

TERRITORY OF PAPUA AND NEW GUINEA.
Vulcanological Observatory Rabaul

SEISMOLOGICAL BULLETIN. 1958.

The Observatory is on the rim of Blanche Bay caldera, which is composed of beds of pumice dust and ash with occasional interspersed basalt lava flow. The instrument vault (3 metres deep) is concrete lined and the roof forms part of the floor of the Observatory. The seismometers are mounted on a concrete pier set on basalt $1\frac{1}{2}$ metres below the vault floor. The pier is separated from the floor by a gap (8cm) loosely filled with pumice dust.

Latitude - $04^{\circ}11'33''S$. Longitude - $152^{\circ}10'16''E$.

Height above mean sea level = 183 metres (600 feet.)

<u>Instrument</u>	<u>Components</u>	<u>Symbol</u>	<u>Tg.sec.</u>	<u>Tp.sec.</u>
Benioff	Z	Z	0.35	1.26
	NS	N	0.26	1.44
	EW	E	0.29	1.45

Rapindik Station. Supplementary information from seismograms recorded at Rapindik is included in this bulletin.

Latitude - $04^{\circ}13.7'S$. Longitude - $152^{\circ}11.8'E$.

Height above mean sea level - about 3 metres.

Foundation - unconsolidated volcanic ash.

<u>Instrument</u>	<u>Components</u>	<u>Symbol</u>	<u>M(kg)</u>	<u>V</u>	<u>To</u>	<u>Damping.</u>
Omori	NS	N	15	11.9	3.6	Air.
	EW	E	15	10.2	3.8	critical

References. Tables - Jeffreys & Bullen, 1940.

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The station is maintained by the Administration of the Territory of Papua and New Guinea for vulcanological and seismological observations.

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DRY OF PAPUA AND NEW GUINEA
Vulcanological Observatory Rabaul.

SEISMOLOGICAL OBSERVATORY.

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1st.	e(P) i	Z	05	31 32	(57) 24	
	eP	Z	07	13	49	
	iP i!	Z	10	17 17	53 55	B.C.I.S. South of Tonga. H. = 10 10 00 Felt:- Warangoi Int. 1-2 (M.M.) 04°30'S, 152°20'E.
				Dilatation.		
	eP	Z	15	16	42	U.S.C.G.S. 52°N, 171½°W. H. = 15 06 08
2nd.	iP! iS! (S.phase reading from Omori	Z	00	21 22	45 00	U.S.C.G.S. 05°S, 152°E. New Britain H= 00 21 22 Seismograph). Felt:- Kokopo Int 4 (M.M.) 04°20'S, 152°15'E. Rabaul Int. 4 (M.M.) 04°10'S, 152°10'E. Warangoi Int. 4-5 (M.M.) 04°30'S, 152°20'E. Ulamona Int 2 (M.M.) 05°00'S, 151°15'E.
	iP	Z	22	55	15	U.S.C.G.S. 11½°N, 60½°W. North-east of Trinidad. H= 22 35 29 Felt:- Tobago Int 6 (M.M.) 11°N, 61°W.
3rd.	eiP i! iS!	Z	11	06	36 41½ 50½	
	e	Z	18	00	54	U.S.C.G.S. 22°S, 65°E. Mascarcue Is. region H= 17 47 12 Magn. 6 (Matsushiro) Magn. 5½ (Moskva)
	iP	Z	23	06	53	Dilatation.
4th.	e	Z	06	59	(39)	
	e(P) i i	Z	13	10	14 20½ 34½	U.S.C.G.S. 6°S, 133°E. Banda Sea. H= 13 05 24
	iP	Z	23	29	00½	U.S.C.G.S. 8½°S, 112°E. Off South coast of Java. H= 23 21 38 h about 200 km. Magn. 5.9 (Quetta)
No record from 16 00 hrs to 19 13 hrs due to power failure.						
5th	iP i!	Z	08	10	40 43	U.S.C.G.S. 2°N, 122½°E. Celebes Sea. H = 08 05 11 h about 550 km. Magn. 6½ (matsushiro)

contd.

	eP	Z	11	41	31	Magn. 6.4 (Wellington) U.S.C.G.S. $56\frac{1}{2}^{\circ}\text{N}$, 121°E . Stansvai Mountains region, Siberia. H = 11 30 44 Magn. 6.7 (Roma) 6.5 (Kew, Pasadena, Praha) $6\frac{1}{4}$ - $6\frac{1}{2}$ (Matsushiro) 6 (Moskva).
	iP i	Z	12	29	16 19	U.S.C.G.S. 6°S , 155°E . Solomon Is. H = 12 28 20 Felt:- Karoola Int. 3 (M.M.) $05^{\circ}10'\text{S}$, $154^{\circ}35'\text{E}$. Rabaul Int. 1 (M.M.) $04^{\circ}10'\text{S}$, $152^{\circ}10'\text{E}$.
6th	e	Z	13	34	34	
7th	Nil					
8th	eP i!	Z	03	47	11 12	Deep, New Britain Felt:- Kandrian Int. 2 (M.M.) $06^{\circ}15'\text{S}$, $149^{\circ}35'\text{E}$. Linga Linga Int. 1-2(MM) $05^{\circ}35'\text{S}$, $149^{\circ}45'\text{E}$.
9th	eP i! eS	Z	11	15	20 22 16 14	U.S.C.G.S. $5\frac{1}{2}^{\circ}\text{S}$, 147°E . Near North coast of New Guinea H = 11 13 56 h about 150 km. Magn. $6\frac{1}{2}$ (Matsushiro) Felt:- Lae Int. 4 (M.M.) $06^{\circ}45'\text{S}$, 147°E . Way Int. 4 (M.M.) $07^{\circ}20'\text{S}$, $146^{\circ}45'\text{E}$. Bundi Int. 4 (M.M.) $05^{\circ}40'\text{S}$, $145^{\circ}15'\text{E}$. Port Moresby Int. 4(M.M.) $09^{\circ}28'\text{S}$, $147^{\circ}08'\text{E}$. Saidor Int 2 (M.M.) $05^{\circ}35'\text{S}$, $146^{\circ}30'\text{E}$. Goroka Int. 2-3 (M.M.) $06^{\circ}05'\text{S}$, $145^{\circ}25'\text{E}$. Kundiawa Int. 3 (M.M.) $06^{\circ}00'\text{S}$, 145°E . Wasu Int 4 (M.M.) $06^{\circ}00'\text{S}$, $147^{\circ}15'\text{E}$. Mumeng Int 2 (M.M.) $07^{\circ}00'\text{S}$, $146^{\circ}35'\text{E}$. Kaiapit Int 3 (M.M.) $06^{\circ}15'\text{S}$, $146^{\circ}15'\text{E}$. Kainantu Int. 4 (M.M.) $06^{\circ}15'\text{S}$, $145^{\circ}50'\text{E}$. Awelkon Int 2 (M.M.) (Umboi Is.) $05^{\circ}40'\text{S}$, $147^{\circ}50'\text{E}$.
	e	Z	14	12	32	
	i(P) i	Z	17	51	22 31 $\frac{1}{2}$	U.S.C.G.S. $44\frac{1}{2}^{\circ}\text{N}$, 85°E . Sinkiang Province, China. H = 17 39 24 Magn. 6.1 (Roma, Quetta) 6 (Kew) $5\frac{1}{2}$ (Moskva) B.C.I.S. 45°N , 85°E . H = 17 39 29 Moskva 45°N , 85°E . H = 17 39 30

9th contd	iP!	Z	19	44	53 $\frac{1}{2}$	Dilatation from South- South-East. Deep.	
	i	Z		45	25		
	iP	Z	21	17	58	Deeper than normal.	
	i!	Z		18	59		
	e(S)	Z		18	(41)		
	eP	Z	21	42	11	B.C.I.S. 7°S., 130°E. Banda Sea. H = 21 37 34	
10th.	e(P)	Z	15	10	(53)	Felt:- Lumi Int 3 (M.M.) 03°30'S., 141°55'E.	
	i	Z		11	22		
11th	eP	Z	13	25	46	U.S.C.G.S. 23 $\frac{1}{2}$ °S., 177°W. Tonga Is. region. H = 13 18 47 Magn. 6 $\frac{1}{4}$ (Matsushiro) Δ 35°30	
	iPP	Z		27	26		
	i	Z			42		
	isPP	Z			55 $\frac{1}{2}$		
	ePcP	Z		28	15		
	i	Z			45		
	eScP	Z		31	42		
	eScS	Z		35	46		
12th	e	Z	08	00	03	Dilatation from S.E.	
	iP	Z	12	22	26 $\frac{1}{2}$		
	e(P)	Z	15	14	56		
	i	Z		15	01		
13th.	iP	Z	00	12	22	U.S.C.G.S. 52 $\frac{1}{2}$ °N., 177°E. Rat Is., Aleutian Is. h about 100 km. H = 00 02 24 H = 00 02 23 (Moskva)	
			Dilatation				
	eP	Z	02	58	11	U.S.C.G.S. 11°S., 166°E. Santa Cruz Is. h about 100 km. H = 02 54 37 Magn. 6 $\frac{1}{4}$ (Matusuhiro).	
	i	Z			21		
	i	Z	03	00	13		
	e(S)	Z			58		
		e(ScS)	Z		10	29	
	eP	Z	13	27	11	U.S.C.G.S. 27 $\frac{1}{2}$ °N., 130°E. Ryukyu Is. H = 13 19 49	
	i	Z			12		
	e	Z			37		
	e	Z		32	20		
	eP	Z	20	24	45	U.S.C.G.S. 11 $\frac{1}{2}$ °N., 92 $\frac{1}{2}$ °E. Andaman Is. H = 20 14 27 H = 20 14 34 Magn. 6.3 (Quetta) 6 (Matsushiro) Moskva 12°5'N., 95°5'E. H = 20 14 34	
	i	Z		25	04 $\frac{1}{2}$		
e	Z		27	32			
e	Z		29	25			
14th.	iP	Z	01	03	08	U.S.C.G.S. 22°S., 175°W. Tonga Is. H = 05 54 48 Magn. 5 $\frac{3}{4}$ -6 (Matsushiro)	
	e(P)	Z	06	02	(01)		
	iP	Z	07	27	07		
	i	Z		29	21		
	e	Z		32	37		
	e	Z	10	13	26	U.S.C.G.S. 29°S., 179°W. Kermadec Is. H = 07 20 25 h about 350 km.	

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14th contd.	iP	Z	14	35	26 $\frac{1}{2}$	B.C.I.S. 11 $\frac{1}{2}$ ^o S., 165 ^o E. Santa Cruz Is. H = 14 31 12
	iP e(S)	Z Z	15	04 07	16 18	U.S.C.G.S. 12 $\frac{1}{2}$ ^o S., 167 ^o E. Santa Cruz Is. H = 15 00 14
15th.	iP	Z	10	07	04	Felt:- Awelkon Int.2" (M.M.) (Umboi Is.) 05 ^o 40'S., 147 ^o 50'E.
	i	Z			06	
	i	Z		08	17	
	e	Z	19	33	25	U.S.C.G.S. 16 $\frac{1}{2}$ ^o S., 71 $\frac{1}{2}$ ^o W. Sth. Peru. Extensive damage to property, 21 killed, 90 injured h about 100 km. H = 19 14 29 Mag. 7 $\frac{1}{4}$ -7 $\frac{1}{2}$ (Praha), 7.3 (Uppsala) (Kiruna); 7 $\frac{1}{4}$ (Matsushiro); 7 $\frac{1}{4}$ (Kew), 7(Pasadena), 7(Moskva Roma); 6 $\frac{3}{4}$ (Berkeley); 6.7 (Wellington) - = C132 $\frac{1}{2}$ ^o
	i(PKP)	Z			35 $\frac{1}{2}$	
	i	Z			42	
	i	Z		34	02	
	e(SKP)	Z		36	55	
	e	Z		46	44	
	e(SS)	Z		49	50	
eP	Z	22	19	54	U.S.C.G.S. 13 $\frac{1}{2}$ ^o S., 167 ^o E. New Hebrides Is. H = 22 15 44 Mag. 6 $\frac{1}{2}$ (Uppsala, Kiruna, Kew); 6.37 (Roma) 6 $\frac{1}{4}$ -6 $\frac{1}{2}$ (Matsushiro)= - = 18 ^o .	
i	Z		22	10		
i	Z		23	12		
eS	Z			31		
eScP	Z		28	10		
eScS	Z		31	37		
16th	iP	Z	04	23	13	U.S.C.G.S. 16 ^o S., 175 ^o W. Tonga Is. region. h about 250 km. H = 04 16 46
	eP	Z	11	07	42	U.S.C.G.S. 14 ^o S., 167 ^o E. New Hebrides Is. H = 11 03 32 Mag. 6 (Matsushiro)
	e	Z		08	51	
e	Z		11	09		
	eP	Z	18	50	43	
	e	Z		51	12	
17th.	iP	Z	04	19	36	U.S.C.G.S. 1 ^o S., 127 ^o E. Spice Is. H = 04 14 02 Mag. 6-6 $\frac{1}{4}$ (Matsushiro)
	i	Z		20	11	
	eP	Z	07	24	20	U.S.C.G.S. 52 ^o S., 139 $\frac{1}{2}$ ^o E. Antartic Ocean. H = 07 15 38 Mag. 6 $\frac{1}{2}$ - 6 $\frac{3}{4}$ (Matsushiro)
18th	ePKP	Z	15	33	59	U.S.C.G.S. North of Tristan Da Cunha. H = 15 14 26
	iP i	Z Z	19	25	19 $\frac{1}{2}$ 23	U.S.C.G.S. 6 ^o S., 155 ^o E. h about 100km. H = 19 24 30 Felt:- Karoola Int 2 (M.M.) 05 ^o 10'S., 154 ^o 35'E. Buin Int 2 (M.M.) 06 ^o 50'S., 155 ^o 45'E. Argpa Int. 2 (M.M.) 06 ^o 25'S., 155 ^o 50'E.

19th.	eP i	Z Z	14 C.B.M.	26 42	(29)	U.S.C.G.S. $1\frac{1}{2}^{\circ}$ S., $79\frac{1}{2}^{\circ}$ W. Near coast of Ecuador. 14 killed, many injured, extensive property damage at Las Esmeraldas, Las Palmas and Guayaquil. Seismic Sea Wave damage, Las Esmeraldas and Guayaquil. h about 60km. H = 14 07 27 Mag. $7\frac{3}{4}$ (Praha, Lwiro); $7\frac{1}{2}$ - $7\frac{3}{4}$ (Matsushiro) $7\frac{1}{2}$ (Pasa, Roma, Moskva, Shillong); 7.3 (Kew, Reykjavik, Uppsala, Kiruma) 6.9 (Quetta.)
	ePKP	Z	15 C.B.M.	02	(32)	U.S.C.G.S. $1\frac{1}{2}^{\circ}$ S., $79\frac{1}{2}^{\circ}$ W. Near coast of Ecuador. Slight damage in Nth, Ecuador. h about 60 km. H = 14 43 24. Mag. 7.2 (Praha); $6\frac{3}{4}$ (Kew) 6.8 (Quetta) $6\frac{3}{4}$ (Pasa.).
20th.	Strong microseismic activity.					
	iP	Z	03	34	13.1	Felt:- Awelkon Int 2 (M.M.) $05^{\circ}40'S.$, $147^{\circ}50'E.$
21st.	iP i! i! i i i	Z Z Z Z Z Z	16	50 51 52	27 28 14 23 47 05	Deep?
22nd	eP i i i e e(L)	Z Z Z Z Z Z	18	36 37 38	37 $48\frac{1}{2}$ 55 22 17 42.8	U.S.C.G.S. 23° N., $121\frac{1}{2}^{\circ}$ E. Near east coast of Formosa. h about 200km. H = 18 29 11 Felt. Taipei.
23rd.	eP i	Z Z	02 C.B.M.	43 28	(12)	U.S.C.G.S. $44\frac{1}{2}^{\circ}$ N., $146\frac{1}{2}^{\circ}$ E. Kurile Is. h about 150km. H = 02 34 09 Felt:- J.M.A. Japan. Mag. 6- $6\frac{1}{4}$ (Matsushiro)
	iP i	Z Z	08	57 58	15 35	U.S.C.G.S. $18\frac{1}{2}^{\circ}$ S., 170° E. New Hebrides Is. h about 150km. H = 08 52 23
	eP e	Z Z	16	28 30	16 34	B.C.I.S. Sth Pacific discordant data.
24th	No records.					
25th	eP e e e(L)	Z Z Z Z	00 C.B.M.	00 03 08 11	(40) 40 39 00	U.S.C.G.S. $17\frac{1}{2}^{\circ}$ S., $178\frac{1}{2}^{\circ}$ W. Fiji Is. h about 550 km. H = 23 53 29 Mag. $6\frac{1}{4}$ (Matsushiro)
	eP eL	Z Z	00	44 47	(26) 00	
	eP eL	Z Z	01	02 $04\frac{1}{2}$	(02)	

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25th.	e	Z	06	53	27	
contd.	e	Z	22	15	50	
26th.	e	Z	07	37	57	U.S.C.G.S. $49\frac{1}{2}^{\circ}\text{N.}, 155^{\circ}\text{E.}$ Nth. Kurile Is. H = 07 28 33 Mag. $5\frac{3}{4}$ (Matsushiro)
	eP	Z	13	36	23	
	i	Z			24	
	e	Z	18	02	59	B.C.I.S. $18\frac{1}{2}^{\circ}\text{S.}, 167^{\circ}\text{E.}$ New Hebrides H = 17 58 20
	i	Z		03	07	
	e	Z		04	34	
27th	i(P)	Z	07	50	55	U.S.C.G.S. $15^{\circ}\text{S.}, 174^{\circ}\text{W.},$ Samoa Islands. H = 07 43 58 Mag. $6\frac{3}{4}$ (Pasadena); $6\frac{1}{2}$ (Berkeley); $6\frac{1}{2}$ (Kew); 6- $6\frac{1}{4}$ (Matsushiro); 6, (1) (Roxburgh); 6.0 (Wellington)
	i	Z		51	12	
	e	Z		52	06	
	e	Z		53	32	
	eP	Z	08	53	51	U.S.C.G.S. $8^{\circ}\text{S.}, 155^{\circ}\text{E.}$ Solomons Is. h about 200 km. H = 08 52 42 Felt:- Aropa Int 2 (M.M.) $06^{\circ}25'\text{S.}, 155^{\circ}50'\text{E.}$
	iS	Z			56	
	eP	Z	09	03	45	Felt:- Aropa Int 2 (M.M.) $06^{\circ}25'\text{S.}, 155^{\circ}50'\text{E.}$
	i!	Z			52	
	i!	Z		04	57	
	e	Z	11	08	04	
28th	eP	Z	18	11	15	
	i	Z			17	
	e(P)	Z	19	46	33	U.S.C.G.S. $03\frac{1}{2}^{\circ}\text{N.}, 127^{\circ}\text{E.}$ Molucca Passage. H = 19 41 54 Mag. 5 (Matsushiro)
	e	Z			51	
	eP	Z	19	54	53	
	i	Z			57	
	i	Z		56	01	
29th.	eP	Z	11	15	49	Felt:- Buin Int 4 (M.M.) $06^{\circ}50'\text{S.}, 155^{\circ}45'\text{E.}$ Aropa Int 2 (M.M.) $06^{\circ}25'\text{S.}, 155^{\circ}50'\text{E.}$
	i	Z		16	55	
30th	iP	Z	06	14	42	U.S.C.G.S. $7\frac{1}{2}^{\circ}\text{S.}, 155\frac{1}{2}^{\circ}\text{E.}$ Solomons Is. H = 06 13 24 Moskva $9^{\circ}\text{S.}, 157\frac{1}{2}^{\circ}\text{E.}$ H = 06 1 20 Mag. $6\frac{1}{2}$ (Pasadena, Uppsala, Kiruna, Wellington, Kew); 6.45 (Roma); 6.4 (Quetta); $6\frac{1}{4}$ - $6\frac{1}{2}$ (Matsushiro) 6.1 (Roxburgh) Felt:- Buin Int 2 (M.M.) $06^{\circ}50'\text{S.}, 155^{\circ}45'\text{E.}$ Aropa Int 1-2 (M.M.) $06^{\circ}25'\text{S.}, 155^{\circ}50'\text{E.}$
	iP	Z	07	19	05	Felt:- Aropa Int 1 (M.M.) $06^{\circ}25'\text{S.}, 155^{\circ}50'\text{E.}$

30th. contd.	eP	Z	08	12	25	Felt:- Arapa Int (M.M.) 06°25'S., 155°50'E.
	i!	Z			26	
	i	Z		13	31	
	iP	Z	14	03	32	B.C.I.S. Insufficient data. Epicentre probably in Aleutian I. Islands.
	iP!	Z	15	07	29	B.C.I.S. insufficient data Felt :- Rabaul Int 3-4 (M.M.) 04°10'S., 152°10'E.
	eP	Z	18	51	52	B.C.I.S. Insufficient data.
	i	Z			53	
	eP	Z	19	00	17	B.C.I.S. Insufficient data
	i	Z			18	
31st.	iP	Z	06	40	28	U.S.C.G.S. 44½°N., 153°E. Kurile Is. region. H = 06 22 35
	iP	Z	07	47	10	Local
	iP!	Z	12	45	36	Compression from S.W. Deep. Local
	iP	Z	18	06	42	Local

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1st.	e	Z	14	35	00	
	ePKP	Z	16	29	10	U.S.C.G.S. 2°N., 79°W.
	i	Z			23	Near coast of Ecuador. H= 16 10 15 Felt:- Esmeraldas Mag. 7(Praha) 6 $\frac{3}{4}$ -7 (Pasadena, Berkeley, Matsushiro Shillong); 6.8(Kew) 6.7(Quetta) 6 $\frac{1}{2}$ (Moskva, Tacubaya); 6.4(Reykjavik)
	ePKP	Z	18	21	47	U.S.C.G.S. 2°N., 79°W. Ecuador
	i	Z			56	after shock H= 18 02 39
	e	Z		25	04	Felt:- Esmeraldas
	e	Z	19	37	51	B.C.I.S. 10 $\frac{1}{2}$ °N., 121 $\frac{1}{2}$ °E. Near S.W. Coast of Panay P.I. H = 19 31 31
	ePKP	Z	21	04	53	U.S.C.G.S. 1 $\frac{1}{2}$ °N., 79°W. Ecuador
	i	Z		07	09	after shock H = 20 45 45 Mag: 6 $\frac{3}{4}$ (Pasadena) 6.5(Tacubaya) 6 $\frac{1}{2}$ (Berkeley); 6 $\frac{1}{4}$ -6 $\frac{1}{2}$ (Kew) 6.3 (Quetta); 6 $\frac{1}{4}$ (Matsushiro)
	eP	Z	22	01	31	U.S.C.G.S. 7°S., 156°E.
	i!	Z			38	Solomons Is. H = 22 00 15
2nd.	iP	Z	08	21	06	U.S.C.G.S. 48 $\frac{1}{2}$ °N., 154 $\frac{1}{2}$ °E. Northern Kurile Is. H = 08 11 53 JMA Japan 47°N., 155°E. h about 60 H = 08 12 03 (km.) Moskva H = 08 11 58 Mag. 6 $\frac{1}{2}$ -6 $\frac{3}{4}$ (Pasadena); 6 $\frac{1}{4}$ (Matsushiro) 5 $\frac{1}{2}$ (Moskva)
	e(PKP)	Z	09	08	32	U.S.C.G.S. 2°N., 79°W. Ecuador after shock. H = 08 49 13
	i	Z	21	00	26	U.S.C.G.S. 27 $\frac{1}{2}$ °N., 127°E. Ryukyu Is. region. h about 200km H = 20 53 08
3rd.	iP	Z	00	47	00	
	i	Z			43	Deep.
	eP	Z	20	12	47	
	i	Z		13	06	
	i	Z			57	
4th.	eiP	Z	00	03	13	U.S.C.G.S. 6 $\frac{1}{2}$ °S., 155°E. Solomons Is. H = 00 02 16 Felt:- Kargoola Int 3 (M.M.) 05°10'S., 154°35'E. Buin Int 1-2 (M.M.) 06°50'S., 155°45'E.
	iP	Z	02	20	48	U.S.C.G.S. 6°S., 131 $\frac{1}{2}$ °E. Banda Sea. H = 02 16 00
	eiP	Z	12	41	54	U.S.C.G.S. 7°S., 156°E. Solomons Is. H = 12 40 27

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5th.	e	Z	08	17	21	U.S.C.G.S. 47°N. , 153°E. Kurile Is. H = 08 08 10 JMA Japan h about 60km. H = 08 08 20 Mag. $5\frac{1}{2}$ - $5\frac{3}{4}$ (Matsushiro); 5 (Moskva).
6th.	iP!	Z	10	00	46	Compression
	i	Z			54	
	e(P)	Z	16	06	57	U.S.C.G.S. $27\frac{1}{2}^{\circ}\text{S.}$, 178°W.
	i	Z			59	Kermadec Is. region. h about 250km.
	e	Z		08	12	H = 16 00 12
	e	Z		12	43	Possibly overlapping shocks.
7th.	iP	Z	01	17	43	U.S.C.G.S. 31°S. , 179°W.
	i	Z		20	05	Kermadec Is. H = 01 10 31
	e	Z		23	31	
	iP	Z	07	07	24	U.S.C.G.S. $27\frac{1}{2}^{\circ}\text{N.}$, $128\frac{1}{2}^{\circ}\text{E}$ Ryukyu Is. H = 06 59 53 Moskva H = 06 59 56 JMA Japan 27°N. , $129\frac{1}{2}^{\circ}\text{E}$, (Felt). H = 06 59 55
	iP	Z	10	20	47	Compression, Deep.
	iP	Z	23	33	29	U.S.C.G.S. $31\frac{1}{2}^{\circ}\text{N.}$, 104°E Szechwan Province, China 3 injured, 20 houses destroyed in Mowhsien (News) H = 23 23 30 Moskva 32°N. , 104°E . H = 23 23 35 Shillong 32°N. , 103°E . H = 23 23 35
						Dilatation
8th.	iP	Z	15	39	23	
	i	Z			41	
	i	Z			44	
	i(S)	Z			54	
9th.	iP	Z	17	00	04	
	i	Z			09	
	iP	Z	22	36	21	U.S.C.G.S. $12\frac{1}{2}^{\circ}\text{N.}$, 121°E . Mindoro, P.I. H = 22 29 23 Shillong 13°N. , 121°E . H = 22 29 21 Mag. 6 (Matsushiro, Uppsala, Kikuna, Kew); $5\frac{1}{2}$ (Moskva).
						confused by microseisms
10th.	e	Z	14	48	$51\frac{1}{2}$	U.S.C.G.S. 26°N. , $142\frac{1}{2}^{\circ}\text{E}$. Volcano Is. H = 14 42 30 B.C.I.S. 26°N. , $142\frac{1}{4}^{\circ}\text{E}$. H = 14 42 32
	iP!	Z	19	20	$21\frac{1}{2}$	Dilatation to E.S.E. Felt:- Rabaul Int 1-2 (M.M.) $04^{\circ}10'\text{S.}$, $152^{\circ}10'\text{S.}$ Warangoi Int 1-2 (M.M.) $04^{\circ}30'\text{S.}$, $152^{\circ}20'\text{E}$.
11th.	iP	Z	20	06	29	U.S.C.G.S. 1°S. , $121\frac{1}{2}^{\circ}\text{E}$. Clelbes. H = 20 00 09 B.C.I.S. $\frac{1}{2}^{\circ}\text{S.}$, 122°E . H = 20 00 14

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contd.

- 12th. iP Z 02 38 29 U.S.C.G.S. $13\frac{1}{2}^{\circ}\text{N.}, 144^{\circ}\text{E.}$
Mariana Is. h about 150 km.
H = 02 34 14 Felt:- Guam $\Delta = 19^{\circ}32'$.
- iP! Z 06 35 28 $\frac{1}{2}$ U.S.C.G.S. $5^{\circ}\text{S.}, 151\frac{1}{2}^{\circ}\text{E.}$
Dil. to S.S.W. New Britain h about 60km., H = 06 34 59
Felt:- Rabaul Int 4 (M.M.)
 $04^{\circ}10'\text{S.}, 152^{\circ}10'\text{E.}$
Warangoi Int 2-3 (M.M.)
 $04^{\circ}30'\text{S.}, 152^{\circ}20'\text{E.}$
Ulamona Int 1 (M.M.)
 $05^{\circ}00'\text{S.}, 151^{\circ}15'\text{E.}$ $\Delta = 01^{\circ}48'$.
- iP! Z 07 22 00 U.S.C.G.S. $5\frac{1}{2}^{\circ}\text{S.}, 151\frac{1}{2}^{\circ}\text{E.}$
Dil. to S.S.W. New Britain h about 60km.
H = 07 21 37
Felt:- Rabaul Int 3 (M.M.)
 $04^{\circ}10'\text{S.}, 152^{\circ}10'\text{E.}$
Warangoi Int 2-3 (M.M.)
 $04^{\circ}30'\text{S.}, 152^{\circ}20'\text{E.}$
Ulamona Int 1 (M.M.)
 $05^{\circ}00'\text{S.}, 151^{\circ}15'\text{E.}$
- iP Z 23 39 58 U.S.C.G.S. $43\frac{1}{2}^{\circ}\text{N.}, 145\frac{1}{2}^{\circ}\text{E.}$ Near East
Coast of Hokkaido, Japan. H = 23 31 21
JMA Japon $42^{\circ}08'\text{N.}, 145^{\circ}07'\text{E.}$
h about 70km. H = 23 31 28 $\Delta = 48^{\circ}05'$
Felt:- Nemuro and Kushiro.
- 13th. iP Z 05 06 52 $\frac{1}{2}$
Dil. to N.E.
- iP Z 06 08 48
Compression.
- 14th. eP Z 11 57 (07)
- 15th. iP Z 01 55 23 $\frac{1}{2}$ U.S.C.G.S. $44^{\circ}\text{N.}, 147^{\circ}\text{E.}$ Kurile Is.
i Z 36 $\frac{1}{2}$ H = 01 46 40
Moskva $44^{\circ}\text{N.}, 146^{\circ}\text{E.}$ H = 01 46 50
JMA Japon $43^{\circ}5'\text{N.}, 147^{\circ}7'\text{E.}$
H = 01 46 43
Felt:- Nemuro, Kushiro.
Mag. 6.4 (Upp., Kiruna); 6.3 (Quetta)
6-6 $\frac{1}{4}$ (Pas.) 6 (Moskva, Matsushiro).
- 16th. eP Z 06 12.6
Confused by microseisms.
U.S.C.G.S. $39^{\circ}\text{N.}, 142^{\circ}\text{E.}$ Near coast
of Honshu, Japan. H = 06 04 05
JMA Japan $38^{\circ}5'\text{N.}, 142^{\circ}\text{E.}$ h about 60km.
H = 06 04 08.
Felt:- Ishinomaki, Mizusawa, Onahama,
Kakioka, Hachinohe, Mito, Utsunomiya
and Tokyo. Moskva H = 06 04 07.
Mag., 6.4 (Mats); 6.3 (Upp., Kiruna);
6-6 $\frac{1}{4}$ (Pas. Kew.) 6 (Moskva) 5.8 (Roma)
- iP Z 07 46 55 $\frac{1}{2}$ U.S.C.G.S. $17^{\circ}\text{N.}, 146^{\circ}\text{E.}$ Mariana Is.
h about 200 km. H = 07 42 11
Benioff not recording from 2350 hrs to 2359 hrs.
Initial phases of earthquake during this period not
recorded.

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- 17th. iP Z 00 52 13
Dilatation
B.C.I.S. 7°S., 147°E.
Near northwest Coast of New Guinea.
H = 00 50.9
Felt: Kaiarit Int 3 (M.M.)
06°15'S., 146°15'E.
Bulolo Int 3 (M.M.)
07°10'S., 146°35'E.
Mumeng Int 1 (M.M.)
07°00'S., 146°35'E.
- iP Z 05 30 56½
Confused by Microseisms
U.S.C.G.S. 35½°N., 70°E.
Hindu Kush.
h about 200 H = 05 18 35
B.C.I.S. 36°5'N., 70°5'E.
h about 220 H = 05 18 44
Moskva 36°N., 71°E.
h about 200 H = 05 18 38
Shillong 37½°N., 70½°E.
h about 200 H = 05 18 33
Quetta 36½°N., 71½°E.
h about 200.
Mag. Mat 6¼-6½; Upp 6.7; Kir 6.7; Kew 6½;
Que 6.9; Pra 6¾.
- 18th. eP Z 07 03 (26)
eL Z 05.1
eP Z 07 41 16
U.S.C.G.S. 21°S., 173½°W.
Tonga Is.
H = 07 34 07
Mag. Mat. 5¾. Δ = 37°25'.
- e(P)Z 13 28 (38)
U.S.C.G.S. 31°S., 178½°W.
Karmadec Is.
H = 13 21 20
Mag. Mat 5½-5¾
- eP Z 19 15 43
i Z 16 04½
U.S.C.G.S. 21°N., 120°E.
Off south coast of Formosa.
H = 19 08 05
Mag, Mat 5-5¼ Δ = 40°25'
- iP Z 19 56 18
U.S.C.G.S. 20½°N., 120°E.
H = 19 48 43
Mag. Mat 6; Mos 6;
- eP Z 20 10 00
i! Z 08
eL Z 11.6
U.S.C.G.S. 3°S., 147½°E.
Bismarck Sea.
H = 20 08 44
Mag. Mat 6¼-6½ Δ = 04°47'.
- eP Z 21 18 02
eL 19.8
- e(P)Z 23 04 00
eL 04.8
Confused by Microseisms.
- 19th. iP! Z 08 08 15
Confused by microseisms
- eP Z 19 33 (35)
i Z 34 17
Confused by microseisms
B.C.I.S. 8¼°S., 107¼° E.
Near south coast of Java.
H = 19 25 20
Mag. Mat 6-6¼; Mos 5¾; Que 6.6:

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20th.	eP	Z	07	22	45.2	Dilatation
	iP	Z	14	40	18 $\frac{1}{2}$	
	i	Z			21	
	iP	Z	14	50	08	
	i	Z		51	53	Overlapped by following shock.
	iP	Z	15	00	09	
	i	Z			27.6	
	i	Z	17	31	31.7	
21st.	iP	Z	01	35	54	
	iP	Z	10	05	40.4	Comp. from S.S.E
			Felt:- Warangoi Int 2-3 (M.M.)			
			<u>04°30'S., 152°20'E.</u>			
22nd.	iP	Z	08	13	08.7	Comp.
			U.S.C.G.S. 6°S., 147°E.			
			h about 200 km. H = 08 11 50			
			Near North coast of New Guinea			
			Felt:- Saidor Int 1 (M.M.)			
			05°35'S., 146°30'E.			
			Mumeng Int 2 (M.M.)			
			07°00'S., 146°35'E.			
			Wau Int 2 (M.M.)			
			07°20'S., 146°45'E.			
			Mag. Mat 5-5 $\frac{1}{2}$			
	iP	Z	11	00	40	U.S.C.G.S. 50 $\frac{1}{2}$ °N., 175°W.
			Andreanof Is. H = 10 50 23			
			Moskva 50 $\frac{1}{2}$ °N., 175°W.			
			H = 10 50 24			
			Mag. Mat 6 $\frac{1}{4}$ -6 $\frac{1}{2}$; Upp, Kir, 7.2;			
			Kew 6 $\frac{3}{4}$; Mos 6 $\frac{1}{4}$; Shl 6 $\frac{3}{4}$ -7; Pas			
			6 $\frac{3}{4}$; Pra 7; Rey 6.8. $\Delta = 62^\circ$			
	eP	Z	13	32	02	U.S.C.G.S. 50 $\frac{1}{2}$ °N., 175°W.
			Andreanof Is. Aleutian Is.			
			H = 13 21 48			
			B.C.I.S. 50 $\frac{1}{2}$ °N., 175°W.			
			H = 13 21 48			
	eP	Z	13	41	24	Comp.
	iP	Z			24 $\frac{1}{2}$	Bismarck Sea. H = 13.40.7
	iP	Z	23	51	35	Comp.
	i	Z			36	
	iP!	Z	23	54	01	(foreshock)
			Superimposed on previous shock./			
			New Britain - Solomon Is. region			
23rd.	iP!	Z	00	25	04	Dilatation
	i!	Z			05 $\frac{1}{2}$	U.S.C.G.S. 6°S., 153°E.
			New Britain - Solomons Is. region.			
			H = 00 24 34			
			Felt:- Ulamona Int 1 (M.M.)			
			05°00'S., 151°15'E.			
			Warangoi Int 1 (M.M.)			
			04°30'S., 152°20'E.			
	eP	Z	08	35	15	
	i	Z			38	
	i				40	

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28th. Contd.

e(P)	Z	19	14	47
e	Z		15	17
iP	Z	20	18	04
e	Z	20	38	25

B.C.I.S. insufficient data.

B.C.I.S. 18° S., 168° E.
New Hebrides. H = 20 33.7

Compiled by G.W.D'Addario

C.D.Branch
Vulcanologist.

FINAL BULLETIN

1st.	iP	Z	00	15	57	
	i	Z		16	03	
	i	Z			39.4	
	iP	Z	16	22	51	U.S.C.G.S. 17°S., 173°W. Tonga Island region. H = 16 16 01
2nd.	Nil					
3rd.	iP	Z	01	59	13	Near E.Coast of New Guinea. B.C.I.S. 8°S., 149°E. H = 01 58.1 Felt:- Mumeng Int.2 M.M. 07°00S; 146°35E.
	eP	Z	04	10	40.3	U.S.C.G.S 14½°S., 168½°E.
	i	Z			46	New Hebrides Is.
	e	Z	07	30	25½	U.S.C.G.S. 23½°N., 122°E. Near E.coast of Formosa H = 07 22 42 Moskva H = 07 22 41 Mag. Mats 5¼-5½; Que 5.9
	iP	Z	16	28	30	U.S.C.G.S. 55½°N., 166½°E. Komandorskie Is. H = 16 18 17 Mag. Mats 6¼, Upp, Kir, 6.4; Roma 5¾, Mos 5¾, Pas 6¼-6½, Que 6.5;
	iP	Z	17	43	01	U.S.C.G.S. 55½°N., 166°E. Kcrandorshie Is. H = 17 32 47 Moskva H = 17 32 49
4th.	iP	Z	17	55	54½	U.S.C.G.S. 27°N., 130°E. Rioukiou Is. H = 17 48 35
5th.	i(P)	Z	16	59	07½	1½°N., 123°E. Celebes. H = 16 53 06.
6th.	Nil					
7th.	e(P)	Z	17	37	(28)	U.S.C.G.S. 20°S., 176°W. Tonga Is. H = 17 30 38
8th.	eP	Z	18	07	43	Near N.coast of New Guinea.
	i	Z			46	B.C.I.S. 6°S., 147°1/3E.,
	i!	Z			48	H = 18 06 30
	i	Z			54	
	i	Z		08	42	
	i	Z		09	00	
	i	Z			20	
	eP	Z	18	48	55	Near N.E. coast of New Guinea. B.C.I.S. 6°S., 148½°E. H = 18 47 42
9th.	eP	Z	07	25	00	U.S.C.G.S. 6½°S., 148°E. H = 07 23 51
	i	Z			03	Near N.coast of New Guinea.
	iS	Z		26	00	Mag. Mat 5¾. Felt:- LongaLinga Int 1-2 M.M. 05°32'S., 149°45'E. Angoram Int 2 M.M. 04°05'S., 144°05'E.
	iP	Z	10	29	58 ^D	U.S.C.G.S. 34°S., 178½°W.
	i	Z		31	43	Kermadec Is. region H = 10 22 25

9th.Contd. continuation of previous shock.

	e	Z	10	35	41	h about 60
	eS	N			52	Wellington $33\frac{3}{4}^{\circ}$ S., 179° W. H = 10 22 32 Mag. Mat $6\frac{1}{2}$ - $6\frac{3}{4}$; Kew 6.5; Wel $6\frac{1}{2}$, Pas $6\frac{1}{2}$ - $6\frac{3}{4}$.
	iP	Z	11	29	$01\frac{1}{2}$	
	i	Z			$05\frac{1}{2}$	U.S.C.G.S. 2° N., 129° E. Halmahera Is region. H = 11 23 19.
10th.	eP	Z	06	47	14	
	eS				35	
	eP	Z	11	42	56	
	e	Z		43	09	
	iP	Z	14	50	09	
	i	Z		50	44	
	i	Z		52	32	
	iP	Z	15	07	37.5	
	i	Z			46	
	e(S)	Z			(51)	
	iP	Z	16	14	$30\frac{1}{2}$	
	eS	Z			41	
	eP	Z	17	34	54	Central Ryukyu Is. H = 17 27 20 B.C.I.S. $27\frac{3}{4}^{\circ}$ N., $128\frac{1}{2}^{\circ}$ E. H = 17 27 27
	iP	Z	18	37	27	
	e(P)	Z	18	51	31	Solomon Is. region. B.C.I.S. $9\frac{1}{2}^{\circ}$ S., $156\frac{1}{3}^{\circ}$ E. H = 18 48.8
	e				43	
	iP	Z	19	05	31 D	
	iS	Z			56	
	e	Z	21	44	19	
11th.	iP!	Z	00	13	58	Dilatation to South. Felt:- Warangoi Int 2 (M.M.) $04^{\circ}30'S.$, $152^{\circ}20'E.$ Keravat Int 2 (M.M.) $04^{\circ}15'S.$, $152^{\circ}00'E.$ Rapaoul Int 1 (M.M.) $04^{\circ}10'S.$, $152^{\circ}10'E.$
	iP	Z	00	33	29	U.S.C.G.S. $25\frac{1}{2}^{\circ}$ N., 125° E.
	i	Z		35	24	Ryukyu Is. h about 60 H = 00 25 56
	i	Z			41	Moskva H = 00 25 49
	i	Z		36	22	J.M.A. Japan $24\frac{3}{4}^{\circ}$ N., $124\frac{1}{2}^{\circ}$ E.
	e(L)	Z		(47.5)		h about 80 H = 00 26 06
	irregular surface waves.					Several killed and many injured on Okinawa. Felt strongly on Miyako and Ishigaki, Aparri, Basco and Calayan (P.I.) and Taipe, Formosa. Mag. Mat 7.2, Upp, Kir 7.4, Kew $7\frac{1}{4}$ - $7\frac{1}{2}$, Mos. $7\frac{1}{2}$, Shi $7\frac{1}{4}$, Pas 7, Que 6.8, Pra 7.5, Oulan 7.5, Bator 7.5.
	eP	Z	05	28	42	
	iP	Z	05	38	$43\frac{1}{2}$	
	eP	Z	14	03	07	U.S.C.G.S. 13° S., 167° E. New Hebrides Is. H = 13 59 00
	iPP	Z			$26\frac{1}{2}$	Mag. Mat $5\frac{3}{4}$ -6.

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11th.contd. continuation of previous shock

	e(PPP)	Z	14	04	20	
	iPcP	Z		07	55	
	ScS	Z		15	08	
	iP	Z	14	57	12½	New Britain region. H = 14 56 46. Dilatation to S.W.
12th.	iP	Z	10	31	22½	
	iP!	Z	11	03	41	Compression
	iP	Z	12	10	55½	D.
	i	Z		11	04½	
	iP	Z	13	13	38½	
	i	Z			47	
	i	Z		14	07	
	eIP	Z	13	56	45	
	iP	Z	14	16	01½	
	iP	Z	14	42	00½	U.S.C.G.S. 20°11'N., 146°E. Mariana Is. H = 14 36 33
	iP	Z	15	06	18½	Compression
	iP	Z	17	04	43½	
	i	Z		05	09½	
	iP	Z	17	43	37	
	iP	Z	18	32	47½	
	iS	Z		33	(08½)	
	iP	Z	19	03	03	
13th	iP	Z	02	10	45	
	iS	Z		11	00	
	iP	Z	06	40	06	
	i	Z			14	
	iP	Z	06	54	32	
	iS	Z			36	
	iP	Z	11	18	02	
	eS	Z			22	
	iP	Z	12	05	05	
	iS	Z			24	
	iP	Z	17	42	33	
	iS	Z			47	
	eP	Z	19	46	28	
	eS	Z			55	
	iP	Z	21	12	55	
	i	Z		13	04	
14th.	e	Z	00	20	06	U.S.C.G.S. 25½°N., 96°E. Northern Burma H = 00 09 41

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14th.contd.

iP	Z	07	50	15
iP	Z	09	00	32
eP	Z	10	32	41
eP	Z	12	04	57
iP	Z			57½
iS	Z		05	17
eP	Z	12	39	47
eS	Z		40	07

15th.

iP	Z	00	31	39½
i	Z			46½
i	Z		33	09½

U.S.C.G.S. 23½°N., 122°E.
Near E coast of Formosa
H = 00 24 04
Mag. Mat 5¼-6, Upp, Kir 6.0, Mos 5½,
Oulan-Sator 5.8.

iP	Z	08	10	12
iS	Z			28

iP!	Z	12	32	20½
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Dilatation to N.W.
Felt:- Rabaul Int 1 (M.M.)
04°10'S, 152°10'E.

iP	Z	14	21	56½
i	Z		22	02½

iP	Z	14	28	43½
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iP	Z	17	53	37
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iP!	Z	19	06	35
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Dilatation to South.
U.S.C.G.S. 5°S., 152°E.
New Britain H = 17 06 10
Felt:- Rabaul Int 3 (M.M.)
04°10'S., 152°10'E.
Warangoi Int 3-4 (M.M.)
04°30'S., 152°20'E.
Ulamona Int 1-2 (M.M.)
05°00'S., 151°15'E.
Mag. Mat 5¼-5½.

iP	Z	20	00	08½
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eP	Z	21	52	48
iS	Z		53	05

16th.

iP	Z	01	05	58½
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iP	Z	03	17	41
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i(P)	Z	04	45	51
eS	Z		46	32

iPn	Z	11	58	58
iPg	Z		59	02
eSn	Z		59	23
i(Sg)	Z			27

Compression

eP	Z	14	42	37
i	Z			44
i	Z			53
iS!	Z			55½

17th

iP	Z	02	59	17½
i	Z			19½

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20th.contd.

iP	Z	22	35	07 $\frac{1}{2}$	
i	Z			17	
iS!	Z			25	
eP	Z	22	46	25	
iS!	Z		47	07 $\frac{1}{2}$	

21st.

iP	Z	10	03	17	
eS	Z			42	
eP	Z	13	24	19	
i	Z		25	09	
i	Z			40	
eP	Z	15	32	10	U.S.C.G.S. 4 $\frac{1}{2}$ ^o S., 143 ^o E.
iPP	Z			28	Northern New Guinea
iPPP	Z			35	H = 15 29 52.
S	N		34	17.5	
iP	Z	21	26	52	
iS	Z		27	07	

22nd

iP	Z	00	17	11	
iS	Z			19	
iP	Z	01	05	20	D. B.C.I.S. 1 ^o S., 127 ^o E. Molucca Sea H = 00 59 48 Mat 5 $\frac{1}{4}$ -5 $\frac{1}{2}$
iP	Z	10	21	58	U.S.C.G.S. 23 $\frac{1}{2}$ ^o N., 94 $\frac{1}{2}$ ^o E
i	Z		22	32	Burma-Pakistan border. (Felt)
i	Z			47.5	H = 10 11 27.
e	Z		24	20	Moskva h about 100 H = 10 11 37 *
					Quetta 24 ^o N., 93 $\frac{1}{2}$ ^o E. H = 10 11 40
					Mag. Mat 6 $\frac{1}{2}$, Upp 6.4, Kew 6,
					Kir 6.4, Pra 5 $\frac{3}{4}$.
					* Moskva 23 $\frac{1}{2}$ ^o N., 93 $\frac{1}{2}$ ^o E.
iP	Z	13	06	45	C.
iS!	Z		07	09	
eP	Z	13	26	23	
iS	Z			48	
eP	Z	14	07	48 $\frac{1}{2}$	B.C.I.S. 18 ^o S., 169 ^o E.
e	Z		09	03 $\frac{3}{2}$	New Hebrides. H = 14 03.3
eP	Z	14	42	51	
i(S)	Z		43	45	

23rd.

iP	Z	00	14	53	
iS	Z		15	25	
iP	Z	10	22	12	U.S.C.G.S. 18 ^o N., 120 ^o E.
i	Z			34	Near northwest coast of Luson. P.I.
					Felt:- Laoag. H = 10 14 42
					Moskva H = 10 14 46
					Mag. Mat 6, Mos 5 $\frac{1}{4}$.
eP	Z	10	25	35	
iP	Z	12	11	03	
i	Z		11	11	
i	Z			35	
e(P)	Z	18	58	58	
e	Z	19	00	(07)	
i	Z			12.5	

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24th.	e	Z	01	01.5		U.S.C.G.S. 21°S., 170 ¹ / ₂ °E. Loyalty Is. region H = 00 55 55
	eP	Z	08	12.7		B.C.I.S. New Hebrides region H = 08 07.2
25th.	e	Z	19	06	(49)	U.S.C.G.S. 17 ¹ / ₂ °S., 167 ¹ / ₂ °E. New Hebrides H = 19 01 52
Records confused by strong microseismic activity/						
26th	e	Z	00	33.3		U.S.C.G.S. Samar Is. P.I. h about 100, H = 00 25 49 Felt:- Surigao, Hinatuah.
						C.B.M.
27th.	eP	Z	13	58	02	
	i	Z			08 ¹ / ₂	
	i	Z			23	
	i	Z		59	10 ¹ / ₂	
	i	Z			16	
	i	Z			23	
	i	Z			55	
28th	iP!	Z	00	23	59D.	U.S.C.G.S. 6°S., 153°E. New Britain region H = 00 23 30 Felt:- Rabaul Int 1 (M.M.) 04°10'S., 152°10'E. Ulamona Int 1-2 (M.M.) 05°00'S., 151°15'E.
	eP	Z	12	18	40	U.S.C.G.S. 37°N., 71°E. Hindu Kush h about 200 H = 12 06 24
	e	Z		19	30	B.C.I.S. Nil, Moskva h about 200 H = 12 06 26.
	i	Z			43	J.M.A. Japan 37°N., 71°E. Shillong 37°N., 70°E. h about 200 H = 12 06 20
29th.	eP	Z	14	56	(49)	
	i	Z			55	
	i	Z		57	48	
30th.	Nil					
31st	Nil					

Compiled by G.W.D'Addario

C.D.Branch - Vulcanologist.

TERRITORY OF PAPUA AND NEW GUINEA

SEISMOLOGICAL OBSERVATORY

FINAL BULLETIN - APRIL 1958

1st.	iP	Z	02	13	41½	
	iP!	Z	11	38	40	U.S.C.G.S. Nil Compression
2nd.	iP!	Z	10	51	22½	U.S.C.G.S. 5½°S., 154½°E. Solomon Is. H = 10 50 42 Felt:- Rabaul Int 1 (M.M.) 04°10'S., 152°10'E.
	iP	Z	17	21	58	B.C.I.S. 6°S., 146°E. N.E. coast of New Guinea H = 17.20.26 Felt:- Kainantu Int2 (M.M.) 06°15'S., 145°50'E.
3rd.	e(P)	Z	16	10	42	
4th.	iP	Z	02	40	20.5	
	iP	Z	03	00	33.3	
	iS	E			53	
	iP!	Z	07	17	24.2	U.S.C.G.S. 5½°S., 152°E. H = 07 16 55 Felt:- Rabaul Int 3 (M.M.) Warangoi Int 4 (M.M.) 04°30'S., 152°20'E.
	iP!	Z	07	28	17.5	B.C.I.S. 5½°S., 152°E. Felt Rabaul Int 1 (M.M.) 04°10'S., 152°10'E.
	iP!	Z	07	30	23.5	U.S.C.G.S. 5½°S., 152°E. H = 07 29 55 Felt:- Rabaul Int 2 (M.M.) 04°10'S., 152°10'E. Warangoi Int 2 (M.M.) 04°30'S., 152°20'E. Ulamona Int 1-2 (M.M.) 05°00'S., 151°15'E.
	iP!	Z	07	56	25.2	Felt:- Rabaul Int 1 (M.M.) 04°10'S., 152°10'E.
	iP!	Z	14	44	20	B.C.I.S. 5½°S., 152°E. H = 14 43 53 Felt:- Rabaul Int 2 (M.M.) 04°10'S., 152°10'E.
	iP!	Z	15	38	31.3	
	iS	Z		38	51.3	From Omori records U.S.C.G.S. 5½°S., 152°E. H = 15 38 03 Felt:- Rabaul Int 4 (M.M.) 04°10'S., 152°10'E.
	iP!	Z	16	44	52	B.C.I.S. 5½°S., 152°E. H = 16 44 21 Felt:- Rabaul Int 2 (M.M.) 04°10'S., 152°10'E. Warangoi Int 3 (M.M.) 04°30'S., 152°20'E.

4th. Contd.	iP	Z	20	57	(28)	Felt:- Rabaul Int 1 (M.M.) 04°10'S., 152°10'E.
						Dilatation C.B.M.
5th.	eiP	Z	05	07	17½	Felt:- Rabaul Int 1 (M.M.) 04°10'S., 152°10'E.
	iP	Z	11	02	38	Felt:- Rabaul Int 1 (M.M.) 04°10'S., 152°10'E.
						Dilatation to S.W.
	iP	Z	11	37	17½	
	iP	Z	17	34	23	
						Compression
	iP!	Z	20	04	00	New Britain Felt:- Rabaul Int 1 (M.M.) 04°10'S., 152°10'E.
						Dilatation to S.W.
	iP	Z	20	19	49	New Britain Felt :- Rabaul Int1 (M.M.) 04°10'S., 152°10'E.
						Dilatation to S.W.
	iP	Z	20	22	22.5	Felt:- Rabaul Int 1 (M.M.) 04°10'S., 152°10'E.
	iP	Z	20	26	29.5	
						Dilatation to S.W.
6th.	No records.					
7th.	iP	Z	15	42	(46)	U.S.C.G.S. 66½°N., 157°W.
	e	Z		45	(47)	Alaska H = 15 30 38
	i	Z		46	(49)	Moskva 65½°N., 155½°W. H = 15 30 37 Mag. Mat 7½-7¾; Upp, Kir 7½; Kew 7; Shillong 8, Mos 7; Pas 7; Que 6.6; Pra 7½; Bks 7¼- 7½; Tac 7.2; Twiro 6.9; URSS Artic 6¼.
	eP	Z	18	13	(04)	U.S.C.G.S. 38½°N., 143°E.
	e	Z		19	(33)	Near E coast of Honshu, Japan H = 18 05 02 (Felt) J.M.A. Japan 38½°N., 143¾°E. H = 18 04 57
	eP	Z	18	38	(16)	U.S.C.G.S. 38½°N., 142½°E.
	i	Z			(37)	Near E coast of Honshu, Japan H = 18 30 12 Moskva H = 18 30 15 J.M.A. Japan 38½°N., 143¾°E. H = 18 30 09
	eP	Z	18	46	(21)	U.S.C.G.S. 38°N., 143°E. Near E coast of Honshu, Japan H = 18 38 18 J.M.A. Japon 38¼°N., 143½°E. H = 18 38 14 Moskva H = 18 38.6 Mag. Mat 6.5
	iP	Z	19	24	(28)	U.S.C.G.S. 45°N., 98°E. Outer Mongolia H = 19 13 20 Moskva 45°N., 98°E. H = 19 13 25 Shillong 45°N., 100°E. H = 19 13 15 Mag. Mat 7-7½; Upp, Kir 6.7; Mos 7; Kew 6¾; Que 6.5; Rev 6.4; Que 6.5; Pra 7.1.

8th.	iP e	Z Z	13	24 29	(04) (58)	
9th.	iP e	Z Z	07 18	08 03 04	(08) 33 46	Deep U.S.C.G.S. 2°N., 126½°E Molucca Passage H = 17 58 02 Moskva 2°N., 126°E. H = 17 58 10
10th.	iP iP! e(PPP) e i	Z Z Z Z	07 13	45 24 37 40 41 19	18 22 48 04 06 19	Dilatation New Britain Felt:- Rabaul Int 2 (M.M.) 04°10'S., 152°10'E. U.S.C.G.S. 24°S., 69°W. Northern Chile H = 13 18 47 h about 150 U.S.C.G.S. 18°S., 174½°W. Tonga Is. H = 19 10 13 h about 200
11th	eP eS iP iP	Z E Z Z	01 03	06 12 24 20	18 51 37 27	Dilatation U.S.C.G.S. 38½°N., 142°E. Off E coast of Honshu, Japan H = 00 58 13 Moskva H = 00 58 20 J.M.A. Japon 38½°N., 144°E H = 00 58 06 Mag. Mat 6.6; Upp, Kir 6.4; Kew 6½; Mos 6¼; Que6. U.S.C.G.S. 47½°N., 153½°E. Kurile Is. H = 23 11 26 h about 100 Moskva 47½°N., 153½°E. H = 23 11 28 h about 100 J.M.A. Japon 47°N., 152°E. H = 23 11 40 h about 80 Mag. Mat 6¼-6½; Up 7.1; Shi 7.1; Kew 6½; Pas 6½; Pra 6¼; Kiruna 7.1; Reykjavik 6.8
12th.	iP iS iP i e	Z N Z Z Z	10 13	53 59 32 33 34	31 00 46.7 01 37	Dilatation New Britain Felt:- Rabaul Int 2 (M.M.) 04°10'S., 152°10'E. U.S.C.G.S. 25°N., 126°E Ryukyu Is. H = 13 25 22 B.C.I.S. 25°N., 125¼°E. H = 13 25 33 Moskva H = 13 25 30 J.M.A. Japon 23°N., 125°E. H = 13 24 52 Mag. Mat, Upp, Kir 6.3; Kew 6¼, Mos 5¼.
13th.	e(P) eS	Z Z	09	19 29	29 30	U.S.C.G.S. 66°N., 156°W. Alaska H = 09 07 24 URSS Artic 65°1N., 154°W. H = 09 07 24 Mag. Mat 6¼; Kew 6¼; Mos 6; Pas 6¾; Que 6.2; Pra 6¾; Tac 6.4

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13th. contd.	eP	Z	12	38	56.5	U.S.C.G.S. 53°N., 161°E. Near E coast of Kamchatka H = 12 29 07 Moskva 52½°N., 163½°E. H = 12 29 06 Mag. Mat 6¾ - 7; Upp, Kir 6.7 Kew 6½; Mos 7; Pas 6½; Que 6.4;
14th.	iP	Z	18	32	50	Compression
	e(P)	Z	19	26	16	U.S.C.G.S. 14½°S., 168°E. New Hebrides H = 19 21 54
	ePKP	Z	21	51	39	U.S.C.G.S. 1°N., 79½°W; Near coast of Ecuador. 1 killed, 12 injured and minor property damage at Esmeraldas. Also felt at Ibarra and Quito. H = 21 32 28 Moskva H = 21 32 30 Mag. Mat 7, Mos 7, Pas 6¾ - 7, Que 6.4, Pra 7, Bks 6¾, Lwiro 7¼.
15th.	ePKP	Z	01	49	54	U.S.C.G.S. 1°N., 79½°W. Ecuador aftershock H = 01 30 43 Mag. Upp, Kir 6.3; Kew 6½; Pas 6½ - 6¾; Que 6.2, Pra 6, Bks 6½, Tac 6.1.
	iP	Z	10	07	00½	B.C.I.S. New Britain. H = 10 06.7 Felt:- Rabaul Int 3 (M.M.) 04°10'S., 152°10'E. Warangoi Int 2 (M.M.) 05°10'S., 154°35'E.
	iP	Z	11	21	52½	
16th.	ei(P)	Z	12	43	15	U.S.C.G.S. 14°N., 120½°E. Philippines Is. H = 12 36 24 h about 150
17th.	iP	Z	02	02	26.2	U.S.C.G.S. 6°S., 154°E. Solomon Is. H = 02 01 26 Felt:- Aropa 6°25'S., 155°50'E.
	iS	E	03	03	14.2	
	iP	Z	02	16	36	U.S.C.G.S. 10°S., 152½°E Off E coast of New Guinea H = 02 15 16 Felt:- Buin 06°50'S., 155°15'E.
	iS!	Z	17	17	36	
	iP	Z	04	16	20.2	B.C.I.S. 5°S., 130¾°E. Banda Sea H = 04 11 25
	iP	Z	06	22	42.2	U.S.C.G.S. 6°S., 155°E., Solomon Is. H = 06 21 41 Felt:- Aropa 06°25'S., 155°50'E. Mat 5¼-5½. (Mag.)
	iS!	E	23	24	24	
	iP!	Z	10	05	16	U.S.C.G.S. 5½°S., 152°E. New Britain H = 10 04 46 Compression from S.

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17th contd. continuation of previous shock.

Felt:- Rabaul Int 3 (M.M.)
 04°10'S., 152°10'S.
 Ulamona Int 2 (M.M.)
 05°00'S., 151°15'E.
 Moskva H = 10 04 40

iP	Z	10	14	46	New Britain aftershock B.C.I.S. H = 10 14.3
iP	Z	11	40	57	U.S.C.G.S. 37°N., 140½°E. Near E coast of Honshu, Japon H = 11 32 48 Moskva 38°N., 141°E. H = 11 32 57 J M A Japon 37°1N., 141°3E. H = 11 32 52 Mag. Mat 6.0; Upp, Kir 6.0; Que 6.1
iP	Z	16	43	24	U.S.C.G.S. 6½°S., 154½°E Solomon Is. H = 16 42 21
iP	Z	18	11	25	Compression

18th. iP Z 03 07 45.5
 i Z 47
 i(S) E 08 07.5
 Dilatation

iP Z 05 23 42
 iS E 24 37

iP Z 09 05 44 U.S.C.G.S. 5°S., 143½°E.
 i Z 06 01 New Guinea H = 09 03 27
 e Z 07 39
 Dilatation

19th Nil recorded

20th eiP Z 13 08 25.5 B.C.I.S. Solomon Is.
 iPP Z 33 6½°S., 155°E. H = 13 07.4
 iS Z 09 26

21st. iP Z 05 39 46.6 U.S.C.G.S. 24½°N., 122°E.
 Near E. coast of Formosa.
 H = 05 32 00

iP Z 15 34 06
 i Z 24

eP Z 20 21 35 U.S.C.G.S. 15°S., 174½°W.
 eS N 27 00 Samoa Is. region
 H = 20 14 47
 Moskva H = 20 14 44
 Mag. Mats 6½-6¾., Kew 6¼;
 Pas 6½.

eiP Z 22 46 00 U.S.C.G.S. 4½°S., 104°E.
 i Z 03 Samatra H = 22 37 18
 i Z 54 B.C.I.S. 4½°S., 104°E.
 i Z 47 26 h about 200 H = 22 37 36
 i Z 50 Moskva h about 180
 e Z 48 42 H = 22 37 44
 Mag. Mat 6-6¼; Upp, Kir 6.7;
 Kew 6½; Pas 6½.

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22nd.	iP	Z	00	01	51	U.S.C.G.S. $6\frac{1}{2}^{\circ}$ S., $131\frac{1}{2}^{\circ}$ E
	eS	N		05	42	Banda Sea H = 23 57 05
	iP!	Z	21	13	14.7	U.S.C.G.S. Solomons Is region H = 21 12 45 Felt:- Londolovit Int 2 M.M. $03^{\circ}05'S.$, $152^{\circ}40'E.$
23rd	eP	Z	03	06	41.7	U.S.C.G.S. 45° N., 152° E. Kurile Is. H = 02 57 40 Mag. Mat $5\frac{1}{2}$; Upp, Kir 6.2; Kew $6\frac{1}{2}$; Mos 6; Pra 6.
	iP!	Z	10	59	08 C.	U.S.C.G.S. $5\frac{1}{2}^{\circ}$ S., 153° E. New Britain H = 10 58 35 Felt:- Rabaul Int 2 M.M. $04^{\circ}10'S.$, $152^{\circ}10'E.$ Warangoi Int 2 M.M. $04^{\circ}30'S.$, $152^{\circ}20'$
	iP!	Z	19	12	55 D.	U.S.C.G.S. $4\frac{1}{2}^{\circ}$ S., 153° E. (E.) New Britain h about 100 H = 19 12 36 Felt:- Rabaul Int 3 M.M. $04^{\circ}10'S.$, $152^{\circ}10'E.$ Warangoi Int 3 M.M. $04^{\circ}30'S.$, $152^{\circ}20'E.$ Londolovit Int 2 M.M. $03^{\circ}00'S.$, $152^{\circ}40'E.$
24th	iP	Z	02	15	32 C.	
	iP	Z	02	19	35.7	in coda
	iP	Z	05	45	59	U.S.C.G.S. New Britain Dilatation to S.W. Felt:- Rabaul Int 2 M.M. $04^{\circ}10'S.$, $152^{\circ}10'E.$
	eP	Z	13	15	08	U.S.C.G.S. 22° S., $170\frac{1}{2}^{\circ}$ E
	iPP	Z		45	Loyalty Is. H = 13 09 41	
	iPPP	Z		56		
	eS	N		19	39	
25th	iP!	Z	05	57	55.5 C	
	iS	N		58	29.5	
	iP!	Z	09	16	20 D	B.C.I.S. New Britain region H = 09 16.0 Felt:- Rabaul Int 3 M.M. $04^{\circ}10'S.$, $152^{\circ}10'E.$
	iP!	Z	11	30	04 C	New Britain region Felt:- Rabaul Int 2 M.M. $04^{\circ}10'S.$, $152^{\circ}10'E.$
	iP	Z	15	48	09.5 D.	
26th	eP	Z	09	30	13	U.S.C.G.S. 15° S., 168° E.
	i	Z		33	44	New Hebrides H = 09 25 54
	iP	Z	21	28	24 D	
	iS	Z			44.5	

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27th contd.	eP i e	Z Z Z	17	26	05 08 52	U.S.C.G.S. 42½°N., 143½°E. Near E coast of Hokkaido, Japan. h about 100 H = 17 17 39 Moskva H = 17 17 40 J.M.A. Japon 42.6°N., 143.6°E. h about 90 H = 17 17 41
	e(PKP) i	Z Z	19	00	12 22	U.S.C.G.S. 23°S., 60°W. Jujuy Province, Argentina h about 200 H = 18 38 10
	iP i	Z Z	19	36	13 30	
28th	iP	Z	11	28	47	U.S.C.G.S. 5°S., 153½°E. Solomons Islands - New Britain region H = 11 28 14 Felt:- Rabaul Int 3 M.M. 04°10'S., 152°10'E. Karoola Int 2 M.M. 05°10'S., 154°35'E. Warangoi Int 3 M.M. 04°30'S., 152°20'E.
29th	Nil recorded					
30th	eP	Z	14	05	07	U.S.C.G.S. 38°N., 103½°E. Kansu Province, China H = 13 54 44

Compiled by G.W.D'Addario.

C.D.Branch - Vulcanologist.



Observatory.

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1st	iP	Z	00	33	14	U.S.C.G.S. 13 $\frac{1}{2}$ ^o S., 167 $\frac{1}{2}$ ^o E. New Hebrides Islands. h about 200 H = 00 29 15 Moskva h about 160 H = 00 29 14
	i	Z			32	
	eS	Z		36	29	
	i	S			55	
	e	Z		38	08	
	e	Z		39	09	
	e	Z			42	
	e(P)	Z	00	40	59	
	i(P)	Z	00	44	46	
2nd.	iP!	Z	15	12	31	Dilatation to S.
3rd.	eP	Z	17	01	13	
	i	Z			14	
	e	Z	20	10	06	
	i	Z			50	
	e	Z		11	04	
	e	Z		14	35	
	e	Z			15	
	eP	Z	22	26	52	
4th	iP!	Z	18	12	16	Compression from N.W.
5th.	iP	Z	01	52	28	Solomons Is. region H = 01 50.5
	i	Z			31	
	eS	Z		53	50	
	i	Z	19	09	48	
	i	Z		10	17	
	iP	Z	19	22	58	
	iP	Z	19	40	48	
	i	Z			50	
6th.	iP	Z	19	15	38	
	eiP	Z	20	34	19	
	i	Z			20	
7th	iP	Z	03	41	12	B.C.I.S. Off N.W. coast of New Guinea H = 03 40 00 Felt:- Awelkon Int 2 M.M. 05 ^o 40'S., 147 ^o 50'E.
	i	Z			32	
8th	ePKP	Z	12	59	29	U.S.C.G.S. 24 ^o S., 67 ^o W. Salta Province, Argentina Felt. h about 200 H = 12 40 46 Moskva h about 180 H = 12 40 40 Mat 7; Upp, Kir 6.3; Pas 6 $\frac{1}{4}$ -6 $\frac{1}{2}$; Bks 6, Tac 6.1.
	i	Z			46	
	i	N	13	00	12	
	e(PP)	Z		02	12	
	i	Z			57	
	i(PKP)	Z	03	15	17	
	iPPP	Z	05	17	45	
	i	Z			50 $\frac{1}{2}$	
	i	Z	06	00	00	
	i	Z				
	eP	Z	15	20	11	

8 th	contd.	e	Z	15	34	50	
		e	Z		35	18	
		e	Z		36	52	
		iP	Z	18	23	49	
9 th		iPKP	Z	04	59	25.5	U.S.C.G.S. 31°S., 65½°W.
		e	E	05	00	14.5	Cordoba - La Roja Provinces
		i	E		02	28	Argentina h about 100
							H = 04 40 20
							Moskva H = 04 40 (35)
							Mag. Mat 6¾; Pas 6¾; Tac 6.6.
10 th .		i(P)	Z	07	14	53.6	
		i	Z			55.3	
		i	Z			58.4	
		i	E		15	00	
		i	E			45	
11 th		i(P)	Z	15	16	10	
		iP	Z	17	54	40	B.C.I.S. 11¾°N., 165°E.
		i	Z		55	45	Marshall Is. region
							H = 17 50 00
							Atomic explosion at Bikini.
12 th		iP	Z	15	23	59	
		iP	Z		24	26	
		i(T)	Z		29	40	
		i	Z	16	52	33	
		iP	Z	16	57	02	U.S.C.G.S. 31°N., 140°½E
							South of Honshu, Japan h about 150
							H = 16 50 05
		i	Z	17	48	09	
		eiP	Z	18	34	22	U.S.C.G.S. 12°N., 163°E.
							Marshall Is. region
							H = 18 29 58
							atomic explosion Eniwetok.
13 th		Nil recorded					
14 th		iP!	Z	03	58	39	U.S.C.G.S. 4½°S., 153°E.
		Dilatation					New Ireland H = 03 58 09
		iS!	N			56	Felt:- Rabaul Int 4 M.M.
		(S phase reading from Omori seismograph)					04°10'S., 152°10'E.
							Warangoi Int 3 M.M.
							04°30'S., 152°20'E.
							Londolovit Int 3 M.M.
							03°05'S., 152°40'E.
							Namatanai Int 3 M.M.
							03°40'S., 152°30'E.
15 th		eP	Z	15	50	02	U.S.C.G.S. 13°S., 166½°E
							New Hebrides H = 15 45 53
		i(P)	Z	18	47	51	U.S.C.G.S. Fiji Islands
		i	Z		48	11	H = 18 41 23
		i	Z		48	27	B.C.I.S. 15½°S., 179½°W.
		e	Z	18	52	49	
		i	Z			53	

16th.	iP	Z	01	34	31	Marshall Is. atomic explosion.
	i	E			38	H = 01 30 00 U.S.C.G.S.
	iP	Z	18	04	39	
17th.	iP	Z	07	03	48	U.S.C.G.S. 3°S., 147½°E
	e	Z		05	07	New Britain region.
	eL	Z			42	H = 07 02 25 Moskva
						Mag. Mat 5¼-6; Kew 6½; Mos 5¼.
	iP	Z	10	59	43	
	eL	Z	11	01	08	
	e	Z	16	52	13	Andaman Is. region.
						Shillong 12½°N., 95°E.
						H = 16 42 40
	eP	Z	17	50	52	U.S.C.G.S. 18½°S., 174½°W
	ePP	Z		51	57	Tonga Is. H = 17 43 45
	ePPP	Z		52	15	
	ePcP	Z		53	15	
	eS	E		56	12	
18th	eP	Z	02	36	52	U.S.C.G.S. 13°S., 167°E.
	i	Z			57	New Hebrides H = 02 32 52
	iPP	Z		37	02	Moskva H = 02 32 52
	iPPP	Z			15	Mag. Mat 6¼-6½; Bks 7;Upp;
	eS	N		40	02	Kir 6.3; Mos 6¼; Pas 6¼-6½;
	i(SS)	N			22	Roma 6.3.
	i(SSS)	N			28	
	e(ScP)	N		45	01	
	eScS	N		48	58	
	eP	Z	03	35	19	U.S.C.G.S. 13°S., 167°E.
	eS	N		38	28	New Hebrides. H = 03 31 18
	e	Z		38	40	
	eP	N	12	25	19	U.S.C.G.S. 13°S., 167°E.
	i	N			26	New Hebrides H = 12 21 18
	e(PP)	N			33	Moskva H = 12 21 16
	e(PPP)	N			41	Mag. mat 6¼; Mos 5¾; Pas 6.6;
	i	N		27	50	Roma 6¼.
	eS	N		28	28	
	e(SS)	N			48	
	e(SSS)	N		29	01	
19th	eP	Z	05	50	45	C.B.M.
	iP	Z	07	35	42	
	e	Z		26	14	
	i	Z		37	07	
20th	eP	Z	05	50	46	U.S.C.G.S. 25°S., 180°Long.
						South of Fiji Is.
						h about 550 H = 05 44 47
	iP	Z	07	35	43	
	e	Z		36	(15)	
	i	Z		37	08	

21st Nil recorded strong microseismic activity

22nd	eP	Z	15	09	34	U.S.C.G.S. 3°S., 146°E.,
	iPP	Z			44	New Britain region
	i	Z		10	00	H = 15 08 00
	eLQ	Z		11.5		Moskva H = 15 08 15 Mag. Mat 6, Kew 6 $\frac{1}{4}$.
	eP	Z	21	41	26	Felt:- Saidor Int 1 M.M.
	iP	Z			27	05°35'S., 146°30'E.
	i	Z			30	
23rd	Drum drifting - times uncertain.					
24th	iP	Z	10	01	56	C. New Britain.
						B.C.I.S. 4°S., 151 $\frac{1}{2}$ E H = 10 01 42
	iP	Z	16	34	35 $\frac{1}{2}$	U.S.C.G.S. 6°S., 146°E.
	iPPP	Z			49 $\frac{1}{2}$	New Guinea H = 16 33 01
	eS	N		35	44	Felt:- Lae Int 4 M.M. 06°45'S., 147°00'E. Way Int 4 M.M. 07°20'S., 146°45'E. Mumeng Int 2 M.M. 07°00'S., 146°35'E., Awelkon Int 3 M.M. 05°40'S., 147°50'E.
25th	eP	Z	09	34	54	
	e	Z	15	04	45	U.S.C.G.S. 51 $\frac{1}{2}$ N., 177°W. Andreanof Is. Aleutian Is. H = 14 54 30 Moskva H = 14 54 22 Mag. Mat 5 $\frac{3}{4}$ -6; Mos 5 $\frac{1}{2}$; Pas 5 $\frac{1}{2}$ -5 $\frac{3}{4}$; Que 6.3.
	eP	Z	17	48	37	U.S.C.G.S. 31°N., 129 $\frac{1}{2}$ E. Near W coast of Kyushu, Japon. H = 17 40 47 Moskva H = 17 40 40 Mag. Mat 6-6 $\frac{1}{4}$
	ePKP	Z	21	30	49	U.S.C.G.S. 3°S., 77°W.
	i	Z			51	Ecuador - Peru border region.
	i	Z		31	01	Felt:- Ecuador.
	e(PP)	Z		33	16	h about 100 H = 21 11 45.
	e(PKS)	N		34.2		Moskva H = 21 11 48
	e(SKS)	N		37	26	Mag. Pas 6 $\frac{1}{2}$; Bks 6 $\frac{1}{4}$ -6 $\frac{1}{2}$.
26th	ePKP	Z	09	08	51	U.S.C.G.S. 3°S., 77°W. h about 100 H = 08 49 47 Mag. Mat 5 $\frac{1}{4}$ -6; Rey 5.8.
	iP	Z	09	56	05	
	i	Z			14	
	iP	Z	15	39	48	
	eP	Z	16	23	51	U.S.C.G.S. 17 $\frac{1}{2}$ S., 178 $\frac{1}{2}$ W.
	i	Z		28	03	Figi Is. h about 600
	e(ScS)	N		33	03	H = 16 18 10
27th	iP	Z	01	30	58	D.
	eP	Z	11	27	30	
	e(S)	Z		28	(38)	
	eP	Z	20	48	(02)	B.C.I.S. 2°S., 145°E.
	eL	Z		49.7		Off N. coast of New Guinea H = 20 46.1

27th contd.

eP	Z	23	34	14	U.S.C.G.S. $5\frac{1}{2}^{\circ}$ S., 146° E.
i(PP)	Z			22	N. coast of New Guinea
i(S)	Z		36	26	H = 23 32 42
					Moskva H = 23 32 47
					Felt:- Kaiapit Int 3 M.M.
					$06^{\circ}15'S.$, $146^{\circ}15'E.$
					Henganofi Int 4 M.M.
					$06^{\circ}15'S.$, $145^{\circ}40'E.$
					Menyanya Int 3 M.M.
					$07^{\circ}10'S.$, 146° E
					Saidor Int 3 M.M.
					$05^{\circ}35'S.$, $146^{\circ}30'E.$
					Kerowagi Int 3 M.M.
					$05^{\circ}50'S.$, $144^{\circ}50'E.$
					Lufa Int 2 - 3 M.M.
					$06^{\circ}20'S.$, $145^{\circ}15'E.$
					Goroka Int 2 M.M.
					$06^{\circ}05'S.$, $145^{\circ}25'E.$

28th Nil recorded

29th e Z 13 20 54

30th iP Z 05 51 25.5 U.S.G.C.S. 7° S., $154\frac{1}{2}^{\circ}$ E Solomons.
i(PPP)Z 34 H = 05 50 26
i(SSS)Z 52 31
i Z 54 21

eP Z 06 00 06
e Z 18
e(P) Z 07 05 (33)
e Z 44

eP Z 16 19 19 U.S.C.G.S. 25° N., 122° E
Near N.Coast of Formosa.
h about 100 H = 16 11 40
Moskva H = 16 11 40 Mag. Mat $5\frac{3}{4}$ -6.
Upp. Kir 5.8.
eP Z 18 15 35 U.S.C.G.S. $52\frac{1}{2}^{\circ}$ N., 169° W.
Fox Is. Aleutian Is. H = 18 04 50
Moskva H = 18 04 50

e Z 21 26 46 U.S.C.G.S. Fiji Is. H = 21 20 05

31st eP Z 14 20 34.5 Wellington $34\frac{1}{4}^{\circ}$ S., $179\frac{1}{2}^{\circ}$ W.
Off S.coast of Kermadec Is.
H = 14 13 06

eP Z 19 36 (58) U.S.C.G.S. 15° S., 169° S.
iPP Z 37 11.5 New Hebrides. H = 19 32 30
i(PPP)Z 28.5 Moskva H = 19 32 28
e(L) Z 43.2 Mag. Mat $7\frac{1}{4}$ - $7\frac{1}{2}$; Upp,Kir 7.1; Kew 7;
Mos 7, Shi $6\frac{1}{2}$ - $6\frac{3}{4}$; Bks $7\frac{1}{4}$ - $7\frac{1}{2}$;
Pas $7\frac{1}{2}$; Tac $7\frac{1}{2}$; Roma 7.

Compiled by G.W.D'Addario

C.D.Branch
Vulcanologist

RABAUl OBSERVATORYFINAL BULLETINJUNE 1958.

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1st.	iP	Z	12	36	28	U.S.C.G.S. $5\frac{1}{2}^{\circ}$ S., 146° E.
	iPP	Z			36	Near N.coast of New Guinea
	iS	Z		37	40	H = 12 34 56
	iSS	N			50	Felt:- Goroka Int 3-4 M.M.
						$06^{\circ}05'S.$, $145^{\circ}25'E.$
						Kajapit Int 3 M.M.
						$06^{\circ}15'S.$, $146^{\circ}15'E.$
						Chauve Int 2 M.M.
						$06^{\circ}05'S.$, $145^{\circ}10'E.$
						Kunliawa Int 3 M.M.
						$06^{\circ}00'S.$, $145^{\circ}00'E.$
						Sajidor Int 2 M.M.
						$05^{\circ}35'S.$, $146^{\circ}30'E.$
2nd.	iP	Z	10	56	04	
	i	Z			07	
	i	Z			13	
	e	Z	17	01	42	
3rd.	iP	Z	00	34	34	Near N.Coast of New Guinea.
	i	Z			35	B.C.I.S. H = 00 31.7
	eP	Z	19	36	22	U.S.C.G.S. 15° S., 168° E. New Hebrides
	iPP	Z			29	H = 19 31 52
	i	Z			38	Tacubaya H = 19 31 40
	e(S)	N			40	Mag. Mat $6\frac{1}{2}$; Upp,Kir 6.4; Kew $6\frac{1}{2}$;
	e(L)	N			41	Bsk $6\frac{1}{2}$ - $6\frac{3}{4}$; Roma $6\frac{3}{4}$; Lwiro $6\frac{3}{4}$ -7;
					22	Mos $6\frac{1}{4}$; Pas $6\frac{1}{2}$.
4th.	e	Z	03	37	13	
	eP	Z	09	49	22	U.S.C.G.S. 7° S., 145° E.
						New Guinea.h about 150.H = 09 47 39
						Felt:- Kaiapit Int 3 M.M.
						$06^{\circ}15'S.$, $146^{\circ}15'E.$
						Chyave Int 2 M.M.
						$06^{\circ}05'S.$, $145^{\circ}10'E.$
						Lufa Int 2 M.M.
						$06^{\circ}20'S.$, $145^{\circ}14'E.$
						Way Int 1 M.M.
						$07^{\circ}20'S.$, $146^{\circ}45'E.$
5th.	iP	Z	02	14	46	U.S.C.G.S. $5\frac{1}{2}^{\circ}$ S., $151^{\circ}\frac{1}{2}$ E.
	i	Z			47	New Britain H = 02 14 16
	iS	Z		15	09	
	iP!	Z	02	25	44	
	eP	Z	03	00	12	B.C.I.S. 6° S., 152° E.
	i!	Z			$12\frac{1}{2}$	New Britain H = 02 58.7
	eP	Z	08	24	42.3	U.S.C.G.S. $10\frac{1}{2}^{\circ}$ S., 166° E.
	ePP	Z			54.2	H = 08 21 07 Santa Cruz Is.
	ePP	Z		25	01.5	Mag. Mat $5-5\frac{1}{4}$.
	eS	N		27	30	
	e(SS)N				47	
	e(SSS)N			28	00	
	ePcP	Z		29	52	
	eP	Z	09	43	39	B.C.I.S. $3\frac{1}{2}^{\circ}$ S., 148° E.
	iPP	Z			45	Bismarck Sea H = 09 42.3
	iPPP	Z			50	
	eS	Z		44	47	

5th. continuation of previous shock

e(SS)Z			56
e Z		45	47
e Z		46	32

6th. ePKPZ 09 30 29 U.S.C.G.S. 8°N., 84½°W
 eSKS N 37 27 Off coast of Costa Rica
 H = 09 11 14
 B.C.I.S. H = 09 11 16
 Moskva H = 09 11 30
 Tacubaya H = 09 11 21
 Mag. Mat 6¾-7; Kew 6¼-6½; Mos 6½;
 Pas 6½-6¾; Tac 6.5; Rey 6.7; Roma 6½
 Strasbourg 6½.

eP Z	12	18	37	Felt:- NUKU Int 3 M.M.
i Z			45	03°35'S., 142°10'E.
i Z			55	

7th. iP! Z 03 24 26 C. U.S.C.G.S. 5°S., 150½°E,
 i Z 53 New Britain.h about 150
 iS N 25 46 H = 03 23 42

iP Z	04	12	18
i Z	10	55	42

eP! Z 15 20 47 B.C.I.S. 5°S., 145½°E. Near N.E.
 i Z 48 coast of New Guinea. H = 15 19.3
 i Z 21 03 Felt:- Kaiapit Int 5 M.M.
 i Z 46 06°15'S., 146°15'E.

iP Z 18 29 23 B.C.I.S. 5°S., 145½°E.
 iPP Z 36.5 Near N.E. coast of New Guinea.
 iPPP Z 42.3 H = 18 27 39.
 iS Z 30 40.4 Felt:- Mumeng Int 4 M.M.
 iSS N 31 03 07°00'S., 146°35'S.
 iSSS N 14 06°15'S., 146°15'E.
 Awelkon Int 2 M.M.
 05°40'S., 147°50'E.
 Saidor Int 2 - 3 M.M.
 05°35'S., 146°30'E.

8th. iP! Z 20 15 43 C.

eP Z	04	03	24
e Z			30
iP Z	05	44	23
e Z	12	23	22
e Z	15	52	51
e Z		54	37
i Z			50
i Z			56

10th. iP! Z 10 27 02 C. Felt:- Londolgovit Int 2 M.M.
 03°05'S., 152°40'E.

iP! Z 13 27 03 C.

iP! Z 14 30 44 C. Felt:- Londolgovit Int 2 M.M.
 03°05'S., 152°40'E.

11th.						Not recording
12th						Not recording
13th						Not recording
14th	iP	Z	15	01	28	
	i	Z		02	21	
	iP	Z	18	34	24	U.S.C.G.S. 12°N., 161½°E. Nuclear explosion Marshall Is. H = 18 29 59 B.C.I.S. 12°N., 161½°E. H = 18 30 00
15th	iP	Z	09	09	17	C. Felt:- Londolovit Int 2 M.M. 03°05'S., 152°40'E.
	eiP	Z	11	34	06	U.S.C.G.S. 9°S., 150°E. Near E. coast of New Guinea H = 11 32 37 Mag. Mat 5¼-5½. Felt:- Esa'ala Int 3 M.M. 9°45'S., 140°50'E.
	iP	Z	11	39	37	
	i	Z		40	43	
	eP	Z	11	54	03	
	eP	Z	12	00	07	Felt:- Makawa Int 3 M.M.
	i	Z			08	09°38'S., 149°58'E.
	i	Z			15	Baniara Int 3 M.M. 09°45'S., 149°55'E.
	eP	Z	15	00	17:7	U.S.C.G.S. 18°S., 178½°W.
	iPP	Z		01	50	Fiji Is. h about 600
	e	Z		04	22	H = 14 54 37
	iS	N		04	48	Moskva h about 550
	eScS	N		09	49	H = 14 54 35 Mag. Mat 6½; Bsk 6.3:Pas 6¼;
	eP	Z	17	22	21	U.S.C.G.S. 9½°S., 150°E.
	iPP	Z			24	Near N coast of New Guinea
	iPPP	Z			32	H = 17 20 56 Mag. Mat 5¾.
	iS	N		23	26	
	iSS	N			37	
	iSSS	N			48	
	i	Z		24	32	
	e	Z		26	54	
	ePcP	Z		29.4		
	eP	Z	21	33	53	U.S.C.G.S. 9½°S., 150°E.
	i(PPP)Z			34	12	Near N. coast of New Guinea.
	iS	Z			58	H = 21 32 23
	e	Z		39	04	Felt:- Fife Bay Int 2-3 M.M. 10°30'S., 150°00'E.
	eP	Z	21	44	18	
	i	Z			27	
16th	eP	Z	23	50	36	
	i	Z		52	35	

17th	iP	Z	18	19	36	C.
	iP	Z	19	12	48	U.S.C.G.S. 25°N., 142°E.
	eS	Z		17	44	Volcano Is. h about 60
						H = 19 06 43
						Moskva 24½°N., 141°E.
						J.M.A. Japon 24¼°N., 143°E.
						h about 200.H = 19 06 48
						Mag. Mat 6; Upp 6.6; Rey 6.5;
						Mos 5¾
18th	iP	Z	10	30	25	
	i	Z		33	05	
19th	iP	Z	05	27	25	U.S.C.G.S. 49½°N., 156°E.
						Kurile Is. H = 05 18 00
						Moskva 50°N., 155°E. H = 05 18 07
						J.M.A. Japon 50°N., 156°E.
						H = 05 18 00
						Mag. Mat 6-6¼; Bsk 6-6¼;
						Upp, Kir, 5.9; Rey 6½; Mos 5¾;
						Pas 6½.
	iP	Z	19	23	05	
20th	iP	Z	01	21	32	New Hebrides. H = 01 16.7
						Rather discordant data.
21st	e	Z	10	54	52	Felt:- Tari Int 2 M.M.
	e	Z		55	03	05°50'S., 143°E.
						Telefomin Int 2 M.M.
						05°10'S., 141°35'E.
22nd	Not recording					
23rd	eP	Z	05	21	06	U.S.C.G.S. 49°N., 102°E.
	ePPP	Z		25	15	Outer Mongolia H = 05 10 03
	iS	N		30	05	Moskva 49°N., 102½°E.
						H = 05 10 10 Mag. Mat 6½;
						Upp.Kir 5.7; Kew 6¼; Strasbourg
						6¼; Mos 6.
	eP	Z	07	23	56	U.S.C.G.S. 15½°S, 168½° E.
	iS	N		27	49.5	New Hebrides H = 07 19 02
	eP	Z	18	59	05	U.S.C.G.S. 18°S., 178°W.
	eS	N	19	03	39	Fiji Is. h about 650
						H = 18 53 23
	eP	Z	19	23	25	U.S.C.G.S. 18°S., 178°W.
	i	Z			30	Fiji Is. h about 650
	ePcP	Z		25	54	Foreshock H = 19 17 43
	e	Z		26	56	
	eS	N		27	59	
24th	eP	Z	00	16	44.2	U.S.C.G.S. 8½°S., 112°E.
	ePP	Z		18	41	Near S coast of Java.
	ePcP	Z		18	49	h about 200
	ePPP	Z		19	03.7	H = 00 09 18
	e(S)	N		22	42.5	J.M.A. Japon H = 00 09 10
	eP	Z	15	19	22	
	i	Z			23	
	eP	Z	18	48	30	

25th.	iP	Z	09	38	23	U.S.C.G.S. 3°S., 144½°E.
	ePP	Z			31	Near N Coast of New Guinea
	ePPP	Z			38	H = 09 36 30
	iS	Z		39	50	Moskva H = 09 36 42
	iSS	N		40	02	Felt:- Chuave Int 2 M.M.
	iSSS	N		40	12	06°05'S., 145°10'E.
	iPcP	Z		45	07	Nuku Int 2 M.M. 03°35'S., 142°10'E. Mag. Mat 6¾-7; Upp. Kir 6.9; Kew 6¾; Mos 7; Pas 6¼- 6½; Strasbourg 7¼; Lwiro 6½.
iP!	Z	12	44	26	U.S.C.G.S. 5°S., 152°E. H = 12 43 55 New Britain. Felt:- Rabaul Int 4-5 M.M. 04°10'S., 152°10'E. Pomio Int 4-5 M.M. 05°32'S., 151°30'E. Warongoi Int 4-5 M.M. 04°30'S., 152°20'E. Ulamona Int 3 M.M. 05°00'S., 151°15'E.	
26th	Confused by microseisms					
27th	iP	Z	04	03	44 D.	B.C.I.S. 2½°S., 127°½E. Moluccas H = 03 58.2
	eP	Z	18	13	20	
	i	Z			27	Discordant data.
	eP	Z	19	56	47	
	i	Z			49	
	i	Z		57	13	
i	Z		58	23		
eP	Z	20	12	21		Felt:- Wasu Int 3 M.M. 06°00'S., 147°15'E.
28th	iP	Z	19	34	18	U.S.C.G.S. 12°N., 162°E. Marshall Is. Nuclear explosion H = 19 29 58 B.C.I.S. 11½°N., 162°E. H = 19 30 00
29th	iP	Z	02	51	30	
	eP	Z	13	37	34	
	i	Z			38	
	iP	Z	15	13	49 C.	
iP	Z	18	11	22		
30th	eP	Z	02	10	57	B.C.I.S. New Britain H = 02 10.1
	i	Z		11	02	
	i	Z		13.8		
	iP	Z	16	22	03	
	iP	Z	18	33	25	U.S.C.G.S. 31°N., 141½°E. Sth of Hinshu, Japan. H = 18 26 30
	iPP	Z		35	09	
iPPP	Z		35	09		
eS	N		39	09		Moskva H = 18 26 19 J.M.A. Japon 31½°N., 142°E. h about 60 H = 18 26 33

6.

June 1958.

30th
contd.

Magnitudes from previous shock

Mat. 6.1; Upp. Kir. 6.3;
Mos $6\frac{1}{4}$; Pas $6\frac{3}{4}$;
Strasbourg $6\frac{1}{4}$.

iP Z 19 36 37

Compiled by G.W.D'AddarioC.D.Branch - Vulcanologist.

1st. July	eP	Z	07	27	33	
	i	Z			33½	
	i	N		28	16	
	iP	Z	11	01	49½	Dilatation
	iP	Z	16	35	30½	
	i	N			51½	
2nd July	iP!	Z	21	25	08½	Compression
	i	Z	21	26	42	Dilatation
3rd July	eP	Z	06	34	17	U.S.C.G.S. 28½°S., 179°E.
	i	Z			21	Kermadec Is. region h about 400 H = 06 27 44 Bks 8 Mag. Pas. 6 Mag.
4th July	eP	Z	13	38	10	
	i	Z			28	
	iP!	Z	18	40	09½	Dilatation . U.S.C.G.S. 6°N., 125°E
	i	Z	41	08½		Near south coast of Mindanao P.I. H = 18 34 10 Moskva H = 18 34 10 J.M.A.Japon H = 18 34 00 Mag. Roma 5.8; Strasbourg 5.8. Pra., Mat., Upp. 6. Que 6.3.
5th July	Nil recorded					
6th July	Nil recorded					
7th July	Nil recorded					
8th July	iP!	Z	05	37	43	Compression. Felt:- Ulamona Int 1 M.M. 05°00'S., 151°15'E.
	iP	Z	10	58	41	
9th July	iP!	Z	10	46	03	Compression
	iP	Z	14	17	39	U.S.C.G.S. 5½°S., 151½°E. New Britain H = 14 16 59
	iP	Z	14	20	39	in coda
	iP!	Z	14	43	29	Compression
10th July	eP	Z	06	28	29.5	U.S.C.G.S. 58.6°N., 137.1°W
	ePP	Z		31	20.4	Southern Alaska. Several killed,
	ePPP	Z		33	32.3	moderate damage. H = 06 15 51.
	e(PSP)Z		40	18		B.C.I.S. 58°6'N., 137.1°W. * H = 06 15 51. Moskva 56°N., 136°W.
	iP	Z	09	11	40	Felt :- Ulamona Int 1-2 M.M. 05°00S., 151°15E. * H = 06 15 47. Mag. Mat 8¼-8½; Upp, Kir. for SL7.8, for P7.2; Shl 8½; Mos 7¼; Pas 7¼-8; Pra 7¾; Bks 8; Tac7.8; Rey 8.2; Roma 7.8.
11th July	iP	Z	00	25	05	B.C.I.S. 5°S., 156°E. H = 00 22 00



July - 1958.

11th July	iP!	Z	06	14	52	Dilatation B.C.I.S. 5°S., 152½°E. New Britain. H = 06 14 30 Felt:- Ulamona Int. 2 M.M. 05°00S., 151°15'E.
	ePKP	Z	19	29	37	U.S.C.G.S. 21°S., 69°W.
	i	Z			52	Northern Chile H = 19 10 20
	i(PP)	Z		32	58.6	Mag. Mat 6¼-6½; Bks 6¼; Upp.Kir.6.2; Tac 6.4; Kew 6.2; Rey 6.7; Pas 6½.
12th July	Not recording.					
13th July	eP	Z	12	07	31	U.S.C.G.S. 10°S., 161½°E. Solomons h about 100 H = 12 03 50. Mag. Mat 5¼; Pas 5¼.
14th July	N.S. Component only.					
	eP	N	15	03	46	
	e	N		05	23	
15th July	i	N	13	05	17	
16th July	Nil recorded					
17th July	iP!	N	21	16	46½	
18th July	Nil recorded					
19th July	N.S. Component only					
	eP	N	06	33	34	U.S.C.G.S. 4°S., 138½°E.
	i	N			39	New Guinea h about 150 H = 06 30 19. Moskva h about 250 H = 06 30 20 Mag. Mat 6¼-6½, Upp, Kir 6.6; Kew 6½; Rom 6.3.
	eP	N	14	47	30½	
	eP	N	15	05	49½	U.S.C.G.S. 41°N., 143½°E. Near S.coast of Hokkaido, Japan. H = 14 57 24. Moskya H = 14 57 20 J.M.A. Japon 40.9°N., 143.9°E. H = 14 57 25. Mat 5.3; Kew 5¾; Mos 5½; Stras. 5.3.
	eP	N	18	21	54½	U.S.C.G.S. 0°, 129½°E.
	eS	N		26	(12½)	Spice Is. H = 18 16 52 Moskva H = 18 16 52. Mag. Mat 7; Upp.Kir.6.8; Kew 6¾; Mos 6¼; Pra 6¼; Rom 6½.
	eP	N	18	44	39½	
	eP	N	20	59	33	
	eP	N	22	19	08	U.S.C.G.S. ½°S., 129°E. Spice Is. aftershock. H = 22 14 01.

20th July N.S. Component only
iP N 08 57 22

B.C.I.S. $5\frac{1}{2}^{\circ}$ S., 153° E.
New Britain region. H = 08 57.1

iP! N 09 06 46

21st July N.S. Component only

eP N 07 33 47
i N 34 00
i N 34 11
e N 35 10

U.S.C.G.S. $44\frac{1}{2}^{\circ}$ N., $147\frac{1}{2}^{\circ}$ E.
Kurile Is. H = 07 24 58
Moskva $44\frac{1}{2}^{\circ}$ N., 148° E.
H = 07 25 03
J M A Japon $43\frac{3}{4}^{\circ}$ N., $147\frac{1}{2}^{\circ}$ E.
h about 60, H = 07 25 08.
Mag. Mat 6, Upp, Kir 5.9; Kew $6\frac{1}{4}$;
Bks $6-6\frac{1}{4}$; Rom 6.15; Bratislava $6\frac{1}{2}$.

e N 14 47 34

22nd July Strong Microseismic activity.

23rd July Strong Microseismic activity

24th July Strong Microseismic activity

25th July Vertical component only

eP Z 17 55 40
i Z 45

U.S.C.G.S. $3\frac{1}{2}^{\circ}$ N., $128\frac{1}{2}^{\circ}$ E.
Moluccas H = 17 50 15.

26th July eP Z 07 51 57
i Z 58

Felt:- Awelkon Int 1 M.M.
 $05^{\circ}40'S.$, $147^{\circ}50'E.$

eP Z 11 44 28
i Z 29

B.C.I.S. 6° S., $148\frac{1}{2}^{\circ}$ E.
New Guinea H = 11 43 21
Felt:- Awelkon Int 3 M.M.
 $05^{\circ}40'S.$, $147^{\circ}50'E.$

iP Z 17 55 12

i Z 14

i Z 27

e(S) N 57 46

e N 58

e N 18 04 16

e N 06 46

e Z 07 55

e N 11 10

iP Z 22 48 58

27th July iP Z 08 31 46

28th July Vertical component only.

iP Z 01 23 39.5 Dilatation

iP Z 03 19 04.2

i(S) Z 33.4

iP Z 17 30 38

eS Z 35 25

eScP Z 36 07.5

U.S.C.G.S. 20° S., $177\frac{1}{2}^{\circ}$ W.
Fiji Is. region h about 500
H = 17 24 40

iP Z 21 29 09.6

i Z 24.7

i Z 30 11

U.S.C.G.S. 20° S., $178\frac{1}{2}^{\circ}$ W.
Fiji Is. h about 650 H = 21 23 25

4.

29th July iP Z 06 59 54 Dilatation
 e Z 10 57 25 U.S.C.G.S. $20\frac{1}{2}^{\circ}$ S., $175\frac{1}{2}^{\circ}$ W.
 Tonga Is. H = 10 49 27
 Mag. Mat $5\frac{3}{4}$ -6.
 iP Z 11 04 27 Dilatation
 ePKP Z 21 57 36.4 U.S.C.G.S. 4° N., $26\frac{1}{2}^{\circ}$ W.
 ePP Z 22 03 28 H = 21 37 25
 ePcPPKP 06 13.4 B.C.I.S. H = 21 37 25
 Moskva H = 21 37 22
 Mag. Mat $5\frac{3}{4}$; Upp, Kir 6.2; Kew 6.1;
 Pra $5\frac{1}{4}$; Rom 5.5; Stras. 5.4.

30th July eP Z 04 48 03 U.S.C.G.S. $2\frac{1}{2}^{\circ}$ S., 140° E.
 iPP Z 09 New Guinea H = 04 44 53
 iPPP Z 15.5 Moskva H = 04 44 55
 e(S) Z 50 24.8 Mag. Mat $6-6\frac{1}{4}$; Upp, Kir 6.1,
 Kew 6, Rom 5.85, Stras. $5\frac{3}{4}$.

31st July Nil recorded.

Compiled by G.W.D'Addario.

RABAUl OBSERVATORY

FINAL BULLETIN AUGUST 1958

Vertical Component only.

1st August.	eP i	Z Z	05 43 48	43 45 28	48	U.S.C.G.S. 16°S., 176½W. Fiji Is. region. h about 450 H = 05 37 50 Moskva H= 05 37 45 h about 420. Mag. Mat 5¾-6, Bks 5¾ - 6, Stras. 5.8.
	iP	Z	16	56	07.7	Compression.
2nd August	Nil recorded					
3rd August	i	Z	00	17	37	
	eP i i(S)	Z Z Z	01	12 29 17	27 29 37	U.S.C.G.S. 21½°S., 179°W. Fiji Is. region h about 550 H = 01 06 24 Moskva h about 580 H = 01 06 25
4th August	iP	Z	04	18	09	U.S.C.G.S. 6°S., 130°E. Banda Sea. h about 150 H = 04 13 19 Moskva h about 160 H = 04 13 22 Mag. Mat 6½-6¾; Pra 6½; Stras.6.
	iP	Z	13	34	27	U.S.C.G.S. 5½°S., 152½°E. New Britain region. H = 13 33 55.
5th August.	Strong microseismic activity.					
6th August.	i	Z	09	05	28	
	i	Z	09	50	29	
	ePKP e'PKP	Z Z	10	09 12	48 26.2	U.S.C.G.S. 24½°S., 63°W. Salta Province, Argentina h about 550 H = 09 51 24
	e	Z	12	12	15	
	eP i e	Z Z Z	14	25 26 27	34 14 08	U.S.C.G.S. 10½°S., 158°E. Solomon Is. H = 14 23 25 B.C.I.S. H = 14 23 32
	eP i ePP ePPP iPcP e(S) eScP	Z Z Z Z Z Z Z	21	16 17 17 55 18 21 22	15 17 38 55 43.6 52.8 22	U.S.C.G.S. 17°S., 173°W. Tonga Is. H = 21 09 09 Moskva H = 21 09 15 Mag. Mat 6¼-6½; Bks 6½; Mat 6¼; Upp, Kir 6.1; Kew 6¼; Pas 6¾, Streabourg. 6¼.
7th August.	iP i i	Z Z Z	04	32	18 19 41	
	eP e iS	Z Z Z	11	29 30	18 41 15	B.C.I.S. 3°S., 146°E. H = 11 27 43

7th August contd.	iP	Z	22	13	29	
8th August.	iP	Z	07	43	52	Compression
	iP	Z	17	05	04	Compression.
9th August	iP	Z	04	46	47½	Compression
10th August.	iP!	Z	18	06	08.5	U.S.C.G.S. 3½°S., 151½°E Felt:- Rabaul Int 3 M.M. 04°10'S., 152°10'E. H = 18 05 54 Mag. Mat 5.8.
11th August	eP	Z	07	58	08	U.S.C.G.S. 18°S., 168½°E.
	i	Z			12	New Hebrides. H = 07 53
	i	Z			38	12
12th August	eP	Z	19	30	48	U.S.C.G.S. 0°, 126½°E.
	ePP	Z		31	34	Molucca Passage
	ePPP	Z			46	H = 19 25 05
	e(S)	Z		34	13	Moskva H = 19 25 12
	PcP	Z		35	27	Mag. Mat 6½; Upp, Kir 6.4; Kew 6½; Pas 6½; Stras. 6½; Mos 6 and 1/3; Lwow 6.2.
	iP!	Z	23	12	48	U.S.C.G.S. 6°S., 152°E. Near coast of New Britain h about 100 H = 23 12 17 Moskva H = 23 12 10 Felt:- Rabaul Int 2 M.M. 04°10'S., 152°10'E. Pomio Int 2-3 M.M. 05°32'S., 151°30'E. Karoola Int 1-2 M.M. 05°10'S., 154°35'E.
13th August	iP!	Z	00	12	07	U.S.C.G.S. 6°S., 152½°E. Near coast of New Britain H = 00 11 28
	iP	Z	03	56	17	U.S.C.G.S. Molucca Passage. H = 03 50 35 B.C.I.S. H = 03 50 34 Moskva H = 03 50 38 Mag. Mat 5½; Stras. 5.8.
	eiP	Z	10	03	25	U.S.C.G.S. 6°S., 153°E. Off coast of New Britain
	iP!	Z	18	58	10	Dilatation
	iP	Z	19	22	38	U.S.C.G.S. Solomon Is.
	i	Z		23	39	H = 19 21 21
	i	Z		24	41	
	iP!	Z	21	57	10	Compression
	iS	Z			30	U.S.C.G.S. 4½°S., 154°E. Solomons Is. region h about 200 H = 21 56 31 Felt:- Rabaul Int 2-3 M.M. 04°10'S., 152°10'E. Karoola Int 4 M.M. 05°10'S., 154°35'E. Warrongoi Int 3 M.M. 04°30'S., 152°20'E.

August 1958.

14th August.	iP	Z	15	05	32	U.S.C.G.S. 52°N., 175°W. Andreanof Is. Aleutian Is. H = 14 55 10 Moskva H = 14 55 05 Mag. Mat 6½-6¾; Upp, Kir. 6.4; Mos 6½; Pas 6½; Bks 6¼-6½; Tac 6.2; Stras 6¼; Lwow.6.0
15th August	iP!	Z	02	27	47	U.S.C.G.S. 6°S., 150½°E. New Britain H = 02 26 51 Felt:- Walindi Int 4 M.M. 05°25'S., 150°05'E. Kandrian Int 3-4 M.M. 06°00., 149°30'E. Mag. Mat 5½.
	iP!	Z	20	05	30	U.S.C.G.S. 53°N., 160½°E. Near east coast of Kamchatka h about 60 H = 19 55 39 Moskva 53½°N., 159½°E. H = 19 55 39 Mag. Pra 6.6; Mat 6¾-7; Upp, Kir 6.8; Kew 6½; Mos 7; Pas 6¾; Bks 6¾; Tac 6.3.
	i	Z			35	
	iP	Z	22	34	55	Compression. Felt:- Rabaul Int 3 M.M. 04°10'S., 152°10'E.
16th August.	iP	Z	13	07	32	Strong microseismic activity. Dilatation.
	e(P)	Z	13	28	00	
	i	Z			09	
17th August	iP	Z	18	02	47	U.S.C.G.S. 3°S., 145½°E. Bismarck Sea. H = 18 01 05 Moskva H = 18 01 00 Mag. Mat 6¼-6½; Kew 6½; Mos 6, Pas 6¼-6½; Pra 6¾; Stras 6½-6¾.
	iPP	Z		03	02.4	
	eS	Z		04	07	
	eSS	Z		04	30.5	
	i	Z		05	48	
	i	Z	21	18	54	U.S.C.G.S. 35½°S., 179½°W Kermadec Is region H = 21 11 09 Mag Mat 5¼-5½; Stras 5¾.
18th August	Strong microseismic activity.					
19th August.	iP	Z	04	51	23	U.S.C.G.S. 19°S., 175°E. Fiji Is. region H = 04 45 45 Mag. Mat 5½-5¾.
	iP	Z	11	15	00	
	i	Z			18	
	eiP	Z	21	49	16.5	U.S.C.G.S. 1°S., 149½°E
	iP	Z			18.5	New Ireland H = 21 48 07
	iS	Z		50	(05)	Moskva H = 21 48 12 Mag. Mat 6¼-6½; Mos 5¼; Stras.6
	eP	Z	22	56	19½	U.S.C.G.S. 1°S., 149°E. New Ireland h about 100 H = 22 55 18

20th August.	eP	Z	03	44	13.5	U.S.C.G.S. 14°S., 167°E.
	ePP	Z			41.7	New Hebrides H = 03 40 07
	ePIP	Z		45	28.2	Mag. Mat 6¼-6½; Kew 6¼; Pas
	e(S)	Z		47	27	6¼-6½; Pra 6.0; Bks 6¼-6½;
	ePcP	Z		49	00.3	Lwow 6.0; Stras 6¼-6½;
	eP	Z	05	02	08	U.S.C.G.S. 1°S., 149°E.
	i	Z			10.5	New Ireland H = 05 00 10.5
	iP	Z	08	16	10	Compression
	i	Z			26	Felt:- Warrangoi Int 1 M.M. 04°30'S., 152°20'E.
	iP	Z	22	49	08.5	U.S.C.G.S. 5°S., 149°E. New Britain h about 250 H = 22 48 05 Felt:- Kainantu Int 4 M.M. 06°15'S., 145°55'E. Kundiawa Int 2 M.M. 06°00'S., 145°00'E. Goroka Int 1-2 M.M. 06°05'S., 145°25'E.
21st August	eP	Z	01	16	13	U.S.C.G.S. 24°S., 176°W. Tonga Is. region H = 01 09 00 Mag. Mat 5½-5¾; Stras. 5¼-6.
	i	Z	04	46	01.5	
	i	Z			06	
	i	Z			21	
	eP	Z	19	18	41	Felt:- Warangoi Int 1 M.M. 04°30'E., 152°20'E.
	iP	Z	21	05	39	U.S.C.G.S. 18°S., 176°W.
	i	Z		11	35	Fiji Is. region h about 250 H = 20 59 10 Moskva h about 260 H = 20 59 04 Mag. Mat 5¾-6.
22nd August	i(P)	Z	10	01	06	U.S.C.G.S. 15°S., 167°E. New Hebrides h about 100 H = 09 56 40
	iP	Z	22	17	28	Dilatation
	iS	Z			59	U.S.C.G.S. 5½°S., 150°E. Western New Britain h about 250 H = 22 16 48 J.M.A. Japon h about 250 H = 22 16 56 Felt:- Port Moresby Int 2 09°27'S., 147°11'E. Mag. Mat 5½-5¾.
23rd August.	eIP	Z	06	49	42	U.S.C.G.S. New Britain region
	i	Z			43	H = 06 49.0
	iP	Z	22	15	36	
	i	Z			38.5	
	i	Z			41.5	
	i	Z		16	38	
24th August	eP	Z	17	01	12	U.S.C.G.S. 14°N., 121°E.
	i	Z			15	Near coast of Luzon P.I.
	ePP	Z		03	01.6	h about 150 H = 16 54 25
	ePPP	Z			19.8	Moskva H = 16 54 25
	ePcP	Z			37	

25th August						Nil recorded
26th August	iP	Z	12	24	50	U.S.C.G.S. 14°S., 167°E. New Hebrides foreshock H = 12 20 43 Mag. Mat 5½-5½
	eP	Z	12	49	09.7	U.S.C.G.S. 14°S., 167°E. New Hebrides foreshock H = 12 45 02
	iP	Z	17	59	43	U.S.C.G.S. 14°S., 167°E. H = 17 55 34 H = 17 55 38 Moskva Mat 5½-5½
27th August						Strong microseismic activity.
	iP!	Z	15	00	10	Felt :- Rabaul Int 3 M.M. 04°10'S., 152°10'E.
28th August	i	Z	14	21	56.5	
29th August	iP	Z	04	04	29.4	Felt:- Pomio Int 2-3 05°32'S., 151°30'E.
	eP	Z	12	28	33	U.S.C.G.S. 14½°S., 167°E. New Hebrides H = 12 24 23 Moskva H = 12 24 22 Mag. Mat 5½; Mos 5½; Pas 5½-6; Stras 5.8.
	i	Z			40	
	eP	Z	12	56	09	U.S.C.G.S. 14°S., 167°E. H = 12 51 58 New Hebrides
30th August	iP!	Z	14	32	09	Compression B.C.I.S. 5°S., 151½°E. New Britain region H = 60 14 31.5
31st August	e	Z	16	23	48	

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RADAUL OBSERVATORY

FINAL BULLETIN

SEPTEMBER 1958

1st.	iP	Z	15	37	13	U.S.C.G.S. 38°N., 134½°E. Sea of Japan. h about 400 H = 15 29 31 J.M.A. Japon 37°9N., 134°8'E. h about 400 H = 15 29 34
	iP	Z	18	59	18	
2nd.	e(P)	Z	02	25	34	Solomons Felt:- Boku Int 5 M.M. 06°35'S., 155°20'E.
	i	Z			37	
	iP	Z	02	31	07	U.S.C.G.S. 10½°S., 164½°E. Santa Cruz Is. region H = 02 27 41
	iS	Z			33 49	
	eiP	Z	02	57	29	U.S.C.G.S. 6½°S., 155°E. Solomons h about 100 H = 02 56 34
	i	Z			35	
eS	Z		58	11.5		
i	Z	13	48	33		
	iP!	Z	14	27	35	Dilatation U.S.C.G.S. 5½°N., 145½°E. Near North coast of New Guinea H = 14 25 37 Felt:- Chauve Int 4-5 M.M. 06°05'S., 145°10'E. Goroka Int 4 M.M. 06°05'S., 145°25'E. Kundiawa Int 5 M.M. 06°00'S., 145°00'E. Kainantu Int 4 M.M. 06°15'S., 145°50'E. Manam Int 4-5 M.M. 04°05'S., 145°E. Kerowagi Int 4 M.M. 05°50'S., 144°50'E. Aigme Int 4-5 M.M. 05°10'S., 144°45'E. Awelkon Int 2 M.M. 05°40'S., 147°50'E. Way Int 1-2 M.M. 07°20'S., 146°45'E.
	e(S)	Z		29	05	
3rd.	eP	Z	08	18	43	U.S.C.G.S. 40½°N., 143°E. Off N.E. coast of Hondo, Japan. h about 60 H = 08 10 26 Moskva H = 08 10 26 J.M.A. Japon 40°7N., 143°3'E. H = 08 10 21 Mag. Mat 6.4; Upp, Kir 6.2; Kew 6.2; Mos 6; Stras 6-6¼; Lwow 5.9.
	i	Z			44	
	e	Z	10	56	16	
	i	Z			19	
	e	Z	13	45	21	
	i	Z			35	
	i	Z	16	57	38	
	e	Z		58	05	
	eP	Z	18	14	56	
	i	Z			58	
e	Z	18	53	59		
i	Z		54	11		
i	Z			18		

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3rd. Contd.

e Z 20 06 34
 i Z 44

4th eP Z 12 26 22

e Z 14 41 55

e Z 15 17 01
 i Z 32 01

e Z 15 42 55
 i Z 43 22

e Z 16 46 53

e Z 17 11 18
 e Z 41

e Z 17 21 07
 e Z 29

e(P) Z 18 55 59
 i Z 56 01
 i Z 58 15

e Z 19 31 25
 i Z 30

5th. e Z 19 24 (04)

i Z 10
 i Z 22
 e Z 30

6th. i(P) Z 14 04 06
 i Z 10

eP Z 14 14 20
 i Z 25
 i Z 15 01
 i Z 06

eP Z 17 36 23

7th e Z 03 16 43
 i Z 55

iP Z 04 38 22
 e Z 39 11
 i Z 24

eP Z 04 41 00
 i Z 04
 i Z 58

Overlapping shock

i(P) Z 09 07 44
 i(S) Z 08 50

eP Z 14 11 36
 i Z 40
 i(S) Z 12 24
 i Z 41

8th. iP Z 05 35 25.4

U.S.G.G.S. 53½°N., 159°E
 Near E. coast of Kamchatka
 H = 05 25 37 Higher than usual

8th. continuation of previous shock.

Moskva $53\frac{1}{2}^{\circ}$ N., 160° E.
 H = 05 25 38 Mag. Upp, Kir 6.4
 Kew $6\frac{1}{4}$; Mos $5\frac{1}{2}$; Rom 6; Stras. 5.9;

eP	Z	11	47	(03)
i	Z			21
e	Z	13	23	53
i	Z		24	05
i	Z			15
i	Z			23
i	Z			40
iP	Z	14	03	08
eP	Z	15	01	06
iP	Z	15	15	49
e	Z		23	27
ei	Z			39
eP	Z	15	33	31
e	Z	16	21	53
ei	Z			07

U.S.C.G.S. Santa Cruz Is. region
 H = 13 58 19

U.S.C.G.S. $33\frac{1}{2}^{\circ}$ N., $131\frac{1}{2}^{\circ}$ E
 Northern Kyushu, Japan
 h about 60 H = 14 53 13
 Moskva H = 14 53 15
 J.M.A. Japon 33° 8N., 131° 9'E.
 h about 80 H = 14 53 17
 Mag. Mat 5.8

9th.

iP	Z	11	41	03
i	Z			15
e	Z	11	55	56
e(P)	Z	13	50	53
i	Z			58
e	Z	16	24	34
eP	Z	18	17	00
i	Z			09
i(S)	Z		18	05

U.S.C.G.S. 46° N., 151° E.
 Kurile Is. H = 11 32 05
 J.M.A. Japon 46° N., 151° E.
 h about 60 H = 11 32 14

10th

e	Z	12	53	(10)
i	Z			23
e	Z	14	24	06
i	Z			09
i	Z			31
eP	Z	16	03	14
i	Z			18
i	Z		04	06
i	Z			19

11th

eP	Z	07	38	14
eP	Z	09	33	18
e	Z	10	38	01
i	Z			04

11th Contd.						
	eP	Z	12	40	06	
	i	Z			11	
	i	Z		41	07	
	e(P)	Z	14	18	01	
	i	Z			06	
	i	Z			20	
	e(P)	Z	15	48	26	
	i	Z			35	
	iP	Z	15	50	32	Compression
	e	Z	16	18	04	
	i	Z			28	
	eP	Z	18	07	39	
	i	Z			57	
	ePP	Z		08	28	
	ePPP	Z			40	
	iPcP	Z		10	54	
	eS	Z		12	22	
						U.S.C.G.S. $7\frac{1}{2}^{\circ}$ N., $126\frac{1}{2}^{\circ}$ E., Near E. coast of Mindanao P.I. H = 18 01 44
12th	iP!	Z	09	55	32	Dilatation
	iP	Z	11	53	19	
						C.B.M.
13th	iP	Z	03	38	36	B.C.I.S. 2° N., 122° E. H = 03 32.2
	eP	Z	14	46	27	
	i	Z			37	
14th	i	Z	12	22	06	Mag. Mat $6\frac{1}{2}$ - $6\frac{3}{4}$; Upp, Kir 6.4; Kew 6.4; Pas $6\frac{1}{4}$ - $6\frac{1}{2}$; Rom $6\frac{1}{2}$; Stras.6.6;
	iP	Z	14	32	26	U.S.C.G.S. 57° N., 121° E Stanovis Mountains region. Siberia. H = 14 21 37 Moskva $56\frac{1}{2}^{\circ}$ N., $121\frac{1}{2}^{\circ}$ E. H = 14 21 37 Mag. Mat $6\frac{1}{2}$ - $6\frac{3}{4}$; Kew 6.4 Rom. $6\frac{1}{2}$; Stras 6.6; Pas $6\frac{1}{4}$ - $6\frac{1}{2}$. (42)
	iP	Z	14	34	26	
	iP	Z	14	58	08	
	i	Z			22	
	iP	Z	15	08	16	
	eP	Z	17	00	(16)	
	i	Z			26	
	eP	Z	17	19	08	
	i	Z			34	
	i	Z			58	
	e(P)	Z	18	02	(11)	
	i	Z	18	13	06	U.S.C.G.S. New Hebrides H = 17 57 28
	iP	Z	19	49	54	U.S.C.G.S. 31° N., 133° E Off coast of Kyushu, Japan.

15th.	i	Z	02	55	20	B.C.I.S. Fiji Is. region probably deep.
	eP	Z	16	55	41	U.S.C.G.S. 33°S., 179°W. Kermadec Is. region H = 16 48 10
	i	Z			42	
	e	Z	19	42	12	
	i	Z			42	
	eP	Z	19	51	26	U.S.C.G.S. 2½°N., 120½°E. Celebes Sea h about 600 H = 19 45 40 Moskva h about 700 H = 19 45 52 Mag. Upp, Kir 6.3; Kew 6.5; Pas 6-6¼; Tac 6.1.
	i	Z			27	
	ePcP	Z		53	53	
	eS	Z		55.9		
	e(ScS)	Z	20	00	30.7	
16th.	e(P)	Z	12	54	(59)	Vertical and N.S. component only.
	i	Z		55	07	
	i	Z	23	37	28	
	i	Z			33	
17th.	eiP	Z	04	53	58	
	i	Z	05	20	29	
	i	Z	12	33	24	
	eP	Z	14	44	46	
	i	Z		45	03	
	i(P)	Z	18	42	51	
18th.	iP	Z	06	53	58	U.S.C.G.S. 2½°S., 141°E. Near N.coast of New Guinea H = 06 51 09 Felt:- Vanimo Int IV M.M. 02°40'S., 151°20'E.
	iP!	Z	07	47	31	Compression Felt:- Rabaul Int II M.M. 04°10'S., 152°10'E. Local
	iP	Z	07	58	56	Local
19th.	iP	Z	21	23	02	Strong microseismic activity. Felt:- Timbunki Int IV M.M. 04°10'S., 144°25'E. Angoram Int IV M.M. 04°05'S., 144°05'E.
20th	i(P)	Z	08	03	10	U.S.C.G.S. 6½°S., 154½°E. Solomon Is. H = 17 09 24 Mag. 6¼-6½; Upp, Kir 6.3; Mag. Kew 6.4. Felt:- Boku Int VI M.M. 06°35'S., 155°20'E. Sohano Int IV-V M.M. 05°25'S., 154°40'E.
	i	Z			24	
	e(P)	Z	11	24	(06)	
	i	Z			08	
	iP	Z	17	10	29	
	i	Z			31	
	i	Z		15	(58)	
	i	Z		17	(42)	

20th contd.

continuation of previous shock.

Felt:- Karoola Int IV M.M.
 05°10'S., 154°05'E.
 Rabaul Int IV M.M.
 04°10'S., 152°10'E.
 Aropa Int III M.M.
 06°25'S., 155°50'E.
 Kieta Int III M.M.
 06°15'S., 155°40'E.

iP Z 17 19 (40)
 i Z 45

Confused in coda of preceding shock.

iP Z 17 37 48
 i Z 38 38

In coda of preceding

iP Z 17 44 51
 i Z 45 (45)

iP! Z 18 02 49

Dilatation

iP! Z 21 30 37

Dilatation

eP Z 22 14 (31)
 i Z 41
 i Z 15 36
 i Z 41

21st iP(P) Z 07 37 01

U.S.C.G.S. Molucca district
 H = 07 31.4

iP Z 11 16 01

iP Z 15 16 10
 i Z 35

eiP Z 22 22 55

22nd No records

23rd. iP! Z 19 58 13

Dilatation
 Local

Felt:- Rabaul Int II M.M.
 04°10'S., 152°10'E.

24th. iP Z 02 10 47
 i Z 11 21
 i Z 42

iP Z 08 34 53
 i Z 35 23

iP Z 11 30 33
 i Z 31 15

iP! Z 11 36 18

eP Z 11 46 11
 i Z 20

iP Z 11 55 27

iP! Z 12 57 49

iP Z 14 15 53
 i Z 16 11
 i Z 16

24th Contd.

eP	Z	14	18	17
i	Z			27
i	Z		19	00
iP	Z	17	56	45
i	Z			47

25th.

iP ¹	Z	07	40	17
i	Z		41	20
iP ¹	Z			32
iPP ²	Z		45	13

U.S.C.G.S. 9°N., 39½°W.
 Atlantic Ocean H = 07 20 01
 Moskva H = 07 20 00
 Mag. Jpp, Kir 6.7; Kew 6.6;
 Pas 6½; Bks 6¼-6½; Tac 6.3;
 Bratislava 6.8; Stras 6.4.

iP!	Z	10	18	51
-----	---	----	----	----

Local.
 Felt:- Rabaul Int II M.M.
 04°10'S., 152°10'E.

iP	Z	12	42	25
i	Z			27

26th

i	Z	06	31	26
i	Z			56
i	Z		33	00

iP	Z	11	39	25
i	Z			37
i	Z		40	10

U.S.C.G.S. Banda Sea
 H = 11 34 24

i	Z	11	52	00
---	---	----	----	----

eP	Z	14	57	14
i	Z			19

27th

eP	Z	10	41	53
e	Z		42	37

iP	Z	14	01	45
----	---	----	----	----

U.S.C.G.S. 15°S., 174°W.
 Samoa Is. region h about 150
 H = 13 55 02. B.C.I.S.H = 13 55 01

iP	Z	22	07	11
i	Z			31

28th

iP!	Z	12	50	50
-----	---	----	----	----

Compression
 U.S.C.G.S. 5°S., 153½°E.
 New Britain region
 Felt:- Rabaul Int II M.M.
 04°10'S., 152°10'E.

iP	Z	18	08	39
i	Z			40
i	Z		09	08

Deep?

29th

iP	Z	09	58	23
eP	N	10	02	26

U.S.C.G.S. 4½°S., 130°E.
 Banda Sea. H = 09 53 20

iP!	Z	16	33	15
i	Z			20

Compression

30th.	i(P)	Z	03	17	(33)
	iP	Z	07	14	06
	iP	Z	15	23	21
	i	Z			27
	iP	Z	15	49	16
	i	Z			34
	iP!	Z	15	51	29
	i	Z			43
	iP	Z	16	05	51
	i	Z			56
	i	Z		06	20
	i	Z		07	02
	iP	Z	16	08	25
	i	Z			30
	i	Z			54
	iP	Z	16	10	00
	i	Z			08
	iP	Z	16	14	03
	e	Z			18
	i	Z			22
	i(P)	Z	16	15	50
	i	Z		16	02
	i	Z	18	25	44

Confused by microseisms

U.S.C.G.S. $3\frac{1}{2}^{\circ}$ N., 128° E

Molucca district

H = 07 08 37

Compiled by G.W.D'Addario

October 1958.

1st Oct.	iP	Z	09	38	59	U.S.C.G.S. 57°S., 147°E. Antartic Ocean. H = 09 29 43 S.W. of Macquarie Is. Mag. Mat 6¼-6½; Upp, Kir 6.2; Kew 6.4; Pas 6¼.
	iP	Z	12	05	48	Dilatation. U.S.C.G.S. 3°N., 125°E. Celebes Sea. H = 11 59 55
	iP	Z	17	53	10	U.S.C.G.S. 53°N., 165½°W.
	i	Z			38	Fox Is. Aleutian Is.
	i	Z			52	H = 17 47 15
	eS	N	18	07	02½	Mag. Pas 6¼.
	iP	Z	22	03	06	Dilatation Deep
2nd. Oct.	iP!	Z	02	52	40	Compression
	iP	Z	09	15	15	
	i	Z			30	
	iP	Z	15	06	45	U.S.C.G.S. 7½°N., 127°E.
	iPP	Z		07	34	Off E coast of Mindanao P.I.
	iPPP	Z			46	H = 15 00 50 Moskva H = 15 01 00 Mag. Mat 5¾-6.
	iP	Z	18	37	01	
3rd. Oct.	iP	Z	00	40	16	Dilatation U.S.C.G.S. 13½°N., 120°E Philippine Is. region H = 00 33 07 Moskva H = 00 33 18
	iP!	Z	09	27	07	Compression Felt:- Rabaul Int II M.M. 04°10'S., 152°10'E.
	iP	Z	11	05	33	Local
	i	Z			43	
	iP	Z	14	39	37	Dilatation
	i	Z			54	
	iP	Z	15	15	44	Compression Deep? Local
	iP!	Z	23	31	58	Compression Local
4th Oct.	iP	Z	00	51	40	Dilatation h about 100
	iPP	Z		-	54	U.S.C.G.S. 4½°S., 143½°E.
	iPPP	Z		52	01	New Guinea H = 00 49 36
	iS	N		53	16	Felt:- Angoram Int V M.M. 04°05'S., 144°05'E. Tari Int III M.M. 05°50'S., 143°00'E Kerowagi Int III M.M. 05°50'S., 144°50'E. Timbunki Int IV M.M. 04°10'S., 143°30'E. Lumi Int II M.M. 03°30'S., 141°55'E.

4th Oct. contd.

continuation of previous shock

Felt:- Kundiawa Int II M.M.
 06°00'S., 145°00'E.
 Wewak Int II M.M.
 03°35'S., 143°40'E.
 Aigme Int II M.M.
 05°10'S., 144°45'E.
 Mendi Int I M.M.
 06°10'S., 143°40'E.
 Lufa Int I M.M.
 06°20'S., 145°15'E.

eP Z 11 38 58
 e Z 39 27
 ePP Z 56
 ePPP Z 40 08
 eS N 43 37

U.S.C.G.S. 22½°N., 144½°E.
 Mariana Is. region
 H = 11 33 07
 B.C.I.S. H = 11 33 08
 Moskva H = 11 34(00)
 Mag. Mat 5¼.

eP Z 18 13 46
 ePP Z 14 01
 ePPP Z 07
 eS N 17 05
 eSS N 28

U.S.G.G.S. 13½°S., 168°E.
 New Hebrides. H = 18 09 33

iP Z 19 43 12
 iP Z 20 01 43
 i Z 02 06

Dilatation

5th Oct.

iP Z 06 12 14
 i Z 20
 iP Z 46
 iPP Z 57
 eS N 16 18

Dilatation
 U.S.C.G.S. 18½°N., 145½°E.
 Mariana Is. H = 06 07 19
 h about 200

iP Z 11 37 28
 i Z 31
 i Z 54 }

6th Oct.

eP Z 00 54 21
 i Z 24
 iP Z 55 19.5

U.S.C.G.S. 32°S., 179½°E.
 Kermadec Is. H = 00 47 20
 h about 250

iP Z 19 02 56
 i Z 03 04

U.S.C.G.S. 56°N., 163°E
 Near E coast of Kamchatka
 H = 18 52 43
 Moskva 56°N., 163°E.
 H = 13 52 48

7th Oct.

iP! Z 11 06 07
 iP! Z 12 33 10

Felt:- Rabaul Int I M.M.
 04°10'S., 152°10'E.
 Warangoi Int I M.M.
 04°30'S., 152°20'E.
 Pomio Int I-II M.M.
 05°32'S., 151°30'E

U.S.C.G.S. 5°S., 151½°E
 New Britain H = 12 32 40
 B.C.I.S. 5¼°S., 151¾°E
 H = 12 32 38
 Moskva H = 12 32 48
 Mag. Pra 6¼; Upp, Kir 6.3;
 Kew 6.4; Bks 6¼-6½;
 Trieste 6¼; Mos 6¼; Que 6.6;
 Pas 6½-6¾.

7th Oct. continuation of previous shock
contd.

Felt:- Rabaul Int IV - V.M.M.
04°10'S., 152°10'E.
Tomio Int IV-V M.M.
05°32'S., 151°30'E.
Karoola Int III M.M.
05°10'S., 154°35'E.
Warangoi Int IV - VM.M.
04°30'S., 152°20'E.

iP! Z 12 38 32

Felt:- Rabaul Int II M.M.
04°10'S., 152°10'E.
Warangoi Int I M.M.
04°30'S., 152°20'E.
Ulamona Int II-III M.M.
05°00'S., 151°15'E.
Sohano Int II-III M.M.
05°27'S., 154°40'E.
Tomio Int II M.M.
05°32'S., 151°30'E.

N-S and E-W components only

8th Oct. ePg N 14 02 08

U.S.C.G.S. 7°S., 155½°E
Solomons H = 14 00 47
Mag. Mat 5¼.

eP N 14 26 11
i N (15)

U.S.C.G.S. 7°S., 156½°E
Solomons H = 14 24(27)

9th Oct. iP Z 10 26 39
iPP Z 52

U.S.C.G.S. 14°N., 145½°E.
Mariana Is. H = 10 22 08
Mag. Mat 5.

10th Oct. iP Z 08 40 12
pP Z 38.3
iPP Z 59

U.S.C.G.S. 53½°N., 160½°E.
Near E coast of Kamchatka
H = 08 30 26 h about 100
Moskva 53°N., 160½°E.
H = 08 30 20 h about 50
Mag. Mat 6¼; Mos 6; Pas 6½.

iP Z 11 41 12
i Z 26
iPP Z 57

U.S.C.G.S. 5½°N., 127°E
Off S coast of Mindanao P.I.
H = 11 35 24
Moskva H = 11 35 30
Mag. Mat 5¼-5½.

iP Z 15 15 06
i Z 07
i Z 17
i(S) N 16 13
i Z 23
i Z 17 18

11th Oct. iP Z 02 10 31

U.S.C.G.S. 53°N., 159½°E.
Near E coast of Kamchatka
H = 02 00 40
Moskva H = 02 00 45

eP! Z 14 56 38
ePP Z 59 13
e(PKS)Z 50

U.S.C.G.S. 23½°S., 65°W.
Jujuy Province, Argentina
H = 14 37 42 h about 200
Mag. Mat 5½; Pas 6.

4.

12th	iP	Z	12	49	52	U.S.C.G.S. $4\frac{1}{2}^{\circ}$ S., 144° E.
	i	Z			53	Near N. coast of New Guinea
	iS	N		51	34	H = 12 47 42
	i	Z		53	23	Felt:- Angoram Int IV M.M. $04^{\circ}05'S.$, $144^{\circ}05'E.$ Bogia Int III-IV M.M. $04^{\circ}15'S.$, $144^{\circ}55'E.$ Mount Hagen Int III-IV $05^{\circ}40'S.$, $144^{\circ}05'E.$ Tufi Int II-III M.M. $09^{\circ}05'S.$, $149^{\circ}20'E.$ Lumi Int II M.M. $03^{\circ}30'S.$, $141^{\circ}55'E.$ Aigme Int II-III M.M. $05^{\circ}10'S.$, $144^{\circ}45'E.$ Mendi Int I-II M.M. $06^{\circ}10'S.$, $143^{\circ}40'E.$ Aitape Int I + II M.M. $03^{\circ}10'S.$, $142^{\circ}20'E.$ Kajapit Int II M.M. $06^{\circ}15'S.$, $146^{\circ}15'E.$ Telefomin Int II M.M. $05^{\circ}10'S.$, $141^{\circ}35'E.$ Kundiawa Int II M.M. $06^{\circ}00'S.$, $145^{\circ}00'E.$ Goroka Int II M.M. $06^{\circ}05'S.$, $145^{\circ}25'E.$
	iP	Z	15	26	03	U.S.C.G.S. $27\frac{1}{2}^{\circ}$ N., $125\frac{1}{2}^{\circ}$ E.
	i	Z			22	E. China Sea h about 250
	e	Z			55	H = 15 18 42
	iPcP	Z		27	$41\frac{1}{2}$	Mag. Pas $6\frac{3}{4}$.
	iS	N		31	25	
13th	eiP	Z	02	56	(42)	Felt:- Boku Int I-II M.M. $06^{\circ}35'S.$, $155^{\circ}20'E.$
	eP	Z	09	10	40	U.S.C.G.S. $41\frac{1}{2}^{\circ}$ N., 75° E. Kirghiz S.S.R. H = 08 58 10 B.C.I.S. $40\frac{1}{2}^{\circ}$ N., $75\frac{3}{4}^{\circ}$ E. H = 08 58 00 Moskva H = 08 58 13
	i	Z	19	21	37	
14th	iP	Z	09	16	17	U.S.C.G.S. $52\frac{1}{2}^{\circ}$ N., 159° E Near E coast of Kamchatka. H = 09 06 24
	e	Z	12	39	16	
	i	Z			24	
	i	Z			30	
15th	iP'	Z	15	31	19	B.C.I.S. 12.5° N., 60.6° W. S. of the Lesser Antilles H = 15 11 50
	i	Z			38	
	i(P)	Z	18	55	32	
16th	iP	Z	02	47	51	Deep?
	iP!	Z	07	29	56	Dilatation B.C.I.S. Insufficient data. Felt:- Ulaona Int I=II M.M. $05^{\circ}00'S.$, $151^{\circ}15'E.$

16th Oct. contd.	eP	Z	18	05	47	U.S.C.G.S. 11°S., 167°E Santa Cruz Is. h about 100 H = 18 02' 01	
	eS	Z		08	30		
	eP	Z	18	33	39		
17th Oct.	iP	Z	06	26	(25)	U.S.C.G.S. 19½°S., 177½°W Fiji Is. h about 400 H = 10 23 56	
	i	Z					32
	i	Z			27		28
	iP	Z	10	29	53		
	i	Z		30	03		
	i	Z			05		
epP	Z		31	05			
e(ScS)N			38.8				
	i(P)	Z	14	54	49		
18th Oct.	iP	Z	00	28	06	Off N.E. coast of New Guinea Felt:- Kajapit Int II-III M.M. 06°15'S., 146°15'E. H = 00 26.5	
	i	Z			12		
	iS	N			30		17.5
19th Oct.	eP	Z	11	50	23	U.S.C.G.S. 34½°S., 178°W Kermadec Is. region H = 11 42 42 Moskva H = 11 42 39	
	i	Z			25		
	i	Z			27		
20th Oct.	iP	Z	01	06	03	U.S.C.G.S. 52°N., 175°W. Andreanof Is. Aleutian Is. H = 00 55 34 Moskva H = 00 55 (44)	
	i	Z					29
	iP	Z	01	20	06	U.S.C.G.S. 9½°S., 112½°E. Off S. coast of Java h about 100 H = 01 12 30 Moskva h about 100 H = 01 12 43 Mag. Mat 6½; Upp, Kir 6.6; Stras 6¼; Lwiro 5.9; Pas 6½; Que 6.7	
	iPcP	Z			22		00
	iScP	Z			25		43
	PcS	Z					53
	iS	N			26		09
	i	N					29
	i	N					36
	iP!	Z	03	21	23	Compression	
	iP	Z	15	31	22		
	i	Z				33	
	i	Z				51	
21st Oct	iP!	Z	06	16	30	Dilatation U.S.C.G.S. 5½°S., 147°E Near N.E. coast of New Guinea, H = 06 14 50 Moskva H = 06 15 10 Mag. Mat 6½. Felt:- Lag Int V M.M. 06°35'S., 147°E Kajapit Int IV-V M.M. 06°15'S., 146°15'E. Boganda Int III-IV M.M. 05°50'S., 146°E Awelkon Int III M.M. 05°40'S., 147°50'E. Mumeng Int III M.M. 07°06'S., 146°35'E.	
	iS	N			17		34
	e	N			19		51
	e	N			21		52
	e	N			55.3		

21st Oct. continuation of previous shock.
contd.

Felt:- Finshhafen Int II M.M.
06°35'S., 147°50'E.
Mt Hagen Int II M.M.
05°50'S., 144°15'E.
Sajior Int II M.M.
05°35'S., 146°30'E.
Goroka Int II M.M.
06°05'S., 145°25'E.
Kundiawa Int II M.M.
06°00'S., 145°00'E.
Way Int I M.M.
07°20'S., 146°45'E.

eP	Z	15	48	32	U.S.C.G.S. 11°S., 111°E.
e	Z			59	S. of Java
ePcP	Z		50	29	H = 15 40 40
					Moskva H = 15 40 44
					Mag. Mat 6½; Que 6.3.

eP	Z	17	40	00	U.S.C.G.S. 29°S., 179°W.
i	Z			24	Kermadec Is.
ePcP	Z		41	35	H = 17 32 45
i	Z		42	15	

eP	Z	18	49	23	U.S.C.G.S. 6°S., 154½°E
i	Z			29	Solomons Is. H = 18 48 38
iS	N		50	01	Felt:- Esa'ala, Int III-IV MM
					09°45'S., 150°50'E.

eP	Z	19	00	49	
i	Z			55	
iS	N		01	27	

22nd Oct. eP Z 23 47 12

23rd Oct. iP Z 19 22 04 Deep?

24th Oct. iP Z 15 52 15 B.C.I.S. Sth Pacific
i Z 29 insufficient data.

eP Z 18 20 47

i(P) Z 18 21 51

iP	Z	21	18	55	U.S.C.G.S. 0°, 125°E.
i	Z		19	21	Molucca Passage
					H = 21 13 06
					Moskva H = 21 13 14

25th. Oct.	eP	Z	09	18	39	New Britain region.
	i	Z			44	B.C.I.S. H = 09 18.7
	iS	N		19	49	

iP	Z	12	36	51	
i	Z			56	
i	Z		37	59	

26th Oct. Strong microseismic activity

27th Oct. Strong microseismic activity

7.

October 1958.

28th Oct.	eP	Z	10	58	03	U.S.C.G.S. $30\frac{1}{2}^{\circ}$ N., 85° E South of Tibet H = 10 46 27 Moskva H = 10 46 37 Shillong 31° N., 85° E. H = 10 46 25 Mag. Upp, Kir 6.4; Shl $6\frac{1}{2}$ - $6\frac{3}{4}$; Mos $6\frac{1}{4}$; Rom 6.4; Stras 6.3.
	iPn!	Z	13	42	36	Dilatation
	iPn!	Z	14	18	09	Dilatation Felt:- Rabaul Int II M.M. $04^{\circ}10'S.$, $152^{\circ}10'E.$
	iPn!	Z	18	18	30	Compression U.S.C.G.S. $4\frac{1}{2}^{\circ}$ S., $153\frac{1}{2}^{\circ}$ E. New Britain-Solomon Is. region H = 18 18 03 Felt:- Rabaul Int III M.M. $04^{\circ}10'S.$, $152^{\circ}10'E.$
	iP!	Z	22	59	36	Compression. Felt:- Rabaul Int 1 M.M. $04^{\circ}10'S.$, $152^{\circ}10'E.$
29th Oct.	eP	Z	07	54	17	U.S.C.G.S. $51\frac{1}{2}^{\circ}$ N., $179\frac{1}{2}^{\circ}$ E. Andreanof Is. Aleutian Is. H = 07 44 10 Moskva 50° N., 180° E H = 07 44 07 Mag. Upp, Kir 6.6; Mos 7; Pas $6\frac{1}{4}$; Que $6\frac{1}{2}$ - $6\frac{3}{4}$; Bks $6\frac{1}{2}$; Rom $6\frac{1}{2}$; Lwiro $6\frac{1}{2}$ - $6\frac{3}{4}$; Stras 6.6.
30th Oct.	iP!	Z	09	38	35	Compression Deep?
	iP	Z	10	11	53	U.S.C.G.S. $20\frac{1}{2}^{\circ}$ S., 176° W. Tonga Is. H = 10 05 00
31st Oct.	iP	Z	19	04	40	U.S.C.G.S. $3\frac{1}{2}^{\circ}$ S., $143\frac{1}{2}^{\circ}$ E
	iPP	Z			43	New Guinea H = 19 02 54
	i	Z		05	34	Moskva H = 19 03 (00)
	iLQ	N		06	12	Mag. Mat $5\frac{3}{4}$; Kew 6.
	eS	N			26	
	e	Z		07	06	
	iP	Z	23	47	03	U.S.C.G.S. 25° N., $122\frac{1}{2}^{\circ}$ E Near N. Coast of Formosa H = 23 39 27 H about 100 Moskva H = 23 39 (36)

Compiled by G.W.D'Addario

Volcanological Observatory Rabaul

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November 1958.

N-S and Vertical Components only.

1st Nov.	iP i	Z Z	03 39	39 39	11 12	U.S.C.G.S. 3°S., 150° E. Bismarck Sea H = 03 38 35 Moskva H = 03 38 36 Felt:--Kaieng Int IV M.M. 02°35'S., 150°50'E. Mag. Mat 6 $\frac{3}{4}$ -7; Upp, Kir 6.3; Pas 6 $\frac{1}{4}$ -6 $\frac{1}{2}$; Stras. 6.3
	iP	Z	05	58	31	
	iP	Z	06	05	37	
	iP	Z	06	08	29	U.S.C.G.S. 3 $\frac{1}{2}$ °S., 145 $\frac{1}{2}$ °E. Off N. Coast of New Guinea. H = 06 06 47 Moskva H = 06 06 50
	iP	Z	06	17	35	U.S.C.G.S. Off N. Coast of New Guinea H = 06 15 54 after shock of iP 06 08.
	e i	Z Z	08	03	24 40	
	iP	Z	08	23	(19)	Off E Coast of New Guinea B.C.I.S. 7 $\frac{1}{2}$ °S., 148°E. H = 08 21.7
	eP	Z	12	13	06	U.S.C.G.S. 17 $\frac{1}{2}$ °S., 168°E. New Hebrides. H = 12 08 21 foreshock of eP 12 21
	eP i e	Z Z Z	12	20	23 27 35	U.S.C.G.S. 17 $\frac{1}{2}$ °S., 169°E New Hebrides H = 12 15 43 foreshock of eP 12 21
	e	Z	12	21	20	U.S.C.G.S. 17 $\frac{1}{2}$ °S., 168°E, New Hebrides H = 12 16 36 Moskva H = 12 16 37 Mag. Mat. 6 $\frac{1}{4}$ -6 $\frac{1}{2}$; Kew 6.2; Stras 6.2; Pas 6-6 $\frac{1}{2}$; Pra 7 $\frac{1}{4}$.
	iP	Z	12	33	55	New Hebrides aftershock of eP 12 21 B.C.I.S. H = 12 29 11
	e(P)	Z	15	54	04	
	eP i	Z Z	15	54	52 55	U.S.C.G.S. 17 $\frac{1}{2}$ °S., 168°E New Hebrides, aftershock of eP 12 21
	e	Z	17	33	48	U.S.C.G.S. 15 $\frac{1}{2}$ °S., 169°E New Hebrides H = 17 25 45
	e(P)	Z	18	05	59	B.C.I.S. 16°S., 168°E New Hebrides H = 18 01.0
	e(P) i	Z Z	19	30 31	54 01	
	iP	Z	19	33	15	U.S.C.G.S. 18°S., 168 $\frac{1}{2}$ °E. New Hebrides H = 19 26 09 aftershock of eP 12 21
	e	Z	21	33	31	B.C.I.S. New Hebrides H = 21 28 48

1st Nov. contd						
e	Z	21	54	11		
e	Z	23	33	(51)		
2nd Nov. Nil						
3rd. Nov.	iP	Z	14	43	09	U.S.C.G.S. 30°N., 84½°E. Tibet H = 14 31 35 B.C.I.S. 30°N., 84°E H = 14 31 37 Moskva H = 14 31 20 Quetta 30½°N., 84½°E H = 14 31 39 Shillong 31°N., 85°E H = 14 31 30 Mag. Kew 5¾.
4th Nov.	iP!	Z	00	25	44	Dilatation
	iPP	Z			48	U.S.C.G.S. 6°S., 147½°E.
	iS	N		26	45	Near N.Coast of New Guinea. H = 00 24 24 Felt:- Finschhafen Int II M.M. 06°35'S., 147°50'E. Okapa Int II-III M.M. 06°10'S., 145°05'E. Kajapit Int I-II M.M. 06°15'S., 146°15'E.
	iP	Z	08	35	10	U.S.C.G.S. 28°N., 140½°E. Bonin Is. region H = 08 28 28 Moskva H = 08 28 30 J.M.A. Japon 28½°N., 141°E. h about 60 H = 08 28 36 Mag. Pra 5¾; Mat 5.7; Stras 6.1.
	iP	Z	08	37	42	U.S.C.G.S. 28°N., 141°E. Bonin Is. region H = 08 31 00 B.C.I.S. H = 08 30 59 J.M.A. Japon 28½°N., 141°E. H = 08 31 06 Mag. Mat 5.8; Upp, Kir 6.0; Kew 6.0; Pra 5¾. aftershock of 08 35 10
	iP!	Z	18	33	45	Compression
	eP	Z	19	58	53	U.S.C.G.S. 11°S., 166°E.
	cS	N	20	04	33	Santa Cruz Is. H = 19 55 11
	eP	Z	23	07	42	U.S.C.G.S. 50°S., 115°W. South Pacific Ocean. H = 22 54 46 Mag. Mat 6; Kew 6.2; Stras 6.2; Pas 6.
	eP	Z	23	39	32	U.S.C.G.S. 17½°S., 168°E. New Hebrides H = 23 34 50 aftershock of 12 21 20 1st Nov., 1958.
5th Nov.	Strong microseismic activity					
	Nil.					
6th Nov.	iP	Z	15	35	03	U.S.C.G.S. 6°S., 128°E. Banda Sea. h about 250 H = 15 30 06

6th Nov. contd.	iP	Z	03	05	51	U.S.C.G.S. $44\frac{1}{2}^{\circ}$ N., $148\frac{1}{2}^{\circ}$ E.	
	i	Z		07	13	Kurile Is. h about 60.	
	iPcS	Z		12	(03)	H = 22 58 06	
	iPPS	Z		14.0		B.C.I.S. 44.5° N., 148.5° E	
	eLQ	N		18.0		H = 22 58 07	
	cLR	Z		20.1		Moskva $44\frac{1}{2}^{\circ}$ N., $149\frac{1}{2}^{\circ}$ E.	
	eM	Z		25.5		H = 22 58 05 J.M.A. Japon 44.3° N., 148.5° E. h about 100 H = 22 58 11 Shillong 44° N., 145° E. H = 22 58 15 Mag. Pra 8.3; Mat 8.0; Upp, Kir 8.0; Kew 8.1; Shl $7\frac{3}{4}$; Mos 8.0; Pas 8- $8\frac{1}{2}$; Bks 8- $8\frac{1}{2}$; Tac 8.0; Stras 8.7; Wien 8- $8\frac{1}{2}$; Lwiro 8.0; Rom 8.0.	
7th Nov.	iP	Z	01	51	45	U.S.C.G.S. $44\frac{1}{2}^{\circ}$ N., 149° E Kurile Is, H = 01 42 (56) h about 60. Japon 44° N., 149° E. h about 100 H = 01 43 07. Moskva H = 01 43 (02) Mag. Mat 5.5 confused by micro- seisms.	
	i	Z	02	19	14		
	i	Z	07	49	23	U.S.C.G.S. $44\frac{1}{2}^{\circ}$ N., $149\frac{1}{2}^{\circ}$ E	
	i	Z			33	Kurile Is. H = 07 40 36	
	i	Z			43	B.C.I.S. H = 07 40 41	
	iScP	Z		54	15	Moskva H = 07 40 44 J.M.A. Japon 43.7° N., 148.7° E. h about 100 H = 07 40 47 aftershock of 23 06 51 confused by microseisms. Mag. Mat 6; Kew 6.1; Pra $5\frac{3}{4}$.	
	eP	Z	11	33	04	U.S.C.G.S. $44\frac{1}{2}^{\circ}$ N., $149\frac{1}{2}^{\circ}$ E Kurile Is. h about 60 H = 11 24 25 J.M.A. Japon 44° N., $148\frac{3}{4}^{\circ}$ E h about 100 H = 11 24 31 Mag. Upp, Kir 5.9; Que 6.3; Kew 6.0	
	iP	Z	17	41	26	U.S.C.G.S. 44° N., $148\frac{1}{2}^{\circ}$ E Kurile Is, H = 17 32 48 Moskva H = 17 32 46 J.M.A. Japon 43.8° N., 148.2° E. h about 60 H = 17 32 49 after shock of 23 06 51 6th Nov., 1958 Mag. Upp, Kir 5.5; Kew 5.8.	
	8th Nov.	iP	Z	09	32	36	U.S.C.G.S. 52° N., $159\frac{1}{2}^{\circ}$ E
		iPcP	Z		33	33	Off S.E. coast of Kamchatka
ScP		Z		37	32	H = 09 22 53 Moskva 52° N., $160\frac{1}{2}^{\circ}$ E H = 09 22 55 Mag. Mat $6\frac{1}{4}$ - $6\frac{1}{2}$; Mos $6\frac{1}{2}$; Que 6.8; Pra $6\frac{1}{2}$; Stras 6.2;	
9th Nov.	Nil recorded						
10th Nov.	Nil recorded						
11th Nov.	e	Z	15	45	49		
	eP	Z	15	57	21		
	iP	Z			33		



November 1958.

11th Nov. contd. iP Z 17 38 15 Deep:

12th Nov. iP! Z 09 46 50 Dilatation. B.C.I.S. New Britain, Solomon Is. H = 09 46.3 Mag Mat 5 1/2. Felt:- Boku Int IV M.M. 06° 35' S., 155° 20' E. Rabaul Int II M.M. 04° 10' S., 152° 10' E. Kieta Int III M.M. 06° 15' S., 155° 40' E.

iP Z 10 40 51 U.S.C.G.S. 7° S., 156° E. i Z 54 h about 100 H = 10 39 47 i Z 58 Solomon Is. Felt:- Rabaul Int I M.M. 04° 10' S., 152° 10' E.

eP Z 20 32 11 U.S.C.G.S. 44 1/2° N., 148 1/2° E. i Z 12 Kurile Is. H = 20 23 26 i Z 12 B.C.I.S. 44 1/2° N., 148 1/2° E. iPcP Z 21 h about 33 H = 20 23 32 iPP Z 34 Moskva H = 20 23 35 iPPP ZN 52 J.M.A. Japon 44° N., 148 3/4° E. eiS N 39 h about 60 H = 20 23 32 e Z 39.8 Mag. Mat 6.7; Upp, Kir 7.0; e N 45.5 Kew 7-7 1/2; Mos 7 1/4; Pas 6 3/4-7; e Z 21 03.3 Que 7-7 1/2; Bks 7-7 1/2.

13th Nov. iP Z 03 05 10 U.S.C.G.S. 44° N., 148 1/2° E. Kurile Is aftershock H = 02 56 26 Moskva H = 02 56 37 J.M.A. Japon 43 1/2° N., 148 1/2° E. h about 80 H = 02 56 34 Mag. Mat 5.2; Upp, Kir 5.8; Kew 6.0; Mos 5 1/2;

iP Z 04 13 22 U.S.C.G.S. 44 1/2° N., 148° E. i Z 30 Kurile Is. aftershock H = 04 04 37. Moskva 44 1/2° N., 148.2° E. H = 04 04 44 J.M.A. Japon 43.6° N., 148.2° E. H = 04 04 44 Mag. Ira 6.2; Mat 5.8; Wel 6.4; Upp, Kir 5.9; Que 6.7; Stras 6.1

iP! Z 12 39 24 Compression. iS N 40 13 U.S.C.G.S. Solomon Is. Felt:- Waranggi Int III M.M. 04° 30' S., 152° 20' E. Rabaul Int I M.M. 04° 10' S., 152° 10' E.

iP Z 16 26 36 U.S.C.G.S. 9° N., 93 1/2° E. i Z 37 Nicobar Is. H = 16 16 25 i Z 47 Shillong 8° N., 94 1/2° E. iPcP Z 27 22 Mag. Mat 5 1/2. i : 38

14th Nov. i Z 03 28 10

iP Z 05 43 38 U.S.C.G.S. 44° N., 149° E. Kurile Is. aftershock H = 05 34 53

contd continuation of previous shock

	iP eS	Z N	13	53 57	07 00	Moskva H = 05 34 54 J.M.A. Japon 44°N., 149°E h about 70 H = 05 34 56 Mag. Mat 5.8, Pra 5.9; Kew 5.8, Upp, Kir 5.7; Mos 5 $\frac{3}{4}$; Stras 6.0.
						U.S.C.G.S 6°S., 131°E Banda Sea. H = 13 48 20 Moskva h about 100 H = 13 48 33 Shillong 6 $\frac{1}{2}$ °S., 133°E. H = 13 48 38 Mag. Mat 6 $\frac{1}{2}$ -6 $\frac{3}{4}$; Kew 6.2; Stras 6.0; Que 6.9
15th Nov.	iP ipP	Z Z	09	09	31 52	U.S.C.G.S. 44°N., 149°E Kurile Is. H = 09 00 45 Moskva 45°N., 148 $\frac{1}{2}$ °E H = 09 00 55 J.M.A. Japon 43 $\frac{3}{4}$ °N., 148 $\frac{3}{4}$ °E h about 70; H = 09 00 53 Mag. Mat 6.2; Kew 6 $\frac{1}{4}$; Wel 6.4; Stras 6.0; Pas 6 $\frac{1}{2}$ -6 $\frac{3}{4}$; Pra 6.2.
16th Nov.	iP	Z	17	52	02	U.S.C.G.S. 16°S., 172°W Samoa Is. region H = 17 44 48 Mag. Mat 6-6 $\frac{1}{4}$; Kew 6 $\frac{1}{4}$; Wel 6.2; Pas 6 $\frac{1}{4}$.
	eP	Z	18	07	35	U.S.C.G.S. 20°S., 169°E Loyalty Is. H = 18 02 25 Mag. Mat 5 $\frac{1}{2}$ -5 $\frac{3}{4}$; Wel 5.7
	iPn i!	Z Z	19	25	05 06	B.C.I.S. 6°S., 152 $\frac{1}{2}$ °E New Britain region H = 19 24.6
	iP ipP	Z Z	21	52 53	08 45	U.S.C.G.S. 28°N., 139 $\frac{1}{2}$ °E h about 500 H = 21 46 00 J.M.A. Japon 28 $\frac{1}{2}$ °N., 139 $\frac{3}{4}$ °E h about 500 H = 21 46 08 Mag. Mat 5.6.
17th Nov.	eP i iS	Z Z N	09	49 51	21 23 36	U.S.C.G.S. 10 $\frac{1}{2}$ °S., 162 $\frac{1}{2}$ °E Solomon Is. H = 09 46 30 Moskva H = 09 46.4 Mag. Mat 6-6 $\frac{1}{4}$; Wel 5.8.
	eP	Z	18	50	02	U.S.C.G.S. 20 $\frac{1}{2}$ °S., 169°E New Hebrides H = 18 44 49 Mag. Mat 5-5 $\frac{1}{4}$; Wel 5.4;
18th Nov	Nil recorded					
19th Nov.	iP ipP	Z Z	09	32	30 55	U.S.C.G.S 44°N., 149°E Kurile Is. h about 60 H = 09 23 51 Moskva 44°N., 149°E H = 09 23 50 J.M.A. Japon 43.8°N., 149°1 E. h about 100 H = 09 23 51 Mag. Mat 5; Kew 6; Mos 5 $\frac{3}{4}$; Pra 6; Stras 6.
	iP iPcP	Z Z	15	14	10 31	U.S.C.G.S. 60 $\frac{1}{2}$ °N., 150 $\frac{1}{2}$ °W Konai Peninsula - Naska

19th Nov. continuation of previous shock.
contd.

h about 60 H = 15 02 15
Moskva H = 15 02 17

20th Nov. e Z 05 46 21 U.S.C.G.S. 52°N., 159½°E.
Near E coast of Kamchatka.
H = 05 36 33
B.C.I.S. 52°N., 158½°E.
H = 05 36 31
Moskva 51½°N., 160°E
H = 05 36 30
Mag. Mat 6; Kew 6; Mos 5¾;
Pra 6; Stras 6.

iP! Z 10 22 58 U.S.C.G.S.
Felt:- Rabaul Int I M.M.
04°10'S., 152°10'E.

iP Z 14 26 50 U.S.C.G.S. 45°N., 149½°E
Kurile Is. aftershock
H = 14 18 04
Moskva H = 14 18 13
J.M.A. Japon 44.2°N., 149.9°E
h about 80 H = 14 18 07
Mag. Kew 6.1

21st Nov. iP! Z 23 34 07 Dilatation U.S.C.G.S. 6°S.,
i N 09 151½°E. h about 60
iS N 35 H = 23 33 36

22nd Nov iP Z 00 11 58 U.S.C.G.S. 10½°S., 112½°E
oS N 18 05 South of Java
H = 00 04 20
Moskva H = 00 04 25 Mag.
Mat 5.7; Wel 5.8.

iP Z 02 01 41 U.S.C.G.S. 4°S., 131½°E.
iS N 05 31.4 Ceram Is. region
H = 01 56 56
Moskva H = 01 57 02
Mag. Wel 6.0

23rd. Nov. iP Z 01 10 36

24th Nov. Nil recorded

25th Nov. - strong microseismic activity

26th Nov No record

27th Nov Nil recorded

28th Nov. Nil recorded

29th Nov. eP Z 04 53 53 U.S.C.G.S. 2.8°S., 177½°W
Kermadec region
H = 04 46 36

eP Z 06 06 13

iPg! Z 21 11 55 U.S.C.G.S. 5°S., 152½°E.
New Britain region
H = 21 11.6
Felt:- Rabaul Int II M.M.
04°10'S., 152°10'E.

29th Nov. continuation of previous shock.
 contd.

Felt:- Waronggi Int III M.M.
 04°30'S., 152°20'E.
 Gavit Int I-II M.M.
 04°13'S., 151°40'E.

30th Nov. iP Z 01 39 58

U.S.C.G.S. 32°N., 142½°E.
 South of Honshu, Japan
 H = 01 32 41
 Moskva H = 01 32 42
 J.M.A. Japon 32½°N., 142½°E
 h about 160 H = 01 32 49
 Shillong 32½°N., 142°E
 H = 01 32 51
 Mag. Mat 5¾; Upp,Kir 6.5; Wel 6;
 Pas 6, Stras 6; Lwow 5¾.

iP Z 05 48 53
 i Z 59
 iS N 50 00

Compiled by G.W.D'Addario

Volcano Observatory Rabaul

Final Bulletin

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Date	Type	Time	Mag	Mag	Mag	Location
1st Dec.	iP	Z	01	47	16	
	i	Z			32	
	i	N			43	
	i(S)	N		48	38	
2nd Dec.	iP!	Z	21	02	58	
	iP!	Z	21	17	21	
	iS	N		18	08	
3rd Dec.	eP	Z	09	55	49	U.S.C.G.S. 19°N., 121½°E Near N.coast of Luzon, P.I. H = 09 48 26 Moskva H = 09 48 35 J.M.A.Japon H = 09 48 48 Mag. Mat 5¾; Upp,Kir 6.0; Kew 6¼; Que 6.3
	i	Z			52	
	iP	Z	13	25	31	
	i	Z	16	07	12	U.S.C.G.S. 29°N., 138½°E South of Honshu, Japan J.M.A. Japon 29°N., 138½°E h about 550 H = 16 00 58 h about 500 H = 16 01 01
4th Dec.	iP!	Z	10	30	27	
	iP	Z	17	16	25	
5th Dec.	iP!	Z	02	21	42	
	iP	Z	16	40	23	
	i(S)	Z		41	11	
6th Dec.	Nil recorded					
7th Dec.	iP	Z	01	51	26	U.S.C.G.S. 21½°N., 121½°E Off S coast of Formosa H = 01 43 51
	iP	Z	02	51	33	U.S.C.G.S. 4°N., 127°E Talaud Is. H = 02 45 49
	i	Z		52	13	
	iP	Z	06	22	57	U.S.C.G.S. Bismarck Sea H = 06 21 46
	iS	N		23	51.4	
	iLQ	N			55	
	i	N		24	06	
	e	N			44	
	e	N		25	20	
	iP!	Z	10	11	56	
	i(S)	Z		12	14	
	iP!	Z	10	36	54	Felt:- Rabaul Int I M.M. 04°10'S., 152°10'E. Warangoi Int I M.M. 04°30'S., 152°20'E.
	i(S)	Z		37	08	
e	Z	15	56	51		
i	Z		57	19		



8th Dec.	Nil recorded						
9th Dec.	iP	Z	00	47	05		
	i	Z			13		
	i	Z			16		
	eS	N			48		
	eL	N		48	14		
	iP	Z	00	53	15		
	i	Z			16		
	i	Z			22		
	i	Z			30		
	i	Z			31		
	i	Z			33		
	iS	N			55		
	i	N		54	10		
	iL	N			19		
	eT	N		56.2			
	iP	Z	01	12	13		
	i!	Z			15		
	i(S)	Z			39		
	e(P)	Z	12	22	08	U.S.C.G.S. 14 $\frac{1}{2}$ ^o S., 167 ^o E New Hebrides Is. H = 12 17 47	
	i	Z			18		
	iPPF	Z			44		
	iS	N		29	56		
	iP	Z	15	28	29		
	i(S)	Z			53		
	iP	Z	16	28	45		
	i(S)	Z		29	08		
	iP	Z	16	43	23		
	i	Z			25		
	i(P)!	Z	16	45.3			
	i(P)!	Z	16	46.8			
i(P)!	Z	16	48.9		multiple shock.		
iP	Z	17	43	24			
iP	Z	20	08	53			
i	Z			57			
i	Z		09	14			
i	Z			20			
10th Dec.	iP!	Z	07	10	09	U.S.C.G.S. 37 ^o S., 176 $\frac{1}{2}$ ^o E Off North Is. New Zealand. h about 300 H = 07 02 59 Mag. Mat 6 $\frac{3}{4}$; Bks 6 $\frac{1}{2}$ -6 $\frac{3}{4}$; Pas 6 $\frac{3}{4}$.	
	ipP	Z		11	19.5		
	iPcP	Z		12	10		
	i	Z			44		
	i	Z		14	38		
	iS	N		15	53		
	iP	Z	14	44	40	U.S.C.G.S. 5 ^o N., 126 ^o E Off South coast of Mindanao P.I. h about 200 H = 14 39 00	
	epP	Z		45	26		
	i	Z			29		
	iP	Z	21	54	08		
	11th Dec.	iP	Z	13	45	36	Deep
		iP	Z	18	45	19	U.S.C.G.S. 29 $\frac{1}{2}$ ^o N., 140 ^o E.
		i	Z			29	

11th Dec. contd.

continuation of previous shock.

South of Honshu, Japan.
H = 18 38 08

12th Dec. Nil recorded

13th Dec.	iP	Z	09	06	39	U.S.C.G.S. $4\frac{1}{2}^{\circ}$ S., $153\frac{1}{2}^{\circ}$ E. New Britain H = 09 06 09 Felt:- Rabaul Int II M.M. $04^{\circ}10'S.$, $152^{\circ}10'E.$
	iP!	Z	14	03	39	Felt := Rabaul Int I M.M. $04^{\circ}10'S.$, $152^{\circ}10'E.$
	iP!	Z	15	26	28	Felt:- Rabaul Int I M.M. $04^{\circ}10'S.$, $152^{\circ}10'E.$

14th Dec. Nil Recorded

15th Dec. Nil Recorded

16th Dec. iP! Z 17 20 57

17th Dec.	iP	Z	15	41	59	U.S.C.G.S. $27\frac{1}{2}^{\circ}$ N., 128° E Ryukyu Is. H = 15 34 08
	iP!	Z	20	34	26	U.S.C.G.S. $4\frac{1}{2}^{\circ}$ S., $153\frac{1}{2}^{\circ}$ E New Ireland region. H = 20 33 58 Felt:- Rabaul Int III M.M. $04^{\circ}10'S.$, $152^{\circ}10'E.$ Warangoi Int II M.M. $04^{\circ}30'S.$, $152^{\circ}20'E.$

18th Dec.	iP	Z	05	05	04	
	i(P)	Z	05	13	29	
	iP	Z	13	16	33	Felt:- Rabaul Int II M.M. $04^{\circ}10'S.$, $152^{\circ}10'E.$ Londolovit Int II M.M. $03^{\circ}05'S.$, $152^{\circ}40'E.$
	iP	Z	13	56	16	Felt:- Warangoi Int II $04^{\circ}30'S.$, $152^{\circ}20'E.$
	iP	Z	20	45	03	

19th Dec.	iP!	Z	04	23	04	
	iP!	Z	08	38	41	
	iP!	Z	08	55	14	
	iP	Z	11	00	33	
	iP	Z	11	04	38	
	iPKP	Z	11	33	48	U.S.C.G.S. 16° S., 72° W Sth Peru h about 100 H = 11 14 40

19th Dec. contd.	iP!	Z	20	51	29	
20th Dec.	iP!	Z	09	28	11	
	iP	Z	19	28	27	U.S.C.G.S. 28½°N., 127½°E Ryukyu Is. region H = 19 20 43
21st Dec.	eP eS	Z N	05 06	58 08	37 37	U.S.C.G.S. 44½°N., 81°E Western Sinkiang Province China H = 05 46 26
22nd. Dec.	eiPn iPg!	Z Z	02	18	10 16	U.S.C.G.S. 6°S., 155°E Solomon Is. H = 02 17 14
	iP!	Z	02	21	(51)	In coda of preceding shock.
23rd Dec.	eP i!	Z Z	17	20	41 47	
	i	Z	18	48	38	
	eP i	Z Z	19	42	33 44	
24th Dec.	iP! iS	Z N	01	14 14	02 30	U.S.C.G.S. 6½°S., 150½°E. Near S.coast of New Britain Felt:- Kandrian Int I M.M. 06°08'S., 149°32'E. h about 100 H = = 01 13 17
	iP!	Z	12	39	46	
	iP!	Z	14	14	35	Deep?
	iP iPP	Z Z	20	40	14 43	U.S.C.G.S. 18°S., 169°E. New Hebrides Is. H = 20 35 20
	iP i	Z Z	22	15	49 56	U.S.C.G.S. 18°S., 169°E New Hebrides Is. aftershock of 20 40 14 H = 22 10 56
25th Dec.	iP!	Z	08	06	09	Dilatation U.S.C.G.S. 5½°S., 151½°E New Britain.h about 60 H = 08 05 38 Felt:- Rabaul Int IV - V M.M. 04°10'S., 152°10'E Pomio Int V M.M. 05°30'S., 151°30'E Warangoi Int V 04°30'S., 152°20'E Rangarere Int III M.M. 04°15'S., 151°35'E Ulamona Int III M.M. 05°00'S., 151°15'E. Mag. Pas 6¼.
	iP!	Z	09	37	07	Dilatation New Britain;aftershock of 08 06 09 Felt:- Rabaul Int I M.M. 04°10'S., 152°10'E.

Date	Time	Station	Mag	Depth (km)	Location
25th Dec.	contd				continuation of previous shock. Felt:- Pomio Int II-III M.M. 05°30'S., 151°30'E.
26th Dec.	iP	Z	05	53	09 Felt:- Rabaul Int I M.M. 04°11'S., 152°10'E. Londolovit Int I M.M. 03°05'S., 152°40'E.
27th Dec.	i	Z	08	29	36
28th Dec.	iP!	Z	04	40	55 C.B.M.
	iP	Z	17	23	30 Felt. :- Saidor Int II M.M. 05°35'S., 146°30'E. Kaiapit Int II M.M. 06°15'S., 146°15'E. Wasu Int IV M.M. 06°00'S., 147°15'E.
	eP	Z	18	23	01
	i!	Z			04
29th Dec.	eP	Z	03	04	16 U.S.C.G.S.
	i	Z			21 Felt:- Saidor Int I M.M. 05°35'S., 146°30'E. Kundiawa Int II M.M. 06°00'S., 145°00'E. Chauve Int 2 M.M. 06°05'S., 145°10'E. Goroka Int I-II M.M. 06°05'S., 145°25'E.
	iP	Z	16	34	14
	i(P)	Z	22	47	48
30th Dec.	Nil recorded				
31st Dec.	iP	Z	01	52	04.5 U.S.C.G.S. 23°S., 178½°W.
	ipP	Z		53	20 Tonga Is. region h about 400 H = 01 45 52
	iP	Z	05	02	20 Felt:-Tari Int III 05°50'S., 143°00'E.
	iP	Z	10	39	45 U.S.C.G.S. 46½°N., 154°E.
	ipP	Z		40	06 Kurile Is. h about 100 H = 10 30 49

Compiled by G.W.D'Addario.