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Antarctica

WILKES BASE as distinct from WILKES STATION California

COMMONWEALTH OF AUSTRALIA

DEPARTMENT OF NATIONAL DEVELOPMENT

BUREAU OF MINERAL RESOURCES, GEOLOGY AND GEOPHYSICS

203 Collins Street,
MELBOURNE. VIC.

FINAL SEISMOLOGICAL BULLETIN

WILKES BASE, ANTARCTICA

Latitude: 66° 15' S. Longitude: 110° 35' E

Height: 12 metres above M.S.L.

Foundation: Gneiss

Instrument: Lehner and Griffith long period seismograph system

Seismometer periods: 15 sec.

Galvanometer periods: 90 sec.

Magnification: (Nominal) 4200 at 25 sec.

Recorder: ENZ

No.	Date 1959	Phase	Time (G.M.T.)	Period Sec.	Remarks
	FEBRUARY				
1	7	eP diffracted (E)N	09 51 23		Δ = 12110Km. H = 09 37 06
		eX N	54 47		USCGS: 4S 81½W Near Coast of
		ePP E N	55 57		Northern Peru.
		ePPP N	58 14		Z Component not functioning.
		eSKS$_a$ E N	10 00 12		
		iPS E N	05 25		
		eSS E N	11 28	30	
		eX E	12 26	12	
		iLq E	22 18	21	
		iL E	25 24	18	
2	9	iP Z	21 24 18		
		eLr Z	46 30	20–25	
		eL E Z	52 25	15–20	
3	12	eX E	11 52.5	40	
		eX N	12 06.5	40	
		eX Z	18.5	40	
4	13	eX N Z	20 00 20	20	E Component not working properly.
5	14	eP Z	04 46 26		Δ = 6440Km. H = 04 36 27
		eS N	54 28		USCGS: 7.5S, 122E Flores Sea.
		M E N Z	05 05 10	20	Amplitude 7½ millimetres on Z.
6	16	M N Z	01 33.5		USCGS: 1S 81.5W Ecuador.
		eM Z	39 50		
		eM N	39 56		
7	17	eSSS E N Z	12 42 50		Early phases missing during
		eX E N Z	46 54		record change.
		eLq E N Z	50 95		USCGS: 51.5N 171W
		eL E N Z	13 04 ..		Fox Island Aleutians.
		e(M_2) Z	14 01 ..		E Component not recording from
					17th-28th February.
8	20	eL Z	19 23.25		USCGS: 15½N 91W
		eL Z	31.5		Guatemala.
9	23	eP Z	02 09 32		Δ = 6990Km. H = 01 59 02
		eS N Z	18 01		USCGS: 5½S 150E New Britain.
		eSS Z	22 00		
		e(SSS) N Z	25 52		
		M	36.5		

WILKES

No.	Date 1959	Phase	Time (G.M.T.)	Period Sec.	Remarks
	FEBRUARY				
10	25	eL Z	20 42.33		USCGS: 2S 129E Ceram Sea
11	25	eP Z	23 46 58		Δ = 3390Km. H = 23 40 47
		e(S) N Z	51 55		Macquarie Island Region.
		eL N Z	53 23		
		M N Z	58 ..		
12	27	eLr N Z	21 41 23		USCGS: 27.5N 129E Ryukyu.
13	28	eL Z	06 32 30		USCGS: 24.5S 179.5E South of Fiji Is.
14	28	iP E Z	11 48 49		First motions: +E, +Z
		i(S) E N	52 35		Δ = 2660Km. H = 11 43 32 for normal depth.
		eLr E N Z	53 42		USCGS: About 500 miles west of Macquarie Island.

WILKES

No.	Date 1959	Phase	Time (G.M.T.)	Period Sec.	Remarks
	MARCH				
15	1	iP Z	17 00 04		Δ = 7460Km.
		eS E N	08 59		USCGS: ½S 134½E Near North
		iLr E	16 36		Coast of New Guinea.
		M N Z	27 ..		
16	2	eLr Z	02 16.3		USCGS: 7S 104E Sunda St.
17	2	eP Z	09 23 11		Δ = 7240Km. H = 09 12 26
		eS E N Z	31 54		USCGS: 8S 128E Timor Is.
		eScS N	32 58		
		iX E	34 54		
		eSS Z	35 57		
		eSS N	36 50		
		eLq or SSS N Z	38 42		
		eLr E N Z	43 ..		
		eX E	45.5		
		M N Z	49.5		
18	5	eLr N Z	23 27 09		USCGS: 2N 98E Sumatra.
19	6	eP Z	03 53 14		Δ = 5500Km. H = 03 44 20
		e(PP) Z	54 41		
		e(PPP) Z	56 00		
		iS E N	04 00 21		
		eSS N	04 18		
		eLq N	06 09		
		eLq E	06 17		
		eL Z	12 ..		
20	6	eLr N Z	21 00 00		USCGS: 10.5S 162E Solomon Is.
21	12	eSSS E N	01 50 54		Δ = 12,650Km. H = 01 10 ..
		e(Lq) E N	59 38		Possibly USCGS: 17N 145E
		eX N	02 02.8		Caroline Islands.
		eX Z	05 17		
		eX E	07 21		
		eLr E N	08 55		
22	17	iP Z	08 38 53		Δ = 10,180Km. H = 08 25 43
		e(pP) Z	39 24		h = 130Km.
		ePP Z	42 30		USCGS: 27½N 130E Ryukyu.
		ePPP Z	44 22		
		eX . Z	44 48		
		iX Z	48 46		
		iS N	49 52		
		eSS N	56 17		
		eSSP Z	56 23		
		eSSS Z	59 32		
23	17	eP Z	13 08 11		Δ = 5780Km. H = 12 59 03
		ePcS Z	13 20		USCGS: 57S 25W Sandwich Is.
		eSS N	19 26		
		eSS E	19 40		
		eLr E N	23 48		
		M Z	26.3		
		M N Z	13 34 ..		
24	17	eS E N	15 19 15		
		eLq E N	28.5		
		eLr Z	32 ..		
		M E N	40.5		
		M Z	42 ..		

No.	Date 1959	Phase	Time (G.M.T.)	Period Sec.	Remarks
	MARCH				
25	19	eSSP N	09 07 38		USCGS: 35N 36W North
		eSS Z	12 25		Atlantic Ocean.
		eX N	15 54		
		eX N	18 51		
		eX N Z	20 34		
		eLq N	28 00		
		eLr Z	32 23		
		eLr N	35 45		
		M N Z	41 34		
		M N Z	43 27		
26	23	iLq E N Z	06 15 34		
		eLr N	18 30		
		eLr Z	20.2		
27	23	eL N Z	08 27 ..	15	USCGS: 40N 118W
					Western Nevada.
28	23	iX N	19 36 08		
		iX N	37 00		
		eX E Z	37.2		
29	25	eLq N	15 09.5		
		eLr N Z	12.5		
30	26	eP Z	02 34 11		Δ = 8330Km. H = 02 22 26
		iS N Z	43 49		USCGS: 7S 155.5E Solomon Is.
		eSS N	48 02		
		eSSS N	51 33		
		eLq N Z	53 17		
		eLr N Z	56 13		
31	26	eX N Z	05 58 ..		
32	28	ePP Z	19 59 20		Δ = 7220Km. H = 19 46 32
		iX Z	20 04 07		USCGS: 20S 178W Fiji Is.
		iS E N Z	04 42		Region.
		iSS E N Z	08 08		
		iX E N Z	11 39		
		eSSS N	12 ..		
		eX Z	16 10		
		iX Z	23 11		
		eX Z	25 28		
		eX Z	28 50		
		eX Z	40 50		
33	31	iP Z	07 32 03		Δ = 8530Km. H = 07 20 08
		e(PcP) Z	32 44		USCGS: 15S 173W Samoa.
		eX Z	34 03		
		eS N	41 15		
		eSP Z	41 45		
		eSSS N	48 49		
		eLq E	50 ..		
		eLr Z	53.5		
		M E N Z	08 01.6		

WILKES

No.	Date 1959	Phase		Time (G.M.T.)	Period Sec.	Remarks
	APRIL					
34	1	eLr	E N Z	01 37 ..		USCGS: 27.5N 21W Canary Is.
35	1	iP	E N Z	14 16 04		Δ = 2720K H = 14 11 14
		eX	N	16 26		h = 400Km.
		eX	N	18 35		USCGS: 48S 98.5E Indian
		iPcP	Z	19 25		Ocean.
		eS	N	19 55		
		iS	E N Z	20 25		
		e(PcS)	N Z	23 ..		
		eX	E N	25 04		
		e(ScS)	E N Z	26 18		
36	4	eX	E Z	23 36 14		
		eX	Z	42 ..		
		eX	Z	45 09		
		eX	Z	46 44		
37	5	eX	E N Z	23 27 00		
38	5	eP	N Z	23 40 12		Δ = 7310Km. H = 23 29 23
		ePP	Z	42 20		USCGS: 55S 146E Near North
		eX	Z	45 28		Coast of New Guinea.
		eS	E N Z	48 58		
		eSKS	E N	49 58		
		eSS	N Z	53 16		
		eSSS	N Z	56 46		
	6	eLr	N Z	00 01 13		
39	6	eX	Z	13 20 06	20	
40	6	iP	N Z	14 22 21		Δ = 6190Km. H = 14 12 40
		ePP	Z	24 23		USCGS: 10S 120.5E Sumba Is.
		eScP	Z	27 21		
		iS	E N Z	30 07		
		eScS	N	31 44		
		e(SS)	Z	34 20		
		eSSS	N	37 28		
		eLr	Z	38 24		
41	8	eX	E N Z	07 50 ..		
42	8	L waves appear during record change at		12 10 ..		USCGS: 50.5S 73W Southern Chile-Argentine border.
43	9	eP	(N)Z	06 25 41		Δ = 3900Km. H = 06 18 44
		ePP	E N Z	27 06		USCGS: 36S 76E Indian
		eS	E N Z	31 14		Ocean 1000 miles North of
		e(ScP)	E N Z	32 15		Kerguelen Is.
		iLq	E N Z	33 42		
		eLr	E N Z	35 48		
		M	E N Z	39 ..		
44	11	eLq	N	11 55 37		USCGS: 1S 128E Spice Is.
		eLr	Z	12 02 33		
		M	(N)Z	04 03		
		eX	E N Z	08 ..		
		eX	E(N)Z	10 42		
45	11	eLr	N Z	18 31 32		USCGS: 15S 173.5W Samoa Is. Region.
46	12	eP	Z	15 33 03		Δ = 7050Km. H = 15 22 29
		ePcP	Z	33 21		USCGS: 4.5S 134E
		eX	Z	34 09		Near Coast of New Guinea.
		ePP	Z	35 09		
		ePPP	Z	36 44		E Component not recording.

No.	Date 1959	Phase		Time (G.M.T.)	Period Sec.	Remarks
4o	APRIL continued					
	12	eScP	Z	15 37 44		
		eS	N Z	41 35		
		e(ScS)	N	43 00		
		eSS	N	45 43		
		eX	Z	47 08		
		eSSS	N	48 46		
		e(Lq)	Z	49 ..		
		eLr	N Z	52 20		
		M	N Z	57.5	24	Amplitudes: 2.4 millimetres on N, 4.0 millimetres on Z.
		M	Z	59 ..	20	Amplitudes: 2.05 millimetres on N, 4.1 millimetres on Z.
		M_2	Z	17 53 ..		
47	12	iP	E Z	21 05 19		Δ = 7880Km. H = 20 53 58
		ePP	Z	08 00		USCGS: 15.5S 173W
		iS	E N Z	14 34		Samoa Is. Region.
		e(SS)	Z	19 32		
		e(SSS)	Z	21 44		
		eLq	N	24.5		
		iLr	E N Z	27 56		
		M	E N Z	32.3		
		eLr	Z	23 13 ..		
48	14	eX	Z	00 58.5		
		M	N Z	01 03 ..	20	
49	14	eLr	Z	03 58 ..	20	USCGS: 24N 109.5W Gulf of California.
50	15	eX	Z	01 06 ..		USCGS: 41.5N 143E Near
		M	Z	14 ..	24	South Coast of Hokkaido, Japan.
50A	15	eX	Z	02 24 ..		
51	18	eP	Z	06 29 10		Δ = 7610Km. H = 06 18 04
		ePP	(Z)	32 00		USCGS: 4.5S 154E New
		eS	N Z	38 11		Ireland Island Region.
		eScS	(Z)	39 02		
		e(Lq)	Z	46 ..		
		eLr	N Z	50.5		
		M	N Z	54.5	24	Amplitude: 6 millimetres on Z.
52	19	e(ScP)	Z	07 41 51		Δ = 7550Km.
		eSS	E N Z	50 58		USCGS: 45S 82W Pacific
		eX	N	51 40		Ocean.
		eSSS	Z	53 20		
		eLq	E	54 ..		
		eLr	N	57 ..		
		eX	E	59 24		
		eX	Z	59 42		
		eX	Z	59.5		
		M	N Z	08 02 48		
		eX	Z	05 01		
53	20	iP	(N)Z	03 38 32		Δ = 7220Km. H = 03 27 48
		iS	E N Z	47 13		USCGS: 6S 149.5E
		eScS	E N Z	48 05		New Britain.
		iX	E Z	48 32		
		eSS	E N Z	51 46		
		eSSS	E N Z	54 43		
		eLq	E	55.5		
		eLr	Z	57.5		

No.	Date 1959	Phase		Time (G.M.T.)	Period Sec.	Remarks
	APRIL continued					
53	20	M	E N Z	04 04.5	22	Amplitude: 4.5 millimetres on Z.
		eX_2	N Z	05 23 ..		
		eLq_2	N Z	31.5		
		eLr_2	Z	41 ..		
		M_2	Z	56 ..		
54	21	M	N Z	15 34 16		
		iX	E N Z	37 38		
55	22	eX	Z	20 07 ..		USCGS: 11.5N 86.5W Near Coast of Nicaragua.
56	22	e(S)	E	20 47 47		Δ = 8890Km. H = 20 27 ..
		e(SS)	N	52 56		USCGS: 36.5S 97.5W Pacific Ocean.
		e(SSS)	E	56 32		
		e(Lq)	E N	59 ..		
		e(Lr)	Z	21 02.5		
		M	N Z	05.5	24	Amplitude: 20 millimetres on Z.
		eX	N Z	06.7		
		M	N Z	07.5		
57	24	eX	N Z	10 31.3	24	Amplitude: 7 millimetres on Z.
		M	N Z	35 ..		H = 09 31 33. USCGS: 11.5N 86.5W Near coast of Nicaragua.
		eX	N Z	36.3	18	Amplitude: 10 millimetres on Z.
		M	N Z	37.7		
		eX	N Z	41.5	15	Amplitude: 6.6 millimetres on Z.
		M	N Z	43 ..		
58	24	iP	E N Z	18 07 26		Amplitudes: 2.0 millimetres N, 8.1 millimetres E, -E. Δ = 5850Km. H = 17 57 58 USCGS: 31S 178W Kermadec Is.
		eScP	Z	12 17		
		iPcS	E	12 36		
		iS	E N Z	14 53		
		ePS	N	15 06		
		iX	E N	16 00		
		e(ScS)	N	17 12		
		iX	E N	17 35		
		eSS	E	18 41		
		iX	N	18 57		
		eX	Z	18 45		
		eSSS	E N	20 25		
		iLq	N	21 00		
		iLr	E Z	23 13		
		M	E N Z	28 0.5		
		Lr_2 Max.	Z	20 27 ..		
		M_2	N Z	41 ..		
		Lq_3	Z	51 ..		
59	25	eX	N Z	00 29 51		
		eX	E N Z	31 ..		
		eX	E Z	34 10		
		eX	E N Z	35 25		

WILKES

No.	1959	Phase	Time (G.M.T.)	Period Sec.	Remarks
	APRIL				
60	25	eX N Z	01 29 ..		USCGS: 37N 20.5E Turkey.
61	25	eX E N Z	05 58 ..		
62	26				non-seismic disturbance.
63	26	iP Z	20 53 30		Δ = 9530Km. H = 20 41 03
		ipP Z	54 00		USCGS: Formosa 25N 122.5E
		ePP Z	56 51		
		iSKS N(Z)	21 03 25		
		iS E N	03 51		
		iS E N Z	04 42		
		iSS N	09 38		
		eLq E	16 47		
		eLr N Z	21 58		
		iLr(M) E N Z	22 50 ..		
		dLq N Z	23 42 ..		
		dLr Z	24 01 ..		
64	27	eP E N Z	09 58 24		Δ = 6440Km. H = 09 48 27
		iPcP Z	58 56		USCGS: 7S 129E Banda Sea.
		eSc(P) Z	10 03 20		
		eS E N	06 24		
		iSc(S) Z	08 00		
		eSS N Z	10 22		
		eLq E N	12 48		
		eLr N Z	16 ..		
		M Z	22 ..		
		M Z	24 0.5		
65	27	eM N Z	14 03 ..		USCGS: 33½N 93E Tsinghai Province, China.
66	28	eL Z	02 17.5		USCGS: 4S 135E Western New Guinea.
		eX (N)	18.7		
		eX N Z	19.5		
		eX N Z	23.3		
		M N Z	24 ..		
67	28	ePKP Z	11 28 06		Earthquake waves arriving at the time of record change.
		ePKP Z	28 32		USCGS: 15N 93W Mexico-Guatemala Border.
		ePP Z	30 23		
		iSKP N Z	31 47		
		iPS N Z	40 41		
		eX N Z	41 46		
		iSS E	47 39		
		iSS N Z	48 01		
		iX Z	49 42		
		eX N Z	51 32		
		iX E Z	52 30		
		eX N Z	55 01		
68	30	i(S) E	13 42 33		USCGS: 55.5S 26W Sandwich Island.
		eX N	43 12		
		eSS E	46 58		
		eSS Z	47 17		
		eLq E N Z	51 .5		
		eLr E N Z	54 .5		

WILKES

No.	Date 1959	Phase		Time (G.M.T.)	Period Sec.	Remarks
	MAY					
69	1	eS	N Z	07 52 49		USCGS: 3.5S 135.5E Western New Guinea.
70	1	eX	N Z	16 48 ..		
		eX	Z	17 07.5		
71	3	eLr	N Z	05 41 ..		USCGS: 12.5N 87.5W
		eM	N Z	50 ..		Near Coast of Nicaragua. h = 100Km.
72	3	eX	N	13 43 57		
		eX	N Z	45 ..		
		eX	N Z	48.5		
73	4	eP	N Z	07 31 14		USCGS: 52.5N 159.5E
		iPKP	E N Z	34 44		h about 60Km. Kamchatka.
		iPP	E N Z	36 30		
		PS or SKSP	E	46.5		
		SS or SSP	E N	53.5		
		SSS	E N	58 ..		
		Lq Max.	E N	(08 08)		
		Lr Max.	N Z	(18)		
74	5	eX	Z	19 30 50		
		eX	Z	19 37 41		
		eX	Z	43 39		
		eX	Z	46 47		
		eX	Z	50(25)		
		(eX)	Z	54 06		
		(eX)	Z	20 01 10		
		eX	N Z	05 ..		
		eX	N Z	10 ..		
		eX	(N)Z	16.7		
		M	N Z	17.5		
75	6	eX	N	11 48(15)		
		eX	N	50.8		
		eX	Z	11 52 ..		
76	6	(eP)	Z	14 11 00		Δ = 2970Km.
		(S)	N Z	15 35		
		eX	N	16 24		(42S 95E)
		eLq	Z	17 40		
		iLq	N	18 09		
		eLr	Z	19.2		
77	6	eLq	N	19 19 ..		USCGS: 3S 128E Ceram Is.
		eLr	N Z	23 ..		
78	7	eL(q)	E N	00 24 27		USCGS: 3S 148.5E Bismarck Sea.
		M	E N	32.2		
		M	E N Z	41.5		
79	7	eLr	N Z	11 52 ..		USCGS: 3.5S 150E Bismarck Sea.
80	14	eL	Z	01 19.7		(7.5S 107E at H = 00 50 08) off South Coast of Java.
81	14	eL	E N Z	07 30 ..		USCGS: 35.5N 24.5E Crete.
82	14	eLr	E N Z	10 01 ..		USCGS: 19S 170E New Hebrides.
83	14	eSS	E Z	13 41 54		USCGS: 19S 170E Loyalty Is.
		eLr	E	47 35		h about 150Km.
		M	E N Z	50 ..		

No.	Date 1959	Phase		Time (G.M.T.)	Period Sec.	Remarks
	MAY					
84	16	iP	E N Z	06 27 21		Δ = 7480Km.
		ePP	N Z	30 15		H = 06 16 22
		(ePPP)	Z	31 40		
		iScP, PCS	E Z	31 53		USCGS: 4.5S 153.5E
		iS	E N Z	36 16		New Britain.
		eSS	E N Z	40 08		h about 60Km.
		eLq	E	44 10		
		eLr	E N Z	48 45		
		M	E N Z	57 ..		
85	19	eLr	N Z	16 08 45		USCGS: 33N 68.5E
		eX	N Z	20 ..		Eastern Afghanistan.
86	20	eX	Z	13 04 ..		
87	20	eM	Z	20 58 ..		USCGS: 41.5N 42E
						Georgia S.S.R.
88	21		N Z	12 23 ..		USCGS: Chile Argentine Border.
		Surface waves, moderate amplitude. Heavy irregular microseisms partly obscure earthquake record.				h approximately 60Km.
89	24	eP	(E) Z	19 30 40		H = 19 17 40
		(iX)	(N)Z	37 56		USCGS: 17.5N 97W
		iPP	(E)N Z	38 30		Oaxaco Mexico.
		(ePPP)	E(N)	41 15		h approximately 100Km.
		iSKKS	E N Z	45 37		
		(eX)	E	46 58		
		ePS	E N Z	49 20		
		(SS)	E N Z	56 00		
		eLq	E N Z	20 04 ..		
		Lr	E Z	11 ..		
90	26	e(PP)	Z	04 30 ..		USCGS: 27.5N 126.5E
		e(SKS)	N	36 37		Ryukyu Is. Region.
		eX	Z	38 35		h about 100Km.
		eX	N Z	57 ..		
91	29	iP	Z	10 52 48		Δ = 6500Km.
		e(pP)	Z	53 25		H = 10 42 47
		ePP	Z	54 45		USCGS: 19S 169.5E
		iS	E Z	11 00 53		New Hebrides.
		iScS	E	02 26		h approx. 100Km.
		eSS	E	04 29		
		eLq	E	07.5		
		eLr	E Z	10 ..		
92	31	eP	E N Z	09 39 07		Δ = 7530Km.
		ePP	Z	41 48		H = 09 28 06
		iS	E N Z	48 04		USCGS: 6.5S 155E
		eX	E N	48 42		Solomon Is.
		eSS	E(N)Z	52 40		
		eX	N	55 18		
		eX	E	55 52		
		eLq	E N	57 ..		
		eLr	N Z	10 00 ..		
		M	E N Z	05.2		
		eX	E Z	11 45 ..		Indication of Long Path Surface waves Lr and M.

WILKES

No.	Date 1959	Phase		Time (G.M.T.)	Period Sec.	Remarks
	JUNE					
93	1	e(S)	Z	12 51 ..		
		eLr	Z	13 05 ..		USCGS: 6S 154E Solomon Is.
		eX	Z	08 ..		h approximately 400Km.
		eX	Z	09.5		
		M	Z	12 ..		
94	1	eP	(EN)Z	17 18 13		Δ = 7530Km.H = 17 07 13
		ePP	Z	20 47		USCGS: 6.5S 155.5E
		eS	E N Z	27 10		h approximately 100Km.
		eSS	E (NZ)	31 33		
		eLq	E N	35 ..		
		eLr	E N Z	39.2		
		M	E N Z	44 ..		
95	2	eP	Z	02 50 35		Not well recorded: Batan Is.
		eS	E N Z	03 00 48		Imstock 21N 121E
		eLr	E Z	21 ..		H = 02 37 46
95A	2	eX	E N Z	03 41 11		Not well recorded
		e(Lq)	E N Z	49.8		
		e(Lr)	E N Z	56.2		
95B	2	eS	E N Z	05 20 38		USCGS: (Batan Is.)
		eSS	N	26 09		
		eLq	E	33 ..		
		eLr	E N Z	38.5		
95C	2	eLq	E	06 12 ..		USCGS: 43S 72W Chile-
		eLr	Z	06 17.5		Argentine Border.
		M_1		22.8		h approximately 150Km.
		M_2		25 ..		
96	9	eS	N	23 26 24		Δ approximately 5330Km.
		eX	E	20		USCGS: Bouvetøya.
		(eScS)	N	29 12		59S 7.5W
		(eSS)	N	29 48		
		eLq	(E)N	31 17		
		eLr	E N	34.5		
		Lr Max.	E N	36 ..		
		M	N	38.3		
97	12	eX	Z	14 14 ..		Only Z recording.
98	14	iP	E N Z	00 25 10		Δ = 10670Km.
		ipP	N Z	25 59		H = 00 12 04
		iPP	N Z	29 ..		USCGS: 20.5S 68W South
		ePPP	Z	31 23		West Bolivia.
		eSKS	E N	35 37		
		(iS)	E N Z	36 08		
		(isS)	N	37 44		
		eSP	Z	37 57		
		iX	E	39 39		
		iSS	E	42 37		
		i	N	43 01		
		eSSS	E N	45 49		
		eLq	E (Z)	50 16		
		eLr	N Z	57 31		
		M	E N Z	01 06 01		
99	18	eLq	E N	07 12.2		
		eLr	E N Z	14.8		USCGS: 55S 129W Pacific
		LM	E N	15.5		Ocean.
		M	N Z	19.8		

WILKES

No.	1959	Phase	Time (G.M.T.)	Period Sec.	Remarks
	JUNE				
100	18	ePKP Z	15 50 19		Near East Coast of Kamchatka 54N 160E. H = 15 31 25
		(eX) Z	51 55		
		(eSKP) Z	53 27		
		eSPP Z	16 03 53		
		eSS (E) Z	09 44		
		e(SSS) (E) Z	13 32		
		ePKP Z	17 34		
		e(Lq) E	22.5		
		e(Lr) E Z	32 54		
101	19	e(M) N Z	02 39 12		USCGS: 6N 82.5W South of Panama.
		eX N Z	46.8		
102	19	eX N	03 06 05		Either a very close earthquake or Ice disturbance.
		eX Z	07 20		
		eX Z	08 00		
		iX E N	08 04		
		iX E	08 19		
		eX E Z	08 57		
103	19	eX E	23 38 47		
		eX N	39 08		
		eX E	39 16		
		eX N Z	39 22		
		iX N Z	40 17		
		eX N Z	40 48		
104	21	eLq E N	17 12.2		Δ about 4440Km. Surface waves, but no sign of body phases.
		eLr Z	14 00		
		M (E)N Z	16.5		
105	21	eL (E)N Z	22 43.3		USCGS: 11.5S 167E Santa Cruz.
105A	23	eL Max. E Z	15 50 ..		USCGS: 39N 119W Western Nevada.
		eL E Z	52 30		
106	27	iP E(N)Z	19 13 27		Amplitudes: 0 millimetres on N, -3.7 millimetres on E, + Z.
		ipP E Z	14 14		Δ = 5670Km.
		e(PPP) E	16 20		Probably 33S 179W South of Kermadec.
		eX N	16 47		
		ScPiPcS E Z	18 39		
		iS E N Z	20 33		
		iX E N	21 42		
		iX E N Z	22 03		
		i(ScS) N(Z)	23 ..		
		iX N	24 12		
		iX Z	24 25		
		eLq N Z	25 40		
		iLr E Z	28 15		
		M E Z	34.5		
		M N	35.5		
107	28	iP N Z	19 53 14		Δ = 6330Km. H = 19 43 22 USCGS: 9.5S 122.5E Sawoe Sea.
		ipP Z	32		
		(iX) N	37		
		(eX) E	54 18		
		ePP (N)Z	55 34		
		ePPP Z	57 ..		
		eS E N	20 01 01		
		iS or PS E N(Z)	01 31		
		iX Z	02 00		
		i(ScS) E N	03 25		

WILKES

No.	Date 1959	Phase		Time (G.M.T.)	Period Sec.	Remarks
	JUNE					
107	continued					
	28	eSS	E Z	20 04 58		
		eLq	E Z	06 50		
		eLr	N Z	10 ..		
		M	N Z	18.5		
		Lr_2	Z	22 10 ..		
108	29	eP	Z	07 26 59		Δ = 7280Km.
		eX	Z	28 18		H = 07 16 12
		eS	E N Z	35 44		USCGS: 7S 155.5E
		e(ScS)	E	36 57		Solomon Is.
		eSS	E N Z	39 58		
		eLq	E N	43.5		
		eLr	(E)N Z	47 50		
		M	E N Z	53.3		

WILKES

No.	Date 1959	Phase		Time (G.M.T.)	Period Sec.	Remarks
	JULY					
109	3	iP	E N Z	18 05 47		Δ = 7170Km.
		ipP	E N Z	06 31		H = 17 55 11
		e(PcS)	E	10 58		USCGS: 16.5S 172.5E
		(eX)	(Z)	14 05		New Hebrides.
		eS	E	14 22		h approximately 200Km.
		eX	N	14 33		
		eX	E N Z	14 55		
		eSS	E N Z	19 03		
		eLq	N	about 22 ..		
		eLr	E N Z	about 25 20		
		Lq_2	(E)N(Z)	20 00 00		
		Lr_2	(E)N(Z)	12 ..		
		(Lr_3)	(E)N(Z)	21 20 ..		
110	6	iP	N Z	09 22 06		Δ = 9670Km.
		(epP)or(PcP)	N Z	24 19		H = 09 10 24 26.5S 61W
		ePP	N Z	25 40		Chaco Province Argentina.
		(ePPP)	N Z	28 39		h approximately 600Km.
		eSKS	E N	31 32		
		iS	E N Z	31 52		
		i(SP)	N Z	32 52		
110A	6	iX	N Z	09 35 18		H = 09 23 27
		isS	N	35 49		26.5S 61.5W Chaco
		eX	N	36 42		Province Argentina.
		iSS	E N	37 47		h approximately 600Km.
		eSSS	Z	41 18		
		iS	E Z	10 45 00		
		esS	E N	48 44		
		iSS	N	51 04		
111	9	iP	N Z	16 18 29		Δ = 10,670Km.
		ipP	(N)Z	19 16		H = 16 05 22
		(ePP)	(N)Z	22 09		USCGS: 20.5S 68W
		iX	N Z	22 56		Chile-Bolivia.
		eX	N	28 44		h approximately 100Km.
		iS	E N Z	29 27		
		iX	E (Z)	30 27		
		iX	N	31 01		
		eSS	E N	35 56		
		eX	E	39 02		
		iX	Z	39 46		
		eX	E	41 35		
		eLq	E	45.5		
		iLr	N Z	51 00		
		M	Z	17 00 ..		
		eLr_2	(E) Z	18 08 ..		
112	11	e(Lq)	E N Z	05 17 00		18.5S 169E New Hebrides.
		e(Lr)	(EN) Z	20 20		H = 04 51 30
		eL	N	25 11		
		eL	Z	26 00		
		eL	N Z	26 40		
113	11	eP	E Z	12 08 32		Δ = 3940Km.
		ePP	E Z	09 47		USCGS: 36S 78E Indian
		ePcP	Z	10 44		Ocean.
		eS	E Z	14 07		
		iLq	(EN) Z	16 29		
		iLr		18 17		

WILKES

No.	Date 1959	Phase		Time (G.M.T.)	Period Sec.	Remarks
	JULY					
114	14	eS	E N Z	13 19 30		USCGS: 16.5S 173E
		eSS	E	23 44		New Hebrides.
		eLr	E N Z	30 30		
115	14	eLr	N Z	23 05 ..		Near North Coast of
		eL Max.	N Z	08 30		Celebes.
						22 31 22 at 0.5N 120E.
116	16	eS	Z	19 32 36		USCGS: 21.5S 169E
		eSS	Z	35 46		Loyalty Is.
		eLr	E(N)	40 32		H = 19 13 52
		eL	E N Z	41 18		
117	17	eL	N Z	19 27 ..		
		eL	N	28.5		
118	18	iP	N Z	20 07 10		Δ = 3780Km.
		ePP	N Z	10 06		H = 19 55 08
		iS	E N Z	17 06		
		eSS	E N Z	21 59		
		eX	N Z	23 58		
		iLq	E N Z	27 03		
		eLr	N Z	32 19		
		M	N Z	38 ..		
		eLq	E N Z	21 53 ..		
		eLr	E N Z	22 04 ..		
		eL		21 ..		
119	19	iS	N Z	04 00 16		USCGS: Sunda St. 03 42 02
		eSS	Z	04 00		6.5S 105E.
		eLr	Z	09 30		
120	19	iP	N Z	15 19 31		Δ = 11,050Km.
		ipP	N Z	20 22		H = 15 06 07
		ePP	N Z	23 15		15S 70.5W Peru.
		iPP	E N Z	23 27		h = 200Km.
		i(PcS)	E N Z	24 21		
		iSKS	E N Z	29 49		
		eS	E N Z	30 42		
		iX	N Z	31 23		
		i(SP)	E(N)	32 15		
		iPPS	N Z	33 40		
		iSS	E	37 42		
		i(SSP)	N Z	37 52		
		eSSS	E Z	41.5		
		eLq	E N Z	46 ..		
		eLr	N Z	53 10		
		eX	N Z	56 00	25	
		eLr	N Z	17 09 ..	120	
121	20	iP	N Z	02 50 29		Δ = 6670Km. H = 02 40 13
		ipP	Z	52 05		USCGS: 6S 110E Java Sea.
		ePP	N Z	52 47		
		iS	E N Z	58 03		
		ePS	N	59 47		
		isS	E N Z	03 01 00		
		eSS	N Z	02 04		
		eX	E	02 55		
		eSSS	N Z	05 10		
122	20	(ePP)	Z	17 05 35		Δ= 6330Km. H = 16 54 25
		(iS)	E Z	10 24		USCGS: 23.5S 179E Fiji
		(esS)	N Z	13 46		Is. Region.
		(eLq)	E N Z	17 44		h approximately 600Km.

No.	Date 1959	Phase		Time (G.M.T.)	Period Sec.	Remarks
	JULY					
123	21	eLr	E Z	01 13.5		USCGS: 9S 151E Off East
		eL	E N	15.5		Coast of New Guinea.
		eL	E	19 ..		
124	21	iP	E N Z	07 53 50		Δ = 7220Km. H = 07 43 11
		iS	E N Z	08 02 28		USCGS: 14.5N 167.5E
		eSS	E N Z	06 30		New Hebrides.
		e(SSS)	N	10 00		
		eLq	E N	10 40		
		eLr	E N Z	13 28		
125	21	eSS	(N)	13 07.5		USCGS: 16N 98W Near
		eSSS	(N)	11.8		Coast of Oacaca, Mexico.
		eX	(N)	19.5		
		eLq	E N Z	24 44		
		eLr	E N Z	29 48		
126	22	eX	N Z	03 33 24		
		eL	E N Z	36 ..		
127	22	iP	(N)Z	11 26 44		USCGS: 2N 126.5E
		Record Change:		off 11 38 30		Molluca Passage.
				on 11 45 30		
		e(Lr)	N Z	11 48.5		
128	22	iP	E Z	23 13 28		Δ = 7280Km.
		iP	N Z	13 36		USCGS: 5S 152.5E.
		ePcS	E N Z	18 02		Felt. New Britain.
		eS	N Z	22 08		h approximately 60Km.
		iS	E N Z	22 16		
		eSS	Z	26 34		
		iSS	N	26 40		
		iSS	E	27 06		
		eSSS	E N Z	29 47		
		eLr	E N Z	34.5		
		M	E N Z	41.3		
	23	eM_2	E N Z	01 30 ..		Amplitudes: 76 millimetres on N, 55 millimetres on E, 94 millimetres on Z.
		eM_3	N Z	02 45 ..		
129	23	eP	(EN)Z	15 07 15		Δ = 6440Km. H = 14 57 33
		epP	E N Z	07 47		24.5S 176W Tonga Is.Region.
		iS	E N Z	15 04		h approximately 60Km.
		i(sS)	Z	16 06		
		e(ScS)	N Z	16 36		
		eLq	N	23 00		
		eLr	E N Z	25 35		
130	24	e(SS)	N	02 04 00		Off Northern California
		e(SS)	E	04 26		Coast at 41N 125.5W.
		e(SSS)	N	09 00		H = 01 23 09
		e(SSS)	E	10 16		
		e(Lq)	N	21 00		
		e(Lq)	Z	21.5		
		e(Lq)	E	21 46		
		e(Lr)	E Z	28 30		
		eX	N	30 50		
		eX	E	31 29		
131	24	eL	Z	19 58 25		USCGS: New Britain at 5.5S 153E.
132	24	iP	Z	23 12 31		Δ = 5830Km. for normal
		eS	E N	19 54		depth. H = 23 03 19
		eX	E	20 41	USCGS:	56.5S 25W South Sandwich
		eX	N	20 52		Is.

No.	Date 1959	Phase		Time (G.M.T.)	Period Sec.	Remarks
	JULY					
132 continued						
	24	eSS	E	23 23 39		
		eX	E N	24 40		
		e(L)	E N	26 00		
		eX	Z	27 46		
		eX	Z	30 43		
		eX	Z	31.5		
133	25	eX	N	12 30 ..		Irregular small amplitude waves.
134	28	eL	E	11 20 ..		Irregular small surface waves.
		eL	N	26.5		
		eX	Z	27.5		
135	30	eLr	N Z	06 20.3		USCGS: Indian Ocean near 49S 118E.
136	31	eL	E Z	05 36 ..		USCGS: 5S 152.5E New Britain.
		eL	N	37 ..		
		eL	E N	43 ..		
		eL	N Z	46 ..		
137	31	eL	E N Z	19 12 20		USCGS: 6.5S 154.5E Solomon Is.

WILKES

No.	Date 1959	Phase	Time (G.M.T.)	Period Sec.	Remarks
	AUGUST				
138	2	eL N	12 30 ..		USCGS: 6.5S 154.5E
		eL(r) N Z	35 ..		Solomon Is.
139	2	eX N	20 22 43		
		eL E	44.3		
		eL Z	46 ..		
		eL E	47.3		
		eL N Z	50.5		
140	3	eP N Z	15 41 21		Δ = 2080Km. H = 15 37 00
		eS E	44 45		USCGS: 46.5S 89E
		e(Lq) E	45 20		Indian Ocean.
		eLr N	45 50		
		eLr Z	46 04		
141	3	eP E N Z	16 14 35		Δ = 2470Km. H = 16 09 40
		eX E N Z	15 44		USCGS: 46.5S 89E
		eX E	17 51		Indian Ocean.
		eS E N Z	18 33		
		eL E N Z	18 55		
142	4	eX N Z	03 52 ..		USCGS: Chile-Argentina Border.
143	4	eP Z	08 11 55		USCGS: 20.5S 178W
		epP Z	13 50		Fiji Is. Region.
		iS E N Z	08 19 44		h approximately 600Km.
		eSKS E N	20 51		
		e(sS) E N Z	23 07		
144	5	eLr N Z	05 55 ..		USCGS: 12.5N 125E
					Samar, Phillipines.
145	7	eLq E N Z	11 58 ..		USCGS: 56.5N 154W
					Kodiak Is.
146	7	eLr E N Z	22 53 ..		USCGS: 56.5N 154W
					Kodiak Is.
147	8	e(L)r Z	01 48 53		USCGS: 55N 162.5E
		e(L) E N Z	01 50 50		Kamchatka.
		e(L) E N Z	02 01 00		
		e(L) Z	02 19 30		
148	8	eL E N	16 06 30		Small surface waves.
		eL Z	10 00		
		eL E N Z	15.5		
148A	8	eL E	20 45 00		Very small surface waves.
		eL N	47 00		
		eL Z	49 00		
148B	9	eLr N Z	00 28 30		USCGS: 6S 155E Solomons.
		eL Z	33 00		h approximately 100Km.
149	9	eX (N)Z	05 09 08		Small surface waves.
		eX Z	13 40		
		eL E N Z	22 00		
150	9	eP Z	20 40 06		Δ = 7390Km. H = 20 29 17
		iS E N Z	48 51		USCGS: 10S 161E
		eSS N Z	53 00		Solomons.
		eLq E N	56 20		h = 100Km.
151	10	iP E N Z	00 41 12		Δ = 2330Km. H = 00 36 29
		iS E N Z	44 59		USCGS: 55.5S 146E
		iX N	45 44		Indian Ocean.
		iLr Z	46 05		

No.	Date 1959	Phase		Time (G.M.T.)	Period Sec.	Remarks
	AUGUST					
152	11	eP	Z	22 00 32		Δ = 7500Km. H = 21 49 37
		eS	E N Z	09 25		USCGS: 11S 163E
		eSS	E N Z	13 20		Solomons Region.
		eLr	Z	20 23		
153	12	eX	E N Z	01 34.5		Small surface waves.
154	12	eL	E N Z	04 43 00		Small surface waves. USCGS: 15S 28E Northern Rhodesia.
155	12	eP	Z	10 09 26		Δ = 6670Km. H = 09 58 28
		iS	E N Z	18 22		USCGS: 16.5S 177.5W
		eX	Z	21 00		Fiji Is. Region.
		eX	E	21 29		
		eSS	E N Z	22 34		
		eX	N	23 50		
		eSSS	E	25 58		
		eLq	E N	27 10		
		eLr	E N Z	30 08		
		Lr_2	Z	12 15 ..		
		L_2	E Z	39 ..		
156	14	eLr	N Z	05 12 ..		Small. USCGS: 0° 125.5E Molucca Passage.
157	15	eL	Z	03 49 ..		Small.
		eL	E N Z	55 ..		
158	15	eP	N Z	09 09 57		Δ = 9840Km. H = 08 57 07
		PcP	N Z	10 02		USCGS: 23N 121E Formosa.
		PcP	E	10 05		
		iPP	N Z	13 28		
		i(SKS)	N	20 21		
		iX	Z	20 27		
		iS	E N Z	20 39		
		iX	N Z	20 44		
		iSP	E Z	21 42		
		eX	N	21(33)		
		iX	Z	24 07		
		iSS	N	26 17		
		iSSP	Z	26 21		
		eLq	E	33 00		
		eLr	N Z	39 16		
		M	Z	46.5		
		M_2	E N Z	11 30 ..		
159	15	eS	N	13 33 42		
		eScS	N	35 00		
		eX	E N Z	49 32		
		eX	E Z	55 30		
		eX	E N Z	14 00 00		
160	16	eP	E Z	01 01 39		Δ = 6510Km. H = 00 51 43
		eScP	Z	06 32		USCGS: 21S 169E Loyalty
		iS	N Z	09 39		Is. Region.
		iX	E	09 41		
		e(ScS)	E	11 32		
		eSS	E Z	13 39		
		eLq	E	15 45		
		eSa	N	16 21		
		eLr	Z	19 00		

No.	Date 1959	Phase		Time (G.M.T.)	Period Sec.	Remarks
	AUGUST					
161	17	M	Z	02 35 55		USCGS: 41.5N 20.5E
		eX	E N Z	41 00		Albania-Yugoslavia Border.
		eX	E N Z	46 09		
		(M_2)	Z	03 34 00		
162	17	eX	E Z	07 05 ..		
		eX	E N Z	12 ..		
163	17	eP	E N Z	21 15 31		Δ = 9420Km.H = 21 04 40
		ipP	E N Z	15 38		USCGS: 7.5S 156E
		iPcP	E N Z	15 56		Solomons.
		iPP	E N Z	18 05		
		(ePcS),(ScP)	E N Z	20 11		
		iS	E N	24 22		
		eSS	E Z	28 32		
		iX	N	28 50		
		i(SSS)or(G)	E N	31 54		
		iLq	E N Z	33 07		
		iLr	E N Z	36 10		
		iL	E Z	36 41		
		iLq	E N	23 07 01		
		iLr	(EN) Z	23 31	80	
		(M_2)	E Z	43 01	20	
		Lq_3	E	24 01 31	60	
164	18	eS	E N	05 56 ..		USCGS: 22.5S 172E
		eL_2	E N Z	06 05.5 ..		Loyalty Is.
		M	E N Z	06 22 ..		
165	18	eP diffracted	Z	06 54 48		Δ = 17,000Km. H = 06 37 13
		$iPKP_1$	N Z	57 05		USCGS: 44.5N 111W
		$iPKP_2$	E N Z	57 14		Yellowstone U.S.A.
		eX	Z	07 00 43		
		ePKS	E N	00 55		
		iSKS	E N Z	04 12		
		iSKKS	E N Z	07 59		
		e(SKKKS)	Z	08 20		
		iSKSP	E N Z	11 09		
		i(ScSPKP)	E	12 28		
		ePPS	Z	13 4(3)		
		ePPS	N	13 48		
		ePPS	E	13 53		
		e(SS)	E N	19 33		
		e(SSP)	E N Z	20 45		
		eSSS	N	26 01		
		Surface Waves are too strong to be clearly written for direct and Long Path Waves.				
		Lq_3	E N	10 08 01	100	
166	18	eLr	E N Z	12 16 01	20	USCGS: 45N 111W
						Yellowstone Aftershock.
167	18	ePKP	Z	15 45 53		Δ = 16,440Km.H = 15 26 08
		iPKP	E N Z	45 59		USCGS: 44.5N 111W
		ePKS	E Z	49 29		Yellowstone U.S.A.
		eX	E Z	55 32		Aftershock.
		e(SKKS)	E N	56 24		
		eX	Z	57 09		
		eSKSP	E N Z	59 43		
		eX	E N Z	16 02 32		
		eSS &/or SSP	E N	08 33		
		eSS &/or SSP	E Z	09 18		
		eX	E N	11 04		

No.	Date 1959	Phase		Time (G.M.T.)	Period Sec.	Remarks
	AUGUST					
167 continued						
	18	eSSS	E N Z	16 14 01		
		eLSS	E(N)Z	18.2		
		eX	E N Z	22 01		
		eX	E N	25 01		
		eX	N	28 01		
		eX	E	29.2		
		eL	E N Z	35 01		
		Lr_3	Z	(17 02 ..)		
168	19	eLr	E(N)Z	05 15 ..		USCGS: 45N 111.5W Yellowstone Aftershock.
		eL	E N Z	05 24 ..		
169	19	eLq	N Z	20 09.8		USCGS: 45N 111.4W Yellowstone Aftershock.
170	20	eL	N Z	08 13 ..		Small surface waves.
		eL	N Z	24 ..		USCGS: 7S 85W Off Coast of Peru.
171	20	eLr	E N Z	09 29 ..		USCGS: New Britain.
172	20	(eX)	Z	12 06.5		USCGS: 45N 111W Yellowstone Aftershock.
		(eX)	Z	32 ..		
172A	20	(eS)	Z	12 35 40		USCGS: 29S 78E Indian Ocean.
173	20	eL	N	19 37 ..		Small surface waves.
		eL	E Z	39 14		
174	21	iP	E N Z	08 08 08		Δ = 2530Km. H = 08 03 19
		i(PPP)	E Z	08 58		USCGS: 50.5S 139.5E
		iP	Z	10 25		Indian Ocean, South of
		iX	E N Z	10 27		Australia.
		iS	E N	12 05		h = 100Km.
		iPcP	E Z	12 14		
		iLq	E N	12 32		
		iLr	E N Z	13 30		
175	21	eP	E N Z	09 42 42		Δ = 2570Km. H = 09 37 44
		i(pP)	E Z	42 59		USCGS: 50.5S 139.5E
		iX	E N Z	44 03		Indian Ocean, South of
		iX	N Z	45 03		Australia.
		iS	E N Z	46 42		h = 100Km.
		i(PcP)	E Z	46 52		
		eLq	E N	47 09		
		eLr	Z	48 06		
176	21	eL	Z	13 48 00		
177	24	eS	E N	16 01 ..		USCGS: 10.5S 161.5E
		e(ScS)	Z	02 ..		Solomon Foreshock.
		e(SS)	(N)	5.2		
		eSSS	N	8.5		
		eLr	N Z	13 55		
		eX	Z	18.5		
		eX	E N	19 ..		
		eX	E N Z	28 00		
178	24	eP	E Z	21 41 35		Δ = 7170Km. H = 21 30 59
		iP	N Z	41 37		USCGS: 10.5S 161E
		iX	E	43 40		Solomon Is.
		iPP	N Z	44 03		

WILKES

No.	Date 1959	Phase		Time (G.M.T.)	Period Sec.	Remarks
	AUGUST					
178	continued					
	24	ePPP	Z	21 45 06		
		iS	E N Z	50 11		
		iPS	E Z	50 21		
		iSPP	N Z	50 34		
		e(ScS)	(E)	51 32		
		iSS	Z	54 18		
		(i)SS	E N	54 27		
		iSS	N Z	54 32		
		(e)SSS	N Z	21 57 34		
		eSSS	E	38		
		eLq	E N Z	58 07		
		eLr	Z	22 02 00		
		Lq_2	(E)N	23 33 ..	60-70	
		(Lr_2)	(Z)	48 ..	60-70	
179	25	M	N Z	13 16 ..		H = 12 24 18
		eL	Z	23 ..		USCGS: Northern Chile.
180	25	eLr	E N Z	14 12.5		USCGS: 6.5S 155E Solomon Is.
181	25	M	N Z	18 43.5 ..		Small surface waves. USCGS: 27.5S 71W Northern Chile.
182	26	ePKP	Z	08 44 44		Δ = 14,330Km.H = 08 25 34
		iX	Z	44 58		USCGS: 18N 94.5W
		ePP	Z	46 52		Vera Cruz, Mexico.
		iPP	E N Z	47 02		
		iSKP	E Z	48 07		
		ePKS	N	48 17		
		ePPP	E	49 34		
		ePPP	N	49 56		
		ePPP	Z	50 ..		
		eSKS	E N Z	52 50		
		eSKKS	E N Z	53 39		
		ePKKP	Z	55 10		
		e(PcS PKP)	Z	56 40		
		e(SKSPPS)	E N Z	57 00		
		ePPS	E N Z	58 37		
		eScSPKP	E N	09 00 17		
		eSS	E N	04 20		
		eSSP	Z	04 31		
		e(PKPPKS)	N	06 44		
		eSSS	E N Z	08 50		
		eX	N Z	11 09		
		eX	Z	12 33		
		eX	E	13 10		
		eX	Z	13 56		
		eLq	E	18 23		
		eLq	N	19 50		
		eLr	N Z	27 00		
		eLq_2	E N	10 01.5	90	
		eLr_2	Z	15 ..		
182A	26	iPKP	E Z	10 47 33		USCGS: 51N 132W South of Queen Charlotte Is.

No.	Date 1959	Phase		Time (G.M.T.)	Period Sec.	Remarks
	AUGUST					
183	27	eScS	E N Z	13 57 05		South Sandwich Is. Region
		e(Lr)	E N	14 04 53		H approximately 13 37 59
		eLq	E	06.5		
		M	E	10 ..		
		M	Z	10 12		
		(eX)	N Z	13 31		
			E Z	15 38		
184	28	eLr	N Z	00 36 ..		USCGS: 25N 96E
		eL	Z	40 ..		North Burma.
185	28	eLr	Z	02 59 ..		USCGS: 48N 155E
		eL	E N	03 04 55		Kurile Is.
		eL	N Z	08.5		
186	28	eP	Z	16 02 29		Δ = 6940Km. H = 15 52 10
		epP	Z	02 48		USCGS: 17S 167E
		eS	(E)N	10 49		New Hebrides.
		esS	N	11 31		
		eSS	E	14 44		
		eLq	E N	17 56		
		eLr	Z	21 ..		
		eL	Z	23 53		
187	29	eLr	N Z	03 53.3		H = 03 21 07
						USCGS: Gaudalcanal.
188	29	eL	E N Z	11 35 ..		
189	29	ePP	Z	17 23 14		Δ = 13,220Km. H = 17 03 13
		iPP	N Z	23 28		USCGS: 52N 106.5E
		eSKS	N	28 57		Lake Baikal USSR.
		e(PSSKSP)	N	32 56		
		e(PS,SKSP)	Z	33 12		
		e(PS,SKSP)	E	33 26		
		eSSP	Z	34 16		
		eSSP	N Z	34 24		
		eX	E	35 28		
		eSS	E N Z	39 58		
		eSSS	E N Z	43 11		Various emergencies be-
		eSSS		44 52		tween these times.
		eLq	E N Z	52 ..		
		eLr	Z	57.5		
190	30	e(PP)	E Z	21 53 16		USCGS: 36.5S 78.5E
		eS group	E N	57 34		Indian Ocean.
		eS	Z	57 44		
		e(SS,Lq)	E	59 ..		
		eL	N Z	59 30		
		eX	Z	22 00 20		
		eL	E N Z	01 38		

WILKES

No.	Date 1959	Phase	Time (G.M.T.)	Period Sec.	Remarks
	SEPTEMBER				
191	3	eP N Z	06 37 34		Δ = 6940Km.
		eX E	38 29		USCGS: 4.5S 123E
		eX Z	38 53		Celebes Is.
		eX Z	39 36		
		ePP N Z	40 27		
		eX Z	45 49		
		eS E	46 19		
		ePS N Z	46 27		
		eX N Z	48 43		
		eSS N Z	50 20		
		eLq E	52.5		
		eLr N Z	56.5		
192	4	eLr E N Z	12 59 ..		USCGS: 31.5S 177W
					Kermadec Is.
193	4	eLr E N Z	19 18 ..		USCGS: 1S 24W Atlantic Ocean.
194	4	eLq E	23 53 ..		USCGS: Near Coast of
		eLr E N Z	23 56 ..		Southern Chile.47S 75W
195	5	eS E	06 27 42		Δ = 8000Km. H approximately
		e(S) N	27 50		06 06 30
		e(S) Z	27 53		USCGS: 1N 129E
		eSS N Z	32 24		Halmahera Is. Region.
		eSSS E	35 30		
		eSSS N Z	35 52		
		eLq E	37 ..		
		eLr E N Z	40.2		
		M N Z	46 ..		
196	5	iP E N Z	07 05 00		Δ = 2220Km. H = 07 00 27.5
		i(pP) E Z	05 04		USCGS: 62S 156E Balleny
		eS E N Z	08 38		Is. Region.
		iX E N Z	08 47		
		iX E N	08 59		
		ePcP (E) Z	09 22		
		eX E N Z	13 47		
		eX E N	07 13 52		
		iX E Z	15 32		
197	5	eP E Z	15 34 48		Δ = 2220Km. H = 15 30 16
		eS E N Z	38 26		Probably an aftershock of
		eX Z	38 39		No.196.
		eL E N Z	39 00		
		M E Z	41 00		
198	5	eS E	15 54 46		Δ approximately 7780Km.
		e(PS) N(Z)	55 24		h approximately 15 34.5
		eSS N	59 27		USCGS: 1N 129E
		eSSS E N	16 03 06		Halmahera aftershock.
		eLr E N Z	07 26		
		eX Z	12 ..		
		M E N Z	13 ..		
199	5	eLr E N Z	22 31 ..		USCGS: 51N 179.5E
					Rat Is. Aleutians.
200	6	eLr Z	04 41.5		USCGS: 10S 160.5E Solomons.
201	8	eS E N	13 26 24		USCGS: 700 miles E of
		eLq E N	28 46		Bouvetoya.
		eLr E Z	32 ..		

WILKES

No.	Date 1959	Phase		Time (G.M.T.)	Period Sec.	Remarks
	SEPTEMBER					
202	8	eL	E N Z	19 44 ..		Faint surface waves obscured by microseisms.
203	8	eL	E N Z	20 44 ..		USCGS: 58.5S 24.5W Sandwich Is.
204	10	eS	E N Z	05 54.5		USCGS: 6.5S 154.5E Solomon Is.
		eLq	E Z	06 02 52		
		eLr	N Z	07 30		
205	10	eL	E N Z	10 54 ..		Small surface waves.
206	11	eL	E N Z	20 47.5		Small surface waves.
207	12	eP	Z	02 04 48		Δ = 7530Km.
		epP	Z	05 07		USCGS: 3S 146.5E
		ePP	Z	07 20		Bismarck Sea.
		ePcS	N Z	09 21		
		eS	E	13 39		
		eX	N	13 43		
		eX	E Z	13 46		
		eSS	E (Z)	17 46		
		e(SSS)	E	20 54		
		eLq	N	21 14		
		eLq	E	21 26		
		e(Lq)	Z	22 26		
		eLr	N Z	26 06	60	
		eL		30 ..		
		eL_2		04 15		
208	12	eP	Z	07 12 48		Δ = 6670Km. H = 07 01 50
		eS	E N Z	21 44		USCGS: 3S 147E Bismarck
		eSS	N Z	25 58		Sea.
		(eSSS)or(Lq)	E N	29 21		
		eLr	N Z	34 ..		
		M	E N Z	38 ..		
209	12	i(P)	(Z)	11 35 28		USCGS: 9.5S 156E
		Record off		38.2		Coral Sea.
		Record on		53 ..		
		L	E N	53 ..		
		eL	Z	55 ..		
210	13	eL	E N Z	05 14.5		USCGS: 3.5S 146.5E Bismarck Sea.
210A	13	eLr	E N Z	23 13 ..		USCGS: 1N 129E Halmahera.
211	14	iP	Z	13 26 06		Δ = 6780Km. H = 13 15 53
		eX	Z	26 21		USCGS: 24S 176.5W
		eS	N Z	34 20		Tonga Is. Region.
		eSP	Z	34 28		
		eSS	E Z	38 34		
		eSSS, Lq	E N	41 20		
		eSSS, Lq	E Z	42 ..		
		eLr	E N Z	45 14		
212	14	iP	E N Z	14 19 28		Δ = 6390Km. H = 14 09 40
		e(pP)	Z	19 37		USCGS: 28.5S 177W
		ePcP	Z	20 32		Kermadec.
		eScP	Z	23(46)		
		iS	E N Z	27 20		
		eX	Z	27 30		

No.	Date 1959	Phase		Time (G.M.T.)	Period Sec.	Remarks
	SEPTEMBER					
212	continued					
	14	eX	N	14 27 34		
		eX	N	27 48		
		iX	E	28 17		
		eScS	E N Z	29 22		
		eSS	E N Z	31 20		
		eLq	N	33 53		
		eLr	E Z	36 40		
213	14	iP	E N Z	17 15 59		Δ = 6280Km. H = 17 06 18
		i(pP)	Z	16 16		USCGS: 29S 176.5W
		iS	E	23 47		Kermadec.
		iX	N	23 54		
		i(SP)	Z	24 11		
		i(ScS)	Z	25 36		
		i(ScS)	E N	25 51		
		eLq	N	29 50		
		eLr	E Z	33 30		
214	14	eP	E Z	22 33 40		Δ = 6280Km.
		ePP	Z	35 36		USCGS: 29S 177W Kermadec.
		ePcS	E	38 34		
		eS	E	41 26		
		eX	N Z	41 35		
		eX	E N	42 56		
		eScS	N	43 26		
		e(SS)	E	45 56		
		eLq	N	46 36		
		e(Lr)	E Z	48 38		
215	15	iP	E Z	06 09 32		Δ = 6280Km. H = 05 59 46
		iX	E N Z	09 37		USCGS: 28.5S 177W
		iX	E Z	09 45		Kermadec.
		iX	E Z	09 50		
		iX	E Z	09(53)		
		iX	E Z	09(56)		
		iX	E Z	09 59		
		iX	E Z	10 13		
		eX	N	10 43		
		iScP	Z	14 28		
		iS	E N Z	17 23		
		iX	N Z	17 32		
		i(ScS)	N	19 19		
		iSS	N	21 19		
		iSS	E Z	21 30		
		eLq	E N	23 36		
		eLr	E N Z	26 48		
		(eX)or(iX)	N	28 14		
		eLq_2	N	08 06.5	60	
		M_2	E Z	08 50 ..		
		M_2	N	52 ..		
216	15	epP	E N	11 17 08		Δ = 6720Km. H = 11 05 56
		ePP	E N	17 51		USCGS: Fiji Is.Region.
		eScP	Z	20 17		21.5S 179.5W
		iS	E N Z	22 41		h approximately 600Km.
		iScS	E N	23 54		
		isS	E N Z	26 10		
		eSS	N	27 03		
		eX	N	27 48		
		iSSS	N Z	29 04		
		eX	N	36 25		

WILKES

No.	Date 1959	Phase		Time (G.M.T.)	Period Sec.	Remarks
	SEPTEMBER					
217	16	iP	E N Z	16 06 55		Δ = 6330Km. H = 15 57 10
		e(PcP)		07 28		USCGS: 28.5S 176W
		eS	E N	14 46		Kermadec.
		iX	E N Z	14 51		
		eX	N	15 26		
		e(ScS)	E	16 37		
		e(ScS)	N	16 41		
		eSS	N	18 45		
		eLq	N	21 24		
		eLr	E Z	24 ..		
		M	E N Z	31.5		
		M_2	E Z	18 43 ..		
218	17	eL	E N Z	07 38.5		Small surface wave train.
		eL	E N Z	42.5		
219	17	M_2	E N Z	14 40 00		USCGS:28.5S 176W Kermadec.
220	17	eP	E N Z	14 46 03		Δ = 6440Km. H = 14 36 28
		ipP	E Z	46 49		USCGS: 28.5S 176W Kermadec.
		eS	E Z	53 46		
		iX	E N	54 00		
		isS	E	55 09		
		eX	N	55 44		
		eSS	N	57 46		
		eL	N	15 03.5		
		M	E N Z	07 ..		
221	17	M	(E)N Z	17 45 ..		Small surface wave train.
222	17	eLr	N Z	22 25.5		Very small surface waves. USCGS: 13.5N 88.5W El Salvador.
223	18	eL	E N Z	09 57 ..		Small surface waves. USCGS: 28.5S 176.5W Kermadec.
224	18	iP	E N Z	12 10 24		Δ = 5830Km.
		ePP	Z	12 22		USCGS: 57.5S 24W
		iS	N	17 47		South Sandwich.
		iX	E	17 49		
		eX	Z	17 52		
		eScS	E	20 11		
		eSS	N	21 12		
		eSS	E Z	21 32		
		eSSS	E	23 21		
		eLq	E N	24.5		
		eLr	Z	26.5		
		M	E N Z	31 ..		
225	20	eLq	E	06 48.5		USCGS: 13.5S 111.5W
		eLq	N	49 ..		North of Easter Is.
		eLr	N Z	54.5		
		eLr	E	55.5		
226	21	eiS	E N Z	02 27 22		USCGS: 9.5S 149E Near
		eSS	Z	31(15)		coast of New Guinea.
		eLq	Z	35 22		
		eLr	E N Z	38 ..		
		M	E N Z	48 ..		

WILKES

No.	Date 1959	Phase		Time (G.M.T.)	Period Sec.	Remarks
	SEPTEMBER					
227	25	iP	N Z	02 49 42		Δ = 9780Km. H = 02 36 54
		i(pP)	Z	49 57		USCGS: 22N 122E Near
		iX	Z	50 03		East coast of Formosa.
		ePP	N Z	53 08		
		e(PPP)	N Z	54 40		
		iSKS	N Z	03 00 06		
		iS	E	00 22		
		iX	Z	00 30		
		eSP	Z	01 25		
		e(SPP)	Z	01 44		
		eSS	N	05 56		
		eSS	Z	06 11		
		eSS	E	06 16		
		eX	E	07 33		
		eLq	E N	13 ..		
		eLr	Z	17 ..		
228	26	eSPP	E Z	08 56 21		
		e(SS)	N	09 02 00		
		ePPP	E Z	03 03		
		ePKS	N	03 43		
		eSSS	N	07 28		
		eSSS	E	07(43)		
		ePPS	N	11(09)		
		ePPS	N	14(30)		
		ePPS	N	17.5		
		eLq	E	19.5		
		eLr	E N	23(57)		
		eLr	Z	25 ..		
		eL	E	26.5		
		M	E Z	43.5		
229	29	eL	E N Z	14 49 ..		Small L group.
230	29	iP	E Z	15 41 47		Δ = 6330Km. H = 15 32 02
		ipP	E Z	41 59		USCGS: 29S 176.5W
		iX	Z	42 30		Kermadec.
		iPcP	Z	42 58		
		eScP	E	46 52		
		ePcS	Z	46 56		
		iS	E N	49 37		
		iX	N Z	49 44		
		iX	Z	50 06		
		iScS	E	51 29		
		iScS	N	51 36		
		eSS	N	53 30		
		eSa	E	55 12		
		eLq	E N	56.5		
		eLr	N Z	58 44		
230A	29	i(Lr)	E N	15 59 05		H = 15 41 21.
		i(Lr)	E N	59 08		USCGS: 29S 176.5W
		M	N	16 05 00		Kermadec.
			E Z	06 00		
231	30	eP	Z	05 05 38		Δ = 7110Km. H = 04 55 08
		ePP	Z	08 39		USCGS: 28.5S 176.5W
		eS	E N	14 08		Kermadec.
		e(ScS)	N	16 09		
		M	N	29.5		
		M	E Z	30.5		

WILKES

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No.	Date 1959	Phase		Time (G.M.T.)	Period Sec.	Remarks
	SEPTEMBER					
232	30	M	E N Z	14 01 ..		USCGS: 29S 176.5W Kermadec.
233	30	eP	E Z	20 36 12		Δ = 6780Km. H = 20 25 59
		eX	E Z	44 21		USCGS: 18S 168E New
		iS	E N Z	44 28		Hebrides.
		eSP	Z	44 40		
		eSS	Z	48 36		
		eLq	E N	51 00		
		eLr	Z	54 17		

No.	Date 1959	Phase		Time (G.M.T.)	Period Sec.	Remarks
	OCTOBER					
234	2	eL	E N Z	19 44 ..		Small surface waves.
235	3	eL	(E)N Z	03 12 48		Extremely small surface waves.
236	3	eL	E N Z	22 12 43		Small surface waves.
237	3	eL	E N Z	23 30 ..		Very small surface waves.
238	5	$ePKP_1$	Z	18 47 35		Very small.
		$e(PKP_2)$	Z	47 51		Very small, followed by continuous very small motion on Z component.
		eL	N	19 35.5		
		eL	Z	40 ..		USCGS: 83.5N 112.5E
		eL	E N	47 ..		Arctic Ocean.
		eM	N Z	54.5		
		eM	E	20 00 ..		
239	6	eLr	N Z	06 17 ..		USCGS: 0.5N 122.5E
		M	N Z	22 ..		Celebes.
						h approximately 200Km.
240	8	eP	E Z	00 13 40		Δ = 6670Km.
		i(pP)	Z	13 53		USCGS: 19S 169E
		eS	E N	21 49		New Hebrides.
		eX	Z	21 52		
		eSS	E	00 25 49		
		eLq	E N	28 49		
		eLr	E N Z	31 48		
241	11	eLr	E N Z	10 28 ..		USCGS: 3.5S 152E
						New Ireland.
242	11	M	E N Z	18 23 ..		USCGS: 28.5S 176.5W
						Kermadec.
243	11	M	E N Z	20 36 ..		USCGS: 20.5S 176.5W
						Kermadec.
244	12	eP	N Z	03 33 12		Δ = 7440Km.H = 03 22 22
		iS	E N Z	42 00		USCGS: 2N 98.5E. Near
		eSS	N Z	46 16		Coast of Sumatra.
		eLq	E	49 42		
		eLq	Z	50 04		
		eLr	E N Z	53 32		
245	12	M	E N Z	10 47 ..		USCGS: 29S 176.5W
						Kermadec.
246	15	eP	E N Z	06 26 25		Δ = 7440Km. H =06 15 33
		iX	E N Z	26 30		USCGS: 0.5N 120.5E
		iX	E N Z	26 38		Celebes.
		e(PP)	N Z	28 31		
		ePPP	N Z	30 29		
		iS	E N	35 15		
		iX	N	35 16		
		iX	Z	35 23		
		iX	E	35 26		
		i(ScS)	N Z	36 22		
		eSS	N	39 20		
		eSS	Z	39 44		
		eSSS	N	42 39		
		i(G)	E	42 44	30	

WILKES

No.	Date 1959	Phase		Time (G.M.T.)	Period Sec.	Remarks
	OCTOBER					
246	continued					
	15	iLq	E N	06 44 26		
		eLr	E N Z	47 00		
		M	E N Z	50 ..		
		eLq_2	E	08 19 ..		
		eLq_2	E(N)	23 ..		
		eLr_2	N Z	35.5		
		M	E N Z	50 ..		
247	15	eL	E N Z	14 20 ..		Small surface waves.
248	15	eL	E N Z	19 40 ..		Very small surface waves.
249	16	eLr	E N Z	16 50 ..		USCGS: 6N 125E. Near South coast of Mindanao.
250	17	eL	N	01 36.5		Surface wave group.
		eL	E	37.5		
		eL	Z	38.5		
251	17	eS+ePS+ePcS	E N	08 48 40		USCGS: 57.5S 161W. South Pacific Ocean.
		eSS+eLq	(N)	51 45		
		eLr	E N Z	53.7		
252	19	iP	E N Z	08 37 14		Δ = 6390Km. H = 08 27 26
		i(pP)	E Z	37 28		USCGS: 27.5S 177W Kermadec.
		ePP	Z	39 36		
		eS	E Z	45 06		
		eX	N	45 13		
		e(sS)	E	45 38		
		eScS	E N Z	47 05		
		eSS	E N Z	49 15		
		eLq	E N Z	51.2		
		eLr	E Z	54 46		
		M	E N Z	09 01 ..		
		M	E N Z	11 16 ..		
253	19	iP	E N Z	16 05 12		Δ = 6280Km.
		iPcP	Z	06 11		USCGS: 54.5S 29W Sandwich Is. Region.
		iPP	E N Z	07 19		
		iS	E N Z	12 59		
		iSS	E N Z	16 48		
		eLq	E N	19 28		
		eLr	N Z	21 00		
		eLr	E Z	21 48		
		M	Z	16 26 ..		
		eX	N	17 24.5		
254	20	eL	E N Z	22 11 ..		Small surface waves.
255	23	eL	E N Z	00(49)..		Small surface waves.
256	23	M	E N Z	04(22)..		USCGS: 4S 154E New Ireland Region. h approximately 150Km.
257	23	eX	E N Z	17 42 53		USCGS: 33.5N 59E Eastern Iran.
		eL	E	18 13.3		
		eL	N	16 ..		
		eL	Z	17 ..		
		(M)	E N Z	17.5		
258	25	eLr	E N Z	00 34 ..		USCGS: 41.5N 70E Kazakh S.S.R.

No.	Date 1959	Phase		Time (G.M.T.)	Period Sec.	Remarks
	OCTOBER					
259	26	e(SKP)	Z	07 56 52		USCGS: 37.5N 142.5E
		eSKS$_1$	N	08 00 04		Near East coast of Honshu.
		e(ScS)or sS	E	01 29		h approximately 60Km.
		eSS	E N	08 40		
		eLq	E N	19 ..		
		e(Lr)	Z	27 ..		
		M	Z	32 ..		
260	27	ePP	E N Z	07 12 30		Δ = 12,500Km. H = 06 53 01
		eSKS	E N Z	19 26		USCGS: 45.5N 151E
		eX	E	20 20		Kurile Is.
		eX	N Z	20 26		h approximately 100Km.
		eSP	E N Z	22 10		
		iSKSP	E(N)Z	22 26		
		eSPS	Z	23 30		
		eSS	E	28 13		
		eSS	N Z	28 22		
		eSSS	E	32 10		
		eSSS	N Z	32 20		
		iX	E N Z	36 06		
		eLq	E	40 00		
		eLq	E N	41 08		
		eL	E N Z	49 09		
261	29	iP	E Z	14 29 38		Δ = 6220Km.
		ePcS	E	34 37		USCGS: 29.5S 176.5W
		eS	E N Z	37 22		Kermadec.
		ePPS	N	37 46		h approximately 60Km.
		eScS	E N(Z)	39 20		
		eSS	N	41 07		
		eSS	Z	41 22		
		eSS	E	42 06		
		eLq	N	44 07		
		eLr	E Z	46 38		
		M	Z	16 54.5		
262	29	eP	N Z	22 06 56		Δ = 1910Km. H = 22 02 56
		ePP	N(Z)	07 19		Indian Ocean South of
		eS	E	10 05		Australia above 50S 117½E.
		e(Lq)	N	10 16		
		e(SS)	Z	10 21		
		eL(r)	N	10 48		
		eL(r)	Z	10 50		
263	30	eX	E N Z	00 54 ..		USCGS: 8.5N 138E Caroline Is.
264	30	eLr	E N Z	06 53 ..		USCGS: 7S 123½E Flores Sea.
265	30	L	E	11 50 ..		Surface waves on new record. USCGS: Solomons.
266	30	eP	E Z	14 08 49		Δ = 7000Km. H = 13 58 25
		ePcP	Z	09 22		USCGS: 23.5S 175.5W
		eS	E N Z	17 14		Tonga Is. Region.
		eScS	N	18 44		
		eSS	N	21 18		
		eLq	N	25 ..		
		eLr	E Z	28 ..		
		M	E Z	35 ..		

WILKES

No.	Date 1959	Phase		Time (G.M.T.)	Period Sec.	Remarks
	OCTOBER					
267	31	eP	E Z	04 37 25		Δ = 6940Km. H = 04 27 03
		ePP,(PcP)	Z	39 41		USCGS: 16.5S 178W Fiji Is.
		iS	E N Z	45 47		h = 450Km.
		eSP	Z	46 11		
		eScS	E N	46 38		
		eX	E	48 44		
		eSS	N	49 42		
		e(SSS)	N Z	53 48		
		eX	N Z	55 30		

WILKES

No.	Date 1959	Phase		Time (G.M.T.)	Period Sec.	Remarks
	NOVEMBER					
268	2	iS	E N Z	20 23 09		Δ = 7780Km. H = 20 02 50
		eSS	E N Z	27 37		USCGS: 5.5S 151.5E New
		eX	E	28(32)		Britain.
		eSSS	E N	30 39		h approximately 60Km.
		eLr	E N Z	35 19		
		eL	E	36 39		
269	3	M	N	09 39 ..		USCGS: 23.5S 175.5W
		M	E Z	40 ..		Tonga Is. Region.
		eL	E N Z	45.5		
270	3	iP	N Z	09 49 42		Δ = 6170Km. H = 09 40 08
		iX	N Z	50 19		USCGS: 10.5S 111E South
		e(PcP)	Z	50 45		of Java.
		iX	Z	51 27		
		e(ScP)	Z	55 07		
		eX	E N Z	56 31		
		iS	E N(Z)	57 23		
		iX	E	57 25		
		iSP	Z	57 36		
		eSS	E Z	41 02		
		eLr	N Z	10 05 20		
271	5	iP	E N Z	12 00 51		Δ = 7170Km. H = 11 50 15
		ePcP	Z	01 24		USCGS: 13S 166.5E New
		eS	E N Z	09 27		Hebrides.
		iPS	N Z	09 51		h approximately 100Km.
		eScS	E N Z	10 32		
		eSS	E N Z	13 44		
		eLq	E N Z	17 06		
		eLr	E N Z	20 30		
272	5	eP	E Z	17 48 55		Δ = 7440Km. H = 17 38 03
		eS	N	57 45		USCGS: 9S 157.5E Solomon
		eX	Z	57 48		Is.
		eX	E	57 52		
		eSS	E	18 01 55		
		eLr	E N Z	09 50		
		M	N Z	13.5		
		M	E Z	16.5		
273	6	eP	E Z	01 18 20		Δ = 7390Km. H = 01 07 32
		eS	E N	27 07		USCGS: 9S 157.5E Solomon
		eX	Z	01 27 12		Is.
		eScS	E N Z	28 22		
		eSS	E N Z	31 41		
		eLr	E N Z	39 15		
274	6	e(PcP)	Z	11 54 42		Early part of Record missing
		eS	E Z	12 01 54		due to instrument disturbance
		eX	E N Z	02 00		after record change.
		eLr	Z	10 55		USCGS: 24S 174.5W Tonga Is.
						Region.
275	7	(eL)	E Z	03 37.5		USCGS: 36.5N 2.5E Algeria.
276	7	eP	E Z	22 26 39		Δ = 7000Km. H = 22 16 13
		ePcP	E Z	27 12		USCGS: 23.5S 175.5W Tonga
		eX	E	34 53		Is. Region.
		eS	N	35 05		
		eX	Z	35 11		
		eScS	E N	36 35		
		eSS	N	38 11		

WILKES

No.	Date 1959	Phase		Time (G.M.T.)	Period Sec.	Remarks
	NOVEMBER					
276	continued					
	7	eLq	N	22 42 56		
		eLr	E Z	46 12		
		M	N	51.5		
		M	E Z	52 ..		
277	8	ePP	N Z	14 14 18		Δ = 12,610Km. H = 13 54 47
		e(SKKS)	N	21 19		USCGS: 44N 140.5E Hokkaido,
		eSP	N Z	23 45		West Coast.
		$ePKKS_2$	E	27 26		
		eSS	E N Z	30 00		
		eLq	E	41 48		
		eLr	N Z	48 ..		
278	9	eP	Z	04 27 44		Δ = 5720Km. H = 04 18 40
		eS	E N Z	35 00		USCGS: 52S 135W South
		eSS	E N	38 52		Pacific.
		eLq	E N	40 ..		
		eLr	Z	42.2		
		M	E N Z	47 ..		
279	10	eLr	E N Z	17 15 ..		USCGS: 7S 156E Solomon Is.
280	10	eLr	E N Z	21 45 ..		USCGS: 36N 89E Northern Tibet.
281	11	eL	E N Z	12 54.5		
282	14	eLq	E(N)	11 01 39		USCGS: 3S 148.5E Bismarck
		eLr	Z	07 ..		Sea.
283	14	eL	Z	20 56 ..		
284	14	eL	E N Z	23 44.5		
285	15	ePP	Z	10 44 03		Δ = 12,170Km. H = 10 24 55
		e(PPP)	(Z)	46 38		USCGS: 38N 74.5E Tadzhik
		eSP	N	53 15		S.S.R.
		eSP	E Z	53 25		
		eSS	E Z	59 19		
		eSS	N Z	59 27		
		eLq	E N Z	11 10 ..		
		eLr	N Z	15 ..		
		M	E N Z	23.5		
		M_2	Z	12 40 ..		
286	15	eP diffracted	Z	17 24 24		Δ = 13,940Km.
		$ePKP_1$	Z	27 46		USCGS: Near West Coast of
		ePP	E N Z	29 32		Greece. 37.5N 20.5E.
		eSKS	E Z	34 37		
		eSKKS	E	36 24		
		$ePKKP_2$	N	37 18		
		$ePKKP_2$	E Z	37 37		
		ePS	Z	38 55		
		ePS	E	39 41		
		ePS	Z	40 14		
		ePPS	Z	41 23		
		ePPS	E	41 30		
		eX	E N	45 52		
		eX	N	49 19		
		eX	Z	54 22		
		eLq	N	18 00.5		
		eLr	E Z	07.5		

No.	Date 1959	Phase		Time (G.M.T.)	Period Sec.	Remarks
	NOVEMBER					
287	16	eP	E Z	01 11 27		Δ = 8500Km. H = 00 59 39
		eS	E N Z	21 10		USCGS: 35S 70W Chile
		ePS	E Z	21 54		Argentina Border.
		eL	E Z	37.5		h approximately 100Km.
288	16	ePP	Z	10 40 06		Δ =12,000Km.H = 10 21 15
		ePPS	E N	50 28		USCGS: 1N 26.5W
		eSS	E Z	55 46		Mid-Atlantic Ocean.
		eLr	E Z	11 12 17		
289	17	eLr	E N Z	03 03 ..		USCGS: 11S 66.5E Indian Ocean.
290	17	eL	E N Z	12 04.5		
291	19	eLr	E N Z	05 55 ..		USCGS: 24.5S 177W Tonga Is. Region.
292	19	iP	E N Z	11 19 21		Δ = 7110Km. H = 11 08 49
		iPcP	N Z	19 59		USCGS: 5.5S 146E Near
		eX	E N Z	22 16		North Coast of New Guinea.
		eX	E N Z	23 42		
		iS	E N Z	27 53		
		iX	Z	27 59		
		iX	Z	28 30		
		eSS	N	31 32		
		eSS	E Z	32 11		
293	20	eLr	E N Z	00 59 ..		USCGS: 42.5N 126.5W Off Coast of Oregon.
294	21	eL	N Z	10 45 ..		
295	22	eS	E N	13 07 30		Δ =8,000Km.H = 12 46.7
		eX	Z	07 39		USCGS: 3S 140E. Near North
		eSS	Z	11 48		Coast of New Guinea.
		e(SSS)	Z	15 30		
		eL	Z	20 ..		
		eL	E N	21.5		
296	22	eP	N Z	16 35 40		Δ = 5390Km. H = 16 26 58
		eS	E N Z	42 38		USCGS: 54S 136W South
		eScS	E N	45 12		Pacific Ocean.
		eSS	N	46 18		
		eSS	E	46 21		
		eSS	Z	46 26		
		eLq	E	47.5		
		eLr	Z	49 18		
		M	E N	50.5		
		M	Z	55.5		
297	22	ePP	E Z	19 46 57		Δ = 6440Km. H = 19 35 35
		eX	E N	51 45		USCGS: 21.5S 178.5W
		eX	Z	51 53		Fiji Is. Region.
		eS	E N	51 58		h = 550Km.
		eSS	E N	55 ..		
		eSSS	E Z	59.5		
298	22	eLr	E N Z	23 09 ..		USCGS: 19.5S 175E Fiji Is. Region.
299	23	eX	E	16 33 12		Δ = 6890Km. H = 16 14 50
		eS	N Z	33 31		USCGS: 20S 174.5E
		eSS	N Z	37 40		Fiji Is. Region.
		eLq	E N	40 45		
		eLr	E Z	43 30		

No.	Date 1959	Phase	Time (G.M.T.)	Period Sec.	Remarks
	NOVEMBER				
300	26	eP Z	07 16 34		Δ = 6800Km. H = 07 06 20
		epP N Z	16 44		USCGS: 5.5S 102.5E North
		iX Z	16 54		Coast of Sumatra.
		iPcP Z	17 15		
		iX Z	17 26		
		eS E N Z	24 50		
		i(SP) Z	24 56		
		eX Z	26 47		
		iSS N Z	28 52		
		eLq E	31 04		
		eLr N Z	34 11		
		eL E	35 00		
301	26	iP N Z	23 19 39		Δ = 6800Km. H = 23 09 25
		eX E	19 46		USCGS: 5.5S 103E Near
		eX N Z	21 06		Coast of Sumatra.
		ePP Z	21 58		
		ePcS Z	24 25		
		iS E N Z	27 55		
		eSS E N	30 32		
		eX Z	31 27		
		eX E N	33 14		
		eLq E N	37 18		
		M N Z	43.5		
	27	eX E N Z	00 01 44		
302	27	eX N Z	19 10 09		USCGS: 5.5S 103E Off
		eX N	14 00		North Coast of Sumatra.
		eL E N Z	18 34		
303	28	eP Z	02 56 10		Δ = 6890Km. H = 02 45 45
		eS E N Z	03 04 30		USCGS: 19.5S 174.5E
		eScS N	05 5(4)		Fiji Is. Region.
		eSS E N	08 33		
		eLq E N	11 46		
		eX Z	11 55		
304	28	iP N Z	12 47 34		Δ = 9390Km. H = 12 35 03
		iPcP E N Z	47 43		USCGS: 28.5S 71W Chile.
		ePP N Z	50 53		
		eSKS E Z	57 53		
		eS N Z	57 57		
		e(PS) E N Z	58 50		
		e(SS) E N Z	13 03.3		
		eSSS E N	07 17		
		eLq E	09.8		
305	28	eP E Z	22 49 54		Δ = 7000Km. H = 22 39 28
		ePcP Z	50 28		USCGS: 13S 167.5E
		eS E N	58 20		New Hebrides Is.
		eX Z	58 26		
		e(ScS) E N Z	59 27		
		eSS N	23 02.5		
		eL N Z	10.5		
306	29	e(Lr) E N Z	06 13 ..		USCGS: 26.5S 178W
					Kermadec Is. Region.
307	29	eP (E) Z	19 25 49		Δ = 5000Km. H = 19 17 36
		eS N Z	32 23		USCGS: 57S 147.5W
		e(ScS or SS) Z	35 38		South Pacific.
		eLq N	35 52		
		eLr N Z	38.5		

No.	Date 1959	Phase	Time (G.M.T.)	Period Sec.	Remarks
	NOVEMBER				
308	30	eL N Z	03 55 ..		
309	30	eL Z	12 07 ..		USCGS: 44.5N 80.5E Sinkiang Province, China.

WILKES

No.	Date 1959	Phase		Time (G.M.T.)	Period Sec.	Remarks
	DECEMBER					
310	1	eiP	E N Z	15 04 16		Amplitudes: -E, +Z.
		eX	E Z	05 34		Δ = 2000Km. H = 15 00 06
		e(S)	E N	07 34		USCGS: 63S 154E Balleny
		iX	N Z	07 48		Island Region.
		iX	Z	07 58		
		eLr	E Z	09 53		
311	2	eP	Z	07 40 02		Δ = 6830Km.H = 07 29 46
		eS	E N Z	48 18		USCGS: 5S 104E Near
		eSS	N	51 10		Coast of Sumatra.
		eSS	Z	52 ..		
		eL(r)	N Z	57.5		
312	2	eP	N Z	09 44 48		Δ = 7360Km. H = 09 34 01
		ipP	E N Z	44 58		USCGS: 1S 123E Celebes.
		ePP	E N Z	47 07		
		eScP	E N Z	49 29		
		eS	E N	53 33		
		eX	Z	53 37		
		eSS	N Z	57 16		
		eG	E N	10 01 07		
		eX	Z	01 32		
		eLr	N Z	05 04		
313	3	(eP)	Z	02 04 25		South Sandwich Is. Region
		e(PS)	E N	12 08		about 57S, 27W.
		e(SS)	N Z	15.8		
		eL(q)	E N	20 ..		
		eL(r)	Z	24 ..		
314	3	(e)S	E	13 36 26		USCGS: 16.5S 177.5W
		eSP	Z	36 33		Fiji Is. Region.
		eLr	N Z	48.3		
		eL	E Z	50.8		
315	3	eL	E N Z	20 00 00		
316	8	Lr	E N Z	05 01 ..		USCGS: 1S 124E Celebes
						Region.
317	8	eL	N	08 27 ..		
		eL	Z	31 ..		
318	8	eLr	Z	14 31.5		USCGS: 42N 44.5E
						Georgia S.S.R.
319	9	eL(q)	N	08 58 ..		
		eL(r)	E Z	09 03 ..		
320	10	eP	Z	03 02 35		Δ = 2670Km. H = 02 57 23
		eS	E N	06 46		Balleny Is. Region about
		eX	Z	06 51		63S 165E.
		eL(r)	N	08 00		
		ePcS	E	10 10		
321	11	eP	Z	00 42 26		Δ = 6720Km. H = 00 32 17
		eS	N	50 37		USCGS: 5S 130E. Banda Sea.
		eX	Z	50 42		
		eSS	N Z	54(56)		
		eLq	N	57(38)		
		eLr	N Z	01 01.5		

WILKES

No.	Date 1959	Phase	Time (G.M.T.)	Period Sec.	Remarks
	DECEMBER				
322	11	eP Z	01 49(10)		Δ = 6890Km. H = 01 38 51
		ePP Z	51 18		USCGS: 23S 175W Tonga
		eS E N	57 29		Is. Region.
		eX Z	57 38		
		eScS Z	58 56		
		eL(q) N	06 08		
		eL(r) Z	10 00		
		M E	14.5		
323	11	eLq N	10 00.5		
		eLr Z	04.5		
324	13	eL Z	06 08 ..		USCGS: 9.5S 106.5E
		eL N	11 ..		Off South Coast of Java.
325	13	eP Z	17 47 12		Δ = 7700Km. H = 17 36 06
		eS E N	56 15		USCGS: 18S 173.5W Tonga
		eX Z	56 30		Is.
		eSS Z	18 00 34		
		eL Z	05 52		
		eL N	07 ..		
		eL Z	12 ..		
		eL E N	13.5		
326	14	eL (E)N Z	13 27 ..		
327	14	iP E N Z	18 09 44		Amplitudes: +N,+E, -Z.
		ipP Z	10 14		Δ = 8000Km. H = 17 58 25
		iPcP N Z	10 29		USCGS: 5.5N 125.5E Off
		e(PP) Z	13 07		South Coast of Mindanao.
		eScP Z	14 46		h = about 120Km.
		iS E N Z	18 55		
		e(PS or SPP) Z	19 33		
		esS E N	19 48		
		eX E N Z	20 04		
		e(SS) N	21 49		
		eLq or eSSS E N Z	26.5		
		eL E N Z	31.8		
328	14	iP N Z	22 00 10		USCGS: 1N 125E Celebes.
		eX Z	00 21		Coda possibly contains Fox Is.
		eScS N Z	10 12		22 00 50 at 52.5N 168W.
		eSS Z	14 12		
		e(SSS) Z	16 44		
		eLr N	21.5		
		e Z	23 39		
		e(L) N	38 ..		
		eX E	40 26		
		eX N	42 36		
329	14	iP E N Z	23 30 56		Amplitudes: +N, +E, +Z.
		iX E N Z	30 58		Δ = 5720Km. H = 23 21 55
		i(pP) E N Z	31 12		USCGS: 59.5S 31W Sandwich
		iX E N	31 47		Is.
		ePP E N Z	33 01		h = 60Km.
		ePcS E N Z	36 14		
		eS E N	38 10		
		iX E Z	38 13		
		eScS E	40 50		
		eSS Z	41 38		
		eLq E N	43 26		
		eLr Z	45 40		
		M E N	50.5		

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No.	Date 1959	Phase		Time (G.M.T.)	Period Sec.	Remarks
	DECEMBER					
330	15	eLq	E N	05 49 ..		
		eLr	E N Z	51.2		
331	15	iP	E N Z	12 24 48		Δ = 5640Km. H = 12 15 50
		ePcP	Z	25 51		USCGS: 59S 24W
		ePP	E N Z	26 43		Sandwich Island.
		eS	E N	32 00		
		e(PS)	Z	32 11		
		eScS	E N	34 27		
		eSS	N Z	35 24		
		eL	E N	38.5		
		eL	E N Z	41.2		
332	15	eP	Z	19 50 15		Δ = 4670Km. H = 19 42 25
		ePP	Z	51 52		
		eS	N	56 32		
		eSS	N	59 42		
		eL	E Z	20 01 ..		
		eL	N	03 51		
333	17	eP	N Z	06 04 21		Δ = 6500Km. H = 05 54 26
		eX	Z	04 41		USCGS: 5.5S 102.5E
		ePP	Z	06 32		Off South Coast of Sumatra.
		ePcS	E Z	08 46		
		eS	E Z	12 20		
		eX	N	12 31		
		eScS	E	13 50		
		eSS	E N Z	16 13		
		eLr	E N Z	21.8		
334	17	eP	Z	17 00 38		Δ = 8500Km. H = 16 48 50
		e(ScP)	Z	05 00		USCGS: 36.5S 101.5W
		eX	Z	06 36		South Pacific Ocean.
		eS	E Z	10 19		
		eX	E	11 01		
		eSS	N Z	15 17		
		eSSS	E	18 18		
		eLq	E N Z	20.8		
		eLr	Z	23.5		
335	17	eL	Z	18 20.5		
336	18	eL	E N Z	09 09 ..		
337	19	eL	N Z	16 03.5		
		eL	E N Z	16 08.5		
338	20	eL	Z	17 32 ..		
339	21	eP	Z	01 37 48		Δ = 5830Km. H = 01 32 07
		epP	Z	38 16		62S 171E North of Balleny
		ePP, S	E	38 42		Island - from reports of
		eSS	N	42 09		surrounding Stations.
		eSS	Z	42 27		
		eLq	E N Z	43.5		
340	21	eP,(SS)	E	10 30 23		Δ = 6670Km. H = 10 20 17
		e(pKKS)	E N	31 29		USCGS: 27.5S 176W
		e(SSS)	E	33 54		Kermadec Island Region.
		eS	E N	38 31		Z component not recording.
		eScS(Lq)	E N	40.2		
		eSS	N	42 33		
		eSS	E	42 44		
		e(X)	E	43 31		
		eLq(Lr)	N	45 30		
		M	E N	54.5		

No.	Date 1959	Phase		Time (G.M.T.)	Period Sec.	Remarks
	DECEMBER					
341	21	eS	E N	11 32 12		Δ = 6440Km.
		iX	N	32 18		In Coda of preceding.
		e(ScS)	N	34 06		USCGS: 27.5S 176W
		eX	E	34 25		Kermadec Is. Region.
		eLq	N	38 32		Z component not recording.
		eL	E	42 55		
		M	E	49 ..		
342	21	eLr	E N	12 01 ..		USCGS: 14N 52E
						Gulf of Aden.
						Z component not recording.
343	22	eL	E N Z	00 52 ..		
344	23	eL	N	04 58 ..		
		eL	Z	05 03 ..		
345	24	eX	E	07 28.5		
		eL	E N	30.2		
		eL	Z	31 ..		
346	24	eL	E N Z	09 44 ..		USCGS: 27.5S 176.5W
		eL	E N	46.5		Kermadec Island Region.
347	24	eLr	Z	13 39 08		USCGS: 13.5S 74.5W.
		eL	Z	45.8		Southern Peru.
						N component not recording.
347A	24	eS	Z	13 30 13		Near North Coast of
		eLr	Z	43 02		Mindanao. 9N 126.5E.
						Phase mixed with 347.
348	25	iP	Z	03 58 54		Δ = 6550Km. H = 03 48 55
		e(PcP)	Z	04 00 12		USCGS: 27.5S 176W
		e(PcS)	E	03 18		Kermadec Island Region.
		e(S)	E	06 48		
		e(X)	Z	06 51		
		(eS)	N	06 56		
		e(ScS)	N	08 44		
		eSS	N	10 58		
		eLq	N	13 00		
		eLr	E Z	16 ..		
		M	E N Z	23 ..		
349	25	iP	E N Z	10 31 34		Δ = 9720Km, H = 10 18 48
		i(pP)	Z	32 16		USCGS: 25.5S 67W
		ePP	N	35 07		Chile-Argentina Border.
		iS	E	42 12		
		eX	E N	42 50		
		e(PS)	N	44 04		
		eSS	E N	48.2		
		eLq	E	57 ..		
		eLr	N Z	11 02.5		
350	27	iP	N Z	12 50 50		Δ = 9440Km. H = 12 39 13
		epP	Z	52 55		USCGS: 28S 63W.
		e(PPP)	Z	56 12		Santiago del Estero
		iS	E N Z	13 00 33		Province, Argentina.
		esS	E Z	04 16		h = 580Km.
		eSS	E	05 56		

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No.	Date 1959	Phase		Time (G.M.T.)	Period Sec.	Remarks
	DECEMBER					
351	27	eP diffracted	Z	16 08 48		Δ = 14,110Km. H = 15 51 00
		ePKP	Z	12 03		USCGS: 56N 162.5E
		ePP	E N Z	14 06		Kamchatka.
		eX	Z	15 00		
		eX	N	15 09		
		eX	E	15 14		
		ePPP	E N Z	16 51		
		eSKS	E N Z	19 11		
		eSKKS	(N)Z	20 51		
		e(PKKP)	E N	22 06		
		eX	Z	22 53		
		ePS	E	24 08		
		ePPS	E N Z	25 25		
		eSS	E N Z	30 43		
		eSSS	E N Z	35 55		
		eLq	E N	46 ..		
352	28	ePP	E N	07 41 53		USCGS: 52.5N 160E
		eX	E	49 ..		Near East Coast of Kamchatka.
		eSP	E	51 17		
		eSS	E N	58 09		
		eX	E N	08 01 00		
		eSSS	N	02 25		
		eX	E	04 56		
		e(L)q	E(N)	12 ..		
353	28	e(L)	E N Z	14 00 ..		Possibly Lr of 52.5N 160E or Lr of 18S 170W.
354	29	eL	Z	07 38 ..		USCGS: 2S 126E Spice Is.
355	29	eP	Z	17 25 23		Δ = 7220Km. H = 17 14 44
		eS	E N	34 02		USCGS: 21.5S 174W Tonga
		eX	E	34 45		Island.
		eScS	N	35 08		
		eSS	E	38 24		
		eL	E N	44 ..		
356	29	eP(pP)	Z	20 48(48)		USCGS: 18N 145E Marianas.
		e(PcP)	Z	49 24		
		e(PP)	Z	52 05		
		e(X)	N	57 09		
		e(S)	E N	57 27		
		e(X)	N Z	59 10		
		e(X)	N	21 00 02		
		e(SS)	E N	03 20		
		eL	Z	18 ..		
357	31	eP	N	10 40 19		USCGS: 3S 139.5E
		eX	N	40 47		Northern New Guinea.
		eS	E N	49 01		
		eX	E	49 50		
		eLq	E N	57.5		
		eLr	N	11 02 ..		
		M	N	07 ..		
358	31	eL	N Z	17 29 ..		
359	31	eX	N	20 41 33		Δ = 2060Km. H = 20 37 18
		eP	Z	41 35		
		eX	Z	42 13		
		e(L)	N	44 19		

WILKES

No.	Date 1959	Phase		Time (G.M.T.)	Period	Remarks
	DECEMBER					
359	continued					
	31	eX	Z	20 44 52		
		eS	E	44 57		
		e(L)	Z	45 26		
		e(PcP)	E	46 17		
360	31	e(S)	E	23 34 05		Probably same epicentre as 359.
		eL	N Z	34 21		
		e(PcP)	E	35 37		
360A	31	eX	N	23 38 49		Δ = 2060Km. H = 23 34 36 In coda of 360.
		e(P)	N	38 51		
		eX	Z	38 59		
		e(S)	N	42 10		
		e(L)	N Z	42 43		
		eX	E	43 48		