

METEOROLOGICAL AND HYDROGRAPHIC BRANCH

Balboa Heights, Canal Zone

Lat. 8°57'39"N


Long. 79°33'29"W

SEISMOLOGICAL BULLETIN - January 1958

h: 36 meters

Sprengnether vertical (Z); Sprengnether LP horizontal (N,E); Wood-Anderson SP horizontal (n,e)

No.	Date	Phase	Comp.	Time	Epicentral Distance (miles)	Remarks
				G.C.T.		
1	1	e	N	02-46-39		Unimak Islands
2	2	iP iS	Z N	22-39-53C 43-22	1,300	USCGS: 11-1/2N 60-1/2W Northeast of Trinidad
3	3	iP	N	08-11-02		USCGS: 17N 99-1/2W Guerrero, Mexico
4	4	iP iS	Zne Zne	23-29-39D 30-41	300	USCGS: 7N 83W Off South Coast of Panama
5	5	iP iS	Zne ZNne	02-53-38D 54-22	215	
6	6	iP iS	ZNne ZNne	05-19-39D 20-23	215	
7	7	iP	ZNne ZN	19-20-03C 24-53	2,025	Southern Peru USCGS: 16-1/2X 71-1/2W
8	8	iP iS	ZNen ne	14-09-21C 11-07	650	USCGS: 1-1/2N 79-1/2W Near Coast of Ecuador
9	9	iP	Zne	14-45-20C		USCGS: 1-1/2N 79-1/2W Near Coast of Ecuador
10	10	iP iS	ZN ne Nne	08-31-37C 31-53	75	Felt Force I
11	11	iP	ZN N	10-19-38D 23-36	1,500	USCGS: 16N 99W Near Coast of Guerrero, Mexico


 W. H. ESSESLINGER
 Chief Hydrographer



logical and Hydrographic Branch

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SEISMOLOGICAL BULLETIN - February 1958

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Sprengnether vertical (Z); Sprengnether LP horizontal (N,E); Wood-Anderson SP horizontal (n,e)

No.	Date	Phase	Comp.	Time		Epicentral Distance (miles)	Remarks
				G.C.T.			
1	1	iP	ZN	16-11-55C			USCGS: 2N 79W Near Coast of Ecuador
2	2	iP	ZN	18-04-23C			USCGS: 2N 79W Ecuador Aftershock
3	3	iP	ZN	20-47-27C			USCGS: 1-1/2N 79W Ecuador Aftershock
4	4	iP iS	ZN N	08-18-06D 20-14	800		USCGS: 2N 80W Near North Coast of Ecuador
5	5	iP iS	ZN N	08-51-00D 53-10	800		USCGS: 2N 79W Ecuador Aftershock
6	6	iP iS	ne ne	14-02-59 03-35	175		South of Panama
7	7	eP eS	N N	21-04-49 08-05	1,250		
8	8	iP iS	ZNne n	04-15-22-1/2C 15-38	80		USCGS: 8N 79-1/2W Felt Force IV - South of Panama All C. Z. Towns, Santa Clara and Rio Hato
9	9	eP iS	n n	08-18-04.5 18-25.5	100		
10	10	iP iS	n n	10-31-57.5 32-16	85		
11	11	eP eS	N N	11-27-44.5 28-41.5	275		
12	12	eP iS	n n	14-56-59 57-17	90		
13	13	eP iS	n n	17-47-33 47-56	110		
14	14	eP eS	N N	01-43-06 48-26	2,150		
15	15	eP	NZ	13-49-04			



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No.	Date	Phase	Comp.	Time		Epicentral Distance (miles)	Remarks
				G.C.T.			
16	16	eP	NZ	11-03-11			USCGS: 50-1/2N 175W Andreanof Islands, Aleutian Is.
17	17	eP	NZ	08-21-36C			USCGS: 27-1/2S 63W Santiago del Estero Province, Argentina
18	18	iP iS	Ze e	22-48-50D 48-58	40		
19	19	iP iPP2	Z N	23-47-26C 57-30	9,800		USCGS: 21N 120E Batan Islands Region
20	20	iP iS	Z N	10-02-13C 08-02	2,600		

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SEISMOLOGICAL BULLETIN - March 1958

h: 36 meters

Sprengnether vertical (Z); Sprengnether LP horizontal (N,E); Wood-Anderson SP horizontal (n,e)

No.	Date	Phase	Comp.	Time	Epicentral Distance (miles)	Remarks
				G.C.T.		
1	1	iP iS	Z N	09-10-45C 14-50	1,575	
2	2	iP	Z	16-31-44D		
3	3	eP eS	n N	17-14-54 16-14	500	USCGS: 6N 73-1/2W Colombia
4	4	iP iS	Z N	01-52-31D 55-02	800	USCGS: 1/2S 81W Near Coast of Ecuador
5	5	i(P)	Z	20-18-22C		USCGS: 33-1/2S 70W Central Chile
6	6	i(P)	Z	21-33-33C		
7	7	iP iS	zne ne	23-31-25C 23-31-46.5	100	
8	8	eSKS iL	N N	10-47-03 11-10-55	7,000	USCGS: 34S 178-1/2W Kermadec Islands Region
9	9	iP ePPS	ZN ZN	00-45-31 01-01-21	9,500	USCGS: 25-1/2N 125E Ryukyu Islands
10	10	iP	ZN	23-57-44		USCGS: 17N 98-1/2W Guerrero, Mexico
11	11	iP	ZN	04-14-52		
12	12	eP iS	zne ne	12-17-55D 12-18-03.5	42	
13	13	e(P)	Z	12-15-17		
14	14	iP iS	Z N	01-50-45C 02-01-04	5,800	USCGS: 51N 173W Fox Islands Region, Aleutian Islands
15	15	iP iS	ne ne	16-07-30 07-45	75	
16	16	iP iPRL	Z Z	18-46-26C 46-30D	1,300	USCGS: 18N 64-1/2W Virgin Islands



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No.	Date	Phase	Comp.	Time	Epicentral Distance	Remarks
				G.C.T.	(miles)	
17	17	i	Z	00-45-29C		USCGS: 11N 126E Samar Islands Philippine Islands
		i	Z	45-32C		
18	18	iP	zne	03-39-48C	55	
		iS	ne	44-00		
19	19	iP	Z	08-24-25C		
		i	E	26-06		
20	20	e(P)	ze	14-24-46		USCGS: Northern Peru
		e	e	25-51		

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h: 36 meters

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No.	Date	Phase	Comp.	Time	Epicentral Distance (miles)	Remarks
				G.C.T.		
1	1	iP iS	Z N	09-10-45C 14-50	1,575	
2	2	iP	Z	16-31-44D		
3	3	eP eS	n N	17-14-54 16-14	500	USCGS: 6N 73-1/2W Colombia
4	4	iP iS	Z N	01-52-31D 55-02	800	USCGS: 1/2S 81W Near Coast of Ecuador
5	5	i(P)	Z	20-18-22C		USCGS: 33-1/2S 70W Central Chile
6	6	i(P)	Z	21-33-33C		
7	7	iP iS	zne ne	23-31-25C 23-31-46.5	100	
8	8	eSKS iL	N N	10-47-03 11-10-55	7,000	USCGS: 34S 178-1/2W Kermadec Islands Region
9	9	iP ePPS	ZN ZN	00-45-31 01-01-21	9,500	USCGS: 25-1/2N 125E Ryukyu Islands
10	10	iP	ZN	23-57-44		USCGS: 17N 98-1/2W Guerrero, Mexico
11	11	iP	ZN	04-14-52		
12	12	eP iS	zne ne	12-17-55D 12-18-03.5	42	
13	13	e(P)	Z	12-15-17		
14	14	iP iS	Z N	01-50-45C 02-01-04	5,800	USCGS: 51N 173W Fox Islands Region, Aleutian Islands
15	15	iP iS	ne ne	16-07-30 07-45	75	
16	16	iP iPRL	Z Z	18-46-26C 46-30D	1,300	USCGS: 18N 64-1/2W Virgin Islands



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No.	Date	Phase	Comp.	Time	Epicentral Distance	Remarks
				G.C.T.	(miles)	
17	17	i	Z	00-45-29G		USCGS: 11N 126E Samar Islands Philippine Islands
		i	Z	45-32G		
18	18	iP	zne	03-39-48G	55	
		iS	ne	44-00		
19	19	iP	Z	08-24-25G		
		i	E	26-06		
20	20	e(P)	ze	14-24-46		USCGS: Northern Peru
		e	e	25-51		

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SEISMOLOGICAL BULLETIN - April 1958

h: 36 meters

Sprengnether vertical (Z); Sprengnether LP horizontal (N,E); Wood-Anderson SP horizontal (n,e)

No.	Date	Phase	Comp.	Time		Epicentral Distance (miles)	Remarks
				G.C.T.			
1	3	iP iS	ZN E	08-27-40D 29-15	575	USCGS: 1-1/2N 79W Near coast of Ecuador	
2	4	eP eS	E E	16-40-44 47-44	3,300		
3	7	iP iS	ZNE NE	15-42-30D 52-20	5,300	USCGS: 66-1/2N 157W Felt throughout central Alaska	
4	8	iL i	E E	00-56-26 01-00-16		USCGS: 66-1/2N 155-1/2W Felt central Alaska	
5	8	iP iS	Z E	04-37-00C 39-18	850	USCGS: 7N 73W Colombia	
6	9	eP e	E E	06-50-38 53-55	1,250	USCGS: 56-1/2N 139W Gulf of Alaska	
7	10	iP iPR1 iS	ZE E E	23-19-02C 20-02 23-57	2,000	USCGS: 4-1/2S 107W 1,000 mi. west Galapagos Islands	
8	11	eP i	E E	04-02-06 10-19			
9	11	iP iS	Zne ne	09-13-41D 14-25	210	About 125 miles off East coast of Costa Rica	
10	12	iP iPR1 iPR2 iS iSR1 iSR2 iL	ZE E E E E E E	11-53-52D 55-12 55-28 12-00-12 02-50 03-40 05-16	2,800	USCGS: 25-1/2N 111W Gulf of Baja California	
11	13	i	Z	12-36-41D		USCGS: 53N 161E Near east coast of Kamchatka	
12	14	eP eS	E E	09-38-48 45-55	3,300		
13	14	iP iS	Z E	21-34-30D 34-15		USCGS: 1-7 1/2N 79W Near coast of Ecuador	
14	14	iP iS	Z E	21-34-30D 34-15		USCGS: 1-7 1/2N 79W Near coast of Ecuador	

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SEISMOLOGICAL BULLETIN - April 1958
 (cont'd)

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No.	Date	Phase	Comp.	Time	Epicentral Distance	Remarks
				G.C.T.	(miles)	
13	14	iP	Z	21-34-32D		USCGS: 1N 79-1/2W Near coast of Ecuador
14	14	iP	Z	22-50-34D		USCGS: 1N 79-1/2W Ecuador Aftershock
15	15	iP	Z	01-32-47D		USCGS: 1N 79-1/2W Ecuador Aftershock
16	15	iP	Z	03-25-06D		
17	15	iP	Z	03-53-49C		USCGS: 9N 84W Off West coast of Costa Rica
18	15	iP	Z	04-39-21D		
19	15	iP	Z	05-37-35C		
20	15	iP	Z	05-46-21D		
21	15	iP	Z	07-24-53D		
22	16	iS	Z	13-05-32C		USCGS: 18-1/2N 119-1/2E off Northwest coast of Luzon, Philippine Islands
23	16	iP	ZE	21-48-10C	260	
		iS	E	49-04		
24	16	iP	Z	23-00-14C	240	
		iS		01-04		
25	17	iP	Z	04-17-22	575	
		iS		18-59		
26	17	iP	Z	14-07-29D	500	USCGS: 8N 85W off coast of Costa Rica
		iS	E	08-41		
27	19	iP	ZE	17-07-05	310	
		eS	E	08-09		



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SEISMOLOGICAL BULLETIN - April 1958
(cont'd)

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Sprengnether vertical (Z); Sprengnether LP horizontal (N,E); Wood-Anderson SP horizontal (n,e)

No.	Date	Phase	Comp.	Time	Epicentral Distance (miles)	Remarks
				G.C.T.		
28	21	i e	Z	20-34-04D 34-40		USCGS: 15S 174-1/2W Samoa Islands Region
29	21	e e	n	20-45-43 46-16	7,500	
30	22	iP iS	Z n	00-08-43D 08-59	80	
31	22	iP' i	E N	21-13-43 21-13-57	70	
32	24	iP iS	ALL ALL	18-10-35C 10-36	5	USCGS: 5N 83W Pacific Ocean
33	28	iP iPR i	ZNE E N	11-52-30.5D 56-20 12-02-37		USCGS: 11S 74W Peru

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SEISMOLOGICAL BULLETIN - May 1958

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Sprengnether vertical (Z); Sprengnether LP horizontal (N,E); Wood-Anderson SP horizontal (n,e)

No.	Date	Phase	Comp.	Time	Epicentral Distance (miles)	Remarks
				G.C.T.		
1	8	iP iS	ZE NE	12-47-29C 52-53	2,500	USCGS: 24S, 67W Salta Province Felt-Antofagasta, Chile
2	8	iP iS	Z e	22-57-47D 58-33	220	
3	9	iP iS	ZE NE	00-48-10C 51-30C	1,250	USCGS: 1-1/2N, 94-1/2W Galapagos Island
4	9	iP iS	ZE NE	04-48-06C 54-14	2,700	USCGS: 31S, 65-1/2W Cordoba LaRoja Province, Argentina
5	10	eP eS	E E	23-33-15 38-34	2,300	
6	11	iP iS	Zne ne	04-06-04C 06-28	115	
7	11	eP eS	E E	06-01-31 08-38	3,500	
8	18	eP eS	E E	02-52-43 03-02-21	7,800	USCGS: 13S, 176E New Hebrides Islands
9	18	eP eS	E E	03-27-33 35-09	3,800	
10	18	iP i	E E	03-56-18 59-27		USCGS: 13S, 167E New Hebrides Islands
11	18	eP e	N N	13-14-35 24-27	5,500	
12	19	iP iS	All All	13-28-14D 28-24.5D	55	USCGS: Felt Force II
13	21	iP	ZNE	14-12-25	1,200	USCGS: 20N, 67W Greater Antilles



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No.	Date	Phase	Comp.	Time	Epicentral Distance		Remarks
				G.G.T.	(miles)		
14	21	iP	ZNE	16-34-24			
15	22	iP iS	ALL ALL	10-14-27D 14-57		145	
16	24	iP iS	Zn n	22-13-09C 13-20		53	
17	25	eP es	ALL	21-14-14D 16-57		1,050	USCGS: 3S, 77W Ecuador Border, Felt Ecuador
18	26	eP eS	ALL	08-51-54D 54-12		1,050	USCGS: 3S, 77W Ecuador After- shock
19	27	eP eS	ALL	08-14-21D 15-12		290	
20	27	eP eS	ALL	19-19-26C 19-20-48		470	
21	29	eP es	NEZ	07-03-32D 07-30		1,500	USCGS: 16-1/2N, 97-1/2W Oaxaca, Mexico
22	29	eP i	Z ne	14-21-12D 24		67	
23	30	iP iS	ZNE ZNE	08-17-17D 27-29		3,000	
24	31	iP i	NE NE	19-48-27C 52-05		7,800	USCGS: 15S, 169E New Hebrides Islands

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SEISMOLOGICAL BULLETIN-June 1958

h: 36 meters

Sprengnether vertical (Z); Sprengnether LP horizontal (N,E); Wood-Anderson SP horizontal (n,e)

No.	Date	Phase	Comp.	Time		Epicentral Distance (miles)	Remarks
				G.C.T.			
1	3	eP	NE	17-13-28D			
2	3	eP	NE	19-48-40D			USCGS: 15S, 168E New Hebrides Islands
3	4	eP eS	ZNE NE	14-42-09C 52-18	5,500		USCGS: 52-1/2N, 167W Fox Islands, Aleutian Islands
4	5	eP iS	Z NE	13-35-53D 38-30	1,000		USCGS: About 50 miles off coast of Micaragua
5	5	eP	neZ	22-45-39D			USCGS: 8N, 84-1/2W off coast of Costa Rica
6	6	iP i	ZNE NE	09-42-32C 49-32			USCGS: 8N, 85W Off coast of Costa Rica
7	6	iP iS	All All	14-40-11C 42-23	300		USCGS: 7N, 84-1/2W South of Costa Rica
8	6	iP iS	All	15-53-19C 54-38	300		USCGS: Near South coast of Costa Rica
9	6	iP iS	All	19-16-40 17-43	300		USCGS: 5-1/2N, 82-1/2W South of Costa Rica
10	6	iP iS	All	22-45-20C 46-31	300		
11	7	iP iS	All	00-29-57C 30-57	300		USCGS: 6-1/2N, 82-1/2W South of Panama
12	7	iP iS	All	03-31-01C 32-21	9,000		USCGS: 5S, 150-1/2E New Britain
13	7	eP eS	ZNE	22-50-42D 51-58	450		
14	8	eP eS	NE	00-59-56D 01-06-27	3,050		



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SEISMOLOGICAL BULLETIN-JUNE 1958
(cont'd)

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No.	Date	Phase	Comp.	Time	Epicentral Distance (miles)	Remarks
				G.C.T.		
15	8	eP eS	All	18-04-49C 05-49	5,500	USCGS: 53N, 167W Fox Islands Aleutian Islands
16	9	eP es	All	02-64-46C 06-07	500	
17	10	eP iS	All	17-48-46D 49-45	290	
18	10	eP iS	All	20-22-04D 23-09	310	USCGS: Panama-Columbia Border
19	11	eP	All	22-12-01		
20	12	eP	All	10-31-50		
21	12	eP iS	All	11-55-23C 56-43		USCGS: 7-1/2N, 84-1/2W Off South coast of Costa Rica
22	12	e	N	21-15-27		USCGS: 53N, 167W Fox Islands Aleutian Islands
23	14	eP	ZE	21-54-56		
24	16	iP iS	Z ne	02-09-07D 09-37	145	
25	18	eP eS	N	06-42-30 52-30	5,000	
26	25	iP iS	Z N	09-55-58C 10-05-52	5,200	USCGS: 3S, 144-1/2E Near North coast of New Orleans
27	27	iP iS	Z N	05-46-51D 48-43		USCGS: 13N, 88-1/2W Near coast of EL Salvador
28	29	iP iS	ZN E	03-31-07D		USCGS: 15-1/2S, 70-1/2W Southern Peru

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No.	Date	Phase	Comp.	Time	Epicentral Distance (miles)	Remarks
				G.C.T.		
1	3	iP	Z	06-04-54C		USCGS: 18S 66E Mascarene Islands Region
2	4	iP iS	Z NE	08-02-47C 03-54	320	
3	4	iP'	Z	18-53-55C	9,800	USCGS: 6N 125E Near South coast of Mindanao, P. I.
4	10	iP iS	Z N	06-26-40C 06-36-18	5,000	USCGS: 58-1/2N 136W South-eastern Alaska Mag. 7-3/4
5	11	iP	N	19-16-57		USCGS: 21S 69W Northern Chile
6	12	eP iL	N N	00-54-37 01-01-53		USCGS: 5S 106-1/2W Pacific Ocean
7	12	e iL	N N	02-41-37 45-09		USCGS: 4-1/2S 105-1/2W Pacific Ocean, Southwest of Galapagos Islands
8	14	eP eS	Z n	09-35-55D 36-29	165	
9	15	iP iS	ZNE N	01-21-28C 22-51	500	USCGS: Felt Boquete and Volcan R de P
10	15	iP iS	Z N	15-06-18 07-11	255	
11	16	iP iS	Z N	13-03-16C 10-22	3,450	USCGS: 29-1/2S 113W South Pacific
12	18	iP iL	ZN N	01-50-27D 54-09		USCGS: 4S 78W Peru Ecuador Border
13	19	iP'	ZN	18-36-44C		USCGS: 129-1/2E Molucca Passage



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SEISMOLOGICAL BULLETIN - July 1958
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No.	Date	Phase	Comp.	Time G.C.T.	Epicentral Distance (miles)	Remarks
14	21	iP iL	Z N	09-41-28D 44-14		USCGS: 12N 89W Near coast of Ecuador
15	21	iP eS	Z N	14-50-12D 15-00-35	5,200	USCGS: 51-1/2N 178W Andreanof Islands, Aleutian Islands
16	22	eP iS	N N	03-15-11 19-57	1,950	
17	26	iP iS	All All	17-41-47C 47-08	2,200	USCGS: Peru-Bolivia Border 13-1/2S 69W
18	30	iP	N	15-41-59		USCGS: South Pacific Ocean about 1,800 miles South- west of Easter Island
19	31	iP iS	Z	10-56-06D 56-30	115	

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Balboa Heights, Canal Zone

Lat. 8°57'39"N
 Long. 79°33'29"W

SEISMOLOGICAL BULLETIN - August 1958

h: 36 meters

Sprengnether vertical (Z); Sprengnether LP horizontal (N,E); Wood-Anderson SP horizontal (n,e)

No.	Date	Phase	Comp.	Time	Epicentral Distance		Remarks
				G.C.T.	(miles)		
1	4	iP'	Z	04-32-59D	10,400		USCGS: 6S 130E Banda Sea
2	12	iP'	ZE	19-45-00D	10,500		USCGS: 0 126-1/2E Molucca Passage
3	14	iP iS	ZNE E	15-07-57D 18-31	5,900		USCGS: 52N 175W Andreandorf Islands, Aleutian Islands
4	15	iP iS	Z e	04-47-49D 48-16	130		
5	15	iP iS	Z e	06-22-27C 23-42	450		
6	15	ePRL iS	N N	20-13-46 22-40	6,900		USCGS: 53N 160-1/2E Near East coast of Kamchatka
7	15	iP'	Z	22-48-51C	10,500		USCGS: 1-1/2N 125E Celebes
8	16	i	E	12-11-22			
9	16	iP iS	Z NE	13-30-42C 41-16	5,900		USCGS: 51-1/2N 176W Andreanof Islands, Aleutian Islands
10	16	iP iS	Z NE	15-50-34C 52-10	510		
11	16	iP'	E	20-32-44	7,900		USCGS: 34-1/2N 48E Iran many killed, major damage
12	17	iP	Z	18-20-31D			USCGS: 3S 145-1/2E Bismarck Sea
13	18	iP iS	ALL NEne	10-17-19C 17-53	300		USCGS: 7-1/2N 78W Panama- Columbia Border

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SEISMOLOGICAL BULLETIN - August 1958

h: 36 meters

Sprengnether vertical (Z); Sprengnether LP horizontal (N,E); Wood-Anderson SP horizontal (n,e)

No.	Date	Phase	Comp.	Time	Epicentral Distance	Remarks
				G.C.T.	(miles)	
14	20	iPR1	E	04-05-43		USCGS: 14S 167E New Hebrides Islands
		iPR2	E	09-41		
15	27	i	E	02-38-18		USCGS: 4-1/2S 104-1/2W About 1,000 miles Southwest of Galapagos Island
		i	E	39-43		
		i	E	43-15		

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SEISMOLOGICAL BULLETIN - Sept. 1958

h: 36 meters

Sprengnether vertical (Z); Sprengnether LP horizontal (N,E); Wood-Anderson SP horizontal (n,e)

No.	Date	Phase	Comp.	Time G.C.T.	Epicentral Distance (miles)	Remarks
1	2	iP iS	ZNE NE	20-10-25C 15-31	2,150	USCGS: 15N 92-1/2W Near coast of Oaxaca, Mexico
2	3	iP iS	ZNE	03-54-50D 04-03-19	4,550	USCGS: 0 18W Atlantic Ocean
3	4	iP iS	ZNE NE	21-59-16D 22-05-48	3,100	USCGS: 33-1/2S 69-1/2W Chile-Argentina Border
4	7	iP iS	Z n	00-26-12D 26-50	180	
5	7	iP iS	Z N	02-49-51C 51-19	550	USCGS: 7N 73W Northern Colombia
6	7	iP iS	Zne ne	14-34-20C 35-04	210	
7	11	iP iS	ZE ne	13-27-55C 28-44.5	240	
8	12	iP iS	Z e	01-16-17C 17-02	215	USCGS: Felt in El Volcan, R de P
9	14	iP iS	Zne NEne	00-51-14C 51-37	110	
10	14	i	Z	21-51-44D		USCGS: 8-1/2S 67E Chagos Archipelago Region
11	15	iP	Z	20-04-32D		
12	18	iP	Z	21-28-58C		USCGS: 9-1/2S 80W Off coast of Peru
13	22	iP eS	Z ne	06-59-35D 07-00-49	475	

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SEISMOLOGICAL BULLETIN - Sept. 1958

h: 36 meters

Sprengnether vertical (Z); Sprengnether LP horizontal (N,E); Wood-Anderson SP horizontal (n,e)

No.	Date	Phase	Comp.	Time	Epicentral Distance (miles)	Remarks
				G.C.T.		
14	22	iP	Z	23-25-13C	170	
		iS	e	25-48		
15	23	iP	e	04-54-44D	50	
		iS	e	54-54		
16	25	iP	Z	07-27-38D	3,750	USCGS: 9N 39-1/2W Atlantic Ocean
		iS	N	33-41		
17	29	iP	Z	02-28-08C	110	
		iS	e	28-31		
18	29	eP	e	14-38-17		USCGS: 39-1/2N 143-1/2E Off NE coast of Honshu, Japan
		i	ne	39-10		

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SEISMOLOGICAL BULLETIN - Oct. 1958

h: 36 meters

Sprengnether vertical (Z); Sprengnether LP horizontal (N,E); Wood-Anderson SP horizontal (n,e)

No.	Date	Phase	Comp.	Time		Epicentral Distance (miles)	Remarks
				G.C.T.			
1	2	iP iS	Zne ne	05-27-050 27-51		220	
2	9	iP eS	N N	11-32-15 41-59		5,000	USCGS: 55-1/2S 27-1/2W Sandwich Islands Region
3	18	iP iS	Z n	06-36-03D 37-32			USCGS: 7N 66-1/2W Columbia- Venezuela Border
4	18	iP iS	Zn n	08-19-21D 20-05		210	
5	29	iP iS	Z E	07-57-13D 08-07-37		5,000	USCGS: 51-1/2N 179-1/2E Andreanof Islands, Aleutian Islands

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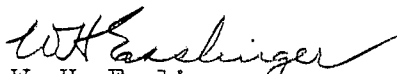
Lat. 8°57'39"N
 Long. 79°33'29"W

SEISMOLOGICAL BULLETIN - Nov. 1958

h: 36 meters

Sprengnether vertical (Z); Sprengnether LP horizontal (N,E); Wood-Anderson SP horizontal (n,e)

No.	Date	Phase	Comp.	Time	Epicentral Distance		Remarks
				G.C.T.	(miles)		
1	1	i	N	04-39-30			
		i	N	45-57			
		i	N	46-40			
2	4	iP	All	09-18-22C			USCGS: 7N 73W Colombia
		eS	n	19-39	450		
3	4	iP	N	23-14-30			USCGS: 50S 115W South Pacific Ocean
		iS	N	26-04	6,000		
4	6	iP	Z	23-12-42D			USCGS: 44-1/2N 148-1/2E Kurile Islands
5	10	eP	N	07-10-21			USCGS: Pacific Ocean fore-shock
		eS	N	13-09	1,000		
6	10	iP	N	11-28-13			USCGS: 9S 110W Pacific Ocean
		iS	N	30-28	850		
7	12	eP	Z	06-11-27C			USCGS: 9-1/2N 70W Venezuela
		iS	N	13-14	650		
8	12	i	N	20-41-10			USCGS: 44-1/2N 149E Kurile Islands
9	13	eP	Z	09-08-42			USCGS: 9-1/2N 70W Venezuela
		eS	N	12-17	1,350		
10	13	iP	Z	21-47-17C			USCGS: Felt Force I
		iS	ne	47-27	50		
11	14	iP	Z	06-49-10C			
12	14	iP	Z	14-08-10D			USCGS: 6S 131E Banda Sea
		eS	e	08-15	25		
13	14	iP	Z	15-24-00C			USCGS: 13N 86W Nicaragua
		iS	N	25-32	135		
14	16	iP	Z	22-42-30C			USCGS: 5N 83W Pacific Ocean
		iS	E	43-51	450		


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SEISMOLOGICAL BULLETIN - Dec. 1958

h: 36 meters

Sprengnether vertical (Z); Sprengnether LP horizontal (N,E); Wood-Anderson SP horizontal (n,e)

No.	Date	Phase	Comp.	Time	Epicentral Distance	Remarks
				G.C.T.	(miles)	
1	4	iP	E	19-21-12	550	USCGS: 11-1/2N 86-1/2W Near coast of Nicaragua
		iS	N	22-43		
2	5	eP	n	14-21-06	250	
		eS	e	21-46		
3	6	iP	All	09-34-48C	215	USCGS: 6-1/2N 83W South of Panama
		iS	ne	35-33		
4	7	P	N	18-10-05		USCGS: 18N 105W Off coast of Mexico
5	9	eP	e	15-15-12	450	
		iS	e	16-24		
6	9	eP	EeZ	19-04-00D	220	
		iS		04-46		
7	10	i	NE	07-27-46		USCGS: 37S 176-1/2E Off North Island, New Zealand
8	10	iP	Z	16-12-42C	510	USCGS: 3N 83W Off West coast of Colombia
		eS	N	14-16		
9	14	iP	Z	07-20-38D	3,600	USCGS: 35S 108-1/2W South Pacific Ocean
		iS	N	28-05		
10	14	iP	All	15-37-15C	750	USCGS: 3-1/2N 83W South of Panama
		iS	E	39-16		
11	15	eP	Zne	07-05-33C	120	
		iS	n	05-57		
12	15	iP	ZNE	07-52-02D	500	USCGS: 5-1/2N 82-1/2W South of Panama
		iS	N	53-29		
13	18	eP	ne	07-45-08	60	
		iS	ne	45-20		



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SEISMOLOGICAL BULLETIN - Dec. 1958

h: 36 meters

Sprengnether vertical (Z); Sprengnether LP horizontal (N,E); Wood-Anderson SP horizontal (n,e)

No.	Date	Phase	Comp.	Time G.C.T.	Epicentral Distance (miles)	Remarks
14	18	iP iS	Z NE	15-26-27C 27-11	215	
15	19	iP	Z	11-20-11C		USCGS: 16S 72W Southern Peru
16	19	eP eS	All	14-38-04 14-39-00	270	USCGS: 5N 83W South of Panama
17	20	eP	All	02-13-49		
18	23	eP eS	All	06-29-02 06-30-10	325	
19	28	eP e	ZNE	05-15-33 05-17-17		USCGS: 29-1/2N 80E Western Nepal, India Border
20	30	i	N N	08-47 09-30		USCGS: 35 1/2 S 105 1/2 W South PACIFIC OCEAN

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