



COMANDANCIA GENERAL DE LA MARINA  
SERVICIO DE HIDROGRAFIA Y NAVEGACION

OBSERVATORIO DE SISMOLOGIA  
Y MAREAS TERRESTRES

Caracas - Venezuela

BOLETIN SISMICO MENSUAL

Enero 1.969

1. e WZ PP 07 14 06, e Z PS 24 12, e Z (PPS) 26 18, e NE SS 31 20, MR 54.0-08 01.00.0, F 08 40.0.  
CGS: 60.5 S, 150.6 E. SW. de la Isla Macquarie. H = 06:53:29.0, h = 33 kms.-
2. i WXZ P 18 02 14.5 D, i WXZ pP 02 34, e Z PP 05 00, i N S 11 36, e E sS 12 02, e NE SS 16 32, e NE SSS 20 10, LR 25.5-35.0 (T 40-22), F 19 30.0, T 0.8, A 2.4, d = 8 000 kms, H = 17:50:54.5.  
CGS: 56.0 S, 27.5 W. Sur de las Islas Sandwich. H = 17:50:46.6, h = 81 kms, M = 5.9.-
5. e WZ PKP 07 48 56.0, e Z PP 53 16, e Z (PSKS) 08 03 16, e NE SS 13 28. F en el cambio de gráficas.  
CGS: 4.1 N, 125.6 E. Islas Talaud. H = 07:28:55.8, h = 59 kms, M = 5.3.-
5. i WZ P 13 43 04.0 D, i Z 45 40 C, i XWZ PKP 45 58, i XWZ 46 19, i XWZ PP 48 30, i N S 57 04, i NE SS 14 06 24, i NE SSS 11 30, LR 30.5 (T 38), F 19 00.0, d = 15 100 kms, H = 13:26:29.0.  
CGS: 8.0 S, 158.9 E. Islas Salomón. H = 13:26:39.9, h = 47 kms, M = 6.4.-
6. i XZ P 09 28 58.0 D, i XZ 29 08, i N S 32 40, MR 36.5 (T 24), F 10 20.0, T 0.8, A 2.5, d = 2 200 kms, H = 09:24:25.0.  
CGS: 11.4 N, 87.2 W. Cerca a la costa Sur de Nicaragua. H = 09:24:23.3, h = 33 kms, M = 4.8.-
6. e WZ (P) 15 55 34.0, i WZ PKP 58 12, i XWZ PP 16 00 14, i ZE SKP 01 34, i N S 08 38, i NE PPS 11 52, i NE SS 17 40, i NE (SSS) 21 28, MR 40.0 (T 32), F 21 00.0.  
CGS: 10.5 S, 164.5 E. Isla Santa Cruz. H = 15:39:00.9, h = 32 kms, M = 6.2.-
6. e XZ P 20 24 25.0, i XZ pP 24 33, i XZ PP 25 33, FX 28.0.  
CGS: 18.4 S, 70.7 W. Cerca a la costa Norte de Chile. H = 20:18:31.3, h = 72 kms, M = 4.9.-
7. e XZ Pn 01 33 46.5, i XZ (Sn) 34 19, FX 36.0, T 0.7, A 1.0.-
7. e WZ (SKKS) 05 07 10.0, e E PPS 13 14, F 06 00.0.  
CGS: 16.0 S, 167.5 E. Islas Nuevas Hébridás. H = 04:40:21.4, h = 45 kms, M = 4.7.-
8. e XZ Pn 07 24 50.0, e XNE Sn 26 22, FX 29.0, d = 950 kms, H = 07:22:40.0.  
CGS: 18.2 N, 70.8 W. República Dominicana. H = 07:22:45.5, h = 41 kms, M = 4.0.-

## Continuación del mes de Enero de 1.969.

8. i XZ Pg 22 11 15.5 D, i XNE Sg 11 18.5, FX 11 30, T 0.3, A 1.8, P-azimut: ESE, d = 24 kms, H = 22:11:11.0, mC = 3.3. Cerca a Tasmare, Estado Miranda.-
9. e XZ PKP1 12 43 16.0, i XZ PKP2 43 28, FX 45.0, T 1.5, A 2.2. CGS: 6.6 S, 148.1 E. Nueva Bretaña. H = 12:23:40.5, h = 68 kms, M = 5.1.-
9. i XZ PKP 14 02 42.0 C, FX 04.0, T 0.7, A 3.0. CGS: 6.6 S, 148.0 E. Nueva Bretaña. H = 13:43:08.3, h = 66 kms, M = 5.0.-
9. e XZ PKP1 16 07 35, i XZ PKP2 07 47, FX 08.0. CGS: 6.7 S, 148.1 E. Nueva Bretaña. H = 15:48:00.4, h = 68 kms, M = 4.2.-
9. i XZ Pg 21 51 13.0 D, i XNE Sg 51 16, FX 51 30, T 0.3, A 1.0, P-azimut: ESE, d = 24 kms, H = 21:51:08.5, mC = 3.0. Cerca a Tasmare, Estado Miranda.-
11. e WZ P 04 41 04.0, e Z PP 45 48, i NE SKS 51 38, i NE SKKS 52 44, i N S 53 34, i NE PS 55 20, e NE SS 05 01 40, e N SSS 05 32, LR 23.0 (T 22), MR 29.0 (T 16), d = 12 600 kms, H = 04:26:17.0. CGS: 28.4 S, 177.0 W. Islas Kermadec. H = 04:26:26.8, h = 68 kms, M = 5.4.-
11. i XZ Pg 09 09 09.7 D, i XNE Sg 09 11.5, FX 09 30, T 0.3, A 1.4, P-azimut: NW, d = 14 kms, H = 09:09:07.2, mC = 3.2. Catia La Mar.-
11. e WZ P 12 08 30.0, e ZNE S 16 36, LR 26.5-31.0 (T 38-20), F 13 20.0, d = 8 450 kms, H = 11:58:41.0. CGS: 10.2 S, 13.2 W. Isla Ascensión. H = 11:58:46.8, h = 33 kms, M = 4.9.-
11. e XZ Pn 20 08 14.0, i XZ Pb 08 29, i XNE Sn 09 31, i XE Sb 09 52, FX 13.0, d = 800 kms, H = 20:07:22.0.-
12. i XZ P 14 18 10.5 D, i XZ pP 18 31, i NE S 22 28, e E sS 23 24, F 50.0, T 0.7, A 3.7, d = 2 700 kms, H = 14:12:55.0. CGS: 14.1 S, 72.7 W. Perú. H = 14:12:53.0, h = 113 kms, M = 5.2.-
13. i XZ P 06 45 19.5 D, e XZ PP 46 55, i NE S 52 06, i E (SS) 55 04, i NE (SSS) 56 00, L 59.5 (T 32), MR 07 04.0 (T 22), F 09 00.0, T 0.8, A 1.2, d = 5 200 kms, H = 06:36:55.0. CGS: 37.1 S, 73.6 W. Cerca a la costa Central de Chile. H = 06:36:37.0, h = 33 kms, M = 4.9.-
13. i XZ Pg 14 03 16.5 C, i XNE Sg 03 17.5, FX 03 30, T 0.3, A 0.7, d = 8 kms, H = 14:03:13.5, mC = 2.9. Región de Caracas.-
14. i XZ Pn 11 53 28.5 D, i XZ (pP) 53 32, i XNE Sn 54 58, i XNE (sS) 55 08, FX 57.0, T 0.5, A 0.8, d = 920 kms, H = 11:51:21.5.-

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Continuación del mes de Enero de 1.969.

14. e WZ P 23 25 02.0, e Z PP 28 28, i NE SKS 35 24, i NE PS 36 44, i NE SS 41 40, i NE SSS 44 52, L 51.5 (T 40), F 02 00.0. CGS: 36.2 N, 29.2 E. Turquía. H = 23:12:07.9, h = 33 kms, M = 5.5.-
15. i XZ Pn 04 52 13.0 C, i XNE Sn 52 36.5, i XNE Sg 52 44, FX 55.0, T 0.5, A 1.0, d = 180 kms, H = 04:51:51.0, mC = 3.3.-
15. i XZ Pn 11 19 43.0 D, i XNE Sn 20 19, i XZNE Sb 20 30, FX 25.0, T 0.4, A 0.7, d = 350 kms, H = 11:18:55.0, mC = 4.0. Sentido en Cumanacoa, Estado Sucre.-
15. i WZ PKP1 13 19 12.0 C, e Z PKP2 20 28, e Z PP 24 18, F 15 00.0. CGS: 3.2 S, 118.9 E. Islas Célebes. H = 12:59:06.7, h = 33 kms, M = 5.5.-
15. e XZ Pg 13 47 46.5, i XNE Sg 47 48, FX 48.0, d = 12 kms, H = 13:47:44.0, mC = 2.9 aprox. Región de Caracas.-
15. i XZ P 19 39 09.5 D, e XZ 40 23, FX 42.0, T 1.0, A 1.4. CGS: 37.2 N, 116.2 W. Sur de Nevada. U.S.A. H = 19:30:00.0, h = 0 kms, M = 5.3.-
17. i XZ P 03 36 14.5 D, i XZ pP 36 25, e XNE S 38 04, FX 41.0, T 0.6, A 1.7, d = 1 000 kms, H = 08:34:00.0, mC = 4.4. CGS: 5.1 N, 75.3 W. Cerca a Herveo, Depto. de Tolima, Colombia. H = 08:33:54.3, h = 138 kms, M = 4.4.-
17. i XZ Pg 16 20 06.7 C, i XZNE Sg 20 09.5, i XZNE 20 12, F 20 25, T 0.4, A 0.9, d = 22 kms, H = 16:20:02.2, mC = 2.9. Región de Caracas.-
17. e XZ Pn 00 05 24.5, i XZNE Sn 06 43, e XN Sg 07 31, FX 10.0, d = 820 kms, H = 00:03:29.0.-
18. i XWZ P 03 14 04.0 C, i Z PP 16 52, e Z PPP 18 26, i NE S 23 28, i N sS 24 06, e NE (SSS) 32 04, LR 38.5-44.5 (T 40-24), F 06 00.0, T 0.8, A 8.2, P-azimut: SSE, d = 8 300 kms, H = 03:02:44.0. CGS: 56.8 S, 26.8 W. Sur de las Islas Sandwich. H = 03:02:38.7, h = 141 kms, M = 5.9.-
18. i XZ Pg 16 56 57.0 C, i XNE Sg 56 59.8, FX 57.5, T 0.4, A 1.6, d = 22 kms, H = 16:56:52.5, mC = 3.0.-
19. i WZ P 07 16 50.0 C, e Z sP 18 16, i XWZ PKP 20 29, i ZNE PP 21 38, i NE SKKS 27 00, i NE S 28 20, i N PS 31 12, i ZNE SS 37 24, L 50.5 (T 40), MR 08 02.0 (T 32), F 11 00.0. CGS: 45.0 N, 143.2 E. Hokkaido, Japón, H = 07:02:04.4, h = 204 kms, M = 6.4.-
19. i XZ P 18 56 34.0 C, e ZE SS 19 06 40, e ZE sSS 07 16. F en el sismo siguiente. T 0.8, A 1.8. CGS: 35.6 S, 71.9 W. Chile Central. H = 18:47:59.3, h = 77 kms, M = 4.7.-

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## Continuación del mes de Enero de 1.969.

19. i XZ PKP1 19 09 45.0, i XZ PP 11 44, i XWZ pPP 12 28, i Z PPP 14 10, i E SKKS 17 54, i N 20 04, i N PSKS 21 00, i NE SS 28 36, L 43.5 (T 44), F 22 30.0, T 1.0, A 1.9.  
CGS: 14.9 S, 167.2 E. Islas Nuevas Hébridas, H = 18:50:52.1, h = 112 kms, M = 6.2.-
21. i XZ pPKP1 02 08 21.5 D, FX 10.0, T 1.2, A 2.4.  
CGS: 7.3 S, 128.3 E. Mar de Banda. H = 01:47:29.6, h = 91 kms, M = 5.6.-
21. e WZ P 08 11 35.0, e Z PP 12 28, i NE S 16 24, e NE SS 17 40, MR 19.0 (T 28), F 09 20.0, d = 3 100 kms, H = 08:05:41.0.  
CGS: 28.7 N, 43.6 W. Norte del Océano Atlántico. H = 08:05:40.1, h = 33 kms, M = 5.2.-
22. i XZ Pn 21 30 31.5 C, i XZ Pb 30 33, i XNE Sn 30 52.5, FX 31 20, T 0.3, A 0.7, d = 150 kms, H = 21:30:13.5, mC = 3.2.-
23. e XZ Pn 06 58 52.0, e XZ Pg 59 22, e XNE Sn 07 00 09, i XN Sg 01 09, FX 03.0, d = 800 kms, H = 06:57:00.0.-
23. e XZ Pg 15 16 51.0, i XNE Sg 16 52, FX 17.0, d = 8 kms, H = 15:16:49.0, mC = 2.9 aprox..-
23. i XZ Pg 15 51 33.0 D, i XNE Sg 51 36, FX 51 50, T 0.3, A 0.9, P-azimut: SW, d = 24 kms, H = 15:51:28.0, mC = 3.0. Cerca a San Pedro, Estado Miranda.-
24. e XZ PKP 02 50 38.0, e XWZ PP 51 41, i WNE SKS 56 30, i XWZNE SKKS 57 47. F mezclado con el sismo siguiente.  
CGS: 21.9 S, 179.6 W. Islas Fiji. H = 02:33:03.5, h = 595 kms, M = 5.9.-
24. i XZ P 03 01 19.5 D, i XZ 01 28, i XZ 04 09, F 05 50.0, T 0.5, A 3.5.-
25. i XWZ PKP1 05 39 19.5 D, i XWZ PKP2 40 09, i XWZ PP 43 50, e ZNE PPP 48 24, i ZNE (SKKS) 51 40, i Z PSKS 54 14, i NE PPS 57 22, i N SS 06 04 12, i E SSS 10 36, L 36.5 (T 40), F 08 00.0, T 1.5, A 1.4, d = 18 200 kms, H = 05:19:20.0.  
CGS: 0.8 N, 126.1 E. Pasaje de Moluca. H = 05:19:17.1, h = 24 kms, M = 5.9.-
25. e XZ Pn 06 51 21.5, i XZ Pb 51 31, i XNE Sn 52 08, FX 55.0, d = 500 kms, H = 06:50:11.5.-
25. i XZ Pn 08 58 25.5 C, i XZ 58 27, i XZNE Sn 59 42, i XZN Sb 59 49, FX 09 00 30, T 0.5, A 0.7, d = 800 kms, H = 08:56:33.0.-
26. i XZ PKP1 06 26 32.0 C, e XZ PKP2 27 41, FX 28.0, T 1.0, A 1.2.  
CGS: 6.6 N, 127.4 E. Islas Filipinas. H = 06:06:05.9, h = 50 kms, M = 5.4.-

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## Continuación del mes de Enero de 1.969.

26. i XZ Pn 11 51 07.0 D, i XZ Pb 51 19, i XNE Sn 52 20, i XN Sn 52 24, FX 56.0, T 0.8, A 2.7, d = 770 kms, H = 11:49:19.0, mC = 4.6.  
CGS: 6.7 N, 72.8 W. Cerca a San Andrés. Depto. de Santander, Colombia, H = 11:49:26.5, h = 182 kms, M = 4.3.-
26. i WZ P 13 35 36.0 D, i Z PP 38 14, e E S 44 58, i E PS 45 40, L 59.0 (T 32), F 14 40.0, d = 8 000 kms, H = 13:24:22.0, 56.3 S, 27.2 W. Sur de las Islas Sandwich. H = 13:23:46.9, h = 33 kms, M = 5.1.-
26. i WZ P 15 19 32.0 D, e Z PP 23 38, e ZN PS 32 38, e ZNE PPS 33 40, e NE SS 38 26, e NE SSS 42 30, R 16 04 45 (T 24), F 17 00.0, d = 11 300 kms, H = 15:05:36.0.  
CGS: 55.8 N, 162.9 E. Cerca a la costa Este de Kamchatka. H = 15:05:32.7, h = 16 kms, M = 5.5.-
27. e WE SKKS 03 21 04, e ZE PS 23 38, e E PPS 24 32, e E SS 29 38, R 52.5 (T 18), F 06 00.0.  
CGS: 30.6 S, 177.2 W. Islas Kermadec. H = 02:54:40, h = 33 kms, M = 5.0.-
27. e XZ Pn 08 11 22.5, e XNE (Sn) 12 25, i X N 13 18, FX 15.0.-
27. i WZ PKP1 13 35 12.0 C, i XWZ PKP2 35 16, e NE SS 58 00, e NE SSS 14 04 00, MR 31.5 (T 28), F 16 00.0, d = 16 600 kms, H = 13:15:31.0.  
CGS: 8.8 N, 137.7 E. Oeste de las Islas Carolinas. H = 13:15:24.4, h = 5 kms, M = 5.5.-
28. e WE SKS 00 52 42, e N S 54 26, i ZNE PS 55 48, e E SS 01 02 06, LR 18.5-28.0 (T 28-16), F 02 00.0.  
CGS: 14.8 S, 173.4 W. Isla Samoa. H = 00:27:31.2, h = 13 kms, M = 5.2.-
28. e XZ Pn 13 49 03.0, i XZ Pb 49 19, i XNE Sn 50 34, FX 14 00.0, d = 940 kms, H = 13:46:56.0. CGS: 19.4 N, 66.3 W. Puerto Rico. H = 13:46:54.0, h = 33 kms, M = 4.4.-
29. e XZ Pn 12 08 30.0, e XNE Sn 10 04, FX 12.0, d = 950 kms, H = 12:06:20.0.  
CGS: 19.5 N, 66.2 W. Puerto Rico. H = 12:06:23.1, h = 33 kms, M = 4.3.-
29. i XZ Pg 12 50 58.0 D, i XNE Sg 50 59, FX 51 10, T 0.3, A 0.9, d = 8 kms, H = 12:50:56.0, mC = 2.9. Región de Caracas.-
29. e WZ PP 18 03 08.0, e E SKS 09 26, e ZE PS 12 40, e E PPS 13 40, e E SS 18 32, LR 36.5-45.0 (T 30-16), F 20 00.0.  
CGS: 17.2 S, 171.6 W. Islas Tonga. H = 17:44:31.1, h = 33 kms, M = 6.0.-

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Continuación del mes de Enero de 1.969.

30. e WZ P 10 47 48.0, i XWZ PKP1 49 32 C, i XZ PKP2 49 59, i Z PP 53 50, i ZNE PSKS 11 04 20, i NE PPS 07 40, F 16 00.0, d = 17 500 kms, H = 10:29:28.0. CGS: 4.8 N, 127.4 E. Islas Talaud. H = 10:29:40.4, h = 70 kms, M = 5.9.-
30. i XZ Pn 13 13 18.5 D, i XZ Pg 13 26, i XNE Sn 13 42.5, i X Sg 13 50, FX 17.0, T 0.6, A 1.3, d = 200 kms, H = 13:12:53.0, mC = 3.4.-
30. e XZ Pn 21 22 40.0, i XZ Pb 22 54, i XN Sn 23 35, FX 26.0, d = 600 kms, H = 21:21:16.0.-
31. i WZ PKP1 01 04 12.0 C, e XWZ PKP2 04 48, e Z PP 08 20, e E PPP 12 34, i E SKKS 15 20, i NE PSKS 18 40, i E PPS 21 52, i NE SS 28 20, i NE SSS 34 36, LR 02 00.0 (T 40), F 04 00.0, d = 17 800 kms, H = 00:44:17.0. CGS: 4.2 N, 128.1 W. Norte de Almahera. H = 00:44:13.3, h = 33 kms, M = 5.7.-
31. e WZ PKP1 14 08 20.0, i Z PKP2 09 16, i Z PP 12 42, e E PSKS 23 00, i E SS 32 38, e NE SSS 38 52, F 16 30.0, d = 17 800 kms, H = 13:48:25.0. CGS: 4.3 N, 128.1 E. Norte de Alamahera. H = 13:48:22.2, h = 33 kms, M = 5.4.-

G. Fiedler

F.A.Miranda

/G.N.



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Febrero 1.969

1. i XZ PKP1 08 01 45.5 C, i XZ PKP2 01 58, FX 02.0, T 1.0, A 1.2.  
CGS: 9.2 N, 126.4 E. Mindanao, Islas Filipinas. H = 07:41:22.8,  
h = 33 kms, M = 5.5.-
1. e WZ PKP1 16 39 08, e Z PP 43 40, e NE (SS) 17 04 30, F 18 30.0.  
CGS: 4.0 N, 128.1 E. Norte de Almahera. H = 16:19:13.3, h =  
33 kms, M = 5.2.-
2. i WZ PKP1 01 58 42.0 C, e Z PP 02 03 00, i NE SKKS 09 50, i NE  
PSKS 13 36, i NE SS 23 44, i NE SSS 29 03, L 55.0 (T 40), R 03  
14.0 (T 16), F 04 30.0, d = 17 800 kms, H = 01:38:47.0.  
CGS: 3.9 N, 128.2 E. Norte de Almahera. H = 01:38:44.2, h = 33  
kms, M = 5.4.-
2. e XZ Pn 09 59 52.0, e NE Sn 10 01 27, i NE Sn 01 46, FX 03.0,  
d = 980 kms, H = 09:57:39.0.-
2. e WZ PKP 16 41 16.0, e E SKKS 52 24, F 18 00.0.  
CGS: 3.8 N, 128.4 E. Norte de Almahera. H = 16:21:15.4, h =  
33 kms, M = 5.3.-
3. e WZ P 06 15 56.0, e NE S 20 26, MR 27.0 (T 18), F 07 00.0, d =  
2 800 kms, H = 06:10:31.0.  
CGS: 15.4 S, 75.8 W. Cerca a la costa del Perú. H = 06:10:15.9,  
h = 64 kms, M = 4.5.-
3. e WZ PKP 08 08 44.0, e Z PP 10 26, e Z PPP 13 00, i E SKKS 16 18,  
i N S 17 20, i ZNE PS 19 15, i ZNE sPS 23 06, F 10 00.0.  
CGS: 25.8 S, 178.1 E. Sur de las Islas Fiji. H = 07:51:25.4,  
h = 629 kms, M = 5.3.-
3. e WZ PKP 19 21 26.0, e E PPP 29 48, e NE SS 46 30, e NE SSS 51  
48, LR 20 12.0-23.0 (T 38-24), F 21 30.0.  
CGS: 4.4 N, 128.1 E. Norte de Almahera. H = 19:01:29.4, h = 33  
kms, M = 5.2.-
3. i XZ P 21 41 55.5 D, e ZE S 45 32, MR 50.0-53.0 (T: 14-8), F 22  
00.0, T 1.0, A 1.2, d = 2 100 kms, H = 21:37:34.0.  
CGS: 5.7 S, 77.1 W. Norte del Perú. H = 21:37:33.5, h = 40 kms,  
M = 4.9.-
3. i XWZ PKP1 22 01 39.5 C, i XZ PKP2 02 17, i NE PP 05 51, L 10.0  
(T 38), F mezclado con otro sismo. T 1.3, A 4.6.  
CGS: 4.9 N, 127.4 E. Islas Talaud. H = 21:41:41.9, h = 33 kms,  
M = 6.1.-

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## Continuación del mes de Febrero de 1.969.

3. i XZ Pn 23 43 15.0 D, i XNE Sn 44 33, FX 47.0, T 0.7, A 0.9, d = 820 kms, H = 23:41:20.0, mC = 4.3.-
4. i WZ PKP1 01 58 34.0 C, e Z PP 02 03 24, i NE SKKS 10 12, i NE PSKS 14 16, i NE SS 24 06, L 38.0 (T 44), MR 58.0 (T 40), F mezclado con el sismo siguiente. d = 18 800 kms, H = 01:38:31.0. CGS: 0.6 S, 121.7 E. Norte de las Islas Célebes. H = 01:38:26.2, h = 33 kms, M = 4.8.-
4. i XWZ P 04 15 16.0 D, i XZ PP 15 35, i XWNE S 19 18, L 22.0 (T 10), F 06 00.0, T 0.8, A 6.6, d = 2 450 kms, H = 04:10:18.0. CGS: 8.2 S, 80.2 W. Cerca a la costa Norte del Perú. H = 04:10:13.3, h = 16 kms, M = 6.0.-
5. i XZ Pg 00 58 47.0 D, i XNE Sg 58 48, FX 59 10, T 0.3, A 1.7, P-azimut: SW, d = 4 kms, H = 00:58:46.0, mC = 3.2. Región de Caracas.-
5. e WZ P 01 53 48.0, e NE S 59 30, i NE SS 02 02 16, LR 03.5-06.5 (T 38-24), F 40.0, d = 4 000 kms, H = 01:46:45.0. CGS: 1.7 N, 102.3 W. Oeste de las Islas Galápagos. H = 01:46:46.3, h = 33 kms, M = 4.4.-
5. i WZ P 23 52 40.0 D, e Z PP 54 08, e NE S 58 40, e NE SS 00 01 04, LR 03.5-06.5 (T 34-20), F 01 00.0, d = 4 200 kms, H = 23:45:21.0. CGS: 0.7 N, 29.7 W. Atlántico Medio. H = 23:45:21.4, h = 33 kms, M = 4.9.-
7. iX Pn 13 20 43.6 C, ei Sn 21 53, ei Sb 22 20, ei Sg 22 40, FX 25.0, T 1.0, A 1.2, d = 730 kms, P-azimut: SW, H = 13:19:01.6, mC = 4.3.- CGS: 6.4 N, 73.1 W. Cerca a Valle, Depto. de Santander, Colombia, H = 13:18:58.1, h = 142 kms, M = 4.1.-
7. iX Sn 16 08 58, FX 09 20. Posible foco como el anterior.-
8. eX Pn 07 41 50.0, ei Sn 43 02, i! Sn 43 06, FX 48.0, T 0.5, A 0.3, d = 750 kms, H = 07:40:06.0, mC = 4.1. CGS: 6.9 N, 73.1 W. Cerca a Piedecuesta, Depto. de Santander, Colombia. H = 07:40:07.2, h = 157 kms, M = 4.1.-
8. i! X Pg 21 50 54.6 C, i! Sg 50 56.5, FX 51 45, T 0.3, A 2.6, P-azimut: N 143° W, d = 15 kms, H = 21:50:52, mC = 3.5. Entre Antímano y Los Teques. 10.4 N, 67.0 W.-
8. ei X Pg 21 52 08.3 C, ei Sg 52 10.8, FX 52 30.0, T 0.7, A 0.8, d = 20 kms, H = 21:52:05.0, mC = 2.5. Foco como el anterior, 10.3 N, 67.1 W, no fue sentido en la región de Los Teques.-
8. i! X Pg 22 26 20.2 C, i! Sg 26 22.4, FX 27 00, T 0.3, A 15.0, P-azimut: N 146° W, d = 18 kms, H = 22:26:17, mC = 4.1. Región Los Teques. 10.3 N, 67.1 W. Sentido en Caracas con 2.5 MCS.-

Continúa



Continuación del mes de Febrero de 1.969.

9. i XZ P 18 05 51.0 D, i N S 08 28, i NE SS 08 56, LR 09.5-11.0 (T 28-12), F 09 30, T 0.8, A 1.0, d = 1 450 kms, H = 18:02:44.0. CGS: 5.6 N, 77.5 W. Cerca a Arusí, Depto. del Chocó, Colombia. H = 18:03:07.7, h = 33 kms, M = 4.5.-
10. i XZ Pn 06 20 17.0 C, i XNE Sn 20 26.5, FX 21.0, T 0.3, A 0.7, P-azimut: N 115° W, d = 70 kms, H = 06:20:07.0. Región de Cagua. 10.1 N, 67.5 W, mC = 3.4.-
10. e WZ P 23 12 02, i WZ PKP 15 22.0 C, i XWZ PP 16 54, e Z PPP 19 26, i ZNE sPP 20 06, i E pPPP 21 26, i XWZNE SKKS 22 48, i ZN S 23 50, i ZNE PS 25 36, i E PPS 29 40, i NE SS 34 16, e E sSS 35 52, e E SSS 36 50, F 03 00.0. CGS: 22.7 S, 178.6 E. Sur de las Islas Fiji. H = 22:58:05.8, h = 673 kms, MB = 6.0.
10. i X Z 23 26 11.5, FX 27.0, T 0.7, A 1.0.-
11. e XZ Pn 14 01 20.5, i XZ 01 24, i XZ Pb 01 38, i XN Sn 02 39, i XNE Sn 02 46, FX 05.0, d = 820 kms, H = 13:59:25.0.-
11. e XWZ PKP 22 27 47.0, i WZ PP 29 12, i E SKS 34 42, F mezclado con el sismo siguiente. CGS: 41.4 N, 79.2 E. Frontera Kirgiz-Sinkiang. H = 22:08:54.7, h = 33 kms, M = 5.8.-
11. i XWZNE PKP1 35 28, i XWZNE PKP2 36 34, i XWZNE sPKP1 38 14, i XWE PP 40 21, i E pPPP 42 10, i E pPPP 46 24, i E PSKS 49 22, i E 50 34, i NE 56 10, i NE SS 23 00 14, i E SSS 07 30, i ZNE L 34.0 (T 40), F 03 00.0. CGS: 6.7 S, 126.8 E. Mar de Banda. H = 22:16:13.5, h = 450 kms, M = 6.0.-
12. i XZ Pn 03 24 05.2 C, i XZ Pb 24 11.5, i XZ Pg 24 16, i XZ Sn 24 40, i XNE Sn 24 44, i XZNE Sb 24 50, i XZNE Sg 25 05, FX 30.0, T 0.6, A 1.1, P-azimut: SW, d = 320 kms, H = 03:23:21.0, mC = 3.6. Cerca a El Tocuyo, Estado Lara.-
12. e XE Pn 04 20 25.0, i XZ Pb 20 30.5, i XN Sn 21 00, i XNE Sb 21 13, FX 23.0, d = 320 kms, H = 04:19:41.0. Cerca a El Tocuyo, Estado Lara.-
13. i XZ Pg 13 45 13.0 C, i XNE Sg 45 15, FX 45 30, T 0.3, A 0.5, P-azimut: SE, d = 16 kms, H = 13:45:10.0, mC = 2.8. Cerca a El Hatillo, Estado Miranda.-
13. e XZ Pg 16 56 39.5, i XNE Sg 56 40.5, FX 56 50, d = 8 kms, H = 16:56:37.0, mC = 2.7. Región de Caracas.-
13. i XZ Pg 21 17 50.7 C, i XNE Sg 17 53, FX 18 20, T 0.3, A 1.1, P-azimut: NE, d = 20 kms, H = 21:17:46.0, mC = 3.1. Cerca a Naiguatá.-
14. i XWZ P 00 45 34.5 C, i XZ 45 44, i NE S 49 42, i ZNE 49 56, i NE SS 50 34, L 52.0 (T 32), M 54.0 (T 24), R 55.5 (T 20), F 02 30.0, T 0.8, A 1.2, P-azimut: SSW, d = 2 550 kms, H = 00:40:29.0. CGS: 8.3 S, 80.1 W. Costa Norte del Perú, H = 00:40:31.3, h = 22 kms, M = 4.8.-

Continúa

Continuación del mes de Febrero de 1.969.

14. i XZ P 09 35 44.0 C, i XZ 35 51, i XNE S 37 24, i XNE SS 37 50, FX 41.0, T 0.8, A 0.8, d = 1 050 kms, H = 09:33:23.0, mC = 4.3. CGS: 6.0 N, 76.6 W. Cerca a Bebaramá, Depto. del Chocó, Colombia, h = 09:33:09.6, h = 15 kms, M = 4.0.-
14. e XWZ P 13 17 04.0, e Z PP 18 12, e NE S 22 22, e E SS 24 12, LR 26.5-30.0 (T 28-18), F 14 00.0, d = 3 550 kms, H = 13:10:34.0. CGS: 16.6 N, 99.1 W. Cerca a la costa de Guerrero, México, H = 13:10:36.9, h = 18 kms, M = 5.1.-
14. i XZ Pg 19 17 43.5 D, i XNE Sg 17 44, FX 17 50, T 0.3, A 1.3, P-azimut: NE, d = 4 kms, H = 19:17:42.5, mC = 2.9. Región de Caracas.-
14. i XZ Pg 22 21 48.5 D, i XNE Sg 21 50.5, i XZNE 21 52, FX 22.0, T 0.3, A 0.6, d = 16 kms, H = 22:21:45.0, mC = 3.0. Región de Caracas.-
15. i XZ P 11 19 41.5 C, i XZ 19 56, i XNE S 21 26, i XNE Sn 21 32, MR 23.0-26.0 (T 24-14), F 12 00.0, T 0.8, A 0.9, d = 1 050 kms, H = 11:17:21.5, mC = 4.5. CGS: 19.7 N, 71.4 W. República Dominicana. H = 11:17:09.6, h = 33 kms, M = 4.3.-
17. i WZ PKP1 01 03 01.0 C, e Z (PP) 08 00, i ZNE SKKS 14 06, i ZNE PSKS 17 40, i N (PPS) 22 28, i ZNE SS 28 08, i E 33 20, L 59.0 (T 40), R 02 05.0 (T 26), F 04 00.0. CGS: 3.8 N, 128.4 E. Norte de Halmahera. H = 00:42:59.2, h = 14 kms, M = 5.6.-
17. i XZ Pg 21 47 07.0 D, i XNE Sg 47 10, FX 47 30, T 0.4, A 0.7, d = 24 kms, H = 21:47:02.5, mC = 2.8.-
18. e WZ P 02 05 10.0, e Z PP 07 06, e NE S 12 06, e E SS 15 48, L 20.0 (T 32), R 26.0 (T 20), F 03 00.0, d = 5 200 kms, H = 01:56:40.0. CGS: 29.8 N, 113.3 W. Golfo de California, H = 01:56:39.0, h = 33 kms, M = 4.8.-
18. e WZ P 19 46 12.0, e Z PP 47 40, e NE S 52 18, i NE SS 55 06, i NE SSS 55 48, L 58.0 (T 32), F 21 00.0, d = 4 300 kms, H = 19:38:45.0. CGS: 0.8 N, 27.9 W. Atlántico Medio Central. H = 19:38:38.0, h = 33 kms, M = 4.7.-
19. i WZ P 04 01 18.0 C, i N S 05 16, e NE SS 06 18, L 07.0 (T 28), F 30.0, d = 2 300 kms, H = 03:56:34.0. CGS: 16.7 N, 46.7 W. Norte del Océano Atlántico. H = 03:56:40.8, h = 33 kms, M = 4.7.-
19. e WZ P 04 59 24.0, e N S 05 03 20, F 20.0, d = 2 300 kms, H = 04:54:40.0.-
20. e XZ Pn 05 05 17.0, i XNE Sn 06 04, i XZ 06 17, FX 08.0, d = 520 kms, H = 05:04:04.0. Península de Paria, Estado Sucre.-

Continúa

## Continuación del mes de Febrero de 1.969.

20. i XZ Pn 08 39 51.5 D, i XZ Pb 40 06, i XNE Sn 41 09, FX 47.0, T 0.7, A 0.9, P-azimut: SW, d = 820 kms, H = 08:37:56.0, mC = 4.3.-  
CGS: 5.5 N, 72.1 W. Cerca a Nunchá, Depto. de Boyacá, Colombia. H = 08:38:07.8, h = 259 kms, M = 3.8.-
20. i WZ PKP1 10 15 29.0 D, i XWZ (PKP2) 15 39, i Z PP 19 56, i ZE PPP 23 56, i ZNE SKKS 26 41, i E (PS) 31 06, i E PPS 33 12, i NE SS 40 44, i NE SSS 45 45, F mezclado con otro sismo, d = 17 800 kms, H = 09:55:34.0.  
CGS: 3.5 N, 128.2 E. Norte de Halmahera. H = 09:55:33.8, h = 33 kms, M = 5.7.-
20. i XZ PKP1 10 50 16.0 C, e XZ PP 54 41, F mezclado con el anterior. T 1.8, A 1.9, d = 17 800 kms, H = 10:30:21.0.  
CGS: 3.5 N, 128.4 E. Norte de Halmahera. H = 10:30:22.1, h = 77 kms, M = 6.0.-
20. e XZ PKP1 17 18 16.0, e XZ PP 22 35, e WE SS 42 30, e E SSS 48 44, L 18 13.5 (T 48), F 20 00.0, d = 17 800 kms, H = 16:58:21.0.  
CGS: 3.7 N, 128.2 E. Norte de Halmahera. H = 16:58:13.8, h = 48 kms, M = 5.3.-
21. e XZ P 00 56 48.0, FX 08.0.  
CGS: 8.9 S, 75.4 W. Perú. H = 00:52:08.6, h = 135 kms, M = 4.4.-
22. i XWZ P 01 23 01.0 C, i XZ pP 23 24, e NE (S) 26 36, e E (PcP) 27 08, F 00 00.0, T 0.8, A 1.2, 2.6 S, 76.4 W. Frontera Perú-Ecuador. H = 01:19:21.0, h = 142 kms, M = 4.5.-
22. i XZ Pg 14 58 35.8 C, i XNE Sg 58 37, FX 59.0, T 0.3, A 1.7, P-azimut: SE, d = 10 kms, H = 14:58:34.0, mC = 3.2. Entre Petare y Baruta. Sentido levemente en Las Mercedes, al Este de Caracas.-
22. i XZ Pn 22 16 07.5 C, i XZ Pb 16 17, i XZ Sn 16 47, i XNE Sn 16 51.5, i XE Sb 17 09, FX 19.0, T 0.4, A 0.7, P-azimut: SW, d = 450 kms, mC = 4.0. Cerca a Mucuchíes, Mérida.-
23. i XWZ PKP 00 57 07.5 C, i XWZ PKP2 58 25, i XWZ PP 01 02 13, i N SKKS 08 28, i NE PSKS 12 42. Ondas siguientes muy mezcladas. F 05 00.0, T 2.0, A 1.9, d = 19 100 kms, H = 00:37:01.5.  
CGS: 3.1 S, 118.9 E. Islas Célebes. H = 00:36:56.6, h = 13 kms, M = 6.1.-
23. e WZ PKP1 06 24 00.0, e Z PKP2 25 16, e ZE SKKS 35 20, e E SS 50 48, e E SSS 58 00, L 07 32.5 (T 40), F 09 00.0, d = 19 100 kms, H = 06:03:54.0.  
CGS: 3.4 S, 119.0 E. Islas Célebes. H = 06:03:47.0, h = 7 kms, M = 5.3.-
24. i WZ PKP1 00 28 46.0 D, i XWZ PKP2 29 19, i Z PP 33 12, i Z 33 44, i E PPP 37 12, i E SKKS 39 54, i Z PSKS 43 28, i ZNE PPS 46 40, i N SS 53 26, i NE SSS 59 44, L 01 16.0 (T 48), R 42.0 (T 32), F 03 00.0, d = 18 100 kms, H = 00:08:48.0.  
CGS: 6.2 S, 131.0 E. Islas Islas Tanimbar. H = 00:08:45.6, h = 38 kms, M = 5.8.-

Continúa

## Continuación del mes de Febrero de 1.969.

24. i XZ Pn 22 45 56.0 C, i XZ Pb 46 08, i XE Pg 46 31, i XE Sn 47 09, i XWNE Sn 47 12, i XWNE Sb 47 30, i XE Sg 48 15, F 23 00.0, T 0.9, A 8.4, P-azimut: SW, d = 770 kms, H = 22:44:09.0, mC = 5.1.  
CGS: 6.8 N, 72.9 W. Cerca a San Andrés, Depto. de Santander, Colombia. H = 22:44:14.0, h = 150 kms, M = 5.0. Sentido en Bogotá, Bucaramanga y San Cristóbal.
25. e WZ PP 01 58 52.0, e Z PPP 02 02 32, i E SKKS 06 28, i E PSKS 10 16, F 30.0.  
CGS: 5.2 N, 126.3 E. Mindanao, Islas Filipinas. H = 01:35:03.0, h = 65 kms, M = 5.5.-
25. i WZ P 07 43 42.0 C, i XZ PP 43 50, i ZE S 47 30, i N PcS 48 10, i N SS 48 40, MR 51.0-56.2 (T 22-16), F 08.5, d = 2 300 kms, H = 07:39:07.0, MC = 5.5.  
CGS: 15.2 N, 87.5 W. Honduras. H = 07:39:00.6, h = 15 kms, M = 5.4.-
25. e PPP 14 24 42.0, e SKS 28 48, e PS 30 28, LR 33.5 (T 38), MR 37.0 (T 16), F 16 00.  
CGS: 19.3 S, 12.1 W. Sur de la Isla Ascensión. H = 14:05:59.8, h = 33 kms, M = 5.3.-
27. e XWZ P 01 37 04.0, e Z PP 37 30, i NE S 40 18, i NE SS 40 48, MR 43.0, F 02 00.0, d = 1 900 kms, H = 01:33:07.0.  
CGS: 5.3 N, 82.5 W. Sur de Panamá. H = 01:33:16.8, h = 33 kms, M = 4.9.-
27. e XZ P 05 14 50.5, i Z pP 15 24, e NE S 19 16, i NE sS 19 30, F 40.0, d = 2 900 kms, H = 05:09:35.5.  
CGS: 13.9 S, 74.3 W. Perú. H = 05:09:30.5, h = 111 kms, M = 5.2.-
28. i XWZ P 02 50 17.0 C, i XZ 50 36, i XZ PP 52 30, i XZ PPP 53 21, i XWZNE S 58 07, i XNE SS 03 02 12, LR 10.5 (T 25), MR 15.5 (T 20), F 09 00.0, T 0.8, A 9.5, d = 6 100 kms, H = 02:40:39.0, MC = 7.1.  
CGS: 36.0 N, 10.6 W. Al SW. de la costa de Portugal. H = 02:40:32.5, h = 22 kms, M = 7.3.-
28. e XZ P 04 35 20.0, i XZ 35 45, i XE PP 37 24, FX 39.0.  
CGS: 36.2 N, 10.5 W. Norte del Océano Atlántico. H = 04:25:36.9, h = 33 kms, M = 5.7.-
28. i XZ Pg 14 15 04.5 D, i XNE Sg 15 06.5, FX 15 20, T 0.3, A 1.2, d = 16 kms, H = 14:15:01.5, mC = 3.1. Entre Petare y El Hatillo.
28. i XZ Pn 18 13 17.0 C, i XZ 13 26, i XZ Pb 13 37, i XNE Sn 14 33, i XZNE Sn 14 40, FX 18.0, T 0.7, A 7.2, d = 800 kms, H = 18:11:25.0, mC = 4.8.-

G. Fiedler

F.A.Miranda

/G.N.

COMANDANCIA GENERAL DE LA MARINA  
SERVICIO DE HIDROGRAFIA Y NAVEGACION  
OBSERVATORIO DE SISMOLOGIA  
Y MAREAS TERRESTRES  
Caracas - Venezuela  
BOLETIN SISMICO MENSUAL

Marzo 1.969

1. i XZ Pg 13 21 49.5 C, i XNE Sg 21 50.2, FX 22.0, T 0.2, A 0.9, d = 6 kms, H = 13:21:48.0, mC = 3.2. Región de Caracas.-
2. i XZ PKP1 03 08 07.5 D, i XZ PKP2 08 36.5, FX 09.0, T 1.0, A 1.7.-
2. i XZ P 12 46 42.2 C, i XZ 46 49.5, e XNE S 48 20, FX 50.0, T 1.0, A 1.1, d = 1 000 kms, H = 12:44:27.0. mC = 4.5. CGS: 3.7 N, 75.5 W. Cerca a Chaparral, Depto. del Tolima, Colombia. H = 12:44:12.2, h = 213 kms, M = 4.4.-
2. e WZ PP 14 22 44, e ZNE PSKS 33 24, e NE (PPS) 37 22, e NE SS 43 42, R 50.0 (T 18), F 16 00.0. CGS: 3.2 S, 118.8 E. Islas Célebes. H = 13:57:24.6, h = 48 kms, M = 5.1.-
3. e WZ P 01 11 56.0, e Z PP 15 30, i NE SKS 22 24, i N S 22 36, e NE PS 23 36, e NE SS 28 16, e NE SSS 32 44, L 41.0 (T 40), MR 45.0 (T 20), F 02 30.0, d = 9 700 kms, H = 00:59:18.0. CGS: 40.1 N, 27.4 E. Turquía. H = 00:59:10.5, h = 4 kms, M = 5.6.-
3. e WE S 15 15 36, e Z PS 17 36, e ZE (SS) 24 40, MR 50.0-54.5 (T 24-16), F 16 30.0. CGS: 51.6 N, 159.3 E. Frente a la costa Este de Kamchatka. H = 14:49:28.0, h = 12 kms, M = 5.3.-
3. i WE SKS 16 55 18, e E PS 58 14, i E PPS 59 26, e E SS 17 04 40, MR 25.0-35.0 (T 20-14), F 18 30.0. CGS: 16.9 S, 172.5 W. Islas Samoa. H = 16:30:13.8, h = 33 kms, M = 5.1.-
3. i XZ Pn 20 26 37.5 C, i XZ 26 41, i XE Sn 28 07, i XNE 28 12, i XE Sb 28 51, FX 31.0, T 0.4, A 0.6, d = 920 kms, H = 20:24:30.5, mC = 4.7.-
4. e XZ P 00 15 52.5, i XZ PP 16 47, e WZ S 19 26, LR 23.5-25.0 (T 22-12), F 30.0. CGS: 6.3 S, 76.7 W. Norte del Perú. H = 00:11:39.0, h = 203 kms, M = 4.5.-
4. i XZ P 03 30 17.5 D, FX 32.0, T 0.8, A 1.3. CGS: 57.7 S, 25.3 W. Sur de las Islas Sandwich. H = 03:18:31.7, h = 33 kms, M = 5.2.-
4. e WZ S 21 14 40, e NE SS 18 32, MR 25.5-28.5 (T 36-20), F 22 00.0. CGS: 26.7 S, 114.2 W. Islas Pascua. H = 20:56:31.5, h = 33 kms, M = 5.1.-

## Continuación del mes de Marzo de 1.969.

4. i XZ Pg 22 31 20.0 D, i XNE Sg 31 22.6, i XZNE 31 24.5, FX 31 50, T 0.4, A 1.0, P-azimut: NNE, d = 21 kms, H = 22:31:16.0, h = 22:31:16.0, mC = 3.0. Cerca a Punta Caraballeda, en la costa.-
5. e WZ PKP1 14 12 02.0, i XZ PKP2 12 39, e Z SKP 15 28, e XWZ PP 16 20, e NE SKKS 23 10, e NE PSKS 26 42, i NE PPS 29 40, i N SS 36 20, e NE SSS 42 10, L 15 03.0 (T 40), MR 15.0 (T 28), F 16 20.0, d = 17 600 kms, H = 13:52:08.0.  
CGS: 4.0 N, 128.2 E. Norte de Halmahera. H = 13:52:04.9, h = 48 kms, M = 5.7.-
5. e WZ PKP1 16 31 08.0, i XZ PKP2 32 05, e WZ PP 35 22, e N SKKS 42 14, e ZE PPS 48 56, e NE SS 55 16, L 22.0 (T 40), MR 34.0 (T 26), F 18 30.0.  
CGS: 4.1 N, 128.4 E. Norte de Halmahera. H = 16:11:12.2, h = 49 kms, M = 5.1.-
5. e XWZ PP 19 52 45.0, i Z 53 06, i Z pPP 54 26, e NE PSKS 20 03 00, e NE PPS 04 04, e NE SKKP 05 28, i E SS 09 10, i N sSS 10 32, e NE SSS 15 00, MR 34.0-39.0 (T 28-20), F 21 30.0.  
CGS: 36.0 N, 70.7 E. Región Hindu Kush. H = 19:33:23.0, h = 208 kms, M = 5.9.-
5. i WZ S 25 27 10.0 C, i E PcP 29 18, MR 31 40.0-33.5 (T 16-08), F 50.0.  
CGS: 6.6 S, 76.2 W. Norte del Perú. H = 23:18:59.6, h = 33 kms, M = 4.6.-
6. e WZ PKP1 01 26 14.0, e Z PP 30 12, e Z SKKS 36 14, e Z PSKS 40 38, i ZN 45 20, F 03 20.0.  
CGS: 4.2 N, 128.3 E. Norte de Halmahera. H = 01:06:01.2, h = 39 kms, M = 5.1.-
6. i XZ P 08 04 50.5 D, i XZ 04 57, i XN (S) 06 06.5, i XE 06 24, i XZ 07 06, FX 09.0, T 0.7, A 0.9.-
7. i XZ Pg 21 28 52.5 C, i XNE Sg 28 54.5, FX 29 20, T 0.3, A 0.8, d = 16 kms, H = 21:28:49.5, mC = 3.0. Región de Caracas.-
8. e XZ P 13 41 34.0, e Z SS 45 50, F 14 00.0.  
CGS: 5.5 S, 77.1 W. Norte del Perú. H = 13:37:05.6, h = 44 kms, M = 4.6.-
8. i XZNE Pg 16 22 03.8 C, i XWZNE Sg 22 06, FX 25.0, T 0.3, A 7.5, P-azimut: ENE, d = 18 kms, H = 16:22:00.3, mC = 3.8. Cerca a Naiguatá. Sentido al Este de Caracas, especialmente en Chacao, Altamira, El Cafetal y Los Palos Grandes.-
9. e XZ P 07 17 21.0, i XZ 17 25.5, FX 19.0.  
CGS: 13.1 N, 88.5 W. El Salvador. H = 07:12:39.0, h = 75 kms, M = 4.4.-
9. e WZ PKP1 14 08 04.0, i XZ PKP2 08 34, i Z PP 12 06, i Z 'SKS) 14 12, i Z (PPP) 17 10, i ZNE 27 20, i N SS 32 02, i NE SSS 38 20, L 53.5 (T 50), LR 15 02.5 (T 40), F 17 00.0, d = 17 600 kms, H = 13:48:11.0.  
CGS: 4.1 S, 135.5 E. Oeste de Nueva Guinea. H = 13:47:59.4, h = 14 kms, M = 5.5.-

Continúa

Continuación del mes de Marzo de 1.969.

9. i XZ PKP1 14 59 29.5 C, i XZ PKP2 59 55, FX 15 02.0, T 1.0, A 2.5, CGS: 4.1 S, 135.6 E. Oeste de Nueva Guinea. H = 14:39:04.2, h = 33 kms, M = 5.5.-
10. i WZ pPKP1 07 13 32.0 C, i XWZ PP 14 26, i Z PPP 16 56, i Z PKKP 23 08, i ZNE SKKP 27 02, i Z SS 29 44, e NE (SSS) 37 00, L 56.0 (T 40), F mezclado con el sismo siguiente. CGS: 5.6 S, 147.2 E. Este de Nueva Guinea. H = 06:54:17.6, h = 206 kms, M = 5.8.-
10. i XZ P 08 19 39.0 C, e XZ S 23 26. Las ondas siguientes están mezcladas con el sismo anterior. T 1.0, A 4.0, d = 2 300 kms, H = 08:15:01.0. CGS: 12.3 N, 87.5 W. Cerca a la costa de Nicaragua. H = 08:15:08.4, h = 62 kms, M = 5.3.-
10. e XZ Pg 20 04 03.2, i XNE Sg 04 04.2, FX 04 20, d = 8 kms, H = 20:04:01.7, mC = 2.8 aprox. Región de Caracas.-
10. e WZ PP 21 20 36.0, i NE S 26 24, MR 38.0-41.0 (T 24-14), F 22 00.0. CGS: 41.2 S, 88.2 W. W. de Chile. H = 21:09:03.6, M = 4.6.-
12. e XZ Pg 16 59 47.5, i XNE Sg 59 48.2, FX 17 00.0, d = 6 kms, H = 16:59:46.5, mC = 2.7 aprox. Región de Caracas.-
13. i XWZ P 22 24 36.5 C, i XZ 24 38.5, i XWZ PP 25 04, i XWZNE S 28 44, i NE SS 30 00, MR 33.0-36.0 (T 24-12), F 23 30.0, T 1.0, A 5.0, P-azimut: SW, d = 2 550 kms, H = 22:19:31.5, MC = 5.2, mC = 5.8. CGS: 8.0 S, 80.1 W. Frente a la costa Norte del Perú. H = 22:19:37.2, h = 38 kms, M = 5.4.-
14. i XWZNE P 08 51 33.0 C, i X Z 51 38, i XWZ PP 52 00, i WZNE 55 04, i NE SS 55 44, LR 57.0 (T 20), F en el cambio de gráficas. T 1.0, A 20.3, P-azimut: WNW, d = 2 100 kms, H = 08:47:12.0. CGS: 12.9 N, 86.8 W. Nicaragua. H = 08:47:16.3, h = 178 kms, M = 5.6.-
14. e XZ Pg 20 19 23.5, i XNE Sg 19 24.0, FX 19 30, d = 4 kms, H = 20:19:22.5, mC = 2.7 aprox. Región de Caracas.-
15. e XZ PKP1 12 04 46.0, i XZ PKP2 05 41.5, e XZ PP 09 24, i WE SKKS 16 20, e E PSKS 20 32, e E (SS) 30 50, e E SSS 36 28. F mezclado con ondas de largo período de otro sismo. CGS: 2.8 S, 126.5 E. Mar Ceram. H = 11:44:42.3, h = 33 kms, M = 5.6.-
16. e XZ PKP 16 13 13.0, e WZ PP 15 12, e E S 22 38, e Z PPS 26 16, e N SSS 36 42, MR 59.0-17 05.0 (T 30-22), F 18 00.0. CGS: 38.5 N, 142.7 E. Cerca a la costa Este de Honshu, Japón, H = 15:54:17.2, h = 40 kms, M = 5.4.-
18. e WE PKP 03 44 40, e E PP 46 14, e E SKKS 53 06, e E PS 56 20, e NE PPS 57 27, e NE SS 04 03 24, e ZNE L 25.0 (T 38), e ZNE R 33.0 (T 24), F mezclado con otro sismo. CGS: 21.4 S, 171.1 E. Islas Loyalty. H = 03:25:31.8, h = 15 kms, M = 5.5.-

Continúa

Continuación del mes de Marzo de 1.969.

18. i XZ P 04 31 17.0 C, i XZ 31 31, FX 33.0, T 0.9, A 1.5.  
CGS: 25.8 S, 70.8 W. Cerca a la costa Norte de Chile. H = 04:  
24:16.5, h = 48 kms, M = 5.2.-
18. i XZ P 22 08 52.0 C, i XZ PP 09 13.5, i XWNE S 12 17, i NE SS  
12 42, L 13.5 (T 22), F mezclado con el sismo siguiente. T 0.7,  
A 1.7, d = 2 000 kms, H = 22:04:43.0.-
18. e N S 23 02 24, e E PS 03 28, LR 27.5-33.0 (T 28-18), F 00 10.0.  
CGS: 24.0 S, 176.0 W. Sur de las Islas Fiji. H = 22:35:30.2, h =  
68 kms, M = 5.4.-
19. e XZ Pg 12 52 31.8, i XZNE Sg 52 32.8, FX 52 40, d = 8 kms,  
H = 12:52:30.0, mC = 2.7. Región de Caracas.-
19. e XWZ PKP1 14 18 26.0, i XWZ PP 21 56, e NE SS 40 40, e NE SSS  
45 40, F 15 40.0.  
CGS: 28.8 N, 128.2 E. Islas Ryukyu. H = 13:59:22.7, h = 136 kms,  
M = 5.8.-
20. i XWZ P 08 26 24.0 C, i Z PP 28 20, i NE S 33 26, i E PS 34 10,  
i N SS 36 26, i E SSS 37 22, LR 43.0-46.0 (T 30-24), F 09 00.0,  
T 0.8, A 1.4, d = 5 350 kms, H = 08:17:46.0, MC = 5.4, mC = 5.4.  
CGS: 31.3 N, 114.3 W. Golfo de California. H = 08:17:41.9, h =  
20 kms, M = 5.4.-
20. i WZ PKP1 16 38 50.0 D, i XZ PKP2 39 18, i Z SKP 42 52, i Z 49  
22, i Z SKKS 49 54, e ZE PSKS 53 28, e NE PPS 56 20, e NE SS 17  
03 00, e NE SSS 08 36, LR 34.5-41.0 (T 40-26), MR 44.5-53.0  
(T 22-18), F 19 00.0, d = 17 550 kms, H = 16:18:57.0.  
CGS: 8.7 N, 127.3 E. Islas Filipinas. H = 16:18:56.4, h = 33 kms,  
M = 6.1.-
21. i XZ PKP1 02 58 43.0 C, F 03 00.0, T 1.0, A 1.2.  
CGS: 6.1 S, 147.4 E. Este de Nueva Guinea. H = 02:39:12.7,  
h = 90 kms, M = 5.4.-
21. i XWZ P 04 02 25.5 C, i Z PP 04 20, e NE S 09 25, e NE SS 13 16,  
LR 19.5 (T 28), F 05 00.0, T 1.0, A 1.5, d = 5 350 kms, H = 03:  
53:47.0.  
CGS: 31.2 N, 114.3 W. Golfo de California. H = 03:53:42.4, h =  
33 kms, M = 5.3.-
21. e WZ P 05 05 02.0, i Z PP 06 56, i NE S 12 06, i N PS 12 46,  
i NE SS 15 58, LR 20.5 (T 34), F mezclado con el sismo siguiente.  
d = 5 350 kms, H = 04:56:24.0, MC = 5.2.  
CGS: 31.2 N, 114.2 W. Golfo de California. H = 04:56:20.3, h =  
33 kms, M = 5.4.-
21. i XWZ P 06 43 06.5 C, i Z PP 45 02, i ZNE S 50 10, i E PS 50 54,  
i NE SS 54 00, LR 58 30 (T 34), MR 07 00.5-05.0 (T 28-24), F  
09 00.0, T 1.0, A 1.3, P-azimut: NW, d = 5 350 kms, H = 06:34:  
28.0, MC = 5.2, mC = 5.5.  
CGS: 31.1 N, 114.3 W. Golfo de California. H = 06:34:22.2, h =  
4 kms, M = 5.5.-

Continúa



Continuación del mes de Marzo de 1.969.

21. i WZ P 10 18 56.0 C, i Z PP 20 50, e NE S 26 02, i E PS 26 42, e NE SS 29 52, LR 34.5-39.0 (T 38-26), F 12 00.0, d = 5 400 kms, H = 10:10:11.0.  
CGS: 31.2 N, 114.3 W. Golfo de California. H = 10:10:10.7, h = 5 kms, M = 5.4.-
21. e XZ P 23 39 03.0, i XZ PP 39 40, e ZE SS 43 26, MR 47.5 (T 14), F 24 00.0.  
CGS: 5.6 S, 77.2 W. Norte del Perú. H = 23:34:41.5, h = 51 kms, M = 4.7.-
22. i XZ P 02 56 57.5 C, e ZE PS 03 05 06, i E 06 48, LR 17.0-23.0 (T 26-14), F 04 00.0, T 0.9, A 1.1.  
CGS: 35.7 S, 103.7 W. Sur del Océano Pacífico. H = 02:47:09.4, h = 33 kms, M = 4.9.-
22. e WZ PS 06 12 52, e Z PPS 13 50, e Z SS 19 00, e E SSS 23 32, L 36.5 (T 22), F 07 00.0.  
CGS: 15.5 S, 176.1 W. Islas Fiji. H = 05:43:57.5, h = 33 kms, M = 5.4.-
22. e XWZ P 07 34 18.0, e Z PP 36 14, i NE S 41 22, i NE SS 45 20, NE MR 49.5-56.0 (T 36-24), F 09 00.0, d = 5 350 kms, H = 07:25:40.0.  
CGS: 31.4 N, 114.1 W. Golfo de California. H = 07:25:35.6, h = 33 kms, M = 5.1.-
22. e XZ Pn 15 25 10.5, i XNE Sn 25 34.5, FX 28.0, d = 200 kms, H = 15:24:45.0.-
23. i XWZ P 11 52 22.0 C, i NE S 54 26, i E SS 54 42, LR 55.5 (T 24), R 56.5 (T 18), F 13 00.0, T 1.0, A 3.0, d = 1 200 kms, H = 11:49:47.0, mC = 5.3.  
CGS: 6.2 N, 77.8 W. Cerca a la costa Norte del Depto. del Chocó, Colombia. H = 11:49:35.6, h = 24 kms, M = 5.0.-
23. i XWZ P 21 21 32.0 D, e Z PP 24 42, i NE S 32 14, i NE PS 33 14, e NE SS 38 06, e NE SSS 41 36, NE LR 53.0-60.0 (T 28-20), F 23 00.0, T 1.7, A 3.0, d = 9 600 kms, H = 21:08:44.0.  
CGS: 39.2 N, 28.5 E. Turquía. H = 21:08:42.6, h = 12 kms, M = 5.6.-
24. Microsismicidad alta en S.P.
- |      | T(seg) | A(u) | T(seg) | A(u) | T(seg) | A(u) |
|------|--------|------|--------|------|--------|------|
| 16 h | Z 1.5  | 0.13 | N 1.5  | 0.09 | E 1.2  | 0.09 |
| 18 h | Z 1.5  | 0.13 | N 1.5  | 0.08 | E 1.4  | 0.09 |
| 20 h | Z 1.5  | 0.13 | N 1.5  | 0.08 | E 1.5  | 0.11 |
25. i XE Pg 13 00 12.5, i XNE Sg 00 14, FX 00 30, d = 12 kms, H = 13:00:09.5, mC = 2.8 aprox. Región de Caracas.-
25. e XWZ P 13 34 20.0, i NE S 45 06, i NE PS 46 06, i NE SS 51 04, e NE SSS 54 32, NE MR 14 09.0-13.0 (T 24-20), F 15 00.0, d = 9 700 kms, H = 13:21:32.0.  
CGS: 39.2 N, 28.4 E. Turquía. H = 13:21:32.4, h = 23 kms, M = 5.6.-

Continúa

## Continuación del mes de Marzo de 1.969.

26. e XNE P 01 20 12.0, e NE S 25 08, e NE SS 26 54, F 02 00.0, d = 3 100 kms, H = 01:14:18.0. CGS: 15.0 S, 75.4 W. Costa del Perú. H = 01:14:31.0, h = 29 kms, M = 4.9.-
27. e WZ PKP1 05 06 26.0, i XZ PKP2 07 04, e Z PP 11 06, i Z 15 20, e E SKKS 17 34, i ZNE SS 31 22, e NE SSS 37 16, E L 58.5 (T 36), ZE R 06 11 (T 20), F 07 00.0, d = 17 900 kms, H = 04:46:30.0. CGS: 3.9 N, 128.5 E. Norte de Halmahera. H = 04:46:26.1, h = 33 kms, M = 5.7.-
27. e WZ P 13 00 04.0, i WXZ PKP1 01 32.0 C, i WXZ PKP2 02 10.5, i WXZ PP 05 48, i Z PPP 09 30, i Z SKKS 12 08, i ZNE PSKS 16 24, i ZNE PPS 19 12, i NE SS 25 48, i NE SSS 32 00, E L 57.0 (T 40), NE MR 14 05.0-13.0 (T 24-16), F 18 00.0, T 1.2, A 1.9, d = 17 800 kms, H = 12:40:09.0, MC = 6.8. CGS: 4.8 N, 127.5 E. Islas Talaud. H = 12:41:35.9, h = 32 kms, M = 6.1.-
28. i WZ P 02 01 20.0 D, i XZ P 01 21.5 C, i Z PP 04 54, i NE S 12 00, i E PPS 13 26, i NE SS 17 44, i NE SSS 21 12, NE L 27.0 (T 32), NE LR 31.0-35.0 (T 24-22), F 05 00.0, T 1.3, A 2.3, d = 9 700 kms, H = 01:48:37.0, MC = 5.8, mC = 6.1.- CGS: 38.6 N, 28.4 E, Turquía. H = 01:48:30.4, h = 9 kms, M = 6.0.-
28. e XZ P 15 28 20.5, e Z PP 30 20, i NE S 35 28, e NE PS 36 04, e NE SS 38 30, e NE SSS 39 26, NE LR 43.5-48.0 (T 40-24), F 17 00.0, d = 5 450 kms, H = 15:19:45.0, MC = 4.9, mC = 5.6. CGS: 31.5 N, 114.3 W. Golfo de California. H = 15:19:40.4, h = 33 kms, M = 5.0.-
28. i XZ Pg 19 31 43.0 D, i XNE Sg 31 45, FX 32 10, T 0.2, A 1.0, P-azimut: NNE, d = 16 kms, H = 19:31:40.0, mC = 3.4. Cerca a Caraballeda. Sentido en Naiguatá, Caraballeda, Macuto, La Guaira y Catia La Mar.-
29. e WZ PP 09 34 20.0, i NE SKS 40 42, i E PS 43 40, i E PPS 44 26, i E SS 49 40, e NE SSS 53 32, F mezclado con otro sismo. CGS: 12.0 N, 41.2 E. Etiopía. H = 09:15:54.1, h = 33 kms, M = 5.8.-
29. i XZ Pg 18 27 33.0 C, i XZNE Sg 27 35.4, i XE 27 37.0, FX 28.0, T 0.3, A 1.8, P-azimut: ENE, d = 20 kms, H = 18:27:29.0, mC = 3.4. Cerca a Naiguatá. No fué sentido.-
29. i XZ Pg 19 02 35.2 D, i XNE Sg 02 38.0, FX 03.0, T 0.3, A 0.5, P-azimut: WSW, d = 22 kms, H = 19:02:31.0, mC = 2.8. Cerca a Macarao, Dpto. Libertador.-
30. e XZ PKP1 08 15 11.5, i XZ PKP2 15 40.5, e NE SKKS 26 18, e E PSKS 30 04, e NE SS 40 08, e NE SSS 46 36, F 10 00.0, d = 17 900 kms, H = 07:55:15.0. CGS: 4.4 N, 128.0 E. Norte de Halmahera. H = 07:55:07.5, h = 33 kms, M = 5.4.-

Continúa

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Continuación del mes de Marzo de 1.969.

30. i WZ P 20 17 42.0 C, i XZ 17 47, e N (S) 19 12, F 21 00.0.  
CGS: 2.0 S, 77.1 W. Frontera Perú-Ecuador. H = 20:14:06.6,  
h = 173 kms, M = 4.7.-
31. e XZ Pn 06 15 03.0, i XNE Sn 15 28, FX 16.0, T 0.5, A 0.4, d =  
200 kms, H = 06:14:38.0, mC = 3.1.-
31. i WZ P 07 29 12.0 D, i Z PP 33 04, i NE SKS 39 48, i NE SKKS  
40 30, i NE PS 41 50, i NE (PPS) 43 04, i NE SS 47 20, i NE SSS  
51 50, NE L 57.0 (T 48), NE MR 08 03.0-09.0 (T 30-16), F 13 00.0,  
d = 10 500 kms, P-azimut: NE, H = 07:15:32.0, MC = 6.0.  
CGS: 27.7 N, 34.0 E. Mar Rojo. H = 07:15:54.4, h = 33 kms, M =  
6.0.-
31. i XZ P 19 43 47.5 C, i XZ 44 14, i XZNE (S) 46 30, FX 52.0,  
T 0.9, A 5.4.-
31. i WZÑ PP 19 45 50.0 D, i ZNE 46 26, i Z SKS 48 06, i ZN PPP  
49 24, i NE PKKP 53 20, i NE PS 56 04, i NE sSS 20 04 46, NL  
18 30 (T 40), F 22 00.0.  
CGS: 38.3 N, 134.6 E. Mar del Japón. H = 19:25:27.2, h = 417 kms,  
M = 5.9.-
31. e XZ Pg 22 25 45.5, i XNE Sg 25 46.5, FX 26.0, d = 8 kms, H =  
22:25:44.0, mC = 2.8 aprox.-

G. Fiedler

F.A.Miranda

/G.N.



18 JUL 1969

COMANDANCIA GENERAL DE LA MARINA  
 SERVICIO DE HIDROGRAFIA Y NAVEGACION  
 OBSERVATORIO DE SISMOLOGIA  
 Y MAREAS TERRESTRES  
 Caracas - Venezuela  
 BOLETIN SISMICO MENSUAL

Abril 1.969

1. i XZ Pn 03 27 00.7 C, i XNE Sn 27 33, FX 28.0, T 0.6, A 0.5, d = 300 kms, H = 03:26:28.0, mC = 3.4.-
1. i XZ Pn 05 59 26.5 D, i XNE Sn 06 00 49, FX 02.0, T 0.3, A 0.5, d = 880 kms, H = 05:57:24.0, mC = 4.5.-
1. e XZ Pn 20 24 45.0, e XNE Sn 25 07, FX 26.0, d = 180 kms, H = 20:22:43.0.-
1. i XZ P 21 24 32.5 C, i XZ pP 24 39, e Z PP 24 54, e NE S 28 21, i NE sS 28 30, i NE SS 29 21, NE LR 30 50-33.5 (T 30-18), M 35.0 (T 18), F 22 30.0, T 0.8, A 4.7, d = 2 300 kms, H = 21:19:48.0.  
CGS: 12.7 N, 88.2 W. Cerca a la costa de América Central. Sentido en San Salvador. H = 21:19:53.6, h = 71 kms, M = 4.9.-
2. e XZ Pn 11 20 10.0, i XNE Sn 20 53, FX 22.0, d = 430 kms, H = 11:19:10.0. Región Valera y Boconó.-
2. i XZ Pn 20 16 47.0 C, i XNE Sn 15 18, FX 16.0, T 0.3, A 0.7, d = 280 kms, H = 20:16:09.0, mC = 3.8.-
3. e XWZ P 22 24 42.0, e Z PP 27 54, e NE S 34 48, e NE PS 35 38, NE L 47.5 (T 32), NE MR 53.0-59.0 (T 28-20), F 23 50.0, d = 9 000 kms, H = 22:12:29.0.  
CGS: 40.7 N, 19.9 E. Albania. H = 22:12:23.8, h = 33 kms, M = 5.1.-
4. e WZ P 08 59 04.0, e Z PP 09 03 10, e NE S 10 40, e ZNE SS 17 10, e NE SSS 21 30, NE LR 33.0-39.0 (T 40-32), F 10 30.0, d = 11 100 kms, H = 08:45:18.0.  
CGS: 51.2 N, 173.7 E. Cerca a las Islas Aleutianas. H = 08:45:18.7, h = 33 kms, M = 5.6.-
4. i WZ P 13 03 00.0 D, e XZ PP 03 20, i ZNE S 06 50, i NE SS 07 34, NE L 08.5 (T 28), NE MR 09.0-13.0 (T 28-12), F 15 00.0, d = 2 300 kms, H = 12:58:16.0, MC = 5.1, mC = 5.6.  
CGS: 1.2 N, 85.2 W. Frente a la costa de Ecuador. H = 12:58:24.1, h = 33 kms, M = 5.3.-
4. i WZ P 16 24 16.0 D, i Z PP 26 08, i ZE PcS 30 08, i N S 30 46, i E SS 34 02, i NE SSS 35 18, NE LR 38.0-42.0 (T 30-20), F 18 00.0, d = 4 800 kms, H = 16:16:17.0, MC = 5.0, mC = 5.6.  
CGS: 24.4 N, 109.8 W. Golfo de California. H = 16:16:17.2, h = 31 kms, M = 5.6.-

Continuación del mes de Abril de 1.969.

5. i WZ P 02 32 44.0 C, i Z PP 37 02, e Z PPP 39 08, e NE SKS 43 24, e NE S 44 52, i E 45 18, i ZE PS 46 18, e NE SS 51 40, e NE SSS 56 12, NE L 03 05 30 (T 40), NE R 13.5 (T 24), F 05 00.0, d = 11 800 kms, H = 02:18:30.0, MC = 6.0, mC = 6.2. CGS: 12.2 N, 41.2 E. Etiopía. H = 02:18:29.9, h = 17 kms, M = 6.2.-
5. e XZ P 22 20 39.0, i NE S 24 26, NE L 27.0 (T 26), F 23 00.0, d = 2 250 kms, H = 22:16:06.0. CGS: 1.6 N, 84.9 W. Frente a la costa de Ecuador. H = 22:16:01.1, h = 33 kms, M = 4.2.-
5. i WZ P 23 30 48.0 D, i XZ PP 31 09, i NE S 34 38, e XNE SS 35 28, ZNE LR 37.0-41.0 (T 28-16), F 03 00.0. P-azimut: SW, d = 2 250 kms, H = 23:26:15.0, MC = 5.7, mC = 6.1. CGS: 1.2 N, 85.2 W. Frente a la costa de Ecuador. H = 23:26:11.5, h = 31 kms, M = 5.8.-
6. i XWZ P 04 02 18.0 D, i E S 12 54, i NE PS 13 44, e NE SS 19 12 e NE SSS 22 46, NE LR 33.0-40.0 (T 32-22), F 05 30.0, T 0.9, A 4.0, d = 9 650 kms, H = 03:49:35.0, mC = 5.5. CGS: 38.5 N, 26.4 E. Mar Egeo. H = 03:49:33.5, h = 14 kms, M = 5.5.-
6. i XZ Pn 04 47 56.5 D, T 0.5, A 1.0, i XZ 48 18, i XNE Sn 49 33, i XNE 50 03, FX 52.0, d = 1 000 kms, H = 04:45:43.5, mC = 4.8. CGS: 19.4 N, 64.6 W. Islas Vírgenes. H = 04:45:44.0, h = 33 kms, M = 4.6.-
7. i XZ Pg 15 17 56.0 D, T 0.3, A 0.8, i XNE Sg 17 57, FX 18 10, d = 8 kms, H = 15:17:54.0, mC = 3.0. Región de Caracas.-
7. i XZ Pg 17 11 44.5 D, T 0.3, A 1.0, i XZNE Sg 11 45.5, FX 12.0, d = 8 kms, H = 17:11:42.5, mC = 3.0. Región de Caracas.-
7. e WZ P 20 39 39.0, e Z PP 43 17, e N 50 17, i ZN S 50 45, e NE SS 56 56, E LR 21 08.0-13.0 (T 34-24), F 22 00.0, d = 10 350 kms, H = 20:26:26.0, MC = 5.2, mC = 5.7. CGS: 76.5 N, 130.8 E. Mar Laptev. H = 20:26:29.9, h = 33 kms, M = 5.5.-
8. e XZ Pn 10 24 08.0, i XZ 24 12, i XN Pb 24 27, i XZNE Sn 25 04, FX 28.0, d = 700 kms, H = 10:22:30.0.-
8. i XZ Pg 16 00 56.5 C, T 0.3, A 0.6, i XZE Sg 00 59, FX 01 20, d = 20 kms, H = 16:00:52.5, mC = 3.0. Cerca a Naiguatá.-
8. i XZ Pg 22 21 41.5 D, T 0.3, A 0.7, i XZNE Sg 21 43, FX 21 55, d = 12 kms, H = 22:21:39.0, mC = 2.9. Región de Caracas.-
9. i XZ Pg 02 21 41.5 D, T 0.3, A 0.6, i XZNE Sg 21 42.5, FX 22.0, P-azimut: NE, d = 8 kms, H = 02:21:39.5, mC = 2.9. Cerca a Caraballeda.-
9. i XZ Pg 13 32 20.0 D, T 0.3, A 0.6, i XNE Sg 32 21.5, FX 32 30, d = 12 kms, H = 13:32:17.5, mC = 2.9. Región de Caracas.-

Continúa

Continuación del mes de Abril de 1.969.

10. i XZ Pg 21 52 40.5 C, T 0.3, A 2.5, i XZNE Sg 52 44.5, i XNE 52 47, FX 53 10. P-azimut: ENE, d = 32 kms, H = 21:52:34.0. mC = 3.4. Cerca Anare, entre Naiguatá y Los Caracas.-
11. e XZ Pn 23 19 47.0 C, T 0.3, A 0.6, i XN Sn 20 09.5, i XNE Sb 20 13, FX 21.0, d = 180 kms, H = 23:19:25.0, mC = 3.6.-
12. e XZ PKP1 11 05 13.0, i XZ PKP2 05 40, FX 07.0. CGS: 10.2 N, 126.3 E. Islas Filipinas. H = 10:45:16.9, h = 11 kms, M = 5.3.-
12. i XZ Pg 23 06 25.5 D, T 0.3, A 0.7, i XZNE Sg 06 28.5, FX 07.0. P-azimut: NE, d = 24 kms, H = 23:06:20.5, mC = 3.0. Cerca a Naiguatá.-
13. i XZ Pn 02 04 32.5 D, T 0.5, A 0.8, i XZ Pg 04 41, i XNE Sn 05 01, i XNE Sg 05 14, FX 07.0. P-azimut: SW, d = 250 kms, H = 02:04:00.5, mC = 3.5. Posiblemente cerca a San Carlos, Estado Cojedes.-
13. e XZ PKP 15 44 26, e WZE SS 16 04 40, e Z SSS 10 24, L 27.0 (T 48), F 18 00.0. CGS: 17.9 N, 80.6 E. India. H = 15:24:55.6, h = 33 kms, M = 5.3.-
13. i WZ PKP1 23 53 04.0 C, T 1.5, A 2.2, i XWZ PKP2 53 54, i XZN pPKP1 54 45, i XWZ PP 57 38, i WE PPP 00 01 26, i Z pPPP 02 10, i E SKKS 04 10, i E 05 20, i E PSKS 08 12, i NE PPS 12 08, i N sSS 18 54, e NE SSS 24 55, e ZNE L 43.0 (T 40), e NE R 01 03.0 (T 24), F 02 00.0, d = 18 200 kms, H = 23:33:05.0, mC = 6.0. CGS: 6.1 S, 129.9 E. Mar de Banda. H = 23:33:15.4, h = 152 kms, M = 5.9.-
14. i XZ Pg 20 03 09.0 C, T 0.3, A 0.9, i XNE Sg 03 09.5, FX 03 20, d = 4 kms, H = 20:03:08.0, mC = 2.8. Región de Caracas.-
15. i XWZ PKP1 22 34 16.5 D, i XZ PKP 35 58, i WZ pPKP1 36 23, i Z PP 39 45, e Z sPP 43 17, e Z SKSP 50 03, e Z PPS 53 40, F 23 30.0, T 1.0, A 1.9.- CGS: 5.9 S, 113.2 E. Mar de Java. H = 22:15:09.6, h = 575 kms, M = 5.6.-
16. i WZ PKP 01 42 15.0 C, i Z PP 45 47, i Z SKP 47 03, i E SKKS 52 20, i E 54 09, i Z PSKS 55 39, i ZE PPS 57 53, i Z 59 19, i ZNE SS 02 04 00, i E SSS 08 53, e NE L 25 30 (T 40), i ZNE R 34.0 (T 24), F 05 00.0, d = 15 900 kms, H = 01:22:42.0, MC = 6.5, mC = 6.6. CGS: 3.5 S, 151.0 E. Nueva Irlanda. H = 01:22:47.5, h = 39 kms, M = 5.7.-
16. e XZ P 09 33 23.0, T 0.8, A 0.8, i XZ pP 33 36, e NE S 38 14, e NE sS 38 32, e NE SS 39 16, e NE L 42.5 (T 30), i NE R 44.5 (T 16), F 10 00.0, d = 3 000 kms, H = 09:27:38.0. CGS: 16.6 S, 73.7 W. Costa Sur del Perú. H = 09:27:37.4, h = 56 kms, M = 4.8.-

Continúa

## Continuación del mes de Abril de 1.969.

18. i XWZ P 17 51 51.0 C, T 0.8, A 1.2, e Z PP 53 36, e NE S 58 26, i NE SS 18 01 50, F 30.0, d = 4 800 kms, H = 17:43:52.0. CGS: 24.3 N, 109.7 W. Golfo de California. H = 17:43:53.7, h = 33 kms, M = 5.0.-
18. i XZ Pn 19 06 58.5 D, T 0.6, A 2.5, i XZ 07 10, i XZNE Pb 07 23, i XZNE Sn 08 15, iX NE Sb 08 29, iX E Sb 08 39, FX 15.0. P-azimut: SW, d = 800 kms, H = 19:05:06.5, mC = 4.8. CGS: 6.9 N, 72.9 W. Cerca a El Tope, Depto. de Santander, Colombia. H = 19:05:18.2, h = 170 kms, M = 4.6. Sentido en Bogotá y Bucaramanga.-
19. e XWZ P 08 21 22.0, i XN 21 37, e NE S 25 52, F 35.0, d = 2 850 kms, H = 08:15:52.0. CGS: 25.2 N, 46.7 W. Norte del Océano Atlántico. H = 08:16:06.5, h = 33 kms, M = 5.0.-
19. e XWZ PKP1 09 05 36.0, i XWZ PKP2 06 54, e ZE PP 10 42, F en el sismo siguiente. CGS: 6.2 S, 103.9 E. SE. de Sumatra. H = 08:45:16.0, h = 40 kms, M = 5.7.-
19. i XWZ P 09 26 06.0 C, T 1.0, A 1.2, i XZ 26 13, i ZS 29 36, i XE 29 58, i XE SS 30 34, e LR 10 11.5-18.0 (T 30-20), F 11 00.0, d = 2 050 kms, H = 09:21:51.0. CGS: 5.3 S, 77.2 W. Norte del Perú. H = 09:21:46.4, h = 26 kms, M = 5.0.-
19. i XZ Pn 14 47 35.0, T 0.7, A 1.6, i XNE Pb 47 49, i XNE Sn 48 53, i XNE Sb 49 24, i XNE Sg 49 45, FX 53.0. P-azimut: SW, d = 800 kms, H = 14:45:43.0, mC = 4.6. CGS: 7.0 N, 73.1 W. Cerca a Piedecuesta, Depto. de Santander, Colombia. H = 14:45:53.4, h = 140 kms, M = 4.1.-
21. i XWZ P 02 24 14.0 D, T 0.5, A 0.6, i XZ PP 25 36, i NE S 28 28, i N sS 29 02, i E SS 29 32, ZNE LR 31.0-33.5 (T 26-22), F 04 00.0, d = 2 600 kms, H = 02:19:04.0, MC = 5.2, mC = 5.7. CGS: 14.1 N, 91.0 W. Guatemala. H = 02:19:07.1, h = 82 kms, M = 5.5.-
21. i XZ PKP 02 31 33.0 D, T 1.5, A 1.6, FX 33.0.-
21. e WZ P 07 35 48.0, e XWZ PKP 38 43, i XWZ PP 41 12, i ZNE SKP 42 14, i E PPP 44 26, e E SKKS 48 20, e E S 49 32, e NE SS 59 00, e NE SSS 08 03 54, e NE L 19.0 (T 50), e NE R 33.0 (T 22), F 11 00.0, d = 14 900 kms, H = 07:19:22.0, MC = 6.0, mC = 6.2. CGS: 32.2 N, 131.9 E. Kyushú, Japón. H = 07:19:27.5, h = 41 kms, M = 6.1.-
22. e XWZ P 00 34 31.0, e Z PP 35 04, e NE S 38 40, e NE SS 39 32, e NE L 41.0 (T 32), F 01 20.0, d = 2 550 kms, H = 00:29:26.0. CGS: 14.1 N, 91.0 W. Guatemala. Sentido en San Salvador, El Salvador. H = 00:29:25.0, h = 89 kms, M = 4.8.-

Continúa

## Continuación del mes de Abril de 1.969.

22. i XWZ P 04 48 01.5 C, T 1.5, A 1.3, e Z PP 50 20, i NE S 56 04, i NE PS 56 22, i NE ScS 58 04, i NE SS 05 00 00, e NE L 04.5 (T 36), e NE R 08.0 (T 28), F 06 40.0. P-azimut: SW, d = 6 600 kms, H = 04:38:05.0, MC = 5.7.-  
CGS: 26.7 S, 114.2 W. Isla Pascua. H = 04:38:03.0, h = 33 kms, M = 5.3.-
22. i WZ P 06 41 54.0 C, i XZ PcP 42 52, i Z PP 43 54, i ZNE S 50 00, i N ScS 51 53, i NE SS 54 02, e ZNE MR 07 01.0-04.0 (T 34-20), F 10 00.0. P-azimut: SW, d = 6 600 kms, H = 06:31:58.0.  
CGS: 26.8 S, 114.1 W. Isla Pascua. H = 06:31:57.5, h = 33 kms, M = 5.6.-
24. i XZ P 22 34 16.0 C, T 0.9, A 1.2, i XZ PP 34 36, e N S 38 02, e NE SS 38 50, e NE LR 41.0-43.5 (T 28-16), F 23 00.0, d = 2 2 50 kms, H = 22:29:41.0.  
CGS: 11.5 N, 87.0 W. Cerca a la costa de Nicaragua. H = 22:29:46.6, h = 50 kms, M = 4.4.-
25. i XWZ P 03 37 52.0 C, T 1.3, A 1.8, i XZPP 38 10, e N S 40 40, i NE 40 59, i ZNE LR 43.0-47.0 (T 26-16), F 05 30.0. P-azimut: WSW, d = 1 600 kms, H = 03:34:26.0, MC = 5.2, mC = 5.7.  
CGS: 7.5 N, 82.1 W. Sur de Panamá, H = 03:34:17.7, h = 25 kms, M = 5.4.-
25. e XZ P 04 04 00.2, i XZ PP 04 15, FX 06.0.  
CGS: 7.5 N, 81.9 W. Sur de Panamá. H = 04:00:19.4, h = 25 kms, M = 4.3.-
25. i XZ P 07 18 23.0 C, T 0.8, A 1.1, i XZ 18 26, i XZ 18 51, FX 20.0.-
25. i XZ P 09 23 32.0 C, T 0.6, A 0.8, i XZ 23 42, FX 25.0.-
25. i XZ P 16 51 32.8 C, T 1.0, A 1.2, i XZ pP 51 56, FX 53.0.  
CGS: 13.3 N, 89.2 W. El Salvador. H = 16:46:31.5, h = 70 kms, M = 4.3.-
26. i XZ P 06 06 33.5 D, T 0.8, A 1.6, i Z PP 08 16, i N PcS 12 18, i NE S 13 10, i NE SS 15 53, F mezclado con el sismo siguiente. d = 4 700 kms.  
CGS: 30.6 S, 71.4 W. Cerca a la costa Central de Chile. H = 05:58:49.0, h = 23 kms, M = 5.6.-
26. i XZ P 06 10 31.0 D, T 0.8, A 3.8, i XZ PP 12 21, i N PcS 16 42, i N S 17 12, i NE SS 20 04, F 09 30.0, d = 4 750 kms.  
CGS: 30.6 S, 71.5 W. Cerca a la costa Central de Chile. H = 06:02:49.0, h = 33 kms, M = 5.9.-
26. e XZ P 06 51 10.0, i XZ 52 21, F 54.0.-
27. i XZ Pn 00 35 35.0 D, T 0.8, A 1.0, e XZ Pb 35 50, i XNE Sn 36 50.5, i XN Sb 37 14, FX 39.0. P-azimut: SW, d = 800 kms, H = 00:33:43.0, mC = 4.4.-

Continúa



Continuación del mes de Abril de 1.969.

27. e WZ PKP1 01 57 16, i XZ PKP2 57 41, e Z PP 02 02 24, e Z PSKS 12 36, F 04 00.0.  
CGS: 0.9 N, 120.1 E. Norte de las Islas Célebes. H = 01:37:14, h = 12 kms, M = 5.4.-
27. i XWZ P 13 10 51.8 C, T 0.9, A 2.8, e Z PP 13 38, e NE S 20 28, e NE PS 21 08, e NE SS 25 24, e NE L 33 30 (T 40), e ZNE MR 38.0-45.0 (T 30-20), F 15 00.0, d = 8 300 kms, H = 12:59:14.0, MC = 5.5, mC = 5.9.  
CGS: 57.7 S, 25.4 W. Sur de las Islas Sandwich. H = 12:59:07.3, h = 42 kms, M = 5.7.-
28. e WZ PKP 01 05 44, e Z PPP 11 32, e Z SS 27 12, e Z SSS 32 40, e NE L 53.0 (T 38), F 03 00.0.  
CGS: 13.3 N, 145.1 E. Islas Marianas. H = 00:46:25.6, h = 51 kms, M = 5.3.-
28. e WZ SKS 07 45 56.0, e N S 51 50, e ZNE PSKS 53 48, F 09 00.0.  
CGS: 22.4 S, 177.7 W. Sur de las Islas Fiji. H = 07:25:29.7, h = 296 kms, M = 5.9.-
28. e XZ (P) 07 47 17.0, i XZ 47 52.5, FX 49.0.-
28. i XZ Pn 15 34 13.0 C, T 0.5, A 1.4, e XNE (Sn) 35 12, FX 37.0.-
28. e WZ PP 20 00 52.0, e ZE pPP 01 44, i Z PKS 02 22, F 21 00.0.  
CGS: 7.9 S, 158.8 E. Islas Salomón. H = 19:39:05.5, h = 77 kms, M = 5.7.-
28. i XWZ P 23 29 46.5, T 1.1, A 2.4, i XZ 29 52, e WZ PP 31 54, e E S 37 04, e NE SS 40 46, e NE SSS 42 16, e ZNE L 46.5 (T 36), e ZNE R 50.0 (T 36), F 01 00.0. P-azimut: NW, d = 5 600 kms, H = 23:20:46.5, MC = 5.1, mC = 5.7.  
CGS: 33.4 N, 116.4 W. Sur de California. H = 23:20:42.9, h = 20 kms, M = 5.7.-
30. i XZ P 17 09 08.0 D, T 1.2, A 1.6, e XZ PP 11 07, FX 10.0.  
CGS: 37.1 N, 116.0 W. Sur de Nevada, U.S.A. H = 17:00:00.0, h = 0 kms, M = 5.3.-
30. i WZ P 20 33 22.0 D, e Z PP 36 30, e N S 44 06, e E PS 45 06, F 22 00.0, d = 9 850 kms, H = 20:20:32.0.  
CGS: 39.2 N, 28.6 E. Turquía. H = 20:20:31.8, h = 9 kms, M = 5.1.-

G.Fiedler

F.A.Miranda

/G.N.

27 APR 1970

COMANDANCIA GENERAL DE LA MARINA  
SERVICIO DE HIDROGRAFIA Y NAVEGACION  
OBSERVATORIO DE SISMOLOGIA  
Y MAREAS TERRESTRES  
Caracas - Venezuela  
BOLETIN SISMICO MENSUAL

Mayo 1.969

1. e WZ P 02 56 24.0, e WZ PP 59 12, i WNE S 03 06 02, i WNE PS 06 34, i WNE SS 10 46, e WE SSS 14 06, i WZNE LR 20.5-27.0 (T 38-16), F 05 00.0, d = 8 250 kms, H = 02:44:59.0, MC = 5.5. CGS: 50.0 S, 114.3 W. Isla Pascua. H = 02:45:05.0, h = 33 kms, M = 4.9.-
1. e WZ P 19 20 06.0, e WZ PP 24 44, i WNE SKS 29 54, i WE SKKS 30 48, i WN S 31 44, i WN sS 33 10, e WNE SS 39 22, e WNE SSS 43 38, F 21 30.0, d = 12 350 kms, H = 19:05:28.0. CGS: 16.8 S, 174.7 W. Islas Tonga. H = 19:05:24.7, h = 205 kms, M = 6.0.-
2. e XZ Pg 22 12 24.5, i XNE Sg 12 26.5, FX 12 50, d = 16 kms, H = 22:12:21.5, mC = 2.8 aprox. Región de Caracas.-
3. e XZ P 03 23 47.0, T 0.7, A 0.7. i XZ pP 24 01.5, F 25.0. CGS: 13.0 N, 88.4 W. El Salvador. Sentido en San Salvador. H = 03:19:06.3, h = 77 kms, M = 4.5.-
3. i XZ P 04 13 53.5 G, T 1.0, A 1.3, i XNE PP 14 19, i XNE S 17 25, F 23.0, d = 2 100 kms, H = 04:09:32.0. CGS: 5.6 S, 77.2 W. Norte del Perú. H = 04:09:30.6, h = 21 kms, M = 4.3.-
4. i XZ P 06 53 34.5 D, T 0.5, A 0.7, e XN 56 27, FX 59.0.-
4. e WN PPS 13 09 08, e WN SS 14 40, e WN SSS 19 16, e WN L 30.0 (T 40), F 15 30.0. CGS: 17.4 S, 168.9 E. Islas Nuevas Hébridás. H = 12:36:33.4, h = 11 kms, M = 5.5.-

Microsismicidad alta en S.P.

Reducida al movimiento sinusoidal del suelo (Ground Motion).

	T	a(u)	T	a(u)	T	a(u)
4. 12h Z	1.5	0.12	N 1.3	0.13	E 1.2	0.05
14h Z	1.3	0.09	N 1.5	0.12	E 1.3	0.06
16h Z	1.5	0.11	N 1.5	0.14	E 1.5	0.07
18h Z	1.3	0.06	N 1.4	0.07	E 1.5	0.07

5. e WZ PP 02 29 38, e WZ S 37 26, e WZ (SS) 47 36, e ZNE R 03 12.0 (T 20), F 04 30.0. CGS: 57.8 S, 147.6 E. W. de la Isla Macquarie. H = 02:08:57.2, h = 33 kms, M = 4.9.-

Continúa

Continuación del mes de Mayo de 1969.

- 5. e XZ P 05 44 08.5, e WE PS 52 20, e WZ SS 56 40, e WZNE L 06 00.5 (T 28), F 07 00.0.  
CGS: 36.0 N, 10.4 W. Norte del Océano Atlántico. H = 05:34:23.5, h = 29 kms, M = 5.5.-
- 5. i XWZ P 14 00 22.0 C, T 1.0, A 1.5, i XZ 00 32, e WZ PP 01 40, e WZ PPP 02 14, i WNE S 06 32, i WE SS 09 06, i WZNE SSS 09 40, e WNE L 13.0 (T 28), e WNE R 16.0 (T 16), F 15 30.0, P-azimut: S, d = 4 700 kms, H = 13:52:39.0, MC = 5.5, 30.8 S, 71.8 W. Cerca a la costa central de Chile. H = 13:52:39.6, h = 38 kms, M = 5.3.-
- 5. i XZ P 21 58 11.5 C, T 0.6, A 0.8, e WZ PP 22 00 40, i WNE S 07 04, e WNE PS 07 38, e NE SS 11 06, e WNE SSS 13 44, e NE L 18.5 (T 30), e WZNE R 23.0 (T 20), F 23 00.0, d = 7 300 kms, H = 21:47:26.0, MC = 4.8.  
CGS: 66.8 N, 18.2 W. Islandia. H = 21:47:31.7, h = 33 kms, M = 5.2.-
- 6. i XZ Pg 14 47 19.0 D, T 0.2, A 0.7, i XZNE Sg 47 20.5, FX 47 40, P-azimut: SW, d = 12 kms, H = 14:47:16.5, mC = 3.2. Cerca a Antímano.
- 6. i XZ P 17 03 42.0 D, T 0.6, A 0.7, e XE 05 18, e XNE 06 09, FX 08.0.-
- 6. i XZ Pg 18 00 25.8 C, T 0.2, A 0.8, i XZNE Sg 00 26.5, FX 00 40, P-azimut: SW, d = 10 kms, H = 18:00:23.8, mC = 3.0. Cerca a Antímano.-
- 7. e XZ P 01 07 20.5, T 1.3, A 0.5, e XZ 07 36, FX 09.0.-
- 7. e XZ PKP1 09 12 31.0, i XZ PKP2 12 54.5, i XZ sPKP1 13 26, FX 15.0.  
CGS: 12.1 N, 124.6 E. Samar, Islas Filipinas. H = 08:52:50.8, h = 134 kms, M = 5.2.-
- 7. i XZ P 13 54 10.5 C, T 1.0, A 5.0, i XZ 54 32, F 40.0.  
CGS: 37.3 N, 116.5 W. Sur de Nevada, U.S.A. H = 13:45:00.0, h = 0 kms, M = 5.8.-

Microsismicidad alta en S.P.  
Reducida al movimiento sinusoidal del suelo (Ground Motion).

- |          | T   | a(u) | T     | a(u) | T     | a(u) |
|----------|-----|------|-------|------|-------|------|
| 7. 16h Z | 1.0 | 0.02 | N 1.0 | 0.03 | E 1.0 | 0.02 |
| 18h Z    | 1.4 | 0.09 | N 1.5 | 0.10 | E 1.5 | 0.09 |
| 20h Z    | 1.4 | 0.07 | N 1.3 | 0.07 | E 1.0 | 0.03 |
- 8. i XZ PKP1 22 56 52.0C, T 0.7, A 0.9, i XZ pPKP1 57 41.5, FX 23 00.0.  
CGS: 5.6 S, 146.2 E. Este de Nueva Guinea. H = 22:37:16.8, h = 76 kms, M = 5.1.-

Continúa

Continuación del mes de Mayo de 1.969.

9. i XZ Pn 10 37 10.5 C, T 0.6, A 0.8, e XNE Sn 38 26.5, i XN Sn 38 29, FX 41.0, d = 800 kms, H = 10:35:18.5, mC = 4.4.-

Microsismicidad alta en S.P.

Reducida al movimiento sinusoidal del suelo (Ground Motion)

		T	a(u)		T	a(u)		T	a(u)	
9.	14h	Z	1.2	0.06	N	1.1	0.04	E	1.2	0.04
	16h	Z	1.5	0.16	N	1.5	0.16	E	1.4	0.12
	18h	Z	1.8	0.35	N	1.8	0.25	E	1.8	0.25
	20h	Z	1.9	0.35	N	1.7	0.25	E	2.0	0.25
	22h	Z	2.0	0.25	N	1.8	0.23	E	2.0	0.20
	24h	Z	1.6	0.14	N	1.8	0.18	E	1.8	0.19
10.	02h	Z	1.5	0.10	N	1.7	0.15	E	1.7	0.12

9. i XZ Pg 20 07 08.5 C, T 0.3, A 1.2, i XNE Sg 07 11, FX 08.0, P-azimut: ENE, d = 20 kms, H = 20:07:04.5, mC = 3.2. Sentido por pocas personas al Este de Caracas.- ✓
10. i XZ Pg 01 05 08.5 C, T 0.3, A 0.8, i XE Sg 05 10.2, FX 06.0, d = 14 kms, H = 01:05:05.5, mC = 3.0. Región de Caracas.-
10. e WZ (P) 13 06 50.0, e WE 26 12, e WE 32 10, F 14 00.0.-
12. i XZ Pg 18 22 14.5 C, T 0.2, A 0.9, i XNE Sg 22 15.2, FX 22 30, P-azimut: NE, d = 6 kms, H = 18:22:13.0, mC = 3.1. Región de Caracas.-
12. e XZ Pn 21 57 31.0, T 0.7, A 0.8, e XNE Sn 58 48, FX 22 01.0, d = 800 kms, H = 21:55:39.0, mC = 4.3.-
13. i XZ P 12 41 19.0 C, T 0.8, A 1.0, i XZ 41 32, eWZE (S) 45 12, eWZNE R 48 40 (T 20), F 13 00.0.-
13. e XWZ P 14 20 12.0, F en el sismo siguiente. CGS: 11.4 N, 86.4 W. Cerca a la costa de Nicaragua. H = 14:15:52.0, h = 71 kms, M = 4.9.-
13. i XWZ P 14 21 10.5 C, T 1.0, A 7.5, i XZ pP 21 12.5, i XZ PP 21 14.0, i WNE S 24 42, i WNE sS 25 20, F mezclado con el sismo siguiente. P-azimut: NW, d = 2.100 kms, H = 14:16:49.0. CGS: 11.5 N, 86.4 W. Cerca a la costa de Nicaragua. H = 14:16:52.8, h = 79 kms, M = 5.6.-
13. i XZ PKP1 14 49 20.0 C, T 0.8, A 2.5, i XZ PKP2 50 48, FX 52.0. CGS: 7.2 S, 120.9 E. Mar Flores, H = 14:30:19.6, h = 616 kms, M = 5.6.-
13. i WZ P 17 42 48.0 C, e XZ PP 43 20, i WN S 46 32, i WN SS 47 32, eWZNE L 48.5 (T 30), eWZNE R 52.0 (T 20), F mezclado con el sismo siguiente. d = 2 150 kms, H = 17:38:22.0, MC = 4.7. CGS: 11.8 N, 86.2 W. Cerca a la costa de Nicaragua. H = 17:38:28.5, h = 46 kms, M = 4.9.-

Continúa

## Continuación del mes de Mayo de 1.969.

13. e WZ P 18 16 02.0, i XZ PP 16 22, iWN S 19 40, iWN sS 20 48, e WZNE R 25.0 (T 20), F 19 20.0, d = 2 150 kms, H = 18:11:36.0. CGS: 11.5 N, 86.5 W. Cerca a la costa de Nicaragua. H = 18:11:39.0, h = 72 kms, M = 4.6.-
13. e XZ P 22 54 34.0, FX 56.0.-
14. i WZ P 13 53 22.0 C, i XZ PP 53 40, i WN S 56 58, i WN SS 58 10, i WZNE LR 59.0-14 05.0 (T 30-16), F 15 00.0, d = 2 150 kms, H = 13:48:57.0, MC = 4.5.-  
CGS: 11.5 N, 86.2 W. Cerca a la costa de Nicaragua. H = 13:49:03.1, h = 62 kms, M = 4.8.-
14. i WZ P 19 46 20.0 C, T 1.2, A 2.5, i WZ PP 49 44, iWNE SKS 56 50, i WE S 57 32, i WNE SS 20 04 00, e WZNE L 16.0 (T 40), e WZNE R 22.0 (T 30), F 24 00.0, P-azimut: NW, d = 10 700 kms, H = 19:32:53.0.  
CGS: 51.3 N, 179.9 W. Andreanof, Islas Aleutianas. H = 19:32:54.2, h = 21 kms, M = 6.2.-
14. i XZ Pn 22 43 57.0 D, T 0.7, A 1.6, i XZ Pb 44 09, iXNE Sn 45 13, i XZNE Sb 45 30, FX 48.0, d = 800 kms, H = 22:42:05.0, mC = 4.7.-
15. i XZ PKP1 08 12 56.0 D, T 0.7, A 1.9, i XZ PKP2 13 04, FX 15.0. CGS: 16.1 N, 121.9 E. Luzón, Islas Filipinas. H = 07:53:03.8, h = 57 kms, M = 5.2.-
15. i XZ Pg 16 23 24.5 D, T 0.3, A 0.6, i XNE Sg 23 27.5, FX 23 40, P-azimut: SE, d = 24 kms, H = 16:23:20.0, mC = 2.9. Cerca a Tuzmare.-
15. i XWZ Pn 20 45 32.0 D, T 0.9, A 10.0, i XZ Pb 46 02, i XZNE Sn 47 05, iWNE Sb 47 36, i WE R 48.5 (T 20), F 23 00.0, P-azimut: NE, d = 950 kms, H = 20:43:22.0, MC = 5.5.  
CGS: 16.8 N, 61.3 W. Antillas Menores. H = 20:43:33.4, h = 50 kms, M = 5.7.-
16. e WZ PP 07 22 36.0, i WE SKS 28 36, i WNE SKKS 29 40, i WZNE PS 32 18, e WNE SS 38 36, e WNE SSS 42 32, e WZNE MR 59.0, 08 03.0 (T 24-16), F 09 30.0.  
CGS: 27.5 S, 176.6 W. Islas Kermadec. H = 07:03:22.2, h = 50 kms, M = 5.4.-
17. e WZ S 15 35 48.0, e WZ SS 38 40, e WE L 41.0 (T 30), e ZNE R 44.0 (T 20), F 16 20.0.  
CGS: 27.3 S, 71.0 W. Cerca a la costa de Chile. H = 15:22:13.0, h = 33 kms, M = 4.7.-
17. i XZ Pg 15 36 47.5 C, T 0.4, A 1.2, i XNE Sg 36 49.2, FX 16 00.0. P-azimut: SE, d = 14 kms, H = 15:36:44.5, mC = 2.9. Cerca a El Hatillo.-
18. e WZ PKP 00 37 26, e WZE SKP 38 26, eWZ PSKS 47 36, eWZNE R 01 26.0 (T 20), F 02 30.0.  
CGS: 9.0 S, 158.4 E. Islas Salomón. H = 00:15:31.5, h = 16 kms, M = 5.6.-

Continúa

## Continuación del mes de Mayo de 1.969.

18. i XZ P 08 55 55.0 D, T 1.0, A 1.4, i XZ 56 52, e WZ PP 58 34, i WNE S 09 05 28, e WNE SS 10 20, e WNE L 19.0 (T 36), e WZNE R 24.5 (T 20), F 10 00.0, d = 8 100 kms, H = 08:44:29.0, MC = 5.0. CGS: 60.3 N, 146.0 W. SE de Alaska. H = 08:44:03.6, h = 6 kms, M = 5.4.-
18. e XZ Pg 17 46 47.0, e XNE Sg 46 49.5, FX 47.0, d = 20 kms, H = 17:46:44.0, mC = 2.8 aprox..-
19. e WZ P 01 45 32.0, e XN (S) 49 20, F 54.0. CGS: 5.2 S, 76.5 W. Norte del Perú. H = 01:41:30.4, h = 33 kms, M = 3.9.-
20. e XZ Pn 03 13 45.0, e XNE Sn 13 56, FX 14 30, d = 80 kms, H = 03:13:35.0.-
20. i XZ Pg 15 19 47.0 D, T 0.2, A 0.7, i XZNE Sg 19 47.5, FX 20.0, d = 4 kms, H = 15:19:46.0, mC = 3.1.-
20. i XZ Pg 20 35 16.2 D, T 0.2, A 1.0, i XZNE Sg 35 17.0, FX 35 30, P-azimut: SW, d = 7 kms, H = 20:35:14.7, mC = 3.2. Cerca a Antimano.-
21. e WZ PKP1 03 16 44.0, i XWZ PKP2 17 10, e WZ PP 20 36, e WZ (PPP) 25 10, e WZN R 04 28.0 (T 20), F 05 30.0. CGS: 11.7 N, 125.8 E. Samar, Islas Filipinas. H = 02:56:49.2, h = 26 kms, M = 5.2.-
21. i XZ Pg 22 19 07.2 C, T 0.3, A 0.7, i XZ Sg 19 09.5, i XNE 19 10.5, FX 19 30, P-azimut: SW, d = 18 kms, H = 22:19:03.7, mC = 2.9. Cerca a Macarao, Depto. Libertador.-
23. i WZ P 13 17 02.0 D, i XZ PcP 17 12, i WZ 17 30, e WZ PP 20 17, e WZN S 27 34, e WZ PS 28 24, e WZE SS 32 56, e WNE L 48.5 (T 30), e WZNE R 56.5 (T 18), F 14 30.0, d = 9 400 kms, H = 13:04:32.0. CGS: 53.4 N, 160.2 W. Sur de Alaska. H = 13:04:36.6, h = 32 kms, M = 5.6.-
23. i XZ Pn 23 13 05.3 C, T 0.5, A 1.5, i XNE Sn 14 08.2, i XNE Sg 14 50, FX 17.0, d = 680 kms, H = 23:11:30.0, mC = 4.5.-
24. e WZ PP 13 23 50.0, e WE (S) 28 12, e WZNE R 35.0 (T 20), F 14 00.0. CGS: 3.7 S, 102.7 W. NE. de la Isla Cordillera. H = 13:14:55.7, h = 33 kms, M = 4.3.-
25. e WZ P 05 26 30.0, e WE S 30 40, e WZNE R 37.0 (T 12), F 06 00.0, d = 2 600 kms, H = 05:21:15.0. CGS: 11.4 S, 79.5 W. Frente a la costa del Perú. H = 05:20:59.2, h = 33 kms, M = 4.2.-
25. i XWZ P 22 42 29.0 D, T 0.8, A 4.7, i XZ PcP 42 50, e WZ PP 45 26, e WE (S) 52 10, e WZ PS 53 10, e WNE L 23 05.5 (T 40), e WZNE MR 10.5-18.0 (T 30-18), F 24 00.0, MC = 5.0, mC = 5.6. CGS: 57.7 S, 25.2 W, Sur de las Islas Sandwich. H = 22:30:43.0, h = 33 kms, M = 5.6.-

Continúa

Continuación del mes de Mayo de 1.969.

26. e XZ (Pn) 05 55 32.5, i XNE Sn 56 11, i XNE Sg 56 31, FX 58.0.-
26. e WZ P 06 00 00, e XZ PP 00 32, e WE S 04 38, e WNE SS 05 52, e WN L 07.0 (T 36), e WNE MR 09.0-12.0 (T 28-20), F 07 00.0, d = 2 950 kms, H = 05:54:20.0, MC = 4.7.  
CGS: 15.8 S, 94.4 W. Cerca a la costa de Oaxaca, México. H = 05:54:18.4, h = 34 kms, M = 5.1.-
26. i WZ PKP1 15 57 14.0 D, i XZ PKP2 57 34, i WZ SKP 16 00 46, e WZ PP 01 12, e WE SKKS 08 12, e WN PSKS 11 36, e WE PPS 14 41, e WNE SS 20 44, e WN SSS 27 04, e WZNE L 51.0 (T 40), e WZNE R 17 08.0 (T 20), F 18 00.0, d = 17 300 kms, H = 15:37:24.0.  
CGS: 11.8 N, 125.8 E. Samar, Islas Filipinas. H = 15:37:16.8, h = 14 kms, M = 5.2.-
26. e XZ Pg 19 54 21.5, i XNE Sg 54 22.5, FX 54 30, d = 8 kms, H = 19:54:19.5, mC = 2.8 aprox., Región de Caracas.-
26. i XZ Pg 20 27 01.0 C, T 0.3, A 2.2, i XZNE Sg 27 03, i XNE 27 04, FX 27 20, P-azimut: SE, d = 16 kms, H = 20:26:58.0, mC = 3.4. Cerca a El Hatillo.-
26. i XE Pg 22 31 00.0 C, i XZNE Sg 31 03, FX 31 20, d = 24 kms, H = 22:30:55.5, mC = 2.9 aprox..-
27. e WZ P 12 30 44.0, e WZ PP 33 44, e WZ PPP 35 35, e WZN S 40 40, e WZN PS 41 16, e WZNE SS 45 44, e WE SSS 49 12, e WZNE LR 55.0-59.0 (T 32-16), F 14 00.0, d = 8 650 kms, H = 12:18:48.0, MC = 5.1.  
CGS: 59.9 S, 26.5 W. Sur de las Islas Sandwich. H = 12:18:45.6, h = 19 kms, M = 5.1.-
27. e XZ Pn 12 53 09.0, i XN Pb 53 21, e XNE Sn 54 02, i XZNE Sn 54 09, FX 56.0, d = 580 kms, H = 12:51:49.0.-
28. e XZ PKP1 04 00 58.0, i XZ PKP2 01 13, FX 02.0.  
CGS: 11.8 N, 125.8 E. Samar, Islas Filipinas. H = 03:41:01.8, h = 6 kms, M = 5.3.-
28. e XZ Pn 04 50 18.0, i XZ Pb 50 40.5, i XNE Sn 51 40, i XNE Sb 51 54.5, FX 53.0, d = 850 kms, H = 04:48:20.0.-
28. e XZ Pn 09 45 29.5, e XN Pg 46 06, i XNE Sn 46 47, e XZE Sb 47 09, FX 49.0, d = 820 kms, H = 09:43:34.0.-
28. i WZ P 09 56 08.0 C, i XZ pP 56 21.5, FX 58 00.  
CGS: 1.2 S, 77.3 W. Ecuador. H = 09:52:35.8, h = 201 kms, M = 4.0.-
28. i XWZ P 13 33 45.5 C, T 2.2, A 10.0, i XZ PP 33 57, i NE S 36 42, i XWZNE SS 37 07, F 15 30 00, P-azimut: SW, d = 1 650 kms, H = 13:30:12.0.  
CGS: 2.1 S, 76.9 W. Frontera Perú-Ecuador. H = 13:30:08.9, h = 177 kms, M = 5.5.-

Continúa



Continuación del mes de Mayo de 1.969.

- 28. i XZNE Pg 18 02 31.0 D, T 0.3, A 1.7, i XNE Sg 02 33.5, FX 03 00, P-azimut: SE, d = 20 kms, H = 18:02:27.0, mC = 3.4. Entre El Hatillo y Tasmare. Sentido al Este de Caracas.-
- 29. e WZ PS 07 45 46.0, e WZE PPS 46 40, e WZNE L 08 08 30 (T 38), F 09 00 00. CGS: 15.0 S, 173.3 W. Islas Tonga. H = 07:17:26.8, h = 33 kms, M = 4.9.-
- 29. e XZ P 20 30 47.5, i XZ 30 50.5, i XZ pP 31 29.5, FX 32.0. CGS: 14.7 N, 90.6 W. Guatemala. H = 20:25:56.2, h = 218 kms, M = 4.8.-
- 29. i XZ Pn 21 22 19.0 D, T 0.8, A 5.3, i XZ Pb 22 29.5, i XNE-Sn 23 31, i XNE Sn 23 37, FX 30.0, P-azimut: SW, d = 780 kms, H = 21:20:31.0, mC = 4.5. Depto. de Santander, Colombia.
- 29. i XZ Pn 22 50 41.0 D, T 0.9, A 1.8, i XZ Pb 50 52, i XNE Sn 51 55.5, i XNE Sn 51 58, FX 57.0, P-azimut: SW, d = 780 kms, H = 22:49:02.0. CGS: 7.4 N, 72.9 W. Cerca a California, Depto. de Santander, Colombia. H = 22:49:02.4, h = 145 kms, M = 4.0.-
- 30. e WZ P 16 10 12.0, e WZ (PKP) 12 06, e WZ PP 15 04, e WNE SKS 21 02, i WNE SKKS 22 06, e WZE PS 24 32, i WZ (PPS) 25 02, i WN 26 54, e WZ SS 31 00, e WZ SSS 35 56, R 17 22.0 (T 22), F 20 00.0. CGS: 32.2 S, 178.1 W. Sur de las Islas Kermadec. H = 15:55:37.1, h = 34 kms, M = 5.2.-
- 31. i XWZ P 11 10 58.0 C, T 1.5, A 11.7, i XZ PP 11 02, i WNE S 14 01, i WZNE SS 14 38, F 40.0, P-azimut: SW, d = 1 750 kms, H = 11:07:15.0. CGS: 1.8 S, 77.7 W. Ecuador. H = 11:07:17.1, h = 172 kms, M = 5.1.-
- 31. e XZ Pg 16 45 42.5, i XNE Sg 45 45.5, FX 46.0, d = 24 kms, H = 16:45:38.0, mC = 2.8 aprox..-
- 31. e WZ PP 22 43 34, e WZNE SKS 49 40, e WN S 51 14, e WZE PS 52 46, e WZE PPS 53 50, e WNE SS 58 20, e WNE SSS 23 02 24, WZNE L 15.5 (T 30), WZNE MR 18.0-21.0 (T 22-16), F 02 00.0. CGS: 16.0 S, 172.9 W. Islas Samoa. H = 22:24:32.0, h = 15 kms, M = 5.2.-

G.Fiedler

Francisco A.Miranda G.

/G.N.

Caracas, 5 de Noviembre de 1.969





COMANDANCIA GENERAL DE LA MARINA  
 SERVICIO DE HIDROGRAFIA Y NAVEGACION  
 OBSERVATORIO DE SISMOLOGIA  
 Y MAREAS TERRESTRES  
 Caracas - Venezuela  
 BOLETIN SISMICO MENSUAL

Junio 1.969

1. e XZ P 06 12 19.5, i XZ 12 32, i XZ PP 13 04, i WNE S 16 40, L 19.0 (T 30), R 22.0 (T 20), F 30.0, d = 2 600 kms, H = 06:07:04.5.  
CGS: 9.8 S, 78.9 W. Cerca a la costa Norte del Perú. H = 06:07:11.3, h = 44 kms, MB = 4.8.-
1. e XZ P 18 57 51.5, e XZ PP 59 08, e WNE S 03 32, i WN PcS 04 04, i WN SS 06 06, L 10.0 (T 28), F 20 00.0, d = 3 900 kms, H = 18:50:56.0.  
CGS: 8.7 N, 102.6 W. Frente a la costa de México. H = 18:50:54.0, h = 33 kms, MB = 4.6.-
1. i XZ Pn 23 50 50.5 D, T 0.3, A 1.9, i XZ 50 51.5, i XZ Pb 50 53.5, i XZ Pg 50 58.5, i XNE Sn 51 13.5, i XNE Sb 51 17, i XNE Sg 51 19, FX 51 30. P-azimut: W-WSW, (N 115 W), d = 175 kms, H = 23:50:29.5, mC = 4.0, epicentro al Sur de Nirgua-Salom, 10.1 N, 68.5 W; causó pánico en estas partes (5 MCS). No fue sentido en Valencia, Barquisimeto y Pto. Cabello.-
1. e XZ Pg 23 43 36.0, i XNE Sg 43 40.5, FX 44.0, d = 36 kms, H = 23:43:28.5, mC = 2.8 aprox.-
2. i XZ Pn 05 58 40.5 D, T 0.3, A 0.7, i XN Sn 59 18.5, F 06 01.0, d = 380 kms, H = 05:57:48.5, mC = 4.1.-
2. e XZ P 09 59 38.0, i WNE S 10 09 15, i WNE SS 14 10, i WNE L 23 00 (T 32), F 11 00 00, d = 8 300 kms, H = 09:48:00.0.  
CGS: 59.5 N, 144.7 W. Golfo de Alaska. H = 09:47:59.5, h = 33 kms, MB = 4.7.-
2. i XZ P 11 12 04.0 C, T 0.6, A 0.9, i XZ 12 05.5, e WE S 15 35, F 30.0, d = 2 150 kms, H = 11:07:43.0.  
CGS: 8.4 S, 74.3 W. Frontera Perú-Brasil, H = 11:07:36.6, h = 149 kms, MB = 5.0.-
2. e XZ Pg 16 44 03.0, e XN Sg 16 44 06.5, FX 44 25, d = 28 kms, H = 16:43:57.5, mC = 2.8 aprox.-
3. e XZ P 04 05 35.5, i XZ 05 37.5, i WZ PP 07 12, i WNE S 11 46, e WNE SS 14 36, e WNE SSS 15 18, e WNE LR 16.5-21.0 (T 36-24), F 05 00 00, d = 4 400 kms, H = 03:58:04.0.  
CGS: 19.1 N, 107.5 W. Frente a la costa de Jalisco, México. H = 03:58:01.5, h = 33 kms, MB = 5.1 : MS = 5.1.-
4. e WE SKKS 05 05 10.0, e WE PS 07 54, e WE SS 14 13, e WNE L 34 30 (T 26), F 06 00 00.  
CGS: 32.3 S, 177.8 W. Sur de las Islas Kermadec. H = 04:38:39.0, h = 33 kms, MB = 4.7.-

Continúa

Continuación del mes de Junio de 1.969.

4. e WZ P 14 35 36.0, e WZ PS 44 32, e WZ PPS 45 40, e WNE SS 50 40, eR 15 10.0 (T 20), F 15 45.0.  
CGS: 16.3 S, 172.7 W. Islas Samoa. H = 14:16:26.0, h = 43 kms, MB = 4.9; MS = 5.1.-
4. i XZ P 20 40 09.7, T 1.3, A 1.4, i WE S 44 16, i WN SS 44 36, MR 46.2 (T 40), MR 49.2 (T 18), F 21 10.0, d = 2 500 kms, H = 20:35:10.0.  
CGS: 11.9 N, 43.8 W. Océano Atlántico. H = 20:35:10.1, h = 33 kms, MB = 4.9, MS = 4.2.-
5. ei XZ P 20 45 25.4 D, T 0.7, A 0.9, i WN S 49 56, i WN SS 51 30, eR 21 03.0 (T 16), F 21 40.0, d = 2 850 kms, H = 20:40:06.  
CGS: 10.7 N, 41.0 W. Océano Atlántico. H = 20:39:58.9, h = 33 kms, MB = 5.2; MS = 4.8.-
5. e XZ Pg 22 24 43.0, i XNE Sg 24 45.5, FX 25.0, d = 20 kms, H = 22:24:39.0, mC = 2.8 aprox.-
6. i XZ P 16 20 40.0 C, T 0.8, A 2.2, e XZ PP 21 02, e WNE S 24 36, e WNE SS 25 38, e WNE LR 26.5-30.0 (T 35-20), F 17 20.0, d = 2 350 kms, H = 16:15:56.0, mC = 5.1; MC = 4.2.  
CGS: 12.5 N, 88.0 W. Frente a la costa de América Central. Sentido en San Salvador, El Salvador. H = 16:16:01.7, h = 48 kms, MB = 5.0; MS = 4.5.-
6. e XZ P 22 32 00.0, e XZ sP 32 45, i WNE (S) 37 06, i WNE sS 37 56, i WNE SS 39 36, F 23.0.  
CGS: 22.6 S, 68.4 W. Norte de Chile. H = 22:25:37.3, h = 125 kms, MB = 5.0.-
7. e WE SKS 05 49 24, e WE PS 53 20, e WZNE L 06 19.0 (T 32), F 07 30.0.  
CGS: 35.4 S, 179.9 W. NE. de Nueva Zelandia. H = 05:24:11.0, h = 46 kms, MB = 4.7.-
7. i XZ Pg 16 03 42.0 D, T 0.4, A 1.9, i XNE Sg 03 44.5, FX 04 20, P<sub>+</sub>azimut: E, d = 20 kms, H = 16:03:38.0, mC = 3.1. Explosión entre Petare y Guarenas.-
7. i XZ Pg 16 31 39.5 (D), T 0.4, A 0.7, i XNE Sg 31 42, FX 32.0, d = 20 kms, H = 16:31:35.0, mC = 2.7. Explosión entre Petare y Guarenas.-
7. i XZ Pg 16 51 27.5 C, T 0.4, A 0.8, i XNE Sg 51 30.5, FX 51 50, d = 24 kms, H = 16:51:21.0, mC = 2.8. Explosión entre Petare y Guarenas.-
7. i XZ P 23 00 07.5 C, T 0.9, A 1.3, i XZ PcP 00 38, FX 02.0.  
CGS: 52.5 N, 169.1 W. Islas Fox, Aleutianas. H = 22:47:15.4, h = 42 kms, MB = 5.2.-
8. e XZ (Pn) 09 10 50.5, i XNE Sn 11 41, i XZNE 11 47, FX 13.0.-

Continúa

## Continuación del mes de Junio de 1.969.

8. i XZ Pn 09 54 54.7 D, T 0.5, A 1.3, i XNE Sn 55 02, i XE 55 04, FX 56.0, P-azimut: SW, d = 60 kms, H = 09:54:45.0, mC = 3.1.  
Cerca a Cagua, Estado Aragua.-
9. i XZ PKP1 07 11 06.5 C, T 0.9, A 1.7, i XZ 11 12, i XZ PKP2 11 18, e WZ PP 14 38, F 08 00.0.  
CGS: 3.2 S, 142.9 E. Cerca a la costa Norte de Nueva Guinea.  
H = 06:51:16.1, h = 17 kms, MB = 5.2, MS = 5.3.-
9. e WZ P 09 45 28.0, e WE S 53 32, e WZNE LR 10 02 30-06.5 (T 36-20), F 20.0, d = 6 400 kms, H = 09:35:38.2.  
CGS: 7.0 S, 12.7 W. Isla Ascensión. H = 09:35:38.2, h = 33 kms, MB = 4.9.-
9. i XZ P 17 49 59.5 D, i XWZ PP 50 22, e WNE PcP 54 16, i WZNE S 54 30, i WNE SS 55 30, i WNE R 58 30, F 19 30 00, d = 2 600 kms, H = 17:44:49.0, mC = 4.8.  
CGS: 8.5 S, 80.5 W. Frente a la costa Norte del Perú. H = 17:44:56.7, h = 33 kms, MB = 4.9; MS = 4.5.-
9. e WZ SKS 22 18 28, e WE PS 21 42, i WNE MR 48 30-53.5 (T 20-16), F 00 00 00.  
CGS: 23.5 S, 175.0 W. Islas Tonga. H = 21:53:01.8, h = 33 kms, MB = 5.5, MS = 5.6.-
10. e WZ P 12 46 12.0, e WZNE S 54 18, e WNE SS 58 08, e WZNE LR 13 05.5-11.0 (T 28-14), F 50.0, d = 6 450 kms, H = 12:36:23.0.  
CGS: 35.1 S, 103.5 W. H = 12:36:31.7, h = 33 kms, MB = 4.1; MS = 4.6.-
10. e XWZ P 15 31 14.0, e XZ PP 31 35, e WE S 35 14, ZNE R 40.0 (T 16), F 55.0, d = 2 450 kms, H = 15:26:19.0.-
10. i XZ Pn 00 25 22.5 D, T 0.4, A 0.9, i XZ Pg 25 29, i XZNE 25 42.5, i XZNE Sg 25 47, FX 27.0, d = 150 kms, H = 00:25:04.5.  
Región de Bejuma, Estado Carabobo.-
11. i XWZ P 01 09 52.5 C, T 0.8, A 1.5, i WZ PcP 11 46, i WZ PP 12 30, i WNE S 19 30, i WNE PS 20 16, e WNE SS 24 26, e WNE L 33.5 (T 36), F 02 30.0, d = 8 300 kms, H = 00:58:14.0, mC = 5.4; MC = 4.6.  
CGS: 59.6 N, 144.8 W. Golgo de Alaska. H = 00:58:10.1, h = 5 kms, MB = 5.3.-
11. i XZ Pn 11 13 25.8, T 0.4, A 1.6, i XN Pg 13 52, i XNE Sn 14 17, i XNE Sb 14 25, FX 16.0, d = 550 kms, H = 11:12:09.0, mC = 4.5.  
Cerca a la Península de Paria.-
11. i XZ P 21 20 31.0 D, T 1.0, A 1.2, i XWZ pP 20 39.5, i XWNE S 24 42, i XWZNE SS 25 50, e WZNE LR 28.5 - 30.0 (T 30-20), F 45.0, d = 2 550 kms, H = 21:15:26.0.  
CGS: 8.6 S, 79.7 W. Cerca a la costa Norte del Perú. H = 21:15:32.6, h = 81 kms, MB = 5.0.-
12. e WZ SKS 07 18, e WZ PS 11 32, e WNE SS 18 26, e WNE SSS 23 08, F 09 30.0. CGS: 40.3 N, 143.7 E. Frente a la costa Este de Honshú, Japón. H = 07:41:25.1, h = 33 kms, MB = 5.1; MS = 5.1.-

Continúa

Continuación del mes de Junio de 1.969.

12. i XZ P 15 26 11.5 C, T 1.4, A 2.5, e WZ PP 29 40, i WNE S 36 42, i WNE PS 37 22, i WNE SS 42 16, i WNE SSS 45 42, e WZNE L 53.5 (T 40), i WZNE R 16 02.0 (T 22), F 18 00.0, d = 9 500 kms, H = 15:13:38.0.  
CGS: 34.4 N, 25.1 E. Creta. H = 15:13:31.1, h = 25 kms, MB = 5.8, MS = 5.8.-
12. i XZ PKP1 19 18 42.5 C, T 1.0, A 1.2, i XZ PKP2 19 01.5, FX 21.0.  
CGS: 24.0 N, 122.4 E. Formosa. H = 18:59:08.1, h = 33 kms, MB = 5.3.-
12. i WZ P 20 40 14.0 C, i WNE S 49 50, e WNE SS 54 44, e WNE L 21 03.5 (T 32), e WZNE MR 08.0-13.0 (T 28-16), F 22 30.0, d = 8 250 kms, H = 20:28:39.0.  
CGS: 56.5 S, 25.3 W. Sur de las Islas Sandwich. H = 20:28:31.9, h = 9 kms, MB = 5.5, MS = 5.4.-
13. e WZ P 09 02 56, i XZ PP 07 24, ± WZ 07 38, e WNE SKS 13 26, i WE PS 15 08, F 13 00.0.  
CGS: 49.4 N, 155.5 E. Islas Kuriles. H = 08:48:29.5, h = 64 kms, MB = 5.9.-
13. i XZ Pg 16 14 52.5 C, T 0.3, A 3.0, i XNE Sg 14 55.3, FX 15 10. P-azimut: WNW, d = 22 kms, H = 16:14:47.0, mC = 3.5. Cerca a Carayaca.-
13. i XZ P 16 23 58.5 D, T 1.0, A 1.5, i XZ 24 08, i WNE S 28 04, e WNE SS 29 00, e WNE L 30 40 (T 24), ZNE MR 33.0-36.0 (T 20-12), F 17 00.0, d = 2 450 kms, H = 16:18:58.0.  
CGS: 6.1 S, 82.1 W. Frente a la costa Norte del Perú. H = 16:19:01.4, h = 32 kms, MB = 4.9.-
14. i WZ PKP 03 42 10.0, T 1.5, A 1.5, i XZ 42 27.5, i WZE PP 44 42, i WZE SKP 45 40, e WNE SS 04 03 02, e WNE L 27.5 (T 34), F 05 40.0.  
CGS: 7.9 S, 159.0 E. Islas Salomón. H = 03:22:56.8, h = 62 kms, MB = 6.0.-
14. i XZ PKP1 09 45 46.0 C, T 1.0, A 2.2, e XZ PKP2 45 55, FX 47.0. CGS: 5.6 S, 145.5 E. Este de Nueva Guinea. H = 09:26:10.6, h = 114 kms, MB = 5.2.-
15. e WZ P 03 40 48.0, i WN S 45 38, e WNE SS 46 34, WZNE LR 49.5-54.5 (T 34-18), F 04 30.0, d = 3 100 kms, H = 03:34:54.0, MC = 4.2.  
CGS: 15.9 N, 95.5 W. Cerca a la costa de Oaxaca, México. H = 03:34:58.7, h = 57 kms, MB = 4.9.-

Microsismicidad alta en L.P.

Reducida al movimiento sinusoidal del suelo (Ground Motion)

	T	a(u)	T	a(u)	T	a(u)
15. 16h	Z 8.0	0.45	N 8.0	0.45	E 6.0	0.53
22h	Z 10.0	0.46	N 9.0	0.58	E 9.0	0.63

Continúa

Continuación del mes de Junio de 1.969.

- |     |     | T | a(u) |      | T | a(u) |      | T | a(u) |      |
|-----|-----|---|------|------|---|------|------|---|------|------|
| 16. | 04h | Z | 9.2  | 0.49 | N | 9.5  | 0.56 | E | 9.5  | 0.40 |
|     | 10h | Z | 8.0  | 0.40 | N | 8.0  | 0.45 | E | 8.0  | 0.32 |
15. i XZ Pg 16 59 42.0 D, T 0.4, A 1.6, i XNE Sg 59 43.5, FX 17 00 00, P-azimut: NNE, d = 12 kms, H = 16:59:39.5, mC = 3.0. Cerca a Caraballeda.-
17. i XZ Pn 05 34 58.5 C, T 0.6, A 0.7, i XZNE Pb 35 33, i XE Sn 36 25, i XZNE Sn 36 32, FX 39.0, P-azimut: N, d = 900 kms, H = 05:32:53.0, mC = 4.5. CGS: 19.0 N, 66.5 W. Puerto Rico. H = 05:32:57.2, h = 54 kms, MB = 4.4.-
17. i XWZ PKP1 19 45 18.0 D, T 0.7, A 1.7, i XWZ PKP2 45 29, i XWZ PP 48 36, i XZ SKP 49 03, i WZ SKS 49 48, i WNE pPPP 52 36, i WN SKKS 54 36, i WZNE SKSP 57 40, i WZ PPS 20 00 04, i WZN SS 06 20, i WN SSS 10 50, ML 26.0 (T 40), MR 41.0 (T 20), F 22 00.0. CGS: 19.0 N, 145.5 E. Islas Marianas. H = 19:26:28.9, h = 206 kms, MB = 5.8.-
17. e XZ Pg 21 29 39.5, T 0.4, A 0.9, i XNE Sg 29 41.5, FX 30.0, d = 16 kms, H = 21:29:36.5, mC = 2.8. Región de Caracas.-
18. e WZ P 00 13 42.0, e WZ PKP 17 08, e WZ SKP 20 22, e WN PPP 21 16, i WNE S 26 48, i WN PPS 30 26, i WNE SS 35 32, i WNE SSS 40 12, i WNE G 50.0 (T 60), i WZN R 01 08.0 (T 20), F 04 00.0. CGS: 52.6 S, 159.7 E. Islas Macquarie. H = 23:58:10.1, h = 33 kms, MB = 6.1, MS = 6.6.-
18. i XZ P 01 50 26.0 D, T 1.0, A 0.8, i XZ PcP 51 25, FX 52.0. CGS: 59.5 N, 145.0 W. Golfo de Alaska. H = 01:38:46.4, h = 33 kms, MB = 5.2.-

Microsismicidad alta en S.P.

Reducida al movimiento sinusoidal del suelo (Ground Motion)

- |     |     | T | a(u) |      | T | a(u) |      | T | a(u) |      |
|-----|-----|---|------|------|---|------|------|---|------|------|
| 18. | 14h | Z | 1.0  | 0.04 | N | 1.0  | 0.04 | E | 1.4  | 0.06 |
|     | 16h | Z | 1.4  | 0.13 | N | 1.5  | 0.14 | E | 1.5  | 0.11 |
|     | 18h | Z | 1.4  | 0.10 | N | 1.4  | 0.10 | E | 1.4  | 0.10 |
|     | 20h | Z | 1.0  | 0.04 | N | 1.2  | 0.05 | E | 1.2  | 0.04 |
18. i WZ PKP1 21 03 24.0 C, e XZ PKP2 04 15, e WZ PP 07 54, e WNE L 22 01.0 (T 40), F 23 00.0. CGS: 0.5 N, 126.1 E. Pasaje de Moluca. H = 20:43:19.2, h = 5 kms, MB = 5.3.-
18. i XWZ P 23 57 03.5 D, T 0.9, A 1.7, i WZ PP 00 01 04, e WZ PPP 03 18, i WNE SKS 07 44, i WNE S 08 24, e WZ PS 08 54, e WNE PPS 09 32, e WNE SS 13 44, e WNE L 30.0 (T 36), i WZNE MR 34.0-38.0 (T 24-16), F 02 00.0, d = 9 900 kms, H = 23:44:10.0, MC = 5.5. CGS: 52.6 N, 167.9 W. Islas Fox, Aleutianas. H = 23:44:11.2, h = 18 kms, MB = 5.4, MS = 5.6.-

Continúa

Continuación del mes de Junio de 1.969.

19. i XZ Pg 12 24 58.5 C, T 0.2, A 0.7, i XZNE Sg 24 59.5, FX 25 10, P-azimut: SW, d = 8 kms, H = 12:24:57.0, mC = 3.2. Cerca a Antímano.
19. i XZ Pg 16 01 29.5 D, T 0.4, A 1.2, i XNE Sg 01 33, FX 01 45, P-azimut: NE, d = 28 kms, H = 16:01:24.0, mC = 3.0. Entre Naiguatá y Anare.-
20. i XWZ P 02 50 23.0 D, T 1.0, A 2.8, e WZ PP 53 40, e WNE S 01 10, e WN SS 06 44, e WNE SSS 10 16, e WNE L 17.0 (T 40), F 04 30.0. CGS: 53.2 N, 162.4 W. Sur de Alaska. H = 02:37:51.5, h = 44 kms, MB = 5.7, MS = 5.1.-

Microsismicidad alta en L.P.

Reducida al movimiento sinusoidal del suelo (Ground Motion)

			T	a(u)		T	a(u)		T	a(u)
20.	20h	Z	8.0	0.48	N	7.2	0.50	E	7.2	0.50
21.	02h	Z	8.0	0.57	N	8.0	0.67	E	8.0	0.48
	08h	Z	8.0	0.72	N	8.0	0.76	E	8.0	0.48
	14h	Z	8.0	0.72	N	7.2	0.77	E	8.0	0.45
	20h	Z	8.0	0.57	N	8.0	0.64	E	8.0	0.37
22.	02h	Z	8.0	0.64	N	8.0	0.55	E	7.2	0.42
	08h	Z	8.0	0.45	N	8.0	0.45	E	7.2	0.38

20. i XZ Pg 16 16 21.5 D, T 0.4, A 1.1, i XZNE Sg 16 23, i XZN 16 25, FX 16 40, P-azimut: NE, d = 12 kms, H = 16:16:19.0, mC = 2.9. Cerca a Punta Caraballeda.-
21. i WZNE PPS 06 44 28, e WNE SS 49 16, e WNE SSS 53 24, i WZN L 07 05.5 (T 30), i WNE MR 07.0-10.0 (T 26-18), F 08 00.0. CGS: 62.5 S, 161.5 W. Sur del Océano Pacífico. H = 06:16:27.9, h = 33 kms, MB = 5.3.-
21. e XZ PKP 06 56 30.5, T 1.1, A 2.0, i XZ PKP2 56 56.0 C, FX 59.0. CGS: 11.3 N, 125.3 E. Samar, Islas Filipinas. H = 06:36:43.1, h = 73 kms, MB = 5.3.-
21. i XZ Pn 09 49 43.2 D, T 0.5, A 2.2, i XNE Pb 49 52, i XZ Pg 50 05, i XE 50 13, i XZNE Sn 50 21, i XZNE 50 23, i XZNE Sb 50 29, i XZ Sg 50 45, FX 52.0, P-azimut: WSW, d = 380 kms, H = 09:48:51.0, mC = 4.1. Cerca a Boconó, Estado Trujillo.-
21. i XWZ PKP1 15 31 17.0 C, T 1.0, A 2.5, i XWZ PKP2 32 53, i WZ PP 36 42, e WZ pPP 38 46, e WZ sPP 39 40, i WZ 42 38, i WNE pPPP 43 38, i WNE SS 57 12, F 17 00.0. CGS: 5.5 S, 109.6 E. Mar de Java. H = 15:12:10.0, h = 561 kms, MB = 5.6.-
21. e XZ Pn 22 34 21.0, T 0.7, A 0.7, i XZ 34 32, i XNE Sn 35 47, i XZNE Sb 36 15, FX 40.0, d = 900 kms, H = 22:32:18.0, mC = 4.4. CGS: 19.8 N, 64.4 W. Islas Vírgenes. H = 22:33:24.7, h = 50 kms, MB = 4.7.-

Continúa

## Continuación del mes de Junio de 1.969.-

22. e XZ Pn 08 19 08.0, T 0.7, A 0.9, i XZ Pb 19 31, i XZNE Sn 20 26, i XZNE Sb 20 49, FX 24.0, d = 820 kms, H = 08:17:18.0, mC = 4.7. CGS: 6.9 N, 73.0 W. Cerca a Los Curos, Depto. de Santander, Colombia. H = 08:17:26.7, h = 164 kms, MB = 4.1.-
22. i XZ P 10 58 46.0 C, T 1.0, A 4.2, e WZ PP 11 02 40, i WN 07 48, i XWZN SKS 09 16, i WE SKKS 10 00, i WZ PS 11 20, e WNE PPS 12 16, e WNE SS 16 46, i WZNE MR 34.0-40.0 (T 36-22), F 12 20.0, d = 10 400 kms; H = 10:45:33.0. CGS: 51.5 N, 179.9 W. Andreanoff, Islas Aleutianas. H = 10:45:24.5, h = 56 kms, MB = 6.1.-
22. e XZ Pn 11 18 42.0, T 0.4, A 0.8, i XZ Pg 19 10.5, i XZNE Sn 19 53, i XNE Sb 20 24, FX 23.0, d = 760 kms, H = 11:16:55.0, mC = 4.6.-
22. i XZ Pg 11 45 46.0 D, T 0.3, A 0.6, i XZNE Sg 45 48, FX 46.0, d = 16 kms, H = 11:45:43.0, mC = 3.0.-
22. e WZ P 14 35 36, i WZE pP 36 10, e WZNE L 40.5 (T 26), F 15 00.0. CGS: 16.9 N, 93.6 W. Chiapas, México. H = 14:30:10.7, h = 151 kms, MB = 5.1.-
23. e WZ PP 00 38 32, e WZN PS 48 28, e WNE SS 55 24, e WNE L 01 17.5 (T 36), F 02 00.0. CGS: 49.3 S, 164.2 E. Islas Auckland. H = 00:17:56.5, h = 27 kms, MB = 5.3, MS = 5.3.-
23. i XWZ P 07 15 41.0 D, T 1.0, A 1.4, i WZ PP 17 10, i WNE S 21 26, e WNE SS 23 44, i WNE SSS 24 12, i WZNE MR 26.5-31.0 (T 36-20), F 08 30.0, d = 4 100 kms, H = 07:08:31.0. CGS: 18.4 N, 104.5 W. Cerca a la costa de Jalisco, México. H = 07:08:27.7, h = 36 kms, MB = 5.3, MS = 5.1.-
23. e XZ Pg 17 03 06.5, i XNE Sg 03 09, FX 03 25, d = 20 kms, H = 17:03:02.5, mC = 2.8 aprox.-
23. i XZ P 20 51 21.0 D, T 0.7, A 1.3, i XZ 51 32, e WZ PP 51 46, e WZNE S 55 20, e WNE SS 56 10, e WNE R 21 00.0 (T 22), F 21 30.0, d = 2 400 kms, H = 20:46:37.0. CGS: 12.4 N, 88.1 W. Frente a la costa central de Centro América. H = 20:46:40.2, h = 33 kms, MB = 4.7.-
24. i XWZ P 00 39 17.5 C, T 1.2, A 7.5, i WZ PP 39 48, i WZNE S 42 42, i WN PcP 43 20, i WNE R 47.0 (T 20), F 01 15.0. P-azimut: WNW, d = 2 100 kms, H = 00:34:58.5. CGS: 11.7 N, 85.7 W. Nicaragua. H = 00:35:05.5, h = 100 kms, MB = 5.3.-
24. i XWZ PKP1 03 48 45.0 C, T 0.8, A 2.8, i XZ PKP2 49 24, e WZ PP 52 08, e WZ SKP 52 50, e WE PSKS 04 02 26, e WZE PPS 05 10, e WZE SS 12 08, e WZE L 38.5 (T 40), F 05 50.0. CGS: 5.8 S, 146.8 E. Este de Nueva Guinea. H = 03:29:17.3, h = 113 kms, MB = 5.6.-

Continúa

Continuación del mes de Junio de 1.969.

24. i XZ P 07 24 26.0 D, T 1.2, A 1.8, i XZ PP 24 44, i WNE S 27 32, i WN SS 28 26, i WZNE L 29.5 (T 26), i WZ R 30.5 (T 18), F 08 00.0, d = 1 800 kms, H = 07:20:41.0.  
CGS: 5.1 N, 82.4 W. Sur de Panamá. H = 07:20:33.2, h = 11 kms, MB = 4.8.-
24. i XZ Pg 22 33 49.5 C, T 0.3, A 1.1, i XZ Sg 33 53, FX 34.0.  
P-azimut: NE, d = 28 kms, H = 22:33:44.0. Entre Naiguatá y Anare. mC = 3.1.-
25. i XZ Pg 15 52 20.5 C, T 0.3, A 1.0, i XZNE Sg 52 23, FX 52 35, P-azimut: NNE, d = 20 kms, H = 15:52:15.5, mC = 3.1. Cerca a Punta Caraballeda.-
25. e WZ P 20 54 18.0, e WE S 58 46, e WZNE LR 21 02.0-04.0 (T 28-20), F 20.0, d = 2 800 kms, H = 20:48:53.0.  
CGS: 2.1 N, 90.7 W. Islas Galápagos. H = 20:48:55.6, h = 33 kms, MB = 4.4, MS = 4.3.-
25. e WZ P 21 58 52.0, e WZ PP 59 25, e WZE PcP 22 02 10, i WZNE S 03 18, i WZNE MR 06.5-09.0 (T 28-20), F 23 00.0, d = 2 800 kms. H = 21:53:27.0.  
CGS: 2.1 N, 90.5 W. Islas Galápagos. H = 20:48:55.6, h = 33 kms, MB = 4.8, MS = 5.2.-
26. e XWZ P 02 36 18.0, i WZ PP 37 06, i WNE S 40 48, i WNE SS 42 06, i WZNE MR 44.0-48.0 (T 30-18), F 04 00.0, d = 2 850 kms. H = 02:30:53.0, MC = 5.0.  
CGS: 2.0 N, 90.5 W. Islas Galápagos. H = 02:30:58.4, h = 33 kms, MB = 5.0, MS = 5.3.-
26. e XZ Pn 17 48 28.0, i XNE Sn 49 35, i XN Sn 49 38.5, FX 51.0, d = 700 kms, H = 17:46:50.0.-
27. i XZ P 13 25 07.5 D, T 0.7, A 1.3, i XWZ pP 25 18, i WN S 29 04, e WNE SS 29 48, i WNE L 31 08 (T 32), e WZN R 34.0 (T 20), F 14 00.0, d = 2 400 kms, H = 13:20:17.0.  
CGS: 13.3 N, 89.5 W. El Salvador. Sentido en San Salvador. H = 13:20:09.6, h = 63 kms, MB = 4.3.-
28. e XZ P 04 39 32.0, i XZ pP 39 45, e WZ PP 40 18, i WNE S 43 37, i WNE SS 45 10, i WNE L 47.0 (T 30), i WZNE R 50.0 (T 18), F 06 00.0, d = 2 500 kms, H = 04:34:32.0.  
CGS: 12.8 N, 89.2 W. Cerca a la costa de El Salvador. Sentido en San Salvador. H = 04:34:42.6, h = 69 kms, MB = 5.2.-
28. i XZ Pg 15 20 02.3 C, T 0.3, A 0.4, i XNE Sg 20 03.1, FX 20 15. P-azimut: NW, d = 6 kms, H = 15:20:00.0, mC = 2.7.-
28. i XZ Pn 15 25 06.0 D, T 0.7, A 1.2, i XNE Sn 26 23, FX 29.0, d = 800 kms, H = 15:23:14.0, mC = 4.5.-
29. e WZ P 10 48 52.0, i WZ PP 53 42, i WNE SKS 59 24, i WNE SKKS 11 00 28, i WNE PKKP 03 12, i WZE PS 03 26, e WE PPS 04 46, i WNE SS 09 40, e WNE SSS 13 40, i WZNE L 28.5 (T 36), i WZNE R 30.5 (T 22), F 13 00.0, d = 12 800 kms, H = 10:33:55.0, MC = 5.6.  
CGS: 30.5 S, 178.2 W. Islas Kermadec. H = 10:34:06.5, h = 43 kms. MB = 5.6, MS = 5.6.-

Continúa



Continuación del mes de Junio de 1.969.

29. i WZ PP 17 28 54, e WZ SKKS 35 50, e WE S 36 46, i WZ PS 38 42, i WN PPS 39 38, i WZNE SS 45 04, i WNE SSS 49 36, i WZNE L 18 06.0 (T 30), i WZNE MR 09.5-13.0 (T 20-16), F 20 30.0. CGS: 62.8 S, 166.3 E. Islas Balleny. H = 17:09:13.9, h = 33 kms, MB = 5.5, MS = 6.0.-
30. e XZ P 08 31 18.0, i XZ pP 31 27, i XZ sP 31 36, e WE (S) 35 22, e WNE SS 36 56, F 09 00.0. CGS: 3.6 S, 77.0 W. Frontera Perú-Ecuador. H = 08:27:21.5, h = 71 kms, MB = 4.6.-
30. i XZ P 18 38 51.5 G, T 1.0, A 1.1, i XZ PP 39 01, e XWNE S 40 28, i WE SS 40 44, e ZN L 41.5 (T 28), i ZN R 43.0 (T 18), F 19 20.0, d = 1 000 kms, H = 18:36:31.0. CGS: 20.0 N, 64.1 W. Océano Atlántico. H = 18:36:24.2, h = 17 kms, MB = 4.6.-
30. e WZ P 20 09 08, e WZ PcP 20 12 52, e WN S 13 48, i WZN R 20.5 (T 18), F 50.0, d = 3 000 kms, H = 20:03:23.0. CGS: 16.1 S, 73.8 W. Cerca a la costa del Perú. H = 20:03:23.6, h = 66 kms, MB = 4.6.-

G.Fiedler

F.A.Miranda

/G.N.

Caracas, 10 de Noviembre de 1.969.



27 APR 1970

COMANDANCIA GENERAL DE LA MARINA  
 SERVICIO DE HIDROGRAFIA Y NAVEGACION  
 OBSERVATORIO DE SISMOLOGIA  
 Y MAREAS TERRESTRES  
 Caracas - Venezuela  
 BOLETIN SISMICO MENSUAL  
 Julio 1.969

NOTA: Desde Julio de 1.969, hemos hecho algunas innovaciones e incluido nuevos datos en nuestro Boletín Sísmico Mensual.

Próximamente adjuntaremos informaciones generales sobre las nuevas estaciones sismológicas de Bailadores, Cumaná, Lagunillas y Mérida que están funcionando por ahora en forma provisional en Venezuela y daremos también las explicaciones necesarias sobre la nomenclatura utilizada en nuestros Boletines.

Microsismicidad alta en S.P.  
 Reducida al movimiento sinusoidal del suelo (Ground Motion)

		T	a(u)		T	a(u)		T	a(u)	
1.	16h	Z	1.2	0.07	N	1.5	0.13	E	1.2	0.04
	18h	Z	1.6	0.18	N	1.5	0.14	E	1.6	0.12
	20h	Z	1.8	0.30	N	1.6	0.19	E	1.5	0.12
	22h	Z	1.5	0.13	N	1.5	0.12	E	1.5	0.09
2.	00h	Z	1.3	0.06	N	1.4	0.07	E	1.4	0.06
1.	XZ iPg 22 40 33.3 D, T 0.3, A 0.5, X N,E iSg 40 36.5, FX 40 45, d = 26 kms, H = 22:40:28.3, mC = 2.9.-									
2.	X Z,N,E iPg 22 03 18.0 D, T 0.3, A 2.1, X Z,N,E iSg 03 20.5, FX 04 00, P-azimut: ESE, d = 20 kms, H = 22:03:14.0, mC = 3.4. Entre El Hatillo y Tasmare, Edo. Miranda.-									
3.	L Z e(P) 21 14 28.0, L Z e (PP) 16 08, L E iS 20 26, L N,E eSS 22 28, L Z,N,E eL 26.5 (T 32), L Z eR 28.5 (T 20), L Z T 20, 2A 7, F 22 00.0, d = 4 200 kms, H = 21:07:09.0.-									
3.	L Z e(P) 22 13 14.0, L Z ePP 14 28, L N,E eS 19 04, L E eSS 21 12, L N,E eL 26.5 (T 32), L Z, T 20, 2A 3; L N, T 20, 2A 6; L E, T 20, 2A 3, F 22 50.00.-									
3.	X Z iPg 22 27 45.0 C, T 0.3, A 0.8, X Z iSg 27 46.5, FX 28.0, d = 12 kms, H = 22:27:42.5, mC = 3.0.-									
4.	X Z ePn 02 24 28.5, T 0.4, A 0.7, X Z,N,E iPg 24 38.0, X N,E iSn 24 47.5, X Z,N,E iSg 24 51.5 24 51.5, FX 27.0, d = 120 kms, H = 02:24:14.0, mC = 3.1.-									

## Continuación del mes de Julio de 1.969.

4. X Z, L Z,N,E iP 06 37 15.0 D, T 0.7, A 1.3, X Z, L Z iP 37 38.5, L Z,N,E iS 41 01, L N,E eSS 41 52, L Z,N,E iL 43.5 (T 28), L Z,N,E iR 45.5 (T 20), LZ: T 20, 2A 82; LN: T 18, 2A 50; LE: T 18, 2A 42, FL 08 00 00. P-azimut: SW, d = 2 250 kms, H = 06:32:39.0, MC = 5.1.  
CGS: 4.1 S, 80.9 W. Frontera Perú-Ecuador. H = 06:32:43.4, h = 33 kms, MB = 4,5, MS = 5,0.-
4. XZ ePn 07 14 04.0, T 1.0, A 0.9, X N iPb 14 19, X N,E iSn 15 21, X N i 15 28, FX 18.0, d = 800 kms, H = 07:12:12.0, mC = 4.4.  
CGS: 6.8 N, 73.0 W. Cerca a Umpalá, Depto. de Santander, Colombia. H = 07:12:22, h = 168 kms, MB = 3.9.-
4. X Z iP 07 26 23.0 G, T 0.9, A 1.0, X N iP 26 38, FX 29.0.  
CGS: 4.1 S, 81.0 W. Cerca a la costa Norte del Perú. H = 07:21:49.7, h = 35 kms, MB = 4.4.-
4. L Z iP 11 19 40.0 D, X Z iP 19 49, L N iS 22 36, L N i 22 44, L Z,N,E i 22 54, L N,E iSS 23 26, L N iL 24 20 (T 30), L Z,N,E iR 26.0 (T 22), LZ: T 22, 2A 35; LN: T 22, 2A 55; LE: T 22, 2A 25, FL 12 30.0, d = 1 700 kms, H = 11:16:01.0.  
CGS: 7.4 N, 82.7 W. Sur de Panamá. H = 11:16:01.0, h = 33 kms, MB = 5.2, MS = 4.9.-
4. L Z ePP 23 15 22.0, L Z eSKP 16 40, L N,E eSKKS 22 20, L Z,N ePPS 27 20, L Z,N i 28 08, L Z,N,E iSS 33 10, L Z,N,E iSSS 37 24, L E eL 50.0 (T 40), L Z,N,E iMR 58.0-00 04.0 (T 24-16), LZ: T 20, 2A 13; LN: T 20, 2A 10; LE: T 20, 2A 6, FL 01 00.0.  
CGS: 55.9 S, 147.2 E. W. de la Isla Macquarie. H = 22:54:18.0, h = 33 kms, MB = 4.9, MS = 5.6.-
5. L Z ePKP1 02 04 02.0, L Z ePKP2 04 40, L Z,E eSKS 10 42, L E eSKKS 15 12, L E eSS 29 03, L Z,E eSSS 35 30, L E eL 03 00.0 (T 38), LZ: T 20, 2A 3; LN: T 20, 2A 3; LE: T 20, 2A 3, FL 04 00.0.  
CGS: 3.8 S, 131.5 E. W. de Nueva Guinea. H = 01:44:01.1, h = 33 kms, MB = 5.5, MS = 5.2.-
5. X L Z,N iP 04 59 53.5 C, T 1.0, A 3.0, X L Z i 05 00 02, L Z iP 00 20, L Z,N,E iS 05 03 25, L N,E iSS 04 16, L Z,N,E iMR 08.0-11.0 (T 16-8), FXL 06 30.0, d = 2 100 kms, H = 04:55:33.0, MC = 5.2.  
CGS: 5.6 S, 77.2 W. Norte del Perú. H = 04:05:33.7, h = 37 kms, MB = 5.2, MS = 5.1.-
6. X Z,L Z eP 12 45 13.5, T 0.7, A 0.8, X Z i 45 16.5, X Z iP 45 33, L Z,N,E eS 48 26, L E eSS 49 24, L N,E eL 50.5 (T 30), L Z,N,E eR 52.0 (T 20), LZ: T 20, 2A 7; LN: T 22, 2A 19, LE: T 18, 2A 9, FL 13 20.0, d = 1 700 kms, H = 12:41:38.5, MC = 4.2.  
CGS: 1.6 N, 79.3 W. Cerca a la costa de Ecuador. H = 12:41:40.1, h = 47 kms, MB = 4.5.-
7. X Z, L Z eP 04 25 17.0, X Z iP 25 47, L N,E e(S) 29 44, L N eR 33.5 (T 24), FL 50.0.  
CGS: 13.1 N, 89.0 W. El Salvador. Sentido en San Salvador. H = 04:20:29.6, h = 64 kms, MB = 4.4.-

Continúa

Continuación del mes de Julio de 1.969.

7. X Z iPKP 05 02 37.5 C, T 1.0, A 1.4, L Z ePP 05 16, L N,E eSKP 06 16, L Z eSKKS 11 32, L E ePS 15 28, L Z,E ePPS 17 40, L N,E eSS 23 32, L N eSSS 28 52, L Z,N, eL 48.5 (T 38), L Z,N,E iR 56.0 (T 20), LZ: T 20, 2A 8; LN: T 20, 2A 7; LE: T 20, 2A 4, FL 07 00.0, d = 15 350 kms. H = 04:43:12.0, MC = 5.7. CGS: 16.5 N, 147.3 E. Islas Marianas. H = 04:43:15.4, h = 38 kms, MB = 5.7, MS = 5.5.-
8. X Z, L Z iPKP1 04 26 42.5 D, T 0.9, A 1.1, X Z iPKP2 27 29, L Z eSKP 30 08, L Z iPP 31 48, L N eL 05 24.5 (T 40), FL 06 00.0, d = 18 300 kms, H = 04:06:42.0. CGS: 2.1 N, 126.6 E. Pasaje de Moluca. H = 04:06:39.7, h = 16 kms, MB = 5.5, MS = 4.7.-
8. L Z eP 07 30 34.0, L E epPPP 35 48.0, L Z,N,E eS 39 32, L E eSS 44 10, L E eSSS 47 30, L Z,N,E eR 08 10.0 (T 20), LZ: T 20, 2A 3; LN: T 18, 2A 4; LE: T 20, 2A 2. FL mezclado con el sismo siguiente. CGS: 56.3 S, 27.6 W. Sur de las Islas Sandwich. H = 07:19:03.0. h = 175 kms, MB = 5.1.-
8. X Z, L Z eP 08 21 37.5, X Z, L Z ePP 24 43, L N, E iS 31 42, L N iPS 32 32, L E eSS 36 48, L N,E eSSS 40 24, L N,E eL 47.5 (T 30), L Z,N,E eR 53.5 (T 23), L Z: T 20, 2A 4; LN: T 20, 2A 4; LE: T 20, 2A 2, FL 10 00.0, d = 9 000 kms. H = 08:09:24.0, MC = 5.2. CGS: 37.6 N, 20.3 E. Cerca a la costa SW. de Grecia. H = 08:09:17.5, h = 33 kms, MB = 5.4, MS = 5.4.-

Microsismicidad alta en L.P.  
 Reducida al movimiento sinusoidal del suelo (Ground Motion)

		T	a(u)	T	a(u)	T	a(u)			
9.	16h	Z	6.8	0.40	N	5.6	0.50	E	5.2	0.66
	22h	Z	6.0	0.70	N	6.0	0.88	E	6.0	0.70
10.	04h	Z	6.0	0.76	N	6.0	0.88	E	5.6	0.94
	10h	Z	5.6	0.75	N	5.6	0.87	E	5.6	1.00
	16h	Z	6.0	0.65	N	5.6	0.81	E	5.6	0.81
	22h	Z	5.6	0.56	N	5.6	0.80	E	6.0	0.59

10. X Z iP 08 49 10.5 C, T 0.5, A 1.3, X Z,N iP 49 27, L N,E eS 54 44, L Z,N,E eLR 09 02.0-05.0 (T 28-16), LZ: T 20, 2A 8; LN: T 20, 2A 6; LE: T 20, 2A 5, FL 25.0, d = 3 800 kms, H = 08:42:23.0. CGS: 23.6 S, 69.7 W. Norte de Chile. H = 08:42:28.5, h = 48 kms, MB = 5.4, MS = 4.7.-
11. L Z iP 06 01 24.0 C, X Z iPP 01 47, L Z,N iS 04 56, L N eSS 06 00, L N,E iL 07.0 (T 30), L N,E iR 08.5 (T 20), LZ: T 18, 2A 14; LN: T 20, 2A 20; LE: T 18, 2A 16, FL 07 00.0, d = 2 100 kms. H = 05:57:03.0. CGS: 10.2 N, 85.5 W. Costa Rica. H = 05:57:12.6, h = 30 kms, MB = 4.7.-

Continúa

Continuación del mes de Julio de 1.969.

11. L Z iP 07 55 16.0 C, X Z iPP 55 27, L Z,N iS 58 46, L E iSS 59 16, L N,E iL 08 00 40 (T 30), L Z,N,E iR 03.0 (T 20), LZ: T 18, 2A 10; LN: T 18, 2A 12; LE: T 18, 2A 11, FL 30.0, d = 2 050 kms. H = 07:51:01.0.  
CGS: 10.3 N, 85.4 W. Costa Rica. H = 07:51:04.0; h = 33 kms, MB = 5.0.-
11. X Z iPg 11 58 42.2 D, T 0.3, A 0.5, X Z,E iSg 58 43, FX 58 50, d = 6 kms, H = 11:58:40.7, mC = 2.8.-
11. X Z ePn 22 35 28.5, X N,E iSn 36 41, FX 39.0, d = 780 kms, H = 22:33:40.0.-
12. L Z ePP 13 20 26.0, L Z eSKP 21 30, L E eS 27 44, L Z,N,E iPS 29 40, L N,E ePPS 30 40, L E eSS 35 44, L Z,N,E eL 59.5 (T 36), L Z,N,E iR 14 07.0 (T 20), LZ: T 20, 2A 7; LN: T 20, 2A 9; LE: T 20, 2A 3, FL 15 30.0.  
CGS: 46.5 N, 153.3 E. Islas Kuriles. H = 13:00:36.9, h = 12 kms, MB = 5.3, MS = 5.3.-
12. L Z e SKP 19 38 28, L Z eSKKS 43 32, LZ ePS 47 16, L E eSS 53 38, L E eL 20 13.5 (T 36), LZ: T 20, 2A 7; LN: T 20, 2A 9; LE: T 20, 2A 3, FL 21 30.0.  
CGS: 39.7 N, 143.5 E. Costa E. de Honshú, Japón. H = 19:16:31.6, h = 33 kms, MB = 5.2, MS = 5.6.-
13. X Z iP 05 50 42.5 C, T 0.6, A 2.3, X Z iP 51 36, L E eScP 56 22, L Z,N iPcS 56 44, L E iScS 06 00 08, FL 15.0.  
CGS: 18.1 S, 69.4 W. Norte de Chile. H = 05:45:00.3, h = 140 kms, MB = 4.7.-
14. X Z,N,E iPn 05 46 25.8 C, T 0.8, A 1.3, X Z,N iPb 46 38, X Z,N iSn 47 34, X N,E iSn 47 40, X L Z,N,E 47 44, FX 06 00.0. P-azimut: SW, d = 750 kms. H = 05:44:41.0, mC = 4.7.  
CGS: 6.8 N, 73.0 W. Cerca a Umpalá, Depto. de Santander, Colombia. H = 05:44:43.8, h = 155 kms, MB = 4.6.-
14. X Z ePg 19 00 48.5, T 0.4, A 0.8, X N,E iSg 00 50.5, FX 01 10, kms, H = 19:00:45.5, mC = 2.8.-
15. X Z eP 03 16 08.0, T 0.6, A 0.8, X Z,E iPP 16 25, X Z i 16 49, X Z,N,E iS 18 08, X E iSS 18 30.5, FX 26.0, d = 1 300 kms, H = 03:13:14.0, mC = 4.6.  
CGS: 3.5 N, 76.2 W. Cerca a Palmira, Depto. del Valle, Colombia. h = 167 kms, MB = 4.5.-
15. X Z,N,E iPn 15 22 33.5 D, T 0.6, A 3.5, X Z i 22 35, X Z iPb 22 48, X N iSn 23 53, X N iSn 24 00, X E iSb 24 25, FX 26.0. P-azimut: SW, d = 840 kms, H = 15:20:36.5, mC = 5.0.  
CGS: 15.1 N, 60.5 W. Antillas Menores. H = 15:20:40.5, h = 31 kms, MB = 5.0.-

Continúa

Continuación del mes de Julio de 1.969.

15. X Z iP 17 01 16.5 C, T 1.0, A 1.2, XZ iP 02 06.5, FX 03.0.  
CGS: 8.4 S, 74.4 W. Frontera Perú-Brasil. H = 16:56:50.7, h = 166 kms, MB = 4.7.-
15. X Z eP 19 40 26.5, T 0.9, A 1.0, X Z iPP 40 37, X N,E iS 42 15, X Zi42 23.5, X N iSS 42 42, FX 50.0, d = 1 150 kms, H = 19:37:56.0, mC = 4.8.  
CGS: 5.1 N, 76.0 W. Cerca a Santuario, Depto. de Caldas, Colombia. H = 19:37:58.0, h = 129 kms, MB = 4.7.-
16. L Z,E ePP 05 44 16, L E eSKKS 51 16, L Z,E ePPS 56 20, L E eSS 06 02 24, L N,E eSSS 07 04, L Z,N,E eR 33.0 (T 20), FL 07 00.0.  
CGS: 17.6 S, 66.3 E. Islas Mascarene. H = 05:22:13.1, h = 33 kms, MB = 5.1.-
16. L Z eP 08 31 06.0, L Z ePP 35 38, L N,E iSKS 41 34, L Z,N iPS 44 36, L N,E iPPS 45 32, L Z,N,E iSS 50 26, L Z,N,E iSSS 55 06, L E eL 09 05.5 (T 40), L Z,N,E iMR 12.5-21.0 (T 30-20), LZ : T 20, 2A 23; LN: T 22, 2A 35; LE: T 22, 2A 15. FL 11 00.0, d = 12 000 kms. H = 08:16:42.0, MC = 5.8.  
CGS: 52.2 N, 159.0 E. Frente a la costa E. de Kamchatka. H = 08:16:53.3, h = 69 kms, MB = 5.8.-
16. L Z ePP 13 02 06, L Z ePPS 14 24, L Z eL 45.5 (T 30), FL 14 30.0.  
CGS: 4.7 S, 153.1 E. Nueva Irlanda. H = 12:39:26.2, h = 85 kms, MB = 4.6.-
16. X Z iP 15 04 08.5 C, T 0.8, A 1.6, FX 06.0.  
CGS: 37.1 N, 116.1 W. Sur de Nevada, U.S.A. H = 14:55:00.0, h = 0 kms, MB = 5.6.-
16. X Z iPn 22 14 30.0 D, T 0.7, A 1.5, X N,E iSn 15 42.5, X Z,N,E iSn 15 47, FX 19.0, d = 780 kms, H = 22:12:42.0, mC = 4.6.  
CGS: 6.9 N, 73.0 W. Cerca a Los Curos, Depto. de Santander, Colombia. H = 22:12:48.9, h = 168 kms, MB = 4.3.-
17. X Z iP 13 28 41.5 D, T 0.9, A 1.7, X Z i 28 45, FX 30.0.  
CGS: 12.6 N, 87.0 W. Cerca a la costa SW. de Nicaragua. H = 13:24:22.9, h = 175 kms, MB = 4.4.-
18. L Z eP 05 41 04, X Z iPKP 43 58.5 D, T 1.0, A 1.7, L Z,N,E iPP 46 20, X N,E iSKP 47 26, L E iPPP 48 56, L Z,N iSKKS 53 02, L N,E iPSKS 55 24, L Z iPPS 58 04, L E i 06 00 00, L N,E iSS 03 48, L Z iSSS 09 12, L Z,N,E iL 30.0 (T 40), L Z,N,E iR 40.0 (T 30), L Z,N,E iR 47.0 (T 20), LZ: T 20, 2A 350; LN: T 20, 2A 480; LE: T 20, 2A 310, FL 11 00.0, d = 14 700 kms, H = 05:24:48.0, MC = 7.1.  
CGS: 38.3 N, 119.4 E. China. H = 05:24:48.0, h = 33 kms, MB = 6.2, MS = 7.3.-
18. X Z,N,E iPn 18 35 31.5 C, T 0.6, A 1.9, XZ i 35 34, XZ iPb 35 45.5, X N,E iSn 36 28, X N,E iSn 36 42, FX 41.0, d = 610 kms. H = 18:34:06.5, mC = 4.4.-

Continúa

## Continuación del mes de Julio de 1.969.

18. XZ iP 23 23 11.5 D, T 0.5, A 2.0, XZ iPP 23 58, LZ ePPP 24 24, LE eS 28 02, LN i(SS) 28 50, LZ,N,E iR 31.0 (T 12), FL 01 30.0, d = 3 200 kms, H = 23:17:08.0.  
CGS: 18.2 S, 63.3 W. Bolivia. H = 23:17:10.6, h = 19 kms, MB = 5.6.-
19. XLZ,N,E iP 05 00 42.0 C, T 1.2, A 15.8, XZ iPP 01 31, LN,E iS 05 22, LN,E iSS 06 28, LN,E iL 12.0 (T 30), FL 08 00.0.  
P-azimut: S, d = 3 000 kms, H = 04:54:57.0.  
CGS: 17.3 S, 72.5 W. H = 04:54:54.1, h = 54 kms, MB = 5.9.-
19. XZ,N iPn 12 30 28.0 C, T 0.7, A 6.5, XZ iPb 30 50, XLZ,N,E iSn 31 45, XN,E iSb 32 15, XN,E iSg 32 55, FX 35.0, d = 820 kms, H = 12:28:38.0, mC = 5.1.  
CGS: 6.8 N, 73.1 W. Entre Los Santos y Umpalá, Depto. de Santander, Colombia. H = 12:28:46.5, h = 157 kms, MB = 4.7.-
20. XZ eP 06 18 36.0, XE eS 20 19, XN,E i 20 47, FX 25.0, d = 1 000 kms, H = 06:16:21.0.-
20. LZ eP 10 45 20, LZ e(S) 54 30, LN,E i 57 58, LN eR 11 02.0 (T 30), FL 12 00.0.-
20. LZ ePP 12 27 36, LN,E eS 34 10, LN,E eSS 38 40, LE eSSS 41 12, LN,E eLR 50.5-55.0 (T 28-14), LZ: T 20, 2A 4; LN: T 20, 2A 4; LE: T 20, 2A 5, FL 13 30.0, d = 7 850 kms, H = 12:13:39.0.  
CGS: 60.0 S, 65.3 W. Pasaje de Drake. H = 12:13:43.4, h = 33 kms, MB = 5.1.-
20. LZ,E ePS 20 18 32, LE eSS 24 50, LZ,N,E eLR 43.5-47.0 (T 30-20), LZ: T 20, 2A 4; LN: T 20, 2A 2; LE: T 20, 2A 4, FL 21 30.0.  
CGS: 19.2 S, 176.4 W. Islas Fiji. H = 19:49:42.0, h = 20 kms, MB = 5.2, MS = 5.2.-
21. LZ iP 07 15 22.0 C, LN,E iS 19 42, LZ,N iSS 20 26, LZ,N,E eR 24.0 (T 20), LZ: T 20, 2A 4; LN: T 20, 2A 4; LE: T 20, 2A 2, FL 08 00.0, d = 2 650 kms, H = 07:10:07.0.  
CGS: 21.0 N, 45.7 W. Norte del Océano Atlántico. H = 07:10:18.3, h = 22 kms, MB = 4.7.-
21. XZ iP 09 11 27.0 D, T 1.0, A 1.2, XZ iPP 11 45, FX 13.0.  
CGS: 16.1 N, 92.1 W. Chiapas, México. H = 09:05:38.1, h = 175 kms, MB = 4.7.-
21. XE iPg 14 34 22.8, XN,E iSg 34 24.2, FX 34 40, d = 11 kms, H = 14:34:20.3, mC = 2.8 aprox., Región de Caracas.-
21. LZ eP 17 45 48, LZ ePPP 47 28, LN,E eS 51 38, FL 18 20.0, d = 4 100 kms, H = 17:38:37.0.  
CGS: 35.2 N, 35.9 W. Cerca a las Islas Azores. H = 17:38:28.8, h = 33 kms, MB = 4.9, MS = 4.8.-

Continúa

Continuación del mes de Julio de 1.969.

21. XZ iPKP1 22 26 34.5 C, T 0.8, A 1.1, XZ iPKP2 27 23, FX 28.0.  
CGS: 2.9 N, 124.7 E. Islas Célebes. H = 22:06:56.9, h = 220 kms,  
MB = 5.6.-
22. XZ iPn 05 57 53.5 C, T 0.6, A 1.3, X N,E e(Sn) 59 11, FX 06 01.0.-
23. XZ iPg 17 12 50.5 C, T 0.3, A 1.7, X Z,N,E iSg 12 53.0, X Z,N,E  
i 12 54.5, FX 13.0. P-azimut: SW, d = 20 kms, H = 17:12:46.5,  
mC = 3.3. Cerca a Macarao.-
24. X L Z,N,E iP 03 04 35.5 D, T 0.9, A 3.7, XZ i 04 46.5, X L Z  
iPP 05 07, L N,E iS 08 48, L E iSS 09 58, L N,E iL 11.5 (T 30),  
FL 05 30.0. P-azimut: SSW, d = 2 600 kms, H = 02:59:25.5.  
CGS: 11.9 S, 75.1 W. Perú. H = 02:59:21.0, h = 1 kms, MB = 5.9;  
MS = 5.7.-
24. X L Z iP 06 38 21.0 C, T 0.5, A 1.5, X Z iPP 38 52, L N,E iS 42  
38, LE eSS 43 48, L N,E eL 46.0 (T 28), L Z,N,E iR 48.0 (T 14),  
FL 07 20.0, d = 2 650 kms, H = 06:33:06.0.  
CGS: 11.9 S, 75.1 W. Perú. H = 06:33:07.8, h = 1 kms, MB = 4.8.-
24. X Z iP 08 00 23.5 C, T 0.5, A 1.3, X N,E iS 02 35.5, FX 04.0,  
d = 1 200 kms, H = 07:57:43.0.-
24. L Z eP 12 55 14, L Z ePP 13 00 38, LE ePS 09 40, L N,E iSS 15  
14, LZ: T 18, 2A 12; LN: T 18, 2A 8; LE: T 18, 2A 5, FL 14 30.0.  
CGS: 45.4 S, 35.0 E. Islas Príncipe Eduardo. H = 12:41:40.2,  
h = 33 kms, MB = 5.7; MS = 5.9.-
25. X L Z,N,E iP 06 12 55.5 D, T 0.5, A 12.5, L Z,N iP 14 40, L N,E  
iS 17 48, L N,E iS 20 56, X L N,E iScS 22 06, FL 08 00.0.  
CGS: 25.6 S, 63.3 W. Provincia de Salta, Argentina. H = 06:06:  
42.4, h = 579 kms, MB = 5.5.-
25. X L Z eP 13 07 13.0, L Z ePP 10 40, L N,E iS 17 50, L N,E ePS  
18 40, L N,E eSS 26 24, L N,E eL 34.0 (T 40), L Z,N,E iR 46.0  
(T 20), LZ: T 20, 2A 7; LN: T 20, 2A 8; LE: T 20, 2A 3, d =  
9 750 kms, H = 12:54:28.0, MC = 5.1.  
CGS: 53.3 N, 167.0 W. Fox, Islas Aleutianas. H = 12:54:27.6,  
h = 42 kms, MB = 5.0; MS = 5.2.-
25. X Z,E iPn 13 50 08.5 D, T 0.3, A 1.4, X Z,N,E i 50 09.5, X Z,N,  
E iSn 51 25.5, X N,E iSn 51 27, FX 53.0. P-azimut: ENE, d =  
120 kms, H = 13:49:55.5, mC = 3.7. Al NW. de la Isla La Tortuga,  
Venezuela.-
25. X Z ePKP1 13 54 10.0, X Z ePKP2 55 03, X Z eSKP 57 32, FX 58.0.  
CGS: 2.6 S, 126.6 E. Pasaje de Moluca. H = 13:34:09.8, h = 33  
kms, MB = 5.6 ; MS = 4.9.-

Continúa



Continuación del mes de Julio de 1,969.

25. X L Z eP 23 09 24.0, L N ePPS 22 30, L Z,N eSS 28 20, L N,E eSSS 33 30, L E iL 55.5 (T 40), L E iR 00 00.0 (T 30), FL 01 30.0. CGS: 21.6 N, 111.9 E. SE. de China. H = 22:49:41.3, h = 33 kms, MB = 5.4 ; MS = 5.9.-
26. X Z,N,E iP 07 25 32.5 C, T 0.9, A 4.2, L Z ePP 26 00, L Z,N,E iS 29 16, L N,E iSS 30 12, L N,E iL 31.5 (T 30), LZ: T 18, 2A 8, LN: T 18, 2A 7; LE: T 18, 2A 5, d = 2 250 kms. H = 07:20:57.0. CGS: 12.6 N, 87.8 W. Cerca a la costa Sur de Nicaragua. H = 07:21:00.2, h = 84 kms, MB = 4.8.-
26. X L Z iP 07 51 17.5 C, T 1.2, A 1.9, X Z iPP 51 29, L N iS 54 22, L N eSS 55 06, LZ: T 18, 2A 4; LN: T 20, 2A 11; LE: T 20, 2A 5, FL 08 45.0, d = 1 800 kms, H = 07:47:32.0. CGS: 6.4 N, 82.5 W. Sur de Panamá. H = 07:47:32.9, h = 33 kms, MB = 4.5.-
26. X Z,E iP 14 08 45.5 D, T 0.7, A 3.5, X Z i 08 49, FX 10.0.-
26. X L Z iP 17 28 54.0 C, T 0.7, A 1.7, L Z ePP 31 42, LE iS 38 28, L Z,E eSS 44 00, L N,E eSSS 47 28, L E eL 53.0 (T 30), L Z,N,E iR 58.0 (T 24), LZ: T 20, 2A 8; LN: T 18, 2A 8; LE: T 18, 2A 5, FL 18 50.0, d = 8 200 kms. H = 17:17:22.0, MC = 5.3. CGS: 56.4 S, 25.9 W. Sur de las Islas Sandwich. H = 17:17:16.2, h = 38 kms, MB = 5.5; MS = 5.0.-
27. X L Z iP 21 33 20.5 C, T 1.2, A 1.2, L Z ePP 36 12, L Z ePPP 38 00, L N,E iS 43 04, L E iSS 47 56, L N,E eSSS 51 40, L Z,N,E eR 22 06.5 (T 18), LZ: T 18, 2A 7; LN: T 18, 2A 7; LE: T 18, 2A 6, FL 23 00.0. d = 8 350 kms. H = 21:21:42.5, mC = 5.6 ; MC = 5.3. CGS: 59.4 N, 145.3 W. Golfo de Alaska. H = 21:21:40.6, h = 33 kms, MB = 5.3 ; MS = 5.3.-
27. X Z iP KP1 22 46 16.0 C, T 1.0, A 2.2, X Z iP KP1 46 38, FX 48.0. CGS: 24.9 N, 122.5 E. Formosa. H = 22:26:54.2, h = 105 kms, MB = 5.4.-
29. X L Z eP 00 36 47.5, XZ i 36 49, XZ i 37 22, L N eS 39 50, L Z,N,E eR 43.5 (T 18), LZ: T 18, 2A 8; LN: T 18, 2A 6; LE: T 18, 2A 7, FL 01 30.0, d = 1 750 kms. H = 00:33:05.5. CGS: 8.0 N, 82.9 W. Frontera Panamá-Costa Rica. H = 00:33:02.4, h = 33 kms, MB = 4.4.-
29. X Z eP 00 43 04.0, XZ i 43 08, X Z iS 44 48, FX 47.0, d = 1 050 kms. H = 00:40:44.0. CGS: 19.9 N, 64.1 W. Islas Vírgenes. H = 00:40:42.5, h = 32 kms, MB = 5.1.-
29. X Z iP KP1 02 15 07.5 C, T 1.1, A 2.0, XZ iP KP2 15 12, FX 17.0. CGS: 3.4 S, 144.8 E. Cerca a la costa Norte de Nueva Guinea. H = 01:55:20.4, h = 6 kms, MB = 5.5.-

Continúa

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Continuación del mes de Julio de 1.969.

29. XZ ePg 19 57 04.7, X N,E iSg 57 06.5, FX 57 20, d = 14 kms,  
H = 19:57:02.0, mC = 2.8 aprox.-
30. XZ iPg 15 01 33.5 D, T 0.3, A 1.3, X Z,N,E iSg 01 34.5, FX 01 50,  
d = 8 kms, H = 15:01:31.5, mC = 3.1.-
31. XZ iP 11 35 56.0 D, T 1.0, A 2.1, XZ i 36 03, XZ ePP 39 42, LN  
iS 46 52, LZ iPS 47 52, LN eSS 53 18, L Z,N,E eL 12 08.0 (T 30),  
L Z,N,E iR 14.0 (T 24), LZ: T 20, 2A 7; LN: T 20, 2A 9; LE: T 20,  
2A 6, FL 13 00.0.  
CGS: 53.0 N, 170.1 W. Fox, Islas Aleutianas. H = 11:23:01.2,  
h = 37 kms, MB = 5.3, MS = 5.3.-

G. Fiedler

F.A.Miranda

/G.N.



27 APR 1970

COMANDANCIA GENERAL DE LA MARINA  
SERVICIO DE HIDROGRAFIA Y NAVEGACION  
OBSERVATORIO DE SISMOLOGIA  
Y MAREAS TERRESTRES  
Caracas - Venezuela  
BOLETIN SISMICO MENSUAL

Agosto 1.969

1. XZ iP 02 33 10.0 D, T 0.8, A 1.9, LE e 35 26, FL 45.0.-
1. XZ ePn 13 08 51.5, L Z,N ePb 09 10, X L N,E iSn 10 25, L Z,N iLR 11.0-13.5 (T 26-16), LZ: T 20, 2A 16; LN: T 20, 2A 20; LE: T 20, 2A 6, FL 13 40.0, d = 980 kms, H = 13:06:38.5.  
CGS: 18.8 N, 64.4 W. Islas Virgenes. Sentido en Puerto Rico. H = 13:06:49.1, h = 47 kms, MB = 5.0.-
1. XL,Z eP 19 07 26.0, XN iPP 07 47, XL N,E iS 11 43, LE eSS 12 48, L N,E eL 14.5 (T 22), L Z,N,E iR 17.0 (T 14), FL 19 35.0, d = 2 600 kms, H = 19:02:16.0.  
CGS: 11.8 S, 75.2 W. Perú. H = 19:02:10.9, h = 2 kms, MB = 5.1.-
1. XZ eP 19 37 27.0, LN iS 42 08, L Z,N,E iR 47.5 (T 12), FL 20 00.0. d = 2 800 kms, H = 19:32:02.0.  
CGS: 13.5 S, 72.5 W. Perú. H = 19:32:13.5, h = 46 kms, MB = 4.5.-
2. LZ ePKP 00 00 12.0, LZ iPP 03 20, LE eS 10 58, L Z,N,E iPS 13 04, L N,E iSS 19 10, LZ i 20 36, L N,E e SSS 24 08, L N,E eL 37.5 (T 38), L Z,N,E iMR 46.5-51.5 (T 26-20), LZ: T 22, 2A 33; LN T 22, 2A 30; LE T 22, 2A 16. FL 03 00.0.  
CGS: 45.6 N, 150.9 E. Islas Kuriles. H = 23:43:44.9, h = 38 kms, MB = 5.6, MS = 5.9.-
2. XL Z iPKP1 04 50 12.5 D, T 0.8, A 1.3, XL Z iPKP2 50 24, XL Z iSKP 54 18, LN eSS 05 12 40, LE eSSS 18 12, LZ: T 20, 2A 4; LN:T 20, 2A 5; LE:T 20, 2A 3. FL 07 50.0.  
CGS: 6.5 S, 146.9 E. Este de Nueva Guinea. H = 04:30:29.2, h = 17 kms, MB = 5.3.-
2. XZ iP 13 54 47.0 C, T 0.9, A 2.0, XZ i 54 49, XZ iPP 55 03, L N,E iS 58 48, L N eSS 58 46, LE eL 14 01.0 (T 30), FL 20.0, d = 2 400 kms, H = 13:49:57.0, mC = 5.1.  
CGS: 8.5 S, 77.3 W. Perú. H = 13:50:00.0, h = 33 kms, MB = 4.7.-
2. XZ iPg 14 52 00.0 C, T 0.3, A 0.6, X Z,N,E iSg 52 01.8, FX 52 10, d = 14 kms, H = 14:51:57.0, mC = 3.0.-
2. XZ,N,E iPg 16 15 27.5 C, T 0.3, A 2.2, X Z,N,E iSg 15 29.3, XZ i 15 30.5, FX 15 50, P-azimut: NE, d = 14 kms, H = 16:15:24.5, mC = 3.4. Cerca a Punta Caraballeda.-
3. XL Z e PKP 00 41 54.0, L Z iSKP 45 28, LE eSKKS 51 40, L N,E iSS 01 03 26, LN e SSS 08 42, L N,E iLR 28.5-34.0 (T 36-22), LZ: T 20, 2A 11; LN: T 20, 2A 8; LE: T 20, 2A 7. FL 02 50.0.  
CGS: 4.2 S, 153.0 E. Nueva Irlanda. H = 00:22:32.0, h = 65 kms, MB = 5.3.-

Continuación del mes de Agosto de 1.969.

3. XZ iPKP1 04 39 07.5 D, T 1.0, A 2.0, FX 41.0.  
CGS: 24.9 N, 123.2 E. Islas Ryukyu, H = 04:19:41.4, h = 62 kms,  
MB = 5.3.-

Microsismicidad alta en SP.

Reducida al movimiento sinusoidal del suelo (Ground Motion)

	T	a(u)	T	a(u)	T	a(u)
3. 16h	Z 1.0	0.03	N 1.5	0.09	E 1.7	0.11
18h	Z 1.4	0.10	N 1.2	0.08	E 1.0	0.05
20h	Z 1.5	0.15	N 1.5	0.20	E 1.5	0.14
22h	Z 1.5	0.15	N 1.5	0.11	E 1.4	0.10
4. 00h	Z 1.5	0.12	N 1.5	0.10	E 1.5	0.08
02h	Z 1.5	0.10	N 1.4	0.07	E 1.5	0.07

4. L Z eP 04 35 48.0, L Z e 40 44, L Z,N eR 49.0 (T 18). LZ: T 18, 2A 2. FL 05 10.0.-

4. L Z eP 10 36 52.0, L Z ePP 40 44, L Z,N,E iSKS 47 24, L E eS 48 08, L Z iPS 49 28, L Z ePPS 50 26, L Z,E eSS 54 28, L Z,N eSSS 59 48, L Z,N,E i LR 11 10.5-19.5 (T 40-20). LZ: T 20, 2A 8; LN: T 20, 2A 6; LE: T 20, 2A 4. FL 12 00.0. d = 10 650 kms. H = 10:23:25.0, CGS: 51.4 N, 179.6 W. Islas Andreanoff, Islas Aleutianas, H = 10:23:28.9, h = 41 kms, MB = 5.3, MS = 5.2.-

4. L Z,N,E iPKP1 17 38 26.0 C, XL Z,N,E iPKP2 39 32, L Z ipPKP2 42 24, XL Z,N,E iPP 43 22, L Z,E ipPP 46 06, L N,E ipPPP 49 18, L E iSKSP 53 00, L Z,E iSPP 56 32, FL 20 00.0.  
LAGUNILLAS: XZ iPKP1 17 38 24.0.  
CGS: 5.7 S, 125.3 E. Mar de Banda. H = 17:19:19.6, h = 521 kms, MB = 6.2.-

4. XL Z iP 21 57 12.5 C, T 0.8, A 2.0, LZ iPP 58 40, LE iPcS 22 02 54, LN iS 03 10, L Z,N,E iSS 05 36, LE eSSS 07 10, LZ iL 10.0 (T 30), LZ: T 18, 2A 31; LN: T 18, 2A 24; LE, T 18, 2A 9. FL 23 20.0, d = 4 250 kms, H = 21:49:56.0. MC = 5.2.  
CGS: 26.9 S, 70.9 W. Cerca a la costa de Chile. H = 21:50:02.3, h = 33 kms, MB = 5.3, MS = 5.3.-

5. XL Z iPKP1 02 33 10.5 C, T 1.7, A 2.8, XZ i 33 21, XL Z iPKP2 34 09, XL Z iPP 37 50, XL Z,N,E i 42 52, XL Z,N,E iSKKS 44 40, L N,E iPSKS 48 16, L N,E iSS 57 44, L Z,N,E iL 03 28.5 (T 36), LZ: T 20, 2A 240; LN: T 20, 2A 260; LE: T 20, 2A 180. FL 08 00.0.  
LAGUNILLAS: XZ ePKP1 02 33 09.5.  
CGS: 1.3 N, 126.2 E. Pasaje de Moluca. H = 02:13:09.6, h = 34 kms, MB = 6.1, 7.0.-

5. XL Z iP 12 19 32.0 C, T 1.2, A 2.0, XN i 19 38, XZ iPP 19 55, L N,E iS 23 34, L N i 23 40, L Z,N,E iL 27.0 (T 26), FL 13 00.0. d = 2 450 kms, H = 12:14:37.0, mC = 5.2.-  
CGS: 5.4 S, 81.7 W. Cerca a la costa del Perú. H = 12:14:43.0, h = 32 kms, MB = 4.9.-

Continúa

Continuación del mes de Agosto de 1.969.

5. LZ ePKP1 13 23 32.0, LZ eSKP 27 06, L N,E eSS 48 20, L N,E eL 14 09.5 (T 36). LZ: T 20, 2A 10; LN: T 22, 2A 8; LE: T 22, 2A 4. FL 15 30.0.  
CGS: 1.3 N, 126.4 E. Pasaje de Moluca. H = 13:03:23.3, h = 18 kms, MB = 5.2, MS = 5.4.-
5. LZ ePKP 16 51 34.0, X L Z i 51 54, XL Z iPP 54 44, XL Z iSKP 55 24, LE iSKKS 17 01 34, LZ, E iPSKS 04 52, L Z,E iPPS 07 08, L N,E iSS 13 06, L Z,E iSSS 18 20, L Z,N,E iLR 38.0-45.0 (T 40-20), LZ: T 20, 2A 46. FL 20 00.0.  
CGS: 5.2 S, 153.8 E. Nueva Irlanda. H = 16:32:25.8, h = 69 kms, MB = 5.4.-
6. LE e(S) 15 35 44, L Z,N,E eR 39.5 (T 20), LZ: T 20, 2A 4, LN: T 20, 2A 3; LE:T 20, 2A 2, FL 46.0.-
6. L Z,E iP 15 46 54.0 C, LZ iPP 47 36, LZ ePcP 50 30, LN iS 51 04, LN iSS 52 20, L Z,N,E iL 53.5 (T 32), L Z,N,E iR 56.0 (T 20), LZ: T 20, 2A 15; LN: T 20, 2A 12; LE T 20, 2A 9, FL 17 00.0, d = 2 600 kms, H = 15:41:49.0, mC = 4.7.  
CGS: 10.8 N, 43.2 W. Norte del Océano Atlántico. H = 15:41:50.4, h = 33 kms, MB = 5.2, MS = 4.7.-
6. XZ,N,E iPg 22 30 09.5 D, T 0.3, A 1.3, X Z,N,E iSg 30 11.5, FX 40.0, P-azimut: SSW, d = 16 kms, H = 22:30:06.5, mC = 3.2, Macarao.-
7. LZ e PKP1 02 08 48.0, LZ ePP 12 04, LZ i pPKS 13 16, LE ePPP 15 18, LE e SKKS 18 24, L Z,E eSKSP 21 46, L Z,E ePPS 24 08, L Z,N, E eSS 30 20, L N,E eL 54.5 (T 40), FL 04 00.0.-  
CGS: 5.3 S, 154.1 E. Islas Salomón. H = 01:49:33.2, h = 116 kms, MB = 5.2.-
7. XZ iPg 15 14 56.5 D, T 0.3, A 0.5, X N,E iSg 14 57.5, FX 15 10, d = 8 kms, H = 15:14:54.5, mC = 2.8. Región de Caracas.-
7. XZ iPg 19 29 53.0 C, T 0.3, A 0.6, X N,E iSg 29 54.5, FX 30 10, d = 12 kms, H = 19:29:50.0, mC = 2.9. Región de Caracas.-
8. XZ iP 05 18 19.5 C, T 0.7, A 1.7, XZ iP 18 47, L N,E iS 23 20, L N,E i sS 24 06, L N,E e(SS) 25 52, LZ,N,E iR 30.0 (T 12), FL 06 00.0, d = 3 300 kms, H = 05:12:10.5, mC = 5.4.  
CGS: 21.2 S, 68.6 W. Frontera Chile-Bolivia. H = 05:12:01.6, h = 74 kms, MB = 5.4.-
8. XZ iPKP 06 49 23.0 D, T 0.8, A 1.3, L Z ePP 50 38, L N,E eSKSP 07 00 28, L N,E ePPS 01 40, L N eSS 06 46, L N,E eSSS 11 10, L Z,N eR 38.0 (T 20), LZ: T 20, 2A 3. F mezclado con el sismo siguiente.  
CGS: 36.4 N, 70.9 E. Región Hindu-Kush. H = 06:30:57.1, h = 198 kms, MB = 5.8.-
8. XZ eP 07 51 21.0, XZ i 51 53, LE eS 54 38, L Z,N, iR 58.0 (T 14), F 08 20.0, d = 1 850 kms, H = 07:47:24.0.  
CGS: 1.1 S, 78.7 W. Ecuador. Sentido en Ambato. H = 07:47:27.3, h = 16 kms, MB = 4.6.-

Continúa

## Continuación del mes de Agosto de 1.969.

8. XL Z,N,E iP 11 19 46.0 D, XL Z iPP 21 32, L Z,N,E iS 29 16, L N, E i PS 29 54, L N,E i SS 34 00, L Z,N,E iSS 37 16, L Z,N,E iL 43.0 (T 36), L Z,N,E iR 49.0 (T 20), LZ: T 20, 2A 206; LN: T 20, 2A 144; LE: T 20, 2A 97. FL 14 00.0. d = 8 100 kms, H = 11:08:20.0.  
CGS: 47.7 S, 15.8 W. Sur del Océano Atlántico. H = 11:08:14.8, h = 33 kms, MB = 5.9, MS = 6.0.-
8. XL Z iP 16 18 08.0 C, T 0.7, A 1.3, L Z iPP 19 34, LE eS 23 54, LN i PcS 24 08, LE iSS 26 46, LE eSSS 27 12, L N,E iL 29.5 (T 30), LZ, N,E iR 33.0 (T 18), LZ: T 18, 2A 10, LN: T 18, 2A 8; LE: T 18, 2A 14. FL 17 20.0, d = 4 000 kms, H = 16:11:05.0, MC = 5.0.  
CGS: 26.6 S, 70.8 W. Cerca a la costa Norte de Chile. H = 16:10:59.3, h = 34 kms, MB = 4.8, MS = 5.0.-
8. XL Z iPKP1 21 04 02.0, T 1.6, A 2.2, XL Z, iPKP2 04 54, XL Z iP 08 34, LZ iP 09 44, LZ iP 13 26, L Z,N,E i SKKS 15 08, L E i 16 00, L N,E i PSKS 19 20, LE i PPS 22 20, L N,E i SS 28 44, L N, E i SSS 35 00, L Z,N,E iR 22 31.5 (T 20), LZ: T 20, 2A 28; LN: T 20, 2A 22; LE: T 20, 2A 17. FL 23 30.0.  
CGS: 6.1 S, 129.7 E. Mar de Banda. H = 20:44:21.0, h = 196 kms, MB = 5.9.-
8. X Z,E iPg 22 19 46.0 D, T 0.3, A 0.9, X Z,N,E iSg 19 48.5, FX 20.0. P-azimut: NE, d = 20 kms, H = 22:19:42.0, mC = 3.1. Cerca a Naiguatá.-
8. X Z,E iPn 23 04 23.5 C, T 0.5, A 1.2, X Z,N,E i 04 26, X N,E iPb 04 30, X N,E eSn 05 24, X N,E iSb 05 32, FX 08.0, d = 650 kms, H = 23:02:53.0, mC = 4.4.-
9. X Z, iPn 15 39 23.0 C, T 0.5, A 1.1, X Z,N,E iPb 39 34, X,N,E eSn 40 37.5, FX 43.0, d = 780 kms, H = 15:37:35.0, mC = 4.6.-
10. X Z iP 02 45 09.5 C, T 0.8, A 1.4, X Z iP 45 39, FX 47.5.  
CGS: 15.6 S, 74.1 W. Cerca a la costa del Perú. H = 02:39:33.9, h = 83 kms, MB = 4.8.-
10. XZ ePn 03 36 06.0, X Z,N,E iPb 36 31.5, X N,E iSn 37 39, X N,E i 37 45, X N,E i 37 50, FX 40.0. d = 950 kms, H = 03:33:56.0.  
CGS: 19.3 N, 65.3 W. Puerto Rico. H = 03:33:57.1, h = 33 kms, MB = 4.1.-
10. X Z iPn 04 58 47.5 C, T 0.8, A 1.5, X Z iPg 59 25, X N,E iSn 00 01, X N,E iSn 05 00 06, X Z iSb 00 44, FX 03.0, d = 780 kms, H = 04:56:59.5, mC = 4.5.  
CGS: 7.1 N, 73.1 W. Cerca a Bucaramanga. Depto. de Santander, Colombia. H = 04:57:06.1, h = 134 kms, MB = 4.2.-
10. L Z eP 05 16 46.0, L Z ePP 20 16, L N,E e(S) 27 24, L N, E ePS 28 52, L Z,N,E eSS 33 40, L N,E eSSS 37 36, L Z,N,E iLR 48.5-52.5 (T 30-16), LZ: T 20, 2A 4; LN: T 20, 2A 4; LE: T 20, 2A 3. FL 06 30.0, d = 9 900 kms, H = 05:03:53.0.-

Continúa

Continuación del mes de Agosto de 1.969.

11. L Z ePPP 13 42 22.0, L N,E eS 46 38, L Z,N,E eSS 49 26, L Z,N,E eLR 52.5-56.0 (T 32-20), LZ: T 20, 2A 3. FL 14 30.0.  
CGS: 1.0 N, 28.5 W. Océano Atlántico Central. H = 13:33:04.1, h = 33 kms, MB = 5.0.-
11. X Z e ScP 16 27 12.0, X Z e PcS 27 33, X Z i 28 08, FL 33.0.  
CGS: 11.6 S, 74.7 W. Perú. H = 16:15:16.5, h = 82 kms, MB = 4.2.-
11. X Z iPg 20 04 33.0 C, T 0.3, A 0.8, X Z,N,E iSg 04 33.8, FX 04 40, d = 6 kms, H = 20:04:31.5, mC = 3.0. Región de Caracas.-
11. XL Z ePn 20 18 58.0, X N,E eSn 20 33, L Z,N,E iL 21 20 (T 24). LZ: T 18, 2A 10; LN: T 18, 2A 9. FL mezclado con el sismo siguiente. d = 1 000 kms, H = 20:16:43.0.  
CGS: 20.1 N, 64.3 W. Islas Vírgenes. H = 20:16:35.0, h = 33 kms, MB = 4.9.-
11. X Z ePn 20 48 22.5, X Z iPb 48 40. FX mezclado con el sismo siguiente.  
CGS: 19.8 N, 64.1 W. Islas Vírgenes. H = 20:45:55.8, h = 33 kms, MB = 4.3.-
11. XZ iPn 20 49 10.0 C, T 0.6, A 1.6, X N,E iSn 50 47.5, FX 55.0, d = 980 kms, H = 20:46:55.0, mC = 4.9.  
CGS: 19.9 N, 64.3 W. Islas Vírgenes. H = 20:46:41.6, h = 10 kms, MB = 5.0.-
11. L Z,N,E iP 21 42 40.0 C, XL Z,N,E iPKP 46 27, XL Z,N,E iPP 47 34, L Z,N,E iSKS 53 46, XN i SKKS 54 35, L Z,E i (PKKP) 56 28, X N,E e PS 57 31, X N,E eSS 22 03 33, FL mezclado con el sismo siguiente. LAGUNILLAS: XZ ePP 21 47 08.  
d = 13 100 kms, H = 21:27:34.0.  
CGS: 43.5 N, 147.4 E. Islas Kuriles. H = 21:27:39.4, h = 28 kms, MB = 7.1, MS = 7.8.-
12. XZ i PKP1 00 12 57.0 D, T 1.0, A 1.3, X Z,N,E iPKP2 13 47, X Z, N,E ePP 17 30, XZ e PPP 21 12, FX 30.0.  
LAGUNILLAS: XZ ePKP2 00 13 00.  
CGS: 1.7 N, 126.5 E. Pasaje de Moluca. H = 23:52:56.9, h = 34 kms, MB = 6.1, MS = 7.0.-
12. XL Z iPP 05 23 21.5 C, L E iS 31 04, LZ iPS 33 10, LE iSS 39 20, L Z,E iL 58 30 (T 40), L Z,E iR 06 09 30 (T 20). LZ: T 20, 2A 59. FL mezclado con otros sismos.  
CGS: 43.6 N, 148.0 E. Islas Kuriles. H = 05:06:26.9, h = 33 kms, MB = 6.0, MS = 6.5.-
12. XZ ePP 06 13 25.0, XZ i 13 37, FX 16.0.  
CGS: 43.7 N, 148.5 E. Islas Kuriles. H = 05:53:28.2, h = 33 kms, MB = 5.4, MS = 6.2.-
12. L Z,N,E iPP 11 41 16.0 C, LZ iPPP 44 08, LE i SKKS 48 22, LE iS 49 03, LZ iPS 51 03, LN iPPS 52 34, L N,E iSS 57 16, LE i SSS 12 01 54, L Z,N,E iL 16.5 (T 40), L Z,N,E iR 25.5 (T 26), L Z,N,E iM 28.0 (T 22). LZ: T 20, 2A 78; LN: T 20, 2A 61; LE: T 20, 2A 25. FL mezclado con el sismo siguiente.  
CGS: 43.9 N, 148.7 E. Islas Kuriles, H = 11:21:21.6, h = 29 kms, MB = 5.4, MS = 6.3.-

Continúa

Continuación del mes de Agosto de 1.969.

12. XZ iPKP1 12 41 20.5 D, T 1.5, A 1.4, XZ iPKP2 42 09.5, XZ ePP 45 51, FX 50.0.  
CGS: 1.7 N, 126.3 E. Pasaje de Moluca. H = 12:21:19.0, h = 30 kms, MB = 5.8.-
12. X Z,N,E iPg 16 55 43.0 C, T 0.3, A 1.5, X Z,N,E iSg 55 46, X N,E i 55 48, FX 56 10, T 0.3, A 1.5. P-azimut: WSW, d = 24 kms, H = 16:55:38.0, mC = 3.3. Entre Macarao y El Junquito.-
13. LZ ePP 08 51 28.0, L Z eSKP 53 16, L N,E eSKKS 58 20, L N,E eS 59 20, FL 13 30.0.  
CGS: 44.0 N, 147.7 E. Islas Kuriles, H = 08:31:32.2, h = 33 kms, MB = 5.6, MS = 5.6.-
13. X Z,N,E iPn 15 56 06.0 D, T 0.3, A 1.3, XZ iPb 56 18, X Z,N,E iSn 56 59.5, X Z,N,E iSn 57 04, FX 16 00.0, d = 580 kms, H = 15:54:46.0, mC = 4.6.-
13. LZ eP 23 12 12.0, LZ ePP 17 02.0, L Z,E eSKS 22 34, LE eSKKS 24 06, L Z,N,E iPS 26 42, L Z,N,E iPPS 28 40, L N,E iSS 33 06, L N,E iSSS 37 36, L N,E iL 50.0 (T 40), L Z,N,E iR 57.0 (T 32), L Z,N,E iM 00 02.0 (T 24), LZ: T 20, 2A 54; LN: T 20, 2A 40; LE: T 20, 2A 12, FL 03 00.0, d = 13 200 kms, H = 22:56:57.0, MC = 6.3.  
CGS: 44.0 N, 148.1 E. Islas Kuriles. H = 22:57:07.4, h = 33 kms, MB = 5.6, MS = 6.1.-
14. LZ iPKP 11 17 26.0, L Z,E ePP 20 30, L N,E e SKP 21 14, LE ePSKS 30 40, FL 13 30.0.  
CGS: 5.4 S, 152.0 E. Nueva Bretaña. H = 10:58:01.7, h = 33 kms, MB = 5.6.-
14. X Z,E iPg 14 21 56.0 C, T 0.3, A 1.1, X Z,N,E iSg 21 56.8, FX 22.0, d = 6 kms, H = 14:21:54.0, mC = 3.0. Región de Caracas.-
14. LZ eP 14 34 14.0, XZ iPKP 37 52, XL Z iPP 39 04, XL Z i 39 18, LZ iPPP 42 04, LE iS 46 54, L Z,E iPS 48 48, LZ iPPS 50 00, LN iSS 55 04, L N,E i 56 28, L Z,N,E iSSS 59 48, L N,E iL 15 14.0 (T 40), L Z,N,E iR 22.5 (T 28), L Z,N,E iM 26.0 (T 26), LZ: T 20, 2A 66; LN: T 20, 2A 56; LE: T 20, 2A 30, FL 18 30.0, d = 13 200 kms, H = 14:18:59.0.  
CGS: 43.1 N, 147.5 E. Islas Kuriles. H = 14:19:01.6, h = 33 kms, MB = 6.1, MS = 6.5.-
15. XL Z iP 01 47 06.0 C, T 0.8, A 0.8, XL Z iPP 47 17, L Z,N,E iS 50 14, L Z,N,E iL 51 30 (T 34), L Z,N,E iR 55.0 (T 20), LZ: T 20, 2A 20; LN: T 20, 2A 16; LE: T 20, 2A 15, FL 02 40.0. P-azimut: W, d = 1 850 kms, H = 01:43:19.0, MC = 4.4.  
CGS: 9.5 N, 83.9 W. Costa Rica. H = 01:43:11.6, h = 33 kms, MB = 4.2.-
15. XZ iPKP1 03 57 41.0 D, T 1.0, A 1.6, LZ ePKP2 04 01 24. FL mezclado con otro sismo.  
CGS: 3.5 S, 144.4 E. Cerca a la costa Norte de Nueva Guinea. H = 03:37:52.8, h = 22 kms, MB = 5.4.-

Continúa



## Continuación del mes de Agosto de 1.969.-

15. XZ iPKP 09 00 34, XL Z i 00 43, LZ i 03 16, XL Z,N,E iPP 03 44, XL N,E iPKS 04 15, L N,E iSKS 05 26, LZ iSKSP 13 02, L N,E eSS 21 12, FL 13 00.0.  
CGS: 21.6 N, 143.0 E. Islas Marianas. H = 08:41:54.9, h = 319 kms, MB = 6.1.-
15. XZ iPn 14 37 16.5 C, T 0.7, A 3.2, X Z,N, iPb 37 28, XNE iSn 38 29.5, X N,E iSn 38 33, XN iSb 38 49.5, FX 42.0, T 0.7, A 3.2, d = 770 kms, H = 14:35:28.5, mC = 4.8.  
CGS: 7.0 N, 73.1 W. Cerca a Piedecuesta, Depto. de Santander, Colombia. H = 14:35:35.1, h = 150 kms, MB = 4.5.-
16. XE e Pn 03 11 10.5, XZ i 11 14, XZ i 11 42.5, X N,E e (Sn) 12 05, X N,E i 12 07, X Z,N,E i 12 11, FX 14.0.-
16. LZ iPP 15 35 24.0 D, LZ iPPP 38 12, L Z,N ePS 45 12, LE eSS 51 36, L N,E iL 16 10.0 (T 40), L Z,N,E iR 21.5 (T 24), LZ: T 20, 2A 5; LN: T 20, 2A 6; LE: T 20, 2A 3, FL 17 30.0.  
CGS: 43.3 N, 147.6 E. Islas Kuriles. H = 15:15:32.7, h = 60 kms, MB = 5.7.-
16. X Z,N,E iPg 18 36 57.5 C, T 0.4, A 3.3, X N,E iSg 36 59.5, FX 37 25.0, T 0.4, A 3.3. P-azimut: SW, d = 16 kms, H = 18:36:54.5, mC = 3.3. Entre Antímano y Macarao.-
16. X Z,N,E ePn 18 43 58.5, T 0.7, A 1.2, XZ iPb 44 13, X Z,N,E iSn 44 56, XN i Sn 45 01.5, X Z,N,E iSb 45 05, X N,E iSb 45 20, FX 49.0  
MERIDA: XZ iPn 18 43 23.0 C, XZ iSn 43 53.  
En Lagunillas no se registró este sismo por estar haciendo ajustes de la luz en ese momento.  
d = .620 kms, H = 18:42:30.5, mC = 4.2.  
CGS: 10.9 N, 72.5 W. Sierra de Perijá, Edo. Zulia. H = 18:42:36.5, h = 44 kms, MB = 3.6, d = 300 kms.-
16. XL Z,N,E iPg 19 03 09.5 C, T 0.2, A 10.0, XL Z,N,E iSg 03 11, FX 04.0. P-azimut: SSW, d = 12 kms, H = 19:03:07.0, mC = 4.3. Cerca a Antímano. No fué sentido.
17. XL Z iP 07 27 43.0 D, T 1.0, A 1.3, LZ iPP 29 22, L N eS 33 45, LZ eSSS 36 50, L N,E eL 42.5 (T 30), FL 08 10.0, d = 4 350 kms. H = 07:20:16.0.  
CGS: 29.5 S, 71.1 W. Cerca a la costa Central de Chile. H = 07:20:11.6, h = 51 kms, MB = 4.9.-
17. XZ ePKP 12 13 34.0, XZ iPP 15 03, FX 16.0.  
CGS: 42.7 N, 141.4 E. Hokkaido, Japón. H = 11:54:54.9, h = 130 kms, MB = 5.6.-
17. XL Z,N,E iP 20 21 03.0 C, T 1.5, A 1.6, XZ i 20 06, L Z,N,E iPP 22 46, L Z,N,E iS 27 30. F mezclado con el sismo siguiente.  
LAGUNILLAS: XZ eP 20 20 35.0.  
P-azimut: NW, d = 4 750 kms, H = 20:13:04.0.  
CGS: 25.3 N, 109.2 W. Golfo de California. H = 20:13:08.2, h = 33 kms, MB = 5.7.-

Continúa

## Continuación del mes de Agosto de 1.969.

17. XL Z,N,E iP 20 22 59.5 D, T 1.3, A 2.7, XL Z iP 24 48, L Z,N,E iS 29 24, L Z,N,E iSS 31 42, FL 00 00.0, d = 4 700 kms, H = 20:15:08.5. LAGUNILLAS: XZ eP 20 22 35.0.- CGS: 25.0 N, 109.5 W. Golfo de California, H = 20:14:58.9, h = 33 kms, MB = 6.1, MS = 6.6.-
17. XZ iP 20 35 23.0 C, T 1.0, A 1.0, FX 37.0. CGS: 25.4 N, 109.2 W. Golfo de California, H = 20:27:25.2, h = 18 kms, MB = 5.4.-
18. XL Z iP 01 16 16.0 D, T 1.0, A 0.9, XZ iPcP 16 18, LZ ePP 19 16, LZ,N,E iS 26 24, L Z,N,E iPS 27 18, L Z,N,E iSS 31 30, L Z,N,E iSSS 35 18, L Z,N,E iL 43.5 (T 40), L Z,N,E iR 48.0 (T 20), LZ: T 20, 2A 190; LN: T 20, 2A 104; LE: T 20, 2A 90. FL en el sismo siguiente. d = 9 000 kms, H = 01:04:03.0. CGS: 56.0 S, 123.4 W. Isla Cordillera. H = 01:04:04.7, h = 33 kms, MB = 5.1, MS = 6.4.-
18. XZ iP 03 07 42.5 C, T 1.0, A 1.3, FX 09.0. CGS: 56.0 S, 122.7 W. Isla Cordillera. H = 02:55:31.1, h = 33 kms, MB = 5.2, MS 5.8.-
18. XL Z,N,E iP 03 29 49.5 D, T 1.0, A 1.1, XZ i 29 55, LZ iP 31 24, L Z,N,E eS 36 16, L Z,N,E iSS 39 22, L Z,N,E i LM 43.0-48.0 (T 36-18), LZ: T 20, 2A 19; LN: T 20, 2A 23; LE: T 20, 2A 10. FL en el sismo siguiente. d = 4 650 kms, H = 03:21:58.5. CGS: 24.9 N, 109.0 W. Golfo de California, H = 03:21:54.0, h = 22 kms, MB = 5.3, MS = 5.5.-
18. XL Z,eP 04 02 45.5, XZ i 02 50, XZ i 03 04.5, XL Z iP 04 32. Las demás ondas están mezcladas con el sismo siguiente. CGS: 24.8 N, 109.1 W. Golfo de California. H = 03:54:49.8, h = 33 kms, MB = 5.3, MS = 5.2.-
18. XZ iP 04 07 52.0 C, T 0.8, A 4.7, XZ i 08 06, XZ i 08 20, F 13.0. CGS: 7.5 N, 80.6 W. Panamá. H = 04:04:(37.4), h = 33 kms, MB = 4.4.-
18. XL Z eP 07 59 02.0, LZ ePP 01 06, LZ i (PcS) 05 10, L N,E iS 05 30, L N,E eSS 07 16, L N,E eSSS 08 44, L Z,N,E iLR 12.5-16.5 (T 40-20). LZ: T 22, 2A 8; LN: T 22, 2A 9; LE: T 22, 2A 5. FL 09 00.0, d = 4 700 kms, H = 07:51:07.0, MC = 4.8. CGS: 24.8 N, 109.1 W. Golfo de California, H = 07:51:06.9, h = 29 kms, MB = 4.8, MS = 4.8.-
18. X Z,N,E iPg 18 56 44.5, T 0.5, A 2.2, X Z,N,E iSg 56 46, FX 57.0, T 0.5, A 2.2. P-azimut: SW, d = 12 kms, H = 18:56:42.0, mC = 3.0. Cerca a Antímáno.-
19. XL Z e PKP1 01 59 20.0, XL Z ePKP2 02 00 47, LZ ePP 04 30, LZ ePPP 08 44, FL 04 00.0. CGS: 6.1 S, 105.3 E. Sur de Sumatra. H = 01:39:08.3, h = 50 kms, MB = 5.1, MS = 5.4.-

Continúa

## Continuación del mes de Agosto de 1.969.

19. LZ eP 09 04 56.0, XZ iPP 09 58, LZ iPPP 12 17, LN,E iPS 19 34, LZ,N,E iPPS 21 03, LZ,N,E iSSS 31 22, LZ,N,E iL 46.5 (T 38), LZ,N,E iR 55.0 (T 26), LZ: T 20, 2A 18; LN T 20, 2A 16, LE: T 20 2A 7. FL 11 30.0,  $d = 13\ 000$  kms,  $H = 08:49:50.0$ . CGS: 43.8 N, 148.2 E. Islas Kuriles.  $H = 08:49:54.8$ ,  $h = 39$  kms, MB = 5.7, MS = 5.8.-
19. LZ eP 17 39 04.0, LZ ePP 42 28, LN,E eS 49 48, LZ,N,E i 50 12, LN,E i(PS) 51 20, LZ,N,E iSS 56 20, LZ,N,E eSSS 18 00 12, LN,E iL 07.0 (T 36). LZ: T 20, 2A 10; LN: T 20, 2A 9; LE: T 20, 2A 7, FL 19 30.0,  $d = 9\ 800$  kms,  $H = 17:26:14.0$ , MC = 5.5.- CGS: 56.7 S, 142.1 W. Sur del Océano Pacífico.  $H = 17:26:07.3$ ,  $h = 33$  kms, MB = 4.4, MS = 5.5.-
20. XL Z eP 06 38 18.0, XZ iPP 38 46, LZ,N,E eS 42 44, LZ,N iR 49.0 (T 12), FL 07 10.0,  $d = 2\ 800$  kms,  $H = 06:32:53.0$ . CGS: 13.4 S, 77.7 W. Frente a la costa del Perú,  $H = 06:32:49.7$ ,  $h = 35$  kms, MB = 4.6.-
20. XZ iPn 07 07 26.0 D, T 0.6, A 1.2, XZ iPb 07 30, XN,E iSn 07 51, XN,E iSb 07 54, XE iSg 07 57.5, FX 09.0,  $d = 200$  kms,  $H = 07:07:25.0$ , mC = 3.4. Entre San Felipe y San Carlos.-
20. LZ ePP 08 09 14, LN eSKS 15 02, LN,E iS 16 44, LE i 17 34, LN e(PS) 18 34, LZ,N,E iSS 24 30, LE iSSS 28 40, LE iL 38.0 (T 60), LZ,N,E iR 51.5 (T 22). LZ: T 22, 2A 9; LN: T 22, 2A 8; LE: T 22, 2A 3. FL 09 30.0. CGS: 47.9 N, 153.6 E. Islas Kuriles.  $H = 07:50:05.5$ ,  $h = 73$  kms, MB = 5.8.-
20. XZ ePKPl 17 41 47.0, XZ i 42 34, LZ ePP 44 56, LZ eSS 18 04 30, LZ eLR 30.0-36.0 (T 40-20), FL 19 40.0. CGS: 5.3 S, 149.7 E. Nueva Bretaña.  $H = 17:22:13.7$ ,  $h = 27$  kms, MB = 4.8, MS = 5.2.-
20. XZ iPb 22 09 56.0 D, T 0.4, A 2.0, XN,E iSb 09 58.5, XZ,N,E 10 02, FX 10 30, P-azimut: SW,  $d = 20$  kms,  $H = 22:09:52.0$ , mC = 3.1. Cerca a San Pedro.-
21. LZ ePP 03 52 04.0, LZ ePPS 04 03 24, LE eSS 08 24, LE eSSS 13 10, LZ,N,E eMR 30.0-36.0 (T 40-20), FL 05 30.0. CGS: 43.2 N, 147.0 E. Islas Kuriles.  $H = 03:32:11.5$ ,  $h = 35$  kms, MB = 5.1, MS = 5.2.-
21. XL Z iP 14 33 55.5 C, T 1.0, A 1.8, XZ i 34 10, LZ iPP 35 46, LZ iPPP 36 20, LN,E iS 40 28, LE iSS 43 32, LN,E iSSS 44 40, LN,E iL 48.0 (T 30), LZ: T 20, 2A 10; LN: T 20, 2A 9; LE: T 20, 2A 6. FL 16 00.0.  $d = 4\ 900$  kms,  $H = 14:25:50.0$ , mC = 5.4. CGS: 23.2 N, 110.6 W. Baja California.  $H = 14:25:51.5$ ,  $h = 15$  kms, MB = 5.3, MS = 5.2.-
22. XL Z iP 10 12 40.0 C, T 1.1, A 1.9; LZ iPP 14 28, LN,E ePPP 15 00, LN,E iS 19 12, LZ,N i 20 00, LN,E iSS 22 24, LZ,N,E iSSS 23 26, LZ,N,E iL 26.5 (T 36), LZ: T 20, 2A 11; LN: T 18, 2A 9; LE: T 18, 2A 7. FL 13 30.0,  $d = 4\ 800$  kms,  $H = 10:04:40.0$ , mC = 5.0. CGS: 23.3 N, 110.4 W. Baja California.  $H = 10:04:36.4$ ,  $h = 11$  kms, MB = 5.1, MS = 5.3.-

Continúa

Continuación del mes de Agosto de 1,969.

22. XZ eP 13 04 35.0, XZ i 04 37.5, FL 18.0.  
CGS: 8.5 S. 77.0 W. Perú, H = 12:59:47.3, h = 28 kms, MB = 4.5.-
22. XZ iPn 19 54 25.5 C, T 0.5, A 1.1, XZ i 54 28, XZ iPb 54 40, XN iSn 55 35, X Z,N,E iSn 55 40, X Z,N,E i 55 45, FX 59.0.  
MERIDA: XZ iPn 19 53 45.0 C.  
T 0.5, A 1.1, d = 750 kms, H = 750 kms, H = 19:52:40.0, mC = 4.5. Colombia.-
22. XZ iPg 19 59 51.0 C, T 0.4, A 1.6, XN iS 59 52.5, FX 20 05, T 0.4, A 1.6. P-azimut: NNE, d = 12 kms, H = 19:59:48.5, mC = 3.0.-
23. X Z,E iPn 12 04 37.5 D, T 0.7, A 3.1, XZ i 04 49, X Z,E iSn 05 50, X N,E iSb 06 25, FX 11.0.  
MERIDA: XZ iPn 12 03 39.0 D, XZ iSn 04 10, d = 280 kms.  
d = 780 kms, H = 12:02:49.5, mC = 4.8.  
CGS: 6.8 N, 72.9 W. Cerca a San Andrés, Depto. de Santander, Colombia. H = 12:02:58.1, h = 180 kms, MB = 4.6.-
23. XZ iPg 15 11 16.5 C, T 0.2, A 1.0, X Z,N,E iSg 11 17.0, FX 11 25. P-azimut: SW, d = 4 kms, H = 15:11:15.5, mC = 3.0.-
23. X Z,N,E iPg 17 19 07.3 D, T 0.3, A 1.2, X Z,N,E iSg 19 09.5, X Z,N,E i 19 13, FX 19 30.0. P-azimut: SE, d = 18 kms, H = 17:19:03.8, mC = 3.2. El Encantado, Edo. Miranda.

Microsismicidad alta en S.P.

Reducida al movimiento sinusoidal del suelo (Ground Motion)

		T	a(u)		T	a(u)		T	a(u)	
25.	12h	Z	1.0	0.04	N	1.0	0.03	E	1.0	0.03
	14h	Z	1.2	0.08	N	1.5	0.13	E	1.2	0.06
	16h	Z	1.5	0.15	N	1.5	0.11	E	1.5	0.11
	18h	Z	1.5	0.15	N	1.5	0.14	E	1.5	0.13
	20h	Z	1.5	0.12	N	1.5	0.12	E	1.5	0.10
	22h	Z	1.5	0.09	N	1.5	0.09	E	1.5	0.09

25. XZ iPn 17 04 59.0 D, T 0.5, A 1.2, XZ iPb 05 17, XZ iPg 05 40, X N,E iSn 06 31.5, XZ iSb 06 43, L Z,N,E iLR 07.5-11.0 (T 24-12), LZ: T 18, 2A 8; LN: T 18, 2A 7; LE: T 18, 2A 5. FL 30.0.  
d = 940 kms, H = 17:02:51.0, mC = 4.8.  
CGS: 17.1 N, 61.5 W. Antillas Menores. H = 17:02:55.3, h = 65 kms, MB = 4.8.-
25. X Z,N,E iPg 19 34 01.2 C, T 0.3, A 1.6, X Z,N,E iSg 34 01.9, FX 34 15.0. P-azimut: SSE, d = 6 kms, H = 19:33:59.7, mC = 3.2. Cerca a Baruta, Edo. Miranda.

Continúa

Continuación del mes de Agosto de 1.969.

25. X Z,N,E iSg 23 01 53.0, X Z,N,E 01 55.5, FX 02.0.-
26. X Z,E iPn 03 32 05.0 C, T 0.4, A 1.5, X Z,N,E iPb 32 06.5, X Z,N,E iSn 32 22.5, X Z,N,E i 32 24, FX 37.0. ∴  
CUMANA: XZ iPn 03 32 08.0, T 0.7, A 133 mu, XZ eSn 32 31, d = 190 kms.  
d = 120 kms, H = 03:31:03.0, mC = 3.4.-
26. XL Z iPKP 17 17 24.0 D, T 0.9, A 2.4, XL Z i 17 46, LZ ePP 20 44, LE iSKP 21 12, LZ eSKS 24 34, LE eSKKS 27 26, LZ E iPSKS 30 48, LZ,E ePPS 33 12, LN iSS 39 12, L Z,N,E eSSS 44 40, LZ eL 18 05.5 (T 40). LZ: T 20, 2A 6; LN: T 20, 2A 4; LE: T 20, 2A 5. FL 19 30.0.  
CUMANA: XE ePKP 17 17 30.0.  
d = 15 900 kms, H = 16:57:54.0.  
CGS: 5.8 S, 151.2 E. Nueva Bretaña. H = 16:58:02.3, h = 59 kms, MB = 5.6.-
26. XL Z iPKP1 19 32 43.0 C, T 0.7, A 2.5, XZ iPKP2 33 12, LZ ePP 35 30, FL 50.0.  
CGS: 6.1 S, 148.0 E. Nueva Bretaña. H = 19:13:13.1, h = 88 kms, MB = 4.9.-
27. XZ iP 08 48 41.0 C, T 0.5, A 1.1, XE i 52 07, FX 55.0.-
27. XZ ePn 10 15 36.0, XN e 15 40, XN i(Sn) 16 40, FX 18.0.-
27. XZ iPg 13 57 31.5 C, T 0.3, A 0.7, XE iSg 57 36, FX 58.0, d = 40 kms, H = 13:57:24.5.-
27. XZ iPn 14 00 44.5 C, T 0.5, A 2.0, XZ iPg 01 11.5, XE iSn 01 43, XN iSb 02 07, FX 04.0. P-azimut: ENE. d = 640 kms. Al W. de la Isla San Vicente. H = 13:59:14.0.-  
CUMANA: XZ eP 14 00 21.0.-
27. XZ iP 16 01 20.0 C, T 0.8, A 1.8, L N,E eS 06 54, L Z,N isS 07 20, L Z,N e ScS 10 16, FL 20.0.  
CGS: 17.3 S, 70.1 W. Cerca a la costa del Perú. H = 15:55:44.1. h = 152 kms, MB = 4.9.-
28. XZ iP 03 35 42.0 C, T 0.6, A 0.5, X N,E i(S) 37 26, X N,E e 38 22, FX 41.0.-
28. XL Z eP 08 38 33.0, LE ePP 39 08, L Z,N,E iS 42 44, LE eL 46.0 (T 24). LZ: T 20, 2A 5; LN: T 20, 2A 4; LE: T 20, 2A 3. FL 09.0. d = 2 550 kms. H = 08:33:28.0.  
CGS: 8.0 S, 80.4 W. Frente a la costa del Perú. H = 08:33:29.7, h = 20 kms, MB = 4.2.-
28. LZ eP 14 09 04.0, LZ iPP 13 32, L N,E iSKS 19 36, L Z,N,E iSKKS 20 38, L Z,N,E iPS 23 30, L Z,N,E iPPS 25 16, L Z,E iSS 29 40, L Z,N,E iSSS 34 00, L Z,N,E iL 48.0 (T 38), FL 17 00.0, d = 14 700 kms, H = 13:54:12.0.  
CGS: 31.5 S, 177.9 W. Islas Kermadec. H = 13:54:11.0, h = 29 kms, MB = 5.3, MS = 5.9.-

Continúa

## Continuación del mes de Agosto de 1.969.

28. X Z,N,E iPg 22 37 17.0 D, T 0.4, A 1.0, X Z,N,E iSg 37 19.5, FX 38.0. P-azimut: SSW. d = 20 kms, H = 22:37:13.0, mC = 2.9. Cerca a Los Teques.-
29. XZ eP 05 27 49.0, T 0.7, A 0.5, XZ i 28 03, X N,E iS 29 30, FX 34.0. d = 1 010 kms, H = 05:25:34.0, mC = (4.4). CGS: 4.4 N, 74.0 W. Cerca a Une, Depto. de Cundinamarca, Colombia. H = 05:25:35.1. h = 33 kms, MB = 4.0.-
29. XZ iPKP1 10 22 10 D, T 0.2, A 0.5, XZ iPKP2 22 14, FX 22 30.0. CGS: 26.3 N, 96.1 E. Burma. H = 10:02:49.6, h = 73 kms, MB = 5.4.-
29. XZ iPn 15 34 05.0 D, T 0.3, A 0.6, X Z,N,E iPb 34 10, X Z,N iPg 34 17, XZ iSn 34 35, FX 38.0. d = 280 kms, H = 15:33:35. mC = 3.8.-
30. X L Z eP 01 32 06.0, LZ ePP 32 48, LN ePPP 33 30, LE ePcP 35 32, LE iS 36 40, LN iSS 39 08, LZ MR 44.0 (T 16), FL 03 00. d = 2 900 kms, H = 01:26:31.0. CGS: 1.1 S, 90.8 W. Islas Galápagos. H = 01:26:29.5, h = 33 kms, MB = 5.5, MS = 5.1.-
30. LZ iPP 07 31 32, L Z,N eSKS 37 10, L Z,N iPS 41 18, L Z,N eSS 47 46, FL 11 00.0. CGS: 43.7 N, 147.8 E. Islas Kuriles. H = 07:11:39.5, h = 33 kms, MB = 5.4.-
30. XZ iPKP1 13 11 17.0, FX 13.0. CGS: 5.7 S, 148.3 E. Nueva Bretaña. H = 12:51:57.9, h = 167 kms, MB = 5.2.-
30. XZ eP 16 12 16.5, LN iS 16 54, LE isS 17 16, FX 30.0. d = 2 900 kms, H = 16:06:41.0. CGS: 14.2 S, 73.3 W. Perú. H = 16:06:53.5, h = 92 kms, MB = 4.6.-

G. Fiedler

F.A.Miranda

/G.N.

Caracas, 22 de Enero de 1.969

COMANDANCIA GENERAL DE LA MARINA  
SERVICIO DE HIDROGRAFIA Y NAVEGACION  
OBSERVATORIO DE SISMOLOGIA  
Y MAREAS TERRESTRES  
Caracas - Venezuela  
BOLETIN SISMICO MENSUAL

Septiembre 1.969

1. LZ ePP 08 35 44.0, LZ ePPP 38 26, LN eSKKS 42 36, LZ ePS 45 42, LN, E iSS 52 40, LN, E iSSS 57 16, LZ eLR 09 15.5-22.5 (T 32-20), FL 11 00.0.  
CGS: 58.9 S, 149.1 E. SW. de la Isla Macquarie. H = 08:14:55.1, h = 33 kms, MB = 5.1, MS = 5.6.-
1. XZ iPg 14 59 39.5 C, T 0.3, A 1.1, X Z, N, E iSg 59 41.5, FX 15 00.0, d = 16 kms, H = 14:59:36.0, mC = 3.1.-
1. XZ eP 18 07 38.0, T 0.7, A 0.9, FX 09.0.  
CGS: 3.8 S, 80.6 W, H = 18:03:12.1, h = 57 kms, MB = 4.7.-
1. XZ iPg 21 33 54.0 D, T 0.5, A 1.6, X Z, N, E 33 56, FX 34 20.0, d = 16 kms, H = 21:33:51.0, mC = 2.9.-
2. XZ iP 03 54 11.0 D, T 0.6, A 11.0, L Z, N iPp 54 52, L Z, N iPP 55 48, L Z, N iPcP 56 30, L Z, N, E iS 59 46, LN, E esS 04 01 00, LZ; T 16, 2A 18; LN: T 16, 2A 14; LE: T 16, 2A 11, FL 04 50.0.  
CGS: 27.7 S, 66.5 W. Provincia de Catamarca, Argentina. H = 03:47:09.1, h = 174 kms, MB = 5.5.  
CUMANA: XZ iP 03 54 12.7 D, T 0.7, A 220 mu  
LAGUNILLAS: XZ iP 03 54 11.0 C, T 0.9, A 2.0 = 400 mu.-
2. X Z, N, E iP 16 41 34.0 C, T 1.0, A 4.5, XZ iPP 42 30, LN iS 46 48, LN i(SS) 48 48, LZ MR 53 10 (T 16), LZ: T 20, 2A 5; LN: T 20, 2A 5; LE: T 16, 2A 3, FL 17 22.0, d = 3 400 kms.  
CGS: 17.8 S, 72.1 W. Cerca a la costa del Perú. Sentido en Arequipa. H = 16:35:40.8, h = 36 kms, MB = 5.0.-
2. X Z, N, E iPg 17 43 03.5 D, T 0.4, A 0.9, X Z, N, E iSg 43 06, FX 43 30.0, d = 20 kms, H = 17:42:59.5, mC = 2.9.-
3. XZ e 21 57 09.5, T 0.4, A 0.8, FX 57 50.-
3. XZ iPg 16 23 02.5 D, T 0.3, A 1.2, FX 23 25.0, LZ ePP 16 41 52.0, L Z, N eSKP 43 06, LZ ePPP 44 48, L Z, N ePPS 53 40, LZ eSSS 17 04 28, LZ MR 27.0-30.0 (T 32-24), FL 18 50.0. d = 14 650 kms, H = 16:20:21.0.  
CGS: 31.5 N, 140.2 E. Sur de Honshú, Japón, H = 16:20:21.5, h = 16 kms, MB = 5.3.-
3. X Z, N, E iPn 21 27 54.5 D, T 0.5, A 1.5, X Z, N, E iSn 29 11, X Z, N, E eSb 29 30, FX 30.0.  
MERIDA: XZ iPn 21 26 55.0 C, XZ iSn 27 26, d = 280 kms.  
P-azimut: SW, d = 775 kms. Cerca a San Andrés, Depto. de Santander, Colombia, H = 21:26:06.5, mC = 4.6.-

Continúa

Continuación del mes de Septiembre de 1.969.

3. XZ ePn 23 53 46.0, T 0.4, A 0.7, XE e(Sn) 54 51, XE e 55 10, FX 57 30.0.  
LAGUNILLAS: XZ e 23 53 29.0, T 0.8, A 144 mu.  
MERIDA: XZ iPn 23 52 51. Colombia.
4. LZ ePP 03 28 12, LN iSKS 34 12, LN,E eSKKS 35 18, LN iS 35 56, LZ iPS 37 48, LZ iPPS 39 00, LN,E iSS 43 50, LN,E iSSS 48 44, LZ L 04 07.5 16.5 (T 28-22), LZ: T 20, 2A 8, LN: T 20, 2A 6; LE: T 18, 2A 5. FL 06 20.0. d = 12 600 kms, H = 03:08:48.0.  
CGS: 46.6 N, 153.5 E. Islas Kuriles. H = 03:08:52.0, h = 33 kms, MB = 5.4, MS = 5.7.-
4. XZ iP 06 30 11.5 D, T 0.8 A 1.0, XZ epP 30 18, FX 32.0.  
CGS: 13.2 N, 88.4 W. El Salvador. Sentido en San Salvador. H = 06:25:28.1, h = 53 kms, MB = 4.6.-
4. X Z,N,E iPn 12 02 37.0 C, T 0.4, A 5.0, X N,E iPg 02 43, X N,E iPg 02 48, X Z,N,E iSn 03 04, X N,E iSb 03 12, X N,E iSg 03 17, FX 08.0.  
LAGUNILLAS: XZ iS 12 04 48.0, T 0.4, A 1.2,  
P-azimut: N 50° E, d = 225 kms, H = 12:02:08.0,  
mC = 5.1, 11.8 N, 65.4 W. Isla La Orchila, Venezuela.-
4. X Z,N,E iPg 18 00 48.5 D, T 0.7, A 1.7, X Z,N,E iSg 00 52.5, FX 02.0, d = 32 kms, H = 18:00:42.5, mC = 2.8.-
4. X Z,N,E iPg 18 57 16.5, T 0.6, A 1.8, X Z,N,E iSg 57 18, FX 58.0.  
d = 20 kms, H = 18:57:12.5, mC = 2.8.-
4. LZ ePP 21 32 38.0, LZ,N ePS 42 36, LN ePPS 43 38, LN eSS 48 52, LZ,N eSSS 53 20, LZ 22 14.5-20.0 (T 28-24), LZ: T 20, 2A 4; LN: T 20, 2A 3; LE: T 20, 2A 2. FL 30.0, d = 13 100 kms, H = 21:12:42.0.  
CGS: 43.8 N, 147.4 E. Islas Kuriles. H = 21:12:39.5, h = 60 kms, MB = 5.6.-
5. X Z,N,E iPg 17 30 51.5 C, T 0.3, A 1.4, X Z,N,E iSg 30 53.5, FX 31.0, d = 16 kms, H = 17:30:48, mC = 3.3.-
6. XZ iP 06 48 22.5 C, T 0.9, A 1.5, LZ,N i 48 26, FL 07 20.C.-
6. LZ ePP 08 03 34.0, LZ ePS 08 13 08, LN ePPS 14 26, LN eSS 19 46, LE eL 35.0 (T 60), LZ: T 20, 2A 3; LN: T 20, 2A 3; LE: T 20, 2A 2. FL 09 20.0.  
CGS: 43.7 N, 147.3 E. Islas Kuriles. H = 07:43:29.8, h = 33 kms, MB = 5.5, MS = 5.2.-
6. XZ eP 14 40 12.0 C, T 2.0, A 1.4, LZ i 40 28, LN iS 48 04, LN iPS 48 16, LN,E iScS 50 22, LN,E iSS 52 24, LE eSSS 54 00, LZ MR 15 01.0 07.0 (T 24-20). FL mezclado con el sismo siguiente. d = 6 200 kms, H = 14:30:37.0.  
CGS: 36.9 N, 11.9 W. Norte del Océano Atlántico. H = 14:30:39.5, h = 33 kms, MB = 5.7, MS = 6.0.-

Continúa



## Continuación del mes de Septiembre de 1.969.

6. XZ ePKP 15 09 17.0, L Z,E iPP 11 56, L Z, E iSKP 12 58, FL mezclado con el sismo anterior.  
CGS: 8.8 S, 157.8 E. Islas Salomón. H = 14:49:55.9, h = 15 kms,  
MB = 5.8, MS = 6.1.-
6. XZ ePKP 17 27 27.5 C, T 0.9, A 0.9, LZ ePP 30 00, L Z,E eSKP 30 56. FL mezclado con otro sismo.  
CGS: 8.9 S, 157.9 E. Islas Salomón. H = 17:08:03.2, h = 10 kms,  
MB = 5.8, MS = 5.7.-
8. XZ ePKP 13 05 02 C, T 1.1, A 1.0, LZ ePP 08 00, LZ eSKP 08 36, LZ ePSKS 18 04, LZ ePPS 20 36, LZ MR 52.0 (T 36), LZ: T 20, 2A 5; LN: T 20, 2A 4; LE: T 20, 2A 4, FL 15 10.0, d = 15 600 kms, H = 12:45:32.0, mC = 5.5.  
CGS: 5.1 S, 153.4 E. Nueva Irlanda. H = 12:45:34.6, h = 47 kms,  
MB = 5.2, MS = 5.4.-
9. XZ ePKP 05 34 50.0, XZ i 35 14, L Z,N ePP 37 00, L Z,N ePPP 39 38, L Z,N,E eSKS 41 56, L Z,N iSS 54 08, L Z,N iSSS 59 00, LZ: T 20, 2A 18; LN: T 20, 2A 14; LE: T 20, 2A 13, FL 08 20.0, d = 14 350 kms, H = 05:15:41.0, mC = 6.0.  
CGS: 35.7 N, 137.0 E. Honshú, Japón, H = 05:15:37.7, h = 29 kms,  
MB = 5.5, MS = 6.0.-
9. XZ iP 15 30 56.5 C, T 1.0, A 1.5, LZ iPcP 32 44, L Z,N iPcS 36 20, L Z,N,E iS 37 12, L Z,N,E i 39 24, L N,E iSS 40 10, L Z,N iSSS 40 48, LZ MR 44.5 48.0 (T 32-16), LZ: T 20, 2A 38, LN: T 20, 2A 17; LE: T 20, 2A 13, FL 17 00, R-azimut: WSW, d = 4 550 kms, H = 15:23:16.5, mC = 5.3, MC = 5.5.  
CGS: 4.4 S, 105.9 W. Cerca a la Isla Cordillera. H = 15:23:10.8, h = 33 kms, MB = 5.2, MS = 5.3.-
10. X Z,N,E iPn 12 43 05.5 D, T 0.9, A 3.4, XZ iPb 43 26, X Z,N,E ePg 43 38, X Z,N,E iSn 44 25.5, XE iSb 44 45, X N,E eSg 45 20, FX 49.0.  
LAGUNILLAS: XZ ePn 12 42 12.0, XZ iSn 12 42 47.5.  
MERIDA: XZ iPn 12 42 07 C.  
P-azimut: WSW, d = 820 kms, H = 12:41:09.5, mC = 4.9.  
CGS: 8.5 N, 73.8 W. Al Sur de La Gloria, entro los Deptos. de Norte de Santander y Bolivar, Colombia. H = 12:41:23.3, h = 128 kms, MB = 4.4, d = 330 kms.-
10. XZ iPn 16 55 06.0 C, T 0.6, A 1.0, X N,E iSn 56 24, , X Z,N iSb 56 58, FX 59.0.  
MERIDA: XZ iPn 16 54 10.0 D, XZ iSn 54 42, d = 300 kms.  
P-azimut: SW, d = 800 kms, H = 16:53:14, mC = 4.5. Colombia.-
11. XZ ePn 07 23 10.0, T 0.5, A 0.6, X Z,N e(Sn) 24 28, FX 26.0, d = 800 kms, H = 07:21:18.0, mC = 4.4.-
11. XZ iPg 22 37 26.0 C, T 0.5, A 2.2, XZ iPg 37 27.0 D, X Z,N,E iSg 37 28.2, FX 38 30.0. P-azimut: SE, d 18 kms, H = 22:37:22.7, mC = 3.0. Cerca a El Hatillo.-

Continúa

Continuación del mes de Septiembre de 1.969.

12. LZ MR 08 52.0 00 (T 24), MR 09 02 00 (T 20), LZ: T 20, 2A 8; LN: T 20, 2A 9; LE: T 20, 2A 4, d = 10 500 kms.  
CGS: H = 08:00:16.8. Isla Andreanof, Aleutianas. 51.1 N, 179.3 W, MB = 5.2.-
12. X Z,N,E iP 09 10 31.0 D, T 1.2, A 2.3, X Z,N iP 10 41, L Z,N iP 14 24, L Z,N,E iSKS 21 00, L Z,N,E iSKKS 21 40, L Z,N,E iPS 23 08, LZ: T 18, 2A 146; LN: T 18, 2A 132; LE: T 18, 2A 51, FL 12.0.  
CUMANA: XZ eP 09 10 42.1, d = 10.800, H = 08:56:59.0, mC = 6.3.-  
CGS: 51.2 N, 179.2 W. Andreanoff, Islas Aleutianas, H = 08:57:07.3, h = 48 kms, MB = 6.0, MS = 6.6.-
12. X L Z iP 15 13 39.5 C, T 0.5, A 1.0, LN ePP 17 40, LN eSKKS 24 48, L Z,N e(S) 25 40, L Z,N,E ePS 26 12, LE eSS 31 24, LZ ER 49.8 (T 38), LZ MR 54.4 (T 20), LZ MR 58.0 (T 20), LZ: T 20, 2A 4; LN: T 20, 2A 4; LE: T 20, 2A 3, FL 16 20.0, d = 10 800 kms, H = 15:00:07.5, mC = 6.0.-  
CGS: 51.3 N, 179.2 W. Andreanoff, Islas Aleutianas. H = 15:00:18.8, h = 53 kms, MB = 5.6.-
12. XZ iPg 15 45 15.0 D, T 0.8, A 2.1, X N,E iSg 45 17, FX 45 30.0, d = 16 kms, H = 15:45:12, mC = 2.8.-
13. XZ iP 10 59 25.0 D, T 0.4, A 0.7, XZ iP 59 49, L Z,N ePP 11 00 20, L N iS 04 36, LN iS 05 22, LZ 14.5 (T 12), FX 27.0, d = 3 500 kms, H = 10:53:05, mC = 5.4.  
CGS: 22.9 S, 68.4 W. Norte de Chile. H = 10:52:58.0, h = 106 kms, MB = 5.4.-
14. LZ eR 15 46 30 (T 25), d = 13 100 kms aprox.. CGS: H = 14:46:21.1. Prov. Sinkiang, China. 39.6 N, 74.9 E, MB = 5.1.-
14. LZ ML 17 12.0-25.0 (T 40-20), LZ: T 22, 2A 6; LN: T 22, 2A 7, LE: T 22, 2A 2, d = 13 100 kms aprox., CGS: H = 16:15:24.8. Prov. Sinkiang, China. 39.7 N, 74.9 E, MB = 5.5.-
15. XZ iP 07 20 10.0 D, T 0.6, A 2.5, LN iS 24 52, L Z,N,E iScP 26 20, LN ePcS 27 00, FL 44.0.  
CGS: 18.6 S, 69.0 W. Norte de Chile. H = 07:14:25.8, h = 177 kms, MB = 5.2.-
16. XZ ePS 01 46 40.0, LE eSS 52 35, L Z,N e 58 40, LZ eR 02 16 00 (T 28), LZ MR 20.3-23.0 (T 24-20), FL 40.0, d = 12 850 kms.  
CGS: H = 01:17:14.6. Islas Kuriles, 45.6 N, 151.6 E, MB = 5.0.-
16. XZ eP 01 56 36.0, T 0.8, A 0.7, XE ei 57 02, FX 59.0.-
16. XZ iPg 13 16 09.1 C, T 0.5, A 10.0, X Z,N,E iSg 16 14.2, FX 20.0. P-azimut: N 140° E, d = 48 kms, H = 13:16:01, mC = 3.6, 10.3 N, 66.7 W. Región, Santa Teresa del Tuy-Charallave.-  
CUMANA: XZ iP 13 16 54.0 C, T 0.8, A 106 mu.-

Continúa

Continuación del mes de Septiembre de 1.969.

16. XZ i!Pg 13 37 22.2 C, T 0.4, A 100 (aprox.). i!Sg 37'27.3, .FX 53.0.  
CUMANA: XZ iP 13 38 02.0 C, T 1.0, A 789mu, i 38 26, iSg 38 56.  
MERIDA: XZ iPn 13 38 27.0 D, XZ i 38 42, XZ iSn 39 09, d= 480 km.  
LAGUNILLAS: XZ iPn 13 38 28.5 C, T 1.2, A 250mu, iSg 39 47.5.  
P-azimut: N 140° E, d = 48 kms, H = 13:37:13.9, mC = 4.6. Región Sta. Teresa-Charallave; algunos daños ligeros en Charallave. Sentido en Valencia, Barquisimeto y Caracas con 3 hasta 4.5 MCS.  
CGS: 10.2 N, 66.8 W. H = 13:37:15.3, h = 11 kms, MB = 4.6.-
16. XZ iP 14 39 10.5 C, T 1.0, A 7.0, XZ iPP 41 12, LN eS 46 32, LZ iPS 47 12, LE eSS 50 20, LZ MR 57.0 (T 36), LZ: T 18, 2A 12; LN: T 18, 2A 11; LE: T 20, 2A 6, FX 15 30.0.  
CUMANA: XZ iP 14 39 28.0 D, T 1.0, A 489 mu.  
d = 5 750 kms, H = 14:30:02.5, mC = 6.1.  
CGS: 37.3 N, 116.5 W. Sur de Nevada, U.S.A. H = 14:30:00.0, h = 0 kms, MB = 6.2, MS = 5.1.-
17. XZ iPKP 19 00 06.5 D, T 0.4, A 0.9, LZ iPP 02 36, L Z,N iSKP 03 38, L Z,N e 04 28, L Z,N iPPP 05 40, L Z,N eSKKS 09 24, L Z,N iPS 13 20, LZ iPP 15 00, L Z,N,E iSS 20 32, L N,E iSSS 25 28, LZ MR 48.0 58.0 (T 32-24), LZ: T 22, 2A 30; LN: T 22, 2A 28, LE: T 22, 2A 9, FL 21 40.0.  
CUMANA: iPKP 19 00 12.8.  
d = 15 100 kms, H = 18:40:44.  
CGS: 31.1 N, 131.3 E. Kyushu, Japón, MB = 6.2, h = 8 kms.-
18. XZ iP 07 17 25.0 C, T 0.7, A 0.8, LN iPP 18 28, LE MR 26.5 (T 28), L Z,N MR 29.0 (T 20), FX 30.0, d = 3 050 kms, H = 07:11:36.  
CGS: 17.8 S, 71.7 W. Cerca a la costa del Perú. MB = 4.3, h = 50 kms.-
18. Falló reloj de Cuarzo; registros sin la hora correcta entre el 19 y 20 de Septiembre.
19. X L Z iPKP 01 (49 35 D), T 0.4, A 0.7, d = 18 100 kms.  
CGS: H = 01:29:37.4, 6.1 N, 125.4 E. Mindanao, MB = 5.7, h = 95 kms.-
19. XZ iPn 05 (01 20.0 D), T 0.8, A 1.0, FX 02 00.-
19. eR 05 (18 00 (T 20)), F 22.0.  
CGS: 24.7 S, 70.0 W, Norte de Chile, H = 05:00:17.2, h = 50 kms, MB = 4.7.-
19. X Z,N,E iPg 06 (59 30.5) C, T 0.3, A 1.9, X Z,N,E iSg (59 35.5), FX 07 01.0. P-azimut: N 143° E, d = 44 kms, H = 06:59:22.5, mC = 3.4. No fué sentido.-
19. XZ iPg 19 21 23.5 C, T 0.3, A 0.9, X Z,N,E iSg 21 24.0, FX 21 30.0, d = 4 kms, H = 19:21:22.0. Al Este del Observatorio.  
mC = 3.0.-
20. X L Z iP 05 18 25.0 D, T 1.4, A 1.5, X Z ePP 20 51, L Z,N,E iPPP 21 40, L Z,N,E iS 26 10, LN iPS 26 32, L N,E iSS 29 50, L Z,N,E iSSS 31 38, L Z,N,E iLR 34.5-41.0 (T 34-20), LZ: T 20, 2A 32, LN: T 20, 2A 32; LE: T 20, 2A 7. FL 08 30.0, d = 6 100 kms, H = 05:08:57.0, mC = 5.5, MC = 5.9.  
CGS: 58.3 N, 32.2 W. Cresta del Océano Atlántico Norte. MB = 5.6.-

Continúa

## Continuación del mes de Septiembre de 1.969.

20. XZ iPKP2 09 16 34.5 C, T 1.2, A 2.2, XZ i 16 41, FX 18.0, d = 16 700 kms aprox..  
CGS: H = 08:56:44.8, 3.1 S, 142.0 E. Cerca a la costa Norte de Nueva Guinea.-
20. LZ iP 15 33 32.0 C, T 1.0, A 0.4, LZ iPP 34 54, LZ ePPP 35 16, LZ ePcP 36 06, L Z,N,E iS 39 04, LZ iPcS 39 36, L N,E iSS 41 32, L N,E iSSS 42 00, LN iL 43.5 (T 36), FL 17 30.0.  
CUMANA: XZ iP 15 33 47.1 D, T 0.6, A 90 mu.  
d = 3 750 kms, H = 15:26:45.  
CGS: 1.8 N, 101.0 W. Este del Océano Pacífico Central. MB = 5.5, h = normal.-
21. X L Z iP 02 07 25.5 C, T 1.0, A 3.5, LZ ePP 08 20, L N,E iS 12 38, LN ePcS 13 30, L N,E eSS 14 36, L Z,N,E eR 20.0 (T 12), FL 50.0.  
CUMANA: X Z iP 02 07 26.6, T 0.9, A 111 mu, (S) 12 49.6, d = 3 600 kms, H = 02:00:52.8.  
d = 3 500 kms, H = 02:01:00.5.  
CGS: 23.6 S, 68.1 W. Norte de Chile, H = 02:00:54.3, MB = 5.5, h = 120 kms.-
21. X L Z eP 11 34 06.0, LZ ePP 35 06, L N,E iS 38 50, L N,E eSS 40 08, L N,E eL 41.5 (T 36), L Z,N,E iR 49.0 (T 18), LZ: T 18, 2A 20; LN: T 18, 2A 17; LE: T 18, 2A 14. FL 12 50.0, d = 3 000 kms, H = 11:28:22.0, mC = 4.7, MC = 5.4.  
CGS: 15.8 S, 74.7 W. Cerca a la costa del Perú. h = 59 kms, MB = 4.7.-
21. XZ ePn 16 02 27.5, X N,E eSn 03 44, FX 07.0.  
MERIDA: XZ iPn 16 01 33.0 D, iSn 02 05, d = 300 kms.  
d = 800 kms, H = 16:00:35.5. Depto. de Santander. Colombia.-
21. XZ iPn 17 34 54.0 D, T 0.5, A 2.0, X N,E e(Sn) 36 23, FX 40.0.-  
CUMANA: XZ P 17 34 55.6.-
22. X L Z ePKP 02 06 10.0, LZ iPP 10 30, LE e 19 06, LE ePSKS 20 48, L N,E i 25 48, L N,E iSS 30 40, L Z,N,E iR 03 16.0 (T 20), LZ: T 20, 2A 14; LN: T 20, 2A 7; LE: T 20, 2A 6. FL mezclado con el sismo siguiente. d = 17 600 kms, H = 01:46:16.  
CGS: 2.9 N, 95.9 E. Frente a la costa Oeste del Norte de Sumatra. H = 01:46:13.5, h = normal, MB = 5.3.-
22. XZ eiPKP 04 12 33.5, X L Z ePP 16 54, L N,E eSS 30 20, L N,E iSS 37 00, L Z,N,E iR 05 25.0 (T 20), LZ: T 20, 2A 5; LN: T 20, 2A 6, LE: T 20, 2A 3. FL 06 30.0, d = 17 500 kms, H = 03:52:40.  
CGS: 2.9 N, 95.9 W. Frente a la costa Oeste del Norte de Sumatra. H = 03:52:37.4, h = normal, MB = 5.3.-
22. X Z,E iPn 06 27 09.0 D, T 0.8, A 1.0, X N,E eSn 28 26, FX 32.0.  
MERIDA: XZ iPn 06 26 02.0, i 26 11, iSn 27 43, d = 450 kms.  
d = 800 kms, H = 06:25:17.0, mC = 4.4, Colombia.-
22. X L Z iP 13 54 38.5 C, T 1.5, A 1.3, LZ iPP 55 46, L N,E iS 14 00 06, L N,E iSS 02 30, L Z,N,E iL 04.5 (T 34), L Z,N,E iR 07.5 (T 20), LZ: T 20, 2A 28; LN: T 20, 2A 22; LE: T 20, 2A 14. FL 15 00.0.  
CUMANA: (i) P 13 54 18.4, T 1.4, A 160mu, (i)(PP) 56 20.2, (S) 59 38.7,  
d = 3 750 kms, H = 13:47:53, mC = 5.0, MC = 5.6.  
CGS: 5.0 N, 32.6 W. Cresta del Océano Atlántico Central, MB = 5.7.-

Continúa

Continuación del mes de Septiembre de 1.969.

23. XZ iPn 14 39 24.5 D, T 1.0, A 1.7, XZ E eSn 40 34, X Z,N,E iSn 40 42, XZ E i 41 07, FX 45.0.  
MERIDA: XZ iPn 14 38 29.0 C, iSn 39 01.  
P-azimut: SW, d = 780 kms, H = 14:37:44. NE. de Colombia, mC = 4.6.  
CGS: H = 14:37:42.9, 6.9 N, 73.0 W, MB = 3.8, h = 155 kms.-
23. XZ N,E iPg 16 47 15.2 C, T 0.3, A 1.3, XZ N,E iSg 47 17.5, FX 47 50. P-azimut: SE, d = 18 kms, H = 16:47:11.7, mC = 3.2. Cerca a El Hatillo.-
23. XZ iPn 19 25 13.5 C, T 0.5, A 1.0, XZ i 25 20, X Z,N,E iSn 26 05.5, FX 28.0.  
CUMANA: XZ i(P) 19 25 03.0.  
d = 560 kms, H = 19:23:53, mC = 4.2.-
23. X N,E iSn 21 47 26, FX 49.0.  
MERIDA: XZ iPn 21 45 12.0 C, XZ iSn 45 45, d = 310 kms.  
Del Depto. de Santander, Colombia.-
23. XL Z eP 22 45 04.5, T 1.0, A 0.9, XZ e 45 42, XL Z ePP 46 42, L Z,N,E iS 51 20, L N,E iSS 54 06, L Z,N,E i LM 56.0-59.0 (T 40-26), L Z,N,E iR 23 00.0 (T 22), LZ: T 22, 2A 23; LN: T 22, 2A 32, LE: T 22, 2A 17, FL 00 00.0. d = 4 500 kms, H = 22:37:29.0, mC = 5.1, MC = 5.7.  
CGS: 18.7 N, 107.1 W. Frente a la costa de Jalisco, México, MB = 4.9, MS = 5.6.-
24. XZ i(Pn) 00 43 03.0 C, T 0.4, A 1.1, XE i(Sn) 43 30.5, FX 45.0.  
MERIDA: XZ ePn 00 40 54.0, XZ i 40 56, XZ iSn 41 16, d = 180 kms.
24. XZ iP 02 54 45.5 C, T 0.8, A 2.0, XZ i 54 49.5, FX 56.0.  
CGS: H = 02:51:26.8, 8.0 N, 81.0 W. Panamá, MB = 4.2, h = 42 kms, d = 1 500 kms.-
24. XZ iP 04 07 54.0 D, T 0.7, A 0.9, XZ i 07 58, L Z,E ePP 09 48, L N,E iS 15 10, IZ iPS 15 40, L Z,N eSS 18 20, L Z,N,E e SSS 19 40, L Z,N,E iL 22 30 (T 34), L Z,N,E iR 26.0 (T 20), LZ: T 20, 2A 20; LN: T 20, 2A 21; LE: T 20, 2A 4. FL mezclado con el sismo siguiente. d = 5 600 kms, H = 03:58:59, mC = 5.2, MC = 5.8.  
CGS: 52.5 N, 31.8 W. Cresta del Océano Atlántico Norte. MB = 5.2, h = normal.  
CUMANA: X Z iP 04 07 50.0.-
24. XZ iP 04 29 51.0 C, T 1.0, A 3.0, FX 32.0. Superpuesto por el sismo anterior.  
CUMANA: XZ eP 04 29 44.2.  
d = 5 600 kms aprox.. H = 04:20:56.  
CGS: 52.6 N, 31.8 W. Cresta del Océano Atlántico Norte, MB = 5.2, h = normal.-
24. X L Z,N,E iP 18 08 03.0 C, T 1.5, A 2.2, XZ iP 08 08.0 D, T 1.7, A 9.5, XZ iPP 08 21, LE eS 11 40, L Z,N,E iPcP 12 00, LZ: T 20, 2A 18Q; LN: la amplitud sobresalio del papel; LE: T 20, 2A 120. FL mezclado con los sismos siguientes.  
CUMANA: XZ iP 18 07 35.8, XL E eS 11 20.3.  
LAGUNILLAS: XZ iP 18 08 48.5 D, XZ iS 13 55.0.  
P-azimut: NE, d = 2 350 kms, H = 18:03:19.  
CGS: 15.2 N, 45.8 W. Cresta del Océano Atlántico Norte. MB = 5.8, MS = 6.4, h = normal.-

Continúa

Continuación del mes de Septiembre de 1,969.

24. XZ iP 19 05 44.0 C, T 1.5, A 0.9, FX 08.0.  
CUMANA: XZ eP 19 05 16.0 D.  
d = 2 350 kms, H = 19:01:00.  
CGS: 15.3 N, 45.7 W. Cresta del Océano Atlántico Norte, MB = 4.7.-
24. XZ eP 22 31 02.0 D, T 1.5, A 1.0, XZ ePP 31 27, L N,Z iS 35 00,  
FL 40.0.  
CUMANA: XZ eP 22 30 32.5.  
d = 2 350 kms, H = 22:26:16,  
CGS: 15.5 N, 46.0 W. Cresta del Océano Atlántico Norte. MB = 4.3,  
h = normal.-
25. XZ iPg 19 57 45.5 D, T 0.4, A 1.2, X Z,N,E iSg 57 48.5, XZ i 57  
52, FX 58.0, d = 24 kms, H = 19:57:41.0, mC = 2.9.-
26. X Z,E iPn 06 54 53.5 C, T 0.6, A 2.1 = 52 mu, XZ iPb 55 04,  
XL Z,N,E iSn 55:44, X N,E iSn 55 45.5, X N,E iSb 56 06, XE iSg 56  
28, FX 07 05.0.  
CUMANA: XZ iPn 06 54 17.0, XE eSn 54 (41.0).  
P-azimut: E-ENE, d = 500 kms, H = 06:53:43, mC = 4.3. Norte de la  
Península de Paria, Estado Sucre.  
CGS: 11.0 N, 62.4 W, MB = 4.3, h = 87 kms.-
27. XL Z iP 09 15 24.0 C, XZ i(PcP) 15 32.5, LZ iPP 17 45, LZ iPPP 19  
38, L N,E iS 24 42, LN iPS 25 38, L N,E iSS 29 52, L N,E iSSS 32  
48, L Z,N,E iG 38.0 (T 44), L Z,N,E iL 39.5 (T 38), L Z,N,E iR  
48.0 (T 20), LZ: T 20, 2A 80; LN: T 20, 2A 80; LE: T 20, 2A 36.  
T 0.9, A 1.1 = 44 mu. FL 12 30.0.  
CUMANA: XZ iP 09 15 25.4 C, T 1.0, A 0.9 = 59 mu, LE eS 24 44.7,  
d = 8 000 kms.-  
d = 8 000 kms, H = 09:04:04, mC = 6.0, MC = 6.2.  
CGS: 60.9 S, 56.0 W. Sur de la Isla Shetland, MB = 5.8, MS = 5.9,  
h = normal.-
27. XZ eP 10 48 02, FX 50.0.  
CGS: 17.0 N, 85.6 W. Mar Caribe, H = 10:43:40.0, d = 2 100 kms,  
MB = 4.3, h = normal.-
27. XZ iPg 15 21 21.5 C, T 0.3, A 0.7, X Z,N,E iSg 21 22, FX 21 30,  
d = 4 kms, H = 15:21:20.5, mC = 2.9. Región de Caracas.-
27. X N,E i(Sn) 19 46 17.5, X N,E i 46 22, FX 48.0.-
28. XZ eP 11 58 04.0, XZ iPP 58 38, L N,E iS 12 02 20, FL 20.0, d =  
2 550 kms, H = 11:52:59.  
CGS: 12.1 S, 74.3 W, Perú, h = 54 kms, MB = 5.0.-
28. XL Z eP 23 06 47.0, T 1.5, A 0.9 = 30 mu, LZ ePP 10 12, L N,E  
iSKS 17 06, L N,E iPS 18 20, L Z,N,E iPPS 18 52, LE eSS 22 50,  
L Z,N,E eL 35.0 (T 38), L Z,N,E iR 44.0 (T 20), LZ: T 20, 2A 4;  
LN: T 20, 2A 3; LE: T 20, 2A 2. FL 01 00.0, d = 9 600 kms, H =  
22:54:07.  
CGS: 34.3 N, 25.1 E. Creta, h = 19 kms, MB = 5.4.-

Continúa

Continuación del mes de Septiembre de 1.969.

29. LZ e(P) 04 40 32.0, L N,E iS 44 20, FL 05 00.0.-
29. X L Z iPKP1 16 39 48.5 C, T 1.5, A 1.3 = 144 mu, X L Z iPKP2 40 44.5, X L Z iPP 44 29, LZ eSKKS 49 40, L Z ePSKS 54 38, L N,E eSS 17 04 44, L N,E eSSS 10 14, L Z,N,E eL 38.0 (T 40), FL 19 30.0, d = 18 300 kms, H = 16:19:49.  
CGS: H = 16:20:00.4, 7.2 S, 128.8 E. Mar de Banda, h = 145 kms, MB = 5.7.-
29. XZ iPn 16 50 31.0 C, T 0.4, A 0.8 = 27 mu, X Z,N,E iSn 50 41, X Z,N,E i 50 47.5, FX 51 10, d = 80 kms, H = 16:50:18.0, mC = 3.0.-
29. XZ iPg 17 54 07.4 D, T 0.4, A 0.9 = 30 mu, X Z,N,E iSg 54 08.2, FX 54 15, d = 7 kms, H = 17:54:05.4, mC = 2.8. Región de Caracas.
29. X L Z eP 20 16 42.0, L Z ePP 20 18, L N ePPP 22 08, L N,E e 26 40, L N,E iSKS 27 16, L N iS 27 44, L Z,N,E iPPS 29 02, L N,E i 30 44, L N,E iSS 33 42, L N,E iL 43.5 (T 40), L N,E iM 47.0 (T 28), L Z,N,E iR 54.5 (T 20), LZ: T 20, 2A 50; LN: T 20, 2A 39 LE: T 20, 2A 45, FL 23 30.0, d = 10 300 kms, H = 20:03:30.  
CGS: 32.9 S, 19.7 E. República Africa del Sur, MB = 5.9, MS = 6.3, h = normal. 12 muertos en Tulbagh y Wolseley.-
30. LZ ePP 04 30 48, LE iSKS 36 36, L N,E iSKKS 37 44, L N,E i!PKKP 40 18, L Z,E iPS 40 38, L Z,N,E eL 05 05.5 (T 36), L Z,N,E iR 11.0 (T 20), LZ: T 18, 2A 5; LN: T 18, 2A 5; LE: T 18, 2A 3. FL 06 30.0, d = 12 800 kms, H = 04:11:13.  
CGS: 31.9 S, 177.9 W, Isla Kermadec, MB = 5.4, MS = 5.5, d = normal.-
30. XZ iPg 12 00 24.9 C, T 0.4, A 1.0 = 33 mu, iSg 00 27.9, FX 00 40.0, d = 24 kms, H = 12:00:20, mC = 2.8.-
30. XZ iPg 13 02 40.7 D, T 0.5, A 1.0 = 25 mu, X iSg 02 42.5, FX 03 00. P-azimut: E, d = 14 kms, H = 13:02:38, mC = 2.7.-
30. L Z eP 18 06 38.0, L Z eiPP 11 04, L E,N ei SKS 17 00, L E,N i SKKS 18 08, L Z,N,E i PKKP 20 42, L Z i (PPS) 22 56, L Z i SS 27 16, L Z i SSS 32 00, MR 45.1 (T 40), MR 50.5-57.0 (T 20-18), LZ: T 20, 2A 26; LN: T 18, 2A 24; LE: T 18, 2A 13. F 21 00.0, d = 12 800 kms, H = 17:51:40.  
CGS: 31.9 S, 178.0 W. Islas Kermadec. H = 17:51:41.8, M = 6.3.-

G. Fiedler

F.A.Miranda

J.S.Pérez

/G.N.

Caracas, 12 de Febrero de 1.970



27 APR 1970

COMANDANCIA GENERAL DE LA MARINA  
 SERVICIO DE HIDROGRAFIA Y NAVEGACION  
 OBSERVATORIO DE SISMOLOGIA  
 Y MAREAS TERRESTRES  
 Caracas - Venezuela  
 BOLETIN SISMICO MENSUAL

Octubre 1.969

1. X eP 05 10 55.5 D, T 1.2, A 1.6 = 106 mu, X iP 10 57.8 D, T 1.2, A 6.0 = 400 mu, L i S 15 08, L i SS 16 10, F en el sismo siguiente. P-azimut: SW, d = 2 700 kms, H = 05:05:45. mC = 5.9. CGS: 11.9 S, 75.1 W, Perú, H = 05:05:43.2, M = 5.9. 80 muertos en Lampa y Chilifruta. LAGUNILLAS: XZ iP 05 10 45.0, T 2.5, A 3.8 = 380 mu. CUMANA: XZ iP 05 11 07.5 D, T 1.0, A 170 mu.-
1. X L Z iP 06 03 25.0 C, T 1.0, A 10.0 = 400 mu, XL N,E iS 07 47, FL mezclado con otro sismo. P-azimut: SSW, d = 2 650 kms, H = 05:58:10.0, mC = 5.9. CGS: 11.7 S, 75.1 W. Perú. H = 05:58:12.7, h = 5 kms, MB = 5.7. LAGUNILLAS: XZ iP 06 03 10.0 C.-
1. XZ iP 06 33 14.5 D, T 0.9, A 1.0 = 33 mu, X N,E eS 37 28, FX 45.0, d = 2 600 kms, H = 06:28:04.5. CGS: 11.7 S, 75.1 W. Perú. H = 06:28:02.4, h = 5 kms, MB = 5.1.-
1. X L Z iP 08 33 27.5 C, T 0.8, A 1.3 = 37 mu, X L Z iPP 33 58, XL N,E iS 37 44, XL N,E iSS 38 48, L Z,E iL 40.5 (T 32), L Z,E iR 42.0 (T 16), FL 10 00.0. P-azimut: SSW, d = 2 650 kms, H = 08:28:12.5. CGS: 11.8 S, 75.0 W. Perú. H = 08:28:14.0, h = 3 kms, MB = 5.8.-
1. X L Z iP 17 09 56.0 C, T 0.8, A 2.1 = 60 mu, LZ iPP 10 36, LZ iPcP 13 16, L Z,N,E iS 14 12, F en el sismo siguiente. d = 2 650 kms, H = 17:04:43.0, mC = 5.2. CGS: 11.7 S, 75.0 W, H = 17:04:44.8, h = 5 kms, MB = 5.1. CUMANA: XZ iP 17 10 07.1 C, T 0.8, A (0.5).-
1. XZ iP 17 15 31.5 C, T 1.0, A 2.0 = 80 mu = mC 5.0, XL Z,N,E iP 15 36 C, T 1.2, A 7.0 = 437 mu = mC 5.7, XL Z iPP 16 04, XL Z,N,E iS 19 20, X N,E iSS 20 12. F mezclado con el sismo siguiente. P-azimut: SW, d = 2 300 kms, H = 17:10:47.0. CGS: 0.8 N, 85.0 W. Frente a la costa de Ecuador. H = 17:10:56.5, h = 33 kms, MB = 5.5, MS = 5.9. LAGUNILLAS: XZ iP 17 14 48.0, T 2.0, A 1 000 mu. CUMANA: XZ eP 17 15 59.5, T 1.1, A (0.8).
1. X L Z iP 20 05 25.0 C, T 1.3, A 1.2 = 80 mu, LZ iPP 08 32, L N,E iS 15 32, L N,E PS 16 10, L N,E iSS 20 48, L N,E iSSS 23 50, L N,E iG 28.0 (T 60), L Z,N,E iLM 31.5-39.0 (T 40-24), L Z,N,E iR 41.0 (T 20), LZ: T 20, 2A 74; LN: T 20, 2A 74; LE: T 20, 2A 64. FL 22 50.0. d = 8 900 kms, H = 19:53:18.0, mC = 5.6, MC = 6.3. CGS: 60.8 S, 19.7 W. SE de las Islas Sandwich, H = 19:53:15.7, h = 33 kms, MB = 5.6, MS = 6.0. CUMANA: XZ eP 20 05 25.1.-

Continúa



## Continuación del mes de Octubre de 1.969.

1. X L Z iP 23 01 38.5 D, T 0.5, A 2.2 = 55 mu, LN ePP 02 06, L Z,N,E iS 05 52, L Z,N,E iSS 06 56, L Z,N,E iR 10.5 (T 18), LZ: T 18, 2A 35; LN: T 18, 2A 29; LE: T 18, 2A 30. FL 23 50.0, d = 2 650 kms, H = 22:56:23.5, mC = 5.4, MC = 5.1. CGS: 11.8 S, 75.0 W. Perú. H = 22:56:24.8, h = 5 kms, MB = 5.5, MS = 5.1.-
2. XZ iP 05 06 34.5 C, T 1.0, A 1.2 = 48 mu, LE eS 14 48, L Z,N,E eL 26.5 (T 36), FL 06 00.0, d = 6 550 kms, H = 04:56:38.0, mC = 5.5. CGS: 38.5 N, 122.7 W. Norte de California. H = 04:56:45.5, h = 2 kms, MB = 5.2, MS = 4.8.-
2. XZ iP 06 29 44.5 D, T 1.0, A 1.4 = 56 mu, L Z,N,E eS 38 08, X Z,N,E eL 50.0 (T 36), FL 07 30.0, d = 6 600 kms, H = 06:19:46.0. CGS: 38.5 N, 122.7 W. Golfo de California. H = 06:19:56.0, h = 2 kms, MB = 5.1.-
2. XZ iP 22 19 27.0 C, T 1.0, A 4.7 = 188.0 mu, LZ iPP 25 38, LN eSKKS 30 52, LZ ePPS 33 34, L Z,N,E eL 56.5 (T 36), FL 00 00.0. d = 10 800 kms, H = 22:05:55.0. CGS: 51.4 N, 179.2 E. Islas Ratas, Aleutianas. H = 22:06:00.0, h = 1 kms, MB = 6.5, MS = 5.0.-
3. XZ iPg 18 03 49.0 C, T 0.3, A 0.9 = 45 mu, X Z,N,E iSg 03 50.5, FX 04.0, d = 12 kms, H = 18:03:46.5, mC = 3.0. Región de Caracas.-
4. X Z,N,E iPg 18 58 32.0 C, T 0.2, A 6.0 = 600 mu, X Z,N,E iSg 58 34, FX 59.0. P-azimut: WSW, d = 16 kms, H = 18:58:29.0, mC = 4.1. Cerca a Macarao.-
- X 4. X Z,N,E iPg 21 03 31.0 C, T 0.3, A 6.7 = 335 mu, X Z,N,E iSg 03 33, FX 04.0. P-azimut: NE, d = 16 kms, H = 21:03:28.0, mC = 3.8. Entre Caraballeda y Naiguatá. Sentido levemente en Macuto.-
6. X L Z iP 00 43 12.0 C, T 0.7, A 1.4 = 35 mu, XZ ePP 43 38, LN eS 47 28, L Z,N,E iR 53.0 (T 16), FL 01 20.0. d = 2 650 kms, H = 00:37:57.0, mC = 5.1. CGS: 11.7 S, 75.1 W. Perú. H = 00:37:59.6, h = 3 kms, MB = 5.1.-
6. XZ ePn 05 40 (57.0), XE e(Sn) 41 28, X N,E i 41 49, FX 46.0. Al Este de Cumaná. CUMANA: XZ iPn 05 40 07.0 D, T 0.4, A 0.8 = 111 mu, iSn 40 21.5, d = 80 kms, H = 05:39:59.0.-
6. X L Z iP 06 41 58.0, T 1.0, A 2.3 = 92 mu, X L Z iPP 42 26, L Z,N,E iS 46 14, L N,E iSS 47 20, L Z,N,E iL 49.5 (T 20), L Z,N,E iR 51.5 (T 12), FL 07 30.0, d = 2 650 kms, H = 06:36:55.0, mC = 5.3. CGS: 11.8 S, 75.0 W. Perú. H = 06:36:45.2, h = 4 kms, MB = 5.3. CUMANA: XZ iP 06 42 09.4 D, T 1.2, A 0.4 = 24 mu.
6. XZ iP 13 07 52.7 C, T 1.0, A 3.7 = 148 mu, XZ i 08 00.4, FX 11.0. CGS: 15.0 N, 120.1 E. Luzón, Islas Filipinas. H = 12:48:05.0, h = 59 kms, MB = 5.6. CUMANA: XZ ePKP1 13 07 51.0, ePKP2 08 16.

Continúa

Continuación del mes de Octubre de 1.969.

7. X Z,N iPg 02 02 36.8 D, T 0.2, A 1.3 = 130 mu, X Z,N,E iSg 02 37.1, FX 02 50. P-azimut: W, d = 2.4 kms, H = 02:02:35.8, mC = 2.8 aprox.. 5 horas más tarde se produjo un derrumbe en el sitio Los Eucaliptus. Hubo un muerto y varios heridos.-
7. XZ iP 23 12 35.2 C, T 0.8, A 0.9 = 26 mu, XZ ePP 13 17, XL N,E eS 16 54, L Z,N,E eL 20.5 (T 24), FL 40.0. d = 2 650 kms, H = 23:07:20.0, mC = 4.9.  
CGS: 11.7 S, 75.3 W. Perú, H = 23:07:21.2, h = 5 kms, MB = 4.9.-
8. XL Z iP 02 49 26.0 D, T 0.5, A 2.2 = 55 mu, XL Z iPP 50 04, XL N,E iS 54 18, L N,E eSS 55 46, L N,E eL 58.5 (T 28), LZ N,E iR 03 02.0 (T 12), FL 30.0. d = 3 200 kms, H = 02:43:23.0.  
CGS: 20.0 S, 68.9 W. Frontera Chile-Bolivia. H = 02:43:24.7, h = 120 kms, MB = 4.9.  
CUMANA: XZ iP 02 49 29.2 D, T 0.6, A 144 mu, LE eS 54 22, d = 3 120 kms, H = 02:43:32.0.-
8. XZ iP 14 39 10.5 C, T 0.9, A 2.0 = 66 mu, XZ i 39 29, FX 41.0, mC = 5.6.  
CGS: 37.3 N, 116.4 W. Sur de Nevada. H = 14:30:00.0, h = 0 kms, MB = 5.5.-
8. XZ N,E iPg 20 23 17.5, T 0.4, A 1.6 = 53 mu, XZ N,E iSg 23 18.3, FX 23 30. P-azimut: SW, d = 6 kms, H = 20:23:16.0, mC = 3.0.  
Cerca a Antímano.-
8. X Z,N,E iPg 21 35 37.5 C, T 0.2, A 1.0 = 100 mu, X Z,N,E iSg 35 39.3, XZ N,E i 35 40, FX 36.0. P-azimut: SW, d = 14 kms, H = 21:35:34.5, mC = 3.5. Cerca a Macarao.-
9. XZ iP 08 12 38.5 C, T 1.0, A 1.5 = 60 mu, LE iS 23 22, LE ePS 24 24, L Z,E ePPS 25 10, L N,E eSS 29 26, L Z,N,E i MR 47.5-56.0 (T 30-18), LZ: T 20, 2A 11; LN: T 20, 2A 9; LE: T 20, 2A 5. FL 10 00.0, d = 9 800 kms, H = 07:59:50.0, MC = 5.5.  
CGS: 52.3 N, 169.5 W. Fox, Islas Aleutianas. H = 07:59:41.3, h = 22 kms, MB = 5.1, MS = 5.3.-
9. X Z,N,E iPg 13 24 26.5 D, T 0.3, A 1.0 = 50 mu, X Z,N,E iSg 24 27.5, FX 24 40. P-azimut: SW, d = 8 kms, H = 13:24:24.5, mC = 3.1.  
Cerca a Antímano.-
9. XZ iPg 22 48 29.0 C, T 0.3, A 0.6 = 30 mu, X N,E iSg 48 34.5, FX 49.0, d = 44 kms, H = 22:48:24.0, mC = 3.0.-
10. XZ iP 04 11 25.5 D, T 1.0, A 1.2 = 48 mu, XZ iP 11 56, FX 14.0, mC = 4.9.  
CGS: 13.2 N, 89.7 W. El Salvador. Sentido en San Salvador. H = 04:06:24.1, h = 71 kms, MB = 4.6.-
10. L Z,N,E iL 05 59.5 (T 28), L Z,N,E iR 06 00.5 (T 20), FL 40.0.-
11. LZ e 11 30 30.0, LZ e PPP 34 16, LZ e SKKS 38 26, L Z,N,E e PS 41 42, LE e (SS) 46 26, L Z,N,E eR 12 08.5 (T 20). LZ: T 20, 2A 3; LN: T 20, 2A 2; LE: T 20, 2A 2. FL 12 30.0.  
CGS: 27.0 S, 176.5 W. Islas Kermadec. H = 11:12:34.9, h = 83 kms, MB = 4.6.-

Continúa

Continuación del mes de Octubre de 1.969.

11. XZ iPKP1 20 01 14.5 D, T 0.8, A 2.0 = 57 mu, XZ iPKP2 01 16.5, FX 03.0.  
CGS: 5.5 S, 147.1 E. Este de Nueva Guinea, H = 19:41:58.3, h = 218 kms, MB = 5.1.-
12. XZ iP 09 48 35.5 D, T 0.7, A 1.0 = 25 mu, XZ i 48 44, X Z,N,E eS 50 20, X Z,N,E i 51 48, FX 54.0, d = 1 050 kms, H = 09:46:11.5.-
13. XZ eP 01 14 42.5, T 1.2, A 0.6 = 40 mu, XL Z i 14 48.5, XZ e(PP) 16 33, L N,E eS 25 02, LZ ePS 25 40, L N,E eSS 30 16, L N,E eL 43.0 (T 30), FL 02 30.0. d = 9 100 kms, H = 01:02:19.0.  
CGS: 39.9 N, 20.6 E. Frontera Grecia Albania. H = 01:02:28.5, h = 8 kms, MB = 5.6, MS = 5.0.-
13. LZ eP 07 11 20.0, LZ epP 12 46, XLZ iPKP 14 33.5 D, T 0.8, A 1.3 = 43 mu, XZ i 14 39, XLZ iPP 16 27.5, LZ i pPP 17 28, L Z,E iPPP 19 18, LE i SKKS 21 14, L N,E i 23 04, LE iS 24 16, LN i PSKS 27 56, L Z,N,E iPPS 29 16, L N,E i SS 33 00, L N,E i SSS 38 00, L N,E iL 49.0 (T 44), FL 10 00.0.  
CGS: 18.9 S, 169.3 E. Islas Nuevas Hébridias. H = 06:56:01.6, h = 246 kms, MB = 5.9.  
CUMANA: XZ iPKP 07 14 36.9 D, T 0.6, A 25 mu, XZ i 14 43.3.-
13. X L Z eP 12 49 02.0, X L Z ePP 49 28, L N,E eS 53 08, L N,E eSS 53 30, L Z,N,E eL 56.0 (T 30), FL 13 30.0. d = 2 500 kms, H = 12:44:02.0.  
CGS: 13.6 N, 44.9 W. Océano Atlántico Central. H = 12:44:10.0, h = 33 kms, MB = 4.9.-
13. X L Z,E iPn 22 13 20.0 D, T 0.7, A 4.7 = 117 mu, XZ iPb 13 32, XZ iPg 13 46, XL Z,N,E iSn 14 12.5, XZ,N,E iSb 14 26, XL Z,N,E iSg 14 56, FX 30.0. P-azimut: E, d = 570 kms, H = 22:12:00.0, mC = 4.6.  
CGS: 9.8 N, 62.4 W. Al SSW. de Pedernales, Territorio Delta Amacuro. H = 22:12:11.8, h = 55 kms, MB = 4.4.  
CUMANA: XZ iP 22 12 46.5, T 0.6, A 1.2, LE iS 13 19.5, d = 270 kms.-
14. LZ epP 04 19 04, LZ esP 19 34, LZ ePS 32 40, LE ePKKP 33 06, L Z, N,E eR 05 00.0 (T 20), LZ: T 20, 2A 2; LN: T 20, 2A 2; LE: T 20, 2A 1. FL 30.0.  
CGS: 27.3 S, 176.6 W. Islas Kermadec, H = 04:03:55.1, h = 132 kms, MB = 4.6.-
14. XZ ePn 05 38 28.5, XZ e 38 40, X N,E e(Sn) 40 06, FX 42.0.-
14. XE iPn 06 17 03.5, X Z,E iPb 17 09.5, X Z,N,E iPg 17 14.5, X Z, N,E iSn 17 41, X N,E iSb 17 47, X N,E iSb 17 54, FX 23.0. d = 380 kms, H = 06:16:11.5. Cerca a Guanare, Estado Portuguesa.  
LAGUNILLAS: XZ iPn 06 17 53.0 D, T 0.5, A 1.2 = 200 mu, iSn 18 16, d = 200 kms.-
14. X Z,N,E iP 07 13 02.5 C, T 0.9, A 4.8 = 160 mu, X Z,N,E i 13 07, XZ ePP 16 38, FX 18.0. d = 10 100 kms, H = 07:00:00.0, mC = 6.3.  
CGS: 73.4 N, 54.8 E. Novaya Zemlya, H = 07:00:06.2, h = 0 kms, MB = 6.1.  
LAGUNILLAS: XZ eP 07 13 10.0 D.-

Continúa

Continuación del mes de Octubre de 1.969.

14. XZ iP 22 58 41.5 C, T 0.6, A 1.2 = 30 mu, XZ i 58 50.5, FX 59.0.  
CGS: 52.6 N, 162.7 W. Sur de Alaska. H = 22:46:04.8, h = 15 kms,  
MB = 5.1.-
15. LE eSKS 00 24 44.0, LE eSKKS 25 38, L Z,N,E iPS 28 20, L Z,N,E  
iR 54.5 (T 24), FL 01 50.0.  
CGS: 27.0 S, 176.5 W. Islas Kermadec, H = 23:59:26.0, h = 61 kms,  
MB = 5.3.-
15. XZ iPn 03 58 16.0 D, T 0.4, A 0.8 = 27 mu, XZ i 58 26, XZ iPb 58  
34, X Z,N,E iSn 59 47, X Z,N,E iSn 59 54, X Z,N,E iSb 04 00 04,  
FL 30.0, d = 920 kms, H = 03:56:09.0.-

Microsismicidad alta en SP.

Reducida al movimiento sinusoidal del suelo (Ground Motion)

		T	(au)		T	(au)		T	(au)	
16.	18 h	Z	1.2	0.07	N	1.2	0.05	E	1.0	0.05
	20 h	Z	1.4	0.11	N	1.2	0.06	E	1.2	0.06
	22 h	Z	1.5	0.10	N	1.5	0.07	E	1.4	0.06
17.	00 h	Z	1.2	0.05	N	1.3	0.06	E	1.5	0.05

17. XZ iPn 01 15 13.0 C, T 0.6, A 1.0 = 25 mu, XZ iPb 15 33, X Z,N,E  
iSn 17 09, X N,E i 17 28, FX 22.0, d = 1 100 kms, H = 01:12:47.0,  
mC = 4.8.  
CGS: 4.4 N, 76.2 W. Cerca a Dovio, Depto. del Valle, Colombia,  
H = 01:12:40.6, h = 157 kms, MB = 4.5.-
17. X L Z i PKP1 01 44 26.0 C, T 0.8, A 1.5 = 44 mu, X L Z i PKP2 45  
04, XLZ iPP 47 56, L N,E ipPP 48 48, L Z,E iPPP 51 24, L Z,E i  
53 30, L Z,N,E i SKKS 54 14, L N,E i 55 24, L Z,N i PSKS 58 34,  
L Z,N i SPP 02 00 16, L Z,N i PPS 01 00, LE iSS 06 48, L Z,N,E i  
15 00, L N,E iL 36.5 (T 52), FL 04 00.0.  
CGS: 23.1 N, 94.7 E. Frontera Burma-India. H = 01:25:12.4, h =  
134 kms, MB = 6.0.  
LAGUNILLAS: XZ iPKP 01 44 35.0 D, XZ iPKP2 45 11.5.
17. XZ ePn 06 55 06.0, X N,E iSn 56 22.5, X N,E iSn 56 29, FX 59.0  
d = 800 kms, H = 06:53:14.0.-
17. XZ iP 08 15 15.5 C, T 1.0, A 1.5 = 60 mu, XL N,E e(S) 19 45,  
L N,E e 20 40, FX 27.0.-
17. XZ iPn 13 48 09.0 D, T 0.9, A 1.3 = 43 mu, XZ iPb 48 31, X Z,E  
iSn 49 22, X Z,N,E iSn 49 27, FX 54.0, d = 780 kms, H = 13:46:  
21.0, mC = 4.5.-  
CGS: 6.9 N, 73.0 W. Cerca a Los Curos, Depto. de Santander, Co-  
lombia, H = 13:46:27.7, h = 151 kms, MB = 4.0.-
20. X Z,E ePn 09 33 55.0, T 0.4, A 1.0 = 33 mu, XZ ePb 34 08, X Z,N,  
E eSn 34 30, X Z,N,E iSn 34 33, FX 36.0, d = 320 kms, H = 09:33:  
11.0, mC = 3.9.-

Continúa

Continuación del mes de Octubre de 1.969.

20. XL Z,N,E iPn 13 12 49.0 D, T 0.7, A 2.4 = 60 mu. FL mezclado con el sismo siguiente. P-azimut: N 85° W. CGS: 10.8 N, 72.4 W. Al W. de Maracaibo. H = 13:11:33.5, h = 55 kms, MB = 5.1.-
20. XL Z,N,E iPn 13 12 52.0 D, T 0.7, A 4.5 = 112.0 mu, XL Z,N,E iSn 13 48.0. FL mezclado con otros sismos. P-azimut: W, d = 610 kms, H = 13:11:27.0. Al W. de Maracaibo. CGS: 10.8 N, 72.5 W. H = 13:11:37.0, h = 40 kms, MB = 5.7, MS = 5.5. Sentido en Maracaibo y Lagunillas. LAGUNILLAS: XZ iPn 13 11 56.5 D, T 4.0, A 17.5 = 113.000 mu, XZ iSn 12 10.5, d = 110 kms. CUMANA: XZ iPn 13 13 28.0 D, T 0.8, A 4.8 = 240 mu. LE iSn 14 55, d = 890 kms.-
20. XL Z iP 15 26 23.0 C, T 0.9, A 1.2 = 40 mu, XZ iPP 27 07, L N,E e PcP 29 44, FL 16 30.0. CGS: 17.3 N, 95.2 W. Oaxaca, México. H = 15:20:36.5, h = 87 kms, MB = 5.4.-
20. XL Z eP 18 05 41.0, XZ ePP 06 12, L N,E eS 10 00, L N,E eL 13.5 (T 26), FL 30.0, d = 2 700 kms, H = 18:00:26.0. CGS: 11.9 S, 75.2 W. Perú. H = 18:00:28.7, h = 12 kms, MB = 5.1.-
21. XZ ePn 07 49 26.0, T 0.5, A 1.7 = 43 mu, XZ iPn 49 29, X N,E iPg 49 52, X N,E iSn 50 18, X N,E iSb 50 28, X N,E iSg 51 00, FX 55.0, d = 580 kms, H = 07:48:05.0, mC = 4.4. Al NW. de Maracaibo. LAGUNILLAS: XZ iPn 07 48 30.5 D, T 0.4, A 0.6 = 120 mu, XZ iSn 48 48.5, XZ iSg 48 52, d = 110 kms.-
21. LZ ePP 11 28 06.0, LZ eS 32 47, L N,E iSS 35 32, FL 12 30.0. CGS: 0.8 N, 27.9 W. Atlántico Medio. H = 11:19:05.5, h = 33 kms, MB = 4.7.-
21. XZ iPg 19 22 14.0 D, T 0.3, A 1.3 = 65 mu, X Z,N,E iSg 22 15.0, FX 22 20, d = 8 kms, H = 19:22:12.0, mC = 3.0. Región de Caracas.-
21. XZ iPg 20 01 53.0 D, T 0.3, A 1.0 = 50 mu, X Z,N,E iSg 01 54.0, FX 02.0, d = 8 kms, H = 20:01:51.0, mC = 2.9. Región de Caracas.-
21. XL Z iP 21 07 08.5 D, T 1.2, A 2.8 = 186 mu, LZ e(PP) 10 06, LZ,N,E iS 18 16, L Z,N,E iPPS 19 42, L N,E iL 37.0 (T 40), L Z, N,E iR 52.0 (T 20). LZ: T 20, 2A 10; LN: T 20, 2A 9; LE: T 20, 2A 3. FL 23 00.0, d = 10 500 kms, H = 20:53:41.0, mC = 6.4, MC = 5.5. CGS: 51.3 N, 179.2 W. Andreanoff, Islas Aleutianas. H = 20:53:47.5, h = 48 kms, MB = 5.9, MS = 5.4.-
22. XL Z ePKP 07 31 24.0, LZ ePP 34 46, LZ e 39 30, LZ ePPS 47 14, LZ eSS 53 24, L Z,N,E eL 08 29.0 (T 36), F 09 30.0. CGS: 4.8 S, 152.5 E. Nueva Bretaña. H = 07:12:07.7, h = 71 kms, MB = 5.3.-
22. XZ iP 10 27 49.5 D, T 0.9, A 2.3 = 77 mu, LZ ePP 28 28, L N,E iS 32 34, L N,E iSS 34 02, L Z,N,E iLR 36.5-38.0 (T 30-14), FL 11 50.0, d = 3 100 kms, H = 10:21:55.0, mC = 5.4. CGS: 18.1 S, 71.5 W. Costa Norte de Chile. H = 10:21:52.1, h = 23 kms, MB = 5.4.-

Continúa

## Continuación del mes de Octubre de 1.969.

22. X Z,N,E iR 12 53 29.0 D, T 0.4, A 4.9 = 163 mu, X Z,N,E i 53 30.5, X Z,N,E i 53 34, XL Z,N,E iPb 53 45, XL Z,N,E iPg 53 54, XL Z,N,E iSn 54 16, XL Z,N,E iSn 54 25, XL N,E iSb 54 35, XL N,E iSg 55 01, FL 13 00.0. P-azimut: E, d = 500 kms, H = 12:52:19.0, mC = 5.1. Sentido en Cumaná, Barcelona, Carúpano, Irapa, Ciudad Bolívar y Puerto Ordaz.  
CGS: 10.9 N, 62.6 W. Cerca a la costa Norte de la Península de Paria. H = 12:52:22.0, h = 79 kms, MB = 5.4.  
CUMANA: X Z,E L E iPn 12 52 53.8.-
22. X Z,E iPg 20 09 12.0 D, T 0.4, A 1.2 = 40 mu, X Z,N,E iSg 09 15, FX 09 30, d = 24 kms, H = 20:09:07.0, mC = 2.9. Región de Caracas.-
22. X Z,N,E iPg 22 32 30.5 D, T 0.3, A 1.1 = 55 mu, X Z,N,E iSg 32 32.5, FX 33.0. P-azimut: SE, d = 16 kms, H = 22:32:27.5, mC = 3.2. Cerca a El Hatillo. Sentido levemente por pocas personas en Altamira, Edo. Miranda.-
22. XL Z,N,E iP 23 01 06.0 D, T 1.0, A 4.2 = 168 mu, XZ i 01 10, LZ iPcP 02 08, LZ iPP 03 22, L N,E iS 08 52, L Z,E iPS 09 18, L N,E iSS 12 40, L N,E iSSS 14 20, L Z,N,E iR 25.0 (T 20), LZ: T 20, 2A 13; LN: T 20, 2A 13; LE: T 20, 2A 7. FL 00 30.0. P-azimut: NW, d = 6 100 kms, H = 22:51:38.0, mC = 6.0, MC = 5.2. CGS: 34.8 N, 121.3 W. Frente a la costa de California. H = 22:51:33.5, h = 15 kms, MB = 5.9, MS = 5.2.-
23. XZ eP 01 50 49.0, LZ epP 51 18, LZ ePP 54 18, LN e(S) 02 00 06, L N,E e ScS 00 48, L N,E eL 14.5 (T 36), FL 02 50.0. CGS: 56.1 S, 27.3 W. Sur de las Islas Sandwich. H = 01:39:22.1, h = 95 kms, MB = 5.3.-
23. X Z,N,E iPg 17 11 45.0 D, T 0.3, A 1.5 = 75 mu, X Z,N,E iSg 11 47.5, FX 12 15. P-azimut: SW, d = 20 kms, H = 17:11:41.0, mC = 3.3. Cerca a San Pedro, Edo. Miranda.-
24. XZ iP 00 59 10.5 C, T 1.0, A 1.3 = 52 mu, LE eS 01 09 48, LZ ePS 10 36, LZ ePPS 11 08, L N,E eSS 14 10, L Z,N,E iMR 36.5-42.0 (T 24-16). LZ: T 20, 2A 5; LN: T 20, 2A 4; LE: T 20, 2A 2. FL 02 20.0. d = 9 700 kms, H = 00:46:27.0, mC = 5.0. CGS: 52.5 N, 168.6 W. Fox, Islas Aleutianas. H = 00:46:14.6, h = 33 kms, MB = 5.2.-
24. XL Z iP 08 38 32.0 D, T 0.9, A 1.2 = 40 mu, XZ i 38 37, XZ ePcP 38 36, LN iPPP 41 48, LZ iPcS 43 38, L Z,N,E iS 46 08, LN iScS 48 26, L Z,N,E iR 09 04.0 (T 20). LZ: T 20, 2A 5; LN: T 20, 2A 8; LE: T 20, 2A 3. FL 09 40.0. d = 5 900 kms, H = 08:29:18.0, mC = 5.4, MC = 5.0. CGS: 33.3 N, 119.2 W. California. H = 08:29:12.1, h = 10 kms, MB = 5.1, MS = 5.0.-
24. XZ iPn 08 48 50.5 D, T 0.8, A 1.2 = 34 mu, XZ i 49 05.5, X N,E i(Sn) 50 28, FX 53.0.-
24. LZ eP 19 54 30.0, L Z,E eS 20 01 20, FL 30.0, d = 5 100 kms, H = 19:46:07.0. CGS: 9.0 S, 108.7 W. Cerca a la Isla Cordillera. H = 19:46:09.0, h = 33 kms, MB = 4.5.-

Continúa

Continuación del mes de Octubre de 1.969.

24. XZ ipPKPl 22 04 54.0 D, T 1.0, A 1.9 = 76 mu, XZ ePP 08 38, FX 09.0.  
CGS: 7.5 S, 127.7 E. Mar de Banda. H = 21:44:06.7, h = 149 kms,  
MB = 5.6.-
25. XL Z iP 04 16 26.0 D, T 1.4, A 1.2 = 120 mu, XZ iPcP 17 11, LZ ePPP 20 04, L N,E iS 24 18, L N,E iSS 28 08, L N,E eSSS 29 42, L Z,N,E iMR 35.5-39.0 (T 34-18). LZ: T 20, 2A 13; LN: T 20, 2A 10; LE: T 20, 2A 10, FL 05 30.0. d = 6 200 kms, H = 04:06:51.0, MC = 5.2.  
CGS: 36.2 S, 101.2 W. Sur de Océano Pacífico. H = 04:06:47.3, h = 33 kms, MB = 5.2, MS = 5.3.-
25. XL Z eP 17 06 34.0, XZ iPP 06 48, L N,E iS 09 38, L Z,N,E iLR 12.0-15.0 (T 28-16), FL 30.0, d = 1 700 kms, H = 17:02:49.0.  
CGS: 8.5 N, 83.0 W. Costa Rica. H = 17:02:49.7, h = 37 kms, MB = 4.1.-
26. LZ ePP 04 04 14.0, LE eSKS 10 08, LE iSKKS 11 10, L Z,E iPS 13 46, LZ i 14 06, L Z,N,E iR 40.0 (T 24), FL 06 00.0.  
CGS: 27.0 S, 176.5 W. Islas Kermadec. H = 03:44:50.4, h = 30 kms, MB = 5.3, MS = 5.2.-
26. XL Z eP 06 52 48.0, XL Z iPP 57 12, L N,E i 07 02 48, L N,E i SKS 03 44, LN iSKKS 04 30, LN iS 05 16, L Z,N,E iPS 06 10, LZ iPPS 07 26, L Z,N,E iSS 12 00, L N,E iSSS 16 30, L N,E iL 29.0 (T 40), L Z,N,E iR 37.0 (T 18), LZ: T 18, 2A 8; LN: T 18, 2A 7; LE: T 18, 2A 6. FL 09 00.0, d = 12 200 kms, H = 06:38:15.0.  
CGS: 16.2 S, 173.9 W. Islas Tonga. H = 06:38:03.4, h = 127 kms, MB = 5.8.-
26. XL Z eP 15 48 56.5, T 1.4, A 1.2 = 120 mu, XZ iPcP 49 09, L N,E iS 58 48, LZ iPS 59 26, L Z,N,E iSS 16 04 00, L Z,N,E iSSS 07 20, L Z,N,E iLR 14.5-22.0 (T 38-18). LZ: T 20, 2A 19; LN: T 20, 2A 13; LE: T 20, 2A 9. FL 17 30.0, d = 8 550 kms, H = 15:37:06.5, MC = 5.6.  
CGS: 44.9 N, 17.3 E. Yugoslavia. H = 15:36:51.8, h = 33 kms, MB = 5.3, MS = 5.6.-
26. LZ eP 21 53 03.0, LZ ePP 56 53, LE eSKS 22 03 36, L N,E i SKKS 04 12, L N,E eS 04 36, L Z,N,E iPS 06 02, L N,E iSS 11 10, L N,E eSSS 15 28, L N,E iL 23.0 (T 40), L N,E iR 30.0 (T 26). LZ: T 22, 2A 94; LN: T 22, 2A 60; LE: T 22, 2A 54, FL 00 30.0. d = 11 000 kms, H = 21:39:21.0, MC = 6.2.  
CGS: 53.4 S, 23.5 E. Sur de Africa. H = 21:39:20.8, h = 33 kms, MB = 5.9, MS = 6.1.-
27. XL Z eP 08 22 58.0, T 1.3, A 1.0 = 71 mu, XZ iPcP 23 29, LZ ePP 26 10, L Z,N,E iS 32 50, L Z,N, iPS 33 32, L Z,N,E iSS 38 06, L Z,N,E iR 54.0 (T 20). LZ: T 20, 2A 44; LN: T 20, 2A 33; LE: T 20, 2A 19. FL 11 30.0. d = 8 550 kms, H = 08:11:08.0, MC = 5.9.  
CGS: 44.9 N, 17.2 E. Yugoslavia. H = 08:10:58.3, h = 33 kms, MB = 5.3, MS = 6.1. 14 muertos, 1 100 heridos y muchos daños materiales.-
27. X Z,N iPn 19 39 34.0 D, T 0.8, A 2.1 = 60 mu, XZ iPg 40 10.5, X Z,N,E iSn 40 58.5, X Z,N,E iSb 41 39, FX 44.0, d = 900 kms, H = 19:37:33.0, mC = 4.9.  
CGS: 18.4 N, 68.8 W. Pasaje de Mona. H = 19:37:38.5, h = 176 kms, MB = 4.4.-

Continúa

Continuación del mes de Octubre de 1.969.

27. XL Z eP 22 36 27.0, XZ iPP 36 40, L Z,N,E eS 39 44, L N,E eSS 40 14, FL 50.0, d = 1 900 kms, H = 22:32:30.0.  
CGS: 2.2 S, 78.9 W. Ecuador. H = 22:32:32.1, h = 131 kms, MB= 4.5.-
29. XL Z eP 16 33 01.0, LZ ePP 35 12, L N,E eS 40 10, LZ ePS 40 42, L N,E eSSS 44 10, LE iR 53.0 (T 17), FL 17 30.0, d = 5 450 kms, H = 16:24:16.0.  
CGS: 38.0 S, 73.5 W. Cerca a la costa central de Chile. H = 16:24:17.0, h = 16 kms, MB = 4.7.-

Microsismicidad alta en SP.  
Reducida al movimiento sinusoidal del suelo (Ground Motion)

	T	a(u)	T	a(u)	T	a(u)
29. 18 h	Z 1.5	0.11	N 1.5	0.10	E 1.5	0.08
20 h	Z 1.4	0.13	N 1.4	0.12	E 1.4	0.08
22 h	Z 1.5	0.13	N 1.5	0.14	E 1.5	0.09
30. 00 h	Z 1.5	0.11	N 1.5	0.12	E 1.5	0.09
02 h	Z 1.5	0.11	N 1.4	0.09	E 1.4	0.07

Alta microsismicidad en las mismas horas en registros de Cumaná.-

29. XZ iP 22 10 59.0 C, T 1.0, A 2.0 = 80.0 mu, FX 12.0.  
CGS: 37.1 N, 116.1 W. Sur de Nevada, U.S.A. H = 22:01:51.4, h = 0 kms, MB = 5.7.  
CUMANA: XZ iP 22 11 17.0, T 1.5, A 1.0 = 270 mu.-
30. X Z,N,E iPn 07 37 01.0 D, T 0.5, A 1.1 = 27 mu, X Z,N,E iSn 37 37, X N,E iSb 37 41, X N,E iSg 37 56, FX 40.0, d = 350 kms, H = 07:36:13.0, mC = 3.8. Cerca a Guanare, Estado Portuguesa.-
30. LZ ePP 08 48 24.0, LZ ePPP 49 12, L Z,N e(S) 53 26, LN eSS 54 20, L Z,N,E iMR 09 01.0-04.0 (T 28-18). LZ: T 20, 2A 3; LN: T 20, 2A 4; LE: T 20, 2A 2. FL 10 30.0.  
CGS: 45.5 N, 27.5 W. Norte del Atlántico Medio. H = 08:37:38.4, h = 33 kms, MB = 4.4.-
30. XZ ePKP1 18 59 06.0, T 1.5, A 1.0 = 111.0 mu, XZ iPKP2 59 18, FX 02.0.  
CGS: 2.5 S, 143.5 E. Nueva Guinea. H = 18:39:23.0, h = 33 kms, MB = 5.2, MS = 4.9.-
30. XZ ePn 21 43 52.0, X Z,N,E iPb 44 09, X Z,N,E iSn 45 15.5, X N,E iSn 45 21.5, FX 48.0, d = 900 kms, H = 21:41:48.0.  
CGS: 18.5 N, 68.7 W. Pasaje de Mona. H = 21:41:55.2, h = 145 kms, MB = 4.0.-
30. XZ iPn 21 52 58.0 C, T 0.5, A 1.1 = 27 mu, X Z,N,E iPb 53 03, X Z,N,E iSn 53 21.5, X N,E iSg 53 34, FX 56.0, d = 300 kms, H = 21:52:18.0, mC = 3.7. Cerca a Guanare, Estado Portuguesa.-
31. XZ iPn 07 08 39.5 D, T 0.5, A 0.8 = 20 mu, X N,E iSn 10 12.5, FX 13.0, d = 950 kms, H = 07:06:28.5.-

Continúa



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Continuación del mes de Octubre de 1.969.

31. XL Z,N,E iP 11 46 26.0 D, T 1.3, A 1.9 = 126 mu, XL Z iP 50 16, LN iPPP 52 44, L Z,N,E iSKS 56 58, L Z,N,E iS 57 44, LZ i PS 58 59, L N,E iSS 12 04 48, L N,E iSSS 08 00, L N,E iL 17.0 (T 40), L Z,N,E iMR 26.0-30.0 (T 26-20). LZ: T 20, 2A 72; LN: T 20, 2A 59; LE: T 20, 2A 35, FL 15 00.0. P-azimut: NW, d = 10 550 kms, H = 11:33:04.0, MC = 6.3. CGS: 51.3 N, 179.0 W. Andreanoff, Islas Aleutianas. H = 11:33:04.8, h = 49 kms, MB = 6.0, MS = 6.3.-
31. XZ iPg 17 42 07.0 D, T 0.4, A 2.0 = 66 mu, X Z,N,E iSg 42 08, FX 42 20, d = 8 kms, H = 17:42:05.0, mC = 3.1. Región de Caracas.-
31. X Z,N,E iPg 22 02 42.5 D, T 0.3, A 1.3 = 65 mu, X N,E iSg 02 44.5, FX 03 20. P-azimut: NE, d = 16 kms, H = 22:02:39.5, mC = 3.2. Entre Caraballeda y Naiguatá.-
31. XZ eP 22 43 04.5, X i 43 07.5, LE epP 43 14, FL 50.0. CGS: 11.8 S, 74.8 W. Perú. H = 22:37:59.8, h = 53 kms, MB = 4.5.-
31. XZ e 22 50 22.0, XZ e 50 34.5, FL 23 10.0.-
31. LE e 23 18 52, XZ e 23 19 20.0, XZ e 19 35, FL 30.0.-
31. XZ iPg 23 28 32.5 C, T 0.4, A 0.8 = 27 mu, XZ i 28 35, X Z,N,E i(Sg) 28 43, FX 29 10.-

G. Fiedler

F.A.Miranda

/G.N.

Caracas 25 de Febrero de 1.970

27 APR 1970

COMANDANCIA GENERAL DE LA MARINA  
SERVICIO DE HIDROGRAFIA Y NAVEGACION  
OBSERVATORIO DE SISMOLOGIA  
Y MAREAS TERRESTRES  
Caracas - Venezuela  
BOLETIN SISMICO MENSUAL

Noviembre 1.969

1. LZ iP 11 16 04.0 C, XL Z i 16 09, LZ iPP 17 46, L Z,N,E iS 22 24, L N,E iSS 25 26, L N,E iSSS 26 16, L N,E iL 29.5 (T 38), LZ: T 22, 2A 146; LN: T 22, 2A 106; LE: T 22, 2A 146. FL mezclado con el sismo siguiente.  $d = 4\ 550$  kms,  $H = 11:08:21.0$ ,  $MC = 6.1$ .  
CGS: 23.1 N, 107.9 W. Folfo de California.  $H = 11:08:20.9$ ,  $h = 33$  kms,  $MB = 5.6$ ,  $MS = 6.6$ .  
CUMANA: XZ eP 11 16 20.0, XL Z i 16 30.2.  
LAGUNILLAS: XZ eP 11 15 37.5.-
1. XZ eP 11 45 35.5, X N,E i 46 29.5, FX 51.0.-
2. XZ,N,E iPn 03 59 14.0 D, T 0.7, A 1.3 = 29 mu, XZ iPg 59 37.5, X Z,N,E iSn 04 00 11, FX 05.0,  $d = 600$  kms,  $H = 03:57:51.0$ .  
CUMANA: XZ iPn 03 58 40.0 C, T 0.8, A 4.4 = 220 mu, eSn 59 08.0,  $d = 260$  kms.-
4. XZ iSKP 09 12 08.0 D, T 0.9, A 2.7 = 90 mu, XZ i 12 11, FX 13.0.  
CGS: 33.8 N, 137.1 E. Cerca a la costa de Honshú, Japón,  $H = 08:50:46.9$ ,  $h = 347$  kms,  $MB = 5.4$ .-
4. XL Z e PKP1 22 24 15.0, XZ 25 40.5, FX 27.0.  
CGS: 0.1 S, 125.0 E. Mar de Moluca.  $H = 22:04:11.9$ ,  $h = 33$  kms,  $MB = 5.4$ .-
4. X Z,E iPg 22 36 44.0 D, T 0.3, A 1.1 = 55 mu, X Z,N,E iSg 36 46.5, FX 37 20,  $d = 20$  kms,  $H = 22:36:40.0$ ,  $mC = 3.1$ . Región de Caracas.-
- X 4. X Z,N,E iPg 23 08 36.5 C, T 0.3, A 8.2 = 410 mu, X Z,N,E iSg 08 38.5, FX 09 30. P-azimut: ENE,  $d = 16$  kms,  $H = 23:08:33.0$ ,  $mC = 3.9$ . Entre Naiguatá y Petare. Sentido levemente al Este de Caracas.-
5. X Z,N,E iP 04 45 07.5 C, T 0.9, A 2.8 = 93 mu, FX 48.0.  
CGS: 27.5 S, 63.1 W. Santiago del Estero, Prov. de Argentina.  $H = 04:38:37.4$ ,  $h = 567$  kms,  $MB = 4.4$ .-
5. XZ iPg 09 08 25.5 C, T 0.3, A 3.0 = 150 mu, XZ iSg 08 28, FX 08 50,  $d = 20$  kms,  $H = 09:08:21.5$ ,  $mC = 3.5$ .-
5. X L Z,N,E iP 18 03 42.5 C, T 0.9, A 3.8 = 126 mu, LZ iPP 05 50, LZ ePPP 06 52, LZ,N,E iS 11 30, L N,E iPS 12 06, L N,E iSS 15 20, L N,E iSSS 17 28, L N,E iL 24.5 (T 30), L Z,N,E iR 28.0 (T 20), LZ: T 18, 2A 32; LN: T 18, 2A 31; LE: T 18, 2A 38, FL 20 30.0. P-azimut: NW,  $d = 6\ 100$  kms,  $H = 17:54:14.0$ ,  $MC = 5.4$ .-  
CGS: 34.8 N, 121.2 W. Frente a la costa de California.  $H = 17:54:13.6$ ,  $h = 33$  kms,  $MB = 5.8$ ,  $MS = 5.8$ .-  
CUMANA: X Z,E eP 18 03 53.3.  
MERIDA: X Z 18 03 28.5 D.
5. X Z iP 18 58 18.0 D, T 0.9, A 1.5 = 50 mu, XZ e 59 17, FX-19 00.0,  $mC = 5.5$ .  
CGS: 34.8 N, 121.2 W. Frente a la costa de California,  $H = 18:48:48.9$ ,  $h = 33$  kms,  $MB = 5.1$ .-

Continuación del mes de Nov, de 1.969.-

5. XZ iPg 19 32 41.0 D, T 0.3, A 1.2 = 60 mu, X Z,N,E iSg 32 43, FX 33.0. d = 16 kms, H = 19:32:38.0, mC = 3.1.-
5. XZ iPKP1 23 24 49.0 C, T 0.7, A 1.0 = 25 mu, FX 26.0. CGS: 19.2 N, 120.5 E. Islas Filipinas. H = 23:04:59.7, h = 17 kms, MB = 4.8.-
6. X Z,N,E iP 11 35 44.5 D, T 0.8, A 2.0 = 57 mu, XZ i 36 02, XZ i 36 15, XN iS 37 30, X Z,N,E i 37 38, XZ iSS 38 03, FXL 50.0. P-azimut: SW, d = 1 050 kms, H = 11:33:23.5, mC = 5.0. CGS: 5.2 N, 76.2 W. Cerca a Pueblorrico, Depto. de Caldas, Colombia, H = 11:33:16.1, h = 110 kms, MB = 4.8.-  
CUMANA: X Z,E eP 11 36 19.5.  
LAGUNILLA: XZ e 11 36 11.0.  
MERIDA: XZ iP 11 34 51.5 C, XZ iS 36 00, d = 690 kms.-
6. XL Z eP 13 06 37.0, XZ iP 06 46, X Z,N,E iP 07 02, LZ ePP 07 34, FL 20.0. CGS: 15.7 N, 92.5 W. Frontera México-Guatemala. H = 13:01:20.1, h = 141 kms, MB = 5.0.-
6. XZ eP 13 19 23.0, XZ i 19 31, X Z,N,E iP 19 47.5, FX 22.0. CGS: 15.7 N, 93.5 W. Cerca a la costa de Chiapas, México. H = 13:13:56.5, h = 114 kms, MB = 4.6.-
6. XZ iPg 18 18 36.8 D, T 0.2, A 0.5 = 55 mu, X Z,E iSg 18 37.0, FX 18 50, d = 1.5 kms, H = 18:18:36.0, mC = 3.0.-
6. XL Z eP 20 33 40.0, XZ iPcP 33 45, LZ ePP 37 04, L Z,N,E eSKKS 44 14, L Z,N,E iS 44 50, L Z,N iP 46 14, L Z,N,E eSS 50 20, L N,E iL 21 03.5 (T 40), L Z,N,E iMR 12.0-17.0 (T 30-20), LZ: T 20, 2A 19; LN: T 20, 2A 15; LE: T 20, 2A 11, FL 23 00.0, d = 9 550 kms, H = 20:20:18.0, MC = 5.8. CGS: 51.5 N, 178.9 W. Andreanoff, Islas Aleutianas, H = 20:20:18.5, h = 36 kms, MB = 5.5, MS = 5.7.-
7. XZ iP 04 04 57.5 C, T 0.8, A 1.1 = 31 mu, XZ epP 05 47, FX 09.0, mC = 5.0. CGS: 24.1 S, 66.9 W. Provincia de Salta, Argentina. H = 03:58:30.9, h = 211 kms, MB = 4.9.-
7. XZ eP 12 21 31.0, LZ ePcP 22 32, L Z,N,E eS 29 24, L Z,N,E eM 38.5 (T 30), FL en el sismo siguiente. d = 6 200 kms, H = 12:11:56.0. CGS: 3.1 S, 12.0 W. Norte de la Isla Ascensión. H = 12:11:46.5, h = 33 kms, MB = 4.9.-
7. L Z,N,E eP 12 55 14.0, L N,E eS 13 03 06.0, L N,E eSS 07 18, L Z,N,E iM 12.5 (T 30), FL en el sismo siguiente. d = 6 200 kms, H = 12:45:39.0. CGS: 2.9 S, 12.0 W. Norte de la Isla Ascensión. H = 12:45:35.3, h = 33 kms, MB = 5.2.-
7. L Z,E eS 18 38 20, LE eSS 42 24, L Z,N,E eM 47.5 (T 30). FL en el sismo siguiente. CGS: 2.9 S, 12.0 W. Norte de la Isla Ascensión. H = 18:20:35.8, h = 33 kms, MB = 5.2.-

Continúa

Continuación del mes de Noviembre de 1.969.

7. XL Z ePKP 18 52 42.5, XL Z iPP 53 46, L N,E iSKS 59 24, L N,E iSKKS 19 00 38, L N,E iS 01 30, XL Z,N,E iPS 03 16, L Z,N,E iPKKP 04 02, L Z,N,E iSS 09 10, L Z,N,E iSSS 13 30, L N,E iL 27.0 (T 48), L Z,N,E iMR 31.0-38.0 (T 40-28), FL 22 00.0.  $d = 12\ 900$  kms,  $H = 18:34:02.0$ .  
CGS: 27.9 N, 60.1 W. Sur de Irán.  $H = 18:33:59.9$ ,  $h = 35$  kms,  $MB = 6.1$ ,  $MS = 6.7$ .  
CUMANA: XZ ePP 18 53 38.5, eS 19 01 09.0.-
7. X Z,N,E iPg 21 59 04.5 D, T 0.3, A 1.2 = 60 mu, X Z,N,E iSg 59 05.5, FX 59 20. P-azimut: SE,  $d = 8$  kms,  $H = 21:59:02.5$ ,  $mC = 3.0$ . Cerca a Petare.-
8. LZ eSKP 02 03 52.0, LE iSKS 07 46, L Z,E eSKKS 09 42, LE ePPS 14 26, L N,E e(SS) 20 48, FL 04 00.0.  
CGS: 16.2 S, 167.5 E. Islas Nuevas Hébridas.  $H = 01:41:41.3$ ,  $h = 23$  kms,  $MB = 5.7$ ,  $MS = 5.5$ .-
8. XZ iP 06 35 17.5 C, T 1.2, A 1.7 = 75 mu, L N,E iS 38 52, L N,E eSS 39 32, FL 50.0,  $d = 2\ 100$  kms,  $H = 06:30:56.0$ ,  $mC = 4.9$ .  
CGS: 3.2 N, 84.2 W. Frente a la costa de América Central.  $H = 06:31:00.9$ ,  $h = 33$  kms,  $MB = 4.6$ .-
8. XZ ePKP1 22 15 15.0, XZ iPKP2 16 07.5, XL Z ePP 20 03, LE eSKKS 26 38, L N,E ePSKS 30 48, FL mezclado con varios sismos lejanos.  
CGS: 1.1 S, 127.0 E. Halmahera.  $H = 21:55:09.2$ ,  $h = 33$  kms,  $MS = 5.9$ .-
8. XZ ePKP1 23 46 01.0, XZ iPKP2 46 50.5, XZ i 46 59, FX 49.0.  
CGS: 1.0 S, 127.0 E. Halmahera.  $H = 23:26:00.0$ ,  $h = 55$  kms,  $MB = 5.3$ .-
9. XZ ePKP 01 29 28.0, XZ iPKP2 30 21.5, XZ i 30 34, FX 32.0.  
CGS: 1.0 S, 127.1 E. Halmahera.  $H = 01:09:24.3$ ,  $h = 19$  kms,  $MB = 5.2$ .-
9. LE iPKP1 09 26 54, LZ ePP 28 30, L Z,E iPpP 29 30, LE eSKKS 34 48, LE i 36 34, LE iPPS 41 04, LN iSS 45 28, LE iSSS 46 30, FL 11 00.0.  
CGS: 16.3 S, 167.9 E. Islas Nuevas Hébridas.  $H = 09:07:50.9$ ,  $h = 185$  kms,  $MB = 5.3$ .-

Microsismicidad alta en S.P.

Reducida al movimiento sinusoidal del suelo (Ground Motion)

		T	(au)		T	(au)		T	(au)	
9.	06 h	Z	1.2	0.05	N	1.2	0.04	E	1.2	0.04
	12 h	Z	1.4	0.12	N	1.5	0.13	E	1.5	0.09
	18 h	Z	1.7	0.20	N	1.4	0.12	E	1.5	0.09
10.	00 h	Z	1.7	0.16	N	1.5	0.09	E	1.2	0.04
	06 h	Z	1.5	0.07	N	1.2	0.05	E	1.5	0.05

9. X Z,N,E iPn 12 28 07.0 C, T 0.8, A 3.9 = 111 mu, XZ iPn 28 18, X N,E iSn 29 19.5, X Z,N,E iSn 29 23, X N,E iSb 29 55, X N,E iSg 30 16, FX 36.0. P-azimut: SW,  $d = 780$  kms,  $H = 12:26:19.0$ ,  $mC = 4.9$ .  
CGS: 6.9 N, 73.0 W. Cerca a Los Curos, Depto. de Santander, Colombia,  $H = 12:26:25.2$ ,  $h = 155$  kms,  $MB = 4.6$ .  
MERIDA: XZ iPn 12 27 10.5 C, XZ iSn 27 42,  $d = 280$  kms.  
LAGUNILLAS: XZ iSn 12 28 07.0, XZ eSg 28 27.  
CUMANA: XL Z,E eP 12 28 38.0, XE iS 30 18.0,  $d = 1.030$  kms.

Continúa

Continuación del mes de Noviembre de 1.969.

10. XZ eP 12 15 44.0, XZ e 16 04, FX 19.0.-
10. X Z,E iPg 20 26 11.0 C, T 0.3, A 1.4 = 70 mu, X Z,N,E iSg 26 11.7, FX 26 25, d = 6 kms, H = 20:26:09.5, mC = 3.1. Región de Caracas.-
11. XZ iP 07 02 25.0 C, T 0.7, A 1.4 = 35 mu, XZ i 02 36.5, LE eS 08 08, LE eSS 10 44, L N,E eL 13.5 (T 28), FL 40.0, d = 3 950 kms, H = 07:55:26.0, mC = 5.4.  
CGS: 24.9 S, 70.6 W. Cerca a la costa Norte de Chile. H = 06:55:32.6, h = 39 kms, MB = 5.1.-
11. XZ iPn 12 20 18.0 C, T 0.8, A 1.1 = 31 mu, XZ iPb 20 32, X N,E eSn 21 30, X Z,N,E iSn 21 36, FX 24.0, d = 780 kms, H = 12:18:30.0, mC = 4.4. Depto. de Santander, Colombia.  
MERIDA: XZ iPn 12 19 21.0 C, XZ iSn 19 53, d = 280 kms.-
12. X Z,E iP 03 53 43.0 D, T 1.0, A 1.6 = 64 mu, XZ i 53 48, FX 55.0. CGS: 13.9 N, 90.0 W. Costa de Guatemala. Sentido en San Salvador, El Salvador. H = 03:48:28.2, h = 111 kms, MB = 4.0.-
12. LZ e 06 06 20.0, L Z e(S) 09 28, L N eSS 12 32, FL 07 00.0. CGS: 8.5 N, 103.7 W. Frente a la costa de México. H = 05:57:02.0, h = 33 kms, MB = 4.3.-
12. XL Z iP KPL 15 59 42.5 D, T 0.9, A 2.3 = 76 mu, XZ e 16 01 14, LZ ePP 03 14, FL 17 40.0. CGS: 6.0 S, 148.8 E. Nueva Bretaña, H = 15:40:15.5, h = 82 kms, MB = 5.0.-
12. XL Z iP 19 21 50.5 D, T 1.0, A 1.7 = 60 mu, LZ ePP 25 14, L Z,N,E iSKS 32 12, L Z,N,E iS 32 30, LZ iPS 33 40, L N,E iSS 38 20, L N, E eSSS 41 30, L N,E iL 49.5 (T 40), L Z,N,E iMR 54.5-20:01.0 (T 30-20), LZ: T 20, 2A 18; LN: T 20, 2A 19; LE: T 20, 2A 12. FL 22 00.0, d = 9 800 kms, H = 19:09:02.0, MC = 5.9. CGS: 53.0 N, 168.3 W. Islas Fox, Islas Aleutianas. H = 19:09:02.0, h = 53 kms, MB = 5.4.-
13. XL Z,N,E iP 07 58 48.5 D, T 1.0, A 7.7 = 308 mu, XZ i 59 02, L Z,N,E iPP 08 00 22, X L Z,N,E iS 04 42, L Z,N,E i 05 06, L Z,N, E iSS 07 06, LE iSSS 07 38, L N,E iL 10.5 (T 34), L Z,N,E iR 16.5 (T 24). LZ: T 18, 2A 56; LN: T 18, 2A 54; LE: T 18, 2A 22. FL 10 30.0, d = 4 200 kms, H = 07:51:29.0, mC = 6.1, MC = 5.6. CGS: 27.8 S, 71.6 W. Cerca a la costa Norte de Chile. H = 07:51:29.5, h = 33 kms, MB = 5.8, MS = 6.0.  
MERIDA: XZ iP 07 58 31.0.  
LAGUNILLAS: XZ iP 07 58 43.0 C, T 2.0, 2A 1.4 = 700 mu.  
CUMANA: XL Z,E iP 07 58 53.0 D, T 1.2, 2A 4.6 = 383 mu, LE iS 08 04 45.5, d = 4 100 kms.-
13. X Z,N,E iPg 21 27 45.5 D, T 0.4, A 1.2 = 40 mu, X Z,N,E iSg 27 46.5, FX 28.0. d = 18 kms, H = 21:27:43.5, mC = 2.9.-
14. X L Z iP 06 54 40.0 D, T 0.8, A 1.4 = 40 mu, X Z,N,E iPP 54 45, X Z,N,E iPPP 54 51, XE i 55 13.5, XL N,E iS 56 40, XL E i 56 50, L N,E e SSS 57 20, L Z,N,E iMR 58.5-07:01.0 (T 20-12), FL mezclado con el sismo siguiente. d = 1 150 kms, H = 06:52:15.5, mC = 4.9. CGS: 4.9 N, 76.8 W. Cerca a Dipurdú, Depto. del Chocó, Colombia. H = 06:52:05.3, h = 53 kms, MB = 4.9.  
MERIDA: XZ iPn 06 53 40.0 D, XZ iSn 54 56, d = 800 kms.  
CUMANA: XZ iP 06 55 21.3, T 0.9, 2A 0.7 = 41 mu.  
LAGUNILLAS: XZ iP 06 53 52.0 D, T 0.8, 2A 1.6 = 178 mu.-

Continúa

Continuación del mes de Noviembre de 1.969.

14. LZ eiP 07 52 46.0, LZ ePP 56 36, L N,E i 08 02 16, LE iSKS 03 18, LN iSKKS 04 12, L Z,E i 05 52, LE ePPS 07 24, LE eSS 12 08, LE eSSS 17 14, FL 10 00.0.  
CGS: 19.7 S, 175.9 W. Islas Tonga, H = 07:37:45.7, h = 209 kms, MB = 5.5.-
14. XZ iPg 22 00 29.0 C, T 0.3, A 1.0 = 50 mu, X N,E iSg 00 31, FX 00 50, d = 16 kms, H = 22:00:26.0, mC = 3.1.-
14. X L Z iP 23 59 57.0 C, T 1.0, A 2.0 = 80 mu, L N eS 00 02 56, L Z,N,E eL 05.0 (T 30), FL 30.0, d = 1 700 kms, H = 23:56:19.0, mC = 4.7.  
CGS: 7.0 N, 82.2 W. Sur de Panamá. H = 23:56:18.5, h = 33 kms, MB = 4.3.-
15. XZ iP 18 04 38.0 D, T 0.8, A 1.8 = 51 mu, FX 05.0.  
CGS: 19.3 S, 70.5 W. Cerca a la Costa Norte de Chile. H = 17:58:36.9, h = 53 kms, MB = 4.6.-
15. XZ iP 20 11 58.5 D, T 0.6, A 1.2 = 30 mu, FX 13.0.-
16. X L Z iP 10 35 04, LN iS 39 04, L N,E iL 41.5 (T 30), L Z,N,E iR 46.5 (T 16), FL 11 40.0. d = 2 500 kms, H = 10:30:04.0.  
CGS: 13.4 N, 89.7 W. El Salvador. Sentido en San Salvador. H = 10:30:01.7, h = 79 kms, MB = 4.9.-
16. XL Z iP KP1 20 28 44.0 C, T 0.7, A 1.9 = 48 mu, X Z,N i 28 51, X Z,N,E iP KP2 29 28.5, FX 31.0.  
CGS: 6.2 S, 147.9 E. Este de Nueva Guinea. H = 20:09:10.4, h = 62 kms, MB = 4.9.-
16. XZ iPn 21 31 49.0 D, T 0.4, A 0.8 = 27 mu, XZ iPb 32 04, XN iPg 32 24, X N,E iSn 32 42, X Z,N iSb 32 53, X Z,N iSg 33 30, FX 37.0.  
d = 580 kms, H = 21:30:29.0, mC = 4.3. Posiblemente en la Península de Paria.  
CUMANA: X Z e(Pn) 21 31 18.0.-
- Ligera microsismicidad en L.P. y S.P. desde el dia 16 a las 22 horas, hasta el dia 17 a las 23 horas.
16. XZ iPn 22 33 15.0 C, T 0.5, A 0.9 = 23 mu, XZ iPb 33 31, X N,E iSn 34 08, X N iSb 34 21. FX mezclado con el sismo siguiente.  
d = 580 kms, H = 22:31:55.0, mC = 4.2. Península de Paria.  
En Cumaná se perdió por cambio de gráficas.-
16. X Z,E iPn 22 37 42.0 C, T 0.5, A 0.9 = 23 mu, X N,E iSn 38 36, FX 43.0. d = 580 kms, H = 22:36:22.0, mC = 4.2. Península de Paria. En Cumaná se perdió por cambio de gráfica.-
18. LZ eP 13 58 02.0, LZ eS 14 02 42, L N,E iL 05.5 (T 30), FL 30.0.  
CGS: 14.5 N, 92.9 W. Cerca a la costa de Chiapas, México. H = 13:52:40.2, h = 160 kms, MB = 4.8.-
18. X Z,E iPg 20 08 37.4 C, T 0.3, A 1.1 = 55 mu, X Z,N,E iSg 08 38.0, FX 08 50, d = 6 kms, H = 20:08:36.0, mC = 3.0. Región de Caracas.-

Continúa

Continuación del mes de Noviembre de 1.969.

- 18. L Z,E ePS 21 14 22.0, LZ ePPS 15 28, LZ eSS 20 40, LZ eSSS 25 12, L Z,N,E eL 38.5 (T 34), FL 22 30.0.  
CGS: 22.3 S, 175.3 W. Islas Tonga. H = 20:45:41.6, h = 33 kms, MB = 4.9, MS = 5.3.-
- 19. LZ e(P) 12 19 34, L Z,N,E eS 23 30.0, L N,E eL 32.5 (T 32), FL 13 00.0.-
- 20. X Z,N,E iPn 07 33 49.5 C, T 0.5, A 1.1 = 28 mu, X Z,N,E iPb 34 11, X N,E iSn 35 03.5, X N,E iSb 35 25, FX 38.0. P-azimut: NW, d = 780 kms, H = 07:32:01.5, mC = 4.5. Posiblemente del Depto. de Santander, Colombia.-
- 20. XZ iPg 13 19 36.6 C, T 0.3, A 0.9 = 45 mu, X Z,N,E iSg 19 36.9, FX 19 45, d = 3 kms, H = 13:19:35.6, mC = 2.9. Región de Caracas.-
- 20. LZ e(P) 17 03 06.0, L Z,N,E eS 07 46, L Z,N,E iLR 18.0-22.0 (T 32-16). LZ: T 20, 2A 9; LN: T 20, 2A 5; LE: T 20, 2A 4. FL 18 00.0.-
- 20. X N,E iPg 20 08 01.7, X Z,N,E iSg 08 02.0, FX 08 10, d = 3 kms, H = 20:08:00.7, mC = 2.9 aprox.. Región de Caracas.-
- 20. XZ eP 23 58 18.5, T 1.0, A 1.3 = 52 mu, LZ ePP 00 01 26, LE iS 08 12, LZ iPS 09 04, L N,E eSS 13 24, L N,E eL 25.0 (T 36), LZ: T 20, 2A 28; LN: T 20, 2A 27; LE: T 20, 2A 16. FL mezclado con el sismo siguiente. d = 8 750 kms, H = 23:46:20.0, mC = 5.5. CGS: 56.6 N, 153.2 W. Islas Kodiak. H = 23:46:11.6, h = 33 kms, MB = 5.1, MS = 5.5.-
- 21. XL Z iPKP1 02 25 34.0 C, T 1.2, A 3.1 = 204 mu, XZ iPKP2 26 09, XL Z,N,E iPP 29 50, XZ ePPP 33 22, L N,E iPSKS 39 54, L N,E iPPS 43 18, L N,E iSS 49 30, FL 08 00.0, d = 17 550 kms, H = 02:05:38.0.  
CGS: 2.1 N, 94.6 E. Frente a la costa W. de Sumatra. H = 02:05:35.3, h = 20 kms, MB = 6.4, MS = 7.7.  
CUMANA: XZ ePKP1 02 25 30.0, XZ iPP 29 50.1.  
LAGUNILLAS: XZ ePKP1 02 25 40, T 1.5, 2A 1.4 = 350 mu.
- 21. X Z,N,E iPg 17 11 33.8 C, T 0.3, A 1.1 = 55 mu, X Z,N,E iSg 11 36.0, FX 12.0. P-azimut: SW, d = 18 kms, H = 17:11:30.3, mC = 3.1. Cerca a Macarao.-
- 21. XZ ePg 22 48 34.5, X Z,N,E iSg 48 37.5, FX 49.0, d = 24 kms, H = 22:48:30.0, mC = 2.9 aprox..-

Microsismicidad alta en S.P.

Reducida al movimiento sinusoidal del suelo (Ground Motion)

		T	(au)	T	(au)	T	(au)			
22.	04 h	Z	1.8	0.13	N	1.8	0.10	E	1.8	0.09
	06 h	Z	1.5	0.12	N	1.5	0.09	E	1.4	0.07
	08 h	Z	1.5	0.10	N	1.5	0.10	E	1.5	0.09
	10 h	Z	1.5	0.11	N	1.5	0.10	E	1.5	0.10
	12 h	Z	1.5	0.09	N	1.4	0.06	E	1.5	0.06

Continúa

## Continuación del mes de Noviembre de 1.969.

22. X Z,N,E iPg 17 03 34.0 C, T 0.4, A 1.3 = 43 mu, X Z,N,E iSg 03 36.0, FX 03 50. P-azimut: SE, d = 16 kms, H = 17:03:31.0, mC = 3.0. Cerca a El Hatillo.
22. LZ ePS 19 56 14, LZ ePPS 57 20, LZ eSS 20 02 24, LZ eSSS 07 12, L Z,N,E eL 20.5 (T 36), FL 21 30.0.  
CGS: 22.3 S, 174.9 W. Islas Tonga. H = 19:27:45.9, h = 33 kms, MB = 5.3.-
22. XL Z,N,E iP 23 23 23.5 D, T 1.3, A 1.5 = 115 mu, XZ i 24 04.5, XL Z iPP 27 30, XL Z,N,E iSKS 34 08, XL Z iPS 36 30, L Z,N,E iSS 42 00, L Z,N,E iL 59.0 (T 40), FL 05 30.0, d = 11 100 kms, H = 23:09:37.0, mC = 6.3.  
CGS: 57.8 N, 163.5 E. Cerca a la costa Este de Kamchatka. H = 23:09:37.2, h = 33 kms, MB = 6.3, MS = 7.3.  
CUMANA: XZ eP 23 23 31.0, XZ ePP 27 24.
24. XL Z eP 04 43 58.0, LZ ePP 47 06, L Z,N eS 54 10, LZ ePS 54 40, LN eSS 59 30, L Z,N,E eL 05 10.0 (T 40), FL 06 00.0, d = 9 050 kms, H = 04:31:43.0.-  
CGS: 58.2 S, 13.8 W. Sur del Océano Atlántico. H = 04:31:41.0, h = 33 kms, MB = 4.8.-
24. X Z,E iPn 14 25 29.5 C, T 0.3, A 1.3 = 65 mu, X Z,N,E iPg 25 52, X Z,N,E iSn 26 17, X Z,N,E iSb 26 31, X N,E iSb 26 37, FX 30.0, d = 520 kms, H = 14:24:15.5, mC = 4.6. Al Este de la Península de Paria. Edo. Sucre.  
CUMANA: XZ eP 14 25 (04.8), i 25 24.8, iS 25 34.0.-
24. LZ ePP 17 43 15.0, LZ epPPP 47 24, LN iSKS 48 40, L Z,N eSP 53 00, L Z,N iPpS 53 48, L Z,N,E iSS 59 28, L Z,N,E eL 18 20.0 (T 40), FL 19 00.0.  
CGS: 37.2 N, 71.7 E. Frontera Afganistán-U.S.S.R.. -H = 17:23:20.2, h = 123 kms, MB = 5.6.-
24. L N,E iSKS 21 54 42, L N,E iSKKS 55 53, L Z,E iSP 58 38, LE ePS 59 42, FL 22 30.0.  
CGS: 18.0 S, 178.4 W. Islas Fiji. H = 21:31:17.6, h = 593 kms, MB = 5.4.-
24. XZ eP 23 03 56.5, T 1.0, A 1.6 = 66 mu, XZ iPcP 04 13, XL Z iPP 07 04, L Z,E iS 13 52, L Z iPS 14 40, L N,E iSS 19 08, L N,E iSSS 22 32, L N,E iL 30.5 (T 34), L Z,N,E iR 39.0 (T 20). LZ: T 20, 2A 26; LN: T 20, 2A 32; LE: T 20, 2A 16. FL 01 00.0, d = 8 850 kms, H = 22:51:52.5, mC = 5.6, MC = 5.8.  
CGS: 56.2 N, 153.6 W. Islas Kodiak, H = 22:51:50.1, h = 33 kms, MB = 5.5, MS = 5.7.-
25. X Z,E iPn 09 11 30.0 C, T 0.5, A 1.1 = 28 mu, X Z,N,E iPb 11 36, X Z,N,E iSn 11 53, X N,E iSg 12 05, X Z,N,E i 12 09, FX 14.0, d = 180 kms, H = 09:11:07.0, mC = 3.3.-
25. X Z,N,E iPg 16 48 18.2 C, T 0.3, A 3.3 = 165 mu, X Z,N,E iSg 48 20.8, X Z,N,E i 48 22.5, FX 48 45. P-azimut: WNW, d = 21 kms, H = 16:48:14.0, mC = 3.6. Cerca a Carayaca.-

Continúa





Continuación del mes de Noviembre de 1.969.

- 26. LZ ePKP 13 03 06.0, L Z,E iPP 05 06, L Z,E eSKP 06 26, LE eSKS 10 24, L N,E ePS 15 14, L Z,N,E iPPS 16 40, L Z,E i 18 06, LE iSS 22 40, L N,E iSSS 26 40, L Z,N,E iR 48.0 (T 20). LZ: T 20, 2A 24; LN: T 20, 2A 9; LE: T 20, 2A 15. FL 16 30.0. d = 14 200 kms, H = 12:43:58.0, MC = 6.2.  
CGS: 16.8 S, 167.7 E. Islas Nuevas Hébridás. H = 12:44:04.7, h = 33 kms, MB = 5.4, MS = 6.0.-
- 26. XL Z eP 18 38 00.0, XL Z ePP 41 06, LE eS 47 46, LE iPS 48 20, L N,E iSS 52 30, LE iLM 19 02.0-05.0 (T 38-22), L Z,N,E iR 11.0 (T 20). LZ: T 20, 2A 57; LN: T 20, 2A 43; LE: T 20, 2A 19. FL 21 00.0, d = 8 450 kms, H = 18:26:16.0, MC = 6.2.  
CGS: 58.8 S, 24.7 W. Sur de las Islas Sandwich. H = 18:26:08.9, h = 33 kms, MB = 5.4.-
- 26. X N,E ePg 19 07 52.0, X N,E iSg 07 53.5, FX 08.0, d = 12 kms, H = 19:07:49.5, MC = 2.8 aprox.. Región de Caracas.-
- 27. XZ ePn 15 38 50.5, X Z,N,E i 39 20, FX 43.0.  
CGS: 4.5 N, 75.5 W. Cerca a Armería, Depto. de Caldas, Colombia. H = 15:36:08.0, h = 61 kms, MB = 4.3. Sentido en Cali.-
- 27. XZ ePn 19 18 51.5, T 0.5, A 1.2 = 30 mu, X Z,N,E iSn 19 41, X N, E iSb 19 51, FX 23.0, d = 550 kms, H = 19:17:34.5, mC = 4.2. Al Este de la Península de Paria, Edo. Sucre.  
CUMANA: XZ ePn 19 18 11.0, X Z L E eSn 18 39.0, d = 250 kms.-
- 29. XZ iPn 14 46 44.5 C, T 0.4, A 1.0 = 33 mu, X N,E iSn 47 23, FX 49.0, d = 380 kms, H = 14:45:52.5, mC = 4.0.-
- 29. XZ e(Pn) 16 05 30.0, X N,E iSn 06 43, FX 10.0, d = 780 kms, H = 16:03:42.0. Al SSE. de Bucaramanga, Colombia.  
MERIDA: XZ iPn 16 04 34.0 C, T 0.4, A 1.5, XZ iSn 05 06, d = 290 kms.-

G.Fiedler

/G.N.

F.A.Miranda

Caracas, 20 de Marzo de 1.969



27 APR 1970

COMANDANCIA GENERAL DE LA MARINA  
SERVICIO DE HIDROGRAFIA Y NAVEGACION  
OBSERVATORIO DE SISMOLOGIA  
Y MAREAS TERRESTRES  
Caracas - Venezuela  
BOLETIN SISMICO MENSUAL

Diciembre 1.969

1. LZ eP 14 28 48.0, LZ,N,E ePP 25 28, LZ,N,E eS 32 18, LZ,N,E ePS 32 46, LZ,N,E eSS 37 02, LE eSSS 40 17, LZ,N,E iLR 47.0-53.5 (T 36-16), LZ: T 20, 2A 18; LN: T 20, 2A 10; LE: T 20, 2A 12. FL 16 00.0, d = 8 100 kms, H = 14:11:22.0. CGS: 49.8 S, 115.1 W. Este de la Isla Cordillera. H = 14:11:14.6, h = 33 kms, MB = 4.8.-
1. XZ iPg 15 16 53.5 C, T 0.3, A 1.0 = 50 mu, X N,E iSg 16 54, FX 17 10. P-azimut: SW, d = 4 kms, H = 15:16:52.5, mC = 3.1. Cerca a Antimano.-
1. X L Z iP 20 46 39.0 D, T 0.8, A 1.9 = 57 mu, XZ iP 46 56, X L Z ePP 49 32, LZ eS 56 48, L N,E iS 57 10, L N,E eSS 21 01 06, L N, E eSSS 04 32, LZ,N,E iL 12.0 (T 32), FL 22 00.0, d = 8 750 kms, H = 20:34:39.0. CGS: 60.0 S, 28.5 W. Sur de las Islas Sandwich. H = 20:35:05.2, h = 163 kms, MB = 5.6. CUMANA: XZ eP 20 46 35.2, LE ePP 49 22.5. MERIDA: XZ eP 20 46 37.3, XZ iP 47 16.6.
1. X L Z iPn 22 15 56.0 C, T 1.0, A 3.4 = 136 mu, X L Z i 16 12, X L Z,N,E iSn 17 42, X L Z, N, E i 17 50, FL 24 00.0, P-azimut: NE, d = 1 000 kms, H = 22:13:41.0, mC = 5.2. CGS: 16.7 N, 60.8 W. Antillas Menores, H = 22:13:53.1, h = 41 kms, MB = 5.6, MS = 5.8. MERIDA: XZ eP 22 16 57.5. CUMANA: XZ iP 22 15 37.6 D. LAGUNILLAS: XZ eP 22 16 48.0 D.
2. XZ ePn 09 49 13.0, X Z,N,E iSn 50 36, FX 53.0, d = 900 kms, H = 09:47:07.0. CGS: 18.7 N, 63.2 W. Antillas Menores, H = 09:46:56.9, h = 35 kms, MB = 4.6.
2. LZ iPkPl 18 16 50.0 D, X L Z,N,E iPkPl 17 21.5, X L Z isPkPl 17 48, X L Z iPP 21 21, LZ iSKKS 27 10, LZ,N,E i 27 38, LZ,N,E iPSKS 31 14, LZ iPPS 34 06, LZ,N,E eSSS 41 32, L N,E eL 19 04.0 (T 40), FL 20 30.0, d = 17 700 kms, H = 17:56:56.0. CGS: 8.2 N, 126.3 E. Mindanao, Islas Filipinas. H = 17:57:04.3, h = 102 kms, MB = 5.7. MERIDA: XZ eP 18 16 52.5.-
3. X Z,N,E iPg 19 13 46.5 D, T 0.3, A 1.3 = 65 mu, X Z,N,E iSg 13 47.5, FX 14.0. P-azimut: SW, d = 8 kms, H = 19:13:44.5, mC = 3.2. Cerca a Antimano.
3. XZ ePn 21 14 04.0, XZ iPb 14 25, X N,E eSn 15 40, X N,E iSn 15 45. FX 47.0, d = 980 kms, H = 21:11:51.0. CGS: 16.6 N, 60.7 W. Antillas Menores. H = 21:11:58.6, h = 36 kms. MB = 4.4.

Continuación del mes de Diciembre de 1.969.

3. X Z,E ePg 22 03 37.0, X N,E iSg 03 39, FX 03 50, d = 16 kms, H = 22:03:34.0, mC = 3.0 aprox.
3. X Z,N,E iPg 22 05 04.5 C, T 0.3, A 3.0 = 150 mu, X L Z,N,E iSg 05 06.5, FX 05 40. P-azimut: WSW, d = 16 kms, H = 22:05:01.5, mC = 3.5. Entre el Junquito y Macarao.-
3. X Z,N iPg 22 26 45.0 C, T 0.3, A 1.2 = 60 mu, X Z,N,E iSg 26 45.5, FX 27.0, d = 4 kms, H = 22:26:44.0, mC = 3.1.-
5. X Z,N iPn 15 17 53.0 D, T 0.7, A 1.7 = 42 mu, XZ i 17 57, X Z,N,E iPb 18 09, X Z,N,E iSn 19 09, X Z,N,E iSn 19 15, FX 21.0, d = 800 kms, H = 15:16:01.0, mC = 4.6.  
MERIDA: XZ iP 15 18 22.6 D.-
5. XZ iPg 20 04 20.0 C, T 0.3, A 1.1 = 55 mu, X Z,N,E iSg 04 20.7, FX 04 25, d = 6 kms, H = 20:04:18.5, mC = 3.0. Región de Caracas.-
5. X Z,N,E iPg 22 23 42.5 D, T 0.3, A 1.2 = 60.0 mu, X Z,N,E iSg 23 45.5, X N,E i 23 48, FX 24 20. P-azimut: ENE, d = 24 kms, H = 22:23:37.5, mC = 3.2. Cerca a Naiguatá, El Litoral.-
6. XL Z eP 15 05 50.0, LZ ePcP 06 04, LZ ePP 08 48, L Z,N ePS 16 20, L N,E eL 28.5 (T 40), L Z,N,E iR 38.0 (T 20), LZ: T 20, 2A 10; LN: T 20, 2A 10; LE: T 20, 2A 7. FL 16 30.0, d = 8 600 kms, H = 14:53:55.0, MC = 5.3.  
CGS: 8.7 S, 25.1 W. Sur de las Islas Sandwichs, H = 14:54:00.8, h = 33 kms, MB = 5.3, MS = 5.1.-
7. XZ ePn 06 13 38.0, X N,E eSn 15 02, FX 17.0, d = 900 kms, H = 06:11:34.0.  
CGS: 19.2 N, 64.6 W. Islas Vírgenes. H = 06:11:22.9, h = 33 kms, MB = 4.2.-
7. XZ iPn 10 37 22.5 D, T 0.4, A 0.9 = 30.0 mu, X N,E iSn 37 49, FX 39.0, d = 250 kms, H = 10:36:49.5, mC = 3.7. Cerca a Barquisimeto, Edo. Lara.  
MERIDA: XZ ePn 10 37 19.0, XZ eSn 37 48, d = 260 kms.-
8. XZ ePKPl 05 24 10.5, T 1.0, A 0.9 = 36.0 mu, XZ iPCKPl 24 55, FX 26.0.  
CGS: 1.7 N, 127.3 E. Halmahera. H = 05:04:19.7, h = 101 kms, MB = 5.5.-
8. XZ iPg 16 49 54.0 C, T 0.3, A 1.2 = 60.0 mu, X Z,N,E iSg 49 56.5, FX 50 10, d = 20 kms, H = 16:49:50.0, mC = 3.2.-
8. XZ iPg 17 00 17.8 C, T 0.3, A 1.2 = 60.0 mu, X Z,N,E iSg 00 18.5, FX 00 25. P-azimut: SW, d = 6 kms, H = 17:00:16.3, mC = 3.1.  
Cerca a Antimano.-
9. X L Z eP 12 14 57.0, XZ eS 19 10, X Z,N,E iSS 20 44, XE i 20 54, X N,E iL 21.5 (T 30), FL 50.0, d = 2 500 kms, H = 12:09:55.0.  
CGS: 10.2 S, 75.5 W. Perú. H = 12:10:01.2, h = 26 kms, MB = 4.8.-
9. X Z,E iPg 15 55 41.7 D, T 0.4, A 1.2 = 40.0 mu, X Z,N,E iSg 55 44.7, FX 16 00.0, d = 24 kms, H = 15:55:36.7, mC = 2.9.-

Continúa

## Continuación del mes de Diciembre de 1.970.

10. LZ e(P) 20 10 12.0, XLZ ePKP 13 10, L Z,E iPP 15 16, L Z,E iSKP 16 28, L Z,E eSKS 20 12, L Z,E eSKKS 22 10, LE iPS 25 34, L Z,E iPPS 26 56, L Z,E i 28 16, L N,E iSS 33 00, L Z,N,E iSSS 37 16, L N,E eL 54.5 (T 40), FL 00 00.0, d = 14 100 kms, H = 19:54:00.0. CGS: 14.8 S, 167.0 E. Islas Nuevas Hébridas. H = 19:53:58.2, h = 21 kms, MB = 5.4, MS = 6.3.-
11. LZ eP 10 44 40.0, L Z,N,E iS 54 06, L Z,N,E ePS 54 38, L N,E eSS 58 52, L N,E eSSS 11 01 20, L N,E eL 05 30 (T 38), L Z,N,E iMR 09.5-15.0 (T 36-16), LZ: T 20, 2A 26; LN: T 20, 2A 13; LE: T 20, 2A 13. FL 12 00.0, d = 8 100 kms, H = 10:33:14.0. CGS: 50.0 S, 114.9 W. Este de la Isla Cordillera. H = 10:33:07.6, h = 33 kms, MB = 4.7.-
12. L Z,N eS 00 48 25, LZ iPS 49 52, L N,E iPPS 50 40, L N,E eSS 55 30, L N,E eSSS 59 40, L Z,N,E iMR 01 12.0-17.0 (T 34-18). LZ: T 20, 2A 20; LN: T 20, 2A 12; LE: T 20, 2A 11. FL 02 30.0. CGS: 62.3 S, 161.8 W. Sur de Océano Pacífico. H = 00:22:47.3, h = 33 kms.-
12. X Z,E iPn 08 07 42.5 C, T 0.8, A 2.9 = 83 mu, X Z,N,E iPb 07 54, X N,E iSn 08 55, X Z,N,E iSn 09 00, X N,E iSb 09 15, FX 13.0. d = 780 kms, H = 08:05:54.5, mC = 4.8. Posiblemente de Colombia.-
12. L Z,E e 13 36 06, L N,E e 40 22, L N,E eL 53.5 (T 30), L Z,N,E iR 58.0 (T 16), FL 14 30.0.-
13. LZ eP 03 14 12.0, LZ ePP 15 40, LE e 18 16, L N,E eS 20 28, L Z,N,E iSS 23 10, L N i 36 30, FL 05 00.0, d = 4 450 kms, H = 03:06:37.0. CGS: 1.0 N, 27.9 W. Océano Atlántico Medio. H = 03:06:40.0, h = 33 kms, MB = 4.8.-
13. XZ iP 21 41 12.7 C, T 1.0, A 2.3 = 92.0 mu, LZ iP 41 48, LZ iPP 43 33, LE i(S) 48 12, L N eScS 50 58, LE iSSS 51 30, L Z,N iSSS 51 40, FL 22 30.0, mC = 5.5. CGS: 32.7 S, 70.0 W. Frontera Chile-Argentina. H = 21:33:21.9, h = 105 kms, MB = 5.6.-
14. X L Z,N,E iPKP1 03 02 09.0 D, T 1.2, A 2.5 = 156.0 mu, X L Z,N,E iPKP2 02 53.5, XLZ iPP 06 32, X L N,E iSKKS 13 19, X L N,E i 14 11, LZ iPSKS 16 50, LE i 17 40, L Z,N iPPS 19 58, L N,E iSS 26 42, LE iSSS 31 50, L N,E eL 58.5 (T 56), FL 05 30.0. d = 18 100 kms, H = 02:42:11.0. CGS: 2.0 N, 126.9 E. Pasaje de Moluca. H = 02:42:09.4, h = 42 kms, MB = 6.0, MS = 5.7.- CUMANA: ePKP1 03 02 10.0, ePKP2 03 04.0, iSKKS 13 29.0.-
14. XZ iP 18 56 05.0 C, T 0.8, A 1.1, = 31 mu, LZ iP 57 40, L N,E eSKS 19 03 10, LZ ePS 07 40, L Z,E ePPS 09 16, L N,E eSS 14 24, L Z,N,E eSSS 18 32, L Z,N,E iL 36.0 (T 40), L Z,N,E iR 46.0 (T 22). LZ: T 20, 2A 13; LN: T 20, 2A 7; LE: T 20, 2A 6. FL 21 00.0, d = 13 600 kms, H = 18:37:09.0, MC = 5.8. CGS: 8.2 N, 58.5 E. Al Este de la costa de Somalia. H = 18:37:09.5, h = 33 kms, MB = 6.0, MS = 5.6.-

Continúa

## Continuación del mes de Diciembre de 1.970.

14. X Z,E iPn 22 39 59.5 D, T 0.3, A 5.2 = 260 mu, X Z,N,E iPb 40 04, X L Z,N,E iPg 40 09, X L N,E iSn 40 26, X Z,N,E iSb 40 32, X L Z,N,E iSg 40 36, FL 23 00.0. P-azimut: NE, d = 220 kms, H = 22:39:29.5, mC = 4.6.  
CGS: 11.4 N, 65.1 W. Entre las Islas La Tortuga y La Blanquilla, Venezuela. Sentido levemente al Este de Caracas. H = 22:39:26.5, h = 32 kms, MB = 4.9.  
CUMANA: XZ iPn 22 39 47.8 D, eSn 40 07.6, d = 140 kms,  
LAGUNILLAS: XZ ePn 22 41 02.-
15. X Z,N,E ePn 01 43 21.5, X N,E iSn 43 43.5, X N,E iSg 43 49, FX 45.0, d = 180 kms, H = 01:43:00.5. Al SSE. de la Isla La Tortuga, Venezuela.  
CUMANA: XZ ePn 01 43 05.0, XZ eSn 43 21.0, d = 90 kms.-
15. X Z,N,E ePn 11 15 17.0, T 0.5, A 1.0 = 26 mu, X N,E iPg 15 39, X N,E iSn 16 08, X N,E iSb 16 20, FX 18.0. d = 550 kms, H = 11:14:00.0, mC = 4.2. Al Este de la Península de Paria.  
CUMANA: se perdió por cambio de cintas.-
16. LZ eP 15 14 34.0, LZ ePcP 15 50, LZ ePP 16 30, LZ ePcS 19 24, L Z,N,E iS 22 24, L Z,N,E iPS 22 44, LN eScS 24 32, L N,E iSS 26 36, L N,E iSSS 28 20, L N,E iL 33.5 (T 30), L Z,N,E iR 38.0 (T16), LZ: T 18, 2A 11; LN: T 18, 2A 12; LE: T 18, 2A 6. FL 17 00.0, d = 6 200 kms, H = 15:05:00.0, MC = 5.1.-
16. XZ iPg 22 08 08.0 D, T 0.3, A 1.4 = 70 mu, X N,E iSg 08 10.5, FX 08 30, d = 20 kms, H = 22:08:04.0, mC = 3.2. Posiblemente cerca a Naiguatá.-
17. LZ eP 07 08 56.0, LN eS 11 50, FL 30.0, d = 1 700 kms, H = 07:05:23.0.  
CGS: 0.7 S, 78.0 W. Ecuador. H = 07:05:24.6, h = 19 kms, MB= 4.5.-
18. LZ eP 06 24 41.0, L Z,E SKKS 36 32, L N,E e(S) 37 24, LE ePPS 40 02, LZ eSS 45 00, LE eSSS 49 30, FL 08 00.0.  
CGS: 27.0 S, 176.3 W. Islas Kermadec. H = 06:09:56.2, h = 49 kms, MB = 4.9.-
18. X Z,N,E iPKP 13 50 12.0 C, T 0.7, A 1.2 = 30 mu, X Z,N iPp 51 28, L Z iSKS 53 18, LZ iPPP 54 08, L N iSKKS 57 58, LZ iPSKS 14 00 42, LZ iPPS 02 36, L N,E iSS 07 10, LN iSSS 09 24, L N,E iSSS 12 28, FL 15 30.0.  
CGS: 46.3 N, 142.5 E. Entre las Islas Hokkaido y Sakhalin. H = 13:32:05.2, h = 344 kms, MB = 5.9.  
CUMANA: XZ ePKP 13 50 20.0, XZ ePP 51 36.-
19. LZ eSS 05 06 16, LZ eSSS 10 40, FL 06 00.0.  
CGS: 43.2 N, 147.7 E. Islas Kuriles. H = 04:29:59.7, h = 29 kms, MB = 4.7.-
19. LZ eP 08 03 36.0, L Z,N,E eS 14 14, L Z,N,E ePS 15 28, L N,E eSS 20 06, FL 09 30.0, d = 9 650 kms, H= 07:50:53.0.  
CGS: 54.3 S, 136.8 W. Sur de Océano Pacífico. H = 07:50:53.3, h = 33 kms, MB = 5.3.-

Continúa

## Continuación del mes de Diciembre de 1.969.

19. LZ eP 13 42 42.0, T 0.5, A 0.8 = 20.0 mu, LZ ePP 13 45 34, L N,E eS 52 32, L Z,E eSS 57 40, LE eL 14 03.0 (T 40), L Z,N,E MR 17.0. LZ: T 20, 2A 8.0; LN: T 20, 2A 6.5; LE: T 20, 2A 5.0. FL 14 40.0. d = 8 550 kms, H = 13:30:52.0, MC = 5.0. CGS: 60.2 N, 147.0 W. SE. de Alaska. H = 13:30:54.6, h = 14 kms, MB = 5.2.-
19. XZ iPn 21 49 53.3 C, T 0.5, A 1.3 = 320 mu, XZ iPb 50 04, X N,E iSn 51 05, X N,E iSb 51 12, FX 53.0. P-azimut: N-NNE, d = 780 kms, H = 21:48:03.3, mC = 4.6.-
20. X Z eiPn 08 19 48.0 C, T 0.4, A 0.7 = 233 mu, X Z iPb 20 07, XN eSn 21 05, XN iSb 21 28, FX 23.0, d = 810 kms, H = 08:17:55, mC = 4.6. MERIDA: XZ iPn 08 18 52.0, XZ i 18 58.-
21. XZ iP 13 09 31.9 C, T 0.8, A 1.0 = 26.5 mu, XZ iPp 10 05, LN eS 14 40, LN eScP 16 00, L eR 18.0 (T 36), F 28.0, d = 3 250 kms, H = 13:03:37, mC = 4.9. CGS: 16.4 S, 72.8 W. Cerca a la costa del Perú. H = 13:03:53.3, h = 68 kms, MB = 5.0.-
22. XZ eP 00 11 49.0 C, T 0.8, A 1.0 = 28.5 mu, LN eiS 16 28, L eR 21.1 (T 28), L eR 23.2 (T 20), FL 40.0, d = 3 000 kms, H = 00:06:04.0. CGS: 16.9 S, 72.9 W. Cerca a la costa del Perú. H = 00:06:04.2, h = 50 kms, MB = 5.2. MERIDA: XZ iP 00 11 31.5. CUMANANA: XZ eP 01 10 32.1.-
22. XZ eiP 11 32 09.4 C, T 1.0, A 1.5 = 60.0 mu, LZ ePP 36 (00), L N, E eiSKS 42 40, L N,E iS 42 52, LZ ePS 44 00, L N,E eSS 49 00, MR 12 10.0 (T 20). LZ: T 20, 2A 9; LN: T 20, 2A 6; LE: T 20, 2A 3.5. FL 54.0, d = 9 800 kms, H = 11:19:16.0, MC = 5.2. CGS: 52.5 N, 168.1 W. Islas Fox, Islas Aleutianas. H = 11:19:19.3, h = 33 kms, MB = 5.2, MS = 5.4.-
22. XZ iPg 14 01 27.2 D, T 0.4, A 1.0 = 33.3 mu, iSg 01 29.4, FX 01 40.0, d = 20 kms, H = 14:01:25, mC = 2.9. Región de Caracas, no se sintió.-
22. XZ iP 15 03 46.5 C, T 0.7, A 1.2 = 30.0 mu, X N eiS 06 00, LE i 07 16, MR 08 06 (T 19). LZ: T 19, 2A 6; LN: T 19, 2A 5; LE: T 19, 2A 4. FX 14.0, d = 1 300 kms, H = 15:01:07.0. CGS: 5.9 N, 77.4 W. Cerca a la costa Central del Depto. del Chocó, Colombia, H = 15:01:05.6, h = 48 kms, MB = 4.1. MERIDA: XZ iPn 15 02 46.0 D, T 0.5, A 2.6.-
23. LE eiS 01 52 40, LE eiSS 55 40, eL 59.0 (T 20), eR 02 01 (T 16), FL 20.0. CGS: 29.6 S, 71.8 W. Cerca a la costa Central de Chile. H = 01:39:00.8, h = 39 kms, MB = 4.4.-
23. XZ iP 12 23 46.6 D, T 0.6, A 1.1 = 27.5 mu, XNE e(S) 25 45, LZ eR 27.0 (T 32), L MR 29.8. LZ: T 20, 2A 5.5; LN: T 20, 2A 3.0; LE: T 19, 2A 3.5, F 36.0. CGS: 10.0 N, 78.8 W. Norte de Panamá. H = 12:20:53.3, h = 33 kms, MB = 5.0. MERIDA: XZ ePn 12 22 47.0, iSn 24 09, d = 950 kms.-

Continúa

## Continuación del mes de Diciembre de 1.969.

23. LZ eP 13 36 48.0, LZ ePP 13 40 48, IN iSKS 13 47 22, LZ ePS 48 46, L Z,E eSS 55 26, MR 14 21.8 (T 22). LZ: T 22, 2A 6.0; IN: T 22, 2A 6.0; LE: T 20, 2A 5.0. F L mezclado en otras ondas. d = 11 200 kms aprox.. H = 13:22:57.0, MC = 5.2. CGS: 57.4 N, 163.1 E. Cerca a la costa Este de Kamchatka. H = 13:22:54.2, h = 33 kms, MB = 5.4, MS = 5.5.-
23. XZ iPg 16 45 15.6 C, T 0.5, A 5.0 = 125.0 mu, XZ iPb 45 20.1, XN,E iSg 45 29, FX 46.0. P-azimut: SW-WSW, d = 120 kms, 10.0 N, 67.9 W, Región de Güigüe, Edo. Carabobo, mC = 3.7.-
23. XZ iPg 16 46 17.4 D, T 0.4, A 1.2 = 40.0 mu, X N,E iSg 46 22.9, FX 47.0. P-azimut: SE, d = 44 kms, 10.2 N, 66.6 W, H = 16:46:10. Región Sta. Lucia, mC = 3.0.-
25. XZ ePn 15 58 16.5, XZ iPg 58 56, X N,E iSn 59 34, FX 16 02.0, d = 810 kms, H = 15:56:23.5. Depto. de Santander, Colombia. MERIDA: XZ iPn 15 57 19.5 C, iSn 57 52, d = 300 kms.
25. X L Z,N,E iPn 21 34 36.0 C, T 0.6, A 16.2 = 405 mu, XZ iPb 34 53, X Z,N,E iPg 35 10, X Z,N,E iSn 36 09, FXL mezclado con el sismo siguiente. P-azimut: NNE. d = 950 kms, H = 21:32:26.0, mC = 7.0. Sentido levemente al Este de Caracas. CGS: 15.8 N, 59.7 W. Antillas Menores. H = 21:32:27.3, h = 7 kms, MB = 6.4, MS = 7.2. CUMANA: XZ iPn 21 34 11.9 D. MERIDA: XZ iP 21 35 38.0 C. LAGUNILLAS: XZ iP 21 35 38.0.-
25. XZ ePn 22 28 20.5, XZ iSn 29 55, FX mezclado con el sismo siguiente. d = 970 kms, H = 22:26:08.5. CGS: 15.8 N, 59.7 W. Antillas Menores. H = 22:26:11.8, h = 15 kms, MB = 5.5, MS = 6.3. CUMANA: XZ iP 22 27 55.2. MERIDA: XZ eP 22 29 25.0.-
25. X Z,N,E iPn 22 33 11.0 D, T 0.8, A 10.0 = 286 mu, X Z,N,E iPb 33 16, X N,E iPg 33 35, X Z,N,E iSn 34 47, X N,E iSb 35 04, FX 23 15.0. P-azimut: NNE, d = 980 kms, H = 22:30:58.0, mC = 5.6. CGS: 16.1 N, 59.8 W. Antillas Menores. H = 22:31:02.3, h = 8 kms, MB = 6.0, MS = 6.5. CUMANA: XZ iP 22 32 48.0. MERIDA: XZ iP 22 34 16.0. LAGUNILLAS: XZ eP 22 34 08.0.-
26. XZ ePn 00 10 22.5, XZ iPg 10 55, X N,E iSn 11 55, FX en el sismo siguiente. d = 950 kms, H = 00:08:12.5.-
26. XZ ePn 00 13 21.5, T 0.5, A 0.8 = 20.0 mu, XZ iPb 13 34, X N,E eSn 14 56, FX 17.0, d = 980 kms, H = 00:11:08.5, mC = 4.7. CGS: 16.0 N, 59.7 W. Antillas Menores. H = 00:11:14.4, h = 33 kms, MB = 5.1.-
26. XZ iP 00 30 46.0 D, T 0.8, A 1.0 = 25.0 mu, mC = 5.5. CGS: 55.2 N, 160.4 W. Península de Alaska. H = 00:18:21.0, h = 25 kms, MB = 5.3. MERIDA: XZ eP 00 30 48.5, i 30 55.-

Continúa

## Continuacion del mes de Diciembre de 1.969.

26. XZ ePn 04 32 39.5, X Z,N,E iSn 34 14, FX 36.0, d = 960 kms, H = 04:30:28.5.  
CGS: 16.2 N, 59.7 W. Antillas Menores. H = 04:30:31.3, h = 33 kms, MB = 4.6.-
26. XZ iPn 05 36 40.0 C, T 0.7, A 1.4 = 35.0 mu, X N,E Pg 37 18, X Z, N,E iSn 38 14, FX 41.0. P-azimut: NNE, d = 960 kms. H = 05:34:29.0, mC = 4.8.  
CGS: 16.1 N, 59.7 W. Antillas Menores. H = 05:34:33.4, h = 33 kms, MB = 5.2.  
CUMANA: XZ eP 05 36 18.0.  
MERIDA: XZ eP 05 37 44.0, XZ i 37 53.-
26. XZ ePn 07 02 11.5, T 0.5, A 0.7 = 17.5 mu, X Z,N,E iSn 03 44, FX 06.0, d = 950 kms, H = 07:00:01.5, mC = 4.6.  
CGS: 15.9 N, 59.5 W. Antillas Menores. H = 07:00:04.5, h = 26 kms, MB = 5.0.  
MERIDA: XZ iP 07 03 25.0, i 03 46.5.-
26. XZ ePn 07 31 26.0, X N,E eSn 33 00, FX 35.0, d = 960 kms, H = 07:29:15.0.  
CGS: 15.9 N, 59.6 W. Antillas Menores. H = 07:29:18.0, h = 25 kms, MB = 4.8.-
26. X Z,E ePn 08 48 22.0, T 0.5, A 1.1 = 27.5 mu, X E iPg 48 52, X N, E iSn 49 54, X N,E iSb 50 32, FX 09 00.0, d = 940 kms, H = 08:46:14.0, mC = 4.8.  
CGS: 15.8 N, 59.6 W. Antillas Menores. H = 08:46:15.2, h = 22 kms, MB = 5.2.  
CUMANA: XZ iP 08 47 58.3 D.  
MERIDA: XZ eP 08 49 27.0, XZ i 49 36.-
26. XZ ePn 10 17 18.5, X N,E iSn 18 52, FX 20.0, d = 960 kms, H = 10:15:07.5.  
CGS: 15.9 N, 59.6 W. Antillas Menores. H = 10:15:12.6, h = 33 kms, MB = 5.0.-
26. X Z,E iPn 10 36 09.5 C, T 0.7, A 1.9 = 47.5 mu, XZ iPb 36 31, X Z,N,E iSn 37 45, XZ iSg 38 54, FX 42.0, d = 970 kms. H = 10:33:58.5, mC = 4.9.-  
CGS: 16.1 N, 59.8 W. Antillas Menores. H = 10:33:59.8, h = 16 kms, MB = 5.4.  
CUMANA: XZ iPn 10 35 48.3.  
MERIDA: XZ eP 10 37 13.0, XZ i 37 23.-
26. XZ iPn 10 48 29.0 D, T 0.5, A 0.9 = 22.5 mu, X Z,N,E iSn 50 04, FX 52.0, d = 970 kms, H = 10:46:18.0, mC = 4.8.  
CGS: 16.3 N, 59.7 W. Antillas Menores. H = 10:46:17.8, h = 9 kms, MB = 5.2.-
26. X Z,N,E iPn 20 05 34.5 C, T 0.6, A 6.7 = 167.5 mu, X N,E iPb 06 02, X Z,N,E iPg 06 15, X Z,N,E iSn 07 07, X N,E iSb 07 53, L Z, N,E iMR 08.5-10.0 (T 22-16), FL 21 00.0. P-azimut: NNE. d = 950 kms, H = 20:03:24.0, mC = 5.3.  
CGS: 15.8 N, 59.6 W. Antillas Menores. H = 20:03:28.8, h = 33 kms, MB = 5.4.  
CUMANA: XZ ePn 20 05 09.0.  
MERIDA: XZ iP 20 06 38.0, XZ i 06 48.-

Continúa



## Continuación del mes de Diciembre de 1.969.

27. X Z,E iPn 06 56 13.5 D, T 0.3, A 0.7 = 35.0 mu, XZ iPb 56 21, X Z, N,E iSn 56 50, X N,E iSb 57 02, FX 07 01.0, d = 350 kms, H = 06:55:25.0, mC = 4.0.  
CGS: 10.7 N, 63.9 W. Isla Coche, Venezuela. H = 06:55:26.7, h = 33 kms, MB = 4.2.  
CUMANA: XZ iP 06 55 35.4.  
MERIDA: XZ iP 06 57 14.0.-
27. XZ iPn 08 01 02.5 D, T 0.7, A 1.0 = 25.0 mu, XZ iPb 01 17, X Z, N,E iSn 02 19, X N,E iSb 02 42, FX 05.0, d = 800 kms, H = 07:59:09.0, mC = 4.5. Depto. de Santander, Colombia.  
MERIDA: XZ iPn 08 00 05.0, XZ iSn 00 16, d = 290 kms.-
27. XZ iPn 09 57 42.0 D, T 0.7, A 0.9 = 22.5 mu, XZ iPb 57 55, X Z,N, E iSn 59 18, FX 10 03.0, d = 980 kms, H = 09:55:29.0, mC = 4.7.  
CGS: 16.2 N, 59.6 W. Antillas Menores. H = 09:55:35.5, h = 33 kms, MB = 5.0, MS = 5.1.  
CUMANA: XZ ePn 09 57 21.3.  
MERIDA: XZ eP 09 58 47.0, i 58 55.-
27. XZ iPn 11 41 12.5 D, T 0.5, A 0.7 = 17.5 mu, XN iPg 41 48, X Z,N, E iSn 42 49, L Z,N,E iMR 45.0-48.0 (T 22-16), FL 12 30.0, d = 980 kms, H = 11:39:00.0, mC = 4.8.  
CGS: 15.8 N, 59.6 W. H = 11:39:07.7, h = 33 kms, MB = 5.0.-
27. XZ iPn 13 10 49.0 D, T 0.7, A 1.7 = 42.5 mu, X N,E iPb 11 09, X Z,N,E iSn 12 24, L Z,N,E iMR 14.0-17.0 (T 24-16), FL 14 00.0, d = 960 kms, H = 13:08:38.0, mC = 4.9.  
CGS: 16.2 N, 59.6 W. Antillas Menores. H = 13:08:41.4, h = 33 kms, MB = 5.1.  
CUMANA: XZ iPn 13 10 38.8 D.  
MERIDA: XZ eP 13 12 04, i 12 12.-
27. X L Z,N,E iPn 14 05 11.5 D, T 0.7, A 1.9 = 47.5 mu, X N,E iPb 05 35, X Z,N,E iSn 06 46.5, X N,E iSb 07 14, L Z,N,E iL 07.5 (T 28), L Z,N,E iMR 04.0-11.5 (T 18-16), FL 15 00.0. P-azimut: NNE, d = 970 kms, H = 14:03:00.5, mC = 5.0.  
CGS: 16.2 N, 59.6 W. Antillas Menores. H = 14:03:04.4, h = 33 kms, MB = 5.5, MS = 4.9.  
CUMANA: XZ iPn 14 04 53.8 D,  
MERIDA: XZ eP 14 06 17.0, i 06 25.-
27. XZ iPg 15 33 39.5 D, T 0.3, A 0.7 = 35.0 mu, X Z,N,E iSg 33 40.0, FX 34.0, d = 4 kms, H = 15:33:38.5, mC = 3.0. Region de Caracas.-
27. XZ iPn 15 46 02.5 C, T 0.7, A 1.1 = 27.5 mu, X Z,N,E iSn 47 37, L N,E iL 48.5 (T 26), L Z,N,E iMR 49.5-52 (T 18-16), FL 16 30.0, d = 970 kms, H = 15:43:51.0, mC = 5.6.  
CGS: 16.2 N, 59.7 W. Antillas Menores. H = 15:43:54.7, h = 33 kms, MB = 5.4.  
CUMANA: XZ iPn 15 45 44.7 D.  
MERIDA: XZ eP 15 47 06.0, i 47 15.-
28. X Z,N,E iPn 23 25 21.0 C, T 0.7, A 1.7 = 42.5 mu, XZ iPb 25 32, X Z,N,E iPb 25 44, X Z,N,E iSn 26 57, X N,E iSb 27 27, L Z,N,E iL 27 45 (T 28), L Z,N,E iR 29.0 (T 18), FL 00 00.0, d = 980 kms, H = 23:23:07.0, mC = 4.9.  
CGS: 16.2 N, 59.7 W. Antillas Menores. H = 23:23:10.5, h = 13 kms, MB = 5.3.  
MERIDA: XZ eP 23 26 28.0, i 26 34.-

Continúa

## Continuación del mes de Diciembre de 1.969.

29. X L Z,N,E iPn 00 53 56.5 C, T 0.6, A 1.2 = 30.0 mu, X Z,N,E iPn 53 59.5 C, T 0.7, A 4.2 = 105 mu, X Z,N,E iPb 54 11, X L Z,N,E iSn 55 33, X N,E iSb 55 49, L Z,N,E iL 56.5 (T 28), L Z,N,E iR 57.5 (T 18), FL 02 30.5. P-azimut: NNE, d = 980 kms, H = 00:51:43.5, mC = 4.8, mC = 5.2.  
CGS: 16.2 N, 59.7 W. Antillas Menores. H = 00:51:47.2, h = 17 kms, MB = 5.6, MS = 5.8.  
CUMANA: XZ iPn 00 53 33.8 D.  
MERIDA: XZ eP 00 55 01.0, i 55 11.-
29. XZ ePn 08 23 46.5, T 0.8, A 0.7 = 17.5 mu, X Z,N,E iSn 25 21.5, FL 09 00.0, d = 970 kms, H = 08:21:34.5, mC = 4.5.  
CGS: 16.2 N, 59.6 W. Antillas Menores. H = 08:21:38.9, h = 33 kms, MB = 4.9.-
29. X Z,N iPn 13 57 33.5 C, T 0.6, A 1.7 = 42.5 mu, X N,E eSn 59 10, FX mezclado con el sismo siguiente, d = 980 kms, H = 13:55:20.5, mC = 4.9.  
CGS: 16.2 N, 59.8 W. Antillas Menores. H = 13:55:26.0, h = 19 kms, MB = 5.0.  
CUMANA: XZ ePn 13 57 21.0.-
29. X Z,N,E iPn 13 57 44.5 C, T 0.8, A 6.0 = 171.4 mu, X Z,N,E iSn 59 19, FX mezclado con el sismo siguiente. d = 970 kms, H = 13:55:31.5, mC = 5.3.  
CGS: 16.0 N, 59.7 W, H = 13:55:38.0, h = 33 kms, MB = 5.4.-
29. X Z,N,E iPn 13 57 55.0 C, T 0.7, A 6.8 = 170.0 mu, X Z,N,E iSn 59 29, FX mezclado con el sismo siguiente. d = 970 kms, H = 13:55:43.0, mC = 5.4.  
CGS: 16.1 N, 59.7 W. H = 13:55:49.9, h = 33 kms, MB = 5.4.  
MERIDA: XZ iP 13 58 46.5, i 58 57.-
29. XZ ePn 14 15 37.5, T 0.6, A 1.3 = 32.5 mu, XZ iPb 15 48, X Z,N,E iSn 17 13, FX 22.0, d = 980 kms, H = 14:13:26.5, mC = 4.8.  
CGS: 16.2 N, 59.7 W. Antillas Menores, H = 14:13:29.6, h = 20 kms, MB = 5.2.-
30. XZ iPn 03 56 21.5 C, T 0.7, A 0.9 = 22.5 mu, XZ i 56 36.5, X Z,N,E iSn 57 38, FX 04 00.0, d = 800 kms, H = 03:54:29.0, mC = 4.4, Depto. de Santander, Colombia.  
MERIDA: XZ iPn 03 55 26.0, iSn 55 58, d = 300 kms.-
30. XZ iPn 08 13 57.0 D, T 0.7, A 1.3, = 32.5 mu, X N,E eSn 15 33, FX 17.0, d = 970 kms, H = 08:11:45.0, mC = 4.7.  
CGS: 16.2 N, 59.6 W. Antillas Menores, H = 08:11:49.4, h = 33 kms, MB = 4.6.-
31. X Z,N,E iPn 05 44 06.0 D, T 0.5, A 1.8 = 45.0 mu, XZ iPb 44 18, X Z,N,E iSn 45 42, L N,E iL 46.5 (T 24), L Z,N,E iMR 48.0-51.0 (T 18-14), FL 06 10.0, d = 970 kms, H = 05:41:53.0, mC = 5.0.  
CGS: 16.1 N, 59.7 W. Antillas Menores. H = 05:41:57.5, h = 17 kms, MB = 5.1.-
31. XZ ePn 06 52 03.0, T 0.6, A 0.9 = 22.2 mu, X Z,N,E iSn 53 39, FL 07 20.0, d = 970 kms, H = 06:49:50.0, mC = 4.7.  
CGS: 16.1 N, 59.6 W. Antillas Menores. H = 06:49:56.8, h = 33 kms, MB = 5.0.-

Continúa

Continuación del mes de Diciembre de 1.969.

31. XL Z ePKP 19 21 08.0, XL Z iPP 24 10, LZ iSKP 24 54, LZ i 25 54, LZ iPPP 27 18, LZ i(SKKS) 31 28, LZ iPPS 36 30, LN iSS 42 16, L N,E eSSS 47 34, L N,E eL 20 06.0 (T 40), L Z,N,E iR 16.0 (T 24), FL 22 00.0, d = 15 400 kms, H = 19:01:41.0.  
CGS: 28.5 N, 129.1 E. Islas Ryukyu, H = 19:01:56.1, h = 44 kms, MB = 5.9, MS = 6.3.-
31. LZ iPKP1 23 58 06.0, LZ ipPKP1 00 00 04, LZ ipPKP2 01 32, L Z,N, E ipPP 05 20, LZ e 07 08, L Z,N,E ipPPP 09 30, L N,E iSS 24 20, FL 01 30.0.  
CGS: 7.0 S, 117.8 W. Mar de Bali. H = 23:38:52.3, h = 483 kms, MB = 5.3.-

Nota: La estación de Mérida no funcionó entre los días 10 a 15 inclusive, por reparaciones en los circuitos del amplificador.-

G.Fiedler

F.A.Miranda

/G.N.

Caracas, 9 de Abril de 1.970