SERVIÇO METEOROLÓGICO DE ANGOLA

11 AUG 1969

Centro de Geofísica de Luanda
C.P. 1228 C Luanda

BULLETIN SÉISMIQUE D'ANGOLA (PORTUGAL)

ANNÉE 4 - Nº 1 JANVIER 1968

Station seismographique de Sá da Bandeira

Coordonnées de la station:

Latitude géographique: φ = 14° 54' 08" S Longitude: λ = 13° 28' 39" E
Latitude géocentrique: ϕ = 14 48 23 S Altitude: h = 1761 m

Nature du sous-sol:
Granite

Constantes des séismographes

Séismographes	T_o (s)	T_g (s)	Amplification			
			Ts=0,2 s	Ts=0,6 s	Ts=1,0 s	Ts=15,0 s
Benioff vertical (z)	1,0	0,2	76750	33000	15300	-
Benioff vertical (Z)	1,0	21,3	400	1100	1650	120
Benioff vertical (CPZ)	1,0	0,75	38000	150000	100000	-
Benioff N/S (CPN)	1,0	0,85	38000	150000	100000	-
Benioff EW (CPE)	1,0	0,82	38000	150000	100000	-
Sprengnether vertical (LPZ)	15,0	100,0	-	-	-	1500
Sprengnether NS (LPN)	15,0	100,0	-	-	-	1500
Sprengnether EW (LPE)	15,0	100,0	-	-	-	1500

Date		Phases	Heure T.M.G.	Composantes, nature du mouvement et amplitudes (μ)	Périodes (s)	Sens du mouvement
1968 Jan.	1	P	20:30:52,0	ICPZNE	-	c, SN, WE
		U.S.C.G.S.: Epicentre: 27,5 S 71,7 W (Côte Nord du Chili) h = 33 km H = 20:18:47,7 Mag: 4,7 (C.G.S.) Δ = 79,0°				
	2	PKP	00:40:19,3	ICPZ	-	c
		pPKP	00:40:35,1	ICPZNE	-	d, SN, EW
		SKP	00:43:58,5	ICPZ	-	-
		SPP	00:55:23	eLPZ	-	-
		LQ	01:17,8		50	-
		LR	01:24:30	LPZ	40	-
		LR_1	01:28:12	LPZNE	30	-
		LR_2	01:35:10	LPZNE	20	-
		U.S.C.G.S.: Epicentre: 5,1 S - 153,4 E (Région de la Nouvelle Irlande) h = 55 km H = 00:21:10,8 Mag: 5,5 (C.G.S.) Δ = 135,5°				
	2	PKP	01:27:16,8	ICPZN	-	d, NS
		U.S.C.G.S.: Epicentre: 19,3 S - 177,6 W (Région des Iles Fidji) h = 570 km H = 02:08:43,2 Mag: 4,2 (C.G.S.) Δ = 144,1°				

Date	Phases	Heure T.M.G.	Composantes, nature du mouvement et amplitudes (μ)	Périodes (s)	Sens du mouvement
1968 Jan. 2	P	22:56:28,0	iCPZE;eLPZ	-	c, WE
	-	22:56:31,0	iCPZNE	-	d, NS, WE
	pP	22:57:23	eiCPZE;eLPZ	-	d, EW
	-	23:05:49	eLPE	-	-
	(PS)	23:06:19	eLPNE	-	-
	LR	23:25,9	LPZE	20	-
	U.S.C.G.S.: Epicentre: 22,6 S - 66,6 W (Province de Jujuy, Argentine) h = 237 km H = 22:45:08,5 Mag: 5,3 (C.G.S.) Δ = 75,4°				
2	-	23:59:14	CPZN	-	-
3	(pPKP)	02:44:35	CPZ	-	-
	U.S.C.G.S.: Epicentre: 51,8 N - 173,3 W (Andreanof, arch des Aléoutiennes) h = 39 km H = 02:24:54,1 Mag: 4,6 (C.G.S.) Δ = 141,8°				
3	LR	04:20:55	LPZN	20	-
4	P	00:29:55,4	iCPZNE	-	c, SN, WE
	pP	00:30:07,0	iCPZE	-	d, EW
	LR	00:35,2	LPNE	23	-
	LR_1	00:36,2	LPZ	25	-
	U.S.C.G.S.: Epicentre: 16,5 S - 13,6 W (Atlantique du Sud) h = 33 km H = 00:24:23 Mag: - Δ = 26,1°				
4	PKIKP	01:17:11,5	CPZ	-	-
	PKP	01:17:13,3	iCPZNE;LPZ	-	c, SN, WE
	(sPKP)	01:17:26,9	iCPZ	-	d
	SKP	01:20:47,5	iCPZ	-	-
	PKS	01:20:51,1	iCPZN;LPZ	-	-
	(SPP)	01:32:30	eLPZ	-	-
	(PPS)	01:33:10	LPN	-	-
	LR	02:00,7	LPN	60	-
	LR_1	02:06,1	LPZN	50	-
	LR_2	02:09:16	LPZN	40	-
	LR_3	02:13:06	LPZN	30	-
	LR_4	02:22:30	LPZNE	20	-
	U.S.C.G.S.: Epicentre: 52,2 N - 171,3 W (Iles Fox, Aléoutiennes Iles) h = 36 km H = 00:57:44,4 Mag: - Δ = 142,5°				
4	PKP	10:46:48	eiCPZ	-	c
	pPKP	10:46:52,1	iCPZ	-	d
	SKP	10:50:17,3	iCPZN	-	d, NS
	PKS	10:50:19,6	CPZE	-	-
	LR	11:30,7	LPZN	30	-
	LR_1	11:39,0	LPZNE	20	-
	U.S.C.G.S.: Epicentre: 9,9 S - 148,9 E (Région Est de Nouvelle - Guinée) h = 19 km H = 10:27:37,7 Mag: 5,4 (C.G.S.) Δ = 129,3°				
4	P	15:00:34,6	iCPZNE	-	d, NS, EW
	LR	15:31,1	LPZ	20	-
	U.S.C.G.S.: Epicentre: 21,5 S - 70,7 W (Nord du Chili) h = 44 km H = 14:48:30,3 Mag: 4,9 (C.G.S.) Δ = 79,3°				
5	-	16:42:32,3	eCPZE	-	-
	-	16:42:37,0	CPZE	-	-
	-	16:43:33,7	CPZ	-	-
	-	16:43:37,9	CPN	-	-
	-	16:44:32,2	CPZNE	-	-
	-	16:46:32,6	CPZNE	-	-
	PLUSIERS SEISMES				
6	P	23:39:20,5	iCPZNE;LPZNE	-	c, SN, WE
	-	23:40:09,7	iCPZNE	-	c, SN, WE
	S	23:49:15,1	iCPNE;LPZNE	-	-
	sS	23:49:28,3	CPNE	-	-
	-	23:49:30,5	CPZ	-	-
	SP	23:50:00	LPZ	-	-
	SS	23:54:15	LPZNE	-	-
	SSS	23:58:06	LPZNE	-	-
	LR	24:00:00,1	LPNE	45	-
	LR1	24:00:05,9	LPZE	30	-
	LR_2	24:00:10,0	LPZNE	20	-
	M1	24:00:10,7	LPZE	19	-
	M_2	24:00:13,5	LPZN	17	-
	U.S.C.G.S.: Epicentre: 27,8 S - 71,1 W (Nord du Chili) h = 33 km H = 23:27:21,2 Mag: = 5,8 (C.G.S.); 6¼ - 6½ (PAS); 6,0 - 6,4 (BRK) Δ = 78,4°				

Date	Phases	Heure T.M.G.	Composantes, nature du mouvement et amplitudes( )	Périodes (s)	Sens du mouvement
1968 Jan. 7	P	00:35:16,0	iCPZNE	-	c, SN, WE
	U.S.C.G.S.: Epicentre: 27,8 S - 70,9 W (Nord du Chili) h = 33 km H = 00:23:16,3 Mag: 4,9 (C.G.S.) Δ = 78,2°				
7	LR	11:00,6	LPZNE	50	-
	LR_1	11:02,4	LPZN	40	-
	LR_2	11:06,9	LPZNE	30	-
	LR_3	11:09,7	LPZNE	20	-
	U.S.C.G.S.: Epicentre: 5,1 S - 153,9 E (Région de la Nouvelle Irlande) h = 118 km H = 09:56:40,3 Mag: 5,6 (C.G.S.); 5,4 - 5,8 (BRK) Δ = 136,0°				
7	P	18:34:32,6	eiCPZNE	-	d, NS, EW
	LR	18:45,8	LPZN	20	-
	U.S.C.G.S.: Epicentre: 48,9 S - 08,4 W (Atlantique du Sud) h = 33 km H = 18:27:12 Mag: - Δ = 38,4°				
7	PKP	19:37:08,4	iCPZ	-	c
	U.S.C.G.S.: Epicentre: 16,7 S - 174,7 W (Iles Tonga) h = 119 km H = 19:17:34,3 Mag: 4,8 (C.G.S.) Δ = 147,4°				
8	P	00:27:03,7	iCPZNE	-	c, SN, EW
	LR	00:33:13	LPZNE	30	-
8	PKP	03:35:40,5	iCPZNE	-	c, NS, EW
	SKP	03:38:23,9	iCPZNE	-	c, SN, WE
	PPP	03:42:22	LPZ	-	-
	SKSP	03:57:36	LPZNE	-	-
	(SKSSKS)	03:57:34	LPZN	-	-
	LR	04:27,4	LPZN	30	-
	LR	04:33,1	LPZNE	20	-
	U.S.C.G.S.: Epicentre: 13,7 S - 171,5 E (Région des Iles Nouvelles Hébrides) h = 630 km H = 03:17:12,6 Mag: 5,2 (C.G.S.); 5,2 - 5,6 (BRK) Δ = 144,1°				
8	P	18:56:19,2	eiCPZNE;LPZ	-	c
	PcP	18:59:29,6	iCPZ	-	c
	sP	18:59:51,3	iCPZNE	-	c, NS, WE
	PP	18:59:18,7	iCPZ	-	c
	S	19:06:09,7	CPNE;LPZNE	-	-
	SP	19:06:49	LPZNE	-	-
	PS	19:07:05	CPN	-	-
	SS	19:11:21	LPZN(E)	-	-
	SSS	19:14:36	LPZE	-	-
	LR	19:21:34	LPZ	60	-
	LR_1	19:23:10	LPE	40	-
	LR_2	19:25,2	LPZ	30	-
	LR_3	19:28,2	LPZNE	20	-
	U.S.C.G.S.: Epicentre: 18,6 S - 69,9 W (Nord du Chili) h = 116 km H = 18:44:24,5 Mag: 5,4 (C.G.S.) Δ = 79,2°				
8	P	20:31:53,7	eiCPZNE;LPZ	-	c, NS, WE
	S	20:39:42	eLPZNE	-	-
	SS	20:43:32	LPZE	-	-
	LR	20:47,5	LPZNE	30	-
	LR	20:49,2	LPZNE	20	-
	U.S.C.G.S.: Epicentre: 8,2 N - 38,2 W (Atlantique Central) h = 33 km H = 20:22:15,6 Mag: 5,4 (C.G.S.) Δ = 56,2°				
8	P	21:33:31,0	iCPZN	-	c, SN
8	PKP_1	22:14:11,9	iCPZE	-	-
	PKP_2	22:14:13,4	iCPZNE;eLPZ	-	d
	(PPP)	22:20:39,1	iLPZ	-	-
	SS	22:36:54	LPZNE	-	-
	SSS	22:42:55	LPNE	-	-
	LQ	22:56,9	LPE	65	-
	LR	23:05,4	LPZNE	40	-
	LR	23:08,0	LPZNE	30	-
	LR	23:11,0	LPZNE	20	-
	M_1	23:12,2	LPZ	20	-
	U.S.C.G.S.: Epicentre: 14,8 S - 174,8 W (Région des Iles Samoa) h = 16 km H = 21:54:20,8 Mag: 5,5 (C.G.S.); 6,2 - 6,4 (BRK); 6 - 6¼ (GOL) Δ = 149,2°				

Date		Phases	Heure T.M.G.	Composantes, nature du mouvement et amplitudes(μ)	Périodes (s)	Sens du mouvement
1968 Jan.	9	pPKP	00:45:34,7	iCPZNE	-	d, NS, EW
		LR	01:38,8	LPZ	40	-
		LR	01:40,6	LPZN	30	-
		LR	01:43,0	LPZNE	20	-
		U.S.C.G.S.: Epicentre: 15,4 S - 174,5 W (Iles Tonga) h = 52 km H = 00:25:42 Mag: 4,6 (C.G.S.) Δ = 148,7°				
	9	P	01:08:59	CPZNE	-	-
	9	PKP	09:45:57,8	iCPZNE	-	d, NS, EW
		LR	10:43,4	LPZN	25	-
		LR_1	10:47,1	LPZN	20	-
		U.S.C.G.S.: Epicentre: 14,8 S - 174,8 W (Région des Iles Samoa) h = 75 km H = 09:26:13,8 Mag: 4,7 (C.G.S.) Δ = 149,2°				
	10	-	09:53:24,2	iCPZE	-	d, EW
		LR	10:38,5	LPZN	30	-
		LR_1	10:44,8	LPZN	20	-
		U.S.C.G.S.: Epicentre: 29,2 S - 177,6 W (Région des Iles Kermadec) h = 64 km H = 09:31:40,3 Mag: 5,0 (C.G.S.) Δ = 134,6°				
	10	LR	14:29,0	LPN	40	-
		LR_1	14:33,3	LPZN	30	-
		LR_2	14:42,1	LPZ	20	-
		U.S.C.G.S.: Epicentre: 53,7 S - 134,3 W (Sud Pacifique) h = 33 km H = 13:42:06 Mag: 4,8 (C.G.S.) Δ = 106,1°				
	12	P	01:04:45,1	iCPZNE	-	d, NS, WE
		PP	01:05:06,1	CPE	-	EW
		PPP	01:05:16,5	CPZNE	-	-
		S	01:08:37	CPNE	-	-
		-	01:09:56	CPNE	-	-
		(SSS)	01:10:20	CPNE	-	-
		L	01:10:29	LPE	-	-
		Lg	01:10:39	CPZNE;LPZNE	-	-
		LR	01:12:08	LPZNE	9	-
		U.S.C.G.S.: Epicentre: 33,1 S - 23,5 E (Afrique du Sud) Ressenti à Paart et à Vltenhage) h = 12 km H = 01:00:07,0 Mag: 5,2 (C.G.S.) Δ = 20,4°				
	12	-	16:38:14,7	iCPZNE	-	d, SN, WE
	13	PS	07:32:49	LPZNE	-	-
		PSP	07:34:04	LPZ	-	-
		SS	07:38:55	LPZNE	-	-
		SSS	07:42,8	LPNE	-	-
		L	07:50,0	LPN	50	-
		LR	07:58,2	LPZN	40	-
		LR_1	08:01,6	LPZE	30	-
		LR_2	08:08,1	LPZNE	20	-
		U.S.C.G.S.: Epicentre: 24,1 N - 122,2 E (Région de l'Ile Formosa) h = 8 km H = 07:03:39,2 Mag: 5,7 (C.G.S.); 6 - 6¼ (GOL) Δ = 112,8°				
	13	P	16:18:29,2	eiCPZNE;LPZ	-	c, NS, EW
		(PcP)	16:18:34,2	iCPZ; LPZ	-	-
		pP	16:19:16,5	iCPZE	-	-
		S	16:27:53,0	iCPNE; LPZE	-	-
		(SKS)	16:27:58,7	ePZN; LPN	-	-
		SSS	16:36,6	LPZNE	-	-
		PKKP	16:37,7	LPZN	-	-
		LR	16:42,5	LPZ	40	-
		LR_1	16:47,5	LPZNE	20	-
		U.S.C.G.S.: Epicentre: 24,2 S - 66,9 W (Province de Salta, Argentine) h = 192 km H = 16:07:04,2 Mag: 5,7 (C.G.S.); 5½ (PAL) Δ = 76,2°				
	13	LR	23:15,9	LPZ	40	-
		LR_1	23:16,7	LPZN	30	-
		LR_2	23:19,2	LPZN	20	-
		U.S.C.G.S.: Epicentre: 43,1 S - 81,9 W (Ouest du Chili) h = 33 km H = 22:36:22 Mag: 4,6 (C.G.S.) Δ = 83,7°				

Date	Phases	Heure T.M.G.	Composantes, nature du mouvement et amplitudes(μ)	Périodes (s)	Sens du mouvement
1968 Jan. 14	PKP	08:19:47,6	ICPZN	-	d, SN
	SKP	08:22:34	ICPZE	-	d, EW
	PP	08:23:00	ICPZNE	-	d, NS, WE
	U.S.C.G.S.: Epicentre: 22,5 S - 179,6 W (Sud des Iles Fidji)				
	h = 610 km H = 08:01:27,8 Mag: 5,2 (C.G.S.)				
	Δ = 141,3°				
14	P	10:41:13,3	ICPZNE	-	d, NS, WE
	pP	10:41:19,0	ICPZNE	-	c, SN, EW
	sP	10:41:25,4	ICPZE	-	-
	PP	10:41:34,1	ICPZ	-	c
	S	10:44:49,5	ICPZNE	-	-
	sS	10:44:59,0	CPZNE	-	-
	SS	10:45:29,8	CPN	-	-
	-	10:47:09	CPZNE	-	-
	Lg	10:47:15	CPZNE;LPZNE	-	-
	LR	10:48:52	LPZNE	08	-
	U.S.C.G.S.: Epicentre: 23,6 S - 33,0 E (Moçambique)				
	h = 33 km H = 10:36:37 Mag: 5,3 (C.G.S.)				
	Δ = 20,4°				
14	PP	12:39:37	LPZ	-	-
	SS	12:48:26	LPZ	-	-
	(AUTRES PHASES MÊLÉES AVEC LES SÉISMES SUIVANTS)				
	U.S.C.G.S.: Epicentre: 37,8 N - 13,1 E (Sicille)				
	h = 33 km H = 12:28:24 Mag: 5,1 (C.G.S.)				
	Δ = 52,7°				
14	PKP	12:43:55	eCPZ	-	-
	PKP	14:43:36,4	ICPZNE	-	d, NS, EW
	PP	14:44:11,9	ICPZ;LPZE	-	-
	SKS	12:50:05	LPZNE	-	-
	SP	12:53:34,3	CPZ; LPZNE	-	-
	SS	12:59:38	LPZNE	-	-
	LR	13:17:16	LPZNE	45	-
	LR_1	13:18:30	LPZ	40	-
	LR_2	13:25:52	LPZN	20	-
	U.S.C.G.S.: Epicentre: 7,5 S - 127,9 E (Mer de Banda)				
	h = 115 km H = 12:25:09,7 Mag: 5,9 (C.G.S.); 6¼ (PAS); 6 (PAL)				
	Δ = 111,3°				
14	PKP	(13:00:20)	CPZNE	-	-
	PP	13:03:19	LPZ	-	-
	SPP	13:15:29	LPZ	-	-
	U.S.C.G.S.: Epicentre: 52,8 N - 171,4 W (Iles Fox, Aléoutiennes)				
	h = 44 km H = 12:40:48,5 Mag: 5,6 (C.G.S.); 6¼-6½ (PAS)				
	Δ = 141,9°				
14	PKP	14:53:34,0	ICPZ	-	d
	PP	14:56:51	LPZE	-	-
	U.S.C.G.S.: Epicentre: 21,0 S - 173,7 W (Iles Tonga)				
	h = 33 km H = 14:39:59,7 Mag: 4,5 (C.G.S.)				
	Δ = 143,4°				
14	LR	16:13,4	LPZNE	40	-
	U.S.C.G.S.: Epicentre: 37,9 N - 13,1 E (Sicille)				
	h = 29 km H = 15:48:31,8 Mag: 4,7 (C.G.S.)				
	Δ = 52,8°				
14	PKIKP	18:02:32,4	CPZN	-	-
	PKP	18:02:36,1	CPZ	-	-
	(SS)	18:24:32	CPN	-	-
	LR	18:53:10	LPN	50	-
	LR_1	18:54:19	LPZ	40	-
	LR_2	18:56:39	LPZ	30	-
	LR_3	19:04:10	LPE	20	-
	U.S.C.G.S.: Epicentre: 52,7 N - 171,2 W (Iles Aléoutiennes)				
	h = 34 km H = 17:43:10,0 Mag: 5,5 (C.G.S.); 6¼ (PAS); 6¼ (PAL); 6¼ (GOL)				
	Δ = 142,0°				
15	P	01:42:17,7	CPZ	-	c
	sP	01:42:34,0	CPZN	-	-
	PPP	01:45:23	LPZ	-	-
	S	01:49:45	LPZN	-	-
	(SS)	01:53:32	LPN	-	-
	LR	01:57,0	LPZNE	40	-
	LR_1	02:02,2	LPZNE	20	-
	U.S.C.G.S.: Epicentre: 37,9 N - 13,1 E (Sicille)				
	h = 33 km H = 01:33:02,7 Mag: 5,1 (C.G.S.)				Δ = 52,8°

Date	Phases	Heure T.M.G.	Composantes, nature du mouvement et amplitudes(μ)	Périodes (s)	Sens du mouvement
1968 Jan. 15	P	02:10:19,3	CPZNE	-	-
	sP	02:10:38,9	CPE	-	-
	(PP)	02:12:29,6	CPZN	-	-
	(S)	02:17:49	LPNE	-	-
	(SS)	02:21:16	CPN; LPN	-	-
	LR	02:26:09	LPZNE	40	-
	LR	02:27,0	LPZE	30	-
	M	02:30,0	LPE	22	-
	LR	02:30,0	LPZNE	20	-
	U.S.C.G.S.: Epicentre: 37,9 N - 13,1 E (Sicilie; 146 morts 1500 blessés) h = 33 km H = 02:01:08,5 Mag: 5,4 (C.G.S.); 6 (PAS); 6 (GOL) $\Delta = 52,8^\circ$				
15	LR	08:43:46	LPZN	20	-
	U.S.C.G.S.: Epicentre: 36,0 S - 99,3 W (Pacifique du Sud) h = 33 km H = 07:53:45 Mag: 4,6 (C.G.S.) $\Delta = 99,7^\circ$				
15	LR	12:34,7	LPZN	30	-
15	L(Q)	14:09,4	LPE	-	-
	U.S.C.G.S.: Epicentre: 37,8 N - 12,8 E (Sicilie) h = 33 km H = 13:42:05 Mag: 5,3 (C.G.S.) $\Delta = 52,9^\circ$				
15	-	18:38:06	CPZNE; LPZNE	-	-
15	LR	18:50,1	LPNE	30	-
	LR_1	18:51,8	LPZNE	20	-
	U.S.C.G.S.: Epicentre: 37,7 N - 13,1 E (Sicilie) h = 6 km H = 18:22:50,1 Mag: 4,1 (C.G.S.) $\Delta = 52,6^\circ$				
16	P	16:52:00,0	CPZN	-	-
	S	16:59:25	LPNE	-	-
	SS	17:03:06	LPNE	-	-
	LR	17:07,8	LPZNE	40	-
	M	17:12,0	LPE	22	-
	U.S.C.G.S.: Epicentre: 37,9 N - 13,1 E (Sicilie) h = 14 km H = 16:42:44,3 Mag: 5,1 (C.G.S.) $\Delta = 52,8^\circ$				
16	-	18:22:28	CPZNE	-	d, NS, EW
	-	18:28,0	LPN	20	-
	LR	18:28:46	LPZE	26	-
17	LR	10:36:15	LPZN	50	-
	LR	10:38,0	LPZE	30	-
	LR	10:41,1	LPZN	20	-
	U.S.C.G.S.: Epicentre: 56,4 S - 147,0 E (Ouest d'Ile Macquarie) h = 33 km H = 09:49:50,7 Mag: - $\Delta = 98,9^\circ$				
17	(P)	23:18:08,9	CPZNE	-	-
	(pP)	23:18:15,8	CPZE	-	-
	LR	23:22:23,8	LPNE	20	-
18	Pn	07:48:05,3	CPZNE	-	-
	Sn	07:48:25,4	CPZNE	-	-
	Lg	07:48:26,5	CPNE	-	-
	$\Delta \simeq 1,5^\circ$				
18	LR	11:22,2	LPZN	-	-
18	-	11:25:20	CPZN	-	-
18	PKP	12:23:23,1	CPZNE	-	d, SN, EW
	SS	12:45:55	LPNE	-	-
	LR	13:07,1	LPE	60	-
	LR_1	11:14,2	LPZNE	35	-
	LR_2	11:23,7	LPZNE	20	-
	U.S.C.G.S.: Epicentre: 14,6 S - 178,4 W (Région des Iles Fidji) h = 33 km H = 12:03:37,4 Mag: 5,1 (C.G.S.) $\Delta = 148,2^\circ$				
18	-	19:37:19	CPZNE	-	-
	-	19:38:29	CPZNE	-	-

Date	Phases	Heure T.M.G.	Composantes, nature du mouvement et amplitudes(μ)	Périodes (s)	Sens du mouvement
1968 Jan. 20	PKP	17:01:05,9	eCPZNE; LPZ	-	d, NS, WE
	SS	17:23:20	LPNE	-	-
	SSS	17:28:43	LPN	-	-
	L	17:43,0	LPNE	60	-
	L	17:48,3	LPZNE	50	-
	L	17:50,3	LPZNE	40	-
	M	17:55,7	LPZ	23	-
	U.S.C.G.S.: Epicentre: 16,2 S - 178,1 E (Iles Fidji) h = 21 km H = 16:41:27,1 Mag: 5,6 (C.G.S.); 6 - 6,2 (BRK) Δ = 145,4°				
20	-	17:05:07,5	eCPZN	-	c, NS
20	PKP	17:52:34,8	iCPZNE	-	c
	U.S.C.G.S.: Epicentre: 18,9 S -178,0 W (Région des Iles Fidji) h = 626 km H = 17:34:05,4 Mag: 4,5 (C.G.S.) Δ = 144,4°				
20	P	18:19:28,4	iCPZN	-	d, SN
20	P	18:44:09,8	iCPZ	-	d
20	PKIKP	21:39:54,9	iCPZ	-	-
	PKP	21:40:07,5	iCPZNE	-	c
	pPKP	21:41:28,9	iCPZNE	-	-
	PP	21:42:43,6	iCPZN	-	-
	SKP	21:43:03,2	iCPZNE;LPZ	-	-
	PKS	21:43:46	LPN	-	-
	PPP	21:45:42,2	LPZ	-	-
	U.S.C.G.S.: Epicentre: 29,9 S - 179,5 W (Iles Kermadec) h = 349 km H = 21:21:31,6 Mag: 5,8 (C.G.S.); 6,3 - 6,5 (BRK) Δ = 133,5°				
21	P	16:48:26,8	iCPZE;LPZ	-	d, WE
	pP	16:48:37,2	iCPZNE; LPZNE	-	c, SN, WE
	PP	16:49:36	LPZE	-	-
	PPP	16:49:54,9	CPZE; LPZNE	-	d, EW
	-	16:53:16	LPZNE	-	-
	-	16:53:44	LPZNE	-	-
	LR	16:55,1	LPZNE	25	-
	M	16:55,5	LPZNE	-	-
	LR	16:55,7	LPZNE	20	-
	U.S.C.G.S.: Epicentre: 1,2 S - 14,0 W (Ascension) h = 33 R. H = 16:42:29,2 Mag: 6,2 (PAS); 6,5 - 6,9 (BRK); 6¼ (PAL) Δ = 30,4°				
21	Pn	20:58:07,2	CPZNE	-	d, NS, EW
	Sn	20:58:29,2	CPZNE	-	d, NS, EW
	Lg	20:58:34,5	CPZNE	-	-
	$\Delta \simeq 1,6°$				
21	PKP	23:14:19,0	iCPZ	-	d
	pPKP	23:14:34,1	iCPZNE	-	c, SN, WE
	SKP	23:17:44,7	iCPZ	-	-
	U.S.C.G.S.: Epicentre: 5,0 S - 150,0 E (Nouvelle Bretagne) h = 185 km H = 22:55:35,8 Mag: 5,0 (C.G.S.) Δ = 133,3°				
22	P	05:29:13,5	eCPZ	-	d
	SSS	05:32:45,5	eCPZNE	-	-
	Lg	05:33:54,2	CPZNE	-	-
	LR	05:34:04,4	LPZNE	20	-
	BUL (Rhodésie) Epicentre: 5,1 S - 26,9 E (Lualaba Valey, Congo) h = - H = 05:25:10 Mag: 4,6 (C.G.S.) Δ = 16,5°				
22	P	10:47:28,5	iCPZNE	-	c, SN, WE
	U.S.C.G.S.: Epicentre: 38,2 N - 75,6 E (Province de Sinklong, Chine) h = 108 km H = 10:35:36,6 Mag: 5,3 (C.G.S.) Δ = 78,2°				
22	LR	19:28,6	LPZ	20	-
	LR_1	19:34,2	LPZNE	15	-
	U.S.C.G.S.: Epicentre: 9,8 S - 149,0 (Nouvelle Guinée) h = 27 km H = 18:16:49,8 Mag: 5,3 (C.G.S.) Δ = 129,5°				

Date	Phases	Heure T.M.G.	Composantes, nature du mouvement et amplitudes(μ)	Périodes (s)	Sens du mouvement
1968 Jan. 22	P	20:44:03,0	iCPZNE	-	d, NS, EW
	U.S.C.G.S.: Epicentre: 33,8 N - 46,9 E (Région interieur entre Iran - Irak)				
	h 33 R H = 20:34:10,0 Mag: 5,0 (C.G.S.)				
	Δ = 58,2°				
22	P	21:30:34,3	eiCPZNE	-	c, SN, EW
	U.S.C.G.S.: Epicentre: 33,7 N - 46,9 E (Région interieur entre Iran - Irak)				
	h = 10 km H = 21:20:38,5 Mag: 5,0 (C.G.S.)				
	Δ = 58,0°				
23	PKP	16:26:16,6	iCPZ	-	c
	pPKP	16:26:27,7	iCPNE	-	SN, WE
	LR	17:23,5	LPZ	30	-
	LR_1	17:26,2	LPZNE	25	-
	LR_2	17:35,1	LPZNE	20	-
	U.S.C.G.S.: Epicentre: 52,1 N - 171,3 W (Iles Aléoutiennes)				
	h = 53 km H = 16:06:50,1 Mag: 5,2 (C.G.S.); 5,0 - 5,4 (BRK); 5¼ - 5¾ (PAL)				
	Δ = 142,6°				
23	-	18:17:46,7	iCPZNE	-	d, SN, WE
23	P	19:24:53,1	iCPZE	-	c, WE
	U.S.C.G.S.: Epicentre: 8,7 N - 37,7 E (Ethiopie)				
	h = 33 R H = 19:18:13,0 Mag: 5,1 (C.G.S.)				
	Δ = 33,7°				
23	PKP	19:35:40,5	iCPZNE; LPZ	-	c, SN, WE
	U.S.C.G.S.: Epicentre: 40,8 N - 142,8 E (Proche de la Côte est de Hunshu, Japon)				
	h = 35 km H = 19:16:29,0 Mag: 4,7 (C.G.S.)				
	Δ = 129,0°				
23	LR	19:35,2	LPNE	25	-
23	S	21:50:53	CPNE	-	d, NS
	Lg	21:23:14	CPNE	-	-
	U.S.C.G.S.: Epicentre: 23,5 S - 33,0 E (Moçambique)				
	h = 33 R H = 21:12:37 Mag: -				
	Δ = 20,3°				
24	P	01:09:00,5	iCPZ	-	d
	pP	01:09:09,7	iCPZE	-	d, EW
	U.S.C.G.S.: Epicentre: 8,1 N - 38,1 W (Atlantique Central)				
	h = 33 R H = 00:59:21,9 Mag: 5,0 (C.G.S.)				
	Δ = 56,1°				
24	-	09:53:15,7	iCPZ	-	d
24	(Lg)	21:36:25	CPZNE	-	-
	BUL (Rhodésie) Epicentre: 8,6 S - 27,4 E (Mts. Mulembe, Congo)				
	h = - H = 21:28:38 Mag: 4,1 (C.G.S.)				
	Δ = 15,0°				
25	P	10:05:49,8	iCPZNE	-	d, NS, EW
	pP	10:06:00,0	iCPZN	-	c, SN
	LR	10:20,5	LPZNE	40	-
	LR_1	10:22,5	LPZNE	30	-
	LR_2	10:24,8	LPZNE	20	-
	U.S.C.G.S.: Epicentre: 37,8 N - 13,2 E (Sicilie)				
	h = 33 R H = 09:56:48,7 Mag: 5,1 (C.G.S.); 5½ - 5¾ (GOL)				
	Δ = 52,7°				
25	Lg	18:16:07	CPZNE	-	-
	BUL (Rhodésie) Epicentre: 16,6 S - 28,3 E (Kariba)				
	h = - H = 18:09:44 Mag: 3,3 (C.G.S.)				
	Δ = 14,4°				
25	-	22:45:05,5	CPZE	-	c

Date	Phases	Heure T.M.G.	Composantes, nature du mouvement et amplitudes(μ)	Périodes (s)	Sens du mouvement
1968 Jan. 26	P	04:59:45,7	iCPZE	-	d, EW
	pP	04:59:57,5	eiCPZE	-	c, EW
	PP	05:04:00	LPZ	-	-
	-	05:10:40	LPE	-	-
	S	05:11:25	LPN	-	-
	SPP	05:14:03	LPZNE	-	-
	SS	05:18:44	LPE	-	-
	SSP	05:19:00	LPN	-	-
	SSS	05:22:38	LPZNE	-	-
	LR	05:29,3	LPN	60	-
	LR_1	05:29,7	LPN	50	-
	LR_2	05:30,3	LPN	40	-
	LR_3	05:30,9	LPZNE	30	-
	M	05:38,0	LPZE	25	-
	LR_4	05:42,0	LPZNE	20	-
	M_1	05:43,0	LPZNE	20	-
	LR_5	05:46,2	LPZNE	16	-
	M_2	05:50,0	LPZ	-	-

U.S.C.G.S.: 8,8 S - 120,4 E (Ile Flores)
h = 29 R H = 04:45:41,4 Mag: 5,9 (C.G.S.); 6½ (PAS); 6,5 - 6,9 (BRK); 6½ - 6¾ (GOL), 6¾ - 7 (PAL)
Δ = 103,8°

26	LR	13:37,5	LPZ	30	-
	LR	13:40,3	LPZE	20	-

U.S.C.G.S.: Epicentre: 24,3 N - 111,5 W (Californie)
h = 33 R H = 12:30:46,3 Mag: 5,3 (C.G.S.); 5½ (GOL)
Δ = 127,7°

27	LR	01:20,9	LPZE	30	-
	LR	01:23,8	LPZE	20	-

U.S.C.G.S.: Epicentre: 29,9 N - 42,8 W (Atlantique Nord)
h = 34 km H = 00:48:35,6 Mag: 5,0 (C.G.S.)
Δ = 70,3

27	LR	14:52,6	LPZ	30	-
	LR_1	14:54,4	LPZNE	26	-
	LR_2	15:00,1	LPZNE	20	-

U.S.C.G.S.: Epicentre: 23,2 N - 121,6 E (Taiwan)
h = 35 km H = 13:56:23,8 Mag: 5,2 (C.G.S.) Δ = 112,2°

29	P	05:11:24,0	iCPZNE	-	c, NS, EW
	pP	05:12:13,2	iCPZNE	-	c, NS, EW

U.S.C.G.S.: Epicentre: 36,3 N - 70,4 E (Hindu Kush)
h = 225 km H = 05:00:10,0 Mag: 5,5 (C.G.S.)
Δ = 73,2°

29	P	09:00:36,5	iCPZN	-	d, NS

U.S.C.G.S.: Epicentre: 54,6 S - 1,3 E (Ile Bouvet)
h = 33 R H = 08:52:56,9 Mag: 5,3 (C.G.S.)
Δ = 40,8°

29	PKIKP	10:32:22,6	iCPZ	-	d
	PKP	10:32:34,5	iCPZNE	-	d, SN, WE
	PP	10:35:16	eLPZ	-	-
	PPP	10:37:52	eLPZ	-	-

U.S.C.G.S.: Epicentre: 5,6 S - 153,9 E (Nouvelle Irlande)
h = 70 km H = 10:13:16,5 Mag: 5,3 (C.G.S.)
Δ = 135,8°

29	PKIKP	10:38:03,5	iCPZN	-	c, SN
	PKP	10:38:14,4	iCPZNE	-	c, NS, EW
	PP	10:40:33,5	iCPZNE	-	c, NS, EW
	SKP	10:41:35,5	iCPZ	-	-
	PKS	10:41:40,9	iCPZNE	-	-
	L	L GROUPE - Enregistrement confus.			

U.S.C.G.S.: Epicentre: 43,6 N - 146,7 E (Ile Kurile)
h = 40 R H = 10:19:05,6 Mag: 7,0 (PAS); 7,7 - 7,9 (BRK); 7 - 7¼ (PAL); 7,0 (GOL)
Δ = 131,0°

29	-	12:30:06,5	eCPZ	-	d

Date	Phases	Heure T.M.G.	Composantes, nature du mouvement et amplitudes(μ)	Périodes (s)	Sens du mouvement
1968 Jan. 29	PKP	16:02:28,2	iCPZ	-	d
	-	16:02:41,4	eCPZ	-	d
	LR	16:49,2	LPZN	30	-
	LR_1	16:53,9	LPZNE	20	-
	U.S.C.G.S.: Epicentre: 33,8 S - 179,3 W (Au sud de Ile Kermadec) h = 33 R H = 15:43:19 Mag: 5,1 (C.G.S.) Δ = 129,8°				
29	PKIKP	17:01:53,3	iCPZ	-	c
	PKP	17:02:02,0	eCPZN	-	d, NS
	PP	17:04:31,0	CPZNE	-	c, NS, WE
	LR	17:49,7	LPZ	50	-
	LR_1	17:49,5	LPZNE	40	-
	LR_2	17:50,2	LPZNE	30	-
	LR_3	17:54,4	LPZNE	20	-
	U.S.C.G.S.: Epicentre: 43,5 N - 147,2 E (Ile Kurile) h = 36 R H = 16:42:50,4 Mag: 5,7 (C.G.S.) Δ = 132,4°				
29	LQ	21:46,2	LPE	-	-
	LR	21:55,1	LPZNE	40	-
	LR_1	22:06,1	LPZNE	30	-
	LR_2	22:14,7	LPZNE	20	-
	U.S.C.G.S.: Epicentre: 56,4 N - 153,6 W (Région de Ile Kodiak) h = 6 km H = 20:52:21,3 Mag: 5,2 (C.G.S.) Δ = 137,3°				
30	LR	03:03,5	LPZNE	20	-
	LR_1	03:15,7	LPZNE	15	-
	U.S.C.G.S.: Epicentre: 43,3 N - 147,7 E (Ile Kurile) h = 33 R H = 01:48:28,6 Mag: 5,1 (C.G.S.) Δ = 131,8°				
30	LR	03:41,2	LPZNE	20	-
	LR	03:54,2	LPZNE	15	-
	U.S.C.G.S.: Epicentre: 43,4 N - 147,7 E (Ile Kurile) h = 25 km H = 02:20:31 Mag: 4,8 (C.G.S.) Δ = 131,8°				
30	LR	04:02,7	LPZ	30	-
	LR	04:21,0	LPZNE	20	-
	LR	04:24,6	LPZNE	15	-
	U.S.C.G.S.: Epicentre: 43,1 N - 147,2 E (Ile Kurile) h = 28 R H = 03:01:44,0 Mag: 5,4 (C.G.S.) Δ = 131,8°				
30	P	03:56:59,8	iCPZNE	-	d, SN, WE
	pP	03:59:08,7	iCPZNE	-	d, NS, EW
	LR	04:34,0	LPZNE	20	-
	LR_1	04:36,8	LPZNE	15	-
	U.S.C.G.S.: Epicentre: 6,1 S - 113,3 E (Java) h = 594 R H = 03:44:24,4 Mag: 6,2 (C.G.S.) Δ = 97,9°				
30	-	04:13:32,5	iCPZNE	-	c, SN, WE
30	P	08:20:49,3	eiCPZNE	-	c, SN, WE
	U.S.C.G.S.: Epicentre: 36,4 N - 70,7 E (Région de Hindu Kush) h = 205 R H = 08:17:32,3 Mag: 5,2 (C.G.S.) Δ = 74,4°				
30	P	20:24:25,6	iCPZNE	-	c, SN, WE
	PcP	20:24:31,7	iCPZE	-	c, WE
	pP	20:24:49,7	iCPZE	-	c, EW
	LR	20:49,8	LPZE	40	-
	LR_1	20:51,4	LPZE	30	-
	LR_2	20:54,5	LPZE	20	-
	LR_3	20:58,2	LPZE	15	-
	U.S.C.G.S.: Epicentre: 22,0 S - 68,5 W (Nord-est de Chili) h = 118 km H = 20:12:41,7 Mag: 5,3 (C.G.S.) Δ = 77,2°				
31	P	02:13:54,9	iCPZNE	-	d, NS, EW
	pP	02:15:54,6	iCPZNE	-	c, SN, WE
	U.S.C.G.S.: Epicentre: 27,9 S - 63,2 W (Province de Santiago de Estero, Argentina) h = 580 R H = 02:03:29,4 Mag: 4,9 (C.G.S.) Δ = 71,5°				

Date	Phases	Heure T.M.G.	Composantes, nature du mouvement et amplitudes(μ)	Périodes (s)	Sens du mouvement
1968 Jan. 31	P	09:09:28,7	eCPZN	-	c, SN
	LR	09:24,1	LPZN	30	-
	LR_1	09:22,3	LPE	25	-
	LR_2	09:22,7	LPZNE	20	-
	LR_3	09:28,5	LPZNE	15	-
	U.S.C.G.S.: Epicentre: 60,0 S - 18,3 W (Sud-ouest de l'Ocean Atlantique)				
	h = 32 km H = 09:00:30* Mag: 5,0 (C.G.S.)				
	Δ = 50,7°				
31	P	11:58:07,6	iCPZ	-	c
	pP	11:58:13,1	iCPZ	-	d
	U.S.C.G.S.: Epicentre: 29,9 N - 92,1 E (Tibet)				
	h = 18 R H = 11:45:16,9 Mag: 5,2 (C.G.S.)				
	Δ = 87,9°				
31	Pg	15:01:39,5	iCPZNE	-	-
	Sg	15:01:48,7	iCPZNE	-	-
31	-	22:39:03,8	iCPZNE	-	c, SN, EW
	-	22:45,4	LPN	-	-
	LR	22:47,8	LPZNE	35	-
	LR_1	22:48,4	LPZNE	20	-

SERVIÇO METEOROLÓGICO DE ANGOLA

Centro de Geofísica de Luanda
C.P. 1228 C Luanda

BULLETIN SÉISMIQUE D'ANGOLA (PORTUGAL)

ANNÉE 4 - Nº 2 FÉVRIER 1968

Station seismographique de Sá da Bandeira

Coordonnées de la station :

Latitude géographique: φ = 14° 54' 08" S Longitude: λ = 13° 28' 39" E
Latitude géocentrique: Φ = 14° 48' 23" S Altitude: h = 1761 m

Nature du sous-sol:

Granite

Constantes des séismographes

Séismographes	T_o (s)	T_g (s)	Amplifications			
			Ts=0,2 s	Ts=0,6 s	Ts=1,0 s	Ts=15,0 s
Benioff vertical (z)	1,0	0,2	76750	33000	15300	-
Benioff vertical (Z)	1,0	21,3	400	1100	1650	120
Benioff vertical (CPZ)	1,0	0,75	38000	150000	100000	-
Benioff N/S (CPN)	1,0	0,85	38000	150000	100000	-
Benioff EW (CPE)	1,0	0,82	38000	150000	100000	-
Sprengnether vertical (LPZ)	15,0	100,0	-	-	-	1500
Sprengnether NS (LPN)	15,0	100,0	-	-	-	1500
Sprengnether EW (LPE)	15,0	100,0	-	-	-	1500

Date		Phases	Heure T.M.G.	Composantes, nature du mouvement et amplitudes(μ)	Périodes (s)	Sens du mouvement
1968 Fev.	1	PKP	23:32:46,7	ICPZ	-	c
		U.S.C.G.S.: Epicentre: 18,5 S - 169,0 E (Nouvelles Hébrides)				
		h = 228 km H = 23:13:47,2 Mag: 5,1 (C.G.S.)				
		Δ = 138,8°				
	2	PKP	19:05:12,0	ICPZ	-	d
		-	19:05:15,6	ICPZNE	-	d, SN, EW
		-	19:05:28,8	ICPZ	-	d
		U.S.C.G.S.: Epicentre: 16,0 S - 177,9 W (Iles Fidji)				
		h = 417 km H = 18:46:14,1 Mag: 4,7 (C.G.S.)				
		Δ = 147,1°				
	3	PS	06:05:50	eLPZE	-	c
		SSP	06:12:21	eLPZNE	-	c, SN, WE
		LQ	06:23,3	LPNE	50	-
		LR	06:28,4	LPZ	40	-
		LR_1	06:34,2	LPZE	30	-
		U.S.C.G.S.: Epicentre: 16,7 N - 99,4 W (Côte de Guerrero, Méxic)				
		h = 9 km H = 05:36:14,6 Mag: 5,7 (C.G.S.)				

Notes: 1 mort en Acapulco, faible dans la ville du Méxic, senti dans tout le Sud du Méxic.

Mag: 6 - 6¼ (PAS), 5,7 - 5,8 (BKS), 6¼ - 6½ (GOL)

Δ = 115,7°

Date	Phases	Heure T.M.G.	Composantes, nature du mouvement et amplitudes(μ)	Périodes (s)	Sens du mouvement
1968 Fev. 4	LR	10:31,7	LPZNE	20	-
4	PP	11:22:18	eLPZNE	-	-
	SKP	11:23:30	eLPZNE	-	-
	-	11:31:50	eLPZ	-	-
	(PS)	11:32:43	eLPZN	-	-
	PPS ou SPP	11:34:19	eLPE	-	-
	SSP	11:40:28	eLPN	-	-
	-	11:45:56	eLPZNE	-	-
	LR	12:01,2	LPZNE	30	-
U.S.C.G.S.: Epicentre: 43,0 N - 147,1 E (Iles Kourile) h = 33 R H = 11:00:50,1 Mag: 5,5 (C.G.S.) Δ = 131,5°					
4	P	11:39:10,4	iCPZE	-	c, SN
	-	11:39:48,8	iCPZE	-	d, NS
	-	11:40:11,2	iCPE	-	EW
U.S.C.G.S.: Epicentre: 19,6 S - 68,2 W (Chili - Bolivie) h = 114 km H = 11:27:24,8 Mag: 5,3 (C.G.S.) Δ = 77,4°					
4	LR	12:13,3	LPZNE	20	-
	LR_1	12:21,7	LPZNE	20	-
6	LR	16:19,2	LPZNE	30	-
6	LR	23:44,2	LPZNE	45	
U.S.C.G.S.: Epicentre: 10,2 N - 103,7 (Au large de la côte du Méxic) h = 53 km H = 22:47:52,4 Mag: 4,8 (C.G.S.); 5,1 - 5,5 (BRK) Δ = 118,7°					
7	PP	00:28:58,5	iCPZNE	-	d, SN, WE
	PPP	00:29:06,8	iCPZNE	-	c, SN, WE
	LR	00:35,0	LPZNE	28	-
U.S.C.G.S.: Epicentre: 35,6 S - 17,2 W (Atlantique Sud) h = 33 R H = 00:20:53 Mag: 5,1 (C.G.S.) Δ = 34,4°					
7	LR	09:41,2	LPZE	40	-
	LR1	09:46,0	LPZNE	26	-
U.S.C.G.S.: Epicentre: 43,6 N - 127,3 W (Au large de la côte de l'Oregon) h = 33 R H = 08:35:29,6 Mag: 5,1 (C.G.S.); 5,0 (BRK); 5 - 5¼ (PAL) Δ = 136,0°					
7	-	13:32:09	eCPZN	-	d, SN
	-	13:32:18,5	iCPZ	-	d
7	P	22:31:21,0	iCPZN	-	c, NS
	LR	22:54,9	LPZN	17	-
U.S.C.G.S.: Epicentre: 36,7 N - 26,8 E (Iles Sporades) h = 161 km H = 22:22:20,2 Mag: 5,0 (C.G.S.) Δ = 53,1°					
8	P	10:21:51,6	iCPZE	-	d, WE
U.S.C.G.S.: Epicentre: 21,8 S - 68,5 W (Région entre Chili-Bolivie) h = 119 km H = 10:10:07,1 Mag: 4,8 (C.G.S.) Δ = 77,2°					
8	P	11:07:15,2	iCPZ	-	d
	LR	11:21,0	LPZNE	50	-
U.S.C.G.S.: Epicentre: 14,6 N - 53,9 E (Mer de l'Arabie) h = 33 R H = 10:58:22,1 Mag: 5,2 (C.G.S.) Δ = 49,7°					
8	P	12:37:13,5	iCPZNE; iLPZNE	-	c, NS, EW
	PP	12:39:10	eLPZNE	-	c, SN, WE
	PS	12:44:30	eLPZNE	-	d, SN, WE
	SS	12:48:10	eLPNE	-	NS, EW
	LR	12:52,1	LPZNE	50	-
U.S.C.G.S.: Epicentre: 14,6 N - 54,0 E (Mer de l'Arabie) h = 33 R H = 12:28:21,0 Mag: 5,4 (C.G.S.) Δ = 49,7°					

Date	Phases	Heure T.M.G.	Composantes, nature du mouvement et amplitudes(μ)	Périodes (s)	Sens du mouvement
1968 Fev. 8	P	14:51:13,0	iCPZNE	-	d, NS, WE
	(pP)	14:51:21,8	iCPZNE	-	d, SN, WE
	PP	14:51:29,8	iCPZNE	-	d, NS, WE
	(S)	14:54:10,2	iCPE	-	WE
	SS	14:54:26,6	iCPE	-	EW
	-	14:54:32,5	iCPN	-	-
	(SSS)	14:54:40,0	iCPZ	-	c
	-	14:55:04	eiLPE	-	-
	-	14:55:23,2	iCPE	-	EW
	-	14:55:31	eiLPZ	-	-
	-	14:55:40,5	iCPZ	-	c
	-	14:55:46,5	iCPN	-	SN
	(Lg)	14:55:49,5	iCPZE;iLPZNE	-	d, EW
	LR	14:56,1	LPZNE	8	-
	U.S.C.G.S.: Epicentre: 2,4 S - 23,5 E (République du Congo) h = 33 R H = 14:47:30 Mag: 4,7 (C.G.S.) Δ = 16,0°				
9	Pg	14:44:28	eiCPZNE	-	-
	Sg	14:44:31,4	iCPZN	-	d, NS
	-	14:44:59,0	iCPZNE	-	c,SN, WE
	Δ = 0,3°				
11	-	12:34:56,5	iCPZN	-	d, SN
11	P	20:50:31,0	iCPZ	-	c
	U.S.C.G.S.: Epicentre: 34,2 N - 78,6 E (Frontière Kachemire - Tibet) h = 44 km H = 20:38:29,4 Mag: 5,1 (C.G.S.) Δ = 78,9°				
12	PKP	06:03:50,5	iCPZNE	-	d, NS, EW
	-	06:04:09,5	iCPZNE;eLPZNE	-	d, NS, EW
	PP	06:06:37,5	iCPZNE;eLPZNE	-	d, NS, EW
	-	06:07:38,5	iCPZNE;eLPZNE	-	c, SN, WE
	-	06:13:38	eLPZNE	-	-
	-	06:15:24	eLPZNE	-	-
	-	06:18:06	eLPZNE	-	-
	-	06:24:39	eLPZNE	-	-
	-	06:26:31	eLPZNE	-	-
	LR	06:33,6	LPZNE	30	-
	U.S.C.G.S.: Epicentre: 5,5 S - 153,2 E (Nouvelle Irlande) h = 74 km H = 05:44:47,6 Mag: 7 - 7¼ (PAS); 7 - 7,5 (BRK); 7 - 7¼ (PAL) Δ = 135,2°				
12	PKP	07:56:18,0	iCPZ	-	c
	U.S.C.G.S.: Epicentre: 18,4 S - 173,1 W (Iles Tonga) h = 26 km H = 07:36:37,4 Mag: 4,8 (C.G.S.) Δ = 146,1°				
12	P	10:28:19,5	iCPZ	-	c
	U.S.C.G.S.: Epicentre: 38,1 N - 17,8 E (Sud de l'Italie) h = 15 km H = 10:18:51,9 Mag: 5,3 (C.G.S.) Δ = 53,9°				
13	P	08:08:25,7	iCPZNE	-	c, NS, WE
	U.S.C.G.S.: Epicentre: 31,4 S - 69,7 W (Province de San Juan, Argentine) h = 115 R H = 07:56:43,4 Mag: 4,8 (C.G.S.) Δ = 76,6°				
13	LR	15:21,7	LPZNE	20	-
13	LR	19:19,2	LPZE	20	-
14	-	04:11:17,0	iCPZNE	-	c, SN, WE
	-	04:11:38,5	iCPZNE	-	c, SN, WE
14	LR	04:13,3	LPZNE	30	-
	U.S.C.G.S.: Epicentre: 37,2 S - 77,8 E (Océan Indien) h = 33 R H = 03:43:50 Mag: - Δ = 60,7°				
14	P	11:42:15,6	iCPZE	-	d, WE
	LR	12:01,2	LPZNE	30	-
	U.S.C.G.S.: Epicentre: 37,2 S - 78,0 E (Océan Indien) h = 33 R H = 11:32:03 Mag: 5,4 (C.G.S.) Δ = 60,7°				

Date	Phases	Heure T.M.G.	Composantes, nature du mouvement et amplitudes(μ)	Périodes (s)	Sens du mouvement
1968 Fev. 15	LR	07:00,3	LPZN	30	-
15	P	22:58:53,7	iCPZE	-	d, EW
	LR	23:06,1	LPZE	30	-
U.S.C.G.S.: Epicentre: 19 S - 12,7 W (Nord de l'île Ascension)					
h = 33 R	H = 22:52:54	Mag: 5,1 (C.G.S.)			
Δ = 28,9°					
16	LR	04:23,5	LPZNE	30	-
16	-	14:44:14,0	iCPZNE	-	c, SN, WE
17	P	06:30:54,8	iCPZNE	-	d, NS, EW
	-	06:31:18,2	iCPZNE	-	d, NS, WE
	(S)	06:35:17	eLPZNE	-	-
	-	06:35:47,7	iCPNE	-	NS, EW
	-	06:36:02,4	iCPZ	-	c
	-	06:38:02,2	iCPZNE; eLPNE	-	d, NS, EW
	(Lg)	06:38:16,4	iCPZNE; iLPZNE	-	c, SN, WE
	LR	06:39:42	LPZNE	10	-
U.S.C.G.S.: Epicentre: 5,0 - 35,9 E (Lac Tanganyika)					
h = 33 km	H = 06:25:39	Mag: 4,5 (C.G.S.)			
Δ = 24,2°					
17	P	07:09:36,7	iCPZE	-	d, EW
	-	07:15:42,8	iCPZ	-	c
	-	07:16:44,0	iCPNE	-	SN, EW
	-	07:16:50	eCPZ	-	-
	Lg	07:17:04,5	iCPZNE;eLPZNE	-	d, NS, WE
	LR	07:18:17	LPN	7	-
	LR_1	07:18:38	LPZE		
U.S.C.G.S.: Epicentre: 5,2 S - 36,0 E (Lac Tanganyika)					
h = 33 R	H = 07:04:18	Mag: 4,2 (C.G.S.)			
Δ = 24,2°					
17	-	17:59:40,8	iCPE	-	WE
	-	18:00:06	eCPNE	-	-
	-	18:00:12,0	iCPZ	-	-
17	-	20:04:56,2	iCPZ	-	d
18	-	12:45:07,0	iCPZE	-	d
	-	12:46:25,0	iCPNE	-	NS, WE
19	LR	15:10,1	LPZNE	20	-
U.S.C.G.S.: Epicentre: 5,5 S - 153,1 E (Nouvelle Irlande)					
h = 73 km	H = 13:55:12,2	Mag: 5,5 (C.G.S.)			
Δ = 135,2°					
19	-	15:44:25,5	iCPZE	-	d, EW
	-	15:44:37,0	iCPN	-	NS
19	LR	15:48,5	LPZNE	20	-
U.S.C.G.S.: Epicentre: 5,5 S - 153,1 E (Nouvelle Irlande)					
h = 73 km	H = 14:31:16	Mag: 4,2 (C.G.S.)			
Δ = 135,2°					
19	P	22:55:15	eCPZNE;eLPZNE	-	c, NS
	-	22:56:08,1	iCPZNE	-	c, SN, WE
	PP	22:57:23,7	iCPZN;eLPZN	-	d
	S	23:03:02,5	iCPZNE;iLPZNE	-	c, SN, EW
	-	23:05:43	eCPZ	-	c
	-	23:05:45,7	iCPZN	-	c, SN
	LR	23:22,3	eCPZNE;eLPZNE	10	-
U.S.C.G.S.: Epicentre: 39,4 N - 25,0 E (Mer Egée)					
h = 7 km	H = 22:45:41,2	Mag: 7¼ - 7½ (PAS); 6,4 - 6,7 (BRK); 7¼ - 7½ (PAL); 7¼ - 7½ (GOL)			
Notes: 20 morts, 18 blessés. Dangereux en Aylos Evstratios, Lemnos et Lesbos. Senti en Grèce, Italie et Turquie.					
Δ = 55,9°					
20	P	02:30:35,0	iCPZNE	-	d, NS, EW
	pP	02:30:40,1	iCPZNE	-	d, NS, EW
U.S.C.G.S.: Epicentre: 12,4 N - 46,9 W (Atlantique Nord)					
h = 13 km	H = 02:19:49,6	Mag: 5,6 (C.G.S.)			
Δ = 65,7°					

Date	Phases	Heure T.M.G.	Composantes, nature du mouvement et amplitudes(μ)	Périodes (s)	Sens du mouvement
1968 Fev. 20	P	16:59:54,5	iCPZN	-	c, SN
	U.S.C.G.S.: Epicentre: 36,2 N - 27,5 E (Iles Sporades)				
	h = 53 km H = 16:50:43,3 Mag: 4,9 (C.G.S.)				
	△ = 52,8°				
20	P	21:49:51,1	iCPZNE	-	d, SN, WE
	U.S.C.G.S.: Epicentre: 27,9 S - 66,4 W (Catamarca, Argentine)				
	h = 157 km H = 21:38:29,2 Mag: 4,9 (C.G.S.)				
	△ = 74,3°				
21	LR	04:51,1	LPZNE	24	-
21	-	15:49:13,3	iCPZ	-	d
21	-	18:32:05,0	iCPE	-	EW
	-	18:32:09,1	iCPN	-	SN
	-	18:32:11,6	iCPZ	-	d
21	PKP	19:28:05,8	iCPZ	-	c
	U.S.C.G.S.: Epicentre: 51,4 N - 176,1 W (Iles Aléoutiennes)				
	h = 49 km H = 19:08:39,3 Mag: 4,7 (C.G.S.)				
	△ = 142,7°				
21	PKP	19:46:19,2	iCPZ	-	-
	U.S.C.G.S.: Epicentre: 30,2 S - 179,0 W (Iles Kermadec)				
	h = 228 km H = 19:27:30,0 Mag: 5,0 (C.G.S.)				
	△ = 133,5°				
21	PKP	19:49:28,5	iCPZ	-	d
	U.S.C.G.S.: Epicentre: 51,6 N - 176,0 W (Iles Aléoutiennes)				
	h = 57 km H = 19:30:04,9 Mag: 4,7 (C.G.S.)				
	△ = 142,7°				
21	PKP	21:27:30,5	iCPZNE	-	c, SN, WE
	U.S.C.G.S.: Epicentre: 20,4 S - 177,9 W (Région des Iles Fidji)				
	h = 503 km H = 21:05:53,8 Mag: 5,5 (C.G.S.)				
	△ = 143,0°				
21	PKP	21:27:22,9	iCPZNE	-	d, SN, WE
	LR	22:29,3	LPZNE	20	-
	LR_1	22:35,7	LPZNE	20	-
	U.S.C.G.S.: Epicentre: 51,4 N - 176,0° W (Iles Aléoutiennes)				
h = 47 km	H = 21:07:56,9 Mag: 5,2 (C.G.S.); 4,3-4,7 (BRK); $5\frac{1}{2}$-$5\frac{3}{4}$ (PAL)				
	△ = 142,7°				
21	P	23:27:46,9	iCPZNE	-	c, SN, WE
	SS	23:35:12	eLPE	-	-
	LR	23:37,0	LPZNE	40	-
	U.S.C.G.S.: Epicentre: 46,0 S - 33,3 E (Région des Iles Prince Edouard)				
	h = 33 R H = 23:20:53 Mag: 5,1 (C.G.S.)				
	△ = 35,3°				
22	LR	02:58,2	LPZNE	30	-
	U.S.C.G.S.: Epicentre: 44,4 S - 167,6 (Ile Sud, Nouvelle Zelande)				
	h = 33 R H = 02:01:46,1 Mag: 5,6 (C.G.S.)				
	△ = 116,2°				
22	LR	11:25,3	LPZE	24	-
	U.S.C.G.S.: Epicentre: 32,0 N - 130,7 E (Kyushu, Japon)				
	h = 11 km H = 10:19:07,6 Mag: 4,9 (C.G.S.)				
	△ = 120,7°				
22	-	12:25:31,8	iCPZE	-	d, EW
22	P	17:46:03,0	iCPZNE	-	c
	U.S.C.G.S.: Epicentre: 42,4 S - 75,4 W (Au large de la Côte Sud du Chili)				
	h = 33 R H = 17:33:58 Mag: 4,7 (C.G.S.)				
	△ = 79,2°				
22	PKP	18:06:23,5	iCPZN	-	d, NS
	U.S.C.G.S.: Epicentre: 51,4 N - 176,3 W (Iles Aléoutiennes)				
	h = 49 km H = 17:46:57,4 Mag: 5,1 (C.G.S.)				
	△ = 142,7°				

Date	Phases	Heure T.M.G.	Composantes, nature du mouvement et amplitudes(μ)	Périodes (s)	Sens du mouvement
1968 Fev. 22	QL	19:58,8	LPNE	40	-
	LR	20:03,2	LPZ	40	-
	LR_1	20:08,0	LPZNE	30	-
23	PKP	00:30:04,1	iCPZ	-	d
U.S.C.G.S.: Epicentre: 51,5 N - 176,3 W (Iles Aléoutiennes) h = 65 km H = 00:10:39,5 Mag: 4,6 (C.G.S.) Δ = 142,7°					
23	LR	03:18,1	LPZ	40	-
24	PKP	01:30:22,4	iCPZ	-	c
	PP	01:32:42,1	iCPZ	-	d
	-	01:33:54,0	iCPNE	-	SN
	PKS ou SKP	01:33:57,0	iCPZ	-	d
	-	01:34:08,7	iCPZ	-	d
	LR	02:15,5	LPZNE	30	-
U.S.C.G.S.: Epicentre: 32,5 S - 177,7 W (Sud des Iles Kermadec) h = 21 km H = 01:11:11,6 Mag: 5,4 (C.G.S.) Δ = 131,4°					
24	PKP	10:54:19,7	iCPZNE	-	c, SN, WE
U.S.C.G.S.: Epicentre: 19,3 S - 175,0 W (Iles Tonga) h = 37 km H = 10:34:45 Mag: 4,7 (C.G.S.) Δ = 144,8°					
25	P	15:49:53,8	iCPZN	-	d, SN
	LR	16:09,9	LPZNE	24	-
U.S.C.G.S.: Epicentre: 36,8 N - 5,6 E (Algérie) h = 20 km H = 15:40:44,8 Mag: 4,9 (C.G.S.) Notes: 1 mort, 4 blessés et 100 maisons détruites en El Alen. Δ = 52,2°					
25	PKP	18:27:46,0	iCPZNE	-	d, SN
	LR	19:26,2	LPZNE	30	-
U.S.C.G.S.: Epicentre: 51,4 N - 176,0 W (Iles Aléoutiennes) h = 50 km H = 18:08:19,9 Mag: 5,3 (C.G.S.) Δ = 142,7°					
25	LR	21:29,2	LPZNE	24	-
26	-	10:59:45	eLPNE	-	SN, WE
	-	11:02:18	eLPE	-	WE
	-	11:04:57	eLPZE	-	c, WE
	-	11:08:38	eLPZNE	-	c, NS, EW
26	PKP	11:08:52,1	iCPZ	-	c
	PP	11:09:38	eLPZNE	-	c, NS, EW
	-	11:09:52,5	iCPZNE	-	c, SN, WE
	PPP	11:11:58	eLPZE	-	d, EW
	-	11:15:35	eLPZ	-	d
	-	11:15:46	eLPNE	-	NS, EW
	-	11:16:58	eLPE	-	WE
	-	11:17:04	eLPN	-	NS
	-	11:18:08	eLPZ	-	d
	-	11:19:20	eLPZE	-	c, WE
	SSP	11:25:21	eLPE	-	EW
	-	11:25:38	eLPZ	-	c
	-	11:26:04	eLPE	-	EW
	SSS	11:29:19	eLPZ	-	c
	LQ	11:36,0	LPNS	-	-
	LR	11:47,0	LPZNE	24	-
U.S.C.G.S.: Epicentre: 22,7 N - 121,5 E (Région de Taiwan) h = 24 km H = 10:50:16,7 Mag: 6¾ (PAS); 6,7 - 6,8 (BRK); 6¾ - 7 (PAL); 7¼ - 7½ (GOL) Δ = 112,0°					
26	P	23:08:47,9	iCPZNE	-	d, NS, EW
	pP	23:09:43,2	iCPZ	-	c
	PP	23:11:50	iCPZE	-	d, WE
U.S.C.G.S.: Epicentre: 23,6 S - 66,3 W (Province de Jujuy, Argentine) h = 204 km H = 22:57:27,2 Mag: 5,3 (C.G.S.) Δ = 74,9°					
27	LQ	06:13,1	LPN	50	-
	LR	06:21,1	LPZE	20	-

Date	Phases	Heure T.M.G.	Composantes, nature du mouvement et amplitudes(μ)	Périodes (s)	Sens du mouvement
1968 Fev. 27	LR	12:15,4	LPZ	20	-
28	PKP	12:26:26,0	iCPZNE; iz,iZ	-	d, SN, WE
	pPKP	12:27:46,5	iCPZ; iz	-	d
	-	12:28:26	eLPZ	-	d
	PP	12:28:31,8	iCPZE; iz,iZ	-	c, EW
	-	12:29:09,0	iCPZE; eLPZNE; iz, iZ	-	d, EW
	-	12:33:05	eLPZNE	-	d, NS, EW
	-	12:34:50	eLPNE	-	SN, WE
	-	12:37:54	eLPE	-	WE
	-	12:39:35	eLPE	-	WE
	SS	12:45:05	eLPZNE	-	c, SN, WE

U.S.C.G.S.: Epicentre: 32,9 N - 137,7 E (Sud de Honshu, Japon)
h = 349 R H = 12:08:01,5 (Mag: 5,8 (C.G.S.); 5,8 - 6,2 (BRK)
Δ = 126,6°

29	PKP	10:40:32,4	iCPZ	-	c
	-	10:40:47,7	iCPZ	-	d

U.S.C.G.S.: Epicentre: 6,9 S - 155,7 E (Iles Solomon)
h = 80 km H = 10:21:15,8 Mag: 5,0 (C.G.S.)
Δ = 137,5°

29	LR	12:45,1	LPZN	40	-
	LR_1	12:48,7	LPE	24	-
29	-	16:08:30,0	iCPZN	-	d, NS
29	LR	17:17,0	LPN	30	-
	LR_1	17:23,1	LPZE	30	-
29	PKP	23:55:13,1	iCPZNE	-	d, SN, EW

U.S.C.G.S.: Epicentre: 14,6 S - 167,2 E (Iles Nouvelles Hébrides)
h = 183 km H = 23:36:08,5 Mag: 4,9 (C.G.S.)
Δ = 140,7°

SERVIÇO METEOROLÓGICO DE ANGOLA

Centro de Geofísica de Luanda
C.P. 1228 C Luanda

BULLETIN SEISMIQUE D'ANGOLA (PORTUGAL)

ANNÉE 4 - Nº 3 MARS 1968

Station seismographique de Sá da Bandeira

Coordonnées de la station:

Latitude géographique: φ = 14° 54' 08" S Longitude: λ = 13° 28' 39" E

Latitude géocentrique: ϕ = 14 48 25 S Altitude: h = 1761 m

Nature du sous-sol:
Granite

Constantes des séismographes

Séismographes	T_o (s)	T_g (s)	Amplification			
			Ts=0,2 s	Ts=0,6 s	Ts=1,0 s	Ts=15,0 s
Benioff vertical (z)	1,0	0,2	76750	33000	15300	-
Benioff vertical (Z)	1,0	21,3	400	1100	1650	120
Benioff vertical (CPZ)	1,0	0,75	38000	150000	100000	-
Benioff N/S (CPN)	1,0	0,85	38000	150000	100000	-
Benioff EW (CPE)	1,0	0,82	38000	150000	100000	-
Sprengnether vertical (LPZ)	15,0	100,0	-	-	-	1500
Sprengnether NS (LPN)	15,0	100,0	-	-	-	1500
Sprengnether EW (LPE)	15,0	100,0	-	-	-	1500

Date		Phases	Heure T.M.G.	Composantes, nature du mouvement et amplitudes(μ)	Périodes (s)	Sens du mouvement
1968 Mar	1	LR	07:11,1	LPZNE	33	-
		LR_1	07:12,5	LPZNE	20	-
		LR_2	07:14,2	LPZNE	15	-
	1	Pn	10:39:53,9	iCRZNE	-	-
		Sn	10:40:19,9	iCPZNE	-	-
			$\Delta \simeq 2,0°$			
	1	LR	11:10,3	LPZN	30	-
		LR_1	11:11,8	LPZNE	20	-
		U.S.C.G.S.: Epicentre: 54,9 S - 131,9 W (Pacifique Sud) h = 33 R H = 10:19:58* Mag: 4,9 (C.G.S.)				
			Δ = 104,3°			
	1	P	22:17:21	eCPZ	-	d
		-	22:17:28,2	iCPZE	-	d, EW
		U.S.C.G.S.: Epicentre: 14,7 N - 45,0 W (Atlantique Nord) h = 33 R H = 22:06:43,8 Mag: 4,6 (C.G.S.)				
			Δ = 65,1°			
	1	Pg	22:29:45,1	iCPZNE	-	-
		Sg	22:29:47,4	iCPZNE	-	-
			$\Delta \simeq 0,2°$			

Date	Phases	Heure T.M.G.	Composantes, nature du mouvement et amplitudes(μ)	Périodes (s)	Sens du mouvement
1968 Mar 1	P	23:11:05,0	eiCPZE	-	d, EW
	-	23:11:11,0	iCPZ	-	d
	LR	23:30,1	LPZE	30	-
	LR_1	23:31,5	LPZE	20	-
	U.S.C.G.S.: Epicentre: 14,6 N - 45,1 W (Atlantique Nord)				
	h = 32 R H = 23:00:26,0 Mag: 4,7 (C.G.S.)				
	$\Delta = 65,1°$				
2	LR	04:20,4	LPZE	40	-
	LR_1	04:22,7	LPZNE	30	-
	LR_2	04:28,1	LPZNE	20	-
	U.S.C.G.S.: Epicentre: 49,2 N - 129,1 W (Région des îles Vancouver)				
	h = 33 R H = 03:14:44,5 Mag: 5,1 (C.G.S.)				
	$\Delta = 134,1°$				
2	P	06:35:50,6	eiCPZE	-	c, EW
	LR	06:42,6	LPZE	25	-
	LR_1	06:43,2	LPZE	20	-
	U.S.C.G.S.: Epicentre: 6,8 S - 11,8 W (Région des îles Ascension)				
	h = 33 R H = 06:30:18* Mag: 4,6 (C.G.S.)				
	$\Delta = 26,0°$				
2	P	11:23:21,7	iCPZN	-	c, SN
	U.S.C.G.S.: Epicentre: 60,7 S - 25,5 W (Sud des îles Sandwich)				
	h = 33 R H = 11:14:01,1 Mag: 5,9 (C.G.S.)				
	$\Delta = 53,7°$				
2	LR	17:10,6	LPZE	20	-
	LR_1	17:16,6	LPZNE	15	-
	U.S.C.G.S.: Epicentre: 29,9 N - 100,2 E (Czechnvan - Chine)				
	h = 24 km H = 16:17:29,0 Mag: 5,1 (C.G.S.)				
	$\Delta = 94,6°$				
2	P	02:54:51,6	iCPZNE	-	d, NS, EW
	U.S.C.G.S.: Epicentre: 32,0 S - 69,2 W (Province de Mendoza, Argentine)				
	h = 33 R H = 20:43:04,2 Mag: 4,7 (C.G.S.)				
	$\Delta = 76,1°$				
2	P	22:12:13,1	eiCPZE;LPZE	-	d, WE
	-	22:12:40	iCPZNE	-	d, NS, WE
	PcP	22:13:06,6	iCPZE; LPZ	-	d, EW
	PPP	22:15:44	LPZE	-	-
	ScP	22:17:12	LPE	-	-
	-	22:17:54	LPZE	-	-
	S	22:20:04	LPZ	-	-
	SP	22:20:19	LPNE	-	-
	-	22:20:35	LPE	-	-
	LR	22:27,9	LPN	40	-
	LR_1	22:28,9	LPN	30	-
	LR_2	22:32,2	LPZE	27	-
	LR_3	22:32,6	LPZNE	20	-
	LR_4	22:36,5	LPZNE	15	-
	U.S.C.G.S.: Epicentre: 6,1 S - 71,4 E (Arch de Chagos)				
	h = 33 R H = 22:02:24,8 Mag: 5,6 (C.G.S.)				
	$\Delta = 57,5°$				
3	P (dif)	23:12:13,4	eCPZE	-	d, EW
	pP	23:13:49,2	eCPZE;LPZE	-	d, EW
	-	23:18:31,2	iCPZ	-	d
	SKS	23:19:09,8	CPNE; LPE	-	-
	-	23:20:10,2	CPE; LPE	-	-
	SP	23:22:34	LPZE	-	-
	SPP	23:23:30	LPZNE	-	-
	-	23:24:36	LPZNE	-	-
	LR	23:31,3	LPN	40	-
	LR_1	23:31,7	LPZNE	30	-
	LR_2	23:55,8	LPZNE	20	-
	LR_3	23:59,3	LPZNE	15	-
	U.S.C.G.S.: Epicentre: 1,6 N - 122,6 E (Nord de Célèbes)				
	h = 435 R H = 22:55:36,8 Mag: 5,5 (C.G.S.)				
	$\Delta = 108,9°$				
4	P	05:12:46,4	iCPZNE	-	d, SN, WE
	pP	05:12:50,7	iCPZNE	-	c, NS, EW
	S	05:16:16,7	CPZNE	-	-
	SS	05:16:38,3	CPZN	-	-
	SSS	05:16:54,9	CPNE	-	-
	Lg	05:18:11	CPZNE; LPZNE	-	-
	U.S.C.G.S.: Epicentre: 9,7 S - 32,7 E (Zambie)				
	h = 33 km H = 05:08:19,0 Mag: 4,8 (C.G.S.)			$\Delta = 19,5°$	

Date	Phases	Heure T.M.G.	Composantes, nature du mouvement et amplitudes(μ)	Périodes (s)	Sens du mouvement
1968 Mar 4	P	07:29:31,7	eICPZNE	-	d, SN, WE
	S	07:32:16,5	eCPZE	-	d, WE
	SS	07:33:24,3	CPZNE	-	-
	SSS	07:33:53,7	CPNE	-	-
	Lg	07:35:22	CPZNE;LPZNE	-	-
	BUL (Rhodesie) Epicentre: 9,5 S - 32,5 E (Zambie)				
	h = -- H = 07:25:16 Mag: 4,5 (C.G.S.)				
	Δ = 19,4°				
4	-	12:24:49,6	iCPZNE	-	-
4	P	17:07:25,7	iCPZE	-	c, WE
	LR	17:15,6	LPZE	30	-
	LR_1	17:16,5	LPZE	20	-
	U.S.C.G.S.: Epicentre: 1,2 S - 15,7 W (Nord d'Ile Ascension)				
	h = 25 km H = 17:01:00 Mag: 4,6 (C.G.S.)				
	Δ = 32,1°				
4	LR	22:41,9	LPZ	30	-
	LR_1	22:43,0	LPZ	20	-
	LR_2	22:45,1	LPZ	15	-
	U.S.C.G.S.: Epicentre: 8,9 S - 74,3 W (Pérou)				
	h = 51 km H = 21:55:03 Mag: 4,5 (C.G.S.)				
	Δ = 85,4°				
5	LR	01:45,1	LPZ	20	-
	U.S.C.G.S.: Epicentre: 53,8 N - 163,3 W (Ile Unimak)				
	h = 33 km H = 00:22:06,9 Mag: 4,8 (C.G.S.)				
	Δ = 141,0°				
5	LR	01:47,5	LPZ	30	-
	LR_1	01:53,7	LPZN	20	-
	U.S.C.G.S.: Epicentre: 53,8 N - 163,3 W (Ile Unimak)				
	h = 33 km H = 00:30:57,4 Mag: 4,9 (C.G.S.)				
	Δ = 141,0°				
5	PKP	14:56:07	eCPZNE	-	c, SN, EW
	-	14:56:16,4	iCPZNE	-	d, NS, EW
	U.S.C.G.S.: Epicentre: 18,1 S - 174,7 W (Ile Tonga)				
	h = 137 km H = 14:36:41,5 Mag: 5,1 (C.G.S.); 4,9 - 5,3 (BRK)				
	Δ = 146,0°				
5	PKP	18:35:15	eCPZ	-	c
	PP	18:36:12	LPZ	-	-
	PS	18:45:57	LPZNE	-	-
	PPS	18:47:09	LPZN	-	-
	LR	18:08,8	LPN	40	-
	LR_1	18:10,7	LPZN	30	-
	LR_2	18:17,2	LPZNE	25	-
	LR_3	18:19,3	LPZNE	20	-
	U.S.C.G.S.: Epicentre: 9,6 N - 126,3 E (Mindanao, Ile Philippines)				
	h = 61 km H = 18:16:39,6 Mag: 5,5 (C.G.S.); 6 - 6¼ (GOL), 5¾ - 6 (PAL)				
	Δ = 114,4°				
5	PKP	18:56:40	eCPZ; LPE	-	-
	pPKP	18:56:54,8	iCPZ	-	d
	PP	18:57:44	LPZ	-	-
	-	19:11:05	LPZ	-	-
	LR	19:35,2	LPZNE	30	-
	LR_1	19:36,7	LPZNE	25	-
	LR_2	19:39,8	LPZNE	20	-
	U.S.C.G.S.: Epicentre: 9,6 N - 126,2 E (Mindanao, Ile Philippine)				
	h = 60 km H = 18:38:06,3 Mag: 5,4 (C.G.S.)				
	Δ = 114,4°				
5	PKP	19:40:05,1	iCPZ	-	c
	U.S.C.G.S.: Epicentre: 21,8 S - 170,9 E (Ile Loyauté)				
	h = 86 km H = 21:20:49,8 Mag: 5,3 (C.G.S.)				
	Δ = 137,2°				
5	P	22:58:51	CPZ	-	-
	S	23:01:32	CPZNE	-	-
	-	23:02:17	CPZNE	-	-
	Lg	23:02:24,5	CPZNE	-	-
	BUL (Rhodesie) Epicentre: 4,4 S - 23,4 E (Province de Cassai, Congo)				
	h = -- H = 22:55:16 Mag: 4,0 (C.G.S.)				
	Δ = 14,4°				

Date	Phases	Heure T.M.G.	Composantes, nature du mouvement et amplitudes(μ)	Périodes (s)	Sens du mouvement
1968 Mar 7	PKP	03:14:34,9	iCPZ	-	c
	U.S.C.G.S.: Epicentre: 16,0 S - 178,6 E (Ile Fidji) h = 33 km H = 02:54:53,5 Mag: 5,1 (C.G.S.) Δ = 145,7°				
7	-	07:34:08,2	iCPZN;LPZN	-	d, NS
7	LR	08:02,2	LPZNE	30	-
	LR_1	08:10,7	LPZNE	20	-
	LR_2	08:18,3	LPZNE	15	-
	U.S.C.G.S.: Epicentre: 71,7 N - 3,1 W (Ile Jo Mayen) h = 26 km H = 07:21:06,5 Mag: 4,6 (C.G.S.) Δ = 87,3°				
7	PKIKP	13:41:21,1	iCPZ	-	-
	PKP	13:41:34,7	eiCPZNE;LPZ	-	c, SN, WE
	PP	13:43:59	LPZE	-	-
	SKP	13:44:58,8	iCPZNE;LPZNE	-	d, NS, WE
	PPS	13:55:53	LPZNE	-	-
	SS	14:01:45	LPNE	-	-
	SSP	14:02:01	LPNE	-	-
	SSS	14:06:30	LPN	-	-
	LR	14:28,2	LPZNE	30	-
	LR_1	14:36,3	LPZNE	20	-
	U.S.C.G.S.: Epicentre: 5,9 S - 151,1 E (Nouvelle Bretagne) h = 39 km H = 13:22:16,6 Mag: 6½ (PAS); 6,2 - 6,5 (BRK) Δ = 135,1°				
7	Pn	15:32:16,4	iCPZN	-	-
	-	15:32:17,4	iCPZNE	-	-
	Sn	15:32:46,6	iCPZN	-	-
	Δ = 2,4°				
7	Pn	15:49:42,6	iCPZN	-	-
	-	15:49:43,6	iCPZNE	-	-
	Sn	15:50:14,5	iCPZN	-	-
	Δ = 2,6°				
8	Pn	05:08:49,3	iCPZNE	-	-
	Sn	05:09:10,4	iCPZNE	-	-
	Δ = 1,6°				
9	P	00:58:27,5	iCPZE	-	d, WE
	(pP)	00:58:35,3	iCPZ	-	d
	LR	01:20,4	LPNE	50	-
	LR_1	01:22,5	LPNE	40	-
	LR_2	01:23,5	LPZNE	30	-
	LR_3	01:25,4	LPZNE	25	-
	LR_4	01:26,1	LPZNE	20	-
	LR_5	01:35,0	LPZNE	15	-
	U.S.C.G.S.: Epicentre: 8,7 N - 94,0 E (Ile Nicobar) h = 33 R H = 00:46:00,9 Mag: 5,0 (C.G.S.) Δ = 82,2°				
9	PKIKP	03:38:23,5	iCPZ	-	d
	PKP	03:38:39,7	iCPZ	-	c
	LR	04:27,4	LPZ	30	-
	LR_1	04:28,8	LPZN	25	-
	LR_2	04:33,1	LPZNE	20	-
	U.S.C.G.S.: Epicentre: 5,6 S - 154,0 E (Iles Salomon) h = 86 km H = 09:19:23,7 Mag: 5,7 (C.G.S.) Δ = 135,8°				
9	-	13:13:28,2	iCPZNE	-	d, SN; EW
9	LR	15:17,2	LPZE	40	-
	LR_1	15:16,9	LPZNE	30	-
	LR_2	15:19,1	LPZNE	20	-
	U.S.C.G.S.: Epicentre: 18,0 S - 65,8 E (Ile Mascarene) h = 33 R H = 14:53:21* Mag: 4,7 (C.G.S.) Δ = 51,9°				
9	-	21:19:31,7	iCPZ	-	d
10	LR	05:09,0	LPZN	28	-
	LR_1	05:14,3	LPZ	25	-
	LR_2	05:17,1	LPZN	20	-
10	-	15:03:32,5	iCPZN	-	d, SN

Date	Phases	Heure T.M.G.	Composantes, nature du mouvement et amplitudes(μ)	Périodes (s)	Sens du mouvement
1968 Mar 11	PKP	08:46:05,8	iCPZNE;LPZE	-	c, NS, WE
	-	08:46:38	LPZNE	-	-
	-	08:46:43,8	iCPZN	-	c, NS
	PP	08:49:38,4	iCPZN	-	d, NS
	-	08:50:00	LPZN	-	-
	-	08:59:40	LPZN	-	-
	SS	09:08:22	LPZNE	-	-
	-	09:09:22	LPNE	-	-
	-	09:13:09	LPZN	-	-
	LR	09:36,8	LPZN	45	-
	LR_1	09:37,3	LPZNE	40	-
	LR_2	09:39,2	LPZNE	30	-
	LR_3	09:45,4	LPZNE	20	-
	U.S.C.G.S.: Epicentre: 16,2 S - 173,9 W (Ile Tonga)				
	h = 112 R H = 08:26:32,8 Mag: 6,0 (C.G.S.); 6½-6¾ (PAS); 6-6,3 (BRK)				
					Senti en Apie
			$\triangle$ = 148,0°		
11	-	14:08:01,3	CPZNE	-	c, NS, EW
12	PKP	18:43:20,0	iCPZN	-	c, SN
	pPKP	18:43:31,7	iCPZ	-	c
	LR	19:40,2	LPZN	30	-
	LR_1	19:46,0	LPZ	20	-
	U.S.C.G.S.: Epicentre: 14,9 S - 176,9 W (Ile Fidji)				
	h = 33 R H = 18:23:34,0 Mag: 5,3 (C.G.S.)				
			$\triangle$ = 148,5°		
13	P	09:40:44,4	eiCPZNE	-	c, NS, WE
	U.S.C.G.S.: Epicentre: 57,1 S - 23,7 W (Sud d'Ile Sandwich)				
	h = 33 R H = 09:31:47,5 Mag: 5,2 (C.G.S.)				
			$\triangle$ = 50,6°		
13	PKP	20:44:06,6	eiCPZNE	-	d, NS; EW
	-	20:44:21,3	iCPZN	-	d, EW
	-	20:47:23,7	iCPZ	-	c
	U.S.C.G.S.: Epicentre: 20,5 S - 178,1 W (Ile Fidji)				
	h = 520 R H = 20:25:32,1 Mag: 5,0 (C.G.S.)				
			$\triangle$ = 142,8°		
13	P	22:50:18,3	iCPZN	-	c, NS
	U.S.C.G.S.: Epicentre: 42,4 N - 66,5 E (Kazakh RSS senti en Tashkent)				
	h = 33 R H = 22:38:38,9 Mag: 5,2 (C.G.S.)				=75,2°
14	P	02:20:16,4	iCPZN	-	c, NS
	U.S.C.G.S.: Epicentre: 42,3 N - 66,5 E (Kazakh RSS, senti en Tashkent)				
	h = 33 R H = 02:08:36,6 Mag: 5,4 (C.G.S.)				
			$\triangle$ = 75,2°		
14	P	11:56:10,5	iCPZ	-	c
	U.S.C.G.S.: Epicentre: 27,5 S - 70,8 W (Côte de Chili)				
	h = 33 R H = 16:44:11,1 Mag: 4,5 (C.G.S.)				
			$\triangle$ = 78,2°		
15	LR	07:07,2	LPZE	40	-
	LR_1	07:09,1	LPZNE	30	-
	LR_2	07:11,0	LPZNE	20	-
	LR_3	07:14,3	LPZNE	15	-
	U.S.C.G.S.: Epicentre: 41,9 S - 88,4 E (Sud de l'Ocean Indien)				
	h = 33 R H = 06:34:31,9 Mag: 5,2 (C.G.S.)				
			$\triangle$ = 69,0°		
16	-	07:15:19	LPZNE	-	-
17	PKP	20:33:09,0	iCPZ	-	c
	pPKP	20:33:20,4	iCPZ	-	c
	U.S.C.G.S.: Epicentre: 3,4 N - 128,1 E (Nord de Halmahera)				
	h = 62 km H = 20:14:32,8 Mag: 5,7 (C.G.S.)				
			$\triangle$ = 114,6°		
17	LR	20:44,2	LPZE	20	-
17	LR	21:13,0	LPZ	24	-
	LR_1	21:18,0	LPZN	20	-

Date	Phases	Heure T.M.G.	Composantes, nature du mouvement et amplitudes(μ)	Périodes (s)	Sens du mouvement
1968 Mar 18	-	07:44:16,5	iCPZ	-	d
18	-	22:03:37,6	iCPZ	-	d
19	PKP	01:55:31,7	iCPZNE	-	d, SN, EW
	pPKP	01:55:42,1	iCPZNE; LPZ	-	d, SN, WE
	PP	01:58:50	LPZ	-	-
	-	02:18:02	LPE	-	-
	LR	02:47,5	LPZNE	30	-
	LR_1	02:53,3	LPZNE	20	-
	LR_2	03:05,9	LPZNE	15	-
	U.S.C.G.S.: Epicentre: 17,4 S - 172,8 W (Ile Tonga) h = 33 R H = 01:35:49,2 Mag: 5,2 (C.G.S.); 6½-6¾ (GOL) △ = 147,1°				
19	P	02:31:15,6	iCPZE	-	d, EW
	U.S.C.G.S.: Epicentre: 15,1 N - 60,5 W (Ile Leenard) h = 55 km H = 02:19:12,7 Mag: 5,1 (C.G.S.) △ = 79,0°				
19	LR	08:15,4	LPZNE	40	-
	LR_1	08:16,1	LPZNE	30	-
	LR_2	08:18,7	LPZNE	20	-
	U.S.C.G.S.: Epicentre: 37,2 N - 33,0 W (Ile Agoros) h = 33 R H = 07:43:37,2 Mag: 5,0 (C.G.S.) △ = 68,0°				
19	Pn	21:17:25,2	iCPZNE	-	-
	Sn	21:17:54,2	iCPZNE	-	-
			2,2		
20	P	06:32:32,7	iCPZE	-	c, WE
	U.S.C.G.S.: Epicentre: 20,3 S - 70,0 W (Au large de la Côte de Chili) h = 47 km H = 06:20:30,8 Mag: 5,1 (C.G.S.) △ = 78,9°				
20	LR	17:07,6	LPZN	38	-
	LR_1	17:13,5	LPZN	20	-
20	-	19:15:44,5	iCPZNE	-	-
	-	19:16:09,9	iCPZNE;LPNE	-	-
	-	19:17:36	LPZNE	-	-
21	-	03:12:42,2	iCPZNE;LPNE	-	-
	-	03:14:28	LPZNE	-	-
21	-	13:02:25,4	iCPZNE;LPNE	-	-
	-	13:04:14	LPZNE	-	-
22	P	02:07:34,4	iCPZNE	-	d, NS, EW
	PcP	02:07:37,9	iCPZE	-	c, WE
	pP	03:08:01,3	iCPZNE	-	d, NS, EW
	U.S.C.G.S.: Epicentre: 20,4 S - 69,0 W (Nord de Chili) h = 96 R H = 01:55:43,5 Mag: 5,5 (C.G.S.); 4,8-5,2 (BRK) △ = 77,8°				
22	-	03:54:39,3	iCPZNE	-	-
22	P	04:27:33,4	iCPZE	-	d, WE
	U.S.C.G.S.: Epicentre: 22,3 S - 67,9 W (Région interieur entre Chili-Bolivie) h = 146 km H = 04:15:52 Mag: 4,7 (C.G.S.) △ = 76,7°				
22	LR	10:31,1	LPZ	20	-
22	P	18:51:14,7	iCPZE	-	c, EW
	U.S.C.G.S.: Epicentre: 20,9 S - 68,5 W (Région interieur entre Chili-Bolivie) h = 138 km H = 18:39:32,7 Mag: 5,0 (C.G.S.) △ = 77,4°				
22	LR	20:33,5	LPZ	30	-
	LR_1	20:36,2	LPZ	20	-
23	LR	17:56,7	LPZN	40	-
	LR_1	17:55,2	LPZNE	30	-
	LR_2	17:57,3	LPZNE	20	-
	U.S.C.G.S.: Epicentre: 39,8 N - 25,5 E (Mer Egée) h = 33 R H = 17:25:53,2 Mag: 4,6 (C.G.S.) △ = 55,9°				

Date	Phases	Heure T.M.G.	Composantes, nature du mouvement et amplitudes(μ)	Périodes (s)	Sens du mouvement
1968 Mar 24	LR	07:29,4	LPN	30	-
	LR_1	07:31,0	LPZE	27	-
	LR_2	07:32,1	LPZE	20	-
	LR_3	07:35,1	LPZNE	15	-
	U.S.C.G.S.: Epicentre: 1,3 S - 24,2 W (Central Atlantique) h = 33 R H = 07:12:47,4 Mag: 5,4 (C.G.S.) Δ = 39,6°				
26	P	00:54:49	eCPZ	-	d
	pP	00:56:52,8	iCPZE	-	d, WE
	-	01:04:36,7	iCPNE; LPE	-	N S, WE
	LR	01:27,2	LPZN	30	-
	LR	01:33,7	LPZNE	20	-
	U.S.C.G.S.: Epicentre: 6,6 S - 116,1 E (Mer Bali) h = 520 km H = 00:41:56,9 Mag: 5,9 (C.G.S.) Δ = 100,4°				
26	-	01:11:04,5	iCPZNE	-	d, SN, WE
26	LR	12:01,3	LPZ	30	-
	LR_1	12:01,9	LPZ	20	-
	LR_2	12:04,1	LPZ	15	-
26	LR	15:06,3	LPZ	30	-
	LR_1	15:07,4	LPZ	20	-
26	P	19:59:14,4	iCPZE	-	d, WE
	-	19:59:29,4	iCPNE	-	NS, EW
	pP	19:59:37,9	iCPZ	-	d
	LR	20:29,4	LPN	50	-
	LR_1	20:35,6	LPZE	47	-
	LR_2	20:36,5	LPZE	40	-
	LR_3	20:38,7	LPZE	30	-
	LR_4	20:45,0	LPZ	20	-
	U.S.C.G.S.: Epicentre: 8,1 N - 126,3 E (Mindanao, Iles Philippines) h = 83 km H = 19:40:42,1 Mag: 5,4 (C.G.S.) Δ = 114,1°				
27	LR	00:53,8	LPZN	25	-
	LR_1	00:58,4	LPZN	20	-
27	LR	04:10,7	LPZE	30	-
	LR_1	04:11,8	LPZE	20	-
	U.S.C.G.S.: Epicentre: 1,1 S - 15,4 W (Ile Ascension) h = 33 km H = 03:56:06,8 Mag: 4,8 (C.G.S.) Δ = 31,7°				
27	PKP	12:51:13,6	iCPZNE	-	d, NS, WE
	U.S.C.G.S.: Epicentre: 19,9 S - 176,1 E (Ile Fidji) h = 225 km H = 12:32:02,6 Mag: 4,5 (C.G.S.) Δ = 143,9°				
27	SSP	23:13:02	LPN	-	-
	-	23:13:43	LPE	-	-
	LR	23:26,4	LPN	50	-
	LR_1	23:33,5	LPZ	38	-
	LR_2	23:35,1	LPZN	30	-
	LR_3	23:36,9	LPZE	25	-
	LR_4	23:43,6	LPZNE	20	-
	U.S.C.G.S.: Epicentre: 4,3 S - 133,3 E (Nouvelle Guinée) h = 33 R H = 22:36:43,3 Mag: 5,5 (C.G.S.) Δ = 117,4°				
28	LR	01:59,3	LPZE	30	-
	U.S.C.G.S.: Epicentre: 15,1 N - 92,1 W (Région interieur entre Mexique-Guatemala) h = 111 km H = 01:07:37,6 Mag: 5,2 (C.G.S.); 5 - 5¼ (PAL) Δ = 108,5°				
28	PKP	06:04:33,8	iCPZ	-	d
	LR	06:56,6	LPZNE	30	-
	LR_1	07:01,6	LPZNE	20	-
	U.S.C.G.S.: Epicentre: 10,8 S - 166,0 E (Iles Sainte Croix) h = 42 R H = 05:45:06,6 Mag: 5,2 (C.G.S.) Δ = 142,6°				

Date	Phases	Heure T.M.G.	Composantes, nature du mouvement et amplitudes(μ)	Périodes (s)	Sens du mouvement
1968 Mar 28	P	07:49:15,6	iCPZNE;LPZ	-	c, NS, WE
	pP	07:49:19,7	iCPZNE	-	c, NS, EW
	-	07:49:29,2	iCPZNE	-	c, SN, EW
	PS	07:56:42	LPZNE	-	-
	SS	08:00:29	LPZNE	-	-
	LR	08:03,7	LPE	50	-
	LR_1	08:06,1	LPZN	38	-
	LR_2	08:08,4	LPZNE	30	-
	LR_3	08:10,3	LPZNE	20	-
	LR_4	08:16,8	LPZNE	15	-
	U.S.C.G.S.: Epicentre: 37,9 N - 20,9 E (Mer Ionienne)				
	h = 6 km H = 07:39:57,1 Mag: 5,4 (C.G.S.)				
	$\Delta = 53,2^\circ$				
28	P	13:49:20,5	iCPZNE	-	d, NS, WE
	pP	13:50:01,9	iCPZNE	-	d, NS, EW
	U.S.C.G.S.: Epicentre: 34,9 S - 69,4 W (Région interieur entre Chile-Argentine)				
	h = 171 R H = 13:37:50,2 Mag: 5,3 (C.G.S.)				
	$\Delta = 75,8^\circ$				
28	-	15:43:08,0	iCPZE	-	c, WE
28	P	16:47:19	eiCPZN	-	c
	LR	17:10,3	LPZNE	20	-
	U.S.C.G.S.: Epicentre: 39,6 N - 20,4 E (Région interieur entre Grece-Albanie)				
	h = 18 km H = 16:37:46,8 Mag: 4,8 (C.G.S.)				
	$\Delta = 54,9^\circ$				
28	-	21:27:17,6	iCPZNE	-	d, NS, EW
29	-	20:44:27,4	iCPZE	-	c, WE
30	Pn	00:25:33,6	iCPZNE	-	-
	Sn	00:26:02,5	iCPZNE	-	-
	$\Delta = 2,2^\circ$				
30	LR	13:11,5	LPZ	40	-
	LR_1	13:12,2	LPZNE	30	-
	LR_2	13:14,4	LPZNE	20	-
	LR_3	13:18,5	LPZNE	15	-
	U.S.C.G.S.: Epicentre: 41,7 S - 85,2 E (Ocean Indien)				
	h = 33 R H = 12:39:22,7 Mag: 4,8 (C.G.S.)				
	$\Delta = 66,6^\circ$				
31	Pn	10:58:05,2	iCPZNE	-	-
	Sn	10:58:30,7	iCPZNE	-	-
	$\Delta = 2,0^\circ$				
31	-	14:09:32,6	eiCPZ	-	-
31	P	23:41:06,9	iCPZNE	-	d, NS, EW
	pP	23:41:13,6	iCPZNE	-	d, SN, EW
	Lg	23:48:06	GPZNE	-	-
	LR	23:49,9	LPZNE	14	-
	U.S.C.G.S.: Epicentre: 4,7 S - 35,0 E (Tanganyika)				
	h = 33 R H = 23:55:56,4 Mag: 4,9 (C.G.S.)				
	$\Delta = 23,4^\circ$				

S E R V I Ç O M E T E O R O L Ó G I C O D E A N G O L A

Centro de Geofísica de Luanda

C.P. 1228 C L u a n d a

BULLETIN SÉISMIQUE D'ANGOLA (PORTUGAL)

ANNÉE 4 - Nº 4 AVRIL 1968

Station séismographique de Sá da Bandeira

Coordonnées de la station:

Latitude géographique: φ = 14° 54' 08" S Longitude: λ = 13° 28' 39" E

Latitude géocentrique: φ' = 14 48 29" S Altitude: h = 1761 m

Nature du sous-sol:

Granite

Constantes des séismographes

Séismographes	T_o (s)	T_g (s)	Amplification			
			Ts=0,2 s	Ts=0,6 s	Ts=1,0 s	Ts=15,0 s
Benioff vertical (z)	1,0	0,2	76750	33000	15300	
Benioff vertical (Z)	1,0	21,3	400	1100	1650	120
Benioff vertical (CPZ)	1,0	0,75	38000	150000	100000	-
Benioff N/S (CPN)	1,0	0,85	~~38000~~	150000	100000	-
Benioff EW (CPE)	1,0	0,82	38000	150000	100000	-
Sprengnether vertical (LPZ)	15,0	100,0	-	-	-	1500
Sprengnether NS (LPN)	15,0	100,0	-	-	-	1500
Sprengnether EW (LPE)	15,0	100,0	-	-	-	1500

Date		Phases	Heure T.M.G.	Composantes, nature du mouvement et amplitudes (μ)	Périodes (s)	Sens du mouvement
1968 Avr.	1	-	00:57:28	eLPZNE	-	c, NS, EW
	1	PKP	01:00:55,7	iCPZNE	-	d
		pPKP	01:01:04,0	iLPZ	-	d
		-	01:02:21	eLPZNE	-	d, SN, WE
		PP	01:02:34	eLPZNE	-	c, NS, EW
		LR	01:53,4	CPZNE	20	-

Note: Enrigistrement de Long Période confus.

U.S.C.G.S.: Epicentre: 32,5 N - 132,2 E (Shikoku, Japon)

h = 33 R H = 00:42:04,2 Mag: 7½ - 7¾ (PAS), 7,3 - 7,7 (BRK), 7¼ - 7½ (GOL)

Δ = 122,0°

Notes: 1 mort, 22 blessés, peu dangereux en Kyushu. Senti en Shikoku et Sud de Honshu

	1	-	04:08:12,5	iCPNE	-	d
		-	04:09:09,4	iCPZ	-	d
		-	04:09:15,4	iCPNE	-	d

Date	Phases	Heure T.M.G.	Composantes, nature du mouvement et amplitudes (μ)	Périodes (s)	Sens du mouvement
1968 Avr. 1	PKP	07:32:11,0	iCPZ	-	c
	-	07:33:46,2	iCPZ	-	c
	PP	07:33:54	eLPZNE	-	c, SN, WE
	PPP	07:36:23	eLPZNE	-	c, NS, EW
	PS ou SP	07:43:34	eLPZ	-	d
	PPS	07:45:06	eLPZ	-	d
	-	07:45:12	eLPNE	-	SN, WE
	SS	07:50:23	eLPZ	-	c
	-	07:50:39	eLPN	-	SN
	-	07:50:53	eLPE	-	WE
	-	07:54:43	eLPZ	-	c
	-	07:55:06	eLPN	-	SN
	SSS	07:55:54	eLPE	-	WE
	LQ	08:06,3	LPN	54	-
	LR	08:15,1	LPZNE	28	-
	U.S.C.G.S.: Epicentre: 32,3 N - 132,1 E (Shikoku, Japon) h = 32 R H = 07:13:17,6 Mag: 5,7 (C.G.S.) Δ = 121,9°				
1	-	09:43:52,8	iCPZNE	-	c, NS, WE
	-	09:50:30,8	iCPZNE	-	c, SN, EW
1	-	11:18:09,2	iCPZNE	-	d, SN, EW
2	LR	09:09,5	LPZNE	30	-
	U.S.C.G.S.: Epicentre: 45,1 S - 166,8 E (Sud de la Nouvelle Zelande) h = 15 km H = 08:12:44,2 Mag: 5,2 (C.G.S.) Δ = 115,3°				
2	PKP	11:00:29,4	iCPZ	-	c
	U.S.C.G.S.: Epicentre: 14,3 S - 167,3 E (Nouvelles Hébrides) h = 198 km H = 10:41:26,0 Mag: 5,0 (C.G.S.) Δ = 141,0°				
3	LR	11:35,3	LPZ	40	-
	LR	11:38,3	LPN	30	-
	LR	11:40,2	LPZNE	24	-
	U.S.C.G.S.: Epicentre: 56,7 S - 147,4 E (Ouest Macquarie) h = 17 km H = 10:49:25,3 Mag: --- Δ = 98,8°				
3	-	17:56,7	LPZ	20	-
4	-	16:40:13,6	iCPZNE	-	c, SN, WE
	-	16:41:54,2	iCPZNE	-	c, SN, WE
4	P	22:18:41,1	iCPZNE	-	c, SN, EW
	-	22:19:09,5	iCPZNE	-	d, NS, EW
	U.S.C.G.S.: Epicentre: 22,7 S - 68,4 W (Nord du Chili) h = 110 R H = 22:06:57,3 Mag: 5,1 (C.G.S.) Δ = 77,0°				
5	PKP	02:20:06,5	iCPZN	-	c, SN
	U.S.C.G.S.: Epicentre: 16,0 S - 179,8 W (Iles Fidji) h = 33 R H = 02:00:25,4 Mag: 4,6 (C.G.S.) Δ = 146,4°				
7	-	01:51:58,6	iCPZ	-	d
9	pPKP	02:48:16,2	iCPZN	-	c, SN
	PP	02:50:33,2	iCPZE;iLPZE	-	c, WE
	PKS ou SKP	02:51:43,0	iCPZNE;eLPZNE	-	c, SN, WE
	PSS	03:08:38	eLPZNE	-	d, NS, EW
	SSS	03:13:08	eLPZNE	-	d, SN, EW
	LR	03:30,0	LPZNE	30	-
	U.S.C.G.S.: Epicentre: 33,1 N - 116,1 W (Sud de Californie) h = 20 km H = 02:28:58,9 Mag: 6,1 (C.G.S.) Δ = 131,9°				
9	PKP	11:46:08,8	iCPZNE	-	d, NS, EW
	pPKP	11:48:35,0	iCPE	-	WE
	U.S.C.G.S.: Epicentre: 17,8 S - 178,2 W (Iles Fidji) h = 650 km H = 11:27:39,0 Mag: 5,2 (C.G.S.) Δ = 145,3°				
10	LR	19:06,4	LPZ	20	-

Date	Phases	Heure T.M.G.	Composantes, nature du mouvement et amplitudes (μ)	Périodes (s)	Sens du mouvement
1968 Avr. 10	LR	19:36,4	LPZ	40	-
	LR	19:44,1	LPZNE	20	-
	U.S.C.G.S.: Epicentre: 22,6 S - 171,5 E (Iles Loyauté) h = 60 km H = 18:32:09,6 Mag: 5,1 (C.G.S.) Δ = 136,8°				
12	PKP	16:54:18,8	iCPZN	-	c, NS
	U.S.C.G.S.: Epicentre: 20,3 S - 177,9 W (Iles Fidji) h = 459 km H = 16:35:38,3 Mag: 4,6 (C.G.S.) Δ = 143,1°				
12	PKP	18:38:13,4	iCPZNE	-	d, NS, EW
	U.S.C.G.S.: Epicentre: 19,8 S - 176,0 W (Iles Fidji) h = 168 km H = 18:18:56,7 Mag: 4,2 (C.G.S.) Δ = 144,0°				
13	P	01:28:10,5	iCPZ	-	c
	LR	01:55,8	LPZE	30	-
	U.S.C.G.S.: Epicentre: 19,0 N - 66,9 W (Puerto Rico) h = 51 km H = 01:15:32,3 Mag: 5,1 (C.G.S.) Δ = 86,0°				
13	-	02:08:40,2	iCPZNE	-	c
14	-	02:12:04,6	iCPZNE	-	d, NS, EW
14	LR	14:18,3	LPZ	20	-
14	PKP	15:05:54,0	iCPZNE	-	d, NS, WE
	U.S.C.G.S.: Epicentre: 17,5 S - 178,8 W (Iles Fidji) h = 550 R H = 14:47:14,9 Mag: 4,6 (C.G.S.) Δ = 145,4°				
15	P	08:00:52,4	iCPZNE	-	d, NS, EW
	LR	08:30,0	LPZNE	40	-
	U.S.C.G.S.: Epicentre: 5,8 S - 80,9 W (Côte Nord du Pérou) h = 35 km H = 07:47:40,3 Mag: 4,9 (C.G.S.) Δ = 92,7°				
16	LR	05:56,3	LPZNE	30	-
16	LR	13:54,1	LPZ	40	-
16	LR	14:26,1	LPZE	30	-
	U.S.C.G.S.: Epicentre: 5,1 S - 68,4 E (Iles Chagos) h = 33 R H = 13:58:40,3 Mag: 5,2 (C.G.S.) Δ = 54,8°				
16	LR	17:17,1	LPZE	30	-
16	LR	19:27,2	LPZE	30	-
16	LR	20:26,0	LPZNE	20	-
16	-	03:13:16,5	iCPZNE	-	d, NS, EW
17	LR	12:17,7	LPZNE	30	-
	U.S.C.G.S.: Epicentre: 5,1 S - 68,4 E (Iles Chagos) h = 33 R H = 11:51:17,8 Mag: 5,0 (C.G.S.) Δ = 54,8°				
17	LR	13:02,2	LPZNE	30	-
	U.S.C.G.S.: Epicentre: 4,9 S - 68,2 E (Iles Chagos) h = 33 R H = 12:35:10 Mag: 4,7 (C.G.S.) Δ = 54,8°				
18	LR	04:13,1	LPZE	30	-
18	LR	07:38,0	LPZNE	40	-
19	P	08:15:35,4	iCPZ	-	c
	-	08:21:28	eLPZNE	-	d, SN, EW
	LR	08:24,1	LPZNE	40	-
	M	08:26:32	LPZ	-	-
	U.S.C.G.S.: Epicentre: 42,7 S - 16,0 W (Atlantique Sud) h = 33 R H = 08:08:22,2 Mag: 5,2 (C.G.S.) Δ = 37,6°				

Date	Phases	Heure T.M.G.	Composantes, nature du mouvement et amplitudes (μ)	Périodes (s)	Sens du mouvement
1968 Avr. 19	P	09:11:39,5	iCPZNE; iz, iZ	-	c, SN, WE
	-	09:17:34	eLPNE	-	SN, EW
	LR	09:19,2	LPZNE	25	-
	M	09:22:36	LPZ	-	-
	U.S.C.G.S.: Epicentre: 42,6 S - 16,0 W (Atlantique Sud)				
	h = 33 R H = 09:04:27,3 Mag: 5,6 (C.G.S.)				
	Δ = 37,6°				
20	-	01:11:34,4	iCPZ	-	d
	LR	01:27,6	LPZN	20	-
	U.S.C.G.S.: Epicentre: 56,1 S - 27,4 W (Iles Sandwich)				
	h = 186 km H = 01:01:31,2 Mag: 5,1 (C.G.S.)				
	Δ = 51,6°				
20	-	07:27:11,0	iCPZE	-	d, EW
20	P	10:28:40,5	iCPZ	-	c
	LR	10:49,2	LPZNE	30	-
	U.S.C.G.S.: Epicentre: 38,3 N - 26,6 W (Açores)				
	h = 33 R H = 10:18:01,1 Mag: 5,1 (C.G.S.)				
	Δ = 65,1°				
20	PKP	12:44:57,7	iCPZNE; eLPZNE; iz, iZ	-	d, NS, EW
	PP	12:48:28	eLPZ	-	d
	-	12:48:40	eLPN	-	SN
	-	12:58:44	eLPZN	-	d, NS
	SS	13:07:35	eLPZNE	-	-
	-	13:17:44	eLPZN	-	-
	LR	13:36,1	LPZNE	30	-
	U.S.C.G.S.: Epicentre: 15,7 S - 172,6 W (Iles Samoa)				
	h = 30 km H = 12:25:10,1 Mag: 5,7 (C.G.S.)				
	Δ = 148,8°				
20	P	14:00:44	eCPZE; iz, iZ	-	d, WE
	-	14:07:29,2	iCPZNE; iz, iZ	-	c, NS, EW
	-	14:08:30,8	iCPNE; eLPZNE; iz, iZ	-	SN, WE
	Lg	14:08:46,0	iCPZNE; iz, iZ	-	d, NS, EW
	U.S.C.G.S.: Epicentre: 7,7 S - 38,8 E (Tanganyika)				
	h = 33 R H = 13:55:09,5 Mag: 4,5 (C.G.S.)				
	Δ = 25,8°				
20	P	19:55:50,5	iCPZNE; iz, iZ	-	c, SN, WE
	-	20:00:22	eLPNE	-	NS, EW
	-	20:00:32	eLPZ	-	d
	LR	20:01,3	LPZNE	24	-
	U.S.C.G.S.: Epicentre: 19,9 S - 11,8 W (Atlantique Sud)				
	h = 33 R H = 19:50:31 Mag: 4,9 (C.G.S.)				
	Δ = 24,6°				
20	P	21:57:03,0	iCPZE; iz, iZ	-	c, WE
	LR	22:02,8	LPZNE	26	-
	U.S.C.G.S.: Epicentre: 19,3 S - 11,8 W (Atlantique Sud)				
	h = 33 R H = 21:51:43 Mag: 4,8 (C.G.S.)				
	Δ = 24,6°				
20	P	22:18:13,0	iCPZNE; iz, iZ	-	d, NS, EW
	LR	22:24,1	LPZNE	30	-
	U.S.C.G.S.: Epicentre: 19,9 S - 11,9 W (Atlantique Sud)				
	h = 33 R H = 22:12:53,6 Mag: 4,7 (C.G.S.)				
	Δ = 24,6°				
20	P	22:59:54,4	iCPZ	-	c
	U.S.C.G.S.: Epicentre: 19,6 S - 177,6 W (Iles Fidji)				
	h = 536 km H = 22:41:19 Mag: 4,2 (C.G.S.)				
	Δ = 143,8°				
21	LR	00:47,3	LPZE	30	-
21	PKP	08:53:11,5	iCPZ	-	d
	PP	08:55:26,0	iCPZ; eLPZ	-	d
	-	08:56:33,0	iCPZ; eLPZ	-	c
	-	08:56:40	eLPNE	-	SN, EW
	PS	08:05:32	eLPZNE	-	c, SN, EW
	U.S.C.G.S.: Epicentre: 38,6 N - 143,0 E (Côte de Honshu, Japon)				
	h = 42 km H = 08:34:03,5 Mag: 5,3 (C.G.S.) Δ = 130,3°				

Date	Phases	Heure T.M.G.	Composantes, nature du mouvement et amplitudes(/Δ)	Périodes (s)	Sens du mouvement
1938 Avr. 21	P	09:36:37,0	iCPZE	-	c, EW
	U.S.C.G.S.: Epicentre: 23,4 S - 70,5 W (Côte Nord du Chili)				
	h = 41 km	H = 09:24:35,5	Mag: 5,5 (C.G.S.)		
		Δ = 78,7°			
21	LR	10:47,0	LPZNE	30	-
21	LQ	17:25,3	LPNE	50	-
	LR	17:34,0	LPZNE	30	-
21	LR	23:01,5	LPNE	20	-
	LR	23:06,3	LPZNE	40	-
23	P	06:56:40,4	iCPZNE; iz, iZ	-	c, SN, WE
	U.S.C.G.S.: Epicentre: 36,3 N - 71,2 E (Afghanistan - URSS)				
	h = 114 R	H = 06:45:11,5	Mag: 5,2 (C.G.S.)		
		Δ = 74,7°			
23	P	12:49:48,5	iCPZNE; iz, iZ	-	d, NS, EW
	LR	13:10,8	LPZNE	30	-
	U.S.C.G.S.: Epicentre: 27,7 N - 56,7 E (Sud d'Iran)				
	h = 52 km	H = 12:39:47,3	Mag: 5,1 (C.G.S.)		
		Δ = 59,7°			
23	LR	18:01,1	LPZN	20	-
23	PKP	20:48:32,5	iCPZN;eLPZ; iz, iZ	-	d, SN
	pPKP	20:48:37	eCPE	-	EW
	PP	20:51:02,5	iCPZN;iLPZN; iz, iZ	-	c, NS
	-	20:52:06,0	iCPZNE;eLPN	-	c, SN
	-	20:52:14	eLPE	-	EW
	SSS	21:13:54	eLPZ	-	c
	LR	21:45,0	LPZNE	24	-
	U.S.C.G.S.: Epicentre: 58,7 N - 150,0 W (Alaska)				
	h = 23 R	H = 20:29:14,5	Mag: 6,3 (C.G.S.)		
		Δ = 134,5°			
24	LR	03:31,0	LPZNE	30	-
24	P	08:27:34,2	iCPZNE	-	c, NS, WE
	LR	08:46,0	LPZNE	30	-
	U.S.C.G.S.: Epicentre: 39,3 N - 24,9 E (Mer Egée)				
	h = 17 R	H = 08:18:02,5	Mag: 5,2 (C.G.S.)		
		Δ = 55,2°			
24	-	14:20:01,5	iCPZ	-	d
24	LR	19:58,0	LPZNE	30	-
25	LR	00:38,3	LPZE	40	-
25	-	14:03:40,3	iCPZ	-	c
25	-	18:00:32,2	iCPZ	-	c
25	PKP	21:45:24,6	iCPZNE	-	d
	(pPKP)	21:45:30,3	iCPZNE;LPZ	-	c, S
	SKP	21:48:48	Z, LPZ	-	c
	(SP)	21:59:10	LPZ	-	-
	SS	22:08:10	LPE	-	-
	LR	22:37,2	LPZ, N	36	-
	LR	22:46,5	LPE	20	-
	U.S.C.G.S.: Epicentre: 15,2 S - 173,1 W (Iles Tonga)				
	h = 33	H = 21:25:36,1	Mag: 5,2 (C.G.S.)		
		Δ = 149,2°			
26	PKP	01:02:23,2	iCPZ, LPZ, z, Z	-	d
	(pPKP)	01:02:27,6	iCPZ, N, E, z	-	c, N
	SKP	01:05:55	LPZ	-	c
	SS	01:25:10	LPE	-	-
	LR	01:53:40	LPZ, N	40	-
	LR	02:02:30	LPZ, N, E	20	-
	U.S.C.G.S.: Epicentre: 15,3 S - 173,1 W (Iles Tonga)				
	h = 33	H = 00:42:34,9	Mag: 5,3 (C.G.S.)		
		Δ = 149,1°			

Date	Phases	Heure T.M.G.	Composantes, nature du mouvement et amplitudes (μ)	Périodes (s)	Sens du mouvement
1968 Avr. 26	P	03:08:34,4	iCPZ, N	-	d, N
	pP	03:08:39,4	iCPZ, N, E	-	c, S, W
	LR	03:35,4	LPZ, N, E	17	-
	U.S.C.G.S.: Epicentre: 35,1 N - 50,2 E (Iran) h = 21 H = 02:58:22,1 Mag: 5,3 (C.G.S.) Δ = 60,9°				
26	P	12:06:38,7	iz, CPZ, CPE	-	d, W
	U.S.C.G.S.: Epicentre: 14,4 S - 70,5 W (Pérou) h = 33 H = 11:54:23 Mag: 5,2 (C.G.S.) Δ = 80,7°				
26	P	13:22:12	z, Z, CPZ, N, E, LPZE	-	-
	PP	13:23:28,5	iCPZE, LPZE	-	c, W
	S	13:27:38	LPE(Z)	-	-
	SSS	13:30,1	LPZNE	-	-
	LR	13:31,2	LPZE	30	-
	LR	13:32,2	LPZNE, Z	20	-
	U.S.C.G.S.: Epicentre: 0,2 S - 18,2 W (Atlantique Central) h = 33 H = 13:15:23,3 Mag: 5,2 (C.G.S.) Δ = 34,6°				
26	PKP	15:19:11,2	ez, CPZ	-	d
	pPKP	15:19:13,3	iz, Z, CPZ	-	d
	-	15:19:19	eCPNE	-	-
	PKS	15:22:40	CPNE	-	-
	SKP	15:22:46	CPZ	-	-
	-	15:23:16,2	CPE	-	-
	LR	16:01,3	CPZ	50	-
	LR	16:04,1	CPZNE	30	-
	LR	16:07,4	CPZNE	20	-
	U.S.C.G.S.: Epicentre: 37,3 N - 116,5 W (Sud de Nevada) h = 0 H = 15:00:00,1 Mag: 6,4 (BRK); 6½ (GOL); 6,3 (C.G.S.) Δ = 130,5°				
26	PP	18:08:10	LPZE	-	-
	PS	18:18:02	LPZE	-	-
	SS	18:24,8	LPNE	-	-
	SSS	18:29,1	LPZNE	-	-
	LR	18:44,9	LPZNE	32	-
	LR	18:53,3	LPZNE	20	-
	U.S.C.G.S.: Epicentre: 18,7 N - 103,3 W (Près de la côte de Michoacan, Mexico) h = 65 H = 17:48:02,3 Mag: 5,9 (BRK); 5,5 (C.G.S.) Δ = 119,6°				
28	PKP	04:37:52,2	iz, CPZNE	-	d, NE
	pPKP	04:38:05,1	iz, CPZE	-	c, E
	U.S.C.G.S.: Epicentre: 44,8 N - 174,5 E (Pacifique du Nord) h = 39 H = 04:18:15,7 Mag: 5,5 (C.G.S.) Δ = 146,1°				
28	Pn	13:30:38,8	iCPZE, z	-	-
	-	13:30:43,1	iCPZNE, z	-	-
29	PKP	09:51:16,0	iz, CPZ	-	d
	U.S.C.G.S.: Epicentre: 21,3 S - 179,5 W (Région des Iles Fidji) h = 640 H = 09:32:56,8 Mag: 4,5 (C.G.S.) Δ = 141,6°				
29	LR	09:55,4	LPZNE	30	-
	Pn	09:58:53,8	iCPNEZ, z	-	c, NE
	P*	09:58:54,4	CPZE, z	-	-
	-	09:58:57,1	CPZNE	-	-
	Sn	09:59:15,4	CPZNE	-	-
	Lg	09:59:16,1	z, CPZNE, Z	-	-
	Δ = 1,6°				
29	P	17:12:10,4	iCPZN, z, Z	-	c, N
	pP	17:12:21,5	iCPEZ, z	-	-
	S	17:20:28	LPNEZ	-	-
	SSS	17:27:15	LPEN	-	-
	LR	17:29,4	LPENZ	40	-
	LR	17:34,7	LPNEZ	20	-
	U.S.C.G.S.: Epicentre: 39,2 N - 44,3 E (Région de la frontière NW de Iran et de Russie) h = 34 H = 17:01:57,6 Mag: 5,3 (C.G.S.) Δ = 61,3°				

Date	Phases	Heure T.M.G.	Composantes, nature du mouvement et amplitudes(AA)	Périodes (s)	Sens du mouvement
1968 Avr. 30	P	00:56:31,7	CPE, Z, N	-	-
	S	00:58:56,6	CPNZE	-	-
	Lg	01:00:08,6	CPNZE, xZ		
BUL Epicentre: 15,1 S - 26,8 E (Zambie)					
H = 00:38:18 Mag: 3,3 (BUL)					
Δ = 12,9°					
30	pP	109:09:14,0	Iz, CPZE	-	e, E
U.S.C.G.S.: Epicentre: 33,3 S - 69,7 W (Région de la frontière Chili-Argentine)					
h = 140 H = 08:57:06,0 Mag: 4,6 (C.G.S.)					
Δ = 76,3°					

S E R V I Ç O M E T E O R O L Ó G I C O D E A N G O L A

Centro de Geofísica de Luanda

C.P. 1228 C L u a n d a

BULLETIN SÉISMIQUE D'ANGOLA (PORTUGAL)

ANNÉE 4 - Nº 7 JUILLET 1968

Station seismographique de Sá da Bandeira

Coordonnées de la station:

Latitude géographique: φ = 14° 54' 08" S Longitude: λ = 13° 28' 39" E

Latitude géocentrique: Φ = 14 48 23 S Altitude: h = 1761 m

Nature du sous-sol:

Granite

Constantes des séismographes

Séismographes	T_o (s)	T_g (s)	Amplification			
			Ts=0,2 s	Ts=0,6 s	Ts=1,0 s	Ts=15,0 s
Benioff vertical (z)	1,0	0,2	76750	33000	15300	-
Benioff vertical (Z)	1,0	21,3	400	1100	1650	120
Benioff vertical (CPZ)	1,0	0,75	38000	150000	100000	-
Benioff N/S (CPN)	1,0	0,85	38000	150000	100000	-
Benioff EW (CPE)	1,0	0,82	38000	150000	100000	-
Sprengnether vertical (LPZ)	15,0	100,0	-	-	-	1500
Sprengnether NS (LPN)	15,0	100,0	-	-	-	1500
Sprengnether EW (LPE)	15,0	100,0	-	-	-	1500

Date		Phases	Heure T.M.G.	Composantes, nature du mouvement et amplitudes(μ)	Périodes (s)	Sens du
1968 Juil.	1	P	04:13:09,6	iCPZN; z	-	c, -SN
		-	04:13:33,2	iCPZN; z	-	c, NS
		U.S.C.G.S.: Epicentre: 47,9 N - 48,0 E (Ouest de Kazakh SSR)				
		h = 33 R	H = 04:02:01,7	Mag: 5,5 (C.G.S.)	Δ = 69,9°	
	1	PKP	11:04:11,1	eiCPZ; z	-	c
		pPKP	11:04:28,5	iCPZ; z	-	c
		LR	11:52,8	LPZNE	30	-
		LR_1	12:03,4	LPZNE	20	-
		U.S.C.G.S.: Epicentre: 36,0 N - 139,3 E (Honshu, Japon)				
		h = 67 km	H = 10:45:11,9	Mag: 5,9 (C.G.S.)	Δ = 127,5°	
	2	PKP	04:03:27,7	iCPZ; z	-	d
		PS	04:14:27	LPZNE	-	-
		SS	04:20:48	LPNE	-	-
		LR	04:34,2	LPN	50	-
		LR_1	04:34,5	LPE	44	-
		LR_2	04:36,5	LPZNE	30	-
		LR_3	04:45,3	LPZNE	20	-
		U.S.C.G.S.: Epicentre: 17,6 N - 100,3 W (Guerrero - Mexico)				
		h = 41 km	H = 03:44:48,9	Mag: 5,9 (C.G.S.)	Δ = 116,7°	

Date	Phases	Heure T.M.G.	Composantes, nature du mouvement et amplitudes (ω)	Périodes (s)	Sens du mouvement
1968 Juil. 2	PKP	04:50:08,1	iCPZ; z	-	c
	LR	05:37,2	LPZNE	30	-
	LR_1	05:48,9	LPZNE	20	-
	U.S.C.G.S.: Epicentre: 29,7 S - 177,9 W (Ile Kermadec)				
	h = 53 km H = 04:30:52,7 Mag: 5,6 (C.G.S.) Δ = 134,1°				
2	-	11:11:15,1	iCPZNE; z, Z	-	c, NS, WE
2	PKP	18:59:28,9	iCPZ; z, Z	-	c
	U.S.C.G.S.: Epicentre: 2,7 S - 138,9 E (Nouvelle Guinée)				
	h = 62 km H = 18:40:10,1 Mag: 5,7 (C.G.S.) Δ = 123,2°				
3	-	19:29:23,4	iCPZNE; z, Z	-	c, NS, EW
4	LR	13:22,7	LPZN	32	-
	LR_1	13:29,1	LPZN	20	-
4	P	21:57:12,0	iCPZN; z, Z	-	d, SN
	S	22:04:41	LPNE	-	-
	SS	22:08:30	LPZN	-	-
	LR	22:13,6	LPE	40	-
	LR_1	22:14,9	LPZNE	30	-
	LR_2	22:17,9	LPZNE	20	-
	U.S.C.G.S.: Epicentre: 37,8 N - 23,2 E (Sud de Grèce)				
	h = 33 R H = 21:47:55,6 Mag: 5,3 (C.G.S.) Δ = 53,5°				
5	PKP	11:47:19,7	iCPZNE; LPZ	-	d, NS, EW
	pPKP	11:47:31,4	iCPZ	-	d
	PP	11:49:31	LPZNE	-	-
	SKP	11:50:37,5	CPZ; LPZNE	-	-
	PPP	11:52:08	LPZNE	-	-
	SP	11:59:31	LPZ	-	-
	PS	11:59:34	LPNE	-	-
	-	12:01:33	LPZNE	-	-
	-	12:02:32	LPZNE	-	-
	SS	12:06:38	LPE	-	-
	LR	12:30,7	LPZNE	40	-
	LR_1	12:35,9	LPZNE	30	-
	LR_2	12:45,3	LPZNE	20	-
	U.S.C.G.S.: Epicentre: 38,5 N - 142,0 E (Proche de la côte east de Honshu, Japon)				
	h = 43 km H = 11:28:12,6 Mag:5,9-6,3 (C.G.S.); 6 (BRK) Δ = 129,1°				
5	PKP	13:57:05,4	iCPZ	-	d
	PP	13:59:36,3	iCPZ	-	d, NS
	SKP	14:00:35,0	iCPZ	-	-
	U.S.C.G.S.: Epicentre: 30,2 S - 178,1 W (Iles Kermadec)				
	h = 53 km H = 13:37:55,7 Mag: 5,2 (C.G.S.) Δ = 133,5°				
5	LR	19:00,2	LPZN	30	-
	LR_1	19:03,1	LPZN	20	-
	LR_2	19:05,2	LPZN	15	-
6	Pg	04:37:08,9	CPZNE	-	-
	Sg	04:37:13,3	CPZNE	-	-
	$\Delta \simeq 0,3$				
6	P	07:43:19,6	iCPZE; z, Z	-	d, EW
	Lg	07:50:31,5	CPZNE; z, Z	-	-
	BUL (Rhodesia) Epicentre: 5,0 S - 36,0 E (Kondoa, Tanzania)				
	h = - H = 07:37:59 Mag: 4,4 (C.G.S.) Δ = 24,3°				
6	P	13:29:45,2	iCPZ; z	-	d
	Lg	13:36:40,5	CPZNE; z, Z	-	-
	U.S.C.G.S.: Epicentre: 1,3 S - 33,3 E (Lac Victoria)				
	h = 33 R H = 13:24:22* Mag: 3,2 (C.G.S.) Δ = 23,8°				
6	P	14:26:55,1	iCPZN; z, Z	-	c, NS
	U.S.C.G.S.: Epicentre: 58,7 S - 24,9 W (Au sud des îles Sandwich)				
	h = 33 R H = 14:17:45,1 Mag: 4,6 (C.G.S.) Δ = 52,2°				
6	-	17:41:53,0	iCPZ	-	d
6	LR	18:30,2	LPZE	20	-
	U.S.C.G.S.: Epicentre: 9,8 N - 126,4 E (Mindanau Philippine Islands)				
	h = 24 km H = 17:23:55,8 Mag: 5,1 (C.G.S.) Δ = 114,5°				
6	-	21:28:15,1	CPZNE; z	-	-

Date	Phases	Heure T.M.G.	Composantes, nature du mouvement et amplitudes(μ)	Périodes (s)	Sens du mouvement
1968 Juil. 7	P	05:59:11,1	CPZ	-	-
	LR	06:28,1	LPZNE	40	-
	LR_1	06:29,0	LPZNE	30	-
	LR_2	06:31,6	LPZNE	20	-
	U.S.C.G.S.: Epicentre: 41,4 S - 88,3 W (Ouest de Chili) h = 33 R H = 05:46:27,3 Mag: 4,5 - 5,6 (C.G.S.) Δ = 88,7°				
7	P	11:11:18,6	iCPZNE; z	-	d, SN, WE
	U.S.C.G.S.: Epicentre: 22,1 S - 68,5 W (Nord de Chili) h = 116 km H = 10:59:33,4 Mag: 4,0 (C.G.S.) Δ = 77,1°				
7	P	13:47:29,3	iCPZE; z	-	d, EW
	U.S.C.G.S.: Epicentre: 27,9 S - 68,4 W (Région interieur entre Chili-Argentine) h = 128 km H = 13:35:52* Mag: 4,2 (C.G.S.) Δ = 76,1°				
7	PKP	14:43:08	eCPZE; z	-	-
	LR	15:37,1	LPZN	25	-
	LR_1	15:39,6	LPZNE	20	-
	U.S.C.G.S.: Epicentre: 22,2 S - 175,1 W (Iles Tonga) h = 33 R H = 14:23:33,6 Mag: 5,3 (C.G.S.) Δ = 142,0°				
7	LR	17:53,6	LPZNE	20	-
	U.S.C.G.S.: Epicentre: 9,8 N - 126,2 E (Mindanao, Iles Philippines) h = 36 km H = 16:50:31,0 Mag: 4,8 (C.G.S.) Δ = 114,3°				
7	LR	22:37,3	LPZE	20	-
	U.S.C.G.S.: Epicentre: 9,6 N - 126,5 E (Mindanao, Iles Philippines) h = 69 km H = 21:34:07,8 Mag: 5,1 (C.G.S.) Δ = 114,3°				
8	P	00:01:05,2	eiCPZNE; z	-	d, NS, WE
	U.S.C.G.S.: Epicentre: 5,8 S - 77,1 W (Nord de Perou) h = 27 km H = 23:48:08,2 Mag: 5,5 - 5,2 (C.G.S.) Δ = 87,9°				
7	LR	23:56,1	LPN	50	-
	LR_1	23:57,4	LPN	40	-
	LR_2	00:03,4	LPZE	32	-
	LR_3	23:58,9	LPZNE	30	-
	LR_4	00:04,8	LPZNE	25	-
	LR_5	00:08,5	LPZNE; Z	20	-
	U.S.C.G.S.: Epicentre: 8,5 N - 103,3 W (Au large de la côte de Mexico) h = 33 R H = 23:05:18,2 Mag: 5,0 - 5,6 (C.G.S.); $5\frac{3}{4}$ - 6 (GOL) Δ = 118,1°				
8	PKP	05:16:34	eCPZNE; z	-	d, NS, EW
	U.S.C.G.S.: Epicentre: 18,2 S - 175,5 W (Iles Tonga) h = 246 km H = 04:57:22* Mag: 4,6 (C.G.S.) Δ = 145,7°				
8	P	11:37:29,4	iCPZNE; z	-	d, NS, EW
	U.S.C.G.S.: Epicentre: 28,0 N - 57,0 E (Sud de Iran) h = 33 R H = 11:27:24* Mag: 4,0 (C.G.S.) Δ = 60,1°				
8	PKP	12:27:45,6	iCPZ; z	-	d
	U.S.C.G.S.: Epicentre: 22,2 S - 179,8 W (Sud des Iles Fidji) h = 622 km H = 12:09:28,4 Mag: 4,9 (C.G.S.) Δ = 140,8°				
8	P	13:26:00,8	iCPZNE; z	-	c, NS, EW
	pP	13:26:08,2	iCPZNE; z	-	c, NS, EW
	U.S.C.G.S.: Epicentre: 38,0 N - 67,6 E (Uzbek, RSS) h = 28 km H = 13:14:29,9 Mag: 5,2 (C.G.S.) Δ = 72,8°				
8	P	17:25:15,1	iCPZN; z	-	c, SN
	LR	17:43,7	LPZE	40	-
	LR_1	17:44,1	LPZNE	30	-
	LR_2	17:48,4	LPZNE	20	-
	U.S.C.G.S.: Epicentre: 29,7 N - 51,1 E (Sud de Iran) h = 44 km H = 17:15:28,3 Mag: 4,9 - 5,1 (C.G.S.) Δ = 57,5°				
8	P	17:50:00,6	iCPZNE; z, Z	-	d, SN, WE
	LR	18:10,0	LRZ	30	-
	LR_1	18:09,1	LPZNE	20	-
	LR_2	18:14,1	LPZNE; Z	10	-
	U.S.C.G.S.: Epicentre: 34,4 N - 25,2 E (Crète) h = 33 R H = 17:41:05,8 Mag: 5,3 (C.G.S.) Δ = 50,5°				

Date	Phases	Heure T.M.G.	Composantes, nature du mouvement et amplitudes (μ)	Périodes (s)	Sens du mouvement
1968 Juil. 9	Pn	06:14:42,2	iCPZNE; z, Z	-	c, NS, WE
	Sn	06:15:28,1	iCPZNE;LPE;z, Z	-	d, NS, EW
	Lg	06:15:40	LPZNE	-	-
	LR	06:15,9	LPZNE	15	-
	BUL (Rhodésia) Epicentre: 11,0 S - 12,0 E (Côte central de Angola)				
	h = - H = 06:13:45 Mag: 4,0 (C.G.S.) Δ = 4,2°				
9	PKP	23:35:50,4	iCPZ; z	-	c
	U.S.C.G.S.: Epicentre: 18,2 S - 178,2 W (Iles Fidji)				
	h = 659 km H = 23:17:21* Mag: 4,1 (C.G.S.) Δ = 144,9°				
10	LR	01:43,1	LPZE	30	-
	LR	01:50,7	LPZE	20	-
	U.S.C.G.S.: Epicentre: 10,5 N - 138,6 E (Ouest de Iles Caroline)				
	h = 33 R H = 00:40:45,9 Mag: 5,1 - 5,3 (C.G.S.) Δ = 126,4°				
10	Pg	05:58:09,6	iCPZNE; z	-	-
	Sg	05:58:16,4	iCPZNE; z	-	-
	-	05:58:27,6	iCPZNE; z	-	-
	$\Delta \simeq 0,5°$				
10	P	06:48:09,6	iCPZNE; z	-	d, NS, EW
	U.S.C.G.S.: Epicentre: 30,7 S - 71,3 W (Proche de la côte central de Chili)				
	h = 66 km. H = 06:36:14,1 Mag: 4,7 (C.G.S.) Δ = 78,1°				
10	P	11:26:59,7	iCPZNE; LPZNE; z, Z	-	c, SN, EW
	PS	11:35:33	LPZNE	-	-
	LR	11:46,0	LPZ; Z	38	-
	LR_1	11:47,2	LPZNE; Z	30	-
	LR_2	11:48,4	LPZNE; Z	20	-
	LR_3	11:55,0	LPZNE; Z	15	-
	U.S.C.G.S.: Epicentre: 36,8 S - 78,5 E (Au moyen de ocean Indian)				
	h = 33 R H = 11:16:44,6 Mag: 5,7 - 6,1 (C.G.S.); 6 (PAS) Δ = 61,3°				
10	LR	21:52,5	LPZNE	30	-
	LR_1	21:56,4	LPZNE	20	-
	U.S.C.G.S.: Epicentre: 40,2 N - 143,2 E (Au large de la côte est de Honshu, Japon)				
	h = 33 R H = 20:40:31,2 Mag: 5,3 (C.G.S.) Δ = 129,6°				
11	LR	10:01,3	LPZ	36	-
	LR_1	10:00,2	LPN	30	-
	LR_2	10:00,4	LPZE	20	-
	LR_3	10:01,4	LPN	15	-
12	PKP	01:03:46	eCPZ;LPZ; z, Z	-	-
	PP	01:06:03,0	CPZ; LPZE; z, Z	-	-
	-	01:07:07	LPZNE; z, Z	-	-
	SP	01:16:04	LPZNE	-	-
	PPS	01:17:50	LPZNE	-	-
	SS	01:23:08	LPNE	-	-
	LR	01:48,3	LPNE	40	-
	LR_1	01:51,1	LPZNE	30	-
	LR_2	02:02,4	LPZNE	20	-
	U.S.C.G.S.: Epicentre: 39,5 N - 143,2 E (Au large de la côte est de Honshu, Japon)				
	h = 28 km H = 00:44:36,5 Mag: 6,0 - 5,8 (C.G.S.) Δ = 129,7°				
12	PKP	04:15:38,3	iCPZ; z, Z	-	d
	pPKP	04:15:46	eCPZ; z, Z	-	-
	LR	05:05,2	LPZNE	30	-
	LR_1	05:07,2	LPZNE	25	-
	LR_2	05:09,3	LPZNE	20	-
	U.S.C.G.S.: Epicentre: 39,5 N - 143,2 E (Au large de la côte est de Honshu, Japon)				
	h = 26 km H = 03:56:27,5 Mag: 5,5 (C.G.S.) Δ = 129,7°				
12	P	09:25:12,6	iCPZ; z	-	-
	-	09:25:15,6	iCPZ; z	-	-
	U.S.C.G.S.: Epicentre: 5,5 S - 103,9 E (Sud de Sumatra)				
	h = 33 R H = 09:12:07,9 Mag: 5,2 (C.G.S.) Δ = 89,6°				
12	P	10:43:50,2	iCPZN	-	-
	U.S.C.G.S.: Epicentre: 29,8 N - 50,6 E (Sud de Iran)				
	h = 24 km H = 10:34:03,1 Mag: 4,8 (C.G.S.) Δ = 56,7°				
12	-	11:49:17,1	iCPZN; z, Z	-	-

Date	Phases	Heure T.M.G.	Composantes, nature du mouvement et amplitudes (μ)	Périodes (s)	Sens du mouvement
1968 Juil. 12	P	12:20:40,6	iCPZ; z	-	-
	U.S.C.G.S.: Epicentre: 49,7 N - 78,1 E (Kazakh RSS)				
	h = 0 H = 12:07:57,? Mag: 5,4 (C.G.S.) Δ = 85,9°				
12	-	23:37:36,2	iCPZNE; z	-	-
13	-	05:18:24,4	iCPZNE; z	-	-
13	-	07:01:04,5	iCPZNE; z	-	-
13	-	08:06:28,6	iCPZNE; z	-	-
13	-	14:29:35,5	iCPZNE; z	-	-
13	-	16:41:30	eCPZNE	-	-
13	PKP	23:36:24	eCPZ; z	-	-
	pPKP	23:37:20,6	iCPZ; z	-	-
	U.S.C.G.S.: Epicentre: 18,3 S - 175,0 W (Iles Tonga)				
	h = 230 km H = 23:17:09,0 Mag: 4,7 (C.G.S.) Δ = 145,7°				
14	PKP	08:16:31,1	iCPZNE; z	-	-
	pPKP	08:16:51,3	iCPZNE; z	-	-
	U.S.C.G.S.: Epicentre: 19,5 S - 173,6 W (Iles Tonga)				
	h = 86 km H = 07:57:01,1 Mag: 5,1 (C.G.S.) Δ = 144,9°				
14	P	21:37:24,6	iCPZE; z	-	-
	U.S.C.G.S.: Epicentre: 20,9 S - 68,8 W (Région interieur Chili-Bolivie)				
	h = 109 km H = 21:25:36,4 Mag: 4,5 (C.G.S.) Δ = 77,6°				
15	PKP	04:31:01,7	iCPZNE; z	-	d, NS, EW
	U.S.C.G.S.: Epicentre: 18,0 S - 178,6 W (Iles Fidji)				
	h = 585 km H = 04:12:26,3 Mag: 5,3 (C.G.S.) Δ = 145,0°				
15	P	08:43:31,6	CPZN; z	-	-
	U.S.C.G.S.: Epicentre: 32,5 N - 48,7 E (Ouest de Iran)				
	h = 33 R H = 08:33:37,5 Mag: 4,6 (C.G.S.) Δ = 58,2°				
15	-	09:15:13,7	iCPZN; z	-	-
15	-	10:25:45,9	iCPZN; z	-	-
15	-	10:28:40	iCPZ; z	-	-
15	Pg	19:16:58,5	iCPZNE; z	-	-
	Sg	19:17:07,4	iCPZNE; z	-	-
		$\Delta \simeq 0,7°$			
16	-	08:15:34,5	iCPZNE; z	-	-
16	PKP	21:44:45,3	iCPZN; z	-	c
	U.S.C.G.S.: Epicentre: 13,5 S - 167,1 E (Iles Nouvelles Hébrides)				
	h = 215 km H = 21:25:41,9 Mag: 4,4 (C.G.S.) Δ = 141,4°				
17	-	07:59:56,0	iCPZNE; z	-	-
17	LR	06:10,4	LPN	50	-
	LR_1	06:15,2	LPZE	46	-
	LR_2	06:16,0	LPZ	40	-
	LR_3	06:16,1	LPZNE	30	-
	LR_4	06:22,0	LPZNE	20	-
	U.S.C.G.S.: Epicentre: 8,8 S - 125,0 E (Timor)				
	h = 25 km H = 05:24:15,6 Mag: 5,7 - 5,6 (C.G.S.) Δ = 108,1°				
17	-	13:24:10,2	iCPZNE; z	-	
18	PKP	05:24:10,7	iCPZN; z	-	c, SN
	U.S.C.G.S.: Epicentre: 19,5 S - 175,9 W (Iles Tonga)				
	h = 235 km H = 05:04:59,8 Mag: 5,0 (C.G.S.) Δ = 144,5°				
19	P	05:08:52,5	iCPZNE;LPZ;z,Z	-	c, NS, EW
	pP	05:08:59,9	iCPZNE; z, Z	-	-
	LR	05:31,2	LPNE	50	-
	LR_1	05:32,5	LPZNE	40	-
	LR_2	05:33,5	LPZNE	30	-
	LR_3	05:39,7	LPZNE; Z	20	-
	U.S.C.G.S.: Epicentre: 8,7 N - 93,6 E (Iles Nicobar)				
	h = 33 R H = 04:56:27,2 Mag: 5,3 - 5,5 (C.G.S.) Δ = 82,8°				

Date	Phases	Heure T.M.G.	Composantes, nature du mouvement et amplitudes(μ)	Périodes (s)	Sens du mouvement
1968 Juil. 19	PKIKP	09:40:22,5	iCPZ; z	-	-
	PKP	09:40:30,1	iCPZNE; z, Z	-	c
	pPKP	09:40:36,0	iCPZNE; z, Z	-	-
	LR	10:30,3	LPZN	38	-
	LR_1	10:30,7	LPZNE	30	-
	LR_2	10:34,8	LPZNE	20	-
	U.S.C.G.S.: Epicentre: 13,0 S - 166,5 E (Iles Nouvelles Hébrides)				
h = 29 km	H = 09:21:04,8	Mag: 5,1 - 5,3 (C.G.S.); $5\frac{3}{4}$ (PAL); $5\frac{1}{2}$ (GOL)		Δ = 141,4°	
19	Pg	09:47:37,4	iCPZNE; z	-	-
	Sg	09:47:43,4	iCPZNE; z	-	-
		$\Delta \simeq 0,5°$			
19	-	09:53:06,9	iCPZNE; z	-	-
19	-	15:50:11,4	iCPZ	-	-
19	-	17:16:12,1	iCPZNE; z	-	-
21	-	04:37:37,3	iCPZNE; z	-	-
21	PKP	06:52:11,3	iCPZ	-	d
	U.S.C.G.S.: Epicentre: 20,8 S - 174,0 W (Iles Tonga)				
	h = 52 km	H = 06:32:39,3	Mag: 4,9 (C.G.S.)	Δ = 143,6°	
21	LR	06:49,1	LPZNE	50	-
	LR_1	06:52,2	LPZNE	40	-
	LR_2	06:58,3	LPZNE	30	-
	LR_3	07:07,0	LPZNE	20	-
	U.S.C.G.S.: Epicentre: 3,2 S - 150,7 E (Nouvelle Irlande)				
h = 5 km	H = 05:52:10,4	Mag: 5,3 - 5,7 (C.G.S.); 6 (PAS); $5\frac{1}{2}$ (PAL)		Δ = 133,9°	
21	LR	18:14,1	LPZNE	40	-
	LR_1	18:16,4	LPZNE	30	-
	LR_2	18:19,5	LPZNE; Z	20	-
	LR_3	18:28,6	LPZNE; Z	15	-
	U.S.C.G.S.: Epicentre: 58,1 S - 148,3 E (Ouest des Iles Macquarie)				
	h = 33 R	H = 17:28:17,6	Mag: 4,9 - 5,9 (C.G.S.)	Δ = 98,1°	
21	-	21:23:02,8	iCPZNE; z, Z	-	c, NS, EW
21	LR	23:28,2	LPZNE	26	-
	LR_1	23:28,7	LPZN	20	-
	U.S.C.G.S.: Epicentre: 3,7 S - 145,2 E (Proche de la côte nord de Nouvelle Guinée)				
	h = 45 km	H = 22:15:38*	Mag: 4,7 (G.G.S.)	Δ = 128,7°	
22	P	00:03:43,3	iCPZN; z	-	c, SN
	LR	00:19,2	LPZNE	20	-
	LR_1	00:23,1	LPZN	15	-
	U.S.C.G.S.: Epicentre: 58,4 S - 29,5 W (Sud des Iles Sandwich)				
	h = 33 R	H = 23:54:21*	Mag: 4,5 (C.G.S.)	Δ = 53,8°	
22	-	02:57:10,5	iCPZNE	-	-
22	P	05:16:54,2	iCPZNE;LPZNE;z,Z	-	c, SN, EW
	pP	05:17:03,6	iCPZNE	-	c, SN, EW
	PP	05:18:34	LPZN	-	-
	PS	05:23:07	LPZNE	-	-
	SS	05:25:58	LPZNE	-	-
	LR	05:26,5	LPZNE	30	-
	LR_1	05:27,1	LPZNE; Z	20	-
	LR_2	05:28,1	LPZNE; Z	15	-
	U.S.C.G.S.: Epicentre: 54,6 S - 1,7 E (Iles Bouvet)				
	h = 33 R	H = 05:09:15,7	Mag: 5,6 - 5,5 (C.G.S.)	Δ = 40,7°	
22	P	07:39:14,4	iCPZN; z	-	d, NS
	U.S.C.G.S.: Epicentre: 58,8 S - 28,9 W (Sud des Iles Sandwich)				
	h = 33 R	H = 07:29:51*	Mag: 4,4 (C.G.S.)	Δ = 53,8°	
22	Pg	08:46:50,3	iCPZNE; z	-	-
	Sg	08:46:53,5	iCPZNE; z	-	-
		$\Delta \simeq 0,3°$			
22	PKP	12:12:14,3	iCPZ	-	c
	U.S.C.G.S.: Epicentre: 20,7 S - 174,1 W (Iles Tonga)				
	h = 33 R	H = 11:52:40,6	Mag: 4,4 (C.G.S.)	Δ = 143,6°	

Date	Phases	Heure T.M.G.	Composantes, nature du mouvement et amplitudes(μ)	Périodes (s)	Sens du mouvement
1968 Jul, 22	PKP	18:17:45,9	iCPZN; z	-	d, NS
	LR	19:04,3	LPZN	36	-
	LR_1	19:04,9	LPZNE	30	-
	LR_2	19:19,1	LPZNE	20	-
	U.S.C.G.S.: Epicentre: 20,1 S - 169,0 E (Iles Nouvelles Hébrides)				
	h = 34 km H = 17:58:30,3 Mag: 5,4 - 5,5 (C.G.S.); 5,6 - 5,9 (BRK); $5\frac{1}{2}$ (PAL) Δ = 137,5°				
23	-	01:08:53,8	iCPZNE; z	-	-
23	LR	19:28,2	LPZNE	25	-
	LR_1	19:30,7	LPZE	20	-
	U.S.C.G.S.: Epicentre: 18,7 N - 107,0 W (Au large de la côte de Jalisco-Mexico)				
	h = 33 R H = 18:28:01,2 Mag: 5,4 - 5,9 (C.G.S.); 6,0 (PAS); 5,5 - 5,7 (BRK); $5\frac{3}{4}$ (PAL; $5\frac{3}{4}$ (GOL) Δ = 123,1°				
24	LR	00:15,9	LPZNE	28	-
	LR_1	00:16,4	LPZNE	20	-
	LR_2	00:22,5	LPZNE	15	-
	U.S.C.G.S.: Epicentre: 40,3 N - 143,3 E (Au large de la côte est de Honshu, Japon)				
	h = 14 km H = 23:02:35,5 Mag: 5,2 - 5,6 (C.G.S.); $5\frac{3}{4}$ (GOL) Δ = 129,7°				
24	LR	05:05,1	LPZ	36	-
	LR_1	05:06,0	LPZE	30	-
	LR_2	05:10,6	LPZE	20	-
	U.S.C.G.S.: Epicentre: 18,1 N - 106,0 W (Au large de la côte de Jalisco - Mexico)				
	h = 46 km H = 04:06:41,2 Mag: 5,2 - 5,5 (C.G.S.); 4,4 - 5,3 (BRK); $5\frac{1}{2}$ (GOL); $5\frac{1}{2}$ (PAL) Δ = 122,1°				
24	-	09:42:05,6	iCPZNE; z	-	-
	-	09:43:03,9	iCPZNE; z	-	-
24	-	09:47:24,5	iCPZNE; z	-	-
	-	09:48:21,9	iCPZNE; z	-	-
24	-	19:15:35,7	iCPZNE; z	-	-
	-	19:16:15,9	iCPZNE; z	-	-
24	PKP	20:40:37,3	iCPZ; z	-	c
	pPKP	20:40:55,1	iCPZ; z	-	c
	U.S.C.G.S.: Epicentre: 15,4 S - 173,2 W (Iles Tonga)				
	h = 84 km H = 20:20:55,3 Mag: 5,3 (C.G.S.) Δ = 149,0°				
25	PKP	07:00:57,6	iCPZN; z, Z	-	d, NS
	pPKP	07:01:08,1	iCPZN; z, Z	-	d, SN
	-	07:39:15	eLPZN	-	-
	U.S.C.G.S.: Epicentre: 21,3 S 174,5 W (Iles Tonga).				
	h = 33 R H = 06:41:27,0 Mag: 5,1 (C.G.S.) Δ = 142,9°				
25	PKIKP	07:42:11,6	iCPZ;LPZ; z	-	d
	PKP	07:42:20,3	iCPZNE;LPZNE;z,Z	-	d, NS, EW
	pPKP	07:42:29,9	iCPZNE;LPZN;z,Z	-	d, NS, EW
	PP	07:44:43,5	iCPZNE; z, Z	-	-
	SKP	07:45:44,0	iCPZNE; z, Z	-	-
	PS	07:55:03	Z	-	-
	PPS	07:56:43	Z	-	-
	LR	08:26,5	Z	40	-
	LR_1	08:30,2	CPZN; Z	30	-
	LR_2	08:31,2	CPZNE; Z	25	-
	LR_2	08:34,5	CPZNE; Z	20	-
	LR_3	08:42,5	CPZNE; Z	15	-
	Long période enregistrement confuse				
	U.S.C.G.S.: Epicentre: 30,8 S - 178,4 W (Iles Kermadec)				
	h = 60 km H = 07:23:07,8 Mag: 6,4 (C.G.S.) Δ = 132,9°				
25	PKP	11:09:42,7	eICPZ; z, Z	-	-
	pPKP	11:09:51,4	CPZ; z, Z	-	-
	U.S.C.G.S.: Epicentre: 45,7 N - 146,7 E (Iles Kurile)				
	h = 16 km H = 10:50:31,5 Mag: 5,9 - 5,5 (C.G.S.) Δ = 130,3°				
25	-	18:05:32,3	iCPZN;	-	-
26	P	14:12:28,1	iCPZ; z	-	c
	-	14:13:05,5	iCPZ	-	d
	U.S.C.G.S.: Epicentre: 8,6 S - 74,2 W (Région interieur Perou - Brésil)				
	h = 151 km H = 14:00:03,6 Mag: 5,2 (C.G.S.) Δ = 85,5°				

Date	Phases	Heure T.M.G.	Composantes, nature du mouvement et amplitudes(μ)	Périodes (s)	Sens du mouvement
1968 Juil. 26	P	17:12:53,7	iCPZNE; z, Z	-	c, WE
	pP	17:13:09,2	iCPZNE; z, Z	-	c, SN, WE
	PP	17:13:41,1	iCPZNE; z, Z	-	-
	LR	17:18,3	LPN	27	-
	LR_1	17:18,5	LPZNE	20	-
	LR_2	17:19,1	LPNE	15	-
	U.S.C.G.S.: Epicentre: 22,4 S - 12,6 W (Atlantique Sud)				
	h = 33R H = 17:07:24,9 Mag: 5,3 (C.G.S.) Δ = 25,8°				
26	-	17:37:24,0	iCPZNE; z	-	-
	-	17:38:05,4	iCPZNE; z	-	-
26	P	20:59:29	eCPZ; z	-	-
	-	20:59:31,4	CPZ; z	-	-
	U.S.C.G.S.: Epicentre: 32,1 N - 70,1 E (Ouest Pakistan)				
	h = 35 km H = 20:48:03,2 Mag: 4,8 (C.G.S.) Δ = 71,7°				
27	P	02:54:59	eCPZN; z, Z	-	-
	pP	02:55:10,4	iCPZN; z, Z	-	-
	LR	03:13,5	LPN	40	-
	LR_1	03:14,1	LPNE	30	-
	LR_2	03:14,7	LPZE	25	-
	M	03:15,2	LPE	25	-
	LR_3	03:15,6	LPZNE; Z	20	-
	LR_4	03:15,8	LPZNE; Z	15	-
	M1	03:18,9	LPZN	15	-
	U.S.C.G.S.: Epicentre: 35,4 N - 27,8 E (Iles Dodecanense)				
	h = 21 km H = 02:45:49,2 Mag: 5,0 - 5,7 (C.G.S.); 5¼ (PAL); 5¼ - 5½ (GOL) Δ = 52,1°				
27	PKP	11:11:03,9	iCPZ	-	c
	U.S.C.G.S.: Epicentre: 19,2 S - 175,7 E (Sud des Iles Fidji)				
	h = 88 km H = 10:51:40,1 Mag: 5,4 (C.G.S.) Δ = 141,7°				
28	LR	12:16,7	LPZN	20	-
	LR_1	12:20,7	LPZN	15	-
	U.S.C.G.S.: Epicentre: 22,5 S - 174,7 W (Iles Tonga)				
	h = 33 R H = 10:58:25,7 Mag: 5,0 - 5,2 (C.G.S.) Δ = 141,8°				
28	-	13:35:39,4	iCPZNE	-	-
28	-	20:40:28,4	iCPZNE; z	-	-
28	P	21:30:53,0	iCPZE; z	-	c, WE
	pP	21:31:11,1	iCPZE; z	-	c, WE
	PPP	21:35:39	LPZ	-	-
	U.S.C.G.S.: Epicentre: 22,7 S - 69,4 W (Nord de Chili)				
	h = 70 km H = 21:18:59,5 Mag: 5,1 (C.G.S.) Δ = 77,9°				
28	LR	22:19,6	LPE	45	-
	LR_1	22:23,0	LPZNE	30	-
	LR_2	22:28,3	LPZNE	20	-
	U.S.C.G.S.: Epicentre: 55,4 N - 166,6 E (Iles Komandorsky)				
	h = 27 km H = 21:12:38,1 Mag: 5,4 - 5,8 (C.G.S.); 5,5 - 5,7 (BRK); 5¾ (GOL); 5¼ (PAL) Δ = 134,8°				
29	PKP	03:05:40,4	iCPZ; z, Z	-	d
	U.S.C.G.S.: Epicentre: 7,5 S - 148,3 W (Iles Line)				
	h = 33 km H = 02:45:46,3 Mag: 4,9 (C.G.S.) Δ = 151,2°				
29	P	06:09:04,9	iCPZ; z	-	d
	U.S.C.G.S.: Epicentre: 19,2 S - 69,8 W (Nord de Chili)				
	h = 71 km H = 05:57:05,9 Mag: 5,2 (C.G.S.); 5,0 (BRK) Δ = 79,0°				
29	PKP	11:31:28	eCPZ; z	-	-
	pPKP	11:31:40,8	iCPZ; LPZ; z	-	-
	PP	11:34:40	LPZN	-	-
	PKS	11:35:31	LPZN	-	-
	SS	11:53:10	LPNE	-	-
	LR	12:19,9	LPZN	40	-
	LR_1	12:21,2	LPZNE	30	-
	LR_2	12:24,3	LPZNE; Z	20	-
	M	12:31,5	LPZN	20	-
	LR_3	12:34,4	LPZNE; Z	15	-
	U.S.C.G.S.: Epicentre: 22,5 S - 175,0 W (Iles Tonga)				
	h = 33 R H = 11:11:59,5 Mag: 5,6 - 6,0 (C.G.S.) Δ = 141,8°				

Date	Phases	Heure T.M.G.	Composantes, nature du mouvement et amplitudes(μ)	Périodes (s)	Sens du mouvement
1968 Juil. 29	LR	14:27,5	LPZNE	40	-
	LR_1	14:28,2	LPZNE	30	-
	LR_2	14:40,4	LPZNE	20	-
	LR_3	14:51,1	LPZNE	15	-
U.S.C.G.S.: Epicentre: 3,2 S - 150,6 E (Nouvelle Irlande)					
h = 28 km H = 13:30:31,9 Mag: 5,4 - 5,7 (C.G.S.) Δ = 133,8°					
29	PKIKP	15:39:22,1	CPZ	-	-
	PKP	15:39:29,5	ICPZ; z, Z	-	c
U.S.C.G.S.: Epicentre: 21,5 S - 174,4 W (Iles Tonga) h = 33 R H = 15:19:57,6 Mag: 5,0 - 5,3(CGS) Δ = 142,8°					
29	Pg	22:06:48,1	ICPZNE; z	-	c, SN, WE
	Sg	22:06:51,1	ICPZNE; z	-	d, NS, EW
$\Delta \simeq 0,3°$					
30	PKP	00:11:05,3	ICPZ; z, Z	-	d
	pPKP	00:00:09,2	ICPZ	-	d
	PP	00:12:25	LPZE; z, Z	-	-
	PS	00:22:09	LPZE	-	-
	SS	00:28:43	LPN	-	-
	LR	00:42,2	LPNE	60	-
	LR_1	00:49,1	LPZ	46	-
	LR_2	00:43,2	LPZNE	40	-
	LR_3	00:44,2	LPZNE; Z	30	-
	LR_4	00:52,3	LPZNE; Z	20	-
	LR_5	00:57,1	LPZNE; Z	15	-
U.S.C.G.S.: Epicentre: 0,2 S - 133,4 E (Nouvelle Guinée)					
h = 12 km H = 23:52:15,0 Mag: 6,1 - 6,0 (C.G.S.); $6\frac{1}{2}$ (PAS); $6\frac{1}{2}$ (PAL) Δ = 118,7°					
30	LR	05:24,5	LPZNE	25	-
	LR_1	05:25,1	LPZNE	20	-
	LR_2	05:31,4	LPZNE	15	-
U.S.C.G.S.: Epicentre: 22,4 S - 175,0 W (Iles Tonga)					
h = 33 R H = 04:10:12,1 Mag: 5,3 - 5,7 (C.G.S.); 5,5 - 5,7 (BRK) ; 6 (PAL) Δ = 141,8°					
30	P	20:51:50	ICPZ;LPZE;z,Z	-	d
	pP	20:52:00	ICPZ;LPZ; z,Z	-	d
	PP	20:55:37,5	CPZE	-	-
	-	21:02:23	LPZE	-	-
	-	21:03:12	LPZN	-	-
	(PS)	21:04:12	LPZNE	-	-
	LR	21:18,2	LPN	60	-
	LR_1	21:19,3	LPZN	50	-
	LR_2	21:20,8	LPZNE	40	-
	LR_3	21:21,3	LPZNE; Z	30	-
	M	21:27,6	LPZE	25	-
	LR_4	21:26,1	LPZNE; Z	20	-
	M_1	21:27,8	LPZNE	20	-
	M_2	21:34,1	LPZE	17	-
	LR_5	21:36,9	LPZNE; Z	15	-
	M_3	21:37,9	LPZE	15	-
U.S.C.G.S.: Epicentre: 6,9 S - 80,5 W (Proche de la côte Nord du Perou)					
h = 37 km H = 20:38:42,0 Mag: 5,8 - 6,4 (C.G.S.); 6,0 - 6,2 (BRK); $5\frac{1}{2}$ - $5^3/_4$ (PAL); $5^3/_4$ - 6 (GOL) Δ = 92,1°					
31	-	14:08:46,6	ICPZ; z	-	d
31	P	19:38:31	eCPZN; Z	-	-
	LR	19:57,7	LPZE	30	-
	LR_1	19:58,4	LPZNE	25	-
	LR_2	19:59,0	LPZNE	20	-
	LR_3	19:59,3	LPZNE	17	-
	LR_4	19:59,7	LPZNE	15	-
U.S.C.G.S.: Epicentre: 35,5 N - 28,0 E (Mer Mediterranée)					
h = 27 km H = 19:29:26,7 Mag: 4,6 (C.G.S.) Δ = 52,2°					

SERVIÇO METEOROLÓGICO DE ANGOLA

Centro de Geofísica de Luanda
C.P. 1228 C Luanda

BULLETIN SEISMIQUE D'ANGOLA (PORTUGAL)
ANNÉE 4 - Nº 8 AOÛT 1968

Station séismographique de Sá da Bandeira

Coordonnées de la station:

Latitude géographique: φ = 14° 54' 08" S Longitude: λ = 13° 28' 39" E

Latitude géocentrique: Φ = 14 48 23 S Altitude: h = 1761 m

Nature du sous-sol:

Granite

Constantes des séismographes

Séismographes	T_o (s)	T_g (s)	Amplification			
			Ts=0,2 s	Ts=0,6 s	Ts=1,0 s	Ts=15,0 s
Benioff vertical (z)	1,0	0,2	76750	33000	15300	-
Benioff vertical (Z)	1,0	21,3	400	1100	1650	120
Benioff vertical (CPZ)	1,0	0,75	38000	150000	100000	-
Benioff N/S (CPN)	1,0	0,85	38000	150000	100000	-
Benioff EW (CPE)	1;0	0,82	38000	150000	100000	-
Sprengnether vertical (LPZ)	15,0	100,0	-	-	-	1500
Sprengnether NS (LPN)	15,0	100,0	-	-	-	1500
Sprengnether EW (LPE)	15,0	100,0	-	-	-	1500

Date	Phases	Heure T.M.G.	Composantes, nature du mouvement et amplitudes (μ)	Périodes (s)	Sens du mouvement
1968 Août 1	PKP	00:33:26,7	ICPZ; eLPZ; Iz,IZ	-	c
	-	00:36:04,0	ICPZN; Iz	-	c, SN
	-	00:36:11	eLPZNE; IZ	-	c, SN
	-	00:37:04,0	ICPNE; Iz, IZ	-	NS, EW
	(PS)	00:46:24	eLPN	-	-
	-	00:49:15	eLPZ	-	-
	SS	00:54:12	eLPE	-	-
	LR	01:13,2	LPNE	40	-
	LR_1	01:19,5	LPZN	40	-
	U.S.C.G.S.: Epicentre: 26,6 S - 177,5 W (Sud des Iles Fidji)				
h = 123 km	H = 00:14:16,0	Mag: 5,6 (C.G.S.); 5,1 (BRK); 5½ (PAL)			Δ = 137,1°
1	P dif.	20:34:00,0	CPZ;ILPZNE;Iz,IZ	-	c
	PKP	20:37:54,6	ICPZNE; Iz, IZ	-	d
	PP	20:38:39,0	ICPZNE;ILPZNE; Iz, IZ	-	c, SN, WE
	-	20:44:51	eLPNE; eZ	-	SN, WE
	LR	21:13,2	CPZNE	-	-
	U.S.C.G.S.: Epicentre: 16,5 N - 122,2 E (Luzon, Iles Philippines)				
h = 36 km	H = 20:19:21,9	Mag: 5,9 (C.G.S.); 7 (PAS); 6,5 - 7,0 (BRK); 7 (GOL)			
Note: Près de 207 morts, beaucoup de blessés et danger extensif à Manila.					Δ = 111,7°

Date	Phases	Heure T.M.G.	Composantes, nature du mouvement et amplitudes (μ)	Périodes (s)	Sens du mouvement
1968 Août 2	P	13:40:42,5	iCPZNE; iz, iZ	-	d, SN, WE
	-	13:41:01,5	iCPZNE; iz, iZ	-	c, NS, EW
	SSS	14:56:10	eLPNE	-	-
	LR	14:00,2	LPZNE	40	-
	U.S.C.G.S.: Epicentre: 27,5 N - 60,9 E (Sud d'Iran)				
	h = 62 km H = 13:30:23,3 Mag: 5,7 (C.G.S.) Δ = 62,5°				
2	P dif	14:21:31	eLPZNE; Z	-	c, SN, WE
	PKP	14:25:20,6	iCPZ; eLPZNE; iz, iZ	-	c
	PP	14:26:15,2	iCPZNE; iLPZNE; iz, iZ	-	c, WE
	-	14:36:03	eCPZE	-	d, WE
	LR	15:02,0	LPZNE; Z	26	-
	U.S.C.G.S.: Epicentre: 16,6 N - 97,7 W (Oaxaca, Mexico)				
	h = 40 km H = 14:06:43,9 Mag: 7 - 7¼ (PAS), 6,8 (BRK), 6¾ - 7 (PAL), 7 - 7¼ (GOL)				
	Δ = 113,9°				
3	PKP	05:13:21,9	iCPZNE;eLPZ; iz, iZ	-	c
	PP	05:14:36,5	iCPZNE;eLPZNE; iz, iZ	-	d, NS, EW
	-	05:20:14	eLPE	-	WE
	-	05:23:19	eLPZ	-	d
	PS	05:24:26	eLPNE; Z	-	NS, EW
	PPS	05:25:43	eLPZ	-	d
	SS	05:30:56	eLPZNE	-	d, SN, WE
	SSS	05:35:14	eLPNE	-	NS
	-	05:44:07	eLPN	-	NS
	LR	05:58,1	LPZNE	30	-
	U.S.C.G.S.: Epicentre: 25,6 N - 128,5 E (Iles Ryukyu)				
	h = 19 km H = 04:54:32,7 Mag: 6,4 (C.G.S.); 6¾ (PAS); 6,7 - 6,9 (BRK) Δ = 118,7°				
3	LR	14:36,9	LPZNE	20	-
9	LR	20:13,1	LPZE	20	-
4	Pn	08:15:41,7	ieCPZNE; iez	-	-
	Sn	08:16:25,5	iCPZNE; iz	-	-
	Δ=3,6°				
4	PKP	11:59:54,2	iCPZNE; iz, iZ	-	d
	-	12:00:14	eLPZ	-	d
	PP	12:00:50	eLPZE	-	c, EW
	SKS	12:06:35	eLPE	-	EW
	-	12:08:21	eLPN	-	SN
	PS ou SP	12:10:23	eLPZE	-	c, EW
	PSS	12:17:05	eLPNE	-	SN, WE
	SSS	12:20:40	eLPZ	-	d
	LQ	12:28,2	LPN	60	-
	LR	12:35,5	LPZNE; Z	40	-
	U.S.C.G.S.: Epicentre: 6,6 N - 126,8 E (Mindanao, Iles Philippines)				
	h = 107 km H = 11:41:24,8 Mag: 5,7 (C.G.S.); 6¼ (PAS); 6,3 - 6,5 (BRK) Δ = 114,2°				
5	-	00:10:55	eLPN	-	NS
	-	00:13:34	eLPE	-	-
	SSS	00:14:06	eLPZN	-	-
	LR	00:14,3	LPZNE	34	-
	U.S.C.G.S.: Epicentre: 53,0 S - 9,6 E (Sud-Ouest d'Afrique)				
	h = 33 R H = 23:57:39,6 Mag: 4,9 (C.G.S.) Δ = 38,2°				
5	-	(14:53:00,0?)			
5	PKP	16:35:56,5	iCPZNE;Iz, IZ	-	c
	pPKP	16:36:10,0	iCPZ; eLPZ; Iz	-	d
	PP	16:37:31	eLPZ	-	c
	-	16:42:57	eLPZNE	-	d, NS, EW
	-	16:44:28	eLPZNE	-	d, NS, EW
	PS	16:47:27	eLPZNE	-	d
	-	16:53:28	eLPE	-	-
	SS	16:54:06	eLPZNE	-	c, SN, WE
	SSS	16:58:40	eLPZNE	-	-
	LR	17:18,3	LPZNE; Z	30	-
	U.S.C.G.S.: Epicentre: 33,3 N - 132,2 E (Shikoku, Japon)				
	h = 41 km H = 16:17:04,8 Mag: 6,3 (C.G.S.); 7 - 7¼ (PAS); 6,4 - 6,6 (BRK) Δ = 122,0°				

Date	Phases	Heure T.M.G.	Composantes, nature du mouvement et amplitudes(μ)	Périodes (s)	Sens du mouvement
1968 Août 6	LR	05:54,7	LPZNE	30	-
6	-	08:50:09	eLPN	-	NS
	-	08:53:52	eLPN	-	NS
	LR	08:57,2	LPZNE	30	-
	U.S.C.G.S.: Epicentre: 13,9 N - 51,5 E (Golfe d'Aden)				
	h = 33 R H = 08:34:42,3 Mag: 4,9 (C.G.S.) Δ=47,3°				
6	P	21:39:40,5	iCPZNE; Iz, IZ	-	d
	(S)	21:44:26	eLPNE	-	-
	LR	21:45,3	LPZNE; Z	30	-
	U.S.C.G.S.: Epicentre: 25,6 S - 13,8 W (Atlantique Sud)				
	h = 33 R H = 21:33:53,9 Mag: 4,9 (C.G.S.) Δ=27,7°				
7	LR	02:52,1	LPZE	20	-
9	PS	03:37:32	eLPZNE	-	c, SN, WE
	PPS	03:38:42	eLPZNE	-	c, SN, WE
	(SS)	03:43:50	eLPZE	-	c, WE
	(SSP)	03:44:07	eLPN	-	SN
	SSS	03:48:06	eLPN	-	-
	LR	03:55,0	LPZNE	30	-
	LR_1	04:02,5	LPZNE; Z	40	-
	U.S.C.G.S.: Epicentre: 22,4 S - 113,0 W (Ile Easter)				
	h = 33 R H = 03:08:04,2 Mag: 5,4 (C.G.S.); 6¼ - 6½ (PAS); 5,8 - 6,0 (BRK) Δ=115,7°				
9	P	07:02:50,3	iCPZNE; Iz, IZ	-	d
	U.S.C.G.S.: Epicentre: 32,2 S - 71,8 W (Côte Centrale du Chili)				
	h = 31 km H = 06:50:50,9 Mag: 4,7 (C.G.S.) Δ = 78,2°				
9	P	07:25:21,2	iCPZNE	-	c, SN, EW
	LR	07:51,5	LPZNE	30	-
	U.S.C.G.S.: Epicentre: 32,3 S - 71,6 W (Côte Centrale du Chili)				
	h = 53 km H = 07:19:24,9 Mag: 4,4 (C.G.S.) Δ = 78,2°				
10	-	02:21:53	eCPZNE; eLPZNE; z, Z	-	d
	-	02:36:01,4	iCPZNE; z, Z	-	d
	LR	03:05,6	CPZNE; z, Z	40	-
	Note: Enregistrement de LP confus.				
10	LR	17:35,0	LPZE	30	-
10	Pn	21:04:18,4	ieCPZNE; z	-	-
	Sn	21:05:08,0	iCPZNE; z, Z	-	c
	Δ = 4,1°				
11	-	01:23:14,0	iCPZE; z	-	c
11	P	02:54:14,3	iCPZNE; z, Z	-	d, SN, EW
	pP	02:54:38,8	iCPZNE;	-	d, NS, EW
	LQ	03:17,0	LPN	50	-
	LR	03:22,2	LPZE	40	-
	U.S.C.G.S.: Epicentre: 15,2 S - 74,0 W (Côte du Pérou)				
	h = 91 km H = 02:41:52,8 Mag: 5,6 (C.G.S.); 4,8 (BRK); (5 PAL) Δ = 83,8°				
11	-	09:28:10,0	iCPZE; z	-	c, WE
11	-	12:56:35,0	iCPZNE; z	-	d, NS
	-	13:00:02,5	iCPZ	-	d
11	PKP	20:19:19,5	iCPZ; eLPZ	-	d
	PP	20:20:09	eLPE	-	EW
	-	20:29:19	eLPZE	-	d, EW
	SS	20:35:41	eLPN	-	NS
	SSS	20:39:58	eLPNE	-	c, SN, WE
	-	20:49:08	eLPN	-	-
	-	20:54:20	eLPZNE	-	-
	LR	20:58,3	LPZNE	30	-
	U.S.C.G.S.: Epicentre: 1,6 N - 126,1 E (Passage de Molucca)				
	h = 33 R H = 20:00:43,4 Mag: 5,9 (C.G.S.); 6¼ (PAS), 5,9 (BRK) Δ = 112,3°				
12	P	09:49:31,6	iCPZNE; z, Z	-	d, NS, EW
	PP	09:49:38,2	iCPZNE; z, Z	-	c
	-	09:50:16,0	iCPZ; z, Z	-	c
	(S)	09:50:19,0	iCPNE; z, Z	-	NS, EW
	Lg	09:50:49,5	iCPZNE; z, Z	-	d
	U.S.C.G.S.: Epicentre: 10,4 S - 13,3 E (Angola)				
	h = 33 R H = 09:48:24,2 Mag: 4,4 (C.G.S.) Δ = 4,6°				

Date	Phases	Heure T.M.G.	Composantes, nature du mouvement et amplitudes(μ)	Périodes (s)	Sens du mouvement
1968 Août 12	P	17:30:02,4	iCPZN; z	-	d, SN
	LR	17:41,0	LPZN	36	-
	U.S.C.G.S.: Epicentre: 52,6 S - 25,5 E (Sud de l'Afrique)				
	h = 33 R H = 17:22:36,3 Mag: 4,8 (C.G.S.) Δ = 38,9°				
12	-	18:29:55,6	iCPZ	-	d
12	LR	19:15,1	LPZ	20	-
	LR_1	19:17,1	LPZN	30	-
	LR_2	19:25,0	LPE	16	-
	LR_3	19:30,6	LPZ	16	-
	LR_4	19:32,1	LPN	16	-
13	LR	01:34,0	LPZ	20	-
13	P*	03:31:03,2	iCPZE; z	-	d, EW
	Sg	03:31:16,5	iCPZNE; z	-	d, NS, EW
		Δ=1,0°			
13	LR	03:52,4	LPZ	30	-
13	-	19:54:30,8	iCPZNE; z	-	d
14	-	08:46:26	eLPN	-	SN
	-	08:52:34	eLPZ	-	c
	-	08:58:42	eLPE	-	WE
	-	09:01:07	eLPZE	-	c, WE
	-	09:10:02	eLPZ	-	d
	-	09:15:06	eLPE	-	WE
	-	09:36:21	eLPE	-	EW
	-	09:37:07	eLPZ	-	c
	-	09:45:54	eLPN	-	NS
	-	09:46:47	eLPZ	-	c
	LR	09:50,8	LPZE	20	-
14	P	22:28:32	eLPZ	-	d
	-	22:28:37	eCPZNE; z, Z	-	c
	PP	22:32:52	eLPZ	-	d
	-	22:33:03,0	iCPZE; z, Z	-	-
	-	22:39:21	eCPE	-	WE
	-	22:40:35	eCPN	-	SN
	-	22:42:16,0	iCPZE	-	c, EW
	LR	23:07,6	CPZNE	20	-
	Note: Enregistrement de LP confus.				
	U.S.C.G.S.: Epicentre: 0,2 N - 119,8 E (Nord des Célèbes)				
	h = 23 km H = 22:14:19,4 Mag: 6,0 (C.G.S.) Δ = 105,8°				
15	-	01:27:39,5	iCPZNE; z, Z	-	C, SN, WE
15	-	07:30:53	eLPNE	-	NS, WE
15	LR	10:26,5	LPZNE	30	-
	U.S.C.G.S.: Epicentre: 1,6 N - 126,2 E (Passage de Molucca)				
	h = 33 R H = 09:27:12,3 Mag: 4,9 (C.G.S.) Δ = 112,4°				
15	LR	12:36,0	LPZE	30	-
	U.S.C.G.S.: Epicentre: 0,2 S - 120,0 E (Nord des Célèbes)				
	h = 11 km H = 11:40:27,5 Mag: 5,3 (C.G.S.) Δ = 105,8°				
15	LR	19:01,7	LPZNE	20	-
	U.S.C.G.S.: Epicentre: 23,2 S - 67,2 W (Chili - Argentine)				
	h = 220 km H = 18:11:02,6 Mag: 4,4 (C.G.S.) Δ = 81,6°				
15	P	19:48:06,0	iCPZNE; z	-	c
	LR	19:58,0	LPZNE	30	-
	U.S.C.G.S.: Epicentre: 49,3 S - 8,1 W (Atlantique Sud)				
	h = 33 R H = 19:40:45,1 Mag: 5,0 (C.G.S.) Δ = 38,7°				
15	-	20:39:58,4	iCPZNE; z	-	d
15	LR	22:23,1	LPZNE	20	-
	U.S.C.G.S.: Epicentre: 0,1 N - 120,0 E (Nord des Célèbes)				
	h = 33 R H = 21:26:00,0 Mag: 5,3 (C.G.S.) Δ = 106,0°				
16	P	10:22:37,6	iCPZNE; z	-	d
	U.S.C.G.S.: Epicentre: 57,7 S - 26,5 W (Sud des Iles Sandwich)				
	h = 134 km H = 10:13:38,2 Mag: 5,4 (C.G.S.) Δ = 52,2°				

Date		Phases	Heure T.M.G.	Composantes, nature du mouvement et amplitudes(μ)	Périodes (s)	Sens du mouvement
1968 Août	16	PKP	11:52:36,3	ICPZ; z	-	c
		U.S.C.G.S.: Epicentre: 21,1 S - 179,3 W (Iles Fidji) h = 640 km H = 11:34:16,4 Mag: 5,1 (C.G.S.) Δ = 141,2°				
	16	LR	11:54,1	LPZNE	20	-
		U.S.C.G.S.: Epicentre: 38,5 N - 143,3 E (Côte de Honshu, Japon)				
h = 22 km		H = 10:39:16,8 Mag: 5,5 - 5,9 (BRK), 5¼ - 5½ (GOL)			Δ = 130,1°	
	17	-	04:27:56	eLPE	-	WE
		PS	04:29:26	eLPZE	-	d, WE
		SSS	04:39:42	eLPZNE	-	-
		LQ	04:49,3	LPNE	40	-
		LR	04:55,3	LPZN	40	-
		LR_1	04:58,2	LPE; Z	30	-
		U.S.C.G.S.: Epicentre: 1,4 N - 126,3 E (Passage de Molucca)				
h = 33 R		H = 04:00:36,3 Mag: 5,5 - 5,9 (BRK); 6 - 6½ (GOL)			Δ = 112,4°	
	18	LR	03:06,4	LPZE	30	-
	18	-	14:31:37	eCPZNE	-	c
		-	14:31:46,0	ICPZNE	-	d
	18	PKP	18:56:48,4	ICPZNE; ILPZNE; z, Z	-	c
		Note: LP Confuse.				
		U.S.C.G.S.: Epicentre: 10,1 S - 159,9 E (Iles Solomon) h = 538 km H = 18:38:30,6 Mag: 6,2 (C.G.S.) Δ = 138,4°				
	21	PKP	18:16:04,0	ICPZ	-	c
		PP	18:18:32	eLPZ	-	d
		PKS	18:19:30	eLPN	-	SN
		-	18:48:09	eLPE	-	WE
		LQ	18:53,1	LPNE	60	-
		LR	19:00,0	LPZNE	30	-
		U.S.C.G.S.: Epicentre: 30,9 S - 179,1 W (Iles Kermadec)				
h = 33 R		H = 17:56:48,0 Mag: 6½ (PAS); 6,4 - 6,6 (BRK); 6¾ (PAL); 6½ - 6¾ (GOL) Δ = 132,9°				
	22	PP	14:22:20	eLPZ	-	c
		(SP)	14:32:30	eLPN	-	-
		(PPS)	14:34:42	eLPZ	-	-
		LR	15:08:12	LPE	40	-
		LR_1	15:12,1	LPE	34	-
		LR_2	15:15,3	LPN	30	-
		LR_3	15:16,2	LPZE	30	-
		U.S.C.G.S.: Epicentre: 53,0 N - 171,0 E (Iles Aléoutiennes)				
h = 33 km		H = 14:00:06,8 Mag: 6½ (PAS); 6,4 - 6,6 (BRK); 6¾ (PAL); 6½ - 6¾ (GOL) Δ = 138,0°				
	22	P	22:48:26,5	ICPZNE; z, Z	-	d
		(S)	22:50:18,0	ICPZNE; z, Z	-	d
		(Lg)	22:51:28,5	ICPZNE; z, Z	-	c
		U.S.C.G.S.: Epicentre: 19,8 S - 29,3 E (Botswana)				
		h = 33 R H = 22:45:55,8 Mag: 3,2 (C.G.S.) Δ = 10,6°				
	23	P	22:47:27,5	ICPZNE; z, Z	-	d
		-	22:49:20,0	ICPZNE; ILPZ; z, Z	-	c
		S	22:56:07	ICPZNE; eLPZNE; z, Z	-	d
		-	22:59:31	eLPZNE	-	c, WE
		LR	23:03,9	LPZNE	30	-
		U.S.C.G.S.: Epicentre: 22,0 S - 63,5 W (Province de Salta, Argentine)				
h = 537 km		H = 22:36:51,3 Mag: 5,3 - 5,5 (BRK); 5¾ (PAL) Δ = 72,6°				
	23	P	23:25:28,0	ICPZNE; z, Z	-	d
		-	23:27:22,0	ICPZNE; z, Z	-	c
		U.S.C.G.S.: Epicentre: 21,8 S - 63,5 W (Sud de Bolivie)				
		h = 541 km H = 23:14:52,7 Mag: 5,2 (C.G.S.) Δ = 72,5°				
	24	LR	13:11,4	LPZNE	35	-
		U.S.C.G.S.: Epicentre: 56,2 S - 143,5 W (Pacifique Sud)				
		h = 33 R H = 12:21:28,7 Mag: 5,5 (C.G.S.) Δ = 106,3°				

Date	Phases	Heure T.M.G.	Composantes, nature du mouvement et amplitudes (μ)	Périodes (s)	Sens du mouvement
1968 Août 24	P	19:40:35,8	ICPZNE; z, Z	-	d, NS, EW
U.S.C.G.S.: Epicentre: 23,9 S - 67,7 W (Chili - Argentine) h = 118 km H = 19:28:57,9 Mag: 4,8 (C.G.S.) Δ = 76,1°					
25	LR	01:00,2	LPZE	30	-
U.S.C.G.S.: Epicentre: 1,2 N - 126,1 E (Passage de Molucca) h = 62 km H = 00:11:33,2 Mag: 5,3 (C.G.S.) Δ = 112,4°					
25	LR	10:20,1	LPZNE	30	-
	PKP	11:35:13,3	ICPZNE; z, Z	-	d, SN, EW
U.S.C.G.S.: Epicentre: 20,0 S - 175,3 W (Iles Tonga) h = 96 km H = 11:15:46,3 Mag: 5,5 (C.G.S.) Δ = 144,0°					
25	LR	14:22,1	LPZE	30	-
26	PKP	09:45:36,6	ICPZNE; z, Z	-	d, SN, EW
U.S.C.G.S.: Epicentre: 16,3 S - 178,0 E (Iles Fidji) h = 25 km H = 09:25:58,7 Mag: 5,7 (C.G.S.) Δ = 145,3°					
27	LR	09:17,5	LPZE	24	-
27	-	14:08:36,5	ICPZ	-	c
28	LR	12:50,2	LPE	30	-
	LR_1	12:51,3	LPN	30	-
	LR_2	12:56,5	LPZ	30	-
U.S.C.G.S.: Epicentre: 20,0 S - 176,3 E (Sud des Iles Fidji) h = 36 km H = 11:50:30,4 Mag: 5,7 (C.G.S.); 6 - 6¼ (PAS); 5,7 - 6,0 (BRK); 5,7 (PAL); Δ = 141,2° 5¼ - 5½ (GOL)					
28	PKP	21:00:52,8	ICPZ; z	-	d
	PP	21:01:35	eLPZE	-	c, SN
	-	21:07:42	eLPE	-	EW
	-	21:09:23	eLPN	-	NS
	-	21:11:18	eLPE	-	EW
	(PPS)	21:12:22	eLPZ	-	d
	(SS)	21:16:40	eLPZNE	-	-
	-	21:21:24	eLPE	-	-
	LR	21:30,2	LPN	40	-
	LR_1	21:35,0	LPZE	30	-
U.S.C.G.S.: Epicentre: 15,6 N - 122,0 E (Iles Philippines) h = 15 km H = 20:42:16,7 Mag: 6 - ¼ (PAS); 5,6 - 5,8 (BRK); 6 (PAL); 6 (GOL) Δ = 111,4°					
28	P*	23:52:28,4	ICPZNE; z	-	c, NS, EW
	S*	23:52:43,4	ICPZNE; z	-	c, SN, EW
Δ = 1,2					
29	LR	22:01,7	LPZE	40	-
	LR_1	22:03,2	LPN	30	-
29	-	22:34:33,6	ICPZN; z, Z	-	d, NS
	-	22:35:46,0	ICPZNE; z, Z	-	d, NS, WE
30	LR	00:37,0	LPZ	30	-
30	LR	13:20,7	LPZE	20	-
30	LR	21:29,4	LPZNE	20	-
30	P	22:11:25,4	ICPZNE; z, Z	-	d
	PS	22:18:50	eLPZNE; z	-	d, NS, EW
	LR	22:25,7	LPZNE; Z	40	-
U.S.C.G.S.: Epicentre: 14,6 N - 56,3 E (Mer de l'Arabie) h = 33 R H = 22:02:19,8 Mag: 5,2 (C.G.S.) Δ = 51,6°					
31	P	10:58:21,0	ICPZN; z, Z	-	d, SN
	pP	10:58:23,8	ICPZNE; z, Z	-	c, NS, EW
	-	10:58:26	eLPZNE	-	d, SN, EW
	-	11:07:02	eLPN	-	NS
	-	11:07:04,5	ICPN	-	NS
	(PS)	11:07:13	eLPZE; Z	-	d, EW
	-	11:08:36,4	ICPN; z	-	NS
	-	11:09:00,5	ICPE	-	WE
	-	11:23:54	eCPZ	-	c
	LR	11:27,3	CPZNE; z, Z	10	-
U.S.C.G.S.: Epicentre: 34,0 N - 59,0 E (Iran) h = 13 km H = 10:47:37,4 Mag: 6,0 (C.G.S.); 7,7¼ (PAS); 7,7 (BRK); 7½ (GOL) Δ = 65,6° Enregistrement de LP confus. Note: 11000 morts en More Than et 6000 blessés.					

Date	Phases	Heure T.M.G.	Composantes, nature du mouvement et amplitudes(μ)	Périodes (s)	Sens du mouvemont
1968 Août 31	PKP	20:13:31,0	iCPZNE; z, Z	-	c

U.S.C.G.S.: Epicentre: 18,3 S - 177,7 W (Iles Fidji)

h = 379 R H = 19:54:35,0 Mag: 5,0 (C.G.S.); 5,7 - 6,1 (BRK)

Δ = 144,8°

S E R V I Ç O M E T E O R O L Ó G I C O D E A N G O L A

Centro de Geofísica de Luanda

C.P. 1228 C L u a n d a

BULLETIN SÉISMIQUE D'ANGOLA (PORTUGAL)

ANNÉE 4 - Nº 9 SEPTEMBRE 1968

Station séismographique de Sá da Bandeira

Coordonnées de la station:

Latitude géographique: φ = 14° 54' 08" S Longitude: λ = 13° 28' 39" E

Latitude géocentrique: Φ = 14 48 23 S Altitude: h = 1761 m

Nature du sous-sol:

Granite

Constantes des séismographes

Séismographes	T_o (s)	T_g (s)	Amplification			
			Ts=0,2 s	Ts=0,6 s	Ts=1,0 s	Ts=15,0 s
Benioff vertical (z)	1,0	0,2	76750	33000	15300	-
Benioff vertical (Z)	1,0	21,3	400	1100	1650	120
Benioff vertical (CPZ)	1,0	0,75	38000	150000	100000	-
Benioff N/S (CPN)	1,0	0,85	38000	150000	100000	-
Benioff EW (CPE)	1,0	0,82	38000	150000	100000	-
Sprengnether vertical (LPZ)	15,0	100,0	-	-	-	1500
Sprengnether NS (LPN)	15,0	100,0	-	-	-	1500
Sprengnether EW (LPE)	15,0	100,0	-	-	-	1500

Date		Phases	Heure T.M.G.	Composantes, nature du mouvement et amplitudes( )	Périodes (s)	Sens du mouvement
1968 Sept.	1	PKP	00:43:21,4	iCPZ	-	d
		-	00:46:49,8	iCPZ; z	-	d
		U.S.C.G.S.: Epicentre: 30,7 S - 178,3 W (Iles Kermadec)				
		h = 25 km H = 00:24:06,7 Mag: 5,2 (C.G.S.); 5,2 - 5,6 (BRK) Δ = 132,9°				
	1	LR	02:33,8	LPZE	24	-
		U.S.C.G.S.: Epicentre: 0,9 s - 24,4 W (Atlantique Central)				
		h = 33 R H = 02:15:05,0 Mag: 4,8 (C.G.S.) Δ = 39,9°				
	1	-	04:53:54,3	iCPN	-	SN
		-	04:54:56,2	iCPE	-	EW
		-	04:54:49,5	iCPN	-	NS
		-	04:55:05,0	iCPZ	-	d
	1	P	04:56:28,5	iCPZE;z,Z	-	d, EW
		-	05:02:13	eLPZN	-	d
		-	05:02:17	eLPE	-	WE
		(SS)	05:05:32	eLPN	-	NS
		LR	05:07,0	LPZE	24	-
		LR_1	05:09,2	LPN	20	-
		U.S.C.G.S.: Epicentre: 1,0 S - 24,5 W (Atlantique Central)				
		h = 33 R H = 04:48:52,2 Mag: 5,2 (C.G.S.) Δ = 39,9°				
	1	-	18:57:58,6	iCPZNE; z	-	d, EW
		LR	19:03,2	LPNE	24	-

Date	Phases	Heure T.M.G.	Composantes, nature du mouvement et amplitudes (μ)	Périodes (s)	Sens du mouvement
1968 Sept. 1	P*	21:08:11,3	iCPZNE; iLPZNE; z, Z	-	c, SN
	-	21:08:15,7	iCPZNE; iLPZNE; z, Z	-	-
	S*	21:08:29,4	iCPZNE; iLPZNE; z, Z	-	-
	BUL Epicentre: 15,5 S - 12,9 E (Sud - Ouest de l'Angola) H = 21:07:47 Mag: 4,1 (C.G.S.) Δ = 1,3°				
2	-	08:20:30,0	iCPN	-	NS
3	-	01:18:47,4	iCPZN	-	d, NS
	-	01:19:07,6	iCPE	-	EW
	LR	01:28,1	LPNE	20	-
	LR_1	01:30,6	LPZ	12	-
3	P	08:29:54,0	iCPZNE; z, Z	-	d, SN, EW
	pP	08:29:56,5	iCPZNE; z, Z	-	d, SN, WE
	-	08:30:02,0	iLPZN	-	c, SN
	S	08:38:07	eLPN	-	NS
	(SP)	08:38:12,5	iCPZE; eLPE	-	d, WE
	-	08:41:00	eLPN	-	SN
	-	08:43:32	eLPZ	-	d
	LR	08:49,7	LPZNE	30	-
	U.S.C.G.S.: Epicentre: 41,8 N - 32,3 E (Turquie) h = 5 km H = 08:19:52,2 Mag: 5,7 (C.G.S.); 6½ (PAS); 6,7 (BRK); 6¾ (PAL); 6½ (GOL) Notes: 25 morts, 200 blessés et considérablement dangereux à Bartin. Δ = 59,2°				
3	P	15:49:21,5	iCPZNE; z, Z	-	d, NS, EW
	LR	16:11,5	LPN	30	-
	LR_1	16:14,3	LPZE	30	-
	U.S.C.G.S.: Epicentre: 20,6 N - 62,2 W (Atlantique Nord) h = 33 R H = 15:37:00,2 Mag: 5,5 (C.G.S.); 5,0 - 5¼ (PAL) Δ = 82,3°				
3	P	18:59:40,5	iCPZNE; z, Z	-	c, SN, WE
	U.S.C.G.S.: Epicentre: 36,2 N - 69,2 E (HIndu Kush) h = 75 km H = 18:48:15,7 Mag: 5,3 (C.G.S.) Δ = 73,3°				
3	LR	19:18,7	LPZE	30	-
4	P	23:35:26,9	iz, IZ	-	c
	-	23:55:24	eLPNE	-	NS, EW
	LR	23:29,0	LPZNE	24	-
	LR_1	00:04,3	LPZ; Z	20	-
	U.S.C.G.S.: Epicentre: 34,0 N - 58,2 E (Iran) h = 15 km H = 23:24:47,2 Mag: 5,4 (C.G.S.) Δ = 64,8°				
5	P	02:55:25,3	Iz, IZ	-	d
	-	03:05:42	eLPE	-	EW
	-	03:05:46	eLPN	-	SN
	-	03:05:50	eLPZ	-	c
	PPS	03:06:42	eLPNE	-	c, NS
	(SS)	03:11:10	eLPZNE	-	c, NS
	-	03:16:08	eLPZ	-	d
	-	03:17:08	eLPE	-	WE
	-	03:17:14	eLPN	-	SN
	LR	03:20,2	LPZ	30	-
	LR_1	03:21,9	LPN	30	-
	LR_2	03:22,1	LPE	30	-
	U.S.C.G.S.: Epicentre: 45,1 S - 80,1 W (Côte Sud du Chili) h = 33 km H = 02:43:02,6 Mag: 5,0 (C.G.S.) Δ = 82,0°				
5	P	04:18:41,3	Iz, IZ	-	d
	U.S.C.G.S.: Epicentre: 49,8 N - 78,1 E (Est de Kazakh - RSS) h = 0 R H = 04:05:57 Mag: 5,5 (C.G.S.) Δ = 85,9°				
5	PKP	10:58:42,5	iCPZ; Iz	-	c
	U.S.C.G.S.: Epicentre: 15,0 S - 174,6 W (Iles Tonga) h = 174 km H = 10:39:12,1 Mag: 4,3 (C.G.S.) Δ = 149,0°				
5	LR	18:02,2	LPZE	40	-
	LR_1	18:11,1	LPZNE	20	-
	U.S.C.G.S.: Epicentre: 6,1 S - 142,8 E (Nouvelle Guinée) h = 33 km H = 17:02:49,8 Mag: 5,4 (C.G.S.) Δ = 125,6°				

Date	Phases	Heure T.M.G.	Composantes, nature du mouvement et amplitudes (μ)	Périodes (s)	Sens du mouvement
1968 Sept, 6	LR	03:00,3	LPZNE	40	-
	LR_1	03:02,0	LPNE	20	-
	LR_2	03:07,2	LPZ	20	-
	U.S.C.G.S.: Epicentre: 34,0 N - 59,3 E (Iran)				
	h = 27 km H = 02:27:37,1 Mag: 4,9 (C.G.S.) Δ = 64,8°				
6	LR	08:36,2	LPZE	30	-
	U.S.C.G.S.: Epicentre: 17,8 S - 167,8 E (Nouvelles Hébrides)				
	h = 28 km H = 07:36:06,4 Mag: 5,3 (C.G.S.); 4,8 (BRK) Δ = 139,6°				
6	LR	08:50,7	LPZNE	20	-
	U.S.C.G.S.: Epicentre: 5,8 S - 80,3 W (Côte Nord du Pérou)				
	h = 66 D H = 07:49:42,0 Mag: 5,3 (C.G.S.); 4,4 - 4,8 (BRK) Δ = 92,1°				
6	PKP	19:41:40,2	ICPZ; z	-	c
	LR	20:21,2	LPZNE	40	-
	LR_1	20:28,5	LPZNE	30	-
	U.S.C.G.S.: Epicentre: 31,0 N - 131,9 E (Kyushu, Japon)				
	h = 39 D H = 19:22:47,8 Mag: 5,7 (C.G.S.); 5,4 (PAL) Δ = 121,8°				
7	PKP	02:20:23,4	ICPZNE; z	-	d
	U.S.C.G.S.: Epicentre: 19,0 S - 178,3 W (Iles Fidji)				
	h = 649 km H = 02:01:56,5 Mag: 4,6 (C.G.S.) Δ = 144,2°				
7	-	07:19:02,5	ieCPZ	-	-
	-	07:19:04,0	iCPZNE; z	-	d, SN, WE
	-	07:19:05,5	ICPZE	-	d, SN
	Note: Séisme local				
7	P	07:34:39,5	iCPZE; z, Z	-	c, EW
	U.S.C.G.S.: Epicentre: 22,4 S - 67,4 W (Chili - Bolivie)				
	h = 173 km H = 07:23:07,8 Mag: 4,7 (C.G.S.) Δ = 76,3°				
7	P_g	07:41:10,5	ieCPZNE; z	-	-
	S_g	07:41:15,0	iCPZNE; z, Z	-	d, NS, EW
			0,3°		
7	P	16:01:23,5	ICPZNE; z, Z	-	d, NS, WE
	U.S.C.G.S.: Epicentre: 58,4 S - 25,6 W (Sud des Iles Sandwich)				
	h = 45 km H = 15:52:13,6 Mag: 5,5 (C.G.S.) Δ = 52,3°				
7	-	21:16:06,0	ieCPE; z	-	-
	-	21:17:16,5	iCPZ; z	-	d
	-	21:17:19,0	iCPN	-	SN
	-	21:17:56,8	iCPN; z	-	NS
	-	21:18:13,0	iCPE; z	-	EW
8	LR	01:26,2	LPZ	20	-
	LR_1	01:30,4	LPN	15	-
	LR_2	01:33,5	LPZE	20	-
8	P	13:13:39,8	iCPZNE; z	-	d, NS, EW
	U.S.C.G.S.: Epicentre: 58,2 S - 26,6 W (Sud des Iles Sandwich)				
	h = 151 km H = 13:04:39,7 Mag: 5,3 (C.G.S.) Δ = 52,5°				
8	PKP	15:31:28,5	ICPZNE; z, Z	-	d, NS, EW
	PP	15:33:24	eLPZE	-	c, WE
	PS	15:43:26	eLPNE	-	NS, EW
	-	15:43:33	eLPZ	-	d
	-	15:46:04	eLPE	-	EW
	(SSP)	15:50:38	eLPN	-	NS
	-	15:51:09	eLPE	-	EW
	(SSS)	15:55:20	eLPE	-	EW
	-	15:59:17	eLPZ	-	d
	-	16:04:50	eLPN	-	NS
	LR	16:12,3	LPZE	40	-
	LR_1	16:19,9	LPZNE	24	-
	U.S.C.G.S.: Epicentre: 3,7 S - 143,0 E (Côte Nord de la Nouvelle Guinée)				
	h = 29 D H = 15:12:23,8 Mag: 6,0 (C.G.S.); 6,1 (PAS); 6,7 (PAL); 6,0 (GOL) Δ = 126,7°				
8	PKP	22:07:36,0	ICPZ; z	-	d
	U.S.C.G.S.: Epicentre: 19,2 S - 176,4 W (Région des Iles Fidji)				
	h = 146 km H = 21:48:13,2 Mag: 4,4 (C.G.S.) Δ = 144,5°				

Date	Phases	Heure T.M.G.	Composantes, nature du mouvement et amplitudes (μ)	Périodes (s)	Sens du mouvement
1968 Sept. 9	P	00:47:43,5	ICPZNE; z, Z	-	d, SN, EW
	-	00:48:19,5	ICPZNE; z	-	d, SN, EW
	U.S.C.G.S.: Epicentre: 8,7 S - 74,5 W (Pérou - Brésil)				
	h = 144 D H = 00:35:18,4 Mag: 5,3 (C.G.S.) Δ = 85,8°				
9	P	00:50:11,5	ICPZNE; ILPZ; z, Z	-	c, NS, WE
	pP	00:50:47,8	ICPZE; eLPZ;z,Z	-	d, EW
	-	00:58:02	ICPNE; eLPZNE	-	NS, WE
	-	00:59:09	eLPZ	-	d
	-	01:00:27	eLPE	-	EW
	-	01:00:29	ICPNE; eLPN	-	SN, EW
	S	01:00:34	eLPZ	-	c
	-	01:01:35	eCPE	-	d
	(SS)	01:06:09	eLPN	-	NS
	(SSS)	01:10:24	eLPN	-	SN
	-	01:12:50	eLPN	-	SN
	-	01:13:48	eLPZ	-	c
	-	01:14:20	eLPE	-	WE
	LR	01:16,3	LPZE	40	-
	LR_1	01:23,6	LPZE	24	-
	U.S.C.G.S.: Epicentre: 8,7 S - 74,5 W (Pérou - Brésil)				
	h = 120 km H = 00:37:43,2 Mag: 6,0 (C.G.S.); 6,3 (PAS) Δ = 85,8°				
10	P	17:29:24,5	ICPZNE; z, Z	-	c, SN, WE
	pP	17:30:16,6	ICPZ; z, Z	-	d
	U.S.C.G.S.: Epicentre: 36,3 N - 70,8 E (Hindu Kush)				
	h = 223 km H = 17:18:08,9 Mag: 5,0 (C.G.S.) Δ = 74,4°				
10	LR	21:05,2	LPZNE	20	-
10	PKP	23:11:04,5	ICPZ; z, Z	-	d
	LR	00:04,2	LPZNE	30	-
	U.S.C.G.S.: Epicentre: 15,1 S - 177,4 W (Iles Fidji)				
	h = 33 km H = 22:51:14,1 Mag: 5,0 (C.G.S.) Δ = 148,1°				
11	P	08:44:11,8	ICPZ; z, Z	-	c
	pP	08:44:17,4	ICPZNE; z, Z	-	c, SN, WE
	U.S.C.G.S.: Epicentre: 43,0 S - 75,4 W (Côte Sud du Chili)				
	h = 20 km H = 08:32:05,6 Mag: 5,0 (C.G.S.) Δ = 79,1°				
11	P	18:38:41,2	ICPZNE; z, Z	-	c, SN, WE
	-	18:38:43,0	ILPZ	-	d
	-	18:48:37	eLPZ	-	c
	-	18:48:43	eLPNE	-	NS, WE
	-	18:53:48	eLPN	-	NS
	(SS)	18:53:53	eLPZE	-	d, EW
	LR	19:02,5	LPZNE; Z	40	-
	U.S.C.G.S.: Epicentre: 43,0 S - 75,2 W (Côte Sud du Chili)				
	h = 31 D H = 18:26:36,8 Mag: 5,7 (C.G.S.) Δ = 78,9°				
11	P	19:27:55,0	ICPZNE; z, Z	-	c
	LR	19:46,2	LPZNE	40	-
	U.S.C.G.S.: Epicentre: 33,9 N - 59,4 E (Iran)				
	h = 33 km H = 19:17:12,9 Mag: 5,2 (C.G.S.) Δ = 65,0°				
12	PKP	23:02:25,3	ICPZNE; ILPZ; z, Z	-	c, SN, EW
	-	23:05:09,0	ICPZNE; z, Z	-	c, NS, EW
	-	23:13:33,8	ICPZN; z, Z	-	c, SN
	-	23:33:24	eLPN	-	SN
	LR	23:27,2	LPZNE	30	-
	U.S.C.G.S.: Epicentre: 21,6 S - 179,4 W (Iles Fidji)				
	h = 635 D H = 22:44:06,5 Mag: 5,9 (C.G.S.) Δ = 141,4°				
13	LQ	05:59,0	LPNE	50	-
	LR	06:08,3	LPZN	30	-
	LR_1	06:12,8	LPE	20	-
	U.S.C.G.S.: Epicentre: 30,8 S - 179,1 W (Iles Kermadec)				
	h = 38 km H = 05:01:50,3 Mag: 5,0 (C.G.S.); 5¼ - 5½ (GOL) Δ = 132,7°				
13	PKP	13:09:16,3	ICPZNE; z, Z	-	c, EW
	U.S.C.G.S.: Epicentre: 11,1 S - 164,6 E (Iles de Santa Cruz)				
	h = 59 km H = 12:49:54,8 Mag: 5,4 (C.G.S.) Δ = 141,3°				

Date	Phases	Heure T.M.G.	Composantes, nature du mouvement et amplitudes(/μ)	Périodes (s)	Sens du mouvement
1968 Sept. 14	P	01:35:46,2	ICPZNE;eLPZN; z, Z	-	c, NS, WE
	LR	01:53,2	LPZNE	40	-
	U.S.C.G.S.: Epicentre: 24,5 S - 80,4 E (Sud de l'Océan Indien)				
	h = 33 km H = 01:25:19,1 Mag: 5,5 (C.G.S.)			△= 63,2°	
14	P	01:50:59,0	ICPZN; z, Z	-	c, NS
	LR	02:18,2	LPZNE	30	-
	U.S.C.G.S.: Epicentre: 57,9 N - 32,6 W (Nord de l'Océan Atlantique)				
	h = 33 km H = 01:38:44,8 Mag: 5,3 (C.G.S.)			△= 82,0°	
14	P	13:58:19,3	ICPZNE;eLPZNE; z, Z	-	c, SN, EW
	S	14:06:20	eLPNE	-	SN, WE
	SP	14:06:30	eLPZ	-	c
	-	14:08:15,0	ICPZ; z	-	d
	LR	14:13,7	LPZNE; Z	40	-
	LR_1	14:19,9	CPZNE;LPZNE;z,Z	20	-
	U.S.C.G.S.: Epicentre: 28,4 N - 53,1 E (Sud d'Iran)				
	h = 33 km H = 13:48:31,2 Mag: 5,8 (C.G.S.)			△= 57,8°	
14	P	19:30:12,6	ICPZNE; z	-	c, SN, WE
	LR	19:50,7	LPZNE	20	-
	U.S.C.G.S.: Epicentre: 28,4 N - 53,2 E (Sud d'Iran)				
	h = 44 km H = 19:20:22,7 Mag: 5,1 (C.G.S.)			△= 57,8°	
15	P	05:04:57,5	ICPZNE	-	d, SN, EW
	-	05:16:12	eLPE	-	EW
	SSS	05:17:22	eLPZ	-	c
	-	05:17:29	eLPN	-	NS
	LR	05:22,0	LPZE	30	-
	LR_1	05:24,4	LPN	24	-
	U.S.C.G.S.: Epicentre: 34,7 N - 25,1 E (Crète)				
	h = 33 km H = 04:55:59,5 Mag: 4,9 (C.G.S.)			△= 50,8°	
15	PKP	11:09:22,2	ICPZ; z	-	d
	LR	12:00,8	LPZNE	30	-
	U.S.C.G.S.: Epicentre: 40,9 N - 143,2 E (Côte Est de Honshu, Japon)				
	h = 15 km H = 10:50:11,8 Mag: 5,4 (C.G.S.)			△= 129,4°	
15	P	19:40:52,4	ICPZNE; z, Z	-	d, NS, WE
	LR	19:46,2	LPN	24	-
	LR_1	19:48,2	LPZE	10	-
	U.S.C.G.S.: Epicentre: 17,9 S - 13,0 W (Atlantique Sud)				
	h = 33 km H = 19:35:23,9 Mag: 4,3 (C.G.S.)			△= 25,5°	
16	-	11:32:39,0	ICPE	-	WE
	-	11:32:41,5	ICPN; z	-	SN
	-	11:32:43,5	ICPZ	-	d
16	PKIKP	14:14:30,0	ICPZNE; z	-	c
	-	14:14:36	eLPZ	-	c
	PKP	14:14:45,5	ICPZE; z, Z	-	d, EW
	pPKP	14:14:56,5	ICPNE; z, Z	-	SN
	PP	14:17:03,0	ICPZE; ILPZNE; z, Z	-	c, NS
	-	14:18:11,7	ICPZNE; z, Z	-	d, NS, WE
	-	14:24:23,5	ICPNE; z, Z	-	NS, WE
	-	14:29:28	eLPN	-	SN
	-	14:34:41	eLPN	-	NS
	LR	15:07,5	CPZNE; z, Z	50	-
	U.S.C.G.S.: Epicentre: 6,1 S - 148,7 E (Nouvelle Bretagne)				
	h = 59 km H = 13:55:36,1 Note: Enregistrement de LP confus.			△= 130,9°	
16	PKP	14:30:06,5	ICPZNE; z, Z	-	d, SN, EW
	U.S.C.G.S.: Epicentre: 17,4 S - 178,8 W (Iles Fidji)				
	h = 583 km H = 14:11:29,4 Mag: 5,1 (C.G.S.)			△= 145,5°	
16	-	16:19:46,5	ICPZNE; z, Z	-	d
	-	16:23:22,0	ICPZNE; z, Z	-	c, SN
	-	16:23:49,5	ICPZNE; z, Z	-	c
17	PKP	18:09:37,0	ICPZNE; z, Z	-	d
	LQ	18:51,3	LPNE	50	-
	LR	19:00,0	LPZNE; Z	30	-
	U.S.C.G.S.: Epicentre: 15,0 S - 175,7 W (Iles Tonga)				
	h = 17 km H = 17:49:47,6 Mag: 5,2 (C.G.S.); 5,4 - 5,6 (BRK); 5½ - 5¾ (GOL)			△= 148,8°	

Date	Phases	Heure T.M.G.	Composantes, nature du mouvement et amplitudes (μ)	Périodes (s)	Sens du mouvement
1968 Sept. 17	P	20:58:34,2	iCPZNE; z, Z	-	d, NS
	U.S.C.G.S.: Epicentre: 63,0 S - 60,8 W (Péninsule de Palmer)				
	h = 33 km H = 20:47:26,4 Mag: 4,9 (C.G.S.) Δ = 69,6°				
18	LR	04:28,0	LPE	30	-
	LR_1	04:30,2	LPN	12	-
	LR_2	04:31,5	LPZ; Z	12	-
18	PKP	12:03:04,5	iCPZ; z	-	d
	LR	12:51,0	LPZNE	40	-
	U.S.C.G.S.: Epicentre: 18,2 S - 167,1 E (Nouvelles Hébrides)				
h = 33 km	H = 11:43:45,6 Mag: 5,7 (C.G.S.); 6,4 - 6,6 (BRK) Δ = 137,9°				
18	Pn	14:19:50,0	iCPZNE; z	-	c, SN
	Sn	14:20:14,3	iCPZNE; z	-	d, NS, EW
	Δ = 1,8°				
19	LR	03:05,2	LPZE	24	-
19	P	09:07:06,4	iCPZE; z	-	d, EW
	U.S.C.G.S.: Epicentre: 29,3 S - 71,0 W (Côte Centrale du Chili)				
	h = 33 km H = 08:55:07,3 Mag: 4,2 (C.G.S.) Δ = 78,1°				
19	LR	11:45,5	LPZNE	30	-
	U.S.C.G.S.: Epicentre: 30,7 N - 41,9 W (Atlantique Nord)				
h = 33 km	H = 11:13:07,4 Mag: 4,9 (C.G.S.); 5½ - ¾ (GOL) Δ = 70,1°				
19	P	22:22:28,5	iCPZNE; z	-	c, NS
	LQ	22:38,3	LPNE	40	-
	LR	22:43,1	LPZNE	20	-
	U.S.C.G.S.: Epicentre: 28,4 N - 53,2 E (Sud d'Iran)				
	h = 34 km H = 22:12:38,2 Mag: 5,1 (C.G.S.) Δ = 57,9°				
20	P	06:12:02,5	iCPZE; z, Z	-	d, EW
	-	06:12:04	eLPZ	-	d
	-	06:12:05,5	iCPN; eLPE	-	SN
	-	06:12:09	eLPN	-	SN
	S	06:21:58,0	iCPN; eLPN; z, Z	-	SN
	-	06:22:00,0	iCPZE; eLPZE	-	d, EW
	SS	06:27:09	eLPNE; Z	-	NS, WE
	-	06:27:15	eLPZ	-	c
	LR	06:31,5	LPN	40	-
	LR_1	06:32,2	LPZ	40	-
	LR_2	06:36,1	LPE; Z	40	-
	U.S.C.G.S.: Epicentre: 10,7 N - 62,7 W (Côte de la Venezuela)				
	h = 107 D H = 06:00:03,5 Mag: 6,2 (C.G.S.)				
	Note: 2 morts, 37 blessés. Δ = 79,7°				
20	P	16:50:16,0	iCPZNE; z	-	c, NS, EW
	pP	16:50:26,8	iCPZNE; z	-	d, EW
	U.S.C.G.S.: Epicentre: 30,3 S - 71,4 W (Côte Centrale du Chili)				
	h = 61 km H = 16:38:20,1 Mag: 4,5 (C.G.S.) Δ = 78,1°				
20	(SSP)	19:09:10	eLPE	-	WE
	-	19:11:10	eLPE	-	WE
	LR	19:26,5	LPE	40	-
	LR_1	19:36,1	LPZN	30	-
	LR_2	19:39,5	LPZN	20	-
	LR_2	19:42,0	LPE	20	-
	U.S.C.G.S.: Epicentre: 28,1 S - 176,7 W (Iles Kermadec)				
h = 70 km	H = 18:29:09,8 Mag: 5,3 (C.G.S.); 5,0 - 5,5 (BRK); 5½ - 5¾ (GOL) Δ = 135,9°				
20	SPP	23:19:06	eLPZNE	-	d, SN, EW
	-	23:23:09	eLPN	-	SN
	LR	23:25,0	LPZNE; Z	45	-
	U.S.C.G.S.: Epicentre: 13,7 S - 66,1 E (Océan Indien)				
	h = 33 km H = 23:02,43,5 Mag: 5,0 (C.G.S.) Δ = 50,9°				

Date	Phases	Heure T.M.G.	Composantes, nature du mouvement et amplitudes(μ)	Périodes (s)	Sens du mouvement
1968 Sept. 21	PKP	13:25:04,0	iCPZNE;eLPZ;z,Z	-	d
	-	13:25:24,4	iCPZNE; z, Z	-	d
	-	13:26:51,0	iLPZ	-	c
	-	13:26:56	eLPNE	-	SN, EW
	-	13:28:30	eLPNE	-	NS, EW
	-	13:32:15	eLPZ	-	c
	-	13:32:38	eLPE	-	EW
	-	13:37:05	eLPZN	-	-
	SP	13:37:16	eLPE	-	WE
	-	13:39:08	eLPZ; Z	-	d
	-	13:39:12	eLPE; Z	-	EW
	-	13:39:17	eLPN; Z	-	NS
	-	13:45:16	eLPNE; Z	-	NS
	-	13:50:07	eLPZ	-	c
	LR	14:13,0	LPZNE; Z	40	-
	U.S.C.G.S.: Epicentre: 42,2 N - 142,6 E (Hokkaido, Japon)				
h = 33 km	H = 13:05:58,2 Mag: 5,9 (C.G.S.); 6,2 (PAS); 5,7 - 6,2 (BRK); 6½ - 6¾ (GOL)				
	Δ = 128,7°				
22	PKP	08:19:03,8	iCPZNE; z, Z	-	d, NS, WE
	U.S.C.G.S.: Epicentre: 18,1 S - 178,6 W (Iles Fidji)				
	h = 630 km H = 08:00:32,8 Mag: 4,8 (C.G.S.) Δ = 144,9°				
22	LR	21:33,4	LPZN	30	-
	LR_1	21:36,8	LPZNE	20	-
22	P	22:04:25,4	iCPZNE; z, Z	-	c, SN, WE
	pP	22:05:09,4	iCPZNE; z, Z	-	d
	U.S.C.G.S.: Epicentre: 24,1 S - 66,9 W (Province de Salta, Argentine)				
	h = 194 D H = 21:52:59,2 Mag: 5,5 (C.G.S.) Δ = 75,4°				
23	LR	06:18,3	LPZNE	20	-
24	P	04:29:57,5	iCPZNE; z	-	c
	LR	04:47,2	LPNE	40	-
	LR_1	04:49,3	LPZ	20	-
	U.S.C.G.S.: Epicentre: 39,2 N - 40,2 E (Turquie)				
	h = 14 km H = 04:19:54,5 Mag: 5,1 (C.G.S.) Δ = 59,6°				
25	SP	07:31:54	eLPZNE	-	d, NS, EW
	PPS ou PSP	07:33:19	eLPZNE	-	c, SN, WE
	SS	07:38:11	eLPNE	-	NS, WE
	SSS	07:42:30	eLPNE	-	NS, EW
	-	07:51,3	LPE	40	-
	LR	07:56,3	LPZNE	50	-
	U.S.C.G.S.: Epicentre: 46,4 S - 166,8 E (Côte Ouest de l'île du Sud, Nouvelle Zelande)				
	h = 33 km H = 07:02:51,8 Mag: 5,5 (C.G.S.) Δ = 144,2°				
25	P	09:25:43,0	iCPZNE; z, Z	-	d, NS
	U.S.C.G.S.: Epicentre: 57,9 S - 25,5 W (Sud des Iles Sandwich)				
	h = 35 km H = 09:16:35,0 Mag: 5,0 (C.G.S.) Δ = 51,9°				
25	-	10:51:56	eLPZ	-	c
	-	10:56:55,5	iCPZNE; z	-	d
	PP	10:57:26	eLPZNE	-	c
	PS	11:06:48	eLPZNE	-	c
	SS	11:12:32	eLPNE	-	-
	(SSS)	11:16:19	eLPZNE; Z	-	-
	LR	11:23:35	eLPNE	40	-
	LR_1	11:30,2	LPZNE	40	-
	U.S.C.G.S.: Epicentre: 15,6 N - 92,6 W (Mexico - Guatemala)				
	h = 138 km H = 10:38:38,4 Mag: 5,7 (C.G.S.) Δ = 109,1°				
25	PKP	14:53:34,5	iCPZNE; z, Z	-	c, NS, WE
	U.S.C.G.S.: Epicentre: 19,3 S - 175,9 W (Iles Tonga)				
	h = 230 D H = 14:34:22,6 Mag: 5,0 (C.G.S.) Δ = 144,6°				
25	P	21:02:16,0	iCPZN; z	-	c, NS
	LR	21:20,1	LPE	40	-
	LR	21:23,0	LPZN; Z	20	-
	U.S.C.G.S.: Epicentre: 39,2 N - 40,2 E (Turquie)				
	h = 47 km H = 20:52:15,9 Mag: 5,1 (C.G.S.) Δ = 59,6°				
26	P	00:57:37,5	iCPZNE; z	-	c, NS, EW
	U.S.C.G.S.: Epicentre: 33,7 N - 69,9 E (Afghanistan)				
	h 45 km H = 00:46:13,8 Mag: 5,2(C.G.S.) Δ = 72,4°				

Date	Phases	Heure T.M.G.	Composantes, nature du mouvement et amplitudes(μ)	Périodes (s)	Sens du mouvement
1968 Sept. 26	PKP	02:58:31,5	iCPZNE; iLPZ;z,Z	-	d, NS, EW
U.S.C.G.S.: Epicentre: 19,3 S - 177,6 W (Iles Fidji)					
h = 560 D	H = 02:39:56,5	Mag: 5,2 (C.G.S.)		Δ = 144,1°	
26	PKIKP	08:59:56,6	iCPZ; z	-	c
	PKP	08:59:58,6	iCPZNE; z, Z	-	d, NS, WE
U.S.C.G.S.: Epicentre: 17,7 S - 178,5 W (Iles Fidji)					
h = 578 D	H = 08:41:22,0	Mag: 5,1 (C.G.S.)		Δ = 145,3°	
26	PKP	14:56:49,5	iCPZNE; z, Z	-	d, NS, EW
U.S.C.G.S.: Epicentre: 20,9 S - 177,0 W(ILes Fidji)					
h = 251 D	H = 14:37:46,2	Mag: 5,8 (C.G.S.); 6 - 6¼ (PAS); 6,0 - 6,4 (BRK)		Δ = 142,7°	
26	-	18:21:54	eLPZ	-	c
	PKP	18:22:06,0	iCPZ; z, Z	-	d
	-	18:22:08	iCPN; eLPZ	-	d
	pPKP	18:22:12	iCPE; eLPN;z, Z	-	WE
	-	18:22:16	eLPE	-	WE
	PP	18:24:31,2	iCPZNE;eLPZNE;z,Z	-	d, NS, WE
	-	18:25:32,5	iCPZNE; z, Z	-	d, SN
	SS	18:42:14	eLPZNE; Z	-	d, NS
	LR	19:08,7	LPZNE	40	-
U.S.C.G.S.: Epicentre: 30,5 S - 178,2 W (Iles Kermadec)					
h = 33 km	H = 18:02:50,1	Mag: 5,8 (C.G.S.); 7 (PAS); 6¾ - 7 (PAL); 6¾ - 7 (GOL)		Δ = 132,9°	
27	PKP	04:17:21,5	iCPZNE; z	-	d
	-	04:18:04	eLPZE	-	d, EW
	PP	04:18:07,5	iCPZNE; z, Z	-	c
	PPP	04:20:39,7	iCPZNE; z	-	d
	-	04:23:42	eLPE	-	EW
	-	04:25:40	eLPN	-	SN
	SP	04:27:28	eCPZ;eLPZE;Z	-	e
	SS	04:33:41	eLPN; Z	-	SN
	LQ	04:44,4	LPN	40	-
	LR	04:51,7	LPZNE; Z	40	-
U.S.C.G.S.: Epicentre: 6,8 S - 129,1 E (Mer de Banda)					
h = 127 km	H = 03:58:55,1	Mag: 6,1 (C.G.S.); 5¾ - 6 (PAL)		Δ = 112,6°	
27	P	10:49:32,6	iCPZNE; z	-	d, SN, WE
U.S.C.G.S.: Epicentre: 37,8 N - 72,3 E (Tadzhik, RSS)					
h = 119 km	H = 10:37:55,9	Mag: 5,2 (C.G.S.)		Δ = 76,3°	
27	PKP	17:00:24,5	iCPZNE; z	-	d
	PP	17:02:49,0	iCPZNE; z, Z	-	d
	-	17:03:58,5	iCPZNE; z, Z	-	c
	LQ	17:37,3	LPE	50	-
	LR	17:49,3	LPE; Z	20	-
U.S.C.G.S.: Epicentre: 30,7 S - 178,2 W (Iles Kermadec)					
h = 33 km	H = 16:41:07,8	Mag: 5,4 (C.G.S.); 6 (PAS); 5,7 - 5,8 (BRK)		Δ = 133,0°	
27	PKP	19:25:51,0	iCPZ; z	-	c
	-	19:33:08	eLPE	-	WE
	-	19:38:05	eLPE	-	WE
	-	19:39:51	eLPE	-	EW
	-	19:45:08	eLPE	-	WE
	(SSS)	19:49:38	eLPE	-	WE
	LR	20:06,7	LPE; Z	40	-
U.S.C.G.S.: Epicentre: 3,7 S - 143,3 E (Côte de la Nouvelle Guinée)					
h = 7 km	H = 19:06:42,2	Mag: 5,9 (C.G.S.); 6,2 (PAS); 6 - 6¾ (BRK); 5¾ - 6 (PAL)		Δ = 127,1°	
28	P	09:36:28,2	iCPZNE; z, Z	-	d
U.S.C.G.S.: Epicentre: 27,6 N - 66,9 E (Ouest du Pakistan)					
h = 33 km	H = 09:25:36,6	Mag: 5,2 (C.G.S.)		Δ = 67,0°	
28	P	14:06:13,5	iCPZNE; z, Z	-	c
	pP	14:06:32	iCPZNE;eLPZE; z, Z	-	d, NS, EW
	S	14:16:38	eLPZNE	-	c, SN, EW
	-	14:22:07	eLPE	-	WE
	(sS)	14:22:21	eLPN	-	SN
	-	14:22:35	eLPZ	-	d
	LR	14:29,5	LPN	40	-
	LR1	14:34,2	LPZE; Z	50	-
U.S.C.G.S.: Epicentre: 13,2 S - 76,4 W (Côte du Pérou)					
h = 70 G	H = 13:53:35,3	Mag: 6,0 (C.G.S.)		Δ = 86,6°	

Date	Phases	Heure T.M.G.	Composantes, nature du mouvement et amplitudes(μ)	Périodes (s)	Sens du mouvement
1968 Sept. 29	LR	02:00,3	LPZNE	20	-
29	P	03:55:39,5	iCPZNE; z, Z	-	c, NS, WE
U.S.C.G.S.: Epicentre: 49,8 N - 78,2 E (Est de Kazakh, RSS)					
h = 0G	H = 03:42:57,5	Mag: -		Δ= 86,0°	
29	P	22:26:13,6	iCPZNE; z	-	d
	LR	22:55,2	LPZ	40	-
	LR_1	22:58,1	LPE	20	-
	LR_2	23:00,2	LPN	20	-
U.S.C.G.S.: Epicentre: 24,1 S - 66,9 W (Province de Salta, Argentine)					
h = 209 D	H = 22:14:52,6	Mag: 4,6 (C.G.S.)		Δ= 75,4°	
30	PKP	11:03:12,7	iCPZNE; z, Z	-	d
U.S.C.G.S.: Epicentre: 15,1 S - 173,5 W (Iles Tonga)					
h = 33 km	H = 10:43:24,0	Mag: 4,9 (C.G.S.)		Δ= 149,2°	
30	LR	12:48,1	LPZNE	20	-
U.S.C.G.S.: Epicentre: 29,5 S - 176,9 W (Iles Kermadec)					
h = 74 km	H = 11:37:24,2	Mag: 4,8 (C.G.S.)		Δ= 135,9°	
30	LR	14:41,3	LPZE	30	-

SERVIÇO METEOROLÓGICO DE ANGOLA

Centro de Geofísica de Luanda
C.P. 1228 C Luanda

BULLETIN SÉISMIQUE D'ANGOLA (PORTUGAL)

ANNÉE 4 - Nº 10 OCTOBRE 1968

Station séismographique de Sá da Bandeira

Coordonnées de la station:

Latitude géographique: φ = 14° 54' 08" S Longitude: λ = 13° 28' 39" E

Latitude géocentrique: ϕ = 14 48 23 S Altitude: h = 1761 m

Nature du sous-sol:

Granite

Constantes des séismographes

Séismographes	T_o (s)	T_g (s)	Amplification			
			Ts =0,2 s	Ts=0,6 s	Ts=1,0 s	Ts=15,0 s
Benioff vertical (Z)	1,0	0,2	76750	33000	15300	-
Benioff vertical (z)	1,0	21,9	400	1100	1650	120
Benioff vertical (CPZ)	1,0	0,75	38000	150000	100000	-
Benioff N/S (CPN)	1,0	0,85	38000	150000	100000	-
Benioff EW (CPE)	1,0	0,82	38000	150000	100000	-
Sprengnether vertical (LPZ)	15,0	100,0	-	-	-	1500
Sprengnether NS (LPN)	15,0	100,0	-	-	-	1500
Sprengnether EW (LPE)	15,0	100,0	-	-	-	1500

Date		Phases	Heure T.M.G.	Composantes, nature du mouvement et amplitudes(μ)	Périodes (s)	Sens du mouvement
1968 Oct.	1	-	23:18:24,2	CPZNE; z	-	-
	2	PKP	13:40:34,2	ICPZN; z	-	c, NS
		U.S.C.G.S.: Epicentre: 17,6 S - 178,8 W (Iles Fidji)				
		h = 560 G H = 13:21:56,5 Mag: 4,4 (C.G.S.) Δ = 145,3°				
	3	PKP	11:28:11,9	ICPZN; z	-	c, NS
		pPKP	11:28:21,2	ICPZN; z	-	c
		U.S.C.G.S.: Epicentre: 51,6 N - 174,1 W (Ile Andreanof, Iles Aleutian)				
		h = 46 D H = 11:08:38,9 Mag: 5,0 (C.G.S.); 4,0 - 4,8 (BRK) Δ = 142,8°				
	3	-	12:40:39	eCPZ; z	-	-
	4	P	06:13:33,3	ICPZNE; LPZNE; z,Z	-	-
		-	06:18:35	LPZ; z	-	-
		(SP)	06:20:46	LPZNE; Z	-	-
		LR	06:26,9	LPZNE; Z	30	-
		LR_1	06:27,2	LPZNE; Z	20	-
		M	06:31,3	LPZN	20	-
		LR_2	06:30,1	LPZNE; Z	15	-
		U.S.C.G.S.: Epicentre: 56,2 S - 27,0 W (Sud des Iles Sandwich)				
		h = 63 km H = 06:04:31,9 Mag: 5,9 (C.G.S.) Δ = 51,5°				

Date	Phases	Heure T.M.G.	Composantes, nature du mouvement et amplitudes(μ)	Périodes (s)	Sens du mouvement
1968 Oct. 4	PKP	07:48:08,8	ICPZNE; z, Z	-	c, NS, EW
	pPKP	07:48:19,9	ICPZE	-	d, NS
U.S.C.G.S.: Epicentre: 17,4 S - 172,8 W (Iles Tonga)					
h = N H = 07:28:27,1 Mag: 5,0 (C.G.S.) Δ = 147,1°					
5	LR	04:53,2	LPZE	40	-
	LR_1	04:53,7	LPZNE	30	-
	LR_2	04:55,7	LPZNE	20	-
U.S.C.G.S.: Epicentre: 39,0 S - 91,7 W (Ouest de Chili)					
h = N H = 04:08:57,0 Mag: 4,6 (C.G.S.) Δ = 92,0°					
5	P	15:23:29,5	ICPZNE; z	-	d, SN, WE
U.S.C.G.S.: Epicentre: 41,7 N - 49,5 E (MerCaspienne)					
h = 56 D H = 15:12:51,0 Mag: 5,1 (C.G.S.) = 65,7°					
6	Pg	01:49:45,9	ICPZNE; z	-	-
	Sg	01:49:49,2	ICPZNE; z	-	-
	-	01:50:25,8	ICPZNE; z	-	-
$\Delta \simeq 0,5°$					
6	PKP	03:11:27,4	ICPZ; z, Z	-	c
U.S.C.G.S.: Epicentre: 15,6 S - 173,2 W (Iles Tonga)					
h = 106 km H = 02:51:46,1 Mag: 5,0 (C.G.S.) Δ = 148,8°					
6	PKP	15:34:59,3	ICPZNE;z, Z	-	d, SN, WE
	pPKP	15:35:04,1	ICPZNE; z, Z	-	-
	PKS	15:38:31,8	ICPZNE; z, Z	-	-
	LR	06:27,0	LPZN	40	-
	LR_1	06:28,4	LPZNE	30	-
	LR_2	06:33,9	LPZNE	20	-
U.S.C.G.S.: Epicentre: 15,0 S - 175,5 W (Iles Tonga)					
h = N H = 05:15:11,5 Mag: 5,3 - 6,0 (C.G.S.); 4,9 - 5,8 (BRK) Δ = 149,8°					
6	P	07:54:41,5	ICPZNE; z	-	c, NS, WE
	pP	07:55:06,1	ICPZ	-	d
U.S.C.G.S.: Epicentre: 10,0 N - 93,7 E (Iles Andaman)					
h = 111 km H = 07:42:25,2 Mag: 5,1 (C.G.S.) Δ = 83,3°					
6	PKP	09:06:52,8	ICPZNE; z, Z	-	c, SN, WE
	PP	09:10:22,3	ICPZN; z, Z	-	c, SN
	LQ	09:50,6	LPE	70	-
	LR	09:51,2	LPZNE	50	-
	LR_1	09:52,1	LPZNE	40	-
	LR2	10:01,0	LPZNE; Z	30	-
	LR_3	10:03,3	LPZNE; Z	20	-
U.S.C.G.S.: Epicentre: 14,7 S - 175,6 W (Iles Samoa)					
h = 35 km H = 08:47:02,0 Mag: 5,4 - 6,0 (C.G.S.); 6 (PAS); 5,8 - 6,2 (BRK) Δ = 149,0°					
6	PKP	09:34:51,8	ICPZ; z, Z	-	c
U.S.C.G.S.: Epicentre: 14,8 S - 175,1 W (Iles Samoa)					
h = N H = 09:15:01,1 Mag: 5,0 (C.G.S.) Δ = 149,1°					
7	Pg	02:31:04,0	CPZNE; z	-	-
	Sg	02:31:07,1	CPZNE; z	-	-
	-	02:31:20,3	CPZNE; z	-	-
7	PKP	19:38:17,8	ICPZNE; LPZE; z, Z	-	d, SN, EW
	pPKP	19:40:32	LPZE; Z	-	-
	PP	19:40:57	LPN	-	-
	-	19:41:09,4	CPZNE; z, Z	-	-
	LR	20:21,2	Z	30	-
	LR_1	20:28,7	Z	20	-
L groupe enregistrement confus.					
U.S.C.G.S.: Epicentre: 26,3 N - 140,6 E (Iles Bonin)					
h = 516 D H = 19:20:20,3 Mag: 6,1 (C.G.S.); 7,5 (PAS); 6,3 - 6,7 (BRK)					
Δ = 129,5°					
7	PKP	21:08:07,2	ICPZNE; z	-	d, SN
L.P. enregistrement confus avec l'autre sisme					
U S C G S.: Epicentre: 42,0 N - 142,4 E (Hokkaido, Japon)					
h = 32 km H = 20:49:01,3 Mag: 5,7 - 6,1 (C.G.S.) Δ = 129,0°					
7	-	23:46:25,6	ICPZNE	-	-
	-	23:46:27,0	ICPZNE	-	-

Date	Phases	Heure T.M.G.	Composantes, nature du mouvement et amplitudes(μ)	Périodes (s)	Sens du mouvement
1968 Oct. 8	P	07:54:24,0	iCPZNE;LPZNE;z,Z	-	d, SN, WE
	pP	07:54:33,8	CPZ; z	-	e
	S	08:03:33	LPZNE; Z	-	-
	SS	08:07:56	LPZNE	-	-
	-	08:11:28	LPZ	-	-
	LR	08:16,1	LPZE	44	-
	LR_1	08:16,4	LPZNE; Z	30	-
	LR_2	08:19,4	LPZNE; Z	20	-
	LR_3	08:22,2	LPZNE; Z	15	-
	U.S.C.G.S.: Epicentre: 39,9 S - 87,7 E (Sud de ocean Indien)				
	h = N H = 07:43:23,1 Mag: 6,0 - 5,8 (C.G.S.) Δ = 68,5°				
8	P	15:04:58,1	iCPZNE; z, Z	-	c, SN, WE
	pP	15:05:50,8	iCPZ;LPZ;z, Z	-	d
	PP	15:07:44,7	iCPZ	-	-
	LR	15:30,2	LPZNE	20	-
	U.S.C.G.S.: Epicentre: 23,3 S - 66,5 W (Province de Jujuy, Argentine)				
	h = 221 D H = 14:53:38,5 Mag: 5,6 (C.G.S.) Δ = 75,1°				
9	PKP	03:58:34,3	iCPZNE; z, Z	-	c, SN, WE
	LR	04:50,2	LPZN	40	-
	LR_1	04:51,2	LPZNE	30	-
	LR_2	04:57,4	LPZNE	20	-
	U.S.C.G.S.: Epicentre: 14,7 S - 175,5 W (Iles Samoa)				
	h = 11 km H = 03:38:39,9 Mag: 5,2 - 5,6 (C.G.S.) Δ = 149,0°				
9	PKP	17:30:22,7	iCPZ; z, Z	-	-
	LR	18:23,2	LPZN	-	-
	LR_1	18:24,8	LPZN	-	-
	LR_2	18:33,5	LPZN	-	-
	U.S.C.G.S.: Epicentre: 15,0 S - 175,5 W (Iles Tonga)				
	h = N H = 17:10:37,2 Mag: 5,0 - 5,3 (C.G.S.) Δ = 148,8°				
10	Pn	02:39:21,4	iCPZNE; z, Z	-	-
	Sn	02:39:43,8	iCPZNE; z, Z	-	-
	$\Delta \simeq 1,7°$				
10	PKP	15:24:43,5	CPZ; z, Z	-	-
	pPKP	15:24:59,1	CPZ; z, Z	-	-
	-	15:28:20	LPZE	-	-
	-	15:28:25,2	CPZNE; z, Z	-	-
	LR	16:10,9	LPZNE; Z	30	-
	LR_1	16:18,8	LPZNE; Z	20	-
	U.S.C.G.S.: Epicentre: 6,0 S - 148,6 E (Nouvelle Bretagne)				
	h = 72 km H = 15:05:37,1 Mag: 5,1 (C.G.S.) Δ = 130,9°				
12	PKP	19:36:05,4	iCPZNE; z, Z	-	d, NS, EW
	pPKP	19:38:50,1	iCPZNE; z, Z	-	d, NS, EW
	U.S.C.G.S.: Epicentre: 20,9 S - 178,8 W (Iles Fidji)				
	h = 607 D H = 19:17:39,9 Mag: 5,7 (C.G.S.); 5,9 (BRK) Δ = 142,2°				
12	P	23:31:35,6	iCPZNE; z, Z	-	d, NS, EW
	pP	23:32:28,6	iCPZ	-	d
	U.S.C.G.S.: Epicentre: 36,4 N - 70,8 E (Région Hindu Kush)				
	h = 203 km H = 23:20:19,3 Mag: 5,3 (C.G.S.) Δ = 74,5°				
13	-	12:16:15,7	iCPZNE; z	-	-
	-	12:16:43,1	iCPZNE; z	-	-
14	P	03:12:07,7	iCPZNE; LPZ;z,Z	-	-
	PS	02:24:36	LPZNE; Z	-	-
	SSS	02:33:36	LPZ	-	-
	LR	02:42,7	LPZ	40	-
	LR_1	02:44,6	LPZNE; Z	30	-
	LR_2	02:46,9	LPZNE; Z	20	-
	U.S.C.G.S.: Epicentre: 31,5 S - 117,0 E (OUest de Australie)				
	h = 1 km H = 02:58:47,8 Mag: 6,0 - 6,8 (C.G.S.) Δ = 93,3°				
15	P	02:23:13,2	iCPZE; z, Z	-	d, EW
	U.S.C.G.S.: Epicentre: 0,5 S - 100,6 E (Sud de Sumatra)				
	h = 90 km H = 02:10:34,4 Mag: 5,6 (C.G.S.) Δ = 87,3°				
16	LR	21:04,6	LPZE	40	-
	LR_1	21:06,4	LPZE	30	-
	LR_2	21:12,2	LPZE	20	-
	U.S.C.G.S.: Epicentre: 9,0 N - 126,3 E (Iles Mindanao, Philippines)				
	h = 63 km H = 20:09:08,7 Mag: 5,2 (C.G.S.) Δ = 114,2°				

Date	Phases	Heure T.M.G.	Composantes, nature du mouvement et amplitudes(μ)	Périodes (s)	Sens du mouvement
1968 Oct. 16	P	17:43:26	iCPZNE; z, Z	-	-
	Lg	17:46:13	iCPZNE; z, Z	-	-
BUL (Rhodesia) Epicentre: 14,2 S - 26,3 E (Busango Suam , Zambia)					
h = --- H = 17:40:31 Mag: 4,1 (C.G.S.) Δ = 12,4°					
17	LR	06:15,3	LPZE	30	-
	LR_1	06:22,0	LPZE	25	-
	LR_2	06:23,4	LPZNE	20	-
U.S.C.G.S.: Epicentre: 3,8 S - 152,2 E (Nouvelle Irlande)					
h = 22 km H = 05:09:06,2 Mag: 5,3 (C.G.S.) Δ = 135,0°					
17	LR	21:54,7	LPZE	25	-
	LR_1	21:56,8	LPZE	20	-
18	LR	00:27,6	LPZN	25	-
	LR_1	00:28,1	LPZN	20	-
U.S.C.G.S.: Epicentre: 28,4 S - 177,0 W (Iles Kermadec)					
h = 151 km H = 23:13:40,4* Mag: 4,5 (C.G.S.) Δ = 135,5°					
18	P	02:55:35,6	iCPZE; z	-	e, WE
U.S.C.G.S.: Epicentre: 35,3 S - 71,0 W (Chili Central)					
h = 93 km H = 02:43:49,4 Mag: 5,0 (C.G.S.) Δ = 77,0°					
18	LR	04:17,1	LPZN	30	-
	LR_1	04:18,7	LPZN	25	-
	LR_2	04:23,1	LPZN	20	-
U.S.C.G.S.: Epicentre: 63,3 S - 165,8 W (Pacific Sud)					
h = N H = 03:26:20,3* Mag: 4,7 (C.G.S.) Δ = 101,8°					
18	P	15:57:28,4	iCPZN; z, Z	-	-
	LR	16:07,3	LPZ	40	-
	LR_1	16:07,6	LPZN	30	-
	LR_2	16:08,7	LPZNE	20	-
	LR_3	16:10,0	LPZNE	15	-
U.S.C.G.S.: Epicentre: 47,0 S - 10,4 W (Atlantique Sud)					
h = N H = 15:50:19,9 Mag: 4,5 (C.G.S.) Δ = 37,8°					
19	LR	10:33,2	LPZNE	20	-
	LR_1	10:39,4	LPZNE	14	-
U.S.C.G.S.: Epicentre: 37,5 N - 73,3 E (Tadzhik, RSS)					
h = N H = 09:52:03,4 Mag: 5,4 (C.G.S.) Δ = 76,8°					
19	P	15:43:56,5	iCPZN; z, Z	-	c, WE
	pP	15:44:07,1	iCPZ	-	d
	LR	16:04,5	LPZNE	20	-
	LR_1	16:07,6	LPZNE	15	-
U.S.C.G.S.: Epicentre: 35,3 N - 23,5 E (Crète)					
h = 19 km H = 15:34:54,8 Mag: 4,8 (C.G.S.) Δ = 51,1°					
19	PKP	17:48:32,6	iCPZ; z, Z	-	d
	(pPKP)	17:48:38,0	iCPZNE; z, Z	-	d
	LR	18:41,1	LPZN	30	-
	LR_1	18:44,0	LPZN	25	-
	LR_2	18:46,2	LPZNE	20	-
U.S.C.G.S.: Epicentre: 15,2 S - 173,3 W (Iles Tonga)					
h = N H = 17:28:43,6 Mag: 5,2 - 5,6 (C.G.S.) Δ = 149,1°					
19	P	21:40:57	eCPZN; z, Z	-	c, SN
	-	21:41:13,5	iCPZ	-	d
	LR	21:57,2	LPZ	25	-
	LR_1	21:57,6	LPZN	20	-
	LR_2	22:02,0	LPZN	15	-
U.S.C.G.S.: Epicentre: 59,4 S - 25,3 W (Sud des Iles Sandwich)					
h = N H = 21:31:43,0 Mag: 4,7 (C.G.S.) Δ = 52,8°					
20	LR	08:04,2	LPZNE	30	-
	LR_1	08:06,4	LPZNE	25	-
	LR2	08:10,2	LPZNE	20	-
U.S.C.G.S.: Epicente: 25,0 N - 122,5 E (Taiwan)					
h = 15 G H = 07:00:17,1 Mag: 5,4 - 5,7 (C.G.S.) Δ = 113,2°					
20	-	13:31:52,4	CPZNE	-	-
	LR	13:39,0	LPZNE	20	-
	LR_1	13:40,3	LPZNE	15	-

Date	Phases	Heure T.M.G.	Composantes, nature du mouvement et amplitudes(μ)	Périodes (s)	Sens du mouvement
1968 Oct. 20	P	17:10:35,1	iCPZNE; z	-	-
	LR	17:17,8	LPNE	30	-
	LR_1	17:19,7	LPZ	25	-
	LR_2	17:18,1	LPZNE	20	-
	U.S.C.G.S.: Epicentre: 35,4 S - 15,9 W (Tristan da Cunha)				
	h = N H = 17:03:58,7 Mag: 5,0 - 5,2 (C.G.S.) Δ = 33,3°				
21	PKP	00:47:16,9	iCPZNE; z	-	d, NS
	U.S.C.G.S.: Epicentre: 19,1 S - 177,7 W (Iles Fidji)				
	h = 575 G H = 00:28:43,4 Mag: 3,9 (C.G.S.) Δ = 144,2°				
21	P	18:25:45,6	iCPZNE; z, Z	-	d, SN, WE
	U.S.C.G.S.: Epicentre: 35,2 N - 23,4 E (Crète)				
	h = 5 km H = 18:16:41,6 Mag: 4,7 (C.G.S.) Δ = 51,1°				
22	LR	08:36,1	LPN	50	-
	LR_1	08:42,0	LPZE	40	-
	LR_2	08:43,5	LPZE	30	-
	LR_3	08:46,5	LPZNE; Z	20	-
	LR_4	08:50,4	LPZNE; Z	15	-
	U.S.C.G.S.: Epicentre: 4,4 S - 104,9 W (Iles Cordillera)				
	h = N H = 07:45:56,1 Mag: 4,7 - 5,5 (C.G.S.) Δ = 116,0°				
22	PKP	14:18:12,7	iCPZ	-	d
	U.S.C.G.S.: Epicentre: 17,6 S - 179,1 W (Iles Fidji)				
	h = 621 H = 13:59:39,7 Mag: 4,3 (C.G.S.) Δ = 145,2°				
23	LR	02:39,2	LPZNE	50	-
	LR_1	02:40,2	LPZNE	40	-
	LR_2	02:40,6	LPZNE; Z	30	-
	LR_3	02:43,7	LPZNE; Z	20	-
	LR_4	02:49,7	LPZNE	15	-
	U.S.C.G.S.: Epicentre: 53,5 E - 140,3 E (Iles Macquarie)				
	h = N H = 01:54:01,9* Mag: 4,7 (C.G.S.) Δ = 97,9°				
23	LR	14:13,9	LPZ	30	-
	LR_1	14:14,2	LPZNE	25	-
	LR_2	14:15,4	LPZNE	20	-
	U.S.C.G.S.: Epicentre: 9,1 S - 112,0 E (Sud de Java)				
	h = 46 D H = 13:25:58,9 Mag: 5,4 (C.G.S.) Δ = 95,8°				
23	PKP	21:23:49,9	iCPZ; LPZ	-	d
	pPKP	21:23:55,4	iCPZ	-	d
	PP	21:25:48,3	iCPZNE; LPZE	-	d, SN, EW
	LR	22:17:26	CPZNE	20	-
	LR_1	22:25:39	CPZNE	15	-
	Longue période enregistrement confuse.				
	U.S.C.G.S.: Epicentre: 3,3 S - 143,3 E (Proche de la côte nord de Nouvelle Guinée)				
	h = 12 km H = 21:04:41,3 Mag: 6,1 - 6,8 (C.G.S.); 6,8 (PAS); 6,6 - 6,9(BRK); 7 - 7¼ (PAL) Δ = 126,6°				
24	Pg	01:24:27,5	iCPZNE	-	-
	Sg	01:24:31,0	iCPZNE	-	-
	Δ ≃ 0,3				
24	P	01:41:32,8	iCPZ	-	c
	pP	01:41:58,3	iCPZ	-	d
	U.S.C.G.S.: Epicentre: 19,6 S - 68,9 W (Région interieur Chili-Bolivie)				
	h = 107 D H = 01:29:42,6 Mag: 5,3 (C.G.S.) Δ = 77,9°				
24	P	05:14:50,7	iCPZNE; LPZN	-	c, NS, WE
	-	05:15:03,8	iCPZ	-	-
	PP	05:16:09,6	iCPZ; LPZNE	-	d
	S	05:20:26	LPZNE	-	-
	LR	05:24,2	LPZNE	50	-
	LR_1	05:25,1	LPZNE	20	-
	LR_2	05:25,5	LPZNE	15	-
	U.S.C.G.S.: Epicentre: 45,6 S - 34,1 E (Iles Prince Edward)				
	h = N H = 05:07:53,9 Mag: 5,3 - 5,5 (C.G.S.) Δ = 35,3°				
24	Pg	13:38:26,6	iCPZNE	-	-
	Sg	13:38:29,5	iCPZNE	-	-
	0,3°				

Date	Phases	Heure T.M.G.	Composantes, nature du mouvement et amplitudes(μ)	Périodes (s)	Sens du mouvement
1968 Oct. 24	LR	16:41,1	LPN	40	-
	LR_1	16:49,3	LPZE; Z	30	-
	LR_2	16:51,0	LPZNE; Z	20	-
	LR_3	17:01,0	LPZNE; Z	15	-
U.S.C.G.S.: Epicentre: 5,9 N - 127,0 E (Iles Philippines)					
h = 70 G H = 15:51:18,5 Mag: 5,4 (C.G.S.); 6,5 (PAS) Δ = 114,2°					
24	P	17:46:15,6	iCPZNE; z, Z	-	c, SN, WE
	pP	17:46:26,0	iCPZNE; z, Z	-	d, NS, EW
U.S.C.G.S.: Epicentre: 30,3 S - 68,2 W (Province de San Juan, Argentine)					
h = 35 km H = 17:34:31,3 Mag: 5,0 (C.G.S.) Δ = 75,5°					
25	P	10:41:50,7	iCPZNE; z, Z	-	c, SN, EW
	-	10:42:08,5	iCPZ; z, Z	-	d
	LR	11:09,5	LPZ	40	-
	LR_1	11:10,3	LPZNE	30	-
	LR_2	11:11,6	LPZNE	25	-
	LR_3	11:13,3	LPZNE	20	-
U.S.C.G.S.: Epicentre: 4,3 N - 95,5 E (Nord de Sumatra)					
h = 33 km H = 10:29:24,1 Mag: 5,5 (C.G.S.) Δ = 83,6°					
28	PKP	23:51:50,9	iCPZNE; LPZNE; z, Z	-	d, NS, WE
	pPKP	23:52:13,2	iCPZNE; LPZ;z,Z	-	c, NS, WE
	PP	23:55:00	iCPZNE; LPZ;z,Z	-	-
	PKS	23:55:27	LPZNE	-	-
	-	00:05:05	LPZ	-	-
	SS	00:13:27	LPZNE	-	-
	SSP	00:14:07	LPZNE	-	-
	LQ	00:32,5	LPN	56	-
	LR	00:40,2	LPZNE; Z	40	-
	LR_1	00:42,4	LPZNE; Z	30	-
	LR_2	00:44,4	LPZNE; Z	20	-
	M	00:47,1	LPZ	20	-
U.S.C.G.S.: Epicentre: 12,5 S - 166,5 E (Ile Santa Cruz)					
h = 60 G H = 23:32:28,7 Mag: 5,9 (C.G.S.); 6,5 (PAS); 6,4-6,6 (BRK); 7,0 (GOL) Δ = 141,7°					
29	PKP	07:39:53,7	iCPZNE; z, Z	-	d, NS, EW
U.S.C.G.S.: Epicentre: 17,8 S - 178,8 W (Iles Fidji)					
h = 567 D H = 07:21:16,7 Mag: 5,5 (C.G.S.) Δ = 145,1°					
29	PKP	22:35:25,2	iCPZNE	-	c, SN, EW
	PP	22:37:35,9	iCPZN	-	d, SN
	(SS)	22:54:52	LPE	-	-
	-	23:06:06	LPE	-	-
	LQ	23:11,2	LPNE	60	-
	LR	23:14,2	LPZNE	50	-
	LR_1	23:19,3	LPZN	40	-
	LR_2	23:20,0	LPZNE	30	-
	LR_3	23:27,8	LPZNE	20	-
U.S.C.G.S.: Epicentre: 65,4 N - 150,1 W (Alaska)					
h = 7 km H = 22:16:15,6 Mag: 6,0-6,5 (C.G.S.); 6¾-7 (PAS); 6,3-6,5 (BRK); 7,0 (GOL); 7,1 (ML) Δ = 128,3°					
29	-	23:10:48,6	iCPZNE	-	d, SN, WE
30	PKP	00:44:30,6	iCPZNE	-	c, NS, WE
U.S.C.G.S.: Epicentre: 65,6 N - 150,1 W (Alaska)					
h = 65 km H = 00:25:11,7 Mag: 4,0 (C.G.S.) Δ = 128,3°					
30	-	00:51:12,4	iCPZNE	-	-
30	P	05:35:24,9	iCPZNE	-	d, NS, WE
U.S.C.G.S.: Epicentre: 59,0 S - 25,6 W (Sud des Iles Sandwich)					
h = 39 km H = 05:26:11,5 Mag: 4,7 (C.G.S.) Δ = 52,7°					
30	PKP	10:00:47,4	iCPZ; z	-	c
	(PP)	10:03:39,7	iCPZNE; z	-	d, NS, EW
U.S.C.G.S.: Epicentre: 31,0 S - 179,9 W (Iles Kermadec)					
h = 328 km H = 09:42:10,8 Mag: 4,9 (C.G.S.) Δ = 132,3°					

Date	Phases	Heure T.M.G.	Composantes, nature du mouvement et amplitudes(μ)	Périodes (s)	Sens du mouvement
1968 Oct. 30	P	17:01:28,9	iCPZN; z	-	c, NS
	pP	17:01:31,4	iCPZN; z	-	c, SN
	LR	17:21,7	LPE	30	-
	LR_1	17:23,2	LPZNE	20	-
	LR_2	17:27,7	LPZNE	15	-
	U.S.C.G.S.: Epicentre: 37,9 N - 38,6 E (Turquie)				
	h = 3 km H = 16:51:33,5 Mag: 4,9 (C.G.S.) Δ = 57,8°				
31	P	03:31:33,4	iCPZNE; z	-	d, SN, EW
	LR	03:50,3	LPE	30	-
	LR_1	03:53,0	LPZNE	15	-
	U.S.C.G.S.: Epicentre: 36,6 N - 27,1 E (Iles Dodecanense)				
	h = 11 km H = 03:22:15,0 Mag: 5,1 (C.G.S.) Δ = 53,1°				
31	P	09:28:07,6	iCPZNE; LPZ; z, Z	-	c, NS, WE
	pP	09:28:19,0	iCPZN; LPZ; z, Z	-	d, NS
	(PPP)	09:33:02	LPE	-	-
	-	09:35:27	LPZE	-	-
	-	09:36:30	LPZE	-	-
	-	09:38:23	LPNE	-	-
	LR	09:55,8	LPNE	40	-
	LR_1	09:56,9	LPZNE	30	-
	LR_2	09:59,5	LPZNE; Z	20	-
	LR_3	10:03,2	LPZN	15	-
	U.S.C.G.S.: Epicentre: 16,3 S - 73,3 W (Proche de la côte de Pérou)				
	h = 67 D H = 09:15:46,9 Mag: 5,7 (C.G.S.) Δ = 82,8°				

S E R V I Ç O M E T E O R O L Ó G I C O D E A N G O L A

Centro de Geofísica de Luanda

C.P. 1228 C L u a n d a

BULLETIN SÉISMIQUE D'ANGOLA (PORTUGAL)

ANNÉE 4 - Nº 11 NOVEMBRE 1968

Station séismographique de Sá da Bandeira

Coordonnées de la station:

Latitude géographique: φ = 14° 54' 08" S Longitude: λ = 13° 28' 39" E

Latitude géocentrique: φ' = 14 48 23 S Altitude: h = 1761 m

Nature du sous-sol:

Granite

Constantes des séismographes

Séismographes	T_o (s)	T_g (s)	Amplification			
			Ts=0,2 s	Ts=0,6 s	Ts=1,0 s	Ts=15,0 s
Benioff vertical (z)	1,0	0,2	76750	33000	15300	-
Benioff vertical (Z)	1,0	21,3	400	1100	1650	120
Benioff vertical (CPZ)	1,0	0,75	38000	150000	100000	-
Benioff N/S (CPN)	1,0	0,85	38000	150000	100000	-
Benioff EW (CPE)	1,0	0,82	38000	150000	100000	-
Sprengnether vertical (LPZ)	15,0	100,0	-	-	-	1500
Sprengnether NS (LPN)	15,0	100,0	-	-	-	1500
Sprengnether EW (LPE)	15,0	100,0	-	-	-	1500

Date	Phases	Heure T.M.G.	Composantes, nature du mouvement et amplitudes(μ)	Périodes (s)	Sens du mouvement
1968 Nov. 3	P	04:59:18,6	iCPZNE; iz	-	c, SN, WE
	pP	04:59:28,0	iCPZNE; iz, Z	-	d, SN, WE
	LQ	05:13:00	LPE	40	-
	LR	05:27:24,0	LPZNE	20	-
	U.S.C.G.S.: Epicentre: 42,1 N - 19,4 E (Yougoslavie)				
	h = 17 H = 04:49:31,8 Mag: 5,0 (C.G.S.) Δ = 57,3°				
4	PKP	09:26:10,8	iCPZNE; iz, Z; LPZNE	-	d, NS, WE
	SS	09:47:36,8	LPZNE	-	-
	U.S.C.G.S.: Epicentre: 14,2 S - 172,0 E (Région des îles Nouvelles Hébrides)				
	h = 585 km H = 09:07:38,5 Mag: 5,8; 6½ (PAS); 6¼ (BRK) Δ = 143,8°				
7	PKP	03:52:38,5	iCPZN;LPZ;iz,IZ	-	c, NS
	LR	04:53:26	LPZN	20	-
	U.S.C.G.S.: Epicentre: 16,6 S - 172,7 W (Région des îles Samoa)				
	h = 33 H = 03:32:50,8. Mag: 5,1 ; 5,5 (C.G.S.) Δ = 147,9°				
7	P	10:15:17,3	iCPZNE; iz, IZ	-	c, EW
	U.S.C.G.S.: Epicentre: 73,4 N - 54,9 E (Nouvelle - Zemble)				
	h = 0 H = 10:02:05,3 Mag: 6,0 (C.G.S.); 6¼ - 6½ (BRK) Δ = 92,9°				

Date	Phases	Heure T.M.G.	Composantes, nature du mouvement et amplitudes(μ)	Périodes (s)	Sens du mouvement
1968 Nov. 7	P	10:26:03,0	iCPZNE; iz, Z	-	c, NS, WE
U.S.C.G.S.: Epicentre: 16,4 S - 73,5 W (Près de la côte du Pérou)					
h = 50 km	H = 10:13:39,8	Mag: 5,0 (C.G.S.)		Δ = 83,0°	
7	P	13:12:41,1	iCPZN	-	-
	LR	13:28:08	LPZN	24	-
U.S.C.G.S.: Epicentre: 60,4 S - 27,0 W (Région Sud des Iles Sandwich)					
h = 33 km	H = 13:03:17,2	Mag: 4,2 (C.G.S.)		Δ = 54,1°	
7	Pg	08:14:45,5	CPZNE	-	-
	Sg	08:14:51,1	CPZN	-	-
$\Delta \simeq 0,5°$					
7	Pg	09:26:56,7	CPZE	-	-
	Sg	09:27:00,0	CPZNE	-	-
$\Delta \simeq 0,3°$					
8	PKP	08:02:04,1	iz	-	c
U.S.C.G.S.: Epicentre: 13,3°S - 167,2° E (Iles Nouvelles Hébrides)					
h = 192 km	H = 07:42:57,3	Mag: 5,1 (C.G.S.)		Δ = 141,6°	
8	Pn	14:15:39,0	iz	-	-
	Sn	14:56:17,2	iz	-	-
$\Delta \simeq 1,6°$					
8	P	18:45:48,1	iCPZNE; iz, iZ	-	c, SN, EW
U.S.C.G.S.: Epicentre: 19,5 S - 179,2 W (Région des Iles Fidji)					
h = 670 km	H = 18:27:26,7	Mag: 5,2 (C.G.S.)		Δ = 143,8°	
9	P	13:31:56,8	iCPZNE	-	-
	LQ	14:10:00	LPNE	46	-
	LR	14:20:00	LPZNE; Z	22	-
U.S.C.G.S.: Epicentre: 20,1 S - 178,6 W (Région des Iles Fidji)					
h = 615 km	H = 13:13:31,3	Mag: 4,7 (C.G.S.)		Δ = 143,0°	
9	SP	20:59:42,8	eLPZNE	-	-
	SPP	21:00:53,0	eLPZE	-	-
	SS	21:05:52	eLPNE	-	-
	LR	21:25,0	LPE	36	-
	LR_1	21:26,0	LPZN	30	-
	LR_2	21:32,0	Z	24	-
U.S.C.G.S.: Epicentre: 2,4 N - 126,8 E (Moluques)					
h = 33 km	H = 20:30:41,9	Mag: 5,5; 6,0 (C.G.S.); 6,1 (PAS)		Δ = 113,2°	
10	LR	13:23,0	LPZN	24	-
U.S.C.G.S.: Epicentre: 34,8 N - 24,3 E (Crète)					
h = 33 km	H = 12:50:42,9	Mag: 5,0 (C.G.S.)		Δ = 50,8°	
10	LR	17:57,0	LPZNE	28	-
U.S.C.G.S.: Epicentre: 20,0 N - 121,4 E (Région des Iles Philippines)					
h = 33 km	H = 17:01:59,2	Mag: 5,2; 5,5 (C.G.S.)		Δ = 111,6°	
10	PKP	02:17:03,0	iCPZNE; iz, iZ	-	c, SN, WE
U.S.C.G.S.: Epicentre: 19,6 S - 179,1 W (Région des Iles Fidji)					
h = 674 km	H = 01:58:41,0	Mag: ,0 (C.G.S.)		Δ = 143,4°	
11	PKP	09:13:09,5	iCPZN; iz	-	c, SN
U.S.C.G.S.: Epicentre: 57,3 N - 155,3 W (Alaska)					
h = 59 km	H = 08:53:52,0	Mag: 5,3 (C.G.S.)		Δ = 136,8°	
11	PKP	15:00:19,4	iCPZ; iz	-	-
	SP	15:12:41,2	LPZNE	-	-
	LR	15:44,0	LPZNE; Z	26	-
U.S.C.G.S.: Epicentre: 40,1 N - 143,0 E (Côte Est du Japon)					
h = 35 km	H = 14:41:15,9	Mag: 5,5; 5,9 (C.G.S.)		Δ = 129,5°	
11	P	23:43:38,1	iCPZN; iz	-	-
	LR	00:06,0	LPZ	20	-
	LR_1	00:02,0	LPNE	26	-
U.S.C.G.S.: Epicentre: 36,7 N - 27,1 E (Dodecanèse)					
h = 23 km	H = 23:34:21,0	Mag: 4,8 (C.G.S.)		Δ = 53,2°	

Date	Phases	Heure T.M.G.	Composantes, neture du mouvement et amplitudes(μ)	Périodes (s)	Sens du mouvement
1968 Nov. 12	LR	01:39,0	LPZNE	30	-
	U.S.C.G.S.: Epicentre: 27,5 N - 128,4 E (Iles Rioukiou)				
	h = 48 km H = 00:44:12,8	Mag: 5,8; 5,6 (C.G.S.)		Δ = 118,7°	
12	P	09:46:54,1	iCPZ	-	-
	LR	04:05	LPZNE	30	-
	U.S.C.G.S.: Epicentre: 36,6 N - 27,3 E (Iles do Dodecanèse)				
	h = 17 km H = 03:37:35,7	Mag: 4,7 (C.G.S.)		Δ = 53,2°	
12	PKP	10:12:31,5	iCPZ	-	c
	U.S.C.G.S.: Epicentre: 29,2 N - 129,4 E (Iles Rioukiou)				
	h = 22 km H = 09:53:42,2	Mag:5,4; 5,1 (C.G.S.)		Δ = 119,6°	
12	LR	10:18,0	LPZNE	20	-
	U.S.C.G.S.: Epicentre: 41,2 N - 143,9 E (Région du Japon)				
	h = 17 km H = 08:57:27,1	Mag: 5,3 (C.G.S.)		Δ = 129,8°	
12	PKP	22:20:24,1	iCPZN;LPZ;iz, iZ	-	-
	LR	23:17,0	LPZNE	20	-
	U.S.C.G.S.: Epicentre: 15,6 S - 172,8 W (Iles Samoa)				
	h = 47 km H = 22:00:39,1	Mag: 5,2 (C.G.S.)		Δ = 148,8°	
13	PKP	02:16:33,0	iCPZN; iz, iZ	-	NS
	U.S.C.G.S.: Epicentre: 15,7 S - 172,8 W (Région des Iles Samoa)				
	h = 35 km H = 01:56:45,1	Mag: 5,0 (C.G.S.)		Δ = 148,2°	
13	-	16:10:36,1	iCPZ	-	d
13	P	16:49:38,9	iCPZNE; iz	-	-
	-	16:57:07,1	iCPZNE; iz, iZ	-	SN, EW
	U.S.C.G.S.: Epicentre: 1,8 N - 31,5 E (Ouganda)				
	h = 21 km H = 16:44:18,9			Δ = 24,4°	
13	PKP	19:00:52,6	eCPZ; iz, iZ	-	-
	SS	19:20:20	LPNE	-	-
	LR	19:48,0	LPZNE	24	-
	U.S.C.G.S.: Epicentre: 40,2 N - 142,5 E (Japon)				
	h = 49 km H = 18:41:47,9	Mag: 5,5; 58 (C.G.S.)		Δ = 129,1°	
13	PKP	21:54:25,2	iCPZ; iz, iZ	-	-
	U.S.C.G.S.: Epicentre: 18,4 S - 178,0 W (Région des Iles Fidji)				
	h = 549 km H = 21:35:47,9	Mag: 4,9 (C.G.S.)		Δ = 144,8°	
14	PKP	11:54:23,0	iCPZNE	-	c, NS, WE
	U.S.C.G.S.: Epicentre: 20,0 S - 176,0 W (Région des Iles Fidji)				
	h = 220 km H = 11:35:12,0	Mag: 5,1 (C.G.S.)		Δ = 143,8°	
15	LR	00:13,0	LPZNE	30	-
	U.S.C.G.S.: Epicentre: 21,5 S - 170,1 (Région des Iles Loyauté)				
	h = 103 km H = 23:08:54,4	Mag: 5,4 (C.G.S.)		Δ = 136,9°	
15	-	06:36:40,5	iCPZN; iz, iZ	-	d, NS
15	LR	06:59,0	LPZ	20	-
	LR_1	06:55,0	LPNE	30	-
	U.S.C.G.S.: Epicentre: 51,4 N - 178,7 E (Iles Aléoutiennes)				
	h = 74 km H = 05:26:57,4	Mag: 4,7 (C.G.S.)		Δ = 141,6°	
15	PKP	13:59:12,0	iCPZ	-	c
	U.S.C.G.S.: Epicentre: 17,7 S - 178,6 W (Région des Iles Fidji)				
	h = 549 km H = 13:40:33,7	Mag: 4,6 (C.G.S.)		Δ = 145,3°	
16	LR	04:15,0	LPZNE	24	-
	U.S.C.G.S.: Epicentre: 35,8 S - 102,2 W (Océan Pacifique Sud)				
	h = 33 km H = 03:27:39,6	Mag: 4,8, 5,4 (C.G.S.)		Δ = 101,0°	

Date	Phases	Heure T.M.G.	Composantes, nature du mouvement et amplitudes(ω)	Périodes (s)	Sens du mouvement
1968 Nov. 16	PKP	08:05:20,6	iCPZNE;LPZ;iz,iZ	-	c, SN, WE
	SS	08:27:09,0	LPNE	-	-
	LQ	08:46,0	LPNE	40	-
	LR	08:53:40	LPZNE	30	-
	LR_1	08:56:49	Z	24	-
	U.S.C.G.S.: Epicentre: 16,6 S - 175,9 E (Région des Iles Fidji)				
	h = 66 km H = 07:45:51,7 Mag: 5,6 (C.G.S.);6,1 (PAS);6,3 - 6,5 (BRK);6-6¼(GOL) Δ = 144,0°				
17	P	00:28:45,0	iCPZNE;LPZE;iz,iZ	-	c, SN, WE
	S	00:39:14,2	eLPNE	-	SN, WE
	SP	00:40:18,0	eLPNE	-	-
	LR	00:53,0	CPNE	24	-
	U.S.C.G.S.: Epicentre: 9,6 N - 72,6 W (Venezuela)				
	h = 172 km H = 00:16:08,6 Mag: 5,7 (C.G.S.); 6½ - 6¾ (PAS) Δ = 88,7°				
17	LR	06:17,0	LPZNE	20	-
	U.S.C.G.S.: Epicentre: 3,3 S - 128,7 E (Ceram)				
	h = 69 km H = 05:18:59,4 Mag: 5,2 (C.G.S.) Δ = 113,4°				
17	P	07:47:24,0	iCPZNE;LPZNE;iz,iZ	-	-
	PP	07:48:16,8	LPZNE	-	-
	F	10:00	LPZ	-	-
	U.S.C.G.S.: Epicentre: 1,3 S - 13,6 W (Ile Ascension)				
	h = 33 km H = 07:41:16,1 Mag: 5,3 - 5,8 (C.G.S.);5,8 (PAS);6½ (GOL) Δ = 30,0°				
20	Pn	10:41:21,8	iz	-	-
	Sn	10:41:54,8	iZ	-	-
	$\Delta \simeq 2,6°$				
21	PKP	23:51:00,5	iCPZN; iz	-	d, SN
	U.S.C.G.S.: Epicentre: 19,6 S - 176,2 W (Région des Iles Fidji)				
	h = 270 km H = 23:31:52,7 Mag: 4,5 (C.G.S.) Δ = 144,2°				
22	LR	02:43,0	LPZE	10	-
	LR_1	02:41,0	LPN	20	-
22	SKS	09:24:48	LPZNE	-	-
	LR	09:56,0	LPZNE; Z	24	-
	U.S.C.G.S.: Epicentre: 16,3 N - 122,3 E (Luzou, Iles Philippines)				
	h = 26 km H = 08:59:23,1 Mag: 5,3 - 5,8 (C.G.S.) Δ = 111,8°				
23	-	16:16:44,0	iCPZNE; iz	-	-
23	-	16:32:16,4	iCPZ; iz	-	-
23	P	16:50:40	iCPZN; iz	-	d, NS
	LR	17:05	LPZN	-	-
	U.S.C.G.S.: Epicentre: 59,9 S - 18,4 W (Ocean Atlantique, Sud-Ouest)				
	h = 33 km H = 16:41:47,5 Mag: 5,6 (C.G.S.) Δ = 50,6°				
24	P	25:40:28,6	iCPZ; iz	-	d
	U.S.C.G.S.: Epicentre: 35,8 S - 71,2 W (Chili Central)				
	h = 103 km H = 05:28:43,8 Mag: 4,6 (C.G.S.) Δ = 77,1°				
24	P	07:04:29,5	iCPZNE;	-	d, NS, EW
	U.S.C.G.S.: Epicentre: 46,6 S - 10,7 W (Océan Atlantique Sud)				
	h = 33 km H = 06:57:16,3 Mag: 4,9 (C.G.S.) Δ = 37,6°				
24	-	21:29:34,0	iCPZ; iz, iZ	-	d
24	PKP	21:40:04,2	iCPZ; iz, iZ	-	c
	U.S.C.G.S.: Epicentre: 40,3 N - 142,3 E (Japon)				
	h = 51 km H = 21:20:59,9 Mag: 5,9 (C.G.S.) Δ = 129,0°				
24	LQ	22:12	LPNE	50	-
	LR	22:21	LPZNE	30	-
	U.S.C.G.S.: Epicentre: 15,6 S - 176,0 W (Région des Iles Fidji)				
	h = 33 km H = 21:09:47,9 Mag: 5,3 (C.G.S.) Δ = 148,1°				

Date	Phases	Heure T.M.G.	Composantes, nature du mouvement et amplitudes(μ)	Périodes (s)	Sens du mouvement
1968 Nov. 25	LR	05:53	LPZN	20	-
25	-	11:34:48,9	iCPZN; iz, iZ	-	c, SN
25	LR	11:50	LPZN	26	-
25	-	19:02:16	LPE	-	-
	PS	19:06:01	LPZNE	-	-
	LR	19:36,4	LPZE	25	-
	LR_1	19:40,3	LPZNE	20	-
	LR_2	19:43,5	LPZNE	15	-
U.S.C.G.S.: Epicentre: 5,0 N - 126,9 E (Mindanau, Iles Philippines)					
h = 31 km	H = 18:36:53,0	Mag: 5,4 - 6,2 (C.G.S.)		Δ = 113,9°	
26	P	00:11:30,2	iCPZNE	-	c, NS, EW
	pP	00:11:37,8	iCPZN	-	d, NS
	PS	00:18:14	LPZNE	-	-
	LR	00:24,1	LPZE	35	-
	LR_1	00:24,7	LPZN	30	-
	LR_2	00:25,7	LPZN	20	-
	LR_3	00:29,5	LPZN	15	-
U.S.C.G.S.: Epicentre: 57,5 S - 6,8 W (Atlantique Sud)					
h = N	H = 00:03:14,3	Mag: 5,6 - 5,3 (C.G.S.)		Δ = 44,4°	
26	PKP	01:29:26,1	iCPZ	-	d
	SKP	01:32:53,5	iCPZE	-	d, EW
	LR	02:15,9	LPZNE	40	-
	LR_1	02:17,8	LPZNE	30	-
	LR_2	02:22,9	LPZNE	20	-
U.S.C.G.S.: Epicentre: 5,3 S - 152,0 E (Nouvelle Bretagne)					
h = 68 km	H = 01:10:12,9	Mag: 5,5 (C.G.S.)		Δ = 134,2°	
26	-	18:54:11,4	iCPZNE; z	-	d, NS, EW
	-	18:59:03,4	iCPZN; z	-	d, NS
	-	19:00:58,1	iCPZNE;LPZNE;z,Z	-	d, NS, EW
27	LR	22:47,7	LPZN	40	-
	LR_1	22:48,5	LPZNE	30	-
	LR_2	22:51,3	LPZNE	20	-
U.S.C.G.S.: Epicentre: 35,7 S - 104,2 W (Pacific Sud)					
h = N	H = 21:59:46,2	Mag: 4,7 - 5,8 (C.G.S.)		Δ = 102,5°	
28	-	01:15:15,8	iCPZE	-	d, EW
28	PKP	10:54:44	LPZ;z, Z	-	-
	PP	10:55:17	LPZE	-	-
	-	11:03:04	LPN	-	-
	PS	11:04:42	LPZE	-	-
	-	11:10:54	LPNE	-	-
	LR	11:31,5	LPZ; Z	30	-
	LR_1	11:33,5	LPZNE; Z	25	-
	LR_2	11:35,6	LPZNE; Z	20	-
U.S.C.G.S.: Epicentre: 15,4 N - 94,6 W (Proche de la côte de Oaxaca, Mexique)					
h = 33 km	H = 10:36:07,7	Mag: 5,2 - 6,4 (C.G.S.)		Δ = 110,9°	
28	PKIKP	16:49:24,6	iCPZ; z	-	-
	PKP	16:49:30,4	iCPZNE;z, Z	-	d, NS, WE
	pPKP	16:50:18,2	iCPZNE; z, Z	-	d, NS, EW
	LR	17:30,2	LPZNE	40	-
	LR_1	17:32,0	LPZNE	30	-
	LR_2	17:42,0	LPZNE	20	-
U.S.C.G.S.: Epicentre: 6,8 S - 156,2 E (Iles Salomon)					
h = 169 D	H = 16:30:32,1	Mag: 5,7 (C.G.S.)		Δ = 137,2°	
28	P	18:30:04,8	iCPZNE; z, Z	-	c, NS, EW
	pP	18:30:06,8	iCPZNE; z, Z	-	d, NS, EW
	-	18:30:45,1	iCPZNE; z, Z	-	-
	(Lg)	18:31:16,7	CPZNE; LPZNE;z,Z	-	-
BUL (Rhodes!) Epicentre: 20,5 S - 14,7 E (S. W. Afrique)					
h = ---	H = 18:28:38	Mag: 4,5 (C.G.S.)		Δ = 5,8°	
28	-	18:58:07,5	iCPZNE; z	-	-
	-	18:58:10,4	iCPZNE; z	-	-
	-	18:59:22,7	iCPZNE; z, Z	-	-

Date	Phases	Heure T.M.G.	Composantes, nature du mouvement et amplitudes( )	Périodes (s)	Sens du mouvement
1968 Nov. 29	P	03:56:23,8	iCPZNE; z, Z	-	c, SN, EW
	LR	04:03,6	LPNE	30	-
	LR_1	04:03,8	LPZN	25	-
	LR_2	04:04,0	LPZNE; Z	20	-
	LR_3	04:05,1	LPZNE	15	-
	U.S.C.G.S.: Epicentre: 36,2 S - 15,7 W (Tristan da Cunha)				
	h = N H = 03:49:44,7 Mag: 4,8 (C.G.S.) Δ = 33,6°				
29	P	04:17:26,0	iCPZN; z, Z	-	c, SN
	-	04:17:32,0	iCPZN; z, Z	-	d, NS
	U.S.C.G.S.: Epicentre: 57,4 S - 7,1 W (Sud de Océan Atlantique)				
	h = N H = 04:09:09,6 Mag: 5,2 (C.G.S.) Δ = 45,2°				
30	LR	03:44,9	LPZN	30	-
	LR_1	03:48,2	LPZN	25	-
	LR_2	03:50,0	LPZN	20	-
	U.S.C.G.S.: Epicentre: 61,6 S - 160,5 E (Iles Balleny)				
	h = N H = 02:54:50,2 Mag: 5,0 (C.G.S.) Δ = 99,2°				
30	LR	05:01,6	LPZN	40	-
	LR_1	05:03,1	LPZN	30	-
	LR_2	05:06,5	LPZN	25	-
	LR_3	05:08,6	LPZN	20	-
	U.S.C.G.S.: Epicentre: 61,6 S - 160,8 E (Iles Balleny)				
	h = N H = 04:13:32,9 Mag: 5,1 (C.G.S.) Δ = 99,2°				
30	LR	06:55,4	LPZN	40	-
	LR_1	06:58,1	LPZN	30	-
	LR_2	07:00,4	LPZN	25	-
	LR_3	07:02,1	LPZNE	20	-
	U.S.C.G.S.: Epicentre: 61,7 S - 160,7 E (Iles Balleny)				
	h = N H = 06:07:33,9 Mag: 5,1 (C.G.S.) Δ = 99,2°				
30	-	15:45:07,5	iCPZNE	-	d, NS, EW

SERVIÇO METEOROLÓGICO DE ANGOLA

29 JUN 1970

Centro de Geofísica de Luanda

C.P. 1228 C Luanda

BULLETIN SÉISMIQUE D'ANGOLA (PORTUGAL)

ANNÉE 4 - Nº 12 DÉCEMBRE 1968

Station séismographique de Sá da Bandeira

Coordonnées de la station:

Latitude géographique: φ = 14° 54' 08" S Longitude: λ = 13° 28' 39" E

Latitude géocentrique: Φ = 14 48 23 S Altitude: h = 1761 m

Nature du sous-sol:
Granite

Constantes des séismographes

Séismographes	T_o (s)	T_g (s)	Amplification			
			Ts=0,2 s	Ts=0,6 s	Ts=1,0 s	Ts=15,0 s
Benioff vertical (z)	1,0	0,2	76750	33000	15300	-
Benioff vertical (Z)	1,0	21,3	400	1100	1650	120
Benioff vertical (CPZ)	1,0	0,75	38000	150000	100000	-
Benioff N/S (CPN)	1,0	0,85	38000	150000	100000	-
Benioff EW (CPE)	1,0	0,82	38000	150000	100000	-
Sprengnether vertical (LPZ)	15,0	100,0	-	-	-	1500
Sprengnether NS (LPN)	15,0	100,0	-	-	-	1500
Sprengnether EW (LPE)	15,0	100,0	-	-	-	1500

Date		Phases	Heure T.M.G.	Composantes, nature du mouvement et amplitudes(μ)	Périodes (s)	Sens du mouvement
1968 Déc.	1	-	07:36:40,2	ICPZNE; z	-	c, NS, WE
	1	P	13:27:32,3	ICPZNE; z, Z	-	c
		-	13:27:46	eLPZ	-	d
		(PS)	13:38:02	eLPZN	-	c, SN
		-	13:38:16	eLPE	-	EW
		-	13:44:05	eLPE	-	WE
		-	13:44:10	eLPZ	-	d
		-	13:50:03	eLPN	-	NS
		-	13:50:10	eLPE	-	-
		-	13:50:26	eLPZ	-	c
		LR	13:52,4	eLPZ; Z	40	-
		LR_1	13:55,3	eLPZE	40	-
		U.S.C.G.S.: Epicentre: 10,6 S - 74,9 W (Pérou)				
		h = 5 km H = 13:14:50,6 Mag: 5,4 (C.G.S.); Δ = 85,7°				
	1	PKP	20:54:25,9	ICPZNE; z, Z	-	d, SN
		U.S.C.G.S.: Epicentre: 17,8 S - 178,6 W (Iles Fidji)				
		h = 551 km H = 20:35:47,6 Mag: 4,9 (C.G.S.); 5,0 (BRK) Δ = 145,3°				

Date	Phases	Heure T.M.G.	Composantes, nature du mouvement et amplitudes(μ)	Périodes (s)	Sens du mouvement
1968 Déc. 2	P	02:36:05,0	iCPZNE;eLPZNE; z, Z	-	d, NS, WE
	(S)	02:37:49,5	iLPZNE; Z	-	c, SN, WE
	(Lg)	02:53:46	eLPNE; Z	-	-
	U.S.C.G.S.: Epicentre: 13,9 S - 23,8 E (Zambie)				
	h = 7 km H = 02:33:41,6 Mag: 6,0 (C.G.S.) Δ = 10,1°				
3	LR	20:13,7	LPZNE	30	-
4	LR	19:12,1	LPE	20	-
4	LR	20:06,7	LPE	20	-
	LR_1	20:10,7	LPZN	20	-
4	P	21:50:28,3	iCPZ; z, Z	-	d
	LR	22:06,5	LPZNE	20	-
	U.S.C.G.S.: Epicentre: 8,4 N - 58,4 E (Carlsberg)				
	h = 33 km H = 21:41:32,6 Mag: 5,1 (C.G.S.). Δ = 50,3°				
5	P	08:01:26,6	iz, iZ	-	d
	LR	08:24,7	Z	12	-
	U.S.C.G.S.: Epicentre: 36,6 N - 27,0 E (Iles Dodecaneses)				
	h = 35 km H = 07:52:11,0 Mag: 5,5 (C.G.S.) Δ = 53,1°				
5	P	09:56:42,6	iz, iZ	-	d
	LR	10:25,2	Z	30	-
	LR_1	10:33,2	Z	20	-
	U.S.C.G.S.: Epicentre: 63,9 N - 21,7 W (Iceland)				
	h = 5 G H = 09:44:11,0 Mag: 5,5 (C.G.S.); 5,9 (PAS); 6¼ (BRK); 6,0 (GOL) Δ = 83,3°				
7	LR	01:07,3	LPN	30	-
7	(Pn)	05:12:38,0	iCPZNE; z	-	c, SN
	(Sn)	05:14:18,2	iCPZNE; z, Z	-	d, SN, EW
	-	05:14:51,4	iCPZNE; z, Z	-	d, SN, EW
7	-	05:17:16	eLPZ	-	d
	PP	05:19:16	eLPZNE	-	d, NS, WE
	-	05:27:36	eLPN	-	NS
	-	05:31:05	eLPZNE; Z	-	d, NS, WE
	SS	05:36:30	eLPN; Z	-	NS
	SSS	05:41:19	eLPE	-	EW
	-	05:44:30	eLPZ	-	c
	-	05:45:04	eLPN	-	SN
	LR	05:[illegible],0	LPZ; Z	40	-
	U.S.C.G.S.: Epicentre: 3,4 S - 145,9 E (Côte Nord de la Nouvelle Guinée)				
	h = 15 km H = 04:57:49,0 Mag: 5,3 (C.G.S.); 6¼ (PAS); 6¾ (BRK) Δ = 129,5°				
7	-	16:15:35	eLPNE	-	NS, WE
	-	16:15:40	eLPZ	-	d
	LR	16:51,2	LPNE	30	-
	LR_1	16:55,0	LPZ	30	-
7	-	17:29:13,0	iCPZNE; z	-	d
	LR	18:19,3	LPZNE	20	-
7	P	20:47:41,8	iCPZNE;eLPZNE; z, Z	-	d, NS, EW
	LR	21:09,1	LPZNE; Z	30	-
	LR_1	21:14,5	LPZNE; Z	30	-
	U.S.C.G.S.: Epicentre: 45,0 S - 80,3 W (Côte Sud du Chili)				
	h = 33 km H = 20:35:21,2 Magr 5,6 (C.G.S.) Δ = 82,1°				
7	PKP	21:55:06,5	iCPZNE; z, Z	-	c
	-	22:30:34	eLPN	-	NS
	-	22:31:21	eLPE	-	WE
	LR	22:35,2	LPE	30	-
	LR_1	22:40,2	LPZNE	40	-
	U.S.C.G.S.: Epicentre: 20,7 S - 169,4 E (Nouvelles Hébrides)				
	h = 61 D H = 21:35:44,8 Mag: 5,6 (C.G.S.); 6 (PAS); 6 (BRK) Δ = 137,3°				
8	LR	08:14,2	LPZNE	30	-
8	LR	11:32,2	LPZN	30	-
8	PKP	20:18:23,5	iCPZNE	-	d
	LR	21:18,2	LPZNE	20	-
	U.S.C.G.S.: Epicentre: 16,5 S - 172,8 W (Iles Samoa)				
	h = 33 km H = 19:58:32,2 Mag: 4,9 (C.G.S.) Δ = 148,0°				

Date	Phases	Heure T.M.G.	Composantes, nature du mouvement et amplitudes(μ)	Périodes (s)	Sens du mouvement
1968 Déc. 9	-	18:37:24,5	iCPE; z	-	EW
	-	18:37:29,0	iCPZNE; z, Z	-	d, NS, WE
	-	18:40:54,4	iCPN	-	SN
	-	18:41:54,2	iCPZ; z, Z	-	d
	-	18:42:02,8	iCPN; z, Z	-	NS
	-	18:42:56,3	iCPZE; z, Z	-	c, WE
	-	18:43:03,3	iCPE	-	EW
	-	18:43:05,2	iCPN;eLPZNE	-	NS
	-	18:43:14,0	iCPZ	-	d
	-	18:44:28	eLPZ	-	c
	-	18:44:30	eLPE	-	WE
10	LR	03:52,6	LPZNE	20	-
10	P	19:11:00,2	iCPZN; z, Z	-	d, NS
	LR	19:22,0	LPZNE	30	-
U.S.C.G.S.: Epicentre: 53,3 S - 24,7 E (Sud de l'Afrique)					
h = 33 km	H = 19:03:30,9	Mag: 4,4 (C.G.S.)		Δ = 39,4°	
11	P	03:52:47,5	iCPZE	-	d, EW
U.S.C.G.S.: Epicentre: 25,2 S - 70,4 W (Côte Nord du Chili)					
h = 50 D	H = 03:40:48,0	Mag: 5,0 (C.G.S.)		Δ = 78,3°	
11	LR	04:07,2	LPZNE	20	-
11	(Pn)	11:52:19,7	iCPZNE; z	-	d, SN, EW
	(Sn)	11:54:23,6	iCPZ; z	-	d
	-	11:54:26,0	iCPN	-	SN
	(Lg)	11:54:59,4	iCPZNE; z, Z	-	d, NS, EW
11	P	13:07:59,5	iCPZNE; z, Z	-	c, SN, WE
U.S.C.G.S.: Epicentre: 21,6 S - 68,4 W (Chili - Bolivie)					
h = 120 G	H = 12:56:15,9	Mag: 4,7 (C.G.S.)		Δ = 77,2°	
11	-	21:03:53	eLPNE		
	-	21:08:10	eLPNE		
	LR	21:11,0	LPZNE; Z	40	-
11	LR	22:41,3	LPZNE	30	-
12	LQ	01:26,2	LPNE	50	-
	LR	01:34,6	LPZN	30	-
12	PKP	07:38:41,6	iz, iZ	-	d
	pPKP	07:40:27	iz, eZ	-	d
U.S.C.G.S.: Epicentre: 16,0 S - 177,8 W (Iles Fidji)					
h = 431 D	H = 07:19:44,8	Mag: 5,5 (C.G.S.)		Δ = 147,2°	
14	-	10:21:30,4	iCPZ; eLPZ	-	d
	-	10:46:04	eLPZNE	-	c
	LR	11:13,7	LPZNE	30	-
14	-	22:19:03,5	iCPZNE; z	-	c, SN, EW
	-	22:20:11,5	iCPZNE; z, Z	-	c, NS, WE
15	PKP	02:33:40	iCPZN; eLPZN;z,Z	-	d
	PP	02:36:44,6	iCPZNE;eLPZNE;z,Z	-	c, NS
	-	02:43:40	eLPN	-	NS
	-	02:46:56	eLPN	-	SN
	-	02:47:05	eLPZE; Z	-	c, EW
	LR	03:25,2	LPZNE; Z	30	-
U.S.C.G.S.: Epicentre: 51,6 N - 175,8 E (Iles Rat, Iles Aléoutiennes)					
h = 33 km	H = 02:14:17,5	Mag: 5,7 (C.G.S.); 6¼ - 6½ (PAS); 5¾ (BRK)		Δ = 140,7°	
15	-	11:04:53,0	iz, iZ	-	-
15	-	11:15:59,5	iz, iZ	-	-
15	P	21:40:55,5	iCPZNE; z, Z	-	d, SN, EW
	-	21:43:11,0	iCPZ; iLPZNE;z,Z	-	d
	-	21:43:59,5	iCPZNE; z, Z	-	d, NS, WE
	-	21:44:02	iLPZ	-	d
	-	21:44:09,2	iCPN	-	NS
	-	21:44:11,0	iLPZN	-	d, SN
	-	21:44:31,0	iCPZ; z, Z	-	d
	-	21:44:34,4	iLPZNE; Z	-	d, NS, WE
	-	21:45:30	eLPZE	-	c, EW
U.S.C.G.S.: Epicentre: 13,5 S - 26,7 E (Zambie)					
h = 33 km	H = 21:37:56,5	Mag: 4,7 (C.G.S.)		Δ = 12,9°	

Date	Phases	Heure T.M.G.	Composantes, nature du mouvement et amplitudes( )	Périodes (s)	Sens du mouvement
1968 Déc. 16	LR	03:47,1	LPN	40	-
	LR_1	03:50,2	LPE	40	-
	LR_2	03:54,2	LPZ	30	-
16	P	07:02:07,0	iCPZNE; z	-	d, NS
	LR	07:10,2	LPE	30	-
	LR_1	07:12,1	LPZN	30	-
U.S.C.G.S.: Epicentre: 52,1 S - 16,0 E (Sud-Ouest d'Afrique)					
h = 33 km H = 06:54:57,0 Mag: 5,2 (C.G.S.)				Δ = 37,3°	
16	-	11:48:22,0	iCPZ	-	c
	-	11:48:31,6	iCPZ	-	d
	LR	11:52,5	LPZNE	30	-
16	-	18:38:26,5	iCPZN	-	d, NS
16	-	22:35:06	eLPN	-	SN
	-	22:35:09	eLPE	-	EW
	LR	22:38,1	LPZNE	20	-
17	PKIKP	12:21:12,5	iCPZE; z	-	d
	PKP	12:21:25,0	iCPZNE; iLPZ; z, Z	-	d, SN, WE
	-	12:24:15	eLPZ	-	c
	SKP	12:24:42,2	iCPZNE; eLPZNE; z, Z	-	d, SN, WE
	(LR)	01:07,5	LPZNE; Z	30	-
U.S.C.G.S.: Epicentre: 60,2 N - 152,8 W (Sud de l'Alaska)					
h = 86 km H = 12:02:15,0 Mag: 5,9 (C.G.S.); 6½ (PAS); 6½ (BRK)				Δ = 133,6°	
25	-	09:25:54,0	iCPZNE	-	c, NS, EW
25	-	12:26:13,0	iCPZN	-	c, NS
	LR	12:46,3	LPZNE	20	-
27	P	14:50:50,8	iCPZ	-	d
U.S.C.G.S.: Epicentre: 24,1 N - 91,6 E (Inde - Est du Pakistan)					
h = 26 km H = 14:38:11,6 Mag: 5,2 (C.G.S.)				Δ = 85,6°	
28	LR	13:23,5	LPZN	40	-
29	-	00:22:31,5	iCPN	-	NS
	-	00:23:52,0	iCPZNE	-	c, NS, EW
29	LR	03:03,3	LPZN	30	-
29	LR	05:20,2	LPZN	20	-
29	PKP	05:33:12,5	iCPZN	-	c, SN
U.S.C.G.S.: Epicentre: 15,6 S - 173,4 W (Iles Tonga)					
h = 125 km H = 05:13:29,7 Mag: 4,9 (C.G.S.)				Δ = 148,7°	
29	P	16:40:53,0	iCPZNE; z	-	c, SN, WE
U.S.C.G.S.: Epicentre: 24,0 S - 66,7 W (Province de Salta, Argentine)					
h = 205 G H = 16:29:31,1 Mag: 5,2 (C.G.S.)				Δ = 75,2°	
29	P	18:06:54,6	iCPZ; z	-	d
	LR	18:24,7	LPZNE	30	-
	LR_1	18:33,1	LPZE	24	-
	LR_2	18:37,1	LPN	20	-
U.S.C.G.S.: Epicentre: 0,5 S - 99,2 E (Sud de Sumatra)					
h = 33 km H = 17:54:15,3 Mag: 4,6 (C.G.S.)				Δ = 85,7°	
29	PKP	20:21:51,0	iCPZNE; z	-	c, SN
U.S.C.G.S.: Epicentre: 20,2 S - 177,9 W (Iles Fidji)					
h = 550 G H = 20:03:19,4 Mag: 4,5 (C.G.S.)				Δ = 143,1°	
30	PKP	05:08:32,0	iCPZN; z, Z	-	c, NS
U.S.C.G.S.: Epicentre: 16,3 S - 172,6 W (Iles Samoa)					
h = 33 km H = 04:48:40,9 Mag: 5,2 (C.G.S.)				Δ = 148,3°	
30	-	07:51:43,3	iCPN; z	-	NS
	-	07:51:47,0	iCPZE	-	d
	-	07:52:43,6	iCPN	-	NS
	-	07:53:06,2	iCPZE; z, Z	-	d
	-	07:53:09,0	iCPN	-	SN
30	LR	10:01,7	LPZN	20	-

Date	Phases	Heure T.M.G.	Composantes, nature du mouvement et amplitudes( )	Périodes (s)	Sens du mouvement
1968 Déc. 30	P	14:51:29,6	ICPZ; z, Z	-	c
	U.S.C.G.S .: Epicentre: 15,8 S - 70,8 W (Sud du Pérou)				
	h = 63 km H = 14:39:22,0 Mag: 5,2 (C.G.S.)				
	Δ = 80,7°				
31	LR	14:50,4	LPZN	30	-
	U.S.C.G.S.: Epicentre: 11,4 S - 162,8 E (Iles Solomon)				
	h = 22 km H = 13:39:26,3 Mag: 5,0 (C.G.S.)				
	Δ = 139,8°				