RHODESIA METEOROLOGICAL SERVICES

SEISMOLOGICAL BULLETIN

The following stations contribute records for analysis and publication in this Bulletin:

KABWE (BHA): (Broken Hill)	14° 26.8' S; 28° 28.1' E; Alt. 1206 m.
Litho. foundation:	Dolomite and Shales of the Middle Katanga System.
Authority:	Zambia Meteorological Service.
Instrument:	Three component Willmore one-second seismograph. Nominal magnification 20,000.
CHILEKA (CLK):	15° 40.8' S; 34° 58.6' E; Alt. 781 m.
Litho. foundation:	Charnockitic granulites of the Basement Complex.
Authority:	Malawi Meteorological Service.
Instrument:	Three-component Willmore one-second seismograph. Nominal magnification 20,000.
KAROI (KRR):	16° 51.1' S; 29° 37.1' E; Alt. 1380 m.
Litho. foundation:	Granitic gneisses of the Zambesi type.
Authority:	Rhodesia Meteorological Services.
Instrument:	Vertical Willmore one-second seismograph. Nominal magnification 20,000.
BULAWAYO (BUL):	20° 08 6' S. 28° 36.8' E. Alt. 1341 m.
Litho. foundation:	Hornblend schists of the Bulawayan System.
Authority:	Rhodesia Meteorological Services.
Instruments:	Three-component Willmore one-second seismograph. Nominal magnification 20,000.
	WWSSS Station: SP magnification 100,000 LP magnification 1,500

Analysis Centre: Goetz Observatory. Meteorological Service, P.O. Box 562, Bulawayo, Rhodesia.

JAN 1968

CLK not operating 1st to 19th.

Date	G h	M m	T s	Epicentre:	Remarks	Mag CGS
X 01	13	44	26	6.3S 39.1E;	Zanzibar Channel	3.9
01	19	07	23	USCGS 27.1S. 62.8W;	Santiago del Estero Province, Argentina.	3.9
01	20	18	48	USCGS 27.5S 71.7W;	Near Coast of N. Chile.	4.7
02	00	21	11	USCGS 5.1S 153.4E;	New Ireland Region.	5.5
02	02	08	43	USCGS 19.3S 177.6W;	Fiji Is. region.	4.2
X 02	09	05	48	7.0S 30.1E;	Central Lake Tanganyika.	3.5
02	11	44	52	USCGS 15.0S 167.6E;	New Hebrides Is.	4.7
02	11	59	32	USCGS 29.4N 52.6E;	S. Iran.	5.0
X 02	16	42	05	7.0S 26.6E;	Lualaba Valley, Congo.	3.4
02	22	45	09	USCGS 22.6S 66.6W:	Jujuy Province, Argentina.	5.3
03	02	24	54	USCGS 51.8N 173.3W:	Andreanof Is. Aleutians.	4.6
X 03	07	08	13	7.0S 26.6E.	Lualaba Valley, Congo.	3.3
X 03	14	28	04	26.4S 27.3E:	Witwatersrand	3.4
03	19	32	37	USCGS 24.5S 179.3E:	S. of Fiji Is.	4.2
04	00	24	23	USCGS 16.5S 13.6W;	S. Atlantic Ridge.	-
04	00	57	44	USCGS 52.2N 171.3W;	Fox Is. Aleutians.	5.7
04	10	27	38	USCGS 9.9S 148.9E;	E. New Guinea region.	5.4
04	14	48	30	USCGS 21.5S 70.7W;	Near Coast of N. Chile.	4.9
X 04	15	57	19	20.1S 32.6E;	Chipinga area, Rhodesia.	2.8
05	06	42	45	USCGS 30.4N 79.1E;	Tibet-India Border region.	5.4
05	09	18	10	USCGS 55.9N 154.6W;	S. of Alaska.	4.8
X 05	15	10	00	26.5S 27.2E;	Witwatersrand.	3.0
X 05	16	36	30	17.2S 27.9E;	Kariba.	2.3
X 05	16	37	27	17.2S 28.0E;	Kariba.	3.2
X 05	16	39	25	17.2S 27.8E;	Kariba. MM III at Binga.	3.5
X 05	18	54	44	26.8S 26.7E;	W. Witwatersrand.	3.2
06	10	23	49	USCGS 45.8N 26.6E;	Rumania.	4.6
06	15	13	29	USCGS 16.4N 92.1E;	Bay of Bengal.	5.1
06	15	50	01	USCGS 27.2S 69.4W;	N. Chile.	5.0
06	23	27	21	USCGS 27.8S 71.1W;	Near Coast of N. Chile.	5.8
07	00	23	16	USCGS 27.8S 70.9W;	Near Coast of N. Chile.	4.9
07	03	46	58	USCGS 49.8N 78.0E;	E. Kazakh, S.S.R.	5.3
07	09	56	40	USCGS 5.1S 153.9E;	New Ireland region.	5.6
07	18	27	12	USCGS 48.9S 8.4W:	S. Atlantic Ridge.	-
08	03	17	13	USCGS 13.7S 171.5E;	New Hebrides Is region.	5.2
08	18	44	25	USCGS 18.6S 69.9W:	N. Chile.	5.4
08	20	22	16	USCGS 8.2N 38.2W;	Central Mid-Atlantic Ridge.	5.4
08	21	54	21	USCGS 14.8S 174.8W;	Samoa Is. region.	5.5

JAN 1968

	Date	G h	M m	T s	Epicentre; Remarks	Mag CGS
X	09	01	41	47	26.3S 28.3E; E. Witwatersrand.	3.3
X	09	06	28	03	15.8S 29.2E; Downstream from Kariba.	2.1
X	09	09	54	53	29.8S 28.3E; Lesotho Drakensberg.	3.3
X	09	10	31	20	26.6S 27.0E; W. Witwatersrand.	3.3
X	09	16	51	02	15.5S 26.7E; W. Kafue Flats, Zambia.	2.2
	09	23	15	42	USCGS 35.5N 22.5E; Mediterranean Sea.	4.7
X	10	04	47	39	26.6S 27.3E; Witwatersrand.	3.2
	10	05	54	19	USCGS 27.8S 70.8W; Near Coast of N. Chile.	4.8
X	10	08	34	24	26.4S 27.2E; Witwatersrand.	3.1
X	10	09	01	18	8.3S 28.8E; Lake Mweru area, Congo.	3.1
	10	09	31	40	USCGS 29.2S 177.6W; Kermadec Is.	5.0
	10	10	02	46	USCGS 6.9S 110.6E; Java.	5.4
X	10	14	36	34	26.3S 28.1E; Johannesburg area.	3.3
X	10	15	54	52	26.7S 26.9E; W. Witwatersrand.	3.1
	11	05	01	39	Witwatersrand.	2.9
X	11	19	50	27	30.3S 28.5E; Lesotho Drakensberg.	3.9
X	12	01	00	08	33.3S 23.6E; S. Karroo Cape Province.	5.5
	12	03	05	19	USCGS 27.2S 177.2W; Kermadec Is.	5.3
	12	04	17	43	USCGS 13.4N 93.1E; Andaman Is. region.	5.5
X	12	14	04	48	26.5S 28.3E; Witwatersrand.	3.0
X	12	18	57	32	8S 26E; Lake Upemba area, Katanga.	3.3
	13	04	22	14	USCGS 12.3S 165.7E; Santa Cruz Is.	4.5
X	13	12	47	54	15.5S 31.0E; Zumbo area, Zambesi Valley.	3.1
X	13	15	34	40	26.6S 27.1E; Witwatersrand.	3.2
	13	16	07	04	USCGS 24.2S 66.9W; Salta Province, Argentina.	5.7
X	13	16	22(10)		24S 67W; Salta Province, Argentina.	(4.5)
	13	21	29	26	USCGS 24.3S 67.0W; Chile-Argentina Border reg.	4.8
	14	03	45	07	USCGS 7.7S 117.4E; Bali Sea.	5.1
	14	08	01	28	USCGS 22.5S 179.6W; S. of Fiji Is.	5.2
X	14	10	36	34	23.5S 33.2E; Sul do Save Province, Mocambique.	5.0
	14	12	28	24	USCGS 37.8N 13.1E; Sicily.	5.1
	14	13	15	41	USCGS 37.7N 13.1E; Sicily.	5.0
	14	15	48	32	USCGS 37.9N 13.1E; Sicily.	4.7
	14	17	43	10	USCGS 52.7N 171.2W; Fox Is., Aleutians.	5.5
	15	01	33	03	USCGS 37.9N 13.1E; Sicily.	5.1
	15	02	01	09	USCGS 37.9N 13.1E; Sicily.	5.4
	15	03	18	41	USCGS 37.9N 13.1E; Sicily.	4.6
	15	12	32	20	USCGS 33.9N 38.9W; N. Atlantic Ridge.	4.8
X	15	18	23	20	2.7S 40.2E; Formosa Bay, Kenya.	4.5
	16	16	42	44	USCGS 37.9N 13.1E; Sicily.	5.1

JAN 1968

	Date	G h	M m	T s	Epicentre; Remarks	Mag. CGS
*	17	00	35	41	10.7S 33.8E; Nyika Plateau, Malawi.	3.6
	17	06	54	57	USCGS 23.3S 66.5W; Jujuy Province, Argentina.	4.0
	17	09	49	51	USCGS 56.4S 147.0E; W. of Macquarie Is.	-
*	17	16	29	17	5.2S 31.1E; Lake Sagara area, Tanzania.	3.4
	18	01	57	32	USCGS 22.3S 179.1W; S. of Fiji Is.	4.6
*	18	11	18	40	13.1S 26.8E; Solwezi area, Zambia.	2.9
	18	12	03	37	USCGS 14.6S 178.4W; Fiji Is. region.	5.1
*	18	19	28	32	4.3S 31.1E; Sagara Swamp, Tanzania.	3.7
*	18	21	16	14	21.1S 32.6E; S.W. Sofala Province, Mocambique.	2.7
	19	06	04	38	USCGS 9.4S 158.4E; Solomon Is.	6.0
*	19	07	14	59	26.2S 27.7E; Witwatersrand.	3.1
	19	14	12	02	USCGS 7.2S 108.6E; Java.	5.6
	19	14	39	38	USCGS 42.6S 75.2W; Off Coast of S. Chile.	5.5
*	19	15	26	44	21.1S 33.2E; S. Sofala Province, Mocambique.	3.3
	20	16	41	27	USCGS 16.2S 178.1E; Fiji Is.	5.6
	20	17	34	05	USCGS 18.9S 178.0W; Fiji Is. region.	4.5
	20	21	21	32	USCGS 29.9S 179.5W; Kermadec Is.	5.8
	21	01	20	50	USCGS 8.0S 117.6E; Sumbawa Is. region.	5.3
	21	09	10	26	USCGS 25.2S 179.4E; S. of Fiji Is.	4.2
*	21	10	26	58	26.3S 27.9E; Witwatersrand.	3.1
*	21	11	13	40	21.2S 33.4E; S. Sofala Province, Mocambique.	3.2
	21	16	42	29	USCGS 1.2S 14.0W; N. of Ascension Is.	-
	21	22	55	36	USCGS 5.0S 150.0E; New Britain region.	5.0
*	22	05	25	10	5.1S 26.9E; Lualaba Valley, Congo.	4.6
	22	10	35	37	USCGS 38.2N 75.6E; S. Sinkiang Province, China.	5.3
	22	20	34	10	USCGS 33.8N 46.9E; Iran-Iraq Border region.	5.0
	22	21	20	39	USCGS 33.7N 46.8E; Iran-Iraq Border region.	5.0
	23	03	22	46	USCGS 26.0N 95.5E; Burma-India Border region.	5.0
	23	16	06	50	USCGS 52.1N 171.3W; Fox Is., Aleutians.	5.2
*	23	19	11	(10)	5N 34E; S. Sudan.	4.7
*	23	21	12	36	23.6S 33.0E; Sul do Save Province, Mocambique.	4.1
	24	00	59	22	USCGS 8.1N 38.1W; Central Mid-Atlantic Ridge.	5.1
*	24	10	27	12	26.7S 26.6E; W. Witwatersrand.	3.4
*	24	21	28	38	8.6S 27.4E; Mulumbe Mts. Congo.	4.1
*	24	23	16	(00)	12S 47E; Comoro Is. region.	4.1
*	25	07	16	19	10.2S 34.3E; N. Lake Malawi.	3.5
	25	09	56	49	USCGS 37.8N 13.2E. Sicily.	5.1
	25	11	22	22	USCGS 51.5N 169.6W; Fox Is., Aleutians.	4.7
*	25	18	09	44	16.6S 28.3E; Kariba.	3.3
*	26	00	47	30	26.3S 27.7E; Witwatersrand.	3.2

JAN 1968

Date	G h	M m	T s	Epicentre; Remarks	Mag CGS
26	01	45	24	USCGS 9.1S 120.8E; Sumba Is. region.	5.3
26	04	45	41	USCGS 8.8S 120.4E; Flores Is. region.	5.9
26	04	53	22	9S 120E; Flores Is. region.	(5.2)
26	12	30	46	USCGS 24.3N 111.5W; Baja, California.	5.3
26	12	55	48	USCGS 12.6S 167.0E; Santa Cruz Is.	5.0
27	00	48	36	USCGS 29.9N 42.8W; N. Atlantic Ridge.	5.0
27	13	56	24	USCGS 23.2N 121.6E; Taiwan.	5.2
27	18	28	52	USCGS 35.9N 5.2E; Algeria.	4.2
28	08	40	49	19.8S 34.1E: Central Sofala Province, Mocambique	2.7
28	15	19	49	USCGS 23.9S 65.4W; Jujuy Province, Argentina.	4.7
29	01	57	05	27.8S 26.9E: S. Lake Kariba.	2.6
29	05	00	10	USCGS 36.3N 70.4E; Hindu Kush region.	5.5
29	08	52	57	USCGS 54.6S 1.3E; Bouvet Is. region.	5.3
29	10	19	06	USCGS 43.6N 146.7E; Kurile Is.	-
29	10	42	09	USCGS 43.2N 147.2E; Kurile Is.	5.2
29	11	43	59	USCGS 43.4N 147.3E; Kurile Is.	5.1
29	14	50	55	26.5S 27.3E; Witwatersrand.	3.0
29	15	43	19	USCGS 33.8S 179.3W; S. of Kermadec Is.	5.1
29	16	42	50	USCGS 43.5N 147.2E; Kurile Is.	5.7
29	20	52	21	USCGS 56.4N 153.6W; Kodiak Is. region.	5.2
30	01	30	13	USCGS 43.3N 146.8E; Kurile Is.	5.3
30	03	01	44	USCGS 43.1N 147.2E; Kurile Is.	5.4
30	03	44	24	USCGS 6.1S 113.3E; Java.	6.2
30	08	17	32	USCGS 36.4N 70.7E; Hindu Kush region.	5.2
30	20	12	42	USCGS 22.0S 68.5W; N. Chile.	5.3
31	01	20	44	USCGS 17.9S 178.1W; Fiji Is. region.	4.4
31	01	23	45	USCGS 24.7N 111.5W; Baja, California.	4.9
31	02	03	29	USCGS 27.7S 63.2W; Santiago del Estero Province, Argentina.	4.9
31	04	06	52	10.4S 28.3E; Lusaka area, Zambia.	2.2
31	09	00	30	USCGS 60 0S 18.3W; S.W. Atlantic Ocean.	5.0
31	11	45	17	USCGS 29.9N 92.1E: Tibet.	5.2
31	15	00	05	26.2S 28.2E: Witwatersrand.	3.6
31	17	36	57	21.4S 33.3E: Save Valley, Mocambique.	2.9
31	11	13	29	USCGS 6.5S 115.8E; Bali Sea.	-

LIST OF RECORDED PHASES: 01 to 02 JAN 1968 - 1

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region:	Remarks
01	KRR	e	00	08	02		0.2	Distant	
	BUL	e			08		0.2		
01	BHA	iP	13	47	34	R	1.1	Zanzibar Channel	
		eS		49	51				
		eL		51	18				
	KRR	eP		47	43		0.3		
		eS		50	03				
		eL		51	49				
	BUL	eP		48	23		0.3		
		eS		51	17				
		eL		53	25				
01	BUL	e	19	18	40		0.3	Distant	
	KRR	e			51		0.2		
	BHA	e			53		0.1		
01	BUL	i	20	31	44	C	0.5	Distant	
	KRR	i			56	C	0.4		
	BHA	e			56		0.2		
02	KRR	i	00	39	57	R	0.9	Distant	
		e		40	15				
		i		41	22				
	BUL	i		39	58	R	1.0		
		i		40	15				
		i		41	27				
	BHA	i		40	02	R	0.6		
		i			19				
		i		41	34				
02	BUL	e	02	26	54		0.2	Distant	
	KRR	e			58		0.3		
	BHA	e		27	04		0.1		
02	BHA	ePn	09	07	40		0.8	Central Lake Tanganyika	
		eSn		09	02				
		eSg		09	42				
	KRR	ePn		08	08		0.5		
		eSn		09	53				
		eSg		10	50				
	BUL	eL		12	37		0.3		
02	BUL	i	12	03	42	R	0.4	Distant	
	KRR	i			44	R	0.4		
	BHA	e			50		0.1		
02	KRR	eP	12	08	35		0.3	Distant	
	BUL	eP		09	00		0.3		
02	BHA	ePn	16	43	(55)		1.0	Lualaba Valley, Congo.	
		eSn		45	16				
		eSgSg		46	02				
	KRR	eP		44	33		0.5		
		eS		46	20				
		eL		47	22				
	BUL	eL		48	59		0.2		
02	BUL	iP	22	57	29	C	4.7	Distant	
		ipP		58	25				
		eSKS	23	06	57				
	KRR	iP	22	57	40	C	2.0		
		ipP		58	37				
	BHA	iP		57	41	C	2.0		
		ipP		58	37				
		eSKS	23	07	55				

LIST OF RECORDED PHASES: 03 to 04 JAN 1968 - 2

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region:	Remarks
03	KRR	e	02	44	20		0.2	Distant	
		e			33				
	BUL	i			25	C	1.1		
		i			38				
03	BHA	ePn	07	10	(05)		0.7	Lualaba Valley, Congo.	
		eSn		11	24				
		eSgSg		12	09				
	KRR	eP		10	40		0.4		
		eS		12	28				
		eL		13	35				
	BUL	eL		15	(00)		0.2		
03	BHA	i	12	35	15	R	0.2	Distant	
	KRR	e			20		0.2		
03	BUL	ePn	14	29	36		1.1	Witwatersrand	
		eSn		30	45				
		eSg		31	16				
	KRR	ePn		30	23		0.5		
		eSn		32	06				
		eSgSg		33	02				
03	KRR	e	19	53	13		0.3	Distant	
	BHA	e			22		0.3		
04	BUL	i	00	31	58	R	0.3	Distant	
	BHA	e		32	05		0.1		
	KRR	i			08	R	0.3		
04	BHA	e	01	17	05		0.6	Distant	
		i			21				
		e		20	41				
		i			52				
		e		28	57				
	KRR	e		17	07		0.8		
		e			23				
		i		20	47				
		i			59				
		e		28	46				
	BUL	i		17	17		3.6		
		e		21	08				
		e		28	28				
04	KRR	i	10	32	16	R	0.4	Distant	
	BHA	i			18	R	0.4		
	BUL	i			29	R	0.4		
04	BUL	e	10	46	17		0.3	Distant	
	KRR	e			19		0.2		
	BHA	e			23		0.2		
04	BUL	e	15	01	32		0.2	Distant?	
	KRR	e			46		0.2		
04	BUL	ePn	15	58	16		0.9	Chipinga Area, Rhodesia.	
		eSn			56				
		eSg		59	15				
	KRR	ePn		58	23		2.0		
		eSn		59	07				
		eSg			28				
	BHA	eSg	16	00	45		0.4		
04	BUL	i	20	18	39	R	0.2	Distant	
	KRR	i			47	R	0.1		

LIST OF RECORDED PHASES: 05 to 06 JAN 1968 - 3

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region:	Remarks
05	BHA	e	06	53	36		0.2	Distant	
	KRR	e			43		0.3		
	BUL	e			59		0.5		
05	KRR	e	09	37	42		0.1	Distant	
		e			52				
	BUL	i			42		0.3		
		i			52				
05	KRR	e	11	50	22		0.1	Distant	
	BUL	e			27		0.2		
05	BUL	ePn	15	11	35		0.4	Witwatersrand	
		eSn		12	44				
		eSg		13	17				
	KRR	ePn		12	20		0.3		
		eSn		14	06				
		eSgSg		15	05				
05	KRR	iPn	16	36	58		3.4	Kariba	
		iSg		37	22				
	BHA	ePn			13		1.2		
		eSg			55				
	BUL	ePn			15		1.2		
		eSn			46				
		eSg			56				
05	KRR	iPn	16	37	56		24.	Kariba	
		iSg		38	20				
	BHA	ePn			10		11.		
		eSg			52				
	BUL	ePn			12		8.0		
		eSg			53				
05	KRR	iPn	16	39	56		45.	Kariba	
		iSg		40	20				
	BHA	ePn			07		22.		
		eSg			52				
	BUL	ePn			10		16.		
		eSg			55				
05	BUL	ePn	18	56	27		0.5	West Witwatersrand	
		eSn		57	37				
		eSg		58	11				
	KRR	ePn		57	07		0.5		
		eSn		58	58				
		eSgSg	19	00	04				
	BHA	eL		01	15		0.2		
06	KRR	iP	10	33	56	C	0.4	Distant	
	BUL	iP		34	17	C	0.2		
06	KRR	i	15	24	38	R	0.7	Distant	
	BHA	i			40	R	0.8		
	BUL	i			52	R	0.6		
06	BUL	i	16	02	45	R	0.4	Distant	
	KRR	i			58	C	0.2		
	BHA	e		03	01		0.1		

LIST OF RECORDED PHASES: 09 to 10 Jan 1968 - 5

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region: Remarks
09	KRR	iP	06	28	23		3.0	Downstream from Kariba
		iS			37			
	BUL	ePn		29	07			
		eSn			55			
09	BUL	ePn	09	57	10		0.4	Lesotho Drakensberg
		eSn		58	53			
		eSgSg		59	52			
	KRR	ePn		57	56		0.2	
		eSn	10	00	12			
		eSgSg		01	32			
09	BUL	ePn	10	32	56		0.9	West Witwatersrand
		eSn		34	07			
		eSg			39			
	KRR	ePn		33	41		0.5	
		eSn		35	27			
		eSgSg		36	26			
09	BHA	ePn	16	51	35		1.4	West Kafue Flats, Zambia.
		eSn		52	00			
		eSg			05			
	KRR	ePn		51	49		0.8	
		eSg		52	36			
	BUL	ePn			16		0.4	
		eSn		53	12			
		eSg			36			
09	BHA	eP	23	24	36		0.1	Distant
	KRR	eiP			53	eR	1.0	
	BUL	iP		25	16	R	0.3	
10	BUL	iPn	04	49	13	C	0.6	Witwatersrand
		eSn		50	21			
		eSg			55			
		eL		52	28			
	KRR	iPn		49	59	C	0.5	
		eSn		51	42			
		eSgSg		52	39			
10	BUL	e	06	07	12		0.2	Distant
	KRR	i			23	C	0.2	
10	BUL	ePn	08	35	57		0.5	Witwatersrand
		eSn		37	08			
		eSg			39			
	KRR	ePn		36	43		0.4	
		eSn		38	27			
		eSgSg		39	26			
10	BHA	ePn	09	02	49		0.7	Lake Mweru Area, Congo.
		eSn		03	51			
		eSg		04	28			
	KRR	ePn		03	21		0.3	
		eSn		04	50			
		eSg		05	38			
10	BUL	e	09	50	34		0.6	Distant
	KRR	i			39	R	0.8	
	BHA	e			45		0.5	
10	KRR	i	10	14	29	C	0.3	Distant
		i		15	22			
	BUL	e		14	34		0.2	
		e		15	26			
	BHA	e		14	37		0.1	
		i		15	29			

LIST OF RECORDED PHASES: 10 to 12 JAN 1968 - 6

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region:	Remarks
10	BUL	ePn	14	38	04		0.8	Johannesburg, S.A.	
		eSn		39	08				
		eSg			41				
	KRR	ePn		38	50		0.6		
		eSn		40	33				
		iSg		41	24				
10	BUL	ePn	15	55	29		0.5	Western Witwatersrand	
		eSn		56	40				
		eSg		57	12				
	KRR	ePn		56	15		0.3		
		eSn		58	03				
		eSgSg			59				
11	BUL	ePn	05	03	08		0.5	Witwatersrand	
		eSn		04	14				
		eSg			42				
	KRR	ePn		03	52		0.2		
		eSn		05	32				
		eSgSg		06	32				
11	BUL	ePn	19	52	52		1.3	Lesotho Drakensberg.	
		eSn		54	39				
		eSgSg		55	38				
	KRR	eP		53	32		1.0		
		iS		55	54				
		eSgSg		57	16				
	BHA	eP		54	08		0.3		
		eS		56	50				
		eL		58	32				
12	BUL	eP	01	03	29		26.	Port Elizabeth Coastal Area.	
		eS		05	53				
		eL		07	31				
	KRR	eP		04	06		13.		
		eS		07	10				
		eL		09	01				
	BHA	eP		04	30		8.		
		eS		07	57				
		eL		10	13				
12	KRR	i	03	24	18	R	0.5	Distant	
	BUL	e			(20)		0.3		
	BHA	i			23	R	0.3		
12	KRR	i	04	28	50	C	0.6	Distant	
		i			56				
	BHA	i			52	C	0.9		
		i			58				
	BUL	i			29(10)	C	0.7		
		i			(16)				
12	BUL	ePn	14	06	32		0.4	Witwatersrand	
		eSn		07	39				
		eSg		08	09				
	KRR	eSgSg		09	51		0.3		
12	BHA	ePn	18	59	19		0.8	Lake Upemba Area, Katanga.	
		eSn	19	00	35				
		eSg		01	16				
	KRR	eP	18	59	52		0.4		
		eSn	19	01	38				
		eSgSg		02	47				

LIST OF RECORDED PHASES: 13 to 14 JAN 1968 - 7

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region:	Remarks
13	BUL	i	04	41	13	C	0.2		Distant
	KRR	i			15	C	0.2		
	BHA	e			20		0.1		
13	KRR	iPn	12	48	26	R	12.	Zumbo Area, Zambesi Valley.	
		eSn			52				
	BHA	ePn			36		8.5		
		eSn		49	16				
	BUL	ePn			10		2.1		
		eSn		50	06				
		eSg			31				
13	BUL	i	15	01	15	C	0.3		Distant
	KRR	e			27		0.2		
13	BUL	ePn	15	36	16		0.5	Witwatersrand	
		eSn		37	27				
		eSg		38	00				
	KRR	ePn		37	04		0.4		
		eSn		38	46				
		eSgSg		39	46				
13	BUL	eP	16	19	29		6.0		Distant
		epP			35				
		iPP		22	51				
		eSKS		29	46				
		ePKKP		37	24				
	BHA	eP		19	40		4.1		
		epP			45				
		iPP		23	11				
		eSKS		30	01				
		ePKKP		37	17				
	KRR	eP		19	41		5.7		
		epP			46				
		iPP		23	13				
		eSKS		30	06				
		ePKKP		37	19				
13	BUL	i	16	34	33	R	0.4		Distant
	BHA	e			44		0.2		
	KRR	i			44	R	0.3		
13	KRR	i	19	05	36	R	0.3		Distant
	BHA	e			45		0.2		
13	BUL	e	21	41	53		0.5		Distant
	BHA	e		42	05		0.3		
	KRR	e			05		0.5		
14	KRR	e	01	13	41		0.1		Distant
	BUL	i			44	R	0.3		
	BHA	e			48		0.2		
14	BHA	ei	03	57	05	cR	0.6		Distant
	KRR	ei			15	cR	0.8		
	BUL	ei			18	cR	0.8		
14	BUL	eP'	08	19	31		0.7		Distant
		ipP'		21	58				
		eSKP		22	11				
		ePKS			57				
	KRR	eP'		19	35		1.3		
		epP'		22	05				
		iSKP			20				

LIST OF RECORDED PHASES: 14 to 16 JAN 1968 - 8

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region:	Remarks
14	BUL	i	08	48	44	R	0.3	Distant	
	KRR	e			49		0.2		
14	BUL	iPn	10	37	55		53.	Sol do Save Province, Mocambique.	
		eSn		38	57				
		eSg		39	(20)				
	KRR	iPn		38	23		52.		
		eSn		39	38				
		eSg		40	(30)				
14	KRR	e	12	38	10		1.1	Distant	
		e			25				
		e		39	00				
	BUL	e		38	26		2.0		
		e		39	00				
14	BUL	e	12	55	16		0.4	Distant ?	
		e	13	00	17				
	KRR	e	12	55	17		0.5		
		e	13	00	16				
14	KRR	eP	13	25	28		0.2	Distant	
	BUL	eP			48		0.2		
14	KRR	iP	15	58	14	R	0.2	Distant	
	BUL	iP			36	R	0.2		
14	KRR	e	18	02	38		0.3	Distant	
	BUL	e			42		0.4		
14	KRR	i	22	34	52	C	0.3	Distant	
	BUL	e		35	05		0.2		
15	KRR	eP	01	42	44		0.4	Distant	
	BUL	iP		43	09	R			
15	KRR	eP	02	10	48		1.0	Distant	
	BUL	iP		11	10	R	1.0		
15	KRR	eP	03	28	22		0.1	Distant	
	BUL	iP			45	C	0.2		
15	BHA	e	12	44	27		0.1	Distant	
	KRR	e			42		0.2		
15	BHA	eP	18	27	07		3.0	Formosa Bay, Kenya.	
		eS		30	05				
		eL		31	43				
	KRR	eP		27	20		0.9		
		eS		30	23				
		eL		32	18				
	BUL	iP		28	00	R	0.7		
		eL		33	59				
16	BHA	eP	16	52	09		0.4	Distant	
	KRR	eP			29		0.5		
	BUL	eP			49		0.4		
16	BUL	iP	18	22	42	R	0.5	Distant	
	KRR	eP			50		0.2		
	BHA	iP		23	09	R	0.2		

LIST OF RECORDED PHASES: 17 to 18 JAN 1968 - 9

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region: Remarks
17	BHA	ePn	00	37	12		-	Nyika Plateau, Malawi.
		eSn		38	22			
		eSg			58			
	KRR	ePn		37	29		1.1	
		eSn		38	44			
		eSg		39	28			
	BUL	eP		38	13		0.6	
		eS		40	05			
		eSgSg		41	06			
17	BUL	i	07	07	14	R	0.3	Distant
	BHA	e			25		0.1	
17	BUL	e	10	02	40		0.1	Distant
	KRR	i			48	C	0.2	
	BHA	e		03	03		0.1	
17	KRR	ePn	16	32	04		0.3	Lake Sagara Area, Tanzania.
		eSn		34	06			
		eSgSg		35	24			
	BHA	eSg		34	12		0.5	
	BUL	eL		37	07		0.2	
17	BUL	i	23	19	49	R	0.2	Distant
	BHA	e		20	02		0.1	
	KRR	e		20	05	R	0.2	
18	BUL	e	02	18	33		0.2	Distant
	KRR	e			41		0.2	
	BHA	e			46		0.1	
18	KRR	i	10	50	19	R	0.3	Distant
	BHA	i			24	R	1.1	
	BUL	e			27		0.3	
18	BHA	ePn	11	19	16		8.5	Solwezi Area, Zambia.
		eSn			40			
		eSg			46			
	KRR	ePn			49		1.4	
		eSn		20	40			
		eSg			58			
	BUL	ePn			23		0.3	
		eSn		21	47			
		eSg		22	24			
18	KRR	e	12	22	50		0.2	Distant
	BHA	e			56		0.2	
	BUL	e			56		0.2	
18	BHA	ePn	19	31	00		1.1	Sagara Swamp, Tanzania.
		eSn		32	54			
		eSgSg		33	50			
	KRR	ePn		31	27		0.6	
		eSn		33	37			
		eSgSg		35	00			
	BUL	eP		32	16		0.2	
		eL		36	52			
18	BUL	ePn	21	17	14		1.0	S.W. Sofala Province, Mocambique.
		eSn		17	58			
		eSg		18	15			
	KRR	ePn		17	31		0.7	
		eSn		18	26			
		eSg			52			

LIST OF RECORDED PHASES: 19 to 20 JAN 1968 - 10

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region:	Remarks
19	BUL	e	06	23	31		1.6	Distant	
		e		25	16				
	KRR	e		23	33		0.7		
		e		25	22				
	BHA	e		23	37		0.6		
		e		25	33				
19	BUL	ePn	07	16	28		0.7	Witwatersrand	
		eSn		17	33				
		iSg		18	04				
	KRR	ePn		17	15		0.4		
		eSn		18	53				
		eSgSg		19	47				
	BHA	eSgSg		21	02		0.2		
19	KRR	i	14	23	42	C	1.0	Distant	
	BUL	i			47	C	1.8		
	BHA	i			49	C	1.1		
19	BUL	iP	14	52	20	R	2.8	Distant	
		ipP			27				
		eSKS	15	03	05				
	KRR	eP	14	52	35		3.7		
		ipP			42				
	BHA	iP			39		3.9		
		ipP			46				
19	BUL	eP*	15	27	54		2.5	S. Sofala Province, Mocambique.	
		iSn		28	44				
		eSg			59				
	KRR	ePn			04		2.3		
		eSn		29	08				
		iL			35				
	BHA	ePn		28	41		0.9		
		eSn		30	10				
		eL			56				
19	BHA	iP	18	34	23	C	2.8	Distant	
		ipP			30				
	KRR	eiP			33	rC	7.5		
	BUL	eiP			36	rC	29.4		
20	BUL	e	17	00	45		0.2	Distant	
	KRR	e			57		0.3		
	BHA	e		01	03		0.2		
20	BUL	e	17	33	58		0.1	Distant	
	KRR	e		34	22		0.2		
	BHA	e			32		0.2		
20	BUL	e	17	52	12		0.2	Distant	
	KRR	e			17		0.2		
20	BUL	iP'	21	39	47	R	13.0	Distant	
		eSKP		42	27				
		iPKKP		49	39				
	KRR	iP'		39	53	R	8.5		
		iSKP		42	34				
		iPKKP		49	31				
	BHA	iP'		39	57	R	7.1		
		iSKP		42	42				
	CLK	iP'		39	59	R	3.2		
		ePKKP		49	48				

LIST OF RECORDED PHASES: 21 to 22 JAN 1968 - 11

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region:	Remarks
21	CLK	i	01	33	00	C	1.1	Distant	
	KRR	i			16	C	1.3		
	BUL	i			18	C	1.8		
	BHA	i			23	C	1.2		
21	KRR	e	09	31	06		0.3	Distant	
	BHA	e			16		0.2		
21	BUL	ePn	10	27	54		0.7	Witwatersrand	
		iSg		29	30				
	KRR	eP		28	38		0.3		
		eL		31	20				
21	BUL	ePn	11	15	50		1.7	S. Sofala Province, Mocambique.	
		eSn		16	41				
		iSg		17	00				
	KRR	ePn		16	03		2.2		
		eSn		17	05				
		eSg			34				
21	BHA	eP	16	50	29		0.8	Distant	
		ipP			37				
	KRR	eP			36		3.0		
		ipP			46				
		i			51				
	BUL	eP			41		2.2		
		ipP			52				
	CLK	eP		51	26		0.9		
		ipP			38				
21	BUL	iP'	23	14	02	C	2.1	Distant	
	KRR	eP'			02		2.1		
	CLK	eP'			04		0.2		
	BHA	iP'			06	C	1.8		
22	BHA	e	00	03	23		0.4	Distant	
		e		04	04				
	BUL	e		03	26		0.3		
		e		04	07				
	KRR	e		03	27		0.6		
		e		04	09				
	CLK	e		03	47		0.2		
		e		04	28				
22	BHA	eP	05	27	27		9.5	Lualaba Valley, Congo.	
		iS		29	07				
		iL		30	11				
	KRR	eP		28	01		2.9		
		eS		30	06				
		iSgSg		31	21				
	CLK	eP		28	18		2.3		
		eS		30	35				
		iSgSg		32	01				
	BUL	eP		28	43		1.9		
		eS		31	22				
		iL		33	10				
22	BHA	e	10	46	30		0.2	Distant	
		e		47	07				
	KRR	e			35		0.2		
		e			12				
	BUL	e			55		0.2		

LIST OF RECORDED PHASES: 22 to 24 JAN 1967 - 12

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region:	Remarks
22	BHA	eP	20	43	13		0.3	Distant	
	CLK	eP			15		0.3		
	KRR	eP			26		0.2		
	BUL	eP			50		0.4		
22	BHA	eP	21	29	44		0.2	Distant	
	CLK	eP			47		0.2		
	KRR	eP			55		0.2		
	BUL	eP		30	21		0.3		
23	CLK	eP	03	34	08		0.3	Distant	
		epP			35				
	BHA	eP			28		0.3		
		epP			54				
	KRR	eP			29		0.5		
		epP			56				
	BUL	eP			44		0.5		
23	BHA	e	16	26	06		0.3	Distant	
	KRR	e			11		0.4		
	CLK	e			15		0.2		
	BUL	e			21		1.4		
23	BHA	eiP	19	23	35	rC	1.4	S. Sudan.	
		iL		31	12				
	CLK	eiP		23	37	rC	1.8		
		eL		31	19				
	KRR	eP		23	50		0.7		
		eL		32	19				
	BUL	iP		24	21	R	0.8		
		eL		34	(00)				
23	BUL	ePn	21	13	57		9.3	Sul do Save Province, Mocambique.	
		iPg		14	15				
		iSn			57				
		iSg		15	23				
	KRR	iPn		14	24	C	7.5		
		iSn		15	45				
	CLK	eP		14	35		1.7		
		eS		16	01				
		eL		17	00				
	BHA	iP		15	00		2.8		
		iS		16	47				
		iL		17	52				
24	BHA	iP	01	10	32	C	0.3	Distant	
	BUL	eP			40		0.2		
	KRR	iP		10	41	C	0.3		
	CLK	iP		11	13	C	0.2		
24	BUL	ePn	10	28	51		0.9	Far W. Witwatersrand.	
		eSn		30	06				
		iSg			42				
	KRR	ePn		29	37		0.6		
		eSgSg		32	29				
	BHA	eSgSg		33	36		0.3		
	CLK	eSgSg		34	05		0.2		

LIST OF RECORDED PHASES: 24 to 26 JAN 1968 - 13

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region; Remarks
24	BHA	ePn	21	30	06		9.	MULUMBE MTS., Congo.
		iSn		31	10			
		iSg			38			
	KRR	ePn		30	40		4.7	
		eSn		32	09			
		iSg			57			
	CLK	ePn		31	03		1.9	
		eSn		32	49			
		iSg		33	51			
		iL			58			
	BUL	eP		31	21		0.8	
		iS		33	22			
		eL		34	41			
24	CLK	eP	23	18	42		2.6	Comoro Is. region.
		eS		20	43			
	KRR	eP		19	54		0.5	
		eS		22	53			
	BHA	eP		20	03		0.4	
		eS		23	08			
	BUL	eP		20	17		0.3	
25	CLK	ePn	07	17	39		1.3	N. Lake Malawi.
		eSn		18	38			
		iL		19	12			
	BHA	ePn		18	04		1.7	
		eSn		19	20			
		iSg			58			
	KRR	eSg		20	18		1.1	
		eL			26			
	BUL	eSg		22	06		0.5	
25	BHA	eP	10	06	12		0.7	Distant
	KRR	eP			29		1.3	
	CLK	eP			37		0.4	
	BUL	eP			50		0.6	
25	BUL	iP	11	41	00	R	0.9	Distant
	KRR	eP			48		0.2	
25	KRR	iP	18	10	06		25.	Kariba.
		iS			20			
	BHA	iPn			22		16.	
		iPg			24			
		iSn			50			
	BUL	ePn			39		7.5	
		ePg			50			
		iSn		11	20			
		iSg			34			
	CLK	ePn			19		2.2	
		iSn		12	28			
		iSg		13	01			
26	BUL	ePn	00	49	02		0.8	Witwatersrand.
		iSg		50	42			
	KRR	ePn		49	50		0.5	
		eSg		52	24			
	BHA	eSg		53	41		0.2	

LIST OF RECORDED PHASES: 26 to 28 JAN 1968 - 14

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region;	Remarks
26	CLK	eP	01	57	51		0.4	Distant	
		epP			55				
	KRR	eP		58	14		0.3		
		epP			20				
	BUL	eP			19		0.5		
		ipP			24				
	BHA	eP			22		0.2		
		epP			27				
26	CLK	iP	04	58	07	R	4.0	Distant	
		ipP			15				
		eS	05	08	27				
	KRR	iP	04	58	33	R	2.4		
		ipP			42				
	BUL	iP			36	R	6.3		
		ipP			44				
		eS	05	09	16				
	BHA	iP	04	58	40	R	2.0		
		ipP			47				
		eiS	05	09	28				
26	CLK	eP	05	05	48		0.4	Distant	
		epP			57				
	KRR	eP		06	15		0.5		
		ipP			24				
	BUL	iP			17	R	1.0		
		ipP			26				
	BHA	eP			(20)		0.3		
		epP			28				
26	BHA	eP'	12	50	12		0.4	Distant	
	KRR	eP'			14		0.6		
	BUL	eP'			14		0.2		
	CLK	eP'			24				
26	BUL	i	13	14	29	R	0.3	Distant	
	KRR	e			31		0.2		
	BHA	e			36		0.2		
27	BHA	e	01	00	52		0.3	Distant	
	BUL	e			53		0.2		
	KRR	e		01	01		0.2		
27	CLK	eP	14	09	27		0.5	Distant	
	KRR	eP			55		0.2		
	BHA	eP			57		0.2		
	BUL	iP		10	06	C	0.4		
27	KRR	e	18	38	40		0.2	Distant?	
	BUL	e		39	00		0.1		
28	CLK	ePn	08	41	55		0.5	Central Sofala Province, Mocambique.	
		eSn		42	38				
		eL		43	03				
	KRR	ePn		42	02		1.1		
		iSn			57				
		iL		43	26				
	BHA	ePn		42	38		0.3		
		eSn		43	55				
		eSg		44	37				
	BUL	eSn		43	04		0.4		
		eL			35				

LIST OF RECORDED PHASES: 28 to 29 JAN 1968 - 15

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region:	Remarks
28	BUL	e	15	32	21		0.3	Distant	
		e			26				
	BHA	e			37		0.2		
	KRR	e			37		0.2		
29	KRR	ePn	01	57	47		3.0	S. Lake Kariba.	
		iPg			56				
		iSn		58	16				
		iSg			26				
	BUL	ePn		57	51		2.0		
		iPg			59				
		eSn		58	23				
		iSg			33				
	BHA	ePn			10		1.3		
		eSn			41				
		eSg			55				
	CLK	eL	02	01	17		0.2		
29	CLK	eiP	05	10	19	rC	0.7	Distant	
		epP		11	06				
	BHA	eP		10	23		0.8		
		epP		11	10				
	KRR	eiP		10	31	rC	3.3		
		i			35				
		ipP		11	20				
		i			48				
	BUL	iP		10	51	C	2.0		
		i			55				
		ipP		11	40				
		e		12	11				
29	BUL	eP	09	00	31		0.2	Distant	
	KRR	eiP			58	rC	0.4		
	BHA	iP		01	14	C	0.3		
	CLK	eP			37		0.2		
29	BUL	i	10	32	02	C	3.6	Distant	
	KRR	ei			03	eR	1.4		
	CLK	e			06		0.3		
		e		34	11				
	BHA	i		32	07	C	2.2		
29	BHA	iP'	10	37	53	C	2.8	Distant	
		iPP		39	17				
		ePKKP		48	04				
		iPKKP			15				
	KRR	iP'		37	55	C	2.2		
		ePP		39	26				
		ePKKP		48	12				
		eSKKP		52	06				
	CLK	eiP'		37	57	eR	2.3		
		i		39	01				
	BUL	eP'		38	00		4.7		
		iPP		39	39				
		ePKKP		47	54				
29	BHA	e	11	00	58		0.2	Distant	
	KRR	e			59		0.2		
	BUL	e		01	05		0.2		
29	KRR	e	12	02	49		0.2	Distant	
	BUL	e			56				

LIST OF RECORDED PHASES: 29 to 30 JAN 1968 - 16

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region:	Remarks
29	BUL	ePn	14	52	30		0.5	Witwatersrand	
		eSg		54	11				
	KRR	eSg		55	50		0.3		
		eL			58				
29	BUL	i	16	02	07	C	0.3	Distant	
		e			20				
	BHA	e			17		0.4		
		e			30				
29	BHA	iP'	17	01	40	C	0.4	Distant	
		ePP		03	02				
		ePKKP		11	48				
		iPKKP		12	00				
	CLK	eP'		01	41		0.7		
		i		02	48				
	KRR	iP'		01	42	C	0.7		
		ePP		03	09				
		ePKKP		11	55				
	BUL	iP'		01	47	C	0.8		
		ePP		03	31				
29	BHA	eP'	21	11	53		0.2	Distant	
		eSKP		14	36				
	KRR	eP'		11	55		0.3		
	BUL	eP'			55		0.4		
	CLK	eP'		12	05		0.2		
30	BHA	eP	01	49	06		0.2	Distant	
	KRR	eP			07		0.2		
	BUL	eP			13		0.3		
	CLK	eP		50	11		0.2		
30	BHA	eP	03	20	36		0.3	Distant	
		e		22	03				
	KRR	eP		20	37		0.2		
	BUL	eP			44		0.2		
	CLK	eP		21	39		0.3		
30	CLK	iP	03	55	27	R	6.0	Distant	
		iS	04	04	28				
		ePKKP		14	29				
		eP'P'		22	13				
	KRR	iP	03	55	46	R	7.5		
		eS	04	05	12				
		iPKKP		14	10				
		eP'P'		22	08				
	BUL	iP	03	55	50	R	6.7		
		iS	04	05	13				
		iSKS			19				
		iPKKP		14	08				
		eP'P'		22	08				
	BHA	iP	03	55	52	R	10.		
		iS	04	05	16				
		iSKS			25				
		iPKKP		14	08				
		eP'P'		22	06				
30	CLK	eP	08	27	37		0.4	Distant	
	BHA	eP			51		0.3		
	KRR	eP			57		0.3		
		e		28	45				
	BUL	eP			17		0.3		

LIST OF RECORDED PHASES: 30 to 31 JAN 1968 - 17

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region:	Remarks
30	BUL	eP	20	25	26		1.3	Distant	
	KRR	eP			34		0.9		
	BHA	eP			36		0.6		
	CIK	eP		26	06		0.5		
31	CIK	e	01	41	31		0.2	Distant	
	KRR	e			33		0.2		
	BHA	e			41		0.1		
31	BHA	e	01	43	07		0.3	Distant	
	KRR	e			10		0.3		
	CIK	e			28		0.4		
31	BUL	iP	02	14	53	R	12.4	Distant	
		ipP		16	57				
		eS		24	22				
	KRR	iP		15	05	R	6.8		
		epP		17	10				
	BHA	iP		15	06	R	6.1		
		ipP		17	13				
	CIK	iP		15	33	R	2.5		
		epP		17	41				
31	BHA	iP	04	07	10		3.0	Lusaka Area, Zambia.	
		iS			22				
	KRR	ePn			23		2.4		
		iPg			26				
		iSn			47				
		iSg			50				
	BUL	eSg		09	21		0.2		
	CIK	eSg		10	12		0.2		
31	BUL	eP	09	09	37		0.5	Distant	
	KRR	eP		10	00		1.3		
		ipP			09				
	BHA	eP			12		0.4		
31	BHA	e	11	24	56		0.3	Distant	
	KRR	e		25	12		0.3		
	BUL	e			16		0.4		
31	CIK	eP	11	56	37		0.9	Distant	
		epP			42				
	BHA	eiP		57	01	rC	1.0		
		epP			06				
	KRR	eiP			03	rC	0.6		
		ipP			09				
	BUL	eiP			19	rC	0.7		
		ipP			25				
31	BUL	ePn	15	01	34		1.4	Witwatersrand.	
		eSg		03	08				
		iL			13				
	KRR	ePn		02	21		1.2		
		iSg		04	51				
		iL		05	00				
	BHA	eL		06	13		0.5		
	CIK	eSg			19		0.4		

LIST OF RECORDED PHASES: 31 JAN 1968 - 18

Date	Stn	Phase	G h	M m	T s	R/C	DA mm	Epicentral region: Remarks
31	BUL	eP*	17	38	10		1.6	Save Valley, Mocambique.
		eS*			58			
		iSg		39	13			
	KRR	ePn		38	19		1.2	
		eSn		39	21			
		eSg			48			
	CLK	ePn		38	(20)		0.5	
		eSn		39	26			
		eSg			55			
	BHA	ePn		38	56		0.3	
		eSn		40	24			
		eSg		41	09			
31	BUL	eP	22	38	48		0.7	Distant
	KRR	eP		39	11		0.4	
		ipP			27			
	BHA	eP			28		0.3	
	CLK	eP			43		0.2	

5 JUN 1968

RHODESIA METEOROLOGICAL SERVICES

SEISMOLOGICAL BULLETIN

The following stations contribute records for analysis and publication in this Bulletin:

KABWE (BHA): (Broken Hill)	14° 26.8' S; 28° 28.1' E; Alt. 1206 m.
Litho. foundation:	Dolomite and Shales of the Middle Katanga System.
Authority:	Zambia Meteorological Service.
Instrument:	Three component Willmore one-second seismograph. Nominal magnification 20,000.
CHILEKA (CLK):	15° 40.8' S; 34° 58.6' E; Alt. 781 m.
Litho. foundation:	Charnockitic granulites of the Basement Complex.
Authority:	Malawi Meteorological Service.
Instrument:	Three-component Willmore one-second seismograph. Nominal magnification 20,000.
KAROI (KRR):	16° 51.1' S; 29° 37.1' E; Alt. 1380 m.
Litho. foundation:	Granitic gneisses of the Zambesi type.
Authority:	Rhodesia Meteorological Services.
Instrument:	Vertical Willmore one-second seismograph. Nominal magnification 20,000.
BULAWAYO (BUL):	20° 08 6' S. 28° 36.8' E. Alt. 1341 m.
Litho. foundation:	Hornblend schists of the Bulawayan System.
Authority:	Rhodesia Meteorological Services.
Instruments:	Three-component Willmore one-second seismograph. Nominal magnification 20,000.
	WWSSS Station: SP magnification 100,000 LP magnification 1,500

Analysis Centre: Goetz Observatory. Meteorological Service, P.O. Box 562, Bulawayo, Rhodesia.

FEB 1968

	Date	G h	M m	T s	Epicentre: Remarks	Mag CGS
X	01	04	14	44	26.8S 26.7E; Far W. Witwatersrand.	3.3
	01	07	58	03	USCGS 50.0N 129.8W; Vancouver Is. region.	5.4
X	01	10	29	10	11.9S 32.0E; Luangwa Valley Zambia.	2.8
	01	12	47	23	USCGS 43.2N 146.9E; Kurile Is.	5.5
X	01	13	46	20	27.8S 26.6E; Far W.Witwatersrand.	3.1
	01	23	13	47	USCGS 18.5S 169.0E; New Hebrides Is.	5.1
X	02	09	06	04	26.3S 27.5E; Witwatersrand.	3.2
	02	18	46	14	USCGS 16.0S 177.9W; Fiji Is. region.	4.7
X	02	21	14	20	7.4S 30.3E; S. Lake Tanganyika.	3.7
	02	21	15	01	USCGS 0.0N 124.5E; N. Celebes.	4.9
	02	23	16	31	USCGS 16.0S 167.5E; New Hebrides Is.	5.0
	03	03	26	17	USCGS 46.6N 152.6E; Kurile Is.	5.3
	03	11	30	44	USCGS 43.2N 146.8E; Kurile Is.	5.5
X	03	12	06	18	26.3S 28.1E; Witwatersrand.	2.9
	03	15	40	45	USCGS 16.6N 93.5W; Chiapas, Mexico.	5.5
X	04	02	45	42	15.0S 35.4E; S. Malawi.	2.7
X	04	02	49	31	26.5S 27.4E; Witwatersrand.	2.9
X	04	07	23	28	26.5S 27.2E; W.Witwatersrand.	3.8
	04	09	10	25	USCGS 43.2N 147.2E; Kurile Is.	5.4
	04	11	00	50	USCGS 43.0N 147.1E; Kurile Is.	5.5
	04	11	27	25	USCGS 19.6S 68.2W; Chile-Bolivia Border region	5.3
X	04	12	58	33	26.8S 26.6E: W.Witwatersrand.	2.9
X	05	05	48	55	9.3S 33.5E: Kipengere Range, Tanzania.	3.5
X	05	12	33	57	17.7S 23.5E; Chobe Swamp area, Caprivi Strip.	2.7
X	05	15	35	20	7.7S 32.8E: Lake Rukwa area, Tanzania.	3.2
X	05	20	23	01	26.4S 27.2E; Witwatersrand.	3.6
	06	04	37	12	USCGS 0.1S 124.3E; Molucca Sea.	5.5
	06	11	19	23	USCGS 28.5S 71.0W; Near Coast of Cent. Chile.	5.7
X	06	17	30	05	21.2S 33.0E; S.W. Sofala Province, Mocambique.	2.5
X	06	18	35	43	9.3S 34.3E; Kipengere Range, Tanzania.	3.1
	06	19	56	55	USCGS 36.2S 17.8W; S. Atlantic Ridge.	4.4
	07	00	20	53	USCGS 35.6S 17.2W; S. Atlantic Ridge.	5.1
	07	00	22	29	USCGS 21.6N 142.9E; Mariana Is. region.	5.3
	07	08	35	30	USCGS 43.6N 127.3W; Off Coast of Oregon.	5.1
	07	22	22	20	USCGS 36.7N 26.8E; Dodecanese Is.	5.0
X	08	08	49	33	27.0S 26.6E; Klerksdorp area, Transvaal.	3.8
	08	10	10	07	USCGS 21.8S 68.5W; Chile-Bolivia Border region	4.8
	08	10	58	22	USCGS 14.6N 53.9E; Arabian Sea.	5.2
Y	08	11	05	56	13.5S 34.5E; Salima, Malawi.	2.4
	08	12	28	21	USCGS 14.6N 54.0E; Arabian Sea.	5.4

FEB 1968

	Date	G M T h m s	Epicentre; Remarks	Mag CGS
x	08	14 47 26	2.2S 23.4E; Lomela, Congo.	5.0
x	08	15 41 19	8.1S 30.0E; Marungu Mts., Katanga.	3.5
x	09	06 46 35	3.5S 28.7E; N. Lake Tanganyika area, Congo.	3.6
	09	13 22 54	USCGS 45.6N 26.4E; Rumania.	4.6
	09	20 46 44	USCGS 13.9S 82.4E; S. Indian Ocean.	5.1
	09	23 38 03	USCGS 26.7S 14.2W; S. Atlantic Ridge.	4.7
x	09	23 45 43	26.3S 27.8E; Witwatersrand.	3.7
	10	10 00 06	USCGS 46.0N 152.3E; Kurile Is.	5.7
x	10	14 37 09	26.7S 27.1E; Potchefstroom, Transvaal.	3.3
	10	17 03 04	USCGS 34.1N78.5E; Kashmir-Tibet Border region.	5.2
	10	20 08 42	USCGS 14.7S 166.5E; New Hebrides Is.	4.7
x	11	03 44 16	25.8S 29.6E; Middelburg area, Transvaal.	2.7
	11	05 33 23	USCGS 52.2N 171.4W; Fox Is., Aleutian Is.	4.4
	11	12 14 09	USCGS 28.0N 139.5E; Bonin Is. region.	4.7
	11	20 38 29	USCGS 34.2N 78.6E; Kashmir-Tibet Border region	5.1
	12	01 26 28	USCGS 6.5S 108.5E; Java.	5.6
	12	05 44 48	USCGS 5.5S 153.2E; New Ireland region.	-
	12	10 18 52	USCGS 38.1N 17.8E; S. Italy.	5.3
	12	11 42 08	USCGS 20.9S 69.0W; N. Chile.	4.8
x	12	11 52 58	16.5S 28.4E; Kariba.	2.0
x	12	14 31 46	16.6S 28.3E; Kariba.	2.7
x	12	19 11 55	18.3S 23.1E; Okavango Swamp, Botswana.	3.0
	12	22 17 36	USCGS 22.9N 95.4E; Burma.	4.7
x	12	23 05 19	10.0S 27.5E; Kundelungu Mts., Congo.	3.1
	13	02 12 31	USCGS 5.5S 131.1E; Banda Sea.	5.8
	13	07 56 43	USCGS 31.4S 69.7W; San Juan Prov. Argentina.	4.8
	13	14 06 20	USCGS 5.5S 153.0E; New Ireland region.	5.0
x	13	15 29 28	29.4S 27.1E; O.F.S. Goldfields.	3.1
	13	18 48 06	USCGS 37.3S 78.0E; Mid-Indian Rise.	5.4
	13	19 02 49	USCGS 57.8S 25.9W; S. Sandwich Is. region.	4.3
	14	03 43 50	USCGS 37.2S 77.8E; Mid-Indian Rise.	-
x	14	04 05 44	12.7S 24.8E; Kasempa area, Zambia.	3.6
	14	09 11 44	USCGS 37.9S 77.3E; Mid-Indian Rise.	-
	14	11 32 03	USCGS 37.2S 78.0E; Mid-Indian Rise.	5.4
x	14	13 14 45	16.5S 28.6E; Kariba.	2.0
x	14	14 30 43	26.3S 27.7E; Witwatersrand.	3.4
	15	02 42 47	USCGS 52.2N 171.4W; Fox Is., Aleutian Is.	5.3
x	15	03 52 30	23.0S 28.7E; N. Transvaal.	2.6
	15	04 28 30	USCGS 49.2S 116.6E; S. of Australia.	5.0
	15	22 52 54	USCGS 1.9S 12.7W; N. of Ascension Is.	5.1

FEB 1968

	Date	G M T h m s	Epicentre: Remarks	Mag CGS
x	16	00 56 12	16.6S 28.3E; Kariba	2.2
x	16	04 47 52	27.1S 27.7E; Witwatersrand.	3.0
	16	05 37 54	USCGS 33.7N 95.1E; Tsinghai Province, China.	4.8
	16	14 23 43	USCGS 49.7N 147.7E; Sea of Okhotsk.	4.7
	16	19 30 23	USCGS 1.9S 12.4W; N. of Ascension Is.	5.0
	17	00 59 20	USCGS 27.9S 63.5E; Atlantic-Indian Rise.	5.4
x	17	06 25 36	4.8S 35.9E; Kondoa, Tanzania.	5.2
x	17	06 52 10	4.8S 36.1E; Kondoa, Tanzania.	4.3
x	17	07 04 16	4.9S 36.0E; Kondoa, Tanzania.	4.7
x	17	13 41 24	12.4S 41.5E; Off Porto Amelia, Mocambique Chan.	3.2
x	17	17 47 35	4.9S 36.0E; Kondoa, Tanzania.	4.2
	17	19 46 22	USCGS 13.6S 172.8E; New Hebrides Is. region.	4.5
	18	01 19 34	USCGS 52.6S 10.7E; S.W. of Africa.	5.0
	18	09 29 26	USCGS 7.2S 125.9E; Banda Sea.	5.3
x	18	12 40 14	12.4S 25.2E; Kasempa area, Zambia.	3.8
	19	00 31 43	Rhodesia.	2.1
x	19	09 28 26	12.9S 28.1E; Copperbelt, Zambia.	2.5
	19	13 55 12	USCGS 5.5S 153.1E; New Ireland region.	5.5
	19	22 45 41	USCGS 39.4N 25.0E; Aegean Sea.	-
	20	02 19 50	USCGS 12.4N 46.9W; N. Atlantic Ridge.	5.6
	20	09 41 10	USCGS 39.4N 24.9E; Aegean Sea.	4.7
	20	15 10 30	USCGS 11.2S 115.4E; S. of Bali Is.	5.0
	20	16 50 43	USCGS 36.2N 27.5E; Dodecanese Is.	4.9
	20	21 38 29	USCGS 27.9S 66.4W; Catamarca Prov. Argentina.	4.9
	21	06 18 22	USCGS 52.3N 175.3W; Andreanof Is., Aleutians	5.2
	21	06 21 04	USCGS 52.3N 175.3W; Andreanof Is., Aleutians	5.3
x	21	18 28 33	15.0S 22.0E; Mongu area, Barotseland.	3.3
	21	19 08 39	USCGS 51.4N 176.1W; Andreanof Is., Aleutians	5.3
	21	19 27 30	USCGS 30.2S 179.0W; Kermadec Is.	5.0
	21	19 32 32	USCGS 51.7N 175.9W; Andreanof Is., Aleutians	4.8
	21	21 05 54	USCGS 20.4S 177.9W; Fiji Is. region.	5.5
	21	21 07 57	USCGS 51.4N 176.0W; Andreanof Is., Aleutians	5.2
	21	21 15 08	USCGS 51.4N 175.8W; Andreanof Is., Aleutians	4.4
	21	21 18 43	USCGS 51.6N 175.9W; Andreanof Is., Aleutians	4.5
	21	23 20 53	USCGS 46.0S 33.3E; Prince Edward Is. region.	5.1
	22	04 57 49	USCGS 39.5N 25.1E; Aegean Sea.	4.6
	22	09 13 48	USCGS 21.8S 179.7E; S. of Fiji Is.	4.7
	22	17 33 58	USCGS 42.4S 75.4W; Off Coast of S. Chile.	4.7
	22	17 46 57	USCGS 51.4N 176.3W; Andreanof Is., Aleutians	5.1
	22	18 13 59	USCGS 51.4N 176.2W; Andreanof Is., Aleutians	4.4

FEB 1968

	Date	G h	M m	T s	Epicentre: Remarks	Mag CGS
X	22	19	21	37	25.9S 28.0E; Witwatersrand.	2.3
X	22	23	42	28	26.8S 26.5E; Witwatersrand.	3.0
	23	00	10	39	USCGS 51.5N 176.3W; Andreanof Is., Aleutians	4.6
	23	02	13	25	USCGS 22.2S 170.2E; Loyalty Is. region.	4.9
	23	05	41	06	USCGS 2.4N 98.4E; N. Sumatra.	4.7
X	23	06	15	12	18.4S 26.3E; Wankie Subsidence.	2.8
	23	08	12	58	USCGS 51.6N 175.9W; Andreanof Is., Aleutians	4.5
	23	09	32	26	USCGS 51.5N 176.3W; Andreanof Is., Aleutians	4.6
	23	11	01	00	USCGS 18.8N 145.3E; Mariana Is.	4.8
X	23	12	23	16	11.9S 32.0E; N. Muchinga Escarpment, Zambia.	2.9
	23	14	08	54	USCGS 9.6S 120.6E; Sumba Is. region.	-
	23	18	50	34	USCGS 5.5S 153.4E; New Ireland region.	4.7
	23	19	35	03	USCGS 18.7N 145.2E; Mariana Is.	4.4
	23	20	29	38	USCGS 51.9N 179.1W; Andreanof Is., Aleutians	5.2
	24	01	11	12	USCGS 32.5S 177.7W; S. of Kermadec Is.	5.4
X	24	02	23	48	30.2S 20.0E; Bushmanland Highlands, S. Africa.	3.6
	24	03	46	53	USCGS 53.8N 163.4W; Unimak Is, region.	4.4
X	24	14	58	53	3.4S 28.7E; N. Iake Tanganyika area.	3.7
	25	12	43	49	USCGS 4.0N 95.8E; N. Sumatra.	5.0
	25	15	40	45	USCGS 36.8N 5.6E; Algeria.	4.9
	25	18	08	20	USCGS 51.4N 176.0W; Andreanof Is., Aleutians.	5.3
	25	20	00	31	USCGS 37.6N 141.4E; Near E. Coast of Honshu, Japan.	5.5
	26	10	50	17	USCGS 22.7N 121.5E; Taiwan region.	-
	26	14	45	15	S.W. Tanzania.	3.5
	26	22	57	27	USCGS 23.6S 66.3W; Jujuy Province, Argentina.	5.3
X	27	16	18	26	26.4S 27.2E; Witwatersrand.	2.7
	28	09	54	56	USCGS 30.3N 67.6E; W. Pakistan.	4.8
	28	12	08	01	USCGS 32.9N 137.7E; S. of Honshu, Japan.	5.8
X	28	14	18	22	28.2S 27.0E; O.F.S. Goldfields.	3.3
	28	21	03	55	USCGS 3.0N 122.8E; Celebes Sea.	4.7
	29	05	18	27	USCGS 38.1N 20.2E; Greece.	4.3
X	29	14	39	01	26.2S 28.3E; Witwatersrand.	3.4
	29	15	46	18	USCGS 52.8N 157.5E; Kamchatka.	5.4
	29	16	31	34	USCGS 2.9S 119.6E; Celebes.	5.4
	29	23	36	09	USCGS 14.6S 167.2E; New Hebrides Is.	4.9

LIST OF RECORDED PHASES: 01 to 02 FEB 1968 - 1

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region: Remarks
01	BUL	ePn	04	16	25		0.7	26.8S 26.7E; Far W. Witwatersrand
		eSg		18	17			
	KRR	ePn		17	10		0.4	
		eL		20	04			
	BHA	eL		21	17		0.2	
	CLK	eSg			38		0.2	
01	CLK	e	08	17	38		0.2	Distant
	BUL	ei			42	rC	1.2	
01	BHA	ePn	10	30	23		2.8	11.9S 32.0E; Luangwa Valley, Zambia
		iSn		31	06			
		iSg			27			
	CLK	ePn		30	30		1.1	
		eSn		31	20			
		iSg			47			
		iL			53			
	KRR	ePn		30	38		0.4	
		eSn		31	32			
		eL		32	03			
	BUL	eL		34	(00)		0.2	
01	CLK	eP'	13	06	06		0.3	Distant
		i		07	11			
	KRR	eiP'		06	14	cR	0.3	
	BHA	eiP'			14	cR	0.2	
	BUL	eP'			18		0.5	
01	BUL	ePn	13	48	01		0.4	Far W. Witwatersrand
		eSg		49	52			
	KRR	eSn		50	40		0.3	
		eSg		51	35			
01	CLK	eP'	23	32	19		0.2	Distant
	BUL	iP'			22	R	0.4	
	BHA	eP'			31		0.3	
		iSKP		35	33			
02	BUL	ePn	09	07	36		0.9	26.3S 27.5E; Witwatersrand
		eSn		08	41			
		iSg		09	17			
	CLK	eSg		12	31		0.2	
02	BHA	e	19	04	48		0.2	Distant
	BUL	e			49		0.1	
02	BHA	iPn	21	16	02		2.7	7.4S 30.3E; S. Lake Tanganyika
		iSn		17	14			
		iSg			57			
		iL		18	02			
	CLK	ePn		16	31		0.7	
		eSn		18	05			
		iSg		19	02			
	BUL	ePn		17	22		0.4	
		iSn		19	37			
		eSg		20	53			
02	CLK	eP	21	27	50		0.2	Distant
	BUL	eP		28	17		0.2	
	BHA	eP			19		0.3	
		e			37			
02	CLK	eP'	23	35	28		0.2	Distant
	BUL	eP'			32		0.2	
	BHA	eP'			39		0.3	
		eSKP		39	02			

LIST OF RECORDED PHASES: 03 to 04 FEB 1968 - 2

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region:	Remarks
03	CLK	eP'	03	45	05		0.3	Distant	
		e		46	30				
	BHA	eP'		45	11		0.2		
	BUL	eiP'			18	cR	0.3		
03	BUL	eP	04	36	25		0.4	Distant	
	BHA	eP			56		0.2		
	CLK	eP		37	15		0.3		
03	BHA	e	05	55	26		0.2	Distant	
	BUL	e			33		0.2		
03	BHA	e	11	49	35		0.2	Distant	
	BUL	i			41	R	0.5		
03	BUL	ePn	12	07	47		0.5	Witwatersrand	
		eSg		09	25				
03	BHA	iP'	15	59	29	R	0.6	Distant	
		ipP'	16	00	01				
	BUL	iP'	15	59	31	R	0.4		
		ipP'	16	00	02				
	CLK	eP'	15	59	43		0.5		
		epP'	16	00	15				
04	CLK	iPg	02	45	55		5.5	S. Malawi	
		iSg		46	05				
		iS*			07				
	BHA	eSg		49	04		0.2		
	BUL	eSg			58		0.2		
04	BUL	ePn	02	51	05		0.4	Witwatersrand	
		eSg		52	48				
04	BUL	iPn	07	25	03		3.3	W. Witwatersrand	
		iSn		26	12				
		iSg		27	45				
	BHA	iPn		26	19		0.6		
		eSn		28	26				
		eSg		29	38				
	CLK	ePn		26	31		0.5		
		eSn		28	50				
		eSg		30	02				
04	BHA	e	09	29	16		0.2	Distant	
	BUL	i			22	R	0.4		
04	BUL	eP	11	19	47		0.4	Distant	
	BHA	eP			52		0.3		
	CLK	eiP		20	42	cR	0.4		
04	BUL	iP	11	40	11	C	1.8	Distant	
		ipP			51				
		iPP		43	40				
		iS		50	51				
	BHA	eP		40	(20)		0.4		
		ipP		41	00				
		ePP		43	55				
	CLK	eP		40	47		0.3		
		ipP		41	27				
		ePP		44	41				
04	BUL	ePn	13	00	13		0.4	W. Witwatersrand	
		iSg		02	03				

LIST OF RECORDED PHASES: 05 to 07 FEB 1968 - 3

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region: Remarks
05	BHA	ePn	05	50	39		1.4	Kipengere Range, Tanzania.
		eSn		51	57			
		eSg		52	34			
	BUL	e		55	04		0.4	
05	BUL	eSn	12	36	12		0.6	Chobe Swamp Area, Caprivi Strip.
		eSg			37			
	BHA	eSn			21		0.4	
		eSg			52			
05	BHA	ePn	15	37	13		0.5	Lake Rukwa Area, Tanzania.
		eSn		38	41			
		eSg		39	21			
	KRR	eSg			32		0.4	
	BUL	eSgSg		41	58		0.2	
05	BUL	iPn	20	24	35	C	1.6	Witwatersrand
		iSn		25	44			
		iSg		26	15			
	KRR	ePn		25	21		1.1	
		eSn		27	05			
		eSg		28	03			
	BHA	ePn		25	50		0.3	
		eSn		28	00			
		eSgSg		29	10			
06	BUL	eP	01	46	17		0.2	Distant
	BHA	eP			52		0.1	
06	KRR	i	04	50	28	C	1.1	Distant
	BUL	i			33	C	1.0	
	BHA	i			34	C	0.9	
06	BUL	iP	11	32	15	C	0.7	Distant
		eS		42	44			
	KRR	iP		32	28	C	1.0	
	BHA	eP			29		0.3	
06	BUL	eP	16	13	43		0.4	Distant
	KRR	iP		14	01	R	0.4	
	BHA	eP			03		0.1	
	CLK	eP			06		0.1	
06	BUL	eSn	17	31	55		0.6	S.W. Sofala Province, Mocambique
		eSg		32	13			
	KRR	eSn			20		0.6	
		eSg			49			
	CLK	eSg			58		0.2	
	BHA	eSg		34	09		0.2	
06	CLK	ePn	18	37	16		0.5	Kipengere Range, Tanzania.
		eSn		38	25			
		eSg			58			
	BHA	eSn			56		0.6	
		eSg		39	38			
	KRR	eSg			59		0.3	
	BUL	eL		42	04		0.2	
06	BUL	eP	20	04	58		0.2	Distant
	KRR	eP		05	16		0.3	
	BHA	eP			23		0.1	
07	BUL	iP	00	28	51	R	0.6	Distant
	KRR	eP		29	10		0.4	
	BHA	eP			15		0.2	
	CLK	eP			51		0.3	

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region:	Remarks
07	CLK	eP	00	40	09		0.1	Distant	
		e		41	25				
	KRR	iP		40	38	R	0.4		
		e		41	56				
	BHA	eP		40	40		0.1		
		e		41	58				
	BUL	iP		40	42	C	0.4		
		e		42	02				
07	BHA	e	08	55	05		0.2	Distant	
	KRR	e			11		0.2		
	BUL	e			16		0.2		
07	BUL	i	13	31	31	R	0.3	Distant	
	BHA	ei			38	rC	2.4		
	KRR	ei			49	rC	2.3		
07	BHA	iP	22	31	06	R	0.5	Distant	
	CLK	iP			19	R	0.6		
	KRR	iP			23	R	1.1		
	BUL	iP			48	R	1.2		
07	BHA	i	22	32	22	C	0.3	Distant	
		i		36	04				
	CLK	i		32	29	C	0.2		
		e		36	11				
	KRR	i		32	30		0.3		
		i		36	13				
	BUL	i		32	43	C	0.4		
		i		36	28				
08	BUL	e	03	44	30		0.2	Distant ?	
	KRR	i			54	C	0.2		
	BHA	e		45	05		0 1		
08	BUL	iPn	08	51	17		2.0	Klerksdorp Area, Transvaal.	
		eSn		52	29				
		eSg		53	09				
		eL			35				
	KRR	iPn		52	03		1.5		
		eSn		53	54				
		iSg		54	55				
	BHA	ePn		52	31		0.6		
		eSn		54	46				
		eSgSg		56	03				
	CLK	eSgSg			28		0.5		
08	CLK	e	09	23	11		0.2	Distant	
	BHA	e			25		0.1		
	KRR	e			36		0.2		
	BUL	e		24	01		0.1		
08	BUL	iP'	10	22	51	R	0.2	Distant	
	CLK	eP'			59		0.1		
	KRR	eP'		23	02		0.1		
	BHA	eP'			07		0.1		
08	CLK	eiP	10	35	28	cR	0.2	Distant	
	KRR	eiP			53	cR	0.5		
	BUL	iP			56	C	0.5		
	BHA	eiP		36	00	cR	0.3		
08	CLK	eP	11	05	17		0.2	Distant	
	BHA	eP			42		0.1		
	KRR	eP			51		0.3		
	BUL	eP		06	16		0.2		

LIST OF RECORDED PHASES: 08 to 09 FEB 1968 - 5

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region:	Remarks
08	CLK	ePn	11	06	33		1.2	Salima, Malawi.	
		eSn			59				
	KRR	eSn		08	20		0.3		
		eSg			48				
	BHA	eSg			56		0.3		
	BUL	eSg		10	23		0.1		
08	CLK	eP	12	35	16		0.5	Distant	
		e		36	40				
	BHA	iP		35	42	C	0.6		
		e		37	12				
	KRR	eP		35	50		0.7		
	BUL	eP		36	16		0.7		
		e		37	55				
08	CLK	e	12	37	47		0.3	Distant	
	BHA	e			55		0.3		
	KRR	e			57		0.4		
	BUL	e		38	05		0.2		
08	BHA	iP	14	50	27		10.5	Lomela, Congo.	
		eL		54	11				
	KRR	eP		51	02		3.8		
		eS		53	51				
		eL		55	43				
	CLK	eP		51	24		3.9		
		eS		54	33				
		eL		56	37				
	BUL	eP		51	41		3.2		
		eS		54	51				
		eL		57	03				
08	BHA	ePn	15	42	55		2.9	Marungu Mts., Katanga.	
		eSn		44	05				
		eSg			42				
	KRR	ePn		43	22		0.9		
		eSn		44	54				
		eSg		45	47				
	CLK	ePn		43	29		0.5		
		eSn		45	00				
		eSg		45	53				
	BUL	eP		44	07		0.3		
		eS		46	17				
		eL		47	34				
09	BHA	ePn	06	49	12		0.6	N. Lake Tanganyika Area, Congo.	
		eSn		51	08				
		eSg		52	12				
	KRR	eSgSg		53	16		0.3		
	CLK	eSgSg			29		0.3		
	BUL	eL		55	10		0.2		
09	BHA	iP	13	32	49	C	0.4	Distant	
	CLK	iP			59	C	0.7		
	KRR	iP		33	04	C	1.3		
	BUL	iP			25	C	0.7		
09	CLK	eP	20	55	06		0.2	Distant	
	KRR	iP			44	C	0.7		
	BUL	iP			50	C	0.2		
	BHA	iP			54	C	0.3		

LIST OF RECORDED PHASES: 09 to 11 FEB 1968 - 6

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region:	Remarks
09	BUL	iP	23	45	34	R	0.3	Distant	
	KRR	eP			44		0.2		
	BHA	eP			50		0.1		
	CLK	eP		46	31		0.2		
09	BUL	ePn	23	47	13		2.7	Witwatersrand.	
		eSn		48	22				
		iSg			53				
	KRR	ePn		47	59		1.2		
		eSn		49	36				
		iSgSg		50	36				
	BHA	eP		48	30		0.5		
		eS		50	37				
		eL		51	51				
	CLK	eP		48	39		0.6		
		eS		50	45				
		eL		52	01				
10	CLK	eP'	10	18	47		0.2	Distant	
	KRR	eP'			53		0.4		
	BHA	eP'			53		0.2		
	BUL	eP'		19	00		0.4		
10	KRR	e	11	13	53		0.2	Distant	
		i		14	28				
	BHA	e		13	59		0.2		
		e		14	34				
10	BUL	iPn	14	38	45		0.9	Potchefstroom, Transvaal.	
		iSn		39	54				
		iSg		40	36				
	KRR	iPn		39	32		0.5		
		iSn		41	16				
		iSg		42	11				
10	BHA	i	14	43	26	R	0.2	Distant	
	KRR	e			43		0.2		
	BUL	e			55		0.1		
10	CLK	iP	17	13	39	C	0.2	Distant	
	BHA	iP		14	01	C	0.2		
	KRR	eP			06		0.2		
	BUL	iP			26	C	0.2		
10	BUL	e	20	27	50		0.2	Distant	
	KRR	e			52		0.1		
11	BUL	ePn	03	45	31		0.3	Middelburg Area, Transvaal.	
		eSn		46	37				
		eSg		47	07				
	KRR	eSg		48	48		0.2		
11	KRR	e	05	52	28		0.1	Distant	
	BUL	i			53	R	0.2		
11	KRR	i	12	31	53	C	0.4	Distant	
		e		32	58				
	BHA	i		31	54	C	0.2		
		i		33	00				
	BUL	i		31	57	R	0.6		
		i		33	06				
11	CLK	eP	20	49	04		0.3	Distant	
	BHA	eP			25		0.4		
	KRR	eP			32		0.5		
	BUL	eP			50		0.6		

LIST OF RECORDED PHASES: 12 FEB 1968 - 7

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region:	Remarks
12	CLK	iP	01	37	37	C	0.3	Distant	
	KRR	iP		38	06	C	0.4		
	BUL	iP			10	C	0.4		
	BHA	iP			13	C	0.3		
12	CLK	e(P)	05	59	40		0.2	Distant	
		eP'	06	03	27		1.1		
		epP'			40				
		ePP		04	28				
		eSKP		07	07				
		eSKS		10	22				
		ePKKP		14	03				
	BUL	e(P)		00	01		0.4		
		eP'		03	33		3.5		
		ipP'			46				
		ePP		05	05				
		eSKS		10	35				
		ePKKP		13	56				
	KRR	e(P)		00	01		0.3		
		eP'		03	35		3.2		
		ipP'			49				
		ePKKP		13	48				
12	BHA	eP	10	28	09		0.2	Distant	
	KRR	iP			28	R	0.6		
	CLK	iP			29	R	0.3		
	BHA	iP			50	R	0.3		
12	BUL	i	11	55	24	R	0.9	Distant	
	BHA	e			33		0.2		
	KRR	e			35		0.3		
	CLK	e		56	00		0.1		
12	KRR	iP	13	53	21		3.1	Kariba.	
		iS			36				
	BHA	ePg			36		1.1		
		eSg		54	02				
	BUL	ePg			00		0.4		
		eSg			46				
12	KRR	iP	14	32	07		11.0	Kariba	
		eS			22				
		e			25				
	BHA	ePg			25		4.5		
		iSg			50				
	BUL	ePg			48		1.6		
		eSn		33	19				
		eSg			33				
	CLK	eSn		34	31		0.6		
		eSg		35	01				
12	BUL	ePn	19	13	15		1.7	Okavango Swamp, Botswana.	
		ePg			34				
		eSn		14	15				
		eSg			41				
	KRR	eSn			30		0.4		
		eSg		15	06				
	BHA	eSn		14	42		0.5		
		eSg		15	17				
12	CLK	eP	22	28	50		0.1	Distant	
	BHA	eP		29	19		0.2		
	KRR	eP			21		0.2		
	BUL	eP			33		0.2		

LIST OF RECORDED PHASES: 12 to 14 FEB 1968 - 8

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region: Remarks
12	BHA	ePn	23	06	25		4.6	Kundelungu Mts., Congo.
		eSn		07	15			
		eSg			35			
	KRR	eSn		08	17		0.8	
		eSg			51			
	CLK	eSn		09	06		0.4	
		eSg		10	02			
	BUL	eSg			31		0.2	
13	CLK	eP	02	25	47		0.1	Distant
		i		26	17			
	KRR	eP			09		0.2	
		i			40			
	BUL	eP			11		0.1	
		i			41			
	BHA	eP			21		0.1	
		e			49			
13	BUL	iP	08	09	16	R	0.4	Distant
	KRR	iP			30	R	0.6	
	BHA	iP			32	R	0.5	
	CLK	eP			57		0.1	
13	CLK	e	14	25	04		0.1	Distant
	BUL	e			07		0.1	
	KRR	e			08		0.1	
	BHA	e			11		0.1	
13	BUL	ePn	15	32	01		0.2	O.F.S. Goldfields.
		eSn		33	25			
		eSg		34	15			
	KRR	eSg		35	55		0.2	
13	CLK	eP	18	56	11		0.1	Distant
	BUL	iP			30	R	0.4	
	KRR	eP			35		0.1	
	BHA	eP			55		0.1	
13	BUL	i	19	12	15	R	0.2	Distant
	KRR	i			39	R	0.2	
	BHA	e			49		0.1	
14	BUL	iP	03	10	08	R	0.3	Distant
	KRR	iP			20	R	0.3	
	BHA	eP			20		0.1	
	CLK	eP			40		0.1	
14	CLK	eP	03	51	52		0.2	Distant
	BUL	iP		52	11	C	0.2	
	KRR	eP			19		0.1	
	BHA	eP			37		0.1	
14	BHA	ePn	04	06	46		8.0	Kasempa Area, Zambia.
		eSn		07	27			
		eSg			44			
	KRR	iPn			14		2.2	
		eSn		08	19			
		eSg			53			
	BUL	ePn		07	43		1.1	
		eSn		09	10			
		eSg			58			
	CLK	eIn		08	10		0.8	
		eSn		09	59			
		eSgSg		11	01			

LIST OF RECORDED PHASES: 14 to 15 FEB 1968 - 9

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region:	Remarks
14	CLK	i	09	19	45	C	0.1	Distant	
	KRR	e			57		0.1		
	BUL	i		20	04	C	0.4		
	BHA	e			29		0.1		
14	CLK	e	11	19	04		0.1	Distant	
	BUL	e			36		0.1		
	KRR	e			40		0.1		
14	CLK	iP	11	40	06	C	0.2	Distant	
		e		41	59				
	BUL	iP		40	25	C	1.0		
		e		42	13				
	KRR	iP		40	33	C	0.2		
	BHA	iP			50	C	0.3		
		e		42	48				
14	KRR	eP	13	15	04		2.2	Kariba.	
		eS			17				
	BHA	ePn			18		1.4		
		eSn			43				
	BUL	ePg			49		0.4		
		eSg		16	33				
14	BUL	ePn	14	32	12		1.1	Witwatersrand.	
		eSn		33	18				
		eS*			30				
		eSg			47				
	KRR	ePn		32	59		0.8		
		eSn		34	40				
		eSg		35	34				
	BHA	ePn		33	31		0.4		
		eSn		35	35				
		eSg		36	47				
	CLK	ePn		33	38		0.2		
		eSn		35	56				
		eL		37	00				
14	CLK	e	14	55	25		0.1	Distant	
	BHA	e			58		0.1		
15	KRR	e	03	02	09		0.1	Distant	
	CLK	e			14		0.1		
	BUL	i			17	C	1.5		
	BHA	e			17		0.1		
15	BUL	iPn	03	53	15		0.8	N. Transvaal.	
		eSn			49				
		eSg			59				
	KRR	eSg		55	36		0.4		
	CLK	eSgSg		57	17		0.2		
15	BUL	i	04	31	32	R	0.2	Distant	
	BHA	e		32	00		0.1		
15	CLK	iP	04	40	00	R	0.2	Distant	
	BUL	eP			04		0.3		
	KRR	eP			14		0.2		
	BHA	eP			29		0.2		
15	CLK	eP	10	54	28		0.2	Distant	
	KRR	eP		55	11		0.2		
	BHA	eP			14		0.2		
	BUL	eP			30		0.1		

LIST OF RECORDED PHASES: 15 to 17 FEB 1968 - 10

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region:	Remarks
15	KRR	i	14	12	05	R	0.2	Distant	
	BHA	i			10	C	0.2		
	BUL	i			16	R	0.2		
15	BHA	eP	23	00	50		0.3	Distant	
	BUL	iP		01	02	C	0.9		
	KRR	iP			03	C	1.5		
	CLK	iP			40	C	0.4		
16	KRR	eP	00	56	35		4.2	Kariba	
		iS			50				
	BHA	ePg			50		1.7		
		iSg		57	18				
	BUL	ePg			15		0.7		
		eSg			56				
	CLK	eSg		59	25		0.1		
16	CLK	eP	04	01	22		0.1	Distant	
	BUL	iP			40	C	0.2		
	KRR	eP			49		0.1		
	BHA	eP		02	10		0.1		
16	BUL	ePn	04	49	33		0.4	Witwatersrand.	
		eSn		50	48				
		eSg		51	21				
	KRR	ePn		50	19		0.4		
		eSg		53	11				
	BHA	eSg		54	25		0.1		
	CLK	eSg			43		0.1		
16	BHA	e	05	50	01		0.2	Distant	
	KRR	e			04		0.2		
	BUL	e			19		0.3		
16	BHA	eP	09	21	02		0.2	Distant	
	CLK	eP			57		0.2		
16	CLK	eP	14	42	30		0.1	Distant	
	BHA	eP			55		0.1		
	BUL	eP		43	27		0.1		
16	KRR	iP	19	38	31	R	0.2	Distant	
	BUL	iP			32	C	0.4		
	CLK	eP			59		0.1		
17	CLK	eP	01	05	24		0.1	Distant	
	BUL	eP			52		0.1		
	KRR	eP			54		0.2		
	BHA	eP		06	13		0.1		
17	CLK	iPn	06	28	08	C	35.	Kondoa, Tanzania.	
		eSn		30	01				
		eSg		31	05				
	BHA	ePn		28	24		22.		
		eSn		30	28				
		eS*		31	00				
		eSgSg			41				
	KRR	ePn		28	44		8.0		
		eSn		31	06				
		eS*			36				
		eSgSg		32	30				
	BUL	iP		29	26	R	6.5		
		eL		34	27				

LIST OF RECORDED PHASES: 17 to 18 FEB 1968 - 11

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region:	Remarks
17	CLK	ePn	06	54	46		2.4	Kondoa, Tanzania.	
		eSn		56	38				
		eSg		57	40				
	BHA	ePn		55	02		6.0		
		eSn		57	02				
		eSgSg		58	20				
	KRR	ePn		55	20		1.4		
		eSn		57	48				
		eSgSg		59	11				
	BUL	eP		56	07		0.8		
		eS		59	08				
		eL	07	01	04				
17	CLK	ePn	07	06	50		5.0	Kondoa, Tanzania.	
		eSn		08	44				
		eSg		09	51				
	BHA	iPn		07	06	C	10.0		
		eSn		09	10				
		eSgSg		10	23				
	KRR	iPn		07	26	C	3.2		
		eSn		09	52				
		eSgSg		11	13				
	BUL	eP		08	12		2.2		
		eS		11	08				
		eL		13	03				
17	CLK	ePn	13	43	06		0.9	Off Porto Amelia, Mocambique Channel.	
		eSn		44	22				
		eSg			58				
	KRR	eSgSg		47	40		0.2		
	BHA	eSgSg			55		0.2		
	BUL	eL		49	00		0.1		
17	CLK	ePn	17	50	08		1.9	Kondoa, Tanzania.	
		eSn		52	04				
		iL		53	14				
	BHA	iPn		50	27	R	4.5		
		eSn		52	31				
		eSgSg		53	(50)				
	KRR	ePn		50	46		1.0		
		eSn		53	09				
		eSgSg		54	31				
	BUL	iP		51	34	R	0.8		
		eS		54	34				
		eL		56	29				
17	CLK	i	20	06	53	C	0.2	Distant	
	KRR	i		07	05	C	0.3		
	BHA	i			13	C	0.2		
18	BUL	iP	01	26	27	R	0.3	Distant	
	KRR	eP			56		0.3		
	BHA	eP		27	13		0.4		
	CLK	eP			(30)		0.2		
18	CLK	iP	09	41	33	C	0.5	Distant	
	KRR	eP			55		0.4		
	BUL	eP			57		0.6		
	BHA	iP		42	03	R	0.3		

LIST OF RECORDED PHASES: 18 to 20 FEB 1968 - 12

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region:	Remarks
18	BHA	ePn	12	41	12		13.	Kasempa Area, Zambia.	
		ePg			22				
		eSn			50				
		eSg		42	06				
	KRR	ePn		41	44		6.0		
		eSn		42	48				
		eSg		43	26				
	BUL	ePn		42	15		1.7		
		eSn		43	46				
		eSg		44	31				
	CIK	ePn		42	41		2.0		
		eSn		44	24				
		eSg		45	26				
19	BUL	ePn	00	32	14		1.3		
		ePg			17				
		iSg			42				
	KRR	ePg			46		0.6		
		eSg		33	28				
19	BHA	ePg	09	29	14		2.2	Copperbelt.	
		eSg			47				
	KRR	ePg			44		0.6		
		eSg		30	38				
	BUL	eSg		32	11		0.2		
19	KRR	e	14	13	54		0.4	Distant	
	BUL	e			58		0.5		
	BHA	e		14	02		0.4		
19	KRR	e	16	21	47		0.1	Distant	
		i			59				
	BHA	i	16	21	51	C	0.2		
		i			59				
	BUL	e		22	08		0.1		
		i			15				
19	BHA	iP	22	55	05	C	1.1	Distant	
		iS	23	02	47				
	KRR	iP	22	55	17	C	1.5		
		eS	23	03	08				
	BUL	iP	22	55	45	C	3.4		
		eS	23	04	04				
		eP'P'		25	20				
20	BHA	i	02	31	58	R	4.2	Distant	
	KRR	i		32	00	R	3.3		
	BUL	i			05	R	0.6		
20	KRR	e	09	45	23		0.2	Distant	
	BUL	e			55		0.1		
	BHA	e		46	19		0.1		
20	BHA	e	09	50	25		0.1	Distant	
	KRR	i			39	R	0.3		
	BUL	i		51	10	R	0.2		
20	KRR	e	15	22	48		0.1	Distant	
	BUL	i			57	C	0.3		
	BHA	e		23	02		0.1		
20	BHA	eP	16	59	42		0.1	Distant	
	KRR	eP			50		0.3		
	BUL	iP	17	00	21	C	0.3		

LIST OF RECORDED PHASES: 20 to 21 FEB 1968 - 13

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region:	Remarks
20	BUL	i	21	50	49	C	4.2	Distant	
		e		51	43				
	KRR	i		50	54	C	1.2		
		e		51	49				
	BHA	i			02	C	2.0		
		e			57				
21	KRR	e	06	37	33		0.3	Distant	
		e		40	12				
	BHA	e		37	35		0.1		
		e		40	17				
	BUL	e		37	47		0.2		
		e		40	23				
21	KRR	e	06	40	57		0.5	Distant	
		e		43	38				
	BHA	e		41	03		0.1		
		e		43	39				
	BUL	e		41	08		0.2		
		e		43	47				
21	BUL	i	10	39	29	C	0.6	Distant	
	KRR	i			35	C	0.1		
	BHA	e			42		0.2		
21	BHA	i	15	49	27	R	0.3	Distant	
		i			37				
	KRR	i			28	R	1.7		
	BUL	i			39	C	3.3		
		i			49				
21	BHA	ePn	18	30	10		0.8	Mongu Area, Barotseland.	
		eSn		31	14				
		eSg			50				
	KRR	ePn		30	19		0.7		
		eSn		31	40				
		eSg		32	24				
	BUL	ePn		30	35		1.0		
		eSn		32	01				
		eSg		33	48				
21	KRR	e	19	28	00		0.1	Distant	
	BUL	i			07	R	0.7		
	BHA	e			13		0.1		
21	KRR	ei	19	45	59	rC	2.8	Distant	
	BUL	ei		46	01	rC	3.0		
	BHA	ei			11	rC	1.4		
21	KRR	eP	19	51	38		0.1	Distant	
	BUL	eP			57				
21	KRR	e	21	24	09		0.5	Distant	
	BUL	e			12		0.2		
	BHA	e			22		0.2		
21	KRR	e	21	26	52		0.5	Distant	
	BHA	e		27	07		0.4		
	BUL	i			24	C	1.3		
21	KRR	e	21	34	23		0.1	Distant	
	BUL	e			33		0.1		
21	KRR	e	21	37	58		0.1	Distant	
	BUL	i		38	08	R	0.2		

LIST OF RECORDED PHASES: 21 to 23 FEB 1968 - 14

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region:	Remarks
21	BUL	iP	23	26	25	C	0.8	Distant	
		eL		31	31				
	KRR	eP		26	47		0.5		
		eL		32	33				
	CIK	eP		27	02		0.7		
		eL		32	49				
	BHA	eP		27	15		1.3		
		eL		33	39				
22	KRR	iP	05	07	22	C	0.2	Distant	
	BUL	eP			50		0.1		
22	BUL	e	09	34	21		0.6	Distant	
	KRR	e			24		0.6		
22	BUL	i	17	46	45	R	0.2	Distant	
	KRR	i			53	R	0.5		
22	KRR	e	18	06	09		0.1	Distant	
		e		09	12				
	BUL	i		06	25	R	1.4		
		e		09	37				
22	KRR	e	18	33	18		0.2	Distant	
	BUL	i			25	R	0.3		
22	BUL	ePn	19	23	03		0.2	Transvaal ?	
		eSn		24	07				
		eSg			35				
	KRR	eSg		26	11		0.1		
22	BUL	ePn	23	44	11		0.3	Transvaal ?	
		eSn		45	23				
		eSg		46	01				
	KRR	ePn		44	50		0.3		
		eSn		46	42				
		eSgSg		47	42				
23	KRR	e	00	29	49		0.1	Distant	
	BUL	i		30	05	R	0.5		
23	KRR	e	02	32	21		0.1	Distant	
	BUL	e			25		0.2		
23	KRR	e	05	52	20		0.1	Distant	
	BUL	e			37		0.2		
23	BUL	eP*	06	16	00		3.2	Wankie Subsidence.	
		iPg			03				
		iS*			34				
		iSg			38				
	KRR	iPn			05		2.4		
		iPg			14				
		iSn			46				
		iSg		17	00				
	CIK	ePn			20		0.2		
		eSn		18	55				
		eSg		19	43				
23	CIK	e	08	32	08		0.1	Distant	
	KRR	e			12		0.1		
	BUL	i			21	R	0.4		
23	KRR	e	09	51	16		0.1	Distant	
	BUL	i			53	R	0.2		

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region: Remarks
23	KRR	e	11	21	13		0.2	Distant
	CLK	e			20		0.1	
	BUL	e			20		0.1	
23	CLK	ePn	12	24	25		2.2	N. Muchinga Escarpment,
		eSn		25	17			Zambia.
		eSg			37			
	KRR	ePn		24	35		0.8	
		eSn		25	31			
		eSg			58			
	BUL	eSn		26	56		0.2	
		eSg		27	50			
23	KRR	e	14	21	44		0.1	Distant
	BUL	i			46	R	0.2	
23	CLK	iP	14	32	56	R	0.3	Distant
	KRR	eP		33	46		0.1	
	BUL	eP			50		0.1	
23	KRR	e	19	09	15		0.2	Distant
	BUL	i			20	R	0.2	
23	KRR	e	19	52	39		0.7	Distant
	BUL	e			47		0.2	
23	KRR	e	20	52	13		0.3	Distant
	BUL	e			27		0.2	
24	KRR	e	01	09	51		0.2	Distant
		i		10	57			
	BUL	e		11	14		0.1	
24	BUL	e	01	30	05		0.5	Distant
	KRR	e			06		0.7	
	CLK	e			08		0.1	
24	BUL	ePn	02	26	47		0.3	Bushmanland Highlands, S. Africa.
		eSn		29	02			
		eSg		30	16			
	KRR	eSn		30	16		0.3	
		eSg		31	52			
	CLK	eL		33	02		0.2	
24	KRR	e	04	06	22		0.1	Distant
	BUL	i			30	C	0.3	
24	KRR	ePn	15	02	04		0.5	N. Lake Tanganyika Area.
		eSn		04	29			
		eSg		05	45			
	CLK	eSg		05	58		0.5	
	BUL	eSgSg		07	30		0.2	
25	KRR	iP	12	54	42	R	0.2	Distant
		i			56			
	BUL	eP			58		0.2	
		e		55	14			
25	KRR	iP	15	50	31	R	0.3	Distant
	CLK	eP			45		0.2	
	BUL	iP			55	R	0.3	
25	KRR	e	18	27	31		0.2	Distant
		e		30	12			
	CLK	e		27	35		0.1	
		i		30	19			
	BUL	i		27	47	R	1.5	
		e		30	53			

LIST OF RECORDED PHASES: 25 to 28 FEB 1968 - 16

Date	Stn	Phase	G h	M m	T s	R/C	DA mm	Epicentral region:	Remarks
25	KRR	i	20	19	06	R	0.3	Distant	
	BUL	i			16	cR	0.9		
25	BUL	iP	21	27	02	R	0.3	Distant	
	KRR	iP			14	R	0.2		
	CLK	iP		28	02	R	0.1		
26	CLK	eP	11	03	30		1.7	Distant	
		iPP		07	24				
		eSKS		14	04				
	KRR	eP		03	47		0.9		
		ePP		07	54				
	BUL	eP		04	01		1.4		
		iPP		08	13				
		eSKS		14	40				
26	KRR	ePn	14	47	51		0.3	S.W. Tanzania.	
		eSn		49	51				
		eSgSg		50	53				
	BUL	eSgSg		52	43		0.3		
26	BUL	eiP	23	09	48	cR	2.4	Distant	
		i		10	43				
	KRR	eP			00		1.0		
		e			56				
	CLK	eiP			24	cR	0.4		
		e		11	18				
27	BUL	ePn	16	20	01		0.2	Witwatersrand	
		eSn		21	12				
		eSg			45				
	KRR	ePn		20	48		0.3		
		eSn		22	33				
		eSgSg		23	30				
28	CLK	eP	10	04	32		0.3	Distant	
	KRR	eP		05	00		0.1		
	BUL	eP			27		0.2		
28	CLK	eP	12	21	49		0.3	Distant	
	KRR	eP		22	14		0.2		
	BUL	eP			24		0.1		
28	KRR	iP'	12	26	01	C	0.7	Distant	
		ePP		27	03				
		eSKP		29	03				
		eSKS		32	16				
		iPKKP		36	44				
		i			52				
	BUL	iP'		26	06	C	1.2		
		ePP		27	17				
		eSKP		29	08				
		iSKS		32	25				
		e(S)		33	38				
		iPKKP		36	41				
	CLK	iP'		26	24	C	1.6		
		epP'		27	41				
		e		28	32				
		iPKKP		37	01				

LIST OF RECORDED PHASES: 28 to 29 FEB 1968 - 17

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region:	Remarks
28	BUL	ePn	14	20	19		0.6	O.F.S. Goldfields.	
		e			51				
		eSn		21	47				
		iSg		22	32				
	KRR	eSn		23	15		0.3		
		eSgSg		24	20				
	CLK	eSn			20		0.1		
		eSgSg		25	46				
28	CLK	iP	21	15	54	R	0.2	Distant	
	KRR	iP		16	17	R	0.4		
	BUL	iP			23	R	0.5		
29	KRR	eP	05	28	04		0.1	Distant	
	CLK	eP			05		0.1		
	BUL	eP			25		0.1		
29	BUL	ePn	14	40	28		0.9	Witwatersrand.	
		eSn		41	32				
		iSg		42	04				
	KRR	eSn			58		0.6		
		eSgSg		43	46				
	CLK	eSgSg		45	13		0.3		
29	CLK	i	16	04	56	C	0.3	Distant	
	KRR	i		05	03	C	0.6		
	BUL	i			09	C	0.4		
29	CLK	eP	16	44	02		0.3	Distant	
	KRR	eP			25		0.2		
	BUL	eP			(30)		0.6		
29	KRR	i	17	28	05	R	0.4	Distant	
	BUL	i			09	R	0.5		
	CLK	e			16		0.4		
29	CLK	i	23	54	48	R	0.2	Distant	
	BUL	ei			52	cR	1.0		
	KRR	i			55	R	2.2		

RHODESIA METEOROLOGICAL SERVICES

SEISMOLOGICAL BULLETIN

The following stations contribute records for analysis and publication in this Bulletin:

KABWE (BHA): (Broken Hill) — 14° 26.8' S; 28° 28.1' E; Alt. 1206 m.
Litho. foundation: Dolomite and Shales of the Middle Katanga System.
Authority: Zambia Meteorological Service.
Instrument: Three component Willmore one-second seismograph. Nominal magnification 20,000.

CHILEKA (CLK): 15° 40.8' S; 34° 58.6' E; Alt. 781 m.
Litho. foundation: Charnockitic granulites of the Basement Complex.
Authority: Malawi Meteorological Service.
Instrument: Three-component Willmore one-second seismograph. Nominal magnification 20,000.

KAROI (KRR): 16° 51.1' S; 29° 37.1' E; Alt. 1380 m.
Litho. foundation: Granitic gneisses of the Zambesi type.
Authority: Rhodesia Meteorological Services.
Instrument: Vertical Willmore one-second seismograph. Nominal magnification 20,000.

BULAWAYO (BUL): 20° 08 6' S. 28° 36.8' E. Alt. 1341 m.
Litho. foundation: Hornblend schists of the Bulawayan System.
Authority: Rhodesia Meteorological Services.
Instruments: Three-component Willmore one-second seismograph. Nominal magnification 20,000.
WWSSS Station: SP magnification 100,000
LP magnification 1,500

Analysis Centre: Goetz Observatory. Meteorological Service, P.O. Box 562. Bulawayo, Rhodesia.

MAR 1968

	Date	G h	M m	T s	Epicentre; Remarks	Mag CGS
X	01	10	16	13	26.5S 27.3E; Witwatersrand	3.3
X	01	17	56	18	19.8S 33.7E; E. of Chimanimani Mountains, Mocambique	2.2
X	01	18	38	11	19.8S 33.7E; E. of Chimanimani Mountains, Mocambique	2.4
	01	22	06	44	USCGS 14.7N 45.0W; N. Atlantic Ridge	4.6
	01	23	00	26	USCGS 14.6N 45.1W; N. Atlantic Ridge	4.7
	02	02	55	06	Lake Albert area, Congo	3.8
	02	03	14	45	USCGS 49.2N 129.1W; Vancouver Is. region	5.1
	02	05	42	23		2.5
	02	06	30	18	USCGS 6.9S 11.5W; Ascension Is. region	4.6
X	02	07	07	22	5.7S 31.0E; Lake Sagara area, Tanzania	3.7
	02	11	14	01	USCGS 60.7S 25.5W; S. Sandwich Is. region	5.3
	02	16	17	29	USCGS 29.9N 100.2E; Szechwan Province, China	5.1
	02	20	43	04	USCGS 32.0S 69.2W; Mendoza Province, Argentina	4.7
	02	22	02	25	USCGS 6.1S 71.4E; Chagos Archipelago region	5.6
	02	23	37	15	USCGS 4.0N 128.0E; N. of Halmahera	5.2
	03	09	31	20	USCGS 34.7N 72.3E; W. Pakistan	5.2
	03	12	03	29	USCGS 23.5S 179.9E; S. of Fiji Is.	4.9
	03	20	45	14	USCGS 56.0S 27.3W; S. Sandwich Is. region	4.9
	03	22	55	37	USCGS 1.6N 122.6E; N. Celebes	5.5
X	04	05	08	18	9.5S 32.5E; Tunduma area, Zambia	5.1
X	04	07	25	16	9.5S 32.5E; Tunduma area Zambia	4.5
	04	17	01	00	USCGS 1.2S 15.7W; N. of Ascension Is.	4.6
	05	00	22	07	USCGS 53.8N 163.3W; Unimak Is. region	4.8
X	05	00	26	25	9.5S 32.5E; Tunduma area, Zambia	3.3
	05	00	30	57	USCGS 53.8N 163.3W; Unimak Is. region	4.9
	05	01	46	05	USCGS 55.8N 165.4W; Unimak Is. region	4.1
	05	05	56	12	USCGS 25.9S 65.4W; Salta Province, Argentina	4.3
X	05	07	02	41	24S 23E; S. Botswana	2.9
X	05	11	27	54	26.5S 27.6E; Witwatersrand	3.5
	05	14	36	41	USCGS 18.1S 174.7W; Tonga Is.	5.1
X	05	15	35	37	25.8S 34.9E; Off S. Mocambique coast	3.7
X	05	16	20	15	17.0S 35.4E; Lower Shire Valley, Malawi	2.7
	05	18	16	40	USCGS 9.6N 126.3E; Mindanao, Philippine Is.	5.5
	05	18	38	06	USCGS 9.6N 126.2E; Mindanao, Philippine Is.	5.4
	05	21	20	50	USCGS 21.8S 170.9E; Loyalty Is. region	5.3
X	05	22	55	16	4.4S 23.4E; Kasai Province, Congo	4.0
X	06	22	04	30	26.0S 28.2E; Witwatersrand	3.2
X	07	01	26	29	26.7S 26.7E; Klerksdorp area, Transvaal	3.3

MAR 1968

Date	G h	M m	T s	Epicentre; Remarks	Mag CGS
07	13	22	17	USCGS 5.9S 151.1E; New Britain region	
07	15	03	40	26.1S 28.1E; Witwatersrand	3.3
07	18	22	13	10.7S 34.2E; Livingstonia area, Malawi	3.2
08	15	28	06	USCGS 58.7S 24.9W; S. Sandwich Is. region	4.6
08	23	08	21	USCGS 8.7N 94.1E; Nicobar Is. region	4.6
09	00	46	01	USCGS 8.7N 94.0E; Nicobar Is. region	5.0
09	03	19	24	USCGS 5.6S 154.0E; Solomon Is.	5.7
09	14	53	21	USCGS 18.0S 65.8E; Mascarene Is. region	4.7
10	01	30	57	USCGS 37.7S 50.6E; Atlantic-Indian Rise	4.4
10	03	49	25	USCGS 52.1N 177.3W; Andreanof Is., Aleutian Is.	5.4
10	07	11	22	USCGS 36.3S 179.4E; Off E. coast of N. Island, New Zealand	5.7
10	18	28	05	26.2S 27.1E; Witwatersrand	3.8
11	08	26	33	USCGS 16.2S 173.9W; Tonga Is.	6.0
11	14	01	47	13.7S 25.2E; Kasempa area, Zambia	3.5
11	15	23	59	26.3S 27.3E; Witwatersrand	2.5
11	16	25	13	USCGS 52.1N 176.2E; Rat.Is., Aleutian Is.	5.2
12	18	23	34	USCGS 14.9S 176.9W; Fiji Is. region	5.3
12	18	59	18	USCGS 24.3S 179.0E; S. of Fiji Is.	4.5
12	21	24	27	USCGS 6.1S 150.3E; New Britain region	4.8
13	05	35	37	17.7S 34.0E; Cherba area, Mocambique	3.0
13	09	31	47	USCGS 57.1S 23.7W; S. Sandwich Is. region	5.2
13	10	32	21	USCGS 9.1S 116.4E; Sumbawa Is. region	5.0
13	12	48	32	USCGS 22.5N 45.2W; N. Atlantic Ridge	4.6
13	14	24	23	USCGS 51.7N 175.4W; Andreanof Is., Aleutian Is.	4.4
13	18	23	22	5S 38E; E. Tanzania	3.4
13	20	25	32	USCGS 20.5S 178.1W; Fiji Is. region	5.0
13	22	38	39	USCGS 42.4N 66.5E; Central Kazakh SSR	5.2
14	02	08	37	USCGS 42.3N 66.5E; Central Kazakh SSR	5.4
14	02	36	56	17.1S 35.4E; Lower Shire Valley	2.3
14	08	06	57	26.3S 28.1E; Witwatersrand	3.1
14	15	26	40	1.0S 33.8E; NE Lake Victoria	3.9
14	18	45	12	USCGS 27.9S 176.8W; Kermadec Is.	5.2
14	19	44	16	1.0S 33.8E; NE Lake Victoria	4.1
15	02	50	31	26.3S 28.3E; Witwatersrand	3.0
15	03	28	52	16.5S 35.3E; Lower Shire Valley	3.9
15	06	34	32	USCGS 41.9S 68.4E; SE Indian Rise	5.2
15	09	35	11	USCGS 21.3S 169.5E; Loyalty Is. region	4.8
15	17	51	57	USCGS 6.3S 71.3E; Chagos Archipelago region	5.3
16	00	17	02	USCGS 22.7N 45.2W; N. Atlantic Ridge	4.4
16	07	00	28	0.3S 34.1E; NE Lake Victoria	4.7

MAR 1968

	Date	G M T h m s	Epicentre; Remarks	Mag CGS
	16	12 23 14	26.4S 27.2E; W. Witwatersrand	3.2
	16	12 26 39	USCGS 25.5N 100.9E; Yunnan Province, China	5.2
	16	13 25 03	26.2S 27.1E; Witwatersrand	3.2
	16	18 11 07	USCGS 39.5N 25.0E; Aegean Sea	4.6
	17	04 03 13	USCGS 10.5S 161.4E; Solomon Is.	5.4
	17	09 56 35	USCGS 21.2S 68.1W; Chile-Bolivia border region	5.1
	17	20 14 33	USCGS 3.4N 128.1E; N. of Halmahera	5.7
	18	01 30 28	17.6S 35.3E; Zambesi-Shire confluence	2.6
	18	07 23 03	USCGS 23.2S 174.8W; S. of Fiji Is.	5.0
	18	07 48 28	9.3S 32.6E; Tunduma area, Zambia	3.3
	18	18 16 04	USCGS 6.6S 126.2E; Banda Sea	4.7
	18	23 14 05	0.5S 34.0E; NE Lake Victoria	3.9
	19	01 35 49	USCGS 17.4S 172.8W; Tonga Is. region	5.2
	19	12 00 24	29.9S 28.3E; Lesotho Drakensberg	3.2
	19	13 49 54	17.6S 27.2E; S. Lake Kariba area	2.2
	19	14 58 14	26.4S 27.2E; Witwatersrand	3.5
	19	19 17 47	USCGS 26.4S 177.4W; S. of Fiji Is.	5.1
	19	21 37 12	26.3S 27.4E; Witwatersrand	3.1
	20	05 33 17	18.5S 34.7E; N. Sofala Province, Mocambique	2.7
	20	06 04 22	26.0S 27.5E; Witwatersrand	3.2
	20	06 20 31	USCGS 20.3S 70.0W; Near coast of N. Chile	5.1
	20	07 54 40	USCGS 40.9N 75.1E; Kirgiz-Sinkiang border region	4.6
	20	12 13 08	USCGS 51.4N 177.7E; Rat Is., Aleutian Is.	5.1
	20	16 44 10	26.5S 27.2E; W. Witwatersrand	3.1
	20	17 36 07	17.5S 27.4E; S. Lake Kariba area	2.5
	20	19 02 52	0.5S 34.3E; NE Lake Victoria	4.6
	20	22 00 01	USCGS 6.1S 71.3E; Chagos Archipelago region	5.3
	20	23 47 15	19.4S 34.7E; Lower Pungue Valley, Mocambique	3.1
	21	02 59 36	0.5S 34.2E; NE Lake Victoria	4.5
	21	03 26 02	0.5S 34.2E; NE Lake Victoria	4.0
	21	03 35 03	0.5S 34.3E; NE Lake Victoria	4.0
	21	04 04 34	26.2S 27.8E; Witwatersrand	4.0
	21	12 49 27	0.5S 34.2E; NE Lake Victoria	4.7
	21	23 22 14	0.6S 34.1E; NE Lake Victoria	4.1
	22	01 55 43	USCGS 20.4S 69.0W; N. Chile	5.5
	22	03 44 48	16.7S 30.8E; Umvukwe range, Rhodesia	2.7
	22	09 15 12	USCGS 13.1N 145.5E; Mariana Is.	5.4
	22	18 39 33	USCGS 20.9S 68.5W; Chile-Bolivia border region	5.0
	23	17 25 53	USCGS 39.0N 25.5E; Aegean Sea	4.6
	24	01 20 46	26.4S 27.2E; W. Witwatersrand	3.0

MAR 1968

	Date	G M T h m s	Epicentre; Remarks	Mag CGS
	24	07 12 47	USCGS 1.3S 24.2W; Central Mid-Atlantic Ridge	5.4
X	24	08 28 40	17.4S 35.6E; Lower Shire Valley	3.3
	24	15 00 00	USCGS 52.8S 21.5E; S. of Africa	4.7
	24	17 13 20	USCGS 12.5N 86.5W; Nicaragua	5.1
X	24	18 49 08	26.6S 28.1E; W. Witwatersrand	3.0
	25	16 32 05	USCGS 15.2N 92.0W; Mexico-Guatemala border region	5.1
	26	00 41 57	USCGS 6.6S 116.1E; Bali Sea	5.9
	26	04 19 11	USCGS 1.0S 2[illegible].1W; Central Mid-Atlantic Ridge	4.9
X	26	08 33 43	16.6S 28.2E; Kariba	2.6
X	26	13 15 27	23.7S 37.4E; Mocambique Channel	4.1
	26	15 03 06	USCGS 36.1N 70.1E; Hindu Kush region	4.7
X	26	19 08 47	5.7S 28.6E; E. Kivu Province, Congo	3.5
	26	19 40 42	USCGS 8.1N 126.3E; Mindanao, Philippine Is.	5.4
	26	21 24 59	USCGS 30.3S 178.0W; Kermadec Is. region	4.9
	27	03 56 07	USCGS 1.1S 15.4W; N. of Ascension Is.	4.8
X	27	04 29 44	26.4S 27.2E; Witwatersrand	3.5
X	27	13 33 28	26.4S 27.2E; Witwatersrand	3.1
	27	21 11 01	USCGS 25.5S 179.6E; S. of Fiji Is.	5.0
	27	22 36 43	USCGS 4.3S 133.3E; W. New Guinea region	5.5
	28	00 55 53	USCGS 1.2N 122.7E; N. Celebes	4.9
	28	01 07 38	USCGS 15.1N 92.1W; Mexico-Guatemala border region	5.2
	28	05 45 07	USCGS 10.8S 166.0E; Santa Cruz Is.	5.2
	28	07 39 57	USCGS 37.9N 20.9E; Ionian Sea	5.4
	28	13 37 50	USCGS 34.9S 69.4W; Chile-Argentina border region	5.3
X	28	18 32 01	16.9S 35.4E; Lower Shire Valley	2.5
X	28	21 17 20	3S 29E; N. Lake Tanganyika area	3.6
	30	00 44 21	USCGS 21.5S 179.4W; Fiji Is. region	4.6
	30	12 39 23	USCGS 41.7S 85.2E; SE Indian Rise	4.8
X	30	14 17 59	26.3S 27.1E; Witwatersrand	2.9
	30	14 19 59	USCGS 5.8S 105.7E; Sunda Strait	4.6
	30	18 51 07	Kariba area	2.4
	30	19 18 47	USCGS 21.2S 174.2W; Tonga Is.	4.6
X	31	10 51 21	8.7S 26.4E; Lake Upemba area, Congo	3.9
X	31	23 35 54	4.5S 34.8E; Central Highlands, Tanzania	5.2

LIST OF RECORDED PHASES: 01 to 02 MAR 1968 - 1

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region: Remarks
01	BUL	ePn	10	17	46		1.2	Witwatersrand
		eSn		18	56			
		iSg		19	27			
	KRR	ePn		18	34		0.6	
		eSn		20	16			
		eSg		21	15			
	CLK	eSgSg		22	48		0.2	
01	KRR	i	17	10	37	R	0.2	Distant
	BUL	i			47	C	0.3	
01	KRR	ePn	17	57	31		0.5	E. of Chimanimani Mts.,
		eSn		58	25			Mocambique.
		iSg			48			
	CLK	eSg			30		0.2	
	BUL	eSg			47		0.3	
01	CLK	ePn	18	39	15		0.3	E. of Chimanimani Mts.,
		eSg		40	23			Mocambique.
	KRR	ePn		39	26		0.7	
		eSn		40	18			
		iSg			43			
	BUL	eSn			15		0.4	
		iSg			42			
01	KRR	i	22	18	52	C	0.3	Distant
	BUL	e			53		0.2	
01	KRR	i	23	12	35	R	0.5	Distant
	BUL	i			37	R	0 4	
02	CLK	eP	02	59	15		0.3	Lake Albert Area, Congo.
		eS	03	02	24			
		eL		04	32			
	KRR	eL			37		0.3	
	BUL	eL		06	51		0.2	
02	KRR	i	03	34	15	C	0.2	Distant
	CLK	e			18		0.1	
	BUL	i			24	C	0.6	
02	BUL	ePn	05	43	40		0.6	?
		eSn		44	29			
		eSg			53			
	KRR	ePn		43	54		0.4	
		eSn		44	51			
		eSg		45	20			
02	BUL	e	06	38	02		0.2	Distant
		e			14			
	KRR	i			05	R	0.4	
		i			16			
	CLK	e			34		0.1	
		e			45			
02	CLK	ePn	07	09	51		0.8	Lake Sagara Area, Tanzania.
		eSn		11	44			
		eSgSg		12	48			
	KRR	ePn		10	02		0.6	
		eSn		11	56			
		eSgSg		13	01			
	BUL	eS			16		0.3	
		eL		14	50			

LIST OF RECORDED PHASES: 02 to 03 MAR 1968 - 2

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region:	Remarks
02	BUL	iP	11	23	33		0.5	Distant	
		ipP			45				
	KRR	eP			56		0.5		
		ipP		24	08				
	CLK	eP			22		0.1		
		epP			34				
02	CLK	eP	16	29	24		0.2	Distant	
	KRR	eP			49		0.3		
		e		30	01				
	BUL	eP			03		0.2		
		e			21				
02	BUL	iP	20	55	42	R	0.2	Distant	
	KRR	iP			55	R	0.2		
	CLK	eP		56	18		0.1		
02	CLK	eP	22	09	32		2.7	Distant	
	KRR	eP		10	15		2.4		
		e		12	10				
	BUL	eP		10	28		2.2		
02	CLK	e	23	50	42		0.1	Distant	
	BUL	e			48		0.1		
03	CLK	iP	09	41	36	C	0.2	Distant	
	KRR	iP		42	02	C	0.8		
	BUL	iP			22	C	0.5		
03	CLK	eP	12	20	48		0.2	Distant	
	BUL	eP		21	35		0.2		
		i		24	05		(0.4)		
	KRR	eP		21	38		0.4		
		i		24	13		(1.3)		
03	KRR	e	15	55	15		0.1	Distant	
	BUL	e			20		0.2		
03	BUL	iP	20	54	34	R	0.3	Distant	
		i			55				
	KRR	iP			57	R	0.2		
		i		55	18				
	CLK	eP			23		0.1		
		e			45				
03	CLK	eP	23	07	40		0.8	Distant	
		ipP		09	27				
		iPP		11	11				
		iSKS		17	29				
		iS			48				
	KRR	iP		08	04	R	0.9		
		ipP		09	58				
		iPP		11	50				
		eS		18	16				
	BUL	iP		08	09	R	1.5		
		ipP		10	01				
		iPP		11	58				
		iSKS		18	02				
		iS			43				

LIST OF RECORDED PHASES: 04 to 05 MAR 1968 - 3

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region:
04	CLK	iPn	05	09	55	R	50.	Tunduma Area, Zambia.
		iSn		11	06			
		iSg			40			
	KRR	iPn		10	12	C	37.	
		eSn		11	35			
		eSg		12	15			
	BUL	eiPn		10	56	rC	15.	
		iSn		12	58			
		iSgSg		14	04			
04	CLK	iPn	07	26	56	C	18.	Tunduma Area, Zambia.
		iSn		28	07			
		iSg			42			
	KRR	iPn		27	12	C	8.0	
		iSn		28	39			
		iSg		29	23			
	BUL	ePn		27	57		2.9	
		eSn		29	58			
		iSgSg		31	09			
04	KRR	e	17	09	32		0.2	Distant
	BUL	e			32		0.2	
	CLK	e			44		0.1	
04	CLK	eP	22	21	14		0.1	Distant
	KRR	eP		22	01		0.1	
	BUL	eP			15		0.2	
05	CLK	ePn	00	28	04		1.3	Tunduma Area, Zambia.
		eSn		29	14			
		iSg			50			
	KRR	eSn		29	44		0.8	
		eSg		30	30			
	BUL	eSgSg		32	22		0.2	
05	KRR	eP'	00	41	35		0.1	Distant
	CLK	eP'			38		0.1	
		e			51			
	BUL	iP'			47	C	1.1	
		i			59			
05	CLK	e	00	50	29		0.1	Distant
		e			43			
	KRR	e			30		0.2	
		e			45			
	BUL	i			33	C	0.8	
		i			46			
05	KRR	e	02	05	37		0.1	Distant
	BUL	i			40	R	0.2	
		i			52			
05	BUL	i	06	08	40	R	0.3	Distant
	KRR	i			52	R	0.2	
	CLK	e		09	10		0.1	
05	BUL	ePn	07	04	15		0.3	S. Botswana.
		eSn		05	24			
		eSg		06	01			
	KRR	ePn		04	(50)		0.3	
		eSn		06	37			
		eSg		07	30			

LIST OF RECORDED PHASES: 05 MAR 1968 - 4

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region: Remarks
05	BUL	ePn	11	29	28		1.7	Witwatersrand.
		eSn		30	34			
		iSg		31	06			
	KRR	ePn		30	13		0.6	
		eSn		31	57			
		eSg		32	49			
	CLK	eSgSg		34	15		0.3	
05	CLK	eP	14	54	40		0.1	Distant
		e			50			
	KRR	eP		55	46		0.3	
		i			54			
	BUL	eP			46		0.2	
		i			55			
05	BUL	ePn	15	37	34		1.3	Off S. Mocambique Coast.
		eSn		39	00			
		eSg			42			
	CLK	iPn		38	00		0.6	
		iSn		39	47			
		eSgSg		40	51			
	KRR	ePn		38	00		1.3	
		eSn		39	48			
		eSgSg		40	48			
05	CLK	iP	16	20	39		7.3	Lower Shire Valley, Malawi.
		iS			57			
	KRR	ePn		21	35		0.7	
		eSn		22	40			
		iSg		23	00			
	BUL	eSg			50		0.3	
05	CLK	eP	18	29	48		0.2	Distant
		ePP		33	51			
	BUL	eP		30	21		0.4	
		ePP		34	32			
	KRR	eP		30	29		0.2	
		ePP		34	38			
05	CLK	eP	18	51	18		0.2	Distant
		ePP		55	05			
	KRR	eP		51	39		0.2	
		ePP		55	43			
	BUL	iP		51	47	C	0.5	
		ePP		55	54			
05	CLK	e	21	39	38		0.2	Distant
	BUL	i			40	R	0.4	
	KRR	ei			43	rC	0.3	
05	KRR	eP	22	58	29		0.8	Kasai Province, Congo.
		eS	23	00	54			
		iL		02	27			
	CLK	eP	22	58	59		0.5	
		eS	23	01	47			
		eSgSg		03	25			
		eL			39			
	BUL	eP	22	59	04		0.5	
		eS	23	01	55			
		eSgSg		03	46			
		eL			53			

LIST OF RECORDED PHASES: 06 to 09 MAR 1968 - 5

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region: Remarks
06	BUL	ePn	22	05	58		0.6	Witwatersrand.
		eSn		07	01			
		eSg			34			
	KRR	ePn		06	44		0.5	
		eSg		09	15			
	CLK	eSgSg		10	47		0.2	
07	BUL	ePn	01	28	10		0.6	Klerksdorp Area, Transvaal.
		eSn		29	23			
		eSg			59			
	KRR	ePn		28	55		0.5	
		eSn		30	43			
		eSgSg		31	46			
	CLK	eSgSg		33	20		0.2	
07	CLK	e	07	34	25		0.1	Distant
	KRR	e			26		0.1	
	BUL	e			40		0.1	
07	CLK	eP	13	40	31		0.1	Distant
		e		41	49			
	KRR	eP			01		0.3	
		e		42	16			
	BUL	i		41	01	R	1.0	
		e		42	18			
07	BUL	ePn	15	05	08		0.9	Witwatersrand.
		eSn		06	12			
		eSg			43			
	KRR	ePn		05	53		0.6	
		eSn		07	33			
		eSg		08	27			
	CLK	eSgSg		09	52		0.2	
07	CLK	ePn	18	23	27		1.1	Livingstonia Area, Malawi.
		eSn		24	19			
		eSg		25	45			
	KRR	eSn			22		0.8	
		eSg		26	05			
	BUL	eSg		27	45		0.4	
08	BUL	eP	15	37	30		0.1	Distant
	KRR	eP			55		0.2	
08	CLK	eP	23	18	51		0.1	Distant
	KRR	eP		19	23		0.1	
	BUL	eP			35		0.1	
09	CLK	eP	00	56	31		0.3	Distant
	KRR	eP		57	01		0.4	
	BUL	eP			14		0.4	
		e			52			
09	CLK	e	03	38	01		0.1	Distant
		e		39	29			
	BUL	i		38	08	C	1.1	
		e		39	40			
	KRR	e		38	08		0.6	
		i		39	36			
09	KRR	e	03	48	13		0.2	Distant
	BUL	i			15	C	0.2	
	CLK	e			33		0.1	
09	CLK	i	14	59	05	C	0.2	Distant
	KRR	i	15	00	06	C	0.3	
	BUL	i			13	C	0.2	

LIST OF RECORDED PHASES: 10 to 12 MAR 1968 - 6

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region:	Remarks
10	BUL	i	01	36	28	C	0.2	Distant	
	CLK	e			28		0.1		
	KRR	e			43		0.1		
10	KRR	e	04	08	51		0.2	Distant	
	CLK	e			53		0.1		
	BUL	e		09	10		0.2		
10	CLK	eP	07	20	36		0.2	Distant	
	KRR	iP			38	C	0.4		
	BUL	iP		21	04	C	0.4		
10	BUL	e	07	30	00		0.5	Distant	
	CLK	e			02		0.1		
	KRR	e			05		0.5		
10	BUL	eP	15	04	10		0.1	Distant	
	KRR	eP			35		0.1		
10	BUL	iPn	18	29	35		2.5	Witwatersrand.	
		eSn		30	42				
		eSg		31	12				
	KRR	ePn		30	21		1.8		
		eSn		32	02				
		eSg			56				
	CLK	eSgSg		34	17		0.7		
11	BUL	eP'	08	45	38		0.3	Distant	
		ipP'			47				
		ePP		48	30				
		iSKP		49	12				
		i			52				
	CLK	eP'		45	38		0.1		
		ipP'			47				
		ePP		48	24				
		eSKP		49	14				
		e			39				
	KRR	eP'		45	41		0.6		
		ipP'			53				
		iPP		48	44				
		iSKP		49	20				
11	KRR	iPn	14	03	05		3.2	Kasempa Area, Zambia.	
		iSn			59				
		eSg		04	26				
	BUL	ePn		03	32		1.1		
		iSn		04	47				
		eSg		05	28				
	CLK	ePn		04	04		0.8		
		eSn		05	44				
		eSg		06	40				
11	BUL	ePn	15	25	33		0.2	Witwatersrand.	
		eSn		26	43				
		eSg		27	15				
	KRR	eSg		29	00		0.1		
11	CLK	e	18	44	01		0.1	Distant	
		i			18				
	KRR	e			11		0.1		
		i			25				
	BUL	e			13		0.1		
		i			29				
12	CLK	e	18	43	03		0.1	Distant	
	KRR	e			03		0.2		
	BUL	e			11		0.2		

LIST OF RECORDED PHASES: 12 to 14 MAR 1968 - 7

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region: Remarks
12	BUL	i	19	17	28	C	0 2	Distant
	KRR	i			32	C	0.3	
		i		20	05			
	CLK	e		17	41		0.1	
12	BUL	i	21	43	10	C	0.2	Distant
	KRR	e			10		0.2	
13	CLK	ePn	05	36	08		4.6	Chemba Area, Mocambique.
		iPg			12			
		eSn			34			
		iSg			38			
	KRR	ePn			54		2.5	
		eSn		37	48			
		iSg		38	12			
	BUL	eSn		38	16		0.8	
		iSg			50			
13	CLK	eP	07	50	57		0.2	Distant
	KRR	eP		51	31		0.3	
	BUL	eP			39		0.2	
13	BUL	eP	09	41	01		0.6	Distant
	KRR	iP			25	R	0.5	
	CLK	eP			52		0.2	
13	CLK	iP	10	44	27	C	0.4	Distant
	KRR	iP			52	C	1.0	
	BUL	iP			55	C	0.9	
	BHA	eP		45	03		0.3	
13	BHA	e	13	00	44		0.2	Distant
	KRR	e			55		0.3	
13	KRR	e	14	43	45		0.2	Distant
	BUL	ei			50	cR	0.6	
13	CLK	ePn	18	26	07		1.0	E. Tanzania.
		eSn		28	10			
		iSg		29	16			
	KRR	eL		31	15		0 2	
	BUL	eL		32	36		0.1	
13	KRR	e	19	28	13		0.2	Distant
		i			17			
	BHA	e			17		0.3	
		e			21			
	BUL	e			28		0.1	
13	BUL	eP'	20	43	48		0.8	Distant
		iSKP		46	27			
	CLK	eP'		43	49		0.3	
		eSKP		46	27			
	KRR	eP'		43	52		1.0	
		eSKP		46	33			
	BHA	eP'		43	59		0.4	
		iSKP		46	42			
13	CLK	iP	22	49	15	C	0.9	Distant
	BHA	iP			27	C	0.6	
	KRR	iP			37	C	0.8	
	BUL	iP			56	C	0.3	
14	CLK	iP	02	19	14	C	0.9	Distant
	BHA	iP			25	C	0.6	
	KRR	iP			34	C	1.1	
	BUL	eP			54		0.5	

LIST OF RECORDED PHASES: 14 to 15 MAR 1968 - 8

Date	Stn	Phase	G h	M m	T s	R/C	DA mm	Epicentral region:	Remarks
14	CLK	iP	02	37	18		2.2	Lower Shire Valley.	
		iS			35				
	KRR	eSg		39	37		0.3		
	BUL	eSg		40	31		0.2		
	BHA	eSg			39		0.1		
14	BUL	ePn	08	08	27		0.6	Witwatersrand.	
		iSg		10	05				
	KRR	eSg		11	47		0.4		
14	BHA	eP	15	30	03		0.8	E. Lake Victoria.	
		eS		32	28				
		eL		34	14				
	KRR	eP		30	30		0.3		
		eS		33	20				
		eL		35	16				
	CLK	eL		34	22		0.6		
	BUL	eL		37	01		0.2		
14	BUL	eP'	19	04	12		0.3	Distant	
		epP'			26				
	KRR	eP'			18		0.2		
		epP'			30				
		eSKP		07	54				
	BHA	epP'		04	36		0.2		
		eSKP		08	01				
14	BHA	eP	19	47	38		1.7	E. Lake Victoria.	
		eS		50	07				
		iL		51	48				
	KRR	eP		48	04		0.5		
		eS		50	51				
		eSgSg		52	40				
	CLK	eL		51	57		1.0		
	BUL	eS		52	10		0.3		
		eL		54	33				
15	BUL	ePn	02	52	02		0.5	Witwatersrand.	
		eSn		53	08				
		iSg			39				
	KRR	ePn		52	45		0.3		
		eSgSg		55	23				
15	CLK	iP	03	29	08		-	Lower Shire Valley.	
		iS			18				
	KRR	ePn		30	11		6.7		
		iSn		31	10				
		iSg			35				
	BHA	ePn		30	31		2.8		
		iSn		31	46				
		iSg		32	24				
	BUL	ePn		30	35		4.3		
		iSn		31	52				
		iSg		32	30				
15	CLK	eP	06	43	45		0.4	Distant	
		ipP			53				
	BUL	eP			57		1.3		
		ipP		44	06				
	KRR	eP			06		0.3		
		epP			15				
	BHA	eP			24		0.6		
		epP			32				

LIST OF RECORDED PHASES: 15 to 17 MAR 1968 - 9

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region:	Remarks
15	BUL	e	09	54	05		0.2	Distant	
	KRR	e			08		0 2		
15	CLK	eiP	17	59	05	rC	0.4	Distant	
	KRR	eiP			47	rC	0.3		
	BHA	eiP			54	rC	0.2		
	BUL	eP	18	00	01		0.2		
16	BHA	e	00	29	21		0.1	Distant	
	KRR	e			26		0.3		
	BUL	e			35		0.1		
16	BHA	eP	07	04	00		3.0	N.E. Lake Victoria.	
		eS		06	38				
		iSgSg		08	17				
	CLK	eP		04	04		2.1		
		eS		06	43				
		iSgSg		08	24				
		iL			36				
	KRR	eP		04	24		1.5		
		eS		07	21				
		iSgSg		09	15				
		iL			22				
	BUL	eP		05	07		1.4		
		eS		08	40				
		eL		11	08				
16	BUL	eP	07	21	15		0.2	Distant	
	KRR	eP			55		0.2		
	CLK	eP		22	14		0.2		
16	BUL	ePn	12	24	48		0.6	W. Witwatersrand.	
		eSn		25	57				
		eS*		26	12				
		eSg			31				
	KRR	iPn		25	33		0 4		
		eSn		27	16				
		eSg		28	11				
		eL			19				
	BHA	ePn		26	05		0 2		
		eSg		29	25				
	CLK	eSg			47		0.2		
16	BHA	e	12	38	50		0.2	Distant	
	KRR	e			51		0.2		
	BUL	e		39	04		0.2		
16	BUL	ePn	13	26	33		0.8	Witwatersrand.	
		iSg		28	11				
	KRR	ePn		27	18		0.4		
		eSg			52				
		iL			59				
16	BHA	eP	18	20	25		0.1	Distant	
	KRR	eP			42		0.3		
	BUL	eP		21	06		0.2		
17	BUL	e	04	22	09		0.2	Distant	
		e			20				
	KRR	e			10		0.2		
		e			22				
	BHA	e			14		0.1		
		e			26				

LIST OF RECORDED PHASES: 17 to 18 MAR 1968 - 10

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region:	Remarks
17	BUL	e	10	09	17		0.6	Distant	
		i			21				
		e			50				
	KRR	e			27		0.2		
		e			31				
17	CLK	eP	20	27	44		0.2	Distant	
		ePP		31	29				
	KRR	eP		28	07		0.3		
		epP			27				
		ePP		32	10				
	BUL	eiP		28	13	cR	0.4		
		ePP		32	38				
	BHA	iP		28	14	R	0.4		
		ePP		32	40				
18	CLK	iPn	01	31	01		4.3	Zambesi-Shire Confluence.	
		iPg			03				
		iSn			25				
		iSg			28				
	KRR	ePn			48		0.9		
		iSn		32	48				
		iSg		33	11				
	BHA	eSn			31		0.2		
		eL		34	17				
	BUL	eSg		33	52		0.3		
18	CLK	eP	02	54	32		0.3	Distant	
	BUL	iP			48	C	0.3		
	KRR	eP			56		0.2		
	BHA	eP		55	16		0.2		
18	CLK	eP'	07	41	10		0.3	Distant	
		eSKP		43	39				
	BUL	eP'		41	11		0.9		
		eSKP		43	41				
	KRR	eP'		41	15		1.8		
		eSKP		43	47				
	BHA	eP'		41	22		2.1		
		eSKP		43	57				
18	BHA	ePn	07	50	02		2.0	Tunduma Area, Zambia.	
		eSn		51	11				
		iSg			45				
	CLK	ePn		50	07		0.7		
		eSn		51	18				
		iSg			52				
	KRR	eSn			44		0.5		
		eSg		52	34				
	BUL	eL		54	23		0.2		
18	CLK	eP	18	28	13		0.2	Distant	
	KRR	eP			35		0.2		
	BUL	eP			38		0.1		
	BHA	eP			43		0.1		
18	BHA	eP	23	17	33		0.6	N.E. Lake Victoria.	
		eS		20	08				
		eSgSg		21	46				
	KRR	eS		20	57		0.3		
		eSgSg		22	49				
	CLK	eSgSg		21	52		0.4		
	BUL	eL		24	43		0.2		

LIST OF RECORDED PHASES: 19 to 20 MAR 1968 - 11

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region: Remarks
19	BUL	eP'	01	55	13		0.6	Distant
		ipP'			24			
		ePP		57	52			
	KRR	eP'		55	17		0.4	
		ipP'			30			
	BHA	eP'			21		0.3	
		ipP'			33			
		ePP		58	42			
	CLK	epP'		55	25		0.2	
19	BUL	ePn	12	02	44		0.3	E. Lesotho Drakensberg ?
		eSn		04	26			
		eSg		05	23			
	KRR	e		07	15		0.2	
19	KRR	ePn	13	50	31		1.7	S. Lake Kariba Area.
		iPg			36			
		eSn			59			
		iSg		51	04			
	BUL	ePn		50	38		1.3	
		ePg			45			
		eS*		51	16			
		iSg			23			
	BHA	ePg		50	55		0.7	
		eSg		51	36			
19	BUL	ePn	14	59	48		1.7	Witwatersrand.
		eSn	15	00	58			
		iSg		01	30			
	KRR	ePn		00	34		1.0	
		eSg		03	13			
		iL			18			
	BHA	iPn		01	05		0.3	
		eSn		03	13			
		eSg		04	23			
		iSgSg			30			
	CLK	eSg			49		0.3	
19	BHA	iP	19	07	18	C	0.5	Distant
		ipP			34			
	KRR	eP			42		0.2	
		epP			59			
	BUL	epP		08	08		0.1	
19	BUL	e	19	36	50		0.3	Distant
	KRR	e			55		0.2	
	BHA	e		37	00		0.1	
19	BUL	ePn	21	38	45		0.6	Witwatersrand.
		eSn		39	53			
		iSg		40	26			
	KRR	ePn		39	29		0.4	
		eSn		41	09			
		iL		42	13			
	BHA	eL		43	28		0.2	
20	CLK	ePn	05	34	00		0.9	N. Sofala Province, Mocambique.
		eSn			33			
		eSg			42			
	KRR	ePg			46		1.1	
		eSn		35	23			
		iSg			49			
	BUL	eSg		36	15		0.4	
	BHA	eSg			56		0.3	

LIST OF RECORDED PHASES: 20 MAR 1968 - 12

Date	Stn	Phase	G h	M m	T s	R/C	DA mm	Epicentral region:	Remarks
20	BUL	ePn	06	05	50		1.0	Witwatersrand.	
		eSn		06	54				
		eS*		07	09				
		iSg			25				
	KRR	eSn		08	17		0.5		
		eSgSg		09	13				
20	BUL	iP'	06	33	31	C	0.5	Distant	
		eSKP		37	04				
	KRR	eP'		33	43		0.3		
20	CLK	e	08	05	32		0.2	Distant	
	KRR	e			55		0.3		
	BUL	e		06	15		0.3		
20	BUL	e	12	06	42		0.4	Distant	
	BHA	e		07	04		0.2		
20	CLK	eP'	12	32	25		0.2	Distant	
		eSKP		35	48				
	KRR	eP'		32	30		0.4		
		eSKP		35	58				
	BUL	eP'		32	31		0.2		
	BHA	eP'			34		0.3		
		eSKP		36	05				
20	BUL	ePn	16	45	44		0.5	W. Witwatersrand.	
		eSn		46	54				
		eSg		47	27				
	KRR	ePn		46	31		0.4		
		eSn		48	14				
		eSgSg		49	14				
20	KRR	iPn	17	36	42		2.7	S. Lake Kariba Area.	
		iPg			46				
		iSg		37	13				
	BUL	iPn		36	49		2.0		
		iPg			57				
		iSg		37	33				
	BHA	ePg			03		1.6		
		eSg			45				
20	BHA	eP	19	06	22		3.2	N.E. Lake Victoria.	
		iS		08	58				
		iSgSg		10	38				
		iL			43				
	CLK	eP		06	25		2.2		
		eS		09	01				
		iSgSg		10	44				
	KRR	eP		06	45		1.1		
		eS		09	43				
		eSgSg		11	34				
	BUL	eP		07	25		1.4		
		eS		10	59				
		eL		13	23				
20	CLK	eP	22	07	09		0.3	Distant	
	KRR	eP			51		0.3		
	BHA	eP			58		0.3		
	BUL	eP		08	04		0.2		

LIST OF RECORDED PHASES: 20 to 21 MAR 1968 - 13

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region:	Remarks
20	CLK	ePg	23	48	23		1.0	Lower Pungue Valley, Mocambique	
		eSg		49	08				
	BUL	ePn		48	41		1.5		
		eSn		49	44				
		iSg		50	14				
	KRR	ePg		48	55		2.9		
		eSn		49	31				
		iSg			58				
	BHA	eP			09		0.4		
		eS		50	28				
		eSg		51	10				
21	BHA	eP	03	03	06		2.8	N.E. Lake Victoria.	
		iS		05	45				
		iSgSg		07	24				
		iL			30				
	CLK	eP		03	10		1.8		
		eS		05	48				
		eSgSg		07	30				
	KRR	eP		03	31		1.0		
		eS		06	27				
		iSgSg		08	18				
	BUL	eP		04	11		1.0		
		eS		07	50				
		iL		10	14				
21	BUL	eP	03	30	38		0.3	N.E. Lake Victoria.	
		iL		36	39				
	BHA	eS		32	11		0.9		
		eSgSg		33	47				
	CLK	eSgSg			57		0.5		
	KRR	eSgSg		34	43		0.3		
21	KRR	eP	03	38	56		0.4	N.E. Lake Victoria.	
		eL		43	52				
	BUL	eP		39	40		0.3		
		eL		45	42				
	BHA	i		41	47		0.9		
		iSgSg		42	52				
	CLK	eSgSg			58		0.5		
21	BUL	ePn	04	06	05		4.8	Witwatersrand.	
		iPg			21				
		eSn		07	11				
		iSg			42				
	KRR	ePn		06	51		2.7		
		eSn		08	30				
		eSg		09	26				
	BHA	ePn		07	21		1.0		
		eSn		09	28				
		eSgSg		10	40				
	CLK	eSg			54		0.7		
21	BHA	eP	12	52	56		4.7	N.E. Lake Victoria.	
		iS		55	33				
		iSgSg		57	09				
		iL			17				
	CLK	eP		53	00		3.0		
		iSgSg		57	19				
	KRR	eP		53	20		1.9		
		eS		56	15				
		iSgSg		58	08				
	BUL	iP		54	01	C	1.7		
		iS		57	37				
		iL	13	00	04				

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region:	Remarks
21	BHA	eP	23	25	42		1.3	N.E. Lake Victoria.	
		eS		28	18				
		iSgSg		29	53				
		iL			59				
	CLK	eP		25	45		0.7		
		iL		30	06				
	KRR	eP		26	08		0.5		
		iL		30	59				
	BUL	eP		26	48		0.3		
		eL		32	43				
22	BUL	eP	02	08	36		2.0	Distant	
		ipP		09	01				
		ePP		12	03				
		eSKS		19	19				
		eS		20	08				
	BHA	eP		08	45		0.3		
		epP		09	11				
	KRR	eP		08	45		0.4		
		epP		09	12				
		iPP		12	21				
	CLK	e		09	21		0.2		
		epP			37				
		ePP		13	01				
22	KRR	iP	03	45	09		5.5	Umvukwe Range, Rhodesia.	
		iS			24				
	BHA	ePg			45		2.0		
		iSg		46	24				
	BUL	eSn			29		2.2		
		iSg			47				
	CLK	eSn			34		0.9		
		iSg			54				
22	KRR	e	09	33	57		0 2	Distant	
	BHA	e		34	00		0.2		
	BUL	e			00		0.3		
22	BHA	eP'	15	19	28		0.4	Distant	
	KRR	eiP'			34	cR	2.6		
	BUL	iP'			38	C	5.3		
	CLK	eP'			44		2.3		
22	BUL	e	18	52	16		0.4	Distant	
	KRR	e			26		0.2		
	BHA	e			28		0.1		
23	BHA	eP'	17	35	22		0.1	Distant	
	CLK	eP'			34		0.2		
	KRR	eP'			35		0.2		
	BUL	eP'			40		0.2		
24	BUL	ePn	01	22	20		0.5	W. Witwatersrand.	
		eSg		24	03				
	KRR	ePn			06		0.3		
		eSn			51				
		eSgSg		25	49				
24	BHA	iP	07	22	10	R	0.4	Distant	
	KRR	eP			18		0.5		
	BUL	eP			39		0.6		

LIST OF RECORDED PHASES: 24 to 26 MAR 1968 - 15

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region:	Remarks
24	KRR	ePn	08	30	04		2.1	Lower Shire Valley.	
		eSn		31	04				
		iSg			33				
	BHA	ePn		30	28		0.4		
		iSn		31	42				
		iSg		32	25				
	BUL	eSn		31	41		0.9		
		iSg		32	20				
24	BUL	eP	15	06	35		0.4	Distant	
	KRR	eP		07	04		0.2		
	BHA	eP			23		0.2		
24	BUL	e	17	31	56		0.2	Distant	
	BHA	e			56		0.3		
	KRR	e			58		0.6		
24	BUL	ePn	18	50	43		0.5	W.Witwatersrand.	
		eSn		51	52				
		eSg		52	25				
	KRR	ePn		51	29		0.4		
		eSg		54	09				
		iSgSg			14				
25	BHA	e	16	50	54		0.2	Distant	
		e		51	15				
		e			32				
	BUL	e		50	55		0.2		
	KRR	e			57		0.3		
		e		51	17				
		e			33				
26	CLK	eP	00	53	14		3.0	Distant	
		ipP		55	12				
		eS	01	02	28				
		iPKKP		11	57				
		eP'P'		19	57				
	KRR	eP	00	53	37	r	8.2		
		epP		55	38				
		eS	01	03	21				
		iPKKP		11	44				
		eP'P'		19	46				
	BUL	eP	00	53	41	r	8.5		
		ipP		55	42				
		iSKS	01	03	12				
		iS			25				
		iPKKP		11	42				
		eP'P'		19	43				
	BHA	iP	00	53	44	R	5.7		
		ipP		55	46				
		iSKS	01	03	15				
		iS			31				
		ePKKP		11	34				
		eP'P'		19	46				
26	BHA	eP	04	28	19		0.2	Distant	
	BUL	eP			28		0.2		
	KRR	eP			33		0.3		
	CLK	eP		29	10		0.2		

LIST OF RECORDED PHASES: 26 to 27 Mar 1968 - 16

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region:	Remarks
26	KRR	eP	08	34	06		5.0	Kariba.	
		iS			20				
	BHA	ePg			23		4.3		
		iSn			48				
		iSg			51				
	BUL	ePn			40		1.3		
		ePg			51				
		iSn		35	22				
		iSg			39				
	CLK	eSg		37	04		0.3		
26	CLK	iPn	13	17	29		5.4	Mocambique Channel.	
		iSn		18	54				
	BUL	iPn		17	35	C	2.3		
		iSn		19	10				
	KRR	ePn		17	50		2.2		
		iSn		19	36				
	BHA	iPn		18	25	C	1.1		
		iSn		20	36				
26	KRR	e	15	13	33		0.3	Distant	
		i		14	25				
	BHA	e			17		0.1		
	BUL	e			42		0.2		
26	BHA	ePn	19	10	53		0.6	E. Kivu Province, Congo.	
		eSn		12	24				
		eSg		13	15				
	KRR	ePn		11	24		0.4		
		eSn		13	21				
		eSg		14	29				
	CLK	eSg			46		0.3		
26	KRR	e	19	54	12		0.3	Distant	
	BHA	i			16	C	0.3		
		e		57	42				
	BUL	e		54	18		0.4		
26	KRR	e	19	58	45		0.3	Distant	
	BUL	e			48		0.3		
26	CLK	eP'	21	43	44		0.3	Distant	
	BUL	iP'			52	R	0.5		
	KRR	iP'			56	R	0.7		
	BHA	eiP'		44	01	rC	0.4		
27	BHA	e	04	04	25		0.2	Distant	
	KRR	e			37		0.2		
	BUL	e			37		0.2		
27	BUL	ePn	04	31	19		2.1	Witwatersrand.	
		eSn		32	27				
		iSg		33	01				
	KRR	ePn		32	04		0.7		
		eSn		33	48				
		iSgSg		34	48				
	BHA	eSgSg		35	57		0.3		
	CLK	eSg		36	17		0.3		
27	BUL	ePn	13	35	02		0.6	Witwatersrand.	
		eSn		36	11				
		eS*			24				
		eSg			45				
	KRR	ePn		35	49		0.3		
		eSn		37	33				
		eSgSg		38	31				

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region:	Remarks
27	KRR	e	21	31	43		0.4	Distant	
	BHA	e			54		0.4		
27	KRR	eP	22	50	37		0.2	Distant	
		ePP		53	49				
	BUL	eP		50	39		0.2		
		ePP		53	51				
	BHA	eP		50	47		0.2		
		ePP		55	01				
28	KRR	e	01	09	08		0.2	Distant	
		e			19				
	BUL	e			13		0.3		
		e			24				
	BHA	e			15		0.2		
		e			26				
28	BHA	i	01	26	24	R	0.5	Distant	
	BUL	i			25	R	0.4		
	KRR	i			26	R	0.6		
28	BUL	i	06	04	10	R	0.5	Distant	
	KRR	e			11		0.3		
	BHA	e			17		0.3		
28	BHA	iP	07	49	14	R	1.0	Distant	
	CLK	eP			30		1.0		
	BUL	iP			54	R	1.9		
28	BUL	iP	13	50	07	R	1.5	Distant	
		ipP			50				
	BHA	eP			25		0.8		
		ipP		51	08				
	CLK	eP		50	45		0.4		
		ipP		51	28				
28	CLK	iP	18	32	22		6.0	Lower Shire Valley.	
		iS			37				
	BUL	eSg		35	37		0.2		
	BHA	eSg			38		0.2		
28	BHA	ePn	21	20	00		1.1	N. Lake Tanganyika area.	
		eSn		21	57				
		iSg		23	03				
	CLK	eSgSg		24	29		0.4		
	BUL	eL		26	05		0.2		
30	CLK	eP'	01	02	22		0.2	Distant	
		iSKP		04	53				
	BUL	eP'		02	24		0.3		
		iSKP		04	54				
	BHA	eP'		02	34		0.3		
		iSKP		05	09				
30	BUL	e	12	46	12		0.4	Distant	
		i		48	31				
	CLK	e			24		0.2		
	BHA	e			57		0.2		
30	BUL	ePn	14	19	32		0.5	Witwatersrand.	
		eSn		20	40				
		iSg		21	14				
30	CLK	eP'	14	31	40		0.1	Distant	
	BUL	eP'			48		0.3		
	BHA	eP'			51		0.2		

LIST OF RECORDED PHASES: 30 to 31 MAR 1968 - 18

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region:	Remarks
30	BHA	iPg	18	51	50		2.3	Kariba area.	
		iSn		52	14				
		iSg			19				
	BUL	iPg			13		0.8		
		iSn			44				
		iSg			59				
30	BUL	e	19	37	59		0.2	Distant	
	BHA	e		38	14		0.1		
31	CLK	eP	03	26	53		0.4	Distant	
		ipP		27	10				
	BHA	iP			28	C	1.5		
		ipP			47				
	BUL	eiP			39	cR	0.5		
		ipP			57				
31	BHA	iPn	10	52	50	C	5.5	Lake Upemba, Congo.	
		iSn		53	54				
		iL		54	32				
	CLK	iPn		53	56		1.6		
		eSn		55	52				
		iSgSg		56	59				
	BUL	eP		54	04		0.8		
		eS		56	03				
		eL		57	23				
31	CLK	eP'	14	09	09		0.3	Distant	
	BUL	eiP'			13	rC	0.8		
	BHA	eP'			21		0.5		
		iSKP		12	22				
31	CLK	ePn	23	38	34		18.	Central Highlands, Tanzania.	
		iS*		41	01				
		iL			51				
	BHA	iPn		38	42		16.		
		iSn		40	44				
		iSg		41	58				
	BUL	eP		39	46		8.		
		iL		44	39				

22 AUG 1968

RHODESIA METEOROLOGICAL SERVICES

SEISMOLOGICAL BULLETIN

The following stations contribute records for analysis and publication in this Bulletin:

KABWE (BHA): (Broken Hill)	14° 26.8' S; 28° 28.1' E; Alt. 1206 m.
Litho. foundation:	Dolomite and Shales of the Middle Katanga System.
Authority:	Zambia Meteorological Service.
Instrument:	Three component Willmore one-second seismograph. Nominal magnification 20,000.
CHILEKA (CLK):	15° 40.8' S; 34° 58.6' E; Alt. 781 m.
Litho. foundation:	Charnockitic granulites of the Basement Complex.
Authority:	Malawi Meteorological Service.
Instrument:	Three-component Willmore one-second seismograph. Nominal magnification 20,000.
KAROI (KRR):	16° 51.1' S; 29° 37.1' E; Alt. 1380 m.
Litho. foundation:	Granitic gneisses of the Zambesi type.
Authority:	Rhodesia Meteorological Services.
Instrument:	Vertical Willmore one-second seismograph. Nominal magnification 20,000.
BULAWAYO (BUL):	20° 08 6' S. 28° 36.8' E. Alt. 1341 m.
Litho. foundation:	Hornblend schists of the Bulawayan System.
Authority:	Rhodesia Meteorological Services.
Instruments:	Three-component Willmore one-second seismograph. Nominal magnification 20,000.
	WWSSS Station: SP magnification 100,000 LP magnification 1,500

Analysis Centre: Goetz Observatory. Meteorological Service, P.O. Box 562. Bulawayo, Rhodesia.

APR 1968

	Date	h	m	s	Epicentre: Remarks	Mag
	01	00	16	30	USCGS 6.2S 151.2E; New Britain region	4.9
	01	00	42	04	USCGS 32.5N 132.2E; Shikoku, Japan.	7.
X	01	03	56	12	0.4S 33.9E; N.E. Lake Victoria.	4.9
	01	07	13	18	USCGS 32.3N 132.1E; Shikoku, Japan.	5.7
X	01	11	08	41	5.3S 29.4E; Lake Tanganyika.	3.8
X	01	14	08	25	26.5S 27.2E; Witwatersrand.	3.0
X	01	20	48	15	28.2S 26.3E; O.F.S. Goldfields.	3.0
	02	10	41	26	USCGS 14.3S 167.3E; New Hebrides Is.	5.0
X	02	20	27	01	16.5S 28.3E; Kariba.	3.2
X	03	14	54	38	26.5S 28.2E; Witwatersrand.	2.8
	03	16	24	46	USCGS 51.7N 174.2E; Near Is., Aleutian Is.	5.3
	04	01	44	26	USCGS 24.6N 66.0E; W. Pakistan.	5.0
	04	09	00	08	USCGS 55.5N 155.1W; S. of Alaska.	4.5
	04	10	01	25	USCGS 56.0S 26.9W; S. Sandwich Is. region.	5.2
X	04	16	31	49	3.2S 29.1E; N. of Lake Tanganyika.	4.3
X	04	21	27	18	28.2S 26.4E; O.F.S. Goldfields.	3.0
	04	22	06	57	USCGS 22.7S 68.4W; N. Chile.	5.1
	05	02	00	25	USCGS 16.0S 179.8W; Fiji Is. region.	4.6
	05	19	31	23	USCGS 56.8N 151.5W; Kodiak Is. region.	4.9
	06	09	05	24	Kariba.	2.3
	06	12	54	38	Kariba.	2.5
	07	04	40	19	USCGS 51.5N 176.5E; Rat Is., Aleutian Is.	5.3
X	07	05	14	14	26.3S 27.4E; Witwatersrand.	3.5
	07	07	47	49	USCGS 7.8S 117.3E; Bali Sea.	4.4
	08	02	14	34	USCGS 23.5S 179.8E; S. of Fiji Is.	4.7
	08	14	27	28	USCGS 53.5S 24.9E; S. of Africa.	5.1
X	08	15	29	25	26.5S 27.4E; Witwatersrand.	3.7
	09	02	28	59	USCGS 33.1N 116.1W; S. California.	6.1
	09	03	03	55	USCGS 33.2N 116.0W; S. California.	5.1
	09	07	01	29	USCGS 18.6S 65.5E; Mascarene Is. region.	5.0
	09	11	27	39	USCGS 17.8S 178.2W; Fiji Is. region.	5.2
X	09	12	23	10	26.2S 28.0E; Witwatersrand.	3.5
	10	01	16	04	USCGS 8.3N 58.9E; Carlsberg Ridge.	4.9
	10	08	09	19	USCGS 5.6S 152.1E; New Britain region.	5.0
	10	10	42	35	USCGS 31.7N 117.0W; Off W. Coast of Baja, Calif.	4.8
	10	16	41	42	USCGS 41.7S 75.5W; Off Coast of S. Chile.	4.7
	10	18	32	10	USCGS 22.6S 171.5E; Loyalty Is. region.	5.1
X	10	18	42	08	28.0S 26.5E; O.F.S. Goldfields.	3.0
	10	19	12	00	USCGS 7.0S 154.9E; Solomon Is.	5.0
	11	03	36	42	USCGS 5.8S 107.9E; Java.	4.7
	11	11	35	04	USCGS 11.6S 166.3E; Santa Cruz Is.	4.6

APR 1968

	Date	h	m	s	Epicentre: Remarks	Mag
	11	17	13	41	USCGS 21.2S 66.6W; S. Bolivia.	5.2
X	11	18	22	02	26.2S 28.1E; Witwatersrand.	3.4
X	12	01	51	16	16.4S 27.0E; Choma area, Zambia.	2.2
	12	10	33	58	USCGS 36.7N 69.1E; Hindu Kush region.	-
	12	12	58	35	USCGS 1.7N 122.6E; N. Celebes.	5.1
X	12	21	07	08	26.2S 28.0E; Witwatersrand.	3.1
X	13	02	01	46	9.6S 26.0E; Lake Upemba area, Congo.	3.7
X	13	12	23	31	26.1S 27.6E; Witwatersrand.	3.2
X	13	22	32	03	8.2S 30.7E; S. Lake Tanganyika.	3.5
	13	23	31	31	USCGS 24.6N 94.8E; Burma-India Border region.	4.7
	14	08	37	12	USCGS 33.4N 141.4E; Off E. Coast of Honshu, Japan	5.4
	14	14	47	15	USCGS 17,5S 178.8W; Fiji Is. region.	4.6
X	15	15	13	19	16.2S 40.2E; Offshore N. Mocambique.	3.4
	16	04	36	35	USCGS 5.5S 68.5E; Chagos Archipelago region.	4.5
X	16	05	17	28	5S 69E; Chagos Archipelago region.	4.5
X	16	05	29	01	5S 69E; Chagos Archipelago region.	4.5
X	16	06	45	43	5S 69E; Chagos Archipelago region.	4.5
	16	13	05	22	USCGS 19.1S 66.8E; Mascarene Is. region.	5.2
	16	13	58	40	USCGS 5.1S 68.4E; Chagos Archipelago region.	5.2
X	16	19	13	17	26.2S 27.3E; Witwatersrand.	3.0
X	17	04	22	17	6.4S 30.7E; Katavi Swamp, Tanzania.	3.4
	17	09	12	04	USCGS 35.2N 3.7W; Straits of Gibraltar.	5.0
	17	09	50	39	USCGS 36.3N 71.4E; Afghanistan-USSR Border region	4.8
X	17	11	23	32	12.7S 28.0E; Copperbelt, Zambia.	2.2
	17	11	51	18	USCGS 5.1S 68.4E; Chagos Archipelago region.	5.0
	17	12	35	10	USCGS 4.9S 68.2E; Chagos Archipelago region.	4.7
	17	13	11	26	USCGS 36.4N 71.5E; Afghanistan-USSR Border region	5.2
X	17	16	57	48	13.7S 26.6E; Upper Kafue Valley.	2.6
	18	04	34	41	USCGS 25.7S 179.5W; S. of Fiji Is.	4.7
X	18	06	42	50	17.4S 40.2E; Mocambique Channel.	3.3
	18	09	58	53	USCGS 25.5S 177.9W; S. of Fiji Is.	5.1
	19	01	13	09	USCGS 15.0S 167.4E; New Hebrides Is.	-
	19	08	08	22	USCGS 42.7S 16.0W; S. Atlantic Ridge.	5.2
	19	09	04	27	USCGS 42.6S 16.0W; S. Atlantic Ridge.	5.6
	19	12	23	52	USCGS 38.2N 26.6W; Azores Is.	4.6
X	19	20	24	59	26.3S 27.3E; Witwatersrand.	3.4
	19	23	25	44	USCGS 12.2N 143.8E; S. of Mariana Is.	5.3
	20	01	01	31	USCGS 56.1S 27.4W; S. Sandwich Is. region.	5.1
	20	10	18	01	USCGS 38.3N 26.6W; Azores Is.	5.1
	20	12	25	10	USCGS 15.7S 172.6W; Samoa Is. region.	5.7
X	20	13	55	05	7.1S 38.8E; W. of Dar-es-Salaam, Tanzania.	5.0

APR 1968

	Date	h	m	s	Epicentre: Remarks	Mag
	20	14	35	11	7.1S 38.8E; W. of Dar-es-Salaam, Tanzania.	3.7
	20	19	50	31	USCGS 19.9S 11.8W; S. Atlantic Ridge.	4.9
	20	21	51	43	USCGS 19.3S 11.8W; S. Atlantic Ridge.	4.8
	20	22	12	54	USCGS 19.9S 11.9W; S. Atlantic Ridge.	4.7
	21	06	21	08	9.1S 32.2E; Zambia-Tanzania Border.	3.6
	21	08	34	03	USCGS 38.6N 143.0E; Off E. Coast of Honshu Japan	5.3
	21	09	24	35	USCGS 23.4S 70.5W; Near Coast N. Chile.	5.5
	21	10	42	20	4.0S 33.0E; S. of Lake Victoria.	3.6
	21	11	04	58	28.2S 26.4E; O.F.S. Goldfields.	3.3
	22	23	17	55	16.9S 40.2E; Offshore N. Mocambique.	3.0
	23	06	45	11	USCGS 36.3N 71.2E; Afghanistan-USSR Border reg.	5.2
	23	12	39	47	USCGS 27.7N 56.7E; S. Iran.	5.1
	23	20	29	15	USCGS 58.7N 150.0W; Gulf of Alaska.	6.3
	23	22	04	01	15.4S 29.9E; Zambezi-Luangwa Confluence area.	2.4
	24	03	04	17	USCGS 5.1S 68.3E; Chagos Archipelago region.	4.9
	24	08	18	03	USCGS 39.3N 24.9E; Aegean Sea.	5.2
	24	19	31	49	USCGS 5.0S 68.4E; Chagos Archipelago region.	5.2
	24	19	45	21	24.4S 37.2E; S. Mocambique Channel.	3.6
	24	23	44	46	USCGS 6.9S 129.2E; Banda Sea.	5.1
	25	05	05	46	17.0S 40.1E; Offshore N. Mocambique.	3.1
	25	21	25	36	USCGS 15.2S 173.1W; Tonga Is.	5.2
	26	00	42	35	USCGS 15.3S 173.1W; Tonga Is.	5.3
	26	02	58	22	USCGS 35.1N 50.2E; Iran.	5.3
	26	11	54	48	USCGS 14.4S 70.5W; Peru.	4.9
	26	13	15	23	USCGS 0.2S 18.2W; Central Mid-Atlantic Ridge.	5.2
	26	15	00	00	USCGS 37.3N 116.5W; S. Nevada.	6.3
	26	17	48	02	USCGS 18.7N 103.3W; Near Coast of Michoacan, Mexico.	5.5
	26	22	40	05	11.6S 34.1E; Central Lake Malawi area.	3.2
	27	00	49	37	16.6S 28.4E; Kariba.	2.6
	27	10	58	21	USCGS 10.5S 165.1E; Santa Cruz Is.	5.1
	27	12	15	06	26.4S27.3E; Witwatersrand.	2.8
	27	12	37	33	26.3S 27.4E; Witwatersrand.	2.8
	27	12	38	05	26.4S 27.3E; Witwatersrand.	2.8
	28	04	18	16	USCGS 44.8N 174.5E; N. Pacific Ocean.	5.5
	28	10	03	31	USCGS 11.8N 88.8W; Off Coast of Central America.	4.9
	28	16	07	18	26.3S 27.6E; Witwatersrand.	2.9
	28	20	13	37	USCGS 45.5N 27.8W; N. Atlantic Ridge.	4.5
	29	00	21	37	USCGS 39.5N 122.1W; N. California.	5.0
	29	00	43	14	USCGS 14.0N 144.7E; Mariana Is.	5.0

APR 1968

	Date	h	m	s	Epicentre; Remarks	Mag
X	29	05	57	11	26.2S 28.1E; Witwatersrand.	3.0
	29	09	32	57	USCGS 21.3S 179.5W; Fiji Is. region.	4.5
X	29	10	28	31	26.5S 27.2E; Witwatersrand.	3.0
	29	17	01	58	USCGS 39.2N 44.3E; NW Iran-USSR Border region.	5.3
X	30	00	53	18	15.1S 26.8E; Mumbwa area, Zambia.	3.3
	30	01	42	59	USCGS 54.3N 159.5E; Near E. Coast, Kamchatka.	5.1
X	30	09	09	40	21.6S 33.6E; Save Valley, S. Mocambique.	3.6
X	30	19	29	55	8.7S 29.1E; Lake Mweru.	3.1
	30	23	51	18	USCGS 38.4S 71.1W; S. Chile-Argentina Border region.	5.9

KRR not operating 01 to 10

LIST OF RECORDED PHASES: 01 to 02 APR 1968 - 1

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region:	Remarks
01	BUL	e	00	35	16		0.2	Distant	
	BHA	e			20		0.2		
		e			30				
01	CLK	eP	00	56	10		0.4	Distant	
		iPP	01	00	29	C	2.0		
		iSKS		06	52				
		ePKKP		12	12				
	BHA	eP	00	56	37		0.3		
		iP'	01	00	50	C	0.7		
		ePP		01	18				
		eSKS		07	12				
		iPKKP		11	57				
	BUL	eP	00	56	52		0.3		
		iP'	01	00	48	R	1.6		
		iPP		01	28				
		eSKS		07	24				
		ePKKP		11	48				
01	BHA	ePn	03	59	41		6.	N.E. Lake Victoria.	
		iSn	04	02	19				
		iSgSg		03	50				
		iL			58				
	CLK	ePn	03	59	44		3.5		
		iSgSg	04	04	01				
		iL			10				
	BUL	eP		00	46		2.2		
		eS		04	20				
		iL		06	48				
01	CLK	eP	07	31	06		0.4	Distant	
		i			39				
	BUL	eP			53		0.4		
		i		32	35				
01	BHA	ePn	11	10	52		1.7	Lake Tanganyika.	
		eSn		12	28				
		eSg		13	21				
	BUL	eP		12	07		0.4		
		eL		16	25				
	CLK	eL		14	47		0.5		
01	BUL	ePn	14	10	01		0.5	W. Witwatersrand.	
		eSn		11	11				
		eS*			25				
		eSg			44				
01	BUL	ePn	20	50	14		0.3	O.F.S. Goldfields.	
		eSn		51	42				
		eSg		52	26				
02	BHA	iPn	20	27	35		9.	Kariba.	
		iP*			37				
		iSn		28	00				
		iSg			05				
	BUL	iPn		27	54		4.6		
		iPg		28	05				
		iSn			35				
		iS*			46				
		iSg			51				
	CLK	ePn			35		2.2		
		eSn		29	42				
		iSg		30	24				

LIST OF RECORDED PHASES: 03 to 06 APR 1968 - 2

Date	Stn	Phase	G h	M m	T s	R/C	DA mm	Epicentral region:	Remarks
03	BUL	ePn	14	56	12		0.4	Witwatersrand	
		eSg		57	54				
03	CLK	eP'	16	43	57		0.2	Distant	
	BHA	eP'		44	02		0.2		
		ePP		46	35				
		eSKP		47	30				
	BUL	eP'		44	11		0.2		
04	CLK	iP	01	53	21	C	0.4	Distant	
		i			26				
	BHA	iP			46	C	0.3		
		e			58				
	BUL	eP		54	15		0.4		
04	BUL	eiP'	09	19	42	cR	0.6	Distant	
04	BUL	iP	10	10	45	C	0.3	Distant	
	BHA	eP		11	18		0.2		
	CLK	eP			36		0.2		
04	BHA	ePn	16	34	29		2.4	N. of Lake Tanganyika.	
		iSn		36	26				
		iSg		37	36				
		iL			43				
	CLK	ePn		35	03		1.9		
		eSn		37	28				
		eSg		38	53				
	BUL	eP		35	46		0.6		
		eS		38	42				
		eL		40	42				
04	BUL	ePn	21	29	18		0.3	O.F.S. Goldfields.	
		eSg		31	30				
04	BUL	iP	22	19	41	R	0.6	Distant	
		ipP		20	10				
	BHA	eP		19	52		0.3		
		epP		20	21				
	CLK	eP			19		0.2		
05	BHA	e	02	19	46		0.2	Distant	
	BUL	e			46		0.2		
05	BHA	eP'	19	50	48		0.2	Distant	
		eSKP		53	38				
	CLK	eP'		50	51		0.1		
	BUL	eP'			53		0.2		
06	BHA	ei	05	44	31	rC	1.0	Distant	
	BUL	e			37		0.2		
06	BHA	iPg	09	06	06		1.8	Kariba.	
		iSg			36				
	BUL	ePg			29		0.6		
		iSg		07	16				
06	BHA	iPg	12	55	20		2.6	Kariba.	
		eSn			43				
		iSg			49				
	BUL	ePg			43		1.2		
		eSn		56	14				
		eS*			24				
		iSg			29				

LIST OF RECORDED PHASES: 07 to 09 APR 1968 - 3

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region:	Remarks
07	CLK	eP'	04	59	33		0.3	Distant	
		ePP	05	01	56				
		eSKP		03	04				
	BHA	eP'	04	59	37		0.3		
		ePP	05	02	12				
		iSKP		03	07				
	BUL	eP'	04	59	50		0.2		
		ePP	05	02	44				
07	BUL	iPn	05	15	47		2.3	Witwatersrand.	
		iSn		16	56				
		eS*		17	10				
		iSg			29				
	BHA	ePn			03		0.3		
		iSn		19	12				
		eSg		20	24				
	CLK	ePn		17	13		0.3		
		eSn		19	30				
		eSg		20	44				
07	CLK	eP	07	59	31		0.2	Distant	
	BUL	iP	08	00	01	R	0.5		
	BHA	eP			05		0.2		
08	BUL	eP'	02	32	40		0.2	Distant	
	BHA	eP'			50		0.2		
		iSKP		35	29				
08	BUL	eiP	14	34	05	eR	1.0	Distant	
		ipP			11				
	CLK	eP			49		0.4		
		ipP			55				
	BHA	eP			52		0.7		
		ipP			58				
08	BUL	iPn	15	31	00		3.0	Witwatersrand.	
		eSn		32	08				
		iSg			43				
	BHA	iPn			16	C	0.4		
		eSn		34	26				
		iSg		35	36				
		iL			47				
	CLK	ePn		32	27		0.5		
		eSn		34	44				
		eSg		35	55				
		iL		36	08				
09	BHA	eP'	02	48	32		1.2	Distant	
		e		51	43				
	BUL	iP'		48	41	C	5.6		
		e		49	13				
	CLK	iP'		48	45	C	2.8		
		ipP'			51				
09	BHA	eP'	03	23	28		0.2	Distant	
	BUL	eP'			35		0.5		
		ipP'			38				
	CLK	iP'			42	C	0.4		
		ipP'			45				
09	BUL	eP	07	08	14		0.3	Distant	
		epP			20				
	BHA	eP			26		0.3		
		epP			31				

LIST OF RECORDED PHASES: 09 to 11 APR 1968 - 4

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region:	Remarks
09	CLK	iP'	11	45	45	C	0.4	Distant	
		iSKP		48	17				
	BUL	eP'		45	46		0.6		
		eSKP		48	18				
	BHA	eP'		45	56		0.5		
		eSKP		48	31				
09	BUL	ePn	12	24	40		1.7	Witwatersrand.	
		iSg		26	18				
	BHA	eSg		29	16		0.3		
	CLK	eSg			25		0.3		
10	BHA	eP	01	23	16		0.2	Distant	
	CLK	eP			42		0.2		
	BUL	eP			45		0.3		
10	BUL	e	08	28	06		0.2	Distant	
	BHA	e			11		0.2		
10	KRR	e	11	02	22		0.2	Distant	
	BUL	e			25		0.2		
10	BUL	iP	16	54	25	C	0.6	Distant	
	KRR	eP			39		0.3		
	BHA	iP			44	C	0.6		
		ipP			53				
10	BUL	ePn	18	44	07		0.3	O.F.S. Goldfields.	
		eSn		45	33				
		eSg		46	19				
	KRR	eP		44	51		0.2		
		eL		48	09				
10	BUL	e	18	51	03		0.4	Distant	
	BHA	e			04		0.1		
	KRR	e			06		0.4		
10	BUL	i	19	30	47	R	0.5	Distant	
	KRR	e			47		0.2		
	BHA	e			50		0.2		
11	CLK	iP	03	47	36	C	1.2	Distant	
	KRR	iP		48	05	C	1.8		
	BUL	iP			10	C	1.9		
	BHA	iP			11	C	0.7		
11	BUL	e	11	54	06		0.1	Distant	
	KRR	e			07		0.2		
11	BUL	iP	17	26	06	C	0.6	Distant	
		ipP			59				
	BHA	eP			15		0.3		
		ipP		27	09				
	KRR	eP		26	16		0.3		
		epP		27	10				
11	BUL	ePn	18	23	31		1.5	Witwatersrand.	
		eSn		24	37				
		iSg		25	09				
	KRR	ePn		24	16		0.7		
		eSn		25	56				
		iSg		26	51				
	BHA	eSg		28	05		0.3		

LIST OF RECORDED PHASES: 12 to 13 APR 1968 - 5

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region:	Remarks
12	KRR	iPg	01	51	58		1.8	Choma area, Zambia.	
		iSg		52	28				
	BHA	iPg			02		1.6		
		eSg			31				
	BUL	eSg		53	23		0.3		
12	KRR	eP	10	44	35		0.3	Distant	
		e			52				
	BHA	eP			36		0.3		
		e		45	13				
	BUL	eP		44	54		0.2		
		e		45	39				
12	BUL	e	11	35	43		0.2	Distant	
	KRR	e			53		0.2		
12	CLK	eP	13	11	26		0.3	Distant	
	KRR	eP			49		0.2		
		e		12	15				
	BUL	iP		11	53	R	0.3		
	BHA	eP			56		0.2		
12	BUL	ePn	21	08	38		0.6	Witwatersrand.	
		eSn		09	42				
		iSg		10	17				
	KRR	ePn		09	23		0.3		
		iSgSg		12	00				
13	BHA	iPn	02	03	07		4.1	Lake Upemba area, Congo.	
		iSn		04	05				
		iSg			39				
	KRR	iPn		03	41		1.2		
		iSn		05	07				
		eSgSg			54				
		e		06	10				
	CLK	ePn		04	18		1.0		
		eSn		06	10				
		iL		07	21				
	BUL	ePn		04	22		0.6		
		eSn		06	17				
		eSg		07	23				
		eL			30				
13	BUL	ePn	12	25	01		1.0	Witwatersrand.	
		eSn		26	08				
		eSg			39				
		iL			44				
	KRR	ePn		25	47		0.6		
		eSn		27	30				
		eSg		28	20				
	BHA	eSg		29	35		0.2		
13	BHA	ePn	22	33	40		2.2	S. Lake Tanganyika.	
		iSn		34	51				
		iL		35	40				
	KRR	ePn		34	08		0.6		
		iSn		35	42				
	BUL	eS		37	00		0.3		
		eL		38	29				
13	BHA	iP	23	43	04	cR	1.3	Distant.	
		ipP			35				
	KRR	eP			05		0.8		
		ipP			36				
	BUL	iP			19	R	0.5		
		epP			51				

LIST OF RECORDED PHASES: 14 to 16 APR 1968 - 6

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region:	Remarks
14	BHA	e	08	55	54		0.3	Distant	
	KRR	e			54		0.2		
		e		57	00				
	BUL	e		55	59		0.2		
14	CLK	eP	15	05	18		0.2	Distant	
		epP			30				
	BUL	eP			20		0.5		
		ipP			32				
	KRR	eP			24		0.6		
		ipP			36				
	BHA	eP			30		0.3		
		epP			41				
15	CLK	ePn	15	14	33		2.8	Offshore N. Mocambique.	
		eSn		15	25				
		eSg			51				
	KRR	eSg		18	28		0.4		
	BHA	eSg		19	11		0.3		
	BUL	eSg			15		0.3		
16	KRR	e	02	57	29		0.2	Distant	
	BHA	e			32		0.2		
	BUL	e			44		0.2		
16	KRR	i	03	50	12	C	0.4	Distant	
	BUL	e			14		0.1		
16	KRR	eP	04	11	07		0.2	Distant	
		e		13	22				
	BUL	eP		11	22		0.2		
		i		13	36				
16	CLK	eP	04	43	22		0.2	Distant	
	KRR	eP		44	06		0.2		
	BHA	eP			12		0.1		
	BUL	eP			20		0.3		
16	CLK	eP	05	24	23		0.2	Distant	
	KRR	eP			59		0.2		
	BHA	eP		25	04		0.1		
	BUL	eP			14		0.3		
16	CLK	eP	05	35	47		0.2	Distant	
	KRR	eP		36	30		0.2		
	BHA	eP			39		0.2		
	BUL	iP			47	C	0.3		
16	CLK	eP	06	52	30		0.3	Distant	
	KRR	eP		53	14		0.2		
	BUL	eP			29		0.3		
16	KRR	eP	07	48	02		0.2	Distant	
	BUL	eP			18		0.2		
16	CLK	eP	13	11	35		0.3	Distant	
	KRR	eP		12	17		0.3		
	BUL	eP			21		0.3		
16	CLK	iP	14	05	28	C	0.4	Distant	
	KRR	eP		06	12		0.3		
	BHA	eP			17		0.2		
	BUL	iP			26	C	0.4		
16	BUL	ePn	19	14	50		0.5	Witwatersrand.	
		iSg		16	31				
	KRR	ePn		15	35		0.3		
		iL		18	19				

LIST OF RECORDED PHASES: 17 to 18 APR 1968 - 7

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region: Remarks
17	BHA	ePn	04	24	16		1.1	Katavi Swamp, Tanzania.
		eSn		25	44			
		iSg		26	29			
	KRR	eSn			35		0.4	
		eSg		27	35			
	CLK	eSg			25		0.4	
	BUL	iSgSg		29	23		0.2	
17	BHA	eP	09	21	59		0.4	Distant
	KRR	eiP		22	17	rC	0.8	
	CLK	eP			30		0.2	
	BUL	eiP			32	rC	0.6	
17	CLK	iP	10	00	52	C	0.3	Distant
	BHA	eP		01	14		0.2	
	KRR	iP			17	C	0.4	
	BUL	iP			37	C	0.4	
17	BHA	iPg	11	24	04		2.2	Copperbelt, Zambia.
		iSg			26			
	KRR	ePg			54		0.3	
		eSg		25	46			
	BUL	eSg		27	22		0.1	
17	CLK	eP	11	58	05		0.2	Distant
	KRR	eP			49		0.2	
	BHA	eP			55		0.1	
	BUL	iP		59	03	C	0.3	
17	CLK	eP	12	41	56		0.2	Distant
	KRR	eP		42	41		0.2	
	BHA	eP			45		0.1	
	BUL	eP			55		0.2	
17	CLK	eP	13	21	38		1.8	Distant
	BHA	eP			54		0.8	
	KRR	iP		22	03	C	1.3	
	BUL	iP			23	C	2.4	
17	BHA	ePn	16	58	20		3.0	Upper Kafue Valley.
		iPg			24			
		eSn			45			
		iSg			49			
	KRR	ePn			50		1.0	
		ePg		59	04			
		iSn			35			
		iSg			54			
		iL			59			
	BUL	eL	17	01	14		0.2	
	CLK	eL		02	09		0.2	
18	BUL	eP	04	55	37		0.2	Distant
	KRR	iP			45	R	1.2	
	BHA	eP			56		0.6	
18	CLK	ePn	06	44	07		2.8	Mocambique Channel.
		eSn		45	04			
		iS*			16			
		iSg			30			
	KRR	eL		48	01		0.3	
	BUL	eL			48		0.2	
	BHA	eL			51		0.2	

LIST OF RECORDED PHASES: 18 to 20 APR 1968 - 8

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region:	Remarks
18	BUL	eP'	10	17	33		0.3	Distant	
	KRR	eP'			38		0.3		
		iSKP		20	39				
	BHA	eP'		17	44		0.2		
		iSKP		20	50				
18	BHA	ei	13	47	27	cR	0.3	Distant	
	KRR	e			30		0.2		
	BUL	e			46		0.2		
18	BHA	eP'	14	24	31		0.1	Distant	
	KRR	eP'			34		0.2		
	BUL	eP'			38		0.4		
	CLK	eP'			46		0.2		
19	BUL	e	01	31	58		0.2	Distant	
	KRR	e		32	01		0.2		
19	BUL	iP	08	16	25	C	0.5	Distant	
		ipP			31				
	KRR	iP			49	C	0.4		
		ipP			55				
	BHA	iP			54	C	0.4		
		ipP		17	00				
	CLK	iP			24	C	0.4		
		epP			30				
19	BUL	iP	09	12	28	C	1.9	Distant	
		ePP		14	15				
		eS		19	06				
	KRR	iP		12	53	R	1.5		
	BHA	eiP		13	00	rC	1.3		
	CLK	eP			28		1.2		
19	BHA	eP	12	35	23		0.1	Distant	
	KRR	eP			39		0.2		
	BUL	eP			49		0.2		
19	BUL	iPn	20	26	32	C	1.1	Witwatersrand.	
		eSn		27	41				
		iSg		28	15				
	KRR	ePn		27	17		0.6		
		eSn		29	01				
		iSg			56				
		iL		30	01				
	CLK	iSg		31	30		0.3		
19	KRR	e	23	44	30		0.2	Distant	
	BUL	e			32		0.2		
		e			44				
20	KRR	e	07	24	55		0.3	Distant	
	BUL	i		25	10	C	0.2		
	BHA	e			10		0.4		
20	BUL	e	07	27	44		0.3	Distant	
		e			53				
	KRR	e		08	00		0.7		
		i			09				
	BHA	e			05		0.4		
		e			14				
20	BHA	eP	10	29	33		0.3	Distant	
	KRR	eP			47		0.4		
	BUL	eP			57		0.6		
	CLK	eP		30	04		0.3		

LIST OF RECORDED PHASES: 20 APR 1968 - 9

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region:	Remarks
20	KRR	eP	12	39	12		0.2	Distant	
		epP			28				
	BUL	iP			17	C	0.4		
	BHA	iP			18	C	0 3		
20	CLK	eP'	12	44	36		0.2	Distant	
		epP'			48				
	BUL	eP'			36		0.5		
		ipP'			56				
		eSKP		48	02				
	KRR	eP'		44	37		0.7		
		epP'			49				
	BHA	iP'			42	C	2.3		
		ipP'			55				
20	CLK	ePn	13	57	18		22.	W. of Dar-es-Salaam, Tanzania.	
		iSn		58	56				
		iSg		59	54				
	BHA	ePn		58	02		17.		
		iSn	14	00	12				
		iSgSg		01	32				
		iL			47				
	KRR	eiPn	13	58	09	cR	6.5		
		iSn	14	00	28				
		iL		02	00				
	BUL	eP	13	58	49		6.7		
		iS	14	01	39				
		eL		03	41				
20	CLK	ePn	14	37	24		1.0	W. of Dar-es-Salaam, Tanzania.	
		iSn		39	00				
		iSgSg		40	02				
	BHA	ePn		38	08		0.7		
		eSn		40	15				
		iL		41	44				
		i			52				
	KRR	eP		38	15		0.4		
		eS		40	32				
		e		42	05				
	BUL	eP		38	58		0.3		
		eS		41	45				
20	BUL	e	19	26	38		0.2	Distant	
	KRR	e			49		0.3		
	BHA	e			56		0.1		
20	BUL	eP	19	57	47		0.7	Distant	
		ipP			53				
	BHA	eP			57		0.4		
		epP		58	02				
	KRR	eP		57	59		0.4		
		epP		58	05				
	CLK	eP			43		0.2		
		epP			48				
20	BUL	eP	21	59	01		0.3	Distant	
	BHA	eP			09		0.2		
	KRR	eP			14		0.2		
	CLK	eP			59		0.2		
20	BUL	eP	22	20	08		0.4	Distant	
	BHA	eP			20		0.2		
	KPR	eP			22		0.3		
	CLK	eP		21	06		0.2		

LIST OF RECORDED PHASES: 21 to 23 APR 1968 - 10

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region: Remarks
21	BHA	ePn	06	22	43		6.0	Zambia-Tanzania Border.
		eSn		23	53			
		iSg		24	27			
	CLK	ePn		22	52		1.2	
		iSn		24	09			
		iSg			49			
	KRR	ePn		23	06		1.3	
		eSn		24	30			
		eSg		25	15			
		iL			20			
	BUL	eP		23	50		0.4	
		eS		25	(50)			
		iL		27	09			
21	BHA	eP'	08	52	48		0.2	Distant
		ePP		53	03			
	KRR	eP'		52	49		0.3	
		ePP		53	09			
	BUL	eP'		52	53		0.3	
		ePP		53	22			
	CLK	ePP			29		0.2	
21	BUL	i	09	37	33	C	0.4	Distant
	KRR	e			44		0.2	
	BHA	e			45		0.2	
21	BHA	eP	10	45	(00)		1.0	S. of Lake Victoria.
		eS		47	04			
		eL		48	20			
	KRR	eP		45	27		0.3	
		eS		47	46			
		iL		49	17			
	CLK	iL		48	38		0.4	
	BUL	eL		51	10		0.2	
21	BUL	iPn	11	06	49		0.4	S.F.S. Goldfields.
		iSn		08	18			
		eSg		09	03			
	KRR	iPn		07	32		0.3	
		eSn		09	36			
		iSg		10	44			
	BHA	ePn		08	03		0.2	
		eSgSg		11	57			
	CLK	eSg		12	14		0.2	
22	CLK	ePn	23	19	09		1.3	Offshore N. Mocambique.
		eSn		20	02			
		eSg			27			
	KRR	eSg		23	02		0.2	
	BHA	eSg			52		0.2	
	BUL	eL			57		0.2	
23	CLK	iP	06	55	23	C	1.3	Distant
	BHA	iP			40	C	0.6	
	KRR	iP			48	C	2.0	
	BUL	iP		56	08	C	2.0	
23	CLK	eP	12	48	24		0.8	Distant
		e		50	20			
	BHA	eP		48	40		0.2	
	KRR	eP			49		0.6	
	BUL	eP		49	13		0.4	

LIST OF RECORDED PHASES: 23 to 25 APR 1968 - 11

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region:	Remarks
23	BHA	iP'	20	48	35	R	0.7	Distant	
		iSKP		51	13				
		ePKS		52	10				
	CLK	iP'		48	36	R	0.6		
		iSKP		51	26				
		iPKS		52	12				
	KRR	iP'		48	38	R	0.6		
		iSKP		51	27				
	BUL	ePKIKP		48	38				
		iP'			44	R	1.3		
		ePP		50	29				
		iSKP		51	47				
		iPKS		52	25				
23	KRR	iP	22	04	27		3.7	Zambesi-Luangwa Confluence area.	
		iS			46				
	BHA	eP			29		3.4		
		iS			49				
	BUL	eSn		06	07		0.4		
		eSg			34				
	CLK	eSg			30		0.4		
24	CLK	iP	03	11	05	C	0.4	Distant	
	KRR	eP			48		0.3		
	BHA	eP			54		0.2		
	BUL	iP		12	03	C	0.7		
24	BHA	eiP	08	27	25	cR	0.3	Distant	
	CLK	eiP			39	cR	0.4		
	KRR	iP			43	C	1.7		
		ipP			51				
	BUL	iP		28	05	C	0.6		
24	CLK	iP	19	38	37	C	0.5	Distant	
	KRR	iP		39	20	C	0.4		
	BHA	iP			26	C	0.3		
		ePP		41	09				
	BUL	iP		39	35	C	0.5		
		ePP		41	31				
24	BUL	iPn	19	47	29		0.8	S. Mocambique Channel.	
		eSn		49	03				
		eL		50	11				
	CLK	ePn		47	29		0.7		
		eSn		49	03				
	KRR	ePn		47	46		0.6		
		eSn		49	34				
		eL		50	47				
	BHA	ePn		48	23		0.3		
24	CLK	eP	23	57	55		0.2	Distant	
		e		58	31				
	KRR	eP			15		0.2		
		e			55				
	BUL	eP			18		0.2		
	BHA	eP			36		0.1		
25	CLK	ePn	05	07	(00)		4.	Offshore N. Mocambique.	
		iSn			54				
		iSg		08	19				
	KRR	eL		11	02		0.2		
	BHA	eL			38		0.2		
	BUL	eL			39		0.2		

LIST OF RECORDED PHASES: 25 to 27 APR 1968 - 12

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region:	Remarks
25	CLK	eP'	21	44	57		0.2	Distant	
	KRR	eP'			59		0.2		
		eSKP		48	05				
	BUL	eP'		45	01		0.3		
	BHA	eP'			07		0.5		
		eSKP		48	31				
26	CLK	eP'	01	01	54		0.2	Distant	
	KRR	eP'			57		0.3		
		eSKP		05	34				
	BUL	eP'		02	01		0.3		
	BHA	eP'			06		0.8		
26	CLK	eP	03	07	36		0.3	Distant	
	BHA	eP			43		0.3		
	KRR	eP			55		0.3		
	BUL	iP		08	30	C	0.5		
26	BUL	iP'	12	07	40	R	0.6	Distant	
		iSKP		11	25				
	BHA	eP'		07	49		0.3		
	KRR	eP'			50	0.2			
26	BHA	eP	13	24	04		0.5	Distant	
	BUL	iP			15	C	0.9		
		i			23				
		ipP			31				
	KRR	iP			16	C	0.8		
		ipP			31				
	CLK	iP			51	C	0.3		
		ipP		25	06				
26	BHA	iP	15	19	27	R	1.0	Distant	
	KRR	iP			35	R	5.9		
	BUL	iP			39	C	11.3		
	CLK	iP			44	C	5.2		
26	BHA	eP'	18	07	02		0.3	Distant	
		ipP'			16				
		ePP		09	43				
	KRR	eP'		07	03		0.3		
		ipP'			17				
	BUL	eP'			11		0.3		
	CLK	eP'			21		0.2		
26	CLK	ePn	22	41	09		1.4	Central Lake Malawi area.	
		ePg			19				
		eSn			55				
		eSg		42	16				
	BHA	ePn		41	36		1.1		
		eSn		42	41				
		iSg		43	12				
	KRR	eSg			28		0.8		
	BUL	eSg		45	09		0.3		
27	KRR	iP	00	50	00		10.	Kariba.	
		iS			14				
	BHA	ePg			18		3.3		
		iSg			46				
	BUL	iPg			40		1.1		
		eSn		51	13				
		iSg			26				
	CLK	eSg		52	54		0.4		

LIST OF RECORDED PHASES: 27 to 29 APR 1968 - 13

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region:	Remarks
27	CLK	eP'	11	17	12		0.2	Distant	
	KRR	eP'			20		0.2		
	BUL	eP'			20		0.2		
	BHA	eP'			25		0.2		
27	BUL	ePn	12	16	40		0.4	Witwatersrand.	
		iSg		18	23				
	KRR	eSg		20	05		0.2		
27	BUL	ePn	12	39	06		0.4	Witwatersrand.	
		eSg		40	47				
	KRR	ePn		39	52		0.2		
		eSg		42	29				
27	BUL	ePn	12	39	39		0.4	Witwatersrand.	
		eSg		41	23				
		eSgSg		43	08		0.2		
27	CLK	eP	16	32	35		0.2	Distant	
	BHA	eP		33	02		0.1		
	KRR	eP			05		0.2		
	BUL	eP			32		0.2		
28	CLK	eP'	04	37	30		0.2	Distant	
	KRR	ePKIKP			31		0.4		
		iP'			42				
		ipP'			55				
	BHA	eP'			39		0.3		
	BUL	eP'			45				
28	CLK	eP	07	14	57		0.2	Distant	
	KRR	iP		15	28	C	0.3		
	BHA	iP			29	C	0.3		
	BUL	eP			41		0.2		
28	BHA	eP'	10	22	18		0.2	Distant	
		e			27				
	BUL	eP'			18		0.2		
		e			27				
	KRR	eP'			20		0.3		
		e			29				
	CLK	eP'			31		0.2		
		e			40				
28	BUL	ePn	16	08	49		0.4	Witwatersrand.	
		eSn		09	56				
		eSg		10	29				
	KRR	eSg		12	13		0.3		
28	BHA	eiP	20	25	36	rC	0.3	Distant	
	KRR	eiP			49	rC	0.3		
	BUL	eiP		26	00	rC	0.3		
	CLK	eP			02		0.2		
29	BHA	iP'	00	41	10	C	0.4	Distant	
		ipP'			18				
	KRR	iP'			19	C	0.4		
		ipP'			27				
	CLK	eP'			20		0.4		
		epP'			28				
	BUL	eP'			22		0.4		
		epP'			31				
29	KRR	e	01	01	43		0.2	Distant	
	BHA	e			45		0.2		
	BUL	e			45		0.2		

LIST OF RECORDED PHASES: 29 to 30 APR 1968 - 14

Date	Stn	Phase	G h	M m	T s	R/C	DA mm	Epicentral region:	Remarks
29	BUL	ePn	05	58	40		0.6	Witwatersrand.	
		eSn		59	48				
		eSg	06	00	16				
	KRR	ePn		59	25		0.4		
		eSg		01	56				
29	BUL	eP'	09	50	58		0.2	Distant	
		eSKP		53	27				
	KRR	eP'		51	03		0.3		
		eSKP		53	36				
	CLK	eSKP			27		0.1		
29	BUL	ePn	10	30	06		0.5	Witwatersrand.	
		eSn		31	16				
		iSg			48				
	KRR	ePn		30	51		0.3		
		eSn		32	36				
		eSg		33	32				
29	BUL	iP	14	44	53	C	0.3	Distant	
	KRR	eP		45	21		0.3		
	CLK	eP			39		0.2		
	BHA	eP			43		0.2		
29	CLK	eP	17	11	30		0.3	Distant	
	BHA	iP			31	R	0.3		
	KRR	eP			44		0.3		
	BUL	eP		12	08		0.6		
30	BHA	iPn	00	53	46	C	16.	Mumbwa area, Zambia.	
		iPg			48				
		iSn		54	06				
	KRR	iPn			05		12.2		
		iPg			14				
		iSn			38				
		iSg			51				
	BUL	ePn			36		2.1		
		eSn		55	34				
		eSg		56	02				
	CLK	ePn		55	09		2.0		
		eSn		56	33				
		iL		57	23				
30	CLK	eP'	02	01	40		0.2	Distant	
	BHA	eP'			46		0.2		
	KRR	eP'			47		0.3		
		eSKP		05	23				
	BUL	eSKP			05		0.2		
30	BUL	iP	09	10	54		4.7	Save Valley, S. Mocambique.	
		eSn		11	44				
		iSg		12	09				
	KRR	ePn		11	05		4.8		
		iSn		12	08				
		iSg			38				
	CLK	ePn		11	10		1.2		
		iSn		12	13				
		iSg			48				
	BHA	ePn		11	43		1.3		
		iSn		13	12				
		eSg		14	00				
30	BHA	ePn	19	31	29		1.0	Lake Mweru.	
		eSn		32	31				
		iSg		33	01				
	KRR	ePn		32	03		0.4		
		eSn		33	30				
		eSg		34	12				
	CLK	eL			47		0.3		
	BUL	eL		36	00		0.2		

PBD
VW

9 SEP 1968

RHODESIA METEOROLOGICAL SERVICES

SEISMOLOGICAL BULLETIN

The following stations contribute records for analysis and publication in this Bulletin:

KABWE (BHA): (Broken Hill)	14° 26.8' S; 28° 28.1' E; Alt. 1206 m.
Litho. foundation:	Dolomite and shales of the Middle Katanga System.
Authority:	Zambia Meteorological Service.
Instrument:	Three-component Willmore one-second seismograph. Nominal magnification 20,000.
CHILEKA (CIK):	15° 40.8' S; 34° 58.6' E; Alt. 781 m.
Litho. foundation:	Charnockitic granulites of the Basement Complex.
Authority:	Malawi Meteorological Service.
Instrument:	Three-component Willmore one-second seismograph. Nominal magnification 20,000.
KAROI (KRR):	16° 51.1' S; 29° 37.1' E; Alt. 1380 m.
Litho. foundation:	Granitic gneisses of the Zambesi type.
Authority:	Rhodesia Meteorological Service.
Instrument:	Vertical Willmore one-second seismograph. Nominal magnification 20 000.
BULAWAYO (BUL):	20° 08.6' S; 28° 36.8' E; Alt. 1341 m.
Litho. foundation:	Hornblend schists of the Bulawayan System.
Authority:	Rhodesia Meteorological Service.
Instruments:	Three-component Willmore one-second seismograph. Nominal magnification 20,000.
	WWSS Station: SP magnification 100,000 LP magnification 1,500
CHIREDZI (CIR):	21° 00.8' S; 31° 34.8' E; Alt. 430 m.
Litho. foundation:	Gneisses or Charnockites of the Limpopo belt.
Authority:	Rhodesia Meteorological Service.
Instrument:	Vertical Willmore one-second seismograph. Nominal magnification 20,000.

Analysis Centre: Coetz Observatory, Meteorological Service, P. O. Box 562, Bulawayo, Rhodesia.

CRITERIA FOR PUBLICATION

To qualify for publication an earthquake must be of magnitude 2 or more. Also, in the case of local earthquakes (nearer than approx. 30°), at least one station must record a clear P phase. In the case of distant earthquakes, at least two stations must record clear P or P' phases.

DISTANCES

Distances of local earthquakes are determined by means of travel-time curves developed at this Centre. For distant earthquakes, the standard Jeffreys-Bullen tables are used.

Where given, distances are in degrees (1° = 111.11 Km).

GLOSSARY

The following terms are used in the List and Bulletin:

h m s	Hours, minutes and seconds of GMT (UT). In the List of Phases, times of arrival of the phases at each station are given. In the Bulletin, the time of occurence of the earthquake is given.
GM	Character and direction of the first ground motion of P or P'.
e	Emersio: the phase emerges gradually from the background.
i	Impetus: the phase is impulsive and clearly defined.
ei	The phase shows an emergent beginning, followed by a sharp increase in amplitude.
R	The first motion is downwards, or towards the epicentre; the motion is rarefactional. A lower case r indicates a weakly rarefactional first motion.
C	The first motion is upwards, or away from the epicentre; the motion is compressional. A lower case c indicates a weakly compressional first motion.
DA	The double-amplitude (peak-to-peak) of the record in millimetres. The double-amplitude is written on the same line as the phase to which it refers; usually P or P' in distant earthquakes, and the S-L complex (the "maximum amplitude") in local earthquakes. In some cases a double-amplitude is given for more than one phase.
Distant	The epicentre is more than about 30° from the approximate centre of the local station network (17S 30E).
Mag	Magnitude. Locally determined magnitudes are based on the double-amplitude of the S-L complex, after Richter (1935). However, the station constants have been adjusted to make the local magnitudes agree as closely as possible with magnitudes published by USCGS. The local magnitudes can therefore be taken as corresponding to m_b of Gutenberg and Richter (1956).
MM	Intensity on the Modified Mercalli Scale.
USCGS	United States Coast and Geodetic Survey. Under "Epicentre", this indicates that the epicentral and magnitude data are taken from the USCGS determinations.
?	Indicates an uncertain statement.
( )	The estimated uncertainty in the bracketted quantity is between 3 and 10 units of the last digit quoted. E.g., a latitude given as (16.4S) is thought to be uncertain by between 0.3 and 1.0 degree: i.e. certainly between 15.4S and 17.4S, and probably between 16.1S and 16.7S.

MAY 1968

Date	h	m	s	Epicentre: Remarks	Mag
01	04	31	10	USCGS 2.9S 128.0E; Ceram Sea.	5.4
01	06	11	46	26.4S 27.1E; Witwatersrand.	3.1
01	08	43	47	USCGS 38.6N 143.1E; Off Coast of Honshu, Japan.	5.3
01	14	35	50	USCGS 0.3S 122.8E; N. Celebes.	4.9
01	21	19	41	8.4S 31.4E; S. Fipa Plateau, Tanzania.	3.6
02	00	26	03	USCGS 26.2N 92.2E; E. India.	4.8
02	01	38	32	9.4S 26.0E; Lake Upemba area, Congo.	2.7
02	02	41	15	21.4S 33.4E; Save Valley, Mocambique.	2.5
02	05	29	38	USCGS 18.8N 69.6W; Dominican Republic region.	5.8
02	07	58	05	USCGS 36.3N 34.1W; Azores Is. region.	4.9
02	23	26	04	USCGS 6.4S 129.9E; Banda Sea.	5.5
03	00	18	09	USCGS 22.9S 68.0W; N. Chile.	4.6
03	02	13	28	27.0S 26.7E; N. Orange Free State.	3.6
03	06	01	29	USCGS 47.4S 13.2W; S. Atlantic Ridge.	5.0
03	16	13	40	USCGS 54.2N 163.3W; Unimak Is. region.	5.0
03	18	27	18	USCGS 48.7S 107.4E; S.E. Indian Rise.	-
04	11	54	32	26.4S 27.3E: Witwatersrand.	3.0
04	14	03	47	26.5S 27.3E: Witwatersrand.	3.1
05	00	36	54	13.3S 35.2E; Vila Cabril area, N. Mocambique.	2.6
06	11	25	56	14.2S 27.0E; Lukanga Swamp, Zambia.	2.5
06	11	12	00	USCGS 51.7N 173.4W; Andreanof Is., Aleutians.	4.1
06	14	37	50	USCGS 14.6N 90.8W; Guatemala.	5.1
06	17	13	19	4.3S 30.4E; N. Sagara Swamp, Tanzania.	3.6
06	20	49	45	USCGS 36.5N 70.8E; Hindu Kush region.	5.0
07	02	29	55	26.4S 27.0E; Witwatersrand.	3.1
07	11	43	32	USCGS 19.2S 177.6W; Fiji Is. region.	4.9
07	16	14	43	USCGS 23.0S 68.6W; N. Chile.	4.6
07	17	53	55	USCGS 18.8S 178.1W; Fiji Is. region.	4.5
07	19	05	36	17.5S 27.2E; S. Lake Kariba.area.	2.2
07	23	39	14	USCGS 13.0N 89.7W; El Salvador.	4.6
08	07	51	20	26.2S 28.3E; Witwatersrand.	3.2
08	11	00	07	USCGS 58.0S 157.7E; Macquarie Is. region.	5.7
08	12	17	13	USCGS 43.6N 127.9W; Off Coast of Oregon.	6.1
08	14	10	50	26.4S 27.0E; Witwatersrand.	3.1
08	15	03	32	26.4S 27.3E; Witwatersrand.	2.9
08	21	53	03	USCGS 43.9N 128.2W; Off Coast of Oregon.	4.6
08	22	17	14	USCGS 43.9N 128.2W; Off Coast of Oregon.	5.0
08	22	45	08	USCGS 37.1N 71.9E; Afghanistan-USSR Border region	5.1
09	03	03	02	USCGS 43.4N 127.0W: Off Coast of Oregon.	5.2
09	07	19	55	USCGS 31.8S 178.7W: Kermadec Is.	5.0
09	12	28	31	USCGS 32.7S 178.1W; S. of Kermadec Is.	4.8

MAY 1968

	Date	h	m	s	Epicentre:	Remarks	Mag
	09	13	28	41	14.2S 35.0E;	S. of Lake Malawi.	3.0
	09	15	41	27	26.3S 27.3E;	Witwatersrand.	3.4
	09	18	03	10	USCGS 16.3N 93.4W;	Chiapas, Mexico.	5.1
	09	18	32	33	USCGS 18.4S 69.4W;	N. Chile.	5.0
	10	05	38	13	26.3S 28.0E;	E. Witwatersrand.	3.8
	10	08	04	15	0.4S 34.3E;	N.E. Lake Victoria.	4.9
	10	15	24	02	USCGS 55.7S 26.8W;	S. Sandwich Is. region.	5.6
	10	17	59	07	USCGS 53.7N 166.9W;	Fox Is., Aleutians.	4.3
	10	22	48	37	USCGS 21.2S 176.6W;	Fiji Is. region.	5.1
	11	12	12	41	USCGS 41.0N 49.8E;	Caspian Sea.	5.0
	11	13	30	06	USCGS 28.8S 63.1W;	Santiago del Estero Province, Argentina.	5.2
	11	15	33	41	USCGS 6.4S 147.3E;	E. New Guinea region.	5.5
	12	13	21	46	USCGS 6.9S 107.0E;	Java.	4.9
	12	18	39	11	USCGS 19.0S 169.8E;	New Hebrides Is.	5.1
	13	02	46	36	USCGS 43.5N 40.3E;	W. Caucasus.	5.1
	13	02	59	25	USCGS 40.2S 73.2W;	Near Coast of Central Chile.	4.8
	13	03	56	09	USCGS 19.0S 169.6E;	New Hebrides Is.	5.1
	13	16	28	16	26.3S 27.4E;	Witwatersrand.	3.0
	14	01	24	31	USCGS 22.3S 171.7E;	Loyalty Is. region.	4.7
	14	05	15	33	20S 46E;	Central Malagasy Republic.	3.5
	14	05	37	05	USCGS 23.8S 176.9W;	S. of Fiji Is.	4.9
	14	13	37	26	15.7S 42.8E;	Mocambique Channel.	3.4
	14	14	05	06	USCGS 29.9N 129.4E;	Ryukyu Is., E. China Sea.	5.9
	15	07	51	18	16.0S 26.0E;	Namwala area, Zambia.	5.2
	15	11	03	16	8.0S 30.6E;	S. Lake Tanganyika.	3.4
	15	11	22	26	5.3S 30.3E;	Central Lake Tanganyika area.	4.6
	15	12	31	28	16.0S 26.1E;	Namwala area, Zambia.	2.9
	15	15	00	30	USCGS 29.8S 179.0W;	Kermadec Is.	5.1
	16	00	48	55	USCGS 40.8N 143.2E;	Off E. Coast of Honshu, Japan	7.9
	16	06	36	51	USCGS 41.1N 143.0E;	Hokkaido, Japan region.	5.7
	16	07	49	01	USCGS 41.3N 142.6E;	Hokkaido, Japan region.	5.1
	16	08	19	57	USCGS 41.1N 142.8E;	Hokkaido, Japan region.	4.8
	16	08	46	40	USCGS 40.9N 143.0E;	Off E. Coast of Honshu, Japan	4.8
	16	08	58	11	USCGS 41.4N 142.7E;	Hokkaido, Japan region.	5.4
	16	10	39	02	USCGS 41.1N 143.0E;	Hokkaido, Japan region.	-
	16	16	13	45	USCGS 39.7N 143.6E;	Off E. Coast of Honshu, Japan	5.6
	16	16	21	53	USCGS 39.7N 143.6E;	Off E. Coast of Honshu, Japan	4.8
	16	18	43	21	USCGS 40.7N 142.1E;	Near E. Coast of Honshu, Japan	5.7
	16	19	16	47	USCGS 41.3N 142.4E;	Hokkaido, Japan region.	5.6
	16	19	45	23	USCGS 12.6N 141.6E;	S. of Mariana Is.	5.2

MAY 1968

	Date	h	m	s	Epicentre; Remarks	Mag
	16	20	22	15	USCGS 41.4N 142.6E; Hokkaido, Japan region.	5.6
X	16	20	28	27	12.4S 30.4E; W. Muchinga Mts., Zambia.	2.2
	16	21	25	56	USCGS 40.9N 143.0E; Off E. Coast of Honshu, Japan	4.8
	16	22	45	19	USCGS 22.8S 68.6W; N. Chile.	5.0
	16	23	04	55	USCGS 39.8N 143.1E; Off E. Coast of Honshu, Japan	5.8
X	16	23	26	16	15.7S 25.9E; Namwala area, Zambia.	3.1
X	17	01	20	03	15.9S 26.1E; Namwala area, Zambia.	2.6
X	17	03	23	03	15.9S 26.1E; Namwala area, Zambia.	2.9
X	17	07	00	39	15.8S 26.0E; Namwala area, Zambia.	3.0
	17	07	57	18	USCGS 22.7S 173.0E; Loyalty Is. region.	5.0
	17	10	42	46	USCGS 39.6N 143.4E; Off E. Coast of Honshu, Japan	5.3
	17	18	17	07	USCGS 39.6N 143.0E; Off E. Coast of Honshu, Japan	5.2
	18	01	02	29	USCGS 55.4S 27.7W; S. Sandwich Is. region.	5.4
	18	05	51	24	USCGS 53.8N 168.3W; Fox Is., Aleutians.	4.5
X	18	06	47	02	26.4S 28.1E; Witwatersrand.	2.8
	18	07	58	35	USCGS 54.1N 164.7W; Unimak Is. region.	4.6
X	18	13	30	34	26.3S 27.4E; Witwatersrand.	3.5
X	18	13	57	34	26.3S 27.4E; Witwatersrand.	3.2
X	18	14	16	45	26.3S 27.2E; Witwatersrand.	3.3
X	19	00	53	27	14.4S 34.1E; Dedza area, Malawi.	2.5
	19	04	12	40	USCGS 35.6N 141.7E; Near E. Coast of Honshu, Japan	5.1
	19	04	49	28	USCGS 17.9S 13.4W; S. Atlantic Ridge.	-
X	19	05	43	03	7.0S 30.3E; Lake Tanganyika.	3.6
	19	08	58	03	USCGS 9.2S 111.9E; S. of Java.	4.6
	19	09	37	30	USCGS 38.5N 15.0E; Sicily.	4.9
	19	12	11	09	USCGS 48.9S 124.5E; S. of Australia.	-
	19	22	16	45	USCGS 40.9N 143.2E; Off E. Coast of Honshu, Japan	5.1
	20	03	16	20	USCGS 40.0N 144.0E; Off E. Coast of Honshu, Japan	5.5
	20	06	53	35	USCGS 40.3N 143.7E; OFF E. Coast of Honshu, Japan	5.2
	20	07	13	03	USCGS 30.9S 178.3W; Kermadec Is. region.	6.0
	20	10	34	17	USCGS 48.8N 154.7E; Kurile Is.	5.4
	20	11	53	55	USCGS 51.9N 158.5E; Near E. Coast of Kamchatka.	5.3
X	20	13	00	14	3.2S 37.5E; Kilimanjaro area, Kenya-Tanzania Bord.	5.0
	20	17	20	22	USCGS 5.0S 153.3E; New Ireland region.	5.3
	20	20	05	49	USCGS 30.7S 178.4W; Kermadec Is. region.	-
	20	20	20	23	USCGS 31.0S 178.1W; Kermadec Is. region.	5.0
	20	21	09	45	USCGS 44.8N 150.3E; Kurile Is. region.	5.8
	20	23	24	27	USCGS 45.0N 150.5E; Kurile Is.	4.4
	21	00	19	35	USCGS 44.8N 150.2E; Kurile Is. region.	5.2
X	21	02	27	42	26.4S 27.2E; Witwatersrand.	3.4

MAY 1968

	Date	h	m	s	Epicentre; Remarks	Mag
X	21	02	42	21	26 4S 27.3E; Witwatersrand.	3.2
	21	03	59	11	USCGS 38.9N 65.2E; S.E. Uzbek, SSR.	5.4
	21	04	11	25	USCGS 41.1N 143.5E; Hokkaido, Japan region.	5.5
	21	07	51	22	USCGS 44.0S 75.5W; Off Coast of S. Chile.	4.5
	21	08	20	01	USCGS 44.9N 150.2E; Kurile Is. region.	5.7
	21	10	52	17	USCGS 20.2N 122.0E; Philippine Is. region.	5.1
	21	11	00	45	USCGS 44.7N 150.2E; Kurile Is. region.	5.1
	21	11	03	57	USCGS 45.0N 150.1E; Kurile Is.	4.9
	21	18	47	31	USCGS 44.8N 150.3E; Kurile Is. region.	5.2
X	21	21	04	47	7.7S 31.6E; N.E. Fipa Plateau, Tanzania.	3.6
	22	00	18	06	USCGS 30.4S 177.8W; Kermadec Is. region.	4.7
	22	05	27	19	USCGS 44.6N 150.7E; Kurile Is. region.	4.5
	22	10	51	53	USCGS 41.5N 142.8E; Hokkaido, Japan region.	5.9
	22	13	21	58	USCGS 38.6N 116.2W; Nevada.	5.1
X	22	14	29	58	26.2S 27.8E; Witwatersrand.	3.1
	22	15	49	26	USCGS 41.2N 143.0E; Hokkaido, Japan region.	4.9
	22	18	36	03	USCGS 33.0N 49.1E; W. Iran.	4.3
	22	18	36	17	USCGS 44.5N 150.3E; Kurile Is. region.	5.0
X	22	19	45	58	22.5S 24.1E; Anderson Vlei, Central Botswana.	3.0
	22	20	01	13	USCGS 44.8N 150.2E; Kurile Is. region.	5.3
	22	21	10	45	USCGS 2.9N 126.5E; Molucca Passage.	5.1
X	22	21	36	33	7S 40E; Off Coast, Tanzania.	3.6
	23	07	42	28	USCGS 44.7N 150.5E; Kurile Is. region.	4.9
	23	17	24	16	USCGS 41.7S 171.9E; S. Island, New Zealand.	6.1
	23	18	33	01	USCGS 44.9N 150.2E; Kurile Is. region.	5.1
	23	18	43	01	USCGS 30.6S 177.7W; Kermadec Is. region.	5.6
	24	11	17	03	USCGS 53.2N 163.1W; Unimak Is. region.	4.5
	24	14	06	24	USCGS 40.9N 143.0E; Off E. Coast of Honshu, Japan	5.6
	24	15	43	54	USCGS 6.8S 118.9E; Flores Sea.	6.0
	24	20	57	27	USCGS 41.8S 172.0E; S. Island, New Zealand.	5.7
	24	21	37	11	USCGS 54.2N 169.3E; Komandorsky Is. region.	5.3
X	24	22	33	48	16.7S 28.4E; Kariba. = 16.7S 28.4E	2.5
	26	04	01	58	USCGS 0.4S 124.0E; Molucca Sea.	5.3
X	26	05	13	44	16.7S 28.4E; Kariba.	3.1
	26	14	41	52	USCGS 63.3S 170.7E; Balleny Is. region.	5.5
	27	19	02	50	USCGS 21.3S 174.5W; Tonga Is.	4.7
X	27	20	03	29	10.1S 41.0E; Offshore S. Tanzania.	(4.0)
	28	01	28	22	USCGS 30.9S 177.4W; Kermadec Is. region.	4.8
	28	02	09	42	USCGS 31.3S 176.8W; Kermadec Is.	4.8
	28	03	33	49	USCGS 31.1S 177.3W; Kermadec Is.	4.7

MAY 1968

	Date	h	m	s	Epicentre; Remarks	Mag
X	28	07	49	57	22.5S 24.1E; Anderson Vlei; Central Botswana.	2.8
	28	09	06	30	USCGS 30.9S 177.8W; Kermadec Is. region.	5.5
	28	13	27	19	USCGS 2.9S 139.3E; Near N. Coast of W. New Guinea.	6.1
	28	22	29	57	USCGS 52.2N 172.8E; Near Is., Aleutians.	5.6
X	29	12	32	31	26.7S 26.5E; Klerksdorp area, Transvaal.	3.1
	29	17	21	53	USCGS 18.6S 169.0E; New Hebrides Is.	5.1
X	29	20	53	22	28.1S 26.7E; O.F.S. Goldfields.	3.8
X	29	21	56	08	26.4S 27.2E; Witwatersrand.	3.1
	30	00	11	17	USCGS 32.6N 48.3E; W. Iran.	4.7
	30	00	36	00	USCGS 42.3N 119.8W; Oregon.	5.1
	30	01	10	30	USCGS 27.8N 54.0E; S. Iran.	5.2
	30	05	23	49	USCGS 44.7N 150.3E; Kurile Is. region.	5.5
X	30	17	27	57	26.4S 27.1E; Witwatersrand.	3.3
	30	17	40	24	USCGS 35.5N 28.0E; E. Mediterranean Sea.	5.3
	30	17	58	41	USCGS 5.2N 126.8E; Mindanao, Philippine Is.	5.1
	30	19	42	25	USCGS 31.0S 177.6W; Kermadec Is.	5.5
	31	18	20	43	USCGS 13.6S 167.2E; New Hebrides Is.	4.9
X	31	21	09	59	26.5S 27.0E; W. Witwatersrand.	3.6

LIST OF RECORDED PHASES: 01 to 02 MAY 1968 - 1

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region; Remarks
01	BUL	iP	00	03	51	C	4.0	Distant
	KRR	iP		04	06	C	4.6	
	BHA	iP			09	C	3.5	
	CLK	eiP			29	cR	0.6	
01	CLK	eP	04	44	19		0.2	Distant
	KRR	eP			41		0.4	
	BUL	iP			45	R	0.2	
	BHA	iP			48	R	0.2	
01	BUL	ePn	06	13	21		0.6	Witwatersrand
		eSn		14	31			
		eSg		15	05			
	KRR	eSg		16	51		0.3	
01	CLK	eP'	09	02	23		0.1	Distant
	BHA	eP'			33		0.2	
	KRR	eP'			33		0.2	
	BUL	iP'			38	R	0.4	
01	KRR	e	14	48	45		0.2	Distant
	BUL	e			50		0.3	
	BHA	e			51		0.2	
01	CLK	eP	20	05	08		0.1	Distant
	KRR	iP			38	C	0.2	
	BHA	eP			44		0.1	
	BUL	iP			44	C	0.3	
01	BHA	ePn	21	21	18		3.0	S. Fipa Plateau, Tanzania
		iSn		22	28			
		iL		23	11			
	CLK	ePn		21	38		1.6	
		eSn		23	01			
		iL			54			
	KRR	ePn		21	44		0.7	
		iSn		23	13			
		iL		24	10			
	BUL	ePn		22	30		0.4	
		eSn		24	34			
		eL		26	00			
02	CLK	iP	00	37	08	C	0.3	Distant
		ipP			23			
	BHA	iP			35	C	0.4	
		ipP			50			
	KRR	eP			37		0.2	
		epP			52			
	BUL	iP			52	C	0.3	
02	BHA	iPn	01	39	54	C	0.5	Lake Upemba area, Congo
		iSn		40	52			
		iSg		41	22			
	KRR	eSg		42	40		0.2	
	CLK	eL		44	13		0.1	
	BUL	eL			23		0.1	
02	BUL	ePn	02	42	23		0.5	Save Valley, Mocambique
		eSg		43	34			
	KRR	eSg		44	10		0.5	
	CLK	eSg			11		0.2	

LIST OF RECORDED PHASES: 02 to 04 May 1968 - 2

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region; Remarks
02	KRR	e	05	43	36		0.2	Distant?
		e			52			
		e		47	48			
	BUL	e		43	57		0.2	
		e		47	47			
	BHA	e		44	13		0.1	
02	BHA	eP	08	10	00		0.2	Distant
	KRR	eP			13		0.3	
	BUL	eP			22		0.3	
	CLK	eP			30		0.2	
02	BUL	eP	17	21	43		0.2	Distant
	KRR	eP		22	07		0.2	
	CLK	eP			26		0.2	
	BHA	eP			27		0.1	
02	CLK	iP	23	39	05	C	0.8	Distant
	KRR	iP			28	C	0.7	
		ePP		43	28			
	BUL	iP		39	29	C	0.5	
		iPP		43	30			
	BHA	iP		39	34	C	0.5	
		ipP		40	04			
		ePP		43	35			
03	BUL	iP	00	30	50	C	0.5	Distant
	KRR	eP		31	01		0.2	
	BHA	eP			02		0.2	
	CLK	eP			28		0.1	
03	BUL	iPn	02	15	11		1.3	N. Orange Free State
		eSn		16	27			
		iSg		17	03			
	KRR	ePn		15	57		0.8	
		eSn		17	47			
		iSg		18	50			
	BHA	ePn		16	27		0.3	
		eSn		18	42			
		eSg		19	58			
	CLK	eSg		20	22		0.3	
03	BUL	iP	06	09	31	R	1.0	Distant
	KRR	eiP			56	rC	0.6	
	BHA	eiP		10	06	rC	0.8	
	CLK	eP			29		0.3	
03	BHA	eP'	16	33	09		0.1	Distant
	KRR	eP'			14		0.3	
		ipP'			24			
	BUL	iP'			16	R	1.6	
	CLK	eP'			18		0.2	
03	CLK	eP	18	38	09		0.2	Distant
	BUL	eP			15		0.2	
	KRR	eP			26		0.2	
	BHA	eP			41		0.2	
04	BUL	ePn	11	56	05		0.6	Witwatersrand
		iSg		57	46			
	KRR	ePn		56	51		0.2	
		eSn		58	35			
		eSg		59	31			

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region: Remarks
04	BUL	ePn	14	05	22		0.6	Witwatersrand
		eSn		06	31			
		iSg		07	05			
	KRR	ePn		06	08		0.3	
		eSn		07	52			
		eSg		08	51			
05	CLK	ePn	00	37	33		2.3	Vila Cabral area, N. Mocambique
		iT			44			
		iSn		38	02			
		iSg			09			
	KRR	eSn		39	33		0.3	
		eSg		40	11			
	BHA	eSn		39	42		0.3	
		eSg		40	19			
	BUL	eSg		41	32		0.1	
06	BHA	iPn	11	26	22	C	5.3	Lukanga Swamp, Zambia
		iSg			40			
	KRR	ePn			50		1.0	
		ePg		27	01			
		eSn			29			
		eSg			44			
	BUL	ePg			48		0.2	
		eSg		29	06			
	CIR	eSg		30	01		0.2	
	CLK	eL			03		0.2	
06	CIR	eP'	11	31	31		0.2	Distant
		epP'			45			
	BUL	iP'			32	C	0.7	
		ipP'			45			
	KRR	epP'			45		0.2	
06	BHA	iP'	14	56	31	P	0.9	Distant
	BUL	iP'			32	R	0.6	
	KRR	eP'			33		1.6	
	CIR	eP'			37		0.3	
	CLK	iP'			44	R	0.6	
06	BHA	ePn	17	15	47		0.6	N. Sagara Swamp, Tanzania
		eSn		17	48			
		eSg		18	34			
	CLK	ePn		16	11		0.4	
		eSgSg		19	37			
	KRR	ePn		16	16		0.4	
		iSg		19	43			
	BUL	eL		21	33		0.2	
	CIR	eL			57		0.2	
06	CLK	eP	20	59	54		0.3	Distant
		e	21	00	37			
	BHA	eP			01		0.3	
		e			33			
	KRR	eP			08		0.6	
		e		01	01			
	CIR	eP		00	23		0.2	
	BUL	eP			28		0.6	
		e			51			
		e		01	24			

LIST OF RECORDED PHASES: 07 to 08 MAY 1968 - 4

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region; Remarks
07	BUL	ePn	02	31	29		0.7	Witwatersrand
		iSg		33	12			
	CIR	ePn		31	33		0.5	
		eSg		33	18			
	KRP	ePn		32	16		0.3	
		eSgSg		35	00			
07	CIR	eP'	12	01	44		0.2	Distant
		eSKP		04	18			
	BUL	eP'		01	47		0.3	
		iSKP		04	25			
	KRP	eP'		01	52		0.4	
		iSKP		04	30			
	BHA	eSKP			39			
07	BUL	e	16	27	28		0.5	Distant
		e			55			
	KRR	e			38		0.2	
07	CIR	eP'	18	12	10		0.2	Distant
		eSKP		14	49			
	BUL	eP'		12	14		0.2	
		eSKP			57			
	KRR	eP'		12	15		0.2	
		eSKP		15	03			
07	KRR	ePn	19	06	13		1.3	S. Lake Kariba area
		eSg			18			
		eSg			46			
	BUL	iPg			29		1.3	
		eSn			55			
		iSg		07	07			
	BHA	ePg		06	36		0.5	
		iSg		07	19			
	CIR	ePn		06	55		0.5	
		eSn		07	51			
		iSg		08	19			
07	BHA	eP'	23	58	03		0.2	Distant
	BUL	eP'			03		0.2	
	KRR	eP'			05		0.3	
	CIR	eP'			10		0.2	
	CLK	eP'			17		0.1	
08	CIR	ePn	07	52	48		1.2	Witwatersrand
		eSn		53	53			
		iSg		54	20			
	BUL	ePn		52	50		1.7	
		eSn		53	54			
		iSg		54	29			
	KRR	ePn		53	34		0.4	
		eSg		56	06			
	CLK	eSg		57	35		0.2	
08	CIR	iP	11	13	03	C	0.4	Distant
	BUL	iP			12	C	0.4	
	CLK	iP			20	C	0.4	
	KRR	eiP			24	eR	0.3	
	BHA	eP			36		0.3	

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region; Remarks
08	BHA	eiP'	12	36	48	cR	8.3	Distant
		ipP'			56			
	KRR	eiP'			54	cR	7.2	
		ipP'		37	03			
	CLK	eiP'		36	57	cR	3.3	
		ipP'		37	07			
		eSKP		40	32			
	BUL	iP'		36	58	R	6.5	
		ipP'		37	09			
		eSKP		40	33			
	CIR	eP'		37	02		2.0	
08	BUL	ePn	14	12	24		0.7	Witwatersrand
		eSn		13	34			
		eSg		14	07			
	CIR	ePn		12	29		0.6	
		eSn		13	41			
		eSg		14	16			
	KPR	ePn		13	11		0.3	
		eSn		14	54			
		eSg		15	54			
08	BUL	ePn	15	05	06		0.4	Witwatersrand
		eSg		06	49			
	CIR	ePn		05	10		0.4	
		eSg		06	56			
	KRR	ePn		05	53		0.2	
		eSg		08	31			
08	BHA	iP'	22	12	36	R	0.3	Distant
		ePP		13	23			
	KRR	eP'		12	41		0.3	
		ePP		13	30			
	CLK	eP'		12	41		0.2	
		ePP		13	31			
	BUL	eP'		12	45		0.3	
		ePP		13	36			
	CIR	eP'			53		0.1	
08	BHA	eiP'	22	36	46	rC	0.3	Distant
	KRR	eP'			51		0.2	
	CLK	eP'			52		0.1	
	BUL	eP'			55		0.3	
	CIR	eP'		37	03		0.2	
08	CLK	eP	22	55	19		0.3	Distant
		e			56			
	BHA	eiP			37	rC	0.3	
	KRR	eiP			44	rC	0.4	
	CIR	eP		56	01		0.2	
		e			49			
	BUL	eiP			04	rC	0.5	
09	BHA	eP'	03	22	35		0.4	Distant
	KRR	eP'			42		0.6	
	CLK	eP'			44		0.3	
	BUL	eP'			46		0.4	
	CIR	eP'			56		0.2	
09	CIR	eP'	07	38	45		0.3	Distant
	BUL	iP'			49	P	0.6	
	CLK	eP'			50		0.2	
	KRR	iP'			54	R	1.1	
	BHA	eP'			59		0.3	

LIST OF RECORDED PHASES: 09 to 10 MAY 1968 - 6

Date	Stn	Phase	G h	M m	T s	R/C	DA mm	Epicentral region; Remarks
09	BUL	eP'	12	47	26		0.2	Distant
	KRR	eP'			30		0.2	
09	CLK	iP	13	29	05	R	6.	S. Lake Malawi
		iS			24			
	KRR	ePn		30	03		0.6	
		iSn		31	10			
		iL			47			
	BHA	iL			59		0.7	
	CIR	eSg		32	33		0.5	
	BUL	eSg		33	02		0.3	
09	BUL	ePn	15	43	00		1.7	Witwatersrand
		eSn		44	09			
		iSg			42			
	CIR	ePn		43	04		1.2	
		eSn		44	15			
		iSg			50			
	KRR	ePn		43	45		0.7	
		eSn		45	30			
		iL		46	30			
	BHA	ePn		44	16		0.2	
		eSn		46	24			
		eSgSg		47	38			
	CLK	eSg			58		0.2	
09	BHA	eP'	18	21	59		0.3	Distant
		ipP'		22	26			
	BUL	eP'			00		0.3	
		epP'			27			
	KRR	eP'			01		0.4	
		ipP'			28			
	CLK	eP'			12		0.3	
		epP'			38			
	CIR	epP'			32		0.1	
09	BUL	eP'	18	45	24		0.3	Distant
		eSKP		48	58			
	BHA	eP'		45	34		0.1	
	KRR	eP'			35		0.2	
		iSKP		49	15			
	CIR	eP'		45	36		0.2	
		eSKP		49	17			
10	BUL	eP	01	59	03		0.2	Distant
	KRR	eP			10		0.2	
	BHA	eP			29		0.2	
10	CIR	ePn	05	39	43		4.0	E. Witwatersrand
		iSg		41	20			
	BUL	ePn		39	45		3.2	
		iSg		41	24			
	KRR	ePn		40	31		2.2	
		eSn		42	12			
		iSg		43	08			
	BHA	ePn		41	01		0.4	
		eSn		43	07			
		eSg		44	17			

LIST OF RECORDED PHASES: 10 to 11 MAY 1968 - 7

Date	Stn	Phase	G h	M m	T s	R/C	DA mm	Epicentral region; Remarks
10	BHA	eP	08	07	46		6.2	NE Lake Victoria
		iS		10	25			
		iSgSg		12	02			
	CLK	eP		07	49		4.0	
		iSgSg		12	09			
		iL			16			
	KRR	eP		08	11		3.3	
		eS		11	07			
		iSgSg		12	59			
	BUL	eiP		08	52	rC	1.8	
		eS		12	27			
		iL		14	54			
	CIR	eP		08	55		1.4	
		eSgSg		14	51			
10	BUL	iP	15	33	26	C	1.1	Distant
	CIR	iP			33	C	0.7	
		epP		34	00			
	KRR	iP		33	49	C	0.6	
	BHA	iP		34	00	C	0.6	
	CLK	eP			17		0.2	
10	KRR	e	18	18	33		0.2	Distant
	CIR	e			39		0.2	
	BUL	i			40	C	0.3	
10	CIR	eP'	23	07	24		0.2	Distant
		ePP		09	34			
		eSKP		10	29			
	BUL	eP'		07	29		0.3	
		ipP'		08	23			
		eSKP		10	37			
	CLK	eP'		07	29		0.3	
		eSKP		10	37			
	KRR	iP'		07	35	C	0.4	
		epP'		08	25			
		iSKP		10	46			
	BHA	eP'		07	38		0.3	
		epP'		08	29			
		eSKP		10	54			
11	KRR	eP	12	22	52		0.2	Distant
		epP		23	08			
	BUL	eP			14		0.2	
		epP			30			
	CIR	eP			16		0.3	
		epP			32			
11	BUL	iP	13	41	26	R	6.0	Distant
	CIR	iP			37	R	2.6	
	KRR	iP			38	R	2.6	
	BHA	iP			40	R	3.8	
	CLK	iP		42	03	R	1.9	
11	CLK	eP'	15	52	08		0.2	Distant
	CIR	iP'			10	C	0.4	
	BUL	iP'			15	C	0.9	
	KRR	iP'			15	C	0.5	
	BHA	iP'			18		0.8	
		iPP		53	50			
		eSKP		55	50			

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region	Remarks
11	BHA	eP	16	02	51		0.2		Distant
	KRR	eP		03	03		0.2		
	CLK	eP			12		0.2		
	CIR	eP			16		0.2		
12	CIR	e	13	33	20		0.2		Distant
	KRR	e			27		0.2		
	BUL	e			33		0.3		
	BHA	e			40		0.2		
12	CLK	e	18	57	59		0.2		Distant
	CIR	e		58	08		0.2		
	BUL	e			13		0.3		
	KRR	e			16		0.3		
	BHA	e			21		0.2		
13	CLK	eP	02	56	36		0.2		Distant
	BHA	eP			43		0.2		
	KRR	iP			48	R	0.3		
	BUL	iP		57	11	R	0.4		
	CIR	iP			15	R	0.5		
13	BUL	eP	03	12	03		0.3		Distant
		ipP			15				
	CIR	eP			11		0.3		
		ipP			23				
	KRR	eP			18		0.2		
		ipP			29				
	BHA	epP			34		0.1		
13	BUL	e	04	15	12		0.2		Distant
	KRR	e			15		0.2		
13	BUL	ePn	16	29	46		0.6		Witwatersrand
		iSg		31	30				
	CIR	iSg		29	45		0.4		
	KRR	iSg		33	16		0.3		
14	CIR	e	01	43	13		0.2		Distant
	BUL	i			16	R	0.3		
	KRR	e			20		0.3		
14	CLK	eP	05	18	16		0.4		Central Malagasy Republic
		eS		20	16				
	CIR	eP		18	47		0.2		
		eS		21	11				
	KRR	eP		19	14		0.2		
	BUL	iP			25	R	0.2		
	BHA	eP			37		0.2		
14	CIR	e	05	55	58		0.3		Distant
	BUL	e		56	01		0.4		
	KRR	e			06		0.6		
14	CLK	iPn	13	39	15		1.0		Mocambique Channel
		iSn		40	36				
		eSg		41	15				
	CIR	ePn		40	13		0.3		
		iSn		42	19				
	KRR	iP		40	27	C	0.3		

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region:	Remarks
14	CIK	eiP	14	18	39	rC	1.0	Distant	
		eP'		22	49				
		iPP			58			(E. China Sea).	
		iSKS		29	06				
		ePKKP		34	49				
	BHA	eP		19	01		0.5		
		eP'		23	13				
		ePP			27				
		eSKS		29	28				
		iPKKP		34	36				
	KRR	eP		19	01		0.5		
		eP'		23	13				
		ePP			27				
		iPKKP		34	35				
	CIR	eP		19	03		0.4		
		eP'		23	15				
		iPP			28				
		ePKKP		34	32				
	BUL	eiP		19	12	rC	0.6		
		eP'		23	17				
		ePP			39				
		eSKS		29	39				
		ePKKP		34	28				
15	BHA	iPn	07	51	59	R		Namwala area, Zambia.	
	KRR	iPn		52	08	C	200.		
	BUL	iPn			30	C	160.		
	CIR	eiPn		53	00	eR	180.		
		iPg			24				
		iSn		54(10)					
	CIK	eiPn		53	18	rC			
		iSn		54(40)					
15	KRR	eP	11	05	21		0.6	S. Lake Tanganyika.	
		eS		06	52				
		eL		07	50				
	BHA	iSg		06	45		1.7		
	CIK	eS			55		0.4		
		eL		07	54				
	BUL	eL		09	38		0.2		
	CIR	eL		10	00		0.2		
15	BHA	iP	11	24	39		8.6	Central Lake Tanganyika area.	
		iS		26	18				
		iL		27	18				
	CIK	eP		25	09		6.0		
		iS		27	14				
		eL		28	28				
	KRR	eP		25	09		4.9		
		eS		27	14				
		iL		28	31				
	BUL	eP		25	53		1.8		
		eS		28	26				
		iL		30	13				
	CIR	eP		26	05		1.9		
		eL		30	43				

LIST OF RECORDED PHASES: 15 to 16 MAY 1968 - 10

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region:	Remarks
15	BHA	ePn	12	32	12		4.5	Namwala area, Zambia.	
		iPg			20				
		eSn			45				
		iSg			55				
	KRR	ePn			20		2.3		
		iPg			32				
		iSn		33	01				
		iSg			16				
	BUL	ePn		32	42		1.2		
		iSn		33	35				
		iSg		34	02				
	CIR	iPn		33	14		0.6		
		eSn		34	31				
		iSg		35	13				
15	CIR	eP'	15	19	25		0.3	Distant	
		eSKP		22	40				
	BUL	eP'		19	30		0.7		
	CLK	eP'			31		0.3		
	KRR	eP'			34		0.6		
	BHA	eP'			42		0.3		
		eSKP		22	57				
16	CLK	eP	01	04	19		0.7	Hokkaido, Japan region.	
		eP'		08	16		3.5		
		ipP'			31				
		ePP		09	06				
	BHA	eP		04	31		1.1		
		eP'		08	20		6.0		
		iPP		09	27				
		iPKKP		18	50				
		eP'P'		26	27				
	KRR	eP		04	32		1.0		
		eP'		08	20		6.7		
		ePKKP		18	49				
		eP'P'		26	25				
	CIR	eP		04	47		0.6		
		eP'		08	21		5.1		
		ePP		09	45				
		ePKKP		18	41				
		eP'P'		26	16				
	BUL	eP		04	51		0.9		
		iP'		08	25	C	10.2		
		ePP		09	55				
		iP'P'		26	04				
16	CLK	eP'	06	55	27		0.3	Distant	
	KRR	eiP'			36	rC	0.6		
	BHA	eiP'			36	rC	0.5		
	BUL	iP'			42	R	1.2		
16	CIR	e	08	08	02		0.1	Distant	
	BUL	e			05		0.2		
16	KRR	e	08	38	43		0.2	Distant	
	CIR	e			45		0.2		
	BUL	e			49		0.3		
	BHA	e		39	00		0.2		
16	KRR	e	09	05	37		0.2	Distant	
	CIR	e			37		0.2		
	BUL	e			43		0.2		

LIST OF RECORDED PHASES: 16 May 1968 - 11

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region:	Remarks
16	KRR	eP'	09	17	00		0.2	Distant	
	CIR	eP'			02		0.2		
	BUL	eP'			06		0.2		
		ePP		18	29				
	CIK	ePP		17	40		0.2		
16	CIK	eP	10	53	46		0.5	Distant	(Japan)
		eP'		57	41		0.9		
		iPP		58	31				
		ePKKP	11	08	27				
	BHA	eP	10	54	(00)		0.4		
		eP'		57	48		1.8		
		ePP		58	58				
		ePKKP	11	08	12				
	KRR	iP'	10	57	49	C	2.0		
		ePP		59	05				
		ePKKP	11	08	09				
		eP'P'		15	46				
	CIR	iP'	10	57	50	C	1.8		
		iPP		59	08				
		ePKKP	11	08	05				
	BUL	eP	10	54	19		0.5		
		iP'		57	54	C	3.2		
		ePP		59	22				
16	KRR	e	14	08	23		0.1	Distant	
	BUL	e			30		0.2		
16	BHA	eP'	16	32	33		0.2	Distant	
		ePP		33	44				
	KRR	eP'		32	33		0.2		
	CIR	eP'			35		0.2		
		ePP		33	57				
	BUL	iP'		32	39	R	0.3		
		ePP		34	08				
16	KRR	eP'	16	40	39		0.1	Distant	
	BUL	eP'			46		0.2		
16	CIK	eP'	19	01	53		0.2	Distant	
		iPP		02	40				
	BHA	iP'			02	C	0.3		
	KRR	iP'			02	C	0.5		
		ePP		03	10				
	CIR	iP'		02	04	C	0.5		
		ePP		03	31				
	BUL	iP'		02	08	C	0.8		
		ePP		03	34				
16	CIK	eP'	19	35	22		0.2	Distant	
		ePP		36	11				
	BHA	eP'		35	31		0.2		
		ePP		36	41				
	KRR	eP'		35	31		0.2		
		ePP		36	43				
	CIR	eP'		35	33		0.2		
		ePP		36	51				
	BUL	eP'		35	36		0.4		
16	CIK	eP'	20	03	31		0.1	Distant	
	CIR	eP'			42		0.1		
	KRR	eP'			43		0.2		
	BUL	eP'			47		0.2		
	BHA	eP'			47		0.2		
		ePP		04	55				

LIST OF RECORDED PHASES: 16 MAY 1968 - 12

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region:	Remarks
16	CIR	e	20	20	28		0.2	Distant	
	BUL	e			28		0.2		
	KRR	e			34		0.2		
16	BHA	ePg	20	29	17		1.1	W. Muchinga Mts., Zambia.	
		iSg			52				
	KRR	eSg		30	42		0.3		
	CIK	eSn			50		0.2		
		eSg		31	18				
	BUL	eL		32	37		0.1		
	CIR	eL			50		0.1		
16	CIK	eP'	20	40	53		0.2	Distant	
		ePP		41	39				
	BHA	eP'			00		0.2		
		ePP		42	09				
	KRR	eP'		41	00		0.2		
		ePP		42	13				
	CIR	eP'		41	02		0.2		
	BUL	eP'			06		0.3		
16	BHA	eP'	21	44	42		0.2	Distant	
	KRR	eP'			42		0.2		
	CIR	eP'			44		0.1		
	BUL	eP'			48		0.2		
16	BUL	i	22	58	04	R	1.2	Distant	
		i			13				
		i			32				
	CIR	e			14		0.4		
		i			42				
	KRR	e			14		0.4		
		e			25				
	BHA	e			15		0.3		
		e			25				
		e			44				
16	CIK	eP'	23	23	32		0.3	Distant	
		ePP		24	16				
	BHA	eP'		23	40		0.4		
		iPP		24	54				
		ePKKP		34	15				
	KRR	eP'		23	40		0.4		
		ePP		24	54				
	CIR	eP'		23	43		0.5		
		iPP		25	07				
	BUL	iP'		23	46	R	0.9		
		iPP		25	14				
16	BHA	ePg	23	27	06		6.	Nanwala area, Zambia.	
		iSn			34				
		iSg			40				
	KRR	eP*			15		2.3		
		e			27				
		iSg		28	06				
	BUL	ePn		27	32		1.7		
		iSn		28	27				
		iSg			53				
	CIR	ePn			05		0.7		
		eSn		29	24				
		eSg		30	08				
	CIK	eSn		29	55		0.3		
		eSg		30	56				

LIST OF RECORDED PHASES: 17 MAY 1968 - 13

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region:	Remarks
17	BHA	ePg	01	20	54		2.8	Namwala area, Zambia.	
		iSn		21	17				
		iSg			25				
		iL			31				
	KRR	eP*		20	59		0.6		
		eSn		21	35				
		iSg			50				
	BUL	ePn			18		0.5		
		eSn		22	11				
		iSg			38				
	CIR	eSn		23	10		0.3		
		eSg			51				
17	BHA	ePg	03	23	50		5.6	Namwala area, Zambia.	
		iSn		24	19				
		iSg			26				
	KRR	ePn		23	57		2.6		
		ePg		24	08				
		eSn			35				
		iSg			50				
	BUL	ePn			18		1.1		
		iPg			36				
		iSn		25	11				
		iSg			38				
	CIR	ePn		24	50		0.7		
		eSn		26	09				
		iSg			49				
	CLK	eSn			40		0.2		
		eL		27	39				
17	BHA	ePg	07	01	31		4.8	Namwala area, Zambia.	
		iSn			56				
		iSg		02	06				
	KRR	eP*		01	40		2.3		
		iSg		02	31				
	BUL	ePn		01	56		1.4		
		iPg		02	13				
		eSn			51				
		iSg		03	17				
	CIR	ePn		02	28		0.7		
		iSn		03	47				
		eSg		04	30				
	CLK	eL		05	20		0.2		
17	BUL	e	08	16	10		0.2	Distant	
	KRR	e			14		0.3		
	BHA	e			21		0.2		
17	KRR	eP'	11	01	31		0.2	Distant	
	CIR	eP'			34		0.2		
	BUL	eP'			37		0.3		
17	KRR	e	13	19	33		0.3	Distant	
	BUL	e			38		0.4		
	CIR	e			46		0.3		
17	CLK	eP'	18	35	49		0.2	Distant	
		ePP		36	51				
	KRR	eP'		35	52		0.2		
		ePP		37	05				
	BUL	eP'	35	58		0.2			

LIST OF RECORDED PHASES: 18 MAY 1968 - 14

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region:	Remarks
18	BUL	iP	01	11	57	R	1.4	Distant	
	CIR	iP		12	03	R	1.2		
	KRR	iP			18	R	0.7		
	BHA	eiP			29	rC	0.6		
	CIK	eiP			48	rC	0.5		
18	CIK	eP'	06	10	34		0.2	Distant	
	BHA	eP'			36		0.2		
	KRR	eP'			38		0.4		
	CIR	eP'			43		0.2		
	BUL	iP'			44	C	0.4		
18	BUL	ePn	06	48	34		0.4	Witwatersrand.	
		eSg		50	14				
	CIR	ePn		48	36		0.4		
		eSg		50	16				
	KRR	eSg		51	54		0.2		
18	BUL	e	08	18	05		0.7	Distant	
		i			21				
	CIR	e			05		0.3		
		i			22				
18	BUL	iPn	13	32	07		1.8	Witwatersrand.	
		iSn		33	16				
		iSg			48				
	CIR	ePn		32	10		1.4		
		eSn		33	21				
		iSg			54				
	KRR	ePn		32	53		0.7		
		eSn		34	36				
		eSg		35	31				
	BHA	eSn			31		0.3		
		eSg		36	42				
	CIK	eSg			59		0.3		
18	BUL	ePn	13	59	07		0.9	Witwatersrand.	
		eSn	14	00	15				
		iSg			48				
	CIR	ePn	13	59	11		0.7		
		eSn	14	00	22				
		iSg			54				
	KRR	ePn	13	59	52		0.5		
		eSn	14	01	35				
		eSgSg		02	35				
	BHA	eSn			30		0.2		
		eSg		03	41				
	CIK	eL		04	11		0.2		
18	BUL	iPn	14	18	19		1.5	Witwatersrand.	
		eSn		19	28				
		iSg		20	02				
	CIR	ePn		18	23		1.1		
		eSn		19	34				
		eSg		20	07				
	KRR	ePn		19	05		0.5		
		eSn		20	47				
		eSg		21	41				
		iL			49				
	BHA	eSg		22	57		0.2		
	CIK	eSg		23	18		0.2		

LIST OF RECORDED PHASES: 19 to 20 MAY 1968 - 15

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region:	Remarks
19	CLK	iPn	00	53	55		3.3	Dedza area, Malawi.	
		iSg		54	17				
	KRR	eSg		55	57		0.3		
	BHA	iSg		56	15		0.4		
	CIR	eSg			58		0.2		
	BUL	eSg		57	23		0.2		
19	BUL	eP	04	31	22		0.2	Distant	
		ePP		33	12				
	CLK	eP		32	01		0.1		
19	BUL	eiP	04	56	59	rC	0.7	Distant	
	BHA	eP		57	05		0.2		
	KRR	eP			11		0.3		
	CIR	eIP			23	rC	1.5		
	CLK	eP			52		0.3		
19	KRR	ePn	05	45	22		0.8	Lake Tanganyika.	
		eSn		47	02				
		eL		48	09				
	BHA	eSn		46	12		1.4		
		iL		47	04				
	BUL	iL		50	03		0.3		
	CIR	eSgSg			12		0.3		
		eL			24				
19	CLK	iP	09	09	45	R	0.3	Distant	
	CIR	eP		10	05		0.2		
	KRR	eP			12		0.2		
	BUL	eP			15		0.3		
19	KRR	e	09	48	11		0.2	Distant	
		e			22		0.2		
19	CIR	eiP	12	22	55	rC	0.7	Distant	
	BUL	eiP		23	10	rC	0.5		
	KRR	eP			20		0.2		
	BHA	iP			33	C	0.3		
19	BHA	e	22	35	33		0.3	Distant	
		e			44				
	KRR	e			34		0.4		
		e			44				
	BUL	e			39		0.3		
		e			49				
20	BHA	eP'	03	35	08		0.2	Distant	
	KRR	eP'			08		0.2		
	CIR	eP'			10		0.2		
	BUL	eP'			13		0.3		
	CLK	ePP		36	02		0.2		
20	KRR	e	07	12	23		0.1	Distant	
	BUL	e			28		0.2		
20	CIR	iP	07	31	55	C	2.2	Distant	
	BUL	iP		32	00	C	5.0		
	CLK	iP			01	C	2.2		
	KRR	iP			05	C	5.3		
		iPP		33	58				
	BHA	iP		32	11	C	3.9		
		iPP		34	10				
		iSKP		35	26				

LIST OF RECORDED PHASES: 28 to 29 MAY 1968 - 24

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region:	Remarks
28	CLK	iP	13	41	13	C	0.7	W. New Guinea region.	
		iPP		45	30				
		iSKS		52	38				
		iPKKP		57	34				
	CIR	eP		41	23		0.9		
		iPP		45	49				
		iPKKP		57	27				
	KRR	eP		41	35		0.8		
		iPP		46	12				
		iPKKP		57	16				
	BUL	iP		41	37	C	1.0		
		iP'		45	48				
		iPP		46	14				
		ePKKP		57	10				
	BHA	eP		41	42		0.7		
		iPP		46	24				
		ePKKP		57	05				
28	CLK	eP'	22	49	09		0.2	Distant	
		eSKP		52	31				
	BHA	eP'		49	14		0.3		
		iSKP		52	40				
	KRR	eP'		49	16		0.3		
		ePP		52	09				
		eSKP			45				
	CIR	eP'		49	21		0.3		
		eSKP		52	51				
	BUL	eP'		49	23		0.2		
		ePP		52	20				
29	BUL	ePn	12	34	12		0.5	Klerksdorp area, Transvaal.	
		iSg		36	03				
	CIR	ePn		34	18		0.4		
		eSg		36	14				
	KRR	ePn		34	57		0.3		
		eSgSg		37	49				
29	CIR	e	17	40	22		0.2	Distant	
	BUL	e			30		0.3		
	KRR	i			32	C	0.3		
29	BUL	ePn	20	55	19		1.9	O.F.S. Goldfields.	
		iSn		56	45				
		iSg		57	30				
	CIR	ePn		55	21		2.0		
		eSn		56	49				
		iSg		57	35				
	KRR	ePn		56	02		1.1		
		eSn		58	01				
		iSgSg		59	14				
	BHA	ePn		56	34		0.4		
		eSn		58	58				
		eSgSg	21	00	27				
	CLK	ePn	20	56	45		0.4		
		eSg	21	00	45				
29	BUL	ePn	21	57	42		0.8	Witwatersrand.	
		eSn		58	51				
		iSg		59	25				
	CIR	ePn		57	47		0.5		
		eSn		58	57				
		eSg		59	32				
	KRR	ePn		58	28		0.4		
		eSg	22	01	06				

LIST OF RECORDED PHASES: 19 to 20 MAY 1968 - 15

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region:	Remarks
19	CLK	iPn	00	53	55		3.3	Dedza area, Malawi.	
		iSg		54	17				
	KRR	eSg		55	57		0.3		
	BHA	iSg		56	15		0.4		
	CIR	eSg			58		0.2		
	BUL	eSg		57	23		0.2		
19	BUL	eP	04	31	22		0.2	Distant	
		ePP		33	12				
	CLK	eP		32	01		0.1		
19	BUL	eiP	04	56	59	rC	0.7	Distant	
	BHA	eP		57	05		0.2		
	KRR	eP			11		0.3		
	CIR	eIP			23	rC	1.5		
	CIK	eP			52		0.3		
19	KRR	ePn	05	45	22		0.8	Lake Tanganyika.	
		eSn		47	02				
		eL		48	09				
	BHA	eSn		46	12		1.4		
		iL		47	04				
	BUL	iL		50	03		0.3		
	CIR	eSgSg			12		0.3		
		eL			24				
19	CIK	iP	09	09	45	R	0.3	Distant	
	CIR	eP		10	05		0.2		
	KRR	eP			12		0.2		
	BUL	eP			15		0.3		
19	KRR	e	09	48	11		0.2	Distant	
		e			22		0.2		
19	CIR	eiP	12	22	55	rC	0.7	Distant	
	BUL	eiP		23	10	rC	0.5		
	KRR	eP			20		0.2		
	BHA	iP			33	C	0.3		
19	BHA	e	22	35	33		0.3	Distant	
		e			44				
	KRR	e			34		0.4		
		e			44				
	BUL	e			39		0.3		
		e			49				
20	BHA	eP'	03	35	08		0.2	Distant	
	KRR	eP'			08		0.2		
	CIR	eP'			10		0.2		
	BUL	eP'			13		0.3		
	CLK	ePP		36	02		0.2		
20	KRR	e	07	12	23		0.1	Distant	
	BUL	e			28		0.2		
20	CIR	iP	07	31	55	C	2.2	Distant	
	BUL	iP		32	00	C	5.0		
	CLK	iP			01	C	2.2		
	KRR	iP			05	C	5.3		
		iPP		33	58				
	BHA	iP		32	11	C	3.9		
		iPP		34	10				
		iSKP		35	26				

LIST OF RECORDED PHASES: 20 MAY 1968 - 16

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region:	Remarks
20	CLK	iP'	10	53	07	C	0.3	Distant	
		ePP		55	04				
	BHA	iP'		53	13	C	0.4		
	KRR	iP'			16	C	0.6		
	CIR	iP'			18	C	0.4		
		ePP		55	57				
	BUL	eiP'		53	21	cR	0.5		
		ePP		56	00				
20	CLK	eP'	12	12	47		0 3	Distant	
	BHA	iP'			52	R	0.5		
	KRR	iP'			55	R	0 7		
	CIR	eP'			58		0.4		
	BUL	eP'		13	01		0.3		
20	CLK	ePn	13	03	13		10.5	Kilimanjaro area,	
		iSn		05	26			Kenya-Tanzania Border.	
		iL		06	52				
	BHA	ePn		03	35		11.7		
		eSn		06	05				
		iSg		07	31				
	KRR	eP		03	54		4.3		
		iL		08	28				
	CIR	eP		04	30		2.4		
		eSgSg		09	49				
	BUL	eP		04	35		2.8		
		iSgSg		10	04				
20	CIR	e	17	39	05		0.2	Distant	
	BUL	e			10		0.2		
	KRR	e			11		0.2		
	BHA	e			15		0.2		
20	CIR	iP'	20	24	38	C	3.1	Distant	
		ipP'			43				
		iPP		25	56				
		ePKKP		34	37				
	BUL	iP'		24	42	C	8.6		
		ipP'			46				
		ePP		26	27				
		eSKS		31	46				
		ePKKP		34	32				
	CLK	iP'		24	44	C	3.0		
		ipP'			48				
	KRR	iP'			47	C	8.6		
		ipP'			52				
		iPP		26	42				
	BHA	iP'		24	53	C	5.5		
		ipP'			57				
		iPP		27	10				
		iSKP		28	13				
20	CIR	eP'	20	39	11		0.4	Distant	
	BUL	eiP'			15	rC	0.9		
	CLK	iP'			17	R	0.4		
	KRR	eiP'			19	cR	1.3		
		epP'			23				
	BHA	iP'			26	R	0.7		
		ipP'			31				
		eSKP		42	43				

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region; Remarks
20	CLK	eP'	21	28	31		1.1	Distant
		epP'			47			
		iPP		29	49			
	BHA	eP'		28	38		0.8	
		epP'			55			
		iPP		30	14			
		ePKKP		38	35			
		iPKKP			53			
	KRR	eP'		28	39		0.9	
		ipP'			57			
		ePP		30	19			
		ePKKP		38	31			
		iPKKP			49			
	CIR	eP'		28	43		0.7	
		ipP'		29	00			
		ePKKP		38	44			
	BUL	iP'		28	45	C	1.7	
		ipP'		29	02			
		iPP		30	37			
20	CLK	eP'	23	43	24		0.1	Distant
	BHA	eP'			31		0.3	
	KRR	eP'			32		0.3	
	CIR	eP'			36		0.2	
	BUL	eP'			38		0.3	
21	CLK	eP'	00	38	20		0.2	Distant
		ePP		39	37			
	BHA	eiP'		38	28	cR	0.4	
	KRR	eiP'			29	cR	0.6	
	CIR	eP'			31		0.2	
	BUL	eP'			34		0.3	
21	BUL	ePn	02	29	16		0.9	Witwatersrand
		eSn		30	25			
		eSg			59			
	CIR	ePn		29	20		1.0	
		eSn		30	33			
		iSg		31	05			
	KRR	ePn		30	02		0.8	
		eSn		31	46			
		eSg		32	42			
	BHA	ePn		30	32		0.3	
		eSn		32	41			
		eSgSg		33	56			
	CIK	eSg		34	10		0.3	
21	BUL	ePn	02	43	55		0.8	Witwatersrand
		eSn		45	06			
		iSg			37			
	CIR	ePn		44	00		0.8	
		eSn		45	12			
		iSg			45			
	KRR	ePn		44	41		0.6	
		eSn		46	24			
		eSg		47	21			
	BHA	ePn		45	12		0 2	
		eSn		47	21			
		eL		48	40			
	CLK	eSg			49		0.2	

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region; Remarks
21	CLK	iP	04	09	28	C	2.5	Distant
	BHA	iP			41	C	1.3	
	KRR	iP			50	C	3.4	
	CIR	iP		10	08	C	0.7	
	BUL	iP			11	C	1.2	
21	KRR	eP'	04	30	12		0.2	Distant
		ePP		31	37			
	BUL	eP'		30	16		0.2	
21	BUL	e	0?	04	06		0.3	Distant
	CIR	e			13		0.2	
	KRR	e			21		0.5	
21	CLK	eP'	08	38	47		0.3	Distant
		epP'		39	03			
		ePP		40	15			
	BHA	eP'		38	55		0.5	
		ipP'		39	11			
		ePP		40	31			
	KRR	eP'		38	55		0.7	
		epP'		39	11			
	CIR	eP'		38	58		0.4	
	BUL	eP'		39	01		0.7	
		ipP'			17			
		ePP		40	54			
21	KRR	e	11	05	51		0.2	Distant
	BUL	e			59		0.1	
21	CLK	eP'	11	19	30		0.1	Distant
	BHA	eP'			38		0.2	
		epP'			55			
	KRR	eP'			38		0.3	
		epP'			56			
	CIR	eP'			43		0.1	
		epP'		20	00			
	BUL	eP'		19	45		0.3	
		epP'		20	02			
		ePP		21	32			
21	BHA	eP'	11	22	48		0.4	Distant
		ipP'		23	01			
	KRR	eP'		22	49		0.3	
		epP'		23	02			
	BUL	eP'		22	55		0.3	
		epP'		23	09			
		ePP		24	45			
21	CLK	eP'	19	06	15		0.1	Distant
		epP'			29			
	BHA	iP'			23	C	0.3	
		epP'			37			
	KRR	iP'			24	C	0.3	
		epP'			38			
	CIR	eP'			27		0.2	
		epP'			41			
	BUL	eP'			29		0.4	
		epP'			43			
		ePP		08	22			

LIST OF RECORDED PHASES: 21 to 22 MAY 1968 - 19

Date	Stn	Phase	G h	M m	T s	R/C	DA mm	Epicentral region: Remarks
21	BHA	ePn	21	06	33		1.4	N.E. Fipa Plateau, Tanzania.
		iSn		07	51			
		eL		08	37			
	CLK	iPn		06	51	R	0.9	
		eSn		08	24			
		eL		09	22			
	KRR	ePn		06	59		0.6	
		eSn		08	36			
		iL		09	35			
	BUL	eP		07	44		0.3	
		eS		09	55			
		eL		11	25			
	CIR	eP		07	50		0.3	
		eS		10	12			
		eL		11	42			
22	CIR	eP'	00	36	53		0.2	Distant
		epP'		37	02			
	BUL	eP'		36	58		0.4	
		epP'		37	07			
	CLK	eP'			00		0.2	
		epP'			09			
	KRR	eP'			03		0.5	
		ipP'			10			
	BHA	eP'			10		0.3	
		ipP'			20			
22	BHA	e	05	46	25		0.2	Distant
	KRR	e			26		0.2	
	CIR	e			29		0.2	
	BUL	e			31		0.2	
22	CLK	eP'	11	10	29		0.2	Distant
	BHA	eP'			37		0.2	(Japan)
		ePP		12	01			
	KRR	eP'			38		0.2	
	CIR	eP'			39		0.2	
	BUL	iP'			43	R	0.3	
22	KRR	i	13	41	27	C	0.4	Distant
	BUL	ei			31	rC	0.6	
	CLK	e			37		0.5	
	CIR	e			39		0.2	
22	CIR	ePn	14	32	29		0.6	Witwatersrand.
		eSg		34	08			
	BUL	ePn		32	30		0.6	
		iSg		34	09			
	KRR	eSg		35	52		0.3	
22	KRR	e	16	08	12		0.2	Distant
		e			25			
	CIR	e			13		0.2	
		e			27			
	BUL	e			17		0.3	
		e			31			
22	BUL	i	16	51	15	R	0.4	Distant
	KRR	e			21		0.2	
22	BUL	eP	18	22	54		0.3	Distant
	KRR	eP		23	04		0.2	
	BHA	eP			23		0.1	

LIST OF RECORDED PHASES: 22 to 23 MAY 1968 - 20

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region:	Remarks
22	CLK	eP	18	30	48		0.2	Distant	
	CIR	eP		31	01		0.2		
	BUL	iP			04	C	0.2		
	KRR	iP			14	C	0.2		
	BHA	eP			32		0.2		
22	KRR	eP	18	45	23		0.2	Distant	
	CIR	eP			46		0.2		
	BUL	eP			48		0.2		
22	BHA	e	18	55	11		0.1	Distant	
		e			26				
	KRR	e			13		0.2		
		e			27				
	CIR	e			16		0.2		
		e			30				
	BUL	e			18		0.2		
		e			32				
22	BUL	ePg	19	47	22		0.8	Central Botswana.	
		eSn			59				
		iSg		48	20				
	BHA	ePn			08		0.3		
		e		49	20				
		eSg		50	33				
	CIR	ePg		48	11		0.5		
		eSn			57				
		iSg		49	37				
	KRR	ePg		48	12		0.4		
		e		49	14				
		eSg			51				
22	BHA	ei	20	20	07	rC	0.3	Distant	
	KRR	ei			07	rC	0.3		
		e			21				
	CIR	e			10		0.2		
	BUL	e			13		0.2		
		e			26				
22	CLK	eP	21	23	46		0.1	Distant	
	CIR	eP		24	07		0.2		
	KRR	eP			13		0.2		
	BUL	eP			18		0.2		
	BHA	eP			19		0.1		
22	CLK	ePn	21	38	58		0.6	Off Coast Tanzania.	
		eSn		40	43				
		iSg		41	43				
	BHA	iPn		39	45		0.4		
		eSn		42	08				
	KRR	ePn		39	55		0.3		
		eSn		42	20				
	CIR	ePn		40	24		0.2		
		eSn		43(20)					
	BUL	ePn		40	34		0.2		
		eSn		43(40)					
23	KRR	eP	08	01	21		0.2	Distant	
	BUL	eP			40		0.1		

LIST OF RECORDED PHASES: 23 to 24 MAY 1968 - 21

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region:	Remarks
23	CIR	eP	17	38	47		0.4	Distant	
		eP'		42	45		0.6	(New Zealand)	
		ePP		43	17				
		e		45	28				
		ePKKP		54	04				
	BUL	eP		38	59		0.2		
		iP'		42	48	R	0.7		
		iPP		43	24				
		ePKKP		53	55				
	CLK	eP		39	03		0.2		
		eP'		42	52		0.4		
		ePP		43	32				
		e		45	50				
		ePKKP		53	54				
	KRR	eP		39	06		0.2		
		iP'		42	53	R	0.8		
		ipP'		43	06				
		iPP			46				
		ePKKP		53	43				
	BHA	eP'		42	57		1.0		
		iPP		44	03				
23	BHA	e	18	51	54		0.2	Distant	
		e		52	08				
	KRR	e		51	55		0.3		
		e		52	09				
	BUL	e			02		0.3		
		e			15				
	CIR	e			11		0.2		
23	CIR	eP'	19	01	47		0.2	Distant	
	BUL	eP'			51		0.3		
	KRR	eP'			56		0.3		
	BHA	eP'		02	00		0.2		
	CLK	eP'			04		0.2		
24	KRR	e	11	36	35		0.2	Distant	
	BUL	i			40	R	0.5		
	CIR	e			41		0.3		
24	CLK	eP'	14	25	01		0.2	Distant	
		ePP			51			(Japan)	
	BHA	iP'			09	C	0.3		
		ePP		26	21				
	KRR	iP'		25	10	C	0.4		
	CIR	eP'			11		0.3		
		iPP		26	32				
		ePKKP		35	33				
	BUL	iP'		25	15	C	0.4		

LIST OF RECORDED PHASES: 24 to 26 MAY 1968 - 22

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region:	Remarks
24	CLK	iP	15	55	16	R	6.0	Distant	
		epP		57	25			(Celebes Sea)	
		eS	16	04	36				
		iPKKP		13	39				
		eP'P'		21	45				
	CIR	iP	15	55	30	R	6.7		
		ipP		57	38				
		eS	16	05	07				
		ePKKP		13	32				
		eP'P'		21	40				
	KRR	iP	15	55	40	R	5.4		
		ipP		57	52				
		iPKKP	16	13	28				
		eP'P'		21	31				
	BUL	iP	15	55	43	R	7.8		
		ipP		57	54				
		iSKS	16	05	12				
		iS			35				
		iPKKP		13	25				
		eP'P'		21	29				
	BHA	iP	15	55	46	R	7.5		
		ipP		57	58				
		iSKS	16	05	16				
		iS			39				
		ePKKP		13	23				
		eP'P'		21	24				
24	BUL	e	21	15	57		0.2	Distant	
	KRR	e		16	02		0.2		
	BHA	e			11		0.1		
24	KRR	eP	21	46	05		0.2	Distant	
	BUL	eP			06		0.2		
	BHA	eP			25		0.2		
24	BHA	e	21	56	27		0.1	Distant	
	KPR	e			35		0.4		
	BUL	e			37		0.2		
24	KRR	iP	22	34	07	C	12.	Kariba.	
		iS			22				
	BHA	ePn			22		2.7		
		iPg			26				
		eSn			48				
		iSg			52				
	BUL	iPg			52		0.9		
		eSn		35	20				
		iSg			34				
	CIR	iSn		36	03		0.7		
		iSg			29				
	CLK	eL		37	11		0.3		
25	KRR	eP	15	49	03		0.2	Distant	
	BUL	eP			23		0.2		
26	CLK	eP	04	14	44		0.3	Distant	
		ipP			50				
	KRR	eiP		15	07	cR	0.9		
		ipP			13				
	BHA	eiP			13	cR	0.5		
		epP			18				
	BUL	iP			11	R	0.5		
		epP			16				

LIST OF RECORDED PHASES: 26 to 28 MAY 1968 - 23

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region:	Remarks
26	KRR	iP	05	14	03	C	20.	Kariba	
		iS			16				
	BHA	ePn			19		5.5		
		ePg			22				
		iSn			45				
		iSg			49				
	BUL	ePn			37		3.8		
		ePg			46				
		iSn		15	17				
		iSg			30				
	CIR	ePn			00		3.2		
		eSn			55				
		iSg		16	23				
	CLK	iL		17	07		1.3		
26	CIR	eP	14	54	55		0.3	Distant	
	BUL	eP		55	04		0.3		
	CLK	eP			14		0.2		
	KRR	eP			14		0.2		
	BHA	eP			25		0.1		
27	BUL	e	19	21	56		0.2	Distant	
	KRR	e		22	02		0.2		
27	CLK	ePn	20	05	25		2.7	Offshore S. Tanzania.	
		iSn		06	50				
		iSg		07	35				
	BHA	iPn		06	30	R	2.3		
		iSn		08	46				
	KRR	iPn		06	30	R	1.1		
		iSn		08	46				
	BUL	ePn		07	04		0.3		
		eSn		09	50				
		eL		11	31				
	CIR	eSgSg		10	44		0.3		
28	BUL	e	01	47	16		0.2	Distant	
		e			42				
	KRR	e			21		0.2		
		e			48				
	BHA	e			26		0.1		
		e			53				
28	KRR	e	01	58	28		0.2	Distant	
	BUL	e			34		0.2		
28	BUL	e	02	28	37		0.2	Distant	
	KRR	e			42		0.2		
	BHA	e			48		0.2		
28	BUL	e	03	52	43		0.2	Distant	
	KRR	e			49		0.2		
28	BUL	ePg	07	51	21		0.6	Central Botswana.	
		iSg		52	19				
	KRR	ePg			13		0.3		
		eSg		53	45				
	CIR	eSg			34		0.3		
28	CIR	eP'	09	25	21		0.4	Distant	
		epP'			37				
	BUL	iP'			25	R	0.7		
		ipP'			42				
	CLK	eP'			26		0.2		
	KRR	iP'			31	R	0.7		
		ipP'			46				
	BHA	iP'			36	R	0.4		
		epP'			52				

LIST OF RECORDED PHASES: 28 to 29 MAY 1968 - 24

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region:	Remarks
28	CLK	iP	13	41	13	C	0.7	W. New Guinea region.	
		iPP		45	30				
		iSKS		52	38				
		iPKKP		57	34				
	CIR	eP		41	23		0.9		
		iPP		45	49				
		iPKKP		57	27				
	KRR	eP		41	35		0.8		
		iPP		46	12				
		iPKKP		57	16				
	BUL	iP		41	37	C	1.0		
		iP'		45	48				
		iPP		46	14				
		ePKKP		57	10				
	BHA	eP		41	42		0.7		
		iPP		46	24				
		ePKKP		57	05				
28	CLK	eP'	22	49	09		0.2	Distant	
		eSKP		52	31				
	BHA	eP'		49	14		0.3		
		iSKP		52	40				
	KRR	eP'		49	16		0.3		
		ePP		52	09				
		eSKP			45				
	CIR	eP'		49	21		0.3		
		eSKP		52	51				
	BUL	eP'		49	23		0.2		
		eIP		52	20				
29	BUL	ePn	12	34	12		0.5	Klerksdorp area, Transvaal.	
		iSg		36	03				
	CIR	ePn		34	18		0.4		
		eSg		36	14				
	KRR	ePn		34	57		0.3		
		eSgSg		37	49				
29	CIR	e	17	40	22		0.2	Distant	
	BUL	e			30		0.3		
	KRR	i			32	C	0.3		
29	BUL	ePn	20	55	19		1.9	O.F.S. Goldfields.	
		iSn		56	45				
		iSg		57	30				
	CIR	ePn		55	21		2.0		
		eSn		56	49				
		iSg		57	35				
	KRR	ePn		56	02		1.1		
		eSn		58	01				
		iSgSg		59	14				
	BHA	ePn		56	34		0.4		
		eSn		58	58				
		eSgSg	21	00	27				
	CLK	ePn	20	56	45		0.4		
		eSg	21	00	45				
29	BUL	ePn	21	57	42		0.8	Witwatersrand.	
		eSn		58	51				
		iSg		59	25				
	CIR	ePn		57	47		0.5		
		eSn		58	57				
		eSg		59	32				
	KRR	ePn		58	28		0.4		
		eSg	22	01	06				

LIST OF RECORDED PHASES: 30 MAY 1968 - 25

Date	Stn	Phase	G h	M m	T s	R/C	DA mm	Epicentral region:	Remarks
30	CLK	eP	00	20	09		0.2	Distant	
	BHA	eP			17		0.1		
	KRR	eP			(30)		0.2		
	CIR	eP			47		0.2		
	BUL	eP			53		0.2		
30	CIR	eP	00	41	09		0.2	Distant	
	BUL	eP			22		0.2		
	KRR	eP			36		0.2		
	BHA	eP			55		0.1		
30	KRR	e	00	55	31		0.2	Distant	
	BUL	ei			37	rC	0.4		
	CLK	ei			38	rC	0.4		
30	CLK	iP	01	19	00	C	0.7	Distant	
	BHA	iP			15	C	0.8		
		ePP		20	39				
	KRR	iP		19	26	C	1.7		
	CIR	eiP			49	cR	1.3		
	BUL	iP			51	C	0.8		
30	CLK	eP	05	42	37		0.2	Distant	
		epP			51				
		ePP		43	51				
	BHA	eP		42	41		0.6		
		ipP			55				
		iPP		44	18				
	KRR	eP		42	42		0.6		
		ipP			56				
		ePP		44	24				
	CIR	eP		42	45		0.6		
		ipP			59				
	BUL	iP			48	R	0.7		
		ipP		43	05				
		iPP		44	40				
30	BUL	ePn	17	29	31		1.1	Witwatersrand.	
		eSn		30	41				
		iSg		31	13				
	CIR	ePn		29	35		0.6		
		eSn		30	46				
		iSg		31	20				
	KRR	ePn		30	17		0.4		
		eSn		32	01				
		e			59				
30	BHA	iP	17	49	18	R	1.5	Distant	
	CLK	iP			30	R	3.7		
	KRR	iP			34	R	2.6		
	BUL	iP			59	R	2.2		
	CIR	iP		50	06	R	3.1		
30	BHA	eP	17	54	32		0.3	Distant	
	CLK	eP			40		0.3		
	KRR	eP			42		0.3		
	BUL	eP			57		0.3		
30	BUL	ePn	17	29	31		1.1	Witwatersrand.	
		eSn		30	41				
		iSg		31	13				
	CIR	ePn		29	35		0.6		
		eSn		30	46				
		iSg		31	20				
	KRR	ePn		30	17		0.4		
		eSn		32	01				
		eSg			59				

LIST OF RECORDED PHASES: 30 to 31 MAY 1968 - 26

Date	Stn	Phase	G h	M m	T s	R C	DA mm	Epicentral region:	Remarks
30	BHA	iP	17	49	18	R	1.5	Distant	
	CLK	iP			30	R	3.7		
	KRR	iP			34	R	2.6		
	BUL	iP			59	R	2.2		
	CIR	iP		50	06	R	3.1		
30	BHA	eP	17	54	32		0.3	Distant	
	CLK	eP			40		0.3		
	KRR	eP			42		0.3		
	BUL	eP			57		0.3		
30	CLK	eP	18	11	46		0.2	Distant	
	CIR	eP		12	02		0.4		
	KRR	eP			09		0.4		
	BHA	iP			14	R	0.4		
	BUL	eiP			15	cR	0.4		
30	CIR	eP'	20	01	15		0.4	Distant	
		i		02	29				
		e		03	04				
	BUL	eP'		01	19		0.6		
		e		02	33				
		e		03	05				
	CLK	eP'		01	21		0.4		
		i			44				
	KRR	eP'			24		0.9		
		e		03	20				
	BHA	eP'		01	30		0.5		
30	CLK	eP	20	23	13		0.1	Distant	
	BHA	eP			22		0.1		
	KRR	eP			35		0.2		
	CIR	eP			57		0.2		
	BUL	eP		24	00		0.2		
30	BHA	eP	21	25	49		0.1	Distant	
	KRR	eP			57		0.2		
		e		26	47				
	CIR	eP			13		0.1		
	BUL	eP			18		0.2		
30	CIR	e	22	58	04		0.2	Distant	
	KRR	e			10		0.2		
	BHA	e			16		0.2		
	BUL	e			21		0.2		
31	CIR	eiP'	18	39	19	cR	0.5	Distant	
	CLK	eiP'			20	cR	0.3		
	BUL	eiP'			25	cR	0.9		
	KRR	iP'			27	R	0.8		
	BHA	iP'			32	R	0.6		
		iSKP		42	38				
31	BUL	ePn	21	11	35		1.5	W. Witwatersrand.	
		iSn		12	45				
		iSg		13	18				
	CIR	ePn		11	39		1.4		
		eSn		12	52				
		iSg		13	28				
	KRR	ePn		12	21		1.1		
		eSn		14	04				
		iSg		15	01				
	BHA	ePn		12	51		0.4		
		eSn		15	00				
		eSg		16	14				
	CLK	eSg			28		0.3		

RHODESIA METEOROLOGICAL SERVICES

SEISMOLOGICAL BULLETIN

The following stations contribute records for analysis and publication in this Bulletin:

KABWE (BHA): (Broken Hill)	14° 26.8' S; 28° 28.1' E; Alt. 1206 m.
Litho. foundation:	Dolomite and shales of the Middle Katanga System.
Authority:	Zambia Meteorological Service.
Instrument:	Three-component Willmore one-second seismograph. Nominal magnification 20,000.
CHILEKA (CLK):	15° 40.8' S; 34° 58.6' E; Alt. 781 m.
Litho. foundation:	Charnockitic granulites of the Basement Complex.
Authority:	Malawi Meteorological Service.
Instrument:	Three-component Willmore one-second seismograph. Nominal magnification 20,000.
KAROI (KRR):	16° 51.1' S; 29° 37.1' E; Alt. 1380 m.
Litho. foundation:	Granitic gneisses of the Zambesi type.
Authority:	Rhodesia Meteorological Service.
Instrument:	Vertical Willmore one-second seismograph. Nominal magnification 20 000.
BULAWAYO (BUL):	20° 08.6' S; 28° 36.8' E; Alt. 1341 m.
Litho. foundation:	Hornblend schists of the Bulawayan System.
Authority:	Rhodesia Meteorological Service.
Instruments:	Three-component Willmore one-second seismograph. Nominal magnification 20,000.
	WWSS Station: SP magnification 100,000 LP magnification 1,500
CHIREDZI (CIR):	21° 00.8' S; 31° 34.8' E; Alt. 430 m.
Litho. foundation:	Gneisses or Charnockites of the Limpopo belt.
Authority:	Rhodesia Meteorological Service.
Instrument:	Vertical Willmore one-second seismograph. Nominal magnification 20,000.

Analysis Centre: Goetz Observatory, Meteorological Service, P. O. Box 562, Bulawayo, Rhodesia.

CRITERIA FOR PUBLICATION

To qualify for publication an earthquake must be of magnitude 2 or more. Also, in the case of local earthquakes (nearer than approx. 30°), at least one station must record a clear P phase. In the case of distant earthquakes, at least two stations must record clear P or P' phases.

DISTANCES

Distances of local earthquakes are determined by means of travel-time curves developed at this Centre. For distant earthquakes, the standard Jeffreys-Bullen tables are used.

Where given, distances are in degrees (1° = 111.11 Km).

GLOSSARY

The following terms are used in the List and Bulletin:

h m s	Hours, minutes and seconds of GMT (UT). In the List of Phases, times of arrival of the phases at each station are given. In the Bulletin, the time of occurence of the earthquake is given.
GM	Character and direction of the first ground motion of P or P'.
e	Emersio: the phase emerges gradually from the background.
i	Impetus: the phase is impulsive and clearly defined.
ei	The phase shows an emergent beginning, followed by a sharp increase in amplitude.
R	The first motion is downwards, or towards the epicentre; the motion is rarefactional. A lower case r indicates a weakly rarefactional first motion.
C	The first motion is upwards, or away from the epicentre; the motion is compressional. A lower case c indicates a weakly compressional first motion.
DA	The double-amplitude (peak-to-peak) of the record in millimetres. The double-amplitude is written on the same line as the phase to which it refers; usually P or P' in distant earthquakes, and the S-L complex (the "maximum amplitude") in local earthquakes. In some cases a double-amplitude is given for more than one phase.
Distant	The epicentre is more than about 30° from the approximate centre of the local station network (17S 30E).
Mag	Magnitude. Locally determined magnitudes are based on the double-amplitude of the S-L complex, after Richter (1935). However, the station constants have been adjusted to make the local magnitudes agree as closely as possible with magnitudes published by USCGS. The local magnitudes can therefore be taken as corresponding to m_b of Gutenberg and Richter (1956).
MM	Intensity on the Modified Mercalli Scale.
USCGS	United States Coast and Geodetic Survey. Under "Epicentre", this indicates that the epicentral and magnitude data are taken from the USCGS determinations.
?	Indicates an uncertain statement.
( )	The estimated uncertainty in the bracketted quantity is between 3 and 10 units of the last digit quoted. E.g., a latitude given as (16.4S) is thought to be uncertain by between 0.3 and 1.0 degree: i.e. certainly between 15.4S and 17.4S, and probably between 16.1S and 16.7S.

JUN 1968

	Date	h	m	s	Epicentre: Remarks	Mag
	01	10	31	49	USCGS 40.2N 142.3E; Near E. Coast of Honshu, Japan	5.4
	01	11	22	35	USCGS 31.0S 177.7W; Kermadec Is.	4.5
X	01	11	38	18	3.3S 33.5E; S. of Lake Victoria.	4.0
	01	20	08	16	USCGS 59.3S 26.3W; S. Sandwhich Is. Region.	4.3
X	02	03	43	42	15.0S 29.1E; Lunsemfwa Valley, Zambia.	3.0
	02	05	16	01	USCGS 8.9S 120.6E; Flores Is. Region.	5.4
	02	08	18	36	USCGS 8.1S 158.6E; Solomon Is.	5.6
	02	20	32	11	USCGS 6.8S 109.4E; Java.	4.8
	03	09	17	46	USCGS 5.4S 147.0E; E. New Guinea Region.	5.6
	03	14	16	20	USCGS 45.7N 148.3E; Kurile Is.	5.4
	03	16	48	56	USCGS 40.3N 127.1W; Off Coast of N. California.	4.8
	04	02	34	16	USCGS 42.3N 119.9W; Oregon.	4.7
	04	06	50	07	USCGS 32.7N 48.3E; W. Iran.	5.2
	04	13	20	27	USCGS 27.6N 139.7E; Bonin Is. Region.	4.4
	04	14	01	31	USCGS 30.7S 178.1W; Kermadec Is. Region.	4.6
	04	15	01	12	USCGS 8.3S 107.9E; Java.	5.0
	04	17	15	10	USCGS 22.5N 121.4E; Taiwan Region.	5.2
X	05	04	15	26	16.6S 28.4E; Kariba. Felt MM III at Kariba.	3.4
	05	06	18	35	USCGS 58.7S 25 7W; S. Sandwhich Is. Region.	5.4
	05	12	10	03	USCGS 30.5S 59.2E; Atlantic-Indian Rise.	-
	05	22	06	27	USCGS 4.5S 153.1E; New Ireland Region.	5.0
	05	23	04	06	USCGS 18.9S 169.4E; New Hebrides Is.	4.6
X	06	00	20	53	28.0S 26.5E; O.F.S. Goldfields	3.5
X	06	16	27	58	26.1S 28.0E; Witwatersrand.	3.6
	06	18	21	26	USCGS 40.6N 142.3E; Near E. Coast of Honshu, Japan.	4.6
	06	19	44	08	USCGS 14.9N 119.9E; Luzon, Philippine Is.	5.4
X	06	20	08	10	3.8S 36.6E; N. Highlands, Tanzania.	3.8
	06	20	33	28	USCGS 30.7S 178.1W; Kermadec Is. Region.	5.0
	06	21	17	14	USCGS 41.3N 142.6E; Hokkaido, Japan Region.	5.3
	06	22	52	00	USCGS 44.5N 148.1E; Kurile Is.	5.1
X	07	07	22	02	26.4S 27.1E; Witwatersrand.	3.3
	07	11	27	30	USCGS 56.4S 26.6W; S. Sandwhich Is. Region.	5.0
	07	11	57	29	USCGS 1.8S 120.1E; Celebes.	5.9
X	07	14	37	16	26.3S 27.3E; Witwatersrand.	3.1
X	07	16	11	54	3.9S 36.5E; N. Highlands, Tanzania.	5.1
	07	21	30	50	USCGS 2.1S 120.5E; Celebes.	5.5
	08	00	16	39	USCGS 8.8S 157.6E; Solomon Is.	5.4
	08	03	13	18	USCGS 7.0S 129.4E; Banda Sea.	5.4
	08	05	29	47	USCGS 43.4N 147.1E; Kurile Is.	5.3

JUN 1968

	Date	h	m	s	Epicentre; Remarks	Mag
X	08	12	03	24	26.3S 27.0E; Witwatersrand.	3.4
	08	23	24	05	USCGS 48.8S 31.5E; S. of Africa.	5.6
	09	00	56	34	USCGS 39.0N 46.0E; N.W. Iran-USSR Border Region.	5.0
	09	04	13	08	USCGS 6.4N 95.2E; Nicobar Is. Rgion.	4.2
	09	09	17	32	USCGS 24.4S 178.5E S. of Fiji Is.	5.1
	09	10	21	36	USCGS 14.6N 92.0W; Near Coast of Chiapas, Mexico.	5.0
X	09	17	42	12	26,4S 27.2E; Witwatersrand.	3.0
	09	22	01	58	USCGS 31.3S 177.8W; Kermadec Is.	5.0
	10	12	41	06	USCGS 56.3N 161.6W; Alaska Peninsula.	5.6
	10	15	06	58	USCGS 22.3N 45 0W; N. Atlantic Ridge	4.7
X	10	20	05	55	4.0S 35.3E; N. Highlands, Tanzania.	4.4
	11	03	05	58	USCGS 49.8N 78.2E; E. Kazakh S.S.R.	5.3
	11	05	52	33	USCGS 13.9N 88 8W; El Salvador.	5.3
	11	10	24	12	USCGS 5.8S 103.9E; S. Sumatra.	5.4
	12	04	29	23	USCGS 24.9N 91.9E; India-E. Pakistan Border Region	5.3
	12	09	05	05	USCGS 35.3N 28.0E; E. Mediterranean Sea.	4.6
	12	13	41	51	USCGS 39.5N 142.7E; Near E. Coast of Honshu, Japan	6.0
	12	14	11	01	USCGS 59.9S 27.6W; S. Sandwhich Is. Region.	5.5
	12	14	38	12	USCGS 39,4N 142.8E; Near E. Coast of Honshu, Japan	5.0
	12	15	08	52	USCGS 39.5N 143.0E; Near E. Coast of Honshu, Japan	5.1
X	12	16	46	24	26,4S 27.2E; Witwatersrand.	3.0
	12	17	52	01	USCGS 39.1N 142.9E; Near E. Coast of Honshu, Japan	5.5
	12	20	15	48	USCGS 0.6S 132.8E; W. New Guinea Region.	5.6
	126	21	57	41	USCGS 39.3N 142.8E; Near E. Coast of Honshu, Japan	5.7
	12	23	26	31	USCGS 13.8N 120.7E; Mindoro, Philippine Is.	5.0
	13	00	05	01	USCGS 39.5N 143.0E; Off E. Coast of Honshu, Japan.	5.3
	13	02	05	43	USCGS 39.4N 142.8E; Near E. Coast of Honshu, Japan	5.1
	13	11	56	23	USCGS 39.2N 143.0E; Off E. Coast of Honshu, Japan.	5.3
X	13	14	06	44	26.7S 26.5E; Klerksdorp Area, Transvaal.	3.0
	13	14	56	15	USCGS 39.4N 142.9E; Near E. Coast of Honshu, Japan	5.1
	13	15	37	43	USCGS 24.7N 66.4E; W. Pakistan.	5.1
X	13	16	53	(50)	2N 34E; Lake Kyoga Area, Uganda.	4.3
	13	21	10	35	USCGS 39.4N 142.9E; Near E. Coast of Honshu, Japan	5.5
	13	21	43	43	USCGS 30.5S 60.0E: Atlantic-Indian Rise	4.3
	13	23	04	00	USCGS 29.7N 51.5E: S.Iran.	5.0
X	14	02	02	45	26.0S 28.1E; Witwatersrand.	2.8
	14	03	18	17	USCGS 39.4N 142.8E; Near E. Coast of Honshu, Japan	5.0
	14	04	02	22	USCGS 31.2N 70.2E; W. Pakistan.	4.9
	14	11	52	40	USCGS 39.3N 142.8E; Near E. Coast of Honshu, Japan	5.4
	14	12	17	28	USCGS 45.2W 153.5E; Kurile Is. Region.	5.5
X	14	12	27	03	13.2S 27.7E; Upper Kafue Catchment, Zambia.	2.5

JUN 1968

	Date	h	m	s	Epicentre· Remarks	Mag
	15	03	31	18	USCGS 39.3N 142.8E; Near E. Coast of Honshu, Japan	5.4
	15	05	11	17	USCGS 14.4N 92.9W; Near Coast of Chiapas, Mexico.	5.4
	15	07	08	48	USCGS 5.6N 82.6W; S. of Panama.	6.0
	15	11	27	33	USCGS 51.7N 159.4E; Off E. Coast of Kamchatka..	5.4
X	15	12	29	38	9S 39E; S. Tanzania.	3.5
X	15	13	16	20	19.3S 35.2E; N.E. of Beira, Mocambique.	3.0
	15	13	34	14	USCGS 18.3S 167.9E; New Hebrides Is.	5.5
	16	04	55	57	USCGS 36.2S 15.9W; Tristan Da Cunha Region.	5.1
	16	05	32	07	USCGS 35.2S 15.9W; Tristan Da Cunha Region.	4.6
X	16	08	49	50	26.6S 27.8E; Witwatersrand.	3.3
	16	19	14	05	USCGS 53.9S 8.7E; Bouvet Is. Region.	5.7
	17	04	26	32	USCGS 22.4N 121.4E; Taiwan Region.	5.1
	17	04	59	05	USCGS 40.9N 48.2E; E. Caucasus.	5.0
	17	10	17	35	USCGS 56.0S 27.9W; S. Sandwhich Is. Region.	5.8
	17	11	53	00	USCGS 41.0N 143.0E; Hokkaido, Japan Region.	5.7
	17	17	49	44	USCGS 6.3S 146.6E; E. New Guinea Region.	5.1
	17	18	09	34	USCGS 12.3S 166.7E; Santa Cruz Is.	5.5
X	17	22	04	16	11.7S 34.7E; Central Lake Malawi.	3.6
	18	05	27	33	USCGS 45.7N 8.1E; N. Italy.	4.7
	18	06	42	22	USCGS 21.7S 179.6W; Fiji Is. Region.	5.0
X	18	15	09	37	26.3S 27.6E; Witwatersrand.	3.2
	19	01	38	17	USCGS 39.5N 142 9E; Near E. Coast of Honshu, Japan	5.3
	19	05	50	57	USCGS 50.0N 79.1E; E. Kazakh S.S.R.	5.5
	19	08	13	35	USCGS 5.6S 77.2W; N. Peru.	6.4
	19	11	25	54	USCGS 30.7S 177.9W; Kermadec Is. Region.	4.7
	19	19	58	02	USCGS 43.9S 75.1W; Off Coast of S. Chile.	5.7
	20	08	15	07	USCGS 40.2N 142.4E; Near E. Coast of Honshu, Japan	4.3
	20	16	43	03	USCGS 28.6S 69.6W; Chile-Argentina Border Region.	4.2
	20	21	49	41	USCGS 22.8S 173.3E; Loyalty Is. Region.	4.5
	21	00	26	08	USCGS 5.7S 77.3W; N. Peru.	5.6
	21	01	24	54	USCGS 15.4N 92.1W; Mexico-Guatemala Border Region.	4.5
X	21	08	32	55	15.9S 26.0E; Namwala Area, Zambia.	3.1
	22	00	28	11	USCGS 56.0S 27.5W; S. Sandwhich Is. Region.	5.1
X	22	00	56	37	25.1S 15.9E; Grootfontein Area, S.W. Africa.	3.7
	22	01	12	31	USCGS 40.3N 143.7E; Off E. Coast of Honshu, Japan.	5.6
X	22	02	10	54	14S 41E; Offshore Memba, N. Mocambique.	3.3
	22	08	08	44	USCGS 20.0S 177.8W; Fiji Is. Region.	4.5
X	22	09	08	34	8.6S 29.9E; S. Lake Tanganyika Area.	3.2
	22	15	56	47	USCGS 29.6N 51.5E; S. Iran.	4.8
	23	01	12	07	USCGS 6.0S 103.9E; S.W. of Sumatra.	5.0
X	23	04	43	51	4.7S 30 3E; N. Lake Tanganyika Area.	4.4

JUN 1968

	Date	h	m	s	Epicentre; Remarks	Mag
	23	08	03	57	USCGS 8.3S 118.2E; Sumbawa Is. Region.	4.9
	23	09	16	19	USCGS 29.8N 51.2E; S. Iran.	5.2
	23	16	53	50	USCGS 56.7N 152.4W; Kodiak Is. Region.	4.9
X	23	21	37	39	3.7S 2[illegible]E; N. Lake Tanganyika Area.	3.8
X	24	01	06	44	1S 30E; Lake Edward Area.	4.1
X	24	01	19	23	0.7S 30.3E; Lake Edward Area.	4.1
X	24	03	21	58	0.3S 29.9E; Lake Edward Area.	4.9
X	24	10	40	45	16.5S 28.6E; Kariba.	2.2
X	24	15	42	35	26.5S 27.2E; W. Witwatersrand.	2.9
X	24	16	30	59	26.5S 27.1E; W. Witwatersrand.	3.0
X	24	17	28	13	1S 31E; Lake Edward Area.	3.9
	24	20	12	20	USCGS 1.6S 15.7W; N. of Ascension Is.	4.9
	25	01	19	08	USCGS 0.0S 90.9W; Galapagos Is.	4.7
X	25	03	48	21	26.5S 27.5E; Witwatersrand.	2.8
	25	05	45	31	USCGS 1.0S 16.2W; N. of Ascension Is.	4.6
	25	06	46	29	USCGS 0.7S 15.9W; N. of Ascension Is.	4.9
	25	09	08	25	USCGS 50.3S 135.0E; S. of Australia.	-
X	25	16	44	00	26.5S 27.2E; W.Witwatersrand.	3.1
	25	21	47	55	USCGS 50.3S 112.4E; S.E. Indian Rise.	5.0
	25	23	33	18	USCGS 39.6N 143.4E; Off E. Coast of Honshu, Japan.	5.3
	26	01	42	19	USCGS 40.1N 124.4W; Near Coast of N. California.	5.5
	26	08	29	30	USCGS 50.3S 135.2E; S. of Australia.	5.0
	26	10	23	48	USCGS 42.1N 142.7E; Hokkaido, Japan Region	5.5
	26	10	47	46	USCGS 40.2N 124.4W; Near Coast of N. California.	5.1
	26	15	40	31	USCGS 22.2S 171.4E; Loyalty Is. Region.	5.6
X	26	17	35	14	12.4S 2[illegible]8E; Mwinilunga Area, Zambia.	2.7
X	26	21	50	13	26.3S 27.5E; Witwatersrand.	2.7
X	27	01	25	16	15.9S 26.0E; Namwala Area, Zambia.	3.2
	27	02	02	40	USCGS 20.8S 179.0W; Fiji Is. Region.	4.9
X	27	14	32	44	26.4S 27.3E; Witwatersrand.	3.1
X	27	16	35	18	28.0S 26.8E. O.F.S. Goldfields.	3.8
	27	22	10	04	USCGS 6.1N 120.9E; Mindanao, Philippine Is. Region	5.3
	27	22	14	01	USCGS 8.2S 119.7E; Flores Is. Region.	5.4
X	28	18	12	08	28.0S 26.7E; O.F.S. Goldfields.	3.2
	28	19	39	50	USCGS 34.6N 70.8E; Afghanistan.	-
	28	20	34	55	USCGS 30.1N 95.1E; Tibet.	4.8
	29	00	04	41	USCGS 20.6S 66.2E; Mascarene Is. Region.	4.8
	29	06	21	48	USCGS 13.6N 90.2W; Near Coast of Guatemala.	4.7
	29	11	07	41	USCGS 11.6S 166.4E; Santa cruz Is.	5.0
X	29	11	47	11	19.8S 33.6E; Manica Province, Mocambique.	3.2
X	29	11	48	18	1.1S 29.4E; Lake Edward Area.	4.9

JUN 1968

	Date	h	m	s	Epicentre; Remarks	Mag
	29	15	31	37	USCGS 58.8S 25,2W; S. Sandwhich Is. Region	4.4
	30	05	04	10	USCGS 30.2N 94.8E; Tibet.	4.8
	30	09	35	29	USCGS 13.0N 145.2; Mariana Is.	5.2
X	30	10	28	58	28.3S 26.7E; O.F.S. Goldfields.	3.1
	30	14	48	36	USCGS 38.8N 142.7E; Near E. Coast of Honshu, Japan	4.8
X	30	21	51	25	19.0S 34.4E; Gorongoza Area, Mocambique.	2.6

LIST OF RECORDED PHASES: 01 to 03 JUN 1968 - 1

Date	Stn	Phase	h	m	s	GM	DA	Epicentral region	Remarks
01	BHA	P	10	50	31	e	0.2	Distant	
	KRR	P		50	32	e	0.2		
	CIR	P		50	33	e	0.2		
	BUL	P		50	37	iR	0.5		
	CLK	P		51	11	e	0.2		
01	BUL		11	41	29	e	0.2	Distant	
				41	43	i			
	KRR			41	34	e	0.2		
				41	46	e			
	CIR			41	38	e	0.2		
01	KRR	Pn	11	41	36	e	0.3	S. of Lake Victoria	
		Sn		44	04	e			
		Sg		45	29	e			
		L		45	41	e	0.7		
	BHA	Sg		44	33	i	2.0		
	CLK	Sg		44	42	e	0.8		
	BUL	L		47	19	e	0.4		
	CIR	L		47	34	e	0.3		
01	BUL	P	20	17	47	e	0.2	Distant	
	CIR	P		17	52	e	0.2		
	KRR	P		18	12	e	0.3		
02	BHA	Pg	03	43	57	iC	3.9	Lunsemfwa Valley, Zambia	
		Sg		44	09	i	10.		
	KRR	Pn		44	14	e	0.4		
		Pg		44	17	i			
		Sn		44	36	i	9.		
	CIR	Pn		45	15	e			
		Sn		46	23	e			
		Sg		46	56	i	1.1		
	BUL	Sn		45	54	e			
		L		46	23	i	1.1		
	CLK	Sn		46	09	e			
		Sg		46	40	e	0.8		
02	CLK	P	05	28	30	e	0.2	Distant	
		pP		28	35	e			
	CIR	P		28	41	e	0.3		
	KRR	P		28	53	e	0.2		
		pP		28	59	e			
	BUL	P		28	56	iC	0.4		
		pP		29	02	i			
	BHA	P		29	02	e	0.2		
		pP		29	08	e			
02	CIR	P'	08	37	24	e	0.7	Distant	
	BUL	P'		37	29	e	2.4		
	KRR	P'		37	31	e	0.8		
	BHA	P'		37	36	e	0.6		
02	KRR		08	47	18	e	0.2	Distant	
	BUL			47	21	e	0.3		
02	CLK	P	20	43	17	e	0.2	Distant	
	CIR	P		43	34	e	0.3		
	KRR	P		43	46	iR	0.5		
	BUL	P		43	49	e	0.4		
	BHA	P		43	53	e	0.3		
03	BUL		09	36	04	e	0.2	Distant	
	KRR			36	05	e	0.2		
03	BUL		09	46	52	e	0.2	Distant	
	KRR			46	54	e	0.2		

LIST OF RECORDED PHASES: 03 to 05 JUN 1968 - 2

Date	Stn	Phase	h	m	s	GM	DA	Epicentral region · Remarks
03	BHA		14	34	55	e	0.3	Distant
	KRR			34	56	e	0.4	
	BUL			35	01	e	0.2	
03	BHA		17	08	45	e	0.1	Distant
	KRR			08	47	e	0.2	
	BUL			08	53	e	0.2	
04	KRR		02	53	53	e	0.2	Distant
	BUL			53	54	e	0.3	
				57	57	e		
04	BHA	P	06	59	(05)	e	0.3	Distant
	KRR	P		59	20	e	0.4	
			07	00	33	e		
	CIR	P	06	59	41	e	0.6	
		pP		59	47	i		
	BUL	P		59	42	e	0.6	
		pP		59	47	i		
04	KRR		13	38	15	iC	0.3	Distant
	BUL			38	18	iC	0.3	
04	BUL		14	20	20	e	0.2	Distant
	KRR			20	26	e	0.2	
04	KRR		15	13	04	e	0.2	Distant
	BUL			13	04	e	0.2	
04	CIR		17	28	41	e	0.3	Distant
	KRR			28	41	e	0.3	
	BHA			28	43	e	0.2	
	BUL			28	51	e	0.4	
05	KRR	Pg	04	15	50	iC	13.	Kariba
		Sg		16	02	i		Felt MM III at Kariba ✓
	BHA	Pn		16	04	e	7.	
		Pg		16	07	e		
		Sn		16	30	i	11.	
	BUL	Pn		16	21	e		
		Pg		16	32	i		
		Sn		17	03	i		
		S*		17	13	i		
		Sg		17	17	i	8.2	
	CIR	Pn		16	44	e		
		Sn		17	43	e		
		Sg		18	08	e	7.0	
05	BUL	P	06	28	03	iR	0.8	Distant
	CIR	P		28	08	iR	0.6	
	KRR	P		28	26	eicR	1.3	
	BHA	P		28	38	e	0.5	
05	CIR	P	12	15	(50)	e	0.2	Distant
	BUL	P		16	06	e	0.3	
	KRR	P		16	13	e	0.2	
		pP		16	20	e		
	BHA	P		16	33	e	0.2	
05	CIR		22	25	07	e	0.2	Distant
	BUL			25	12	e	0.3	
				25	29	e		
	KRR			25	12	e	0.3	
				25	30	e		
	BHA			25	16	iC	0.3	

LIST OF RECORDED PHASES: 05 to 06 JUN 1968 - 3

Date	Stn	Phase	h	m	s	GM	DA	Epicentral region:	Remarks.
05	BUL		23	22	43	e	0.2	Distant?	
	KRR			22	45	e	0.3		
				24	55	e			
				25	07	i			
	BHA			25	03	e	0.2		
	CIR			25	11	e	0.2		
06	BUL	Pn	00	22	51	e		O.F.S. Goldfields.	
		Sn		24	17	e			
		Sg		25	02	e	0.8		
	CIR	Pn		22	53	e			
		Sn		24	21	e			
		Sg		25	04	e	0.7		
	KRR	Pn		23	36	e			
		Sn		25	38	e			
		Sg		26	47	i	0.5		
	BHA	Pn		24	07	e			
		SgSg		28	00	e	0.3		
06	BUL	P	12	08	32	e	0.2	Distant	
		PP		10	34	e			
	CIR	P		08	34	iC	0.3		
		PP		10	43	e			
	KRR	P		08	52	e	0.2		
06	BUL	Pn	16	29	26	e		Witwatersrand.	
		Sn		30	31	e			
		Sg		31	01	i			
		L		31	05	i	2.5		
	CIR	Pn		29	27	e			
		Pg		29	46	i			
		Sn		30	34	e			
		Sg		31	03	i	2.3		
	KRR	Pn		30	12	e			
		Sn		31	48	e			
		Sg		32	42	e	1.4		
	BHA	P		30	42	e			
		L		33	58	e	0.5		
06	KRR		18	40	04	e	0.2	Distant	
	CIR			40	06	e	0.2		
	BUL			40	10	e	0.3		
06	CIR		19	57	17	e	0.3	Distant	
	KRR			57	20	e	0.3		
	BHA			57	24	iR	0.3		
	BUL			57	28	e	0.2		
06	KRR	P	20	11	31	e	0.2	N. Highlands, Tanzania.	
		L		15	40	e	0.4		
	BHA	Sg		14	43	e			
		SgSg		14	51	i	1.1		
	CIR	L		17	15	e	0.2		
	BUL	L		17	22	e	0.2		
06	CIR	P'	20	52	15	e	0.2	Distant	
	BUL	P'		52	20	iR	0.5		
	KRR	P'		52	24	iR	0.6		
	BHA	P'		52	30	e	0.4		
06	KRR	P	21	35	59	e	0.2	Distant	
		PP		37	07	e			
	CIR	P		36	01	e	0.2		
	BUL	P		36	04	e	0.2		
	BHA	PP		37	09	e			

LIST OF RECORDED PHASES: 06 to 08 JUN 1968 - 4

Date	Stn	Phase	h	m	s	GM	DA	Epicentral region:	Remarks
06	BHA		23	10	48	iR	0.3	Distant	
	KRR			10	50	iR	0.3		
	CIR			10	52	e	0.2		
	BUL			10	55	iR	0.4		
07	BUL	Pn	07	23	36	e		Witwatersrand.	
		Sn		24	45	e			
		S*		25	00	i			
		Sg		25	19	i	1.0		
	CIR	Pn		23	40	e			
		Sn		24	52	e			
		Sg		25	24	e	0.7		
	KRR	Pn		24	22	e			
		Sn		25	06	e			
		Sg		26	01	e	0.5		
07	BUL	P	11	36	45	e	0.4	Distant	
	CIR	P		36	52	eirC	0.7		
	KRR	P		37	09	e	0.5		
	BHA	P		37	20	iC	0.4		
07	CLK	P	12	10	04	e	3.0	Distant	
	CIR	P		10	19	iC	3.8		
	KRR	P		10	27	e	0.9		
	BUL	P		10	31	e	2.1		
		SKS		21	36	i			
		S		22	25	e			
	BHA	P		10	34	eicR	1.2		
		pP		10	41	i			
07	CIR	P	13	29	55	e	0.3	Distant	
	KRR	P		30	05	e	0.1		
	BUL	P		30	09	e	0.2		
07	CIR	Pn	14	38	51	e		Witwatersrand.	
		Sn		40	01	e			
		Sg		40	35	e	0 5		
	BUL	Sn		39	56	e			
		Sg		40	29	e	0.6		
	KRR	Sg		42	11	i	0.4		
07	CLK	Pn	16	14	(40)	e		N. Highlands, Tanzania.	
		Sn		16	47	i	-		
	BHA	Pn		14	51	e			
		Sn		17	04	i			
		Sg		18	17	i	22.		
	KRR	P		15	12	e			
		S		17	42	i			
		S*		18	28	i			
		SgSg		19	13	i	7.4		
	BUL	P		15	56	e			
		L		21	04	i	4.0		
	CIR	P		15	57	e			
		L		21	05	i	4.0		
07	CLK	P	21	43	26	e	1.8	Distant	
	CIR	P		43	40	e	1.3		
	KRR	P		43	50	e	0.5		
	BUL	P		43	53	e	0.8		
	BHA	P		43	56	e	0.4		
08	CIR	P	00	35	27	e	0.4	Distant	
	BUL	P		35	33	iR	0.7		
	KRR	P		35	35	e	0.4		
	BHA	P		35	39	e	0.3		

LIST OF RECORDED PHASES: 08 to 09 JUN 1968 - 5

Date	Stn	Phase	h m s	GM	DA	Epicentral region:	Remarks
08	CLK	P	03 26 18	e	0.4	Distant	
	CIR	P	26 28	e	0.2		
	KRR	P	26 38	e	0.2		
	BUL	P	26 41	e	0.2		
	BHA	P	26 47	e	0.2		
08	KRR	P'	05 48 36	e	0.2	Distant	
		PP	50 06	e			
	CIR	P'	48 38	e	0.2		
	BUL	P'	48 42	e	0.3		
		PP	50 23	e			
	CLK	PP	49 33	e	0.3		
	BHA	PP	50 11	e	0.3		
08	KRR		10 38 12	e	0.1	Distant	
	BUL		38 17	e	0.2		
08	BUL	Pn	12 04 58	e		Witwatersrand.	
		Sn	06 08	e			
		Sg	06 41	i	1.0		
	CIR	Pn	05 02	e			
		Sg	06 48	i	0.9		
	KRR	Pn	05 45	e			
		Sg	08 26	e	0.7		
08	BHA	Pn	23 07 31	e			
		Sn	08 36	e			
		L	09 14	e	0.8		
	KRR	Pn	08 07	e			
		Sn	09 39	e			
		L	10 37	e	0.4		
08	CIR	P	23 29 47	iC	11.3	Distant	
	BUL	P	29 58	iC	7.2		
			36 43	i			
	KRR	P	30 25	iC	5.2		
			31 23	e			
			38 19	i			
	CLK	P	30 41	e			
	BHA	P	30 48	iC	7.7		
			36 16	i			
09	BHA		01 06(04)	e	0.1	Distant	
	KRR		06(22)	e	0.2		
	BUL		06 46	e	0.4		
	CIR		06 47	e	0.4		
09	CIR		04 24(10)	e	0.2	Distant	
	BHA		24 14	e	0.5		
	KRR		24(20)	e	0.2		
	BUL		24 24	e	0.2		
09	CIR	P'	09 35 27	e	0.2	Distant	
	BUL	P'	35 32	iC	0.4		
		SKP	37 59	e			
	KRR	P'	35 37	e	0.3		
		SKP	38 07	e			
	BHA	P'	35 42	e	0.2		
		SKP	38 18	i			
09	BHA		10 40 27	e	0.3	Distant	
	BUL		40 28	e	0.3		
			40 43	i			
	KRR		40 29	e	0.5		
			40 47	e			

LIST OF RECORDED PHASES: 09 to 11 JUN 1968 - 6

Date	Stn	Phase	h	m	s	GM	DA	Epicentral region:	Remarks
09	BUL	Pn	17	43	46	e		Witwatersrand.	
		Sg		45	29	e	0.4		
	CIR	Sg		45	34	e	0.4		
	KRR	Pn		44	31	e			
		Sg		47	10	e	0.3		
09	BUL		22	20	51	e	0.3	Distant	
				21	05	e			
	KRR			20	56	e	0.3		
				21	08	e			
	BHA			21	03	e	0.1		
				21	15	e			
10	KRR		04	02	50	e	0.2	Distant	
				03	26	e			
	BUL			02	58	e	0.2		
				03	35	e			
	BHA			03	02	e	0.2		
				03	38	e			
10	KRR		05	25	56	e	0.2	Distant	
	BUL			26	04	e	0.3		
	BHA			26	07	e	0.2		
10	BHA		13	00	01	e	0.3	Distant	
				00	10	e			
	KRR			00	06	e	0.4		
				00	16	e			
	BUL			00	17	e	0.6		
	CIR			00	20	e	0.3		
10	BHA		15	19	15	e	0 2	Distant	
	KRR			19	24	e	0 3		
10	BHA	Pn	20	08	(52)	e		N. Highlands, Tanzania.	
		Sn		11	03	e			
		S*		11	43	i			
		Sg		12	18	i			
		SgSg		12	24	i	7.0		
	KRR	P		09	13				
		S*		12	26	e			
		SgSg		13	13	e	1.4		
	CIR	P		09	57	e			
		L		14	59	e	0.6		
	BUL	P		10	00	e			
		L		14	59	e	0.7		
11	BHA		03	17	56	e	0.3	Distant	
	KRR			18	04	e	0.4		
	CIR			18	19	e	0.2		
	BUL			18	22	e	0.3		
11	BHA		06	11	00	e	0.2	Distant	
	BUL			11	01	e	0.2		
	KRR			11	02	iC	0.3		
	CIR			11	07	e	0.2		
11	KRR		10	35	37	e	0.2	Distant	
				35	52	i			
	CIR			35	41	e	0.2		
	BUL			35	44	e	0.3		
				35	57	e			
	BHA			35	56	e	0.2		
11	CIR	P	14	13	06	e	0.3	Distant	
	BUL	P		13	06	e	0·2		
	KRR	P		13	31	e	0.2		

LIST OF RECORDED PHASES: 12 JUN 1968 - 7

Date	Stn	Phase	h	m	s	GM	DA	Epicentral region:	Remarks
12	BHA		04	40	51	iC	1.8	Distant	
	KRR			40	52	eicR	1.1		
	CIR			40	56	e	0.2		
	BUL			41	07	iC	0.7		
12	BHA	P	09	13	(55)	e	0.2	Distant	
	CLK	P		14	09	e	0.3		
	KRR	P		14	12	e	0.3		
	BUL	P		14	37	e	0.2		
	CIR	P		14	42	e	0.2		
12	BHA	P	09	33	12	e	0.2	Distant	
	KRR	P		33	13	e	0.2		
	CIR	P		33	18	e	0.2		
12	CLK	P'	14	00	37	e	0.9	Distant	
		PP		01	32	i			
		PKKP		11	19	e			
	KRR	P'		00	44	e	1.4		
		PP		02	(00)	e			
		PKKP		11	00	e			
	BHA	P'		00	47	e	1.1		
		PP		02	(06)	e			
		PKKP		10	59	e			
	CIR	P'		00	49	e	1.1		
		PP		02	(18)	e			
		PKKP		10	53	e			
	BUL	P'		00	49	e	2.5		
		PP		02	18	e			
		PKKP		10	52	e			
12	BUL	P	14	20	31	iR	4.3	Distant	
		pP		20	54	i			
		S		28	12	i			
	CIR	P		20	36	iR	2.8		
		pP		21	00	i			
	KRR	P		20	54	iR	6.6		
		pP		21	18	i			
	BHA	P		21	05	eirC	2.3		
		pP		21	29	i			
	CLK	P		21	20	iR	1.5		
		pP		21	43	i			
12	KRR		14	56	57	e	0.2	Distant	
	BUL			57	02	e	0.3		
12	KRR		15	27	37	e	0.2	Distant	
	BUL			27	44	iC	0.4		
12	BUL	Pn	16	47	58	e		Witwatersrand.	
		Sg		49	42	i	0.6		
	CIR	Pn		48	02	e			
		Sg		49	47	e	0.4		
	KRR	Pn		48	44	e			
		Sg		51	22	e	0.3		
12	KRR		18	10	44	e	0.2	Distant	
	BHA			10	47	e	0.2		
	BUL			10	52	e	0.3		
12	CLK	P	20	29	21	e	0.3	Distant	
	CIR	P		29	33	e	0.2		
		PP		33	35	e			
	KRR	P		29	42	e	0.3		
		PP		33	51	e			
	BUL	P		29	47	e	0.3		
		PP		34	02	e			
	BHA	P		29	49	e	0.3		
		PP		34	03	e			

Date	Stn	Phase	h	m	s	GM	DA	Epicentral region: Remarks
12	CLK	P'	22	16	18	iR	0.3	Distant
	BHA	P'		16	26	iR	0.4	
	KRR	P'		16	27	iR	0.4	
	CIR	P'		16	28	e	0.3	
	BUL	P'		16	32	eicR	1.3	
12	CLK	P	23	39	15	iC	0.5	Distant
				39	52	i		
	KRR	P		39	26	iR	0.6	
	CIR	P		39	34	e	0.3	
				40	05	e		
	BHA	P		39	41	iC	0.3	
				40	15	e		
	BUL	P		39	46	e	0.4	
13	KRR		00	23	48	e	0.1	Distant
	BUL			23	55	e	0.2	
	BHA			24	01	e	0.1	
13	BHA		02	24	28	e	0.1	Distant
	KRR			24	33	e	0.2	
	BUL			24	35	e	0.3	
13	BHA		12	15	08	e	0.2	Distant
	KRR			15	09	e	0.2	
	BUL			15	15	e	0.3	
13	BUL	Pn	14	08	25	e		Klerksdorp area, Transvaal.
		Sg		10	17	e	0.4	
	CIR	Pn		08	30	e		
		Sg		10	28	e	0.4	
	KRR	Pn		09	11	e		
		SgSg		12	04	e	0.2	
13	BHA		15	15	02	e	0.1	Distant
	KRR			15	02	e	0.1	
	BUL			15	08	e	0.3	
13	CLK	P	15	46	41	e	0.2	Distant
		pP?		46	52	e		
	BHA	P		47	03	e	0.2	
		pP		47	08	e		
	KRR	P		47	10	e	0.3	
		pP		47	16	e		
	CIR	pP		47	26	e	0.2	
	BUL	P		47	27	e	0.4	
		pP		47	33	e		
13	BHA	P	16	57	48	e		Lake Kyoga area, Uganda.
		L	17	02	49	i	2.0	
	KRR	P	16	58	11	e		
		L	17	03	44	e	0.7	
	BUL	P	16	58	49	e		
		L	17	05	27	e	0.5	
	CIR	P	16	58	53	e		
		L	17	05	(50)	e	0.4	
	CLK	L		02	57	i	0.7	
13	BUL		18	39	38	e	0.4	Distant
	BHA			39	49	e	0.1	
13	CLK	P'	21	29	15	e	0.2	Distant
	BHA	P'		29	21	e	0.2	
	KRR	P'		29	22	e	0.3	
	CIR	P'		29	24	e	0.2	
	BUL	P'		29	27	e	0.4	
		pP'		29	37	e		

Date	Stn	Phase	h	m	s	GM	DA	Epicentral region:	Remarks
13	CIR	P	21	49	27	e	0.2	Distant	
	CLK	P		49	32	e	0.4		
	BUL	P		49	51	eirC	0.4		
	KRR	P		49	58	e	0.2		
	BHA	P		50	18	eirC	0.5		
13	CLK	P	23	12	41	e	0.3	Distant	
	BHA	P		12	(51)	e	0.3		
	KRR	P		13	03	e	0.3		
	CIR	P		13	26	e	0.4		
	BUL	P		13	27	e	0.3		
14	CIR	Pn	02	04	15	e		Witwatersrand.	
		Sg		05	48	e	0.4		
	BUL	Pn		04	15	e			
		Sg		05	48	e	0.4		
	KRR	Pn		04	56	e			
		L		07	33	e	0.2		
14	BHA		03	37	03	e	0.2	Distant	
				37	10	e			
	KRR			37	04	e	0.2		
	BUL			37	08	e	0.2		
				37	16	e			
14	CLK	P	04	12	12	e	0.2	Distant	
	KRR	P		12	39	e	0.2		
	CIR	P		12	51	e	0.2		
	BUL	P		13	02	e	0.2		
14	BHA		12	11	25	e	0.2	Distant	
	KRR			11	25	e	0.3		
	BUL			11	30	iR	0.5		
14	BHA	Pn	12	27	28	e		Upper Kafue Catchment.	
		Sg		27	48	i	3.3		
	KRR	Sn		28	50	e			
		Sg		29	09	e	0.6		
	BUL	L		30	41	e	0.2		
	CIR	L		31	32	e	0.2		
14	CLK	P'	12	36	19	e	0.2	Distant	
	BHA	P'		36	25	e	0.4		
	KRR	P'		36	25	e	0.5		
	CIR	P'		36	28	e	0.3		
	BUL	P'		36	32	e	0.5		
15	KRR		03	50	04	e	0.2	Distant	
	BHA			50	05	e	0.2		
	BUL			50	10	iR	0.4		
15	BHA		05	30	14	e	0.3	Distant	
				30	18	i			
	BUL			30	14	e	0.4		
				30	18	i			
	KRR			30	16	e	0.6		
				30	21	i			
	CIR			30	24	e	0.3		
15	BHA		07	27	24	e	0.2	Distant	
	KRR			27	26	e	0.4		
	CLK			27	37	e	0.3		
15	CLK		11	46	28	iR	0.3	Distant	
	BHA			46	33	iR	0.3		
	KRR			46	34	e	0.3		
	CIR			46	39	e	0.2		
	BUL			46	41	e	0.2		

LIST OF RECORDED PHASES: 15 to 16 JUN 1968 - 10

Date	Stn	Phase	h	m	s	GM	DA	Epicentral region: Remarks
15	KRR	P	12	32	31	e		S. Tanzania.
		S		34	38	e		
		L		36	04	e	0.4	
	CLK	Sg		33	47	i	0.8	
	BHA	L		36	07	e	0.3	
	CIR	L		37	07	e	0.2	
	BUL	L		37	42	e	0.2	
15	CIR	Pg	13	17	28	e		N.E. of Beira, Mocambique.
		Sn		18	00			
		Sg		18	15	i	2.4	
	BUL	Pg		18	13			
		Sg		19	31	e	0.7	
	KPP	Sg		19	17	i	1.2	
15	CIR		13	53	12	e	0.2	Distant
	BUL			53	15	e	0 3	
				55	16	e		
	KRR			53	18	e	0.3	
	BHA			53	23	e	0.3	
15	BHA	P'	14	19	27	e	0.4	Distant
		PP		20	00	e		
	KRR	P'		19	35	eicR	3.5	
	BUL	P'		19	38	iC	6.9	
	CLK	P'		19	44	eicR	3.8	
	CIR	P'		19	45	e	1.6	
16	BUL	P	05	03	44	e	0.7	Distant
				04	08	i		
	CIR	P		04	03	e	0.7	
	BHA	P		04	13	e	0.5	
				04	41	i		
	CLK	P		04	(46)	e	0.4	
				05	08	i		
16	BUL	P	05	39	54	e	0.4	Distant
	CIR	P		40	10	e	0.4	
	BHA	P		40	21	e	0.2	
16	BUL	Pn	08	51	26	iC	0.4	Witwatersrand.
		Sn		52	35	e		
		S*		52	50	e		
		Sg		53	10	e	1.4	
	CIR	Pn		51	30	e	0.5	
		Sn		52	42	e		
		Sg		53	14	e	1.2	
	BHA	Pn		52	41	e	0..3	
		Sn		54	49	e		
		SgSg		56	04	e	0.2	
	CLK	SgSg		56	23	e	0.2	
16	BUL	P	19	21	12	iR	0 3	Distant
		PP		22	28	e		
		S		27	08	e		
	CIR	P		21	13	e	0.5	
		PP		22	39	i		
	BHA	P		21	55	e	0.4	
		PP		23	32	e		
		S		28	34	e		
	CLK	P		22	06	e	0.2	
		PP		23	52	i		
		S		28	46	e		

LIST OF RECORDED PHASES: 16 to 18 JUN 1968 - 11

Date	Stn	Phase	h	m	s	GM	DA	Epicentral region:	Remarks
16	BUL	P	19	42	42	iC	0.2	Distant	
	CIR	P		43	04	iC	0.2		
17	CIR		04	40	04	iR	0.2	Distant	
	BUL			40	14	iR	0.2		
17	BUL		05	09	32	e	0.1	Distant	
	CIR			09	33	e	0.2		
17	BUL	P	10	26	52	iR	1.1	Distant	
	CIR	P		26	58	iR	0.8		
	BHA	P		27	25	iR	0.8		
	CLK	P		27	43	iR	0.6		
17	CLK	P	12	11	00	e	0.1	Distant	
				12	35	i			
	CIR	P		11	40	e	0.3		
				12	55	i			
	BHA	P		11	43	e	0.1		
				13	01	i			
	BUL	P		11	50	iR	0.3		
				13	24	i			
17	BUL		18	08	12	e	0.2	Distant	
	BHA			08	15	e	0.1		
17	CIR	P'	18	28	32	iC	0.4	Distant	
		pP'		29	10	e			
		PP		30	17	e			
	CLK	P'		28	33	iC	0.3		
		PP		30	19	e			
	BUL	P'		28	37	iC	0.6		
		pP'		29	19	e			
		PP		30	36	e			
	BHA	P'		28	44	iR	0.3		
		PP		31	01	i			
17	CLK	Pn	22	04	16	e		Central Lake Malawi.	
		Pg		04	27	e			
		Sn		04	58	e			
		Sg		05	15	e	-		
	BHA	Pn		04	52	e			
		Sn		06	01	e			
		L		06	44	e	2.3		
	CIR	Pn		05	34	e			
		Sn		07	16	e			
		L		08	19	i	0.6		
	BUL	Pn		05	42	e			
		Sn		07	24	e			
		L		08	38	e	0.6		
17	CIR		22	35	24	e	0.1	Distant	
	BUL			35	30	e	0.2		
18	BUL		03	03	06	e	0.2	Distant	
	BHA			03	06	e	0.2		
18	BHA	P	05	38	00	iR	0.1	Distant	
	BUL	P		38	34	iR	0.2		
	CIR	P		38	45	iR	0.2		
18	CIR	P'	07	00	21	iC	0.3	Distant	
				02	46	e			
	BUL	P'		00	26	iC	0.7		
				02	54	i			
	CLK	P'		00	26	iC	0.2		
				02	54	i			
	BHA	P'		00	35	iC	0 3		
				03	10	e			

LIST OF RECORDED PHASES: 27 to 29 JUN 1968 - 20

Date	Stn	Phase	h	m	s	GM	DA	Epicentral region:	Remarks
27	CLK	P	22	22	46	iR	0.2	Distant	
	CIR	P		23	04	e	0.1		
	KRR	P		23	11	e	0.1		
	BHA	P		23	15	iR	0.2		
	BUL	P		23	17	iR	0.2		
27	CLK	P	22	26	19	iC	1.4	Distant	
		pP		26	53	i			
	CIR	P		26	31	iC	1.4		
		pP		27	09	i			
	KRR	P		26	44	iC	1.4		
		pP		27	19	i			
		PP		30	05	e			
	BUL	P		26	46	iC	4.4		
		pP		27	20	i			
		PP		30	14	i			
		SKS		37	01	i			
		S		37	16	i			
	BHA	P		26	50	iC	0.9		
		pP		27	24	i			
		PP		30	21	i			
		SKS		37	24	i			
		S		37	55	i			
28	KRR		12	41	35	e	0.5	Distant	
	BUL			41	39	e	0.9		
	CLK			41	46	e	0.6		
	CIR			41	47	e	0.5		
28	BUL	Pn	18	14	08	e		O.F.S. Goldfields.	
		Sn		15	32	e			
		Sg		16	17	e	0.4		
	CIR	Pn		14	08	e			
		Sn		15	35	e			
		Sg		16	17	e	0.4		
	KRR	Pn		14	48	iR			
		Sn		16	48	e			
		L		18	05	i	0.3		
28	BHA	P	19	50	19	e	0.1	Distant	
	KRR	P		50	26	iC	0.4		
	BUL	P		50	46	e	0.2		
28	CLK	P	20	46	26	iC	0.4	Distant	
	BHA	P		46	51	iC	0.3		
	KRR	P		46	53	iC	0.2		
	BUL	P		47	08	iC	0.3		
29	CIR	P	00	11	13	e	0.1	Distant	
	KRR	P		11	30	iC	0.2		
	BUL	P		11	34	e	0.1		
	BHA	P		11	45	e	0.1		
29	BUL	P'	06	40	34	iR	0.2	Distant	
	KRR	P'		40	34	iR	0.7		
	CIR	P'		40	40	e	0.2		
	CLK	P'		40	46	e	0.2		
29	CIR	P'	11	26	27	e	0.3	Distant	
	BUL	P'		26	34	iC	0.5		
	KRR	P'		26	35	iC	0.5		
	BHA	P'		26	39	iC	0.3		

LIST OF RECORDED PHASES: 16 to 18 JUN 1968 - 11

Date	Stn	Phase	h	m	s	GM	DA	Epicentral region:	Remarks
16	BUL	P	19	42	42	iC	0.2	Distant	
	CIR	P		43	04	iC	0.2		
17	CIR		04	40	04	iR	0.2	Distant	
	BUL			40	14	iR	0.2		
17	BUL		05	09	32	e	0.1	Distant	
	CIR			09	33	e	0.2		
17	BUL	P	10	26	52	iR	1.1	Distant	
	CIR	P		26	58	iR	0.8		
	BHA	P		27	25	iR	0.8		
	CLK	P		27	43	iR	0.6		
17	CLK	P	12	11	00	e	0.1	Distant	
				12	35	i			
	CIR	P		11	40	e	0.3		
				12	55	i			
	BHA	P		11	43	e	0.1		
				13	01	i			
	BUL	P		11	50	iR	0.3		
				13	24	i			
17	BUL		18	08	12	e	0.2	Distant	
	BHA			08	15	e	0.1		
17	CIR	P'	18	28	32	iC	0.4	Distant	
		pP'		29	10	e			
		PP		30	17	e			
	CLK	P'		28	33	iC	0.3		
		PP		30	19	e			
	BUL	P'		28	37	iC	0.6		
		pP'		29	19	e			
		PP		30	36	e			
	BHA	P'		28	44	iR	0.3		
		PP		31	01	i			
17	CLK	Pn	22	04	16	e		Central Lake Malawi.	
		Pg		04	27	e			
		Sn		04	58	e			
		Sg		05	15	e	-		
	BHA	Pn		04	52	e			
		Sn		06	01	e			
		L		06	44	e	2.3		
	CIR	Pn		05	34	e			
		Sn		07	16	e			
		L		08	19	i	0.6		
	BUL	Pn		05	42	e			
		Sn		07	24	e			
		L		08	38	e	0.6		
17	CIR		22	35	24	e	0.1	Distant	
	BUL			35	30	e	0.2		
18	BUL		03	03	06	e	0.2	Distant	
	BHA			03	06	e	0.2		
18	BHA	P	05	38	00	iR	0.1	Distant	
	BUL	P		38	34	iR	0.2		
	CIR	P		38	45	iR	0.2		
18	CIR	P'	07	00	21	iC	0.3	Distant	
				02	46	e			
	BUL	P'		00	26	iC	0.7		
				02	54	i			
	CLK	P'		00	26	iC	0.2		
				02	54	i			
	BHA	P'		00	35	iC	0 3		
				03	10	e			

LIST OF RECORDED PHASES: 18 to 19 JUN 1968 - 12

Date	Stn	Phase	h	m	s	GM	DA	Epicentral region:	Remarks
18	BUL	Pn	15	11	06	e		Witwatersrand.	
		Sn		12	18	e			
		Sg		12	49	i	1.2		
	CIR	Pn		11	13	e			
		Sn		12	22	e			
		Sg		12	54	i	1.0		
	BHA	L		15	50	e	0.2		
	CLK	L		16	08	e	0.2		
19	CLK		01	56	55	e	0.1	Distant	
				57	56	e			
				58	53	e			
	BUL			57	09	iC	0.2		
				58	15	i			
				59	09	i			
	BHA			58	12	e	0.7		
				59	06	e			
19	BHA		05	18	00	iR	0.5	Distant	
	CIR			18	22	iC	0.5		
	BUL			18	25	iR	0.9		
19	BUL	P	08	27	33	iR	0.8	Distant	
				30	46	i			
		PP		31	44	i			
		S		39	13	e			
		PKKP		43	34	i			
	BHA	P		27	38	e	0.2		
				30	54	e			
		PP		31	51	i			
	KRR	P		27	41	e	0.3		
				31	00	e			
		PP		31	52	i			
		PKKP		43	30	e			
	CIR	P		27	48	e	0.3		
				31	05	i			
		PP		31	57	i			
		PKKP		43	24	i			
	CLK	P		28	(09)	e	0.2		
				31	44	e			
		PP		32	32	i			
		SKS		38	50	e			
		PKKP		43	17	e			
19	CIR	P'	11	44	44	iR	0.2	Distant	
	BUL	P'		44	47	iR	0.4		
	CLK	P'		44	50	e	0.1		
	KRR	P'		44	53	iR	0.3		
	BHA	P'		44	59	e	0.2		
19	CIR	P	13	53	09	e	0.3	Distant	
	CLK	P		53	26	e	0.2		
	BUL	P		53	36	e	0.2		
	KRR	P		53	47	e	0.2		
	BHA	P		54	10	e	0.1		
19	BUL	P	20	10	42	iR	2.0	Distant	
		pP		10	49	i			
		S		21	55	i			
	CIR	P		10	48	iR	1.2		
		pP		10	56	i			
	KRR	P		10	57	iR	1.0		
		pP		11	04	i			
	BHA	P		11	02	iR	1.4		
		pP		11	08	i			
		S		21	59	e			
	CLK	P		11	17	e	0.2		
		pP		11	25	e			

LIST OF RECORDED PHASES: 20 to 22 JUN 1968 - 13

Date	Stn	Phase	h	m	s	GM	DA	Epicentral region: Remarks
20	BHA	P	08	33	41	iR	0.2	Distant
	KRR	P		33	51	iR	0.2	
	CIR	P		34	13	iR	0.2	
	BUL	P		34	18	iC	0.2	
20	BUL	P	16	55	40	iC	0.2	Distant
	KRR	P		55	53	iC	0.2	
20	BUL		22	08	38	e	0.1	Distant
	KRR			08	42	e	0.1	
21	BUL		00	40	15	e	0.1	Distant
				44	23	e	0.3	
	KRR			44	27	e	0.3	
	BHA			44	29	e	0.1	
	CIR			44	38	e	0.2	
21	BHA	P'	01	43	37	e	0.3	Distant
	BUL	P'		43	39	e	0.3	
	KRR	P'		43	40	e	0.3	
	CIR	P'		43	44	e	0.1	
	CLK	P'		43	52	e	0.1	
21	BHA	Pn	08	33	39	e		Namwala area, Zambia.
		Pg		33	47	e		
		Sn		34	10	e		
		S*		34	17	e		
		Sg		34	22	e	5.5	
	KRR	Pn		33	50	e		
		Pg		33	58	e		
		Sg		34	44	e	2.2	
	BUL	Pn		34	05	e		
		Sn		35	00	i		
		Sg		35	25	i	1.7	
	CIR	Pn		34	40	e		
		Sn		35	58	i		
		SgSg		36	40	e	1.2	
	CLK	L		37	21	e	0.3	
22	BUL	P	00	37	24	iC	0.6	Distant
		pP		37	55	i		
	CIR	P		37	30	iC	0.6	
		pP		38	02	i		
				38	10	i		
	KRR	P		37	47	iC	0.7	
		pP		38	19	i		
				38	35	i		
	BHA	P		37	58	iC	0.4	
		pP		38	20	i		
				38	45	i		
	KRR	P		38	15	e	0.2	
22	BUL	Pn	00	59	34	e		Grootfontein area, S.W. Africa.
		Sn	01	01	46	e		
		SgSg		03	00	e	0.4	
	CIR	P		00	05	e		
		S		02	41	e		
		L		04	15	e	0.4	
	KRR	P		00	06	e		
		S		02	45	e		
		L		04	21	e	0.3	
	BHA	L		04	50	e	0.2	

Date	Stn	Phase	h	m	s	GM	DA	Epicentral region: Remarks
22	CLK		01	30	35	e	0.1	Distant
				31	45	e		
	BHA			31	21	e	0.1	
				32	33	e		
	KRR			31	23	e	0.2	
				32	36	e		
	BUL			31	27	e	0.2	
				32	39	e		
	CIR			31	27	e	0.1	
				32	41	e		
22	CLK	Pn	02	12	23	e		Offshore Memba, N. Mocambique.
		Sn		13	28	e		
		L		14	06	e	1.6	
	KRR	P		13	36	e		
		S		15	35	e		
		L		16	55	e	0.3	
	CIR	P		13	41	e		
				15	37	e		
				16	58	e	0.2	
	BHA	L		17	25	e	0.3	
	BUL	L		17	44	e	0.2	
22	CIR	P'	08	27	07	e	0.2	Distant
		SKP		29	52	i		
	BUL	P'		27	12	e	0.2	
		SKP		29	59	i		
	CLK	P'		27	14	e	0.2	
		SKP		30	00	i		
	KRR	P'		27	17	e	0.2	
				30	06	i		
22	BHA	Pn	09	10	02	i	0.4	S. Lake Tanganyika area.
		Sn		11	04	i		
		L		11	41	i	0.7	
	KRR	Pn		10	33	iR	0.2	
		Sn		12	00	i		
		L		12	55	i	0.7	
	CLK	Pn		10	38	e	0.2	
		Sn		12	10	i		
		L		13	05	e	0.4	
	BUL	Pn		11	16	e	0.1	
		Sn		13	16	e		
		L		14	27	i	0.2	
	KRR	L		15	07	e	0.3	
22	CLK	P	16	05	22	e	0.2	Distant
	BHA	P		05	32	e	0.1	
	KRR	P		05	42	e	0.2	
	CIR	P		06	10	e	0.2	
	BUL	P		06	13	e	0.1	
23	CIR	P	01	23	37	iC	0.2	Distant
	KRR	P		23	47	iC	0.2	
	BUL	P		23	53	iC	0.4	
	BHA	P		23	54	iC	0.2	
23	CIR	P	01	40	15	e	0.4	Distant
	BUL	P		40	40	e	0.2	
	KRR	P		40	57	e	0.1	
	BHA	P		41	10	e	0.1	
23	BUL		03	00	43	e	0.2	Distant
	KRR			00	45	iR	0.2	

Date	Stn	Phase	h	m	s	GM	DA	Epicentral region: Remarks
23	BUL		03	14	10	e	0.2	Distant
	KRR			14	13	e	0.2	
23	BHA	Pn	04	46	13	e	0.3	N. Lake Tanganyika area.
		Sn		47	58	e		
		L		49	01	e	5.0	
	CLK	Pn		46	38	e	0.7	
		Sn		48	46	e		
		L		49	59	e	2.0	
	KRR	Pn		46	43	e	0.3	
		Sn		48	55	e		
		L		50	18	i	2.3	
	BUL	Pn		47	30	e	0.2	
		Sn		50	07	e		
		L		51	55	e	0.9	
	CIR	Pn		47	37	e	0.2	
		Sn		50	30	e		
		L		52	23	i	1.2	
23	CIR		08	16	22	e	0.2	Distant
	KRR			16	34	iR	0.2	
	BUL			16	37	iR	0.3	
23	CLK	P	09	24	54	e	0.7	Distant
	BHA	P		25	04	e	0.6	
	KRR	P		25	16	e	0.7	
	CIR	P		25	40	e	0.8	
	BUL	P		25	41	e	0.6	
23	CLK	P'	17	13	15	e	0.1	Distant
	BHA	P'		13	15	e	0.1	
	KRR	P'		13	19	e	0.2	
	BUL	P'		13	20	iR	0.2	
	CIR	P'		13	23	iR	0.2	
23	BHA	Pn	21	40	05	e		N. Lake Tanganyika area.
		Sn		41	52	e		
		SgSg		42	59	e	1.6	
	CLK	Pn		40	39	e		
		Sn		43	03	e		
		L		44	37	e	0.4	
	BUL	Pn		41	16	e		
		Sn		44	06	e		
		L		46	01	e	0.3	
	CIR	L		46	27	e	0.2	
24	BHA	Pn	01	10	01	e	0.1	Lake Edward area.
		Sn		12	25	e		
		L		13	59	e	1.2	
	CLK	Pn		10	22	e	0.2	
		Sn		13	11	e		
		L		14	54	i	0.8	
	KRR	Pn		10	25	e	0.2	
		Sn		13	18	e		
		L		15	05	i	0.7	
	BUL	P		11	02	e	0.1	
		L		16	43	e	0.3	
	CIR	L		17	12	e	0.2	

LIST OF RECORDED PHASES: 24 JUN 1968 - 16

Date	Stn	Phase	h	m	s	GM	DA	Epicentral region;	Remarks
24	BHA	P	01	22	44	e	0.2	Lake Edward area.	
		S		25	05	e			
		L		26	40	e	1.1		
	CLK	P		22	59	e	0.2		
		S		25	44	e			
		L		27	33	e	0.7		
	KRR	P		23	04	e	0.2		
		S		25	58	e			
		L		27	50	e	0.7		
	BUL	P		23	47	e	0.2		
		S		27	03	e			
		L		29	30	i	0.4		
	CIR	L		30	02	e	0.3		
24	BHA	P	03	25	15	e	0.4	S.W. Uganda.	
		S		27	50	e			
		L		29	26	e	7.3		
	CLK	P		25	42	e	0.4		
		S		28	29	e			
		L		30	13	e	3.6		
	KRR	P		25	48	e	0.3		
		S		28	37	e			
		L		30	36	i	3.4		
	BUL	P		26	30	iC	0.3		
		S		29	58	e			
		L		32	16	i	1.7		
	CIR	P		26	39	e	0.4		
		S		30	12	e			
		L		32	37	i	1.6		
24	BUL		04	17	45	iC	0 1	Distant	
	KRR			17	53	iC	0 4		
24	BUL		05	27	55	e	0.2	Distant	
	CIR			28	12	e	0.1		
	KRR			28	23	e	0.2		
	BHA			28	27	e	0.1		
	CLK			29	04	e	0.1		
24	CLK		10	00	31	e	0.1	Distant	
	KRR			00	33	iC	0.2		
	BUL			00	55	e	0.1		
	CIR			01	04	e	0.1		
24	KRR	Pg	10	41	14	iC		Kariba.	
		Sg		41	28	i	3.9		
	BUL	Pg		42	00	iC			
		Sg		42	43	e	0.5		
	CIR	Sn		43	12	e			
		Sg		43	37	e	0.3		
	CLK	Sg		44	07	e	0.1		
24	BUL	Pn	15	44	12	e		W. Witwatersrand.	
		Sn		45	20	e			
		Sg		45	52	e	0.4		
	CIR	Sg		45	57	e	0.3		
	KRR	Sg		47	39	e	0.3		
24	BUL	Pn	16	32	33	e		W. Witwatersrand.	
		Sn		33	45	e			
		Sg		34	15	e	0.5		
	KRR	Pn		33	22	e			
		Sn		35	04	e			
		Sg		36	05	e	0.3		
	CIR	Sg		34	22	e	0.1		
	CLK	Sg		37	37	e	0 1		

Date	Stn	Phase	h	m	s	GM	DA	Epicentral region:	Remarks
24	BHA	P	17	31	33	e		Lake Edward area.	
		S		33	55	e			
		L		35	33	e	0.6		
	KRR	P		31	56	e			
		S		34	48	e			
		L		36	42	e	0.4		
	BUL	P		32	38	e			
		S		35	56	e			
		L		38	24	e	0.3		
	CLK	L		36	28	e	0.5		
24	BUL	P	19	59	48	iC	0.2	Distant	
	KRR	P		59	50	e	0.1		
	CIR	P	20	00	11	iC	0.3		
24	BHA	P	20	20	49	iC	0.2	Distant	
	BUL	P		20	59	iC	0.3		
	KRR	P		21	00	iC	0.3		
	CIR	P		21	21	iC	0.3		
	CLK	P		21	31	e	0.1		
25	BHA		01	37	54	e	0.1	Distant	
	KRR			37	58	e	0.1		
25	BUL	P	03	41	11	iR	0.1	Distant	
	KRR	P		41	11	iR	0.1		
	CIR	P		41	32	iR	0.1		
25	BUL	Pn	03	49	54	e		Witwatersrand.	
		Sn		51	02	e			
		Sg		51	37	e	0.3		
	CIR	Pn		50	00	e			
		Sn		51	07	e			
		Sg		51	40	e	0.3		
	KRR	Pn		50	42	e			
		Sn		52	24	e			
		Sg		53	24	e	0.2		
25	BHA	P	05	53	55	e	0.1	Distant	
	BUL	P		54	05	iC	0.2		
	KRR	P		54	06	e	0.2		
	CIR	P		54	25	e	0.2		
25	BHA	P	06	54	53	e	0.1	Distant	
	BUL	P		55	03	iR	0.3		
	KRR	P		55	05	iR	0.3		
	CIR	P		55	26	e	0.3		
	CLK	P		55	40	e	0.1		
25	BUL	P	06	59	49	iC	0.2	Distant	
	CIR	P	07	00	00	iC	0.2		
	KRR	P		00	13	e	0.2		
	BHA	P		00	26	e	0.2		
	CLK	P		00	45	e	0.1		
25	CIR	P	09	20	45	e	0.1	Distant	
				26	08	e			
	BUL	P		20	58	e	0.1		
				26	20	e			
	KRR	P		21	08	e	0.1		
				21	30	e			
	BHA	P		21	21	e	0.1		
				21	44	e			

LIST OF RECORDED PHASES: 25 to 26 JUN 1968 - 18

Date	Stn	Phase	h	m	s	GM	DA	Epicentral region:	Remarks
25	BUL	Pn	16	45	33	e		W. Witwatersrand.	
		Sn		46	43	e			
		S*		46	58	i			
		Sg		47	15	i	0.6		
	KRR	Pn		46	21	i			
		Sn		48	04	i			
		Sg		48	59	i	0.5		
	BHA	L		50	14	e	0.1		
	CLK	L		50	38	e	0.1		
25	BUL		19	58	53	iR	0.2	Distant	
	KRR			59	03	e	0.1		
25	BUL	P	21	59	10	e	0.1	Distant	
	KRR	P		59	21	e	0.2		
	BHA	P		59	35	e	0.1		
	CLK	P		59	46	e	0 1		
25	KRR		23	52	09	e	0.2	Distant	
	BUL			52	12	e	0.2		
	CLK			52	48	e	0.1		
26	BHA	P'	02	02	00	e	0.7	Distant	
	KRR	P'		02	07	e	0.6		
	BUL	P'		02	09	e	0.5		
	CLK	P'		02	10	e	0.3		
26	CIR	P	08	41	50	iR	0.2	Distant	
	BUL	P		42	02	iR	0.1		
	CLK	P		42	10	e	0.1		
	KRR	P		42	13	e	0.1		
	BHA	P		42	27	e	0.1		
26	CLK	P'	10	42	26	e	0.1	Distant	
	BHA	P'		42	34	e	0.1		
	KRR	P'		42	36	e	0.1		
	CIR	P'		42	36	e	0.1		
	BUL	P'		42	39	e	0.1		
26	BHA	P'	11	07	24	e	0.2	Distant	
	KRR	P'		07	28	e	0.2		
	BUL	P'		07	34	e	0.2		
	CLK	P'		07	38	e	0.1		
	CIR	P'		07	48	e	0.1		
26	CIR	P'	15	59	15	iC	0.4	Distant	
	CLK	P'		59	18	iC	0.2		
	BUL	P'		59	20	iC	0.9		
	KRR	P'		59	25	iC	0.7		
	BHA	P'		59	29	iC	0.3		
26	BHA	Pn	17	36	17	e		Mwinilunga area, Zambia.	
		Sn		37	03	e			
		Sg		37	21	e	1.0		
	KRR	Pn		36	47	e			
		Sn		37	55	e			
		Sg		38	31	e	0.4		
	BUL	Pn		37	17	e			
		Sn		38	49	e			
		Sg		39	35	e	0.2		
26	CIR	P	18	22	17	e	0.2	Distant	
	CLK	P		22	19	e	0.1		
	BUL	P		22	33	e	0.2		
	KRR	P		22	42	e	0.2		
	BHA	P		22	59	e	0.2		

LIST OF RECORDED PHASES: 26 to 27 JUN 1968 - 19

Date	Stn	Phase	h	m	s	GM	DA	Epicentral region:	Remarks
26	CIR	P	19	02	55	e	0.1	Distant	
	CLK	P		02	59	iR	0.2		
	BUL	P		03	18	iR	0.2		
	KRR	P		03	26	iR	0.2		
	BHA	P		03	44	iR	0.2		
26	BUL	Pn	21	51	42	e		Witwatersrand.	
		Sn		52	50	e			
		Sg		53	21	e	0.3		
	CIR	Sn		52	56	e			
		Sg		53	27	e	0.3		
	KRR	L		55	10	e	0.2		
27	BHA	Pn	01	26	00	e		Namwala area, Zambia.	
		Pg		26	06	e			
		Sn		26	30	e			
		Sg		26	40	e	7.		
	KRR	Pn		26	10	iR			
		P*		26	16	i			
		Pg		26	22	i			
		Sn		26	48	i			
		Sg		27	02	e	4.6		
	BUL	Pn		26	28	iR			
		Pg		26	46	i			
		Sn		27	21	i			
		Sg		27	47	i	3.1		
	CIR	Pn		27	00	iR			
		Sn		28	19	i			
		Sg		29	00	i	1.4		
	CLK	Pn		27	18	e			
		Sn		28	52	e			
		L		29	46	e	0.4		
27	CIR	P'	02	20	43	iC	0.2	Distant	
				23	12	i			
	BUL	P'		20	46	iC	0.3		
				23	19	i			
	CLK	P'		20	47	e	0.1		
				23	18	i			
	KRR	P'		20	51	iC	0.4		
				23	27	i			
	BHA	P'		20	57	iC	0.2		
				23	34	i			
27	CIR	Pn	14	34	24	e		Witwatersrand.	
		Sn		35	33	e			
		Sg		36	06	e	0.5		
	KRR	Pn		35	03	e			
		Sn		36	51	e			
		Sg		37	43	e	0.4		
27	BUL	Pn	16	37	13	e		O.F.S. Goldfields.	
		Sn		38	37	e			
		Sg		39	22	e	1.4		
	CIR	Pn		37	16	e			
		Sn		38	44	e			
		Sg		39	27	i	1.4		
	KRR	Pn		37	59	iR			
		Sn		39	58	e			
		L		41	15	i	1.2		
	BHA	Pn		38	30	e			
		Sn		40	52	i			
		L		42	22	i	0.5		
	CLK	L		42	39	i	0.4		

LIST OF RECORDED PHASES: 27 to 29 JUN 1968 - 20

Date	Stn	Phase	h	m	s	GM	DA	Epicentral region:	Remarks
27	CLK	P	22	22	46	iR	0.2	Distant	
	CIR	P		23	04	e	0.1		
	KRR	P		23	11	e	0.1		
	BHA	P		23	15	iR	0.2		
	BUL	P		23	17	iR	0.2		
27	CLK	P	22	26	19	iC	1.4	Distant	
		pP		26	53	i			
	CIR	P		26	31	iC	1.4		
		pP		27	09	i			
	KRR	P		26	44	iC	1.4		
		pP		27	19	i			
		PP		30	05	e			
	BUL	P		26	46	iC	4.4		
		pP		27	20	i			
		PP		30	14	i			
		SKS		37	01	i			
		S		37	16	i			
	BHA	P		26	50	iC	0.9		
		pP		27	24	i			
		PP		30	21	i			
		SKS		37	24	i			
		S		37	55	i			
28	KRR		12	41	35	e	0.5	Distant	
	BUL			41	39	e	0.9		
	CLK			41	46	e	0.6		
	CIR			41	47	e	0.5		
28	BUL	Pn	18	14	08	e		O.F.S. Goldfields.	
		Sn		15	32	e			
		Sg		16	17	e	0.4		
	CIR	Pn		14	08	e			
		Sn		15	35	e			
		Sg		16	17	e	0.4		
	KRR	Pn		14	48	iR			
		Sn		16	48	e			
		L		18	05	i	0.3		
28	BHA	P	19	50	19	e	0.1	Distant	
	KRR	P		50	26	iC	0.4		
	BUL	P		50	46	e	0.2		
28	CLK	P	20	46	26	iC	0.4	Distant	
	BHA	P		46	51	iC	0.3		
	KRR	P		46	53	iC	0.2		
	BUL	P		47	08	iC	0.3		
29	CIR	P	00	11	13	e	0.1	Distant	
	KRR	P		11	30	iC	0.2		
	BUL	P		11	34	e	0.1		
	BHA	P		11	45	e	0.1		
29	BUL	P'	06	40	34	iR	0.2	Distant	
	KRR	P'		40	34	iR	0.7		
	CIR	P'		40	40	e	0.2		
	CLK	P'		40	46	e	0.2		
29	CIR	P'	11	26	27	e	0.3	Distant	
	BUL	P'		26	34	iC	0.5		
	KRR	P'		26	35	iC	0.5		
	BHA	P'		26	39	iC	0.3		

LIST OF RECORDED PHASES: 29 to 30 JUN 1968 - 21

Date	Stn	Phase	h	m	s	GM	DA	Epicentral region: Remarks
29	CIR	Pg	11	47	48	i		Manica Province, Mocambique.
		Sg		48	15	i	11.0	
	CLK	Pn		48	15	e		
		Sn		49	02	e		
		S*		49	12	e		
		Sg		49	23	e	2.2	
	BUL	Pn		48	20	e		
		Sn		49	10	e		
		Sg		49	33	e	2.2	
	KRR	Pn		48	21	e		
		P*		48	26	i		
		Sn		49	13	i		
		Sg		49	38	i	2.9	
	BHA	Pn		48	55	e		
		Sn		50	11	e		
		Sg		50	50	e	1.1	
29	BHA	P	11	51	25	e	0.8	Lake Edward area.
		L		55	20	e	10.	
	CLK	P		51	51	e	0.3	
		L		56	15	e	5.5	
	KRR	P		51	55	e	0.5	
		S		54	34	e		
		L		56	25	i	3.8	
	BUL	P		52	40	iR	0.6	
		S		55	59	e		
		L		58	10	e	2.7	
	CIR	P		52	50	iR	0.6	
		L		58	35	e	2.3	
29	BUL	P	15	41	02	e	0.2	Distant
	CIR	P		41	08	e	0.2	
	KRR	P		41	24	e	0.2	
	BHA	P		41	32	e	0.1	
	CLK	P		41	55	e	0.1	
29	CIR	P	16	45	47	e	0.1	Distant
	KRR	P		45	48	e	0.1	
	BHA	P		45	55	iR	0.4	
	BUL	P		46	03	iR	0.2	
29	BHA	P'	19	32	01	iR	0.2	Distant
	KRR	P'		32	01	iR	0.1	
	BUL	P'		32	10	iR	0.2	
	CLK	P'		32	11	iR	0.2	
29	BHA	Pn	22	28	54	e		Mwinilunga area, Zambia?
		Sn		29	49	e		
		Sg		30	20	e	0.5	
	KRR	Sg		31	39	e	0.1	
30	CLK	P	05	15	41	e	0.4	Distant
	BHA	P		16	05	iC	0.3	
	KRR	P		16	08	iC	0.4	
	BUL	P		16	22	iC	0.3	
30	CIR	P'	09	54	12	e	0.2	Distant
	KRR	P'		54	14	iR	0.2	
	BHA	P'		54	16	e	0.1	
	BUL	P'		54	18	iR	0.2	

LIST OF RECORDED PHASES: 30 JUN 1968 - 22

Date	Stn	Phase	h	m	s	GM	DA	Epicentral region:	Remarks
30	BUL	Pn	10	30	57	e		O.F.S. Goldfields.	
		Sn		32	23	e			
		Sg		33	07	i	0.4		
	CIR	Pn		31	00	e			
		Sn		32	26	e			
		Sg		33	12	i	0.3		
	KRR	Sg		34	52	i	0.2		
30	BUL		15	07	30	iR	0.2	Distant	
	KRR			07	36	e	0.1		
30	KRR		19	00	29	iC	0.2	Distant	
	BUL			00	39	iC	0.1		
	BHA			00	41	iC	0.1		
30	CIR	Pg	20	52	23	e		Gorongoza area, Mocambique.	
		Sg		53	04	i	0.9		
	KRR	Pg		52	54	e			
		Sn		53	32	e			
		Sg		53	56	e	0.9		
	BUL	Sn		53	47	e			
		Sg		54	15	i	0.4		
	BHA	Sg		55	08	e	0.2		

BUL

4 NOV 1968

~~EPICENTRES INDICATED~~ 1162

RHODESIA METEOROLOGICAL SERVICES

SEISMOLOGICAL BULLETIN

The following stations contribute records for analysis and publication in this Bulletin:

KABWE (BHA): (Broken Hill)	14° 26.8' S; 28° 28.1' E; Alt. 1206 m.
Litho. foundation:	Dolomite and shales of the Middle Katanga System.
Authority:	Zambia Meteorological Service.
Instrument:	Three-component Willmore one-second seismograph. Nominal magnification 20,000.
CHILEKA (CLK):	15° 40.8' S; 34° 58.6' E; Alt. 781 m.
Litho. foundation:	Charnockitic granulites of the Basement Complex.
Authority:	Malawi Meteorological Service.
Instrument:	Three-component Willmore one-second seismograph. Nominal magnification 20,000.
KAROI (KRR):	16° 51.1' S; 29° 37.1' E; Alt. 1380 m.
Litho. foundation:	Granitic gneisses of the Zambesi type.
Authority:	Rhodesia Meteorological Service.
Instrument:	Vertical Willmore one-second seismograph. Nominal magnification 20 000.
BULAWAYO (BUL):	20° 08.6' S; 28° 36.8' E; Alt. 1341 m.
Litho. foundation:	Hornblend schists of the Bulawayan System.
Authority:	Rhodesia Meteorological Service.
Instruments:	Three-component Willmore one-second seismograph. Nominal magnification 20,000.
	WWSS Station: SP magnification 100,000 LP magnification 1,500
CHIREDZI (CIR):	21° 00.8' S; 31° 34.8' E; Alt. 430 m.
Litho. foundation:	Gneisses or Charnockites of the Limpopo belt.
Authority:	Rhodesia Meteorological Service.
Instrument:	Vertical Willmore one-second seismograph. Nominal magnification 20,000.

Analysis Centre: Goetz Observatory, Meteorological Service, P. O. Box 562, Bulawayo, Rhodesia.

CRITERIA FOR PUBLICATION

To qualify for publication an earthquake must be of magnitude 2 or more. Also, in the case of local earthquakes (nearer than approx. 30°), at least one station must record a clear P phase. In the case of distant earthquakes, at least two stations must record clear P or P' phases.

DISTANCES

Distances of local earthquakes are determined by means of travel-time curves developed at this Centre. For distant earthquakes, the standard Jeffreys-Bullen tables are used.

Where given, distances are in degrees (1° = 111.11 Km).

GLOSSARY

The following terms are used in the List and Bulletin:

h m s	Hours, minutes and seconds of GMT (UT). In the List of Phases, times of arrival of the phases at each station are given. In the Bulletin, the time of occurence of the earthquake is given.
GM	Character and direction of the first ground motion of P or P'.
e	Emersio: the phase emerges gradually from the background.
i	Impetus: the phase is impulsive and clearly defined.
ei	The phase shows an emergent beginning, followed by a sharp increase in amplitude.
R	The first motion is downwards, or towards the epicentre; the motion is rarefactional. A lower case r indicates a weakly rarefactional first motion.
C	The first motion is upwards, or away from the epicentre; the motion is compressional. A lower case c indicates a weakly compressional first motion.
DA	The double-amplitude (peak-to-peak) of the record in millimetres. The double-amplitude is written on the same line as the phase to which it refers; usually P or P' in distant earthquakes, and the S-L complex (the "maximum amplitude") in local earthquakes. In some cases a double-amplitude is given for more than one phase.
Distant	The epicentre is more than about 30° from the approximate centre of the local station network (17S 30E).
Mag	Magnitude. Locally determined magnitudes are based on the double-amplitude of the S-L complex, after Richter (1935). However, the station constants have been adjusted to make the local magnitudes agree as closely as possible with magnitudes published by USCGS. The local magnitudes can therefore be taken as corresponding to m_b of Gutenberg and Richter (1956).
MM	Intensity on the Modified Mercalli Scale.
USCGS	United States Coast and Geodetic Survey. Under "Epicentre", this indicates that the epicentral and magnitude data are taken from the USCGS determinations.
?	Indicates an uncertain statement.
( )	The estimated uncertainty in the bracketted quantity is between 3 and 10 units of the last digit quoted. E.g., a latitude given as (16.4S) is thought to be uncertain by between 0.3 and 1.0 degree: i.e. certainly between 15.4S and 17.4S, and probably between 16.1S and 16.7S.

JLY 1968

	Date	h	m	s	Epicentre; Remarks	Mag
	01	03	11	10	USCGS 30.3N 94.5E; Tibet	4.3
	01	04	02	02	USCGS 47.9 N 48.0 E; W. Kazakh SSR	5.5
	01	10	45	12	USCGS 36.0 N 139.3 E; Honshu, Japan	5.9
	01	16	14	15	USCGS 21.4 S 66.8 W; S. Bolivia	4.1
	01	19	14	55	USCGS 44.0 N 79.2 E; E. Kazakh, SSR.	4.9
X	01	19	46	35	14.6 S 35.4 E; Lake Malombe area, Malawi	3.1
	02	03	44	49	USCGS 17.6 N 100.3 W; Guerrero,Mexico	5.9
	02	04	30	03	USCGS 29.7 S 177.9 W; Kermadec Is. region	5.6
	02	11	00	29	00 S 30 E; Lake George area,Uganda	4.1
	02	11	01	25	00 S 30 E; Lake George area, Uganda	4.4
	02	18	40	10	USCGS 2.7 S 138.9 E; W. New Guinea	5.7
	03	01	10	35	USCGS 31.0 176.8 W; Kermadec Is.	4.9
X	03	19	17	25	4.8 S 35.0 E; Mt. Hanang area, Tanzania	4.4
	03	20	40	24	18.6 S 34.7 E; Gorongosa area,Mocambique	2.3
						4.7
	04	06	45	58	USCGS 30.3 N 94.9 E; Tibet	4.7
	04	07	12	24	USCGS 43.9 N 147.2 E; Kurile Is.	5.0
X	04	16	41	20	26.4 S 27.3 E; Witwatersrand	3.0
X	04	20	55	10	26.4 S 27.3 E; Witwatersrand	3.9
	04	21	47	56	USCGS 37.8 N 23.2 E; S.Greece	5.3
X	05	00	10	44	26.7 S 27.9 E; Witwatersrand	3.4
	05	00	45	17	USCGS 34.1 N 119.7 W; S.California	5.7
	05	02	26	50	USCGS 30.5 S 59.2 E; Atlantic - Indian Rise	4.0
	05	11	28	13	USCGS 38.5 N 142.0 E; Near E.coast Honshu,Japan	5.9
	05	13	37	56	USCGS 30.2 S 178.1 W; Kermadec Is. region	5.2
X	05	15	52	19	26.3 S 27.3 E; Witwatersrand	2.8
X	05	18	20	30	48.3 S 106.7 E; SE Indian Rise	5.2
X	06	07	37	59	5.0 S 36.0 E; Kondoa Area Tanzania	4.4
X	06	13	24	22	1.3 S 33.3 E; Lake Victoria	4.9
	06	14	02	42	USCGS 41.0 N 117.4 W; Nevada	5.1
	06	14	17	45	USCGS 58.7 S 24.9 W; S.Sandwich Is. region	4.6
	06	17	23	56	USCGS 9.8 N 126.9 E; Mindanao,Philippine Is.	5.1
X	06	18	41	07	21.3 S 33.5 E; Save River,Mocambique	2.3
X	06	19	23	04	21.3 S 33.5 E; Save River,Mocambique	2.1
	06	19	28	55	USCGS 6.4 S 133.8 E; Aru Is. region	5.7
X	07	22	34	34	21.3 S 33.5 E; Save River,Mocambique	2.2
	07	14	23	34	USCGS 22.2 S 175.1 W; Tonga Is. region	5.3
	07	14	33	31	USCGS 34.2 N 119.8 W; S. California	4.6
	07	16	50	31	USCGS 9.8 N 126.2 E; Mindanao,Philippine Is.	4.8
X	07	21	54	56	17.2 S 45.7 E; NW Malagasy Republic	3.5
X	07	22	07	57	17.2 S 45.7 E; NW Malagasy Republic	3.6

JLY 1968

	Date	h	m	s	Epicentre; Remarks	Mag
	08	00	18	39	USCGS 40.8 N 143.2 E; off E. coast Honshu, Japan	4.5
X	08	03	52	20	26.4 S 27.2 E; Witwatersrand	3.1
	08	08	01	49	USCGS 42.5 N 144.5 E; Hokkaido, Japan region	4.6
	08	11	27	24	USCGS 28.0 N 57.0 E; S. Iran	4.0
	08	12	09	28	USCGS 22.2 S 179.8 W; S. of Fiji Is.	4.9
	08	13	14	30	USCGS 38.0 N 67.6 E; SW Uzbek SSR	5.2
	08	17	15	28	USCGS 29.7 N 51.1 E; S. Iran	5.1
	08	17	41	06	USCGS 34.4 N 25.2 E; Crete	5.3
	08	18	34	24	USCGS 34.4 N 25.2 E; Crete	4.3
X	08	19	53	25	8.5 S 29.5 E; Lake Mweru area, Zambia	3.6
	08	21	21	12	USCGS 51.2 N 173.1 W; Andreanof Is., Aleutian Is.	4.3
	08	21	24	48	USCGS 28.8 N 142.5 E; Bonin Is. region	5.3
	08	03	53	19	USCGS 8.3 S 125.3 E; Timor	4.9
X	09	06	13	45	11.0 S 12.0 E; off central Angola coast	4.0
X	09	14	39	04	26.4 S 27.3 E; Witwatersrand	3.2
X	09	21	55	06	9.0 S 29.0 E; Lake Mweru area	2.7
	10	06	36	14	USCGS 30.7 S 71.3 W; near coast central Chile	4.7
	10	11	16	45	USCGS 36.8 S 78.5 E; Mid-Indian Rise	5.7
	10	13	52	59	W. Witwatersrand area	3.3
X	10	15	17	32	26.5 S 27.9 E; Witwatersrand	3.8
	11	10	06	46	USCGS 11.9 S 167.6 E; Santa Cruz Is.	4.7
X	11	15	00	17	28.0 S 26.0 E; OFS goldfields	3.3
	11	21	39	14	USCGS 33.9 N 15.5 W; Madeira Is. region	4.4
	12	00	44	37	USCGS 39.5 N 143.2 E; off E. coast Honshu, Japan	6.0
	12	03	56	27	USCGS 39.6 N 143.2 E; off E. coast Honshu, Japan	5.5
X	12	17	31	05	26.5 S 27.9 E; Witwatersrand	3.6
X	13	23	31	20	10.5 S 25.1 E; Kolwezi area, Congo	3.8
	13	06	05	54	USCGS 30.3 N 94.6 E; Tibet	5.0
	13	06	38	26	USCGS 6.4 S 149.7 E; New Britain region	5.1
X	13	12	28	48	26.5 S 27.3 E; Witwatersrand	3.5
X	13	14	20	16	5.6 S 28.9 E; Albertville area, Congo	4.2
	14	07	30	46	USCGS 17.4 N 121.4 E; Luzon, Philippine Is.	5.0
	14	13	01	57	USCGS 55.2 S 24.3 E; S. of Africa	-
	14	18	12	41	USCGS 30.3 S 94.8 E; Tibet	4.9
	14	21	25	36	USCGS 20.9 S 68.8 W; Chile-Bolivia border region	4.5
	15	04	12	26	USCGS 18.0 S 178.6 W; Fiji Is. region	5.3
	15	05	09	06	USCGS 30.3 N 95.0 E; Tibet	4.8
	15	08	33	37	USCGS 32.5 N 48.7E; W. Iran	4.6
	15	10	07	27	USCGS 23.6 S 179.2 E; S. of Fiji Is.	4.4
X	15	15	40	54	7.4 S 31.8 E; N. Lake Rukwa	3.6

JLY 1968

	Date	h	m	s	Epicentre: Remarks	Mag
X	16	08	12	18	18 N 33.2 E· Lake Kyoga area. Uganda	4.1
	16	21	25	42	USCGS 13.5 S 167.1 E: New Hebrides Is.	4.4
	16	22	23	07	USCGS 30.3 N 94.8 E: Tibet	4.8
X	17	00	16	03	26.2 S 27.7 E; Witwatersrand	2.6
X	17	05	25	33	19.6 S 23.6 E; Okavango Swamp	3.5
	17	05	24	16	USCGS 8.8 S 125.0 E; Timor	5.7
X	17	12	20	56	26.3 S 27.5 E; Witwatersrand	3.0
X	17	20	18	48	15.5 S 33.6 E; Tete area, Mocambique	3.5
X	17	20	47	05	16.6 S 28.4 E; Kariba	2.0
X	17	23	30	46	19.2 S 34.4 E; Beira area, Mocambique	3.5
	18	00	26	26	USCGS 2.4 N 128.3 E; Halmahera	5.5
	18	00	59	43	USCGS 46.1 N 153.1 E; Kurile Is.	4.9
	18	05	05	00	USCGS 19.5 S 175.9 W; Tonga Is.	5.0
	18	07	54	18	USCGS 2.0 S 99.7 E; S. Sumatra	4.5
	18	14	39	21	USCGS 9.6 N 40.2 W; Central Mid-Atlantic Ridge	4.4
	18	17	20	29	USCGS 8.9 N 93.9 E; Nicobar Is. region	4.8
X	18	17	40	32	26.6 S 27.0 E; W. Witwatersrand	2.5
	18	17	43	24	USCGS 8.8 N 93.8 E; Nicobar Is. region	4.3
	19	04	56	27	USCGS 8.7 N 93.6 E; Nicobar Is. region	5.3
	19	06	07	22	USCGS 8.9 N 93.8 E; Nicobar Is. region	4.8
	19	07	56	50	USCGS 17.9 S 65.3 E; Mascarene Is. region	4.4
	19	09	21	05	USCGS 13.0 S 166.5 E· New Hebrides Is.	4.2
X	19	15	31	55	26.1 S 28.5 E· E. Witwatersrand	2.5
	19	16	42	16	USCGS 8.7 N 93.7 E· Nicobar Is. region	5.1
	19	18	48	59	USCGS 30.2 N 94.8 E; Tibet	4.9
X	19	19	20	05	13.4 S 34.7 E; S. Lake Malawi	2.8
X	19	23	09	03	26.2 S 28.0 E; Witwatersrand	2.8
X	20	05	02	38	24.1 S 31.3 E.; Phalaborwa, NE Transvaal	2.3
	20	08	22	09	USCGS 39.4 N 73.8 E; Tadzhik-Sinkiang border region	4.8
	20	21	22	03	USCGS 57.9 S 24.5 W; S. Sandwich Is. region	4.9
X	21	04	28	16	8.3 S 30.7 E; S. Lake Tanganyika	4.1
	21	06	09	42	USCGS 3.2 S 150.5 E; New Ireland region	5.4
	21	13	12	21	USCGS 32.1 S 178.8 W; S. of Kermadec Is.	4.8
	21	17	00	32	USCGS 30.1 N 50.9 E; Iran	-
X	21	19	34	29	8.5 S 31.0 E; S. Lake Tanganyika	3.3
	21	21	02	31	USCGS 49.7 N 147.8 E; Sea of Okhotsk	4.9
	21	23	54	21	USCGS 58.4 S 29.5 W; S. Sandwich Is. region	4.5
X	22	02	49	20	8.5 S 31.3 E; S. Lake Tanganyika area	4.4
	22	05	09	16	USCGS 54.6 S 1.7 E; Bouvet Is. region	5.6
	22	07	29	51	USCGS 58.8 S 28.9 W; S. Sandwich Is. region	4.4
	22	17	58	30	USCGS 20.1 S 169.0 E; New Hebrides Is.	5.4
	22	22	33	43	USCGS 30.3 N 138.4 E; S. of Honshu, Japan	4.5

JLY 1968

	Date	h	m	s	Epicentra; Remarks	Mag
	23	18	28	01	USCGS 18.7 N 107.0 W; Jalisco, Mexico	5.4
	23	20	51	48	USCGS 30.3 N 94.9 E; Tibet	4.9
	23	23	02	35	USCGS 40.3 N 143.3 E: off E. coast Honshu, Japan	5.2
	24	09	21	52	USCGS 5.7 S 105.5 E; Sundra Strait	4.4
X	24	09	53	52	27.8 S 34.6 E; off N. Natal coast	2.9
X	24	11	14	32	12.5 S 24.8 E; Mwinilunga area, Zambia	2.9
X	24	15	26	08	18.7 S 34.3 E; Gorongosa area, Mocambique	2.8
X	24	19	09	14	17.4 S 27.3 E; Kandabwe, Zambia	3.2
	25	03	34	13	USCGS 30.2 N 94.8 E; Tibet	4.8
	25	06	41	27	USCGS 21.3 S 174.5 W: Tonga Is. region	5.1
	25	07	23	08	USCGS 30.8 S 178.4 W: Kermadec Is. region	6.4
	25	07	47	46	USCGS 30.9 S 178.0 W: Kermadec Is. region	4.8
	25	10	50	31	USCGS 45.7 N 146.7 E; Kurile Is.	5.9
	25	11	31	48	USCGS 31.0 S 178.1 W; Kermadec Is.	4.3
X	25	15	21	56	26.3 S 27.2 E; Witwatersrand	3.0
X	25	17	42	40	8.1 S 27.3 E; Lake Upemba area	3.5
	25	18	52	21	USCGS 30.9 S 178.2 W; Kermadec Is. region	4.5
	25	22	05	29	USCGS 40.9 N 20.0 E; Greece-Albania border region	4.9
	26	12	44	03	USCGS 29.4 N 95.0 E; India-China border region	4.9
X	26	14	37	42	26.0 S 28.3 E; Witwatersrand	3.9
	26	17	07	25	USCGS 22.4 S 12.6 W; S. Atlantic Ridge	5.3
X	26	18	38	01	26.3 S 27.6 E; Witwatersrand	2.7
X	26	19	16	37	17.5 S 27.4 E; Kandabwe, Zambia	2.8
	26	20	48	03	USCGS 32.1 N 70.1 E; W. Pakistan	4.8
	27	02	45	49	USCGS 35.4 N 27.8 E; Dodecanese Is.	5.0
	27	17	41	46	USCGS 52.5 N 170.6 W; Fox Is. region	4.7
	27	22	56	55	USCGS 28.5 S 74.3 E; Mid-Atlantic Rise	4.5
	28	03	24	36	USCGS 52.8 N 167.1 W; Fox Is.,Aleutians	4.5
X	28	07	48	34	16.7 S 28.3 E; Kariba	2.3
	28	10	56	26	USCGS 22.5 S 174.7 W; Tonga Is. region	5.0
X	28	14	05	14	13.1 S 26.7 E: Kasempa area, Zambia	2.6
X	28	20	31	26	5.0 S 29.4 E: N. Lake Tanganyika area	3.7
	28	21	12	38	USCGS 55.4 N 166.6 E; Komandorsky Is. region	5.4
	28	21	23	07	USCGS 55.3 N 166.8 E: Komandorsky Is. region	5.1
	29	06	24	47	USCGS 52.9 N 167.1 W; Fox Is., Aleutians	4.7
	29	07	36	28	USCGS 52.8 N 167.0 W; Fox Is., Aleutians	4.6
	29	09	54	05	USCGS 15.1 N 94.0 W; near coast of Oaxaca, Mexico	5.6
	29	11	11	59	USCGS 22.5 S 175.0 W; Tonga Is. region	5.6
	29	12	19	47	USCGS 22.4 S 174.9 W; Tonga Is region	5.3
	29	13	30	32	USCGS 3.2 S 150.6 E; New Ireland region	5.4
	29	15	14	01	USCGS 25.3 S 177.9 W; S. of Fiji Is.	4.5

JLY 1968

	Date	h	m	s	Epicentre; Remarks	Mag
	29	15	19	58	USCGS 21.5 S 174.4 W; Tonga Is.	5.0
	29	23	52	15	USCGS 0.2 S 133.4 E; W. New Guinea region	6.1
	30	04	10	12	USCGS 22.4 S 175.0 W; Tonga Is. region	5.3
	30	08	11	39	USCGS 52.8 N 167.1 W; Fox Is., Aleutians	4.2
X	30	11	57	37	26.2 S 27.4 E; Witwatersrand	3.3
X	30	14	00	41	16.7 S 27.9 E; Kariba	2.9
	30	20	38	42	USCGS 6.9 S 80.5 W; near coast of N. Peru	5.8
X	31	04	06	17	26.4 S 27.2 E; Witwatersrand	3.3
	31	09	21	59	USCGS 37.8 N 21.4 E; S. Greece	4.3
	31	13	46	00	USCGS 31.5 S 178.1 W; Kermadec Is.	4.5
X	31	17	51	55	26.2 S 27.5 E; Witwatersrand	3.1
X	31	18	50	59	26.3 S 27.5 E; Witwatersrand	3.3
	31	19	29	27	USCGS 35.5 N 28.0 E; E. Mediterranean	4.8

LIST OF RECORDED PHASES: 01 to 01 JLY 1968 - 1

Date	Stn	Phase	h	m	s	GM	DA	Epicentral Region: Remarks
01	CLK	P	03	22	40	e	0.2	Distant
	BHA	P		23	02	e	0.1	
	KRR	P		23	06	e	0.1	
	BUL	P		23	21	e	0.1	
01	CLK	P	04	05	25	e	0.1	Distant
	BHA	P		05	30	e	0.1	
	KRR	P		05	37	e	0.1	
	BUL	P		06	24	e	0.1	
	CIR	P		06	24	e	0.1	
01	CLK	P	04	12	35	iC	1.9	Distant
		PcP		13	10	i		
	BHA	P		12	36	iC	0.5	
		PcP		13	11	i		
	KRR	P		12	49	iC	0.7	
		PcP		13	18	i		
	BUL	P		13	11	iC	1.2	
		PcP		13	34	i		
	CIR	P		13	11	iC	1.6	
01	CLK	P	10	59	38	i	0.1	Distant
		P'	11	03	38	e	0.1	
		PP		04	14	i		
		PKKP		14	54	e		
	BHA	P	10	59	58	i	0.1	
		P'	11	03	47	e	0.1	
		PP		04	43	i		
		PKKP		14	39	e		
	KRR	P'		03	47	iC	0.3	
		PP		04	47	i		
		PKKP		14	32	i		
	CIR	P'		03	49	iC	0.2	
		PP		04	50	i		
		PKKP		14	28	e		
	BUL	P		00	12	e	0.1	
		P'		03	52	iC	0.6	
		PP		05	04	i		
		PKKP		14	18	e		
01	CLK	P	19	26	23	e	0.1	Distant
	BHA	P		26	30	e	0.1	
	KRR	P		26	38	e	0.1	
	CIR	P		26	54	e	0.1	
	BUL	P		26	57	e	0.1	
01	CLK	Pg	19	46	55	i		Lake Malombe area, Malawi
		Sg		47	09	i		
	KRR	Pn		48	04	e		
		Sn		49	08	i		
		Sg		49	40	i	0.5	
	BHA	Pn		48	12	e		
		Sn		49	25	e		
		Sg		49	58	e	0.7	
	CIR	Sg		50	18	e	0.5	
	BUL	Sn		50	05	e		
		Sg		50	52	e	0.4	
01	BUL		16	26	46	iR	0.4	Distant
	KRR			26	57	e	0.2	

LIST OF RECORDED PHASES: 02 to 02 JLY 1968 - 2

Date	Stn	Phase	h	m	s	GM	DA	Epicentral Region; Remarks
02	BHA	P'	04	03	47	e	0.2	Distant
				03	59	i		
				04	30	e		
				06	15	e		
				07	19	i		
				07	45	i		
	KRR	P'		03	49	e	0.2	
				04	00	i		
				04	30	i		
				06	56	i		
				07	33	i		
	BUL	P'		03	53	e	0.2	
				04	04	i		
				04	32	e		
				07	25	i		
				07	50	i		
	CIR	P'		03	57	e	0.2	
				04	08	i		
				06	39	i		
				07	35	e		
				08	00	i		
	CIK	P'		04	05	e	0.2	
				04	14	i		
				04	42	i		
				07	18	e		
				07	45	e		
02	CIR	P'	04	49	44	iR	0.5	Distant
		pP'		50	00	i		
	BUL	P'		49	47	iC	1.4	
		pP'		50	05	i		
	KRR	P'		49	52	iC	1.1	
		pP'		50	09	i		
	BHA	P'		49	57	iC	0.7	
		pP'		50	14	i		
02	BHA	P	11	03	(55)	e		Lake Edward area
		S		06	(25)	c		
		L		08	09	e	1.1	
	CIK	P		04	15	e	0.1	
		S		07	04	e		
		L		08	59	e	0.9	
	KRR	P		04	26	e	0.1	
		L		09	32	e	0.5	
	BUL	P		05	00	e	0.1	
		L		10	54	e	0.3	
	CIR	P		05	11	e	0.1	
		L		11	27	e	0.3	
02	BHA	P	11	04	48	e	0.1	Lake Edward area
		S		07	17	e		
		L		09	02	e	2.2	
	CIK	P		05	07	e	0.2	
		S		07	57	e		
		L		09	45	e	1.6	
	KRR	P		05	20	e	0.2	
		L		10	14	e	1.1	
	BUL	P		05	55	e	0.2	
		L		11	45	e	0.7	
	CIR	P		06	05	e	0.1	
		L		12	17	e	0.5	

LIST OF RECORDED PHASES: 02 to 04 JLY 1968 - 3

Date	Stn	Phase	h	m	s	GM	DA	Epicentral Region; Remarks
02	BUL		14	32	51	iR	0.3	Distant
	CIR			32	52	e	0.1	
02	CLK	P	18	00	20	e	0.1	Distant
	CIR	P		00	45	e	0.2	
	KRR	P		00	49	e	0.1	
	BHA	P		00	52	e	0.4	
	BUL	P		01	01	e	0.2	
02	CLK	P	18	58	16	e	0.1	Distant
	CIR	P		58	34	e	0.3	
	KRR	P		58	53	e	0.2	
	BUL	P		58	56	e	0.2	
	BHA	P		59	02	e	0.2	
03	CIR	P'	01	29	26	iR	0.1	Distant
	BUL	P'		29	30	iR	0.2	
	CLK	P'		29	32	e	0.1	
	KRR	P'		29	35	iC	0.2	
	BHA	P'		29	41	iR	0.1	
03	CLK	Pn	19	20	01	e		Mt Hanang area, Tanzania
		S		21	59	e		
				22	40	e		
		Sg		23	02	e		
	BHA	Pn		20	10	e		
		Sn		22	14	e		
				22	57	e		
		SgSg		23	27	e	8.5	
	KRR	P		20	32	iR	0.3	
		S		22	52	e		
				23	18	e		
		L		24	16	i	1.9	
	BUL	P		21	15	iR	0.3	
		S		24	07	e		
				24	44	e		
		L		25	56	e	0.8	
	CIR	P		21	16	iR	0.2	
		S		24	09	e		
				24	48	i		
		L		25	57	i	0.8	
03	CLK	Pn	20	41	10	e		Gorongosa area, Moçambique
		Sg		41	55	e	0.9	
	CIR	Pn		41	21	e		
		Sg		42	19	e	0.5	
	KRR	Sg		43	00	e	0.3	
	BUL	Sg		43	31	e	0.2	
04	CLK	P	06	57	30	e	0.4	Distant
	BHA	P		57	55	iC	0.3	
	KRR	P		57	57	iC	0.2	
	CIR	P		58	02	iC	0.2	
	BUL	P		58	12	iC	0.3	
04	CLK	P'	07	31	02	e	0.1	Distant
	BHA	P'		31	09	e	0.1	
	KRR	P'		31	10	iC	0.2	
	CIR	P'		31	14	e	0.1	
	BUL	P		31	16	iR	0.2	

LIST OF RECORDED PHASES: 04 to 05 JLY 1968 - 4

Date	Stn	Phase	h	m	s	GM	DA	Epicentral Region	Remarks
04	BUL	Pn	16	42	53	e		Witwatersrand	
		Sg		44	34	e	0.5		
	CIR	Pn		42	57	e			
		Sn		44	07	e			
		Sg		44	40	e	0.5		
	KRR	Pn		43	40	iR			
		Sn		44	23	i			
		SgSg		45	23	i	0.3		
04	BUL	Pn	20	56	44	iR		Witwatersrand	
		Sn		57	50	e			
		Sg		58	24	e	3.4		
	CIR	Pn		56	48	e			
		Sn		57	58	e			
		Sg		58	31	e	3.1		
	KRR	Pn		57	29	e			
		Sn		59	13	e			
		Sg	21	00	10	e	1.9		
	BHA	Pn	20	58	00	e			
		Sn	21	00	06	e			
		L		01	21	e	0.8		
	CLK	Pn	20	58	10	e			
		Sn	21	00	26	e			
		L		01	43	e	0.7		
04	CLK	P	21	11	48	iC	0.4	Distant	
	BHA	P		12	12	e	0.3		
	KRR	P		12	15	iC	0.3		
	CIR	P		12	21	e	0.1		
	BUL	P		12	30	iC	0.3		
04	BHA	P	21	57	04	e	0.2	Distant	
	CLK	P		57	19	e	1.4		
	KRR	P		57	22	iC	1.3		
	BUL	P		57	45	iP	0.4		
	CIR	P		57	53	e	0.9		
04	BUL	P	23	16	30	e	0.2	Distant	
	CIR	P		16	32	e	0.1		
	KRR	P		16	57	iR	0.2		
	BHA	P		17	13	e	0.1		
05	BUL	Pn	00	12	24	iC	0.4	Witwatersrand	
		Sn		13	34	e			
		Sg		14	07	i	1.1		
	CIR	Pn		12	28	e	0.5		
		Sn		13	42	e			
		Sg		14	11	e	1.2		
	KRR	Pn		13	10	e	0.3		
		Sn		14	54	e			
		Sg		15	55	i	0.9		
	BHA	Pn		13	39	e	0.2		
		Sn		15	52	e			
		L		17	10	e	0.2		
05	BHA	P'	01	04	57	iC	0.8	Distant	
	KRR	P'		05	03	iC	0.7		
	BUL	P'		05	06	iC	0.7		
	CLK	P'		05	08	iC	0.5		
	CIR	P'		05	09	e	0.2		

LIST OF RECORDED PHASES: 05 to 05 JLY 1968- 5

Date	Stn	Phase	h	m	s	GM	DA	Epicentral Region; Remarks
05	BUL	P	02	09	23	iR	0.2	Distant
	CIR	P		09	25	e	0.1	
	KRR	P		09	50	e	0.1	
	CLK	P		10	15	e	0.1	
05	CIR	P	02	32	27	e	0.2	Distant
	CLK	P		32	28	e	0.1	
	BUL	P		32	47	e	0.1	
	KRR	P		32	59	e	0.2	
	BHA	P		33	28	e	0.1	
05	CLK	P	08	32	31	iC	0.4	Distant
	BHA	P		32	54	iC	0.2	
	KRR	P		32	57	iC	0.2	
	CIR	P		33	03	e	0.1	
	BUL	P		33	13	e	0.2	
05	CLK	P'	11	46	48	e	0.3	Distant
		pP'		47	01	e		
		PP		47	35	e		
	KRR	P'		46	56	e	0.5	
		pP'		47	09	e		
		PP		48	07	e		
		PKKP		57	26	e		
	BHA	P'		46	56	e	0.4	
		pP'		47	07	e		
		PP		48	04	e		
		PKKP		57	24	e		
	CIR	P'		46	58	e	0.5	
		pP'		47	10	e		
		PP		48	16	i		
		PKKP		57	25	e		
	BUL	P'		47	00	e	1.3	
		pP'		47	15	e		
		PP		48	28	i		
		PKKP		57	23	e		
05	CIR	P'	13	56	45	iR	0.5	Distant
	BUL	P'		56	49	iR	1.0	
		pP'		57	05	e		
	CLK	P'		56	51	iR	0.3	
	KRR	P'		56	54	iR	1.1	
		pP'		57	11	e		
	BHA	P'		57	00	iR	0.7	
		pP'		57	13	e		
05	BUL	Pn	15	53	54	e		Witwatersrand
		Sn		55	01	e		
		Sg		55	33	e	0.3	
	CIR	Sn		55	05	e		
		Sg		55	40	e	0.3	
	KRR	Sn		56	20	e		
		SgSg		57	21	e	0.2	
05	CIR	P	18	31	07	e	0.2	Distant
	CLK	P		31	18	e	0.1	
	BUL	P		31	25	e	0.3	
	KRR	P		31	34	e	0.2	
	BHA	P		31	51	e	0.2	

LIST OF RECORDED PHASES: 06 to 06 JLY 1968 - 6

Date	Stn	Phase	h	m	s	GM	DA	Epicentral Region: Remarks
06	CLK	Pn	07	40	32	e		Mt. Hanang area, Tanzania
		Sn		42	28	i		
		Sg		43	35	i	3.4	
	BHA	Pn		40	49	e		
				43	28	e		
		L		44	14	i	4.4	
	KRR	P		41	09	e		
		L		44	59	e	1.1	
	CIR	P		41	54	e		
		L		46	34	i	0.9	
	BUL	P		41	57	iC		
		L		46	47	i	0.9	
06	BHA	P	13	27	38	e	0.4	Lake Victoria
		S		30	08	i		
		L		31	43	e	6.5	
	CLK	P		27	46	e	1.1	
		L		32	03	e	5.5	
	KRR	P		28	05	e	0.4	
		S		30	56	i		
		L		32	38	e	2.9	
	BUL	P		28	48	e	0.3	
		S		32	17	e		
		L		34	43	e	1.8	
	CIR	P		28	53	e	0.3	
		S		32	23	e		
		L		34	52	i	1.3	
06	BHA	P'	14	22	07	e	0.1	Distant
	KRR	P'		22	09	e	0.2	
	BUL	P'		22	15	iR	0.5	
	CLK	P'		22	17	iC	0.5	
	CIR	P'		22	22	e	0.2	
06	CIR	P	14	27	16	e	0.1	Distant
	BUL	P		27	18	e	0.2	
	KRR	P		27	32	e	0.2	
06	KRR		16	56	48	e	0.1	Distant
				58	46	e		
	BHA			56	48	e	0.2	
				58	48	i		
06	CIR		17	37	30	e	0.2	Distant
	KRR			37	36	e	0.1	
	BUL			37	33	e	0.3	
06	CLK	P	17	39	57	iC	0.3	Distant
	CIR	P		40	28	iR	0.3	
	KRR	P		40	30	iR	0.2	
	BHA	P		40	33	iR	1.2	
	BUL	P		40	42	iR	0.4	
06	CLK	P'	17	47	10	e	0.1	Distant
	CIR	P'		47	11	e	0.2	
	BUL	P'		47	16	e	0.3	
	KRR	P'		47	16	e	0.4	
	BHA	P'		47	21	e	0.1	
06	CIR	Pg	18	41	39	iR		Save River, Moçambique
		Sg		42	01	i	1.9	
	BUL	Sn		43	07	e		
		Sg		43	28	e	0.4	
	KRR	Sg		44	04	e	0.3	
	CLK	Sg		44	07	e	0.2	

LIST OF RECORDED PHASES: 06 to 07 JLY 1968 - 7

Date	Stn	Phase	h	m	s	CM	DA	Epicentral Region: Remarks
06	CIP	Pg	19	23	37	iP		Save River, Mocambique.
		Sg		23	59	i	1.3	
	BUL	Sn		25	07	e		
		Sg		25	27	e	0.3	
	KRR	Sn		25	34	e		
		Sg		26	02	e	0.2	
	CLK	Sg		26	07	e	0.1	
06	CLK	P	19	42	25	iR	0.2	Distant
		pP		42	46	e		
	CIR	P		42	35	e	0.2	
		pP		42	56	e		
	KRR	P		42	47	iR	0.3	
		pP		43	05	e		
	BUL	P		42	48	iR	0.3	
		pP		43	08	e		
	BHA	P		42	54	e	0.2	
		pP		43	14	e		
06	CIR	Pg	22	35	07	iR		Save River, Mocambique.
		Sg		35	28	i	1.7	
	BUL	Sn		36	36	e		
		Sg		36	57	e	0.3	
	KRR	Sn		37	05	e		
		Sg		37	31	e	0.3	
	CLK	Sg		37	39	e	0.1	
07	CLK	P	13	40	20	e	0.3	Distant
	BHA	P		40	44	e	0.2	
	KRR	P		40	45	e	0.2	
	BUL	P		41	00	e	0.3	
07	BUL		14	42	45	e	0.2	Distant
	KRR			42	49	e	0.2	
07	BHA	P'	14	53	10	iC	0.3	Distant
	KRR	P'		53	17	iP	0.3	
	BUL	P'		53	20	iP	0.2	
	CLK	P'		53	21	iR	0.1	
07	CIP		17	04	04	e	0.2	Distant
	BUL			04	16	iC	0.2	
	KRR			04	18	e	0.1	
07	KRR		18	00	44	e	0.1	Distant
	BHA			00	46	e	0.2	
	CIR			00	48	e	0.1	
	BUL			01	04	e	0.1	
07	CIR	P	15	36	07	e	0.2	Distant
	KRR	P		36	28	iR	0.2	
	BHA	P		36	36	iC	0.4	
07	CLK	Pn	21	57	22	e		NW Malagasy Republic
		Sn		59	10	i		
	CIR	Pn		58	09	e	0.3	
		Sn	22	00	33	e	0.3	
	KRR	Pn	21	58	30	e	0.3	
		Sn	22	01	09	e	0.3	
	BUL	Pn	21	58	46	e	0.2	
		Sn	22	01	34	e	0.2	
	BHA	Pn	21	58	51	e	0.2	
		Sn	22	01	53	e		
				02	55	e	0.2	

LIST OF RECORDED PHASES: 07 to 08 JLY 1968 - 8

Date	Stn	Phase	h	m	s	GM	DA	Epicentral Region; Remarks
07	CLK	Pn	22	10	22	e		NW Malagasy Republic
		Sn		12	11	i		
	CIR	Pn		11	09	e	0.3	
		Sn		13	32	e	0.3	
	KRR	Pn		11	31	e	0.3	
		Sn		14	12	e	0.2	
	BUL	Pn		11	46	e	0.2	
		Sn		14	36	e	0.2	
	BHA	Pn		11	51	e	0.2	
		Sn		14	43	e		
				15	55	e	0.3	
08	KRR		00	37	26	e	0.1	Distant
	BUL			37	31	e	0.1	
	BHA			37	35	e	0.1	
08	BUL	Pn	03	53	53	e		Witwatersrand
		Sn		55	03	e		
		Sg		55	34	e	0.6	
	CIR	Pn		53	57	e		
		Sn		55	09	e		
		Sg		55	42	e	0.6	
	KRR	Pn		54	38	e		
		Sn		56	20	e		
		Sg		57	17	e	0 4	
08	BUL		05	16	13	e	0.2	Distant
	KRR			16	19	e	0 1	
08	BHA		08	20	37	e	0 1	Distant
	KRR			20	38	e	0 1	
	BUL			20	43	e	0 2	
08	CLK	P	11	36	05	iC	0.4	Distant
	BHA	P		36	20	iC	0 3	
	KRR	P		36	31	iR	0.9	
	CIR	P		36	50	e	0.2	
	BUL	P		36	55	iC	0.3	
08	CIR	P'	12	27	24	e	0.3	Distant
	BUL	P'		27	30	iR	0.3	
	KRR	P'		27	34	e	0.2	
	BHA	P'		27	37	e	0.2	
08	CLK	P	13	24	48	e	0.2	
		pP		24	55	i		
	BHA	P		25	02	e	0.2	
		pP		25	09	i		
	KRR	P		25	11	iC	0.5	
		pP		25	18	i		
	CIR	P		25	28	e	0.1	
		pP		25	34	e		
	BUL	P		25	32	iC	0.2	
		pP		25	39	i		
08	CLK	P	17	24	04	e	0.3	Distant
	BHA	P		24	13	e	0.3	
	KRR	P		24	25	e	0 3	
	CIR	P		24	48	e	0.3	
	BUL	P		24	51	iR	0 2	

LIST OF RECORDED PHASES: 08 to 09 JLY 1968 - 9

Date	Stn	Phase	h	m	s	GM	DA	Epicentral Region; Remarks
08	BHA	P	17	49	48	iR	0 6	Distant
				55	05	i		
	KRR	P		50	07	iR	1.3	
				55	14	i		
	CLK	P		50	(10)			
				55	14	i		
	BUL	P		50	31	iR	0.9	
				55	29	i		
	CIR	P		50	39	iR	0.9	
				55	34	i		
08	KRR	P	18	43	29	iC	0.3	Distant
	BUL	P		43	53	e	0.2	
	CIR	P		44	02	e	0.1	
08	BHA	Pn	19	54	52	e		Lake Mweru Area, Zambia
		Sn		55	55	i		
		Sg		56	30	i	2.7	
	KRR	Pn		55	56	e		
		Sn		56	52	i		
		Sg		57	40	e	1.1	
	CLK	Pn		55	32	e		
		Sn		57	05	i		
		L		58	03	e	0.9	
	BUL	Pn		56	10	e		
		Sn		58	09	e		
		L		59	30	e	0.4	
	CIR	Pn		56	23	e		
		Sn		58	32	e		
		L		59	59	e	0.3	
08	KRR	P'	21	40	37	e	0.1	Distant
	CIR	P'		40	44	e	0 1	
	BUL	P'		40	45	iR	0.4	
08	CIR	P'	21	43	33	iR	0.1	Distant
	KRR	P'		43	34	iR	0 2	
	BHA	P'		43	34	e	0 1	
	BUL	P'		43	38	iR	0 2	
08	CIR		04	06	21	e	0 1	Distant
	BUL			06	33	e	0.1	
	KRR			06	37	e	0 1	
09	BHA	P	06	17	28	e	0.3	Off Central Angola Coast
		S		20	10	e		
		I		22	02	e	0.7	
	KRR	P		17	46	e	0.1	
		S		20	55	e		
		L		22	59	e	0.5	
	BUL	P		17	52	e	0.2	
		S		21	05	e		
		L		23	07	e	0.4	
	CIR	P		18	23	iC	0.4	
		L		24	35	e	0.3	
	CLK	P		18	50	e	0.2	
		L		25	25	e	0.2	

LIST OF RECORDED PHASES: 09 to 11 JLY 1968 - 10

Date	Stn	Phase	h	m	s	GM	DA	Epicentral Region, Remarks
09	BUL	Pn	14	40	37	e		Witwatersrand
		Sn		41	45	e		
		Sg		42	20	e	0.8	
	CIR	Pn	14	40	42	e		
		Sn		41	53	e		
		Sg		42	25	e	0.8	
	KRR	Pn		41	24	e		
		Sn		43	07	e		
		Sg		44	03	e	0.4	
09	BHA	Pn	21	56	30	i		Lake Mweru Area
		Sn		57	31	i		
		Sg		58	01	e	0.6	
	KRR	L		59	28	i	0.2	
10	BUL		01	17	50	e	0.2	Distant
	KRR			17	52	e	0.2	
10	BUL		06	49	00	iR	0.3	Distant
	KRR			49	12	iR	0.3	
	BHA			49	14	iR	0.2	
10	CIR	P	11	24	47	iC	1.1	Distant
	CLK	P		24	50	iC	0.6	
		S		31	27	e		
	BUL	P		25	09	iC	2.6	
		S		31	56	e		
	KRR	P		25	16	iC	0.8	
	BHA	P		25	34	iC	1.4	
		S		32	47	e		
10	BUL	Pn	13	34	41	e		W. Witwatersrand
		Sn		35	55	e		
		Sg		36	32	e	0.5	
	KRR	Pn		35	27	e		
		Sn		37	18	e		
		Sg		38	20	e	0.4	
10	BUL	Pn	15	19	06	iR	0.5	Witwatersrand
		Sn		20	14	e		
		Sg		20	43	e	3.1	
	CIR	Pn		19	07	e		
		Sn		20	15	e		
	KRR	Pn		19	51	e	0.4	
	..	Sn		21	34	e		
		Sg		22	28	e	2.3	
	BHA	Pn		20	22	iC	0.2	
		Sn	..	22	30	e		
		L		23	55	e	0.5	
11	CLK	P'	10	25	12	e	0.1	Distant
		SKP		28	06	e		
	BUL	P'		25	17	iR	0.3	
		SKP		28	08	e		
	KRR	P'		25	18	e	0.3	
		SKP		28	13	i		
	BHA	P'		25	22	e	0.2	
		SKP		28	20	i		

LIST OF RECORDED PHASES: 11 to 13 JLY 1968 - 11

Date	Stn	Phase	h	m	s	CM	DA	Epicentral Region: Remarks
11	BUL	Pn	15	02	15	e		O.F.S. Goldfields
		Sn		03	45	e		
		Sg		04	28	e	0.4	
	KRR	Pn		03	01	e		
		Sn		05	01	e		
		Sg		06	11	e	0.3	
11	BHA	P	21	49	44	e	0.2	Distant
	KRR	P		50	01	e	0 3	
	BUL	P		50	12	e	0.3	
	CLK	P		50	20	e	0 1	
12	CLK	P'	01	03	07	e	0.1	Distant
		PP		04	07	e		
	BHA	P'		03	23	e	0.2	
		PP		04	35	e		
	KRR	P'		03	24	e	0.2	
		PP		04	40	e		
	BUL	P'		03	29	e	0.6	
		PP		04	55	e		
12	CLK	P'	04	15	02	e	0.1	Distant
		PP		15	59	e		
	BHA	P'		15	14	e	0.2	
		PP		16	28	e		
	KRR	P'		15	14	e	0.2	
		PP		16	33	e		
	BUL	P'		15	20	iR	0.6	
				16	50	e		
12	BUL	P	15	00	16	iC	0.2	Distant
	KRR	P		00	32	iC	0;1	
12	BUL	Pn	17	32	40	e		Witwatersrand
		Sn		33	47	e		
		Sg		34	18	e	1.7	
	KRR	Pn		33	26	e		
		Sn		35	08	e		
		Sg		36	04	e	1.2	
	BHA	Pn		33	55	e		
		Sn		36	03	e		
		SgSg		37	11	e	0.4	
12	BHA	Pn	23	32	37	i		Kolwezi Area, Congo
		Sn		33	32	e		
		Sg		33	58	e	8 0	
	KRR	Pn		33	10	i		
		Sn		34	32	e		
		Sg		35	18	e	2.2	
	BUL	P		33	43	e		
		L		36	39	e	0 9	
	CLK	P		33	55	e		
		L		37	06	e	0.8	
13	CLK	P	06	17	25	iC	0.4	Distant
	KRR	P		17	53	iC	0,3	
	BUL	P		18	07	iC	0.4	
13	CIR	P'	06	57	03	e	0.1	Distant
	BUL	P'		57	07	e	0.2	
	KRR	P'		57	09	e	0.2	
	BHA	P'		57	13	e	0.2	

Date	Stn	Phase	h	m	s	GM	DA	Epicentral Region	Remarks
13	BUL	Pn	12	30	20	iR	0 4	Witwatersrand	
		Sn		31	29	i			
		S*		31	44	i			
		Sg		32	02	i	1 8		
	CIR	Pn		30	24	i	0 6		
		Sn		31	34	e			
		S*		31	51	e			
		Sg		32	07	e	1.6		
	KRR	Pn		31	06	e	0.4		
		Sn		32	50	e			
		Sg		33	45	e	0.8		
	CLK	Sg		35	20	e	0.3		
13	BHA	Pn	14	22	23	e		Albertville Area, Congo	
		Sn		23	56	i			
		Sg		24	50	e	4.8		
	KRR	Pn		22	55	e			
		Sn		24	54	i			
		Sg		25	59	e	1.3		
	CLK	Pn		22	58	e			
		Sn		25	00	e			
		Sg		26	12	e	1.3		
	BUL	Pn		23	37	e			
		Sn		26	06	e			
		L		27	42	e	0.7		
	CIR	Pn		23	53	e			
		Sn		26	33	e			
		L		28	18	e	0.6		
14	BUL	P'	04	14	17	iC	0.2	Distant	
	KRR	P'		14	19	iC	0.2		
	CIR	P'		14	22	e	0.2		
	BHA	P'		14	25	e	0.1		
	CLK	P'		14	38	e	0.1		
14	CIR		07	44	11	e	0 1	Distant	
	KRR			44	14	e	0 1		
	BHA			44	16	e	0 1		
	BUL			44	22	e	0.2		
14	BUL	P	12	43	54	e	0.1	Distant	
	BHA	P		44	09	e	0.2		
	CIR	P		44	19	e	0.1		
14	CIR	P	13	08	28	e	0.2	Distant	
	BUL	P		08	29	e	0.2		
	KRR	P		09	01	e	0.1		
	BHA	P		09	22	e	0.1		
14	CLK	P	18	24	14	iC	0.6	Distant	
	BHA	P		24	39	iC	0.3		
	KRR	P		24	40	iC	0.4		
	CIR	P		24	46	e	0.3		
	BUL	P		24	55	iC	o.4		
14	BUL		20	51	02	e	0.2	Distant	
	CIR			51	03	e	0.1		
14	BUL		21	38	24	e	0.3	Distant	
				38	55	i			
	CIR			38	35	e	0.2		
				39	06	e			
	KRR			38	35	e	0.2		
				39	06	e			

LIST OF RECORDED PHASES: 15 to 15 JLY 1968 - 13

Date	Stn	Phase	h	m	s	QM	DA	Epicentral Region: Remarks
15	CLK		00	05	14	e	0.1	
	KRR			05	36	e	0.1	
	BUL			05	40	iP	0.2	
15	CIR	P'	00	30	34	e	0.3	Distant
		PP		32	57	e		
	CLK	P'		30	38	e	0.1	
		PP		33	13	i		
		SKP		34	01	i		
	BUL	P'		30	38	e	0.3	
		PP		33	15	i		
		SKP		34	10	i		
	KRR	P'		30	42	e	0.4	
		PP		33	20	i		
15	CLK	P	05	20	41	iR	0.3	Distant
	KRR	P		21	06	iR	0.3	
	CIR	P		21	12	iR	0.2	
	BUL	P		21	22	iR	0.3	
15	BHA	P	08	42	40	e	0.1	Distant
	KRR	P		42	51	e	0.1	
	BUL	P		43	15	iR	0.2	
	CIR	P		43	15	iR	0.2	
15	BHA	P	09	13	40	e	0.1	Distant
	KRR	P		13	47	iC	0.4	
	CIR	P		14	02	iC	0.3	
	BUL	P		14	11	iC	1.0	
15	CIR	P'	10	25	27	iC	0.3	Distant
	BUL	P'		25	32	iC	0.2	
	KRR	P'		25	36	e	0.3	
	BHA	P'		25	40	e	0.1	
15	KRR		10	28	09	iP	0.4	Distant
	BHA			28	18	iR	0.3	
15	KRR	P	14	27	51	e	0.2	Distant
	CIR	P		28	14	e	0.1	
	BUL	P		28	20	e	0.2	
15	CIR	P	15	24	03	e	0.1	Distant
	BUL	P		24	20	iR	0.2	
	KRR	P		24	27	e	0.1	
	BHA	P		24	40	e	0.1	
15	BHA	Pn	15	42	46	e		N. Lake Rukwa
		Sn		44	08	i		
		Sg		44	52	i	1 4	
	KRR	Sn		44	53	e		
		Sg		45	47	i	0 6	
	CLK	Sg		45	26	e		
	BUL	SgSg		47	32	i	0.3	
15	CIR	P	20	42	07	e	0.1	Distant
	BUL	P		42	31	e	0.2	
	KRR	P		42	38	e	0.1	
	BHA	P		42	56	e	0.1	

Date	Stn	Phase	h	m	s	GM	DA	Epicentral Region	Remarks
16	BHA	P	08	16	12	e		NW Uganda	
		S		19	13	e			
		L		21	12	e	0.7		
	KRR	L		22	16	i	0.4		
	BUL	L		23	53	i	0.3		
	CIR	L		24	27	i	0.3		
16	CIR	P'	21	44	17	e	0.5	Distant	
	BUL	P'		44	22	e	0.4		
	KRR	P'		44	25	e	0.9		
	BHA	P'		44	30	e	0.5		
16	BHA	P	22	35	02	iC	0.2	Distant	
	KRR	P		35	05	iC	0.2		
	CIR	P		35	10	e	0.2		
	BUL	P		35	19	iC	0.3		
17	BUL	Pn	00	17	33	e		NW Witwatersrand?	
		Sn		18	38	e			
		Sg		19	11	e	0.2		
	CIR	Sn		18	50	e			
		Sg		19	24	e	0.3		
	KRR	Sg		20	52	e	0.2		
17	BUL		01	10	48	iC	0.2	Distant	
	KRR			10	51	e	0.1		
	BHA			10	52	e	0.1		
17	BUL	Pn	05	26	44	e		Okavango Swamp	
		Pg		26	59	e			
		Sn		27	35	e			
		Sg		27	58	e	4.8		
	KRR	Pn		27	05	e			
		Sn		28	13	e			
		Sg		28	48	e	1.6		
	BHA	Sn		28	25	e			
		L		29	10	e	1.0		
	CIR	Sn		28	40	e			
		L		29	27	e	2.2		
17	CLK	P	05	37	06	i		Distant	
	CIR	P		37	16	iC	1.0		
		pP		37	53	i			
		PP		40	48	e			
		PKKP		54	51	e			
	KRR	P		37	29	iC	0.8		
		pP		38	03	e			
		PP		41	09	e			
	BUL	P		37	30	iC	1.5		
		pP		38	03	i			
		PP		41	09	e			
		S		48	32	e			
		PKKP		54	44	e			
	BHA	P		37	35	iC	0.8		
		pP		38	02	e			
		PP		41	20	e			
		S		48	49	e			
		PKKP		54	36	e			

LIST OF RECORDED PHASES: 17 to 18 JLY 1968 - 15

Date	Stn	Phase	h	m	s	GM	DA	Epicentral Region; Remarks
17	BUL	Pn	12	22	26	iR	0.1	Witwatersrand
		Sn		23	34	e		
		Sg		24	06	i	0.4	
	CIR	Pn		22	33	e		
		Sn		24	40	e		
		Sg		24	12	e	0 4	
	KRR	Pn		23	12	e		
		L		25	56	e	0 3	
17	CLK	P	20	19	13	i		Tete Area, Mocambique
	KRR	Pn		19	50	e	0 3	
		Pg		20	03	e		
		Sn		20	37	e		
		Sg		20	58	e	2 4	
	BHA	Pn		20	05	e		
		Sn		21	02	e		
		Sg		21	25	e	2.3	
	CIR	Pn		20	15	e		
		Sn		21	15	e		
		Sg		21	48	e	2.2	
	BUL	Pn		20	25	e		
		Sn		21	37	e		
		Sg		22	15	e	2.0	
17	KRR	Pg	20	47	26	iC		Kariba
		Sg		47	40	i	2.0	
	BHA	Pg		47	44	e		
		Sg		48	12	e	1.4	
	BUL	Pg		48	11	e		
		Sg		48	55	e	0.3	
	CIR	Sg		49	46	e	0.2	
17	CIR	Pn	23	31	35	e		Beira Area, Mocambique
		Pg		31	44	i		
		Sn		32	10	e		
		Sg		33	21	e	7.8	
	CLK	Pn		31	41	e		
		Pg		31	51	e		
		Sn		32	20	e		
		Sg		32	33	e		
	KRR	Pn		32	02	e		
		Sn		32	58	e		
		Sg		33	25	e	5.1	
	BUL	Pn		32	07	e		
		Sn		33	06	e		
		Sg		33	37	e	4.9	
	BHA	Pn		32	34	e		
		Sn		33	56	e		
		Sg		34	32	e	1.7	
18	CIR		00	39	52	e	0.1	Distant
	KRR			40	00	e	0.1	
	BUL			40	05	e	0.1	

LIST OF RECORDED PHASES: 18 to 19 JLY 1968 - 16

Date	Stn	Phase	h	m	s	GM	DA	Epicentral Region; Remarks
18	CLK	P'	01	18	33	e	0.1	Distant
		pP'		18	46	e		
	BHA	P'		18	40	e	0.1	
		pP'		18	53	e		
	KRR	P'		18	41	e	0.1	
		pP'		18	53	i		
	CIR	P'		18	44	e	0.1	
		pP'		18	56	e		
	BUL	P'		18	47	iC	0.2	
		pP'		18	59	i		
18	CIR		05	23	47	e	0.2	Distant
	BUL			23	51	iC	0.3	
	KRR			23	57	e	0.2	
	BHA			24	02	e	0.2	
18	KRR		08	05	33	e	0 1	Distant
				05	42	e		
	BUL			05	41	e	0.1	
18	BHA	P	14	50	46	e	0.3	Distant
	BUL	P		50	55	e	0.2	
	KRR	P		50	55	e	0.4	
	CIR	P		51	12	e	0.3	
	CLK	P		51	23	e	0.1	
18	CLK	P	17	30	58	e	0.1	
		pP		31	07	e		
	CIR	P		31	28	e	0.1	
		pP		31	38	i		
	KRR	P		31	30	iC	0.2	
		pP		31	40	i		
	BHA	P		31	34	iC	0.3	
		pP		31	44	i		
	BUL	P		31	42	iC	0.2	
		pP		31	52	i		
18	BUL	Pn	17	42	10	e		Witwatersrand
		Sn		43	22	e		
		Sg		43	56	i	0.2	
	CIR	Pn		42	13	e		
		Sn		43	28	e		
		Sg		44	02	e	0.2	
	KRR	L		45	44	e	0.1	
18	CLK	P	17	53	55	e	0.1	Distant
	CIR	P		54	24	e	0.1	
	KRR	P		54	26	e	0.2	
	BHA	P		54	30	iC	0 4	
	BUL	P		54	39	e	0 2	
19	CLK	P	05	06	54	iR		Distant
		pP		07	03	i		
	CIR	P		07	24	iR	1 5	
		pP		07	35	i		
	KRR	P		07	27	iR	2.4	
		pP		07	38	i		
	BHA	P		07	30	e	7.8	
		pP		07	40	i		
	BUL	P		07	39	iR	3.4	
		pP		07	49	i		
19	CIR		05	24	46	e	0.2	Distant
	KRR			24	49	iC	0.3	
	BHA			24	53	e	0.5	
	BUL			25	01	iC	0.3	

LIST OF RECORDED PHASES: 19 to 19 JLY 1968-17

Date	Stn	Phase	h	m	s	GM	DA	Epicentral Region; Remarks
19	BHA		05	31	26	e	0.3	Distant
				31	36	i		
	BUL			31	34	e	0.1	
				31	45	e		
19	CLK	P	06	17	50	e	0.2	Distant
		pP		17	59	i		
	CIR	P		18	20	e	0.2	
		pP		18	30	i		
	KRR	P		18	22	e	0.2	
		pP		18	32	i		
	BHA	P		18	26	e	0.5	
		pP		18	35	i		
	BUL	P		18	25	e	0.2	
		pP		18	44	i		
19	CLK	P	08	02	50	e	0.1	Distant
	CIR	P		03	16	e	0.1	
	KRR	P		03	33	e	0.1	
	BUL	P		03	40	e	0.1	
	BHA	P		03	47	iR	0.3	
19	CIR	P'	09	40	02	eC	1.5	Distant
	CLK	P'		40	03	iR	0.4	
	BUL	P'		40	07	eC	2.4	
	KRR	P'		40	10	eC	1.6	
	BHA	P'		40	14	eC	1.6	
19	CIR	Pn	15	33	19	e		26.1S 28.5E E. Witwatersrand
		Sn		34	22	e		
		Sg		34	52	e	0.3	
	BUL	Pn		33	25	e		
		Sn		34	29	e		
		Sg		34	59	e	0 2	
19	CLK	P	16	52	47	iR	0.2	Distant
	CIR	P		53	16	e	0.2	
	KRR	P		53	20	iR	0.2	
	BHA	P		53	23	iR	0.9	
	BUL	P		53	32	iR	0.3	
19	CLK	P	19	00	31	iC	0.6	Distant
		pP		01	25	e		
	BHA	P		00	56	iC	0.3	
		pP		01	50	e		
	KRR	P		00	58	iC	0.4	
		pP		01	52	e		
	CIR	P		01	03	eC	0.2	
		pP		01	58	e		
	BUL	P		01	13	iC	0.4	
		pP		02	08	e		
19	CLK	Pg	19	20	46	e		13.4S 34.7E S. Lake Malawi
		Sn		21	10	e		
		Sg		21	16	e	3.7	
	KRR	Pg		21	54	e		
		Sn		22	36	e		
		Sg		23	08	e	0.5	
	BHA	Pg		21	59	e		
		Sn		22	43	e		
		Sg		23	16	e	0.5	
	CIR	Pg		22	30	e		
		Sn		23	27	e		
		L		24	20	e	0.4	
	BUL	Sn		23	44	e		
		L		24	40	e	0.2	

Date	Stn	Phase	h	m	s	GM	DA	Epicentral Region; Remarks
19	CLK	P	22	23	09	e	0.2	Distant
	CIR	P		23	38	e	0.2	
	KRR	P		23	42	iR	0.2	
	BHA	P		23	45	iR	0.6	
	BUL	P		23	54	iR	0.3	
19	CIR	Pn	23	10	32	e		26.2S 28.0E
		Sn		11	35	e		
		Sg		12	06	e	0.4	
	BUL	Pn		10	34	e		
		Sn		11	40	e		
		Sg		12	10	e	0.3	
	KRR	Sg		13	51	e	0.2	
20	CIR	Pg	05	03	33	e		24.1S 31.3E Phalaborwa, N.E. Transvaal
		Sg		04	12	e	0.5	
	BUL	Pg		04	04	e		
		Sg		04	59	i	0.3	
	KRR	Sg		06	23	i	0.2	
20	BHA	P	08	33	07	e	0.1	Distant
	KRR	P		33	14	iC	0.3	
	CIR	P		33	27	e	0.1	
	BUL	P		33	32	iC	0.4	
20	BUL	P	21	31	25	iR	0.8	Distant
	CIR	P		31	30	iR	0.6	
	KRR	P		31	48	iR	0.5	
	BHA	P		31	59	iR	0.4	
	CLK	P		31	14	e	0.2	
21	CIR	P'	01	48	13	e	0.1	Distant
		SKP		50	40	i		
	BUL	P'		48	19	e	0.1	
		SKP		50	48	i		
	KRR	P'		48	23	e	0.3	
		SKP		50	56	i		
	BHA	P'		48	30	e	0.1	
		SKP		51	05	i		
21	BHA	Pn	04	29	53	e		8.2S 30.6E S. Lake Tanganyika
		Sn		31	02	e		Felt MMIV at Mbala (Abercorn)
		Sg		31	39	e	10.	
	CLK	Pn		30	19	e		
		Sn		31	51	e		
		Sg		32	38	e	3.4	
	KRR	Pn		30	21	e		
		Sn		31	52	i		
		Sg		32	42	e	3.3	
	BUL	Pn		31	05	e		
		Sn		33	08	e		
		Sg		34	21	e	1.2	
	CIR	Pn		31	15	e		
		Sn		33	27	e		
		L		34	53	e	1.2	
21	BUL		05	53	16	iR	0.5	Distant
	KRR			53	28	iR	0.3	
	BHA			53	28	e	0.2	
21	CIR	P'	06	11	00	iC	0.2	Distant
	BUL	P'		11	04	iC	0.2	
	KRR	P'		11	05	iC	0.2	
	BHA	P'		11	09	e	0.2	

LIST OF RECORDED PHASES: 21 to 22 JLY 1968-19

Date	Stn	Phase	h	m	s	GM	DA	Epicentral Region; Remarks
21	CIR	P'	06	11	00	iC	0.2	Distant
	BUL	P'		11	04	iC	0.2	
	KRR	P'		11	05	iC	0.2	
	BHA	P'		11	09	e	0.2	
21	CIR	P'	06	28	24	e	0.2	Distant
	BUL	P'		28	29	e	0.2	
	KRR	P'		28	31	e	0.2	
	BHA	P'		28	32	e	0.1	
21	CIR	P'	13	31	17	e	0.1	Distant
	BUL	P'		31	22	iR	0.2	
	KRR	P'		31	27	iR	1.1	
	BHA	P'		31	33	e	0.3	
21	BHA	P	16	11	25	e	0.1	Distant
	KRR	P		11	31	e	0.2	
	BUL	P		11	55	e	0.2	
21	BHA		17	09	20	e	0.1	Distant
	KRR			09	33	e	0.1	
	CIR			09	56	e	0.1	
21	CIR	P	17	40	56	e	0.3	Distant
	BUL	P		41	06	e	0.2	
	CLK	P		41	13	e	0.2	
	KRR	P		41	20	e	0.2	
	BHA	P		41	33	e	0.2	
21	BHA	Pn	19	36	05	e		8.5S 31.0E S. Lake Tanganyika
		Sn		37	12	e		Felt MMV at Mbala (Abercorn)
		Sg		37	48	e	1.6	
	KRR	Pn		36	31	e		
		Sn		38	02	e		
		Sg		38	50	e	0.5	
	BUL	L		40	40	e	0.2	
	CIR	L		41	03	e	0.2	
21	BHA	P'	21	20	17	e	0.1	Distant
				21	53	e		
				22	58	i		
	KRR	P'		20	20	e	0.2	
				21	57	e		
				22	59	i		
	CIR	P'		20	20	e	0.2	
				22	02	e		
				23	03	i		
	BUL	P'		20	25	iR	0.2	
				22	17	e		
				23	05	i		
	CLK			21	30	e	-	
				22	52	i		
22	BUL	P	00	04	01	iR	0.4	Distant
	CIR	P		04	07	e	0.4	
	KRR	P		04	26	iC	0.3	
	BHA	P		04	35	e	0.1	
	CLK	P		04	51	e	0.1	

Date	Stn	Phase	h	m	s	GM	DA	Epicentral Region; Remarks
22	BHA	Pn	02	50	56	iC		8.5S 31.3E S. Lake Tanganyika Area
		Sn		52	05	e		
		Sg		52	38	e	17.	
	CLK	Pn		51	16	iC		
		Sn		52	40	e		
		Sg		53	25	e	10.	
	KRR	Pn		51	22	iC		
		Sn		52	50	e		
		Sg		53	40	e	8.0	
	BUL	Pn		52	07	e		
		Sn		54	12	e		
		Sg		55	22	e	1.9	
	CIR	Pn		52	13	iR		
		Sn		54	25	e		
		Sg		55	39	e	1.8	
22	BUL	P	05	16	48	iC	1.6	Distant
		PP		18	28	i		
		S		22	36	e		
	CIR	P		16	53	iC	2.8	
		PP		18	31	i		
	KRR	P		17	16	iC	2.2	
		PP		19	06	i		
	BHA	P		17	30	iC	1.1	
		PP		19	25	i		
	CLK	P		17	43	iC	0.6	
		PP		19	36	i		
22	BUL		06	41	36	iR	0.4	Distant
	CLK			41	36	e	0.1	
	KRR			41	44	iC	1.2	
	BHA			41	52	iR	0.6	
22	BUL	P	07	39	30	e	0.2	Distant
	CIR	P		39	38	e	0.2	
	KRR	P		39	53	e	0.2	
22	CIR	P'	18	17	21	e	0.3	Distant
		pP'		17	32	i		
	CLK	P'		17	24	e	0.2	
		pP'		17	35	i		
	BUL	P'		17	28	iR	0.6	
		pP'		17	38	i		
	KRR	P'		17	31	iR	0.4	
		pP'		17	42	i		
	BHA	P'		17	35	e	0.2	
		pP'		17	46	i		
22	CIR	P'	22	51	33	e	0.1	Distant
	KRR	P'		51	34	iC	0.3	
	BHA	P'		51	34	e	0.1	
	BUL	P'		51	37	iC	0.4	
23	BHA		18	47	13	e	0.1	Distant
	BUL			47	17	e	0.1	
	KRR			47	20	e	0.1	
	CIR			47	26	e	0.1	
	CLK			47	32	e	0.2	
23	CLK	P	21	03	20	iC	0.4	Distant
				04	16	e		
	BHA	P		03	45	iC	0.2	
				04	40	e		
	KRR	P		03	47	iC	0.3	
				04	42	e		
	BUL	P		04	02	iC	0.4	
				04	57	e		

Date	Stn	Phase	h	m	s	GM	DA	Epicentral Region; Remarks
23	BUL		23	21	33	e	0.1	Distant
	CIR			21	41	e	0.1	
24	CIR		09	33	06	e	0.1	Distant
	KRR			33	20	iC	0.2	
	BUL			33	24	iC	0.2	
24	CIR	Pn	09	55	38	iC		Off N. Natal Coast
		Sn		56	54	e		
		L		57	38	e	0.2	
	BUL	Pn		56	04	e		
		Sn		57	40	e		
		L		58	42	e	0.3	
	KRR	L	10	00	13	e	0.1	
24	BHA	Pn	11	15	22	e		Mwinilunga Area, Zambia
		Sn		16	05	e		
		Sg		16	23	e	1.6	
	KRR	Pn		15	53	e		
		Sn		16	59	e		
		Sg		17	32	e	0.4	
	CLK	Sn		18	44	e		
		Sg		19	40	e	0.2	
	BUL	L		18	54	i	0.2	
	CIR	L		19	50	e	0.2	
24	CLK	Pn	15	26	57	e		Gorongoza Area, Mocambique
		Pg		27	02	e		
		Sn		27	27	e		
		Sg		27	36	e	0.6	
	CIR	Pn	15	26	58	e		
		Pg		27	06	e		
		Sn		27	33	e		
		Sg		27	45	e	1.6	
	KRR	Pn		27	17	e		
		Pg		27	33	e		
		Sn		28	12	e		
		Sg		28	34	e	2.0	
	BUL	Sg		28	56	e	1.3	
	BHA	Sg		29	44	e	0.3	
24	KRR	Pg	19	10	02	iC		Kandabwe
		Sg		10	30	i	14.	
	BUL	Pn		10	12	e		
		Pg		10	18	e		
		Sn		10	47	e		
		Sg		10	56	e	6.1	
	BHA	Pn		10	13	e		
		Pg		10	20	i		
		Sn		10	48	e		
		Sg		10	58	e	6.3	
	CIR	Pn		10	42	iR		
		Pg		11	01	i		
		Sn		12	41	i		
		Sg		13	08	i	2.6	
	CLK	Pn		11	13	e		
		Sn		12	35	e		
		Sg		13	15	e	1.3	

Date	Stn	Phase	h	m	s	GM	DA	Epicentral Region; Remarks
25	CLK	P	03	45	65	iC	0.6	Distant
		pP		46	07	e		
	BHA	P		46	10	e	0.3	
		pP		46	31	e		
	KRR	P		46	12	iC	0.3	
		pP		46	35	e		
	CIR	P		46	18	e	0.1	
		pP		46	39	e		
	BUL	P		46	26	iC	0.3	
		pP		46	48	i		
25	CIR		07	00	39	e	0.1	Distant
	BUL			00	42	iR	0.2	
	KRR			00	52	e	0.2	
	BHA			00	52	e	0.1	
25	CIR	P'	07	41	54	eC	6.3	Distant
		pP'		42	14	e		
		PP		43	30	i		
		SKP		45	10	e		
		PKKP		51	59	e		
				55	43	e		
	BUL	P'		41	58	eC	20.	
		pP'		42	17	e		
		PP		43	42	e		
		SKP		45	15	i		
		SKS		48	59	i		
		PKKP		51	50	i		
				55	35	i		
	CLK	P'		42	01	eC	5.6	
		PP'		43	50	e		
		SKP		45	17	e		
		PKKP		51	48	e		
				55	24	e		
	KRR	P'		42	04	eC	19.	
		pP'		42	22	e		
		PP		43	55	i		
		SKP		45	18	i		
		SKS		49	01	C		
		PKKP		51	41	i		
				54	53	i		
	BHA	P'		42	09	eC	14.	
		pP'		42	29	e		
		PP		44	12	i		
		SKP		45	28	i		
		PKKP		51	35	e		
				54	40			
25	CIR		08	06	35	e	0.2	Distant
	BUL			06	39	iR		
				06	57	i	0.4	
	CLK			06	42	iR	0.2	
	KRR			06	45	iR	0.6	
	BHA			06	51	e	0.3	

LIST OF RECORDED PHASES: 25 to 25 JLY 1968 - 23

Date	Stn	Phase	h	m	s	GM	DA	Epicentral Region: Remarks
25	CLK	P'	11	09	15	e	0.1	Distant
		pP'		09	24	i		
		PP		10	20	e		
	BHA	P'		09	23	e	0.2	
		pP'		09	32	i		
		PP		10	56	e		
	KRR	P'		09	24	iR	0.4	
		pP'		09	33	i		
		PP		11	00	i		
	CIR	P'		09	26	e	0.2	
		pP'		09	35	e		
		PP		11	07	i		
	BUL	P'		09	29	iR	0.4	
		pP'		09	38	i		
		PP		11	15	i		
25	BUL	P	11	19	17	e	0.1	Distant
		pP		19	26	e		
	KRR	P		19	30	iC	0.3	
		pP		19	40	i		
	BHA	P		19	35	e	0.5	
		pP		19	44	i		
	CLK	P		19	47	e	0.1	
25	BUL		11	50	43	e	0.1	Distant
	KRR			50	48	e	0.2	
	BHA			50	54	e	0.1	
25	BUL	Pn	15	23	30	e		Witwatersrand
		Sn		24	40	e		
		Sg		25	13	e	0.5	
	CIR	Pn		23	34	e		
		Sn		24	45	e		
		Sg		25	18	e	0.3	
	KRR	Pn		24	16	e		
		L		27	00	e	0.3	
25	BHA	Pn	17	44	14	e		Lake Upemba Area
		Sn		45	21	e		
		Sg		45	57	e	1.7	
	KRR	Pn		44	47	e		
		Sn		46	22	e		
		Sg		47	13	e	0.8	
	BUL	Pn		45	27	e		
		Sn		47	35	e		
		L		48	58	e	0.3	
	CIR	Pn		45	52	e		
		Sn		48	13	e		
		L		49	40	e	0.3	
	CLK	Sn		47	05	e		
		L		48	14	e	0.4	
25	CIR		19	11	10	e	0.1	Distant
	BUL			11	14	iC	0.3	
	CLK			11	15	e	0.1	
	KRR			11	20	iC	0.5	
	BHA			11	26	e	0.1	
25	BUL		20	40	56	iR	0.2	Distant
	CIR			41	00	iR	0.2	
	KRR			41	22	iR	0.3	

LIST OF RECORDED PHASES: 25 to JLY 1968 - 24

Date	Stn	Phase	h	m	s	GM	DA	Epicentral Region; Remarks
25	BHA	P	22	15	15	e	0.1	Distant
	CLK	P		15	23	iC	0.2	
	KRR	P		15	24	iC	0.2	
	BUL	P		15	45	iC	0.2	
	CIR	P		15	54	iC	0.2	
26	BHA		12	56	03	e	0.3	Distant
	KRR			56	05	e	0.4	
	CIR			56	10	e	0.2	
	BUL			56	20	iR	0.4	
26	BUL	Pn	14	39	12	e		Witwatersrand
		Pg		39	33	e		
		Sg		40	46	e	5.7	
	CIR	Pn		39	13	e		
		Pg		39	31	e		
		Sn		40	16	e		
		Sg		40	44	e	7.0	
	KRR	Pn		39	58	e		
		Sn		41	30	e		
		L		42	32	e	2.3	
	BHA	Pn		40	28	iC		
		Sn		42	30	e		
		L		43	47	e	0.5	
	CLK	L		44	02	e	0.7	
26	BUL	P	17	14	43	iR	0.8	Distant
		PP		16	12	i		
	BHA	P		14	54	e	0.2	
		PP		16	32	e		
	KRR	P		14	56	e	0.4	
		PP		16	35	e		
	CIR	P		15	04	e	0.9	
		PP		16	46	e		
	CLK	P		15	41	e	0.3	
		PP		17	23	e		
26	BUL	Pn	18	39	34	e		Witwatersrand
		Sg		41	13	e	0.3	
	CIR	Pn		39	34	e		
		Sg		41	16	e	0.3	
	KRR	Sg		42	54	e	0.1	
26	KRR	Pn	19	17	13	e		Kandabwe, Zambia
		Pg		17	16	i		
		Sg		17	43	i	5.2	
	BUL	Pn		17	24	e		
		Pg		17	31	i		
		Sg		18	09	e	2.2	
	BHA	Pn		17	25	e		
		Pg		17	33	e		
		Sn		18	02	e		
		Sg		18	14	e	1.8	
	CIR	Pn		17	56	e		
		Sn		18	54	e		
		Sg		19	18	i	1.2	
	CLK	Sn		19	49	e		
		Sg		20	29	e	0.3	
26	CLK	P	20	57	57	e	0.1	Distant
	BHA	P		58	17	e	0.1	
	KRR	P		58	25	e	0.2	
	CIR	P		58	44	e	0.1	
	BUL	P		58	45	e	0.1	

Date	Stn	Phase	h m s	GM	DA	Epicentral Region; Remarks
27	BHA	P	02 54 42	e	0.4	Distant
	CLK	P	54 55	e	1.4	
	KRR	P	54 59	e	0.7	
	BUL	P	55 23	e	0.5	
	CIR	P	55 30	e	0.9	
27	CIR	P	11 10 36	iC	0.3	Distant
	CLK	P	10 39	iC	0.2	
	BUL	P	10 40	iC	0.5	
	KRR	P	10 44	iC	0.5	
	BHA	P	10 59	e	0.2	
27	KRR	P'	18 01 05	e	0.2	Distant
		SKP	04 45	i		
	BHA	P'	01 08	e	0.1	
	CIR	P'	01 14	e	0.3	
		SKP	04 56	e		
	BUL	P'	01 14	iR	2.1	
		SKP	04 56	e		
27	CIR		21 41 17	e	0.1	Distant
	BUL		41 21	e	0.2	
	KRR		41 26	e	0.2	
27	CLK	P	23 04 16	e	0.1	Distant
	CIR	P	04 23	iR	0.2	
		pP	04 29	i		
	BUL	P	04 47	iR	0.2	
		pP	04 54	i		
	KRR	P	04 50	e	0.1	
		pP	04 56	i		
	BHA	P	05 13	e	0.1	
		pP	05 19	e		
28	KRR		03 44 04	e	0 1	Distant
			44 18	e		
	CIR		44 11	iR	0 3	
			44 24	i		
	BUL		44 12	iR	0 5	
			44 24	i		
28	KRR	P	07 48 55	i		Kariba
		S	49 10	i	4.1	
	BHA	Pn	49 09	e		
		Pg	49 13	e		
		Sn	49 34	e		
		Sg	49 40	e	1.3	
	BUL	Pn	49 28	e		
		Pg	49 37	e		
		Sn	50 07	e		
		Sg	50 20	e	0.7	
	CIR	Pn	49 52	e		
		Sg	51 12	e	0.4	
28	BUL		11 17 39	iR	0.1	Distant
	KRR		17 42	iR	0.1	
	BHA		17 45	e	0.1	
28	BHA	Pg	14 05 54	iC		Kasempa Area, Zambia
		Sg	06 22	i	4.0	
	KRR	Pn	06 23	e		
		Sn	07 13	e		
		Sg	07 35	e	0.7	
	BUL	Sg	08 52	e	0.2	
	CLK	L	09 43	e	0.2	

Date	Stn	Phase	h	m	s	GM	DA	Epicentral Region; Remarks
28	BHA	P	20	33	44	e		N. Lake Tanganyika Area
		S		35	21	e		
		L		36	27	e	1.1	
	KRR	P		34	12	e		
		S		36	16	e		
		L		37	36	e	0.7	
	BUL	S		37	35	e		
		L		39	19	e	0.3	
	CLK	L		37	44	e	0.4	
28	CLK	P'	21	31	40	iR	0.4	Distant
	BHA	P'		31	44	e	0.3	
		pP'		32	02	e		
	KRR	P'		31	46	e	0.6	
		pP'		32	05	e		
		SKP		35	06	e		
	BUL	P'		31	51	e	0.4	
		pP'		32	11	e		
		SKP		35	20	e		
28	BHA		21	42	10	e	0.1	Distant
	KRR			42	16	e	0.2	
	BUL			42	22	e	0.1	
29	BUL		06	10	05	iC	0.3	Distant
	KRR			10	15	iC	0.2	
29	KRR		06	44	12	e	0.1	Distant
	BUL			44	24	iR	0.6	
	CIR			44	24	iR	0.3	
29	KRR		07	56	02	e	0.1	Distant
	BUL			56	04	e	0.6	
	CIR			56	04	e	0.4	
29	BHA		10	13	02	e	0.2	Distant
	KRR			13	05	e	0.1	
	BUL			13	13	e	0.1	
	CLK			13	15	e	0.1	
29	CIR	P'	11	31	11	e	0.2	Distant
	BUL	P'		31	15	iR	0.3	
				35	00	i		
	KRR	P'		31	19	e	0.3	
	BHA	P'		31	25	e	0.2	
				35	10	e		
29	BUL		12	38	58	e	0.1	Distant
				42	35	e		
	KRR			39	05	e	0.1	
				42	34	e		
	BHA			39	08	e	0.2	
				42	38	e		
29	CIR	P'	13	49	20	e	0.2	Distant
	BUL	P'		49	20	iC	0.3	
				50	36	e		
	KRR	P'		49	20	iC	0.2	
				50	36	e		
	BHA	P'		49	22	e	0.2	
				50	34	e		
29	BUL		15	32	45	iR	0.2	Distant
	KRR			32	50	e	0.2	
				35	54	e		
	BHA			32	54	e	0.1	
				35	55	e		

Date	Stn	Phase	h	m	s	GM	DA	Epicentral Region:	Remarks
29	BUL		15	39	13	iC	0.4	Distant	
	KRR			39	18	iC	0.2		
	BHA			39	23	e	0 1		
30	CLK	P	00	05	54	e	0.3	Distant	
				09	49	e			
		PKKP		22	30	e			
	CIR	P		06	07	e	0.3		
				06	47	e			
				10	24	i			
		PKKP		22	20	e			
	KRR	P		06	15	e	0.2		
				06	50	e			
				10	30	i			
		PKKP		22	14	e			
	BUL	P		06	18	e	0.4		
				06	55	e			
				10	35	i			
		PKKP		22	09	e			
	BHA	P		06	20	e	0.4		
				07	03	e			
				10	39	i			
		PKKP		22	01	e			
30	CLK	P	00	16	57	e	0.2	Distant	
				17	12	i			
	CIR	P		17	11	iR	0.2		
				17	27	i			
	KRR	P		17	23	iR	0.2		
				17	38	i			
	BUL	P		17	25	iC	0.4		
				17	41	i			
	BHA	P		17	29	e	0.2		
				17	47	i			
30	CIR	P'	03	08	42	e	0.1	Distant	
		SKP		11	06	e			
	CLK	P'		08	43	e	0.1		
		SKP		11	45	i			
	BUL	P'		08	45	e	0.1		
		SKP		11	14	i			
	KRR	P'		08	50	e	0.2		
		SKP		11	22	i			
	BHA	P'		08	55	e	0.1		
		SKP		11	30	e			
30	CIR		04	29	08	e	0.1	Distant	
				32	57	e			
	BUL			29	25	e	0.2		
				33	20	e			
	KRR			29	28	e	0.1		
				33	20	i			
	BHA			29	35	e	0.1		
				33	34	e			
30	BUL		08	31	13	iR	0.3	Distant	
	CIR			31	13	iR	0.2		

Date	Stn	Phase	h	m	s	GM	DA	Epicentral Region; Remarks
30	BUL	Pn	11	59	08	e		Witwatersrand
		Sn	12	00	15	e		
		Sg		00	47	e	1.1	
	CIR	Pn	11	59	10	e		
		Sn	12	00	17	e		
		Sg		00	49	e	0.8	
	KRR	Pn	11	59	55	e		
		Sn	12	01	38	e		
		Sg		02	50	e	0.6	
	CLK	L		04	05	e	0.3	
30	KKR	Pg	14	01	10	i		Kariba
		Sg		01	30	i	14.	
	BHA	Pg		01	41	i		
		Sn		01	45	e		
		Sg		01	49	i	7.2	
	BUL	Pn		01	36	e		
		Pg		01	45	i		
		Sn		02	15	e		
		Sg		02	28	e	2.6	
	CIR	Pn		02	06	e		
		Sn		02	05	e		
		Sg		02	26	e	1.5	
	CLK	Sg		04	10	e	0.3	
30	BUL	P	20	57	03	e	0.2	Distant
	BHA	P		57	07	e	0.1	
	KRR	P		57	19	e	0.2	
	CIR	P		57	30	e	0.3	
31	KKR		02	51	53	e	0.1	Distant
	BUL			51	56	iR	0.2	
	BHA			52	02	e	0.1	
31	BUL	P	04	07	51	e		Witwatersrand
		Sn		09	00	e		
		Sg		09	34	e	0.9	
	CIR	Pn		07	56	e		
		Sn		09	05	e		
		Sg		09	41	e	0.7	
	KRR	Pn		08	38	e		
		Sn		10	23	e		
		Sg		11	19	e	0.7	
31	BHA		09	31	15	e	0.1	Distant
	KRR			31	25	iC	0.3	
	CLK			31	26	e	0.2	
	BUL			31	47	iC	0.3	
	CIR			31	53	iC	0.2	
31	CIR		14	04	49	e	0.1	Distant
				05	06	i		
	BUL			04	54	e	0.1	
				05	09	i		
	KRR			04	58	e	0.1	
				05	04	i		
31	BUL		14	29	52	e	0.1	Distant
	KRR			30	03	e	0.1	

Date	Stn	Phase	h	m	s	GM	DA	Epicentral Region:	Remarks
31	BUL	Pn	17	53	27	e		Witwatersrand	
		Sn		54	34	e			
		Sg		55	07	e	0.8		
	CIR	Pn		53	30	e			
		Sn		54	40	e			
		Sg		55	13	i	0.6		
	KRR	Pn		54	10	e			
		Sn		55	52	e			
		L		56	54	i	0.3		
31	BUL	Pn	18	52	31	i		Witwatersrand	
		Sn		53	39	e			
		Sg		54	11	e	1.3		
	CIR	Pn		52	35	e			
		Sn		53	46	i			
		Sg		54	18	e	0.8		
	KRR	Pn		53	17	e			
		Sn		55	00	e			
		Sg		55	58	e	0.4		
31	BHA	P	19	38	20	iR	0.2	Distant	
	CLK	P		38	34	iR	0.8		
	KRR	P		38	38	iR	0.7		
	BUL	P		39	02	iR	0.4		
	CIR	P		39	09	iR	0.6		
31	CLK	P	20	14	30	e	0.1	Distant	
	BHA	P		14	44	e	0.1		
	KRR	P		14	51	e	0.1		
	CIR	P		15	13	e	0.1		
	BUL	P		15	16	e	0.1		
31	BUL	P	21	03	08	iC	0.2	Distant	
	CIR	P		03	13	iC	0.3		
	KRR	P		03	32	iC	0.1		

RHODESIA METEOROLOGICAL SERVICES

SEISMOLOGICAL BULLETIN

The following stations contribute records for analysis and publication in this Bulletin:

KABWE (BHA): (Broken Hill)	14° 26.8' S; 28° 28.1' E; Alt. 1206 m.
Litho. foundation:	Dolomite and shales of the Middle Katanga System.
Authority:	Zambia Meteorological Service.
Instrument:	Three-component Willmore one-second seismograph. Nominal magnification 20,000.
CHILEKA (CLK):	15° 40.8' S; 34° 58.6' E; Alt. 781 m.
Litho. foundation:	Charnockitic granulites of the Basement Complex.
Authority:	Malawi Meteorological Service.
Instrument:	Three-component Willmore one-second seismograph. Nominal magnification 20,000.
KAROI (KRR):	16° 51.1' S; 29° 37.1' E; Alt. 1380 m.
Litho. foundation:	Granitic gneisses of the Zambesi type.
Authority:	Rhodesia Meteorological Service.
Instrument:	Vertical Willmore one-second seismograph. Nominal magnification 20 000.
BULAWAYO (BUL):	20° 08.6' S; 28° 36.8' E; Alt. 1341 m.
Litho. foundation:	Hornblend schists of the Bulawayan System.
Authority:	Rhodesia Meteorological Service.
Instruments:	Three-component Willmore one-second seismograph. Nominal magnification 20,000.
	WWSS Station: SP magnification 100,000 LP magnification 1,500
CHIREDZI (CIR):	21° 00.8' S; 31° 34.8' E; Alt. 430 m.
Litho. foundation:	Gneisses or Charnockites of the Limpopo belt.
Authority:	Rhodesia Meteorological Service.
Instrument:	Vertical Willmore one-second seismograph. Nominal magnification 20,000.

Analysis Centre: Goetz Observatory, Meteorological Service, P. O. Box 562, Bulawayo, Rhodesia.

CRITERIA FOR PUBLICATION

To qualify for publication an earthquake must be of magnitude 2 or more. Also, in the case of local earthquakes (nearer than approx. 30°), at least one station must record a clear P phase. In the case of distant earthquakes, at least two stations must record clear P or P' phases.

DISTANCES

Distances of local earthquakes are determined by means of travel-time curves developed at this Centre. For distant earthquakes, the standard Jeffreys-Bullen tables are used.

Where given, distances are in degrees (1° = 111.11 Km).

GLOSSARY

The following terms are used in the List and Bulletin:

h m s	Hours, minutes and seconds of GMT (UT). In the List of Phases, times of arrival of the phases at each station are given. In the Bulletin, the time of occurence of the earthquake is given.
GM	Character and direction of the first ground motion of P or P'.
e	Emersio: the phase emerges gradually from the background.
i	Impetus: the phase is impulsive and clearly defined.
ei	The phase shows an emergent beginning, followed by a sharp increase in amplitude.
R	The first motion is downwards, or towards the epicentre; the motion is rarefactional. A lower case r indicates a weakly rarefactional first motion.
C	The first motion is upwards, or away from the epicentre; the motion is compressional. A lower case c indicates a weakly compressional first motion.
DA	The double-amplitude (peak-to-peak) of the record in millimetres. The double-amplitude is written on the same line as the phase to which it refers; usually P or P' in distant earthquakes, and the S-L complex (the "maximum amplitude") in local earthquakes. In some cases a double-amplitude is given for more than one phase.
Distant	The epicentre is more than about 30° from the approximate centre of the local station network (17S 30E).
Mag	Magnitude. Locally determined magnitudes are based on the double-amplitude of the S-L complex, after Richter (1935). However, the station constants have been adjusted to make the local magnitudes agree as closely as possible with magnitudes published by USCGS. The local magnitudes can therefore be taken as corresponding to m_b of Gutenberg and Richter (1956).
MM	Intensity on the Modified Mercalli Scale.
USCGS	United States Coast and Geodetic Survey. Under "Epicentre", this indicates that the epicentral and magnitude data are taken from the USCGS determinations.
?	Indicates an uncertain statement.
( )	The estimated uncertainty in the bracketted quantity is between 3 and 10 units of the last digit quoted. E.g., a latitude given as (16.4S) is thought to be uncertain by between 0.3 and 1.0 degree: i.e. certainly between 15.4S and 17.4S, and probably between 16.1S and 16.7S.

AUG 1968

	Date	h	m	s	Epicentre: Remarks	Mag
	01	00	14	16	USCGS 26.6S 177.5W: S. of Fiji Is.	5.6
X	01	19	06	10	26.4S 27.3E; Witwatersrand	3.2
	01	20	19	22	USCGS 16.5N 122.2E; Luzon, Philippine Is.	5.9
	02	13	30	23	USCGS 27.5N 60.9E; S. Iran	5.7
	02	14	06	44	USCGS 16.6N 97.7W; Oxaca, Mexico	6.3
	02	17	15	29	USCGS 57.0N 151.5W; Kodiak Is. Region	4.8
X	03	04	04	02	13.0S 26.6E; N. Zambia	2.8
	03	04	54	33	USCGS 25.6N 128.5E; Ryukyu Is.	6.4
	03	06	25	06	USCGS 16.5N 122.3E; Luzon, Philippine Is.	5.9
	03	14	01	47	USCGS 25.8N 62.8E; W. Pakistan	4.7
	03	15	38	36	USCGS 15.5N 122.0E; Philippine Is. Region	4.9
	03	19	19	02	USCGS 16.3N 122.4E; Luzon, Philippine Is.	5.2
	04	11	41	25	USCGS 6.6N 126.8E; Mindanao, Philippine Is.	5.7
	04	16	26	39	USCGS 40.8S 43.3E; Atlantic-Indian Rise	4.4
	04	18	18	38	USCGS 35.4N 27.9E; Dodecanese Is.	4.5
	04	18	24	17	USCGS 6.1S 147.6E; E. New Guinea Region	4.9
X	04	23	12	29	6.6S 30.9E; Katavi Swamp, Tanzania	3.4
	04	23	57	40	USCGS 53.0S 9.6E; SW of Africa	4.9
	05	~~04~~ 02	41	12	USCGS 35.7N 70.2E. Hindu Kush Region	3.6
	05	13	30	59	USCGS 4 3S 102.8E: S. Sumatra	4.8
X	05	14	44	00	10.0S 33.9E; N. Lake Malawi	4.3
	05	16	17	05	USCGS 33 3N 132 2E Shikoku, Japan	6.1
	05	16	41	23	USCGS 17.2N 92.3W; Chipas, Mexico	4.6
	06	00	12	30	USCGS 26.7N 44.6W; N. Atlantic Ridge	4.7
	06	04	53	05	USCGS 15.7N 121.9E; Luzon, Philippine Is.	5.2
	06	08	34	42	USCGS 13.9N 51.5E; E. Gulf of Aden	4.9
	06	11	22	42	Witwatersrand	3.4
X	06	15	36	54	8.2S 31.0E; S. Lake Tanganyika Area	3.7
	06	21	33	54	USCGS 25.6S 13.8W; S. Atlantic Ridge	4.9
	07	08	00	13	USCGS 43.1N 144.6E; Hokkaido, Japan Region	5.6
X	07	19	41	58	3.9S 35.4E; Lake Eyasi Area, Tanzania	4.1
	08	04	55	10	USCGS 36.4N 141.4E; Near E. Coast of Honshu, Japan	5.4
	08	22	10	39	USCGS 13.9S 166.6E; New Hebrides Is.	4.8
X	09	01	13	47	26.3S 27.3E; Witwatersrand	3.3
	09	02	24	53	USCGS 25.2N 94.4E; Burma-India Border Region	4.7
	09	03	08	04	USCGS 22.4S 113.0W; Easter Is. Region	5.4
X	09	03	42(35)		0S 29E; Lake Edward Area, Congo	3.9
	09	06	50	51	USCGS 32.2S 71.8W; Near Coast of Central Chile	4.7
	09	07	13	25	USCGS 32.3S 71.6W; Near Coast of Central Chile	4.4
	09	07	25	40	USCGS 32.1S 70.4W; Chile-Argentina Border Region	4.1
	09	10	38	04	USCGS 43.4N 147.1E; Kurile Is	5.1

AUG 1968

	Date	h	m	s	Epicentre; Remarks	Mag
X	09	12	51	51	26.1S 28.1E; Witwatersrand	3.5
	09	21	26	23	USCGS 61.6S 58.0W; S. Shetland Is.	4.5
	10	02	07	04	USCGS 1.4N 126.2E; Molucca Passage	6.3
	10	03	57	10	USCGS 1.4N 126.6E; Molucca Passage	4.8
	10	04	02	27	USCGS 1.4N 126.4E; Molucca Passage	5.3
	10	04	05	51	USCGS 1.4N 126.5E; Molucca Passage	5.7
	10	04	28	00	USCGS 36.9N 43.0E; Iraq	5.0
	10	05	51	48	USCGS 1.5N 126.2E; Molucca Passage	6.2
	10	08	10	16	USCGS 1.6N 126.2E; Molucca Passage	5.6
X	10	09	00	43	10.2S 35.1E; S. Tanzania	3.1
	10	10	05	52	USCGS 1.6N 126.3E; Molucca Passage	5.4
	10	14	00	40	USCGS 1.6N 126.3E; Molucca Passage	4.9
	10	15	21	43	USCGS 1.5 126.2E; Molucca Passage	5.1
	10	15	45	37	USCGS 1.5N 126.3E; Molucca Passage	5.4
	10	16	41	25	USCGS 15.5N 121.6E; Luzon, Philippine Is.	5.4
	10	17	26	20	USCGS 5.6S 153.2E; New Ireland Region	5.0
	11	02	41	53	USCGS 15.2S 74.0W; Near Coast of Peru	5.6
	11	09	00	25	USCGS 1.8N 126.1E; Molucca Passage	5.2
	11	09	22	37	USCGS 11.1S 13.0W; Ascension Is. Region	4.7
	11	12	37	28	USCGS 52.1N 179.9W; Andreanof Is., Aleutian Is.	5.5
	11	15	07	53	USCGS 1,8N 126.3E; Molucca Passage	5.1
X	11	16	21	25	20.3S 22.4E; Okavango Swamp, Botswana	3.2
	11	20	00	43	USCGS 1.6N 126.1E; Molucca Passage	5.9
	11	22	07	57	USCGS 1,7N 126.3E; Molucca Passage	-
	12	02	15	58	USCGS 21.1S 68.7W; Chile-Bolivia Border Region	4.7
X	12	09	48	22	10S 13E; W. Angola	4.3
	12	13	43	46	USCGS 1.7N 126.3E; Molucca Passage	5.4
X	12	14	30	45	26.3S 27.9E; Witwatersrand	3.1
X	12	15	31	21	14.7S 26.4E; Kafue Hook, Zambia	2.5
	12	17	22	36	USCGS 52.6S 25.5E; S. of Africa	5.0
	12	18	07	11	USCGS 31.4S 177.9W; Kermadec Is.	4.9
X	12	22	27	32	13.2S 27.2E; Kafue Catchment Area	3.1
	13	02	52	52	USCGS 2.0N 126.3E; Molucca Passage	5.8
	13	04	05	26	USCGS 1.9N 126.6E; Molucca Passage	5.1
X	13	06	12	13	26.4S 27.2E; Witwatersrand	3.1
X	13	11	30	54	4S 29E; N. Lake Tanganyika Area	3.7
	13	19	35	21	USCGS 15.5S 167.5E; New Hebrides Is.	5.2
X	13	20	13	58	26.3S 27.5E; Witwatersrand	3.1
	13	22	20	09	USCGS 9.5S 116.4E; Sumbawa Is. Region	4.9
X	13	22	35	40	15.0S 34.2E; Kirk Range, Malawi	2.5
	14	01	13	45	USCGS 55.6N 162.1E; Near E. Coast of Kamchatka	5.3
X	14	05	43	44	27.7S 26.5E; O.F.S. Goldfields	3.6

AUG 1968

	Date	h	m	s	Epicentre, Remarks	Mag
X	14	06	59	33	27.7S 26.5E; O.F.S. Goldfields	3.2
	14	08	38	48	USCGS 18.5N 102.8W; Michoacan, Mexico	5.4
X	14	12	49	53	26.5S 28.2E; Witwatersrand	3.7
	14	15	47	01	USCGS 45.7N 26.5E; Rumania	4.3
	14	17	14	55	USCGS 52.4S 26.6E; S. of Africa	4.3
	14	22	14	19	USCGS 0.2N 119.8E; N. Celebes	6.0
X	15	00	55	11	26.4S 27.2E; Witwatersrand	2.9
	15	02	29	45	USCGS 35.3N 26.8E; Crete	4.8
	15	04	13	01	USCGS 0.6N 119.9E; N. Celebes	5.3
	15	05	05	18	USCGS 1.6N 126.2E; Molucca Passage	5.3
	15	06	50	39	USCGS 23.8S 177.4W; S. of Fiji Is.	5.5
	15	11	40	27	USCGS 0.2S 120.0E; N. Celebes	5.3
	15	17	41	28	USCGS 12.7S 166.2E; Santa Cruz Is.	5.4
	15	19	20	15	USCGS 6.3S 154.8E; Solomon Is.	5.1
	15	19	40	45	USCGS 49.3S 8.1W; S. Atlantic Ridge	5.0
	15	20	32	36	USCGS 49.3S 8.0W; S. Atlantic Ridge	5.1
	15	21	26	00	USCGS 0.1N 120.0E; N. Celebes	5.3
	16	03	32	05	USCGS 21.8S 179.5W; Fiji Is. Region	4.6
	16	10	13	38	USCGS 57.7S 26.5W; S. Sandwich Is. Region	5.4
	16	10	39	17	USCGS 38.5N 143.3E; Off E. Coast of Honshu, Japan	5.6
	16	11	08	39	USCGS 1.2N 126.0E; Molucca Passage	5.0
	16	11	34	16	USCGS 21.1S 179.3W; Fiji Is. Region	5.1
X	16	12	32	39	26.9S 26.6E; Klerksdorp Area, Transvaal	3.8
	16	13	36	37	Witwatersrand	3.3
X	16	22	26	23	16.2S 34.8E; Shire Valley, Malawi	3.3
	17	02	51	16	USCGS 30.1S 60.7E; Atlantic- Indian Rise	4.5
	17	04	00	36	USCGS 1.4N 126.3E; Molucca Passage	5.7
X	17	13	53	10	26.4S 27.2E; Witwatersrand	3.0
	17	14	39	29	USCGS 4.9S 103.3E; S. Sumatra	5.4
	18	02	10	27	USCGS 0.0S 125.7E; Molucca Sea	-
	18	05	43	58	USCGS 1.4N 126.4E; Molucca Passage	5.4
	18	11	54	59	USCGS 48.2N 157.3E; Kurile Is. Region	5.2
	18	14	18	59	USCGS 26.4N 90.6E; E. India	5.2
	18	17	35	37	USCGS 1.5N 126.1E; Molucca Passage	5.2
	18	18	08	35	USCGS 12.7S 166.2E; Santa Cruz Is.	5.2
	18	18	29	22	USCGS 12.6S 166.3E; Santa Cruz Is.	4.7
	18	18	38	31	USCGS 10.1S 159.9E; Solomon Is.	6.2
	19	10	02	46	USCGS 9.0S 66.1E; Mid-Indian Rise	4.6
	19	15	42	30	USCGS 15.9S 174.0W; Tonga Is.	5.3
X	19	22	58	52	7.4S 38.6E; E. Tanzania	3.6
	20	03	15	46	USCGS 31.1S 179.9E; Kermadec Is.	4.8
	20	11	16	59	USCGS 5.6N 146.9E; Caroline Is. Region	5.6

AUG 1968

	Date	h	m	s	Epicentre; Remarks	Mag
X	20	14	54	19	26.4S 27.1E; Witwatersrand	3.7
	20	15	25	31	USCGS 31.2S 178.4W; Kermadec Is.	5.1
X	21	07	54	07	26.1S 28.2E; Witwatersrand	3.2
X	21	13	35	54	26.3S 27.4E; Witwatersrand	3.1
	21	17	56	48	USCGS 30.9S 179.1W; Kermadec Is.	5.3
X	21	18	21	55	13.9S 26.1E; Busango Swamp Area, Zambia	3.2
X	21	18	35	21	14.1S 26.2E; Busango Swamp Area, Zambia	2.6
X	21	22	08	22	26.4S 27.2E; Witwatersrand	3.4
X	22	14	21	06	13.7S 26.3E; Busango Swamp Area, Zambia	2.1
	22	16	19	39	USCGS 19.1S 169.1E; New Hebrides Is.	5.1
X	22	22	45	56	19.8S 23.2E; Okavango Swamp, Botswana	4.5
	23	08	38	08	USCGS 0.7N 119.9E; N. Celebes	5.4
	23	12	01	17	USCGS 30.3N 94.9E; Tibet	4.8
	23	22	36	51	USCGS 22.0S 63.5W; Salta Province, Argentina	5.8
	23	23	14	53	USCGS 21.8S 63.5W; S. Bolivia	5.2
	24	14	26	07	USCGS 30.0N 95.1E; Tibet	4.6
	24	15	06	59	USCGS 32.9S 178.9W; S. of Kermadec Is.	5.3
	24	19	28	58	USCGS 23.9S 67.7W; Chile-Argentina Border Region	4.8
	25	01	54	24	USCGS 52.0N 172.9W; Andeanof Is., Aleutian Is.	4.3
X	25	08	31	16	17.0S 28.0E; Kariba	2.6
	25	11	15	46	USCGS 20.0S 175.3W; Tonga Is.	5.5
	25	17	55	05	USCGS 30.4N 94.8E; Tibet	4.8
	26	09	19	01	USCGS 11.4S 163.6E; Solomon Is.	4.8
	26	09	25	59	USCGS 16.3S 178.0E; Fiji Is.	5.7
X	26	12	42	48	26.3S 27.7E; Witwatersrand	2.9
	26	14	35	08	USCGS 0.2S 121.8E; N. Celebes	4.5
X	26	15	48	53	26.4S 27.2E; Witwatersrand	2.9
X	26	16	18	19	11.5S 33.6E; Mzuzu Area, Malawi	3.1
	26	18	23	41	USCGS 36.4N 70.7E; Hindu Kush Region	5.0
	27	13	45	48	USCGS 19.3N 144.3E; S. of Mariana Is.	5.6
X	27	18	29	21	25.9S 27.8E; Witwatersrand	3.3
	27	19	51	13	USCGS 1.0N 126.2E; N. Celebes	4.8
	27	23	55	48	USCGS 0.2S 121.8E; N. Celebes	5.0
	28	11	50	30	USCGS 20.0S 176.3E; S. of Fiji Is.	5.7
X	28	14	45	17	19.7S 24.1E; Okavango Swamp, Botswana	2.6
	28	15	05	31	USCGS 14.7S 167.3E; New Hebrides Is.	4.8
	28	20	42	19	USCGS 15.6N 122.0E; Philippine Is. Region	5.7
X	28	21	34	17	14.0S 26.2E; Busango Swamp Area, Zambia	3.2
X	29	13	45	12	26.3S 27.6E; Witwatersrand	3.1
	29	19	51	25	USCGS 30.2N 95.1E; Tibet	5.0
	29	21	08	08	USCGS 15.9N 121.7E; Luzon, Philippine Is.	5.2
X	29	22	33	34	22S 17E; Windhoek Area, S.W.A.	3.5

AUG 1968

	Date	h	m	s	Epicentre; Remarks	Mag
	30	02	44	53	USCGS 40.0N 142.7E; Near E. Coast Honshu, Japan	5.0
	30	13	31	33	USCGS 6.7S 155.0E; Solomon Is.	4.7
X	30	14	29	59	8.0S 30.5E; S. Lake Tanganyika	3.3
	30	22	02	20	USCGS 14.6N 56.3E; Arabian Sea	5.2
	31	08	48	45	USCGS 22.9S 172.9E; Loyalty Is. Region	4.9
	31	09	46	15	USCGS 0.9S 24.6W; Central Mid-Atlantic Ridge	4.4
X	31	10	13	11	26.4S 27.8E; Witwatersrand	3.0
	31	10	13	55	USCGS 0.9S 24.6W; Central Mid-Atlantic Ridge	4.5
	31	10	47	37	USCGS 34.0N 59.0E; Iran	6.0
	31	11	34	33	USCGS 33.9N 59.2E; Iran	5.5
X	31	12	33	37	16.6S 28.4E; Kariba	2.4
X	31	13	13	32	29.6S 25.9E; Edenburg Area, O.F.S.	4.4
	31	13	22	59	USCGS 34.1N 59.4E; Iran	4.8
	31	14	06	16	USCGS 34.1N 59.4E; Iran	5.0
X	31	16	07	58	5.5S 28.7E; Central Lake Tanganyika Area	3.3
	31	19	54	35	USCGS 18.3S 177.7W; Fiji Is. Region	5.0

LIST OF RECORDED PHASES: 01 AUG 1968 - 1

Date	Stn	Phase	h	m	s	GM	DA	Epicentral region:	Remarks
01	CIR	P'	00	33	03	iC	0.8	Distant	
		pP'		33	38	i			
		PP		34	55	e			
		SKP		35	59	e			
	BUL	P'		33	06	iC	1.8		
		pP'		33	40	i			
		PP		35	05	i			
		SKP		36	03	e			
	CLK	P'		33	08	iC	0.6		
		PP		35	08	e			
		SKP		36	17	e			
	KRR	P'		33	12	iC	1.9		
		pP'		33	45	i			
		PP		35	20	e			
		SKP		36	23	i			
	BHA	P'		33	17	iC	1.2		
		pP'		33	52	e			
		PP		35	29	e			
		SKP		36	33	i			
01	CIR	P	11	55	30	e	0.2	Distant	
	BUL	P		55	47	e	0.1		
	KRR	P		56	03	e	0.1		
01	BUL	Pn	19	07	43	e		Witwatersrand	
		Sn		08	54	e			
		Sg		09	26	e	0.9		
	CIR	Pn		07	48	e			
		Sn		08	58	e			
		Sg		09	31	e	0.7		
	KRR	Pn		08	30	e			
		Sn		10	14	e			
		Sg		11	14	i	0.4		
	CLK	Sg		12	41	e	0.2		
01	CLK	P	20	32	27	iC	3.2	Luzon, Philippine Is.	
		pP		32	51	e			
		PP		36	04	e			
		S		43	02	e			
		PS		43	53	i			
		PKKP		49	53	i			
		P'P'		58	09	e			
	CIR	P		32	46	e	2.2		
		pP		33	14	i			
				36	12	e			
				36	49	e			
		S		43	13	e			
		PKKP		49	40	e			
		P'P'		58	27	e			
	KRR	P		32	50	e	1.6		
		pP		33	16	e			
				36	12	e			
		PP		36	58	e			
		PKKP		49	37	e			
		P'P'		58	01	e			
	BHA	P		32	53	iC	2.3		
		pP		33	17	i			
				36	17	e			
				36	59	e			
		S		43	48	i			
		PKKP		49	36	e			
		P'P'		57	57	e			

CONTINUED PAGE 2.

LIST OF RECORDED PHASES: 01 to 03 AUG 1968 - 2

Date	Stn	Phase	h	m	s	GM	DA	Epicentral region:	Remarks
	Continued from previous Page:								
01	BUL	P	20	32	58	e	2.3		
		pP		33	22	i			
				36	19	i			
				37	15	i			
		S		43	55	i			
		PKKP		49	35	e			
		P'P'		57	56	e			
02	CLK	P	13	39	13	iR	2.3	Distant.	
		pP		39	31	i			
	BHA	P		39	31	iR	2.5		
		pP		39	48	e			
	KRR	P		39	40	iR	6.6		
		pP		40	00	i			
	CIR	P		39	57	iR	3.9		
		pP		40	16	i			
	BUL	P		40	03	iR	3.3		
		pP		40	23	i			
		S		47	52	e			
02	BHA	P'	14	25	48	iR	1.6	Mexico.	
		PKS		29	18	e			
	BUL	P'		25	49	iR	1.3		
		SKP		29	15	e			
	KRR	P'		25	50	iR	2.5		
		SKP		29	16	e			
	CIR	P'		25	54	e	0.6		
		PP		28	15	e			
		SKP		29	20	e			
	CLK	P'		26	02	e	1.7		
		PP		28	39	e			
		SKP		29	37	i			
02	CIR	P	16	14	00	e	0.3	Distant.	
	BUL	P		14	00	e	0.3		
	KRR	P		14	13	e	0.2		
	BHA	P		14	22	e	0.1		
02	KRR		17	35	00	e	0.2	Distant.	
	CIR			35	01	e	0.3		
				35	08	e			
	BUL			35	07	e	0.2		
03	CLK	P	01	30	18	iC	0.3	Distant.	
	CIR	P		30	41	iC	0.5		
	KRR	P		30	57	iC	0.8		
	BUL	P		31	03	e	0.2		
	BHA	P		31	08	iC	0.3		
03	BHA	Pn	04	04	41	e		N. Zambia.	
		P*		04	45	i			
		Sn		05	10	e			
		Sg		05	17	e	4.3		
	KRR	Pn		05	14	e			
		P*		05	21	e			
		Sn		06	06	e			
		Sg		06	31	e	0.8		
	BUL	Pn		05	50	e			
		Sn		07	07	e			
		Sg		07	51	e	0.3		
	CIR	Sg		08	48	e	0.2		

LIST OF RECORDED PHASES: 03 to 04 AUG 1968 - 3

Date	Stn	Phase	h	m	s	GM	DA	Epicentral region:	Remarks
03	CLK	P	05	08	17	iR	0.7	Philippine Is.	
		pP		08	35	i			
		PP		12	24	e			
		SKS		19	19	e			
		PKKP		24	43	e			
	CIR	P		08	37	e	0.5		
		PP		13	00	e			
		PKKP		24	26	e			
	KRR	P		08	37	e	0.5		
		pP		08	56	i			
		PP		13	00	e			
		PKKP		24	26	i			
	BHA	P		08	39	iR	0.5		
		PP		13	02	i			
		PKKP		24	23	e			
	BUL	P		08	48	e	0.6		
		PP		13	18	e			
		SKS		19	52	e			
		PKKP		24	18	e			
03	CLK	P	06	38	13	iC	0.7	Philippine Is.	
		S		49	16				
	CIR	P		38	32	iC	0.5		
		PP		42	32	e			
		PKKP		55	20	e			
	BHA	P		38	38	iC	0.5		
				41	51	i			
	BUL	P		38	44	iC	0.4		
		PP		42	42	e			
	KRR	PP		42	30	e			
		PKKP		55	19	e			
03	CLK	P	14	10	26	e	0.2	Distant.	
		pP		10	34	e			
	KRR	P		10	54	e	0.3		
		pP		11	03	e			
	CIR	P		11	11	e	0.2		
	BUL	P		11	18	e	0.2		
		pP		11	27	e			
03	BUL		15	52	07	e	0.2	Distant.	
	BHA			52	13	e	0.1		
03	CLK	P	19	32	11	e	0.2	Philippine Is.	
	KRR	P		32	33	e	0.1		
	BHA	P		32	36	e	0.1		
	BUL	P		32	38	e	0.1		
04	CLK	P	11	54	29	iC	2.0	Distant.	
		pP		54	34	i			
				57	27	e			
		SKS	12	04	58	i			
	CIR	P	11	54	47	iC	4.8		
		pP		54	52	i			
				59	11	e			
	KRR	P		54	52	iC	2.3		
		PKKP	12	11	27	e			
	BHA	P	11	54	57	iC	1.7		
		PKKP	12	11	23	e			
	BUL	P	11	54	58	iC	7.2		
				59	31	i			
		SKS	12	05	31	e			

LIST OF RECORDED PHASES: 04 to 05 AUG 1968 - 4

Date	Stn	Phase	h	m	s	GM	DA	Epicentral Region:	Remarks
04	CIR	P	16	31	32	iC	0.5	Distant	
	BUL	P		31	51	e	0.3		
	KRR	P		32	14	e	0.3		
	CLK	P		32	15	e	0.2		
	BHA	P		32	39	iC	0.4		
04	BHA	P	18	27	23	e	0.2	Distant	
	CLK	P		27	41	iC	0.3		
	KRR	P		27	46	e	0.3		
	BUL	P		28	10	e	0.1		
	CIR	P		28	18	e	0.2		
04	CIR		18	42	44	e	0.2	Distant.	
	KRR			42	49	iC	0.3		
	BUL			42	50	iC	0.3		
	BHA			42	53	e	0.2		
04	BHA	Pn	23	14	26	e		Katavi Swamp, Tanzania.	
		Sn		15	52	i			
		Sg		16	37	e	0.7		
	KRR	Sn		16	40	e			
		SgSg		17	42	i	0.4		
	CLK	Sn		16	30	e			
		SgSg		17	31	e	0.3		
	BUL	L		19	45	e	0.2		
	CIR	L		20	08	e	0.2		
05	BUL	P	00	04	38	e	0.6	Distant.	
		pP		04	50	i			
	CIR	P		04	40	e	0.9		
		pP		04	50	e			
	KRR	P		05	(05)	e	0.4		
		pP		05	13	e			
	BHA	P		05	26	e	0.4		
		pP		05	38	e			
	CLK	P		05	(35)	e	0.3		
		pP		05	45	i			
05	KRR	P	02	51	40	e	0.3	Distant.	
		pP		52	08	e			
	BUL	P		52	04	e	0.3		
		pP		52	28	e			
05	KRR		13	42	22	e	0.2	Distant.	
	BUL			42	31	e	0.2		
05	CLK	Pn	14	45	28	iC		N. Lake Malawi.	
		Pg		45	49	i			
		Sg		47	(00)	e			
	BHA	Pn		45	44	e	2.8		
		Sn		46	59	i			
		Sg		47	38	i	13.		
	KRR	Pn		45	59	e	1.0		
		Sn		47	29	i			
		Sg		48	13	i	5.4		
	BUL	Pn		46	44	e	0.6		
		Sn		48	44	e			
		SgSg		49	56	i	2.8		
	CIR	Pn		46	42	e	1.2		
		Sn		48	39	i			
		Sg		49	48	i	4.2		

LIST OF RECORDED PHASES: 05 to 06 AUG 1968 - 5

Date	Stn	Phase	h	m	s	GM	DA	Epicentral Region; Remarks
05	CLK	P	16	31	07	iR	0.6	Distant
		PP		35	27	i		Japan
		SKS		41	44	i		
		PKKP		46	56	i		
	KRR	P		31	27	e	0.3	
		P'		35	31	e		
		PKKP		46	38	i		
		$PKKP_2$		46	51	i		
	CIR	P		31	27	e	0.2	
		P'		35	34	e		
		PKKP		46	37	e		
	BHA	P		31	28	e	0.4	
		$PKKP_2$		46	39	i		
	BUL	P		31	39	iP	0.4	
		P'		35	38	i		
		PKKP		46	26	e		
		$PKKP_2$		46	40	i		
05	BHA	P'	17	00	19	e	0.2	Distant
	BUL	P'		00	19	e	0.2	
	KRR	P'		00	21	e	0.3	
	CIR	P'		00	30	e	0.2	
	CLK	P'		00	33	e	0.2	
06	BHA	P	00	24	48	e	0.2	Distant
	KRR	P		24	59	e	0.2	
	BUL	P		25	06	e	0.2	
	CIR	P		25	18	e	0.2	
	CLK	P		25	26	e	0.1	
06	CLK	P	05	06	07	iC	0.4	Distant
	CIR	P		06	27	e	0.3	
	KRR	P		06	30	e	0.2	
	BHA	P		06	34	e	0.3	
	BUL	P		06	39	e	0.3	
06	CLK	P	08	41	22	e	0.8	Distant
		pP		41	31	i		
		PP		44	13	i		
	BHA	P		41	45	e	0.4	
		pP		41	55	e		
		PP		44	20	e		
	KRR	P		41	53	e	0.7	
		PP		44	23	i		
	CIR	P		42	15	e	1.0	
		pP		42	25	i		
		PP		44	30	e		
	BUL	P		42	21	e	0.7	
		pP		42	31	e		
		PP		44	33	i		
06	BUL	Pn	11	24	12	e		Witwatersrand
		Sg		25	50	i	1.3	
	CIR	Pn		24	13	e		
		Sg		25	52	i	1 7	
	KRR	P		24	58	e		
		L		27	38	i	0.7	
	BHA	L		28	52	e	0.2	
	CLK	Sg		29	01	e	0 2	
06	CIR		13	54	34	e	0 2	Distant
	BUL			54	40	iR	0.3	
	KRR			54	40	e	0.2	

LIST OF RECORDED PHASES: 06 to 09 AUG 1968 - 6

Date	Stn	Phase	h	m	s	GM	DA	Epicentral Region; Remarks
06	CLK	Pn	15	38	55	e		S. Lake Tanganyika Area
		Sn		40	25	i	1.7	
	KRR	Pn		39	02	e		
		Sn		40	34	i	0.7	
	BUL	P		39	47	e		
		S		41	55	e		
		L		43	19	e	0.4	
	CIR	P		39	54	e		
		S		42	09	e		
		L		43	39	e	0.4	
06	BUL	P	21	41	21	e	0.3	Distant
	KRR	P		41	37	e	0.4	
	CIR	P		41	41	e	0.3	
				43	27	e		
	CLK	P		42	20	e	0.2	
07	BHA		08	18	58	iC	0.6	Distant
	KRR			18	59	iC	0.7	
				20	20	e		
	CIR			19	01	e	0.2	
	BUL			19	05	iC	0.6	
				20	34	e		
07	BHA	Pn	19	44	55	e		Lake Eyasi Area, Tanzania
		Sn		47	05	e		
		SgSg		48	26	e		
		L		48	32	i	2.8	
	KRR	P		45	(17)	e		
		S		47	42	e		
		L		49	28	e	0.6	
	CIR	L		51	03	e	0.4	
	BUL	L		51	12	e	0.4	
08	BHA		05	13	51	e	0.2	Distant
	KRR			13	52	e	0.4	
	CIR			13	53	e	0.3	
	BUL			13	57	iC	0.6	
				15	21	i		
08	CIR	P'	22	29	33	e	0.2	Distant
	CLK	P'		29	35	e	0.1	
	BUL	P'		29	38	e	0.3	
	KRR	P'		29	41	e	0.3	
09	BUL	Pn	01	15	21	e		Witwatersrand
		Sg		17	04	i	1.0	
	CIR	Sg		17	10	e	0.6	
	KRR	Pn		16	08	e		
		Sg		18	47	e	0.4	
09	CLK	P	02	36	09	e	0.3	Distant
	BHA	P		36	35	iR	0.5	
	KRR	P		36	37	iR	0.5	
	CIR	P		36	(38)	e	0.2	
	BUL	P		36	51	e	0.2	
09	BUL	P'	03	27	02	e	0.2	Distant
	CIR	P'		27	05	e	0.2	
	KRR	P'		27	05	e	0.2	
	BHA	P'		27	12	e	0.2	
		PP		29	03	e		
	CLK	P'		27	18	e	0.2	

LIST OF RECORDED PHASES: 09 to 09 AUG 1968 -7

Date	Stn	Phase	h	m	s	GM	DA	Epicentral Region; Remarks
09	KRR	P	03	46	32	e	0.2	Lake Edward Area, Congo
		S		49	32	e		
		L		51	25	e	0.4	
	BUL	P		47	05	e	0.2	
		L		53	03	e	0.2	
	CIR	P		47	18	e	0.3	
	BHA	Sg		50	02	e		
		L		50	13	e	1.0	
	CLK	L		51(35)		e	0.2	
09	BUL		07	03	39	iR	0.6	Distant
	CIR			03	48	e	0.4	
	KRR			03	52	e	0.9	
	BHA			03	55	iP	0.8	
09	BUL		07	26	10	iC	0.8	Distant
				28	13	i		
	CIR			26	20	iC	0.6	
				28	22	i		
	KRR			26	23	e	0.9	
				28	27	e		
	BHA			26	26	iC	1.0	
09	BUL		07	38	24	e	0.2	Distant
	CIR			38	33	e	0.2	
	KRR			38	37	e	0.2	
	BHA			38	40	e	0.2	
09	KRR	P	10	56	54	e	0.2	Distant
		PP		58	22	e		
	BUL	P		57	00	e	0.2	
	CLK	PP		57	54	e	0.2	
09	BUL		12	19	50	e	0.3	Distant
	CIR			19	58	e	0.2	
	KRR			20	02	e	0.2	
	BHA			20	05	e	0.3	
09	BUL	Pn	12	53	19	e		Witwatersrand
		Sn		54	24	e		
		Sg		54	55	i	2.4	
	CIR	Pn		53	19	e		
		Sg		54	55	i	1.9	
	KRR	Pn		54	03	e		
		SgSg		56	37	i	1.0	
	BHA	SgSg		57	49	e	0.3	
	CLK	SgSg		58	06	e	0.3	
09	BUL	P	21	37	39	iC	0.8	Distant
	CIR	P		37	42	e	0.3	
	KRR	P		37	59	e	0.2	
	BHA	P		38	09	e	0.2	
	CLK	P		38	21	e	0.2	

LIST OF RECORDED PHASES: 10 to 10 AUG 1968 - 8

Date	Stn	Phase	h	m	s	GM	DA	Epicentral Region; Remarks
10	CLK	P	02	20	11	iC	4.6	Distant
		SKS		30	45	i		Luzon, Phillippines
		S		31	16	i		
		SP		32	20	i		
		PKKP		37	34	e		
	CIR	P		20	25	e	4.0	
		pP		20	35	i		
		PP		24	22	e		
		S		31	47	e		
		SP		32	54	e		
		PKKP		37	24			
	KRR	P		20	35	iC	8.5	
		pP		20	44	i		
		PP		24	41	i		
		S		31	51	i		
		SP		33	27	i		
		PKKP		37	17	e		
	BUL	P		20	38	i	7.7	
		pP		20	48	i		
		PP		24	36	i		
		SKS		31	23	i		
		S		32	11	i		
		SP		33	33	i		
		PKKP		37	10	e		
	BHA	P		20	39	iC	10.5	
		pP		20	48	i		
		PP		24	54	e		
		SKS		31	25	i		
		S		32	12	i		
		PKKP		37	08	e		
10	CIR	P	02	53	43	e	3.1	Distant
		pP		53	55	e		
	CLK	P		53	56	e	0.8	
		pP		54	06	i		
	BUL	P		54	01	e	4.0	
		pP		54	13	i		
	KRR	P		54	14	e	0.9	
		pP		54	24	i		
	BHA	P		54	28	e	1 8	
		pP		54	40	i		
10	CIR	P	03	24	51	iC	0.4	Distant
	CLK	P		25	02	e	0.2	
	BUL	P		25	09	iC	0.5	
	KRR	P		25	16	e	0.2	
	BHA	P		25	36	e	0.2	
10	CIR	P	04	10	37	e	0.2	Distant
	KRR	P		10	40	e	0.2	
	BUL	P		10	44	e	0.2	
10	KRR	P	04	12	01	e	0.2	Distant
	BUL	P		12	06	e	0.2	
	BHA	P		12	07	e	0.2	
10	CLK	P	04	15	39	e	0.2	Distant
	CIR	P		15	52	e.	0.2	
	KRR	P		15	56	e	0.3	
	BUL	P		16	01	e	0.3	
		pP		16	07	e		
	BHA	P		16	02	e	0.2	

LIST OF RECORDED PHASES: 10 to 10 AUG 1068 - 9

Date	Stn	Phase	h	m	s	GM	DA	Epicentral Region; Remarks
10	CLK	P	04	19	00	e	0.4	Distant
		PP		22	42	e		Phillippines
		S		30	03	e		
		PKKP		36	(15)	e		
	CIR	P		19	12	e	0.5	
		PP		22	58	e		
		PKKP		36	11	e		
	KRR	P		19	19	e	0.9	
		PP		23	14	e		
		PKKP		36	07	e		
	BUL	P		19	(22)	e	1.0	
		pP		19	28	i		
		PP		23	27	i		
		SP		32	16	e		
		PKKP		36	01	e		
	BHA	P		19	26	e	0.9	
		PP		23	37	e		
		SKS		30	04	e		
10	CLK	P	04	37	17	e	0.2	Distant
	BHA	P		37	18	e	0.2	
	KRR	P		37	33	e	0.3	
	BUL	P		37	56	e	0.3	
10	CLK	P	06	04	53	e	0.7	Distant
		PP		08	32	e		
		SKS		15	27	i		
		S		15	53	i		
		PKKP		22	19	e		
	CIR	P		05	05	e	0.6	
		PP		08	52	e		
		PKKP		22	08	e		
	KRR	P		05	16	iC	1.8	
		PP		09	13	i		
		PKKP		22	05	e		
	BUL	P		05	21	e	1.0	
		PP		09	20	e		
		SKS		15	59	i		
		PKKP		22	02	e		
	BHA	P		05	21	e	1.5	
		S		16	46	i		
		PKKP		22	02	e		
10	CLK	P	08	23	23	iC	0.4	Distant
	CIR	P		23	37	e	0.5	
	KRR	P		23	45	e	0.4	
	BUL	P		23	48	e	0.5	
	BHA	P		23	51	e	0.4	
10	BHA	Pn	09	02	33	e		S. Tanzania
		Sn		03	55	e		
		Sg		04	43	i	1.9	
	KRR			03	27	e		
		Sg		04	59	e	0.3	
	CLK	Sg		03	30	e	0.5	
10	KRR		10	19	24	e	0.2	Distant
	BUL			19	29	e	0.3	
10	KRR		14	14	12	e	0.2	Distant
	BHA			14	16	e	0.1	
	BUL			14	(30)	e	0.2	

LIST OF RECORDED PHASES: 10 to 11 AUG 1968 - 10

Date	Stn	Phase	h	m	s	GM	DA	Epicentral Region; Remarks
10	KRR		15	35	13	e	0.2	Distant
	BUL			35	(16)	e	0.2	
	BHA			35	19	e	0.2	
10	CLK	P	15	58	43	e	0.2	Distant
	CIR	P		59	02	e	0.2	
	KRR	P		59	06	e	0.3	
				59	31	i		
	BUL	P		59	11	e	0.3	
	BHA	P		59	12	e	0.2	
10	CLK	P	16	54	29	iC	0.3	Distant
	CIR	P		54	49	e	0.2	
	KRR	P		54	53	e	0.2	
	BHA	P		54	55	eicR	0.3	
	BUL	P		55	00	e	0.3	
10	BUL		17	45	07	e	0.2	Distant
	KRR			45	09	e	0.2	
11	BUL	P	02	55	12	e	1.5	Distant
		pP		55	37	i		
	BHA	P		55	21	e	0.4	
		pP		55	47	i		
	KRR	P		55	22	e	0.4	
		pP		55	47	i		
	CIR	P		55	23	e	0.4	
		pP		55	48	i		
	CLK	P		55	48	e	0.3	
		pP		56	12	i		
11	CLK	P	09	13	(38)	e	0.2	Distant
	CIR	P		13	44	e	0.2	
	BUL	P		13	58	e	0.2	
11	BUL	P	09	30	18	eirC	0.5	Distant
	CIR	P		30	40	e	0.3	
	BHA	P		30	40	eirC	0.6	
	CLK	P		31	06	e	0.3	
11	CLK	P'	12	56	29	e	0.7	Distant
		pP'		57	11	e		
		SKP		59	41	i		
	BHA	P'		56	31	e	0.6	
		pP'		57	15	e		
		SKP		59	47	e		
	CIR	P'		56	32	e	0.4	
		pP'		57	22	e		
		SKP	13	00	00	e		
	BUL	P'	12	56	32	e	0.4	
		pP'		57	21	e		
		SKP	13	00	00	e		
11	CLK	P	15	21	01	e	0.2	Distant
	CIR	P		21	14	e	0.2	
	BUL	P		21	27	iC	0.4	
	BHA	P		21	(28)	e	0.3	

LIST OF RECORDED PHASES: 11 to 12 AUG 1968 - 11

Date	Stn	Phase	h	m	s	GM	DA	Epicentral region: Remarks
11	BUL	Pn	16	22	49	e		Okavango Swamp, Botswana.
		Pg		23	16	e		
		Sn		23	53	e		
		Sg		24	20	e	1.2	
	KRR	Sn		24	34	e		
		Sg		25	16	e	0.5	
	CIR	Sn		24	58	e		
		Sg		25	47	e	0.5	
	BHA	Sg		25	33	e	0.3	
11	CLK	P	20	13	50	iC	0.5	Distant.
		S		24	54	i		
		PKKP		13	12	e		
	CIR	P		14	05	e	0.4	
	KRR	P		14	12	e	1.3	
		PKKP		30	58	e		
	BUL	P		14	17	e	0.9	
		PKKP		30	54	e		
	BHA	P		14	18	e	0.9	
		SKS		24	57	e		
		S		25	49	e		
11	KRR	P	22	21	27	e	0.2	Distant
	BUL	P		21	30	e	0.2	
	BHA	P		21	32	e	0.1	
12	BUL	P	02	28	43	e	0.3	Distant.
		pP		28	50	i		
	KRR	pP		29	19	e	0.2	
12	BHA	P	09	52	00	e		W. Angola.
		S		54	40	e		
		Sg		56	21	e		
		L		56	36	i	2.0	
	KRR	P		52	22	e		
		L		57	29	i	0.7	
	BUL	P		52	33	e		
		SgSg		57	39	i	0.7	
	CIR	P		53	03	iC		
		L		59	17	i	0.5	
	CLK	P		53	17	e		
		L		59	53	e	0.4	
12	CLK	P	13	56	52	e	0.2	Distant
	CIR	P		57	08	e	0.2	
	KRR	P		57	16	e	0.3	
	BUL	P		57	20	e	0.3	
	BHA	P		57	22	e	0.3	
12	BUL	Pn	14	32	16	e		Witwatersrand
		Sg		33	55	i	0.8	
	CIR	Pn		32	17	e		
		Sg		33	56	i	0.9	
	KRR	Sg		35	37	e	0.3	
12	CLK	P	15	13	32		0.2	Distant
	CIR	P		14	(05)	e	0.1	
	KRR	P		14	13	e	0.2	
	BUL	P		14	26	e	0.2	

LIST OF RECORDED PHASES: 12 to 13 AUG 1968 - 12

Date	Stn	Phase	h	m	s	GM	DA	Epicentral region:	Remarks
12	BHA	Pn	15	31	55	i		Kafue Hook, Zambia,	
		Sn		32	18	i	2.0		
	KRR	P*		32	24	e			
		Sn		32	58	i			
		Sg		33	16	e	1.1		
	BUL	Sg		34	20	e	0.3		
	CIR	Sg		35	22	e	0.2		
12	CIR	P	17	28	59	iC	0.7	Distant.	
	BUL	P		29	04	iC	1,1		
		pP		29	15	i			
	KRR	P		29	32	eirC	1.1		
		pP		29	43	i			
	CLK	P		29	50	e	0.5		
		pP		30	00	i			
	BHA	P		29	54	e	0.6		
		pP		30	05	i			
12	CIR	P'	18	26	02	e	0.3	Distant.	
		pP'		26	30	e			
	BUL	P'		26	03	e	0.4		
		pP'		26	33	e			
	KRR	P'		26	07	e	0.5		
		pP'		26	38	e			
	CLK	P'		26	07	e	0.2		
	BHA	P'		26	16	e	0.3		
12	BHA	Pn	22	28	03	i		Kafue Catchment.	
				28	09	i			
		Sn		28	24	i	10.		
	KRR	Pn		28	37	e			
		Sn		29	25	i			
		Sg		29	46	i	2.2		
	BUL	Pn		29	15	e			
		Sn		30	32	e			
		Sg		31	12	e	0.5		
	CLK	Pn		29	26	e			
		Sn		30	52				
		Sg		31	36	e	0.5		
	CIR	Sg		32	01	e	0.5		
13	CLK	P	03	05	58	iC	0.4	Distant.	
	CIR	P		06	13	e	0.4		
		PP		10	00	e			
	KRR	P		06	21	iC	0.8		
		PP		10	08	e			
	BUL	P		06	26	eicR	0.7		
		PP		10	20	e			
	BHA	P		06	27	eicR	0.6		
		PP		10	29	e			
13	KRR		04	18	58	e	0.2	Distant.	
	BUL			19	01	e	0.2		
13	CLK	P	04	50	(00)	e	0.1	Distant.	
	KRR	P		50	14	e	0.2		
	BUL	P		50	36	e	0.2		
	CIR	P		50	40	e	0.3		

LIST OF RECORDED PHASES: 13 to 14 AUG 1968 - 13

Date	Stn	Phase	h	m	s	GM	DA	Epicentral region: Remarks
13	BUL	Pn	06	13	47	e		Witwatersrand.
		Sn		14	57	e		
		Sg		15	29	i	0.6	
	CIR	Pn		13	50	e		
		Sn		15	03	e		
		Sg		15	38	e	0.6	
	KRR	Pn		14	34	e		
		Sg		17	15	e	0.4	
13	KRR	P	11	34	03	e		N. Lake Tanganyika area.
		SgSg		37	49	e	0.4	
	BUL	P		34	(40)	e		
		L		39	31	e	0.2	
	BHA	Sg		36	28	e	0.6	
	CLK	L		37	43	e	0.4	
	CIR	L		39	(57)	e	0.2	
13	CIR	P'	19	54	05	e	0 7	Distant.
	CLK	P'		54	06	e	0.5	
	BUL	P'		54	10	eicR	1.2	
	KRR	P'		54	13	iR	1.7	
	BHA	P'		54	18	eicR	1.1	
		SKP		57	30	i		
13	BUL	Pn	20	15	30	e		Witwatersrand.
		Sn		16	37	e		
		Sg		17	10	i	0.7	
	CIR	Sg		17	16	e	0.6	
	KRR	Sn		17	57	e		
		SgSg		18	57	i	0.4	
13	CLK	P	22	32	12	e	0.2	Distant.
		pP		32	31	e		
	CIR	P		32	26	e	0.3	
	KRR	P		32	38	e	0.3	
		pP		32	57	e		
	BUL	P		32	40	iR	0.5	
		pP		32	59	i		
	BHA	P		32	45	iR	0.4	
		pP		33	04			
13	CLK	Pn	22	36	02	e		Kirk Range, Malawi.
		Sn		36	15	i	6.	
	KRR	P*		37	01	e		
		Sn		37	45	e		
		Sg		38	10	i	0.4	
	BHA	Sg		38	28	i	0.4	
	CIR	Sg		38	56	e	0.3	
	BUL	Sg		39	26	e	0.2	
14	CLK	P'	01	32	36	iC	0.5	Distant.
	BHA	P'		32	40	eicR	0.4	
	KRR	P'		32	43	eicR	0.8	
	CIR	P'		32	48	e	0.3	
	BUL	P'		32	49	e	0 3	
14	KRR	P	02	32	35	e	0.2	Distant.
	BUL	P		32	54	e	0.3	
		pP		33	05	e		
	CIR	P		32	56	e	0.2	

LIST OF RECORDED PHASES: 14 AUG 1968 - 14

Date	Stn	Phase	h	m	s	GM	DA	Epicentral region;	Remarks
14	BUL	Pn	05	45	39	e		O.F.S. Goldfields.	
		Sn		47	05	e			
		Sg		47	49	e			
		L		47	54	i	1.1		
	CIR	Pn		45	43	e			
		Sn		47	10	e			
		Sg		47	56	e	0.8		
	KRR	Pn		46	25	e			
		Sn		48	26	e			
		Sg		49	33	e			
		L		49	41	i	0.5		
	BHA	L		50	48	e	0.3		
14	BUL	Pn	07	01	28	e		O.F.S. Goldfields?	
		Sg		03	38	e	0.5		
	CIR	Pn		01	33	e			
		Sg		03	45	e	0.5		
14	CIR	P'	08	57	56	e	0.4	Distant.	
	BHA	P'		57	58	iC	0.6		
		SKP	09	00	25	i			
	BUL	P'	08	58	00	e	0.6		
		SKP	09	00	36	e			
		PKS		01	35	e			
	CLK	P'	08	58	05	e	0.5		
14	CIR	Pn	12	51	25	e		Witwatersrand.	
		Sg		53	01	e	2.4		
	BUL	Pn		51	25	iC			
		Sn		52	33	e			
		Sg		53	04	i	3.7		
	KRR	Pn		52	10	e			
		Sn		53	51	e			
		Sg		54	45	i	1.4		
	BHA	Pn		52	41	iC			
		Sn		54	48	e			
		L		56	05	i	0.5		
	CLK	Sg		56	07	e	0.6		
14	KRR	P	15	57	11	e	0.3	Distant.	
	BUL	P		57	32	e	0.2		
	CIR	P		57	40	e	0.3		
14	CIR	P	17	21	16	e	0.2	Distant.	
	BUL	P		21	23	e	0.4		
		pP		21	30	i			
	KRR	P		21	51	e	0.3		
		pP		21	58	i			
	CLK	P		22	08	iC	0.3		
		pP		22	15	i			
	BHA	P		22	12	iC	0 3		

LIST OF RECORDED PHASES: 14 to 15 AUG 1968 - 15

Date	Stn	Phase	h	m	s	GM	DA	Epicentral region:	Remarks
14	CLK	P	22	26	55	eicR	6.2	Distant.	
		PP		29	57	e			
		S		37	33	i			
		PKKP		45	13	e			
	CIR	P		27	12	e			
		pP		27	19	i	7.0		
		PP		30	51	e			
		S		38	04	e			
		PKKP		45	07	e			
	BUL	P		27	23	e	7.4		
		pP		27	30	i			
		PP		31	17	e			
		S		38	29	i			
	BHA	P		27	24	e	7.2		
		pP		27	31	i			
		SKS		38	04	e			
		S		38	31	i			
		PKKP		44	51	e			
14	CLK	P	22	40	18	e	0.2	Distant.	
	CIR	P		40	36	e	0.2		
	BUL	P		40	46	e	0.3		
	BHA	P		40	47	e	0.3		
14	CLK	P	22	41	32	e	0.2	Distant.	
	CIR	P		41	48	e	0.2		
	BUL	P		42	01	e	0.2		
	BHA	P		42	02	e	0.2		
14	CLK	P	22	42	42	iC	0.7	Distant.	
	CIR	P		42	58	iC	0.5		
	BUL	P		43	10	e	0.6		
	BHA	P		43	11	eirC	0.5		
15	BUL	Pn	00	56	45	e		Witwatersrand.	
		Sn		57	55	e			
		Sg		58	28	i	0.4		
	CIR	Sg		58	35	e	0.4		
	KRR	Pn		57	31	e			
		Sg	01	00	13	e	0.3		
15	BHA	P	02	38	30	e	0 3	Distant.	
				43	44	e			
	CLK	P		38	44	e	0. 6		
	KRR	P		38	48	e	0 5		
				43	55	e			
	BUL	P		39	12	e	0.3		
				44	08	e			
	CIR	P		39	21	e	0.8		
				44	15	e			
15	CLK	P	04	25	35	e	0.4	Distant.	
	CIR	P		25	52	e	0.3		
	KRR	P		25	59	e	0.3		
	BUL	P		26	04	e	0.5		
	BHA	P		26	05	e	0.5		
15	KRR	P	05	18	49	e	0.2	Distant.	
	BUL	P		18	54	e	0.2		
	BHA	P		18	55	e	0.2		

LIST OF RECORDED PHASES: 15 AUG 1968 - 16

Date	Stn	Phase	h	m	s	GM	DA	Epicentral region:	Remarks
15	CIR	P'	07	09	23	e	0 5	Distant.	
		PP		11	21	e			
	BUL	P'		09	27	e	1.0		
		PP		11	32	e			
		SKP		12	33	i			
	KRR	P'		09	31	e	1.2		
		PP		11	57	e			
		SKP		12	41	i			
	BHA	P'		09	39	e	0.6		
		PP		12	08	e			
		SKP		12	50	i			
15	BUL	P	10	20	35	eicR	0.7	Distant.	
	CIR	P		20	51	e	0.3		
	KRR	P		20	56	eicR	0.7		
	BHA	P		21	01	e	0.3		
	CLK	P		21	36	e	0.3		
15	CLK	P	11	53	05	iR	0.9	Distant.	
	CIR	P		53	21	e	0.6		
	KRR	P		53	28	e	0.6		
	BUL	P		53	33	eicR	1.2		
	BHA	P		53	35	e	0.8		
15	CIR		18	00(30)		e	0.2	Distant.	
	BUL			00	36	e	0.3		
				00	50	e			
	CLK			00(38)		e	0.2		
	KRR			00	38	e	0.2		
				00	51	e			
	BHA			00	45	e	0.2		
				00	56	e			
15	CLK	P'	19	38	49	e	0.2	Distant.	
	CIR	P'		38	55	e	0 2		
	BUL	P'		39	00	iC	0.4		
		pP'		39	14	i			
	BHA	P'		39	05	e	0.3		
		pP'		39	19	e			
15	BUL	P	19	48	27	e	0.5	Distant.	
	CIR	P		48	35	e	0.6		
				50	14	e			
	BHA	P		49	05	e	0.5		
	CLK	P		49	25	e	0.2		
15	BUL	P	20	40	18	e	0.7	Distant.	
	CIR	P		40	26	e	0.6		
				42	08	e			
	KRR	P		40	44	e	0.4		
				42	38	e			
	BHA	P		40	56	e	0.5		
	CLK	P		41	17	e	0.3		
				41	27	e			
15	CLK	P	21	38	35	e	0.6	Distant.	
	CIR	P		38	50	e	0.3		
	KRR	P		39	01	e	0.2		
	BUL	P		39	04	e	0.5		
	BHA	P		39	05	e	0.4		
15	CLK	P'	22	05	25	e	0.1	Distant.	
	CIR	P'		05	26	e	0.2		
	BUL	P'		05	31	iC	0.3		
	KRR	P'		05	33	e	0.2		
	BHA	P'		05	37	e	0.2		

Date	Stn	Phase	h	m	s	GM	DA	Epicentral Region; Remarks
15	BUL	P	23	48	19	e	0.2	Distant
	CIR	P		48	27	e	0.2	
	KRR	P		48	45	e	0.2	
	BHA	P		48	56	e	0.2	
15	BHA	Pn	23	56	50	e		
		Sn		57	56	e		
		Sg		58	30	i	0.5	
	KRR	Sn		58	58	e		
		Sg		59	46	e	0.3	
16	CIR	P'	03	50	02	e	0.2	Distant
		SKP		52	28	e		
	BUL	P'		50	07	e	0.2	
		SKP		52	36	i		
	KRR	P'		50	11	e	0.3	
		SKP		52	46	i		
	BHA	P'		50	17	e	0.2	
		SKP		52	52	i		
	CLK	SKP		52	35	e	0.1	
16	BUL	P	10	22	54	e	0 7	Distant
		pP		23	25	i		
	CIR	P		23	00	e	0 8	
		pP		23	29	e		
	KRR	P		23	18	iC	0.6	
		pP		23	49			
	BHA	P		23	30	iC	0.6	
		pP		24	00			
	CLK	P		23	45	e	0.3	
		pP		24	16			
16	CLK	P'	10	58	01	e.	0.3	Distant
		PP		58	50	e		
	BHA	P'		58	05	e	0.2	
		PP		59	22	e		
	KRR	P'		58	05	e	0.2	
	BUL	P'		58	10	e	0.3	
16	BUL		11	02	17	e	0.3	Distant
	KRR			02	23	e	0.3	
	CIR			02	42	e	0.2	
16	KRR		11	22	08	e	0.2	Distant
	BHA			22	11	e	0.1	
	BUL			22	14	e	0.2	
16	CIR	P'	11	52	12	e	0.3	Distant
		SKP		54	36	e		
	BUL	P'		52	17	iC	0.5	
		SKP		54	44	i		
	CLK	P'		52	18	e	0.2	
		SKP		54	44	i		
	KRR	P'		52	21	e	1.0	
		SKP		54	53	i		
	BHA	P'		52	27	e	0.3	
		SKP		55	00	e		

LIST OF RECORDED PHASES: 16 to 17 AUG 1968 - 18

Date	Stn	Phase	h	m	s	GM	DA	Epicentral Region: Remarks
16	BUL	Pn	12	34	22	e		Klerksdorp Area, Transvaal
		Sn		35	38	e		
		Sg		36	14	i	2.8	
	CIR	Pn		34	27	e		
		Sn		35	46	i		
		Sg		36	26	i	2.3	
	KRR	Pn		35	07	e		
		Sn		36	58	e		
		SgSg		38	01	i	1.2	
	BHA	Pn		35	37	e		
		Sn		37	51	e		
		Sg		39	06	e	0.5	
	CLK	Pn		35	52	e		
		Sg		39	35	i	0.6	
16	BUL	Pn	13	38	10	e		Witwatersrand
		Sn		39	19	e		
		Sg		39	52	i	1.3	
	CIR	Pn		38	14	e		
		Sn		39	25	e		
		Sg		39	58	i	0.8	
	KRR	Pn		38	56	e		
		Sn		40	41	e		
		SgSg		41	40	i	0.5	
	BHA	Pn		39	25	e		
		L		42	50	e	0.2	
16	BHA		21	43	55	e	0.2	Distant
	KRR			43	57	e	0.2	
16	CLK	P	22	26	34	i		Shire Valley, Malawi
	KRR	Pn		27	38	e		
		Sn		28	34	e		
		Sg		28	58	i	2.1	
	CIR	Pn		27	47	e		
		Sg		29	17	e	1.7	
	BHA	Pn		27	(55)	e		
		Sn		29	04	i		
		Sg		29	35	i	1.4	
	BUL	Pn		28	(05)	e		
		Sn		29	21	i		
		Sg		29	58	i	1.3	
17	CLK	P	02	57	03	eirC	0.5	Distant
	CIR	P		57	03	e	0.3	
	BUL	P		57	28	iR	1.1	
	KRR	P		57	34	iR	0.5	
	BHA	P		57	54	eirC	0.5	
17	CLK	P	03	36	44	e	0.2	Distant
	KRR	P		37	13	iC	0.3	
	BUL	P		37	27	e	0.2	

Date	Stn	Phase	h	m	s	GM	DA	Epicentral Region; Remarks
17	CLK	P	04	13	45	e	0.4	Distant
		SKS		24	16	i		
		S		24	42	e		
		PKKP		31	07	i		
	CIR	P		14	03	e	0.3	
		PP		17	52	e		
		PKKP		30	56	e		
	KRR	P		14	06	e	0.6	
		PKKP		30	52	i		
	BUL	P		14	10	e	0.8	
		PP		18	07	e		
		SKS		24	47	i		
		PKKP		30	48	e		
	BHA	P		14	11	e	0.7	
		SKS		24	49	e		
		S		25	33	e		
		PKKP		30	48	e		
17	BUL	Pn	13	54	44	e		Witwatersrand
		Sg		56	27	e	0.5	
	CIR	Sg		56	32	e	0.4	
	KRR	Pn		55	30	e		
		SgSg		58	14	e	0.3	
17	KRR		14	50	49	e	0.2	Distant
				51	06	e		
	BUL			51	02	e	0.3	
				51	12	e		
18	KRR		02	23	52	e	0.2	Distant
	BUL			24	07	e	0.2	
18	CIR		05	57	23	e	0.2	Distant
	BUL			57	31	e	0.4	
18	KRR		12	14	04	e	0.3	Distant
	BUL			14	12	e	0.2	
18	KRR	P	14	21	30	e	0.2	Distant
	BUL	P		21	52	e	0.2	
18	CLK	P	14	30	01	iC	1.2	Distant
		pP		30	09			
	BHA	P		30	27	iC	1.3	
		pP		30	36			
	KRR	P		30	29	iC	0.8	
		pP		30	38			
	CIR	P		30	35	e	0.4	
		pP		30	44			
	BUL	P		30	45	iC	0.7	
		pP		30	54			
18	CIR		17	49	00	e	0.2	Distant
	KRR			49	06	e	0.2	
	BUL			49	13	e	0.2	
	BHA			49	14	e	0.2	
18	CIR	P'	18	27	28	e	0.2	Distant
	BUL	P'		27	37	e	0.4	
		SKP		31	12	e		
	KRR	P'		27	40	e	0.2	
		SKP		31	18			
	BHA	P'		27	43	e	0.2	
		SKP		31	21	i		

LIST OF RECORDED PHASES: 18 to 19 AUG 1968 - 20

Date	Stn	Phase	h	m	s	GM	DA	Epicentral Region; Remarks
18	BUL	P'	18	48	24	e	0.3	Distant
		SKP		51	52	e		
	KRR	P'		48	26	e	0.2	
		SKP		51	56	e		
	BHA	P'		48(34)		e	0.2	
		SKP		52	04	i		
18	CLK	P	18	53	00	e	0.3	Distant
		P'		56	21	iR	6.0	Solomon Is.
		SKP		59	15			
		SKS	19	02	39	e		
		SKKS		04	08	i		
		PKKP		06	35	i		
	CIR	P	18	53	05	e	0.3	
		P'		56	23	e	7.7	
		PP		58	02	i		
		PKKP		06	34	i		
		SKKP		10	23	e		
	BUL	P	18	53	20	e	0.3	
		P'		56	29	e	15.4	
		PP		58	15	i		
		PKS	19	00	13	e		
		SKS		02	44	i		
		SKKS		04	25	e		
		PKKP		06	21	i		
		SKKP		10	22	e		
	KRR	P	18	53	20	e	0.3	
		P'		56	30	e	15.0	
		PKKP	19	06	21	e		
		SP		09	46	i		
		SKKP		10	11	i		
	BHA	P'	18	56	34	i	2.7	
		pP'		56	42	i		
		SKS	19	02	52	i		
		SKKS		04	39	i		
		PKKP		06	14	e		
		SP		09	30	e		
		SKKP		10	03	e		
18	CIR		19	25	10	e	0.3	Distant
	BUL			25	14	e	0.7	
	KRR			25	19	e	0.7	
	BHA			25	25	e	0.4	
18	CIR		20	33(02)		e	0.2	Distant
	KRR			33	14	e	0.2	
	BHA			33	21	e	0.2	
	BUL			33	22	e	0.2	
19	KRR		02	41	18	e	0.2	Distant
	CIR			41	18	e	0.2	
	BHA			41	21	e	0.4	
	BUL			41(30)		e	0.2	
19	CIR		10	09	41	e	0.2	Distant
	KRR			09	55	e	0.2	
	BUL			10	02	e	0.2	

Date	Stn	Phase	h	m	s	GM	DA	Epicentral Region; Remarks
19	CIR	P'	16	01	34	e	0.4	Distant
		PP		04	07	e		
	CLK	P'		01	39	e	0.2	
		PP		04	17	e		
	BUL	P'		01	43	iR	0.5	
		PP		04	23	i		
	KRR	P'		01	43	e	0.6	
		PP		04	23	e		
		SKP		04	48	e		
	BHA	P'		01	42	e	1.3	
		SKP		04	51	e		
19	CLK	P	22	01	02	e		E. Tanzania.
		S		02	37	i		
		L		03	38	i	0.7	
	BHA	P		01	46	e		
		S		03	55	e		
		L		05	16	e	0.5	
	KRR	P		01	53	e		
		S		04	08	e		
		L		05	37	e	0.3	
	BUL	P		02	(33)	e		
		S		05	17	e		
		L		07	07	e	0.3	
20	CIR	P'	03	33	54	iR	0.8	Distant
	BUL	P'		33	58	iR	2.4	
	CLK	P'		33	59	iR	0.5	
	KRR	P'		34	03	iR	3.3	
				36	41	e		
	BHA	P'		34	09	iR	1.3	
				36	51	e		
20	CLK	P	09	42	30	eirC	0.7	Distant
	BUA	P		42	55	iC	0.4	
	CIR	P		43	05	e	0.2	
	BUL	P		43	12	iC	0.4	
20	CIR		11	35	41	iR	0.3	Distant
	BUL			35	46	iR	0.6	
	BHA			35	48	e	0.3	
20	BUL	Pn	14	55	53	e		Witwatersrand
		Sn		57	03	i		
		Sg		57	35	i	2.1	
	CIR	Pn		55	53	e		
		Sn		57	09	e		
		Sg		57	42	i	1.6	
	KRR	Pn		56	40	e		
		Sn		58	23	e		
		SgSg		59	23	i	1.4	
	BHA	Sn		59	18	e		
		Sg	15	00	27	e	0.4	
	CLK	Sg		00	47	0.4		
20	CIR	P'	15	44	21	e	0.6	Distant
	BUL	P'		44	26	eirC	1.6	
		PP		46	42	e		
	CLK	P'		44	26	e	0.3	
	KRR	P'		44	31	iC	2.0	
		PP		47	04			
20	CLK	P	20	19	02	e	0.4	Distant
	BHA	P		19	27	e	0.2	
	KRR	P		19	30	e	0.3	
	BUL	P		19	44	e	0.3	

LIST OF RECORDED PHASES: 21 to 21 AUG 1968- 22

Date	Stn	Phase	h	m	s	GM	DA	Epicentral Region; Remarks
21	CIR	Pn	07	55	37	e		Witwatersrand.
		Pg		55	52	e		
		Sn		56	42	e		
		Sg		57	07	i	0.8	
	BUL	Pn		55	37			
		Pg		55	55			
		Sn		56	44			
		Sg		57	11	e	0.9	
	KRR	Pn		56	21	e		
		Sn		58	03	e		
		Sg		58	52	e	0.5	
21	BUL	Pn	13	37	24	e		Witwatersrand.
		Sn		38	31	e		
		Sg		39	04	i	0.6	
	CIR	Pn		37	30	e		
		Sn		38	38	e		
		Sg		39	11	e	0.5	
	KRR	Pn		38	09	e		
		Sn		39	53	e		
		L		40	52	e	0.4	
21	CIR	P'	18	15	41	e	0.3	Distant.
	BUL	P'		15	42	e	0.5	
	CLK	P'		15	44	e	0.2	
	KRR	P'		15	47	e	0.5	
	BHA	P'		15	52	e	0.3	
21	BHA	Pn	18	22	32	e		Busango Swamp Area, Zambia.
		Sn		23	00	e		
	KRR	Pn		23	01	iR		
		Sn		23	49	e		
		Sg		24	10	e	2.9	
	BUL	Pn		23	30	iR		
		Sn		24	44	e		
		Sg		25	20	e	0.5	
	CIR	Pn		23	58	e		
		Sn		25	34	e		
		Sg		26	23	e	0.6	
	CLK	Pn		24	03	e		
		Sn		25	35	i		
		Sg		26	23	e	0.6	
21	BHA	Pn	18	35	57	e		Busango Swamp Area, Zambia.
		Sn		36	24	e		
		Sg		36	30	e	2.7	
	KRR	Pn		36	26	e		
		Pg		36	39	e		
		Sn		37	13	e		
		Sg		37	34	e	0.7	
	BUL	Sg		38	45	e	0.4	
	CLK	Sg		39	46	e	0.2	
	CIR	Sg		39	48	e	0.2	
21	BUL	Pn	22	09	56	e		Witwatersrand
		Sn		11	06	e		
		Sg		11	38	i	1.6	
	CIR	Pn		10	00	e		
		Sn		11	08	e		
		Sg		11	44	i	1.1	
	KRR	Pn		10	42	e		
		Sn		12	28	e		
		Sg		13	21	e	0.6	

Date	Stn	Phase	h	m	s	GM	DA	Epicentral Region; Remarks.
22	CIR	P	14	18	13	iC	0.5	Distant.
	CLK	P		18	24	iC	0.3	
	BUL	P		18	27	iC	0.5	
	KRR	P		18	38	iC	0.3	
	BHA	P		18	51	e	0.3	
22	BHA	Pn	14	21	43	e		Busango Swamp Area, Zambia.
		Pg		21	47	e		
		Sn		22	10	e		
		Sg		22	14	e	2.5	
	KRR	Sg		23	24	e	0.3	
22	CIR	P'	16	38	18	iC	0.8	Distant.
		pP'		39	00	i		
		PP		39	56	e		
	CLK	P'		38	19	iR	0.3	
		PP		40	00	e		
	BUL	P'		38	21	e	0.9	
		pP'		39	04	e		
		PP		40	12	e		
	KRR	P'		38	26	iR	0.8	
		pP'		39	07	i		
		SKP		41	32	e		
	BHA	P'		38	30	iR	0.3	
		pP'		39	13	i		
		SKP		41	39	e		
22	BUL	Pn	22	47	12	iR		Okavango Swamp, Botswana.
		P*		47	19	i		
		Pg		47	30	i		
		Sn		48	05	e		
		Sg		48	34	e	29.	
	KRR	Pn		47	35	iC		
		P*		47	44	i		
		Sn		48	48	e		
		Sg		49	27	e	13.	
	BHA	Pn		47	42	e		
		Sn		48	59	e		
		L		49	49	e	10.	
	CIR	Pn		47	51	iC		
		Sn		49	13	i		
		Sg		49	59	i	23.	
	CLK	Pn		48	44	iR		
		Sn		50	50	i		
		L		52	15	e	2.5	
23	CLK	P	08	50	44	e	0.3	Distant.
	CIR	P		51	01	e	0.4	
	KRR	P		51	08	e	0.2	
	BUL	P		51	10	e	0.4	
	BHA	P		51	13	e	0.3	
23	CLK	P	12	12	49	iR	0.5	Distant.
	BHA	P		13	13	iC	0.3	
	KRR	P		13	15	e	0.2	
	CIR	P		13	23	e	0.2	
	BUL	P		13	30	iR	0.3	

LIST OF RECORDED PHASES: 23 to 25 AUG 1968 - 24

Date	Stn	Phase	h	m	s	GM	DA	Epicentral Region:	Remarks.
23	BUL	P	22	48	30	iR	17.	Distant.	
				49	29	i			
		pP		50	25	i			
		SKS		58	05	e			
		PKKP	23	06	37	e			
	BHA	P	22	48	41	iR	6.8		
				49	40	e			
		pP		50	38	i			
		SKS		58	21	i			
		PKKP	23	06	34	e			
	KRR	P	22	48	41	iR	9.0		
				49	41	i			
		pP		50	38	i			
		PKKP	23	06	32	e			
	CIR	P	22	48	42	iR	4.4		
		pP		50	39	i			
		PKKP	23	06	31	e			
	CLK	P	22	49	05	iR	1.9		
				50	06	i			
		pP		51	05	i			
		SKS		58	53	i			
		S		59	29	i			
		PKKP	23	06	21	e			
23	BUL	P	23	26	31	iR	8.5	Distant.	
		pP		28	28	i			
	BHA	P		26	41	iR	2.5		
		pP		28	40	i			
	KRR	P		26	42	iR	3.9		
		pP		28	40	i			
	CIR	P		26	42	iR	1.5		
		pP		28	40	i			
	CLK	P		27	06	iR	1.9		
		pP		29	06	i			
24	CLK	P	14	37	36	e	0.4	Distant.	
	BHA	P		38	01	e	0.2		
	KRR	P		38	04	e	0.3		
	BUL	P		38	19	e	0.3		
24	BUL	P'	15	25	48	e	0.2	Distant.	
	CIR	P'		25	49	e	0.1		
	CLK	P'		25	51	e	0.2		
	KRR	P'		25	53	e	0.2		
	BHA	P'		25	57	e	0.2		
24	BUL	P	19	41	35	iC	2.3	Distant.	
	KRR	P		41	46	e	0.8		
	BHA	P		41	47	e	0.7		
	CLK	P		42	10	e	0.2		
25	KRR		00	12	26	e	0.2	Distant.	
	BUL			12	28	e	0.2		
	BHA			12	30	e	0.1		
25	KRR		02	13	52	e	0.1	Distant.	
	BUL			13	53	e	0.3		

LIST OF RECORDED PHASES: 25 to 26 AUG 1968 - 25

Date	Stn	Phase	h	m	s	GM	DA	Epicentral Region; Remarks.
25	BHA	Pn	08	31	55	e		Kariba.
		Pg		32	01	e		
		Sn		32	26	i		
		Sg		32	35	e	2.8	
	BUL	Pg		32	13	e		
		Sn		32	40	e		
		Sg		32	53	e	1.3	
	CIR	Pg		32	50	e		
		Sn		32	28	e		
		Sg		33	51	e	0.9	
25	BUL		09	26	23	e	0.2	Distant?
	CLK			26	54	e	0.2	
	BHA			27	16	e	0.1	
25	CIR	P'	11	34	49	e	0.5	Distant.
		SKP		38	07	i		
	BUL	P'		34	54	iC	0.8	
		SKP		38	15	i		
	CLK	P'		34	55	e	0.2	
		SKP		38	16	i		
	KRR	P'		35	01	e	0.5	
		SKP		38	22	i		
	BHA	P'		35	12	e	0.3	
		SKP		38	30	e		
25	KRR		13	36	38	e	0.2	Distant.
	BUL			36	42	iC	0.3	
	BHA			36	42	e	0.3	
25	BHA		18	07	03	e	0.3	Distant.
	BUL			07	20	e	0.4	
26	BUL		09	38	04	iC	0.4	Distant.
	BHA			38	(07)	e	0.2	
26	BUL		09	45	08	e	0.2	Distant.
	BHA			45	(14)	e	0.2	
26	BUL	Pn	12	44	19	e		Witwatersrand.
		Sg		45	58	e	0.5	
	CIR	Pn		44	23	e		
		Sg		46	02	e	0.3	
26	BUL		14	47	50	iC	0.4	Distant.
	BHA			47	51	iC	0.3	
26	BUL	Pn	15	50	32	e		Witwatersrand.
		Sg		52	16	i	0.4	
	CIR	Pn		50	(36)	e		
		Sg		52	21	e	0.3	
26	CLK	Pn	16	19	24	e		Mzuzu Area, Malawi.
		Pg		19	36	e		
		Sn		20	12	e		
		Sg		20	32	i	1.4	
	BHA	Sn		20	47	e		
		Sg		21	17	e	0.7	
	CIR	Sg		23	17	e	0.4	
	BUL	Sg		23	21	e	0.3	
26	CLK	P	18	33	41	iC	0.3	Distant.
	BHA	P		33	57	e	0.2	
	CIR	P		34	21	e	0.2	
	BUL	P		34	25	e	0.3	

Date	Stn	Phase	h	m	s	GM	DA	Epicentral Region; Remarks.
27	CIR		08	53	(50)	e	0.1	Distant.
	BUL			54	16	e	0.3	
27	CIR		14	04	33	e	0.2	Distant.
	KRR			04	38	e	0.3	
	BUL			04	40	e	0.4	
	BHA			04	40	e	0.2	
				05	56	e		
27	BUL	Pn	18	30	47	e		Witwatersrand.
		Sn		31	49	e		
		S*		32	08	e		
		Sg		32	21	i	1.3	
	CIR	Pn		30	51	e		
		Sg		32	27	i	1.3	
	KRR	Pn		31	33	e		
		Sn		33	12	e		
		Sg		34	02	e	0.5	
	BHA	Pn		32	05	e		
		SgSg		35	20	e	0.2	
	CLK	Sg		35	32	e	0.3	
27	CLK	P	20	04	03	e	0.2	Distant.
	KRR	P		04	(20)	e	0.2	
	BHA	P		04	24	e	0.2	
		pP		04	31	e		
	BUL	P		04	25	e	0.3	
		pP		04	35	e		
27	CLK	P	22	21	52	e	0.2	Distant.
	CIR	P		22	07	e	0.2	
	KRR	P		22	19	e	0.2	
	BUL	P		22	22	iC	0.3	
	BHA	P		22	27	e	0.2	
28	CLK	P	00	08	(26)	e	0.2	Distant.
	CIR	P		08	43	e	0.2	
	BHA	P		08	54	e	0.2	
	BUL	P		08	56	e	0.3	
28	CIR	P	12	09	30	e	0.2	Distant.
				11	26	i		
	BUL	P		09	31	e	0.3	
				11	42	e		
	KRR	P		09	40	e	0.2	
	BHA	P		10	(10)	e	0.2	
28	BUL	Pn	14	46	22	e		Okavago Swamp, Botswana.
		Pg		46	32	e		
		Sg		47	28	i	0.7	
	KRR	Sg		48	17	e	0.3	
	CIR	Sg		48	52	e	0.3	
28	CIR		15	24	17	e	0.2	Distant.
	BUL			24	22	e	0.2	
	KRR			24	25	e	0.2	
28	CLK	P	20	55	24	iC	0.5	Distant.
		SKS	21	06	11	e		
	CIR	P	20	55	44	e	0.4	
		PP		59	38	e		
	BHA	P		55	50	iC	0.8	
	BUL	P		55	55	e	0.5	
		PP		59	58	e		

Date	Stn	Phase	h	m	s	GM	DA	Epicentral Region; Remarks.
28	BHA	Pn	21	34	54	iC		Busango Swamp Area, Zambia.
		Pg		34	59	i		
		Sn		35	21	i	6.8	
	BUL	Pn		35	54	e		
		Sn		37	05	e		
		Sg		37	40	i	0.6	
	CIR	Pn		36	21	e		
		SgSg		38	43	i	0.6	
	CLK	Sg		38	39	e	0.5	
29	BUL	Pn	13	46	44	e		Witwatersrand.
		Sn		47	54	e		
		Sg		48	24	e	0.8	
	CIR	Pn		46	47	e		
		Sn		47	57	e		
		Sg		48	29	e	0.8	
	KRR	Pn		47	29	e		
		Sn		49	12	e		
		SgSg		50	09	e	0.4	
29	CLK	P	20	02	56	eirC	0.6	Distant.
	BHA	P		03	21	iC	0.4	
	CIR	P		03	29	e	0.3	
	BUL	P		03	38	e	0.3	
29	CLK	P	21	21	12	iC	0.5	Distant.
	CIR	P		21	32	iC	0.4	
	BHA	P		21	37	iC	0.4	
		pP		21	48	i		
	BUL	P		21	43	iC	0.4	
		pP		21	54	e		
29	BUL	Pn	22	36(04)		e		Windhoek Area, S.W.A.
		Sn		37	57	e		
		Sg		38	55	i	0.4	
	BHA	Sg		40	07	e	0.3	
	CIR	SgSg		40	18	e	0.3	
29	BHA	P	23	04	26	e	0.5	Distant.
	BUL	P		04	39	iC	7.0	
	CLK	P		04	44	iC	4.0	
	CIR	P		04	47	iC	2.1	
30	BHA		03	03	37	e	0.1	Distant.
	CIR			03	39	e	0.2	
	BUL			03	42	iC	0.4	
30	CIR		13	50	15	e	0.2	Distant.
	BUL			50	20	iR	0.5	
				50	29	i		
	KRR			50	21	e	0.1	
	BHA			50	25	e	0.2	
30	BHA	Pn	14	31	37	e		S.Lake Tanganyika.
		Sn		32	49	i		
		L		33	37	i	1.7	
	KRR	P		32(15)		e		
		S		33	38	e	0.5	
	CLK	L		34	44	e	0.4	
	BUL	S		34	57	e		
		L		36	25	e	0.2	
	CIR	L		36	18	e	0.2	

Date	Stn	Phase	h	m	s	GM	DA	Epicentral Region; Remarks.
30	CLK	P	20	24	13	e	0.2	Distant.
	KRR	P		24	46	e	0.2	
	CIR	P		24	49	e	0.2	
	BUL	P		25	13	e	0.3	
30	CLK	P	21	09	(19)	e	0.2	Distant.
				11	49	e		
	BHA	P		09	50	e	0.1	
				12	17			
	KRR	P		09	(54)	e	0.2	
				12	23			
	CIR	P		10	(10)	e	0.2	
				12	40			
	BUL	P		10	22	e	0.2	
				12	49			
30	CLK	P	21	16	07	e	0.2	Distant.
		pP		16	45	e		
	BHA	P		16	36	e	0.2	
		pP		17	10	e		
	KRR	P		16	42	e	0.3	
		pP		17	20	i		
	CIR	P		17	01	e	0.3	
		pP		17	37	e		
	BUL	P		17	08	e	0.4	
		pP		17	45	i		
30	CLK	P	22	09	25	iC	0.9	Distant.
				11	49	e		
	BHA	P		09	52	e	0.6	
	KRR	P		09	59	eirC	1.1	
	CIR	P		10	16	iC	1.2	
	BUL	P		10	23	e	1.4	
31	BUL	P	08	04	18	e	0.1	Distant.
	CIR	P		04	39	e	0.2	
31	CIR	P'	09	07	40	e	0.2	Distant.
	CLK	P'		07	42	e	0.2	
	BUL	P'		07	43	e	0.5	
	KRR	P'		07	47	e	0.4	
31	KRR	P	09	11	51	e	0.2	Distant.
	CIR	P		12	09	e	0.2	
	BUL	P		12	17	e	0.2	
31	BUL	P	09	55	47	e	0.2	Distant.
	CIR	P		56	07	e	0.2	
31	BUL	Pn	10	14	42	e		Witwatersrand.
		Sg		16	22	i	0.6	
	CIR	Pn		14	44	e		
		Sg		16	24	i	0.7	
31	BUL		10	23	28	e	0.2	Distant.
				26	42	e		
	CIR			23	47	e	0.2	
31	CLK	P	10	57	06	e	8.3	Distant,
		pP		57	12	i		Iran.
		S	11	05	03	e		
	BHA	P	10	57	20	e	3.7	
		PcP		58	22	i		
	CIR	P		57	51	e	4.9	
	BUL	P		57	52	e		
		PcP		58	56	e	5.8	
		S	11	06	21	e		

LIST OF RECORDED PHASES: 31 to 31 AUG 1968 - 29

Date	Stn	Phase	h	m	s	GM	DA	Epicentral Region; Remarks.
31	CLK	P	11	34	29	e	0.2	Distant,
	BHA	P		34	52	e	0.2	Iran.
	BUL	P		35	12	e	0.2	
31	CLK	P	11	44	01	eirC	1.1	Distant,
				45	07	i		Iran.
	BHA	P		44	15	iC	0.4	
	CIR	P		44	44	e	0.6	
	BUL	P		44	47	e	0.8	
31	KRR	P	12	33	57	iC		Kariba.
		S		34	11	i	4.5	
	BHA	P		34	15	e		
		S		34	42	i	4.5	
	BUL	Pn		34	42	e		
		Sg		35	25	i	0.5	
	CIR	Sn		35	52	e		
		Sg		36	18	e	0.3	
31	BUL	Pn	13	15	53	e		Edenburg Area, O.F.S.
		Sn		17	36	e		
		Sg		18	36	e		
		L		18	42	i	4.9	
	CIR	Pn		15	57	e		
		Sn		17	40			
		Sg		18	38	i	3.5	
	KRR	Pn		16	38	e		
		S		19	21	e		
		Sg		20	18	i		
		L		20	29	i	2.2	
	BHA	L		21	35	e	0.5	
	CLK	SgSg		21	42	e	0.5	
31	CLK	P	13	32	29	iC	0.4	Distant.
	KRR	P		32	52	iC	0.3	Iran.
	CIR	P		33	12	iC	0.3	
	BUL	P		33	15	e	0.2	
31	CLK	P	14	16	02	e	0.3	Distant.
	KRR	P		16	10	e	0.4	
		pP		16	16	i		
		PP		20	28	e		
	BHA	P		16	28	e	0.3	
	CIR	P		16	30	e	0.3	
		pP		16	35	i		
	BUL	P		16	32	e	0.3	
31	BHA	Pn	16	10	05	e		Central Lake Tanganyika Area.
		Sn		11	39	e		
		L		12	36	e	0.5	
	KRR	L		13	55	e	0.3	
	CLK	L		14	(08)	e	0.2	
31	CIR		20	13	04	e	0.2	Distant.
				15	25	e		
	BUL			13	09	e	0.2	
	KRR			13	12	e	0.3	
				15	54	e		

RHODESIA METEOROLOGICAL SERVICES

SEISMOLOGICAL BULLETIN

The following stations contribute records for analysis and publication in this Bulletin:

KABWE (BHA): (Broken Hill)	14° 26.8' S; 28° 28.1' E; Alt. 1206 m.
Litho. foundation:	Dolomite and shales of the Middle Katanga System.
Authority:	Zambia Meteorological Service.
Instrument:	Three-component Willmore one-second seismograph. Nominal magnification 20,000.
CHILEKA (CLK):	15° 40.8' S; 34° 58.6' E; Alt. 781 m.
Litho. foundation:	Charnockitic granulites of the Basement Complex.
Authority:	Malawi Meteorological Service.
Instrument:	Three-component Willmore one-second seismograph. Nominal magnification 20,000.
KAPOI (KRR):	16° 51.1' S; 29° 37.1' E; Alt. 1380 m.
Litho. foundation:	Granitic gneisses of the Zambesi type.
Authority:	Rhodesia Meteorological Service.
Instrument:	Vertical Willmore one-second seismograph. Nominal magnification 20 000.
BULAWAYO (BUL):	20° 08.6' S; 28° 36.8' E; Alt. 1341 m.
Litho. foundation:	Hornblend schists of the Bulawayan System.
Authority:	Rhodesia Meteorological Service.
Instruments:	Three-component Willmore one-second seismograph. Nominal magnification 20,000.
	WWSS Station: SP magnification 100,000 LP magnification 1,500
CHIREDZI (CIR):	21° 00.8' S; 31° 34.8' E; Alt. 430 m.
Litho. foundation:	Gneisses or Charnockites of the Limpopo belt.
Authority:	Rhodesia Meteorological Service.
Instrument:	Vertical Willmore one-second seismograph. Nominal magnification 20,000.

Analysis Centre: Goetz Observatory, Meteorological Service, P. O. Box 562, Bulawayo, Rhodesia.

CRITERIA FOR PUBLICATION

To qualify for publication an earthquake must be of magnitude 2 or more. Also, in the case of local earthquakes (nearer than approx. 30°), at least one station must record a clear P phase. In the case of distant earthquakes, at least two stations must record clear P or P' phases.

DISTANCES

Distances of local earthquakes are determined by means of travel-time curves developed at this Centre. For distant earthquakes, the standard Jeffreys-Bullen tables are used.

Where given, distances are in degrees (1° = 111.11 Km).

GLOSSARY

The following terms are used in the List and Bulletin:

h m s	Hours, minutes and seconds of GMT (UT). In the List of Phases, times of arrival of the phases at each station are given. In the Bulletin, the time of occurence of the earthquake is given.
GM	Character and direction of the first ground motion of P or P'.
e	Emersio: the phase emerges gradually from the background.
i	Impetus: the phase is impulsive and clearly defined.
ei	The phase shows an emergent beginning, followed by a sharp increase in amplitude.
R	The first motion is downwards, or towards the epicentre; the motion is rarefactional. A lower case r indicates a weakly rarefactional first motion.
C	The first motion is upwards, or away from the epicentre; the motion is compressional. A lower case c indicates a weakly compressional first motion.
DA	The double-amplitude (peak-to-peak) of the record in millimetres. The double-amplitude is written on the same line as the phase to which it refers; usually P or P' in distant earthquakes, and the S-L complex (the "maximum amplitude") in local earthquakes. In some cases a double-amplitude is given for more than one phase.
Distant	The epicentre is more than about 30° from the approximate centre of the local station network (17S 30E).
Mag	Magnitude. Locally determined magnitudes are based on the double-amplitude of the S-L complex, after Richter (1935). However, the station constants have been adjusted to make the local magnitudes agree as closely as possible with magnitudes published by USCGS. The local magnitudes can therefore be taken as corresponding to m_b of Gutenberg and Richter (1956).
MM	Intensity on the Modified Mercalli Scale.
USCGS	United States Coast and Geodetic Survey. Under "Epicentre", this indicates that the epicentral and magnitude data are taken from the USCGS determinations.
?	Indicates an uncertain statement.
( )	The estimated uncertainty in the bracketted quantity is between 3 and 10 units of the last digit quoted. E.g., a latitude given as (16.4S) is thought to be uncertain by between 0.3 and 1.0 degree: i.e. certainly between 15.4S and 17.4S, and probably between 16.1S and 16.7S.

Date	Stn	Phase	h	m	s	GM	DA	Epicentral Region; Remarks
29	CLK	Pg	09	32	41	e		Zambezia Province, Mocambique.
				32	44	i		
		Sg		33	12	i	5.	
	CIR	Pn		33	03	e		
		Pg		33	16	e		
		Sn		33	52	e		
		Sg		34	12	i	2.3	
	KRR	Pn		33	17	e		
		Sn		34	17	e		
		Sg		34	43	i	1.8	
	BHA	Pn		33	44	e		
		Sn		35	04	e		
		Sg		35	43	i	0.6	
	BUL	Sg		35	12	e	1.0	
		L		35	16	i		
29	CLK	P'	13	02	16	e	0.2	Distant
	CIR	P'		02	17	e	0.3	
	BUL	P'		02	22	iR	0.3	
	KRR	P'		02	25	e	0.6	
	BHA	P'		02	29	e	0.2	
		SKP		05	42	e		
29	CIR		13	40	(12)	e	0.2	Distant
	KRR			40	17	e	0.3	
	BUL			40	21	e	0.3	
	BHA			40	23	e	0.2	
29	CLK	Pn	15	04	45	iR		Zambezia Province, Mocambique.
		P*		04	48	i		
		Pg		04	51	i		
		S*		05	16	i		
		Sg		05	20	i	8.	
	CIR	Pn		05	10	e		
		Pg		05	22	i		
		Sn		05	58	e		
		Sg		06	18	i	3.4	
	KRR	Pn		05	24	e		
		Sn		06	25	e		
		Sg		06	49	i	3.0	
	BHA	Pn		05	51	e		
		Sn		07	12	e		
		Sg		07	52	i	1.0	
	BUL	Sg		07	19	i	2.8	
29	CLK	P	16	36	04	e		S. Lake Malawi.
		S		36	24	i	4.5	
	KRR	Sn		38	05	e		
		Sg		38	37	e	0.4	
	BHA	Sn		38	15	e		
		L		38	52	i	0.8	
	CIR	Sn		38	45	e		
		Sg		39	28	e	0.4	
	BUL	L		40	03	e	0.3	
29	CLK	P	19	54	38	e	0.4	Distant
	CIR	P		54	50	e	0.3	
	KRR	P		55	02	e	0.2	
	BUL	P		55	03	e	0.2	
	BHA	P		55	08	e	0.2	
29	CIR		22	13	04	e	0.2	Distant?
	BUL			13	08	e	0.3	

LIST OF RECORDED PHASES: 29 to 30 SEP 1968 - 22

Date	Stn	Phase	h	m	s	GM	DA	Epicentral Region; Remarks.
29	BUL	P	22	27	15	iC	0.5	Distant.
	KRR	P		27	27	e	0.4	
	BHA	P		27	27	e	0.2	
	CLK	P		27	51	e	0.1	
30	BUL		11	56	17	e	0.3	Distant.
				56	38	e		
	KRR			56	22	e	0.2	
30	KRR		14	18	44	e	0.2	Distant.
				18	47	e	0.2	
	BHA			18	49	e	0.1	
30	BUL		19	02	08	e	0.2	Distant.
	KRR			02	13	e	0.2	

12 FEB 1969

RHODESIA METEOROLOGICAL SERVICES

SEISMOLOGICAL BULLETIN

The following stations contribute records for analysis and publication in this Bulletin:

KABWE (BHA): (Broken Hill)	14° 26.8' S; 28° 28.1' E; Alt. 1206 m.
Litho. foundation:	Dolomite and shales of the Middle Katanga System.
Authority:	Zambia Meteorological Service.
Instrument:	Three-component Willmore one-second seismograph. Nominal magnification 20,000.
CHILEKA (CIK):	15° 40.8' S; 34° 58.6' E; Alt. 781 m.
Litho. foundation:	Charnockitic granulites of the Basement Complex.
Authority:	Malawi Meteorological Service.
Instrument:	Three-component Willmore one-second seismograph. Nominal magnification 20,000.
KAPOI (KRR):	16° 51.1' S; 29° 37.1' E; Alt. 1380 m.
Litho. foundation:	Granitic gneisses of the Zambesi type.
Authority:	Rhodesia Meteorological Service.
Instrument:	Vertical Willmore one-second seismograph. Nominal magnification 20 000.
BULAWAYO (BUL):	20° 08.6' S; 28° 36.8' E; Alt. 1341 m.
Litho. foundation:	Hornblend schists of the Bulawayan System.
Authority:	Rhodesia Meteorological Service.
Instruments:	Three-component Willmore one-second seismograph. Nominal magnification 20,000.
	WWSS Station: SP magnification 100,000 LP magnification 1,500
CHIREDZI (CIR):	21° 00.8' S; 31° 34.8' E; Alt. 430 m.
Litho. foundation:	Gneisses or Charnockites of the Limpopo belt.
Authority:	Rhodesia Meteorological Service.
Instrument:	Vertical Willmore one-second seismograph. Nominal magnification 20,000.

Analysis Centre: Goetz Observatory, Meteorological Service, P. O. Box 562, Bulawayo, Rhodesia.

CRITERIA FOR PUBLICATION

To qualify for publication an earthquake must be of magnitude 2 or more. Also, in the case of local earthquakes (nearer than approx. 30°), at least one station must record a clear P phase. In the case of distant earthquakes, at least two stations must record clear P or P' phases.

DISTANCES

Distances of local earthquakes are determined by means of travel-time curves developed at this Centre. For distant earthquakes, the standard Jeffreys-Bullen tables are used.

Where given, distances are in degrees (1° = 111.11 Km).

GLOSSARY

The following terms are used in the List and Bulletin:

h m s	Hours, minutes and seconds of GMT (UT). In the List of Phases, times of arrival of the phases at each station are given. In the Bulletin, the time of occurence of the earthquake is given.
GM	Character and direction of the first ground motion of P or P'.
e	Emersio: the phase emerges gradually from the background.
i	Impetus: the phase is impulsive and clearly defined.
ei	The phase shows an emergent beginning, followed by a sharp increase in amplitude.
R	The first motion is downwards, or towards the epicentre; the motion is rarefactional. A lower case r indicates a weakly rarefactional first motion.
C	The first motion is upwards, or away from the epicentre; the motion is compressional. A lower case c indicates a weakly compressional first motion.
DA	The double-amplitude (peak-to-peak) of the record in millimetres. The double-amplitude is written on the same line as the phase to which it refers; usually P or P' in distant earthquakes, and the S-L complex (the "maximum amplitude") in local earthquakes. In some cases a double-amplitude is given for more than one phase.
Distant	The epicentre is more than about 30° from the approximate centre of the local station network (17S 30E).
Mag	Magnitude. Locally determined magnitudes are based on the double-amplitude of the S-L complex, after Richter (1935). However, the station constants have been adjusted to make the local magnitudes agree as closely as possible with magnitudes published by USCGS. The local magnitudes can therefore be taken as corresponding to m_b of Gutenberg and Richter (1956).
MM	Intensity on the Modified Mercalli Scale.
USCGS	United States Coast and Geodetic Survey. Under "Epicentre", this indicates that the epicentral and magnitude data are taken from the USCGS determinations.
?	Indicates an uncertain statement.
( )	The estimated uncertainty in the bracketted quantity is between 3 and 10 units of the last digit quoted. E.g., a latitude given as (16.4S) is thought to be uncertain by between 0.3 and 1.0 degree: i.e. certainly between 15.4S and 17.4S, and probably between 16.1S and 16.7S.

OCT 1968

Date	h	m	s	Epicentre, Remarks	Mag
01	08	19	13	17.0S 35.2E; Lower Shire Valley, Malawi.	3.0
01	10	39	23	14.2S 33.6E; Lilongwe Area, Malawi.	2.7
02	07	19	12	USCGS 60.7S 25.2W; S. Sandwhich Is.Region .	5.1
02	09	09	52	USCGS 27.2N 140.1E; Bonin Is. Region.	4.8
02	12	58	26	6.7S 31.1E; N. Fipa Plateau, Tanzania.	3.9
02	13	21	57	USCGS 17.6S 178.8W; Fiji Is. Region.	4.4
02	18	25	26	12.1S 27.2E; W. Copperbelt, Zambia.	2.8
02	19	50	35	USCGS 16.9N 147.3E; Mariana Is. Region.	4.9
02	22	51	03	26.2S 27.8E; Witwatersrand.	3.0
03	08	04	56	USCGS 3.8S 128.5E; Ceram.	5.6
03	11	08	39	USCGS 51.6N 174.1W; Andreanof Is., Aleutian Is.	5.0
03	12	18	05	USCGS 33.6S 179.2W; S. of Kermadec Is.	5.3
04	06	04	32	USCGS 56.2S 27.0W; S. Sandwhich Is. Region.	5.9
04	06	50	51	USCGS 7.3S 129.7E; Banda Sea.	5.3
04	14	44	34	26.5S 27.5E; Witwatersrand.	3.1
05	06	59	01	13.9S 26.8E; W. Zambia.	2.5
05	15	12	51	USCGS 41.7N 49.5E; Caspian Sea.	5.1
05	22	24	01	16.7S 28.3E; Kariba.	2.2
05	23	10	12	18.9S 23.9E; Okavango Swamp, Botswana.	3.1
06	02	51	46	USCGS 15.6S 173.2W; Tonga Is. Region.	5.0
06	05	15	11	USCGS 15.0S 175.5W; Tonga Is. Region.	5.3
06	07	42	25	USCGS 10.0N 93.7E; Andaman Is. Region.	5.1
06	08	47	02	USCGS 14.7S 175.6W; Samoa Is. Region.	5.4
06	15	06	45	USCGS 36.9N 26.5E; Dodecanese Is.	4.7
06	22	07	11	USCGS 38.8N 32.6E; Turkey.	4.8
07	03	46	07	6.7S 29.7E; Lake Tanganyika.	3.3
07	19	20	20	USCGS 26.3N 140.6E; Bonin Is. Region.	6.1
07	20	49	01	USCGS 42.0N 142.4E; Hokkaido, Japan Region.	5.7
07	22	43	35	USCGS 43.8S 16.1W; S. Atlantic Ridge.	4.6
08	23	47	50	USCGS 15.5N 146.8E; Mariana Is.	5.0
08	00	50	42	USCGS 35.6N 139.9E; Near S. Coast of Honshu, Japan	5.3
08	07	43	23	USCGS 39.9S 87.7E; S.E. Indian Rise.	6.0
08	08	37	26	14.6S 26.3E; Kafue Valley, Zambia.	2.9
08	14	53	39	USCGS 23.3S 66.5W; Jujuy Prov., Argentina.	5.6
09	03	38	40	USCGS 14.7S 175.5W; Samoa Is. Region.	5.2
09	17	10	37	USCGS 15.0S 175.5W; Tonga Is.	5.0
09	23	31	33	26.4S 27.1E; Witwatersrand.	3.4
09	23	36	18	26.1S 26.7E; Witwatersrand.	3.0
10	15	05	37	USCGS 6.0S 148.6E; New Britain Region.	5.0
10	15	05	52	USCGS 6.0S 148.6E; New Britain Region.	5.1
10	16	14	38	USCGS 6.2S 148.6E; New Britain Region.	5.0

OCT 1968

	Date	h	m	s	Epicentre, Remarks	Mag
	11	07	50	31	USCGS 22.2S 69.8W; N. Chile.	4.8
X	11	09	04	13	26.6S 27.6E; Witwatersrand.	3.1
	11	14	18	00	USCGS 25.9S 68.9W; Chile - Argentina Border Region	4.6
	11	17	11	44	USCGS 30.5S 178.0W; Kermadec Is.	4.8
X	11	19	49	32	14.4S 29.7E; Lower Muchinga Escarpment, Zambia.	2.3
	12	05	01	01	USCGS 58.7S 25.3W; S. Sandwhich Is. Region	4.1
X	12	06	12	56	26.2S 27.3E; Witwatersrand,	3.6
X	12	13	58	39	18.4S 26.4E; Wankie Coalfields, Rhodesia.	2.8
X	12	16	20	04	10.9S 34.1E; N. Lake Malawi Area.	3.1
	12	19	17	40	USCGS 20.9S 178.8W; Fiji Is. Region	5.7
	12	23	20	19	USCGS 36.4N 70.8E; Hindu-Kush Region.	5.3
X	13	03	07	23	26.4S 27.0E; Witwatersrand.	3.3
X	13	04	30	28	18.2S 35.1E; Zambezia Prov., Mocambique.	2.4
	13	07	34	15	USCGS 20.1S 66.3E; Mascarene Is. Region.	4.1
	13	08	05	09	USCGS 30.6S 178.2W; Kermadec Is. Region.	4.8
	13	12	04	38	USCGS 32.1S 69.2W; Mendoza Prov., Argentina.	4.9
X	13	16	39	15	20.8S 35.6E; Off Central Mocambique Coast.	3.1
	14	02	58	49	USCGS 31.5S 117.0E; W. Australia.	6.0
	14	05	22	44	USCGS 12.6N 95.2E; Andaman Is. Region.	5.5
	14	05	51	42	USCGS 11.1S 163.1E; Solomon Is.	5.2
	14	07	27	33	USCGS 22.5N 144.3E; Volcano Is. Region	4.9
	14	09	11	27	USCGS 38.2N 142.1E; Near E. Coast of Honshu, Japan	5.0
X	14	13	42	19	26.2S 28.1E; Witwatersrand.	3.6
X	14	16	13	27	26.3S 27.1E; W. Witwatersrand,	4.0
	15	01	55	16	USCGS 0.9N 119.9E; N. Celebes.	5.0
	15	02	10	34	USCGS 0.5S 100.6E; S. Sumatra.	5.6
	15	02	53	33	USCGS 0.8N 119.9E; N. Celebes.	5.3
	15	17	30	16	USCGS 30.3S 178.0W; Kermadec Is. Region	4.2
	15	17	47	39	USCGS 6.1N 95.5E; Nicobar Is. Region.	4.9
	15	20	09	09	USCGS 9.0N 126.3E; Mindanao, Philippine Is. Region.	5.2
X	16	04	18	26	29.6S 29.2E; E. Drakensberg.	3.1
X	16	17	40	31	14.2S 26.3E; Busango Swamp Area, Zambia.	4.1
X	16	19	09	05	26.4S 27.2E; Witwatersrand.	3.1
	16	19	37	02	USCGS 52.5N 169.7W; Fox Is., Aleutian Is.	4.7
	17	06	53	17	USCGS 18.7N 146.4E; Mariana Is.	4.9
X	17	08	12	16	8.7S 30.9E; S. Lake Tanganyika Area.	3.0
X	17	14	32	44	26.4S 27.1E; Witwatersrand,	3.2
X	17	22	14	36	9.0S 33.3E; Mbeya Area, S. Tanzania.	3.3
	17	23	56	05	USCGS 38.3N 20.2E; Greece.	4.5
	18	02	43	49	USCGS 35.3S 71.0W; Central Chile,	5.0
	18	02	47	25	USCGS 18.9N 145.3E; Mariana Is.	4.8

OCT 1968

	Date	h	m	s	Epicentre, Remarks	Mag
	18	15	50	20	USCGS 47.0S 10.4W; S. Atlantic Ridge.	4.5
	18	18	53	13	USCGS 12.3N 95.1E; Andaman Is, Ridge.	4.6
X	18	21	10	45	9.4S 41.5E; Offshore S. Tanzania.	3.8
	19	00	20	02	USCGS 1.5N 126.4E; Molucca Passage.	5.3
X	19	02	16	55	7.1S 30.9E; N. Fipa Plateau, Tanzania.	4.0
	19	02	33	31	USCGS 37.3N 73.1E; Tadzhik S.S.R.	4.9
	19	07	01	33	USCGS 37.3N 73.2E; Tadzhik S.S.R.	5.2
	19	09	52	03	USCGS 37.5N 73.3E; Tadzhik S.S.R.	5.4
X	19	12	38	18	10.7S 34.3E; N. Lake Malawi Area.	3.7
X	19	12	49	45	26.5S 27.3E; Witwatersrand.	3.1
X	19	14	40	04	26.6S 27.3E; Witwatersrand.	3.1
	19	15	34	55	USCGS 35.3N 23.5E; Crete.	4.8
	19	17	28	44	USCGS 15.2S 173.3W; Tonga Is. Region	5.2
	19	21	31	43	USCGS 59.4S 25.3W; S. Sandwhich Is. Region.	4.7
	20	01	27	01	USCGS 59.4S 25.2W; S. Sandwhich Is. Region	4.6
X	20	11	10	16	15.4S 30.3E; Luangwa-Zambezia Confluence, Zambia.	2.5
X	20	12	31	25	16.7S 36.0E; Zambezia Prov., Mocambique.	2.4
X	20	12	45	48	26.9S 26.5E; Klerksdorp Area, Transvaal.	3.7
X	20	13	21	50	7.8S 31.6E; E. Fipa Plateau, Tanzania	4.0
	20	13	37	36	USCGS 55.8S 25.8W; S. Sandwhich Is. Region.	4.7
	20	17	03	59	USCGS 35.4S 15.9W; Tristan da Cunha Region.	5.0
X	20	21	09	53	28.1S 26.2E; O.F.S. Goldfields.	3.6
	20	23	15	04	USCGS 45.7N 26.6E; Rumania.	4.6
	21	01	13	28	USCGS 7.9S 120.4E; Flores Sea.	4.8
	21	07	54	38	USCGS 59.4S 25.3W; S. Sandwhich Is. Region.	4.6
	21	18	16	42	USCGS 35.2N 23.4E; Crete	4.7
	21	23	13	37	USCGS 7.7S 120.4E; Flores Sea.	4.8
X	22	04	46	54	16.7S 28.5E; Kariba.	3.5
	22	06	42	01	USCGS 13.2N 88.2W; El Salvador	4.7
X	23	01	54	02	53.5S 140.3E; W. of Macquarie Is.	4.7
X	23	07	43	48	26.2S 28.3E; Witwatersrand.	3.0
	23	13	25	59	USCGS 9.1S 112.0E; S. of Java.	5.4
	23	21	04	41	USCGS 3.3S 143.3E; Near N. Coast of New Guinea.	6.1
	24	00	42	22	USCGS 7.2N 126.6E; Mindanao, Philippine Is.	5.4
	24	01	29	43	USCGS 19.6S 68.9W; Chile-Boliva Border Region.	5.3
	24	05	07	54	USCGS 45.6S 34.1E; Prince Edward Is. Region	5.3
	24	13	58	35	USCGS 1.5N 126.4E; Molucca Passage.	5.4
	24	15	51	19	USCGS 5.9N 127.0E; Philippine Is. Region.	5.4
X	24	17	16	24	26.5S 27.3E; Witwatersrand.	3.2
	24	17	34	31	USCGS 30.3S 68.2W; San Juan Prov., Argentina.	5.0
	24	22	35	51	USCGS 49.7N 155.8E; Kurile Is.	5.5

OCT 1968

	Date	h	m	s	Epicentre, Remarks	Mag
	25	02	22	24	USCGS 59.0S 25.6W; S. Sandwhich Is. Region.	4.5
	25	10	29	24	USCGS 4.3N 95.5E; N. Sumatra.	5.5
	25	15	55	12	USCGS 3.5N 126.0E; Talaud Is.	5.2
X	25	17	28	34	27.2S 26.7E: Vierfontein Area, O.F.S.	3.9
	26	09	58	25	USCGS 8.9S 110.9E; Java.	5.0
	26	19	16	49	USCGS 52.4N 169.5W: Fox Is., Aleutians Is.	4.5
X	27	11	41	38	26.2S 27.7E; Witwatersrand.	3.2
	27	13	42	26	USCGS 5.9N 125.6E; Mindanao, Philippine Is.	5.5
	28	11	11	17	USCGS 54.3N 164.5W; Unimak Is. Region.	4.6
	28	14	40	41	USCGS 33.4N 140.8E; S. of Honshu, Japan.	5.5
	28	23	32	29	USCGS 12.5S 166.5E; Santa Cruz Is.	5.9
	29	04	06	04	USCGS 31.2N 141.6E; S. of Honshu, Japan	5.7
	29	07	21	17	USCGS 17.8S 178.8W; Fiji Is. Region.	5.5
	29	10	00	00	USCGS 17.3N 73.9E; India.	5.8
	29	09	59	35	USCGS 24.2S 66.9W; Salta Prov., Argentina.	4.4
	29	11	26	52	USCGS 22.5S 175.2W; Tonga Is. Region.	5.1
X	29	13	09	51	19.3S 23.2E; Okavango Swamp, Botswana.	3.3
	29	17	00	40	USCGS 1.8N 126.4E; Molucca Passage	5.5
	29	22	16	16	USCGS 65.4N 150.1W; Alaska.	6.0
X	30	00	39	52	0.3S 29.5E; Lake Edward Area.	4.3
X	30	00	56	16	16.6S 28.6E; Kariba.	2.0
	30	04	07	21	USCGS 37.4N 73.2E; Tadzhik, S.S.R.	5.5
	30	05	26	11	USCGS 59.0S 25.6W; S. Sandwhich Is.Region.	4.7
	30	09	42	11	USCGS 31.0S 179.9W; Kermadec Is.	4.9
	30	16	51	33	USCGS 37.9N 38.6E: Turkey.	4.9
X	30	19	25	22	26.4S 27.3E; Witwatersrand.	3.3
	31	03	22	15	USCGS 36.6N 27.1E; Dodecanese Is.	5.1
	31	09	06	36	USCGS 1.2N 126.3E; Molucca Passage.	6.1
	31	09	15	47	USCGS 16.3S 73.3W; Near Coast of Peru.	5.7

LIST OF RECORDED PHASES: 01 to 02 OCT 1968 - 1

Date	Stn	Phase	h	m	s	GM	DA	Epicentral Region; Remarks.
01	CLK	P	08	19	31	i		Lower Shire Valley, Malawi.
		S		19	48	i	9.	
	CIR	Pn		20	31	e		
		Sn		21	27	e		
		Sg		21	52	e	1.0	
	BUL	Sg		22	46	i	0.9	
	BHA	L		22	51	e	0.5	
01	CLK	Pn	10	40	05	e		Lilongwe Area, Malawi.
		Sg		40	33	i	7.	
	KRR	P*		40	55	e		
				41	08	i		
		S*		41	47	e		
		Sg		42	00	e	0.7	
	BHA	Sg		42	04	i	0.8	
	CIR	Sg		43	09	e	0.4	
	BUL	Sg		43	27	e	0.2	
02	BUL	P	07	28	43	iR	0.8	Distant.
	CIR	P		28	48	iR	1.3	
	KRR	P		29	07	iR	0.7	
	BHA	P		29	18	iR	0.3	
	CLK	P		29	32	iR	0.2	
02	CIR		09	27	42	e	0.3	Distant.
	KRR			27	43	e	0.3	
	BHA			27	43	e	0.2	
	BUL			27	47	iR	0.9	
02	BHA	Pn	13	00	24	e		N. Fipa Plateau, Tanzania.
		Sn		01	51	i		
		Sg		02	36	i		
		SgSg		02	40	i	2.6	
	CLK	Pn		00	43	e		
		Sn		02	29	e		
		L		03	29	i	0.9	
	KRR	P		00	53	e		
		Sn		02	39	e		
		Sg		03	39	e		
		L		03	48	i	1.2	
	BUL	P		01	(36)	e		
				05	29	i	0.5	
	CIR	L		05	54	e	0.4	
02	BUL		13	40	11	e	0.2	Distant.
	KRR			40	16	e	0.2	
02	CIR		15	29	20	e	0.5	Distant.
	BUL			29	(27)	e	0.2	
	CLK			30	09	e	0.3	
	BHA			30	18	e	0.2	
02	BHA	Pn	18	26	10	e		W. Copperbelt, Zambia.
		Sn		26	40	i		
		Sg		26	51	i	2.4	
	KRR	Sn		27	42	e		
		Sg		28	09	e	0.5	
	CIR	Pn		27	47	e		
		Sn		29	26	e		
		L		30	34	e	0.3	
	CLK	Sn		28	52	e		
		Sg		29	38	e	0.3	
02	CIR		20	09	22	e	0.2	Distant.
	BUL			09	26	e	0.2	
	BHA			09	26	e	0.1	

LIST OF RECORDED PHASES: 02 to 05 OCT 1968 - 2

Date	Stn	Phase	h	m	s	CM	DA	Epicentral Region; Remarks.
02	BUL	Pn	22	52	35	e		Witwatersrand.
		Sn		53	42	e		
		Sg		54	12	e	0.7	
	CIR	Pn		52	35	e		
		Sg		54	12	e	0.7	
	KRR	Sg		55	52	e	0.3	
03	CLK	P	08	17	57	iR	1.6	Distant.
	CIR	P		18	09	iR	1.0	
	KRR	P		18	19	iR	1.7	
	BUL	P		18	22	iR	0.9	
	BHA	P		18	27	iR	1.8	
03	CIR	P'	11	28	07	e	0.4	Distant.
	BUL	P'		28	09	iC	1.3	
	KRR	P'		28	13	e	0.5	
		pP'		28	21	i		
	CLK	P'		28	15	e	0.3	
	BHA	P'		28	18	e	0.3	
03	CIR		12	36	49	e	0.2	Distant.
	BUL			36	54	e	0.4	
	KRR			36	58	e	0.5	
	BHA			37	04	e	0.4	
04	BUL	P	06	13	55	iR	4.7	Distant.
		S		21	26	e		
		SKS		23	42	e		
	CIR	P		14	01	e	3.6	
		PcP		14	41	i		
	BHA	P		14	28	iR	5.3	
		PcP		15	01	i		
		S		22	29	e		
		SKS		24	17	e		
	CLK	P		14	45	e	1.5	
04	CIR	P	07	04	11	e	0.3	Distant.
	KRR	P		04	22	e	0.3	
		PP		08	18	e		
	BUL	P		04	23	e	0.3	
		PP		08	22	i		
	BHA	P		04	29	e	0.3	
		PP		08	32	e		
04	BUL	Pn	14	46	07	e		Witwatersrand.
		Sg		47	50	i	0.6	
	CIR	Pn		46	11	e		
		Sg		47	55	e	0.6	
	KRR	Pn		46	54	e		
		Sg		49	30	e		
		L		49	38	e	0.4	
05	BHA	P	06	59	30	e		W. Zambia.
		Sg		59	53	i	7.	
	KRR	Sg	07	01	02	i	0.6	
	BUL	Sg		02	22	e	0.2	
05	KRR		11	13	05	e	0.2	Distant.
	BUL			13	18	e	0.2	
05	CLK	P	15	22	44	e	0.9	Distant.
	BHA	P		22	47	e	0.3	
	KRR	P		23	01	e	0.8	
	BUL	P		23	23	iR	1.0	
	CIR	P		23	23	iR	1.7	

Date	Stn	Phase	h	m	s	GM	DA	Epicentral Region; Remarks.
05	BHA		22	24	43	e		Kariba
		Sn		25	08	e		
		Sg		25	13	e	1.1	
	BUL	Pg		25	06	e		
		Sg		25	51	e	0.6	
	CIR			26	36	e	0.3	
05	BUL	Pn	23	11	(20)	e		Okavango Swamp, Botswana.
		Pg		11	34	i		
		Sg		12	32	i	1.6	
	BHA	Pn		11	43	e		
		Sn		12	39	e		
		Sg		13	20	i	0.8	
	CIR	Sn		13	25	e		
		Sg		14	08	e	0.7	
06	BUL		03	10	56	e	0.1	Distant
	BHA			11	09	iR	0.6	
06	CIR	P'	05	34	37	e	0.2	Distant
	BUL	P'		34	41	e	0.3	
	BHA	P'		34	52	iR	0.5	
06	BUL		05	42	36	iR	0.4	Distant
06	CLK	P	07	52	46	iC	0.6	Distant
		pP		53	19	e		
	CIR	P		53	16	iC	0.5	
		pP		53	48	e		
	BHA	P		53	22	iC	2.7	
		pP		53	55	i		
	BUL	P		53	30	iC	0.9	
		pP		54	03	i		
06	CIR		09	06	25	e	0.2	Distant
	BUL			06	29	e	0.3	
	BHA			06	32	e	0.4	
06	BHA		15	15	52	e	0.1	Distant
	BUL			16	31	e	0.3	
	CIR			16	40	e	0.3	
06	BUL		22	17	09	e	0.2	Distant
	CIR			17	13	e.	0.2	
07	BHA	Pn	03	48	02	e		Lake Tanganyika.
		Sn		49	26	i		
		SgSg		50	13	i	0.7	
	KRR	L		51	22	e	0.3	
	CLK	L		51	31	e	0.3	
	BUL	L		53	11	e	0.2	

LIST OF RECORDED PHASES: 07 to 08 OCT 1968 - 4

Date	Stn	Phase	h	m	s	GM	DA	Epicentral Region:	Remarks
07	CLK	P	19	34	02	iC	0.7	Distant	
		P'		37	59	iR	2.2	Japan	
		PP		38	47	i			
		SKS		43	51	i			
		PKKP		49	02	i			
		pPKKP		51	00	e			
	CIR	P		34	24	e	0.5		
		P'		38	06	e	10.2		
		pP'		40	15	i			
		PKKP		48	44	i			
		pPKKP		50	51	i			
	BHA	P		34	25	iC	0.8		
		P'		38	07	iR	5.0		
		SKS		45	28	i			
		PKKP		48	42	i			
		pPKKP		50	44	i			
		SS		54	36	i			
	BUL	P		34	33	iC	0.7		
		P'		38	09	iR	8.8		
		PP		39	41	i			
		pP'		40	18	i			
		SKS		44	19	i			
		S		46	30	e			
		PKKP		48	39	i			
		pPKKP		50	32	i			
	KRR	PKKP		48	40	i			
		pPKKP		50	37	i			
07	CLK	P'	21	07	41	e	0.2	Distant	
		PP		08	28	e		Japan	
	KRR	P'		07	46	e	0.3		
		PP		09	05	e			
		PKKP		18	24	e			
	CIR	P'		07	49	e	0.3		
	BHA	P'		07	49	e	0.3		
		pP'		08	57	i			
		PP		09	19	e			
	BUL	P'		07	52	e	0.3		
		PP		09	20				
07	BUL	P	22	51	39	e	0.4	Distant	
	CIR	P		5[illegible]	52	e	0.4		
		pP		52	01	e			
	KRR	P		52	02	e	0.3		
	BHA	P		52	11	e	0.3		
	CLK	P		52	38	e	0.2		
08	CIR		00	06	37	e	0.1	Distant	
	KRR			06	39	e	0.2		
	BUL			06	40	e	0.2		
08	KRR		01	09	17	e	0.2	Distant	
	BUL			09	22	e	0.2		
				10	39	e			
08	CIR	P	07	52	23	iR	1.8	Distant	
		pP		53	42	i			
	CLK	P		52	28	iR	2.2		
		pP		53	43	e			
	BUL	P		52	43	iR	3.2		
		pP		53	51	i			
		S		57	50	e			
	KRR	P		52	51	e	1.7		
		pP		53	56	i			
	BHA	P		53	08	iR	2.9		
		pP		54	05	i			

LIST OF RECORDED PHASES: 08 to 09 OCT 1968 - 5

Date	Stn	Phase	h	m	s	GM	DA	Epicentral Region; Remarks.
08	BHA	Pn	08	37	59			Kafue Valley, Zambia.
		Sn		38	23	i	9.	
	KRR	Pn		38	23	e		
		Pg		38	33	i		
		Sn		39	04	e		
		Sg		39	21	i	1.6	
	BUL	Pn		38	52	e		
		Sn		39	55	e		
		Sg		40	26	i	0.6	
	CIR	Pn		39	19	e		
		Sn		40	44	e		
		L		41	33	e	0.4	
	CLK	L		41	50	e	0.3	
08	BUL	P	15	06	00	i	3.4	Distant.
		pP		06	52	i		
		PP		09	21	e		
		SKS		16	10	i		
	CIR	P		06	11	e	0.6	
		pP		07	03	e		
	KRR	P		06	11	e	1.7	
		pP		07	03	i		
		PP		09	38	e		
	BHA	P		06	11	e	1.2	
		pP		07	03	i		
		SKS		16	26	i		
	CLK	P		06	35	e	0.7	
		pP		07	29	i		
		SKS		16	57	i		
09	CIR		03	58	(05)	e	0.1	Distant.
	BUL			58	10	e	0.3	
				58	25			
	BHA			58	14	e	0.3	
09	CIR		15	42	15	e	0.1	Distant.
	BUL			42	19	e	0.2	
	KRR			42	24	e	0.2	
	BHA			42	30	e	0.1	
09	CIR	P'	17	30	00	e	0.1	Distant.
	BUL	P'		30	04	e	0.2	
	KRR	P'		30	08	e	0.2	
	BHA	P'		30	08	e	0.2	
09	BUL	Pn	22	33	05	e		Witwatersrand.
		Sn		34	13	e		
		Sg		34	46	i	1.1	
	CIR	Pn		33	10	e		
		Sg		34	56	e	1.1	
	KRR	Pn		33	51	e		
		Sg		36	30	e	0.7	
	BHA	Pn		34	21	e		
		Sn		36	30	e		
		SgSg		37	44	e	0.3	
	CLK	Sg		38	01	e	0.3	
09	BUL	Pn	23	37	50	e		Witwatersrand.
		Sn		39	02	e		
		Sg		39	32	e	0.5	
	CIR	Pn		37	57	e		
		Sg		39	42	e	0.5	
	KRR	Pn		38	36	e		
		Sg		41	15	e	0.3	
	BHA	Pn		39	06	e		
		SgSg		42	28	e	0.2	

Date	Stn	Phase	h	m	s	GM	DA	Epicentral Region; Remarks.
10	CLK	P'	15	24	19	e	0.3	Distant.
	CIR	P'		24	23	iC	0.6	
		PP		25	06	e		
	BUL			24	14	iR		
		P'		24	28	iC	1.3	
	KRR			24	14	e		
		P'		24	28	eirC	0.8	
		PP		25	30	e		
	BHA			24	18	e		
		P'		24	32	iC	0.7	
		PP		26	42	e		
10	CIR		16	33	09	iR	0.2	Distant.
	KRR			33	13	e	0.2	
	BUL			33	14	e	0.2	
11	BHA		08	03	21	e	0.2	Distant.
				03	37	e		
	BUL			03	26	iC	0.3	
	KRR			03	36	e	0.3	
	CIR			03	38	e	0.3	
11	BUL	Pn	09	05	47	e		Witwatersrand.
		Sn		06	57	e		
		Sg		07	30	i	0.7	
	CIR	Pn		05	55	e		
		Sn		07	03	e		
		Sg		07	42	i	0.6	
	KRR	Pn		06	35	e		
		Sg		09	13	e	0.4	
11	BUL		14	30	45	iR	0.4	Distant.
	KRR			30	51	e	0.2	
				30	57	e		
	BHA			30	52	e	0.1	
				30	58	e		
11	CIR		17	30	28	e	0.2	Distant.
	BUL			30	31	e	0.2	
	KRR			30	37	e	0.2	
	BHA			30	42	e	0.3	
11	BHA	Pg	19	49	53	iC		Lower Muchinga Escarpment, Zambia.
		Sg		50	08	i	4.3	
	KRR	Pg		50	19	e		
		Sg		50	46	e	1.4	
	CIR	Sg		50	13	e	0.3	
	BUL	Sg		52	35	e	0.2	
	CIR	Sg		53	01	e	0.1	
12	BUL	P	05	10	27	e	0.2	Distant.
	CIR	P		10	33	e	0.1	
	KRR	P		10	50	iR	0.3	
12	BUL	Pn	06	14	26	e		Witwatersrand.
		Sn		15	32	e		
		Sg		16	02	i	2.6	
	CIR	Pn		14	30	e		
		Sn		15	37	e		
		Sg		16	06	i	2.0	
	KRR	Pn		15	12	e		
		Sn		16	52	e		
		Sg		17	45	e	0.9	
	BHA	Pn		15	44	e		
		Sn		17	48	e		
		Sg		19	00	e	0.5	
	CLK	Sg		19	13	e	0.5	

Date	Stn	Phase	h	m	s	CM	DA	Epicentral Region; Remarks.
12	BUL	Pn	13	59	21	e		Wankie Coalfields, Rhodesia.
		P*		59	24	i		
		Sg	14	00	01	i	3.5	
	KRR	Pn	13	59	31	e		
		Pg		59	38	i		
		Sn	14	00	09	i		
		Sg		00	25	i	2.3	
	CIR	Pn		00	01	e		
		Pg		00	18	e		
		Sn		00	59	e		
		Sg		01	30	i	1.2	
	BHA	Sn		00	34	e		
		Sg		00	56	e	0.7	
12	BHA	Pn	16	21	38	e		N. Lake Malawi Area.
		Sn		22	47	e		
		Sg		23	22	e	0.7	
	KRR	Sg		23	47	e	0.5	
	CIR	Sg		25	17	e	0.4	
	BUL	Sg		25	28	e	0.2	
12	CIR	P'	19	35	42	e	0.4	Distant.
		SKP		38	09	i		Fiji Is.
	BUL	P'		35	46	e	0.7	
		SKP		38	17	i		
	KRR	P'		35	51	e	1.0	
		SKP		38	24	i		
	BHA	P'		35	53	e	0.3	
		SKP		38	32	i		
	CLK	SKP		38	16	i		
12	BUL	P	21	04	33	e	0.2	Distant.
	CIR	P		04	40	e	0.3	
	KRR	P		04	57	e	0.3	
12	CLK	P	23	30	19	e	1.2	Distant.
	BHA	P		30	36	e	0.7	
	KRR	P		30	44	iR	1.6	
		PP		32	58	i		
	CIR	P		30	59	eirC	0.5	
	BUL	P		31	04	iR	1.2	
		S		39	50	e		
		SKS		40	44	e		
13	BUL	Pn	03	08	59	e		Witwatersrand.
		Sn		10	10	e		
		Sg		10	43	i	1.0	
	CIR	Pn		09	04	e		
		Sn		10	16	e		
		Sg		10	49	i	1.1	
	KRR	Pn		09	45	e		
		Sn		11	29	e		
		Sg		12	27	e	0.7	
13	CLK	Pg	04	31	15	e		Zambezia Province, Mocambique.
		Sg		31	46	i	1.5	
	CIR	Pg		31	48	e		
		Sn		32	24	e		
		Sg		32	40	e	0.4	
	KRR	Sg		33	09	i	0.4	
	BUL	Sg		33	42	i	0.3	
13	CIR	P	07	40	45	e	0.2	Distant.
	BHA	P		41	02	e	0.3	
	KRR	P		41	06	e	0.3	
	BUL	P		41	10	e	0.2	

LIST OF RECORDED PHASES: 13 to 14 OCT 1968 - 8

Date	Stn	Phase	h	m	s	GM	DA	Epicentral Region; Remarks
13	CIR	P	08	23	57	e	0.3	Distant
	BUL	P		24	01	iC	0.6	
	KRR	P		24	06	e	0.8	
	BHA	P		24	11	e	0.4	
13	BUL		12	17	06	e	0.3	Distant
				17	40	i		
	CIR			17	16	e	0.2	
	KRR			17	20	e	0.2	
				17	50	e		
	BHA			17	22	e	0.2	
				17	52	e		
13	CIR	Pn	16	40	11	e		Off Central Mocambique Coast
		P*		40	18	i		
		Pg		40	22	i		
		Sn		40	50	i		
		S*		41	00	i		
		Sg		41	07	i	3.5	
	BUL	P*		41	00	e		
		Sn		41	59	e		
		Sg		42	31	i	0.7	
	KRR	P*		41	05	e		
		Sn		42	15	e		
		Sg		42	49	e	0.8	
	CLK	Sg		41	44	e	0.4	
	BHA	L		44	08	e	0.3	
14	BUL	P	00	57	21	e	0.2	Distant
	CIR	P		57	26	e	0.2	
	KRR	P		58	07	e	0.2	
14	CLK	P	03	10	35	eicR	3.2	Distant
		pP		10	40	iC		W. Australia
		S		20	23	e		
	CIR	P		10	35	eicR	8.5	
		pP		10	40	iC		
	BUL	P		10	53	iC	6.6	
		pP		10	58	iC		
		S		20	54	e		
		SKS		21	15	i		
	KRR	P		10	57	eicR	11.5	
		pP		11	02	iC		
		S		21	06	e		
14	CLK	P	05	33	34	e	0.4	Distant
	CIR	P		33	59	e	0.5	
		pP		34	06	i		
	KRR	P		34	00	e	0.7	
		pP		34	07	i		
	BHA	P		34	03	iC	2.1	
		pP		34	10	i		
	BUL	P		34	13	e	1.2	
		pP		34	20	i		
14	BUL		06	10	42	e	0.2	Distant
	KRR			10	43	e	0.3	
14	CIR		07	46	17	e	0.2	Distant
	KRR			46	20	e	0.2	
	BUL			46	21	e	0.2	
14	KRR		09	30	(07)	e	0.2	Distant
	BUL			30	14	e	0.2	

Date	Stn	Phase	h	m	s	GM	DA	Epicentral Region; Remarks
14	CIR	Pn	13	43	48	e		Witwatersrand
		Sn		44	55	e		
		Sg		45	24	i	2.8	
	BUL	Pn		43	49	e		
		Sn		44	57	e		
		S*		45	10	e		
		Sg		45	28	i	2.7	
	KRR	Pn		44	36	e		
		Sn		46	17	e		
		Sg		47	09	e	1.3	
14	BUL	Pn	16	14	59	iC		W. Witwatersrand
		Sn		16	09	i		
		S*		16	24	i		
		Sg		16	40	i	5.0	
	CIR	Pn		15	03	e		
		Sn		16	12	e		
		Sg		16	46	i	4.7	
	KRR	Pn		15	44	e		
		Sn		17	27	e		
		SgSg		18	24	i	2.3	
	CLK	Pn		16	26	e		
		Sn		18	43	i		
		Sg		19	51	e	0.8	
15	CLK	P	02	07	52	iC	0.4	Distant
	CIR	P		08	08	e	0.3	
	KRR	P		08	14	e	0.2	
	BUL	P		08	21	iR	0.5	
15	CLK	P	02	21	46	e	0.3	Distant
	CIR	P		21	38	iC	0.5	
	KRR	P		21	48	iC	1.0	
	BUL	P		21	56	iC	1.4	
15	CLK	P	03	06	14	e	0.2	Distant
	BUL	P		06	42	e	0.2	
15	BUL		17	49	08	e	0.1	Distant
	KRR			49	15	e	0.2	
	BHA			49	20	e	0.1	
15	CLK	P	17	58	10	e	0.3	Distant
	CIR	P		58	39	iC	0.5	
	KRR	P		58	43	e	0.6	
	BHA	P		58	47	iC	2.5	
	BUL	P		58	53	iC	0.6	
15	CLK	P	20	22	05	e	0.1	Distant
	CIR	P		22	36	e	0.2	
	KRR	P		22	42	e	0.2	
	BHA	P		22	46	e	0.1	
	BUL	P		22	47	e	0.2	
16	CIR	Pn	04	20	33	e		E. Drakensberg
		Sg		22	57	e	0.3	
	BUL	Pn		20	42	e		
		Sn		22	24	e		
		Sg		23	14	e	0.2	
	KRR	L		25	05	e	0.2	

Date	Stn	Phase	h m s	GM	DA	Epicentral Region; Remarks
16	BHA	P	17 41 06	i		Busango Swamp Area, Zambia
	KRR	Pn	41 34	iR		
		P*	41 40	i		
		Sg	42 36	i	20.	
	BUL	Pn	42 05	e		
		Sn	43 14	i		
		Sg	43 48	i	5.5	
	CLK	Pn	42 31	e		
		Sn	43 55	e		
		Sg	44 46	i	4.6	
	CIR	Pn	42 33	e		
		Sn	43 59	e	3.0	
16	BUL	Pn	19 10 38	e		Witwatersrand
		Sn	11 47	e		
		S*	12 02	i		
		Sg	12 19	i	0.8	
	CIR	Pn	10 42	e		
		Sn	11 55	e		
		Sg	12 26	e	0.8	
	KRR	Pn	11 24	e		
		Sg	14 05	e	0.3	
16	BUL		19 56 32	e	0.2	Distant
	CIR		56(49)	e	0.2	
16	BUL	P	23 15 06	e	0.2	Distant
	CIR	P	15 12	e	0.2	
	KRR	P	15 30	e	0.2	
	BHA	P	15 41	e	0.2	
17	CIR		07 11 58	e	0.2	Distant
	KRR		12 00	e	0.2	
	BHA		12 03	e	0.2	
	BUL		12 04	e	0.2	
17	BHA	Pn	08 13 44	e		S. Lake Tanganyika
		Sn	14 48	e		
		L	15 25	e	0.7	
	KRR	Sn	15 41	e		
		L	16 35	e	0.3	
17	BUL	Pn	14 34 18	e		Witwatersrand
		Sn	35 29	e		
		Sg	36 01	i	0.9	
	CIR	Pn	34 22	e		
		Sn	35 34	e		
		Sg	36 06	e	0.8	
	KRR	Pn	35 05	e		
		Sg	37 47	e	0.4	
17	BHA	Pn	22 16 21	e		Mbeya Area, S. Tanzania
		Sn	17 40	e		
		Sg	18 17	i	2.0	
	CLK	Sn	17 33	e		
		Sg	18 09	e	0.6	
	KRR	Sn	18 14	e		
		Sg	19 05	e	0.3	
18	CLK	P	00 05 39	e	0.3	Distant
	KRR	P	05 40	e	0.4	
	BUL	P	06 02	e	0.3	
	CIR	P	06 11	e	0.3	
18	BUL	P	02 56 22	iC	0.4	Distant
	KRR	P	56 36	e	0.3	
	CIR	P	56 44	e	0.2	

LIST OF RECORDED PHASES: 18 to 19 OCT 1968 - 11

Date	Stn	Phase	h	m	s	GM	DA	Epicentral Region; Remarks
18	CIR		03	05	48	e	0.2	Distant
	KRR			05	49	e	0.2	
	BUL			05	52	e	0.2	
18	BUL	P	15	58	05	e	0.4	Distant
	CIR	P		58	14	e	0.4	
	KRR	P		58	30	e	0.2	
	BHA	P		58	33	e	0.2	
18	KRR		16	08	10	e	0.2	Distant
	BUL			08	23	e	0.1	
18	CIR		19	04	33	e	0.2	Distant
	KRR			04	37	e	0.2	
	BUL			04	50	e	0.2	
18	CLK	Pn	21	12	52	i	1.2	Offshore S. Tanzania
		Sn		14	24	e		
		T		14	36	i		
		L		15	25	e	1.3	
	BHA	P		13	55	e	0.4	
		S		16	11	e	0.6	
	KRR	P		13	56	e	0.9	
		S		16	15	e		
		L		17	47	e	0.4	
	CIR	P		14	13	e	0.3	
	BUL	P		14	31	e	0.3	
		L		19	15	e	0.2	
19	KRR		00	33	34	e	0.2	Distant
	BUL			33	40	e	0.2	
19	BHA	Pn	02	18	47	e		N. Fipa Plateau, Tanzania
		Sn		20	08	i		
		Sg		20	51	i	4.7	
	CLK	Pn		19	10	e		
		Sn		20	51	e		
		Sg		21	46	e		
		SgSg		21	51	i	2.6	
	KRR	Pn		19	16	e		
		Sn		21	01	e		
		Sg		21	59	i	1.3	
	BUL	Pn		20	03	e		
		Sn		22	18	e		
		SgSg		23	45	i	0.6	
	CIR	Pn		20	08	e		
		Sg		23	53	e	0.5	
19	CLK	P	02	44	(06)	e	0.2	Distant
	KRR	P		44	21	e	0.3	
	BUL	P		44	40	e	0.3	
19	CLK	P	07	12	02	e	0.3	Distant
		pP		12	07	i		
	KRR	P		12	26	e	0.7	
		pP		12	51	i		
	CIR	P		12	40	e	0.2	
		pP		12	45	e		
	BUL	P		12	46	e	0.5	
		pP		12	51	i		

LIST OF RECORDED PHASES: 19 to 20 OCT 1968 - 12

Date	Stn	Phase	h	m	s	GM	DA	Epicentral Region; Remarks
19	CLK	P	10	02	33	e	0.3	Distant
		pP		02	37	i		
	KRR	P		02	57	e	0.6	
		pP		03	01	i		
	CIR	P		03	12	e	0.2	
		pP		03	16	e		
	BUL	P		03	18	e	0.7	
		pP		03	22	i		
19	CLK	Pn	12	39	33	e		N. Lake Malawi
		Sn		40	27	e		
		Sg		40	53	i	3.2	
	BHA	Pn		40	00	e		
		Sn		41	13	i		
		Sg		41	48	i	3.7	
	KRR	Pn		40	(09)	e		
		Sn		41	30	e		
		Sg		42	09	e	1.5	
	CIR	Pn		40	48	e		
		Sg		43	41	e	0.8	
	BUL	Pn		40	(53)	e		
		Sg		43	48	e	0.8	
19	BUL	Pn	12	51	18	e		Witwatersrand
		Sg		53	00	e	0.7	
	CIR	Pn		51	22	e		
		Sg		53	08	e	0.5	
	KRR	Pn		52	04	e		
		Sg		54	43	e	0.3	
19	BUL	Pn	14	41	38	e		Witwatersrand
		Sn		42	48	e		
		Sg		43	20	e	0.5	
	CIR	Pn		41	42	e		
		Sn		42	52	e		
		Sg		43	27	e	0.6	
	KRR	Pn		42	24	e		
		Sn		44	08	e		
		Sg		45	02	e		
		L		45	12	e	0.4	
19	KRR	P	15	44	07	e	0.7	Distant
	BUL	P		44	29	e	0.3	
	CIR	P		44	39	e	0.2	
19	CIR	P'	17	48	05	e	0.2	Distant
	KRR	P'		48	07	e	0.2	
	BUL	P'		48	08	e	0.4	
	BHA	P'		48	16	e	0.2	
		PP		48	40	e		
19	BUL	P	21	41	10	iC	0.6	Distant
	CIR	P		41	16	iC	0.6	
	KRR	P		41	34	iC	1.0	
20	BUL	P	01	36	28	iC	0.3	Distant
	CIR	P		36	34	e	0.3	
	KRR	P		36	52	iC	0.5	
20	KRR	Pg	11	10	46	iC		Luangwa - Zambesi Confluence,
		Sg		11	07	i	2.6	Zambia
	CIR	P*		11	45	e		
		Sn		12	40	e		
		Sg		13	11	i	0.8	
	BUL	Sn		12	25	e		
		Sg		12	55	e	0.4	

Date	Stn	Phase	h	m	s	GM	DA	Epicentral Region; Remarks
20	CLK	Pg	12	32	51	e		Zambezia Province, Mocambique
		Sg		33	09	i	5.0	
	KRR	Sg		35	30	e	0.2	
	CIR	Sg		35	32	e	0.2	
	BUL	Sg		36	25	e	0.2	
20	BUL	Pn	12	47	31	e		Klerksdorp Area, Transvaal
		Sn		48	45	e		
		Sg		49	23	i	1.4	
	CIR	Pn		47	36	e		
		Sn		48	57	e		
		Sg		49	38	i	1.7	
	KRR	Pn		48	17	e		
		Sn		50	07	e		
		Sg		51	06	e	0.9	
	CLK	Sg		52	42	e	0.3	
20	CLK	Pn	13	23	52	e		E. Fipa Plateau, Tanzania
		Sn		25	20	i		
		Sg		26	09	i	2.4	
	KRR	Pn		24	03	e		
		Sn		25	37	i		
		Sg		26	31	e	2.8	
	BUL	Pn		24	46	e		
		Sn		26	56	e		
		SgSg		28	17	e	1.0	
	CIR	Pn		24	53	e		
		Sn		27	09	e		
		SgSg		28	30	e	0.8	
20	BUL	P	13	46	57	iC	0.5	Distant
	CIR	P		47	05	iC	0.7	
	KRR	P		47	21	iC	0.4	
20	BUL	P	17	11	46	e	0.9	Distant
	CIR	P		12	03	e	0.4	
	KRR	P		12	08	e	0.6	
	CLK	P		12	45	e	0.3	
20	BUL	Pn	21	11	52	e		O.F.S. Goldfields
		Sg		14	05	e	0.9	
	CIR	Pn		11	56	e		
		Sn		13	23	e		
		Sg		14	16	i	1.0	
	KRR	Pn		12	37	e		
		Sn		14	39	i		
		SgSg		15	53	e	0.5	
20	CLK	P	23	25	10	iC	0.4	Distant
	KRR	P		25	15	iC	0.5	
	BUL	P		25	36	e	0.3	
	CIR	P		25	43	iC	0.9	
21	CLK		01	25	55	e	0.2	Distant
	BUL			26	22	e	0.2	
21	BUL	P	08	04	06	iC	0.4	Distant
	CIR	P		04	12	iC	0.5	
	KRR	P		04	30	iC	0.9	
21	CLK	P	18	25	53	e	0.3	Distant
	KRR	P		25	55	e	0.8	
	BUL	P		26	18	e	0.3	
	CIR	P		26	28	e	0.2	
	BHA	P		26	52	e	0.1	

LIST OF RECORDED PHASES: 21 to 23 OCT 1968 - 14

Date	Stn	Phase	h	m	s	GM	DA	Epicentral Region; Remarks
21	CLK	P	23	26	04	e	0.2	Distant.
	CIR	P		26	18	e	0.2	
	KRR	P		26	28	e	0.1	
	BUL	P		26	30	e	0.3	
	BHA	P		26	35	e	0.1	
		PP		30	15	e		
22	KRR	Pg	04	47	14	iC		Kariba.
		Sg		47	28	i	25.	
	BHA	P		47	31	i		
	BUL	Pn		47	48	e		
		Pg		47	59	i		
		Sn		48	28	i		
		Sg		48	43	i	11.	
	CIR	Pn		48	11	e		
		Sn		48	07	i		
		S*		49	19	i		
		Sg		49	32	i	6.0	
	CLK	Pn		48	29	e		
		Sn		49	36	i		
		Sg		50	11	i	2.8	
22	BHA	P'	07	00	45	e	0.3	Distant.
		pP'		01	03	i		
	BUL	P'		00	45	e	0.2	
		pP'		01	03	i		
	KRR	P'		00	47	e	0.5	
		pP'		01	05	i		
	CIR	P'		00	51	e	0.2	
		pP'		01	09	e		
	CLK	P'		00	58	e	0.2	
		pP'		01	16	e		
23	CIR	P	02	06	30	e	0.2	Distant.
	BUL	P		06	40	e	0.4	
	CLK	P		06	(45)	e	0.2	
	KRR	P		06	53	e	0.4	
	BHA	P		07	(04)	e	0.2	
23	CIR	Pn	07	45	16	e		E. Witwatersrand.
		Sg		46	50	i	0.7	
	BUL	Pn		45	16			
		Sg		46	53	i	0.6	
	KRR	Pn		46	01	e		
		SgSg		48	35	e	0.4	
23	CLK	P	13	37	33	e	0.4	Distant.
	CIR	P		37	54	e	0.4	
		pP		38	07	e		
	KRR	P		38	06	e	0.4	
		pP		38	19	e		
	BUL	P		38	09	iC	0.8	
		pP		38	22	e		
	BHA	P		38	13	e	0.2	

LIST OF RECORDED PHASES: 23 to 24 OCT 1968 - 15

Date	Stn	Phase	h	m	s	GM	DA	Epicentral Region; Remarks
23	CLK	P	21	19	04	e	0.2	Distant
		P'		23	17	e	0.2	
		PP		23	28	e		
		PKKP		34	50	e		
	CIR	P		19	13	e	0.3	
		P'		23	21	e	0.4	
		PP		23	52	e		
		PKKP		34	38	i		
	KRR	P		19	24	e	0.3	
		P'		23	24	iC	0.5	
		PP		24	03	e		
		PKKP		34	28	e		
	BUL	P		19	27	e	0.5	
		P'		23	24	iC	0.7	
		PP		24	05	i		
		S		31	11	e		
		PKKP		34	24	e		
	BHA	P		19	32	e	0.2	
		P'		23	28	e	0.3	
		PP		24	13	e		
		S		31	23	e		
		PKKP		34	12			
23	CIR	P'	21	32	02	iC	0.9	Distant
	BUL	P'		32	06	iC	2.3	
	CLK	P'		32	08	e	0.3	
	KRR	P'		32	11	iC	2.5	
	BHA	P'		32	17	iC	1.7	
24	CIR		00	55	47	e	0.3	Distant
	KRR			55	53	e	0.2	
	BUL			55	59	e	0.3	
	BHA			56	00	e	0.2	
24	BUL		01	42	33	e	0.6	Distant
				42	42	i		
				43	02	e		
				43	13	e		
	CIR			42	44	e	0.3	
				43	13	e		
	KRR			42	44	e	0.2	
24	CIR	P	05	13	12	iC	4.0	Distant
		S		18	49	e		
	BUL	P		13	23	iC	4.0	
				13	45	i		
		S		19	09	i		
	KRR	P		13	(52)	e	2.8	
	CLK	P		13	59	e	1.3	
		S		20	15	e		
	BHA	P		14	14	e	2.7	
24	CIR		14	11	56	e	0.2	Distant
	KRR			12	03	e	0.3	
	BUL			12	07	iR	0.4	
	BHA			12	09	iR	0.3	
24	CIR		16	04	45	iC	0.9	Distant
	KRR			04	51	iC	0.9	
	BHA			04	56	iC	0.5	
	BUL			04	56	iC	1.2	

LIST OF RECORDED PHASES: 24 to 26 OCT 1968 - 16

Date	Stn	Phase	h	m	s	GM	DA	Epicentral Region; Remarks
24	BUL	Pn	17	17	59	e		Witwatersrand
		Sg		19	42	e	0.9	
	CIR	Pn		18	04	e		
		Sg		19	48	e	0.7	
	KRR	Pn		18	45	e		
		Sg		21	22	e		
		L		21	30	i	0.6	
24	BUL	P	17	47	08	iC	2.2	Distant
				47	24	i		
				47	32	i		
	CIR	P		47	19	iC	0.7	
				47	36	e		
	KRR	P		47	22	iC	1.0	
				47	39	e		
				47	47	e		
	BHA	P		47	24	e	0.7	
				47	48	i		
	CLK	P		47	46	e	0.3	
24	CLK	P'	22	54	43	iC	0.8	Distant
	BHA	P'		54	50	iC	1.2	
	KRR	P'		54	50	iC	1.5	
	CIR	P'		54	55	iC	0.6	
	BUL	P'		54	56	e	0.4	
25	BUL	P	02	31	52	e	0.3	Distant
	CIR	P		31	57	e	0.3	
	KRR	P		32	15	iC	0.7	
	BHA	P		32	28	iC	0.3	
25	CLK	P	10	39	48	iR	0.8	Distant
	CIR	P		40	18	iR	1.2	
		pP		40	36	e		
	KRR	P		40	23	iR	2.0	
				40	35	e		
		pP		40	42	e		
	BUL	P		40	33	eirC	1.3	
		pP		40	51	i		
25	CIR		16	08	30	iR	0,4	Distant
	KRR			08	36	e	0.3	
	BHA			08	41	e	0.2	
	BUL			08	42	e	0.3	
25	BUL	Pn	17	30	15	iC		Vierfontein Area, O.F.S.
		Sn		31	30	e		
		Sg		32	07	i	3.4	
	CIR	Pn		30	21	e		
		Sn		31	42	i		
		Sg		32	20	i	2.8	
	KRR	Pn		31	02	e		
		Sn		32	51	e		
		Sg		33	52	i	2.2	
	BHA	Pn		31	31	e		
		Sn		33	44	e		
		SgSg		35	02	e	0.7	
	CLK	Sg		35	25	e	0.9	
26	CLK	P	10	09	58	e	0.2	Distant
	CIR	P		10	12	e	0.2	
	KRR	P		10	26	e	0.3	
	BUL	P		10	29	iR	0.4	

Date	Stn	Phase	h m s	GM	DA	Epicentral Region; Remarks
26	BUL		10 33 40	e	0.3	Distant
	CIR		33 45	e	0.3	
	KRR		34 03	e	0.3	
26	BHA		19 36 18	e	0.1	Distant
	KRR		36 21	e	0.2	
	BUL		36 24	iC	0.5	
	CIR		36(30)	e	0.2	
27	BUL	Pn	11 43 08	e		Witwatersrand
		Sg	44 45	e	0.7	
	CIR	Pn	43 13	e		
		Sg	44 50	i	0.9	
	KRR	Pn	43 55	e		
		Sn	45 35	e		
		Sg	46 27	e	0.4	
27	CIR		13 55 31	e	0.2	Distant
	BUL		55 43	e	0.2	
28	BUL	P	03 05 54	iR	0.7	Distant
	CIR	P	06 05	e	0.4	
	KRR	P	06 06	iR	0.8	
	BHA	P	06 07	iR	0.5	
	CLK	P	06 29	e	0.2	
28	KRR		11 30(47)	e	0.4	Distant
	BUL		30 48	e	0.6	
	CIR		30 48	e	0.4	
28	BHA		14 59 19	e	0.1	Distant
	KRR		59 21	iR	0.3	
	CIR		59 21	iR	0.3	
	BUL		59 25	iR	0.5	
28	CLK	P'	23 51 23	iC	0.7	Distant
		pP'	51 39	e		
	CIR	P'	51 23	e	1.0	
		PP	53 08	e		
	BUL	P'	51 28	e	3.1	
		PP	53 43	i		
		PKS	54 50	e		
	KRR	P'	51 31	e	1.4	
		PP	53 56	e		
	BHA	P'	51 36	e	0.8	
		SKP	54 55	e		
29	KRR		04 24 50	e	0.3	Distant
	BUL		24 54	iR	0.4	
29	CIR	P'	07 39 26	e	0.2	Distant
		PP	41 49	e		Fiji Is.
		SKP	42 02	i		
	BUL	P'	39 31	e	0.2	
		SKP	42 09	i		
	KRR	P'	39 33	e	0.2	
		SKP	42 16	i		
	BHA	SKP	42 23	i		
29	BHA	P	10 09 36	e	0.2	Distant
	KRR	P	09 38	e	0.2	
	CIR	P	09 46	e	0.3	
	BUL	P	09 57	e	0.3	
29	BUL		10 12 00	iC	0.3	Distant
	CIR		12 12	e	0.1	
	KRR		12 13	e	0.6	
	BHA		12 14	e	0.3	

Date	Stn	Phase	h	m	s	GM	DA	Epicentral Region; Remarks
29	BUL		10	12	00	iC	0.3	Distant
	CIR			12	12	e	0.1	
	KRR			12	13	e	0.6	
	BHA			12	14	e	0.3	
29	BUL		11	46	02	e	0.2	Distant
	KRR			46	06	e	0.2	
29	BUL	Pn	13	11	06	e		Okavango Swamp, Botswana
		P		11	24	i		
		Sn		12	00	e		
		Sg		12	26	i	1.8	
	KRR	P*		11	36	e		
		Sn		12	36	e		
		Sg		13	11	e	0.9	
	CIR	Pn		11	45	e		
		Sn		13	06	e		
		Sg		13	52	e	0.9	
29	CIR		17	14	02	e	0.3	Distant
	KRR			14	10	e	0.3	
	BUL			14	15	iR	0.4	
	BHA			14	16	iR	0.3	
29	BHA	P	22	35	28	e	0.6	Distant
		PP		37	36	e		
	KRR	P		35	31	e	0.7	
		PP		37	40	e		
	BUL	P		35	37	e	0.6	
		PP		38	08	e		
		PKS		39	12	e		
	CIR	P		35	39	e	0.4	
		PP		38	13	e		
30	BHA	P	00	43	18	e	0.3	Lake Victoria
		SgSg		47	23	e	1.6	
	KRR	P		43	42	e	0.2	
		L		48	31	e	1.1	
	BUL	P		44	20	e	0.2	
		L		50	13	e	0.7	
	CIR	P		44	27	e	0.2	
		L		50	38	e	0.5	
30	KRR	Pg	00	56	35	e		Kariba
				56	38	i		
		Sg		56	48	i	2.5	
	BHA	Pg		56	57	e		
		Sg		57	23	e	1.0	
	BUL	Pg		57	21	e		
		Sg		58	05	i	0.5	
	CIR	Sg		58	52	e	0.2	
30	KRR		04	18	17	e	0.3	Distant
	CIR			18	32	e	0.2	
	BUL			18	36	e	0.3	
30	BUL	P	05	35	37	e	0.3	Distant
				35	56	e		
	CIR	P		35	43	e	0.3	
				35	58	e		
	KRR	P		36	02	e	0.4	
	BHA	P		36	(13)	e	0.1	
30	CIR	P	10	00	22	eirC	0.3	Distant
	BUL	P		00	27	eirC	1.1	
	KRR	P		00	32	eirC	1.3	
				02	01	e		
	BHA	P		00	37	e	0.5	
		PP		03	18	e		

Date	Stn	Phase	h	m	s	GM	DA	Epicentral Region; Remarks
30	BUL	P	11	51	41	iR	0.3	Distant
		pP		52	22	e		
	BHA	P		51	49	e	0.2	
	KRR	P		52	07	e	0.6	
	CIR	P		52	36	e	0.2	
30	CLK	P	17	00	58	e	0.5	Distant
	BHA	P		00	58	e	0.3	
	KRR	P		01	11	e	0.5	
	BUL	P		01	35	e	0.6	
	CIR	P		01	38	e		
30	BUL	Pn	19	26	55	e		Witwatersrand
		Sn		28	04	e		
		Sg		28	36	e	1.2	
	CIR	Pn		26	58	e		
		Sn		28	09	e		
		Sg		28	42	e	0.8	
	KRR	Pn		27	41	e		
		Sn		29	21	e		
		Sg		30	18	e	0.6	
31	BHA	P	03	31	18	iR	0.4	Distant
	CLK	P		31	31	iR	1.2	
	KRR	P		31	35	iR	0.8	
	BUL	P		32	00	iR	0.9	
	CIR	P		32	08	eicR	1.8	
31	CLK	P	09	19	43	iC	0.7	Distant
				22	29	e		
		S		30	43	i		
		PKKP		37	05	e		
	CIR	P		19	57	iC	0.9	
		PP		23	43	i		
		PKKP		36	53	e		
	KRR	P		20	05	iC	2.3	
		PP		23	58	e		
		S		31	17	e		
		PKKP		36	49	e		
	BUL	P		20	10	iC	2.4	
		pP		20	19	i		
		PP		21	03	e		
		PKKP		36	45	e		
	BHA	P		20	12	iC	1.3	
		SKS		30	48	e		
		PKKP		36	27	e		
31	BUL		09	29	06	e	1.4	Distant
	BHA			29	15	e	0.4	
	KRR			29	16	e	0.2	
	CIR			29	18	e	0.3	

RHODESIA METEOROLOGICAL SERVICES

SEISMOLOGICAL BULLETIN

The following stations contribute records for analysis and publication in this Bulletin:

KABWE (BHA): (Broken Hill)	14° 26.8' S; 28° 28.1' E; Alt. 1206 m.
Litho. foundation:	Dolomite and shales of the Middle Katanga System.
Authority:	Zambia Meteorological Service.
Instrument:	Three-component Willmore one-second seismograph. Nominal magnification 20,000.
CHILEKA (CLK):	15° 40.8' S; 34° 58.6' E; Alt. 781 m.
Litho. foundation:	Charnockitic granulites of the Basement Complex.
Authority:	Malawi Meteorological Service.
Instrument:	Three-component Willmore one-second seismograph. Nominal magnification 20,000.
KAPOI (KRR):	16° 51.1' S; 29° 37.1' E; Alt. 1380 m.
Litho. foundation:	Granitic gneisses of the Zambesi type.
Authority:	Rhodesia Meteorological Service.
Instrument:	Vertical Willmore one-second seismograph. Nominal magnification 20 000.
BULAWAYO (BUL):	20° 08.6' S; 28° 36.8' E; Alt. 1341 m.
Litho. foundation:	Hornblend schists of the Bulawayan System.
Authority:	Rhodesia Meteorological Service.
Instruments:	Three-component Willmore one-second seismograph. Nominal magnification 20,000.
	WWSS Station: SP magnification 100,000 LP magnification 1,500
CHIREDZI (CIR):	21° 00.8' S; 31° 34.8' E; Alt. 430 m.
Litho. foundation:	Gneisses or Charnockites of the Limpopo belt.
Authority:	Rhodesia Meteorological Service.
Instrument:	Vertical Willmore one-second seismograph. Nominal magnification 20,000.

Analysis Centre: Goetz Observatory, Meteorological Service, P. O. Box 562, Bulawayo, Rhodesia.

CRITERIA FOR PUBLICATION

To qualify for publication an earthquake must be of magnitude 2 or more. Also, in the case of local earthquakes (nearer than approx. 30°), at least one station must record a clear P phase. In the case of distant earthquakes, at least two stations must record clear P or P' phases.

DISTANCES

Distances of local earthquakes are determined by means of travel-time curves developed at this Centre. For distant earthquakes, the standard Jeffreys-Bullen tables are used.

Where given, distances are in degrees (1° = 111.11 Km).

GLOSSARY

The following terms are used in the List and Bulletin:

h m s	Hours, minutes and seconds of GMT (UT). In the List of Phases, times of arrival of the phases at each station are given. In the Bulletin, the time of occurence of the earthquake is given.
GM	Character and direction of the first ground motion of P or P'.
e	Emersio: the phase emerges gradually from the background.
i	Impetus: the phase is impulsive and clearly defined.
ei	The phase shows an emergent beginning, followed by a sharp increase in amplitude.
R	The first motion is downwards, or towards the epicentre; the motion is rarefactional. A lower case r indicates a weakly rarefactional first motion.
C	The first motion is upwards, or away from the epicentre; the motion is compressional. A lower case c indicates a weakly compressional first motion.
DA	The double-amplitude (peak-to-peak) of the record in millimetres. The double-amplitude is written on the same line as the phase to which it refers; usually P or P' in distant earthquakes, and the S-L complex (the "maximum amplitude") in local earthquakes. In some cases a double-amplitude is given for more than one phase.
Distant	The epicentre is more than about 30° from the approximate centre of the local station network (17S 30E).
Mag	Magnitude. Locally determined magnitudes are based on the double-amplitude of the S-L complex, after Richter (1935). However, the station constants have been adjusted to make the local magnitudes agree as closely as possible with magnitudes published by USCGS. The local magnitudes can therefore be taken as corresponding to m_b of Gutenberg and Richter (1956).
MM	Intensity on the Modified Mercalli Scale.
USCGS	United States Coast and Geodetic Survey. Under "Epicentre", this indicates that the epicentral and magnitude data are taken from the USCGS determinations.
?	Indicates an uncertain statement.
( )	The estimated uncertainty in the bracketted quantity is between 3 and 10 units of the last digit quoted. E.g., a latitude given as (16.4S) is thought to be uncertain by between 0.3 and 1.0 degree: i.e. certainly between 15.4S and 17.4S, and probably between 16.1S and 16.7S.

SEISMOLOGICAL BULLETIN: NOV 1968

Dy	Stn	Phase	h	m	s	GM	DA	Epicentral data; Remarks	Mag
01	BHA	P	00	29	46	e	0.1	CGS 00 21 43 0.9S 13.4W	5.1
	KRR	P		29	59	iC	0.4	N. of Ascension Is.	
	BUL	P		30	00	iC	0.3		
	CIR	P		30	22	iC	0.3		
01	CLK	P	13	31	36	e	0.3	CGS 13 18 47 5.5S 124.8E	5.6
	CIR	P		31	49	iC	0.3	Banda Sea.	
	KRR	P		31	59	iC	0.3		
	BUL	P		32	02	iC	0.5		
	BHA	P		32	06	iC	0.5		
01	BUL		20	21	15	e	0.2	Distant.	
				21	32	e			
	KRR			21	20	e	0.2		
				21	37	e			
	BHA			21	26	e	0.1		
				21	43	e			
01	BUL	Pn	22	34	52	e		BUL 22 32 53 28.1S 26.5E	3.3
		Sn		36	18	e		O.F.S. Goldfields.	
		Sg		37	06	e	0.5		
	CIR	Pn		34	56	e			
		Sn		36	22	e			
		Sg		37	13	e	0.4		
	KRR	Pn		35	37	e			
		Sn		37	37	e			
		SgSg		38	51	e	0.4		
02	BHA	Pn	04	48	53	e		BUL 04 46 52 6.1S 29.7E	3.9
		Sn		50	21	i		Central Lake Tanganyika.	
		Sg		51	09	i	2.5		
	KRR	Pn		49	24	e			
		Sn		51	17	e			
		L		52	27	i	1.0		
	CLK	Pn		49	26	e			
		Sn		51	24	e			
		L		52	37	e	0.9		
	BUL	Pn		50	07	e			
		Sn		52	33	e			
		L		54	11	e	0.4		
	CIR	Pn		50	21	e			
		L		54	36	e	0.4		
02	CLK	P	23	18	02	iC	0.5	CGS 23 05 11 5 4S 124.9E	5.2
	CIR	P		18	12	e	0.2	Banda Sea.	
	KRR	P		18	22	iC	0.4		
	BUL	P		18	25	e	0.2		
	BHA	P		18	29	e	0.2		
02	CLK	Pg	23	47	59	iC		BUL 23 47 45 15.3S 34.6E	2.9
		Sg		48	05	i	15.	Kirk Range, Malawi.	
	KRR	Pn		49	00	e			
		P*		49	10	e			
		Pg		49	18	e			
		Sn		49	55	e			
		Sg		50	21	i	0.7		
	BHA	Sg		50	49	e	0.6		
	CIR	Sg		50	57	e	0.6		
	BUL	Sg		51	33	e	0.4		
03	CIR	P'	03	29	49	e	0.2	CGS 03 11 10 7.0S 155.6E	5.2
	BUL	P'		29	54	e	0.6	Solomon Is.	
	KRR	P'		29	55	e	0.2		
	BHA	P'		30	00	e	0.1		

Dy	Stn	Phase	h	m	s	GM	DA	Epicentral data; Remarks	Mag
03	BHA	P	04	59	18	e	0.3	CGS 04 49 32 42.1N 19.4E	5.0
	KRR	P		59	35	e	1.7	Yugoslavia.	
		pP		59	43	i			
	CLK	P		59	35	e	1.5		
		pP		59	44	e			
	BUL	P		59	55	e	1.2		
		pP	05	00	04	i			
	CIR	P		00	05	e	1.0		
		pP		00	14	e			
03	CLK	P	08	10	54	e	0.3	CGS 08 04 16 6.8N 60.1E	5.2
	BHA	P		11	31	e	0.2	Carlsberg Ridge.	
	KRR	P		11	33	iC	0.3		
	CIR	P		11	44	iC	0.2		
	BUL	P		11	56	e	0.6		
03	CLK	P	08	30	38	e	0.2	CGS 08 24 03 6.8N 60.3E	5.2
	KRR	P		31	18	e	0.2	Carlsberg Ridge.	
	CIR	P		31	(30)	e	0.2		
	BUL	P		31	44	e	0.3		
03	KRR	P	18	49	35	e	0.3	CGS 18 39 59 30.8N 29.2E	5.0
	BUL	P		49	58	e	0.1	Turkey.	
	CIR	P		50	05	e	0.3		
04	CLK	Pn	01	33	22	e		BUL 01 31 16 7.4S 37.9E	3.9
		Sn		34	55	e		Uluguru Escarpment, Tanzania.	
		Sg		35	45	e	1.6		
	KRR	Pn		34	13	e			
		Sg		37	36	i	0.5		
	CIR	Pn		34	47	e			
		Sg		38	57	e	0.4		
	BUL	Pn		34	51	e			
		L		39	22	e	0.4		
	BHA	Sg		37	14	e	1.4		
04	CLK	Pn	03	03	21	e		BUL 03 01 17 7.4S 37.7E	4.3
		Sn		04	52	e		Uluguru Escarpment, Tanzania.	
		L		05	47	i	6.2		
	BHA	Pn		04	02	e			
		S*		06	33	e			
		Sg		07	14	i	2.9		
	KRR	Pn		04	08	e			
		Sn		06	15	e			
		S*		06	41	e			
		L		07	36	e	1.6		
	CIR	Pn		04	46	e			
		SgSg		09	00	i	1.3		
	BUL	Pn		04	51	e			
		L		09	15	i	0.9		
04	BUL	Pn	06	04	26	e		BUL 06 02 57 26.2S 28.2E	3.5
		Sg		06	03	e	1.3	Witwatersrand.	
	CIR	Pn		04	27	e			
		Sg		06	03	i	2.1		
	KRR	Pn		05	11	e			
		SgSg		07	47	i	0.8		
04	KRR	Pg	07	02	25	e		BUL 07 02 05 16.6S 28.6E	2.0
		Sg		02	38	i	2.4	Kariba	
	BHA	P*		02	46	e			
		Sg		03	18	i	0.7		
	BUL	Pg		03	10	e			
		Sg		03	55	e	0.4		
	CIR	Sg		04	48	e	0.2		

Dy	Stn	Phase	h	m	s	GM	DA	Epicentral data; Remarks	Mag
04	KRR	Pg	07	03	30	e		BUL 07 03 12 16.6S 28.6E	2.4
		Sg		03	43	i	4.0	Kariba.	
	BHA	Pg		03	52	e			
		Sg		04	20	e	1.3		
	BUL	Pg		04	17	e			
		Sg		05	01	i	1.0		
	CIR	Sg		05	49	e	0.6		
04	CLK	P	09	09	30	e	0.5	CGS 09 02 32 12.2N 58.0E	5.1
	BHA	P		10	01	e	0.3	Arabian Sea.	
	KRR	P		10	06	e	0.5		
	CIR	P		10	21	e	0.4		
	BUL	P		10	31	e	0.8		
04	CIR		09	25	33	e		CGS 09 07 39 14.2S 172.0E	5.8
		P'		25	40	iR	3.2	New Hebrides Is. Region.	
		PP		27	56	e			
		SKP		28	06	i			
	CLK	P'		25	42	iC	1.1		
		PP		27	57	e			
		SKP		28	08	i			
		SKKS		33	54	e			
	BUL			25	27	e			
		P'		25	45	iR	5.6		
		PP		28	00	e			
		SKP		28	15	i			
		PKS		29	11	i			
		SKKS		34	06	e			
	KRR			25	28	e			
				25	37	i			
		P'		25	48	iR	7.2		
		PP		28	02	e			
		SKP		28	20	i			
		SKKS		34	31	e			
	BHA			25	37	iC			
				25	47	i			
		P'		25	53	iR	3.0		
		SKP		28	30	i			
		SKKS		34	28	i			
04	CIR	P'	10	54	22	e	0.2	CGS 10 36 21 14.1S 172.0E	4.8
		SKP		56	47	e		New Hebrides Is. Region.	
	BUL	P'		54	26	e	0.3		
		SKP		56	57	i			
	KRR	P'		54	30	e	0.3		
		SKP		57	01	i			
	CLK	SKP		56	50	i			
	BHA	SKP		57	10	i			
04	CIR	P'	12	49	19	e	0.2	CGS 12 30 40 5.0S 153.3E	4.9
	BUL	P'		49	24	e	0.2	New Ireland Region.	
	KRR	P'		49	25	e	0.1		
	BHA	P'		49	29	e	0.2		
04	BUL	P	13	19	51	iR	0.6	CGS 13 10 19 60.3S 26.1W	5.0
	CIR	P		19	51	e	0.4	S. Sandwhich Is. Region.	
	KRR	P		20	15	iR	0.5		
		pP		20	32	e			
	BHA	P		20	27	e	0.2		
04	BHA	P'	15	34	(32)	e	0.1	Distant.	
	KRR	P'		34	35	e	0.3		
	BUL	P'		34	38	e	0.4		
	CLK	P'		34	44	e	0.3		
	CIR	P'		34	47	e	0.2		

Dy	Stn	Phase	h	m	s	GM	DA	Epicentral data: Remarks	Mag
05	CLK	P	02	13	(07)	e	0.2	CGS 02 02 44 32.4N 76.4E	4.9
	BHA	P		13	25	e	0.2	Kashmir-India Border Region.	
	KRR	P		13	31	iC	0.4		
	BUL	P		13	49	e	0.2		
05	KRR	P	02	53	55	iC		BUL 02 53 34 16.6S 28.5E	2.2
		S		54	10	i	4.3	Kariba.	
	BHA	Pg		54	16	i			
	BUL	Pg		54	39	e			
		Sg		55	23	e	0.4		
05	KRR		05	24	38	e	0.3	Distant.	
	CIR			24	38	e	0.2		
	BHA			24	41	e	0.3		
	BUL			24	51	e	0.2		
05	BHA	Pn	19	45	14	e		BUL 19 43 22 7.0S 30.9E	3.3
		Sn		46	36	i		N. Fipa Plateau, Tanzania.	
		Sg		47	19	e	0.5		
	CLK	Sg		48	11	e	0.4		
	KRR	Sg		48	25	e	0.3		
06	CLK	Pn	02	45	24	e		BUL 02 44 38 18.6S 34.8E	3.4
		Pg		45	31	i		Zambezia Prov., Mocambique.	
		Sn		45	57	i			
		S*		46	05	i			
		Sg		46	10	i	4.2		
	CIR	Pn		45	37	e			
		Pg		45	47	e			
				45	55	e			
		Sn		46	21	i			
		Sg		46	38	i	2.7		
	KRR	Pn		45	56	e			
		Pg		46	13	i			
		Sn		46	49	e			
		Sg		47	16	i	4.8		
	BUL	Pn		46	06	e			
		P*		46	15	e			
		Sn		47	10	e			
		S*		47	22	i			
		Sg		47	42	i	3.0		
	BHA	Pn		46	24	e			
		Sn		47	42	e			
		Sg		48	21	i	1.1		
06	CIR	P	10	31	44	e	0.4	CGS 10.21 56.46.6S 96.2E	4.9
	CLK	P		31	53	e	0.3	S.E. Indian Rise.	
	BUL	P		32	03	e	0.9		
	KRR	P		32	11	e	0.3		
	BHA	P		32	29	e	0.3		
06	BHA	Pn	10	36	50	e		BUL 10 35 21 8.6S 30.2E	3.0
		Sn		37	56	i		S. Lake Tanganyika Area.	
		L		38	32	e	0.6		
	KRR			38	46	e			
		L		39	48	e	0.3		
	CLK	L		39	49	e	0.3		
06	BHA	P	13	49	52	iC	0.4	CGS 13 41 05 35.2N 32.8E	4.8
		pP		50	14	i		Cyprus.	
	CLK	P		50	00	e	0.6		
	KRR	P		50	08	iC	0.4		
	BUL	P		50	33	e	0.3		
	CIR	P		50	40	iC	0.5		
06	BUL	P	15	44	45	e	0 2	CGS 15 36 42 44.6S 15.1W	4.5
	CIR	P		44	56	e	0.2	S. Atlantic Ridge.	
	KRR	P		45	09	e	0.2		

Dy	Stn	Phase	h	m	s	GM	DA	Epicentral data; Remarks	Mag
06	BUL	Pn	16	58	20	e		BUL 16 56 50 26.2S 28.0E	3.5
		Sg		59	57	i	1.3	Witwatersrand.	
	CIR	Pn		58	20	e			
		Sg		59	57	i	1.9		
	KRR	Pn		59	05	e			
		Sg	17	01	39	e	0.7		
06	BUL	P	21	31	32	e	0.4	CGS 21 18 57 23.9S 67.7W	4.3
	KRR	P		31	45	e	0.2	Chile-Argentine Border Region.	
06	BHA	P	23	31	23	e		BUL 23 26(57) 3.6N 34.4E	4.2
		L		37	06	i	0.7	N. Kenya.	
	CLK	P		31	23	e			
		L		37	(08)	e	0.5		
	KRR	P		31	41	e			
		L		38	03	e	0.4		
	CIR	P		32	15	e			
07	BUL	P	00	08	13	e	0.2	CGS 23 55 39 29.1S 66.7W	4.6
		PcP		08	21	e		La Rioja Prov., Argentina.	
	CIR	P		08	24	e	0.2		
	KRR	P		08	27	e	0.2		
07	CLK	P'	01	07	59	e	0.2	CGS 00 48 34 54.3N 164.6W	5.1
		SKP		11	32	e		Unimak Is. Region.	
	BHA	P'		08	00	e	0.2		
		SKP		11	34	e			
	KRR	P'		08	05	e	0.3		
		SKP		11	38	i			
	CIR	P'		08	06	iC	0.9		
		SKP		11	47	e			
	BUL	P'		08	06	iC	2.0		
		SKP		11	47	e			
07	CIR	P'	03	52	(15)	e	0.2	CGS 03 32 51 16.0S 172.7W	5.1
	BUL	P'		52	16	e	0.2	Samoa Is. Region.	
	KRR	P'		52	18	e	0.2		
	BHA	P'		52	21	e	0.3		
07	BHA	P	10	15	05	iC	2.4	CGS 10 02 05 73.4N 54.9E	6.0
	CLK	P		15	07	iC	6.3	Novaya Zemlya.	
		PP		18	42	e		(Underground Explosion.)	
	KRR	P		15	15	iC	3.5		
		PP		18	55	e			
	BUL	P		15	29	iC	4.0		
				18	24	e			
	CIR	P		15	32	iC	0.7		
07	BUL	P	10	27	00	iC	0.3	CGS 10 13 40 16.4S 73.5W	5.0
	CIR	P		27	12	e	0.2	Near Coast of Peru.	
07	BUL	P	10	49	21	e	0.3	Distant.	
	CIR	P		49	24	e	0.3		
	KRR	P		49	45	e	0.4		
07	BUL	P	13	12	53	e	0.4	CGS 13 03 17 60.3S 27.0W	4.2
	CIR	P		12	59	e	0.4	S. Sandwhich Is. Region.	
	KRR	P		13	17	e	0.5		
	BHA	P		13	29	e	0.3		
07	BHA	P'	14	55	29	e	0.2	CGS 14 36 39 45.0N 150.0E	5.0
	KRR	P'		55	31	e	0.2	Kurile Is.	
	BUL	P'		55	35	e	0.1		
07	KRR	P'	17	21	05	e	0.2	CGS 17 01 35 54.3N 164.7W	4.4
	BUL	P'		21	06	e	0.3	Unimak Is. Region.	
	CIR	P'		21	07	e	0.2		

Dy	Stn	Phase	h	m	s	GM	DA	Epicentral data; Remarks	Mag
07	BUL	P	17	52	24	e	0.1	CGS 17 34 13 59.1S 24.9W	4.8
	CIR	P		52	31	e	0.2	S. Sandwkich Is. Region.	
		pP		52	50	i			
	KRR	P		52	50	iC	0.3		
	BHA	P		53	02	e	0.1		
07	KRR	P'	23	24	(44)	e	0.3	CGS 23 05 18 53.8N 165.7W	4.7
	BUL	P'		24	48	iC	2.4	Fox Is., Aleutian Is.	
	CIR	P'		24	49	iC	0.6		
08	CIR	P'	08	01	36	iC	1.6	CGS 07 42 57 13.3S 167.2E	5.1
				01	54	i		New Hebrides Is.	
	CLK	P'		01	36	iC	0.4		
	BUL	P'		01	40	iC	1.7		
	KRR	P'		01	44	iC	1.7		
		SKP		04	46	e			
	BHA	P'		01	49	iC	1.3		
		SKP		04	55	i			
08	CLK	Pn	08	53	52	e		BUL 08 52 01 8.1S 36.6E	4.1
		Sn		55	12	e		Udzungwa Escarpment, Tanzania.	
		L		56	03	i	4.9		
	KRR	Pn		54	37	e			
		SgSg		57	39	i	1.3		
	CIR	Pn		55	12	e			
		L		59	10	e	0.7		
	BUL	Pn		55	24	e			
		Sn		57	59	e			
		L		59	28	e	0.9		
	BHA	L		58	15	e	2.0		
08	CIR	Pn	15	10	57	e		BUL 15 09 28 26.1S 28.0E	3.5
		Sg		12	53	i	2.2	Witwatersrand.	
	BUL	Pn		10	58	e			
		Sg		12	34	i	1.9		
	KRR	Pn		11	43	e			
		Sg		14	18	i	1.3		
08	CIR	P'	18	45	23	e	0.5	CGS 18 27 27 19.5S 179.2W	5.2
		SKP		47	46	i		Fiji Is. Region.	
	BUL	P'		45	27	e	0.7		
		SKP		47	53	e			
	KRR	P'		45	31	e	0.9		
		SKP		48	01	e			
	BHA	P'		45	39	e	0.5		
		SKP		48	09	e			
09	CIR		07	07	04	iR	0.4	Distant.	
	KRR			07	24	e	0.2		
09	CIR	P'	13	31	32	e	0.3	CGS 13 13 31 20.1S 178.6W	4.7
		SKP		34	01	i		Fiji Is. Region.	
	BUL	P'		31	37	e	0.2		
		SKP		34	09	e			
	KRR	P'		31	42	e	0.3		
		SKP		34	16	i			
09	CLK	P	13	52	21	e	0.3	CGS 13 43 38 23.8N 64.7E	5.2
	BHA	P		52	45	iC	0.3	Near Coast of W. Pakistan.	
	KRR	P		52	52	iC	0.7		
	CIR	P		53	08	e	0.3		
	BUL	P		53	15	iC	0.7		
09	BHA	P'	17	20	29	iR	0.2	CGS 17 01 41 38.0N 88.5W	5.3
		pP'		20	37	i		S. Illinois.	
	BUL	P'		20	31	e	0.3		
	KRR	P'		20	33	e	0.3		
		pP'		20	41	e			
	CIR	P'		20	47	e	0.2		

Dy	Stn	Phase	h	m	s	GM	DA	Epicentral data; Remarks	Mag
09	CLK	P	20	43	(5)	e	0.4	CGS 20 30 42 2.4N 126.8E	5.5
	CIR	P		44	(06)	e	0.3	Molucca Passage.	
	KRR	P		44	15	e	0.3		
	BUL	P		44	21	iR	0.4		
	BHA	P		44	21	e	0.4		
09	BUL	P	23	35	50	e	0.3	CGS 23 26 26 56.4S 26.3W	5.3
	CIR	P		35	57	e	0.3	S. Sandwhich Is. Region.	
	KRR	P		36	14	e	0.3		
	BHA	P		36	23	e	0.2		
10	KRR	P	17	15	42	e	0.2	CGS 17 01 59 20.0N 121.4E	5.2
	BHA	P		15	44	iC	0.2	Philippine Is. Region.	
10	CIR	P	21	36	05	e	0.2	CGS 21 24 52 3.6S 102.0E	5.3
		pP		36	21	e		S. Sumatra.	
	KRR	P		36	15	iR	0.5		
		pP		36	30	i			
	BHA	P		36	21	iR	1.0		
		pP		36	35	i			
	BUL	P		36	21	e	0.6		
		pP		36	35	i			
11	CIR	P'	02	16	37	e	0.3	CGS 01 58 41 19.6S 179.1W	4.9
	CLK	P'		16	41	e	0.3	Fiji Is. Region.	
	BUL	P'		16	42	e	0.3		
	KRR	P'		16	45	e	0.9		
	BHA	P'		16	52	e	0.4		
11	CLK	P'	09	13	10	e	0.6	CGS 08 53 52 57.3N 155.3W	5.3
	BHA	P'		13	10	e	0.3	Alaska Peninsula.	
	KRR	P'		13	11	e	0.9		
	BUL	P'		13	16	iR	1.6		
	CIR	P'		13	18	iR	0.6		
11	KRR	P'	15	00	(02)	e	0.2	CGS 14 41 16 40.1N 143.0E	5.5
	BUL	P'		00	06	e	0.3	Off E. Coast of Honshu, Japan.	
11	BHA	P	23	43	23	e	0.2	CGS 23 34 21 36.7N 27.1E	4.8
	CLK	P		43	36	e	0.4	Dodecanese Is.	
	KRR	P		43	40	e	0.4		
	BUL	P		44	03	e	0.3		
	CIR	P		44	13	e	0.5		
11	BHA	Pg	23	49	44	i		BUL 23 49 31 14.9S 29.1E	2.4
		Sg		49	52	i	7.	Upper Luano Valley, Zambia.	
	KRR	Pn		50	04	e			
		Pg		50	07	i			
		Sn		50	30	e			
		Sg		50	35	i	2.2		
	BUL	S*		52	04	e			
		Sg		52	18	e	0.3		
	CIR	Sg		52	53	e	0.2		
12	KRR	P	00	02	22	e	0.2	CGS 23 53 04 36.5N 27.2E	4.5
	BUL	P		02	47	e	0.2	Dodecanese Is.	
	CIR	P		02	56	e	0.2		
12	KRR	P'	01	02	31	e	0.2	CGS 00 44 13 27.5N 128.4E	5.8
	CIR	P'		02	33	e	0.2	Ryukyu Is.	
	BUL	P'		02	35	e	0.3		
		pP'		03	12	e			
	BHA	P'		02	34	e	0.3		
		pP'		03	05	e			
12	KRR	P	03	46	57	e	0.2	CGS 03 37 36 36.6N 27.3E	4.7
	BUL	P		47	20	e	0.2	Dodecanese Is.	
	CIR	P		47	29	e	0.3		

Dy	Stn	Phase	h	m	s	GM	DA	Epicentral data; Remarks	Mag
12	KRR	P	06	18	16	e	0.2	CGS 06 08 54 36.6N 27.3E	4.7
	BUL	P		18	40	e	0.2	Dodecanese Is.	
	CIR	P		18	48	e	0.3		
12	KRR	P'	14	23	17	e	0.2	CGS 14 04 35 40.0N 142.6E	5.3
	BUL	P'		23	23	iR	0.3	Near E. Coast of Honshu, Japan.	
12	BUL	P'	22	20	(00)	e	0.2	CGS 22 00 39 15.6S 172.8W	5.2
	CIR	P'		20	(00)	e	0.2	Samoa Is. Region.	
	KRR	P'		20	01	e	0.3		
	BHA	P'		20	07	e	0.3		
13	KRR	P'	02	16	08	e	0.2	CGS 01 56 45 15.7S 172.8W	5.0
	BHA	P'		16	15	e	0.2	Samoa Is. Region.	
	BUL	(pP')		16	21	e	0.2		
13	KRR	P	03	35	44	e	0.2	CGS 03 22 39 0.2S 123.0E	5.1
	BUL	P		35	48	e	0.2	N. Celebes.	
13	CIR	P'	16	07	28	e	0.3	CGS 15 49 26 20.8S 178.8W	5.2
		SKP		09	55	i		Fiji Is. Region.	
	BUL	P'		07	33	e	0.4		
		SKP		10	03	i			
	KRR	P'		07	39	e	0.6		
		SKP		10	11	e			
	BHA	P'		07	45	e	0.3		
		SKP		10	18	e			
	CLK	SKP		10	02	e			
13	BHA	P	16	48	08	e	0.4	BUL 16 44 21 2N 31E	5.0
		S		50	58	e		Lake Albert Area, Uganda.	
		L		52	51	i	6.2		
	CLK	P		48	27	e	0.6		
		L		53	33	e	3.1		
	KRR	P		48	37	e	0.4		
		L		53	57	i	3.5		
	BUL	P		49	13	e	0.9		
		L		55	56	i	2.5		
	CIR	P		49	20	e	0.3		
		L		56	08	e	2.3		
13	KRR	P'	19	00	31	e	0.2	CGS 18 41 48 40.2N 142.5E	5.5
	BHA	P'		00	32	e	0.1	Near E. Coast of Honshu, Japan.	
	CIR	P'		00	34	e	0.3		
	BUL	P'		00	36	e	0.4		
14	CIR	P'	11	54	00	e	0.4	CGS 11.3S 17..20.0S 176.0W	5.1
		SKP		57	06	i		Fiji Is. Region	
	BUL	P'		54	04	e	0.7		
		SKP		57	13	e			
	CLK	P'		54	05	e	0.3		
		SKP		57	14	e			
	KRR	P'		54	07	e	0.4		
		SKP		57	20	e			
	BHA	P'		54	14	e	0.3		
14	CIR	P'	23	27	38	e	0.2	CGS 23 08 54 21.5S 170.1E	5.4
	BUL	P'		27	42	e	0.2	Loyalty Is. Region.	
	KRR	P'		27	45	e	0.2		
15	BHA	P'	00	26	31	e	0.1	CGS 00 07 10 58.3N 150.4W	5.1
	CLK	(pP')		26	34	e	0.2	Gulf of Alaska	
	BUL	P'		26	40	e	0.2		

Dy	Stn	Phase	h	m	s	GM	DA	Epicentral data; Remarks	Mag
15	KRR	Pg	01	23	09	e		BUL 01 22 52 16.6S 28.7E	2.3
		Sg		23	21	i	2.8	Kariba.	
	BHA	Pg		23	30	e			
		Sg		23	59	i	1.5		
	BUL	Pg		23	55	e			
		Sg		24	37	e	0.8		
	CIR	Sg		25	26	e	0.5		
15	CLK	P	06	35	21	e	0.9	BUL 06.25(40)	
				35	25	i		USSR-Iran Border Region ?	5.1
		pP		35	34	i			
	BHA	P		35	32	e	0.4		
		pP		35	47	i			
	KRR	P		35	42	e	1.3		
				35	47	i			
		pP		35	56	i			
	CIR	P		36	03	e	0.8		
				36	08	i			
		pP		36	17	i			
	BUL	P		36	05	e	0.7		
				36	09	e			
		pP		36	19	e			
16	CIR	P'	00	42	18	iR	0.4	CGS 00 23 41 18.0S 168.5E	5.3
	CLK	P'		42	19	e	0.1	New Hebrides Is.	
	BUL	P'		42	23	iR	0.6		
	KRR	P'		42	25	iR	0.7		
	BHA	P'		42	31	e	0.2		
16	BUL	Pn	01	36	54	e		BUL 01 35 19 26.4S 27.1E	3.0
		Sg		38	37	i	0.5	Witwatersrand.	
	CIR	Pn		36	58	e			
		Sg		38	43	e	0.3		
	KRR	SgSg		40	22	e	0.3		
16	BUL	Pn	01	42	39	e		BUL 01 41 05 26.5S 27.4E	3.3
		Sn		43	49	i		Witwatersrand.	
		Sg		44	23	i	1.1		
	CIR	Pn		42	43	e			
		Sg		44	27	i	0.7		
	KRR	Pn		43	24	e			
		Sn		45	08	e			
		Sg		46	02	e			
		SgSg		46	09	i	0.6		
16	CIR	P'	08	04	54	e	0.3	CGS 07 45 52 16.6S 175.9E	5.6
	CLK	P'		04	58	e	0.2	Fiji Is. Region.	
	BUL	P'		04	59	e	0.3		
	KRR	P'		05	02	e	0.4		
17	BHA	P	00	29	51	iC	0.4	CGS 00 16 09 9.6N 72.6W	5.7
				32	55	e		Venezuela.	
				33	17	e			
	BUL	P		29	54	e	0.2		
				33	10	e			
		PP		34	07	i			
				34	49	i			
	KRR	P		29	57	e	0.3		
				33	05	e			
		PP		34	11	e			
				34	52	e			
	CIR	P		30	09	e	0.2		
		PP		34	16	i			
				35	10	i			
	CLK	P		33	48	e			
				35	22	e			

Dy	Stn	Phase	h	m	s	GM	DA	Epicentral data; Remarks	Mag
17	BHA	P	07	49	21	e	0.5	CGS 07 41 16 1.3S 13.6W	5.3
		PP		51	25	e		N. of Ascension Is.	
	KRR	P		49	31	e	2.2		
	BUL	P		49	32	e	1.4		
		PP		51	29	e			
	CIR	P		49	55	e	1.6		
	CLK	P		50	11	e	0.6		
17	KRR	P'	21	31	(06)	e	0.2	CGS 21 11 35 49.0N 128.9W	4.4
	BUL	'P'		31	21	e	0.2	Vancouver Is. Region.	
17	CIR	P	23	13	46	e	0.2	CGS 23 00 21 1.8N 126.6E	5.1
	KRR	P		13	52	e	0.2	Molucca Passage	
	BUL	P		13	57	e	0.2		
	BHA	P		13	59	e	0.1		
		pP		14	19	e			
18	CLK	P	01	52	29	e	0.4	CGS 01 39 22 8.1S 128.9E	5.2
		pP		52	37	e		Timor Sea.	
	CIR	P		52	39	e	0.2		
		pP		52	49	e			
	KRR	P		52	50	e	0.2		
	BUL	P		52	53	e	0.2		
		pP		53	02	e			
18	CLK	P'	03	00	40	e	0.2	CGS 02 42 02 7.0S 155.8E	5.1
		pP'		00	52	e		Solomon Is.	
	CIR	P'		00	42	iC	0.7		
		pP'		00	56	i			
	BUL	P'		00	47	iC	2.1		
		pP'		01	00	i			
	KRR	P'		00	48	iC	0.4		
		pP'		01	01	i			
	BHA	P'		00	52	iC	0.4		
		pP'		01	06	i			
18	BHA	P	09	00	40	e	0.3	CGS 08 49 08 26.8N 92.3E	4.0
		pP		00	54	e		E. India.	
	KRR	P		00	41	e	0.2		
		pP		00	54	e			
	BUL	P		00	56	e	0.2		
		pP		01	02	e			
18	BUL	Pn	14	43	02	e		BUL 14 41 28 26.3S 27.2E	3.2
		Sn		44	11	e		Witwatersrand.	
		Sg		44	44	i	1.1		
	CIR	Pn		43	06	e			
		Sn		44	18	e			
		Sg		44	51	i	0.8		
	KRR	Pn		43	47	e			
		SgSg		46	30	e	0.5		
18	BHA	Pn	16	10	06	iC		BUL 16 08 20 7.9S 31.9E	4.5
		P*		10	15	i		Lake Rukwa Area, Tanzania.	
		Sn		11	22	i			
		Sg		12	01	i	14.		
	KRR	Pn		10	31	e			
		Sn		12	09	e			
		Sg		13	02	i	4.8		
	BUL	Pn		11	16	e			
		Sn		13	28	i			
		SgSg		14	48	e			
		L		14	54	i	2.9		
	CIR	Pn		11	23	e			
		P		11	32	i			
		Sn		13	40	e			
		SgSg		15	04	i	2.3		

Dy	Stn	Phase	h	m	s	GM	DA	Epicentral data; Remarks	Mag
18	CIR		22	00	41	e	0.1	Distant.	
				00	49	e			
	BUL			00	46	e	0.3		
				00	53	e			
	KRR			00	46	e	0.2		
				00	54	e			
	BHA			00	51	e	0.2		
				00	59	e			
19	BUL	P	10	01	(02)	e	0.2	CGS 09 41 52 9.7S 150.6E	4.7
	CIR	P		01	(07)	e	0.2	E. New Guinea Region.	
	KRR	P		01	33	e	0.3		
19	BUL	P'	10	33	33	e	0.2	CGS 10 14 45 33.2S 179.2W	4.4
	KRR	P'		33	37	e	0.2	S. of Kermadec Is.	
19	CIR	P	22	59	04	e	0.3	CGS 22 48 04 8.7N 94.1E	4.9
	KRR	P		59	07	iR	0.4	Nicobar Is. Region.	
	BHA	P		59	10	iR	0.7		
	BUL	P		59	18	iR	0.5		
20	KRR		18	19	34	e	0.2	Distant.	
	BUL			19	37	e	0.2		
	CIR			19	47	e	0.2		
21	BUL	P	00	52	31	e	0.2	Distant.	
				52	47	e			
	KRR	P		52	56	e	0.2		
				53	43	e			
21	BHA	P	03	14	56	e	0.3	CGS 03 04 39 36.4N 70.6E	5.0
	KRR	P		15	02	iC	0.6	Hindu Kush Region.	
		pP		15	52	i			
	CIR	P		15	17	e	0.2		
	BUL	P		15	22	iC	0.5		
		pP		16	11	e			
				16	34	e			
21	KRR	P'	14	50	27	e	1.1	CGS 14 32 13 18.8N 145.0E	5.2
	CIR	P'		50	27	e	0.5	Mariana Is.	
	BUL	P'		50	32	iR	0.7		
22	CIR		03	07	13	e	0.2	Distant.	
	BUL			07	17	e	0.2		
22	CIR	P'	04	01	43	e	0.2	CGS 03 43 04 34.5S 179.8E	5.3
	BUL	P'		01	48	e	0.5	S. of Kermadec Is.	
		SKP		05	12	e			
	KRR	P'		01	52	e	1.0		
		SKP		05	17	e			
	BHA	P'		01	59	e	0.5		
22	CIR	P	09	12	51	e	0.2	CGS 08 59 23 16.3N 122.3E	5.3
	KRR	P		12	52	e	0.2	Luzon, Philippine Is.	
	BUL	P		13	01	e	0.2		
	BHA	P		13	(04)	e	0.2		
22	CIR	P	10	45	08	iC	0.5	CGS 10 31 45 1.5N 125.6E	5.7
	KRR	P		45	10	iC	2.4	Molucca Passage.	
	BUL	P		45	19	iC	1.8		
22	CIR	P	11	51	42	e	0.3	CGS 11 38 17 13.1N 122.6E	5.5
	BUL	P		51	53	e	0.2	Luzon, Philippine Is.	
22	CIR	P'	16	02	10	e	0.2	CGS 15 44 05 23.6S 180.0W	5.3
		SKP		04	39	i		S. of Fiji Is,	
	BUL	P'		02	14	e	0.4		
		SKP		04	45	i			
	KRR	P'		02	18	e	0.3		
		SKP		04	53	i			
	BHA	P'		02	24	e	0.3		
		SKP		05	02	i			

Dy	Stn	Phase	h	m	s	GM	DA	Epicentral data; Remarks	Mag
23	BUL	P	11	29	52	e	0.3	CGS 11 20 25 55.9S 27.5W	4.5
	CIR	P		30	00	e	0.2	S. Sandwhich Is. Region.	
		pP		30	31	e			
	KRR	P		30	16	e	0.3		
	BHA	P		30	26	e	0.2		
23	CIR		14	38	42	e	0.3	Distant.	
	KRR			39	00	e	0.2		
23	KRR	P	15	26	59	e	0.2	CGS 15 13 27 1.6N 126.3E	4.9
		pP		27	37	e		Molucca Passage.	
	CIR	pP		27	10	e	0.3		
				27	18	e			
	BUL	pP		27	26	e	0.2		
23	CIR	P	16	10	32	e	0.2	Distant.	
	KRR	P		10	51	e	0.2		
23	CIR	P	16	22	33	iC	0.3	Distant.	
	KRR	P		22	52	e	0.2		
23	BUL		16	33	16	e	0.7	Distant.	
				33	51	e			
	KRR			33	26	e	0.2		
	CIR			33	27	e	0.2		
	BHA			33	31	e	0.3		
23	BUL	P	16	50	53	e	0.3	CGS 16 41 47 59.9S 18.4W	5.6
	CIR	P		50	59	iR	0.8	S.W. Atlantic Ocean.	
	KRR	P		51	19	iR	0.9		
	BHA	P		51	31	e	0.2		
23	BHA	Pn	23	25	42	e		BUL 23 23 58 7.7S 31.4E	3.3
		Sn		26	58	e		S. Lake Tanganyika Area.	
		SgSg		27	41	i	1.0		
	KRR	S*		28	01	e			
		L		28	46	e	0.4		
	BUL	L		30	43	e	0.2		
	CIR	L		31	(04)	e	0.2		
24	CIR	P	03	10	32	e	0.3	CGS 03 05 23 38.4S 49.9E	3.9
	BUL	P		10	53	e	0.3	Atlantic-Indian Rise.	
	KRR	P		11	11	e	0.3		
	BHA	P		11	34	e	0.3		
24	BUL	P	05	41	14	iC	0.7	CGS 05 28 44 35.8S 71.2W	4.6
	CIR	P		41	23	e	0.2	Central Chile.	
	KRR	P		41	29	e	0.6		
	BHA	P		41	32	e	0.2		
24	BUL		06	45	15	iC	0.3	Distant.	
	CIR			45	21	iC	0.3		
	KRR			45	38	iC	0.3		
24	BUL	P	07	05	00	e	0.5	CGS 06 57 16 46.6S 10.7W	4.9
	CIR	P		05	11	iC	0.6	S. Atlantic Ridge.	
	KRR	P		05	26	iC	0.5		
	BHA	P		05	37	iC	0.7		
24	KRR	P'	21	39	42	iC	0.5	CGS 21 21 00 40.3N 142 3E	5.9
		PP		40	48	e		Near E. Coast of Honshu, Japan.	
	BHA	P'		39	42	iC	0.4		
		PP		40	51	e			
	CIR	P'		39	45	iC	0.6		
		PP		41	01	e			
	BUL	P'		39	48	iC	1.2		

Dy	Stn	Phase	h	m	s	GM	DA	Epicentral data; Remarks	Mag
24	CIR		21	50	01	e	0.2	Distant.	
				50	15	i			
	KRR			50	04	e	0.3		
				50	18	e			
	BHA			50	06	e	0.3		
				50	20	i			
	BUL			50	08	e	0.3		
25	CLK	P	18	50	05	e	0.3	CGS 18 36 53 5.0N 126.9E	5.4
	CIR	P		50	22	iC	0.6	Mindanao, Philippine Is.	
	KRR	P		50	27	e	0.8		
	BUL	P		50	33	e	1.1		
	BHA	P		50	33	e	0.5		
25	BUL	P'	18	56	45	e	0.2	Distant.	
	BHA	P'		56	45	e	0.4		
	KRR	P'		56	47	e	0.3		
	CLK	P'		56	57	e	0.2		
26	BUL	P	00	11	33	e	1.4	CGS 00 03 14 57.5S 6.8W	5.6
	CIR	P		11	35	e	2.9	S. Atlantic Ridge.	
		pP		11	43	i			
	KRR	P		11	58	e	1.5		
		pP		12	05	i			
	BHA	P		12	12	iC	0.5		
	CLK	P		12	26	iC	0.5		
26	CLK	P'	01	28	47	e	0.3	CGS 01 10 13 5.3S 152.0E	5.5
		PP		29	40	e		New Britain Region.	
	CIR	P'		28	50	iC	0.6		
		PP		29	50	i			
	BUL	P'		28	55	iC	1.6		
		PP		30	14	i			
	KRR	P'		28	56	iC	0.6		
		PP		30	15	i			
	BHA	P'		29	00	iC	0.7		
		PP		30	26	e			
26	BUL	P'	02	07	54	e	0.1	CGS 01 49 56 21.3S 179.5W	5.0
		SKP		10	23	i	0.6	Fiji Is. Region.	
	KRR	P'		08	01	e	0.2		
		SKP		10	30	i	0.7		
	CIR	SKP		10	15	e	0.2		
	CLK	SKP		10	21	e	0.3		
	BHA	SKP		10	38	i	0.5		
26	CLK	P	06	18	06	e	0.3	CGS 06 08 57 3.2S 86.5E	-
	CIR	P		18	37	e	0.3	S. Indian Rise.	
	KRR	P		18	45	e	0.3		
	BHA	P		18	51	e	0.4		
	BUL	P		18	55	e	0.4		
26	CIR	Pn	14	01	11	e		BUL 14 00 24 23.9S 31.1E	2.5
		Pg		01	18	i		Phalaborwa, E. Transvaal.	
		Sg		01	54	i	1.2		
	BUL	Pg		01	44	e			
		Sg		02	39	i	0.6		
	KRR	Sg		04	06	e	0.3		
26	BHA	P	18	52	44	e		BUL 18 49 12 0.7N 30.5E	4.5
		L		57	08	i	2.3	Ruwenzori Area, Uganda.	
	CLK	P		53	08	e			
		SgSg		57	59	e	1.3		
	KRR	P		53	15	e			
		SgSg		58	13	e	1.2		
	BUL	P		53	52	e			
		L		59	55	i	0.8		
	CIR	P		54	03	e			
		L	19	00	(30)	e	0.7		

Dy	Stn	Phase	h	m	s	GM	DA	Epicentral data; Remarks	Mag
26	BHA	Pn	22	42	33	e		BUL 22 40 50 9.9S 34.0E	3.1
		Sn		43	49	e		N. Lake Malawi Area.	
		Sg		44	27	i	0.7		
	CLK	Sn		43	20	e			
		L		43	59	e	0.6		
	KRR	Sg		45	00	e	0.3		
	CIR	Sg		46	35	e	0.2		
	BUL	Sg		46	37	e	0.2		
27	BUL	Pn	04	13	28	e		BUL 04 11 32 27.9S 26.3E	3.6
		Sn		14	52	e		O.F.S. Goldfields.	
		Sg		15	38	i	0.9		
	CIR	Pn		13	34	e			
		Sn		15	02	i			
		Sg		15	47	i	1.0		
	KRR	Pn		14	16	e			
		Sn		16	17	i			
		Sg		17	24	e			
		SgSg		17	30	i	1.0		
27	BUL		05	36	40	e	0.2	Distant.	
	CIR			36	46	e	0.2		
	KRR			37	05	e	0.3		
27	CLK	P	07	32	08	iC	0.3	Distant.	
	BHA	P		32	24	e	0.2		
	KRR	P		32	32	iC	0.3		
	CIR	P		32	47	e	0.2		
	BUL	P		32	52	iC	0.4		
27	KRR	P'	12	40	14	e		CGS 12 20 54 52.6N 170.6W	4.9
		pP'		40	24	e	0.3	Fox Is., Aleutian Is.	
		SKP		43	55	e			
	BUL	P'		40	24	iC	1.1		
	CIR	P'		40	25	e	0.3		
27	KRR	P'	13	15	10	e	0.2	CGS 12 55 56 56.6N 157.6W	5.3
	BUL	P'		15	21	e	0.5	Alaska Peninsula.	
	CIR	P'		15	23	e	0.4		
27	CLK	P	13	45	06	e	0.2	Distant.	
	KRR	P		45	44	e	0.2		
	CIR	P		45	58	e	0.2		
	BUL	P		46	09	iC	0.4		
27	BUL	Pn	14	30	35	e		BUL 14 29 01 26.5S 27.3E	3.1
		Sg		32	17	e	0.7	Witwatersrand.	
	CIR	Pn		30	39	e			
		Sg		32	23	e	0.6		
	KRR	Pn		31	22	e			
		SgSg		34	06	e	0.3		
28	KRR		01	27	01	e	0.2	Distant.	
	BUL			27	16	e	0.2		
28	BUL		01	31	11	e	0.3	Distant.	
	KRR			31	22	e	0.2		
	CIR			31	22	e	0.3		
	BHA			31	23	e	0.1		
28	BUL		02	19	37	e	0.3	Distant.	
	CIR			19	44	e	0.2		
	KRR			20	00	e	0.2		
28	CIR	P'	06	11	(28)	e	0.2	CGS 05 52 49 7.5S 155.9E	4.8
	BUL	P'		11	35	e	0.2	Solomon Is.	

Dy	Stn	Phase	h	m	s	GM	DA	Epicentral data; Remarks	Mag
28	BHA	P'	10	55	(05)	e	0.3	CGS 10.36 08. 15.4N 94.6W	5.2
	KRR	P'		55	08	e	0.6	Near Coast of Oaxaca, Mexico.	
	BUL	P'		55	08	e	0.3		
	CIR	P'		55	15	e	0.2		
	CLK	P'		55	18	e	0.3		
28	CIR	P	15	27	33	e	0.2	CGS 15 15 05 8.0S 119.4E	-
		pP		28	19	e		Flores Is. Region.	
	BUL	P		27	46	e	0.2		
		pP		28	30	e			
	KRR	P		27	(47)	e	0.2		
		pP		28	31	e			
28	CLK	P'	16	49	00	iC	0.3	CGS 16 30 32 6.8S 156.2E	5.7
		pP'		49	43	i		Solomon Is.	
		PKKP		59	22	i			
	CIR	P'		49	02	e	0.9		
		pP'		49	45	i			
		PKKP		59	20	e			
	BUL	P'		49	08	iR	3.3		
		pP'		49	50	i			
		PKKP		59	07	e			
		pPKKP		59	50	i			
	KRR	P'		49	08	e	0.5		
		pP'		49	51	i			
		PKKP		59	06	e			
	BHA	P'		49	12	iR	0.6		
		pP'		49	55	i			
		PKKP		58	59	e			
28	BUL	P	18	31	43	e		BUL 18 28 38 20.5S 14.7E	4.5
		S		33	58	e		Coastal Escarpment, S.W. Africa.	
		SgSg		35	20	i			
		L		35	28	i	2.5		
	BHA	P		31	57	e			
		S		34	30	e			
		L		36	09	i			
				36	15	i	2.1		
	KRR	P		31	58	e			
		S		34	32	e			
		L		36	09	i	1.3		
	CIR	P		32	21	e			
		SgSg		36	43	i			
		L		36	57	i	1.9		
	CLK	P		33	(10)	e			
		L		38	50	e	0.5		
28	BHA	P	18	52	21	e	0.1	Distant.	
	BUL	P		52	31	e	0.3		
	KRR	P		52	32	e	0.4		
	CIR	P		52	54	e	0.2		
29	BUL	P	03	57	32	e	0.6	CGS 03 49 45 36.2S 15.7W	4.8
	CIR	P		57	49	e	0.3	Tristan da Cunha Region.	
	KRR	P		57	53	e	0.5		
	BHA	P		57	59	e	0.3		
	CLK	P		58	(33)	e	0.2		
29	BUL	P	04	17	27	e	0.2	CGS 04.09 10 57.4S 7.1W	5.2
	CIR	P		17	31	e	0.4	S.W. Atlantic Ocean	
	KRR	P		17	53	e	0.3		
	BHA	P		18	07	e	0.1		
	CLK	P		18	(20)	e	0.1		
29	KRR	P	04	42	22	e	0.2	CGS 04 28 51 2.5N 127.3E	5.4
	BUL	P		42	28	e	0.2	Molucca Passage.	
	BHA	P		42	29	e	0.2		

Dy	Stn	Phase	h	m	s	GM	DA	Epicentral data; Remarks	Mag
29	BUL	P'	17	16	26	e	0.2	BUL	
		SKP		18	56	e		S. of Fiji Is.	
	KRR	P'		16	31	e	0.2		
		SKP		19	04	e			
	BHA	SKP		19	12	e			
29	CIR	Pg	20	16	46	e		BUL 20 15 47 19.0S 34.4E	2.5
		Sg		17	27	e	0.9	Zambezia Prov., Mocambique.	
	KRR	Sg		18	18	i	0.9		
	BUL	Sg		18	39	i	0.4		
29	KRR	P	22	30	18	e	0.2	Distant.	
	BUL	P		30	41	iC	0.3		
30	CIR		00	19	03	e	0.2	Distant.	
	BUL			19	09	e	0.4		
	KRR			19	09	e	0.2		
	BHA			19	14	e	0.2		
30	CIR	P'	01	17	14	e	0.2	BUL	
	BUL	P'		17	18	e	0.3	S. of Fiji Is.	
		SKP		19	48	e			
	KRR	P'		17	21	e	0.3		
		SKP		19	56	i			
	BHA	P'		17	28	e	0.2		
		SKP		20	06	i			
30	BHA	P	07	20	35	e	0.2	Distant.	
	BUL	P		20	41	e	0.3		
	KRR	P		20	42	e	0.3		
	CIR	P		21	04	e	0.2		
30	BUL	P	08	36	35	e	0.2	Distant.	
	KRR	P		36	37	e	0.2		
	CIR	P		36	58	e	0.2		
30	BUL	P	12	12	48	e	0.2	CGS 12 00 27 23.9S 66.7W	4.3
	KRR	P		13	00	e	0.2	Jujuy Prov., Argentina.	
30	BUL	P	15	45	29	iR	0.4	Distant.	
	CIR	P		45	35	iR	1.2		
	KRR	P		45	51	iR	0.4		
	BHA	P		46	02	e	0.5		
30	BHA	P	19	30	00	e	0.2	CGS 19 22 49 8.4N 58.3E	4.9
	KRR	P		30	04	e	0.3	Carlsberg Ridge.	
	CIR	P		30	15	e	0.2		
	BUL	P		30	37	iC	0.6		

PLD

7 MAY 1969

RHODESIA METEOROLOGICAL SERVICES

SEISMOLOGICAL BULLETIN

The following stations contribute records for analysis and publication in this Bulletin:

KABWE (BHA):	14° 26.8' S; 28° 28.1' E; Alt. 1206 m.
Litho. foundation:	Dolomite and shales of the Middle Katanga System.
Authority:	Zambia Meteorological Service.
Instrument:	Three-component Willmore one-second seismograph. Nominal magnification 20,000.
CHILEKA (CIK):	15° 40.8' S; 34° 58.6' E; Alt. 781 m.
Litho. foundation:	Charnockitic granulites of the Basement Complex.
Authority:	Malawi Meteorological Service.
Instrument:	Three-component Willmore one-second seismograph. Nominal magnification 20,000.
KAROI (KRR):	16° 51.1' S; 29° 37.1' E; Alt. 1380 m.
Litho. foundation:	Granitic gneisses of the Zambesi type.
Authority:	Rhodesia Meteorological Service.
Instrument:	Vertical Willmore one-second seismograph. Nominal magnification 20,000.
BULAWAYO (BUL):	20° 08.6' S; 28° 36.8' E; Alt. 1341 m.
Litho foundation:	Hornblend schists of the Bulawayan System.
Authority:	Rhodesia Meteorological Service.
Instruments:	Three-component Willmore one-second seismograph. Nominal magnification 20,000.
	WWSS Station: SP magnification 100,000 LP magnification 1,500
CHIREDZI (CIR):	21° 00.8' S; 31° 34.8' E; Alt. 430 m.
Litho foundation:	Gneisses or Charnockites of the Limpopo belt.
Authority:	Rhodesia Meteorological Service.
Instrument:	Vertical Willmore one-second seismograph. Nominal magnification 20,000.

Analysis Centre: Goetz Observatory, Meteorological Service, P. O. Box 562, Bulawayo, Rhodesia.

CRITERIA FOR PUBLICATION

To qualify for publication an earthquake must be of magnitude 2 or more. Also, in the case of local earthquakes (nearer than about 30°) at least one station must record a clear P phase. In the case of distant earthquakes, at least two stations must record clear P or P' phases.

DISTANCES

Distances of local earthquakes are determined by means of travel-time curves developed at this Centre. For distant earthquakes, the standard Jeffreys-Bullen tables are used.

Where given, distances are in degrees (1° = 111.11 Km).

TIMES

Times are given in hours, minutes and seconds of GMT (UT).

GLOSSARY

GM	Character of phase, and direction of the first ground motion of P or P'.
e	Emersio; the phase emerges gradually from the background.
i	Impetus; the phase is impulsive and clearly defined.
ei	The phase shows an emergent beginning, followed by a sharp increase in amplitude.
R	The first motion is downwards, or towards the epicentre; the motion is rarefactional. A lower case r indicates a weakly rarefactional first motion.
C	The first motion is upwards, or away from the epicentre; the motion is compressional. A lower case c indicates a weakly compressional first motion.
DA	The double-amplitude (peak-to-peak) of the record in millimetres. The double-amplitude is written on the same line as the phase to which it refers; usually P or P' in distant earthquakes, and the S-L complex (the "maximum amplitude") in local earthquakes. In some cases a double-amplitude is given for more than one phase.
BUL	The epicentral and magnitude data are determined by Goetz Observatory, Bulawayo.
CGS	The epicentral and magnitude data are determined by the U. S. Coast and Geodetic Survey (USCGS).
Distant	The epicentre is more than about 30° from the approximate centre of the local station network (17S 30E).
MM	Intensity on the Modified Mercalli scale.
?	Indicates an uncertain statement.
( )	The estimated uncertainty in the quantity in brackets is between 4 and 10 units of the last digit quoted. E.g., a latitude given as (16.4S) is thought to be uncertain by between 0.4 and 1.0 degree.
Mag	Magnitude. Locally-determined magnitudes are based on the double-amplitude of the S-L complex, after Richter (1935). However, the station constants and distance-amplitude relationship have been slightly adjusted to make the local magnitudes agree as closely as possible with magnitudes published by USCGS. The local magnitudes can therefore be taken as being estimates of m_b of Gutenberg and Richter (1956).

SEISMOLOGICAL BULLETIN: DEC 1968 - 1

Dy	Stn	Phase	h m s	GM	DA	Epicentral data; Remarks	Mag
01	CIR	P	04 51 34	e	0.2	Distant	
	BUL	P	52 01	e	0.3		
	KRR	P	52 06	e	0.5		
	BHA	P	52 27	iC	0.6		
01	CIR	P	05 40 08	e	0.2	CGS 05 27 09 65.4S 179.7E	5.2
	BUL	P	40 15	e	0.3	Balleny Is. Region	
	KRR	P	40 30	e	0.3		
	BHA	P	40(47)	e	0.1		
01	BHA	Pn	07 29 30	e		BUL 07 26 47 2.9S 29.1E	3.9
		Sn	31 32	e		N. of Lake Tanganyika	
		L	32 49	e	1.3		
	KRR	Pn	30 05	e			
		Sn	32 27	e			
		Sg	33 57	e	0.5		
	BUL	P	30 51	e			
		L	35 43	e	0.3		
	CIR	P	31 02	e			
		L	36 16	e	0.2		
01	BUL	P	13 28 33	e	0.6	CGS 13 14 51 10.6S 74.9W	5.4
		(pP)	28 44	e		Peru	
	BHA	P	28 40	e	0.2		
		(pP)	28 51	e			
	KRR	P	28 42	e	0.2		
	CIR	(pP)	28 52	e	0.2		
01	CIR	SKP	20 56 23	e	0.2	CGS 20 35 47 17.8S 178.6W	4.9
	BUL	SKP	56 40	e	0.2	Fiji Is. Region	
	KRR	SKP	56 47	e	0.4		
	BHA	SKP	56 53	e	0.1		
02	BHA	Pn	02 34 51	iR	-	BUL 02 33 42 14.2S 23.7E	5.3
	KRR	Pn	35 15	iR	60.	Barotseland, Zambia	
		Sg	38(00)	i	110.	Felt MM V at Kabompo	
	BUL	Pn	35 32	iC	50.	Felt MM IV at Mongu	
		Sn	36 51	i	90.		
	CIR	Pn	36 05	iC	30.		
02	BHA	Pn	03 13 05	e		BUL 03 11 55 14.4S 23.7E	3.2
		Sn	13 59	e		Barotseland, Zambia	
		L	14 25	i	1.8		
	KRR	Pn	13 28	e			
		Sn	14 34	e			
		L	15 12	e	0.7		
	BUL	Pn	13 45	e			
		Sn	15 07	e			
		L	15 53	i	0.7		
	CIR	Pn	14 18	e			
		Sn	16 05	e			
		L	17 10	e	0.4		
02	KRR	P'	13 56 40	e	0.3	CGS 13 37 25 51.9N 175.1E	4.5
	CIR	P'	56 47	e	0.2	Rat Is., Aleutian Is.	
	BUL	P'	56 47	e	0.2		
03	BHA	Pn	09 03 42	e		BUL 09 01 42 6.7S 32.1E	3.5
		Sn	05 12	e		S. Tanzania	
		Sg	05 59	i	1.2		
	KRR	Pn	04 08	e			
		Sg	07 01	e	0.5		
	BUL	SgSg	08 51	e	0.2		
	CIR	L	09 08	e	0.2		

Dy	Stn	Phase	h	m	s	GM	DA	Epicentral data; Remarks	Mag
03	CIR	P	10	48	13	e	0.4	CGS 10 40 30 6.1S 71.3E	4.9
	KRR	P		48	21	e	0.5	Chagos Archipelago Region	
	BHA	P		48	27	e	0.2		
	BUL	P		48	33	e	0.3		
03	BUL		15	32	49	e	0.3	Distant	
	CIR			32	56	e	0.2		
	KRR			33	02	e	0.2		
	BHA			33	03	e	0.1		
03	BUL	Pn	16	01	30	e		BUL 15 59 57 26.6S 27.8E	3.2
		Sg		03	12	i	0.9	Witwatersrand	
	CIR	Pn		01	35	e			
		Sg		03	17	i	0.7		
	KRR	Pn		02	15	e			
		SgSg		04	57	e	0.5		
03	CIR	P	19	38	05	e	0.2	CGS 19 26 39 8.4S 105.7E	5.2
	KRR	P		38	17	e	0.4	S. of Java	
	BUL	P		38	20	iR	0.5		
	BHA	P		38	25	e	0.3		
03	BHA	P	21	07	37	e	0.2	CGS 20 57 31 44.6N 18.4E	4.7
	KRR	P		07	54	iC	0.3	Yugoslavia	
	BUL	P		08	14	iC	0.3		
	CIR	P		08	23	e	0.4		
03	CIR	P	22	29	58	e	0.3	Distant	
	BUL	P		30	(20)	e	0.2		
	KRR	P		30	37	e	0.2		
04	BUL	Pn	17	10	00	e		BUL 17 08 27 26.5S 27.3E	3.3
		Sn		11	09	e		Witwatersrand	
		Sg		11	41	i	1.3		
	CIR	Pn		10	04	e			
		Sn		11	14	e			
		Sg		11	48	e	0.7		
	KRR	Pn		10	46	e			
		Sn		12	30	e			
		Sg		13	25	i			
		SgSg		13	30	i	0.6		
04	BHA	P	21	48	44	e	0.3	CGS 21 41 33 8.4N 58.4E	5.1
	CIR	P		49	01	e	0.3	Carlsberg Ridge	
	BUL	P		49	11	e	0.8		
05	CIR	Pn	00	50	26	e		BUL 00 48 13 29.0S 26.5E	3.3
		Sn		52	10	i		Southern O.F.S.	
		Sg		52	55	i	0.4		
	BUL	Sn		52	02	e			
		Sg		52	49	i	0.5		
05	BHA	P	08	01	11	e	0.3	CGS 07 52 11 36.6N 27.0E	5.5
		PcP		02	30	i		Dodecanese Is.	
	BUL	P		01	51	e	0.9		
	CIR	P		02	00	e	1.1		
05	BUL	Pn	08	25	10	e		BUL 08 23 36 26.5S 27.3E	3.0
		Sg		26	53	e	0.5	Witwatersrand	
	CIR	Pn		25	14	e			
		Sn		26	25	e			
		Sg		26	59	i	0.6		
05	CIR	P	09	12	25	e	0.6	CGS 09 01 26 5.1N 95.8E	4.8
	BHA	P		12	34	iC	3.2	N. Sumatra	
		PP		16	52	i			
	BUL	P		12	40	e	0.4		

Dy	Stn	Phase	h	m	s	GM	DA	Epicentral data; Remarks	Mag
05	BHA	P	09	57	01	iR	0.3	CGS 09 44 11 63.9N 21.7W	5.5
		PP	10	00	24	e		Iceland Region	
	BUL	P	09	57	30	iR	0.2		
		PP	10	01	03	e			
		SKS		08	09	e			
06	CIR	P'	00	31	01	iC	0.4	CGS 00 12 18 14.9S 167.3E	4.6
	BUL	P'		31	06	iC	0.5	New Hebrides Is.	
	BHA	P'		31	13	e	0.3		
06	CIR	Pn	02	52	14	e		BUL 02 51 04 17.6S 35.0E	3.5
		Sn		53	05	i		Zambezia Province, Mocambique	
		Sg		53	26	i	3.2		
	BUL	Pn		52	40	e			
		Sn		53	48	e			
		Sg		54	23	i	2.5		
	BHA	Pn		52	46	e			
		L		54	49	i	0.7		
06	CIR	Pn	19	58	07	e		BUL 19 56 39 26.2S 28.2E	3.0
		Sn		59	14	e		Witwatersrand	
		Sg		59	41	i	0.8		
	BUL	Sg		59	43	i	0.6		
06	BUL	Pn	20	34	11	e		BUL 20 32 42 26.0S 27.5E	3.4
		Sg		35	47	e	1.5	Witwatersrand	
	CIR	Pn		34	12	e			
		Sg		35	47	e	1.9		
07	BUL	Pn	14	07	59	e		BUL 14 06 25 26.5S 27.0E	3.4
		Sn		09	09	e		Witwatersrand	
		Sg		09	41	e	1.6		
	CIR	Pn		08	03	e			
		Sn		09	14	e			
		Sg		09	48	i	1.3		
07	CLK	P'	16	00	11	e	0.3	CGS 15 40 58 51.6N 175.7E	5.3
	BHA	P'		00	14	e	0.3	Rat Is., Aleutian Is.	
		SKP		03	43	e			
		PKKP		09	28	e			
	CIR	P'		00	21	e	0.2		
	BUL	P'		00	23	e	0.2		
07	CLK	P'	17	28	26	e	0.3	CGS 17 09 53 14.0S 166.8E	5.1
	CIR	P'		28	46	e	0.5	New Hebrides Is.	
	BUL	P'		28	51	e	0.6		
		SKP		32	23	e			
	BHA	P'		28	59	e	0.2		
		SKP		32	30	i			
07	BUL	Pn	18	26	34	e		BUL 18 24 36 28.0S 26.6E	3.2
		Sn		28	00	e		O.F.S. Goldfields	
		Sg		28	46	e	0.5		
	CIR	Pn		26	37	e			
		Sn		28	05	e			
		Sg		28	51	e	0.4		
07	BUL	P	20	48	13	iR	1.9	CGS 20 35 21 45.0S 80.3W	5.6
	CIR	P		48	19	iR	1.3	Off Coast of S. Chile	
		PP		51	48	e			
	BHA	P		48	33	iR	2.7		
	CLK	P		48	45	iR	0.4		

Dy	Stn	Phase	h	m	s	GM	DA	Epicentral data; Remarks	Mag
07	CLK	P'	21	54	32	e	0.4	CGS 21 35 45 20.7S 169.4E	5.6
		pP'		54	51	i		New hebrides Is.	
	CIR	P'		54	37	e	0.4		
		pP'		54	56	i			
	BUL	P'		54	37	e	0.9		
		pP'		54	56	i			
	BHA	P'		54	47	e	0.3		
		pP'		55	10	e			
08	BUL	Pn	00	17	48	e		BUL 00 16 17 26.4S 27.3E	3.0
		Sg		19	38	e	0.6	Witwatersrand	
	CIR	Pn		17	50	e			
		Sn		19	00	e			
		Sg		19	33	i	0.5		
08	BUL	Pn	03	46	07	e		BUL 03 44 38 26.5S 29.0E	3.4
		Sg		47	44	i	1.4	Witwatersrand	
	CIR	Pn		46	08	e			
		Sg		47	45	i	2.3		
08	BUL	P	06	27	13	e	0.1	CGS 06 17 45 58.0S 26.2W	4.3
	CIR	P		27	19	e	0.2	S. Sandwich Is. Region	
08	BHA	Pg	07	27	16	e		BUL 07 26 53 15.6S 29.0E	2.2
		Sg		27	32	i	1.6	Kafue Area, Zambia	
	BUL	Sg		29	12	e	0.3		
	CIR	Sg		29	54	e	0.3		
08	BHA	Pn	07	40	17	iC		BUL 07 37 40 3.6S 29.8E	4.2
		Sn		42	13	i		N. Lake Tanganyika Area	
		L		43	28	i			
				43	34	i	2.2		
	BUL	Pn		41	30	e			
		Sn		44	23	e			
		L		46	35	e	0.6		
	CIR	Pn		41	47	e			
		Sn		44	57	e			
		L		47	00	e	0.5		
	CLK	Sg		44	25	e			
		L		44	35	i	1.2		
08	BHA	Pn	08	37	14	e		BUL 08 35 19 6.7S 30.5E	3.9
		Sn		38	37	i		Central Lake Tanganyika	
		Sg		39	22	i	1.7		
	CLK	Pn		37	42	e			
		Sn		39	27	e			
		Sg		40	25	i	1.8		
	BUL	Pn		38	27	e			
		L		42	19	e	0.5		
	CIR	Pn		38	42	e			
09	BUL	Pn	00	09	09	e		BUL 00 07 42 26.3S 28.3E	3.5
		Sg		10	45	i		Witwatersrand	
		L		10	49	i	3.1		
	CIR	Pn		09	10	e			
		Sg		10	44	i			
		L		10	47	i	2.3		

Dy	Stn	Phase	h	m	s	GM	DA	Epicentral data; Remarks	Mag
09	BHA	Pn	18	34	37	iC	2.8	BUL 18 32 54 8.7S 32.6E	5.0
		Sn		35	52	i		S. Lake Rukwa, Tanzania	
	CLK	Pn		34	41	iR	8.5	Felt MM IV at Chitipa	
		Sn		35	57	i			
		Sg		36	40	i	27.		
	BUL	Pn		33	43	iC	3.2		
		Sn		37	50	i			
		Sg		38	53	e			
		L		39	09	i	14.4		
	CIR	Pn		35	47	e	2.5		
		Sn		37	59	i			
		Sg		39	06	e	10.3		
10	BUL	P	11	38	32	e	0.2	CGS 11 28 37 38.9N 21.6E	4.6
	CIR	P		38	42	e	0.2	Greece	
10	CIR	P	19	10	02	e	0.3	CGS 19 03 31 53.3S 24.7E	4.4
	BUL	P		10	07	iC	0.9	S. of Africa	
	CLK	P		10	51	e	0.2		
11	BUL	P	03	53	42	e	0.3	CGS 03 40 48 25.2S 70.4W	5.0
				54	31	e		Near Coast of N. Chile	
	CIR	P		53	55	e	0.2		
11	BHA	Pn	11	51	08	e	-	BUL 11 49 57 14.3S 23.6E	4.3
	KRR	Pn		51	32	e	2.4	Barotseland, Zambia	
		Sn		52	40	i			
		Sg		53	16	e	8.3		
	BUL	Pn		51	48	iC	1.8		
		Sn		53	08	i			
		L		53	58	i	8.2		
	CIR	Pn		52	20	e	1.1		
		Sn		54	06	e			
		L		55	15	i	3.3		
	CLK	Pn		52	34	e	0.4		
		Sn		54	56	e			
		L		55	43	e	1.7		
11	BUL	P	13	08	59	iC	2.0	CGS 12 56 16 21.6S 68.4W	4.7
	CIR	P		09	11	e	0.3	Chile-Boliva Border Region	
	KRR	P		09	(13)	e	0.6		
11	BUL	Pn	15	06	35	e		BUL 15 05 07 26.1S 27.9E	3.2
		Sg		08	10	e	1.2	Witwatersrand	
	CIR	Pn		06	55	e			
		Sg		08	09	e	1.3		
11	CIR	P	20	59	58	e	1.1	CGS 20 55 06 40.4S 44.2E	4.4
	BUL	P	21	00	21	e	0.6	Atlantic-Indian Rise	
	KRR	P		00	(40)	e	0.3		
	CLK	P		00	(45)	e	0.9		
	BHA	P		01	(00)	e	0.2		
11	BUL	P'	21	53	09	e	0.2	CGS 21 34 07 23.9S 176.1W	5.4
		PP		56	33	e		S. of Fiji Is.	
	KRR	P'		53	16	e	0.3		
12	CLK	P	05	38	39	e	0.2	CGS 05 25 37 9.7N 125.7E	5.6
		PP		42	31	e		Mindanao, Philippine Is.	
	CIR	P		38	57	e	0.4		
	KRR	P		39	03	e	0.2		
		PP		43	04	e			
	BUL	P		39	09	e	0.6		
		PP		43	08	e			

Dy	Stn	Phase	h	m	s	GM	DA	Epicentral data; Remarks	Mag
12	CIR	P'	07	38	16	e	0.5	CGS 07 19 45 16.0S 177.8W	5.1
		PP		40	44	i		Fiji Is. Region	
		SKP		41	05	i			
	CLK	P'		38	17	e	0.2		
		SKP		41	10	i			
	BUL	P'		38	18	e	0.6		
		PP		41	05	e			
		SKP		41	12	i			
12	CLK	P	17	36	38	e	0.4	CGS 17 30 30 12.1N 45.9E	4.6
	KRR	P		37	03	e	0.2	W. Gulf of Aden	
	CIR	P		37	30	e	0.2		
	BUL	P		37	32	e	0.5		
12	BUL	pP	23	55	21	e	0.3	CGS 23 41 37 15.0S 73.6W	5.0
	CIR	pP		55	32	e	0.1	S. Peru	
13	CLK	Pn	03	32	55	e		BUL 05 31 16 9.0S 33.4E	3.7
		Sn		34	06	e		S. Highlands, Tanzania	
		Sg		34	42	i	1.9		
	KRR	Pn		33	(23)	e			
		Sn		34	55	e			
		Sg		35	42	e	1.0		
	CIR	Pn		34	08	e			
		Sg		37	24	e	0.6		
	BUL	Pn		34	08	e			
		Sg		37	24	e	0.6		
13	KRR	Pn	05	04	45	e		BUL 05 02 46 8.8S 28.2E	3.5
		Sn		06	12	e		Lake Mweru Area, Congo	
		L		07	06	i	1.6		
	CLK	Pn		05	17	e			
		Sn		07	09	e			
		SgSg		08	16	i	0.8		
	BUL	Pn		05	28	e			
		Sn		07	25	e			
		L		08	41	i	0.3		
	CIR	Pn		05	46	e			
		L		09	(27)	e	0.3		
13	CLK	P	10	07	42	e	0.2	Distant	
	KRR	P		08	05	e	0.2		
	CIR	P		08	30	e	0.2		
	BUL	P		08	34	e	0.2		
13	KRR		18	45	48	e	0.2	Distant	
	BUL			45	51	e	0.2		
13	CIR	P'	19	45	25	e	0.2	CGS 19 26 42 7.5S 156.1E	4.7
	BUL	P'		45	30	e	0.4	Solomon Is.	
	KRR	P'		45	31	e	0.2		
13	BUL	Pn	20	41	39	iC		BUL 20 41 07 18.3S 27.3E	3.3
		Sn		42	03	i	20.	Kamativi Area, Rhodesia	
	KRR	P*		41	51	e			
		Sg		42	25	i	15.		
	BHA	Pn		42	10	e			
		Sn		42	57	e	-		
	CIR	Pn		42	15	e			
		Sn		43	05	i			
		Sg		43	27	e	5.2		
14	KRR		06	08	35	e	0.2	Distant	
	BUL			08	41	e	0.2		

Dy	Stn	Phase	h	m	s	GM	DA	Epicentral data; Remarks	Mag
14	KRR	P'	10	18	23	e	0.5	CGS 09 59 02 51.5N 175.7E	5.2
		SKP		21	52	e		Rat Is., Aleutian Is.	
	BUL	P'		18	28	e	0.2		
	CIR	P'		18	29	e	0.2		
		SKP		22	08	e			
14	CIR	P	11	52	47	iC	0.6	CGS 11 43 14 3.1S 85.5E	5.1
	KRR	P		52	55	e	0.4	S. Indian Ocean	
	BHA	P		53	02	iC	0.3		
	BUL	P		53	05	iC	0.6		
14	CIR	Pn	22	12	18	e		BUL 22 10 51 26.2S 28.2E	4.2
		P*		12	25	i		Witwatersrand	
		Sg		13	32	i	7.2		
	BUL	Pn		12	19	e			
		Sn		13	24	e			
		Sg		13	55	i	9.0		
	KRR	Pn		13	04	e			
		Sn		14	43	e			
		Sg		15	37	e			
		L		15	46	i	4.6		
	BHA	Pn		13	36	iC			
		Sn		15	(38)	e			
		Sg		16	47	e	2.9		
15	BHA	P'	02	33	33	e	0.6	CGS 02 14 17 51.6N 175.8E	5.7
		PP		36	06	e		Rat Is., Aleutians	
		SKP		37	03	i			
	KRR	P'		33	37	e	0.8		
		PP		36	15	e			
		SKP		37	06	e			
	BUL	P'		33	38	e	0.5		
		PP		36	39	i			
		SKP		37	17	i			
	CIR	P'		33	(38)	e	0.4		
		SKP		37	15	e			
15	BHA	P'	02	47	49	e	0.3	CGS 02 28 32 51.7N 175.8E	5.4
		PP		50	26	e		Rat Is., Aleutian Is.	
		SKP		51	18	i			
	KRR	P'		47	52	e	0.4		
		PP		50	31	e			
		SKP		51	21	e			
	BUL	P'		47	53	e	0.4		
		PP		50	57	e			
		SKP		51	30	e			
	CIR	P'		47	(54)	e	0.3		
		SKP		51	29	e			
15	BUL	P	11	07	13	e	0.4	CGS 10 59 19 8.3S 13.5W	4.5
	KRR	P		07	17	e	0.2	Ascension Is. Region	
	CIR	P		07	35	e	0.4		
		pP		07	41	i			
15	BUL	P	11	18	25	iC	0.5	CGS 11 10 32 8.2S 13.5W	4.5
	KRR	P		18	30	e	0.3	Ascension Is. Region	
	CIR	P		18	48	e	0.5		
15	BUL	Pn	13	31	30	e		BUL 13 29 50 26.8S 26.5E	3.3
		Sn		32	44	e		W. Witwatersrand	
		Sg		33	20	i	0.9		
	CIR	Pn		31	36	e			
		Sg		33	33	i	0.7		
	KRR	Pn		32	16	e			
		Sg		35	05	e	0.4		

Dy	Stn	Phase	h	m	s	GM	DA	Epicentral data; Remarks	Mag
15	BHA	P'	14	20	40	iR	0.6	CGS 14 01 43 49.6N 155.7E	5.4
	KRR	P'		20	41	e	0.5	Kurile Is.	
	CIR	P'		20	45	e	0.3		
	BUL	P'		20	47	e	0.3		
15	BHA	Pn	21	38	32	iR	-	BUL 21 37 52 13.5S 26.0E	4.9
	KRR	Pn		39	04	iR	28.	Kasempa Area, Zambia	
		Sn		39	55	i	90.		
	BUL	Pn		39	37	iR	13.8		
		Sn		40	54	i			
		Sg		41	33	i	39.		
	CIR	Pn		40	03	iR	9.5		
		Sn		41	39	i			
		Sg		42	(30)	i	20.		
15	BHA	P*	22	57	08	e		BUL 22 56 28 13.6S 26.0E	3.1
		Sn		57	33	i	3.5	Kasempa Area, Zambia	
	KRR	Pn		57	32	e			
		Sn		58	31	i			
		Sg		58	49	i	2.1		
	BUL	Pn		58	(14)	e			
		Sn		59	30	e			
		Sg	23	00	10	i	0.4		
	CIR	Pn	22	58	41	e			
		Sn	23	00	(17)	e			
		Sg		01	11	e	0.4		
16	BUL	P	07	01	33	iC	0.5	CGS 06 54 57 52.1S 16.0E	5.2
		PP		02	34	e		S.W. of Africa	
	CIR	P		01	33	iC	0.5		
		PP		02	35	e			
	KRR	P		02	01	iC	0.3		
		PP		03	18	e			
	BHA	P		02	20	iC	0.3		
		PP		03	51	e			
16	CIR	P'	11	05	39	e	0.2	CGS 10 46 47 18.0S 168.1E	5.1
	BUL	P'		05	42	e	0.3	New Hebrides Is.	
	KRR	P'		05	45	e	0.3		
	BHA	P'		05	53	e	0.2		
16	KRR	Pg	13	21	50	e		BUL 13 21 31 16.7S 28.6E	2.4
		Sg		22	04	i	3.7	Kariba	
	BHA	Pg		22	10	e			
		Sg		22	39	i	1.3		
	BUL	Pg		22	55	e			
		Sg		23	18	i	1.2		
	CIR	Sg		24	08	e	0.4		
16	KRR	Pg	19	45	46	iC		BUL 19 45 28 16.3S 28.8E	2.4
		Sg		45	59	i	4.2	Kariba	
	BHA	Pg		46	02	e			
		Sg		46	25	e	2.3		
	BUL	Pg		46	40	e			
		Sg		47	28	e	0.7		
	CIR	Sg		48	12	e	0.3		
16	CLK	P	22	23	51	e	0.2	Distant	
	BHA	P		24	03	e	0.2		
	CIR	P		24	40	e	0.2		
	BUL	P		24	43	e	0.3		

Dy	Stn	Phase	h	m	s	GM	DA	Epicentral data; Remarks	Mag
16	BHA	P	22	34	52	i		BUL 22 34 14 13.4S 26.4E	3.6
	KRR	Pn		35	24	e		Kasempa Area, Zambia	
		Pg		35	40	i			
		Sn		36	16	i			
		Sg		36	36	i	7.2		
	BUL	Pn		35	56	e			
		Sn		37	12	i			
		L		37	55	i	1.4		
	CLK	Pn		36	17	e			
		Sn		37	50	e			
		Sg		38	35	e	1.1		
	CIR	Pn		36	23	e			
		Sn		37	57	e			
		L		38	55	e	1.2		
17	BHA	P'	12	21	17	e		CGS 12 02 15 60.2N 152.8W	5.9
		P'		21	26	iC	2.9	S. Alaska	
		PP		24	22	i			
		SKP		24	47	i			
	CLK	P'		21	19	e			
		P'		21	28	iC	2.7		
		SKP		24	48	i			
	KRR	P'		21	21	e			
		P'		21	31	i	5.7		
		SKP		24	52	i			
	BUL	P'		21	27	e			
		P'		21	36	i	3.8		
		SKP		25	02	e			
	CIR	P'		21	30	e			
		P'		21	38	i	1.6		
		SKP		25	03	i			
18	BUL	P	01	43	02	e	0.4	CGS 01 30 30 21.4S 67.3W	4.2
	KRR	P		43	13	e	0.2	Chile-Boliva Border Region	
18	BUL	P'	04	56	47	e	0.2	CGS 04 37 51 21.8S 169.9E	4.8
	KRR	P'		56	51	e	0.2	Loyalty Is. Region	
18	CLK	P	05	13	45	e	0.2	CGS 05 01 57 49.7N 78.1E	5.2
	BHA	P		13	56	e	0.2	E. Kazakh S.S.R.	
	KRR	P		14	04	e	0.2		
	CIR	P		14	17	e	0.2		
	BUL	P		14	22	e	0.2		
18	CIR	P'	20	21	59	e		CGS 20 03 44 19.9S 177.6W	5.5
		P'		22	12	i	0.6	Fiji Is. Region	
		PP		24	26	e			
		SKP		25	02	i			
	BUL	P'		22	04	e			
		P'		22	17	iR	0.8		
		PP		24	42	e			
		SKP		25	10	i			
		PKS		25	48	i			
	KRR	P'		22	10	e	1.0		
		P'		22	24	i			
		PP		24	57	e			
		SKP		25	18	i			
	BHA	P'		22	16	e	0.6		
		P'		22	29	i			
		SKP		25	26	i			
	CLK	P'		22	17	e	0.3		
		SKP		25	09	i			

Dy	Stn	Phase	h	m	s	GM	DA	Epicentral data; Remarks	Mag
18	CLK	P	21	03	24	iC	0.3	CGS 20 56 48 8.4N 58.4E	4.8
	BHA	P		03	59	e	0.2	Carlsberg Ridge	
	KRR	P		04	03	e	0.2		
	CIR	P		04	16	iC	0.2		
	BUL	P		04	27	iC	0.9		
19	CLK	P	00	39	32	iC	0.6	CGS 00 26 38 0.2S 124.3E	5.5
	CIR	P		39	47	e	0.2	Molucca Sea	
	KRR	P		39	56	iC	1.6		
	BUL	P		40	00	iC	1.5		
	BHA	P		40	02	iC	0.7		
19	BUL	Pn	02	47	45	e		BUL 02 46 11 26.5S 27.1E	2.9
		Sg		49	28	e	0.5	Witwatersrand	
	CIR	Pn		47	49	e			
		Sg		49	56	e	0.4		
	KRR	Pn		48	30	e			
		Sg		51	10	e	0.2		
19	CLK	P	05	27	54	iR	4.3	CGS 05 17 52 36.1N 70.1E	5.4
		S		36	04	i		Hindu Kush Region	
	BHA	P		28	10	iR	1.7		
		pP		29	04	e			
		S		36	35	i			
	KRR	P		28	19	iR	4.9		
		PcP		28	57	e			
	CIR	P		28	34	iR	1.0		
		pP		29	27	i			
	BUL	P		28	39	iR	3.1		
		PcP		29	15	e			
		pP		29	30	e			
		S		37	27	i			
19	CIR	P	11	38	43	e	0.2	CGS 11 25 17 5.0N 126.9E	5.0
	BUL	P		38	58	e	0.2	Mindanao, Philippine Is.	
19	CLK	P'	15	34	54	iC	0.7	CGS 15 15 56 53.3N 160.1E	5.4
	BHA	P'		34	57	iC	0.6	Near E. Coast of Kamchatka	
	KRR	P'		34	59	iC	0.8		
	CIR	P'		35	03	iC	0.5		
		SKP		38	45	e			
	BUL	P'		35	05	iC	0.6		
		PP		38	25	i			
		SKP		38	48	i			
19	BHA	P'	16	49	26	e	0.8	CGS 16 30 00 37.2N 116.5W	6.3
				50	07	e		S. Nevada (Underground Explosion)	
	KRR	P'		49	34	e	3.0		
				50	25	e			
	BUL	P'		49	39	iC	9.8		
	CLK	P'		49	43	iC	6.5		
		(PP)		53	05	e			
	CIR	P'		49	45	e	3.0		
		(PP)		53	10	e			
19	BHA	P	18	14	(22)	e	0.1	Distant	
	KRR	P		14	30	e	0.3		
	BUL	P		14	51	e	0.2		
	CLK	P		14	39	e	0.2		
	CIR	P		14	39	e	0.2		
19	BUL	P'	22	43	05	e	0.2	CGS 22 23 26 37.2N 116.5W	
	CLK	P'		43	11	e	0.2	S. Nevada	
20	CIR		04	31	(10)	e	0.1	Distant	
	BUL			31	21	e	0.3		

Dy	Stn	Phase	h	m	s	GM	DA	Epicentral data; Remarks	Mag
20	BHA	Pn	19	38	45	e		BUL 19 37 55 16.0S 25.8E	3.1
		Sn		39	19	i		Namwala Area, Zambia	
		S*		39	26	i	3.3		
	KRR	P*		38	57	e			
		Sn		39	34	e			
		Sg		39	49	e	2.7		
	BUL	Pn		39	10	e			
		Pg		39	27	e			
		Sn		40	04	e			
		Sg		40	29	i	1.8		
	CIR	Pn		39	41	e			
		Sn		41	01	e			
		L		41	45	i	0.9		
20	KRR	P	23	48	22	e	0.2	CGS 23 37 56 36.4N 71.0E	4.7
	BUL	P		48	42	e	0.2	Afghanistan-U.S.S.R. Border Region	
21	KRR	P'	00	34	00	e	0.2	CGS 00 14 25 37.3N 116.5W	4.9
	BUL	P'		34	04	e	0.3	S. Nevada	
	CLK	P'		34	10	e	0.2		
21	BHA	P	00	45	40	e	0.1	CGS 00 36 37 36.6N 27.1E	4.6
	CLK	P		45	51	e	0.2	Dodecanese Is.	
	KRR	P		45	57	e	0.2		
	BUL	P		46	21	e	0.3		
	CIR	P		46	27	e	0.3		
21	BUL	Pn	07	01	54	e		BUL 07 00 20 26.5S 27.3E	3.6
		Sn		03	03	e		Witwatersrand	
		Sg		03	37	i	1.8		
	CIR	Pn		01	57	e			
		Sn		03	09	e			
		Sg		03	43	i	1.8		
	KRR	Pn		02	40	e			
		Sn		04	24	e			
		SgSg		05	24	e	1.3		
21	BUL	P	09	00	14	e	0.9	Distant	
	KRR	P		00	21	e	0.2		
	CIR	P		00	37	e	0.4		
21	BHA	P'	20	16	16	e	0.2	CGS 19 56 42 43.1N 126.2W	4.6
	KRR	P'		16	22	e	0.4	Off Coast of Oregon	
	CLK	P'		16	28	e	0.3		
	BUL	P'		16	28	e	0.2		
22	CLK	P	09	18	52	iC	1.1	CGS 09 06 36 36.2N 101.9E	5.5
	BHA	P		19	13	iC	1.1	Tsinghai Province, China	
	KRR	P		19	16	iC	0.6		
	CIR	P		19	22	iC	0.7		
	BUL	P		19	29	iC	0.5		
22	BHA	P'	17	04	08	e	0.3	CGS 16 44 44 56.3N 153.8W	5.3
		PP		06	57	e		Kodiak Is. Region	
	CLK	P'		04	09	e	0.3		
		PP		06	59	e			
	KRR	P'		04	15	e	0.3		
		PP		07	10	e			
	BUL	P'		04	15	e	0.9		
		pP'		04	23	i			
		PP		07	28	e			
	CIR	P'		04	17	e	0.9		
		pP'		04	25	i			
		PP		07	33	e			

Dy	Stn	Phase	h	m	s	GM	DA	Epicentral data; Remarks	Mag
23	BUL	P'	04	25	11	e	0.2	CGS 04 05 40 56.4N 153.8W	4.7
				25	19	e		Kodiak Is. Region	
	CIR	P'		25	13	e	0.2		
				25	21	e			
23	CLK	P	06	05	58	e	0.2	CGS 05 52 51 1.7N 126.6E	5.6
	CIR	P		06	13	iC	0.3	Molucca Passage	
	KRR	P		06	21	iC	0.3		
	BUL	P		06	25	iC	0.6		
	BHA	P		06	26	iC	0.3		
23	BUL	P	08	16	28	e	0.2	CGS 08 03 28 45.0S 76.0W	4.7
	BHA	P		16	48	e	0.3	Off Coast of S. Chile	
	KRR	P		16	(48)	e	0.2		
23	BHA	P	08	42	23	iR	-	BUL 08 41 43 13.8S 25.9E	3.9
	KRR	Pn		42	54	e		Kasempa Area, Zambia	
		Sn		43	45	i			
		Sg		44	08	i	9.8		
	BUL	Pn		43	27	e			
		Sn		44	43	i			
		SgSg		45	25	i	2.4		
	CLK	Pn		43	48	iC			
		Sn		45	20	e			
		Sg		46	07	i	2.0		
	CIR	Pn		43	53	e			
		Sn		45	28	i			
		SgSg		46	25	i	2.3		
23	CLK	P	15	58	25	e	0.3	CGS 15 46 07 11.3S 11.9E	5.1
		pP		58	39	e		S. of Sumatra Is.	
	CIR	P		58	37	e	0.2		
		pP		58	51	e			
	KRR	P		58	49	e	0.5		
		pP		59	04	i			
	BUL	P		58	50	e	0.6		
		pP		59	05	i			
	BHA	P		58	57	e	0.2		
		pP		59	11	e			
23	CIR	P	22	47	15	e	0.3	CGS 22 41 25 49.0S 31.0E	4.5
	BUL	P		47	21	e	0.4	South of Africa	
	KRR	P		47	51	e	0.2		
	CLK	P		48	04	e	0.2		
	BHA	P		48	12	e	0.3		
23	BHA	P	23	30	15	e	0.2	CGS 23 20 00 36.4N 70.6E	4.7
	KRR	P		30	22	e	0.2	Hindu Kush Region	
	CIR	P		30	37	e	0.2		
	BUL	P		30	43	iR	0.4		
24	CIR	Pn	00	37	59	iC		BUL 00 37 30 21.6S 33.1E	2.9
		Sg		38	21	i	7.	Save River, Mocambique	
	BUL	Pn		38	39	e			
		Sn		39	30	e			
		Sg		39	48	e	1.7		
	KRR	Pn		38	53	e			
		Sn		39	55	e			
		Sg		40	22	e	1.4		
	BHA	Pn		39	30	e			
		Sn		40	59	i			
		L		41	51	e	0.5		
	CLK	Sg		40	29	e	0.3		
24	BUL		00	43	13	e	0.3	Distant	
				43	25	e			
	KRR			43	19	e	0.4		
	BHA			43	24	e	0.2		

Dy	Stn	Phase	h	m	s	GM	DA	Epicentral data; Remarks	Mag
24	BUL	Pn	04	26	27	e		BUL 04 24 59 26.4S 28.0E	3.5
		Sg		28	03	e	1.3	Witwatersrand	
	CIR	Pn		26	28	e			
		Sg		28	05	i	2.0		
	KRR	Pn		27	13	e			
		L		29	50	e	1.0		
24	BUL	Pn	13	05	08	e		BUL 13 03 38 26.4S 28.0E	3.1
		Sg		06	47	i	0.8	Witwatersrand	
	CIR	Pn		05	08	e			
		Sg		06	47	e	1.2		
24	CLK	P	15	55	01	e	0.3	CGS 15 42 43 7.6S 123.0E	5.2
	CIR	P		55	14	e	0.3	Banda Sea	
	KRR	P		55	25	e	0.3		
	BUL	P		55	27	e	0.4		
	BHA	P		55	32	iC	0.4		
24	BHA	Pn	15	51	14	e		BUL 15 50 39 12.9S 30.1E	2.5
		Sg		51	(45)	e	2.8	W. Muchinga Mts., Zambia	
	KRR	Sg		52	38	e	1.1		
	BUL	Sg		54	27	e	0.2		
25	BHA	P'	04	15	24	iC	0.3	CGS 03 56 39 41.7N 142.8E	5.3
	KRR	P'		15	25	e	0.3	Hokkaido, Japan Region	
	CIR	P'		15	27	iC	0.3		
	BUL	P'		15	30	iC	0.6		
	CLK	PP		16	04	e	0.2		
25	BUL	P'	08	44	22	e	0.2	CGS 08 25 29 32.1S 178.0W	4.9
	KRR	P'		44	27	e	0.2	S. of Kermadec Is.	
	BHA	P'		44	34	e	0.2		
25	BUL	Pn	09	18	30	iR		BUL 09 16 51 26.7S 26.3E	3.9
		Sn		19	45	e		W. Witwatersrand	
		Sg		20	21	i	2.9		
	CIR	Pn		18	35	e			
		Sn		19	53	e			
		Sg		20	33	i	2.5		
	KRR	Pn		19	16	e			
		Sn		21	04	e			
		L		22	10	i	1.9		
	BHA	Pn		19	45	e			
		Sn		21	59	i			
		L		23	17	i	0.7		
	CLK	Sg		23	40	e	0.9		
25	BHA	P	12	26	(06)	e	0.2	CGS 12 17 21 35.1N 24.3E	5.0
	KRR	P		26	20	e	0.5	Crete	
	BUL	P		26	51	e	0.2		
	CIR	P		26	59	e	0.2		
25	CIR	P'	19	15	38	iR	0.2	CGS 18 56 49 30.2S 177.9W	4.9
	CLK	P'		15	42	e	0.2	Kermadec Is. Region	
	BUL	P'		15	43	iR	0.5		
	KRR	P'		15	48	e	0.4		
	BHA	P'		15	53	e	0.3		
25	CIR	P'	23	00	05	iC	0.3	CGS 22 41 16 30.7S 178.1W	4.9
	CLK	P'		00	09	e	0.2	Kermadec Is. Region	
	BUL	P'		00	09	iC	0.7		
	KRR	P'		00	14	e	0.5		
	BHA	P'		00	20	e	0.4		

Dy	Stn	Phase	h	m	s	GM	DA	Epicentral data; Remarks	
26	BHA	Pn	13	21	47	iC		BUL 13 21 02 13.9S 25.6E	3.0
		Sn		22	20	e		Kasempa Area, Zambia	
		Sg		22	29	i	3.3		
	KRR	Pn		22	15	iR			
		Sn		23	08	i	1.4		
	CIR	Pn		23	11	e			
		Sn		24	51	e			
		L		25	49	e	0.3		
	BUL	Sn		24	03	i			
		Sg		24	44	i	0.4		
27	BUL	P	02	17	40	iC	1.5	CGS 02 04 51 17.3S 69.4W	4.9
	KRR	P		17	49	e	0.2	Peru-Boliva Border Region	
	BHA	P		17	49	e	0.2		
	CIR	P		17	52	iC	0.4		
	CLK	P		18	13	e	0.2		
27	CLK	Pn	03	15	29	e		BUL 03 14 39 18.9S 34.3E	3.0
		Sn		16	05	e		Zambezia Province, Mocambique	
		Sg		16	19	i	1.7		
	CIR	P*		15	36	e			
		Pg		15	40	i			
		Sg		16	22	i	3.0		
	KRR	P*		15	59	e			
		Sn		16	45	e			
		L		17	14	i	2.3		
	BUL	L		17	31	e	1.3		
	BHA	L		18	21	e	0.5		
27	KRR	Pg	08	26	21	iC		BUL 08 26 08 16.3S 29.0E	2.1
		Sg		26	29	i	5.	Kariba	
	BHA	Pg		26	45	e			
		Sg		27	13	i	0.9		
	BUL	Sg		28	05	i	0.5		
27	BHA	P	14	49	39	e	1.6	CGS 14 38 12 24.1N 91.6E	5.2
		PcP		49	48	i		India-E. Pakistan Border Region	
	KRR	P		49	40	e	0.9		
		PcP		49	50	i			
	CIR	P		49	45	e	0.3		
		PcP		49	54	e			
	BUL	P		49	56	e	0.5		
		PcP		50	05	i			
27	BUL	Pn	14	54	47	i		BUL 14 53 13 26.5S 27.2E	3.6
		Sn		55	57	i		Witwatersrand	
		Sg		56	30	i	2.3		
	CIR	Pn		54	51	e			
		Sn		56	01	e			
		Sg		56	35	i	1.8		
	KRR	Pn		55	33	e			
		Sn		57	17	e			
		SgSg		58	18	e	1.0		
27	CIR	P	22	44	36	e	0.2	CGS 22 31 16 3.5S 128.2E	5.4
	KRR	P		44	45	e	0.2	Ceram	
	BUL	P		44	49	e	0.2		
	BHA	P		44	53	e	0.2		
28	BUL	SKP	03	18	40	e	0.4	CGS 02 58 07 22.5S 179.5W	4.5
	KRR	SKP		18	47	e	0.2	S. of Fiji Is.	
	BHA	SKP		18	56	e	0.2		

Dy	Stn	Phase	h	m	s	GM	DA	Epicentral data; Remarks	Mag
29	BHA	Pn	00	17	52	iC		BUL 00 17 15 13.4S 26.3E	3.8
	KRR	Pn		18	24	e		Kasempa Area, Zambia	
		Pg		18	41	i			
		Sn		19	15	i			
		Sg		19	36	i	10.		
	BUL	Pn		17	57	e			
		Sn		20	13	i			
		L		20	56	i	2.1		
	CIR	Pn		19	23	e			
		Sn		20	57	i			
		L		21	55	i	1.7		
29	CIR	P'	02	14	20	e	0.3	CGS 01 55 33 29.9S 178.2W	5.1
	BUL	P'		14	24	e	0.6	Kermadec Is. Region	
		pP'		14	43	e			
	KRR	P'		14	29	e	0.5		
	BHA	P'		14	35	e	0.4		
29	BUL		04	2[illegible]58)		e	0.1	Distant	
	KRR			27(05)		e	0.2		
29	CIR	P'	07	12	50	e	0.2	CGS 06 54 03 16.3S 145.0E	4.7
	KRR	P'		12	50	e	0.2	Mariana Is.	
	BUL	P'		12	53	e	0.2		
29	CIR	P	07	29	07	e	0.5	CGS 07 15 51 13.6N 120.5E	5.4
	BHA	P		29	13	e	0.4	Mindoro, Philippine Is.	
	KRR	P		29	15	e	0.2		
	BUL	P		29	18	e	0.4		
29	CIR	P'	03	57	18	e	0.3	CGS 08 38 41 5.2S 151.8E	5.2
		pP'		57	33	e		New Britain Is. Region	
	KRR	P'		57	23	e	0.3		
		pP'		57	39	e			
	BUL	P'		57	24	iC	0.6		
		pP'		57	39	i			
	BHA	P'		57	28	e	0.3		
		pP'		57	42	i			
29	BUL	P	16	41	53	iC	1.8	CGS 16 29 31 24.9S 66.7W	5.2
	CIR	P		42	05	e	0.4	Salta Province, Argentina	
	KRR	P		42	06	e	0.5		
	BHA	P		42	06	e	0.5		
29	BUL	P'	17	55	21	e	0.4	CGS 17 36 30 14.5N 92.4W	5.4
	BHA	P'		55	22	e	0.5	Near Coast of Chiapas, Mexico	
	KRR	P'		55	25	e	0.5		
	CIR	P'		55	30	e	0.3		
29	CIR	P	18	05	20	e	0.3	CGS 17 54 15 0.5S 99.2E	4.6
		PcP		05	36	e		S. Sumatra	
	KRR	P		05	28	e	0.2		
		PcP		05	45	e			
	BHA	P		05	34	iR	0.5		
		PcP		05	50	i			
	BUL	P		05	36	e	0.4		
		PcP		05	51	e			
30	BHA	P'	07	22	31	e	0.4	CGS 07 03 12 57.6N 151.4W	5.4
	BUL	P'		22	38	iR	0.9	Kodiak Is. Region	
30	BHA	Pn	07	47	03	e		BUL 07 46 24 13.4S 26.3E	4.0
	BUL	Pn		48	07	e		Kasempa Area, Zambia	
		Sn		49	24	i			
		L		50	07	i	4.0		

Dy	Stn	Phase	h	m	s	GM	DA	Epicentral data; Remarks	Mag
30	BHA	Pg	08	15	38	e		BUL 08 15 09 15.4S 29.9E	2.4
		Sg		16	00	i	3.7	Chicunda Province, Zambia	
	BUL	Sg		17	39	e	0.3		
30	BUL	P	14	52	30	e	0.5	CGS 14 39 22 15.8S 70.8W	5.2
	BHA	P		52	39	e	0.1	S. Peru	
31	BUL		00	40	23	e	0.3	Distant	
	BHA			40	30	e	0.2		