17r				15 57+0 07L	15 55+0 06L	15 53+0 06L	..
450	1	18 56+0 16r					16 36+0 0.7d		..
451	1	18 06+0 16r				19 06+0 04L	19 03+0 11L	19 02+0 12L	..
452	2	18 06+0 0.8v*							A
453	2					18 27+0 05L			..
454	2	23 03+0 01P				23 50+0 23L			..
455	3	0 26+2 07u				0 24+2 14u			..
456	3					14 10+0 09L			..
457	3	16 54+0 01P*				23 55+0 13L			..
458	3	23 54+0 13L				11 11+0 08L			..
459	4					3 00+0 26L			..
460	5	2 45+0 41u							..
461	5	10 47+0 01P*							..
462	5	11 46+0 01P*							..
463	5	11 54+0 46u	12 15+0 09L			13 40+0 33u		11 54+0 02P	..
464	6	13 40+0 31u	13 42+0 23u			8 13+1 16u		13 40+0 10u	B
465	7	7 51+1 42u						7 52+0 07P	C
466	7	16 30+0 0.8v*							..
467	8	10 04+0 01P*							..
468	8	10 27+0 33u							..
469	9	4 09+0 06P							..
470	9	10 42+0 01P*							..
471	10	12 01+5 10U	12 01+3 45U		12 02+2 35U	12 01+5 07U	12 01+2 31U	12 01+2 37U	E
472	11					2 28+0 13L			..
473	11	13 13+0 27r				13 19+0 18r			..
474	12	5 02+1 09r	5 03+1 07r			5 02+1 11r		5 02+0 19r	F
475	12	15 35+1 17u	15 37+0 59u		5 13+0 07L	15 35+1 45u		15 35+0 03P	G
476	12	16 10+0 01P*							J
477	12	18 08+0 01P							..
478	13	14 40+0 0.2P*							..
479	14	5 40+1 54u	5 48+2 04u				5 52+1 36u		..
480	14	18 07+0 41u	18 34+0 07L				18 16+0 17L		..
481	14	21 05+0 01P*							..
482	15	17 13+0 02P*							..

## EARTHQUAKE CORRELATION TABLE

Month November, 1942

No.	Date	Ottawa	Victoria	Saskatoon	Halifax	Seven Falls			Shawinigan	**
						M. S.	W. A.			
483	15	17 25+2 07u	17 23+1 37u		18 03+0 16L	17 28+2 11u		17 25+0 02P	K	
484	16	0 14+0 05d					0 14+0 02v	0 14+0 03v	M	
485	16	21 39+0 0.5P*								
486	17	10 21+1 09u				11 07+0 34L				
487	17	23 30+0 43u	23 41+0 36u			23 38+0 32u				
488	18		7 38+0 08L							
489	18									
490	19	9 00+1 33u	9 ca+2 ca		9 01+0 39u	12 53+0 13L	9 01+0 37u	9 00+0 37u	Q	
491	19	9 17+0 05P				9 01+2 07u	9 18+0 02P	9 17+0 05P		
492	19	13 43+0 02P*								
493	19	14 48+0 33u	15 13+0 10L							
494	19	16 41+0 03P*				14 56+0 21u			R	
495	19	20 28+0 01P*								
496	20	4 11+0 03P								
497	21	13 42+0 01P*								
498	21	14 13+0 02P*								
499	21									
500	22	16 23+1 37u					14 13+0 01P		S	
501	25	1 25+1 22r	1 25+0 57r	1 25+1 04r		17 09+0 51L		1 25+0 30r	T	
502	26	14 40+1 25u	14 37+1 23u	14 38+0 56u		1 25+1 09r	14 40+0 13u	14 40+0 13u	V	
503	27		10 59+0 13L	11 05+0 08L		14 50+0 40u				
504	27	14 19+0 0.8v*							W	
505	28	10 48+2 00u	10 51+2 42u	10 50+2 26u		10 48+3 10u	10 48+0 50u	10 48+0 34u	X	
506	30	0 59+0 13u					0 59+0 10u	0 59+0 09P		
507	30	21 00+0 01P*								

## CORRELATION OF EARTHQUAKES

November, 1942

## NOTES

A	: Ottawa	$\Delta = 150$ km.	H = 18 <sup>h</sup> 05 <sup>m</sup> .7 U.T.
B	: Ottawa	$\Delta = 5500$ km.	H = 13 <sup>h</sup> 31 <sup>m</sup> .3 U.T.
	Victoria	$\Delta = 7300$ km.	H = 13 31.3 U.T.
	Seven Falls	$\Delta = 5800$ km.	H = 13 31.5 U.T.
	Shawinigan Falls	$\Delta = 5650$ km.	H = 13 31.3 U.T.
C	: Ottawa	$\Delta = 210$ km.	H = 16 <sup>h</sup> 29 <sup>m</sup> .3 U.T.
E	: Ottawa	$\Delta = 15,000$ km.	H = 11 <sup>h</sup> 41 <sup>m</sup> .3 U.T.
	Victoria	$\Delta = 18,700$ km.	H = 11 41.3 U.T.
	Halifax	$\Delta = 13,900$ km.	H = 11 41.7 U.T.
	Seven Falls	$\Delta = 15,000$ km.	H = 11 41.3 U.T.
	Shawinigan Falls	$\Delta = 15,000$ km.	H = 11 41.3 U.T.
F	: Ottawa	$\Delta = 3850$ km.	H = 13 <sup>h</sup> 06 <sup>m</sup> .3 U.T.
G	: Ottawa	$\Delta = 3400$ km.	H = 4 <sup>h</sup> 55 <sup>m</sup> .7 U.T.
	Victoria	$\Delta = 4240$ km.	H = 4 55.9 U.T.
	Seven Falls	$\Delta = 3840$ km.	H = 4 55.8 U.T.
J	: Ottawa	$\Delta = 5150$ km.	H = 15 <sup>h</sup> 26 <sup>m</sup> .2 U.T.
	Victoria	$\Delta = 6720$ km.	H = 15 26.5 U.T.
K	: Ottawa	$\Delta = 10,040$ km.	H = 17 <sup>h</sup> 12 <sup>m</sup> .1 U.T.
	Victoria	$\Delta = 7120$ km.	H = 17 12.5 U.T.
M	: Ottawa	$\Delta = 95$ km.	H = 0 <sup>h</sup> 13 <sup>m</sup> .5 U.T.
	Seven Falls	$\Delta = 320$ km.	H = 0 33.5 U.T.
	Shawinigan Falls	$\Delta = 190$ km.	H = 0 13.5 U.T.
N	: Ottawa	$\Delta = 6650$ km.	H = 23 <sup>h</sup> 19 <sup>m</sup> .7 U.T.
	Q	: Ottawa	$\Delta = 5100$ km.
Q	: Victoria	$\Delta = 6720$ km.	Time uncertain
	Halifax	$\Delta = 5150$ km.	H = 8 52.2 U.T.
	*		
S	: Seven Falls	$\Delta = 155$ km.	H = 15 <sup>h</sup> 07 <sup>m</sup> .4 U.T.
T	: Ottawa	$\Delta = 3850$ km.	H = 1 <sup>h</sup> 17 <sup>m</sup> .9 U.T.
	Victoria	$\Delta = 4190$ km.	H = 1 18.0 U.T.
	Saskatoon	$\Delta = 3865$ km.	H = 1 18.2 U.T.
	Seven Falls	$\Delta = 4260$ km.	H = 1 17.9 U.T.
	Shawinigan Falls	$\Delta = 4200$ km.	H = 1 17.8 U.T.
V	: Ottawa	$\Delta = 8700$ km.	H = 14 <sup>h</sup> 27 <sup>m</sup> .6 U.T.
	Victoria	$\Delta = 6020$ km.	H = 14 27.7 U.T.
	Saskatoon	$\Delta = 6420$ km.	H = 14 28.3 U.T.
	Seven Falls	$\Delta = 8620$ km.	H = 14 27.7 U.T.
	Shawinigan Falls	$\Delta = 8780$ km.	H = 14 27.6 U.T.
W	: Ottawa	$\Delta = 145$ km.	H = 14 <sup>h</sup> 18 <sup>m</sup> .4 U.T.
X	: Ottawa	$\Delta = 5550$ km.	H = 10 <sup>h</sup> 39 <sup>m</sup> .0 U.T.
	Victoria	$\Delta = 9180$ km.	H = 10 38.9 U.T.
	Saskatoon	$\Delta = 7880$ km.	H = 10 39.1 U.T.
	Seven Falls	$\Delta = 5400$ km.	H = 10 39.0 U.T.
	Shawinigan Falls	$\Delta = 5540$ km.	H = 10 38.9 U.T.
Y	: Ottawa	$\Delta = 7120$ km.	H = 0 <sup>h</sup> 48 <sup>m</sup> .1 U.T.
	Seven Falls	$\Delta = 7180$ km.	H = 0 48.1 U.T.
* R	: Ottawa	$\Delta = 5050$ km.	H = 14 <sup>h</sup> 40 <sup>m</sup> .0 U.T.

Dominion Observatory,

Ottawa, Canada,

January 7, 1943.

SEISMOLOGICAL SERVICE OF CANADA

SEISMOLOGICAL BULLETIN  
December  
1942

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DOMINION OBSERVATORY  
OTTAWA - CANADA

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SEISMOLOGICAL SERVICE OF CANADA  
DOMINION OBSERVATORY, OTTAWA

R. Meldrum Stewart, Dominion Astronomer  
Ernest A. Hodgson, Seismologist  
W. W. Doxsee, Station Superintendent

S T A T I O N S

OTTAWA

$\phi = 45^{\circ}23'38''$  N.  $\lambda = 75^{\circ}42'57''$  W.  $h = 83$ m.  
Time correction within 0.10s.

Foundation: boulder clay over limestone

Instruments: Milne-Shaw NS and EW components,  
designated 23 and 17, respectively, each with  
photographic registration, magnetic damping,  
paper speed of 15 mm. per min., mass 1 lb.

Benioff Vertical, short and long  
period, designated BS and BL, respectively,  
photographic registration, BS a paper speed  
of 60 mm. per min., BL a paper speed of 30 mm.  
per min., mass 235 lbs.

HALIFAX

Dalhousie University

$\phi = 44^{\circ}38'$  N.  $\lambda = 63^{\circ}36'$  W.  $h = 46$ m.

Time correction from recorded radio time signals

Foundation: Carbonaceous slate

Instruments: Bosch NS and EW components, designated  
HN and HE, respectively, each with photographic  
registration, magnetic damping, paper speed of  
15 mm. per min., mass 200g.

SEVEN FALLS

Quebec Power Company

$\phi = 47^{\circ}07'4''$  N.  $\lambda = 70^{\circ}49'6''$  W.  $h = 232$ m. ca.

Time correction from recorded radio time signals

Foundation: Solid granite of Canadian Shield

Instruments: Wood-Anderson and Milne-Shaw, both  
EW component, designated SF and SM, respectively,  
each with photographic registration, magnetic  
damping, SF a paper speed of 60 mm. per min.  
and mass 15g., SM a paper speed of 8 mm. per  
min. and mass 1 lb.

VICTORIA

Dominion Astrophysical Observatory

$\phi = 48^{\circ}31'14''$  N.  $\lambda = 123^{\circ}24'56''$  W.  $h = 197$ m.

Time correction from recorded radio time signals

Foundation: rock

Instruments: Milne-Shaw NS and EW components,  
designated 21 and 20, respectively, each with  
photographic registration, magnetic damping,  
paper speed of 8 mm. per min., mass 1 lb.

Wiechert Vertical, designated WV  
smoked sheet registration, air damping, paper  
speed of 15 mm. per min., mass 80 kg.

## S T A T I O N S (Cont'd)

SHAWINIGAN FALLS

Shawinigan Water and Power Company

$\phi = 46^{\circ}33'1.1$  N.  $\lambda = 72^{\circ}45'8$  W.  $h = 60$ m. ca.  
 Time correction from recorded radio time signals  
 Foundation: solid granite of Canadian Shield  
 Instrument: Wood-Anderson NS component, designated  
 SA, photographic registration, magnetic damping,  
 paper speed of 60 mm. per min., mass 15g.

SASKATOON

University of Saskatchewan

$\phi = 52^{\circ}08'$  N.  $\lambda = 106^{\circ}38'$  W.  $h = 515$ m.  
 Time correction from radio time signals  
 Foundation: clay and sand  
 Instrument: Milne-Shaw NE component, designated  
 SN, photographic registration, magnetic damping,  
 paper speed of 8 mm. per min., mass 1 lb.

KIRKLAND LAKE

Lake Shore Mines

$\phi = 48^{\circ}09'$  N.  $\lambda = 80^{\circ}03'$  W.  $h = 320$ m.  
 Time correction from recorded radio time signals  
 Foundation: rock  
 Instrument: Converted Feiland Field Seismometer,  
 vertical component, designated KL, photographic  
 registration, paper speed of 30 mm. per min.

DETERMINED CONSTANTS

INSTRUMENT	$T_0$	V	$\epsilon$	DISPLACEMENT FOR 1" ARC TILT	DISPLACEMENT FOR $10^{-6}$ g
17 (Ottawa)	12.0	300	20:1	50 mm.	
23 (Ottawa)	12.0	300	20:1	50 mm.	
BS (Ottawa)	1.0				5 mm.
BL (Ottawa)	1.0				16 mm.
HN (Halifax)	5.0	125	20:1		
HE (Halifax)	5.0	125	20:1		
SA (Shawinigan)	1.0	2200			
20 (Victoria)	12.0	300	20:1		
21 (Victoria)	12.0	300	20:1		
WV (Victoria)	4.0	120	15:1		
SF (Seven Falls)	1.0	2500			
SM (Seven Falls)	12.0	300	20:1	50 mm.	
SN (Saskatoon)	10.0	150	20:1	18 mm.	
KL (Kirkland Lake)	1/30	$2 \times 10^4$	at 30	cycles	

NOTE:- Universal Time used throughout.

## DOMINION OBSERVATORY, OTTAWA

FROM December 1, 1942

to

December 5, 1942

No. 78

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
509 Dec. 2	eZ L F	Ottawa 0 33 05 1 23 1 34		
512 Dec. 4	eZ L F	Ottawa 15 44 14 16 23 16 58		
	e L F	Victoria 15 49 12 16 03 16 57		
513 Dec. 5	H PZ S SSS L F	Ottawa 14 28.7 14 36 53 14 43 35 14 47.3 14 50 15 37	4960	
	H P iS L F	Victoria 14 28.4 14 33 07 14 36 57 14 39 15 38	2300	
	H P S L F	Saskatoon 14 28.8 14 34 22 14 38 54 14 43 14 55+	2845	
	e S? e L F	Seven Falls 14 37 11 14 43 51 14 47 14 14 50 15 30		
	e L F	Shawinigan Falls 14 36 58 14 53 15 06		
514 Dec. 5	H P <sub>1</sub> S <sub>1</sub> i F	Ottawa 21 10.8 21 11 19.5 21 11 41 21 11 47.5 21 18	185	



## DOMINION OBSERVATORY, OTTAWA

FROM	December 5, 1942	to	December 9, 1942	No. 79
NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
514 Dec. 5 (Cont'd)		Seven Falls		
	i	21 12 27		
	i	21 12 44		
	F	21 15		
		Shawinigan Falls		
	H	21 10.9	230	
	P <sub>1</sub>	21 11 37		
	S <sub>1</sub>	21 12 04		
	F	21 15		
		Ottawa		
515 Dec. 9	H	22 19.3	6000	
	P <sub>Z</sub>	22 28 36		
	i	22 28 44		
	PP	22 30 42		
	S	22 36 16		
	SS	22 40.0		
	L	22 46		
	F	0 10 ca.		
		Victoria		
	H	22 19.1	2950	
	P	22 24 46		
	PP	22 25 24		
	S	22 29 26		
	L	22 33		
	F	0 27		
		Saskatoon		
	H	22 19.5	3580	
P	22 26 04			
S	22 31 25			
L	22 34			
F	23 57			
	Halifax			
e	22 37 39			
e	22 51 04			
L	22 56			
F	23 15			
	Seven Falls			
H	22 19.3	6100		
P	22 28 44			
S	22 36 30			
SS	22 40.3			
L	22 46			
F	0 02			
	Shawinigan Falls			
H	22 19.3	6000		
P	22 28 41			
PP	22 30.8			
S	22 36.3			
L	22 47			
F	23 01			

SEISMOLOGICAL SERVICE OF CAN.  
DOMINION OBSERVATORY, OTTAWA



From the ISC collection scanned by SISMOS

FROM December 9, 1942 to December 15, 1942 No. 80

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Ottawa		
516 Dec. 11	H	2 39.4	8120	
	PZ	2 50 52		
	S	3 00.4		
	SS <sub>E</sub>	3 05.3		
	eL <sub>E</sub>	3 12		
	F	4 01 ca.		
		Victoria		
	e	3 03 05		
	e	3 20.5		
	L	3 30		
	F	4 14		
		Saskatoon		
	e	3 01 49		
	L	3 18		
	F	3 57		
		Seven Falls		
	H	2 39.2	7940	
	P	2 50 27		
	S	2 59 49		
	L	3 13		
	F	4 06		
		Ottawa		
521 Dec. 13	eZ	19 31 57		
	L	20 23		
	F	20 40		
		Victoria		
	e	19 50.5		
	L	20 04		
	F	20 23		
		Seven Falls		
	e	19 35 18		
	L	20 19		
	F	20 46		
		Ottawa		
525 Dec. 15	eZ	9 17 24		
	L	9 24		
	F	9 55		
		Victoria		
	e	9 27 46		
	L	9 39		
	F	10 06		
		Seven Falls		
	e	9 17 50		
	e	9 24		
	L	9 35		
	F	9 46		

SEISMOLOGICAL SERVICE OF CANADA  
 DOMINION OBSERVATORY, OTTAWA

FROM December 15, 1942 to December 20, 1942 No. 81

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS	
		h m s	km.		
529 Dec. 19	eZ L F	Ottawa			
		23 24.0			
		0 04			
	e e L F	Victoria			
		23 31 03			
		23 43.0			
		23 58			
	e e L F	Saskatoon			
		23 32.3			
		23 43			
		23 50			
	e L F	Seven Falls			
23 59.5					
0 05					
530 Dec. 20	H PZ S L F	Ottawa			
		14 03.2	8320		
		14 14 51			
		14 24 32			
		14 37			
	e L F	Victoria			
		14 27.3			
		14 43			
	e? S L F	Saskatoon			
		16 24+			
		14 15.2			
		14 25 47			
H P S SSS L F	Seven Falls				
	14 41				
	15 27+				
	14 03.1	8100			
	14 14 29				
H P S L F	Shawinigan Falls				
	14 24.0				
	14 31 56				
	14 37				
	15 54				
H P S L F	Shawinigan Falls				
	14 03.1	8200			
	14 14 36				
	14 24 12				
	14 38				
		15 04			

SEISMOLOGICAL SERVICE OF CANADA  
 DOMINION OBSERVATORY, OTTAWA

FROM December 20, 1942 to December 23, 1942 No. 82

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Ottawa		
533 Dec. 22	eE eE e L F	4 40 18 4 43.5 4 49.0 5 02 6 04		
		Seven Falls		
	e e L F	4 43.5 4 49.7 5 08 6 04		
534 Dec. 22	H PZ SE L F	Ottawa 6 25.0 6 32 15 6 38 12 6 44 7 07	4150	
		Seven Falls		
	e L F	6 31.5 6 45 7 12		
537 Dec. 23	H PZ S SSS L F	Ottawa 1 13.0 1 20.2 1 26 04 1 29.0 1 36 1 57	4080	
		Seven Falls		
	e L F	1 26 26 1 37 2 01		
538 Dec. 23	eZ e L F	Ottawa 14 17 40 14 35.6 14 50 16 04		
		Victoria		
	eE LE F	14 22.3 14 41 15 01		
		Seven Falls		
	e L F	14 17 45 14 52 16 08		

SEISMOLOGICAL SERVICE OF CANADA  
 DOMINION OBSERVATORY, OTTAWA

FROM December 23, 1942 to December 29, 1942 No. 83

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km	
539 Dec. 26		Ottawa	3960	USCGS. gives:- $\phi = 9^{\circ}0' N.$ $\lambda = 75^{\circ}0' W.$
	H	12 31.8		
	PZ	12 38 51		
	PP	12 40 02		
	S	12 44 36		
	SS	12 47.2		
	L	12 49		
	F	13 28		
		Victoria		
	e	12 41 53		
	e	12 49 12		
	L	13 00		
	F	13 31		
		Saskatoon		
	e	12 47.8		
e	12 54.1			
L	12 59			
F	13 18			
	Seven Falls	4080		
H	12 32.0			
P	12 39 08			
PPP	12 40 29			
S	12 45.0			
L	12 48			
F	13 13+			
	Ottawa			
eZ	16 48 15			
eE	17 11.3			
L	17 29			
F	17 58			
	Seven Falls			
e	17 04.8			
L	17 29			
F	18 22			
	Ottawa			
eZ	3 52 44			
L	4 11			
F	4 30			
	Seven Falls			
e	3 52 19			
L	4 10			
F	4 34			
542 Dec. 29				

SEISMOLOGICAL SERVICE OF CANADA  
DOMINION OBSERVATORY, OTTAWA

FROM December 29, 1942 to December 31, 1942 No. 84

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS	
		h m s			
544 Dec. 31		Ottawa			
	H	12 03.7	4010	USCGS. gives:- $\phi = 18^{\circ}1' N.$ $\lambda = 47^{\circ}0' W.$	
	P	12 10 47			
	PP	12 12 00			
	S	12 16 35			
	SS	12 18 48			
	SSS	12 19.5			
	F	13 30			
			Victoria		
	H	12 03.8	7440		
	P	12 14.6			
	S	12 23 37			
	L	12 36			
	F	13 23			
			Seven Falls		
	H	12 03.8	3840		
	P	12 10 36			
	PP	12 11 43			
	S	12 16 13			
	SS	12 18.4			
	F	13 34			
		Shawinigan Falls			
H	12 03.8	3800			
P	12 10 40				
S	12 16 15				
L	12 21				
F	12 28				
		Ottawa			
eZ	19 21 10				
L	19 29				
F	20 03				
		Seven Falls			
e	19 20 54				
L	19 28				
F	20 03				
			<i>W. W. Doxsee.</i>		

EARTHQUAKE CORRELATION TABLE  
 Month December, 1942

No.	Date	Ottawa	Victoria	Saskatoon	Halifax	Seven Falls		Shawinigan	**
						M. S.	W. A.		
508	1	2 50+0 01P							
509	2	0 33+1 01u							
510	2								
511	3		9 50+0 09L	9 53+0 04L					
512	4	15 44+1 14u	15 49+1 08u	16 13+0 31L					
513	5	14 37+1 08r	14 33+1 05r	14 34+0 21r					
514	5	21 11+0 07v							
515	9	22 29+1 41u	22 25+2 02r	22 26+1 31r	22 38+0 37u		14 37+0 31r	A	
516	11	2 51+1 10u	3 03+1 11u	3 02+0 55u			21 12+0 03v	B	
517	11	3 33+0 0.5P*					22 29+0 31u	C	
518	11	3 44+0 01P					2 50+0 02P	E	
519	11	6 20+0 0.7P*							
520	13	8 53+0 11P							
521	13	19 32+1 08u	19 50+0 33u				8 52+0 11P		
522	14	14 06+0 02P	16 37+0 05L				19 35+0 01P		
523	14								
524	15	8 17+0 01P							
525	15	9 17+0 38u	9 28+0 38u	9 41+0 17L			9 18+0 02P		
526	16	2 53+0 01P							
527	17	1 28+0 01P							
528	17	2 28+0 01P							
529	19	23 24+1 23u	23 31+1 41u	23 32+1 33u					
530	20	14 15+1 45U	14 27+1 57U	14 15+1 12U			14 14+0 49U	F	
531	20	15 46+0 01P*							
532	21	13 11+0 04P					13 11+0 02P		
533	22	4 40+1 24u	4 37+0 29L						
534	22	6 32+0 35r					4 44+1 20u		
535	22	15 41+0 0.6P*					6 32+0 42r	G	
							6 33+0 01P		

EARTHQUAKE CORRELATION TABLE  
Month December, 1942

No.	Date	Ottawa	Victoria	Saskatoon	Halifax	Seven Falls			Shawinigan	**
						M. S.	W. A.			
536	22	16 40+0 01P	.....	.....	.....	.....	.....	.....	.....	.....
537	23	1 20+0 37r	.....	.....	.....	.....	.....	.....	.....	.....
538	23	14 18+1 46u	14 22+0 39u	.....	.....	.....	.....	.....	.....	J
539	26	12 39+0 49r	12 42+0 48u	12 48+0 30r	.....	.....	.....	.....	.....	.....
540	26	22 32+0 02P	.....	.....	.....	.....	.....	.....	12 39+0 11r	K
541	27	16 48+1 10u	17 00+0 41L	.....	.....	.....	.....	.....	.....	.....
542	29	3 53+0 37u	4 28+0 16L	4 22+0 13L	.....	.....	.....	.....	.....	.....
543	29	4 48+0 02P	.....	.....	.....	.....	.....	.....	.....	.....
544	31	12 11+1 19r	12 15+1 08u	.....	.....	.....	.....	.....	.....	.....
545	31	19 21+0 42u	19 46+0 21L	19 41+0 14L	12 22+0 07L	.....	.....	.....	12 11+0 17r	N
					.....	.....	.....	.....	19 21+0 02P	.....



## CORRELATION OF EARTHQUAKES

 December, 1942
 

.....

 N O T E S
 

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A	:	Ottawa	$\Delta = 4960$ km.	$H = 14^h 28^m.7$ U.T.
		Victoria	$\Delta = 2300$ km.	$H = 14\ 28.4$ U.T.
		Saskatoon	$\Delta = 2845$ km.	$H = 14\ 28.8$ U.T.
B	:	Ottawa	$\Delta = 185$ km.	$H = 21^h 10^m.8$ U.T.
		Shawinigan Falls	$\Delta = 230$ km.	$H = 21\ 10.9$ U.T.
C	:	Ottawa	$\Delta = 6000$ km.	$H = 22^h 19^m.3$ U.T.
		Victoria	$\Delta = 2950$ km.	$H = 22\ 19.1$ U.T.
		Saskatoon	$\Delta = 3580$ km.	$H = 22\ 19.5$ U.T.
		Seven Falls	$\Delta = 6100$ km.	$H = 22\ 19.3$ U.T.
		Shawinigan Falls	$\Delta = 6000$ km.	$H = 22\ 19.3$ U.T.
E	:	Ottawa	$\Delta = 8120$ km.	$H = 2^h 39^m.4$ U.T.
		Seven Falls	$\Delta = 7940$ km.	$H = 2\ 39.2$ U.T.
F	:	Ottawa	$\Delta = 8320$ km.	$H = 14^h 03^m.2$ U.T.
		Seven Falls	$\Delta = 8100$ km.	$H = 14\ 03.1$ U.T.
		Shawinigan Falls	$\Delta = 8200$ km.	$H = 14\ 03.1$ U.T.
G	:	Ottawa	$\Delta = 4150$ km.	$H = 6^h 25^m.0$ U.T.
J	:	Ottawa	$\Delta = 4080$ km.	$H = 1^h 13^m.0$ U.T.
K	:	Ottawa	$\Delta = 3960$ km.	$H = 12^h 31^m.8$ U.T.
		Seven Falls	$\Delta = 4080$ km.	$H = 12\ 32.0$ U.T.
N	:	Ottawa	$\Delta = 4010$ km.	$H = 12^h 03^m.7$ U.T.
		Seven Falls	$\Delta = 3840$ km.	$H = 12\ 03.8$ U.T.
		Shawinigan Falls	$\Delta = 3800$ km.	$H = 12\ 03.8$ U.T.

Dominion Observatory,  
 Ottawa, Canada,  
 March 2, 1943

## SEISMOLOGICAL BULLETINS RECEIVED

December, 1942

We acknowledge, with thanks, the receipt of the following seismological publications and bulletins:-

STATIONS	BULLETINS	RECEIVED
Brisbane	September, 1942	December 5
Weston	November, 1942	" 11
India Stations	April to June, 1940	" 15
Santa Clara	November, 1942	" 15
Coimbra	January to July, 1941	" 19
New Zealand Stations	October, 1941	" 21
Pasadena	Preliminary bulletin Sept.-Oct./42	" 29

DOMINION OBSERVATORY,  
 OTTAWA - CANADA.