

RED SISMOLOGICA DE COBERTURA NACIONAL

COSTA RICA

Departamento de Geología ICE

Escuela Centroamericana de Geología UCR

BOLETIN SISMOLOGICO INTERNACIONAL No.86

Julio - Agosto - Setiembre  
de 1984

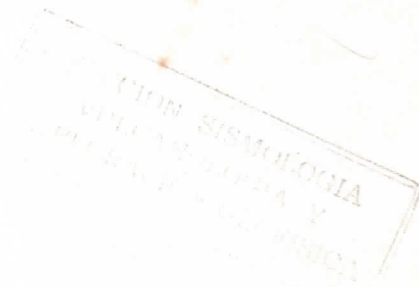
Datos de las estaciones de R.S.N.

| ESTACION         | CODIGO | LONGITUD W | LATITUD N  | ELEVACION |
|------------------|--------|------------|------------|-----------|
| U. de Costa Rica | SJS    | 84° 03.25' | 9° 56.35'  | 1196 m    |
| La Lucha 2       | LCR2   | 84° 00.18' | 9° 44.53'  | 1730 m    |
| Volcán Poás 2    | VPS2   | 84° 14.12' | 10° 11.41' | 2570 m    |
| San Ramón        | SRA    | 84° 26.89' | 10° 04.95' | 1160 m    |
| Volcán Irazú     | ICR    | 83° 49.83' | 9° 58.85'  | 3306 m    |
| Buvis            | BUS    | 83° 45.47' | 9° 33.42'  | 3400 m    |
| Quepos           | QCR    | 84° 09.75' | 9° 25.52'  | 50 m      |
| Chiripa          | AR6    | 84° 54.63' | 10° 26.38' | 1020 m    |
| Limón            | LIO    | 83° 02.10' | 10° 00.30' | 62 m      |
| Adams            | ACR    | 83° 10.23' | 08° 38.93' | 100 m     |
| Vista del Mar    | VCR    | 85° 37.42' | 10° 07.50' | 800 m     |
| Fortuna          | FOR    | 84° 41.52' | 10° 28.00' | 500 m     |
| Jicaral          | JCR    | 85° 06.98' | 09° 51.02' | 582 m     |

Preparado por:

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## INTRODUCCION

El presente Boletín Sismológico Trimestral contiene la siguiente información:

### PARTE A

Localización y parámetros de todos los sismos locales registrados trimestralmente por todas las estaciones de la Red Sismológica Nacional (RSCN) y cuya magnitud es  $\geq 2.5$ .

### PARTE B

Lectura de los tiempos de Arribo para los eventos locales, registrados por RSCN con  $M \geq 4.0$ , sismos regionales y telesismos, en las estaciones LCR 2, SJS, SRA, VPS 2, ICR, BUS, LIO, QCR, ACR y VCR, ya que éstas son, actualmente las que tienen sus respectivos códigos internacionales.

### EXPLICACION DE LOS DATOS

1. EST : Estación que registró el Evento.
2. FECHA : Todas las fechas están reportadas en tiempo medio de Greenwich (TMG)
3. TIEMPO : Tiempo origen (Parte A) y tiempo Arribo de las Fases (parte B), están dados en horas, minutos y segundos en TMG.
4. FASE : Una "i" o "e" precede el nombre de la fase para indicar el carácter del arribo.
  - a) "i" (impetu), indica que el primer arribo fue impulsivo y la dirección del primer movimiento es evidente.
  - b) "e" (emersio), indica un comienzo gradual en el cual la dirección del movimiento es dudosa.
5. COM : Designa la componente (N, E o Z) del sismógrafo de la cual el tiempo de arribo fue medido.
6. Pol : Polaridad, una C o una D representan un movimiento de compresión o dilatación respectivamente. Indicada especialmente para las fases designadas, con impetu (i).
7. PER : Si se trata de la estación LCR2 entonces se anota si el dato es de Período Corto (PC), Período Medio (PM) o Período Largo (PL).

8. PROF. : Indica la profundidad a que se produjo el foco del sismo.
9. RMS : Indica el error medio estandar, que da como resultado la localización por computadora, a través del programa HYPO.71.
10. ERH,ERZ: Datos de errores en la localización horizontal (H), y Vertical (Z).
11. COMENTARIO : Se indica si el epicentro es de sismos locales, telesismos o regionales. Los regionales se refieren a sismos fuera de las zonas limítrofes de Costa Rica.

En caso de los sismos locales, aquí se indica además la Intensidad (Mercalli Modificada) en San José u otra ciudad importante.

#### SIMBOLOGIA BASICA

- \*..... Localización de profundidad <sup>inconsistente.</sup> consistente
- <..... La estimación de profundidad es menor que la señalada instrumentalmente.
- >..... La estimación de profundidad es mayor que la señalada instrumentalmente.
- ERH,ERZ.. Datos de errores en la localización, horizontal (H) y vertical (Z) que no son consistentes con los datos de profundidad estimada.

#### Prof.Lat

Long. ... Sismos localizados sin proceso en el HYPO 71

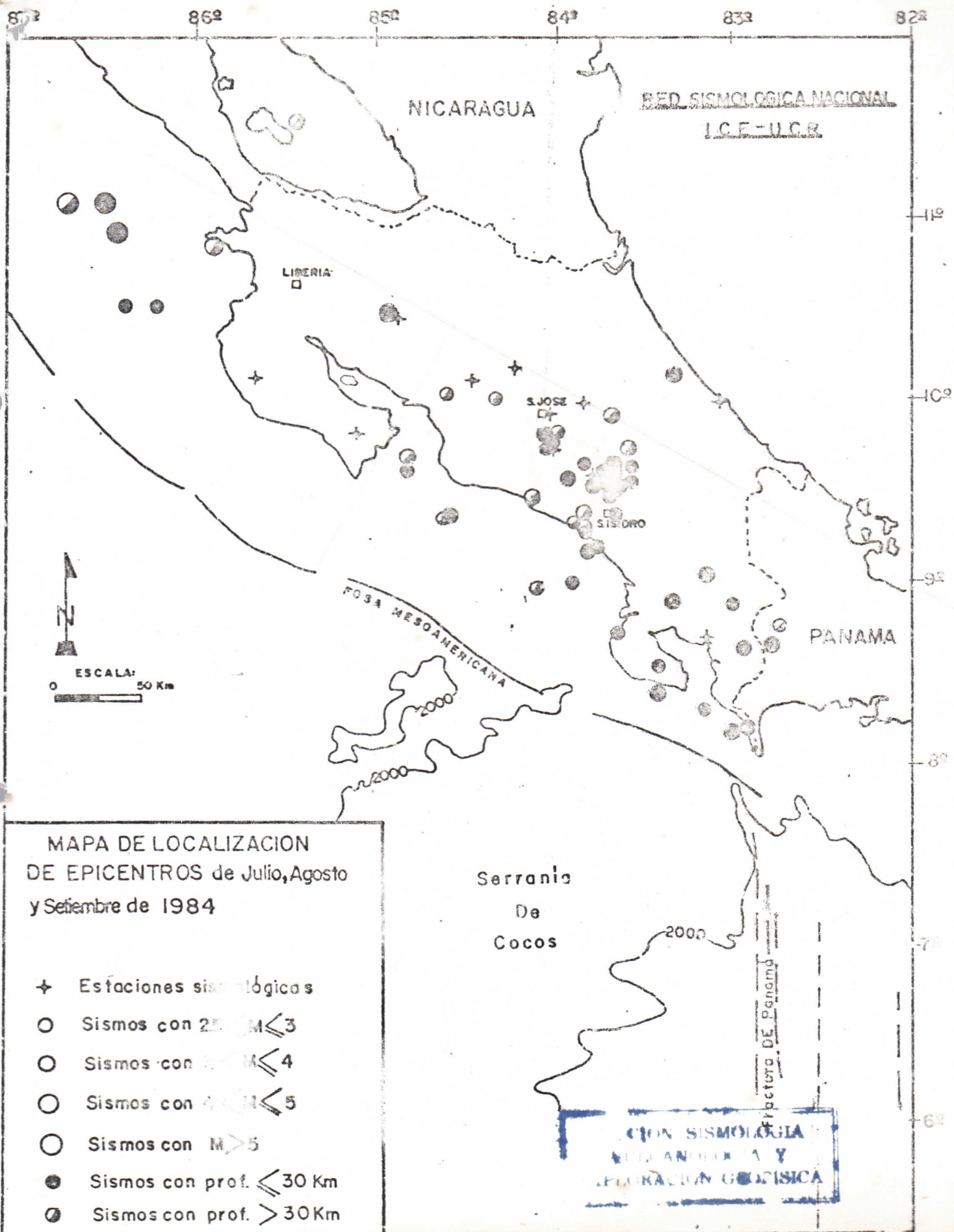
- Calidad: A : Excelente localización instrumental  
B : Buena localización instrumental  
C : Localización manual o instrumental aceptable.



PARTE A

-JULIO-

| FECHA | TIEMPO ORIGEN | LATITUD N | LONGITUD W | PROF.  | MAG. | GAP. | RMS  | ERH  | ERZ  | CALIDAD |
|-------|---------------|-----------|------------|--------|------|------|------|------|------|---------|
| 06    | 03 48 44.8    | 08239'    | 82247'     | ≤ 25   | 3.9  | -    | -    | -    | -    | C       |
| 07    | 10 54 07.6    | 08223.69' | 82227.78'  | *20.7  | 3.7  | 352  | 0.37 | 31.4 | 4.1  | C       |
| 09    | 11 14 36.4    | 08210'    | 83200'     | ≤ 30   | 3.9  | -    | -    | -    | -    | C       |
| 10    | 07 21 50.7    | 09248.57' | 84203.44'  | *21.0  | 3.2  | 176  | 0.02 | -    | -    | A       |
| 11    | 00 39 27.6    | 09248.65' | 84201.93'  | * 7.0  | 2.6  | 207  | 0.25 | 1.8  | 3.2  | A       |
| 11    | 00 42 19.5    | 08254.44' | 83221.37'  | *19.3  | 3.4  | 173  | 0.30 | 7.5  | 11.3 | B       |
| 11    | 02 03 50.9    | 09233.62' | 83235.28'  | * 4.8  | 2.5  | 185  | 0.32 | 2.8  | 2.4  | B       |
| 11    | 16 31 23.9    | 09245.28' | 84203.35'  | * 7.1  | 2.6  | 185  | 0.76 | 3.8  | 6.7  | B       |
| 12    | 11 26 05.9    | 08244.31' | 83239.82'  | *10.8  | 3.0  | 359  | 0.65 | -    | -    | C       |
| 14    | 09 18 18.8    | 09233.24' | 83243.56'  | *12.6  | 2.6  | 162  | 0.26 | 17.0 | 6.7  | B       |
| 16    | 13 50 06.3    | 09244.72' | 84235.96'  | *102.1 | 3.1  | 233  | 0.09 | 4.0  | 2.6  | A       |
| 18    | 03 27 22.1    | 09231.23' | 83239.14'  | *13.8  | 2.5  | 172  | 0.25 | 3.8  | 3.1  | A       |
| 18    | 06 43 02.3    | 09221.25' | 83239.15'  | *19.3  | 2.5  | 180  | 0.33 | 6.6  | 3.9  | B       |
| 22    | 11 12 07.4    | 09255.40' | 84242.20'  | *54.8  | 3.1  | 227  | 0.14 | 3.0  | 5.5  | A       |
| 25    | 16 45 26.9    | 09223.23' | 83252.20'  | *33.9  | 3.1  | 287  | 0.51 | 13.8 | 7.8  | B       |
| 30    | 04 44 45.4    | 09221.43' | 84235.47'  | 14.4   | 3.6  | 293  | 0.77 | 40.4 | 90.6 | C       |
| * 31  | 05 52 51.8    | 10230'    | 86225'     | ≤ 30   | 2.7  | -    | -    | -    | -    | C       |
| * 31  | 06 04 08.8    | 10230'    | 86214'     | ≤ 30   | 2.6  | -    | -    | -    | -    | C       |
| 31    | 16 53 04.8    | 08246.65' | 82244.75'  | *33.2  | 2.6  | 295  | 0.49 | 12.9 | 9.7  | B       |



S E T I E M B R E

| EST  | FECHA | TIEMPO     | FASE | COM | POL | PER  | COMENTARIO                    |
|------|-------|------------|------|-----|-----|------|-------------------------------|
| LCR  | 13    | 10:26:16.1 | iP   | Z   | C   |      |                               |
| SRA  | 13    | 10:26:09.5 | iP   | Z   | D   |      | Regional                      |
| VCR  | 13    | 10:25:51.9 | iP   | Z   | C   |      |                               |
| ACR  | 13    | 10:26:08.9 | iP   | Z   | C   |      |                               |
| VPS2 | 13    | 10:26:12.0 | eP   | Z   |     |      |                               |
| VCR  | 13    | 13:46:36.2 | eP   | Z   | D   |      | Regional                      |
| AR6  | 13    | 13:46:45.9 | eP   | Z   | D   |      |                               |
| SJS  | 14    | 09:03:12.8 | eP   | Z   |     |      | Regional                      |
| AR6  | 14    | 09:03:04.9 | iP   | Z   | C   |      |                               |
| LCR2 | 14    | 09:03:12.8 | iP   | Z   | D   | P.C. |                               |
| SRA  | 15    | 18:50:38.5 | eP   | Z   | D   |      | Regional                      |
| LCR2 | 15    | 18:50:27.6 | eP   | Z   | C   | P.C. |                               |
| ICR  | 15    | 18:50:16.4 | eP   | Z   |     |      |                               |
| SJS  | 15    | 23:14:35.0 | eP   | Z   |     |      | Telesismo                     |
| SJS  | 17    | 17:26:02.2 | eP   | Z   |     |      | Regional                      |
| ICR  | 17    | 17:26:04.5 | eP   | Z   | D   |      |                               |
| SJS  | 28    | 10:49:14.0 | eP   | Z   |     |      | Región de Easter Island       |
| SJS  | 29    | 16:43:11.3 | eP   | Z   |     |      |                               |
| SRA  | 29    | 16:43:13.3 | eP   | Z   |     |      | Regional                      |
| VPS2 | 29    | 16:43:15.3 | eP   | Z   |     |      |                               |
| SJS  | 30    | 21:07:46.5 | eP   | Z   |     |      | Nueva Bretaña                 |
| SJS  | 30    | 21:35:49.1 | eP   | Z   | D   |      | Frontera entre Brasil y Perú. |



S E T I E M B R E

| EST  | FECHA | TIEMPO     | FASE | COM | POL | PER  | COMENTARIO                       |
|------|-------|------------|------|-----|-----|------|----------------------------------|
| SJS  | 07    | 13:11:07.0 | eP   | Z   |     |      |                                  |
| SRA  | 07    | 13:10:59.0 | eP   | Z   | D   |      | Regional                         |
| SJS  | 09    | 18:20:29.0 | eP   | Z   |     |      | Regional                         |
| SRA  | 09    | 18:20:21.0 | eP   | Z   |     |      |                                  |
|      |       | 18:21:32.8 | S    | Z   |     |      |                                  |
| ICR  | 09    | 18:20:31.1 | eP   | Z   | D   |      |                                  |
| AR6  | 09    | 18:20:13.0 | eP   | Z   | D   |      |                                  |
| LCR2 | 09    | 18:20:29.5 | eP   | Z   |     | P.C. |                                  |
| SJS  | 10    | 03:22:57.0 | eP   | Z   |     |      | Telesismo                        |
| ICR  | 10    | 03:22:59.4 | eP   | Z   | C   |      |                                  |
| SJS  | 13    | 07:37:43.0 | eP   | Z   |     |      | Oeste de la Península de Nicoya, |
|      |       | 07:38:19.0 | S    | Z   |     |      | Costa Rica.                      |
| SRA  | 13    | 07:37:37.2 | iP   | Z   | C   |      |                                  |
|      |       | 07:38:08.0 | S    | Z   |     |      |                                  |
| ICR  | 13    | 07:37:47.5 | iP   | Z   | C   |      |                                  |
| QCR  | 13    | 07:37:44.0 | iP   | Z   | C   |      |                                  |
| VPS2 | 13    | 07:37:39.0 | eP   | Z   |     |      |                                  |
| AR6  | 13    | 07:37:30.8 | iP   | Z   | D   |      |                                  |
| VCR  | 13    | 07:37:19.8 | iP   | Z   | D   |      |                                  |
| LCR2 | 13    | 07:37:44.3 | eP   | Z   | D   |      |                                  |
| SJS  | 13    | 07:58:07.9 | eP   | Z   | D   |      |                                  |
| LCR  | 13    | 07:58:08.8 | iP   | Z   | D   |      | Regional                         |
| SRA  | 13    | 07:58:01.6 | iP   | Z   | C   |      |                                  |
| VCR  | 13    | 07:57:44.2 | iP   | Z   | D   |      |                                  |
| AR6  | 13    | 07:57:53.3 | iP   | Z   | C   |      |                                  |
| QCR  | 13    | 07:58:08.5 | iP   | Z   | D   |      |                                  |
| ICR  | 13    | 07:58:11.8 | iP   | Z   | C   |      |                                  |
| SJS  | 13    | 08:08:04.1 | eP   | Z   | D   |      |                                  |
| ICR  | 13    | 08:08:07.9 | iP   | Z   | D   |      | Regional                         |
| QCR  | 13    | 08:08:04.9 | iP   | Z   | D   |      |                                  |
| SRA  | 13    | 08:07:57.2 | iP   | Z   |     |      |                                  |
| VPS2 | 13    | 08:08:03.8 | eP   | Z   |     |      |                                  |
| AR6  | 13    | 08:07:55.3 | eP   | Z   |     |      |                                  |
| VCR  | 13    | 08:07:39.9 | iP   | Z   | C   |      |                                  |
| LCR2 | 13    | 08:08:05.0 | eP   | Z   | C   |      |                                  |

S E T I E M B R E

| EST  | FECHA | TIEMPO     | FASE | COM | POL | PER  | COMENTARIO |
|------|-------|------------|------|-----|-----|------|------------|
| AR6  | 01    | 09:07:44.6 | iP   | Z   | D   |      |            |
| VCR  | 01    | 09:07:44.2 | iP   | Z   | C   |      | Regional   |
| BUS  | 01    | 09:08:04.3 | eP   | Z   |     |      |            |
| ICR  | 01    | 09:08:01.3 | iP   | Z   | C   |      |            |
| LCR2 | 01    | 09:08:01.2 | iP   | Z   | C   | P.C. |            |
| SJS  | 01    | 23:42:57.2 | eP   | Z   |     |      | Regional   |
| VCR  | 01    | 23:43:11.0 | eP   | Z   |     |      |            |
| ICR  | 01    | 23:42:55.0 | eP   | Z   |     |      |            |
| BUS  | 01    | 23:42:56.8 | eP   | Z   |     |      |            |
| SJS  | 04    | 03:31:28.0 | eP   | Z   |     |      | Regional   |
| LCR2 | 04    | 03:31:29.0 | eP   | Z   | D   | P.C. |            |
| ICR  | 04    | 03:31:31.2 | eP   | Z   | D   |      |            |
| AR6  | 04    | 03:31:21.4 | eP   | Z   | C   |      |            |
| AR6  | 04    | 10:42:10.1 | iP   | Z   | D   |      | Regional   |
| ICR  | 04    | 10:42:27.8 | eP   | Z   | D   |      |            |
| SJS  | 04    | 10:42:23.3 | eP   | Z   |     |      |            |
| LCR2 | 04    | 10:42:25.2 | iP   | Z   | C   | P.C. |            |
| VCR  | 04    | 10:42:03.5 | iP   | Z   | C   |      |            |
| VCR  | 04    | 11:00:27.5 | iP   | Z   | D   |      | Regional   |
| LCR2 | 04    | 11:00:40.9 | iP   | Z   | D   | P.C. |            |
| SJS  | 04    | 11:00:44.5 | iP   | Z   | D   |      |            |
| ICR  | 04    | 11:00:47.9 | iP   | Z   |     |      |            |
| AR6  | 04    | 11:00:31.2 | iP   | Z   | C   |      |            |
| LCR2 | 04    | 11:04:48.9 | iP   | Z   | D   | P.C. |            |
| AR6  | 04    | 11:04:34.5 | iP   | Z   | C   |      | Regional   |
| SJS  | 04    | 11:04:48.1 | eP   | Z   |     |      |            |
| VCR  | 04    | 11:04:24.9 | iP   | Z   | D   |      |            |
| AR6  | 04    | 12:53:58.9 | eP   | Z   | C   |      | Regional   |
| ICR  | 04    | 12:54:13.1 | eP   | Z   | C   |      |            |
| LCR2 | 04    | 12:54:10.3 | eP   | Z   | D   | P.C. |            |
| VCR  | 04    | 12:53:57.5 | iP   | Z   | D   |      |            |
| SJS  | 04    | 18:45:37.9 | iP   | Z   | D   |      |            |
| AR6  | 04    | 18:45:24.0 | eP   | Z   |     |      | Regional   |
| LCR2 | 04    | 18:45:38.8 | eP   | Z   |     | P.C. |            |
| ACR  | 04    | 18:45:55.3 | eP   | Z   |     |      |            |



A G O S T O

| EST  | FECHA | TIEMPO     | FASE | COM | POL PER | COMENTARIO               |
|------|-------|------------|------|-----|---------|--------------------------|
| LCR2 | 27    | 18:46:33.2 | eP   | Z   | D       | Regional                 |
| SJS  | 27    | 18:46:31.3 | eP   | Z   | C       |                          |
| AR6  | 27    | 18:46:17.5 | eP   | Z   | C       |                          |
| BUS  | 27    | 18:46:37.9 | eP   | Z   | D       |                          |
| ICR  | 27    | 18:46:34.3 | eP   | Z   | C       |                          |
| ACR  | 27    | 18:46:51.9 | eP   | Z   | D       |                          |
| SRA  | 27    | 18:46:25.6 | eP   | Z   |         |                          |
|      |       | 18:47:03.1 | S    | Z   |         |                          |
| SJS  | 28    | 10:10:02.0 | eP   | Z   |         | Telesismo                |
| ICR  | 28    | 10:10:04.2 | eP   | Z   |         |                          |
| SJS  | 31    | 04:44:02.8 | ePn  | Z   | C       | Costa de Nicara-<br>gua. |
| AR6  | 31    | 04:44:48.2 | eP   | Z   | D       |                          |
| ICR  | 31    | 04:44:04.5 | ePn  | Z   |         |                          |
| LCR2 | 31    | 04:44:03.2 | ePn  | Z   | C       |                          |
| ACR  | 31    | 04:44:26.5 | ePn  | Z   |         |                          |
|      |       |            |      |     | P.C     |                          |
| LCR2 | 31    | 19:48:40.9 | eP   | Z   | C       | P.C Chiapas, México      |
| SJS  | 31    | 19:48:39.3 | iP   | Z   | C       |                          |
| ACR  | 31    | 19:48:58.2 | ePn  | Z   |         |                          |
| BUS  | 31    | 19:48:44.9 | eP   | Z   | C       |                          |
| VCR  | 31    | 19:48:20.8 | eP   | Z   | C       |                          |
| AR6  | 31    | 19:48:26.8 | eP   | Z   | D       |                          |
| ICR  | 31    | 19:48:41.2 | eP   | Z   | C       |                          |

A G O S T O

| EST  | FECHA | TIEMPO     | FASE | COM | POL | PER | COMENTARIO                                                                         |
|------|-------|------------|------|-----|-----|-----|------------------------------------------------------------------------------------|
| SJS  | 23    | 00:30:46.4 | iP   | Z   | D   |     | 90 Km al SW de<br>Masachapa<br>Int.II San José                                     |
|      |       | 00:31:11.0 | S    | Z   |     |     |                                                                                    |
| ACR  | 23    | 00:31:20.0 | iP   | Z   | D   |     |                                                                                    |
|      |       | 00:32:07.1 | S    | Z   |     |     |                                                                                    |
| ICR  | 23    | 00:31:02.3 | iP   | Z   | D   |     |                                                                                    |
| SRA  | 23    | 00:30:53.9 | iP   | Z   |     |     |                                                                                    |
|      |       | 00:31:29.0 | S    | Z   |     |     |                                                                                    |
| ICR  | 23    | 19:50:05.9 | eP   | Z   | C   |     | 55 km oeste de la<br>Península de Santa<br>Elena.<br>Int. II-III Peñas<br>Blancas. |
| AR6  | 23    | 19:49:49.0 | eP   | Z   | C   |     |                                                                                    |
| VCR  | 23    | 19:49:41.0 | iP   | Z   | D   |     |                                                                                    |
| SJS  | 23    | 19:50:03.6 | iP   | Z   | D   |     |                                                                                    |
|      |       | 19:50:50.8 | S    | Z   |     |     |                                                                                    |
| SRA  | 23    | 19:49:57.3 | eP   | Z   |     |     |                                                                                    |
| SJS  | 25    | 04:56:56.0 | eP   | Z   |     |     | Regional                                                                           |
| AR6  | 25    | 04:56:43.0 | eP   | Z   |     |     |                                                                                    |
| LCR2 | 25    | 04:56:57.0 | eP   | Z   | D   |     |                                                                                    |
| SRA  | 25    | 04:56:53.0 | eP   | Z   |     |     |                                                                                    |
| ICR  | 26    | 05:05:12.2 | eP   | Z   | C   |     | Costa Oaxaca,<br>México.                                                           |
| SJS  | 26    | 05:05:09.0 | eP   | Z   |     |     |                                                                                    |
| SRA  | 26    | 05:05:03.4 | eP   | Z   | C   |     |                                                                                    |
| LCR2 | 26    | 05:05:11.2 | eP   | Z   | D   |     |                                                                                    |
| AR6  | 26    | 05:04:57.2 | eP   | Z   |     |     |                                                                                    |
| BUS  | 26    | 05:05:15.6 | eP   | Z   | C   |     |                                                                                    |

A G O S T O

| EST  | FECHA | TIEMPO     | FASE | COM | POL | PER | COMENTARIO      |
|------|-------|------------|------|-----|-----|-----|-----------------|
| SJS  | 16    | 03:11:52.2 | eP   | Z   | C   |     | Mar Caribe      |
| LCR2 | 16    | 03:11:53.7 | eP   | Z   |     |     |                 |
| ICR  | 16    | 03:11:49.5 | eP   | Z   | C   |     |                 |
| BUS  | 16    | 03:11:55.0 | eP   | Z   | D   |     |                 |
| SJS  | 17    | 08:20:13.0 | iP   | Z   | D   |     |                 |
| ICR  | 17    | 08:20:14.6 | iP   | Z   | C   |     | El Salvador     |
|      |       | 08:21:10.0 | S    | Z   |     |     |                 |
| SRA  | 17    | 08:20:07.3 | iP   | Z   | C   |     |                 |
| ACR  | 17    | 08:20:32.8 | eP   | Z   |     |     |                 |
|      |       | 08:21:46.7 | S    | Z   |     |     |                 |
| AR6  | 17    | 08:20:00.1 | iP   | Z   | C   |     |                 |
|      |       | 08:20:49.0 | S    | Z   |     |     |                 |
| BUS  | 17    | 08:20:19.5 | iP   | Z   | C   |     |                 |
|      |       | 08:21:22.6 | S    | Z   |     |     |                 |
| SJS  | 19    | 11:08:36.0 | eP   | Z   |     |     |                 |
| BUS  | 19    | 11:08:39.6 | eP   | Z   | D   |     | El Salvador     |
| ICR  | 19    | 11:08:37.0 | eP   | Z   |     |     |                 |
| SJS  | 20    | 11:30:28.6 | iP   | Z   | D   |     |                 |
| SRA  | 20    | 11:30:22.0 | iP   | Z   | D   |     | Regional        |
| ICR  | 20    | 11:30:31.7 | iP   | Z   | D   |     |                 |
| BUS  | 20    | 11:30:33.4 | iP   | Z   |     |     |                 |
| VPS2 | 20    | 11:30:25.0 | iP   | Z   | D   |     |                 |
| AR6  | 20    | 11:30:15.7 | iP   | Z   | D   |     |                 |
| LCR  | 22    | 18:14:10.0 | eP   | Z   | D   |     | 120 km oeste de |
| BUS  | 22    | 18:14:15.6 | eP   | Z   | C   |     | la Península de |
| ACR  | 22    | 18:14:28.7 | eP   | Z   |     |     | Santa Elena.    |
|      |       | 18:15:17.5 | S    | Z   |     |     |                 |
| AR6  | 22    | 18:13:54.5 | eP   | Z   |     |     |                 |
| ICR  | 22    | 18:14:10.8 | eP   | Z   |     |     |                 |
| SJS  | 22    | 18:14:10.0 | iP   | Z   | D   |     |                 |
|      |       | 18:14:52.5 | S    | Z   |     |     |                 |
| SRA  | 22    | 18:14:03.1 | iP   | Z   |     |     |                 |
| SJS  | 22    | 23:53:44.5 | iP   | Z   |     |     | 70 km al SW de  |
|      |       | 23:54:26.5 | S    | Z   |     |     | Masachapa       |
| AR6  | 22    | 23:53:31.0 | iP   | Z   | D   |     | Int. II San Jo- |
|      |       | 23:53:58.4 | S    | Z   |     |     | sé.             |
| ACR  | 22    | 23:54:03.9 | iP   | Z   | C   |     |                 |
|      |       | 23:54:50.8 | S    | Z   |     |     |                 |
| ICR  | 22    | 23:53:47.5 | iP   | Z   | C   |     |                 |
| SRA  | 22    | 23:53:38.6 | iP   | Z   | C   |     |                 |
|      |       | 23:54:13.8 | S    | Z   |     |     |                 |



A G O S T O

| EST  | FECHA | TIEMPO     | FASE | COM | POL PER | COMENTARIO       |
|------|-------|------------|------|-----|---------|------------------|
| SJS  | 03    | 14:33:16.0 | eP   | Z   |         |                  |
|      |       | 14:35:07.2 | S    | Z   |         |                  |
| SRA  | 03    | 14:33:09.0 | eP   | Z   |         | Costa de Chiapas |
|      |       | 14:34:47.7 | S    | Z   |         | México           |
| VCR  | 03    | 14:32:54.8 | eP   | Z   | C       |                  |
|      |       | 14:33:12.2 | S    | Z   |         |                  |
| AR6  | 03    | 14:33:01.0 | eP   | Z   | C       |                  |
| ICR  | 03    | 14:33:12.9 | eP   | Z   | D       |                  |
|      |       | 14:33:58.5 | S    | Z   |         |                  |
| SJS  | 05    | 04:29:12.0 | iP   | Z   | C       | Regional         |
| SRA  | 05    | 04:29:04.3 | eP   | Z   |         |                  |
| LCR2 | 05    | 04:29:12.5 | iP   | Z   | C P.C   |                  |
| SJS  | 06    | 05:11:16.3 | eP   | Z   |         | Regional         |
| SJS  | 06    | 12:21:15.2 | eP   | Z   | D       | Península de     |
| ACR  | 06    | 12:21:19.2 | eP   | Z   | C       | Minahassa        |
| AR6  | 06    | 12:21:14.5 | eP   | Z   | D       |                  |
| SRA  | 06    | 12:21:14.8 | eP   | Z   |         |                  |
| ICR  | 06    | 12:21:15.2 | eP   | Z   |         |                  |
| LCR2 | 06    | 12:21:16.2 | ep   | Z   | C P.C   |                  |
| SRA  | 08    | 13:49:55.6 | eP   | Z   |         | Regional         |
| BUS  | 08    | 13:50:00.2 | eP   | Z   |         |                  |
| AR6  | 08    | 13:49:46.8 | eP   | Z   | C       |                  |
| BUS  | 10    | 08:04:01.3 | iP   | Z   | D       |                  |
| ICR  | 10    | 08:03:58.6 | iP   | Z   | D       | Regional         |
| AR6  | 10    | 08:03:40.2 | iP   | Z   | D       |                  |
| VCR  | 10    | 08:03:33.2 | iP   | Z   | D       |                  |
|      |       | 08:04:03.5 | S    | Z   |         |                  |
| SRA  | 10    | 08:03:48.6 | eP   | Z   |         |                  |
| SJS  | 11    | 08:20:54.0 | eP   | Z   |         | Regional         |
| VCR  | 11    | 08:20:33.2 | eP   | Z   | D       |                  |
| SRA  | 11    | 08:20:49.2 | eP   | Z   |         |                  |
| AR6  | 11    | 08:20:41.5 | eP   | Z   | D       |                  |
| BUS  | 11    | 08:21:00.1 | eP   | Z   |         |                  |
| ICR  | 11    | 08:20:56.8 | eP   | Z   |         |                  |

J U L I O

| EST  | FECHA | TIEMPO     | FASE | COM | POL PER | COMENTARIOS                        |
|------|-------|------------|------|-----|---------|------------------------------------|
| SJS  | 30    | 21:34:40.7 | ePn  | Z   |         |                                    |
|      |       | 21:34:54.4 | Sn   | Z   |         |                                    |
| ICR  | 30    | 21:34:40.1 | ePn  | Z   | D       | Cerca de la Costa<br>de Guatemala. |
|      |       | 21:35:53.0 | Sn   | Z   |         |                                    |
| SRA  | 30    | 21:34:33.1 | ePn  | Z   |         |                                    |
|      |       | 21:35:46.7 | Sn   | Z   |         |                                    |
| BUS  | 30    | 21:34:45.4 | ePn  | Z   | D       |                                    |
| AR6  | 30    | 21:34:25.1 | ePn  | Z   |         |                                    |
| VCR  | 30    | 21:34:12.8 | ePn  | Z   | C       |                                    |
|      |       | 21:35:20.0 | Sn   | Z   |         |                                    |
| LCR2 | 30    | 21:34:40.5 | ePn  | Z   | C       | P.C                                |
|      |       | 21:35:53.6 | Sn   | Z   |         |                                    |

# J U L I O

| EST  | FECHA | TIEMPO     | FASE | COM. | POL | PER | COMENTARIOS                                      |
|------|-------|------------|------|------|-----|-----|--------------------------------------------------|
| SRA  | 15    | 20:14:43.9 | eP   | Z    |     |     | Costa Pacífica de<br>Centro América              |
| BUS  | 15    | 20:14:55.3 | eP   | Z    |     |     |                                                  |
| ICR  | 15    | 20:14:53.2 | eP   | Z    |     |     |                                                  |
| AR6  | 15    | 20:14:36.5 | eP   | Z    |     |     |                                                  |
| VPS2 | 17    | 05:39:53.6 | eP   | Z    | C   |     | Cerca de la Costa<br>Pacífica de Nica-<br>ragua. |
| VCR  | 17    | 05:39:35.6 | eP   | Z    |     |     |                                                  |
| SRA  | 17    | 05:39:47.8 | eP   | Z    | D   |     |                                                  |
| AR6  | 17    | 05:39:39.6 | iP   | Z    | C   |     |                                                  |
| BUS  | 17    | 05:40:01.2 | eP   | Z    |     |     | Regional                                         |
| ICR  | 17    | 05:39:57.2 | eP   | Z    |     |     |                                                  |
| SRA  | 19    | 03:46:59.4 | eP   | Z    | D   |     |                                                  |
| VPS2 | 19    | 03:47:03.3 | eP   | Z    |     |     |                                                  |
| AR6  | 19    | 03:46:53.2 | eP   | Z    |     |     |                                                  |
| SJS  | 19    | 03:47:06.3 | eP   | Z    | C   |     |                                                  |
| ICR  | 19    | 03:47:09.3 | eP   | Z    |     |     |                                                  |
| SJS  | 22    | 23:36:52.3 | eP   | Z    | C   |     | Mar Caribe                                       |
| ICR  | 22    | 23:36:42.7 | eP   | Z    |     |     |                                                  |
| SJS  | 23    | 16:23:27.0 | eP   | Z    |     |     | Molucca Passage                                  |
| BUS  | 23    | 16:23:25.7 | eP   | Z    |     |     |                                                  |
| ICR  | 23    | 16:23:26.1 | eP   | Z    |     |     |                                                  |
| SRA  | 23    | 16:23:25.7 | eP   | Z    |     |     |                                                  |
| SJS  | 24    | 10:54:30.0 | iP   | Z    | D   |     | Telesismo                                        |
| BUS  | 24    | 10:54:29.8 | iP   | Z    | D   |     |                                                  |
| SRA  | 24    | 10:54:34.3 | iP   | Z    | D   |     |                                                  |
| ICR  | 24    | 10:54:29.2 | iP   | Z    |     |     |                                                  |
| SJS  | 25    | 19:54:38.2 | eP   | Z    |     |     | Molucca Passage                                  |
| BUS  | 25    | 19:54:38.9 | iP   | Z    | D   |     |                                                  |
| ICR  | 28    | 22:52:59.9 | eP   | Z    |     |     | Regional                                         |
| SJS  | 29    | 15:26:17.5 | eP   | Z    |     |     | Regional                                         |
| SRA  | 29    | 15:26:11.5 | eP   | Z    |     |     |                                                  |
| SJS  | 30    | 02:49:31.0 | eP   | Z    |     |     | Sur de Panamá                                    |
| ICR  | 30    | 02:49:33.5 | eP   | Z    | D   |     |                                                  |



PARTE BJ U L I O

| EST | FECHA | TIEMPO     | FASE | COM. | POL | PER | COMENTARIOS                  |
|-----|-------|------------|------|------|-----|-----|------------------------------|
| SJS | 02    | 04:54:23.5 | iP   | Z    | D   |     | Costa de Guerrero<br>México  |
| ICR | 02    | 04:54:26.1 | iP   | Z    | C   |     |                              |
| BUS | 02    | 04:54:29.8 | iP   | Z    | C   |     |                              |
| VCR | 02    | 04:54:05.1 | iP   | Z    | D   |     |                              |
| SRA | 02    | 04:54:18.3 | eP   | Z    | D   |     |                              |
| AR6 | 04    | 12:27:05.0 | eP   | Z    | C   |     | Regional                     |
| BUS | 04    | 12:27:16.0 | eP   | Z    |     |     |                              |
| VCR | 04    | 12:26:53.9 | eP   | Z    | C   |     |                              |
| AR6 | 05    | 12:39:29.4 | eP   | Z    |     |     | Telesismo                    |
| BUS | 05    | 12:39:39.2 | eP   | Z    | C   |     |                              |
| SJS | 07    | 18:29:20.0 | eP   | Z    |     |     | Frontera Panamá-<br>Colombia |
| SRA | 07    | 18:29:24.4 | eP   | Z    |     |     |                              |
| ICR | 07    | 18:29:21.5 | eP   | Z    |     |     |                              |
| SJS | 08    | 12:33:52.0 | eP   | Z    |     |     | Regional                     |
| ICR | 08    | 12:33:50.2 | eP   | Z    |     |     |                              |
| SJS | 11    | 05:59:58.8 | eP   | Z    | D   |     | Islas Filipinas              |
| SRA | 11    | 05:59:57.3 | eP   | Z    |     |     |                              |
| BUS | 11    | 06:00:00.0 | eP   | Z    |     |     |                              |
| ACR | 11    | 06:00:02.9 | eP   | Z    |     |     |                              |
| AR6 | 11    | 05:59:24.9 | eP   | Z    |     |     |                              |
| ICR | 11    | 06:00:00.2 | eP   | Z    |     |     |                              |
| BUS | 11    | 18:01:01.0 | eP   | Z    |     |     | Costa de Chiapas,<br>México. |
| ICR | 11    | 18:00:55.2 | eP   | Z    |     |     |                              |
| AR6 | 11    | 18:00:44.9 | eP   | Z    |     |     |                              |
| SJS | 14    | 21:07:44.2 | eP   | Z    | C   |     | Guerrero, México             |
| SRA | 14    | 21:07:39.2 | eP   | Z    | C   |     |                              |
| AR6 | 14    | 21:07:31.9 | iP   | Z    | C   |     |                              |
| ICR | 14    | 21:07:46.5 | iP   | Z    | D   |     |                              |
| SJS | 15    | 11:34:28.0 | eP   | Z    |     |     | Costa de Ecuador             |
| AR6 | 15    | 11:34:32.9 | eP   | Z    |     |     |                              |

-SETIEMBRE-

| FECHA | TIEMPO ORIGEN | LATITUD N | LONGITUD W | PROF. | MAG. | GAP. | RMS  | ERH | ERZ  | CALIDAD |
|-------|---------------|-----------|------------|-------|------|------|------|-----|------|---------|
| 04    | 15 52 23.9    | 09208.86' | 83248.58'  | *10.0 | 3.2  | 214  | 0.31 | 8.4 | 7.1  | B       |
| * 04  | 18 45 19.0    | 10226.48' | 84254.73'  | 30    | 4.2  | 337  | 0.72 | -   | -    | C       |
| 08    | 11 53 46.1    | 08212'    | 82256'     | ≤ 25  | 3.8  | -    | -    | -   | -    | C       |
| 09    | 07 28 15.9    | 08259.36' | 84205.30'  | *35.2 | 2.7  | 327  | 0.07 | 4.1 | 1.9  | A       |
| 11    | 11 50 41.0    | 09239.52' | 83241.67'  | *12.2 | 3.5  | 266  | 0.35 | 2.3 | 2.4  | B       |
| 11    | 20 33 03.9    | 09231.76' | 83239.53'  | *10.6 | 3.1  | 279  | 0.24 | 2.2 | 2.1  | A       |
| 14    | 15 38 55.0    | 09236.07' | 83244.05'  | *12.2 | 3.5  | 148  | 0.42 | 3.1 | 2.5  | B       |
| 14    | 16 06 05.2    | 09236.63' | 83240.43'  | *11.9 | 2.7  | 179  | 0.27 | 2.5 | 3.2  | B       |
| 15    | 21 45 25.1    | 09237.20' | 84252.88'  | 25.1  | 2.8  | 265  | 0.40 | 4.7 | 22.1 | B       |
| 15    | 22 50 24.4    | 09242.59' | 84252.63'  | *35.6 | 3.3  | 201  | 0.27 | 2.8 | 2.3  | B       |
| 17    | 06 54 55.3    | 10207.57' | 83221.17'  | * 6.2 | 3.3  | 315  | 0.35 | 8.4 | 9.3  | B       |
| ✓ 17  | 15 44 07.4    | 09236.40' | 83239.77'  | *14.9 | 3.2  | 316  | 0.25 | 8.7 | 5.4  | B       |
| 18    | 02 47 44.9    | 09232.22' | 83243.84'  | *24.9 | 3.1  | 320  | 0.46 | 6.4 | 8.8  | B       |
| 18    | 12 35 27.8    | 09200.26' | 83255.42'  | *22.0 | 2.6  | 314  | 0.14 | 2.1 | 8.7  | A       |
| 18    | 12 43 51.1    | 10200.83' | 84222.21'  | *50.7 | 2.8  | 182  | 0.46 | 4.3 | 3.1  | B       |
| 18    | 23 50 47.6    | 09235.16' | 83243.00'  | *24.4 | 3.0  | 266  | 0.35 | 5.8 | 7.8  | B       |
| 19    | 15 24 51.3'   | 09234.82' | 83257.64'  | *20.6 | 3.1  | 214  | 0.27 | 1.9 | 2.3  | A       |
| 22    | 22 59 57.5    | 09232.07' | 83247.05'  | *11.5 | 3.4  | 284  | 0.22 | 1.7 | 2.0  | A       |
| 24    | 09 51 24.3    | 09238.51' | 83235.84'  | *15.0 | 2.6  | 283  | 0.18 | 1.4 | 1.1  | A       |
| 26    | 01 41 31.2    | 09251.66' | 84200.28'  | *67.1 | 2.6  | 124  | 0.28 | 6.2 | 4.4  | A       |
| * 26  | 08 11 28.8    | 11232'    | 85227.5'   | ≤ 40  | 3.9  | -    | -    | -   | -    | C       |

-AGOSTO-

| FECHA | TIEMPO ORIGEN | LATITUD N | LONGITUD W | PROF.    | MAG. | GAP. | RMS  | ERH | ERZ  | CALIDAD |
|-------|---------------|-----------|------------|----------|------|------|------|-----|------|---------|
| 04    | 06 12 04.8    | 09°27.62' | 84°08.04'  | *31.9    | 3.1  | 247  | 0.60 | 6.3 | 7.8  | B       |
| 06    | 17 41 50.8    | 09°39.43' | 83°51.91'  | *14.7    | 2.5  | 169  | 0.39 | 2.9 | 4.2  | B       |
| 06    | 18 28 41.7    | 09°30.92' | 83°39.15'  | *14.1    | 2.5  | 172  | 0.49 | 4.5 | 3.3  | B       |
| 15    | 01 46 20.3    | 10°01.29' | 84°38.70'  | *61.9    | 2.7  | 315  | 0.15 | 3.1 | 1.5  | A       |
| 15    | 05 34 26.5    | 09°18.87' | 83°51.10'  | *37.4    | 3.2  | 301  | 0.13 | 1.9 | 1.0  | A       |
| 17    | 11 12 54.9    | 09°32.18' | 83°27.73'  | *20.1    | 2.9  | 275  | 0.5  | -   | -    | B       |
| 18    | 05 31 15.9    | 09°17.33' | 83°51.37'  | *33.0    | 2.8  | 303  | 0.28 | 3.9 | 4.7  | B       |
| 18    | 09 46 01.9    | 09°22.71' | 84°38.46'  | 34.7     | 2.7  | 297  | 0.55 | 8.8 | 24.2 | C       |
| 19    | 13 04 00.6    | 08°38.81' | 82°57.47'  | *18.6    | 3.6  | 312  | 0.16 | -   | -    | B       |
| 20    | 06 34 20.7    | 09°32.70' | 83°38.13'  | *12.2    | 3.8  | 300  | 0.22 | 2.7 | 2.0  | A       |
| 22    | 03 20 48.6    | 09°28.34' | 83°43.47'  | *18.2    | 2.8  | 168  | 0.64 | 6.9 | 7.5  | B       |
| * 22  | 18 13 22.3    | 11°05.98' | 86°33.34'  | *20      | 5.8  | 347  | 0.40 | -   | -    | B       |
| * 22  | 23 52 56.1    | 12°10.69' | 86°03.27'  | *20      | 5.6  | 355  | 0.09 | -   | -    | A       |
| * 23  | 00 29 58      | 11°05'    | 86°45'     | 40       | 5.7  | -    | -    | -   | -    | C       |
| * 23  | 19 49 23.1    | 10°55.28' | 86°28.06'  | 26.7 5.8 | 5.9  | 323  | 0.09 | 3.7 | 4.4  | A       |
| 25    | 03 21 28.6    | 09°19.27' | 83°55.08'  | *44.8    | 2.6  | 193  | 0.31 | 4.9 | 4.9  | B       |
| 27    | 10 33 18.7    | 09°02.50' | 83°09.98'  | * 6.7    | 4.0  | 216  | 0.13 | 5.4 | 3.0  | A       |
| * 27  | 18 45 31      | 11°46.31' | 87°10.66'  | 82       | 4.5  | -    | 0.48 | -   | 10   | C       |
| 28    | 01 29 07.5    | 08°17.62' | 83°10.32'  | *24.5    | 2.8  | 360  | 0.60 | -   | -    | B       |
| 28    | 09 51 15.9    | 08°53.98' | 83°00.71'  | 24.8     | 2.5  | 249  | 0.15 | 4.2 | 3.2  | A       |
| 30    | 08 23 52.3    | 09°11.13' | 83°47.50'  | 15.1     | 3.0  | 193  | 0.41 | 4.9 | 4.6  | B       |
| * 31  | 19 48 06.3    | 10°51.30' | 85°54.09'  | 34.8     | 4.9  | 309  | 0.35 | 7.2 | 11.6 | B       |