

LA PAZ - (Bolivia)

BOLETIN SEISMICO DEL OBSERVATORIO DEL COLEGIO SAN CALIXTO (PP. Jesuitas)

Longitud W. Greenwich 68° 7' 57",7  
4h 32m 31s.85  
Latitud S. 16° 29' 43"  
Altura sobre el mar 3658 m.  
Subsuelo: aluvión antiguo

Mes de ENERO de 1928 97

|                            |  | Componente | Masa       | To  | A     | ε: 1 | $\frac{r}{Tos}$ |
|----------------------------|--|------------|------------|-----|-------|------|-----------------|
| Péndulo horizontal Bifilar |  | N. S.      | 2,000 kgs. | 14  | 180   | 4.2  | 0.002           |
| Instrumentos: > >          |  | E. W       | 3,500 >    | 12  | 300   | 3.2  | 0.002           |
| > vertical S. Calixto      |  | NS y EW    | 1,500 >    | 2.4 | 1.100 | 2    | 0.001           |

| No. | Día | Fases | HORA<br>Tiempo medio de Greenw. | Período |     | Amplitud verdadera |     | Distancia | NOTAS                |
|-----|-----|-------|---------------------------------|---------|-----|--------------------|-----|-----------|----------------------|
|     |     |       |                                 | NS      | EW  | AN                 | AE  |           |                      |
|     |     |       |                                 | S       | S   | μ                  | μ   | kms.      |                      |
| 1   | 1   | P     | 0 55 51                         |         |     |                    |     |           |                      |
|     |     | L     | 56 18                           |         |     |                    |     |           |                      |
|     |     | M     | 56 23                           |         |     |                    |     |           |                      |
|     |     | F     | 1 Ca -                          |         |     |                    |     |           | Vert. 1 mm.          |
| 2   | 1   | eP    | 13 15 14                        |         |     |                    |     |           |                      |
|     |     | L     | 25 50                           |         |     |                    |     |           |                      |
|     |     | F     | 40 -                            |         |     |                    |     |           |                      |
| 3   | 1   | L     | 14 51 00                        | 18      |     |                    |     |           |                      |
|     |     | M     | 59 15                           | 17      | 17  | 2                  | 2   |           |                      |
|     |     | F     | 15 30 -                         |         |     |                    |     |           |                      |
| 4   | 1   | eP    | 19 51 09                        |         |     |                    |     |           |                      |
| 5   | 2   | eP    | 2 47 20                         |         |     |                    |     |           |                      |
| 6   | 3   | eP    | 7 36 24                         |         |     |                    |     |           |                      |
| 7   | 5   | eP    | 17 15 21                        |         |     |                    |     |           |                      |
| 8   | 7   | P     | 5 19 41                         |         |     |                    |     |           |                      |
| 9   | 7   | O     | 3 09 08                         |         |     |                    |     | 6580      |                      |
|     |     | eP    | 7 20 27                         |         |     |                    |     |           |                      |
|     |     | eS    | 28 44                           |         |     |                    |     |           |                      |
|     |     | L     | 38 00                           | 23      |     |                    |     |           |                      |
|     |     | M     | 41 30                           | 15      |     | 2                  |     |           |                      |
|     |     | M     | 43 24                           | 15      |     | 1                  |     |           |                      |
|     |     | F     | 8 20 -                          |         |     |                    |     |           |                      |
| 10  | 7   | P     | 15 05 51                        |         |     |                    |     |           |                      |
| 11  | 7   | eP    | 20 02 24                        |         |     |                    |     |           |                      |
|     |     | S     | 03 06                           |         |     |                    |     |           |                      |
|     |     | L     | 03 14                           |         |     |                    |     |           |                      |
|     |     | M     | 03 21                           |         |     |                    |     |           |                      |
|     |     | F     | 07 -                            |         |     |                    |     |           | Vert. 1,5 mm.        |
| 12  | 8   | e     | 7 41 38                         |         |     |                    |     |           |                      |
|     |     | eP    | 42 25                           |         |     |                    |     |           |                      |
|     |     | eS?   | 53 21                           |         |     |                    |     |           | Principio muy debil. |
|     |     | LN    | 8 17 00                         | 23      | 27  |                    |     | 9940?     |                      |
|     |     | M     | 21 33                           |         | 18  |                    | 3   |           |                      |
|     |     | M     | 23 24                           | 17      |     | 3                  |     |           |                      |
|     |     | M     | 26 30                           |         | 17  |                    | 2   |           |                      |
|     |     | M     | 28 35                           | 17      |     | 2                  |     |           |                      |
|     |     | F     | 9 Ca -                          |         |     |                    |     |           |                      |
| 13  | 11  | P     | 2 32 27                         |         |     |                    |     |           |                      |
| 14  | 11  | P     | 6 29 40                         |         |     |                    |     |           |                      |
|     |     | eS    | 32 07                           |         |     |                    |     | 1400      |                      |
|     |     | L     | 33 00                           |         |     |                    |     |           |                      |
|     |     | M     | 33 36                           | 8       |     | - 2                |     |           |                      |
|     |     | F     | 40 -                            |         |     |                    |     |           |                      |
| 15  | 11  | P     | 8 29 50                         | 2       |     |                    |     | 2110      |                      |
|     |     | iSE   | 33 27                           |         | 7,5 |                    | + 1 |           | Epic 34°7 S          |
|     |     | SN    | 33 35                           |         |     |                    |     |           | 71°3 W.              |
|     |     | LN    | 35 43                           |         |     |                    |     |           | La Paz, Sucre        |
|     |     | M     | 37 25                           | 10      | 12  | 2                  | 1   |           | La Plata.            |
|     |     | F     | 9 Ca .                          |         |     |                    |     |           |                      |
| 16  | 11  | eP    | 13 57 07                        |         |     |                    |     |           |                      |
|     |     | i     | 14 01 12                        |         |     |                    |     |           |                      |
|     |     | F     | 06                              |         |     |                    |     |           |                      |
| 17  | 12  | eP    | 9 11 00                         |         |     |                    |     |           |                      |
| 18  | 12  | eP    | 16 59 00                        |         |     |                    |     |           |                      |
|     |     | S     | 17 00 54                        |         |     |                    |     |           |                      |
|     |     | F     | 07 -                            |         |     |                    |     |           |                      |



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| No. | Día | Fases  | HORA<br>Tiempo medio de Greenwich | Período |      | Amplitud verdadera |      | Distancia | NOTAS               |
|-----|-----|--------|-----------------------------------|---------|------|--------------------|------|-----------|---------------------|
|     |     |        |                                   | NS      | EW   | Am                 | Ar   |           |                     |
| 19  | 13  | 1P     | 0 22 16                           | S       | S    | μ                  | μ    | 14450     | Epic. 53°N<br>156°E |
|     |     | PR1    | 24 44                             | 3       |      |                    |      |           |                     |
|     |     | 1      | 26 18                             | 8       | 7    | -7                 | +3   |           |                     |
|     |     | PR2    | 27 36                             | 10      | 7,5  | +38                | -10  |           |                     |
|     |     | SoPcS? | 29 12                             | 9       | 12,5 | -16                | +9   |           |                     |
|     |     | PSN    | 34 36                             |         | 10   |                    | -5   |           |                     |
|     |     | PSE    | 34 49                             | 11      |      | +12                |      |           |                     |
|     |     | 1E     | 36 06                             |         | 10   |                    | +5   |           |                     |
|     |     | 1N     | 37 00                             |         | 11   |                    | -5   |           |                     |
|     |     | SR1    | 42 00                             | 15      |      | +15                |      |           |                     |
|     |     | 1E     | 42 57                             | 16      | 20   | +33                | -96  |           |                     |
|     |     | 1N     | 44 20                             |         | 20   |                    | +114 |           |                     |
|     |     | 1SR2   | 47 10                             | 18      |      | -87                |      |           |                     |
|     |     | LN     | 1 00 20                           |         | 22   |                    | +46  |           |                     |
|     |     | LE     | 07 12                             | 31      |      |                    |      |           |                     |
|     |     | M      | 10 36                             |         | 46   |                    | +124 |           |                     |
|     |     | M      | 11 30                             |         | 27   |                    |      |           |                     |
|     |     | M      | 13 02                             | 33      |      | -62                |      |           |                     |
|     |     | M      | 27 50                             | 30      |      | -55                |      |           |                     |
|     |     | M      | 28 50                             |         | 18   |                    | -18  |           |                     |
| 20  | 13  | M      | 33 06                             | 20      |      | +31                |      |           |                     |
|     |     | F      | 3 40 -                            | 17      |      | +26                |      |           |                     |
|     |     | P      | 6 44 20                           |         |      |                    |      |           |                     |
|     |     | P      | 0 54 48                           |         |      |                    |      |           |                     |
|     |     | P      | 2 47 56                           |         |      |                    |      |           |                     |
|     |     | L      | 3 02 00                           |         |      |                    |      |           |                     |
|     |     | M      | 06 15                             | 12      |      | 1                  |      |           |                     |
|     |     | M      | 08 20                             | 12      |      | 1                  |      |           |                     |
| 23  | 14  | F      | 30 -                              |         |      |                    |      |           |                     |
|     |     | P      | 23 08 38                          |         |      |                    |      |           |                     |
|     |     | P      | 17 59 38                          |         |      |                    |      |           |                     |
|     |     | S      | 18 00 29                          |         |      |                    |      |           |                     |
|     |     | L      | 00 34                             |         |      |                    |      |           |                     |
|     |     | M      | 00 42                             |         |      |                    |      |           |                     |
|     |     | F      | 05 -                              |         |      |                    |      |           |                     |
|     |     | P      | 8 26 22                           | 4       |      |                    |      |           |                     |
| 25  | 16  | PR1    | 31 42                             |         |      |                    |      |           |                     |
|     |     | L      | 9 19 50                           | 23      | 25   |                    |      |           |                     |
|     |     | M      | 35 35                             | 18      |      | 2,5                |      |           |                     |
|     |     | M      | 41 36                             | 18      |      | 2,5                |      |           |                     |
|     |     | F      | 10 1 1/2                          |         |      |                    |      |           |                     |
|     |     | oP     | 16 32 38                          |         |      |                    |      |           |                     |
|     |     | oS     | 36 26                             | 9       |      |                    |      |           |                     |
|     |     | L      | 39 00                             |         |      |                    |      |           |                     |
| 26  | 16  | M      | 41 20                             | 15      |      | 1,5                |      | 2290      | Vert. 1 mm.         |
|     |     | F      | 17 Ca .                           |         |      |                    |      |           |                     |
|     |     | o      | 4 25 22                           |         |      |                    |      |           |                     |
|     |     | P      | 27 14                             |         |      |                    |      |           |                     |
|     |     | L      | 32 20                             |         |      |                    |      |           |                     |
|     |     | M      | 33 20                             | 10      |      | 1                  |      |           |                     |
|     |     | M      | 34 32                             |         | 7    |                    | 1    |           |                     |
|     |     | F      | 50 -                              |         |      |                    |      |           |                     |

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|-----|-----|-------|-----------------------------------|---------|-------|--------------------|------|-----------|----------------------------------------------------------------------------------------------------|
|     |     |       |                                   | NS      | EW    | Am                 | Ar   |           |                                                                                                    |
|     |     |       |                                   | S       | S     | μ                  | μ    |           |                                                                                                    |
| 28  | 17  | O     | 11 45 20                          |         |       |                    |      | 3110      | Epic. 10° N<br>64° 5 W<br>Destructor en<br>Cumaná, Venezu-<br>ela.<br>Sucre 3500 Km.<br>P 11 51 49 |
|     |     | iPE   | 11 51 28                          |         |       |                    |      |           |                                                                                                    |
|     |     | PRiE  | 52 00                             |         | 3     |                    | + 3  |           |                                                                                                    |
|     |     | iSE   | 56 12                             |         | 8     |                    | - 7  |           |                                                                                                    |
|     |     | eSN   | 56 19                             |         |       |                    |      |           |                                                                                                    |
|     |     | iN    | 56 31                             | 7-20    |       | -25                |      |           |                                                                                                    |
|     |     | iE    | 56 59                             |         | 8     |                    | +12  |           |                                                                                                    |
|     |     | SRiN  | 58 31                             |         |       |                    |      |           |                                                                                                    |
|     |     | L     | 59 00                             |         | 20-30 |                    |      |           |                                                                                                    |
|     |     | M     | 12 00 04                          |         | 6-15  |                    | -210 |           |                                                                                                    |
|     |     | M     | 01 00                             |         | 10    |                    | -160 |           |                                                                                                    |
|     |     | M     | 02 00                             |         | 12    |                    | -190 |           |                                                                                                    |
|     |     | M     | 03 00                             | 10      | 12    | -212               | -171 |           |                                                                                                    |
|     |     | M     | 03 57                             |         | 12    |                    | -190 |           |                                                                                                    |
|     |     | M     | 04 48                             | 10      | 12    | -152               | -190 |           |                                                                                                    |
|     |     | M     | 06 54                             |         | 10    |                    | -157 |           |                                                                                                    |
|     |     | M     | 07 52                             | 8       | 10    | -172               | -122 |           |                                                                                                    |
|     |     | M     | 11 42                             | 9       |       | +108               |      |           |                                                                                                    |
|     |     | F     | 14 40 -                           |         |       |                    |      |           |                                                                                                    |
| 29  | 17  | P     | 12 55 09                          |         |       |                    |      |           |                                                                                                    |
| 30  | 17  | eP'   | 22 48 37                          |         |       |                    |      |           | Sucre<br>eP 22 47 41                                                                               |
|     |     | PRiN? | 53 03                             |         |       |                    |      |           |                                                                                                    |
|     |     | L     | 23 47 00                          | 22      |       |                    |      |           |                                                                                                    |
|     |     | M     | 0 00 42                           | 16      |       | 2                  |      |           |                                                                                                    |
|     |     | M     | 06 14                             | 15      |       | 1                  |      |           |                                                                                                    |
|     |     | F     | 40 -                              |         |       |                    |      |           |                                                                                                    |
| 31  | 18  | iP    | 21 37 06                          |         |       |                    |      | 5680?     | Sucre 5450 Km<br>eP 21 36 50                                                                       |
|     |     | SN?   | 44 18                             |         |       |                    |      |           |                                                                                                    |
|     |     | SE    | 44 25                             |         |       |                    |      |           |                                                                                                    |
|     |     | LN    | 51 46                             | 35      |       |                    |      |           |                                                                                                    |
|     |     | M     | 56 10                             | 13      |       | 2                  |      |           |                                                                                                    |
|     |     | M     | 57 40                             | 13      | 12    | -3,5               | -1,5 |           |                                                                                                    |
|     |     | M     | 58 24                             | 13      |       | -3,6               |      |           |                                                                                                    |
|     |     | F     | 22 1 -                            |         |       |                    |      |           |                                                                                                    |
| 32  | 19  | eP    | 3 23 58                           |         |       |                    |      | 3310      | ± 5 s por falta<br>de señales.<br>Sentido en<br>Balboa. P 3 18 37<br>Sucre 3660 Km<br>eP 3 24 35   |
|     |     | eS?   | 29 03                             |         |       |                    |      |           |                                                                                                    |
|     |     | L     | 32 00                             |         |       |                    |      |           |                                                                                                    |
|     |     | M     | 35 58                             | 20      |       | 8                  |      |           |                                                                                                    |
|     |     | M     | 36 53                             | 15      | 16    | - 8                | - 5  |           |                                                                                                    |
|     |     | M     | 37 36                             |         | 12    |                    | - 4  |           |                                                                                                    |
|     |     | M     | 38 38                             | 13      |       | - 6                |      |           |                                                                                                    |
|     |     | F     | 4 1 1/2 Ca.                       |         |       |                    |      |           |                                                                                                    |
| 33  | 19  | eP    | 6 26 53                           |         |       |                    |      |           |                                                                                                    |
| 34  | 19  | eP?   | 9 08 13                           |         |       |                    |      |           |                                                                                                    |
|     |     | L     | 10 53                             |         |       |                    |      |           |                                                                                                    |
|     |     | M     | 11 18                             | 10      |       | 2                  |      |           |                                                                                                    |
|     |     | F     | 20 -                              |         |       |                    |      |           |                                                                                                    |
| 35  | 19  | P     | 12 01 03                          |         |       |                    |      |           |                                                                                                    |
| 36  | 19  | eP    | 14 17 29                          |         |       |                    |      |           |                                                                                                    |
|     |     | F     | 30 -                              |         |       |                    |      |           |                                                                                                    |

No.

- J H S -



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Mes de

ENERO 1929

| No. | Día | Fases | HORA                      |    | Periodo |     | Amplitud verdadera |       | Distancia | NOTAS            |
|-----|-----|-------|---------------------------|----|---------|-----|--------------------|-------|-----------|------------------|
|     |     |       | Tiempo medio de Greenwich |    | NS      | EW  | Ar                 | Ar    |           |                  |
|     |     |       |                           |    | S       | S   | $\mu$              | $\mu$ |           |                  |
| 37  | 20  | P     | 15                        | 14 | 14      |     |                    |       | 6240?     | Fases confusas   |
|     |     | eS?   |                           | 22 | 03      |     |                    |       |           | Sucre P 15 14 10 |
|     |     | L     |                           | 33 | 00      | 16  |                    |       |           |                  |
|     |     | M     |                           | 38 | 24      | 15  |                    | 1     |           |                  |
|     |     | F     | 16                        | Ca | .       |     |                    |       |           |                  |
| 38  | 20  | iP    | 16                        | 05 | 30      |     |                    |       |           |                  |
| 39  | 20  | P     | 21                        | 01 | 18      |     |                    |       |           |                  |
|     |     | S     |                           | 02 | 15      |     |                    |       |           |                  |
|     |     | L     |                           | 02 | 28      |     |                    |       |           |                  |
|     |     | M     |                           | 02 | 46      |     |                    |       |           | Vert. 2 mm.      |
|     |     | F     |                           | 06 | -       |     |                    |       |           |                  |
| 40  | 21  | eP    | 1                         | 58 | 48      |     |                    |       |           |                  |
|     |     | L     | 2                         | 08 | 00      | 15  |                    |       |           |                  |
|     |     | M     |                           | 11 | 30      | 8   |                    | 2,6   |           |                  |
|     |     | M     |                           | 13 | 18      | 8   |                    | 2     |           |                  |
|     |     | F     |                           | 32 | -       |     |                    |       |           |                  |
| 41  | 21  | eP    | 5                         | 15 | 10      |     |                    |       |           | Sucre P 5 14 05  |
|     |     | L     |                           | 47 | 00      |     |                    |       |           |                  |
|     |     | M     |                           | 54 | 20      | 16  |                    | 2     |           |                  |
|     |     | M     |                           | 56 | 32      | 18  |                    | 2     |           |                  |
|     |     | F     | 6                         | 30 | -       |     |                    |       |           |                  |
| 42  | 21  | iP    | 10                        | 49 | 08      |     |                    |       |           |                  |
|     |     | S?    | 11                        | 01 | 08      |     |                    |       | 11500?    |                  |
|     |     | LE    |                           | 23 | 00      |     | 27                 |       |           |                  |
|     |     | LN    |                           | 25 | 00      |     |                    |       |           |                  |
|     |     | M     |                           | 31 | 20      |     | 20                 | 3     |           |                  |
|     |     | M     |                           | 33 | 42      | 20  |                    | 4     |           |                  |
|     |     | M     |                           | 38 | 12      |     | 18                 | 2     |           |                  |
|     |     | F     | 12                        | 10 | Ca.     |     |                    |       |           |                  |
| 43  | 21  | eP    | 22                        | 17 | 45      |     |                    |       |           |                  |
| 44  | 22  | P     | 9                         | 17 | 58      |     |                    |       |           |                  |
|     |     | L     |                           | 18 | 28      |     |                    |       |           |                  |
|     |     | M     |                           | 18 | 31      |     |                    |       |           | Vert. 1,5 mm.    |
|     |     | F     |                           | 23 | -       |     |                    |       |           |                  |
| 45  | 22  | iP    | 18                        | 13 | 18      |     |                    |       | 565       | Sucre 610 Km.    |
|     |     | iS    |                           | 14 | 18      |     |                    |       |           | eP 18 13 12      |
|     |     | L     |                           | 14 | 25      |     |                    |       |           |                  |
|     |     | M     |                           | 14 | 28      |     | 2                  | -1,6  |           |                  |
|     |     | F     |                           | 19 | -       |     |                    |       |           |                  |
| 46  | 22  | P     | 19                        | 34 | 20      | 2,5 |                    |       | 3645      | Balboa 620 Km.   |
|     |     | SE    |                           | 39 | 46      |     | 10                 |       |           | P 19 29 22       |
|     |     | LN    |                           | 43 | 20      |     |                    |       |           |                  |
|     |     | M     |                           | 47 | 16      | 15  | 11                 | 2     | 0,6       |                  |
|     |     | M     |                           | 51 | 18      | 15  | 11                 | 2     | 1         |                  |
|     |     | F     | 20                        | 10 | -       |     |                    |       |           |                  |
| 47  | 23  | P     | 0                         | 16 | 43      |     |                    |       |           | Balboa 565 Km    |
| 48  | 23  | P     | 4                         | 37 | 33      |     |                    |       |           | P 0 12 19        |
|     |     | L     |                           | 38 | 08      |     |                    |       |           |                  |
|     |     | M     |                           | 38 | 16      |     |                    |       |           | Vert. 2 mm.      |
|     |     | F     |                           | 42 | -       |     |                    |       |           |                  |
| 49  | 23  | eP    | 7                         | 13 | 33      |     |                    |       |           | Sucre P 7 14 06  |
|     |     | L     |                           | 23 | 00      |     |                    |       |           |                  |
|     |     | F     |                           | 30 | -       |     |                    |       |           |                  |
| 50  | 23  | L     | 12                        | 27 | 00      |     |                    |       |           |                  |
|     |     | M     |                           | 20 | 15      | 11  |                    | 1     |           |                  |
|     |     | F     |                           | 30 | -       |     |                    |       |           |                  |

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|-----|-----|----------------------|-----------------------------------|---------|-----|--------------------|-------|-----------|-------------------------------------------------------|
|     |     |                      |                                   | NS      | EW  | Am                 | As    |           |                                                       |
|     |     |                      |                                   | S       | S   | $\mu$              | $\mu$ |           |                                                       |
| 51  | 24  | O                    | 20 36 19                          |         |     |                    |       | 4135      | Epic. 12°N<br>90°5 W.<br>Sucre 4610 Km.<br>P 20 44 26 |
|     |     | ePE                  | 20 43 56                          |         |     |                    |       |           |                                                       |
|     |     | PR1N                 | 45 38                             | 8       |     |                    |       |           |                                                       |
|     |     | iSE                  | 49 41                             |         | 15  |                    | - 7   |           |                                                       |
|     |     | iPS                  | 50 14                             | 11      | 9   | +14                | + 9   |           |                                                       |
|     |     | SR1N                 | 52 21                             | 22      |     | +42                |       |           |                                                       |
|     |     | iSR1E                | 52 28                             |         | 20  |                    | +72   |           |                                                       |
|     |     | iLN                  | 54 08                             | 20      |     |                    |       |           |                                                       |
|     |     | iE                   | 55 33                             |         | 23  |                    | +212  |           |                                                       |
|     |     | M                    | 56 42                             | 17      |     | -79                |       |           |                                                       |
|     |     | M                    | 59 08                             | 13      |     | +36                |       |           |                                                       |
|     |     | M                    | 59 45                             |         | 13  |                    | -53   |           |                                                       |
|     |     | M                    | 21 01 32                          | 12      | 13  | -61                | +51   |           |                                                       |
|     |     | M                    | 03 18                             |         | 14  |                    | +37   |           |                                                       |
|     |     | M                    | 07 48                             | 12      |     | +40                |       |           |                                                       |
|     |     | M                    | 09 58                             |         | 9   |                    | +26   |           |                                                       |
| 52  | 24  | Fin en el siguiente. |                                   |         |     |                    |       |           | Sucre L 23 54 00                                      |
|     |     | eP?                  | 23 36 28                          |         |     |                    |       |           |                                                       |
|     |     | L                    | 45 24                             |         | 20  |                    |       |           |                                                       |
|     |     | M                    | 47 24                             |         | 13  |                    | 1     |           |                                                       |
|     |     | M                    | 50 25                             |         | 13  |                    | 1     |           |                                                       |
|     |     | M                    | 58 50                             | 15      | 13  | 2                  | 1     |           |                                                       |
| 53  | 25  | F                    | 0 40 -                            |         |     |                    |       | 4120      | Sucre eP 1 36 10                                      |
|     |     | eP                   | 1 35 38                           |         |     |                    |       |           |                                                       |
|     |     | eS                   | 41 33                             |         |     |                    |       |           |                                                       |
|     |     | L                    | 46 03                             | 15      |     |                    |       |           |                                                       |
|     |     | M                    | 51 18                             | 15      |     | 2                  |       |           |                                                       |
|     |     | M                    | 53 24                             | 15      |     | 2                  |       |           |                                                       |
| 54  | 25  | F                    | 2 1 1/2 -                         |         |     |                    |       |           |                                                       |
|     |     | eP                   | 21 56 34                          |         |     |                    |       |           |                                                       |
|     |     | S                    | 59 27                             |         |     |                    |       |           |                                                       |
|     |     | L                    | 22 00 24                          | 17      |     |                    |       |           |                                                       |
|     |     | M                    | 01 29                             | 12      |     | 2                  |       |           |                                                       |
|     |     | F                    | 12 -                              |         |     |                    |       |           |                                                       |
| 55  | 26  | P                    | 1 40 07                           |         |     |                    |       |           |                                                       |
| 56  | 26  | eP                   | 2 38 14                           |         |     |                    |       |           |                                                       |
|     |     | L                    | 49 00                             | 16      |     |                    |       |           |                                                       |
|     |     | M                    | 52 18                             | 13      | 15  | 1,5                | 1     |           |                                                       |
|     |     | M                    | 56 27                             | 15      |     | 2                  |       |           |                                                       |
|     |     | F                    | 3 1 1/2 -                         |         |     |                    |       |           |                                                       |
| 57  | 27  | eP                   | 5 37 23                           |         |     |                    |       |           | Sucre 1P 5 36 00                                      |
|     |     | S                    | 38 14                             |         |     |                    |       |           |                                                       |
|     |     | M                    | 38 20                             |         |     |                    |       |           |                                                       |
|     |     | F                    | 43 -                              |         |     |                    |       |           |                                                       |
| 58  | 27  | O                    | 16 06 53                          | 8       | 3   |                    |       | 4380      | Epic. 8 N.<br>37 W.<br>Sucre 4220 Km.<br>P 16 14 37   |
|     |     | iPE                  | 16 14 38                          | 2,5     | 2,5 | +3                 | + 2   |           |                                                       |
|     |     | PR1E                 | 15 59                             |         | 8   |                    | + 5   |           |                                                       |
|     |     | PR1N                 | 16 04                             | 9       |     | 2                  |       |           |                                                       |
|     |     | iSNE                 | 20 43                             | 8       | 8   | +8                 | + 6   |           |                                                       |
|     |     | PSN                  | 21 08                             | 8       |     | -6                 |       |           |                                                       |
|     |     | SR1E                 | 23 44                             |         | 9   |                    | - 2   |           |                                                       |
|     |     | SR2E                 | 24 32                             |         |     |                    |       |           |                                                       |
|     |     | LN                   | 27 37                             | 19      |     |                    |       |           |                                                       |
|     |     | LE                   | 28 00                             |         | 22  |                    |       |           |                                                       |
|     |     |                      |                                   |         |     |                    |       |           |                                                       |

No.

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# LA PAZ = (Bolivia)

BOLETIN SEISMICO DEL OBSERVATORIO DEL COLEGIO SAN CALIXTO (PP. Jesuitas)

Mes de

ENERO 1929

| No. | Día | Fases          | HORA<br>Tiempo medio de Greenwich | Período |    | Amplitud verdadera |       | Distancia | NOTAS               |
|-----|-----|----------------|-----------------------------------|---------|----|--------------------|-------|-----------|---------------------|
|     |     |                |                                   | NS      | EW | Am                 | Ac    |           |                     |
|     |     |                |                                   | S       | S  | $\mu$              | $\mu$ |           |                     |
| 58  | 27  | M              | 16 30 20                          |         | 15 |                    | - 9   |           |                     |
|     |     | Continuacion M | 31 48                             |         | 10 |                    | - 4   |           |                     |
|     |     | M              | 32 02                             | 13      |    | -13                |       |           |                     |
|     |     | M              | 36 54                             | 10      | 11 | +13                | - 7   |           |                     |
|     |     | M              | 39 00                             |         | 12 |                    | - 5   |           |                     |
|     |     | F              | 17 50 -                           |         |    |                    |       |           |                     |
| 59  | 28  | e              | 3 37 16                           |         |    |                    |       |           | Sucre 4370 K        |
|     |     | eP             | 38 20                             |         |    |                    |       |           | eP 3 37 58          |
|     |     | L              | 49 00                             |         |    |                    |       |           |                     |
|     |     | M              | 52 31                             | 1       | 17 |                    | 1,5   |           |                     |
|     |     | F              | 4 10 -                            |         |    |                    |       |           |                     |
| 60  | 28  | eP             | 16 31 59                          |         |    |                    |       |           |                     |
|     |     | L              | 32 47                             |         |    |                    |       |           |                     |
|     |     | M              | 32 52                             |         |    |                    |       |           | Vert. 1 mm.         |
|     |     | F              | 35 -                              |         |    |                    |       |           |                     |
| 61  | 28  | eP             | 18 22 44                          |         |    |                    |       |           |                     |
|     |     | SE             | 23 36                             |         |    |                    |       |           |                     |
|     |     | L              | 23 43                             |         |    |                    |       |           |                     |
|     |     | M              | 23 52                             |         |    |                    |       |           | Vert. 3 mm.         |
|     |     | F              | 28 -                              |         |    |                    |       |           |                     |
| 62  | 28  | e              | 22 04 12                          |         |    |                    |       |           | Sucre eP 22 04 37   |
|     |     | eP             | 04 42                             |         |    |                    |       |           |                     |
|     |     | L              | 17 00                             |         |    |                    |       |           |                     |
|     |     | M              | 20 24                             |         | 15 |                    | 1     |           |                     |
|     |     | F              | 30 -                              |         |    |                    |       |           |                     |
| 63  | 29  | eP             | 20 47 37                          |         |    |                    |       |           |                     |
| 64  | 30  | eP             | 1 49 11                           |         |    |                    |       |           |                     |
| 65  | 30  | eP             | 1 53 48                           |         |    |                    |       |           |                     |
|     |     | S?             | 56 06                             |         |    |                    |       |           |                     |
|     |     | L              | 57 06                             |         |    |                    |       |           |                     |
|     |     | M              | 57 34                             |         | 8  |                    | 1     |           |                     |
|     |     | F              | 2 04 -                            |         |    |                    |       |           |                     |
| 66  | 30  | P              | 15 25 33                          |         |    |                    |       |           |                     |
|     |     | L              | 26 26                             |         |    |                    |       |           |                     |
|     |     | M              | 26 22                             |         |    |                    |       |           | Vert. 2 mm.         |
|     |     | F              | 30 -                              |         |    |                    |       |           |                     |
| 67  | 30  | P              | 17 14 07                          |         |    |                    |       |           |                     |
| 68  | 31  | O              | 12 59 14                          |         |    |                    |       | 2165      | Epic. 34° S         |
|     |     | P              | 13 03 49                          |         |    |                    |       |           | 69° W               |
|     |     | SE             | 07 27                             |         |    |                    |       |           | Sucre 1790 Km.      |
|     |     | L              | 09 00                             |         |    |                    |       |           | P 13 03 18          |
|     |     | M              | 10 20                             | 10      | 12 | - 4                | - 2   |           |                     |
|     |     | M              | 11 36                             |         | 7  |                    | - 2   |           |                     |
|     |     | F              | 32 -                              |         |    |                    |       |           |                     |
| 69  | 31  | eP             | 18 12 47                          |         |    |                    |       | 4530      | Sucre               |
|     |     | P              | 13 08                             |         |    |                    |       |           | eP 18 13 33         |
|     |     | eS?E           | 18 42                             |         |    |                    |       |           |                     |
|     |     | SN             | 19 25                             |         |    |                    |       |           |                     |
|     |     | L              | 24 30                             |         | 25 |                    |       |           |                     |
|     |     | M              | 30 37                             | 15      |    | 2                  |       |           |                     |
|     |     | M              | 32 50                             | 15      | 15 | 2                  | 1     |           |                     |
|     |     | M              | 36 46                             | 15      | 15 | 2                  | 1     |           |                     |
|     |     | F              | 19 30 -                           |         |    |                    |       |           | P. M. Descotes S.J. |

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Longitud W. Greenwich { 68° 7' 57".7  
4h 32m 31s.85  
Latitud S. 16° 29' 43"  
Altura sobre el mar 3658 m.  
Subsuelo: aluvión antiguo

Mes de FEBRERO de 1928

|                            |  | Componente | Masa       | To | A   | ε: 1 | r<br>To² |
|----------------------------|--|------------|------------|----|-----|------|----------|
| Péndulo horizontal Bifilar |  | N. S.      | 2,000 kgs. |    |     |      |          |
| Instrumentos: » »          |  | E. W       | 3,500 »    | 14 | 180 | 3.2  | 0.002    |
| » vertical S. Calixto      |  | NS y EW    | 1,500 »    | 12 | 300 | 3.2  | 0.002    |

| No. | Día         | Fases  | HORA<br>Tiempo medio de Greenw. | Período |     | Amplitud verdadera |      | Distancia<br>kms. | NOTAS             |
|-----|-------------|--------|---------------------------------|---------|-----|--------------------|------|-------------------|-------------------|
|     |             |        |                                 | NS      | EW  | Am                 | Ar   |                   |                   |
|     |             |        |                                 | S       | S   | μ                  | μ    |                   |                   |
| 70  | 1 Feb. 1929 | 1P1    | 17 33 29                        |         | 3   |                    | 1,5  | 15200             | Sucre eP 17 33 30 |
|     |             | PR1N   | 36 24                           | 8       |     |                    |      |                   |                   |
|     |             | 1ScPcS | 38 13                           |         |     |                    |      |                   |                   |
|     |             | PR2N   | 39 30                           |         |     |                    |      |                   |                   |
|     |             | SR1N   | 54 07                           | 15      |     | - 9                |      |                   |                   |
|     |             | SR2E   | 59 38                           |         | 13  |                    | + 2  |                   |                   |
|     |             | L      | 18 17 00                        | 27      |     |                    |      |                   |                   |
|     |             | M      | 26 20                           | 23      |     | - 9                |      |                   |                   |
|     |             | M      | 30 42                           | 23      |     | - 6                |      |                   |                   |
|     |             | M      | 34 52                           | 20      |     | 6                  |      |                   |                   |
|     |             | M      | 39 30                           | 23      |     | 7                  |      |                   |                   |
|     |             | M      | 44 18                           | 17      |     | 2                  |      |                   |                   |
| 71  | 1           | F      | 19 Ca -                         |         |     |                    |      |                   |                   |
|     |             | P      | 21 52 41                        |         |     |                    |      |                   |                   |
|     |             | L      | 22 01 00                        |         |     |                    |      |                   | Sucre P 21 53 14  |
|     |             | M      | 04 20                           |         | 7,5 |                    | - 2  |                   |                   |
|     |             | M      | 07 48                           |         | 6   |                    | - 2  |                   |                   |
| 72  | 2           | F      | 30 -                            |         |     |                    |      |                   |                   |
|     |             | O      | 23 59 44                        |         |     |                    |      | 5680              |                   |
|     |             | 1PE    | 0 08 57                         |         | 3   |                    | + 2  |                   | Epic. 2°7 S       |
|     |             | 1E     | 09 06                           |         | 5   |                    | + 7  |                   | 18°5 W            |
|     |             | PR1 N  | 10 14                           | 10      |     | -18                |      |                   | Sucre P 0 08 49   |
|     |             | PR1E   | 10 16                           |         | 8   |                    | -22  |                   | 5450 Km.          |
|     |             | PR2E   | 10 46                           |         | 10  |                    | -13  |                   |                   |
|     |             | 1SNE   | 16 14                           | 4-13    | 10  | -25                | +22  |                   |                   |
|     |             | PSE    | 16 38                           |         | 11  |                    | +84  |                   |                   |
|     |             | SR1N   | 20 03                           | 15      |     | +224               |      |                   |                   |
|     |             | SR1E   | 20 06                           |         | 18  |                    | -136 |                   |                   |
|     |             | SR2N   | 21 28                           | 15      |     | - 78               |      |                   |                   |
|     |             | 1LN    | 24 08                           | 24      |     | -885               |      |                   |                   |
|     |             | 1LE    | 24 22                           |         | 19  |                    | -400 |                   |                   |
|     |             | M      | 25 10                           |         | 16  |                    | +336 |                   |                   |
|     |             | M      | 25 28                           | 15      |     | +427               |      |                   |                   |
|     |             | M      | 27 06                           |         | 12  |                    | +224 |                   |                   |
|     |             | M      | 32 18                           | 15      |     | +427               |      |                   |                   |
|     |             | M      | 34 00                           | 15      |     | +427               |      |                   |                   |
|     |             | M      | 36 12                           | 16      |     | +402               |      |                   |                   |
|     |             | M      | 38 32                           | 14      |     | +105               |      |                   |                   |
|     |             | M      | 40 42                           | 12      |     | -185               |      |                   |                   |
|     |             | M      | 41 00                           |         | 12  |                    | -164 |                   |                   |
|     |             | M      | 44 00                           |         | 12  |                    | +187 |                   |                   |
|     |             | M      | 46 18                           |         | 13  |                    | -149 |                   |                   |
|     |             | M      | 48 12                           |         | 11  |                    | -122 |                   |                   |
|     |             | M      | 54 12                           | 11      | 12  | -100               | - 90 |                   |                   |
|     |             | M      | 58 30                           |         | 12  |                    | + 70 |                   |                   |
| 73  | 2           | F      | 4 Ca .                          |         |     |                    |      |                   |                   |
|     |             | P      | 7 30 06                         |         |     |                    |      |                   |                   |
|     |             | S      | 30 55                           |         |     |                    |      |                   |                   |
|     |             | L      | 31 00                           |         |     |                    |      |                   |                   |
|     |             | M      | 31 05                           |         |     |                    |      |                   |                   |
|     |             | F      | 35 -                            |         |     |                    |      |                   |                   |
| 74  | 2           | P      | 8 30 Ca                         |         |     |                    |      |                   | Vert. 7 mm.       |

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| No. | Día | Fases                        | HORA<br>Tiempo medio de Greenwich | Período |    | Amplitud verdadera |       | Distancia | NOTAS                             |
|-----|-----|------------------------------|-----------------------------------|---------|----|--------------------|-------|-----------|-----------------------------------|
|     |     |                              |                                   | NS      | EW | Am                 | As    |           |                                   |
| 75  | 3   | P                            | 18 08 Ca                          | S       | S  | $\mu$              | $\mu$ |           | Sucre 5070<br>P 18 08 25          |
|     |     | Las demas fases<br>extraños. |                                   |         |    |                    |       |           |                                   |
| 76  | 4   | P                            | 2 03 41                           |         |    |                    |       | 3600?     |                                   |
|     |     | S?                           | 09 03                             |         |    |                    |       |           |                                   |
|     |     | L                            | 14 12                             | 23      |    |                    |       |           |                                   |
|     |     | M                            | 16 50                             | 12      |    | 1                  |       |           |                                   |
|     |     | F                            | 32 -                              |         |    |                    |       |           |                                   |
| 77  | 4   | eP                           | 10 27 11                          |         |    |                    |       |           | Sucre 3780<br>P 10 27 20          |
|     |     | L                            | 38 00                             |         |    |                    |       |           |                                   |
|     |     | F                            | 11 Ca .                           |         |    |                    |       |           |                                   |
| 78  | 5   | eP                           | 1 35 15                           |         |    |                    |       |           |                                   |
| 79  | 6   | eP                           | 2 35 26                           |         |    |                    |       |           | Sucre P 2 35 25                   |
|     |     | L                            | 51 00                             |         |    |                    |       |           |                                   |
|     |     | M                            | 56 30                             | 8       |    | 1                  |       |           |                                   |
|     |     | F                            | 3 1/2 -                           |         |    |                    |       |           |                                   |
| 80  | 6   | P                            | 5 37 46                           |         |    |                    |       |           |                                   |
|     |     | S                            | 40 04                             |         |    |                    |       |           |                                   |
|     |     | L                            | 40 42                             |         |    |                    |       |           |                                   |
|     |     | M                            | 40 53                             | 8       |    | 1                  |       |           |                                   |
|     |     | F                            | 53 -                              |         |    |                    |       |           |                                   |
| 81  | 6   | P                            | 6 05 14                           |         |    |                    |       |           |                                   |
| 82  | 6   | P                            | 7 08 14                           |         |    |                    |       |           |                                   |
|     |     | S                            | 11 33                             |         |    |                    |       |           |                                   |
|     |     | F                            | 17 -                              |         |    |                    |       |           |                                   |
| 83  | 6   | P                            | 12 29 30                          |         |    |                    |       |           | Sucre P 12 28 06                  |
|     |     | S?                           | 33 00                             |         |    |                    |       |           |                                   |
|     |     | L                            | 34 12                             |         |    |                    |       |           |                                   |
|     |     | M                            | 34 40                             | 8       | 8  |                    | 1     |           |                                   |
|     |     | F                            | 42 -                              |         |    |                    |       |           |                                   |
| 84  | 6   | P                            | 14 09 54                          |         |    |                    |       |           |                                   |
|     |     | SE?                          | 13 09                             |         |    |                    |       |           |                                   |
|     |     | SN?                          | 13 39                             |         |    |                    |       |           |                                   |
|     |     | L                            | 14 50                             |         |    |                    |       |           |                                   |
|     |     | M                            | 15 44                             |         | 10 |                    | -2    |           |                                   |
|     |     | M                            | 17 06                             | 12      |    | 3                  |       |           |                                   |
|     |     | F                            | 30 -                              |         |    |                    |       |           |                                   |
| 85  | 7   | L                            | 20 09 00                          |         |    |                    |       |           |                                   |
|     |     | M                            | 18 20                             | 18      |    | 2                  |       |           |                                   |
|     |     | M                            | 21 24                             | 13      |    | 2                  |       |           |                                   |
|     |     | M                            | 25 45                             | 14      |    | 2                  |       |           |                                   |
|     |     | F                            | 21 Ca .                           |         |    |                    |       |           |                                   |
| 86  | 8   | eP                           | 1 06 43                           |         |    |                    |       |           |                                   |
| 87  | 8   | P                            | 2 12 17                           |         |    |                    |       | 5070?     | Fases confusas<br>Sucre P 2 12 42 |
|     |     | S?                           | 19 02                             |         |    |                    |       |           |                                   |
|     |     | L                            | 24 05                             |         |    |                    |       |           |                                   |
|     |     | M                            | 28 20                             |         | 16 |                    | - 3   |           |                                   |
|     |     | F                            | 50 -                              |         |    |                    |       |           |                                   |
| 88  | 8   | P                            | 12 43 36                          |         |    |                    |       |           |                                   |
|     |     | M                            | 43 40                             |         |    |                    |       |           |                                   |
|     |     | F                            | 44 20                             |         |    |                    |       |           | Vert. 1 mm.                       |
| 89  | 8   | P                            | 12 46 27                          |         |    |                    |       |           |                                   |
|     |     | L                            | 46 31                             |         |    |                    |       |           |                                   |
|     |     | M                            | 46 23                             |         |    |                    |       |           |                                   |
|     |     | F                            | 47 30                             |         |    |                    |       |           |                                   |

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Mes de

FEBRERO 1929

| No. | Dia | Fases | HORA<br>Tiempo medio de Greenwich | Período |    | Amplitud verdadera |     | Distancia | NOTAS            |
|-----|-----|-------|-----------------------------------|---------|----|--------------------|-----|-----------|------------------|
|     |     |       |                                   | NS      | EW | Am                 | Az  |           |                  |
|     |     |       |                                   | S       | S  | μ                  | μ   |           |                  |
| 90  | 9   | P     | 5 28 07                           |         |    |                    |     |           | Sucre 315 Km     |
|     |     | L     | 29 02                             |         |    |                    |     |           | 1P 5 27 43       |
|     |     | M     | 29 08                             |         |    |                    |     |           | Vert. 2 mm,      |
|     |     | F     | 33 -                              |         |    |                    |     |           |                  |
| 91  | 9   | P     | 6 28 23                           |         |    |                    |     |           |                  |
| 92  | 9   | P     | 8 26 37                           |         |    |                    |     |           |                  |
|     |     | S     | 27 00                             |         |    |                    |     |           |                  |
|     |     | M     | 27 42                             |         |    |                    |     |           | Vert. 1 mm.      |
|     |     | F     | 31 -                              |         |    |                    |     |           |                  |
| 93  | 9   | P     | 13 58 41                          |         |    |                    |     |           |                  |
| 94  | 9   | P     | 18 53 15                          |         |    |                    |     |           | Sucre P 18 53 51 |
|     |     | L     | 19 01 00                          |         |    |                    |     |           |                  |
|     |     | M     | 02 32                             | 16      |    | 2                  |     |           |                  |
|     |     | F     | 20 -                              |         |    |                    |     |           |                  |
| 95  | 10  | L     | 4 02 30                           |         |    |                    |     |           |                  |
|     |     | M     | 04 40                             | 11      |    | 1                  |     |           |                  |
|     |     | M     | 08 33                             | 12      |    | 1                  |     |           |                  |
|     |     | F     | 31 -                              |         |    |                    |     |           |                  |
| 96  | 10  | eP    | 13 16 13                          |         |    |                    |     |           |                  |
|     |     | L     | 16 32                             |         |    |                    |     |           |                  |
|     |     | M     | 16 40                             |         |    |                    |     |           | Vert. 1 mm.      |
|     |     | F     | 20 -                              |         |    |                    |     |           |                  |
| 97  | 10  | P     | 15 34 08                          |         |    |                    |     |           |                  |
| 98  | 10  | O     | 15 38 30                          |         |    |                    |     | 4220      | Epic. 12°7 N     |
|     |     | PE    | 15 46 29                          |         |    |                    |     |           | 93°2 W.          |
|     |     | 1SN   | 52 29                             |         |    |                    |     |           | Sucre 4580       |
|     |     | 1SR1N | 54 59                             | 11      |    | +7                 |     |           | EP 15 47 04      |
|     |     | 1SR2E | 55 09                             |         | 12 |                    | +10 |           |                  |
|     |     | LNE   | 57 09                             |         |    |                    |     |           |                  |
|     |     | i     | 58 38                             |         | 18 |                    | -85 |           |                  |
|     |     | M     | 16 02 06                          |         | 15 |                    | +25 |           |                  |
|     |     | M     | 03 00                             |         | 12 |                    | -24 |           |                  |
|     |     | M     | 05 20                             | 12      |    | +16                |     |           |                  |
|     |     | M     | 08 06                             | 12,5    |    | - 9                |     |           |                  |
|     |     | F     | 17 40 -                           |         |    |                    |     |           |                  |
| 99  | 10  | P     | 21 51 52                          |         |    |                    |     |           |                  |
| 100 | 11  | P     | 0 37 09                           |         |    |                    |     |           |                  |
| 101 | 11  | P     | 7 20 05                           |         |    |                    |     |           |                  |
| 102 | 12  | 1P    | 3 25 44                           |         |    |                    |     |           |                  |
| 103 | 12  | eP    | 12 59 10                          |         |    |                    |     |           |                  |
| 104 | 12  | eP    | 19 48 34                          |         |    |                    |     |           |                  |
| 105 | 13  | P     | 2 12 42                           |         |    |                    |     |           |                  |
| 106 | 13  | O     | 22 13 23                          |         |    |                    |     | 4125      | Epic. 13°2 N     |
|     |     | eP    | 22 21 04                          |         |    |                    |     |           | 9155 W           |
|     |     | eSE   | 27 09                             |         |    |                    |     |           | Sucre P 22 21 32 |
|     |     | SR1E  | 31 25                             |         | 12 |                    |     |           |                  |
|     |     | L     | 34 00                             | 18      |    |                    |     |           |                  |
|     |     | M     | 36 45                             |         | 15 |                    | 1,5 |           |                  |
|     |     | M     | 38 16                             | 11      |    | - 4                |     |           |                  |
|     |     | M     | 40 22                             |         | 10 |                    | - 2 |           |                  |
|     |     | M     | 44 32                             | 12      |    | - 2                |     |           |                  |
|     |     | F     | 23 20 -                           |         |    |                    |     |           |                  |

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**Mes de**

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| No. | Día | Fases                                                                      | HORA                                                                                                                            | Periodo                    |          | Amplitud verdadera      |             | Distancia | NOTAS                                                   |
|-----|-----|----------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|----------------------------|----------|-------------------------|-------------|-----------|---------------------------------------------------------|
|     |     |                                                                            | Tiempo medio de Greenwich                                                                                                       | NB                         | EW       | An                      | Az          |           |                                                         |
|     |     |                                                                            |                                                                                                                                 | S                          | S        | $\mu$                   | $\mu$       |           |                                                         |
| 107 | 13  | 1P<br>S<br>L<br>M<br>F                                                     | 23 12 24<br>12 55<br>13 00<br>13 12<br>17 -                                                                                     |                            |          |                         |             |           | Vert.-4 mm.                                             |
| 108 | 14  | P                                                                          | 14 26 54                                                                                                                        |                            |          |                         |             |           |                                                         |
| 109 | 15  | eP<br>F                                                                    | 5 58 20<br>7 Ca,                                                                                                                |                            |          |                         |             |           | Sucrer P 6 00 41                                        |
| 110 | 15  | P<br>L<br>M<br>F                                                           | 7 20 28<br>20 51<br>21 00<br>29 -                                                                                               |                            |          |                         |             |           | Vert. 7 mm.                                             |
| 111 | 15  | O<br>ePN<br>PR1E<br>ISE?<br>eSN<br>SR1N<br>L<br>M<br>M<br>M<br>M<br>M<br>F | 8 04 28<br>8 11 48<br>13 20<br>17 28<br>17 35<br>19 00<br>21 30<br>22 19<br>23 00<br>24 20<br>25 32<br>26 06<br>29 12<br>9 50 - |                            |          |                         |             | 3960      | Epic. 12° N<br>90° 3 W.<br>Sucrer 4180 Km<br>IP 8 12 17 |
|     |     |                                                                            |                                                                                                                                 | 11<br>13                   | 6<br>12  | + 3                     | - 2<br>+1,5 |           |                                                         |
|     |     |                                                                            |                                                                                                                                 | 14                         | 12<br>12 | - 8                     | + 6<br>- 6  |           |                                                         |
|     |     |                                                                            |                                                                                                                                 | 12,5<br>13                 |          | - 8<br>- 8              |             |           |                                                         |
|     |     |                                                                            |                                                                                                                                 |                            | 13       |                         | + 6         |           |                                                         |
|     |     |                                                                            |                                                                                                                                 | 15                         |          | -11                     |             |           |                                                         |
| 112 | 16  | P<br>PR1<br>eSE<br>ISN<br>L<br>M<br>M<br>M<br>F                            | 19 32 57<br>35 27<br>40 55<br>41 05<br>53 00<br>55 50<br>20 01 17<br>11 20<br>21 Ca .<br>3 59 16                                |                            | 2        |                         |             | 6600      | Sucrer eP 19 32 58                                      |
|     |     |                                                                            |                                                                                                                                 | 15<br>18<br>15<br>13<br>14 |          | 2<br>4<br>2<br>1,5<br>2 |             |           |                                                         |
|     |     |                                                                            |                                                                                                                                 |                            | 13       |                         | 1           |           |                                                         |
| 113 | 17  | eP                                                                         | 17 54 15                                                                                                                        |                            |          |                         |             |           |                                                         |
| 114 | 17  | eP                                                                         | 13 15 04                                                                                                                        |                            |          |                         |             |           |                                                         |
| 115 | 18  | eP<br>S<br>F                                                               | 15 54<br>19 -<br>20 57 52                                                                                                       |                            |          |                         |             |           |                                                         |
| 116 | 18  | eP<br>IS<br>F                                                              | 58 53<br>21 03 -<br>21 07 48                                                                                                    |                            |          |                         |             |           | Sucrer P 21 07 10                                       |
|     |     | P<br>IS<br>M<br>F                                                          | 08 43<br>09 20<br>12 -                                                                                                          |                            |          |                         |             |           | Vert.1 mm.                                              |
| 118 | 18  | eP<br>S<br>F                                                               | 23 19 36<br>20 29<br>23 -                                                                                                       |                            |          |                         |             |           | Sucrer P 23 18 51                                       |
| 119 | 19  | O                                                                          | 5 23 27                                                                                                                         |                            |          |                         |             | 565       | Epic. 17° S<br>63 W<br>Sentido en War<br>nes.Santa Cruz |



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| No. | Día | Fases               | HORA<br>Tiempo medio de Greenwich | Período |     | Amplitud verdadera |       | Distancia | NOTAS                                                                                                        |
|-----|-----|---------------------|-----------------------------------|---------|-----|--------------------|-------|-----------|--------------------------------------------------------------------------------------------------------------|
|     |     |                     |                                   | NS      | EW  | Am                 | Az    |           |                                                                                                              |
|     |     |                     |                                   | S       | S   | $\mu$              | $\mu$ |           |                                                                                                              |
| 119 | 19  | O                   | 5 23 30                           |         |     |                    |       | 565       | Epic. 17° S<br>aprox. 63° W.<br>Sentido en el<br>Departamento<br>de Santa Cruz<br>Sucre 160 Km<br>iP 5 24 19 |
|     |     | iP                  | 5 24 49                           |         | 2   |                    | + 3   |           |                                                                                                              |
|     |     | iN                  | 25 02                             | 1       | 1   | + 20               | + 17  |           |                                                                                                              |
|     |     | iNE                 | 25 34                             | 2       | 2   | + 35               | + 28  |           |                                                                                                              |
|     |     | SNE                 | 25 49                             |         |     |                    |       |           |                                                                                                              |
|     |     | LN                  | 25 56                             |         |     |                    |       |           |                                                                                                              |
|     |     | M                   | 26 06                             | 2       |     | +262               |       |           |                                                                                                              |
|     |     | M                   | 26 10                             | 2       |     | -154               |       |           |                                                                                                              |
|     |     | M                   | 26 23                             | 2       |     | -111               |       |           |                                                                                                              |
|     |     | Fin en el siguiente |                                   |         |     |                    |       |           |                                                                                                              |
| 120 | 19  | iPE                 | 5 41 39                           |         |     |                    |       | 565       | Réplica del 119<br>Sucre 160 Km<br>iP 5 41 10                                                                |
|     |     | iN                  | 41 54                             | 1       |     | - 11               |       |           |                                                                                                              |
|     |     | iE                  | 42 24                             |         | 2   |                    | - 10  |           |                                                                                                              |
|     |     | iSE                 | 42 39                             |         | 2,5 |                    | - 22  |           |                                                                                                              |
|     |     | iSN                 | 42 41                             | 2       |     | + 22               |       |           |                                                                                                              |
|     |     | L                   | 42 45                             |         |     |                    |       |           |                                                                                                              |
|     |     | M                   | 42 59                             | 2       | 2   | - 59               | - 67  |           |                                                                                                              |
|     |     | M                   | 43 44                             |         | 2   |                    | + 46  |           |                                                                                                              |
|     |     | Fin en el siguiente |                                   |         |     |                    |       |           |                                                                                                              |
| 121 | 19  | P                   | 5 51 04                           |         |     |                    |       |           | Réplica                                                                                                      |
|     |     | iE                  | 51 54                             |         | 2   |                    | + 9   |           |                                                                                                              |
|     |     | iE                  | 52 04                             |         | 2   |                    | + 7   |           |                                                                                                              |
|     |     | F                   | 6 40 -                            |         |     |                    |       |           |                                                                                                              |
| 122 | 19  | eP                  | 6 52 35                           |         |     |                    |       |           | Réplica<br>Replica<br>Replica                                                                                |
| 123 | 19  | eP                  | 9 27 45                           |         |     |                    |       |           |                                                                                                              |
| 124 | 19  | eP                  | 9 57 28                           |         |     |                    |       |           |                                                                                                              |
| 125 | 19  | P                   | 11 04 30                          |         |     |                    |       | 465       | Replica                                                                                                      |
|     |     | S                   | 05 21                             |         |     |                    |       |           |                                                                                                              |
|     |     | L                   | 05 25                             |         |     |                    |       |           |                                                                                                              |
|     |     | M                   | 05 35                             |         |     |                    |       |           |                                                                                                              |
|     |     | F                   | 12 -                              |         |     |                    |       |           | Vert. 2 mm.                                                                                                  |
| 126 | 19  | eP                  | 11 50 5                           |         |     |                    |       |           | Replica<br>Replica<br>Replica                                                                                |
| 127 | 19  | eP                  | 13 00 5                           |         |     |                    |       |           |                                                                                                              |
| 128 | 19  | eP                  | 13 19 10                          |         |     |                    |       |           |                                                                                                              |
|     |     | S                   | 20 05                             |         |     |                    |       |           |                                                                                                              |
|     |     | L                   | 20 09                             |         |     |                    |       |           |                                                                                                              |
|     |     | M                   | 20 15                             |         |     |                    |       |           | Vert. 1 mm.                                                                                                  |
|     |     | F                   | 24 -                              |         |     |                    |       |           |                                                                                                              |
| 129 | 19  | eP                  | 14 21 52                          |         |     |                    |       |           | Replica<br>id                                                                                                |
| 130 | 19  | eP                  | 15 36 44                          |         |     |                    |       |           |                                                                                                              |
|     |     | S                   | 37 39                             |         |     |                    |       |           |                                                                                                              |
|     |     | F                   | 41 -                              |         |     |                    |       |           |                                                                                                              |
| 131 | 19  | eP                  | 16 51 29                          |         |     |                    |       |           | Replica<br>id                                                                                                |
| 132 | 19  | eP                  | 17 43 20                          |         |     |                    |       |           |                                                                                                              |
| 133 | 19  | P                   | 17 43 49                          |         |     |                    |       |           |                                                                                                              |
| 134 |     | S                   | 44 43                             |         |     |                    |       |           | Replica                                                                                                      |
|     |     | L                   | 44 47                             |         |     |                    |       |           |                                                                                                              |
|     |     | M                   | 44 51                             |         |     |                    |       |           |                                                                                                              |
|     |     | F                   | 53 -                              |         |     |                    |       |           | Vert. 2 mm.                                                                                                  |
| 134 | 19  | eP                  | 18 06 00                          |         |     |                    |       |           | Replica                                                                                                      |
|     |     | S                   | 06 58                             |         |     |                    |       |           |                                                                                                              |
|     |     | M                   | 07 08                             |         |     |                    |       |           |                                                                                                              |
|     |     | F                   | 13 -                              |         |     |                    |       |           | Vert. 1,5 mm.                                                                                                |

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| No.            | Dia           | Fases                                                                               | HORA<br>Tiempo medio de Greenwich                                                                                  | Período                              |                                  | Amplitud verdadera                       |                           | Distancia | NOTAS                                                       |
|----------------|---------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|--------------------------------------|----------------------------------|------------------------------------------|---------------------------|-----------|-------------------------------------------------------------|
|                |               |                                                                                     |                                                                                                                    | NS                                   | EW                               | AN                                       | AE                        |           |                                                             |
|                |               |                                                                                     |                                                                                                                    | S                                    | S                                | $\mu$                                    | $\mu$                     |           |                                                             |
| 135            | 19            | eP<br>S<br>L<br>M                                                                   | 19 00 51<br>01 50<br>01 55<br>02 10                                                                                |                                      |                                  |                                          |                           |           | Replica del 119                                             |
|                | 20            | F                                                                                   | 06 -                                                                                                               |                                      |                                  |                                          |                           |           | Vert. 2 mm.                                                 |
| 136            | <del>19</del> | eP                                                                                  | 5 50 37                                                                                                            |                                      |                                  |                                          |                           |           | Replica                                                     |
| 137            | 20            | eP                                                                                  | 5 54 11                                                                                                            |                                      |                                  |                                          |                           |           | id                                                          |
| 138            | 20            | eP<br>S<br>L<br>M<br>F                                                              | 6 00 42<br>01 34<br>01 39<br>01 44<br>05                                                                           |                                      |                                  |                                          |                           |           | id                                                          |
| 139            | 20            | P                                                                                   | 6 15 43                                                                                                            |                                      |                                  |                                          |                           |           |                                                             |
| 140            | 20            | P                                                                                   | 7 53 37                                                                                                            |                                      |                                  |                                          |                           |           |                                                             |
| 141            | 20            | eP?<br>i<br>iS<br>iPS<br>L<br>F                                                     | 21 16 57<br>21 31<br>27 26<br>28 36<br>45 00<br>22 20 -                                                            |                                      | 7<br>7,5                         |                                          | - 1<br>- 2                | 9400?     | Fuertes micros.                                             |
| 142            | 21            | iP<br>L<br>M<br>F                                                                   | <del>3</del> 27 17<br>3 27 41<br>27 48<br>32 -                                                                     |                                      |                                  |                                          |                           | 185       | Vert. 4,5 mm.                                               |
| 143            | 21            | P<br>S<br>M<br>F                                                                    | 7 01 51<br>02 41<br>04 45<br>08 -                                                                                  |                                      |                                  |                                          |                           |           | Vert. 0.5 mm.                                               |
| 144            | 21            | eP                                                                                  | 13 04 24                                                                                                           |                                      |                                  |                                          |                           |           |                                                             |
| 145            | 21            | eP<br>L<br>M<br>F                                                                   | 17 45 42<br>46 07<br>46 16<br>49 -                                                                                 |                                      |                                  |                                          |                           | 190       | Vert. 2 mm.                                                 |
| 147            | 22            | P<br>SE<br>eSN<br>L<br>M<br>F                                                       | 6 05 13<br>11 06<br>11 10<br>15 50<br>18 46<br>43 -                                                                | 9<br>10                              |                                  | 1                                        |                           | 4150      | Centro America<br>Balboa 380 Km.                            |
| <del>147</del> | 22            | iP                                                                                  | 13 03 33                                                                                                           |                                      |                                  |                                          |                           |           | Muy proximo                                                 |
| 148            | 22            | P                                                                                   | 19 49 27                                                                                                           |                                      |                                  |                                          |                           |           |                                                             |
| 149            | 22            | G<br>iP<br>iPN<br>iPE<br>PR1E<br>PR2 N<br>PR2E<br>iN<br>iSN<br>iSE<br>SR1N<br>iSP2E | 20 41 32<br>20 40 00,5<br>49 05<br>49 05,5<br>50 12<br>50 25<br>50 30<br>51 40<br>54 53<br>54 55<br>57 03<br>57 40 | 4<br>5<br>7,5<br>8<br>12<br>10<br>13 | 5<br>6,5<br>10<br>10<br>10<br>13 | + 12<br>- 18<br>+ 21<br>- 33<br>28<br>37 | + 6<br>+ 17<br>- 23<br>37 | 4100      | Epic. 10° 7 N<br>40° 3 W.<br>Sucre 4025 Km<br>iP 20 49 03,5 |



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| No.      | Dia | Fases | Hora<br>Tiempo medio de Greenwich | Periodo |    | Amplitud verdadera |       | Distancia  | NOTAS           |
|----------|-----|-------|-----------------------------------|---------|----|--------------------|-------|------------|-----------------|
|          |     |       |                                   | NS      | EW | Am                 | Ar    |            |                 |
|          |     |       |                                   | S       | S  | $\mu$              | $\mu$ |            |                 |
| 149      | 22  | L     | 20 59 33                          |         |    |                    |       |            |                 |
| Continua |     | 1E    | 21 00 55                          |         | 13 |                    | -22   |            |                 |
|          |     | 1N    | 01 18                             | 12      |    | +160               |       |            |                 |
|          |     | M     | 03 18                             |         | 20 |                    | +249  |            |                 |
|          |     | M     | 03 42                             | 20      |    | +246               |       |            |                 |
|          |     | M     | 04 18                             | 16      |    | -160               |       |            |                 |
|          |     | M     | 06 40                             |         | 15 |                    | + 96  |            |                 |
|          |     | M     | 07 54                             | 14      |    | - 87               |       |            |                 |
|          |     | M     | 10 24                             |         | 12 |                    | - 57  |            |                 |
|          |     | M     | 13 42                             |         | 10 |                    | - 45  |            |                 |
|          |     | M     | 15 30                             | 13      |    | -63                |       |            |                 |
|          |     | F     | 0 Ca -                            |         |    |                    |       |            |                 |
| 150      | 22  | P     | 22 37 26                          |         |    |                    |       |            | Replica del 119 |
| 151      | 22  | eP    | 22 48 16                          |         |    |                    |       |            | id              |
| 152      | 22  | eP    | 23 38 18                          |         |    |                    |       |            | id              |
| 153      | 23  | eP    | 4 38 23                           |         |    |                    |       |            | id              |
| 154      | 23  | eP    | 4 53 16                           |         |    |                    |       |            | id              |
| 155      | 23  | P     | 7 54 12                           |         |    |                    |       |            |                 |
| 156      | 23  | P     | 11 13 54                          |         |    |                    |       | 1590 Sucre | P 11 13 31      |
|          |     | 1S    | 16 39                             |         |    |                    |       |            |                 |
|          |     | L     | 17 34                             |         |    |                    |       |            |                 |
|          |     | M     | 18 00                             |         | 13 |                    | + 8   |            |                 |
|          |     | M     | 20 39                             |         | 13 |                    | - 3   |            |                 |
|          |     | F     | 41 -                              |         |    |                    |       |            |                 |
| 157      | 23  | P     | 12 30 49                          |         |    |                    |       |            |                 |
| 158      | 23  | P     | 14 16 17                          |         |    |                    |       |            |                 |
|          |     | L     | 16 34                             |         |    |                    |       |            |                 |
|          |     | F     | 19 -                              |         |    |                    |       |            |                 |
| 159      | 23  | P     | 16 31 55                          |         |    |                    |       |            |                 |
|          |     | S     | 32 54                             |         |    |                    |       |            |                 |
|          |     | L     | 33 00                             |         |    |                    |       |            |                 |
|          |     | M     | 33 12                             | 2       |    | 3                  |       |            |                 |
|          |     | F     | 38 -                              |         |    |                    |       |            |                 |
| 160      | 24  | P     | 11 57 17                          |         |    |                    |       |            |                 |
|          |     | 1S    | 58 12                             |         |    |                    |       |            |                 |
|          |     | M     | 59 00                             |         |    |                    |       |            | Vert. 1 mm.     |
|          |     | F     | 12 05 -                           |         |    |                    |       |            |                 |
| 161      | 24  | P     | 17 49 38                          |         |    |                    |       |            |                 |
|          |     | S     | 50 31                             |         |    |                    |       |            |                 |
|          |     | L     | 50 40                             |         |    |                    |       |            |                 |
|          |     | M     | 50 52                             |         |    |                    |       |            | Vert. 2mm.      |
|          |     | F     | 56 -                              |         |    |                    |       |            |                 |
| 162      | 25  | P     | 0 37 08                           |         |    |                    |       |            |                 |
|          |     | S     | 37 50                             |         |    |                    |       |            |                 |
|          |     | L     | 37 58                             |         |    |                    |       |            |                 |
|          |     | M     | 38 16                             |         |    |                    |       |            | Vert. 3 mm.     |
|          |     | F     | 43 -                              |         |    |                    |       |            |                 |
| 163      | 25  | P     | 2 20 21                           |         |    |                    |       |            |                 |
| 164      | 25  | P     | 20 00 31                          |         |    |                    |       |            |                 |
| 165      | 25  | P     | 23 59 37                          |         |    |                    |       | 1880       | Sucre 2450 Km   |
|          | 26  | SN    | 0 02 49                           |         |    |                    |       |            | P 0 00 22       |
|          |     | SE    | 02 51                             |         |    |                    |       |            |                 |
|          |     | L     | 04 36                             |         |    |                    |       |            |                 |
|          |     | M     | 05 30                             | 13      |    | 2                  |       |            |                 |

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| No.               | Día | Fases                                               | Hora<br>Tiempo medio de Greenwich                                         | Período |                 | Amplitud verdadera |                   | Distancia | NOTAS                                                      |
|-------------------|-----|-----------------------------------------------------|---------------------------------------------------------------------------|---------|-----------------|--------------------|-------------------|-----------|------------------------------------------------------------|
|                   |     |                                                     |                                                                           | NS      | EW              | Am                 | At                |           |                                                            |
| 166               | 26  | eP <sup>1</sup><br>S?<br>L<br>L<br>M<br>M<br>M<br>F | 9 20 23<br>30 31<br>48 00<br>53 00<br>10 3 18<br>06 48<br>18 12<br>11 1 - | S       | S               | μ                  | μ                 |           |                                                            |
| 167               | 26  | P<br>S<br>L<br>M<br>F                               | 14 10 35<br>11 22<br>11 32<br>11 37<br>14 -                               |         |                 |                    |                   |           |                                                            |
| 168               | 27  | P                                                   | 3 04 10                                                                   |         |                 |                    |                   |           |                                                            |
| 169               | 27  | P<br>S<br>L<br>M<br>M<br>F                          | 14 47 04<br>47 32<br>47 43<br>47 46<br>47 54<br>53 -                      | 1       | 1<br>0,5<br>0,5 | -12                | +17<br>+18<br>-12 | 210       | Sentido en Are-<br>quipa Poru<br>Sucre 565 K<br>P 14 47 32 |
| 170               | 28  | P                                                   | 0 52 55                                                                   |         |                 |                    |                   |           |                                                            |
| 171               | 28  | P                                                   | 1 27 10                                                                   |         |                 |                    |                   |           |                                                            |
| 172               | 28  | P                                                   | 9 57 28                                                                   |         |                 |                    |                   |           |                                                            |
| M A R Z O 1 9 2 9 |     |                                                     |                                                                           |         |                 |                    |                   |           |                                                            |
| 173               | 1   | P<br>L<br>M<br>F                                    | 0 37 35<br>58 13<br>58 17<br>42 -                                         |         |                 |                    |                   |           | Vert.1 mm.                                                 |
| 174               | 1   | eP<br>L<br>M<br>F                                   | 7 44 00<br>8 15 00<br>24 00<br>9 00 -                                     | 17      |                 | 2                  |                   |           | Sucre 9600 ?<br>eP 7 44 25                                 |
| 175               | 1   | P                                                   | 20 24 12                                                                  |         |                 |                    |                   |           |                                                            |
| 176               | 2   | P<br>S<br>L<br>M<br>F                               | 7 41 16<br>42 01<br>42 06<br>42 10<br>46 -                                |         |                 |                    |                   |           | Vert.1 mm.                                                 |
| 177               | 2   | P<br>F<br>F                                         | 16 41 34<br>41 56<br>44 -                                                 |         |                 |                    |                   |           |                                                            |
| 178               | 2   | P<br>F<br>F                                         | 16 55 05<br>55 51<br>58 -                                                 |         |                 |                    |                   |           |                                                            |
| 179               | 2   | P<br>F                                              | 20 29 27<br>33 -                                                          |         |                 |                    |                   |           |                                                            |
| 180               | 2   | P<br>S<br>L<br>M<br>F                               | 21 40 02<br>42 04<br>42 36<br>42 57<br>55 -                               | 9       |                 | 4                  |                   |           | Sucre P 21 40 50                                           |
| 181               | 3   | P                                                   | 5 06 11                                                                   |         |                 |                    |                   |           |                                                            |

**LA PAZ = (Bolivia)**

BOLETIN SEISMICO DEL OBSERVATORIO DEL COLEGIO SAN CALIXTO (PP. Jesuitas)

**Meš de**

~~MARZO 1989~~

[illegible]

## LA PAZ = (Bolivia)

BOLETIN SEISMICO DEL OBSERVATORIO DEL COLEGIO SAN CALIXTO (PP. Jesuitas)

Mes de

MARZO 1929

| No.                                                       | Día | Fases                                             | HORA<br>Tiempo medio de Greenwich                                                  | Período |                      | Amplitud verdadera |              | Distancia | NOTAS                         |    |   |  |  |  |               |
|-----------------------------------------------------------|-----|---------------------------------------------------|------------------------------------------------------------------------------------|---------|----------------------|--------------------|--------------|-----------|-------------------------------|----|---|--|--|--|---------------|
|                                                           |     |                                                   |                                                                                    | NS      | EW                   | AN                 | AE           |           |                               |    |   |  |  |  |               |
|                                                           |     |                                                   |                                                                                    | S       | S                    | μ                  | μ            |           |                               |    |   |  |  |  |               |
| 192                                                       | 9   | eP<br>1SE<br>SR1E<br>LE<br>LE<br>M<br>M<br>M<br>F | 11 04 35<br>15 09<br>20 14<br>33 12<br>36 27<br>40 36<br>43 54<br>59 48<br>14 00 - | 16      | 24<br>30<br>25<br>15 | 9                  | - 21<br>- 10 | 9510      | Sucre 9500 Km<br>eP 11 04 23  |    |   |  |  |  |               |
| 193                                                       | 9   | P<br>1                                            | 14 54 13<br>15 04 17                                                               |         |                      |                    |              |           |                               |    |   |  |  |  |               |
| Las demas fases dificiles de decifrar por los baroseismos |     |                                                   |                                                                                    |         |                      |                    |              |           |                               |    |   |  |  |  |               |
| 194                                                       | 10  | P                                                 | 16 54 46                                                                           |         |                      |                    |              |           |                               |    |   |  |  |  |               |
| 195                                                       | 10  | F<br>P<br>S<br>L<br>M<br>F                        | 17 10 -<br>22 00 54<br>02 26<br>02 43<br>03 04<br>10 -                             |         |                      |                    |              |           |                               |    |   |  |  |  |               |
| 196                                                       | 11  | P                                                 | 0 58 56                                                                            |         |                      |                    |              |           |                               |    |   |  |  |  |               |
| 197                                                       | 11  | P<br>S<br>LN<br>M<br>M<br>F                       | 13 31 41<br>36 33<br>40 15<br>41 40<br>43 48<br>14 1/2 -                           | 22      | 2<br>13<br>15<br>15  |                    | - 4<br>- 5   | 3120      | Sucre 3990? Km<br>eP 13 32 12 |    |   |  |  |  |               |
| 198                                                       | 11  | P                                                 | 14 51 05                                                                           |         |                      |                    |              |           |                               |    |   |  |  |  |               |
| 199                                                       | 11  | 1P<br>S<br>L<br>M<br>F                            | 19 34 15<br>35 04<br>35 09<br>35 15<br>40 -                                        |         |                      |                    |              |           | Vert. 1 mm.                   |    |   |  |  |  |               |
| 200                                                       | 11  | eP<br>1P<br>F                                     | 22 50 45<br>22 54 17<br>23 05 -                                                    |         |                      |                    |              |           |                               |    |   |  |  |  |               |
| 201                                                       | 12  | eP<br>S<br>L<br>M<br>F                            | 2 26 17<br>27 48<br>27 50<br>28 06<br>33 -                                         |         |                      |                    |              |           |                               | 12 | 1 |  |  |  | Vert. 1,5 mm. |
| 202                                                       | 12  | eP                                                | 17 35 30                                                                           |         |                      |                    |              |           |                               |    |   |  |  |  |               |
| 203                                                       | 13  | L<br>M<br>F                                       | 7 40 00<br>44 36<br>8 Ca .                                                         |         |                      |                    |              |           |                               |    |   |  |  |  |               |
| 204                                                       | 13  | 1P<br>1S<br>L<br>M<br>F                           | 17 10 02<br>11 02<br>11 15<br>11 27<br>16 -                                        | 15      | 16                   | 2                  | 1            |           |                               |    |   |  |  |  |               |
| 205                                                       | 14  | P                                                 | 18 57 06                                                                           |         |                      |                    |              |           |                               |    |   |  |  |  |               |
| 206                                                       | 15  | P<br>L<br>M<br>F                                  | 6 54 04<br>44 00<br>48 07<br>7 Ca                                                  |         |                      |                    |              |           |                               |    |   |  |  |  |               |

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BOLETIN SEISMICO DEL OBSERVATORIO DEL COLEGIO SAN CALIXTO (PP. Jesuitas)

Mes de

MARZO 1929

| No. | Día | Fases | HORA<br>Tiempo medio de Greenwich | Período |      | Amplitud verdadera |       | Distancia | NOTAS              |
|-----|-----|-------|-----------------------------------|---------|------|--------------------|-------|-----------|--------------------|
|     |     |       |                                   | NS      | EW   | Am                 | Ac    |           |                    |
|     |     |       |                                   | S       | S    | $\mu$              | $\mu$ |           |                    |
| 207 | 15  | P     | 12 46 06                          |         |      |                    |       |           |                    |
|     |     | L     | 13 13 00                          |         |      |                    |       |           |                    |
|     |     | M     | 20 36                             | 15      |      | 2                  |       |           |                    |
|     |     | F     | 40 -                              |         |      |                    |       |           |                    |
| 208 | 15  | eP    | 18 06 43                          |         |      |                    |       |           |                    |
|     |     | L     | 22 00                             |         |      |                    |       |           |                    |
|     |     | M     | 26 40                             | 18      |      | 2                  |       |           |                    |
|     |     | M     | 28 36                             | 16      |      | 1                  |       |           |                    |
|     |     | F     | 41 -                              |         |      |                    |       |           |                    |
| 209 | 15  | eP    | 18 57 39                          |         |      |                    |       | 600       |                    |
|     |     | S     | 58 45                             |         |      |                    |       |           |                    |
|     |     | L     | 58 55                             |         |      |                    |       |           |                    |
|     |     | M     | 59 15                             |         |      |                    |       |           |                    |
|     |     | F     | 19 04 -                           |         |      |                    |       |           | Vert. 1,5 mm.      |
| 210 | 15  | iP    | 22 29 38                          |         |      |                    |       |           | Suore P 22 30 12   |
|     |     | L     | 30 03                             |         |      |                    |       |           |                    |
|     |     | M     | 30 03                             | 2       | 1    | -26                | +29   |           |                    |
|     |     | M     | 30 23                             |         | 1    |                    | +24   |           |                    |
|     |     | F     | 43 -                              |         |      |                    |       |           |                    |
| 211 | 16  | P     | 0 42 41                           |         |      |                    |       |           |                    |
| 212 | 16  | eP    | 3 29 28                           |         |      |                    |       |           | Suore P 3 38 27    |
|     |     | L     | 38 00                             |         |      |                    |       |           |                    |
|     |     | M     | 43 06                             | 10      |      | 0,8                |       |           |                    |
|     |     | F     | 4 06 -                            |         |      |                    |       |           |                    |
| 213 | 16  | eP    | 8 14 41                           |         |      |                    |       |           |                    |
| 214 | 18  | eP    | 2 02 54                           |         |      |                    |       |           |                    |
| 215 | 18  | eP    | 4 08 10                           |         |      |                    |       | 870       |                    |
|     |     | S     | 09 46                             |         |      |                    |       |           |                    |
|     |     | L     | 10 14                             |         |      |                    |       |           |                    |
|     |     | M     | 11 20                             |         | 3-12 |                    | 2     |           |                    |
|     |     | F     | 22 -                              |         |      |                    |       |           |                    |
| 216 | 18  | PE    | 7 02 56                           |         |      |                    |       |           | Sentido en Arequi- |
|     |     | P     | 03 01                             |         |      |                    |       |           | pa, Peru.          |
|     |     | iS    | 03 37                             |         | 1    |                    | + 20  |           | Suore 710          |
|     |     | M     | 05 42                             | 2       | 2    | + 76               | - 47  |           | P 7 03 44          |
|     |     | M     | 03 58                             |         | 2    |                    | + 50  |           |                    |
|     |     | M     | 04 25                             |         | 2    |                    | - 52  |           |                    |
|     |     | F     | 30 -                              |         |      |                    |       |           |                    |
| 217 | 18  | iP    | 9 41 09                           |         |      |                    |       | 450       | Suore P 9 40 43    |
|     |     | iS    | 41 59                             | 4       | 4    | + 5                | + 4   |           |                    |
|     |     | L     | 42 13                             |         |      |                    |       |           |                    |
|     |     | M     | 42 49                             |         | 7    |                    | - 5   |           |                    |
|     |     | F     | 55 -                              |         |      |                    |       |           |                    |
| 218 | 18  | P     | 15 31 34                          |         |      |                    |       |           | Fases debiles      |
|     |     | L     | 46 00                             |         |      |                    |       |           | Fuertes micros.    |
|     |     | M     | 16 10 -                           |         |      |                    |       |           |                    |
| 219 | 18  | P     | 23 41 22                          |         |      |                    |       |           |                    |
| 220 | 19  | P     | 3 41 24                           |         |      |                    |       |           |                    |
|     |     | L     | 41 27                             |         |      |                    |       |           |                    |
|     |     | F     | 43 -                              |         |      |                    |       |           |                    |
| 221 | 19  | P     | 12 38 48                          |         |      |                    |       | 545       |                    |
|     |     | S     | 39 48                             |         |      |                    |       |           |                    |
|     |     | L     | 39 52                             |         |      |                    |       |           |                    |
|     |     | F     | 44 -                              |         |      |                    |       |           |                    |

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| No. | Día | Fases | HORA<br>Tiempo medio de Greenwich | Período |    | Amplitud verdadera |       | Distancia | NOTAS           |
|-----|-----|-------|-----------------------------------|---------|----|--------------------|-------|-----------|-----------------|
|     |     |       |                                   | NS      | EW | AN                 | AE    |           |                 |
|     |     |       |                                   | S       | S  | $\mu$              | $\mu$ |           |                 |
| 222 | 19  | P     | 18 25 11                          |         |    |                    |       |           |                 |
|     |     | S     | 25 30                             |         |    |                    |       |           |                 |
|     |     | M     | 25 44                             |         |    |                    |       |           |                 |
|     |     | F     | 29 -                              |         |    |                    |       |           | Vert. 1 mm.     |
| 223 | 19  | ePE   | 21 01 05                          |         |    |                    |       | 4125      | Sucre 4600 ?    |
|     |     | EPN   | 01 08                             |         |    |                    |       |           | P? 21 01 32     |
|     |     | PR1E  | 02 16                             |         | 6  |                    |       |           |                 |
|     |     | PR2E  | 02 39                             |         | 7  |                    |       |           |                 |
|     |     | 1SE   | 06 57                             |         | 11 |                    | 2     |           |                 |
|     |     | 1SN   | 07 05                             |         |    |                    |       |           |                 |
|     |     | 1SR2E | 09 40                             |         | 15 |                    | 7     |           |                 |
|     |     | LN    | 11 42                             | 25      |    | 28                 |       |           |                 |
|     |     | LE    | 12 34                             |         | 25 |                    | - 26  |           |                 |
|     |     | M     | 14 48                             | 20      |    | + 24               |       |           |                 |
|     |     | M     | 15 36                             | 22      |    | - 26               |       |           |                 |
|     |     | F     | 22 40 Ca                          |         |    |                    |       |           |                 |
| 224 | 20  | eP    | 6 31 17                           |         |    |                    |       | 1910      |                 |
|     |     | SE    | 34 32                             |         |    |                    |       |           |                 |
|     |     | L     | 36 10                             |         |    |                    |       |           |                 |
|     |     | M     | 37 17                             |         | 8  |                    | 1     |           |                 |
|     |     | F     | 50 -                              |         |    |                    |       |           |                 |
| 225 | 20  | P     | 12 28 15                          |         |    |                    |       |           |                 |
| 226 | 20  | eP    | 13 35 37                          |         |    |                    |       |           | Fases debiles   |
|     |     | F     | 54 -                              |         |    |                    |       |           |                 |
| 227 | 20  | eP?   | 21 30 41                          |         |    |                    |       |           |                 |
| 228 | 20  | P     | 22 50 05                          |         |    |                    |       | 410       | Sucre P 22 4947 |
|     |     | S     | 50 50                             |         |    |                    |       |           |                 |
|     |     | L     | 51 08                             |         |    |                    |       |           |                 |
|     |     | M     | 51 39                             |         | 6  |                    | - 2   |           |                 |
|     |     | F     | 56 -                              |         |    |                    |       |           |                 |
| 229 | 21  | P     | 0 04 16                           |         |    |                    |       |           |                 |
|     |     | L     | 04 46                             |         |    |                    |       |           |                 |
|     |     | M     | 04 50                             |         |    |                    |       |           | Vert. 0,5 mm.   |
|     |     | F     | 09 -                              |         |    |                    |       |           |                 |
| 230 | 21  | ePN   | 2 44 20                           |         |    |                    |       | 4025      | Sucre 4500      |
|     |     | ePE   | 44 21                             |         |    |                    |       |           | P 2 44 49       |
|     |     | 1P    | 44 26                             |         |    |                    |       |           |                 |
|     |     | PR2N  | 45 46                             | 7       |    |                    |       |           |                 |
|     |     | 1SE   | 50 10                             |         | 14 |                    | 5     |           |                 |
|     |     | eSR2N | 52 36                             |         |    |                    |       |           |                 |
|     |     | 1SR2E | 52 49                             |         | 15 |                    | 7     |           |                 |
|     |     | L     | 55 40                             | 20      |    | 9                  |       |           |                 |
|     |     | M     | 58 52                             | 20      |    | 12                 |       |           |                 |
|     |     | M     | 3 00 26                           |         | 13 |                    | 14    |           |                 |
|     |     | F     | 4 1 Ca                            |         |    |                    |       |           |                 |
| 231 | 21  | 1     | 17 34 19                          |         |    |                    |       |           |                 |
| 232 | 22  | 1P    | 1 20 04                           |         |    |                    |       |           |                 |
| 233 | 23  | 1P    | 1 36 05                           |         |    |                    |       |           |                 |
|     |     | 1S    | 36 31                             |         |    |                    |       |           |                 |
|     |     | M     | 36 35                             |         |    |                    |       |           |                 |
|     |     | F     | 40 -                              |         |    |                    |       |           | Vert. 7 mm.     |
| 234 | 23  | P     | 6 12 50                           |         |    |                    |       |           |                 |
|     |     | S     | 13 30                             |         |    |                    |       |           |                 |
|     |     | F     | 18 -                              |         |    |                    |       |           |                 |

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| No. | Día | Fases | HORA<br>Tiempo medio de Greenwich | Período |    | Amplitud verdadera |       | Distancia | NOTAS            |
|-----|-----|-------|-----------------------------------|---------|----|--------------------|-------|-----------|------------------|
|     |     |       |                                   | NS      | EW | Am                 | Am    |           |                  |
| 235 | 23  | eP    | 20 20 05                          | S       | S  | $\mu$              | $\mu$ |           |                  |
| 236 | 24  | P     | 0 32 57                           |         |    |                    |       |           |                  |
| 237 | 24  | e     | 22 03 44                          |         |    |                    |       |           |                  |
| 238 | 25  | P     | 10 57 07                          |         |    |                    |       |           |                  |
| 239 | 27  | P     | 12 47 58                          |         |    |                    |       |           |                  |
|     |     | iS    | 48 35                             |         |    |                    |       |           |                  |
|     |     | L     | 48 42                             |         |    |                    |       |           |                  |
|     |     | M     | 48 45                             |         |    |                    |       |           |                  |
|     |     | F     | 57 -                              |         |    |                    |       |           | Vort. 1 mm.      |
| 240 | 27  | eP    | 14 59 46                          |         |    |                    |       | 1470      |                  |
|     |     | SE    | 15 02 20                          |         |    |                    |       |           |                  |
|     |     | L     | 02 40                             |         |    |                    |       |           |                  |
|     |     | M     | 03 33                             | 11      | 7  | - 3                | - 2   |           |                  |
|     |     | F     | 12 -                              |         |    |                    |       |           |                  |
| 241 | 27  | P     | 22 22 10                          |         |    |                    |       |           |                  |
| 242 | 28  | eP?   | 3 17 53                           |         |    |                    |       |           |                  |
|     |     | i     | 18 53                             |         |    |                    |       |           |                  |
|     |     | L     | 29 00                             |         |    |                    |       |           |                  |
|     |     | M     | 35 12                             |         | 18 |                    | 4     |           |                  |
|     |     | F     | 4 0a .                            |         |    |                    |       |           |                  |
| 243 | 28  | P     | 6 38 29                           |         |    |                    |       |           |                  |
|     |     | S     | 40 35                             |         |    |                    |       | 1180      |                  |
|     |     | L     | 40 55                             |         |    |                    |       |           |                  |
|     |     | M     | 41 15                             |         | 8  |                    | 1,6   |           |                  |
|     |     | F     | 54 -                              |         |    |                    |       |           |                  |
| 244 | 28  | iPE   | 20 26 54                          |         |    |                    |       | 5355      |                  |
|     |     | PN    | 26 55                             |         |    |                    |       |           | Sucro 5035       |
|     |     | PR1N  | 28 48                             | 12      |    |                    |       |           | P 20 26 21       |
|     |     | PR2N  | 29 25                             | 10      |    | 1                  |       |           |                  |
|     |     | PR2E  | 29 44                             |         | 10 |                    | 1     |           |                  |
|     |     | iSE   | 34 55                             |         | 8  |                    | - 7   |           |                  |
|     |     | PSN   | 35 12                             |         |    |                    |       |           |                  |
|     |     | SR1E? | 38 03                             |         | 11 |                    | - 2   |           |                  |
|     |     | SR2E  | 39 35                             |         | 16 |                    | - 5   |           |                  |
|     |     | LE    | 41 52                             |         | 28 |                    |       |           |                  |
|     |     | M     | 46 42                             |         | 14 |                    | - 5   |           |                  |
|     |     | M     | 48 30                             | 15      |    | - 8                |       |           |                  |
|     |     | M     | 53 54                             | 14      |    | - 6                |       |           |                  |
|     |     | M     | 55 00                             |         | 15 |                    | - 7   |           |                  |
|     |     | M     | 57 30                             |         | 15 |                    | + 7   |           |                  |
|     |     | M     | 21 03 18                          | 15      |    | - 5                |       |           |                  |
|     |     | F     | 22 0a .                           |         |    |                    |       |           |                  |
| 245 | 29  | eP    | 3 48 10                           |         |    |                    |       | 1740      |                  |
|     |     | S     | 51 10                             |         |    |                    |       |           | Sucro L 3 49 40  |
|     |     | L     | 52 12                             |         |    |                    |       |           |                  |
|     |     | M     | 52 48                             |         | 9  |                    | 0,8   |           |                  |
|     |     | F     | 4 05 -                            |         |    |                    |       |           |                  |
| 246 | 29  | eP    | 14 04 34                          |         |    |                    |       |           | Sucro P 14 04 21 |
|     |     | iS    | 05 13                             |         |    |                    |       |           |                  |
|     |     | L     | 05 18                             |         |    |                    |       |           |                  |
|     |     | M     | 05 28                             |         |    |                    |       |           |                  |
|     |     | F     | 09 -                              |         |    |                    |       |           | Vort. 5 mm.      |
| 247 | 30  | eP    | 22 03 39                          |         |    |                    |       |           |                  |
|     |     | F     | 13 -                              |         |    |                    |       |           |                  |

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| No.            | Día | Fases | HORA<br>Tiempo medio de Greenwich | Período |    | Amplitud verdadera |       | Distancia | NOTAS                    |
|----------------|-----|-------|-----------------------------------|---------|----|--------------------|-------|-----------|--------------------------|
|                |     |       |                                   | NS      | EW | Am                 | Ar    |           |                          |
| 248            | 31  | P     | 3 19 14                           | S       | S  | $\mu$              | $\mu$ | 5860?     |                          |
|                |     | S?    | 26 42                             |         |    |                    |       |           |                          |
|                |     | LN    | 33 00                             |         |    |                    |       |           |                          |
|                |     | M     | 37 56                             | 13      |    | 3,5                |       |           |                          |
|                |     | M     | 41 12                             |         | 12 |                    | - 2   |           |                          |
|                |     | F     | 4 30 Ca                           |         |    |                    |       |           |                          |
| 249            | 31  | eP    | 20 37 13                          |         |    |                    |       |           |                          |
| A B R I L 1929 |     |       |                                   |         |    |                    |       |           |                          |
| 250            | 1   | P     | 8 42 42                           |         |    |                    |       |           |                          |
| 251            | 3   | P     | 0 52 22                           |         |    |                    |       |           |                          |
| 252            | 3   | P     | 17 29 54                          |         |    |                    |       |           |                          |
|                |     | L     | 30 47                             |         |    |                    |       |           |                          |
|                |     | M     | 31 04                             |         |    |                    |       |           |                          |
|                |     | F     | 36 -                              |         |    |                    |       |           |                          |
| 253            | 4   | eP    | 5 23 13                           |         |    |                    |       |           |                          |
| 254            | 5   | eP    | 8 31 50                           |         |    |                    |       |           |                          |
| 255            | 5   | eP    | 19 23 02                          |         |    |                    |       | 1120      | Sucre P 19 26 52         |
|                |     | S     | 30 02                             |         |    |                    |       |           |                          |
|                |     | L     | 30 34                             |         |    |                    |       |           |                          |
|                |     | M     | 31 27                             |         |    |                    |       |           |                          |
|                |     | F     | 42 -                              |         |    |                    |       |           |                          |
| 256            | 7   | P     | 16 05 15                          |         |    |                    |       |           |                          |
| 257            | 7   | eP    | 19 39 52                          |         |    |                    |       |           | Sentido en Arequipa Peru |
|                |     | eSN   | 49 02                             |         |    |                    |       | 3050 ?    | Sucre P 19 42 10         |
|                |     | iSE   | 49 13                             |         | 13 |                    | - 2   |           |                          |
|                |     | L     | 20 00 00                          |         |    |                    |       |           |                          |
|                |     | M     | 05 58                             |         | 16 |                    | 3     |           |                          |
|                |     | M     | 08 40                             |         | 14 |                    | 2     |           |                          |
|                |     | F     | 21 Ca .                           |         |    |                    |       |           |                          |
| 258            | 8   | P     | 2 26 22                           |         |    |                    |       |           |                          |
|                |     | L     | 26 47                             |         |    |                    |       |           |                          |
|                |     | M     | 27 00                             |         |    |                    |       |           |                          |
|                |     | F     | 31 -                              |         |    |                    |       |           | Vert. 2 mm.              |
| 259            | 8   | P     | 7 34 22                           |         |    |                    |       |           |                          |
| 260            | 8   | iP    | 10 36 02                          |         |    |                    |       |           |                          |
|                |     | iS?   | 41 40                             |         |    |                    |       |           | Fases muy con-           |
|                |     | S     | 46 35                             |         |    |                    |       |           | fusas.                   |
|                |     | F     | 11 -                              |         |    |                    |       |           |                          |
| 261            | 9   | L     | 4 47 00                           |         |    |                    |       |           |                          |
|                |     | M     | 51 32                             |         | 18 |                    | 2     |           |                          |
|                |     | M     | 56 06                             |         | 17 |                    | 2     |           |                          |
|                |     | F     | 5 -                               |         |    |                    |       |           |                          |
| 262            | 10  | P     | 1 36 42                           |         |    |                    |       | 820       |                          |
|                |     | S     | 38 11                             |         |    |                    |       |           |                          |
|                |     | L     | 38 40                             |         |    |                    |       |           |                          |
|                |     | M     | 38 52                             |         |    |                    |       |           |                          |
|                |     | F     | 48 -                              |         |    |                    |       |           | Vert. 3,5 mm.            |
| 263            | 10  | P     | 19 23 12                          |         |    |                    |       |           |                          |
|                |     | L     | 23 55                             |         |    |                    |       |           |                          |
|                |     | M     | 24 35                             |         |    |                    |       |           |                          |
|                |     | F     | 29 -                              |         |    |                    |       |           | Vert. 2 mm.              |

LA PAZ = (Bolivia)

BOLETIN SEISMICO DEL OBSERVATORIO DEL COLEGIO SAN CALIXTO (PP. Jesuitas)

Longitud W. Greenwich { 68° 7' 57",7  
4h 32m 31s.85  
Latitud S. 16° 29' 43"  
Altura sobre el mar 3658 m.  
Subsuelo: aluvión antiguo

Mes de ABRIL de 1928

|                            |  | Componente | Masa       | To  | A     | ε: 1 | r<br>To <sup>3</sup> |
|----------------------------|--|------------|------------|-----|-------|------|----------------------|
| Péndulo horizontal Bifilar |  | N. S.      | 2,000 kgs. | 14  | 180   | 8.8  | 0.002                |
| Instrumentos: , ,          |  | E. W       | 3,500 ,    | 12  | 300   | 8,2  | 0.002                |
| , vertical S. Calixto      |  | NS y EW    | 1,500 ,    | 2,4 | 1.100 | 2    | 0.001                |

| No. | Día | Fases           | HORA<br>Tiempo medio de Greenw. | Período |    | Amplitud verdadera |     | Distancia  | NOTAS             |
|-----|-----|-----------------|---------------------------------|---------|----|--------------------|-----|------------|-------------------|
|     |     |                 |                                 | NS      | EW | AN                 | AE  |            |                   |
|     |     |                 |                                 | S       | S  | μ                  | μ   | kms.       |                   |
| 264 | 11  | 1929<br>Abril P | 8 19 53                         |         |    |                    |     | ABRIL 1929 |                   |
|     |     | S               | 20 35                           |         |    |                    |     | ± 5 s.     |                   |
|     |     | F               | 26                              |         |    |                    |     |            |                   |
| 265 | 11  | P               | 23 17 01                        |         |    |                    |     |            |                   |
|     |     | IS              | 17 43                           |         |    |                    |     |            |                   |
|     |     | L               | 17 54                           |         |    |                    |     |            |                   |
|     |     | M               | 18 11                           |         |    |                    |     |            | Vert. 2,5 mm.     |
|     |     | F               | 23 -                            |         |    |                    |     |            |                   |
| 266 | 13  | oP              | 6 55 18                         |         |    |                    |     | 6130       | Sucre 5310        |
|     |     | oSE             | 7 01 01                         |         |    |                    |     |            | P 6 52 56         |
|     |     | eSN             | 01 06                           |         |    |                    |     |            |                   |
|     |     | LN              | 10 30                           | 27      |    |                    |     |            |                   |
|     |     | L               | 14 24                           | 20      | 20 | 4                  | 3   |            |                   |
|     |     | M               | 17 16                           | 18      | 16 | 3                  | 3   |            |                   |
|     |     | M               | 22 24                           |         | 15 |                    | 1   |            |                   |
|     |     | M               | 31 42                           | 20      |    | 4                  |     |            |                   |
|     |     | F               | 8 Ca .                          |         |    |                    |     |            |                   |
| 267 | 13  | P               | 9 53 11                         |         |    |                    |     |            |                   |
| 268 | 13  | 1P              | 13 10 03                        |         |    |                    |     |            |                   |
| 269 | 13  | P               | 21 15 04                        |         |    |                    |     | 5590       | Sucre P 21 14 40  |
|     |     | 1SE             | 22 18                           |         | 7  |                    | -2  |            |                   |
|     |     | i               | 23 11                           |         | 10 |                    | +4  |            |                   |
|     |     | L               | 30 18                           | 37      |    |                    |     |            |                   |
|     |     | M               | 55 33                           |         | 18 |                    | - 5 |            |                   |
|     |     | M               | 41 03                           | 13      |    | 4                  |     |            |                   |
|     |     | F               | 22 1 Ca                         |         |    |                    |     |            |                   |
| 270 | 14  | oP?             | 16 19 02                        |         |    |                    |     |            |                   |
| 271 | 15  | P               | 1 42 45                         |         |    |                    |     |            |                   |
| 272 | 15  | oP              | 2 03 20                         |         |    |                    |     |            |                   |
| 273 | 15  | oP              | 14 56 28                        |         |    |                    |     |            |                   |
| 274 | 15  | P               | 16 14 56                        |         |    |                    |     |            |                   |
| 275 | 16  | oP              | 1 12 38                         |         |    |                    |     |            |                   |
| 276 | 16  | P               | 2 20 30                         |         |    |                    |     |            | Fuertes microsis- |
|     |     | S               | 22 05                           |         |    |                    |     |            | mos               |
|     |     | L               | 22 28                           |         |    |                    |     |            |                   |
|     |     | M               | 22 42                           |         |    |                    |     |            | Vert. 2 mm.       |
|     |     | F               |                                 |         |    |                    |     |            |                   |
| 277 | 16  | P               | 5 40 43                         |         |    |                    |     |            |                   |
| 278 | 16  | P               | 14 06 20                        |         |    |                    |     |            |                   |
|     |     | SN              | 09 03                           |         |    |                    |     |            |                   |
|     |     | 1SE             | 09 12                           |         |    |                    |     |            | Epico. 31°5 S.    |
|     |     | LN              | 10 07                           |         |    |                    |     |            | 39° W.            |
|     |     | M               | 11 42                           |         | 11 |                    | +15 |            | La Paz, Sucre, La |
|     |     | M               | 12 56                           | 10      |    | - 3                |     |            | Plata             |
|     |     | F               | 40 -                            |         |    |                    |     |            | Sucre P 14 06 06  |
| 279 | 17  | P               | 6 24 10                         |         |    |                    |     | 2010       | 1500 K.           |
|     |     | oSE             | 27 55                           |         |    |                    |     |            | Sucre P 6 23 41   |
|     |     | L               | 29 25                           |         |    |                    |     |            |                   |
|     |     | M               | 31 20                           | 13      |    | -3,5               |     |            |                   |
|     |     | M               | 32 30                           |         | 13 |                    | + 2 |            |                   |
|     |     | F               | 7 Ca .                          |         |    |                    |     |            |                   |
| 280 | 17  | P               | 9 13 32                         |         |    |                    |     |            |                   |
| 281 | 17  | P               | 18 53 49                        |         |    |                    |     |            | Fuerte agitacion  |
| 282 | 20  | P               | 0 53 47                         |         |    |                    |     |            | microseismica.    |
| 283 | 20  | P               | 3 26 56                         |         |    |                    |     |            |                   |

# LA PAZ = (Bolivia)

BOLETIN SEISMICO DEL OBSERVATORIO DEL COLEGIO SAN CALIXTO (PP. Jesuitas)

Mes de

A B R I L 1 9 2 9

| No. | Día | Fases | HORA<br>Tiempo medio de Greenwich | Período |    | Amplitud verdadera |       | Distancia | NOTAS            |
|-----|-----|-------|-----------------------------------|---------|----|--------------------|-------|-----------|------------------|
|     |     |       |                                   | NS      | EW | Am                 | Ae    |           |                  |
| 284 | 21  | P     | 3 44 29                           | S       | S  | $\mu$              | $\mu$ |           |                  |
| 285 | 21  | P     | 12 47 47                          |         |    |                    |       |           |                  |
| 286 | 22  | P     | 5 07 43                           |         |    |                    |       |           |                  |
|     |     | IP -  | 07 50                             |         |    |                    |       |           |                  |
|     |     | iS    | 03 37 5                           |         | 3  |                    | + 4   |           |                  |
|     |     | M     | 09 03                             |         |    |                    |       |           | Vert. 6 mm.      |
|     |     | F     | 14 -                              |         |    |                    |       |           |                  |
| 287 | 22  | oP    | 23 25 18                          |         |    |                    |       |           | Fuente agitacion |
| 288 | 23  | oP    | 1 02 09                           |         |    |                    |       |           | microseismica.   |
| 289 | 23  | oP    | 7 51 32                           |         |    |                    |       |           |                  |
| 290 | 23  | P     | 8 36 15                           |         |    |                    |       |           |                  |
| 291 | 23  | P     | 21 40 58                          |         |    |                    |       |           |                  |
|     |     | S     | 43 59                             |         |    |                    |       |           |                  |
|     |     | L     | 44 50                             |         |    |                    |       |           |                  |
|     |     |       | 45 52                             |         |    |                    |       |           | Vert. 1 mm.      |
|     |     | F     | 52 -                              |         |    |                    |       |           |                  |
| 292 | 24  | P     | 1 21 38                           |         |    |                    |       |           |                  |
|     |     | S     | 22 27                             |         |    |                    |       |           |                  |
|     |     | L     | 22 38                             |         |    |                    |       |           |                  |
|     |     |       | 23 07                             |         |    |                    |       |           | Vert. 2 mm.      |
| 293 | 24  | IP    | 6 10 11                           |         |    |                    |       |           |                  |
|     |     | iS    | 10 56,8                           |         |    |                    |       |           |                  |
|     |     | M     | 10 46                             |         |    |                    |       |           | Vert. 121 mm.    |
|     |     | M     | 10 48                             | 1       |    |                    | +17   |           |                  |
|     |     | M     | 10 55                             | 1       |    |                    | +20   |           |                  |
|     |     | F     | 16 -                              |         |    |                    |       |           |                  |
| 294 | 25  | PN    | 17 28 42                          |         |    |                    |       |           | Sucre P 17 28 0  |
|     |     | P     | 28 49                             |         |    |                    |       |           |                  |
|     |     | S     | 29 38                             |         |    |                    |       |           |                  |
|     |     | M     | 29 45                             |         |    |                    |       |           | Vert. 2 mm.      |
|     |     | F     | 54 -                              |         |    |                    |       |           |                  |
| 295 | 25  | P     | 17 49 58                          |         |    |                    |       |           |                  |
| 296 | 25  | P     | 20 26 28                          |         |    |                    |       |           |                  |
| 297 | 27  | 1P    | 11 48 55                          |         |    |                    |       | 3790      | Sucre 4035       |
|     |     | oS    | 54 29                             |         |    |                    |       |           | P? 11 49 48      |
|     |     | L     | 12 01 30                          |         |    |                    |       |           |                  |
|     |     | M     | 04 30                             | 13      |    |                    | - 2   |           |                  |
|     |     | F     | 52 -                              |         |    |                    |       |           |                  |
| 298 | 29  | P     | 13 59 58                          |         |    |                    |       |           | Sucre P 13 59 10 |
|     |     | S     | 14 01 03                          |         |    |                    |       |           |                  |
|     |     | L     | 01 18                             |         |    |                    |       |           |                  |
|     |     | M     | 01 38                             |         |    |                    |       |           | Vert. 2,5 mm.    |
|     |     | F     | 08 -                              |         |    |                    |       |           |                  |
| 299 | 30  | P     | 12 16 30                          |         |    |                    |       |           | Sucre P 12 15 46 |
|     |     | S     | 17 45                             |         |    |                    |       |           |                  |
|     |     | L     | 18 05                             |         |    |                    |       |           |                  |
|     |     | M     | 18 48                             | 7       |    |                    | 1     |           |                  |
|     |     | F     | 30 -                              |         |    |                    |       |           |                  |
| 300 | 30  | P     | 16 06 55                          |         |    |                    |       |           |                  |

 P.M. Doscoates S.J.  
 E. Tortosa Asiat.

LA PAZ - (Bolivia)

BOLETIN SEISMICO DEL OBSERVATORIO DEL COLEGIO SAN CALIXTO (PP. Jesuitas)

Longitud W. Greenwich 68° 7' 57",7  
4h 32m 31s,85  
Latitud S. 16° 29' 43"  
Altura sobre el mar 3658 m.  
Subsuelo: aluvión antiguo

Mes de MAYO de 1929

|                            |  | Componente | Masa       | To | A     | ε: 1 | r<br>To² |
|----------------------------|--|------------|------------|----|-------|------|----------|
| Péndulo horizontal Bifilar |  | N. S.      | 2,000 kgs. | 14 | 180   | 3,3  | 0.002    |
| Instrumentos: " "          |  | E. W       | 3,500 "    | 12 | 200   | 3,2  | 0.002    |
| " vertical S. Calixto      |  | NS y EW    | 1,500 "    | 24 | 1.100 | 2    | 0.001    |

| No. | Día        | Fases  | HORA<br>Tiempo medio de Greenw. | Período |    | Amplitud verdadera |      | Distancia<br>kms. | NOTAS            |
|-----|------------|--------|---------------------------------|---------|----|--------------------|------|-------------------|------------------|
|     |            |        |                                 | NS      | EW | AN                 | AE   |                   |                  |
| 301 | 1 May 1929 | P      | 3 58 23                         | S       | S  | μ                  | μ    |                   |                  |
|     |            | L      | 59 37                           |         |    |                    |      |                   |                  |
|     |            | M      | 59 55                           |         |    |                    |      |                   |                  |
|     |            | F      | 9 06 -                          |         |    |                    |      |                   | Vert. 3 mm.      |
| 302 | 1          | iP'    | 15 56 37                        |         |    |                    |      |                   | Epic. 41°N       |
|     |            | PR1N   | 59 43                           |         |    |                    |      |                   | 53°E. Geo-       |
|     |            | PR2 E  | 16 03 16                        |         |    |                    |      |                   | detic Survey     |
|     |            | ScPcS  | 04 51                           |         |    |                    |      |                   | Epic. 38° N      |
|     |            | ScPcSP | 10 30                           |         |    |                    |      |                   | 59° E.           |
|     |            | SR1E?  | 16 21                           |         |    |                    |      |                   | La Paz &.        |
|     |            | LE     | 43 00                           |         | 27 |                    |      |                   |                  |
|     |            | M      | 54 40                           |         | 16 |                    | + 18 |                   |                  |
|     |            | M      | 58 00                           | 17      | 16 | +27                | - 23 |                   |                  |
|     |            | M      | 17 01 18                        |         | 16 |                    | - 30 |                   |                  |
|     |            | M      | 08 56                           |         | 17 |                    | + 18 |                   |                  |
|     |            | M      | 10 50                           |         | 15 |                    | - 13 |                   |                  |
| 303 | 1          | F      | 19 Ca .                         |         |    |                    |      |                   |                  |
|     |            | P      | 22 07 18,5                      |         |    |                    |      | 1680              | Sur del Ecuador  |
|     |            | iSN    | 10 13                           |         |    |                    |      |                   | Sucre 2090       |
|     |            | SE     | 10 18                           |         |    |                    |      |                   | P 22 08 00       |
|     |            | L      | 11 26                           |         |    |                    |      |                   |                  |
|     |            | M      | 12 00                           |         | 10 |                    | + 21 |                   |                  |
|     |            | M      | 12 56                           |         | 13 |                    | - 35 |                   |                  |
|     |            | M      | 13 28                           |         | 12 |                    | + 34 |                   |                  |
|     |            | M      | 15 46                           |         | 3  |                    | - 21 |                   |                  |
|     |            | F      | 23 Ca .                         |         |    |                    |      |                   |                  |
| 304 | 2          | P      | 3 51 24                         |         |    |                    |      |                   |                  |
| 305 | 2          | P      | 13 15 53                        |         |    |                    |      |                   |                  |
| 306 | 3          | P      | 19 15 15                        |         |    |                    |      |                   |                  |
|     |            | i      | 15 30,5                         |         |    |                    |      |                   |                  |
|     |            | L      | 20 23                           |         |    |                    |      |                   |                  |
|     |            | M      | 22 21                           |         | 10 |                    | 1    |                   |                  |
|     |            | F      | 32 -                            |         |    |                    |      |                   |                  |
| 307 | 3          | P      | 22 15 48                        |         |    |                    |      |                   |                  |
| 308 | 4          | P      | 3 27 23                         |         |    |                    |      |                   |                  |
|     |            | M      | 27 58                           |         |    |                    |      |                   | Vert. 3 mm.      |
|     |            | F      | 32 -                            |         |    |                    |      |                   |                  |
| 309 | 4          | P      | 20 42 34                        |         |    |                    |      |                   |                  |
| 310 | 6          | P      | 0 51 50                         |         |    |                    |      |                   | Sucre P 0 51 25  |
|     |            | iS     | 52 48                           |         |    |                    |      |                   |                  |
|     |            | L      | 52 55                           |         |    |                    |      |                   |                  |
|     |            | M      | 53 02                           |         |    |                    |      |                   | Vert. 2,5 mm.    |
|     |            | F      | 1 05 -                          |         |    |                    |      |                   |                  |
| 311 | 6          | P      | 5 28 40                         |         |    |                    |      |                   | Sucre P 5 28 39  |
| 312 | 6          | P      | 18 54 03                        |         |    |                    |      |                   | Fuerte agitacion |
|     |            | L      | 57 53                           |         |    |                    |      |                   | microseismica    |
|     |            | M      | 58 30                           |         | 12 |                    | - 2  |                   |                  |
|     |            | F      | 19 10 -                         |         |    |                    |      |                   |                  |
| 313 | 6          | P      | 19 01 39                        |         |    |                    |      |                   |                  |
| 314 | 7          | P      | 7 59 05                         |         |    |                    |      |                   |                  |
|     |            | B      | 8 01 27                         |         |    |                    |      |                   |                  |
|     |            | L      | 02 07                           |         |    |                    |      |                   |                  |
|     |            | M      | 02 47                           |         |    |                    |      |                   | Vert. 2 mm.      |
|     |            | F      | 10 -                            |         |    |                    |      |                   |                  |



# LA PAZ - (Bolivia)

BOLETIN SEISMICO DEL OBSERVATORIO DEL COLEGIO SAN CALIXTO (PP. Jesuitas)

Mes de

M A Y O 1 9 2 9

| No. | Dia | Fases          | HORA<br>Tiempo medio de Greenwich | Periodo |    | Amplitud verdadera |       | Distancia | NOTAS                                                  |
|-----|-----|----------------|-----------------------------------|---------|----|--------------------|-------|-----------|--------------------------------------------------------|
|     |     |                |                                   | NS      | EW | Am                 | At    |           |                                                        |
|     |     |                |                                   | S       | S  | $\mu$              | $\mu$ |           |                                                        |
| 315 | 7   | P <sup>r</sup> | 16 55 06                          |         |    |                    |       |           | Sucre P'1655 03                                        |
|     |     | L              | 17 51 00                          |         | 25 |                    |       |           |                                                        |
|     |     | M              | 18 00 16                          |         | 18 |                    | 2     |           |                                                        |
|     |     | M              | 10 06                             | 22      |    | 5                  |       |           |                                                        |
|     |     | M              | 14 24                             |         | 20 |                    | 2     |           |                                                        |
|     |     | M              | 19 06 .                           |         |    |                    |       |           |                                                        |
| 316 | 7   | P              | 21 32 36                          |         |    |                    |       |           |                                                        |
| 317 | 8   | P              | 19 56 58                          |         |    |                    |       |           | Sucre P 19 57 00                                       |
|     |     | i              | 58 36                             |         |    |                    |       |           |                                                        |
|     |     | F              | 20 07 -                           |         |    |                    |       |           |                                                        |
| 318 | 9   | P              | 19 42 29                          |         |    |                    |       |           |                                                        |
| 319 | 10  | P              | 0 55 53                           |         |    |                    |       |           |                                                        |
| 320 | 10  | P              | 13 16 39                          |         |    |                    |       |           |                                                        |
|     |     | L              | 17 47                             |         |    |                    |       |           |                                                        |
|     |     | M              | 17 57                             |         |    |                    |       |           | Vert. 2 mm.                                            |
|     |     | F              | 23 -                              |         |    |                    |       |           |                                                        |
| 321 | 11  | P              | 2 38 27                           |         |    |                    |       |           |                                                        |
| 322 | 11  | P              | 8 12 26                           |         |    |                    |       | 676       | Epic. 22°7 S<br>65°6 W.<br>Sucre 350 Km.<br>1P 8 11 53 |
|     |     | iS             | 13 40                             | 5       | 5  | * 7                | * 5   |           |                                                        |
|     |     | L              | 13 51                             |         |    |                    |       |           |                                                        |
|     |     | M              | 14 18                             |         | 7  |                    | * 5   |           |                                                        |
|     |     | M              | 15 51                             |         | 7  |                    | - 5   |           |                                                        |
|     |     | F              | 27 -                              |         |    |                    |       |           |                                                        |
| 323 | 12  | P              | 21 36 00                          |         |    |                    |       |           |                                                        |
|     |     | iS             | 36 31                             |         |    |                    |       |           |                                                        |
|     |     | L              | 36 36                             |         |    |                    |       |           |                                                        |
|     |     | M              | 36 45                             |         |    |                    |       |           | Vert. 1,5 mm                                           |
|     |     | F              | 42 -                              |         |    |                    |       |           |                                                        |
| 324 | 13  | P              | 0 19 19                           |         |    |                    |       | 4910      |                                                        |
|     |     | OSN?           | 24 56                             |         |    |                    |       |           |                                                        |
|     |     | L              | 30 26                             | 17      |    |                    |       |           |                                                        |
|     |     | M              | 33 03                             |         | 8  |                    | - 2   |           |                                                        |
|     |     | M              | 35 30                             |         | 7  |                    | - 2   |           |                                                        |
|     |     | F              | 1 06 .                            |         |    |                    |       |           |                                                        |
| 325 | 13  | P              | 10 18 51                          |         |    |                    |       |           | Sotido en<br>Aroquipa Peru<br>Vert. 2 mm.              |
|     |     | L              | 19 18                             |         |    |                    |       |           |                                                        |
|     |     | M              | 19 23                             |         |    |                    |       |           |                                                        |
|     |     | F              | 24 -                              |         |    |                    |       |           |                                                        |
| 326 | 15  | P              | 13 35 20                          |         |    |                    |       |           |                                                        |
| 327 | 15  | P              | 22 20 52                          |         |    |                    |       |           |                                                        |
| 328 | 16  | P              | 17 12 25                          |         |    |                    |       |           | Sucre P 17 10 50<br>Fuerte agitacion<br>microseismica. |
| 329 | 16  | P              | 22 24 29                          |         |    |                    |       |           |                                                        |
| 330 | 18  | ePR1?          | 6 56 57                           |         |    |                    |       |           |                                                        |
|     |     | L              | 7 38 50                           | 27      | 36 |                    |       |           |                                                        |
|     |     | LE             | 42 00                             |         | 25 |                    |       |           |                                                        |
|     |     | M              | 52 15                             | 18      | 18 | 3                  | 2     |           |                                                        |
|     |     | M              | 8 08 40                           |         | 17 |                    | 1,5   |           |                                                        |
|     |     | F              | 40 -                              |         |    |                    |       |           |                                                        |
| 331 | 18  | P              | 22 00 00                          |         |    |                    |       |           |                                                        |
| 332 | 18  | P              | 22 21 31                          |         |    |                    |       |           |                                                        |
| 333 | 19  | P              | 5 30 10                           |         |    |                    |       |           |                                                        |
| 334 | 19  | P              | 9 21 08                           |         |    |                    |       |           |                                                        |
|     |     | L              | 22 20                             |         |    |                    |       |           |                                                        |
|     |     | M              | 22 43                             |         |    |                    |       |           | Vert. 2 mm                                             |
|     |     | F              | 27 -                              |         |    |                    |       |           |                                                        |

# LA PAZ - (Bolivia)

BOLETIN SEISMICO DEL OBSERVATORIO DEL COLEGIO SAN CALIXTO (PP. Jesuitas)

Mes de MAYO 1929

| No. | Día | Fases                                              | HORA<br>Tiempo medio de Greenwich                                                        | Período |     | Amplitud verdadera |     | Distancia | NOTAS                                                                                               |
|-----|-----|----------------------------------------------------|------------------------------------------------------------------------------------------|---------|-----|--------------------|-----|-----------|-----------------------------------------------------------------------------------------------------|
|     |     |                                                    |                                                                                          | NS      | EW  | AN                 | AE  |           |                                                                                                     |
|     |     |                                                    |                                                                                          | S       | S   | μ                  | μ   |           |                                                                                                     |
| 335 | 20  | e<br>oP<br>L<br>M<br>M<br>M<br>F<br>P              | 5 11 11<br>12 36<br>57 00<br>6 05 33<br>03 36<br>15 42<br>7 Ca .<br>19 02 18             |         |     |                    |     |           | Epic. 54°N.<br>178°W.<br>Geodetic Survey                                                            |
|     |     |                                                    |                                                                                          | 27      |     |                    |     |           |                                                                                                     |
|     |     |                                                    |                                                                                          |         | 20  |                    | 3   |           |                                                                                                     |
|     |     |                                                    |                                                                                          | 20      | 20  | 4                  | 3   |           |                                                                                                     |
|     |     |                                                    |                                                                                          | 20      |     | 3                  |     |           |                                                                                                     |
| 336 | 20  | P                                                  | 19 02 18                                                                                 |         |     |                    |     |           |                                                                                                     |
| 337 | 21  | 1P <sup>1</sup><br>L<br>M<br>M<br>M<br>M<br>M<br>F | 16 55 33<br>17 50 00<br>18 01 18<br>06 21<br>13 23<br>25 00<br>32 18<br>33 21<br>19 20 - |         | 30  | 10                 |     |           |                                                                                                     |
|     |     |                                                    |                                                                                          | 30      | 30  | 5                  | 5   |           |                                                                                                     |
|     |     |                                                    |                                                                                          | 22      | 25  | 6                  | 2   |           |                                                                                                     |
|     |     |                                                    |                                                                                          | 25      | 20  | 3                  | 3   |           |                                                                                                     |
|     |     |                                                    |                                                                                          | 20      | 20  |                    | 4   |           |                                                                                                     |
|     |     |                                                    |                                                                                          | 19      | 19  |                    | 2   |           |                                                                                                     |
| 338 | 22  | oP <sup>1</sup><br>L<br>M<br>M<br>F                | 20 19 53<br>51 00<br>21 00 24<br>05 30<br>25 -                                           |         |     | 3                  |     |           |                                                                                                     |
|     |     |                                                    |                                                                                          | 20      |     | 2                  |     |           |                                                                                                     |
|     |     |                                                    |                                                                                          | 14      |     |                    |     |           |                                                                                                     |
| 339 | 22  | P<br>L<br>M<br>F                                   | 20 30 45<br>31 25<br>31 26<br>35 -                                                       |         |     |                    |     |           | Vert. 1 mm.                                                                                         |
| 340 | 23  | oP                                                 | 5 08 14                                                                                  |         |     |                    |     |           | Província de Mendoza.                                                                               |
| 341 | 23  | oP<br>L<br>M<br>F                                  | 16 56 31<br>57 28<br>57 33<br>17 03 -                                                    |         |     |                    |     |           | Vert. 1 mm.                                                                                         |
| 342 | 24  | oP                                                 | 2 40 30                                                                                  |         |     |                    |     |           |                                                                                                     |
| 343 | 24  | oP                                                 | 22 35 09                                                                                 |         |     |                    |     |           |                                                                                                     |
| 344 | 25  | 1P<br>1S<br>L<br>M<br>M<br>M<br>F<br>P             | 12 02 11<br>04 05<br>04 30<br>05 06<br>05 32<br>05 54<br>13 Ca .<br>16 14 59             | 2,5     | 3-8 | +30                | +37 | 1065      | 7°3 S<br>Epic. 15°1 S<br>72° W.<br>L.P. L. Plata<br>Sucre, Cartuja<br>Sucre, 1500 Km<br>1P 12 03 02 |
|     |     |                                                    |                                                                                          | 2,5     | 3-9 | +59                | +40 |           |                                                                                                     |
|     |     |                                                    |                                                                                          | 3       | 4   | +53                | +52 |           |                                                                                                     |
|     |     |                                                    |                                                                                          |         | 3   |                    | +59 |           |                                                                                                     |
| 345 | 25  | P<br>SE<br>L<br>M<br>F                             | 16 14 59<br>16 43<br>17 36<br>17 56<br>25 -                                              |         |     |                    |     |           |                                                                                                     |
|     |     |                                                    |                                                                                          |         | 3   |                    | + 3 |           |                                                                                                     |
|     |     |                                                    |                                                                                          |         | 3   |                    | + 2 |           |                                                                                                     |
| 346 | 25  | P                                                  | 22 43 57                                                                                 |         |     |                    |     |           |                                                                                                     |
| 347 | 26  | P<br>L<br>M<br>F<br>P                              | 9 02 22<br>03 00<br>03 07<br>09 -<br>19 36 37                                            |         |     |                    |     |           | Vert. 1,5 mm                                                                                        |
|     |     |                                                    |                                                                                          |         |     |                    |     |           |                                                                                                     |
| 348 | 26  | 1S?<br>L<br>F                                      | 43 41<br>56 00<br>20 1/2 -                                                               |         | 7   |                    | - 2 |           | <del>SHAKE AT 3 02</del><br>Fases muy debilo                                                        |



# LA PAZ = (Bolivia)

BOLETIN SEISMICO DEL OBSERVATORIO DEL COLEGIO SAN CALIXTO (PP. Jesuitas)

Mes de

M A Y O 1 9 2 9

| No.               | Dia | Fases | HORA<br>Tiempo medio de Greenwich | Período |     | Amplitud verdadera |     | Distancia | NOTAS            |
|-------------------|-----|-------|-----------------------------------|---------|-----|--------------------|-----|-----------|------------------|
|                   |     |       |                                   | NS      | EW  | AN                 | AE  |           |                  |
|                   |     |       |                                   | S       | S   | μ                  | μ   |           |                  |
| 360               | 30  | P     | 11 52 05                          |         |     |                    |     |           | Réplica del 358  |
| 361               | 30  | PN    | 12 15 08,5                        |         |     |                    |     | 2080      | Replica          |
|                   |     | IS    | 18 38                             | 7       | 6   | - 5                | + 3 |           | Sucre 1800 Km    |
|                   |     | LN    | 20 39                             |         |     |                    |     |           | IP 12 14 38      |
|                   |     | M     | 22 03                             | 16      | 12  | +52                | +34 |           |                  |
|                   |     | M     | 23 02                             | 12      | 11  | +33                | +30 |           |                  |
|                   |     | F     | 13 1/2 Ca.                        |         |     |                    |     |           |                  |
| 362               | 30  | P     | 15 31 07                          |         |     |                    |     |           |                  |
|                   |     | L     | 32 27                             |         |     |                    |     |           |                  |
|                   |     | M     | 32 36                             |         |     |                    |     |           | Vert. 2 mm.      |
|                   |     | F     | 37 -                              |         |     |                    |     |           |                  |
| 363               | 30  | P     | 19 46 40                          |         |     |                    |     |           |                  |
| 364               | 30  | P     | 23 47 06                          |         |     |                    |     |           |                  |
| 365               | 31  | P     | 0 29 52                           |         |     |                    |     |           |                  |
| 366               | 31  | P     | 14 56 18                          |         |     |                    |     |           | Fases muy debi-  |
|                   |     | SE?   | 15 02 18                          |         |     |                    |     |           | les y fuerte     |
|                   |     | L     | 07 14                             |         |     |                    |     |           | agitacion micro- |
|                   |     | F     | 21 -                              |         |     |                    |     |           | seísmicas.       |
| J U N I O 1 9 2 9 |     |       |                                   |         |     |                    |     |           |                  |
| 367               | 1   | P     | 4 09 25                           |         |     |                    |     |           |                  |
|                   |     | L     | 10 55                             |         |     |                    |     |           |                  |
|                   |     | M     | 11 03                             |         |     |                    |     |           | Vert. 1 mm.      |
|                   |     | F     | 15 -                              |         |     |                    |     |           |                  |
| 368               | 2   | P     | 21 57 44                          |         |     |                    |     |           | Fases confusas   |
|                   |     | F     | 22 40 -                           |         |     |                    |     |           |                  |
| 369               | 3   | 1PE   | 12 29 04                          |         |     |                    |     | 290       | Sentido Arequipa |
|                   |     | 1SN   | 29 36                             | 1,5     |     | + 10               |     |           |                  |
|                   |     | 1SE   | 29 39                             |         |     |                    |     |           |                  |
|                   |     | L     | 29 42                             |         | 1,5 |                    | +11 |           |                  |
|                   |     | M     | 29 51                             |         | 1   |                    | +18 |           |                  |
|                   |     | F     | 34 -                              |         |     |                    |     |           |                  |
| 370               | 3   | ePN   | 14 01 14                          |         |     |                    |     | 1115      |                  |
|                   |     | SN    | 03 14                             |         |     |                    |     |           |                  |
|                   |     | L     | 04 11                             |         |     |                    |     |           |                  |
|                   |     | F     | 12 -                              |         |     |                    |     |           |                  |
| 371               | 3   | eP    | 20 49 05                          |         |     |                    |     |           |                  |
| 372               | 4   | P     | 11 37 15                          |         |     |                    |     |           |                  |
| 373               | 4   | P     | 14 44 53                          |         |     |                    |     |           | Réplica de 358   |
|                   |     | L     | 51 51                             |         |     |                    |     |           | Sucre P 14 44 29 |
|                   |     | M     | 52 38                             | 12      |     | 2                  |     |           |                  |
|                   |     | F     | 15 0 -                            |         |     |                    |     |           |                  |
| 374               | 4   | 1P    | 15 55 26                          |         |     |                    |     |           | Sucre 9730 Km    |
|                   |     | S     | mezclado con movimiento extraños  |         |     |                    |     |           | IP 15 55 29      |
|                   |     | L     | 16 00 00                          |         |     |                    |     |           |                  |
|                   |     | F     | 40 -                              |         |     |                    |     |           |                  |
| 375               | 5   | 1P    | 6 03 01,5                         |         |     |                    |     |           |                  |
|                   |     | 1S    | 03 28                             |         |     |                    |     |           |                  |
|                   |     | M     | 03 28                             |         |     |                    |     |           | Vert. 7 mm.      |
|                   |     | F     | 07 -                              |         |     |                    |     |           |                  |
| 376               | 6   | P     | 3 55 59                           |         |     |                    |     |           |                  |
| 377               | 6   | P     | 6 57 59                           |         |     |                    |     |           |                  |

# LA PAZ = (Bolivia)

BOLETIN SEISMICO DEL OBSERVATORIO DEL COLEGIO SAN CALIXTO (PP. Jesuitas)

Longitud W. Greenwich } 68° 7' 57",7  
 4h 32m 31s.85  
 Latitud S. 16° 29' 43"  
 Altura sobre el mar 3658 m.  
 Subsuelo: aluvión antiguo

Mes de JUNIO de 1929

|                            |  | Componente | Masa       | To | A     | E: 1 | r<br>To² |
|----------------------------|--|------------|------------|----|-------|------|----------|
| Péndulo horizontal Bifilar |  | N. S.      | 2,000 kgs. | 14 | 180   | 8.8  | 0.002    |
| Instrumentos: " "          |  | E. W       | 3,500 "    | 12 | 800   | 8.2  | 0.002    |
| " vertical S. Calixto      |  | NS y EW    | 1,500 "    | 24 | 1,100 | 2    | 0.001    |

| No. | Día             | Fases  | HORA<br>Tiempo medio de Greenw. | Periodo |    | Amplitud verdadera |      | Distancia |                   |
|-----|-----------------|--------|---------------------------------|---------|----|--------------------|------|-----------|-------------------|
|     |                 |        |                                 | NS      | EW | AN                 | AE   |           |                   |
| 378 | 1929<br>6 Junio | iP     | 10 59 45                        | S       | S  | μ                  | μ    | kms.      |                   |
|     |                 | eSE    | 11 07 22                        |         |    |                    |      | 6125      |                   |
|     |                 | eSN    | 07 27                           |         |    |                    |      |           |                   |
|     |                 | LN     | 14 30                           | 36      |    |                    |      |           |                   |
|     |                 | LE     | 16 20                           |         | 25 |                    |      |           |                   |
|     |                 | M      | 13 20                           | 13      |    | +24                |      |           |                   |
|     |                 | M      | 20 42                           |         | 13 |                    | - 7  |           |                   |
|     |                 | M      | 21 00                           | 13      |    | -14                |      |           |                   |
|     |                 | M      | 21 54                           |         | 12 |                    | +11  |           |                   |
|     |                 | M      | 22 42                           |         | 10 |                    | - 9  |           |                   |
|     |                 | F      | 12 1 Ca.                        |         |    |                    |      |           |                   |
| 379 | 6               | P      | 16 03 33                        |         |    |                    |      |           |                   |
| 380 | 6               | P      | 20 33 35                        |         |    |                    |      |           |                   |
| 381 | 7               | P      | 0 12 23                         |         |    |                    |      | 4000      |                   |
|     |                 | SE     | 13 17                           |         |    |                    |      |           |                   |
|     |                 | L      | 22 30                           |         |    |                    |      |           |                   |
|     |                 | M      | 26 38                           |         | 18 |                    | - 7  |           |                   |
|     |                 | M      | 28 14                           |         | 14 |                    | - 2  |           |                   |
|     |                 | F      | 1 Ca.                           |         |    |                    |      |           |                   |
| 382 | 7               | P      | 4 06 22                         |         |    |                    |      |           |                   |
| 383 | 7               | P      | 20 32 00                        |         |    |                    |      |           |                   |
| 384 | 8               | P      | 18 42 32                        |         |    |                    |      |           |                   |
| 385 | 9               | P'     | 9 27 22                         |         |    |                    |      |           |                   |
|     |                 | PRLE   | 30 50                           |         |    |                    |      |           |                   |
|     |                 | LE     | 10 13 00                        |         | 35 |                    |      |           |                   |
|     |                 | LN     | 14 00                           | 25      |    |                    |      |           |                   |
|     |                 | M      | 22 57                           |         | 20 |                    | 3    |           |                   |
|     |                 | M      | 26 48                           |         | 20 |                    | 5    |           |                   |
|     |                 | M      | 33 50                           | 22      |    | 5                  |      |           |                   |
|     |                 | M      | 36 57                           | 20      |    | 3                  |      |           |                   |
|     |                 | F      | 11 1 -                          |         |    |                    |      |           |                   |
| 386 | 9               | P      | 18 11 38                        |         |    |                    |      |           | micro             |
| 387 | 12              | P      | 7 29 28                         |         |    |                    |      | 475       | Fuertes seismos   |
|     |                 | iS     | 29 51                           |         |    |                    |      |           |                   |
|     |                 | M      | 30 06                           | 1       |    |                    | + 11 |           | Vert. 52 mm.      |
|     |                 | F      | 40 -                            |         |    |                    |      |           |                   |
| 388 | 12              | P      | 12 02 24                        |         |    |                    |      |           |                   |
|     |                 | PRLE?  | 05 39                           |         |    |                    |      |           |                   |
|     |                 | F      | 13 Ca.                          |         |    |                    |      |           | Fases muy debiles |
| 389 | 12              | ●P     | 23 15 26                        |         |    |                    |      |           | Fuertes microsis- |
| 390 | 13              | iP'    | 0 31 42                         |         |    |                    |      |           | mos               |
|     |                 | PRLE   | 35 13                           |         |    |                    |      |           |                   |
|     |                 | ScPcs? | 38 30                           |         | 10 |                    |      |           |                   |
|     |                 | i      | 43 56                           |         | 10 |                    |      |           |                   |
|     |                 | SRLE   | 54 21                           |         |    |                    | - 3  |           |                   |
|     |                 | LN     | 1 25 00                         | 35      |    |                    |      |           |                   |
|     |                 | LE     | 23 00                           |         | 25 |                    |      |           |                   |
|     |                 | LE     | 31 22                           |         | 35 |                    |      |           |                   |
|     |                 | M      | 34 12                           | 25      |    | 14                 |      |           |                   |
|     |                 | M      | 36 42                           | 24      |    | 12                 |      |           |                   |
|     |                 | M      | 38 03                           |         | 22 |                    | 6    |           |                   |
|     |                 | M      | 41 20                           | 20      |    | 8                  |      |           |                   |
|     |                 | M      | 44 48                           | 22      | 22 | 13                 | 3    |           |                   |
|     |                 | M      | 47 26                           | 22      | 22 | 11                 | 3    |           |                   |
|     |                 | M      | 55 18                           |         | 20 |                    | 6    |           |                   |
|     |                 | M      | 2 00 20                         | 20      | 18 | 6                  | 4    |           |                   |
|     |                 | F      | 3 20 -                          |         |    |                    |      |           |                   |

LA PAZ - (Bolivia)

BOLETIN SEISMICO DEL OBSERVATORIO DEL COLEGIO SAN CALIXTO (PP. Jesuitas)

Mes de

J U N I O 1929

| No. | Día | Fases  | HORA<br>Tiempo medio de Greenwich | Periodo |    | Amplitud verdadera |     | Distancia | NOTAS            |
|-----|-----|--------|-----------------------------------|---------|----|--------------------|-----|-----------|------------------|
|     |     |        |                                   | NS      | EW | Am                 | Ar  |           |                  |
| 391 | 13  | 1P     | 0 45 31                           | S       | S  | μ                  | μ   |           |                  |
| 392 | 13  | 1P'    | 9 44 46                           |         |    |                    |     |           | Replica del 390  |
|     |     | PR1E   | 48 32                             |         |    |                    |     |           | 1d               |
|     |     | ScPoS  | 51 47                             |         | 11 |                    |     |           | Sucre P' 9 44 46 |
|     |     | PR2E   | 56 12                             |         | 16 |                    | + 5 |           |                  |
|     |     | 1E     | 10 00 22                          |         | 10 |                    | - 4 |           |                  |
|     |     | PPSN   | 01 22                             | 16      |    | -4,6               |     |           |                  |
|     |     | SR1N   | 07 32                             |         |    |                    |     |           |                  |
|     |     | SR2E   | 13 39                             |         | 25 |                    |     |           |                  |
|     |     | LN     | 33 00                             | 65      |    |                    |     |           |                  |
|     |     | LN     | 36 00                             | 60      |    |                    |     |           |                  |
|     |     | M      | 45 42                             |         | 22 |                    | -30 |           |                  |
|     |     | M      | 46 32                             | 20      |    | -16                |     |           |                  |
|     |     | M      | 50 50                             | 22      |    | +32                |     |           |                  |
|     |     | M      | 57 24                             |         | 19 |                    | -13 |           |                  |
|     |     | M      | 11 09 40                          |         | 21 |                    | -17 |           |                  |
|     |     | M      | 12 00                             |         | 22 |                    | -15 |           |                  |
|     |     | M      | 20 32                             |         | 20 |                    | -12 |           |                  |
|     |     | M      | 30 12                             |         | 18 |                    | - 7 |           |                  |
|     |     | F      | 12 1 -                            |         |    |                    |     |           |                  |
| 393 | 13  | P      | 12 37 21                          |         |    |                    |     |           |                  |
|     |     | S      | 38 11                             |         |    |                    |     |           |                  |
|     |     | L      | 38 18                             |         |    |                    |     |           |                  |
|     |     | M      | 38 27                             |         |    |                    |     |           | Vert.4 mm.       |
|     |     | F      | 12 54 -                           |         |    |                    |     |           |                  |
| 394 | 13  | P      | 14 18 02                          |         |    |                    |     |           |                  |
| 395 | 13  | P      | 20 42 58                          |         |    |                    |     |           |                  |
| 396 | 13  | •P     | 23 20 48                          |         |    |                    |     |           |                  |
|     |     | 1E     | 32 13                             |         |    |                    |     |           |                  |
|     |     | L      | 0 22 00                           |         | 35 |                    | -29 |           |                  |
|     |     | M      | 35 36                             |         | 18 |                    | 2   |           |                  |
|     |     | M      | 37 40                             |         | 20 |                    | 2   |           |                  |
|     |     | F      | 1 20 -                            |         |    |                    |     |           |                  |
| 397 | 15  | P      | 9 04 29                           |         |    |                    |     | 2155      | Sucre P 9 05 18  |
|     |     | S      | 08 05                             |         |    |                    |     |           |                  |
|     |     | L      | 10 35                             |         |    |                    |     |           |                  |
|     |     | M      | 11 40                             | 15      | 13 | 4                  | 2   |           |                  |
|     |     | F      | 25 -                              |         |    |                    |     |           |                  |
| 398 | 15  | •P     | 21 29 17                          |         |    |                    |     |           |                  |
| 399 | 16  | •P     | 10 35 22,5                        |         |    |                    |     |           |                  |
|     |     | 1S     | 35 49,5                           |         |    |                    |     |           |                  |
|     |     | M      | 36 00                             |         |    |                    |     |           | Vert.3 mm.       |
|     |     | F      | 40 -                              |         |    |                    |     |           |                  |
| 400 | 16  | P      | 13 16 25                          |         |    |                    |     |           |                  |
| 401 | 16  | P      | 18 24 34                          |         |    |                    |     |           |                  |
| 402 | 16  | P      | 23 00 34,5                        |         |    |                    |     | 10380     | S.de New Zealand |
|     |     | 1P     | 00 43,5                           |         |    |                    |     |           | Sucre 10900      |
|     |     | PR1E   | 04 54                             |         |    |                    |     |           | P 23 00 47       |
|     |     | PR2E   | 07 09                             |         |    |                    |     |           |                  |
|     |     | ScPoSE | 11 43                             |         |    |                    |     |           |                  |
|     |     | SN     | 12 04                             |         |    |                    |     |           |                  |
|     |     | 1SE    | 12 10                             |         | 11 |                    | - 3 |           |                  |
|     |     | 1PSE   | 13 21                             |         | 11 |                    | + 5 |           |                  |
|     |     | PPSE   | 13 54                             |         |    |                    |     |           |                  |
|     |     | 1E     | 14 27                             | 15-20   |    |                    | +34 |           |                  |

# LA PAZ = (Bolivia)

BOLETIN SEISMICO DEL OBSERVATORIO DEL COLEGIO SAN CALIXTO (PP. Jesuitas)

J U N I O 1 9 2 9

Mes de

| No. | Día      | Fases | HORA<br>Tiempo medio de Greenwich | Período |    | Amplitud verdadera |      | Distancia | NOTAS             |
|-----|----------|-------|-----------------------------------|---------|----|--------------------|------|-----------|-------------------|
|     |          |       |                                   | NS      | EW | AN                 | AE   |           |                   |
| 402 | 16       | SR1N  | 23 18 49                          | 33      | S  | 493                | μ    |           |                   |
|     | continua | SR1E  | 18 54                             |         | 35 |                    | -111 |           |                   |
|     |          | SR2N  | 23 29                             | 36      |    | -95                |      |           |                   |
|     |          | SR3N  | 25 46                             | 30      |    | -66                |      |           |                   |
|     |          | LE    | 30 00                             |         | 30 |                    | -110 |           |                   |
|     |          | LN    | 32 00                             |         |    |                    |      |           |                   |
|     |          | M     | 35 30                             |         | 23 |                    | -132 |           |                   |
|     |          | M     | 36 00                             | 25      |    | +173               |      |           |                   |
|     |          | M     | 38 14                             |         | 20 |                    | -108 |           |                   |
|     |          | M     | 40 46                             |         | 19 |                    | - 66 |           |                   |
|     |          | M     | 44 42                             | 16      |    | + 35               |      |           |                   |
|     |          | M     | 53 54                             |         | 15 |                    | - 36 |           |                   |
|     |          | M     | 55 50                             |         | 15 |                    | - 53 |           |                   |
|     |          | M     | 0 00 24                           | 16      | 15 | + 31               | - 43 |           |                   |
|     |          | Lrop1 | 54 14                             |         | 40 |                    |      |           |                   |
|     |          | M     | 1 10 30                           |         | 23 |                    | - 13 |           |                   |
|     |          | F     | 2 17 Ca.                          |         |    |                    |      |           |                   |
| 403 | 16       | P     | 23 25 51                          |         |    |                    |      |           |                   |
| 404 | 18       | P     | 23 03 01                          |         |    |                    |      |           |                   |
| 405 | 19       | 1P    | 2 58 56                           |         |    |                    |      | 500       | Sucre 350         |
|     |          | 1S    | 59 51                             |         |    |                    |      |           | Vert.5 mm.        |
|     |          | M     | 3 00 15                           |         |    |                    |      |           |                   |
|     |          | F     | 07 -                              |         |    |                    |      |           |                   |
| 406 | 19       | •P    | 7 51 17                           |         |    |                    |      | 9950?     | Sucre P 7 50 56   |
|     |          | 1S?   | 8 02 13                           |         |    |                    |      |           | Fases muy debiles |
|     |          | L     | 48 00                             |         |    |                    |      |           |                   |
|     |          | F     | 10 Ca                             |         |    |                    |      |           |                   |
| 407 | 20       | •P    | 7 42 25                           |         |    |                    |      |           |                   |
|     |          | L     | 49 00                             |         |    |                    |      |           |                   |
|     |          | M     | 50 10                             |         | 12 |                    | 0,7  |           |                   |
|     |          | F     | 58 -                              |         |    |                    |      |           |                   |
| 408 | 20       | 1P    | 9 33 13                           | 5 2     | 2  | +11                | + 8  | 220       | Sentido Arequipa  |
|     |          | 1     | 33 15                             | 5 2     | 2  |                    | +18  |           | Sucre 440 Km      |
|     |          | 1S    | 33 41                             | 5 2     | 2  | +59                | +89  |           | P 9 33 55         |
|     |          | 1     | 33 46                             | 3       |    | -90                |      |           |                   |
|     |          | M     | 33 50                             |         | 2  |                    | +112 |           |                   |
|     |          | F     | 10 10 -                           |         |    |                    |      |           |                   |
| 409 | 21       | •P    | 5 01 03                           |         |    |                    |      |           | Fuertes barosis-  |
| 410 | 23       | P     | 0 55 22                           |         |    |                    |      |           | mos.              |
| 411 | 23       | •P    | 13 45 25                          |         |    |                    |      |           | 1d                |
| 412 | 24       | •P    | 2 24 12                           |         |    |                    |      |           |                   |
| 413 | 24       | P     | 15 43 13                          |         |    |                    |      | 440       | Sucre P 15 44 02  |
|     |          | S     | 44 02                             |         |    |                    |      |           |                   |
|     |          | L     | 44 09                             |         |    |                    |      |           |                   |
|     |          | M     | 44 18                             |         | 3  |                    | + 3  |           |                   |
|     |          | F     | 49 -                              |         |    |                    |      |           |                   |
| 414 | 24       | P     | 23 38 19                          |         |    |                    |      | 690       |                   |
|     |          | S     | 39 32                             |         |    |                    |      |           |                   |
|     |          | L     | 39 39                             |         |    |                    |      |           |                   |
|     |          | M     | 39 50                             |         |    |                    |      |           | Vert.1 mm         |
|     |          | F     | 45 -                              |         |    |                    |      |           |                   |
| 415 | 25       | •P    | 4 09 20                           |         |    |                    |      |           |                   |

# LA PAZ = (Bolivia)

BOLETIN SEISMICO DEL OBSERVATORIO DEL COLEGIO SAN CALIXTO (PP. Jesuitas)

Mes de

J U N I O 1929

| No. | Día | Fases | HORA                      |         | Período |    | Amplitud verdadera |      | Distancia | NOTAS              |
|-----|-----|-------|---------------------------|---------|---------|----|--------------------|------|-----------|--------------------|
|     |     |       | Tiempo medio de Greenwich |         | NS      | EW | Am                 | Az   |           |                    |
| 416 | 25  | oP    | 6                         | 20 44   | s       | S  | μ                  | μ    | 4850      | Sucre P 6 20 56    |
|     |     | S     |                           | 27 18   |         | 9  |                    | - 2  |           |                    |
|     |     | L     |                           | 33 00   |         |    |                    |      |           |                    |
|     |     | M     |                           | 34 48   |         | 17 |                    | 2    |           |                    |
|     |     | M     |                           | 35 48   |         | 17 |                    | 2    |           |                    |
|     |     | F     | 7                         | Ca .    |         |    |                    |      |           |                    |
| 417 | 25  | oP    | 9                         | 21 28   |         |    |                    |      | 4780      | Sucre P 9 21 33    |
|     |     | S     |                           | 27 58   |         | 8  |                    | - 2  |           |                    |
|     |     | L     |                           | 33 30   |         |    |                    |      |           |                    |
|     |     | M     |                           | 35 30   |         | 15 |                    | - 3  |           |                    |
|     |     | M     |                           | 37 24   |         | 9  |                    | - 2  |           |                    |
|     |     | F     | 10                        | Ca .    |         |    |                    |      |           |                    |
| 418 | 25  | 1P    | 14                        | 00 47   |         |    |                    |      | 590       | Sucre 780          |
|     |     | 1S    |                           | 01 30   |         |    |                    |      |           | P 14 01 32         |
|     |     | L     |                           | 01 34   |         |    |                    |      |           |                    |
|     |     | M     |                           | 02 00   |         | 4  |                    | + 5  |           |                    |
|     |     | F     |                           | 11 -    |         |    |                    |      |           |                    |
| 419 | 26  | P     | 17                        | 09 01   |         |    |                    |      |           |                    |
| 420 | 27  | P     | 1                         | 41 23   |         |    |                    |      |           |                    |
| 421 | 27  | O     | 12                        | 46 46   |         |    |                    |      | 5530      | Epic. apr. 58° 5 S |
|     |     | 1PN   | 12                        | 55 52,5 |         |    |                    |      |           | 40° W.             |
|     |     | 1NE   |                           | 56 05   | 5       | 3  | +29                | +46  |           | Sucre 5150         |
|     |     | PR1E  |                           | 57 55   |         | 10 |                    | +60  |           | 1P 12 55 28        |
|     |     | PR1N  |                           | 58 10   | 12      |    | +38                |      |           |                    |
|     |     | PR2N  |                           | 58 33   | 9       |    | +50                |      |           |                    |
|     |     | 1SE   | 13                        | 05 05   |         |    |                    |      |           |                    |
|     |     | 1SN   |                           | 05 07   | 9       |    | +264               |      |           |                    |
|     |     | 1E    |                           | 03 19   |         | 10 |                    | +245 |           |                    |
|     |     | PSN   |                           | 03 32   | 10      |    | +216               |      |           |                    |
|     |     | SR1N  |                           | 06 55   | 17      |    | - 91               |      |           |                    |
|     |     | SR2N  |                           | 08 00   | 17      |    | - 80               |      |           |                    |
|     |     | L     |                           | 11 40   | 20      |    | -230               |      |           |                    |
|     |     | M     |                           | 15 18   | 23      |    | +438               |      |           |                    |
|     |     | M     |                           | 16 36   | 20      |    | -550               |      |           |                    |
|     |     | M     |                           | 18 20   | 18,5    |    | -336               |      |           |                    |
|     |     | M     |                           | 19 33   | 16      |    | +247               |      |           |                    |
|     |     | M     |                           | 22 45   | 17      |    | +196               |      |           |                    |
|     |     | M     |                           | 25 06   | 16      |    | +162               |      |           |                    |
|     |     | M     |                           | 28 48   | 14      |    | +100               |      |           |                    |
|     |     | M     |                           | 31 24   | 14      |    | +121               |      |           |                    |
|     |     | Lropl | 15                        | 00 05   | 50      |    |                    |      |           |                    |
|     |     | M     |                           | 12 42   | 20      |    | - 10               |      |           |                    |
|     |     | F     | 17                        | 42 -    |         |    |                    |      |           |                    |
| 422 | 27  | P     | 13                        | 21 19   |         |    |                    |      |           |                    |
| 423 | 27  | 1P    | 13                        | 27 50   |         |    |                    |      |           | Replica            |
| 424 | 27  | 1P    | 13                        | 32 58   |         |    |                    |      |           | id                 |
| 425 | 27  | P     | 13                        | 45 35   |         |    |                    |      |           | id                 |
| 426 | 27  | P     | 14                        | 03 00   |         |    |                    |      |           | id                 |
| 427 | 27  | P     | 14                        | 29 05   |         |    |                    |      |           | id                 |
| 428 | 27  | P     | 14                        | 40 23   |         |    |                    |      |           | id                 |
| 429 | 27  | P     | 14                        | 49 52   |         |    |                    |      |           | id                 |
| 430 | 27  | P     | 15                        | 03 43   |         |    |                    |      |           |                    |

LA PAZ = (Bolivia)

BOLETIN SEISMICO DEL OBSERVATORIO DEL COLEGIO SAN CALIXTO (PP. Jesuitas)  
Mes de JUNIO 1929

| No.                                          | Día | Fases              | HORA<br>Tiempo medio de Greenwich | Período |    | Amplitud verdadera |     | Distancia | NOTAS           |
|----------------------------------------------|-----|--------------------|-----------------------------------|---------|----|--------------------|-----|-----------|-----------------|
|                                              |     |                    |                                   | NS      | EW | Am                 | Ae  |           |                 |
| 431                                          | 27  | O                  | 15 16 59                          | S       | S  | μ                  | μ   | 5580      | Réplica del 421 |
|                                              |     | P                  | 15 26 07                          |         |    |                    |     |           |                 |
|                                              |     | iSNE               | 33 20                             | 13      | 9  | -10                | +10 |           |                 |
|                                              |     | L                  | 41 15                             |         |    |                    |     |           |                 |
|                                              |     | M                  | 42 55                             |         | 20 |                    | - 7 |           |                 |
|                                              |     | M                  | 44 54                             | 22      |    | -12                |     |           |                 |
| Fin confundido con el anterior               |     |                    |                                   |         |    |                    |     |           |                 |
| 432                                          | 27  | P                  | 16 17 55                          |         |    |                    |     |           |                 |
|                                              |     | SE?                | 22 20                             |         |    |                    |     |           |                 |
|                                              |     | Fin en el anterior |                                   |         |    |                    |     |           |                 |
| 433                                          | 27  | P                  | 17 02 02                          |         |    |                    |     |           | Réplica del 421 |
| 434                                          | 27  | P                  | 18 09 05                          |         |    |                    |     |           |                 |
| 435                                          | 27  | P                  | 18 31 19                          |         |    |                    |     |           |                 |
| 436                                          | 28  | P                  | 0 49 05                           |         |    |                    |     |           | Réplica del 421 |
|                                              |     | S                  | 56 15                             |         |    |                    |     |           |                 |
|                                              |     | L                  | 1 05 00                           |         |    |                    |     |           |                 |
|                                              |     | M                  | 08 12                             |         | 15 |                    | 1,6 |           |                 |
|                                              |     | F                  | 30 -                              |         |    |                    |     |           |                 |
|                                              |     | P                  | 6 09 24                           |         |    |                    |     |           |                 |
| 437                                          | 28  | P                  | 7 06 16                           |         |    |                    |     |           |                 |
| 439                                          | 28  | iP                 | 9 58 09                           |         |    |                    |     | 330       | Vert. 9 mm.     |
|                                              |     | iS                 | 58 44                             |         |    |                    |     |           |                 |
|                                              |     | M                  | 58 56                             |         |    |                    |     |           |                 |
|                                              |     | F                  | 10 06 -                           |         |    |                    |     |           |                 |
|                                              |     | P                  | 9 33 11                           |         |    |                    |     |           |                 |
| 440                                          | 28  | oP                 | 15 41 41                          |         |    |                    |     |           |                 |
| 441                                          | 28  | i                  | 48 42                             |         |    |                    |     | 2100      |                 |
|                                              |     | P                  | 20 47 53                          |         |    |                    |     |           |                 |
|                                              |     | S                  | 51 25                             |         |    |                    |     |           |                 |
|                                              |     | L                  | 52 40                             |         |    |                    |     |           |                 |
|                                              |     | M                  | 53 48                             |         | 7  |                    | 2   |           |                 |
|                                              |     | F                  | 57 -                              |         |    |                    |     |           |                 |
| 443                                          | 30  | P'                 | 3 05 01                           |         |    |                    |     |           |                 |
|                                              |     | PR3E               | 16 16                             | 12      | 12 | - 5                | - 5 |           |                 |
|                                              |     | SR1E               | 30 13                             |         | 10 |                    | 3   |           |                 |
|                                              |     | L                  | 4 02 00                           | 27      |    |                    |     |           |                 |
|                                              |     | M                  | 14 33                             | 18      |    | 4                  |     |           |                 |
|                                              |     | M                  | 16 48                             | 18      |    | 5                  |     |           |                 |
|                                              |     | M                  | 23 54                             | 20      |    | 5                  |     |           |                 |
|                                              |     | F                  | 5 Ca .                            |         |    |                    |     |           |                 |
| 444                                          | 30  | P                  | 6 34 08                           |         |    |                    |     |           |                 |
| 445                                          | 30  | P                  | 15 19 54                          |         |    |                    |     |           |                 |
|                                              |     | L                  | 20 38                             |         |    |                    |     |           |                 |
|                                              |     | M                  | 20 48                             |         |    |                    |     |           | Vert. 2 mm.     |
|                                              |     | F                  | 24 -                              |         |    |                    |     |           |                 |
| P.M. Descotes S.J.<br>E. Tortosa S.J. Asist. |     |                    |                                   |         |    |                    |     |           |                 |

P.M. Descotes S.J.  
E. Tortosa S.J. Asist.

LA PAZ = (Bolivia)

BOLETIN SEISMICO DEL OBSERVATORIO DEL COLEGIO SAN CALIXTO (PP. Jesuitas)

Longitud W. Greenwich { 68° 7' 57",7  
4h 32m 31s,85  
Latitud S. 16° 29' 43"  
Altura sobre el mar 3658 m.  
Subsuelo: aluvión antiguo

Mes de JULIO de 1929

|                            |  | Componente | Masa       | T <sub>0</sub> | R     | ε: 1 | $\frac{r}{T_0^3}$ |
|----------------------------|--|------------|------------|----------------|-------|------|-------------------|
| Péndulo horizontal Bifilar |  | N. S.      | 2,000 kgs. | 14             | 180   | 3.8  | 0.002             |
| Instrumentos: > >          |  | E. W       | 3,500 >    | 12             | 300   | 3,2  | 0.002             |
| > vertical S. Calixto      |  | NS y EW    | 1,500 >    | 2,4            | 1.100 | 2    | 0,001             |

| No. | Día | Fases         | Hora<br>Tiempo medio de Greenw. | Período |     | Amplitud verdadera |                | Distancia<br>kms. | NOTAS             |
|-----|-----|---------------|---------------------------------|---------|-----|--------------------|----------------|-------------------|-------------------|
|     |     |               |                                 | NS      | EW  | A <sub>N</sub>     | A <sub>E</sub> |                   |                   |
|     |     |               |                                 | S       | S   | μ                  | μ              |                   |                   |
| 446 | 1   | <del>OP</del> | 2 49 08                         |         |     |                    |                |                   |                   |
| 447 | 2   | O             | 15 11 52                        |         |     |                    |                |                   |                   |
|     |     | P             | 15 20 43                        |         |     |                    |                | 5370              |                   |
|     |     | ISE           | 27 50                           |         | 10  |                    | - 5            |                   | Sucre P 15 20 19  |
|     |     | L             | 39 00                           |         |     |                    |                |                   |                   |
|     |     | M             | 48 53                           | 15      |     | 2,4                |                |                   |                   |
|     |     | M             | 51 43                           | 15      |     | 2,5                |                |                   |                   |
|     |     | F             | 16 10 -                         |         |     |                    |                |                   |                   |
| 448 | 2   | IP            | 16 18 26                        |         |     |                    |                | 300               | Sucre IP 16 18 28 |
|     |     | IP            | 18 34                           |         |     |                    |                | 430 Km.           |                   |
|     |     | IS            | 19 11                           | 5       | 2,5 |                    | 8              |                   |                   |
|     |     | M             | 19 31                           |         | 2   |                    | + 6            |                   |                   |
|     |     | M             | 19 41                           |         | 1,5 |                    | - 6            |                   |                   |
|     |     | F             | 30 -                            |         |     |                    |                |                   |                   |
| 449 | 3   | P             | 1 45 50                         |         |     |                    |                |                   |                   |
| 450 | 3   | OP            | 13 44 41                        |         |     |                    |                |                   |                   |
| 451 | 3   | P             | 14 03 21                        |         |     |                    |                |                   |                   |
| 452 | 3   | P             | 18 13 29                        |         |     |                    |                |                   |                   |
| 453 | 4   | OP            | 4 46 37                         |         |     |                    |                |                   |                   |
|     |     | L             | 5 30 00                         |         |     |                    |                |                   |                   |
|     |     | F             | 6 Ca.                           |         |     |                    |                |                   |                   |
| 454 | 4   | P             | 8 48 45                         |         |     |                    |                | 610               | Epic. 21°5 S.     |
|     |     | S             | 49 50                           |         |     |                    |                |                   | 69°7 W.           |
|     |     | L             | 50 03                           |         |     |                    |                |                   | Sucre IP 8 48 02  |
|     |     | M             | 50 33                           |         |     |                    |                |                   | 510 Km.           |
|     |     | F             | 54 -                            |         |     |                    |                |                   |                   |
| 455 | 4   | OP?           | 10 00 33                        |         |     |                    |                |                   |                   |
|     |     | L             | 45 33                           |         | 22  |                    |                |                   |                   |
|     |     | M             | 51 13                           |         | 20  |                    | 3,5            |                   |                   |
|     |     | M             | 57 15                           |         | 15  |                    | 1,6            |                   |                   |
|     |     | F             | 11 1 Ca.                        |         |     |                    |                |                   |                   |
| 456 | 5   | P             | 14 15 11                        |         |     |                    |                | 300 Km.           |                   |
|     |     | IP            | 15 19                           |         |     |                    |                |                   |                   |
|     |     | IS            | 16 07                           |         |     |                    |                |                   |                   |
|     |     | M             | 16 13                           |         | 1   |                    | - 3            |                   |                   |
|     |     | F             | 21 -                            |         |     |                    |                |                   |                   |
| 457 | 5   | OP?           | 14 35 21                        |         |     |                    |                |                   | Sucre P 14 38 46  |
|     |     | IP?           | 38 32                           |         |     |                    |                | 9230 Km. ?        |                   |
|     |     | SoPoS         | 45 23                           |         | 12  |                    |                |                   |                   |
|     |     | PPSE          | 48 41                           |         | 15  |                    | + 3            |                   |                   |
|     |     | PPSN          | 48 46                           | 15      |     | + 5                |                |                   |                   |
|     |     | L             | 15 14 46                        |         | 30  |                    |                |                   |                   |
|     |     | M             | 21 56                           |         | 20  |                    | -15            |                   |                   |
|     |     | M             | 27 24                           |         | 18  |                    | -15            |                   |                   |
|     |     | M             | 34 52                           |         | 20  |                    | -28            |                   |                   |
|     |     | M             | 38 00                           |         | 18  |                    | -14            |                   |                   |
|     |     | M             | 44 50                           |         | 17  |                    | -11            |                   |                   |
|     |     | F             | 17 20 -                         |         |     |                    |                |                   |                   |

No.

- J H S -



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# LA PAZ - (Bolivia)

BOLETIN SEISMICO DEL OBSERVATORIO DEL COLEGIO SAN CALIXTO (PP. Jesuitas)

Mes de

J U L I O 1 9 2 9

| No. | Día | Fases | HORA<br>Tiempo medio de Greenwich | Período |    | Amplitud verdadera |      | Distancia | NOTAS                                                 |
|-----|-----|-------|-----------------------------------|---------|----|--------------------|------|-----------|-------------------------------------------------------|
|     |     |       |                                   | NS      | EW | Am                 | Az   |           |                                                       |
|     |     |       |                                   | S       | S  | μ                  | μ    |           |                                                       |
| 458 | 5   | oP    | 22 53 02                          |         |    |                    |      |           | Sucre eP 22 55 51                                     |
|     |     | e     | 23 12 00                          |         | 16 |                    |      |           |                                                       |
|     |     | L     | 34 00                             |         | 21 |                    |      |           |                                                       |
|     |     | M     | 44 07                             |         | 20 |                    | 3,5  |           |                                                       |
|     |     | M     | 49 00                             |         | 19 |                    | 3    |           |                                                       |
|     |     | M     | 58 15                             |         | 17 |                    | 2,5  |           |                                                       |
|     |     | M     | 0 06 18                           |         | 17 |                    | 2    |           |                                                       |
|     |     | F     | 1 Ca .                            |         |    |                    |      |           |                                                       |
| 459 | 6   | e     | 2 22 31                           |         |    |                    |      |           |                                                       |
|     |     | iP'   | 23 32                             |         |    |                    |      |           |                                                       |
|     |     | L     | 3 12 00                           |         | 25 |                    |      |           |                                                       |
|     |     | M     | 22 25                             |         | 18 |                    | 2    |           |                                                       |
|     |     | F     | 4 Ca .                            |         |    |                    |      |           |                                                       |
| 460 | 6   | O     | 9 46 04                           | 5       |    |                    |      | 4070      | Sucre 4160 Km.<br>iP 9 53 36<br>Epic. 15° N.<br>49° W |
|     |     | iPE   | 9 53 32                           | 5       | 4  | - 3                | -2,7 |           |                                                       |
|     |     | PR2E  | 54 55                             |         |    |                    |      |           |                                                       |
|     |     | iSE   | 59 25                             |         | 7  |                    | - 7  |           |                                                       |
|     |     | i     | 10 02 10                          |         | 11 |                    | -18  |           |                                                       |
|     |     | L     | 03 15                             |         | 16 |                    |      |           |                                                       |
|     |     | M     | 05 12                             |         | 11 |                    | -16  |           |                                                       |
|     |     | M     | 06 00                             |         | 11 |                    | +23  |           |                                                       |
|     |     | M     | 08 18                             | 11      | 12 | -20                | +17  |           |                                                       |
|     |     | F     | 11 1 Ca .                         |         |    |                    |      |           |                                                       |
| 461 | 7   | oP    | 21 40 27                          |         |    |                    |      | 11780     | Sucre 13000 ?<br>oP? 21 40 17                         |
|     |     | iPR1? | 43 06                             |         | 10 |                    | -2,5 |           |                                                       |
|     |     | SoPcS | 50 34                             |         | 12 |                    |      |           |                                                       |
|     |     | eSE?  | 51 59                             |         | 15 |                    |      |           |                                                       |
|     |     | iSE   | 52 41                             |         | 12 |                    | - 9  |           |                                                       |
|     |     | i     | 53 52                             |         | 12 |                    | -10  |           |                                                       |
|     |     | SR1E  | 58 48                             |         | 18 |                    | +16  |           |                                                       |
|     |     | SR2NE | 22 03 19                          | 17      | 18 | -17                | -19  |           |                                                       |
|     |     | SR3E  | 06 39                             |         | 17 |                    | -12  |           |                                                       |
|     |     | LE    | 14 00                             |         | 35 |                    |      |           |                                                       |
|     |     | i     | 19 36                             |         | 30 |                    | -58  |           |                                                       |
|     |     | M     | 22 12                             |         | 25 |                    | -67  |           |                                                       |
|     |     | M     | 26 00                             |         | 23 |                    | -42  |           |                                                       |
|     |     | M     | 31 34                             | 25      | 22 | +54                | -82  |           |                                                       |
|     |     | M     | 38 24                             | 19      | 17 | +36                | +37  |           |                                                       |
|     |     | M     | 47 27                             |         | 18 |                    | -11  |           |                                                       |
|     |     | M     | 48 06                             | 18      |    | +28                |      |           |                                                       |
|     |     | F     | 1 Ca .                            |         |    |                    |      |           |                                                       |
| 462 | 3   | P     | 20 12 14                          |         |    |                    |      | 320       | Vert. 3 mm.                                           |
|     |     | S     | 12 54                             |         |    |                    |      |           |                                                       |
|     |     | M     | 13 07                             |         |    |                    |      |           |                                                       |
|     |     | M     | 18 -                              |         |    |                    |      |           |                                                       |
| 463 | 8   | P     | 20 59 17                          |         |    |                    |      |           |                                                       |
| 464 | 9   | oP    | 5 37 20                           |         |    |                    |      | 5560      |                                                       |
|     |     | iSE   | 44 32                             |         |    |                    |      |           |                                                       |
|     |     | L     | 53 27                             |         |    |                    |      |           |                                                       |
|     |     | M     | 56 12                             |         | 15 |                    | 1,6  |           |                                                       |
|     |     | F     | 6 20 -                            |         |    |                    |      |           |                                                       |
| 465 | 9   | P     | 22 40 36                          |         |    |                    |      |           | Fuerte agitaci-<br>on microseismica                   |
| 466 | 10  | P     | 14 59 40                          |         |    |                    |      |           |                                                       |
| 467 | 11  | P     | 19 17 39                          |         |    |                    |      |           |                                                       |
| 468 | 11  | eP    | 21 14 26                          |         |    |                    |      |           |                                                       |
|     |     | L     | 22 02 00                          |         |    |                    |      |           |                                                       |
|     |     | F     | 30 -                              |         |    |                    |      |           |                                                       |

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| No. | Día | Fases               | HORA<br>Tiempo medio de Greenwich | Período |    | Amplitud verdadera |       | Distancia | NOTAS            |
|-----|-----|---------------------|-----------------------------------|---------|----|--------------------|-------|-----------|------------------|
|     |     |                     |                                   | NS      | EW | Am                 | Ac    |           |                  |
|     |     |                     |                                   | S       | S  | $\mu$              | $\mu$ |           |                  |
| 469 | 12  | P                   | 3 17 26                           |         |    |                    |       |           | Sucre eP 3 20 09 |
|     |     | i                   | 19 12                             |         |    |                    |       |           |                  |
|     |     | F                   | 30 -                              |         |    |                    |       |           |                  |
| 470 | 12  | eP                  | 20 17 17                          |         |    |                    |       |           |                  |
| 471 | 13  | eP                  | 5 05 39                           |         |    |                    |       |           |                  |
| 472 | 13  | eP                  | 15 09 48                          |         |    |                    |       | 2250      | Sucre P 15 09 52 |
|     |     | S                   | 13 33                             |         |    |                    |       |           |                  |
|     |     | L                   | 15 07                             |         |    |                    |       |           |                  |
|     |     | <del>E</del>        | 25 -                              |         |    |                    |       |           |                  |
| 473 | 13  | P                   | 22 34 42                          |         |    |                    |       |           |                  |
|     |     | i                   | 35 14                             |         |    |                    |       |           |                  |
|     |     | M                   | 35 22                             |         |    |                    |       |           | Vort. 1,5 mm.    |
|     |     | F                   | 39 -                              |         |    |                    |       |           |                  |
| 474 | 14  | P                   | 7 36 57                           |         |    |                    |       |           | Sucre P 7 37 04  |
|     |     | i                   | 44 02                             |         |    |                    |       | 9200      |                  |
|     |     | S?                  | 48 17                             |         |    |                    |       |           |                  |
|     |     | L                   | 3 05 00                           |         |    |                    |       |           |                  |
|     |     | M                   | 11 20                             |         | 13 |                    | -1,5  |           |                  |
|     |     | M                   | 13 02                             |         | 15 |                    | - 2   |           |                  |
|     |     | F                   | 50 -                              |         |    |                    |       |           |                  |
| 475 | 14  | P                   | 7 57 57                           |         |    |                    |       |           |                  |
| 476 | 14  | iP                  | 9 05 46                           |         |    |                    |       | 4500      | Sucre 4710 Km.   |
|     |     | PRIE                | 07 09                             |         | 8  |                    | 1     |           |                  |
|     |     | iSN                 | 12 00                             | 12      |    | - 5                |       |           |                  |
|     |     | iSE                 | 12 02                             |         | 12 |                    | - 5   |           |                  |
|     |     | LN                  | 16 37                             | 27      |    |                    |       |           |                  |
|     |     | i                   | 18 09                             |         | 19 |                    | -12   |           |                  |
|     |     | M                   | 20 40                             | 15      |    | - 7                |       |           |                  |
|     |     | M                   | 23 00                             |         | 16 |                    | -12   |           |                  |
|     |     | M                   | 25 22                             |         | 13 |                    | - 8   |           |                  |
|     |     | M                   | 26 09                             | 15      |    | - 9                |       |           |                  |
|     |     | M                   | 27 36                             |         | 13 |                    | - 8   |           |                  |
|     |     | Fin en el siguiente |                                   |         |    |                    |       |           |                  |
| 477 | 14  | iP'                 | 19 56 9,5                         |         |    |                    |       |           | Sucre P' 9 56 18 |
|     |     | iPR1?               | 59 35                             |         | 5  |                    | -2,6  |           |                  |
|     |     | L                   | 10 41 00                          |         | 30 |                    |       |           |                  |
|     |     | M                   | 53 32                             |         | 25 |                    | - 5   |           |                  |
|     |     | M                   | 56 22                             | 21      | 23 | 6                  | 5     |           |                  |
|     |     | M                   | 59 00                             | 20      |    | 5                  |       |           |                  |
|     |     | M                   | 11 03 00                          | 22      |    | 6                  |       |           |                  |
|     |     | M                   | 11 12                             | 18      |    | 4                  |       |           |                  |
|     |     | F                   | 12 Ca .                           |         |    |                    |       |           |                  |
| 478 | 14  | P                   | 21 39 57                          |         |    |                    |       |           |                  |
| 479 | 15  | e?                  | 8 04 17                           |         |    |                    |       |           |                  |
|     |     | P                   | 05 04                             |         |    |                    |       |           |                  |
|     |     | L                   | 50 27                             | 25      |    |                    |       |           |                  |
|     |     | M                   | 57 02                             | 22      | 22 | -12                | -13   |           |                  |
|     |     | M                   | 58 04                             | 20      | 22 | -10                | -14   |           |                  |
|     |     | M                   | 9 01 30                           |         | 16 |                    | - 4   |           |                  |
|     |     | M                   | 06 17                             |         | 14 |                    | 3     |           |                  |
|     |     | F                   | 10 00 -                           |         |    |                    |       |           |                  |
| 480 | 15  | P                   | 13 57 07                          |         |    |                    |       |           |                  |
| 481 | 15  | P                   | 14 33 10                          |         |    |                    |       | 1765      |                  |
|     |     | SN                  | 36 07                             |         |    |                    |       |           |                  |
|     |     | iSE                 | 36 12                             |         | 5  |                    | - 3   |           |                  |
|     |     | L                   | 36 47                             |         |    |                    |       |           |                  |
|     |     | M                   | 37 03                             | 4       | 3  | -10                | - 6   |           |                  |
|     |     | F                   | 15 10 -                           |         |    |                    |       |           |                  |

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| No. | Día | Fases | HORA                      |          | Período |     | Amplitud verdadera |      | Distancia | NOTAS                              |
|-----|-----|-------|---------------------------|----------|---------|-----|--------------------|------|-----------|------------------------------------|
|     |     |       | Tiempo medio de Greenwich |          | NS      | EW  | Am                 | At   |           |                                    |
|     |     |       |                           |          | S       | S   | μ                  | μ    |           |                                    |
| 482 | 15  | P     | 16                        | 42 00    |         |     |                    |      |           |                                    |
| 483 | 15  | iP    | 21                        | 42 53    |         |     |                    |      |           |                                    |
| 484 | 16  | iP    | 10                        | 33 12    |         | 1,5 |                    | + 4  | 320       |                                    |
|     |     | iP    |                           | 38 19    |         | 2   |                    | + 6  |           |                                    |
|     |     | iS    |                           | 38 59    |         | 2,5 |                    | -13  |           |                                    |
|     |     | i     |                           | 39 11,5  |         | 3   |                    | +42  |           |                                    |
|     |     | M     |                           | 39 29    | 2,5     | 2,5 | +41                | -39  |           |                                    |
|     |     | F     |                           | 52 -     |         |     |                    |      |           |                                    |
| 485 | 17  | P     | 1                         | 10 06    |         |     |                    |      | 480       |                                    |
|     |     | iP    |                           | 10 20    |         |     |                    |      |           |                                    |
|     |     | iS    |                           | 11 19,5  |         | 2   |                    | + 8  |           |                                    |
|     |     | M     |                           | 11 40    | 2,5     | 2,5 | +22                | +14  |           |                                    |
|     |     | M     |                           | 11 50    | 2,5     |     | +19                |      |           |                                    |
|     |     | M     |                           | 12 10    |         | 3   |                    | -15  |           |                                    |
|     |     | F     |                           | 30 -     |         |     |                    |      |           |                                    |
| 486 | 17  | P     | 6                         | 46 48    |         |     |                    |      |           | Fuerte agitacion<br>microseismica. |
| 487 | 17  | P     | 8                         | 58 00    |         |     |                    |      |           |                                    |
|     |     | L     | 9                         | 43 00    |         |     |                    |      |           |                                    |
|     |     | M     |                           | 54 40    |         | 17  |                    | 1,5  |           |                                    |
|     |     | M     |                           | 57 22    |         | 18  |                    | 2    |           |                                    |
|     |     | F     | 10                        | 1/2 Ca . |         |     |                    |      |           |                                    |
| 488 | 17  | P     | 20                        | 08 01    |         |     |                    |      |           |                                    |
| 489 | 18  | P     | 0                         | 04 42,5  |         |     |                    |      | 220       |                                    |
|     |     | iS    |                           | 05 10    |         |     |                    |      |           | Vert.3 mm.                         |
|     |     | M     |                           | 05 17    |         |     |                    |      |           | Vert.13 mm                         |
|     |     | F     |                           | 09 -     |         |     |                    |      |           |                                    |
| 490 | 19  | iP    | 5                         | 06 28,5  |         |     |                    |      | 320       | Sucre eP 5 07 45                   |
|     |     | iP    |                           | 06 38,5  |         | 1   |                    | - 4  |           |                                    |
|     |     | iSE   |                           | 07 18,5  |         | 1   |                    | -10  |           |                                    |
|     |     | i     |                           | 07 21    |         | 1   |                    | +29  |           |                                    |
|     |     | M     |                           | 07 43    |         | 1,5 |                    | -45  |           |                                    |
|     |     | M     |                           | 08 05    |         | 2   |                    | +29  |           |                                    |
|     |     | F     |                           | 20 -     |         |     |                    |      |           |                                    |
| 491 | 19  | iP    | 11                        | 33 22    |         |     |                    |      |           |                                    |
| 492 | 19  | P     | 14                        | 03 05    |         |     |                    |      |           |                                    |
|     |     | i     |                           | 08 32    |         |     |                    |      |           |                                    |
|     |     | F     |                           | 12 -     |         |     |                    |      |           |                                    |
| 493 | 19  | P     | 22                        | 13 30    |         |     |                    |      |           |                                    |
| 494 | 20  | eP    | 2                         | 08 15    |         |     |                    |      |           |                                    |
|     |     | iE    |                           | 14 07    |         |     |                    |      |           |                                    |
|     |     | iE    |                           | 14 40    |         | 5   |                    | -2,6 |           |                                    |
|     |     | F     |                           | 23 -     |         |     |                    |      |           |                                    |
| 495 | 20  | P     | 10                        | 04 40    |         |     |                    |      |           |                                    |
| 496 | 20  | iP    | 14                        | 03 17,5  |         |     |                    |      | 300       |                                    |
|     |     | iP    |                           | 03 23    |         |     |                    |      |           |                                    |
|     |     | iS    |                           | 04 00,5  |         |     |                    |      |           |                                    |
|     |     | M     |                           | 04 15    |         |     |                    |      |           | Vert.11 mm.                        |
|     |     | F     |                           | 10 -     |         |     |                    |      |           |                                    |
| 497 | 21  | P     | 1                         | 12 46,5  |         |     |                    |      |           |                                    |
|     |     | i     |                           | 13 42    |         |     |                    |      |           |                                    |
|     |     | F     |                           | 17 -     |         |     |                    |      |           |                                    |
| 498 | 21  | P     | 3                         | 46 58    |         |     |                    |      | 700       | Sucre 430 Km.<br>iPN 3 46 24       |
|     |     | SE    |                           | 48 12    |         |     |                    |      |           |                                    |
|     |     | L     |                           | 48 20    |         |     |                    |      |           |                                    |
|     |     | M     |                           | 48 38    |         | 3   |                    | - 3  |           |                                    |
|     |     | F     |                           | 55 -     |         |     |                    |      |           |                                    |

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| No. | Día | Fases | HORA<br>Tiempo medio de Greenwich | Período |    | Amplitud verdadera |      | Distancia | NOTAS                        |
|-----|-----|-------|-----------------------------------|---------|----|--------------------|------|-----------|------------------------------|
|     |     |       |                                   | NS      | EW | Am                 | Az   |           |                              |
| 499 | 22  | P     | 18 59 02                          | S       | S  | μ                  | μ    |           |                              |
| 500 | 23  | P     | 10 21 19                          |         |    |                    |      |           |                              |
| 501 | 23  | oP    | 15 44 45                          |         |    |                    |      |           |                              |
| 502 | 23  | oP    | 18 56 13                          |         |    |                    |      |           | Sucre L 19 33 30             |
|     |     | L?    | 19 33 00                          |         |    |                    |      |           |                              |
|     |     | M     | 38 32                             |         | 19 |                    | 2    |           |                              |
|     |     | F     | 20 Ca .                           |         |    |                    |      |           |                              |
| 503 | 24  | P     | 3 17 43                           |         |    |                    |      |           |                              |
| 504 | 24  | oP    | 7 59 29                           |         |    |                    |      |           |                              |
| 505 | 24  | P     | 18 55 33                          |         |    |                    |      |           |                              |
| 506 | 24  | oP    | 21 06 02                          |         |    |                    |      |           |                              |
| 507 | 25  | oP    | 8 57 42                           |         |    |                    |      | 2100      |                              |
|     |     | iS?   | 9 01 14                           |         |    |                    |      |           |                              |
|     |     | iL    | 03 06                             |         |    |                    |      |           |                              |
|     |     | M     | 04 10                             |         |    |                    |      |           | Vert.1 mm.                   |
|     |     | F     | 15 -                              |         |    |                    |      |           |                              |
| 508 | 25  | P     | 11 39 52                          |         |    |                    |      |           |                              |
|     |     | L     | 40 30                             |         |    |                    |      |           |                              |
|     |     | M     | 40 35                             |         |    |                    |      |           | Vert.2 mm.                   |
|     |     | F     | 45 -                              |         |    |                    |      |           |                              |
| 509 | 25  | P     | 23 06 33                          |         |    |                    |      | 5750      |                              |
|     |     | iSE   | 13 56                             |         | 10 |                    | +2,5 |           |                              |
|     |     | SRLE  | 16 13                             |         | 11 |                    |      |           |                              |
|     |     | L     | 22 42                             |         | 30 |                    |      |           |                              |
|     |     | M     | 26 27                             |         | 18 |                    | 2,7  |           |                              |
|     |     | M     | 27 43                             |         | 18 |                    | 2,7  |           |                              |
|     |     | M     | 28 24                             | 15      |    | 3                  |      |           |                              |
|     |     | F     | 0 20 -                            |         |    |                    |      |           |                              |
| 510 | 26  | oP    | 23 08 00                          |         |    |                    |      |           |                              |
| 511 | 27  | P     | 2 02 29                           |         |    |                    |      |           | Sucre P 2 03 25              |
|     |     | S?    | 05 20                             |         |    |                    |      |           |                              |
|     |     | F     | 15 -                              |         |    |                    |      |           |                              |
| 512 | 27  | iP    | 2 22 12,5                         |         |    |                    |      | 610       | Sucre 470 Km.<br>1PN 2 21 34 |
|     |     | S     | 23 18                             |         |    |                    |      |           |                              |
|     |     | L     | 23 25                             |         |    |                    |      |           |                              |
|     |     | M     | 23 40                             |         |    |                    |      |           | Vert.2 mm.                   |
|     |     | F     | 31 -                              |         |    |                    |      |           |                              |
| 513 | 27  | P     | 3 17 22                           |         |    |                    |      |           |                              |
| 514 | 27  | P     | 3 21 37                           |         |    |                    |      | 450       |                              |
|     |     | S     | 22 27                             |         |    |                    |      |           |                              |
|     |     | M     | 22 45                             |         |    |                    |      |           | Vert.1,5 mm.                 |
|     |     | F     | 27 -                              |         |    |                    |      |           |                              |
| 515 | 27  | oP    | 13 00 27                          |         |    |                    |      | 4110      | Sucre L 13 13 00             |
|     |     | iS    | 06 21                             |         | 7  |                    | + 2  |           |                              |
|     |     | L     | 12 30                             | 22      |    |                    |      |           |                              |
|     |     | M     | 16 45                             | 17      |    | 4                  |      |           |                              |
|     |     | M     | 17 40                             | 15      |    | 3                  |      |           |                              |
|     |     | F     | 54 -                              |         |    |                    |      |           |                              |
| 516 | 29  | P     | 10 31 26,5                        |         |    |                    |      | 640       |                              |
|     |     | S     | 32 34                             |         |    |                    |      |           |                              |
|     |     | L     | 32 46                             |         |    |                    |      |           |                              |
|     |     | M     | 33 50                             |         |    |                    |      |           | Vert.3 mm.                   |
|     |     | F     | 40 -                              |         |    |                    |      |           |                              |



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|------------------|-----|--------------------|-----------------------------------|---------|----|--------------------|-----|-----------|-------------------|
|                  |     |                    |                                   | NS      | EW | Am                 | Ar  |           |                   |
| 517              | 30  | P                  | 4 02 26                           | S       | S  | μ                  | μ   |           |                   |
| 518              | 30  | eP                 | 7 51 22                           |         |    |                    |     |           | Sucre L 8 01 00   |
|                  |     | LE                 | 8 02 32                           |         | 25 |                    |     |           |                   |
|                  |     | M                  | 06 20                             |         | 15 |                    | 2   |           |                   |
|                  |     | F                  | 32 -                              |         |    |                    |     |           |                   |
| 519              | 31  | P                  | 12 13 21                          |         |    |                    |     | 280       |                   |
|                  |     | iP                 | 13 26                             |         |    |                    |     |           |                   |
|                  |     | iS                 | 13 56,5                           |         |    |                    |     |           |                   |
|                  |     | M                  | 14 08,5                           |         |    |                    |     |           | Vert. 5 mm.       |
|                  |     | F                  | 21 -                              |         |    |                    |     |           |                   |
| 520              |     |                    |                                   |         |    |                    |     |           |                   |
| A G O S T O 1929 |     |                    |                                   |         |    |                    |     |           |                   |
| 520              | 1   | P <sup>i</sup>     | 5 19 52                           |         |    |                    |     |           | Sucre eP 5 21 52  |
|                  |     | iSoPcSP            | 34 47                             |         |    |                    |     |           |                   |
|                  |     | L                  | 6 19 00                           |         | 30 |                    |     |           |                   |
|                  |     | M                  | 27 09                             |         | 20 |                    | 3   |           |                   |
|                  |     | M                  | 31 12                             |         | 19 |                    | 2   |           |                   |
|                  |     | F                  | 7 Ca .                            |         |    |                    |     |           |                   |
| 521              | 2   | P                  | 5 25 40                           |         |    |                    |     |           |                   |
| 522              | 2   | P                  | 22 32 53                          |         |    |                    |     | 1400      |                   |
|                  |     | SE                 | 35 20                             |         |    |                    |     |           |                   |
|                  |     | L                  | 36 02                             |         |    |                    |     |           |                   |
|                  |     | M                  | 36 18                             |         | 3  |                    | + 3 |           |                   |
|                  |     | F                  | 54 -                              |         |    |                    |     |           |                   |
| 523              | 3   | iP                 | 7 29 00                           |         |    |                    |     | 220       | Sucre P 7 29 50   |
|                  |     | P                  | 29 01                             |         |    |                    |     |           |                   |
|                  |     | S                  | 29 29                             |         |    |                    |     |           |                   |
|                  |     | M                  | 29 42                             |         | 1  |                    | +13 |           |                   |
|                  |     | F                  | 37 -                              |         |    |                    |     |           |                   |
| 524              | 3   | B                  | 13 03 07                          |         |    |                    |     |           | Sucre eP 13 03 26 |
|                  |     | eP                 | 03 18                             |         |    |                    |     |           |                   |
|                  |     | L                  | 36 22                             |         | 22 |                    |     |           |                   |
|                  |     | F                  | 14 Ca .                           |         |    |                    |     |           |                   |
| 525              | 3   | iPE                | 13 41 17                          |         | 1  |                    | - 2 |           | Sucre P 13 41 50  |
|                  |     | i                  | 41 21                             |         | 1  |                    | + 3 |           |                   |
|                  |     | i                  | 41 26                             |         | 1  |                    | + 4 |           |                   |
|                  |     | Fin en el anterior |                                   |         |    |                    |     |           |                   |
| 526              | 3   | eP                 | 15 14 56                          |         |    |                    |     |           |                   |
| 527              | 3   | eP                 | 17 10 31                          |         |    |                    |     |           |                   |
| 528              | 4   | eP                 | 9 15 50                           |         |    |                    |     |           |                   |
|                  |     | L?                 | 23 50                             |         |    |                    |     |           |                   |
|                  |     | M                  | 27 48                             |         | 10 |                    | 1   |           |                   |
|                  |     | F                  | 41 -                              |         |    |                    |     |           |                   |
| 529              | 4   | eP                 | 19 55 25                          |         |    |                    |     |           |                   |
| 530              | 4   | eP                 | 22 26 30                          |         |    |                    |     | 6390      |                   |
|                  |     | eS                 | 34 27                             |         |    |                    |     |           |                   |
|                  |     | L                  | 44 25                             |         | 20 |                    |     |           |                   |
|                  |     | M                  | 52 36                             |         | 15 |                    | 2   |           |                   |
|                  |     | F                  | 23 35 -                           |         |    |                    |     |           |                   |
| 531              | 5   | eP                 | 3 38 30                           |         |    |                    |     |           |                   |
| 532              | 5   | eP                 | 5 34 01                           |         |    |                    |     |           |                   |
|                  |     | S                  | 34 46                             |         |    |                    |     |           |                   |
|                  |     | F                  | 38 -                              |         |    |                    |     |           |                   |

# LA PAZ - (Bolivia)

BOLETIN SEISMICO DEL OBSERVATORIO DEL COLEGIO SAN CALIXTO (PP. Jesuitas)

Longitud W. Greenwich { 68° 7' 57",7  
4<sup>h</sup> 32<sup>m</sup> 31<sup>s</sup>,85  
Latitud S. 16° 29' 43"  
Altura sobre el mar 3658 m.  
Subsuelo: aluvión antiguo

Mes de AGOSTO de 1929

|                           |   |          |            |            |     |       |      |                   |
|---------------------------|---|----------|------------|------------|-----|-------|------|-------------------|
| Altura sobre el mar       |   | 3658 m.  | Componente | Masa       | To  | A     | ε: 1 | $\frac{r}{T_o^2}$ |
| Subsuelo: aluvión antiguo |   |          |            |            |     |       |      |                   |
| Péndulo horizontal        |   | Bifilar  | N. S.      | 2,000 kgs. | 14  | 180   | 5.0  | 0.002             |
| Instrumentos:             | » | »        | E. W       | 3,500 »    | 12  | 300   | 5,0  | 0.002             |
|                           | » | vertical | S. Calixto | NS y EW    | 2,4 | 1.100 | 2    | 0,001             |

| No. | Día           | Fases                                   | HORA                   |    | Período |    | Amplitud verdadera |     | Distancia | NOTAS                                                                      |
|-----|---------------|-----------------------------------------|------------------------|----|---------|----|--------------------|-----|-----------|----------------------------------------------------------------------------|
|     |               |                                         | Tiempo medio de Greew. |    | NS      | EW | An                 | Az  |           |                                                                            |
|     |               |                                         |                        |    | S       | S  | μ                  | μ   |           |                                                                            |
| 533 | 5 Agosto 1929 | IP<br>IS<br>L<br>M<br>M<br>M<br>F<br>P  | 14                     | 25 | 43      |    |                    |     | 1890      | Sentido muy fuerte en Viña del Mar Valparaíso Sucre 1750 Km<br>IP 14 25 19 |
|     |               |                                         |                        | 28 | 56      |    |                    |     |           |                                                                            |
|     |               |                                         |                        | 30 | 12      |    |                    |     |           |                                                                            |
|     |               |                                         |                        | 30 | 33      |    | 5                  |     | -7        |                                                                            |
|     |               |                                         |                        | 31 | 30      |    | 6                  |     | -8        |                                                                            |
|     |               |                                         |                        | 32 | 12      | 10 | 7,5                | + 7 | -7        |                                                                            |
| 534 | 5             | 15 1/2<br>P<br>IS<br>M<br>F<br>P        | 18                     | 21 | 51,5    | 5  |                    |     | 200       | Vert.1 mm.                                                                 |
|     |               |                                         |                        | 22 | 16,5    | 5  |                    |     |           |                                                                            |
|     |               |                                         |                        | 22 | 45      |    |                    |     |           |                                                                            |
|     |               |                                         |                        | 26 | -       |    |                    |     |           |                                                                            |
| 535 | 6             | P<br>S?<br>L<br>M<br>F                  | 20                     | 18 | 45      |    |                    |     |           |                                                                            |
|     |               |                                         |                        | 22 | 00      |    |                    |     |           |                                                                            |
|     |               |                                         |                        | 23 | 12      |    |                    |     |           |                                                                            |
|     |               |                                         |                        | 23 | 58      |    |                    |     |           |                                                                            |
|     |               |                                         |                        | 32 | -       |    |                    |     |           |                                                                            |
| 536 | 7             | eP                                      | 4                      | 28 | 18      |    |                    |     |           | 5560<br><br><br><br><br><br><br><br><br><br><br>280                        |
| 537 | 7             | eP<br>IP<br>SNE                         | 20                     | 05 | 24      |    |                    |     |           |                                                                            |
|     |               |                                         |                        | 05 | 28      |    |                    |     |           |                                                                            |
|     |               |                                         |                        | 12 | 35      |    |                    |     |           |                                                                            |
|     |               |                                         |                        | 22 | 00      |    | 15                 |     |           |                                                                            |
|     |               |                                         |                        | 28 | 30      |    | 13                 |     | 2         |                                                                            |
|     |               |                                         |                        | 32 | 00      |    | 15                 |     | 2         |                                                                            |
| 538 | 7             | 21 Ca.<br>eP<br>IS<br>M<br>F            | 22                     | 32 | 23      |    |                    |     |           |                                                                            |
|     |               |                                         |                        | 32 | 58      |    |                    |     |           |                                                                            |
|     |               |                                         |                        | 33 | 25      |    | 2,5                |     | - 3       |                                                                            |
| 539 | 8             | 48 -<br>P<br>L<br>M<br>F                | 12                     | 14 | 29      |    |                    |     |           | Vert.1 mm.                                                                 |
|     |               |                                         |                        | 14 | 35      |    |                    |     |           |                                                                            |
|     |               |                                         |                        | 14 | 38      |    |                    |     |           |                                                                            |
|     |               |                                         |                        | 17 | -       |    |                    |     |           |                                                                            |
| 540 | 8             | 13<br>eP<br>eL<br>M<br>M<br>M<br>M<br>F | 13                     | 17 | 32      |    |                    |     |           |                                                                            |
|     |               |                                         | 14                     | 17 | 00      | 30 | 37                 |     |           |                                                                            |
|     |               |                                         |                        | 30 | 42      | 25 | 20                 | 7   | 4         |                                                                            |
|     |               |                                         |                        | 34 | 27      | 23 | 23                 | 4   | 7         |                                                                            |
|     |               |                                         |                        | 36 | 30      | 22 | 18                 | 4   | -5        |                                                                            |
|     |               |                                         |                        | 42 | 27      |    | 17,5               |     | -4        |                                                                            |
| 541 | 8             | 15 1/2 Ca.<br>P                         | 17                     | 58 | 27      |    |                    |     |           |                                                                            |
| 542 | 9             | P<br>S?<br>F                            | 2                      | 00 | 22      |    |                    |     |           |                                                                            |
|     |               |                                         |                        | 05 | 10      |    |                    |     |           |                                                                            |
|     |               |                                         |                        | 15 | -       |    |                    |     |           |                                                                            |
| 543 | 9             | eP                                      | 7                      | 09 | 28      |    |                    |     |           |                                                                            |
| 544 | 10            | eP                                      | 15                     | 36 | 18      |    |                    |     |           |                                                                            |
| 545 | 11            | eP                                      | 1                      | 45 | 34      |    |                    |     |           |                                                                            |
| 546 | 12            | eP                                      | 12                     | 12 | 48      |    |                    |     |           |                                                                            |
| 547 | 12            | eP                                      | 20                     | 42 | 04      |    |                    |     |           |                                                                            |
| 548 | 13            | eP                                      | 6                      | 22 | 21      |    |                    |     |           |                                                                            |
| 549 | 13            | P<br>IP<br>IS<br>M<br>F<br>P            | 19                     | 34 | 10      |    |                    |     | 340       | Sucre 990 Km<br>eP 19 35 16                                                |
|     |               |                                         |                        | 34 | 16,5    |    |                    |     |           |                                                                            |
|     |               |                                         |                        | 34 | 59,5    |    |                    |     |           |                                                                            |
|     |               |                                         |                        | 35 | 15      |    | 1                  |     | +10       |                                                                            |
|     |               |                                         |                        | 50 | -       |    | 2,5                |     | -34       |                                                                            |
| 550 | 14            | P                                       | 2                      | 04 | 54      |    |                    |     |           |                                                                            |

# LA PAZ = (Bolivia)

BOLETIN SEISMICO DEL OBSERVATORIO DEL COLEGIO SAN CALIXTO (PP. Jesuitas)

Mes de

A G O S T O 1 9 2 9

| No. | Día | Fases | HORA<br>Tiempo medio de Greenwich | Período |    | Amplitud verdadera |       | Distancia | NOTAS            |
|-----|-----|-------|-----------------------------------|---------|----|--------------------|-------|-----------|------------------|
|     |     |       |                                   | NS      | EW | Am                 | At    |           |                  |
|     |     |       |                                   | S       | S  | $\mu$              | $\mu$ |           |                  |
| 551 | 14  | eP    | 2 29 31                           |         |    |                    |       | 8930      | Sucre 9280 Km.?  |
|     |     | eSNE  | 39 37                             |         |    |                    |       |           | eP 2 29 20       |
|     |     | L     | 56 00                             | 18      | 17 |                    |       |           |                  |
|     |     | M     | 3 01 44                           |         | 15 |                    | 1     |           |                  |
|     |     | M     | 05 24                             | 18      |    | 3                  |       |           |                  |
|     |     | M     | 07 06                             |         | 16 |                    | 1     |           |                  |
|     |     | F     | 35 -                              |         |    |                    |       |           |                  |
| 552 | 15  | eP    | 1 14 54                           |         |    |                    |       |           |                  |
| 553 | 15  | P     | 5 08 58                           |         |    |                    |       |           |                  |
|     |     | L     | 11 00                             |         |    |                    |       |           |                  |
|     |     | F     | 17 -                              |         |    |                    |       |           |                  |
| 554 | 15  | eP    | 18 35 09                          |         |    |                    |       |           |                  |
| 555 | 15  | iP    | 20 01 57,5                        |         |    |                    |       |           |                  |
|     |     | iP    | 02 02                             |         |    |                    |       |           |                  |
|     |     | PR2E  | 02 49                             |         |    |                    |       | 2980      | Sucre 3370 Km    |
|     |     | iSNE  | 05 45                             |         |    |                    |       |           |                  |
|     |     | BR    | 09 54                             | 24      |    |                    |       |           |                  |
|     |     | M     | 13 52                             | 18      | 11 | -38                | +12   |           |                  |
|     |     | M     | 16 14                             | 13      |    | -16                |       |           |                  |
|     |     | F     | 21 1/8 Ca.                        |         |    |                    |       |           |                  |
| 556 | 16  | eP    | 21 48 15                          |         |    |                    |       |           |                  |
| 557 | 17  | P     | 23 31 29                          |         |    |                    |       |           |                  |
|     |     | iL    | 31 54                             |         |    |                    |       |           |                  |
|     |     | M     | 32 06                             |         |    |                    |       |           | Vert. 4,5 mm.    |
|     |     | F     | 36 -                              |         |    |                    |       |           |                  |
| 558 | 17  | iP    | 23 49 10,5                        |         |    |                    |       | 4780      | Sucre 4940 Km.   |
|     |     | iSNE  | 55 40,5                           | 11      | 11 | + 4                | +4    |           | 1P 23 49 33      |
|     |     | eSR1E | 58 44                             |         |    |                    |       |           |                  |
|     |     | i N   | 59 01,5                           | 11      |    | + 8                |       |           |                  |
|     |     | L     | 0 03 14                           |         |    |                    |       |           |                  |
|     |     | M     | 05 24                             | 17      | 17 | - 5                | - 5   |           |                  |
|     |     | M     | 10 10                             |         | 15 |                    | 3     |           |                  |
|     |     | M     | 11 30                             |         | 12 |                    | -4    |           |                  |
|     |     | F     | 1 10 -                            |         |    |                    |       |           |                  |
| 559 | 18  | iP    | 3 03 18                           |         |    |                    |       |           | Sucre eP 3 03 19 |
|     |     | L     | 4 01 00                           |         |    |                    |       |           |                  |
|     |     | LE    | 05 00                             |         | 37 |                    |       |           |                  |
|     |     | M     | 15 12                             |         | 22 |                    | 3     |           |                  |
|     |     | M     | 20 15                             |         | 25 |                    | 4     |           |                  |
|     |     | M     | 26 30                             | 22      |    | 5                  |       |           |                  |
|     |     | M     | 27 12                             |         | 20 |                    | 3     |           |                  |
|     |     | M     | 34 18                             |         | 18 |                    | 2     |           |                  |
|     |     | F     | 5 00 -                            |         |    |                    |       |           |                  |
| 560 | 19  | P     | 21 04 42                          |         |    |                    |       |           |                  |
| 561 | 20  | eP    | 13 49 31                          |         |    |                    |       |           |                  |
| 562 | 20  | P     | 16 58 27                          |         |    |                    |       |           |                  |
| 563 | 20  | iP    | 17 43 44                          |         |    |                    |       | 3300      | Sucre L 17 57 00 |
|     |     | SN    | 49 21                             |         |    |                    |       |           |                  |
|     |     | L     | 52 50                             |         |    |                    |       |           |                  |
|     |     | L     | 54 00                             | 27      | 25 |                    |       |           |                  |
|     |     | M     | 57 32                             | 17      |    | + 5                |       |           |                  |
|     |     | M     | 18 01 40                          |         | 13 |                    | 2,5   |           |                  |
|     |     | F     | 40 -                              |         |    |                    |       |           |                  |

# LA PAZ - (Bolivia)

BOLETIN SEISMICO DEL OBSERVATORIO DEL COLEGIO SAN CALIXTO (PP. Jesuitas)

Mes de

A G O S T O 1 9 2 9

| No.                             | Día | Fases                            | Hora<br>Tiempo medio de Greenwich                          | Período |                    | Amplitud verdadera |                          | Distancia | NOTAS                        |
|---------------------------------|-----|----------------------------------|------------------------------------------------------------|---------|--------------------|--------------------|--------------------------|-----------|------------------------------|
|                                 |     |                                  |                                                            | NS      | EW                 | AN                 | AE                       |           |                              |
|                                 |     |                                  |                                                            | S       | S                  | $\mu$              | $\mu$                    |           |                              |
| 564                             | 21  | 1P<br>1L<br>M<br>F               | 13 33 36,5<br>34 03<br>34 30<br>45 -                       |         | 2,5                |                    | +21                      | 200       | Sucre 425 Km.<br>1P 13 34 09 |
| 565                             | 22  | eP<br>SE<br>LE<br>M<br>M<br>F    | 16 39 08<br>44 34<br>47 09<br>49 45<br>50 14<br>17 1/2 Ca. |         |                    |                    |                          | 3480      | Sucre 3380 Km<br>eP 16 39 08 |
| 566                             | 22  | P<br>PR2E<br>1SE<br>LN<br>M<br>F | 19 49 32<br>51 56<br>56 19<br>20 05 00<br>08 24<br>40 -    | 10      | 8<br>10            | - 8                | - 3<br>- 4               | 5100      | Sucre 5190 Km<br>eP 19 49 27 |
| 567                             | 24  | eP                               | 3 47 17                                                    |         |                    |                    |                          |           |                              |
| 568                             | 24  | eP                               | 12 43 02                                                   |         |                    |                    |                          |           |                              |
| 569                             | 27  | PN<br>1P<br>1S<br>M<br>M<br>F    | 0 15 49<br>15 53<br>16 38<br>17 00<br>17 12<br>25 -        | 2       | 1<br>2,5<br>2<br>2 | +17                | + 5<br>+10<br>+28<br>+19 | 360       | Sucre 845 Km.<br>eP 0 16 58  |
| 570                             | 27  | eP                               | 22 10 11                                                   |         |                    |                    |                          |           |                              |
| 571                             | 28  | o                                | 19 06 00                                                   |         |                    |                    |                          |           |                              |
| 572                             | 28  | oP                               | 19 11 54                                                   |         |                    |                    |                          |           |                              |
| 573                             | 29  | eP                               | 1 12 46                                                    |         |                    |                    |                          |           |                              |
| 574                             | 30  | eP                               | 7 27 11                                                    |         |                    |                    |                          |           |                              |
| 575                             | 31  | oP                               | 16 06 36                                                   |         |                    |                    |                          |           |                              |
| 576                             | 31  | 1P<br>S<br>M<br>F                | 17 34 05<br>35 00<br>35 12<br>39 -                         |         | 2                  |                    | + 3                      |           |                              |
| 577                             | 31  | P<br>L<br>M<br>M<br>F            | 19 26 01<br>41 00<br>45 24<br>47 53<br>20 15 -             |         | 12<br>10           |                    | 3<br>- 3                 | Sucre     | L 19 40 00                   |
| SEP S E P T I E M B R E 1 9 2 9 |     |                                  |                                                            |         |                    |                    |                          |           |                              |
| 578                             | 1   | P<br>1<br>F                      | 3 38 03<br>44 34<br>55 -                                   |         |                    |                    |                          |           |                              |
| 579                             | 1   | L<br>M<br>F                      | 16 47 00<br>56 21<br>17 30 Ca                              |         |                    |                    |                          | Sucre     | L 16 46 00                   |
| 580                             | 3   | oP<br>S?<br>L<br>M<br>F          | 11 53 41<br>55 51<br>56 30<br>57 02<br>12 05 -             |         |                    |                    |                          |           | Vert. 1 mm.                  |

LA PAZ = (Bolivia)

BOLETIN SEISMICO DEL OBSERVATORIO DEL COLEGIO SAN CALIXTO (PP. Jesuitas)



Longitud W. Greenwich 68° 7' 57",7  
4h 32m 31s,85

Latitud S. 16° 29' 43"

Altura sobre el mar 3658 m.

Subsuelo: aluvión antiguo

Péndulo horizontal Bifilar

Instrumentos:

» »  
» vertical S. Calixto

Mes de SEPTIEMBRE de 1929

| Componente | Masa       | To  | A     | $\epsilon: 1$ | $\frac{r}{To^2}$ |
|------------|------------|-----|-------|---------------|------------------|
| N. S.      | 2,000 kgs. | 14  | 180   | 3,4           | 0,002            |
| E. W       | 3,500 »    | 12  | 200   | 4,0           | 0,002            |
| NS y EW    | 1,500 »    | 2,4 | 1.100 | 2             | 0,001            |

| No.            | Día             | Fases | HORA<br>Tiempo medio de Greenw. | Período |     | Amplitud verdadera |       | Distancia<br>kms. | NOTAS                     |
|----------------|-----------------|-------|---------------------------------|---------|-----|--------------------|-------|-------------------|---------------------------|
|                |                 |       |                                 | NS      | EW  | AN                 | Ae    |                   |                           |
|                |                 |       |                                 | S       | S   | $\mu$              | $\mu$ |                   |                           |
| 581            | 3 Sept.<br>1929 | eP    | 12 26 44                        |         |     |                    |       |                   | Afganistan                |
| 582            | 3               | eP    | 20 42 52                        |         |     |                    |       | 1400?             | Sucre 1145<br>oP 20 42 58 |
|                |                 | S?    | 45 00                           |         |     |                    |       |                   |                           |
|                |                 | L     | 46 15                           |         |     |                    |       |                   |                           |
|                |                 | M     | 47 24                           |         | 15  |                    | - 3   |                   |                           |
| 583            | 4               | F     | 21 12 -                         |         |     |                    |       |                   |                           |
| <del>584</del> |                 | eP    | 15 45 12                        |         |     |                    |       |                   |                           |
|                |                 | L     | 47 59                           |         |     |                    |       |                   |                           |
|                |                 | M     | 48 30                           | 8       |     | 2                  |       |                   |                           |
|                |                 | F     | 58 -                            |         |     |                    |       |                   |                           |
| 584            | 4               | P     | 18 23 46                        |         |     |                    |       |                   |                           |
| 585            | 5               | eP    | 8 18 19                         |         |     |                    |       |                   |                           |
| 586            | 5               | eP    | 23 04 18                        |         |     |                    |       | 1855              | Sucre 2210<br>P 23 05 01  |
|                |                 | iP    | 04 25                           |         |     |                    |       |                   |                           |
|                |                 | iSE?  | 07 28                           |         | 8   |                    | 2     |                   |                           |
|                |                 | L     | 08 58                           |         |     |                    |       |                   |                           |
|                |                 | M     | 09 31                           | 8       | 8   | -4                 |       |                   |                           |
|                |                 | F     | 20 -                            |         |     |                    |       |                   |                           |
| 587            | 6               | eP    | 3 06 28                         |         |     |                    |       |                   |                           |
| 588            | 6               | iP    | 6 21 11                         |         |     |                    |       |                   |                           |
| 589            | 6               | iP    | 6 38 20                         |         |     |                    |       |                   |                           |
|                |                 | S     | 39 11                           |         |     |                    |       |                   |                           |
|                |                 | M     | 39 28                           |         |     |                    |       |                   | Vert. 2 mm.               |
|                |                 | F     | 45 -                            |         |     |                    |       |                   |                           |
| 590            | 7               | P     | 15 12 48                        |         |     |                    |       |                   |                           |
| 591            | 7               | P     | 16 24 48                        |         |     |                    |       |                   |                           |
| 592            | 7               | P     | 18 25 53                        |         |     |                    |       |                   |                           |
|                |                 | S     | 27 17                           |         |     |                    |       |                   |                           |
|                |                 | L     | 27 33                           |         |     |                    |       |                   |                           |
|                |                 | M     | 28 13                           |         |     |                    |       |                   | Vert. 2 mm                |
|                |                 | F     | 34 -                            |         |     |                    |       |                   |                           |
| 593            | 8               | eP    | 2 29 38                         |         |     |                    |       |                   |                           |
| 594            | 3               | P     | 17 50 20                        |         |     |                    |       |                   |                           |
| 595            | 10              | P     | 9 34 21                         |         |     |                    |       |                   |                           |
| 596            | 12              | eP    | 20 20 23                        |         |     |                    |       |                   |                           |
|                |                 | L     | 58 00                           |         | 15  |                    |       |                   |                           |
|                |                 | M     | 43 06                           |         | 13  |                    | 1     |                   |                           |
|                |                 | F     | 21 00 -                         |         |     |                    |       |                   |                           |
| 597            | 15              | iP    | 6 23 18                         |         | 1   |                    | -1,5  | 190               | Sucre 700<br>P 6 24 03    |
|                |                 | iS    | 25 41                           |         | 2   |                    | + 8   |                   |                           |
|                |                 | i     | 25 44                           |         | 2   |                    | -21   |                   |                           |
|                |                 | L     | 23 51                           |         |     |                    |       |                   |                           |
|                |                 | M     | 24 00                           |         | 2   |                    | -18   |                   |                           |
|                |                 | M     | 24 22                           |         | 2,5 |                    | +14   |                   |                           |
|                |                 | F     | 40 -                            |         |     |                    |       |                   |                           |
| 598            | 15              | P     | 7 00 56                         |         |     |                    |       |                   |                           |
| 599            | 15              | eP    | 16 07 32                        |         |     |                    |       |                   |                           |

# LA PAZ - (Bolivia)

BOLETIN SEISMICO DEL OBSERVATORIO DEL COLEGIO SAN CALIXTO (PP. Jesuitas)

Mes de

| No. | Día | Fases | HORA<br>Tiempo medio de Greenwich | Período |    | Amplitud verdadera |       | Distancia | NOTAS            |
|-----|-----|-------|-----------------------------------|---------|----|--------------------|-------|-----------|------------------|
|     |     |       |                                   | NS      | EW | Am                 | Az    |           |                  |
| 600 | 15  | P     | 17 54 45                          | S       | S  | $\mu$              | $\mu$ |           | Sucre P 17 54 57 |
|     |     | iS    | 55 54                             |         |    |                    |       |           |                  |
|     |     | L     | 55 42                             |         |    |                    |       |           |                  |
|     |     | M     | 55 47                             |         |    |                    |       |           |                  |
|     |     | F     | 18 02 -                           |         |    |                    |       |           | Vert. 22 mm      |
| 601 | 16  | O     | 3 44 52                           |         |    |                    |       | 2290      | Sucre 2690       |
|     |     | P     | 3 49 20                           | 7       | 7  | +1                 | +2    |           | P 3 50 03        |
|     |     | iSN   | 53 03                             | 10      | 10 | -5                 | -2    |           | Epic. 18°S       |
|     |     | L     | 55 10                             |         |    |                    |       |           | 90°W.            |
|     |     | M     | 56 52                             |         | 10 |                    | - 4   |           |                  |
|     |     | M     | 57 46                             | 12      | 8  | -3                 | + 7   |           |                  |
|     |     | M     | 4 00 00                           |         | 8  |                    | 6 5   |           |                  |
|     |     | F     | 40 -                              |         |    |                    |       |           |                  |
| 602 | 17  | P     | 19 30 27                          |         |    |                    |       | 9650      | Queen Charlotte  |
|     |     | PR1E  | 33 48                             |         |    |                    |       |           | Island. J.S.A.   |
|     |     | PR2W  | 35 56                             | 9       |    |                    |       |           |                  |
|     |     | iSN   | 41 03                             | 12      |    | + 7                |       |           |                  |
|     |     | iSE   | 41 08                             |         | 12 |                    | - 5   |           |                  |
|     |     | SR1N  | 47 06                             |         |    |                    |       |           |                  |
|     |     | LN    | 50 00                             | 40      |    |                    |       |           |                  |
|     |     | LE    | 20 01 40                          |         | 33 |                    |       |           |                  |
|     |     | M     | 10 52                             |         | 16 |                    | -11   |           |                  |
|     |     | M     | 13 06                             | 13      |    | +10,5              |       |           |                  |
|     |     | M     | 14 16                             |         | 13 |                    | -12   |           |                  |
|     |     | M     | 15 46                             | 15      |    | -13                |       |           |                  |
|     |     | F     | 21 40 -                           |         |    |                    |       |           |                  |
| 603 | 18  | eP    | 5 50 23                           |         |    |                    |       |           |                  |
|     |     | oS    | 52 36                             |         |    |                    |       |           |                  |
|     |     | L     | 53 14                             |         |    |                    |       |           |                  |
|     |     | M     | 55 46                             | 3       |    | 1                  |       |           |                  |
|     |     | F     | 6 00 -                            |         |    |                    |       |           |                  |
| 604 | 18  | i     | 23 26 19                          |         |    |                    |       |           |                  |
|     |     | F     | 33 -                              |         |    |                    |       |           |                  |
| 605 | 19  | e     | 2 41 21                           |         |    |                    |       |           |                  |
|     |     | F     | 48 -                              |         |    |                    |       |           |                  |
| 606 | 19  | eP    | 13 47 26                          |         |    |                    |       |           |                  |
| 607 | 21  | eP    | 5 21 43                           |         |    |                    |       |           |                  |
| 608 | 21  | eP    | 22 52 55                          |         |    |                    |       |           |                  |
| 609 | 23  | iPN   | 13 10 54                          | 2       | 2  | +21                | - 6   | 310       | Epic. 20°S.      |
|     |     | iS    | 11 29                             | 2,5     | 2  | +59                | +280  |           | 69°W.            |
|     |     | L     | 11 53                             |         |    |                    |       |           | Sucre 345        |
|     |     | M     | 11 57                             | 3       |    | +29                |       |           | 1P 13 10 52      |
|     |     | M     | 11 52                             | 2       |    | -23                |       |           |                  |
|     |     | F     | 40 -                              |         |    |                    |       |           |                  |
| 610 | 23  | iP    | 18 21 00                          |         |    |                    |       |           |                  |
| 611 | 24  | iP    | 1 27 05                           |         |    |                    |       |           |                  |
| 612 | 25  | P     | 8 14 01                           |         |    |                    |       |           |                  |
| 613 | 26  | iP    | 5 04 17                           |         |    |                    |       |           |                  |
| 614 | 26  | eP    | 8 00 51                           |         |    |                    |       |           |                  |
| 615 | 26  | P     | 23 44 23                          |         |    |                    |       |           |                  |
| 616 | 27  | iP    | 15 18 23                          |         |    |                    |       | 390       |                  |
|     |     | iS    | 19 06                             |         |    |                    |       |           |                  |
|     |     | L     | 19 11                             |         |    |                    |       |           |                  |
|     |     | M     | 19 25                             |         | 2  |                    | + 9   |           |                  |
|     |     | F     | 26 -                              |         |    |                    |       |           |                  |



# LA PAZ = (Bolivia)

BOLETIN SEISMICO DEL OBSERVATORIO DEL COLEGIO SAN CALIXTO (PP. Jesuitas)

Mes de Septiembre 1929

| No.                | Día | Fases                                                    | HORA<br>Tiempo medio de Greenwich                                                             | Período                |                        | Amplitud verdadera   |                      | Distancia | NOTAS                                              |
|--------------------|-----|----------------------------------------------------------|-----------------------------------------------------------------------------------------------|------------------------|------------------------|----------------------|----------------------|-----------|----------------------------------------------------|
|                    |     |                                                          |                                                                                               | NS                     | EW                     | Am                   | Az                   |           |                                                    |
|                    |     |                                                          |                                                                                               | S                      | S                      | $\mu$                | $\mu$                |           |                                                    |
| 617                | 27  | P<br>SN<br>L<br>M<br>M<br>M<br>F                         | 23 26 07<br>34 17<br>46 00<br>53 34<br>55 42<br>0 00 27<br>32 -                               | 23<br>15<br>17         |                        | 1,6<br>1<br>2,5      |                      | 6645      | <del>6645</del><br>Sucre 6370<br>eP 23 26 28       |
| 618                | 28  | eP                                                       | 15 14 56                                                                                      |                        |                        |                      |                      |           |                                                    |
| 619                | 29  | P<br>S<br>L<br>F                                         | 3 35 22<br>36 38<br>56 51<br>45 -                                                             |                        |                        |                      |                      |           |                                                    |
| O c t u b r e 1929 |     |                                                          |                                                                                               |                        |                        |                      |                      |           |                                                    |
| 620                | 2   | iPE<br>iPN<br>iSE<br>iSN<br>LN<br>LE<br>M<br>M<br>M<br>F | 9 26 56<br>26 58<br>34 00<br>34 01<br>39 30<br>41 50<br>45 45<br>56 40<br>10 05 56<br>11 Ca . | 3<br>7<br>7            | 5<br>7                 | +1,5<br>-4,5         | -2,5<br>+4           | 5410      | Sucre 4920<br>1P 9 25 25                           |
| 621                | 2   | iP<br>iS<br>L<br>M<br>M<br>M<br>M<br>F<br>P              | 11 09 50,5<br>12 15,5<br>13 10<br>13 40<br>14 20<br>14 53<br>15 35<br>45 -<br>18 23 46        | 5<br>6<br>6<br>9<br>10 | 5<br>5<br>6<br>7<br>10 | +4<br>-6<br>-8<br>-7 | +4<br>-6<br>+8<br>-7 | 1590      | Sucre 1400<br>P 11 08 54<br>Sentido en<br>Coquimbo |
| 622                | 2   | P                                                        | 22 24 28                                                                                      |                        |                        |                      |                      |           |                                                    |
| 623                | 2   | eP<br>S<br>L<br>M<br>F                                   | 27 18<br>28 53<br>29 50<br>45 -                                                               |                        | 5                      |                      | -4,5                 |           |                                                    |
| 624                | 3   | P                                                        | 1 43 58                                                                                       |                        |                        |                      |                      |           |                                                    |
| 625                | 4   | oP<br>iS<br>M<br>F                                       | 14 31 25<br>32 44<br>33 30<br>38 -                                                            |                        |                        |                      |                      |           | Vert. 2 mm.                                        |
| 626                | 4   | iP                                                       | 20 56 24                                                                                      |                        |                        |                      |                      |           |                                                    |
| 627                | 5   | L<br>M<br>M<br>F                                         | 3 46 30<br>52 21<br>4 01 00<br>33 -                                                           |                        | 13<br>17               |                      | 2<br>1,5             |           |                                                    |
| 628                | 5   | eP                                                       | 17 19 15                                                                                      |                        |                        |                      |                      |           |                                                    |
| 629                | 6   | iP<br>F                                                  | 0 50 17<br>1 05 -                                                                             |                        |                        |                      |                      |           |                                                    |

# LA PAZ = (Bolivia)

BOLETIN SEISMICO DEL OBSERVATORIO DEL COLEGIO SAN CALIXTO (PP. Jesuitas)

Mes de

O C T U B R E 1929

| No. | Día | Fases                                                                    | HORA<br>Tiempo medio de Greenwich                                                                                                                 | Período                    |     | Amplitud verdadera   |       | Distancia | NOTAS                        |
|-----|-----|--------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|-----|----------------------|-------|-----------|------------------------------|
|     |     |                                                                          |                                                                                                                                                   | NS                         | EW  | Am                   | As    |           |                              |
|     |     |                                                                          |                                                                                                                                                   | S                          | S   | $\mu$                | $\mu$ |           |                              |
| 650 | 6   | eP<br>SN?<br>ISE?<br>L<br>F<br>P                                         | 5 38 04<br>6 04 47<br>06 32<br>11 00<br>7 Ca .<br>8 04 51                                                                                         |                            |     |                      |       |           | Sucre 4720<br>eP 5 58 01     |
| 631 | 6   | ISE<br>LE<br>H<br>M<br>M<br>M<br>Fin en el siguiente                     | 15 30<br>35 00<br>40 52<br>46 21<br>55 10<br>9 04 20                                                                                              | 12<br>25<br>20<br>17<br>16 |     | - 2<br>- 9<br>2<br>3 |       | 9610      | Sucre 9980<br>eP 8 04 59     |
| 632 | 6   | P<br>Fases muy confusas                                                  | 9 45 00                                                                                                                                           |                            |     |                      |       |           |                              |
| 633 | 7   | eP                                                                       | 15 21 54                                                                                                                                          |                            |     |                      |       |           |                              |
| 634 | 8   | P<br>S<br>L<br>M<br>F<br>eP?<br>eP<br>SN?<br>L<br>LN<br>M<br>M<br>M<br>F | 11 55 22<br>55 43<br>55 50<br>56 06<br>12 02<br>17 25 50<br>17 23 44<br>56 35<br>55 00<br>53 00<br>18 03 51<br>06 48<br>09 48<br>17 42<br>19 Ca . |                            |     |                      |       |           | Vert. 1,5 mm                 |
| 635 | 8   | eP<br>eP<br>SN?<br>L<br>LN<br>M<br>M<br>M<br>M<br>F                      | 17 23 44<br>56 35<br>55 00<br>53 00<br>18 03 51<br>06 48<br>09 48<br>17 42<br>19 Ca .                                                             |                            |     |                      |       | 9380?     | Sucre 9720 ?<br>eP? 17 23 36 |
| 636 | 9   | eP                                                                       | 8 32 22                                                                                                                                           |                            |     |                      |       |           |                              |
| 637 | 9   | P                                                                        | 20 41 53                                                                                                                                          |                            |     |                      |       |           |                              |
| 638 | 10  | 1                                                                        | 12 15 15                                                                                                                                          |                            |     |                      |       |           |                              |
| 639 | 10  | P<br>L<br>M<br>F                                                         | 4 44 53<br>45 00<br>45 10<br>47 -                                                                                                                 |                            | 0,5 |                      | 3     |           |                              |
| 640 | 13  | eP                                                                       | 9 06 03                                                                                                                                           |                            |     |                      |       |           |                              |
| 641 | 13  | P<br>L<br>M<br>F                                                         | 10 07 13<br>13 28<br>15 56<br>30                                                                                                                  |                            | 8   |                      | 1     |           |                              |
| 642 | 14  | P                                                                        | 3 48 17                                                                                                                                           |                            |     |                      |       |           |                              |
| 643 | 14  | eP<br>L<br>F<br>F                                                        | 22 17 31<br>18 21<br>18 19<br>23 -                                                                                                                |                            |     |                      |       |           | Vert. 1,5 mm.                |
| 644 | 16  | 1P<br>L<br>F                                                             | 3 19 00<br>20 15<br>23 -                                                                                                                          |                            |     |                      |       |           |                              |
| 645 | 16  | P<br>1S<br>L<br>M<br>F                                                   | 5 46 59<br>47 26<br>47 57<br>47 58<br>52 -                                                                                                        |                            |     |                      |       |           | Vert. 5 mm.                  |

# LA PAZ - (Bolivia)

BOLETIN SEISMICO DEL OBSERVATORIO DEL COLEGIO SAN CALIXTO (PP. Jesuitas)

Mes de OCTUBRE 1929

| No. | Día | Fases                                                                                                        | HORA<br>Tiempo medio de Greenwich | Período |     | Amplitud verdadera |     | Distancia | NOTAS                  |
|-----|-----|--------------------------------------------------------------------------------------------------------------|-----------------------------------|---------|-----|--------------------|-----|-----------|------------------------|
|     |     |                                                                                                              |                                   | NS      | EW  | Am                 | Ac  |           |                        |
| 646 | 16  | oP                                                                                                           | 17 05 13                          | S       | S   | μ                  | μ   |           |                        |
| 647 | 26  | oP                                                                                                           | 20 47 58                          |         |     |                    |     |           |                        |
| 648 | 17  | oP                                                                                                           | 0 06 58                           |         |     |                    |     |           |                        |
| 649 | 18  | oP                                                                                                           | 0 01 04                           |         |     |                    |     |           |                        |
|     |     | S                                                                                                            | 01 55                             |         |     |                    |     |           |                        |
|     |     | M                                                                                                            | 02 15                             |         |     |                    |     |           | Vert. 1 mm.            |
|     |     | F                                                                                                            | 06 -                              |         |     |                    |     |           |                        |
| 650 | 18  | P                                                                                                            | 10 09 04                          |         |     |                    |     |           |                        |
|     |     | S                                                                                                            | 12 50                             |         |     |                    |     |           |                        |
|     |     | L                                                                                                            | 13 52                             |         |     |                    |     |           |                        |
|     |     | F                                                                                                            | 22 -                              |         |     |                    |     |           |                        |
| 651 | 18  | oP                                                                                                           | 16 26 52                          |         |     |                    |     |           |                        |
| 652 | 18  | oP                                                                                                           | 21 45 01                          |         |     |                    |     |           |                        |
|     |     | S                                                                                                            | 45 59                             |         |     |                    |     |           |                        |
|     |     | M                                                                                                            | 46 04                             |         |     |                    |     |           | Vert. 1 mm.            |
|     |     | F                                                                                                            | 51 -                              |         |     |                    |     |           |                        |
| 653 | 19  | iP                                                                                                           | 10 14 29 2,5                      |         |     | - 7                |     |           | Epic. 23° 2 S<br>69° W |
|     |     | Se levantaron las agujas.<br>Sentido en La Paz II F.H.<br>Sucre 530? iP 10 14 12 . Se levantaron las agujas. |                                   |         |     |                    |     |           |                        |
| 654 | 19  | P                                                                                                            | 11 05 29                          |         |     |                    |     |           | Replica                |
| 655 | 19  | P                                                                                                            | 12 06 36                          |         |     |                    |     |           | Replica                |
| 656 | 19  | oP                                                                                                           | 12 26 29                          |         |     |                    |     |           | id                     |
| 657 | 19  | oP                                                                                                           | 13 07 59                          |         |     |                    |     |           | id                     |
| 658 | 19  | iPN                                                                                                          | 20 22 21                          |         |     |                    |     | 700       | id                     |
|     |     | i                                                                                                            | 23 04                             |         | 2   |                    | +28 |           | Sucre 565              |
|     |     | i                                                                                                            | 25 25                             |         | 1   |                    | -55 |           | iP 20 22 02            |
|     |     | iSE                                                                                                          | 23 36                             |         | 1,5 |                    | -87 |           |                        |
|     |     | iSN?                                                                                                         | 24 02                             | 6       |     | -34                |     |           |                        |
|     |     | L                                                                                                            | 24 27                             |         |     |                    |     |           |                        |
|     |     | M                                                                                                            | 24 41                             |         | 5   |                    | -97 |           |                        |
|     |     | M                                                                                                            | 25 11                             |         | 5   |                    | +82 |           |                        |
|     |     | M                                                                                                            | 25 22                             | 3       |     | -57                |     |           |                        |
|     |     | M                                                                                                            | 25 54                             | 7       |     | +53                |     |           |                        |
|     |     | F                                                                                                            | 21 1 Ca .                         |         |     |                    |     |           |                        |
| 659 | 20  | P                                                                                                            | 0 05 04                           |         |     |                    |     |           |                        |
| 660 | 20  | oP                                                                                                           | 0 10 24                           |         |     |                    |     |           |                        |
| 661 | 20  | P                                                                                                            | 3 53 50                           |         |     |                    |     | 5030      | Sucre iP 3 54 10       |
|     |     | S?                                                                                                           | 58 59                             |         |     |                    |     |           |                        |
|     |     | L                                                                                                            | 4 01 42                           |         |     |                    |     |           |                        |
|     |     | M                                                                                                            | 02 29                             |         | 10  |                    | - 3 |           |                        |
|     |     | M                                                                                                            | 03 15                             |         | 10  |                    | - 3 |           |                        |
|     |     | F                                                                                                            | 30 -                              |         |     |                    |     |           |                        |
| 662 | 20  | oP                                                                                                           | 21 18 19                          |         |     |                    |     |           |                        |
| 663 | 21  | oP                                                                                                           | 1 12 02                           |         |     |                    |     |           |                        |
| 664 | 21  | P                                                                                                            | 10 42 50                          |         |     |                    |     | 5610      | Sucre oP 10 42 50      |
|     |     | oSN                                                                                                          | 30 09                             |         |     |                    |     |           |                        |
|     |     | SE                                                                                                           | 50 15                             |         |     |                    |     |           |                        |
|     |     | L                                                                                                            | 58 12                             | 26      | 22  |                    |     |           |                        |
|     |     | M                                                                                                            | 11 04 09                          |         | 15  |                    | 2   |           |                        |
|     |     | M                                                                                                            | 07 29                             | 17      |     | 2,5                |     |           |                        |
|     |     | M                                                                                                            | 11 13 34                          | 15      |     | 3                  |     |           |                        |
|     |     | F                                                                                                            | 12 Ca .                           |         |     |                    |     |           |                        |

## LA PAZ = (Bolivia)

BOLETIN SEISMICO DEL OBSERVATORIO DEL COLEGIO SAN CALIXTO (PP. Jesuitas)

Mes de 0 0 0 0 0 0 0 0 0 0 0 0 1929

| No. | Día | Fases | HORA<br>Tiempo medio de Greenwich | Período |    | Amplitud verdadera |       | Distancia | NOTAS               |
|-----|-----|-------|-----------------------------------|---------|----|--------------------|-------|-----------|---------------------|
|     |     |       |                                   | NS      | EW | Am                 | Ar    |           |                     |
|     |     |       |                                   | S       | S  | $\mu$              | $\mu$ |           |                     |
| 665 | 21  | eP    | 21 09 39                          |         |    |                    |       |           |                     |
|     |     | S     | 10 29                             |         |    |                    |       |           |                     |
|     |     | L     | 10 41                             |         |    |                    |       |           |                     |
|     |     | M     | 11 42                             |         |    |                    |       |           | Vert. 2,5 mm.       |
|     |     | F     | 20 -                              |         |    |                    |       |           |                     |
| 666 | 22  | eP    | 14 15 15                          |         |    |                    |       |           |                     |
| 667 | 22  | P     | 18 12 56,5                        |         |    |                    |       | 1020      | Epic. 25° S         |
|     |     | S     | 14 25,5                           |         |    |                    |       |           | 66° W               |
|     |     | L     | 15 00                             |         |    |                    |       |           | Sentido en la       |
|     |     | M     | 15 40                             |         |    |                    |       |           | provincia de        |
|     |     | F     | 50 -                              |         |    |                    |       |           | Jujuy               |
| 668 | 23  | eP    | 0 01 45                           |         |    |                    |       | 5790      | ± 5 s.              |
|     |     | SE    | 03 46                             |         | 7  |                    | - 1   |           | Sucre 5080          |
|     |     | L     | 16 30                             |         |    |                    |       |           | eP 0 01 11          |
|     |     | M     | 22 40                             | 14      |    | 1,5                |       |           |                     |
|     |     | F     | 40 -                              |         |    |                    |       |           |                     |
| 669 | 23  | P     | 19 58 03                          |         |    |                    |       | 5525      |                     |
|     |     | S     | 53 23                             |         |    |                    |       |           |                     |
|     |     | L     | 20 04 00                          |         |    |                    |       |           |                     |
|     |     | M     | 07 06                             |         | 12 |                    | 1     |           |                     |
|     |     | F     | 34 -                              |         |    |                    |       |           |                     |
| 670 | 24  | P     | 1 28 40                           |         |    |                    |       | 300       | Epic. 23° 7 S       |
|     |     | IS    | 20 05                             |         | 4  |                    | -2    |           | 67° W.              |
|     |     | L     | 30 20                             |         |    |                    |       |           | Sucre 565           |
|     |     | M     | 30 49                             |         | 7  |                    | 2     |           | P 1 28 00           |
|     |     | F     | 36 -                              |         |    |                    |       |           |                     |
| 671 | 24  | P     | 2 35 26                           |         |    |                    |       |           |                     |
| 672 | 24  | P     | 3 46 45                           |         |    |                    |       |           |                     |
| 673 | 24  | eP    | 6 54 52                           |         |    |                    |       |           | 20° 3 N             |
|     |     | F     | 7 00 -                            |         |    |                    |       |           | 110° 2 E.           |
| 674 | 24  | eP    | 10 03 57                          |         |    |                    |       |           | sogun Panila        |
| 675 | 24  | P     | 18 05 59                          |         |    |                    |       |           |                     |
| 676 | 25  | eP    | 5 37 35                           |         |    |                    |       |           |                     |
| 677 | 26  | P     | 4 51 09                           |         |    |                    |       |           |                     |
| 678 | 23  | P     | 15 16 24                          |         |    |                    |       |           |                     |
|     |     | IS    | 16 49                             |         |    |                    |       |           |                     |
|     |     | M     | 17 02                             |         |    |                    |       |           | Vert. 6 mm.         |
|     |     | F     | 22 -                              |         |    |                    |       |           |                     |
| 679 | 28  | P     | 15 45 59                          |         |    |                    |       | 755       |                     |
|     |     | S     | 47 19                             |         |    |                    |       |           |                     |
|     |     | L     | 47 54                             |         |    |                    |       |           |                     |
|     |     | M     | 47 55                             |         | 7  |                    | 1     |           |                     |
|     |     | F     | 53 -                              |         |    |                    |       |           |                     |
| 680 | 30  | P     | 7 17 55                           |         |    |                    |       | 510       |                     |
|     |     | S     | 13 10                             |         |    |                    |       |           |                     |
|     |     | L     | 13 18                             |         |    |                    |       |           |                     |
|     |     | M     | 12 25                             |         |    |                    |       |           | Vert. 4,5 mm.       |
|     |     | F     | 22 -                              |         |    |                    |       |           |                     |
| 681 | 30  | P     | 21 53 02                          |         |    |                    |       |           |                     |
|     |     | L     | 53 41                             |         |    |                    |       |           |                     |
|     |     | M     | 53 43                             |         |    |                    |       |           | Vert. 3 mm.         |
|     |     | F     | 22 03 -                           |         |    |                    |       |           |                     |
| 682 | 30  | eP    | 23 02 20                          | -       |    |                    |       |           | P. M. Descotes S.J. |

# LA PAZ = (Bolivia)

BOLETIN SEISMICO DEL OBSERVATORIO DEL COLEGIO SAN CALIXTO (PP. Jesuitas)

Longitud W. Greenwich } 68° 7' 57",7  
                                  4h 32m 31s.85  
Latitud S.                   16° 29' 43"  
Altura sobre el mar       3658 m.  
Subsuelo: aluvión antiguo

Mes de NOVIEMBRE de 1929

|                            |  | Componente | Masa       | To | A     | ε: 1 | r<br>To² |
|----------------------------|--|------------|------------|----|-------|------|----------|
| Péndulo horizontal Bifilar |  | N. S.      | 2,000 kgs. | 14 | 180   | 3.3  | 0.003    |
| Instrumentos:    >    >    |  | E. W       | 3,500   >  | 12 | 300   | 2.0  | 0.002    |
| >   vertical    S. Calixto |  | NS y EW    | 1,500   >  | 24 | 1,100 | 2    | 0.001    |

| No. | Día            | Fases | HORA                    |    | Período |       | Amplitud verdadera |    | Distancia | NOTAS                 |
|-----|----------------|-------|-------------------------|----|---------|-------|--------------------|----|-----------|-----------------------|
|     |                |       | Tiempo medio de Greenw. |    | NS      | EW    | AN                 | AE |           |                       |
|     |                |       |                         |    | S       | S     | μ                  | μ  | kms.      |                       |
| 683 | 1929<br>1 Nov. | eP    | 2 29 35                 |    |         |       |                    |    | 600       | Sucre P 2 29 48       |
|     |                | iP    | 29 42                   |    |         |       |                    |    |           |                       |
|     |                | iS    | 30 38                   |    | 1       |       | 2                  |    |           |                       |
|     |                | L     | 30 49                   |    |         |       |                    |    |           |                       |
|     |                | M     | 31 23                   |    | 7       |       | - 3                |    |           |                       |
|     |                | F     | 37 -                    |    |         |       |                    |    |           |                       |
| 684 | 1              | P     | 8 04 07                 |    |         |       |                    |    |           |                       |
| 685 | 2              | eP    | 1 12 36                 |    |         |       |                    |    |           |                       |
| 686 | 2              | oP    | 7 06 18                 |    |         |       |                    |    |           |                       |
| 687 | 4              | oP    | 5 13 49                 |    |         |       |                    |    |           |                       |
| 688 | 4              | eP    | 9 01 23                 |    |         |       |                    |    |           |                       |
|     |                | S     | 02 58                   |    |         |       |                    |    |           |                       |
|     |                | L     | 03 19                   |    |         |       |                    |    |           |                       |
|     |                | M     | 03 45                   |    |         |       |                    |    |           | Vert. 2 mm.           |
|     |                | F     | 09 -                    |    |         |       |                    |    |           |                       |
| 689 | 5              | e     | 3 03 16                 |    |         |       |                    |    |           |                       |
|     |                | eP    | 8 03 49                 |    |         |       |                    |    |           |                       |
| 690 | 5              | oP    | 11 58 13                |    |         |       |                    |    |           | Sucre eP' 11 58 17    |
|     |                | L     | 12 57 0                 | 20 |         |       |                    |    |           |                       |
|     |                | M     | 13 04 18                | 18 |         | 2     |                    |    |           |                       |
|     |                | M     | 28 33                   | 20 |         | 3     |                    |    |           |                       |
|     |                | F     | 40 -                    |    |         |       |                    |    |           |                       |
| 691 | 8              | P     | 3 26 03                 |    |         |       |                    |    | 2840      | + 5 s. por falta      |
|     |                | iS    | 30 33                   | 8  | 7       | + 4   | + 2                |    |           | - de señalos hor.     |
|     |                | L     | 32 58                   |    |         |       |                    |    |           | Epic. 1° 0' S.        |
|     |                | M     | 34 41                   |    | 10      |       | - 3                |    |           | 88° W.                |
|     |                | M     | 36 43                   | 15 | 16      | - 6   | + 7                |    |           | L. Paz, Sucre Balboa  |
|     |                | M     | 39 58                   |    | 8       |       | - 5                |    |           |                       |
|     |                | F     | 4 40 -                  |    |         |       |                    |    |           |                       |
| 692 | 9              | iP    | 1 29 07                 |    |         |       |                    |    |           |                       |
| 693 | 9              | oP    | 2 45 08                 |    |         |       |                    |    |           |                       |
| 694 | 9              | eP    | 3 03 47                 |    |         |       |                    |    |           |                       |
| 695 | 9              | eP    | 3 41 45                 |    |         |       |                    |    |           |                       |
| 696 | 9              | iP    | 4 23 58                 |    |         |       |                    |    |           |                       |
| 697 | 9              | oP    | 9 15 29                 |    |         |       |                    |    |           |                       |
|     |                | S     | 15 49                   |    |         |       |                    |    |           |                       |
|     |                | M     | 16 36                   |    |         |       |                    |    |           | Vert. 1,5 mm.         |
|     |                | F     | 20 -                    |    |         |       |                    |    |           |                       |
| 698 | 9              | P     | 14 14 35                |    |         |       |                    |    |           |                       |
|     |                | iS    | 15 15                   |    |         |       |                    |    |           |                       |
|     |                | L     | 15 18                   |    |         |       |                    |    |           |                       |
|     |                | M     | 15 28                   |    | 2       |       | + 3                |    |           |                       |
|     |                | F     | 20 -                    |    |         |       |                    |    |           |                       |
| 699 | 10             | oP    | 23 20 22                |    |         |       |                    |    |           |                       |
| 700 | 11             | P     | 2 35 57                 |    |         |       |                    |    |           |                       |
| 701 | 11             | oP    | 21 13 24                |    |         |       |                    |    |           |                       |
| 702 | 12             | oP    | 12 05 10                |    |         |       |                    |    |           |                       |
| 703 | 12             | iP    | 20 07 57,5              |    | 2,5     | + 14  | + 20               |    | 255       | Epic. 19° 5' S        |
|     |                | iSN   | 03 26                   | 1  |         | + 216 |                    |    |           | 70° W                 |
|     |                | L     | 03 31                   |    |         |       |                    |    |           | L. P. Sucre, L. Plata |
|     |                | M     | 03 36                   | 1  | 1       | + 216 | - 246              |    |           | Sucre 520             |
|     |                | M     | 03 47                   |    | 1       |       | - 204              |    |           | iP 20 08 29           |
|     |                | M     | 03 55                   |    | 1       |       | - 163              |    |           |                       |
|     |                | M     | 09 35                   |    | 1       |       | + 126              |    |           |                       |
|     |                | F     | 21 Ca.                  |    |         |       |                    |    |           |                       |
| 704 | 14             | eP    | 10 32 11                |    |         |       |                    |    |           |                       |
|     |                | iS?   | 39 55                   |    | 3       |       |                    |    |           | Fuertes microseis.    |
|     |                | F     | 11 10 -                 |    |         |       |                    |    |           |                       |



# LA PAZ - (Bolivia)

BOLETIN SEISMICO DEL OBSERVATORIO DEL COLEGIO SAN CALIXTO (PP. Jesuitas)

Mes de NOVIEMBRE 1929

| No. | Dia | Fases  | HORA<br>Tiempo medio de Greenwich | Período |    | Amplitud verdadera |     | Distancia | NOTAS            |
|-----|-----|--------|-----------------------------------|---------|----|--------------------|-----|-----------|------------------|
|     |     |        |                                   | NS      | EW | Am                 | Ar  |           |                  |
| 705 | 14  | P      | 21 03 27                          | S       | S  | μ                  | μ   |           |                  |
| 706 | 15  | P'     | 19 10 14                          |         |    |                    |     | 150°      | Suere 1P19 10 24 |
|     |     | 1P'N   | 10 19                             | 2,5     |    | + 4                |     |           |                  |
|     |     | PR1N   | 14 29                             | 12      |    | - 3                |     |           |                  |
|     |     | ScPcS  | 17 34                             | 15      |    |                    |     |           |                  |
|     |     | ScPcSP | 24 06                             | 12,5    | 13 | - 4                | - 3 |           |                  |
|     |     | 1E     | 23 25                             |         | 11 |                    | - 5 |           |                  |
|     |     | SR1N   | 33 14                             | 16      |    | - 9                |     |           |                  |
|     |     | 1E     | 35 04                             |         | 12 |                    | - 6 |           |                  |
|     |     | SR2E   | 38 44                             |         | 11 |                    | + 3 |           |                  |
|     |     | SR2N   | 39 06                             |         |    |                    |     |           |                  |
|     |     | L      | 20 01 14                          | 33      | 30 |                    |     |           |                  |
|     |     | M      | 09 30                             |         | 13 |                    | -10 |           |                  |
|     |     | M      | 10 12                             | 20      |    | -18                |     |           |                  |
|     |     | M      | 13 12                             |         | 13 |                    | -13 |           |                  |
|     |     | M      | 15 24                             |         | 20 |                    | -24 |           |                  |
|     |     | M      | 16 39                             | 16      | 29 | -12                | +24 |           |                  |
|     |     | M      | 19 36                             | 20      |    | -25                |     |           |                  |
|     |     | M      | 20 24                             |         | 16 |                    | +10 |           |                  |
|     |     | M      | 23 12                             | 20      |    | +24                |     |           |                  |
|     |     | F      | 21 40 -                           |         |    |                    |     |           |                  |
| 707 | 16  | P      | 13 01 54                          |         |    |                    |     |           |                  |
| 708 | 16  | P      | 23 54 03                          |         |    |                    |     |           |                  |
|     |     | 1      | 54 22                             |         |    |                    |     |           |                  |
|     |     | F      | 58 -                              |         |    |                    |     |           |                  |
| 709 | 17  | 1P'    | 4 05 19                           |         |    |                    |     |           | 11°N. 123°5 E    |
|     |     | PcPcS  | 07 04                             | 8       |    | - 2                |     |           | Geodot. Survey   |
|     |     | PR1N   | 07 44                             |         |    |                    |     |           | Suere P' 4 03 19 |
|     |     | PR1E   | 07 52                             |         | 12 |                    | -2  |           |                  |
|     |     | ScPcS  | 10 16                             | 15      |    | - 3                |     |           |                  |
|     |     | ScPcSP | 14 39                             |         | 15 |                    | - 2 |           |                  |
|     |     | 1NE    | 19 14                             | 15      | 15 | - 8                | + 7 |           |                  |
|     |     | 1NE    | 21 47                             | 15      | 17 | - 6                | -12 |           |                  |
|     |     | SR1E   | 23 13                             |         | 13 |                    | 2   |           |                  |
|     |     | 1E     | 30 06                             |         | 14 |                    | + 7 |           |                  |
|     |     | SR3N   | 34 09                             | 32      |    |                    |     |           |                  |
|     |     | SR3E   | 34 36                             |         | 33 |                    | -49 |           |                  |
|     |     | L      | 52 00                             | 33      |    |                    |     |           |                  |
|     |     | M      | 3 04 06                           |         | 22 |                    | -38 |           |                  |
|     |     | M      | 04 50                             | 22      | 22 | -26                | -46 |           |                  |
|     |     | M      | 06 54                             | 23      |    | -22                |     |           |                  |
|     |     | M      | 07 30                             |         | 20 |                    | -27 |           |                  |
|     |     | M      | 15 42                             |         | 18 |                    | -11 |           |                  |
|     |     | M      | 22 00                             | 22      |    | -25                |     |           |                  |
|     |     | F      | 6 1 Ca.                           |         |    |                    |     |           |                  |
| 710 | 13  | P      | 6 01 34                           |         |    |                    |     |           |                  |
|     |     | L      | 7 07 30                           |         |    |                    |     |           |                  |
|     |     | F      | 20 -                              |         |    |                    |     |           |                  |
| 711 | 13  | 1PN    | 20 42 18                          | 2,5     |    | + 4                |     | 6365      | Epia. 43°N       |
|     |     | 1N     | 43 00                             | 5       |    | +25                |     |           | 57°W.            |
|     |     | PR1N   | 45 01 5-12                        |         |    | - 4                |     |           | 0 20 51 54       |
|     |     | PR2N   | 43 15                             |         |    |                    |     |           | Ottawa 43°5 N    |
|     |     | 1SN    | 50 40                             | 11      |    | -17,5              |     |           | 57°3 W           |

Continúa en la pagina siguiente.



# LA PAZ = (Bolívia)

BOLETIN SEISMICO DEL OBSERVATORIO DEL COLEGIO SAN CALIXTO (PP. Jesuitas)

Mes de N O V I E M B R E 1929

| No.      | Día | Fases               | HORA<br>Tiempo medio de Greenwich | Período |    | Amplitud verdadera |       | Distancia | NOTAS                    |
|----------|-----|---------------------|-----------------------------------|---------|----|--------------------|-------|-----------|--------------------------|
|          |     |                     |                                   | NS      | EW | Am                 | Ar    |           |                          |
|          |     |                     |                                   | S       | S  | $\mu$              | $\mu$ |           |                          |
| 711      | 18  | SRIN                | 20 55 40                          | 15      |    | + 10               |       |           |                          |
| Continua |     | i                   | 58 30                             | 15      |    | - 16               |       |           |                          |
|          |     | LN                  | 21 01 54                          |         |    |                    |       |           |                          |
|          |     | M                   | 06 10                             | 24      |    | +109               |       |           |                          |
|          |     | M                   | 06 20                             |         | 16 |                    | - 21  |           |                          |
|          |     | M                   | 03 06                             | 20      |    | + 52               |       |           |                          |
|          |     | M                   | 09 15                             |         | 18 |                    | - 44  |           |                          |
|          |     | M                   | 10 30                             | 20      |    | + 60               |       |           |                          |
|          |     | M                   | 13 06                             |         | 15 |                    | + 21  |           |                          |
|          |     | M                   | 15 24                             | 13      |    | + 58               |       |           |                          |
|          |     | M                   | 20 24                             |         | 17 |                    | - 18  |           |                          |
|          |     | Fin en el siguiente |                                   |         |    |                    |       |           |                          |
| 712      | 18  | oP                  | 21 11 9                           |         |    |                    |       |           |                          |
|          |     | iS                  | 11 55                             |         |    |                    |       |           |                          |
|          |     | L                   | 12 00                             |         |    |                    |       |           |                          |
|          |     | M                   | 12 07                             |         |    |                    |       |           | Vert. 4 mm.              |
|          |     | Fin en el anterior  |                                   |         |    |                    |       |           |                          |
| 713      | 18  | P                   | 22 47 30                          |         |    |                    |       | 1120      | Sucre 775                |
|          |     | iSE                 | 49 30                             |         | 3  |                    | - 7   |           | 1P 22 46 57              |
|          |     | iSN                 | 49 32                             | 5       |    | +10                |       |           | Sentido en la provin-    |
|          |     | LN                  | 50 16                             |         |    |                    |       |           | cia de La Rioja.         |
|          |     | M                   | 51 20                             |         | 8  |                    | + 7   |           |                          |
|          |     | M                   | 51 50                             |         | 11 |                    | - 8   |           |                          |
|          |     | M                   | 52 45                             |         | 8  |                    | + 8   |           |                          |
|          |     | F                   | 22 50 -                           |         |    |                    |       |           |                          |
| 714      | 18  | P                   | 23 12 12                          |         |    |                    |       |           |                          |
| 715      | 19  | ●P                  | 2 11 03                           |         |    |                    |       |           |                          |
| 716      | 19  | oP                  | 13 54 33                          |         |    |                    |       |           |                          |
| 717      | 20  | oP                  | 4 09 36                           |         |    |                    |       |           |                          |
| 718      | 21  | P                   | 23 57 55                          |         |    |                    |       |           |                          |
|          |     | S?                  | 58 35                             |         |    |                    |       |           |                          |
|          |     | M                   | 59 05                             |         |    |                    |       |           | Vert. 2 mm.              |
|          |     | F                   | 0 11 -                            |         |    |                    |       |           |                          |
| 719      | 22  | P                   | 2 39 27                           |         |    |                    |       |           |                          |
|          |     | S                   | 40 09                             |         |    |                    |       |           |                          |
|          |     | F                   | 45 -                              |         |    |                    |       |           |                          |
| 720      | 22  | P                   | 8 50 55,5                         |         |    |                    |       | 1630      | Sucre P 8 50 50          |
|          |     | S                   | 53 27,5                           | 7       | 9  | - 3                | - 2   |           | Sentido en las provin-   |
|          |     | L                   | 54 06                             |         |    |                    |       |           | cias de Mendoza, San Ju- |
|          |     | M                   | 55 03                             |         | 7  |                    | - 2   |           | san y Tucuman.           |
|          |     | M                   | 56 44                             |         | 10 |                    | - 2   |           |                          |
|          |     | F                   | 9 07 -                            |         |    |                    |       |           |                          |
| 721      | 22  | L                   | 12 52 20                          | 14      |    |                    |       |           |                          |
|          |     | M                   | 55 00                             |         | 7  |                    | - 2   |           |                          |
|          |     | F                   | 13 10 -                           |         |    |                    |       |           |                          |
| 722      | 22  | ●P                  | 13 03 06                          |         |    |                    |       |           |                          |
| 723      | 22  | ●P                  | 23 00 15                          |         |    |                    |       | 310       | Sucre 510                |
|          |     | iS                  | 01 39                             |         | 3  |                    | - 3   |           | P 22 59 39               |
|          |     | L                   | 02 16                             |         |    |                    |       |           | Epia. 23° 6 S            |
|          |     | M                   | 02 42                             |         | 7  |                    | - 2   |           | 67° W                    |
|          |     | F                   | 07 -                              |         |    |                    |       |           |                          |
|          |     |                     | 0 00 54                           |         |    |                    |       |           |                          |

# LA PAZ = (Bolivia)

BOLETIN SEISMICO DEL OBSERVATORIO DEL COLEGIO SAN CALIXTO (PP. Jesuitas)

N O V I E M B R E 1929

**Mes de**

| No. | Día | Fases | Hora                      |           | Período |    | Amplitud verdadera |     | Distancia | NOTAS            |
|-----|-----|-------|---------------------------|-----------|---------|----|--------------------|-----|-----------|------------------|
|     |     |       | Tiempo medio de Greenwich |           | NS      | EW | AN                 | AE  |           |                  |
| 724 | 23  | P'    | 0                         | 21 34     | S       | S  | μ                  | μ   |           | Suore P' 0 21 31 |
|     |     | iP'   |                           | 21 32     |         |    |                    |     |           |                  |
|     |     | PRIN  |                           | 25 39     |         |    |                    |     |           |                  |
|     |     | LN    | 1                         | 14 00     | 28      |    |                    |     |           |                  |
|     |     | LE    |                           | 16 00     |         | 25 |                    |     |           |                  |
|     |     | M     |                           | 27 40     |         | 20 |                    | 3   |           |                  |
|     |     | M     |                           | 31 24     | 24      |    | 5                  |     |           |                  |
|     |     | M     |                           | 38 29     | 20      |    | 4                  |     |           |                  |
|     |     | M     |                           | 41 30     | 20      | 20 | 5                  | 2   |           |                  |
|     |     | M     |                           | 47 18     | 17      | 17 | 3                  | 2   |           |                  |
|     |     | F     | 2                         | 1 1/2 Ca. |         |    |                    |     |           |                  |
| 725 | 23  | eP    | 12                        | 36 01     |         |    |                    |     |           |                  |
|     |     | eS    |                           | 38 46     |         |    |                    |     |           |                  |
|     |     | L     |                           | 39 40     |         |    |                    |     |           |                  |
|     |     | F     |                           | 46 -      |         |    |                    |     |           |                  |
| 726 | 24  | eP    | 2                         | 08 41     |         |    |                    |     | 1930      |                  |
|     |     | eS    |                           | 11 58     |         |    |                    |     |           | Suore P? 2 08 44 |
|     |     | L     |                           | 12 36     | 9       |    |                    |     |           |                  |
|     |     | M     |                           | 13 04     |         | 9  |                    | - 2 |           |                  |
|     |     | M     |                           | 13 21     | 10      |    | + 7                | - 5 |           |                  |
|     |     | M     |                           | 13 58     |         | 9  |                    |     |           |                  |
|     |     | F     |                           | 25 -      |         |    |                    |     |           |                  |
| 727 | 24  | P     | 6                         | 53 12     |         |    |                    |     | 875       | Suore 565        |
|     |     | iS    |                           | 54 45     |         |    |                    |     |           | eP 6 52 50       |
|     |     | L     |                           | 55 09     |         |    |                    |     |           |                  |
|     |     | M     |                           | 55 44     |         | 4  |                    | - 3 |           |                  |
|     |     | F     | 7                         | 02 -      |         |    |                    |     |           |                  |
| 728 | 24  | P?    | 17                        | 46 00     |         |    |                    |     |           |                  |
| 729 | 24  | eP    | 18                        | 06 17     |         |    |                    |     |           |                  |
|     |     | L     |                           | 07 30     |         |    |                    |     |           |                  |
|     |     | M     |                           | 07 47     |         |    |                    |     |           | Vert. 1,5 mm.    |
|     |     | F     |                           | 13 -      |         |    |                    |     |           |                  |
| 730 | 24  | eP    | 18                        | 38 30     |         |    |                    |     |           |                  |
|     |     | i     |                           | 38 52     |         |    |                    |     |           | Vert. 2,5 mm.    |
|     |     | M     |                           | 39 03     |         |    |                    |     |           | id 3             |
|     |     | F     |                           | 44 -      |         |    |                    |     |           |                  |
| 731 | 24  | eP    | 22                        | 08 27     |         |    |                    |     |           |                  |
| 732 | 25  | eP    | 18                        | 09 09     |         |    |                    |     |           |                  |
| 733 | 26  | eP    | 0                         | 25 24     |         |    |                    |     |           |                  |
|     |     | i     |                           | 26 09     |         |    |                    |     |           |                  |
|     |     | i     |                           | 28 31     |         |    |                    |     |           |                  |
|     |     | F     |                           | 35 -      |         |    |                    |     |           |                  |
| 734 | 26  | eP    | 4                         | 39 14     |         |    |                    |     |           |                  |
|     |     | L     |                           | 45 39     |         |    |                    |     |           |                  |
|     |     | M     |                           | 46 39     |         | 10 |                    | 1   |           |                  |
|     |     | F     |                           | 56 -      |         |    |                    |     |           |                  |
| 735 | 26  | eP    | 16                        | 49 15     |         |    |                    |     |           |                  |
|     |     | F     | 17                        | 10 -      |         |    |                    |     |           |                  |
| 736 | 26  | P     | 20                        | 43 40     |         |    |                    |     |           |                  |
| 737 | 27  | P     | 1                         | 53 37     |         |    |                    |     |           |                  |
|     |     | L     |                           | 56 00     |         |    |                    |     |           |                  |
|     |     | F     | 2                         | 03 -      |         |    |                    |     |           |                  |

## BOLETIN SEISMICO DEL OBSERVATORIO DEL COLEGIO SAN CALIXTO (PP. Jesuitas)

N O V I E M B R E 1 9 29

D I C I E M B R E 1929

No. ....

- J H S -



From the ISC collection scanned by SISMOS

# LA PAZ = (Bolivia)

BOLETIN SEISMICO DEL OBSERVATORIO DEL COLEGIO SAN CALIXTO (PP. Jesuitas)

Longitud W. Greenwich { 68° 7' 57",7  
4° 32' 31",85  
Latitud S. 16° 29' 43"  
Altura sobre el mar 3658 m.  
Subsuelo: aluvión antiguo

Mes de DICIEMBRE de 1929

| Instrumentos: |                            | Componente | Masa       | T <sub>0</sub> | A     | ε: 1 | $\frac{r}{T_0^3}$ |
|---------------|----------------------------|------------|------------|----------------|-------|------|-------------------|
|               |                            |            |            |                |       |      |                   |
|               |                            |            |            |                |       |      |                   |
|               | Péndulo horizontal Bifilar | N. S.      | 2,000 kgs. | 24             | 100   | 2.0  | 0.000             |
|               |                            | E. W       | 3,500 "    | 19             | 300   | 2.6  | 0.002             |
|               | vertical S. Calixto        | NS y EW    | 1,500 "    | 24             | 1.100 | 2    | 0.001             |

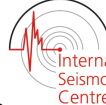
| No. | Día         | Fases | HORA<br>Tiempo medio de Greenw. | Período |      | Amplitud verdadera |                | Distancia | NOTAS              |
|-----|-------------|-------|---------------------------------|---------|------|--------------------|----------------|-----------|--------------------|
|     |             |       |                                 | NS      | EW   | A <sub>N</sub>     | A <sub>E</sub> |           |                    |
| 756 | 5 Dic. 1929 | 1P    | 11 46 35                        | S       | S    | μ                  | μ              | 5645 ms.  |                    |
|     |             | 1SE   | 53 53                           |         | 8    |                    | + 6            |           | Epic. 65° 7 S      |
|     |             | 1SN   | 54 00                           | 7       |      | +10                |                |           | 50° W.             |
|     |             | PSE   | 54 20                           |         | 8    |                    | - 5            |           | L.P., Sucre, L.Pl. |
|     |             | L     | 12 00 24                        |         |      |                    |                |           | Sucre 4980 5335    |
|     |             | M     | 02 46                           |         | 12   |                    | - 4            |           | P 11 46 18         |
|     |             | M     | 06 12                           |         | 15   |                    | - 6            |           |                    |
|     |             | M     | 07 00                           | 19      |      | - 7                |                |           |                    |
|     |             | M     | 12 20                           |         | 17,5 |                    | + 4            |           |                    |
|     |             | M     | 16 54 16                        |         |      | + 5                |                |           |                    |
|     |             | F     | 13 20 -                         |         |      |                    |                |           |                    |
| 757 | 6           | 1P    | 16 55 20,5                      |         |      |                    |                | 5455      | Epic. 59° S        |
|     |             | 1SE   | 17 02 25,5                      |         | 10   |                    | + 5            |           | 35° W              |
|     |             | 1     | 02 47                           |         | 12   |                    | +38            |           | L.P., Sucre, L.Pl. |
|     |             | 1SN   | 02 26,5                         | 12      |      | -22                |                |           | Sucre 4980         |
|     |             | 1PSN  | 02 50                           | 10      |      | +11                |                |           | P 16 54 59         |
|     |             | PSE   | 03 08                           |         | 12   |                    | +38            |           |                    |
|     |             | 1     | 05 12                           | 8       | 12   | - 8                | -11            |           |                    |
|     |             | SR2   | 07 16                           |         |      |                    |                |           |                    |
|     |             | L     | 11 00                           |         |      |                    |                |           |                    |
|     |             | M     | 13 50                           |         | 15   |                    | +13            |           |                    |
|     |             | M     | 15 30                           |         | 15   |                    | +15            |           |                    |
|     |             | M     | 16 26                           | 17      |      | -15                |                |           |                    |
|     |             | M     | 23 26                           |         | 14   |                    | - 9            |           |                    |
|     |             | M     | 24 26                           |         | 14   |                    | + 9            |           |                    |
|     |             | F     | 19 Ca.                          |         |      |                    |                |           |                    |
| 758 | 6           | 1P    | 20 29 47                        |         |      |                    |                | 5460      | Epic. 59° S        |
|     |             | 1SN   | 36 53                           | 10      |      | +13                |                |           | 35° W.             |
|     |             | 1SE   | 36 54                           |         | 9    |                    | +13            |           | L.P., Sucre, L.Pl. |
|     |             | 1E    | 37 10                           |         | 9    |                    | +55            |           |                    |
|     |             | PSN   | 37 21                           | 10      |      | +14                |                |           |                    |
|     |             | 1E    | 39 39                           |         | 10   |                    | + 6            |           |                    |
|     |             | SR2E  | 41 39                           |         | 10   |                    | - 6            |           |                    |
|     |             | L     | 46 00                           | 27      |      |                    |                |           |                    |
|     |             | M     | 48 34                           | 15      | 15   | -14                | +28            |           |                    |
|     |             | M     | 50 00                           |         | 16   |                    | +27            |           |                    |
|     |             | M     | 50 46                           |         | 14   |                    | +19            |           |                    |
|     |             | M     | 51 00                           | 13      |      | +12                |                |           |                    |
|     |             | M     | 57 06                           | 15      |      | +18                |                |           |                    |
|     |             | F     | 22 40 -                         |         |      |                    |                |           |                    |
| 759 | 6           | P     | 20 41 54                        |         |      |                    |                |           |                    |
| 760 | 8           | 1P    | 4 23 27,5                       |         |      |                    |                | 475       | Epic. 20° 3 S.     |
|     |             | S     | 24 20                           |         |      |                    |                |           | 69° 7 W.           |
|     |             | L     | 24 30                           |         |      |                    |                |           | Sucre 420          |
|     |             | M     | 25 02                           | 2,5     | 3    | - 5                | - 3            |           | 1P 4 23 33         |
|     |             | F     | 33 -                            |         |      |                    |                |           |                    |
| 761 | 8           | oP    | 22 51 11                        |         |      |                    |                |           |                    |
| 762 | 9           | eP    | 5 04 57                         |         |      |                    |                |           |                    |
| 763 | 9           | eP    | 6 50 34                         |         |      |                    |                |           |                    |
| 764 | 9           | eP    | 7 09 50                         |         |      |                    |                | 158°      | Sucre eP 7 09 44   |
|     |             | 1P    | 09 52                           |         |      |                    |                |           |                    |
|     |             | PR1   | 14 12                           |         |      |                    |                |           |                    |
|     |             | SoPcS | 17 02                           |         |      |                    |                |           |                    |
|     |             | PR2E  | 20 55                           |         | 13   |                    |                |           |                    |
|     |             | SR1E? | 28 09                           |         | 20   |                    |                |           |                    |
|     |             | L     | 8 05 00                         |         | 35   |                    |                |           |                    |
|     |             | M     | 13 54                           |         | 20   |                    | - 6            |           |                    |
|     |             | M     | 20 45                           |         | 17   |                    | -10            |           |                    |
|     |             | M     | 26 45                           |         | 18   |                    | - 7            |           |                    |
|     |             | F     | 10 Ca.                          |         |      |                    |                |           |                    |

LA PAZ = (Bolivia)

BOLETIN SEISMICO DEL OBSERVATORIO DEL COLEGIO SAN CALIXTO (PP. Jesuitas)

Mes de D I C I E M B R E 1 9 2 9

| No. | Día | Fases  | HORA<br>Tiempo medio de Greenwich | Periodo |     | Amplitud verdadera |      | Distancia | NOTAS              |
|-----|-----|--------|-----------------------------------|---------|-----|--------------------|------|-----------|--------------------|
|     |     |        |                                   | NS      | EW  | AN                 | Az   |           |                    |
| 764 | 9   | eP     | 9 09 27                           | S       | S   | μ                  | μ    |           |                    |
| 765 | 10  | eP     | 3 13 06                           |         |     |                    |      |           |                    |
| 766 | 10  | eP     | 17 03 00                          |         |     |                    |      |           |                    |
| 767 | 11  | 1P     | 7 27 15                           |         |     |                    |      | 575       | Eplo. 21° S        |
|     |     | 1S     | 28 16                             |         | 5   |                    | + 9  |           | 68° W.             |
|     |     | L      | 28 28                             |         |     |                    |      |           | Sucre 330          |
|     |     | M      | 28 48                             | 7       |     | + 31               |      |           | 1P 7 26 52         |
|     |     | M      | 29 08                             | 7       | 7,5 |                    | +44  |           |                    |
|     |     | M      | 30 00                             |         | 8   |                    | -37  |           |                    |
|     |     | F      | 8 11 -                            |         |     |                    |      |           |                    |
| 768 | 11  | P      | 13 16 16,5                        |         |     |                    |      |           |                    |
| 769 | 11  | eP     | 14 42 34                          |         |     |                    |      |           | Sentido en la pro- |
|     |     | L      | 44 37                             |         |     |                    |      |           | vincia de Santiago |
|     |     | M      | 44 54                             |         |     |                    |      |           | ago del Estero     |
|     |     | F      | 50 -                              |         |     |                    |      |           | Segun La Plata     |
| 770 | 11  | eP     | 14 53 07                          |         |     |                    |      |           |                    |
| 771 | 11  | eP     | 22 22 39                          |         |     |                    |      |           |                    |
| 772 | 12  | eP     | 15 12 48,5                        |         |     |                    |      |           |                    |
|     |     | SN     | 13 58                             |         |     |                    |      |           |                    |
|     |     | L      | 14 06                             |         |     |                    |      |           |                    |
|     |     | M      | 15 30                             |         | 2   |                    | + 4  |           |                    |
|     |     | F      | 21 -                              |         |     |                    |      |           |                    |
| 773 | 13  | eP     | 0 28 47                           |         |     |                    |      |           |                    |
|     |     | L      | 29 39                             |         |     |                    |      |           |                    |
|     |     | M      | 29 44                             | 0,5     |     | + 4                |      |           |                    |
|     |     | F      | 34 -                              |         |     |                    |      |           |                    |
| 774 | 14  | eP     | 13 25 17                          |         |     |                    |      |           |                    |
| 775 | 15  | eP     | 2 05 16                           |         |     |                    |      |           |                    |
|     |     | SN     | 07 28                             |         |     |                    |      |           |                    |
|     |     | L      | 07 56                             |         |     |                    |      |           |                    |
|     |     | M      | 08 41                             | 10      |     | + 2                |      |           |                    |
|     |     | F      | 20 -                              |         |     |                    |      |           |                    |
| 776 | 17  | eP     | 11 16 29                          |         |     |                    |      | 12000     | Sucre 12300?       |
|     |     | 1N     | 19 05                             | 11      |     | + 6                |      |           | eP? 11 16 49       |
|     |     | PR1E   | 20 44                             |         | 11  |                    | - 5  |           |                    |
|     |     | PR2E   | 23 57                             |         | 12  |                    | - 6  |           |                    |
|     |     | 1SoPoS | 27 04                             | 15      |     | +12                |      |           |                    |
|     |     | 1SNE   | 28 52                             | 18      | 17  | +28                | -11  |           |                    |
|     |     | 1PSE   | 31 02                             |         | 14  |                    | -17  |           |                    |
|     |     | 1PSN   | 32 07                             | 13      |     | +20                |      |           |                    |
|     |     | PPSN   | 31 47                             | 14      |     | -23                |      |           |                    |
|     |     | 1SR1N  | 36 42                             | 17,5    |     | +40                |      |           |                    |
|     |     | 1SR1E  | 36 40                             |         | 12  |                    | +14  |           |                    |
|     |     | SR2N   | 40 42                             | 18      |     | -46                |      |           |                    |
|     |     | SR2E   | 41 07                             |         | 20  |                    | -36  |           |                    |
|     |     | SR3E   | 43 59                             |         | 18  |                    | -34  |           |                    |
|     |     | SR3N   | 44 22                             | 19      |     | +27                |      |           |                    |
|     |     | 1LN    | 51 40                             | 43      |     |                    |      |           |                    |
|     |     | 1LE    | 51 52                             |         | 40  |                    |      |           |                    |
|     |     | M      | 12 02 12                          |         | 27  |                    | -279 |           |                    |
|     |     | M      | 04 32                             |         | 20  |                    | +186 |           |                    |
|     |     | M      | 06 00                             |         | 20  |                    | +252 |           |                    |
|     |     | M      | 11 12                             |         | 20  |                    | +252 |           |                    |
|     |     | M      | 12 12                             | 22      |     | -252               |      |           |                    |
|     |     | M      | 13 52                             |         | 25  |                    | -390 |           |                    |



# LA PAZ - (Bolivia)

BOLETIN SEISMICO DEL OBSERVATORIO DEL COLEGIO SAN CALIXTO (PP. Jesuitas)

Mes de D I C I E M B R E 1 9 2 9

| No.                                                | Día | Fases | HORA<br>Tiempo medio de Greenwich | Período |      | Amplitud verdadera |      | Distancia | NOTAS        |
|----------------------------------------------------|-----|-------|-----------------------------------|---------|------|--------------------|------|-----------|--------------|
|                                                    |     |       |                                   | NS      | EW   | AN                 | Az   |           |              |
| 776                                                | 17  | M     | 12 12 12                          | 22      | S    | μ                  | μ    |           |              |
| Continuación                                       |     | M     | 13 52                             | 25      |      | -252               |      |           |              |
|                                                    |     | M     | 16 12                             |         | 17,5 | -390               |      |           |              |
|                                                    |     | M     | 17 42                             |         | 17   |                    | -180 |           |              |
|                                                    |     | M     | 18 27                             | 18      |      | -161               |      |           |              |
|                                                    |     | Me    | 19 37                             | 17      | 18   | -132               | -103 |           |              |
|                                                    |     | M     | 21 52                             |         | 17,5 |                    | -112 |           |              |
|                                                    |     | M     | 25 12                             | 15      | 17,5 | + 64               | - 88 |           |              |
|                                                    |     | F     | 14 1/2 Ca.                        |         |      |                    |      |           |              |
| 777                                                | 17  | eP    | 12 16 42                          |         |      |                    |      |           |              |
| 778                                                | 17  | P     | 12 32 17                          |         |      |                    |      |           |              |
| 779                                                | 17  | P     | 14 18 44                          |         |      |                    |      |           |              |
| Las otras fases mezcladas con movimientos extraños |     |       |                                   |         |      |                    |      |           |              |
|                                                    |     | F     | 16 Ca.                            |         |      |                    |      |           |              |
| 780                                                | 19  | P     | 2 44 15                           |         |      |                    |      |           |              |
| 781                                                | 19  | iP    | 8 55 01                           |         |      |                    |      |           | Sucre 450    |
|                                                    |     | S     | 55 42                             | 3       |      | - 7                |      |           | P 8 55 07    |
|                                                    |     | L     | 55 45                             |         |      |                    |      |           | Vert. 14 mm. |
|                                                    |     | M     | 55 57                             |         |      |                    |      |           |              |
| 782                                                | 20  | F     | 10 01 -                           |         |      |                    |      |           |              |
|                                                    | 20  | iP    | 10 34 55                          |         |      |                    |      |           |              |
|                                                    |     | eS?   | 43 12                             |         |      |                    |      |           |              |
|                                                    |     | F     | 11 1/2 -                          |         |      |                    |      |           |              |
| 783                                                | 20  | P     | 16 30 22                          |         |      |                    |      | 1510      | Sucre 1020?  |
|                                                    |     | iS    | 32 37                             |         |      |                    |      | 1510      | P 16 29 49   |
|                                                    |     | L     | 32 50                             |         |      |                    |      |           |              |
|                                                    |     | M     | 33 16                             |         |      |                    |      |           |              |
|                                                    |     | F     | 40 -                              |         |      |                    |      |           |              |
| 784                                                | 20  | e     | 23 43 11                          |         |      |                    |      |           |              |
| 785                                                | 21  | eP    | 44 17                             |         |      |                    |      |           |              |
| 786                                                | 21  | eP    | 2 35 38                           |         |      |                    |      |           |              |
| 787                                                | 21  | eP    | 3 18 01                           |         |      |                    |      |           |              |
| 788                                                | 21  | eP    | 10 41 02                          |         |      |                    |      |           |              |
|                                                    |     | eP    | 11 24 43                          |         |      |                    |      |           |              |
|                                                    |     | L     | 32 00                             |         |      |                    |      |           |              |
|                                                    |     | M     | 36 40                             | 10      |      |                    | 2    |           |              |
|                                                    |     | M     | 39 54                             | 8       |      |                    | 2    |           |              |
|                                                    |     | F     | 12 Ca.                            |         |      |                    |      |           |              |
| 789                                                | 21  | eP    | 22 00 03                          |         |      |                    |      |           |              |
|                                                    |     | S     | 03 07                             |         |      |                    |      |           |              |
|                                                    |     | L     | 04 20                             |         |      |                    |      |           |              |
|                                                    |     | F     | 12 -                              |         |      |                    |      |           |              |
| 790                                                | 24  | ePN?  | 4 38 32                           |         |      |                    |      |           |              |
|                                                    |     | L     | 5 20 00                           | 20      |      |                    |      |           |              |
|                                                    |     | M     | 24 30                             | 20      |      |                    |      |           |              |
|                                                    |     | F     | 6 Ca.                             |         |      |                    |      |           |              |
| 791                                                | 24  | eP    | 16 12 48                          |         |      |                    |      |           |              |
| 792                                                | 25  | eP    | 16 38 33                          |         |      |                    |      |           |              |
| 793                                                | 27  | eP    | 2 37 54                           |         |      |                    |      |           |              |
|                                                    |     | F     | 50 -                              |         |      |                    |      |           |              |



## LA PAZ = (Bolivia)

BOLETIN SEISMICO DEL OBSERVATORIO DEL COLEGIO SAN CALIXTO (PP. Jesuitas)

Mes DE D I C I E M B R E 1929

| No.                                                            | Día    | Fases | HORA<br>Tiempo medio de Greenwich | Período |    | Amplitud verdadera |       | Distancia | NOTAS         |
|----------------------------------------------------------------|--------|-------|-----------------------------------|---------|----|--------------------|-------|-----------|---------------|
|                                                                |        |       |                                   | NS      | EW | AN                 | AE    |           |               |
|                                                                |        |       |                                   | S       | S  | $\mu$              | $\mu$ |           |               |
| 794                                                            | 27     | 1P    | 4 06 06                           |         |    |                    |       |           |               |
|                                                                |        | 1SN   | 07 02                             |         | 3  |                    | + 5   |           |               |
|                                                                |        | L     | 07 08                             |         |    |                    |       |           |               |
|                                                                |        | M     | 07 29                             | 5       | 3  | + 7                | - 6   |           |               |
|                                                                |        | F     | 13 -                              |         |    |                    |       |           |               |
| 795                                                            | 27     | P     | 13 51 15                          |         |    |                    |       |           |               |
|                                                                |        | F     | 14 10 -                           |         |    |                    |       |           |               |
| 796                                                            | 31     | eP    | 1 23 53                           |         |    |                    |       |           |               |
|                                                                |        | PR1   | 27 55                             |         |    |                    |       |           |               |
|                                                                |        | L     | 2 23 10                           | 20      |    |                    |       |           |               |
|                                                                |        | M     | 38 40                             | 10      |    | 1                  |       |           |               |
|                                                                |        | F     | 3 02 -                            |         |    |                    |       |           |               |
| 797                                                            | 31     | eP    | 5 02 30                           |         |    |                    |       |           |               |
|                                                                |        | F     | 12 -                              |         |    |                    |       |           |               |
| 798                                                            | 31     | eP    | 12 35 52                          |         |    |                    |       |           |               |
|                                                                |        | S     | 37 03                             |         |    |                    |       |           |               |
|                                                                |        | F     | 42 -                              |         |    |                    |       |           |               |
| 799                                                            | 31     | P     | 20 17 23,5                        |         |    |                    |       |           |               |
|                                                                |        | SE    | 20 25,5                           |         |    |                    |       | 1765      | La Plata 1230 |
|                                                                |        | L     | 21 49                             |         |    |                    |       |           | P 20 17,01    |
|                                                                |        | M     | 22 41                             |         | 8  |                    | - 3   |           |               |
|                                                                |        | F     | 40 -                              |         |    |                    |       |           |               |
| P.M. Desecotes S.J.                                            |        |       |                                   |         |    |                    |       |           |               |
| Addenda                                                        |        |       |                                   |         |    |                    |       |           |               |
| 193 bis                                                        | 10     |       |                                   |         |    |                    |       |           |               |
|                                                                | 10-III | P     | 14 54 13                          |         |    |                    |       |           |               |
|                                                                |        | 13?   | 15 04 17                          |         | 7  |                    | + 3   |           |               |
| Las demas fases perdidas en la fuerte agitacion microseismica. |        |       |                                   |         |    |                    |       |           |               |
| 206 bis                                                        | 15-III | P     | 8 48 37                           |         |    |                    |       |           |               |
| 206 ter                                                        | 15-III | P     | 9 18 26                           |         |    |                    |       |           |               |
| 305                                                            | 2-V    | eP    | 14 45 00                          |         |    |                    |       |           |               |
| 305                                                            | 2-V    | eP    | 15 04 45                          |         |    |                    |       |           | Fases débiles |
|                                                                |        | F     | 16 Ca -                           |         |    |                    |       |           |               |
| 483                                                            | 15-VII | P     | 9 39 09                           |         |    |                    |       |           |               |