

На станции использовался  
ионозонд типа АИС.

При обработке данных за февраль  
месяц 1969 года обнаружено:

|                  |                                                        |   |                            |
|------------------|--------------------------------------------------------|---|----------------------------|
| 3 <sup>20</sup>  | 00 <sup>15</sup> - 10 <sup>00</sup>                    | } | не переключено на 1500 км. |
| 5 <sup>20</sup>  | 09 <sup>15</sup> - 10 <sup>00</sup>                    |   |                            |
| 9 <sup>20</sup>  | 10 <sup>00</sup>                                       | } | не переключено на 18 мГц.  |
| 24 <sup>20</sup> | 09 <sup>00</sup>                                       |   |                            |
| 25 <sup>20</sup> | 09 <sup>00</sup> - 09 <sup>30</sup>                    |   |                            |
| 28 <sup>20</sup> | 10 <sup>00</sup> ; 12 <sup>00</sup> - 12 <sup>45</sup> |   |                            |
| 26 <sup>20</sup> | 06 <sup>00</sup>                                       |   | взяты визуальные значения. |

Руководитель станции Тетасилов Т. И.  
Обработка данных проведена под  
руководством Лобановой Н. С.

Станция foF2 Мгц февраль 1969  
(характеристика) (единицы) (месяц) (год)

Долгота 73°05'E широта 49°49'N

## ИОНОСФЕРНЫЕ ДАННЫЕ

Кем составлена Кокоша  
Кем подсчитана Гейко

поясное время 25°E

| Дни       | 00   | 01   | 02   | 03    | 04   | 05   | 06   | 07    | 08   | 09    | 10    | 11    | 12   | 13   | 14   | 15   | 16   | 17   | 18    | 19   | 20   | 21   | 22   | 23   |
|-----------|------|------|------|-------|------|------|------|-------|------|-------|-------|-------|------|------|------|------|------|------|-------|------|------|------|------|------|
| 1         | 3.4N | 3.6N | 3.4F | 3.2F  | 3.2F | 2.9  | 2.6F | 3.1   | 5.8  | 2.6   | 8.6   | 9.1   | 9.8  | 9.8  | 8.9  | 8.3  | 2.0  | 6.8  | 6.0   | 4.8  | 3.3  | 3.0  | 2.8  | 2.4  |
| 2         | 2.8  | 2.9  | 2.9  | 3.0   | 3.1  | 2.9C | 2.6  | 3.1   | 6.5  | 8.5   | 9.6S  | 9.7   | 8.8  | 9.2  | 9.0  | 8.5  | 2.7  | 6.5  | 7.63S | 4.9  | 3.1  | 2.8  | 2.7  | 2.8  |
| 3         | 1.9  | 1.9C | 2.0  | 2.6   | 2.9  | 2.0  | 2.4F | 3.2   | 5.4  | 2.6   | 9.2   | 10.5  | 10.8 | 10.2 | 10.2 | 9.7  | 9.1  | 8.6  | 7.5S  | 6.1  | 4.9  | 5.1  | 3.9  | 3.8F |
| 4         | 3.6  | 3.3  | 3.3  | 3.3   | 3.3  | 3.3  | 2.7  | 3.0   | 5.6  | 2.2   | 9.1   | 10.6  | 9.8  | 10.3 | 10.0 | 9.0  | 8.1  | 6.8  | 6.1   | 5.5  | 4.9  | 3.6  | 3.6  | 3.3  |
| 5         | 3.5  | 3.6  | 3.4  | 3.4   | 3.4  | 3.3  | 2.8  | 3.3   | 6.6  | 8.4   | 10.0C | 10.6  | 10.3 | 10.6 | 10.5 | 9.3  | 9.0  | 2.5  | 6.4S  | 5.3  | 4.2  | 3.3  | 2.8  | 2.9  |
| 6         | 3.2F | 3.3F | 3.3F | 3.1F  | 3.0F | 2.9F | 2.5  | 3.3   | 2.0  | 8.5   | 9.0   | 9.7   | 10.8 | 10.3 | 10.3 | 9.7  | 9.4S | 8.9  | 7.3S  | 6.0  | 4.8  | 4.1  | 3.8F | 3.4F |
| 7         | 3.7F | 3.8N | 3.5F | 3.8F  | 3.9F | 3.7F | 3.6F | 3.2F  | 6.8  | 8.4   | 9.4   | 10.3S | 11.0 | 9.6  | 10.9 | 10.2 | 9.1  | 8.3  | 2.4   | 5.8  | 4.0  | 3.6  | 3.0  | 2.9  |
| 8         | 3.1  | 3.0N | 3.3N | 3.3F  | 3.4  | 3.4F | 3.2  | 3.3   | 6.0  | 8.3   | 10.3  | 9.8   | 10.3 | 10.8 | 10.9 | 10.0 | 9.5  | 9.0  | 2.7   | 6.5  | 5.0  | 4.0F | 4.0F | F    |
| 9         | 3.7N | 3.7N | 3.9F | 3.9F  | 3.9F | 3.9  | 3.6  | 4.3   | 2.1  | 8.8   | 10.1C | 10.3  | 9.9  | 10.3 | 9.8  | 10.3 | 9.3  | 8.4  | 2.8   | 6.3S | 4.8  | 3.8  | 3.4  | 3.4  |
| 10        | 3.5  | 3.7  | 3.8  | 3.7   | 3.6  | 3.8  | 3.5  | 4.1   | 7.3S | 9.6S  | 11.4  | 11.0  | 9.7  | 9.8  | 9.7  | 10.0 | 9.3  | 8.4  | 7.8S  | 6.1S | 4.6  | 3.8  | 3.2  | 3.2  |
| 11        | 3.5  | 3.8  | 3.9  | 3.4   | 3.5N | 3.2  | 2.9  | 3.8   | 6.1S | 2.8   | 10.5  | 10.5  | 10.6 | 11.0 | 11.7 | 11.1 | 11.2 | 10.3 | 7.5S  | 7.1S | 5.0  | 5.0S | 4.3  | 4.4  |
| 12        | 3.8  | 4.2R | 4.3  | 4.0   | 4.2  | 4.3  | 3.8  | 4.5   | 2.7  | 9.2S  | 11.1  | 12.5  | 11.9 | 11.8 | 10.8 | 10.4 | 9.0  | 8.6  | 6.5   | 5.7  | 4.0  | 3.6  | 3.3  | 3.4  |
| 13        | 3.4  | 3.3  | 3.3  | 3.3   | 3.1  | 2.9  | 2.5F | 3.5F  | 2.4  | 8.6   | 9.0   | 9.3   | 9.7  | 9.4  | 9.5  | 10.0 | 8.8  | 8.4  | 6.8   | 5.2  | 3.4  | 3.3  | 3.0F | 2.7F |
| 14        | 3.3F | 3.5F | 3.3F | 4.28F | 3.0F | 3.1F | 3.1F | 4.0F  | 7.3S | 8.1   | 9.5   | 9.9   | 9.4  | 9.7  | 10.2 | 9.2  | 8.4  | 2.4  | 6.8   | 5.8  | 4.5  | 3.3  | 3.0  | 3.2  |
| 15        | 3.2  | 3.2F | 3.4F | 3.5F  | 3.4F | 3.0F | 2.8F | 3.8   | 6.4S | 8.4   | 9.3   | 10.0  | 10.1 | 9.6  | 9.9  | 9.5  | 9.0  | 8.1  | 7.0S  | 5.3  | 4.4  | 3.9  | 3.7  | 3.5  |
| 16        | 3.5  | 3.3F | 3.4F | 3.3F  | 3.0F | 2.9F | 2.4F | 3.6F  | 5.9  | 2.8   | 9.3   | 11.1  | 10.9 | 10.6 | 10.1 | 9.8  | 9.2  | 8.3  | 6.8S  | 5.8  | 4.8  | 4.4  | 3.8  | 3.8  |
| 17        | 3.8  | 3.8  | 3.8  | 3.8F  | 3.7  | 3.2  | 2.9  | 4.3   | 6.5S | 9.0   | 9.3   | 9.9   | 10.9 | 10.5 | 9.6  | 9.6  | 8.4  | 2.8  | 2.0   | 5.7  | 4.3  | 3.5  | 3.0  | 3.0  |
| 18        | 3.3  | 3.1  | 3.2  | 3.4   | 3.3  | 3.1  | 2.7  | 4.1   | 2.0  | 8.5   | 9.8   | 10.9  | 10.9 | 10.8 | 10.0 | 10.0 | 9.8  | 8.6  | 6.8   | 5.8  | 4.4  | 3.5  | 3.1  | 3.3  |
| 19        | 3.7  | 3.5  | 3.7F | 4.2F  | 3.8F | 3.7F | 3.6F | 4.4   | 2.8  | 9.2   | 10.0  | 10.5  | 10.9 | 10.8 | 10.2 | 9.8  | 9.8  | 8.8  | 2.7   | 7.0S | 5.3  | 4.5  | 4.2  | 4.0  |
| 20        | 4.1  | 3.9  | 3.9  | 3.7   | 3.8  | 3.8  | 3.6  | 4.8   | 7.7S | 10.0  | 10.2  | 11.8  | 12.0 | 11.7 | 11.4 | 11.3 | 10.4 | 9.5  | 8.4   | 2.5  | 6.4S | 5.0  | 4.0  | 3.7  |
| 21        | 4.0  | 4.0  | 4.0  | 4.0   | 4.0  | 3.3F | 2.9  | 4.8   | 2.7  | 10.0  | 11.0  | 11.3  | 11.6 | 11.2 | 10.9 | 11.0 | 10.7 | 9.4  | 8.3   | 6.7  | 6.0  | 5.0  | 4.5  | 4.1  |
| 22        | 4.0  | 4.0  | 4.1  | 4.2   | 4.5  | 4.4  | 4.3  | 5.8   | 8.7  | 9.3   | 10.4  | 10.4  | 11.3 | 10.9 | 10.4 | 10.2 | 10.2 | 9.1  | 8.1   | 6.1  | 5.9  | 4.5  | 3.8  | 3.7  |
| 23        | 4.0  | 4.2  | 4.4  | 4.5   | 4.0  | 3.9  | 3.9  | 5.3   | 8.2  | 9.7   | 11.2  | 11.4  | 12.0 | 11.3 | 11.4 | 11.4 | 11.1 | 10.4 | 8.9   | 7.3S | 5.8  | 5.1  | 5.1  | 4.6  |
| 24        | 4.7  | 4.5F | 4.5F | 4.6F  | 4.8F | 4.9N | 4.8  | 6.1   | 9.1  | 10.0C | 11.2  | 11.8  | 12.2 | 12.1 | 11.1 | 10.8 | 10.5 | 9.9  | 9.0   | 8.1  | 6.8  | 5.2  | 4.5  | 4.1  |
| 25        | 4.2  | 4.5  | 4.5  | 4.5   | 4.6  | 4.5  | 4.5  | 6.0   | 8.8  | 9.5   | 11.0  | 11.5  | 11.7 | 11.3 | 10.8 | 10.8 | 10.6 | 9.9  | 8.9   | 2.3  | 6.3S | 5.8  | 5.2S | 4.9F |
| 26        | 4.3F | 4.2F | 4.3F | 4.3F  | F    | F    | 3.9  | 7.3S  | 9.5  | 10.3  | 11.5  | 11.9  | 12.3 | 12.0 | 11.6 | 10.7 | 10.8 | 10.3 | 9.5   | 8.5  | 7.5S | 6.3S | 6.0  | 5.3S |
| 27        | 4.9F | 4.9F | 5.0F | 5.0F  | 4.8F | F    | F    | 7.63S | 9.2  | 11.0  | 12.2  | 12.4  | 12.6 | 11.6 | 11.0 | 11.2 | 10.5 | 10.4 | 9.5   | 9.0  | 7.7S | 5.5S | 4.4  | 4.1  |
| 28        | 4.2  | 4.6  | 4.5  | 4.0   | 4.2  | 4.0  | 3.8  | 5.3   | 7.4S | 9.3   | 10.5C | 10.7  | 10.8 | 11.0 | 10.3 | 10.3 | 9.8  | 9.5  | 9.0   | 8.1  | 6.3S | 5.8  | 5.1  | 4.5  |
| 29        |      |      |      |       |      |      |      |       |      |       |       |       |      |      |      |      |      |      |       |      |      |      |      |      |
| 30        |      |      |      |       |      |      |      |       |      |       |       |       |      |      |      |      |      |      |       |      |      |      |      |      |
| 31        |      |      |      |       |      |      |      |       |      |       |       |       |      |      |      |      |      |      |       |      |      |      |      |      |
| Диаг.     | 0.6  | 0.8  | 0.9  | 0.8   | 0.8  | 0.9  | 1.1  | 1.7   | 1.4  | 1.2   | 1.7   | 1.4   | 1.6  | 1.2  | 0.9  | 1.2  | 1.4  | 1.3  | 1.6   | 1.5  | 1.6  | 1.4  | 1.4  | 0.9  |
| Меланга   | 3.6  | 3.7  | 3.8  | 3.7   | 3.6  | 3.3  | 3.1  | 4.1   | 2.2  | 8.7   | 10.0  | 10.5  | 10.8 | 10.7 | 10.3 | 10.0 | 9.4  | 8.6  | 2.5   | 6.1  | 4.8  | 4.0  | 3.8  | 3.5  |
| Учено     | 28   | 28   | 28   | 28    | 27   | 26   | 27   | 28    | 28   | 28    | 28    | 28    | 28   | 28   | 28   | 28   | 28   | 28   | 28    | 28   | 28   | 28   | 28   | 27   |
| Верхн.кв. | 3.4  | 3.3  | 3.3  | 3.3   | 3.2  | 3.0  | 2.7  | 3.3   | 6.4  | 8.4   | 9.3   | 10.0  | 10.0 | 10.0 | 10.0 | 9.6  | 9.0  | 8.2  | 6.8   | 5.7  | 4.4  | 3.6  | 3.0  | 3.2  |
| Нижн.кв.  | 4.0  | 4.1  | 4.2  | 4.1   | 4.0  | 3.9  | 3.8  | 5.0   | 2.8  | 9.6   | 11.0  | 11.4  | 11.6 | 11.2 | 10.9 | 10.8 | 10.4 | 9.5  | 8.4   | 7.2  | 6.0  | 5.0  | 4.4  | 4.1  |

Пробег частоты от 1.0 Мгц до 18.0 Мгц 20 Вк.

Станция автоматическая  
(ручная, автоматическая)

fo F1 МГц февраль 1969  
(характеристика) (единицы) (месяц) (год)

АН КазССР  
(институт)

Станция Караганда  
Долгота 73°05'E широта 49°49'N

ИОНОСФЕРНЫЕ ДАННЫЕ  
поясное время 75°E

Кем составлена Кокоша  
Кем подсчитана Грюко

| Ион    | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09    | 10    | 11    | 12    | 13    | 14    | 15    | 16  | 17 | 18 | 19 | 20 | 21 | 22 | 23 |  |  |
|--------|----|----|----|----|----|----|----|----|----|-------|-------|-------|-------|-------|-------|-------|-----|----|----|----|----|----|----|----|--|--|
| 1      |    |    |    |    |    |    |    |    |    | L     | L     | 6     | U4.0L | U4.0L | L     |       |     |    |    |    |    |    |    |    |  |  |
| 2      |    |    |    |    |    |    |    |    | 5  | U3.3L | L     | U4.3L | 4.0   | L     | U4.3L |       |     |    |    |    |    |    |    |    |  |  |
| 3      |    |    |    |    |    |    |    |    |    |       |       | 6L    | U4.3L | U3.7L | L     |       |     |    |    |    |    |    |    |    |  |  |
| 4      |    |    |    |    |    |    |    |    |    |       | L     | U4.2L | U4.1L | L     |       |       |     |    |    |    |    |    |    |    |  |  |
| 5      |    |    |    |    |    |    |    |    |    |       |       | L     | L     | L     | L     |       |     |    |    |    |    |    |    |    |  |  |
| 6      |    |    |    |    |    |    |    |    |    | U3.5L | L     | L     | U4.6L | L     |       |       |     |    |    |    |    |    |    |    |  |  |
| 7      |    |    |    |    |    |    |    |    |    |       | L     | L     | L     | 3.9   | L     | L     | 2.9 |    |    |    |    |    |    |    |  |  |
| 8      |    |    |    |    |    |    |    |    |    | 5     | L     | U3.9L | 4.0   | U4.5L | U4.4L | L     | L   |    |    |    |    |    |    |    |  |  |
| 9      |    |    |    |    |    |    |    |    |    | 3.0   | L     | U4.2L | U4.1L | U4.0L |       | L     |     |    |    |    |    |    |    |    |  |  |
| 10     |    |    |    |    |    |    |    |    |    | 5     | U4.2L | U4.5L | 4.3   | U4.0L | L     | L     |     |    |    |    |    |    |    |    |  |  |
| 11     |    |    |    |    |    |    |    |    |    | 3.2   | L     | 4.0   | U4.5L | L     |       | L     |     |    |    |    |    |    |    |    |  |  |
| 12     |    |    |    |    |    |    |    |    |    | L     | U4.2L | L     | L     | L     | L     | L     | L   |    |    |    |    |    |    |    |  |  |
| 13     |    |    |    |    |    |    |    |    |    | U3.3L | U3.8L | L     | L     | L     | U4.2L | U4.0L | L   |    |    |    |    |    |    |    |  |  |
| 14     |    |    |    |    |    |    |    |    |    | U3.2L | L     | U4.5L | 4.5   | L     | U3.8L | L     |     |    |    |    |    |    |    |    |  |  |
| 15     |    |    |    |    |    |    |    |    |    | L     | L     | U4.3L | 4.5   | 4.3   | 3.5   | U3.8L |     |    |    |    |    |    |    |    |  |  |
| 16     |    |    |    |    |    |    |    |    |    | L     | 3.3   | L     | U4.3L | L     | U3.5L | L     |     |    |    |    |    |    |    |    |  |  |
| 17     |    |    |    |    |    |    |    |    |    | U3.6L | L     | L     | U4.6L | L     | U4.0L | 3.5   |     |    |    |    |    |    |    |    |  |  |
| 18     |    |    |    |    |    |    |    |    |    | U3.2L | L     | L     | L     | L     | U4.3L |       |     |    |    |    |    |    |    |    |  |  |
| 19     |    |    |    |    |    |    |    |    |    |       | L     | L     | L     | U4.5L | 4.0   | L     |     |    |    |    |    |    |    |    |  |  |
| 20     |    |    |    |    |    |    |    |    |    | L     | L     | 5.1   | L     | U4.6L | 4.0   | L     |     |    |    |    |    |    |    |    |  |  |
| 21     |    |    |    |    |    |    |    |    |    |       | L     | U5.0L | L     | U4.7L | U4.1L | L     |     |    |    |    |    |    |    |    |  |  |
| 22     |    |    |    |    |    |    |    |    |    | L     | U3.5L |       | 4.6   | 5.0   |       | L     |     |    |    |    |    |    |    |    |  |  |
| 23     |    |    |    |    |    |    |    |    |    | L     | L     | L     |       | L     | L     | L     |     |    |    |    |    |    |    |    |  |  |
| 24     |    |    |    |    |    |    |    |    |    |       | L     | L     | L     | L     | U4.3L |       |     |    |    |    |    |    |    |    |  |  |
| 25     |    |    |    |    |    |    |    |    |    |       | 3.5   |       |       | L     | L     |       |     |    |    |    |    |    |    |    |  |  |
| 26     |    |    |    |    |    |    |    |    |    |       |       | U3.8L |       | U4.3L | U4.5L | U3.9L |     |    |    |    |    |    |    |    |  |  |
| 27     |    |    |    |    |    |    |    |    |    | U3.7L | L     | 5.5   | L     | L     |       |       |     |    |    |    |    |    |    |    |  |  |
| 28     |    |    |    |    |    |    |    |    |    | L     | L     | U4.6L | U4.3L | U4.7L | U4.3L | L     |     |    |    |    |    |    |    |    |  |  |
| 29     |    |    |    |    |    |    |    |    |    |       |       |       |       |       |       |       |     |    |    |    |    |    |    |    |  |  |
| 30     |    |    |    |    |    |    |    |    |    |       |       |       |       |       |       |       |     |    |    |    |    |    |    |    |  |  |
| 31     |    |    |    |    |    |    |    |    |    |       |       |       |       |       |       |       |     |    |    |    |    |    |    |    |  |  |
| Мелана |    |    |    |    |    |    |    |    |    | U3.3L | U3.6L | U4.3L | U4.3L | U4.3L | U4.2L | U3.8L | 2.9 |    |    |    |    |    |    |    |  |  |
| Учено  |    |    |    |    |    |    |    |    |    | 9     | 6     | 13    | 15    | 13    | 14    | 4     | 1   |    |    |    |    |    |    |    |  |  |

## МЕЖДУНАРОДНЫЙ ГЕОФИЗИЧЕСКИЙ ГОД

foE МГц февраль 1969  
(характеристика) (единицы) (месяц) (год)АН КазССР  
(институт)

Станция Караганда

## ИОНОСФЕРНЫЕ ДАННЫЕ

Кем составлена

Кокоша

Долгота 73°05'E широта 49°49'N

Поясное время 75°E

Кем подсчитана

Бондаренко

| Дни   | 00     | 01     | 02 | 03 | 04 | 05 | 06     | 07     | 08      | 09      | 10     | 11     | 12     | 13    | 14      | 15      | 16     | 17     | 18     | 19     | 20     | 21     | 22     | 23     |  |  |
|-------|--------|--------|----|----|----|----|--------|--------|---------|---------|--------|--------|--------|-------|---------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--|--|
| 1     |        |        |    |    |    |    |        | E      | 1.40    | 2.20    | 2.55H  | 2.90H  | 3.00H  | 3.00H | 2.90H   | 2.85H   | 2.30H  | 1.50H  | A      |        |        |        |        |        |  |  |
| 2     |        |        |    |    |    |    |        | 1.20   | 1.90H   | 2.40H   | 2.75H  | 2.95   | 3.00   | 3.00H | 2.90    | 2.50    | 2.20H  | A      |        |        |        |        |        |        |  |  |
| 3     |        |        |    | E  | E  | E  | A      | 1.30H  | 1.95    | 2.40H   | 2.80   | 3.00   | 3.00   | 3.05  | 2.90    | 2.65H   | 2.30F  | 1.70 F | E180B  |        |        |        |        |        |  |  |
| 4     |        |        |    |    |    |    | A      | A      | A       | 2.30    | 2.70   | 2.90   | 3.00   | 3.00  | 2.90    | 2.55    | 2.20   | A      | A      |        |        |        |        |        |  |  |
| 5     |        |        |    |    |    |    | E      | 1.85   | U230A   | 2.80    | 2.95   | 3.00   | 2.95   | 2.85  | 2.80    | 2.20    | A      | E110B  |        |        |        |        |        |        |  |  |
| 6     |        |        |    |    |    |    | E      | 1.65A  | 2.30    | 2.70    | 2.90   | 3.00   | 3.00   | 2.95  | 2.75    | 2.20    | E1.70B | E110B  |        |        |        |        |        |        |  |  |
| 7     |        |        |    |    |    |    | E      | 1.65   | 2.40    | 2.85    | 1.300A | 3.00   | 1.300A | 3.00  | 2.80    | 2.45    | 1.55A  | A      |        |        |        |        |        |        |  |  |
| 8     |        |        |    |    |    |    | E      | 1.65A  | 1.225A  | 2.70    | 2.95   | 3.00   | 3.00   | 2.90  | 2.80    | 2.40    | A      | A      |        |        |        |        |        |        |  |  |
| 9     |        |        |    |    |    |    | E110B  | 1.85   | 2.40    | 2.80    | 3.00   | 3.10H  | 3.05   | 3.00  | 2.85    | 2.35    | A      | A      |        |        |        |        |        |        |  |  |
| 10    |        |        |    |    |    |    | E1.30B | 1.75H  | 2.45H   | 2.85    | 3.00   | 3.10   | 3.10   | 3.00  | 2.80    | 2.30    | U1.80A | B      |        |        |        |        |        |        |  |  |
| 11    |        |        |    |    |    |    | 1.25   | 1.95H  | 2.50H   | 2.75    | 3.00   | 3.05   | 3.10H  | 3.00  | 2.75    | 2.45    | 1.80H  | E1.10B | E110B  | E110B  | E110B  | E110B  | E110B  | E1.20B |  |  |
| 12    | E1.30B | E1.10B | A  | A  | A  | A  | A      | A      | A       | 2.30    | 2.80   | 3.00   | 3.00   | 2.95  | 2.80    | 2.50    | 2.00H  | 1.30   | A      |        |        |        |        |        |  |  |
| 13    |        |        |    |    |    |    | E      | 1.90H  | 2.20H   | U2.45A  | 3.00H  | U3.00A | 3.00   | 2.80  | 1.2.70A | 1.2.45A | 1.60   | A      |        |        |        |        |        |        |  |  |
| 14    |        |        |    |    |    |    | A      | A      | 2.45    | 2.75    | 3.00   | U3.00A | 3.00   | 3.00  | 2.80    | A       | A      | A      |        |        |        |        |        |        |  |  |
| 15    |        |        |    |    |    |    | E1.10B | A      | A       | A       | 3.00   | 3.00   | 3.00   | 2.90  | 2.70    | 2.25H   | 1.80   | A      |        |        |        |        |        |        |  |  |
| 16    |        |        |    |    |    | A  | E      | 1.50   | U2.10A  | 2.50    | 2.75   | 3.00   | 3.00   | 2.95  | 2.90H   | 2.75H   | 2.45H  | 1.90   | E1.10B |        |        |        |        |        |  |  |
| 17    |        |        |    |    |    |    | 1.20   | 1.80A  | 2.20H   | 1.2.90A | A      | A      | 3.10   | 3.00  | 2.85    | 2.5     | 1.70   | A      |        |        |        |        |        |        |  |  |
| 18    |        |        |    |    |    |    | A      | 2.00   | 2.50    | 2.90    | 3.05   | 3.15   | 3.20   | 3.15  | 2.90    | 2.40    | 1.70   | E1.10B |        |        |        |        |        |        |  |  |
| 19    |        |        |    |    |    |    | A      | 2.10   | 1.2.60A | 3.00    | 3.10H  | 3.25   | 3.20   | 3.10  | 2.95    | 2.60    | 1.70   | E1.30B |        |        |        |        |        |        |  |  |
| 20    |        |        |    |    |    | E  | E      | 2.15   | 2.65    | 1.2.95A | 3.15   | 3.30   | 3.30H  | 3.20  | 3.00    | 2.60    | 1.90   | A      | E      |        |        |        |        |        |  |  |
| 21    |        |        |    |    |    |    | 1.35   | 2.10   | U2.60A  | 1.300A  | 1.3.75 | 3.25   | 3.15   | 3.00  | 2.80    | 2.50    | 2.00   | A      |        |        |        |        |        |        |  |  |
| 22    |        |        |    |    | A  | E  | A      | 1.20   | 2.30    | 2.75    | 3.00   | 3.20   | 3.35   | 3.35  | 3.25    | 3.10    | 2.70   | 2.10H  | A      |        |        |        |        |        |  |  |
| 23    |        |        |    |    |    |    | E      | A      | 2.15H   | 2.75    | 3.20   | 3.35   | 3.40   | 3.40  | 3.25    | 3.05    | 2.75   | 1.90H  | 1.20   | E      | E1.20B |        |        |        |  |  |
| 24    |        |        |    |    |    |    | E      | 1.40   | A       | A       | A      | 3.30   | 3.40   | 3.40  | 3.25    | 3.05H   | 2.50   | 2.15   | 1.15   | E      | E1.20B | E1.20B |        |        |  |  |
| 25    |        |        |    | E  | E  | E  | E      | 1.30   | 2.30H   | 2.80F   | 3.10   | 3.30   | 3.40   | 3.45  | 3.30    | 3.25    | 2.70   |        |        |        |        |        |        |        |  |  |
| 26    |        |        |    |    |    |    | 1.30   | 2.30H  | 2.90    | 3.40    | 3.40   | 3.50   | 3.40   | 3.25  | 3.00    | 2.80    | 2.10   | E1.50B | E110B  |        |        |        |        |        |  |  |
| 27    |        |        |    |    |    |    | E      | A      | 2.20    | 2.80    | 3.10   | 3.35   | 3.40   | 3.35  | 3.20H   | 3.00    | 2.40   | E1.50B |        |        | E1.20B |        |        |        |  |  |
| 28    |        | E1.30B | E  | E  |    | E  | E      | A      | 2.30    | 2.80    | 3.15   | 3.40   | 3.50   | 3.50  | 3.35    | 3.10    | 2.60   | 2.10   | E1.20B | E1.20B | E1.20B | E1.30B | E1.20B |        |  |  |
| 29    |        |        |    |    |    |    |        |        |         |         |        |        |        |       |         |         |        |        |        |        |        |        |        |        |  |  |
| 30    |        |        |    |    |    |    |        |        |         |         |        |        |        |       |         |         |        |        |        |        |        |        |        |        |  |  |
| 31    |        |        |    |    |    |    |        |        |         |         |        |        |        |       |         |         |        |        |        |        |        |        |        |        |  |  |
| Медиа | E1.30B | E1.20B | E  | E  | E  | E  | E      | E1.20B | 1.95    | 2.45    | 2.80   | 3.00   | 3.05   | 3.10  | 3.10    | 2.80    | 2.45   | 1.80   | E1.20B | E110B  | E1.15B | E1.20B | E1.15B | E1.20B |  |  |
| Учтен | 1      | 2      | 1  | 3  | 2  | 3  | 6      | 20     | 23      | 26      | 26     | 27     | 27     | 28    | 28      | 27      | 22     | 14     | 6      | 4      | 5      | 2      | 1      |        |  |  |

Пробег частоты от МГц до МГц мин.

Станция

(ручная, автоматическая)

foEs Мгц февраль 1969

(характеристика) (единицы) (месяц) (год)

АН КазССР

(институт)

Станция Караганда

## ИОНОСФЕРНЫЕ ДАННЫЕ

Кем составлена Кокоша

Долгота 73°05'E широта 49°49'N

поясное время 75°E

Кем подсчитана Зонак

| Час     | 00   | 01   | 02   | 03   | 04   | 05   | 06   | 07   | 08   | 09   | 10   | 11   | 12   | 13   | 14   | 15   | 16   | 17   | 18  | 19   | 20   | 21   | 22   | 23   |
|---------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|------|------|------|------|------|
| 1       | E14B | E12B | 15   | J17X | 21   | E    | E    | G    | 21   | J28X | J28X | J29X | 34   | 36   | 34   | 34   | 37   | 2.1  | 1.2 | E11B | E13B | E11B | E    | E    |
| 2       | E    | E    | 15H  | 12   | 13H  | C    | E    | G    | 20H  | 21G  | J28X | 35Y  | 36Y  | 21G  | 35Y  | 20G  | 25   | J29X | 20  | 15   | 20   | E15B | E15B | E11B |
| 3       | 1.5  | C    | E12B | G    | G    | G    | 13   | 20   | 18G  | G    | J28X | 35   | J31X | G    | G    | G    | G    | 2.0  | G   | E12B | E14B | E    | E    | E11B |
| 4       | 1.8  | 1.9  | 1.5  | E11B | E    | E11B | J13X | 13   | 2.5  | G    | G    | G    | 21G  | G    | G    | 21G  | 2.0G | J27X | 1.8 | E15B | E11B | E11B | E12B | E14B |
| 5       | E12B | E13B | E12B | E    | E    | E    | E    | G    | 1.9  | 24   | 2.9  | 24G  | 25G  | 25G  | 2.0G | G    | G    | 2.0  | G   | E12B | 1.8  | J29X | J25X | J28X |
| 6       | E11B | E11B | E    | E    | E11B | E    | 20   | G    | 21   | 25   | 22G  | 26G  | 31   | 32   | 36   | J28X | 23   | G    | G   | E12B | E11B | 1.6  | 2.1  | 1.4  |
| 7       | E12B | J32X | 19   | E    | 20   | E    | E    | G    | 20   | 26   | 35   | 31   | 30   | 31   | 26G  | G    | 25   | 19   | 17  | E12B | 2.2  | 1.5  | 2.9  | J25X |
| 8       | J30X | J38H | J26X | J23X | E    | E    | E    | G    | U17R | 26   | 33   | 35   | 34Y  | J43X | 34   | J42H | J38H | J30H | 2.2 | E    | E11B | E11B | E11B | J23X |
| 9       | J17X | 15   | J16X | 15   | 2.2  | 1.4  | 11   | 21   | 23   | 33Y  | 34Y  | 33Y  | 32H  | 33Y  | 35Y  | 35Y  | J33X | 24H  | 1.6 | 2.5  | E    | E11B | E13B | E11B |
| 10      | E    | E11B | 26   | 20   | 20   | E    | E    | 25   | 22   | 24G  | 35   | 40   | J40X | J36X | 34Y  | 34Y  | 32   | 25   | G   | E12B | E11B | E11B | E    | E16B |
| 11      | E11B | E    | E    | E    | E    | E    | E    | G    | 23   | 33Y  | 33Y  | 32Y  | 32Y  | 33Y  | 25G  | G    | 32Y  | G    | G   | G    | G    | G    | G    | G    |
| 12      | G    | G    | 14   | 15   | 13   | 13   | 16   | 15   | 21   | 23   | 32Y  | 33Y  | 31Y  | 35   | 33Y  | 24G  | 24   | G    | 25  | E11B | E11B | E    | E14B | 25   |
| 13      | J18X | E11B | 12   | J28X | 18   | E    | E    | G    | G    | 28   | 29   | 33   | 30   | 34   | 22G  | 30   | 31   | 25   | 15  | 18   | J27X | J35X | 15   | 15   |
| 14      | 1.6  | 1.3  | J38X | J23H | E    | 20H  | 13   | J28X | 24   | 32Y  | 30   | 27G  | 33   | 28G  | 35H  | 29   | J37X | J31X | 2.0 | 1.5  | 17   | 18   | 16   | E12B |
| 15      | 20   | 2.1  | 2.4  | 2.1  | 2.1  | 19   | E    | G    | 28   | 33   | 33   | 27G  | 33Y  | 33H  | 34Y  | 31Y  | G    | 22   | 1.8 | J28X | J21X | 13   | E12B | E11B |
| 16      | E12B | E12B | 20   | 20   | E12B | 11   | 11   | G    | 21   | 25   | 26G  | 32   | 32   | 22G  | 20G  | 33H  | 25   | 2.1  | G   | E11B | E11B | E    | E12B | E13B |
| 17      | E13B | E13B | 21   | 20   | E12B | 22   | E    | G    | J29X | 25   | 30   | J45X | 34   | 28G  | 33   | 35   | 33Y  | 2.5  | 1.3 | E12B | E14B | E12B | E12B | 24   |
| 18      | J23X | E15B | 17   | 23   | 21   | 25   | 12   | 21   | G    | 24G  | 33   | 32H  | J53H | 32H  | 24G  | G    | 25   | 15G  | G   | E12B | U15R | E12B | E12B | E14B |
| 19      | E12B | 15   | 18   | 13   | 2.2  | E    | E    | 12   | 21   | 30   | 26G  | 25G  | 25G  | 32   | 28G  | 34   | 21G  | 16G  | G   | E13B | E13B | E    | E12B | E12B |
| 20      | E12B | E12B | 11   | 15   | 16   | G    | E    | G    | 20G  | 24G  | 31   | 32   | 34   | 23G  | 33   | 33Y  | 21G  | 24   | 13  | G    | E11B | E11B | E14B | E11B |
| 21      | E12B | E11B | E    | 12   | E    | E    | E    | G    | 18G  | 25G  | 33   | 32   | 25G  | 25G  | 32   | 33   | 26   | 23   | 12  | 13   | 15   | E11B | 1.5  | E11B |
| 22      | 1.5  | E13B | 22   | 13   | 11   | 21   | 12   | G    | 17G  | 24G  | 33   | 50   | 33G  | 22G  | 23G  | J43X | 21G  | 20G  | 17  | E14B | E13B | E12B | E12B | E12B |
| 23      | E12B | 21Y  | 22Y  | 21Y  | E    | 21Y  | G    | 14   | G    | 23G  | 33   | 32G  | J43X | 23G  | 33   | 33   | 21G  | 22   | G   | G    | G    | G    | E12B | E11B |
| 24      | E12B | E    | E    | E    | E    | E    | G    | 15   | 26   | 31   | 34   | 35   | 35   | G    | 23G  | 24G  | 2.8  | G    | G   | G    | G    | G    | E12B | E    |
| 25      | E12B | E    | E    | G    | G    | G    | G    | G    | G    | 24G  | J38X | 35   | 34   | 34G  | 35   | G    | 25G  | 25   | G   | E    | E    | E11B | E12B | E    |
| 26      | E12B | E12B | E    | E    | E    | E    | E    | G    | G    | 30   | 30G  | 31G  | J53X | 40   | 35   | 39   | 32Y  | 23   | G   | G    | E11B | E11B | E12B | E13B |
| 27      | E12B | E    | E    | E    | 15   | E    | G    | 14   | 25   | G    | G    | 25G  | 24G  | 21G  | 18G  | 32   | G    | 26   | G   | E14B | E13B | G    | E14B | E13B |
| 28      | E13B | G    | G    | 13   | E11B | G    | G    | J25X | G    | 32   | 32   | 35   | 35   | 35   | 35   | 35   | 24G  | 21   | G   | G    | G    | G    | G    | E12B |
| 29      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |
| 30      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |
| 31      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |
| Дуан    | D04  | -    | D10  | D10  | D09  | D04  | D02  | -    | 0.6  | 0.6  | 0.5  | 0.7  | 0.4  | 0.8  | 11   | 14   | 11   | 0.5  | -   | -    | -    | -    | -    | -    |
| Мелана  | E12B | E12B | 15   | 13   | E12B | G    | E    | G    | 20   | 25   | 32   | 32   | 33   | 32   | 33   | 32   | 25   | 22   | 1.2 | E12B | E12B | E11B | E12B | E12B |
| Учено   | 28   | 27   | 28   | 28   | 28   | 27   | 28   | 28   | 28   | 28   | 28   | 28   | 28   | 28   | 28   | 28   | 28   | 28   | 28  | 28   | 28   | 28   | 28   | 28   |
| Верх КВ | E1.2 | G    | E    | E    | E    | E    | E    | G    | 1.7  | 2.4  | 2.8  | 2.8  | 3.0  | 2.2  | 2.3  | 2.0  | 2.1  | 2.0  | G   | G    | E1.1 | G    | E1.2 | E1.1 |
| Ниж КВ  | 1.6  | 1.5  | 2.0  | 2.0  | 1.9  | 1.4  | 1.2  | 1.5  | 2.3  | 3.0  | 3.3  | 3.5  | 3.4  | 3.4  | 3.4  | 3.4  | 3.2  | 2.5  | 1.7 | 1.4  | E1.5 | E1.2 | E1.4 | E1.4 |

Пробег частоты от 10 Мгц до 18.0 Мгц 20 мин.

Станция автоматическая  
(ручная, автоматическая)

## МЕЖДУНАРОДНЫЙ ГЕОФИЗИЧЕСКИЙ ГОД

fEs Мгц февраль 1969  
(характеристика) (единица) (месяц) (год)АН КазССР  
(институт)

Станция Караганда

## ИОНОСФЕРНЫЕ ДАННЫЕ

Кем составлена Анакиной

Долгота 73°05'E широта 49°49'N

Поясное время 75°E

Кем подсчитана Бондаренко

| Дни     | 00   | 01   | 02   | 03   | 04   | 05   | 06 | 07 | 08   | 09  | 10   | 11   | 12   | 13   | 14   | 15   | 16   | 17   | 18  | 19   | 20   | 21   | 22   | 23   |  |  |
|---------|------|------|------|------|------|------|----|----|------|-----|------|------|------|------|------|------|------|------|-----|------|------|------|------|------|--|--|
| 1       | E14B | E12B | 13   | 14   | E    | E    | E  | G  | G    | G   | 15G  | 18G  | 18G  | G    | 16G  | G    | G    | G    | 12  | E12B | E12B | E11B | E    | E    |  |  |
| 2       | E    | E    | 14   | 12   | 12   | C    | E  | G  | 14G  | G   | 17G  | 17G  | 18G  | 18G  | 18G  | G    | G    | 20   | 15  | 15   | 15   | E15B | E15B | E11B |  |  |
| 3       | 13   | C    | E12B | G    | G    | G    | 12 | G  | 16G  | G   | 18G  | 18G  | 18G  | G    | G    | G    | G    | 16G  | G   | E12B | E14B | E    | E    | E11B |  |  |
| 4       | 14   | 15   | 15   | E11B | E    | E11B | 12 | 12 | 20   | G   | G    | G    | 21G  | G    | G    | 20G  | 15G  | 18   | 12  | E15B | E11B | E11B | E12B | E14B |  |  |
| 5       | E12B | E13B | E12B | E    | E    | E    | E  | G  | 19   | 23  | 29   | 23G  | 25G  | 23G  | 19G  | G    | G    | 17   | G   | E12B | 17   | 16   | 14   | 15   |  |  |
| 6       | E11B | E11B | E    | E    | E11B | E    | E  | G  | 18   | G   | G    | G    | 31   | 32   | 24G  | 19G  | 23   | G    | G   | E12B | E11B | E11B | 15   | 14   |  |  |
| 7       | E12B | 14   | 15   | E    | E    | E    | E  | G  | 14G  | G   | 17G  | 31   | G    | 31   | G    | G    | G    | 17   | 14  | E12B | 19   | 12   | 19   | 23   |  |  |
| 8       | 26   | 18   | 20   | 17   | E    | E    | E  | G  | U17R | 24  | G    | G    | G    | 16G  | 30   | 20G  | 19G  | 19   | 15  | E    | E11B | E11B | E11B | 12   |  |  |
| 9       | 14   | 13   | 12   | 12   | E    | 13   | 11 | G  | 17G  | G   | 17G  | G    | 20G  | G    | 18G  | 18G  | 18G  | 19   | 15  | 17   | E    | E11B | E13B | E11B |  |  |
| 10      | E    | E11B | E    | E    | E    | E    | E  | G  | G    | G   | 14G  | 14G  | 16G  | 16G  | 16G  | 16G  | 16G  | 16   | G   | E12B | E11B | E11B | E    | E16B |  |  |
| 11      | E11B | E    | E    | E    | E    | E    | E  | G  | G    | G   | 16G  | G    | 16G  | G    | 25G  | G    | G    | G    | G   | G    | G    | G    | G    | G    |  |  |
| 12      | G    | G    | 14   | 15   | 12   | 11   | 15 | 15 | 21   | G   | G    | G    | G    | G    | G    | G    | 24   | G    | 19  | E11B | E11B | E    | E14B | 12   |  |  |
| 13      | 13   | E11B | 11   | 16   | 15   | E    | E  | G  | G    | 27  | 29   | G    | 30   | 34   | 22G  | 29   | 26   | G    | 12  | 18   | 25   | 20   | 15   | 13   |  |  |
| 14      | 13   | 12   | 20   | E    | E    | E    | 12 | 13 | 21   | G   | 29   | 27G  | 31   | G    | 20G  | 29   | 22   | 20   | 17  | 15   | 14   | 18   | 15   | E12B |  |  |
| 15      | 14   | 18   | 15   | 16   | 16   | 12   | E  | G  | 28   | 32  | 29   | 27G  | G    | 20G  | 18G  | G    | G    | 15G  | 18  | 20   | 18   | 13   | E12B | E11B |  |  |
| 16      | E12B | E12B | E    | E    | E12B | 11   | G  | G  | 21   | G   | G    | 30   | 30   | 22G  | 19G  | G    | G    | G    | G   | E11B | E11B | E    | E12B | E13B |  |  |
| 17      | E13B | E13B | E11B | 14   | E12B | E    | E  | G  | 26   | 25  | 30   | 35   | 32   | 25G  | 18G  | 16G  | G    | 16G  | 13  | E12B | E14B | E12B | E12B | 15   |  |  |
| 18      | 16   | E15B | 14   | 16   | 19   | 11   | 12 | 13 | G    | 24G | G    | 23G  | G    | 20G  | 18G  | G    | 18G  | 15G  | G   | E12B | U15R | E12B | E12B | E14B |  |  |
| 19      | E12B | 12   | 12   | 13   | 13   | E    | E  | 12 | 20G  | 27  | 25G  | 25G  | 21G  | 20G  | 24G  | 30G  | 20G  | 15G  | G   | E13B | E13B | E    | E12B | E12B |  |  |
| 20      | E12B | E12B | 11   | 14   | 16   | G    | E  | G  | G    | G   | 30   | G    | G    | 18G  | 33   | 16G  | 15G  | 15G  | 13  | G    | E11B | E11B | E14B | E11B |  |  |
| 21      | E12B | E11B | E    | 11   | E    | E    | E  | G  | G    | G   | 31   | 32   | 25G  | 20G  | 19G  | 19G  | 26   | 17G  | 12  | 13   | 15   | E11B | 14   | E11B |  |  |
| 22      | 15   | E13B | E    | 13   | 11   | G    | 11 | G  | 17G  | G   | G    | G    | 22G  | 21G  | 19G  | 19G  | 19G  | 14G  | 15  | E14B | E13B | E12B | E12B | E12B |  |  |
| 23      | E12B | 12   | 12   | E    | E    | E    | G  | 13 | G    | G   | G    | G    | G    | 22G  | 18G  | 17G  | 13G  | G    | G   | G    | G    | G    | E12B | E11B |  |  |
| 24      | E12B | E    | E    | E    | E    | E    | G  | G  | 21   | 29  | 32   | G    | G    | G    | G    | G    | G    | G    | G   | G    | G    | G    | E12B | E    |  |  |
| 25      | E12B | E    | E    | G    | G    | G    | G  | G  | G    | G   | G    | 33   | G    | G    | 34   | G    | G    | G    | G   | E    | E    | E11B | E12B | E    |  |  |
| 26      | E12B | E12B | E    | E    | E    | E    | E  | G  | G    | 30  | G    | G    | 28G  | G    | 34   | 32   | 15G  | 23   | G   | G    | E11B | E11B | E12B | E13B |  |  |
| 27      | E12B | E    | E    | E    | E    | E    | G  | 14 | 24   | G   | G    | 24G  | 24G  | 18G  | 18G  | 17G  | G    | 14G  | G   | E14B | E13B | G    | E14B | E13B |  |  |
| 28      | E13B | G    | G    | G    | E11B | G    | G  | 14 | G    | 30  | G    | G    | G    | 23G  | 18G  | 14G  | G    | 12G  | G   | G    | G    | G    | G    | E12B |  |  |
| 29      |      |      |      |      |      |      |    |    |      |     |      |      |      |      |      |      |      |      |     |      |      |      |      |      |  |  |
| 30      |      |      |      |      |      |      |    |    |      |     |      |      |      |      |      |      |      |      |     |      |      |      |      |      |  |  |
| 31      |      |      |      |      |      |      |    |    |      |     |      |      |      |      |      |      |      |      |     |      |      |      |      |      |  |  |
| Медиана | E12B | E12B | E12  | E11  | E    | E    | E  | G  | 1.6G | G   | 1.6G | 1.6G | 1.8G | 1.8G | 1.8G | 1.6G | 1.4G | 1.5G | 1.2 | E12B | E12B | E11B | E12B | E12B |  |  |
| Учтено  | 28   | 27   | 28   | 28   | 28   | 27   | 28 | 28 | 28   | 28  | 28   | 28   | 28   | 28   | 28   | 28   | 28   | 28   | 28  | 28   | 28   | 28   | 28   | 28   |  |  |

Пробег частоты от 1.0 Мгц до 18.0 Мгц 20 сек.

Станция автоматическая  
(ручная, автомат)



## МЕЖДУНАРОДНЫЙ ГЕОФИЗИЧЕСКИЙ ГОД

f<sub>min</sub> Мги февраль 1969

(характеристика) (с широты) (месяц) (год)

АН Каз ССР

(институт)

Станция Караганда

## ИОНОСФЕРНЫЕ ДАННЫЕ

Кем составлена Рева

Долгота 73°05'E широта 49°49'N

Поясное время 75°E

Кем подсчитана Зейко

| Дни     | 00  | 01  | 02  | 03  | 04  | 05  | 06  | 07  | 08  | 09  | 10  | 11  | 12  | 13  | 14  | 15  | 16  | 17  | 18  | 19  | 20  | 21  | 22  | 23  |  |  |
|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|
| 1       | 1.4 | 1.2 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.2 | 1.5 | 1.0 | 1.5 | 1.4 | 1.5 | 1.3 | 1.5 | 1.5 | 1.0 | 1.0 | 1.1 | 1.2 | 1.1 | 1.0 | 1.0 |  |  |
| 2       | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 0   | 1.0 | 1.0 | 1.3 | 1.5 | 1.5 | 1.3 | 1.4 | 1.5 | 1.1 | 1.6 | 1.5 | 1.1 | 1.1 | 1.0 | 1.0 | 1.5 | 1.5 | 1.1 |  |  |
| 3       | 1.0 | 0   | 1.2 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.5 | 1.0 | 1.0 | 1.5 | 2.1 | 1.8 | 1.6 | 1.4 | 1.0 | 1.2 | 1.2 | 1.4 | 1.0 | 1.0 | 1.1 |  |  |
| 4       | 1.0 | 1.0 | 1.0 | 1.1 | 1.0 | 1.1 | 1.0 | 1.0 | 1.1 | 1.3 | 1.5 | 1.5 | 1.5 | 1.7 | 1.8 | 1.4 | 1.1 | 1.0 | 1.1 | 1.5 | 1.1 | 1.1 | 1.2 | 1.4 |  |  |
| 5       | 1.2 | 1.3 | 1.2 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.3 | 1.4 | 1.5 | 1.5 | 1.6 | 1.4 | 1.5 | 1.5 | 1.0 | 1.1 | 1.2 | 1.0 | 1.0 | 1.0 | 1.0 |  |  |
| 6       | 1.1 | 1.1 | 1.0 | 1.0 | 1.1 | 1.0 | 1.0 | 1.0 | 1.1 | 1.5 | 1.6 | 1.6 | 1.7 | 1.5 | 1.5 | 1.6 | 1.6 | 1.7 | 1.1 | 1.2 | 1.1 | 1.1 | 1.1 | 1.1 |  |  |
| 7       | 1.2 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.5 | 1.5 | 1.6 | 1.6 | 1.5 | 1.5 | 1.5 | 1.5 | 1.2 | 1.0 | 1.2 | 1.0 | 1.0 | 1.0 | 1.0 |  |  |
| 8       | 1.1 | 1.0 | 1.1 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.2 | 1.2 | 1.3 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.1 | 1.0 | 1.0 | 1.1 | 1.1 | 1.1 | 1.0 |  |  |
| 9       | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.1 | 1.3 | 1.7 | 1.6 | 1.8 | 1.8 | 1.9 | 1.6 | 1.7 | 1.7 | 1.6 | 1.1 | 1.0 | 1.0 | 1.1 | 1.3 | 1.1 |  |  |
| 10      | 1.0 | 1.1 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.3 | 1.3 | 1.2 | 1.0 | 1.0 | 1.0 | 1.1 | 1.1 | 1.1 | 1.0 | 1.2 | 1.0 | 1.2 | 1.1 | 1.1 | 1.0 | 1.6 |  |  |
| 11      | 1.1 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.4 | 1.6 | 1.0 | 1.7 | 1.2 | 1.7 | 1.8 | 1.9 | 1.5 | 1.3 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 1.2 |  |  |
| 12      | 1.3 | 1.1 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.2 | 1.4 | 1.4 | 1.6 | 1.5 | 1.5 | 1.6 | 1.4 | 1.3 | 1.1 | 1.1 | 1.1 | 1.1 | 1.0 | 1.4 | 1.1 |  |  |
| 13      | 1.2 | 1.1 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.2 | 1.6 | 1.4 | 1.4 | 1.6 | 1.5 | 1.5 | 1.3 | 1.3 | 1.1 | 1.2 | 1.0 | 1.2 | 1.1 | 1.0 |  |  |
| 14      | 1.2 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.4 | 1.5 | 1.4 | 1.8 | 1.6 | 1.6 | 1.6 | 1.4 | 1.3 | 1.2 | 1.1 | 1.2 | 1.0 | 1.1 | 1.2 | 1.2 |  |  |
| 15      | 1.3 | 1.0 | 1.0 | 1.0 | 1.1 | 1.0 | 1.0 | 1.1 | 1.2 | 1.3 | 1.4 | 1.6 | 1.6 | 1.5 | 1.4 | 1.4 | 1.5 | 1.0 | 1.0 | 1.1 | 1.1 | 1.1 | 1.2 | 1.1 |  |  |
| 16      | 1.2 | 1.2 | 1.0 | 1.0 | 1.2 | 1.0 | 1.0 | 1.0 | 1.1 | 1.3 | 1.2 | 1.4 | 1.5 | 1.5 | 1.4 | 1.6 | 1.5 | 1.2 | 1.1 | 1.1 | 1.1 | 1.0 | 1.2 | 1.3 |  |  |
| 17      | 1.3 | 1.3 | 1.1 | 1.0 | 1.2 | 1.0 | 1.0 | 1.0 | 1.2 | 1.0 | 1.2 | 1.4 | 1.4 | 1.5 | 1.3 | 1.3 | 1.5 | 1.1 | 1.0 | 1.2 | 1.4 | 1.2 | 1.2 | 1.2 |  |  |
| 18      | 1.0 | 1.5 | 1.1 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.3 | 1.2 | 1.4 | 1.4 | 1.4 | 1.4 | 1.3 | 1.8 | 1.4 | 1.2 | 1.1 | 1.2 | 1.0 | 1.2 | 1.2 | 1.4 |  |  |
| 19      | 1.2 | 1.1 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.1 | 1.3 | 1.4 | 1.3 | 1.4 | 1.4 | 1.2 | 1.4 | 1.2 | 1.2 | 1.3 | 1.3 | 1.3 | 1.0 | 1.2 | 1.2 |  |  |
| 20      | 1.2 | 1.2 | 1.0 | 1.1 | 1.1 | 1.0 | 1.0 | 1.0 | 1.1 | 1.0 | 1.1 | 1.1 | 1.5 | 1.3 | 1.4 | 1.1 | 1.1 | 1.1 | 1.0 | 1.0 | 1.1 | 1.1 | 1.4 | 1.1 |  |  |
| 21      | 1.2 | 1.1 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.2 | 1.3 | 1.4 | 1.4 | 1.3 | 1.1 | 1.1 | 1.1 | 1.0 | 1.0 | 1.0 | 1.1 | 1.1 | 1.0 | 1.1 |  |  |
| 22      | 1.1 | 1.3 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.2 | 1.3 | 1.1 | 1.2 | 1.3 | 1.4 | 1.3 | 1.2 | 1.0 | 1.0 | 1.2 | 1.4 | 1.3 | 1.2 | 1.2 | 1.2 |  |  |
| 23      | 1.2 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.1 | 1.0 | 1.6 | 1.2 | 1.5 | 1.4 | 1.2 | 1.2 | 1.0 | 1.2 | 1.0 | 1.0 | 1.0 | 1.2 | 1.2 | 1.1 |  |  |
| 24      | 1.2 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.1 | 1.2 | 1.2 | 1.3 | 1.2 | 1.3 | 1.3 | 1.3 | 1.2 | 1.2 | 1.0 | 1.0 | 1.2 | 1.2 | 1.2 | 1.0 |  |  |
| 25      | 1.2 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.2 | 1.0 | 1.3 | 1.4 | 1.5 | 1.4 | 2.0 | 1.3 | 1.3 | 1.5 | 1.0 | 1.0 | 1.1 | 1.2 | 1.0 |  |  |
| 26      | 1.2 | 1.2 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.1 | 2.0 | 1.8 | 1.4 | 1.3 | 1.2 | 1.1 | 1.0 | 1.0 | 1.5 | 1.1 | 1.1 | 1.1 | 1.2 | 1.3 |  |  |
| 27      | 1.2 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.3 | 1.2 | 1.1 | 1.4 | 1.5 | 1.2 | 1.2 | 1.2 | 1.5 | 1.0 | 1.5 | 1.4 | 1.3 | 1.2 | 1.4 | 1.3 |  |  |
| 28      | 1.3 | 1.3 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.2 | 1.4 | 1.3 | 1.6 | 1.1 | 1.2 | 1.2 | 1.1 | 1.0 | 1.0 | 1.2 | 1.2 | 1.2 | 1.3 | 1.2 | 1.2 |  |  |
| 29      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |
| 30      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |
| 31      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |
| Медиана | 1.2 | 1.1 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.1 | 1.3 | 1.4 | 1.4 | 1.4 | 1.5 | 1.4 | 1.4 | 1.3 | 1.1 | 1.1 | 1.2 | 1.1 | 1.1 | 1.2 | 1.1 |  |  |
| Учтено  | 28  | 27  | 28  | 28  | 28  | 27  | 28  | 28  | 28  | 28  | 28  | 28  | 28  | 28  | 28  | 28  | 28  | 28  | 28  | 28  | 28  | 28  | 28  | 28  |  |  |

Пробег частоты от 10 Мги до 18.0 Мги 2.0 мин.

Станция автоматическая (ручная, автоматическая)

(M3000)F2 февраль 1969

(характеристика) (единицы) (месяц) (год)

Станция Кораганда

Долгота 73°05'E широта 49°49'N

## ИОНОСФЕРНЫЕ ДАННЫЕ

полосное время 75°E

АН КазССР

Кем составлена Анокиной

Кем подсчитана Бондаренко

| Дни                | 00    | 01    | 02    | 03    | 04    | 05    | 06    | 07    | 08    | 09    | 10   | 11    | 12   | 13   | 14   | 15   | 16    | 17   | 18    | 19    | 20    | 21    | 22    |       |  |  |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|------|------|------|------|-------|------|-------|-------|-------|-------|-------|-------|--|--|
| 1                  | 2.65N | 2.80N | 2.80F | 2.65F | 2.65F | 2.80  | 2.70F | 2.80  | 3.25  | 3.35  | 3.40 | 3.30  | 3.20 | 3.30 | 3.20 | 3.40 | 3.30  | 3.30 | 3.30  | 3.55  | 3.35  | 3.05  | 2.95  | 2.80  |  |  |
| 2                  | 2.65  | 2.60  | 2.60  | 2.80  | 2.80  | C     | 2.85  | 2.85  | 3.35  | 3.50  | S    | 3.30  | 3.30 | 3.25 | 3.25 | 3.35 | 3.30  | 3.35 | 3.20S | 3.35  | 3.15  | 2.95  | 2.65  | 2.80  |  |  |
| 3                  | 3.00  | C     | 2.30  | 2.50  | 2.85  | 2.40  | 2.55F | 2.70  | 2.95  | 3.20  | 3.10 | 3.15  | 3.20 | 3.10 | 3.20 | 3.30 | 3.10  | 3.15 | S     | 3.15  | 2.90  | 3.15  | 2.95  | 2.90F |  |  |
| 4                  | 2.85  | 2.60  | 2.80  | 2.40  | 2.65  | 2.80  | 3.00  | 3.00  | 3.35  | 3.50  | 3.20 | 3.35  | 3.20 | 3.20 | 3.25 | 3.35 | 3.30  | 3.35 | 3.30  | 3.20  | 3.25  | 3.00  | 2.90  | 2.65  |  |  |
| 5                  | 2.75  | 2.80  | 2.80  | 2.80  | 2.65  | 2.80  | 2.80  | 2.85  | 3.30  | 3.25  | C    | 3.25  | 3.35 | 3.15 | 3.15 | 3.15 | 3.30  | 3.25 | 3.30S | 3.35  | 3.15  | 3.15  | 2.75  | 2.60  |  |  |
| 6                  | 2.80F | 2.85F | 2.80F | 2.90F | 2.80F | 2.90F | 3.00  | 2.95  | 3.45  | 3.55  | 3.35 | 3.15  | 3.20 | 3.15 | 3.15 | 3.15 | 3.30S | 3.20 | S     | 3.50  | 3.20  | 3.20  | 3.15F | 2.85F |  |  |
| 7                  | 2.85F | 2.85N | 2.80F | 2.70F | 2.85F | 3.10F | 3.10F | 3.35F | 3.35  | 3.35  | 3.20 | 3.00S | 3.10 | 3.15 | 3.15 | 3.15 | 3.15  | 3.15 | 3.15  | 3.30  | 3.10  | 3.00  | 2.95  | 2.80  |  |  |
| 8                  | A     | 2.70N | 2.60N | 2.65F | 2.70  | 2.90F | 3.15  | 2.90  | 3.35  | 3.30  | 3.20 | 3.15  | 3.10 | 3.05 | 3.20 | 3.15 | 3.15  | 3.25 | 3.10  | 3.20  | 3.15  | 3.00F | 2.95F | F     |  |  |
| 9                  | 2.65N | 2.80N | 2.90F | 2.90F | 2.90F | 2.95  | 3.10  | 3.15  | 3.50  | 3.30  | C    | 3.20  | 3.25 | 3.10 | 3.15 | 3.15 | 3.16  | 3.20 | 3.20  | 3.25S | 3.20  | 3.25  | 2.95  | 2.85  |  |  |
| 10                 | 2.85  | 2.85  | 2.95  | 2.75  | 2.80  | 2.95  | 3.10  | 3.10  | 3.30S | 3.25S | 3.25 | 3.30  | 3.30 | 3.10 | 3.15 | 3.15 | 3.20  | 3.25 | 3.20S | 3.35S | 3.10  | 3.15  | 2.90  | 2.65  |  |  |
| 11                 | 2.80  | 2.85  | 2.75  | 2.85  | 2.60N | 2.55  | 2.60  | 3.00  | S     | 3.25  | 3.15 | 3.05  | 3.20 | 3.10 | 3.00 | 3.10 | 3.05  | 3.15 | 3.10S | 3.25S | 2.85  | 2.80S | 2.40  | 2.40  |  |  |
| 12                 | 2.45  | 3.35F | 2.55  | 2.50  | 2.65  | 2.80  | 2.95  | 2.95  | 3.25  | 3.35S | 3.25 | 3.05  | 3.05 | 3.15 | 3.10 | 3.15 | 3.20  | 3.25 | 3.15  | 3.15  | 3.10  | 2.95  | 2.85  | 2.80  |  |  |
| 13                 | 2.75  | 2.60  | 2.65  | 2.90  | 2.90  | 2.95  | 2.90F | 3.10F | 3.35  | 3.30  | 3.20 | 3.10  | 3.15 | 3.15 | 3.15 | 3.15 | 3.15  | 3.30 | 3.20  | 3.40  | 3.10  | 3.10  | 2.80F | 2.80F |  |  |
| 14                 | 2.65F | 2.85F | 2.80F | 2.80F | 2.65F | 2.85F | F     | 3.10F | 3.50S | 3.30  | 3.30 | 3.30  | 3.25 | 3.15 | 3.15 | 3.20 | 3.35  | 3.00 | 3.25  | 3.20  | 3.30  | 3.15  | 2.90  | 2.65  |  |  |
| 15                 | 2.80  | 2.75F | 2.85F | 2.85F | 2.85F | 2.70F | 2.75F | 2.90  | 3.20S | 3.35  | 3.30 | 3.20  | 3.15 | 3.30 | 3.15 | 3.20 | 3.25  | 3.25 | 3.25S | 3.15  | 3.15  | 3.05  | 2.90  | 2.60  |  |  |
| 16                 | 2.70  | 2.55F | 2.45F | 2.50F | 2.80F | 2.80F | 3.05F | F     | 3.20  | 3.20  | 3.15 | 3.05  | 3.10 | 3.20 | 3.20 | 3.15 | 3.20  | 3.30 | 3.10S | 3.15  | 3.15  | 2.95  | 2.85  | 2.65  |  |  |
| 17                 | 2.75  | 2.80  | 2.85  | 2.80F | 2.85  | 2.90  | 2.95  | 3.00  | 3.35S | 3.30  | 3.20 | 3.10  | 3.20 | 3.15 | 3.15 | 3.15 | 3.20  | 3.20 | 3.20  | 3.15  | 3.20  | 3.15  | 3.10  | 2.80  |  |  |
| 18                 | 2.75  | 2.70  | 2.80  | 2.95  | 3.10  | 3.00  | 3.15  | 3.20  | 3.30  | 3.30  | 3.20 | 3.15  | 3.10 | 3.05 | 3.15 | 3.10 | 3.20  | 3.25 | 3.25  | 3.20  | 3.30  | 3.25  | 2.95  | 2.65  |  |  |
| 19                 | 2.75  | 2.80  | 2.75F | 2.90F | 3.05F | 3.05F | F     | 3.20  | 3.45  | 3.35  | 3.20 | 3.15  | 3.05 | 3.10 | 3.10 | 3.00 | 3.15  | 3.20 | 3.15  | 3.10S | 3.15  | 3.00  | 2.90  | 2.90  |  |  |
| 20                 | 2.85  | 2.90  | 2.80  | 2.65  | 2.70  | 3.05  | 3.20  | 3.30  | 3.40  | 3.25  | 3.15 | 3.00  | 3.00 | 3.00 | 3.00 | 3.10 | 3.10  | 3.15 | 3.15  | 3.10  | S     | 3.30  | 2.95  | 2.60  |  |  |
| 21                 | 2.65  | 2.65  | 2.65  | 2.85  | 3.05  | 3.00F | 3.00  | 3.05  | 3.15  | 3.30  | 3.15 | 3.10  | 3.05 | 3.00 | 2.95 | 3.00 | 3.10  | 3.10 | 3.15  | 3.10  | 3.10  | 3.10  | 2.95  | 2.95  |  |  |
| 22                 | 2.80  | 2.85  | 2.85  | 2.90  | 2.85  | 2.90  | 3.05  | 3.10  | 3.35  | 3.25  | 3.25 | 3.00  | 3.05 | 3.10 | 2.95 | 3.00 | 3.10  | 3.15 | 3.20  | 3.10  | 3.20  | 2.95  | 2.95  | 2.80  |  |  |
| 23                 | 2.65  | 2.65  | 2.65  | 2.70  | 2.75  | 2.75  | 2.90  | 3.30  | 3.35  | 3.30  | 3.20 | 3.10  | 3.05 | 3.00 | 2.90 | 3.00 | 3.00  | 3.15 | 3.00  | 3.15S | 3.10  | 3.00  | 3.00  | 2.80  |  |  |
| 24                 | 2.70  | 2.75F | 2.65F | 2.65F | 2.70F | 2.80N | 2.90  | 3.15  | 3.20  | C     | 3.00 | 3.10  | 3.00 | 3.00 | 2.95 | 2.90 | 3.00  | 3.05 | 3.00  | 3.05  | 3.15  | 3.15  | 2.85  | 2.70  |  |  |
| 25                 | 2.80  | 2.80  | 2.70  | 2.75  | 2.80  | 2.80  | 3.00  | 3.20  | 3.30  | 3.25  | 3.15 | 2.95  | 2.95 | 3.00 | 3.05 | 3.00 | 3.25  | 3.10 | 3.10  | 3.00  | S     | 3.00  | S     | 3.00F |  |  |
| 26                 | 2.80F | 2.75F | 2.65F | 2.65F | F     | F     | 2.95  | 3.05S | 3.30  | 3.15  | 3.10 | 3.05  | 2.95 | 2.95 | 2.95 | 2.90 | 2.95  | 3.00 | 3.05  | 3.05  | 3.00S | 3.00S | 3.05  | 3.00S |  |  |
| 27                 | 2.85F | F     | 2.65F | 2.75F | 2.80F | F     | F     | 3.00S | 3.25  | 3.15  | 3.15 | 3.10  | 3.00 | 2.90 | 2.95 | 2.95 | 3.00  | 3.15 | 3.00  | 3.00  | 3.10S | S     | 2.40  | 2.30  |  |  |
| 28                 | 2.50  | 2.65  | 2.60  | 2.55  | 2.55  | 2.65  | 2.65  | 3.00  | 3.15S | 3.15  | C    | 3.00  | 3.00 | 3.00 | 3.00 | 3.00 | 3.00  | 3.20 | 3.05  | 3.05  | S     | 3.00  | 2.80  | 2.50  |  |  |
| 29                 |       |       |       |       |       |       |       |       |       |       |      |       |      |      |      |      |       |      |       |       |       |       |       |       |  |  |
| 30                 |       |       |       |       |       |       |       |       |       |       |      |       |      |      |      |      |       |      |       |       |       |       |       |       |  |  |
| 31                 |       |       |       |       |       |       |       |       |       |       |      |       |      |      |      |      |       |      |       |       |       |       |       |       |  |  |
| Дуон.              | 0.15  | 0.20  | 0.15  | 0.20  | 0.20  | 0.15  | 0.30  | 0.20  | 0.10  | 0.05  | 0.10 | 0.15  | 0.15 | 0.15 | 0.15 | 0.15 | 0.15  | 0.10 | 0.10  | 0.20  | 0.10  | 0.15  | 0.10  | 0.20  |  |  |
| Медiana            | 2.75  | 2.80  | 2.75  | 2.75  | 2.80  | 2.85  | 2.95  | 3.05  | 3.30  | 3.30  | 3.20 | 3.10  | 3.10 | 3.15 | 3.15 | 3.15 | 3.15  | 3.20 | 3.15  | 3.15  | 3.15  | 3.05  | 2.90  | 2.90  |  |  |
| Учтено             | 27    | 26    | 28    | 28    | 27    | 25    | 25    | 27    | 27    | 27    | 24   | 28    | 28   | 28   | 28   | 28   | 28    | 28   | 26    | 28    | 25    | 27    | 27    | 27    |  |  |
| Верхн. и нижн. кр. | 2.65  | 2.65  | 2.65  | 2.65  | 2.65  | 2.80  | 2.80  | 2.95  | 3.25  | 3.25  | 3.15 | 3.05  | 3.05 | 3.00 | 3.00 | 3.00 | 3.10  | 3.15 | 3.10  | 3.10  | 3.10  | 3.00  | 2.85  | 2.65  |  |  |
|                    | 2.80  | 2.85  | 2.80  | 2.85  | 2.80  | 2.95  | 3.10  | 3.15  | 3.35  | 3.30  | 3.25 | 3.20  | 3.20 | 3.15 | 3.15 | 3.15 | 3.25  | 3.25 | 3.20  | 3.30  | 3.20  | 3.15  | 2.95  | 2.85  |  |  |

Пробег частоты от 1.0 МГц до 18.0 МГц 20 ГГц

Станция автоматическая

(ручная, автоматическая)



(М30001F1) февраль 1969

(характеристика) (единицы) (месяц) (год)

Станция

Караганда

Долгота

73°05'E

широта

49°49'N

## ИОНОСФЕРНЫЕ ДАННЫЕ

поясное время 75°E

Кем составлена

Рева

Кем подсчитана

Зейко

| Дни    | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09     | 10    | 11     | 12     | 13     | 14     | 15   | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
|--------|----|----|----|----|----|----|----|----|----|--------|-------|--------|--------|--------|--------|------|----|----|----|----|----|----|----|----|
| 1      |    |    |    |    |    |    |    |    |    | L      | L     |        | U410L  | U435L  | L      |      |    |    |    |    |    |    |    |    |
| 2      |    |    |    |    |    |    |    |    |    | G      | L     | U420L  | 420    | L      | L      |      |    |    |    |    |    |    |    |    |
| 3      |    |    |    |    |    |    |    |    |    |        |       | L      | U390L  | L      | L      |      |    |    |    |    |    |    |    |    |
| 4      |    |    |    |    |    |    |    |    |    |        | L     | U400L  | L      | L      |        |      |    |    |    |    |    |    |    |    |
| 5      |    |    |    |    |    |    |    |    |    |        |       | L      | L      | L      | L      |      |    |    |    |    |    |    |    |    |
| 6      |    |    |    |    |    |    |    |    |    | G      | L     | L      | U375L  | L      |        |      |    |    |    |    |    |    |    |    |
| 7      |    |    |    |    |    |    |    |    |    |        | L     | L      | L      | 4.00   | L      | L    | G  |    |    |    |    |    |    |    |
| 8      |    |    |    |    |    |    |    |    |    |        | L     | L      | 4.10   | L      | L      | L    | L  |    |    |    |    |    |    |    |
| 9      |    |    |    |    |    |    |    |    |    | 4.15   | L     | L      | L      | L      |        | L    |    |    |    |    |    |    |    |    |
| 10     |    |    |    |    |    |    |    |    |    |        | L     | L      | 4.05   | U415L  | L      | L    |    |    |    |    |    |    |    |    |
| 11     |    |    |    |    |    |    |    |    |    | G      | L     | 4.10   | U370L  | L      |        | L    |    |    |    |    |    |    |    |    |
| 12     |    |    |    |    |    |    |    |    |    | L      | L     | L      | L      | L      | L      | L    | L  |    |    |    |    |    |    |    |
| 13     |    |    |    |    |    |    |    |    |    | L      | U435L | L      | L      | L      | L      | L    | L  |    |    |    |    |    |    |    |
| 14     |    |    |    |    |    |    |    |    |    | L      | L     | L      | 3.90   | L      | U3.95L | L    |    |    |    |    |    |    |    |    |
| 15     |    |    |    |    |    |    |    |    |    | L      | L     | U385L  | 3.80   | 4.00   | 4.25   | L    |    |    |    |    |    |    |    |    |
| 16     |    |    |    |    |    |    |    |    |    | L      | 4.40  | L      | L      | L      | L      | L    |    |    |    |    |    |    |    |    |
| 17     |    |    |    |    |    |    |    |    |    | L      | L     | L      | U3.65L | L      | U3.75L | 4.15 |    |    |    |    |    |    |    |    |
| 18     |    |    |    |    |    |    |    |    |    | U4.05L | L     | L      | L      | L      | U3.80L |      |    |    |    |    |    |    |    |    |
| 19     |    |    |    |    |    |    |    |    |    |        | L     | L      | L      | U3.70L | 4.00   | L    |    |    |    |    |    |    |    |    |
| 20     |    |    |    |    |    |    |    |    |    | L      | L     | 3.00   | L      | U3.70L | 4.10   | L    |    |    |    |    |    |    |    |    |
| 21     |    |    |    |    |    |    |    |    |    |        | L     | U3.15L | L      | L      | U3.90L | L    |    |    |    |    |    |    |    |    |
| 22     |    |    |    |    |    |    |    |    |    | L      | L     |        | 3.75   | 3.60   |        | L    |    |    |    |    |    |    |    |    |
| 23     |    |    |    |    |    |    |    |    |    | L      | L     | L      |        | L      | L      | L    |    |    |    |    |    |    |    |    |
| 24     |    |    |    |    |    |    |    |    |    |        | L     | L      | L      | L      | U4.00L |      |    |    |    |    |    |    |    |    |
| 25     |    |    |    |    |    |    |    |    |    |        | 4.05  |        |        | L      | L      |      |    |    |    |    |    |    |    |    |
| 26     |    |    |    |    |    |    |    |    |    |        |       | L      |        | L      | L      | L    |    |    |    |    |    |    |    |    |
| 27     |    |    |    |    |    |    |    |    |    | L      | L     | 3.55   | L      | L      |        |      |    |    |    |    |    |    |    |    |
| 28     |    |    |    |    |    |    |    |    |    | L      | L     | L      | L      | U3.60L | L      | L    |    |    |    |    |    |    |    |    |
| 29     |    |    |    |    |    |    |    |    |    |        |       |        |        |        |        |      |    |    |    |    |    |    |    |    |
| 30     |    |    |    |    |    |    |    |    |    |        |       |        |        |        |        |      |    |    |    |    |    |    |    |    |
| 31     |    |    |    |    |    |    |    |    |    |        |       |        |        |        |        |      |    |    |    |    |    |    |    |    |
| Метана |    |    |    |    |    |    |    |    |    | 4.10   | 4.35  | U3.85L | 3.90   | U3.85L | U4.00L | 4.15 |    |    |    |    |    |    |    |    |
| Учтено |    |    |    |    |    |    |    |    |    | 2      | 3     | 4      | 11     | 8      | 8      | 1    |    |    |    |    |    |    |    |    |

Пробег частоты от 10 МГц до 18.0 МГц 20 сек

Станция автоматическая

(ручная, автоматическая)

h'F км февраль 1969  
(характеристика) (единицы) (месяц) (год)

Станция Караганда  
Долгота 73°05'E широта 49°49'N

## ИОНОСФЕРНЫЕ ДАННЫЕ

поясное время 75°E

АН КазССР  
(наименование)

Кем составлена Рева

Кем подсчитана Семенов

| Дни      | 00     | 01     | 02     | 03     | 04     | 05     | 06     | 07     | 08  | 09     | 10  | 11     | 12  | 13     | 14  | 15  | 16     | 17  | 18     | 19     | 20     | 21     | 22     | 23     |
|----------|--------|--------|--------|--------|--------|--------|--------|--------|-----|--------|-----|--------|-----|--------|-----|-----|--------|-----|--------|--------|--------|--------|--------|--------|
| 1        | E 295B | E 265B | E 275A | E 300A | E 285E | E 265E | E 265E | E 245E | 235 | E 235G | 220 | 205    | 195 | 200    | 180 | 215 | 210    | 210 | 210    | E 195B | E 215B | E 225B | E 240E | E 280E |
| 2        | E 300E | E 295E | E 320A | E 285A | E 270A | C      | E 255E | 260    | 230 | E 220G | 205 | 215    | 195 | 195    | 205 | 220 | 210    | 205 | E 220A | E 200A | E 230A | E 260B | E 320B | E 250B |
| 3        | E 290A | C      | E 440B | 370    | 265    | 315    | 350    | 290    | 265 | 225    | 220 | 220    | 210 | 200    | 220 | 225 | 220    | 210 | 210    | E 220B | E 230B | E 215E | E 240E | E 240B |
| 4        | E 270A | E 300A | E 275A | E 340B | E 295E | E 255B | 245    | 240    | 215 | 210    | 200 | 205    | 190 | 200    | 220 | 210 | 205    | 205 | 205    | E 210B | E 215B | E 230B | E 250B | E 290B |
| 5        | E 290B | E 275B | E 255B | E 265E | E 275E | E 255E | E 255E | 240    | 225 | 200    | 210 | 200    | 205 | 190    | 195 | 190 | 210    | 200 | 200    | E 205B | E 220A | E 235A | E 280A | E 325A |
| 6        | E 290B | E 270B | E 265E | E 255E | E 260B | E 245E | E 230E | 230    | 215 | E 215G | 205 | 220    | 220 | 205    | 225 | 215 | 230    | 215 | 195    | E 205B | E 205B | E 225B | E 235A | E 245A |
| 7        | E 265B | E 265A | E 285A | E 270E | E 260E | E 230E | E 230E | 200    | 205 | 210    | 205 | 205    | 185 | E 195A | 195 | 220 | E 230G | 205 | 205    | E 205B | E 245A | E 235A | E 270A | E 345A |
| 8        | E 335A | E 325A | E 345A | E 310A | E 280E | E 250E | E 230E | 210    | 215 | 215    | 190 | 205    | 195 | 205    | 220 | 205 | 215    | 210 | E 205A | E 205E | E 200B | E 225B | E 245B | E 265A |
| 9        | E 315A | E 285A | E 270A | E 260A | E 250E | E 245A | E 235A | 230    | 205 | 205    | 215 | 210    | 200 | 200    | 220 | 205 | 210    | 210 | 215    | E 215A | E 205E | E 220B | E 240B | E 250B |
| 10       | E 255E | E 250B | E 245E | E 255E | E 270E | E 240E | E 220E | 240    | 180 | 210    | 215 | 205    | 205 | 190    | 200 | 225 | 215    | 210 | 205    | E 200B | E 220B | E 215B | E 245E | E 300B |
| 11       | E 270B | E 245E | E 255E | E 250E | E 300E | E 310E | E 300E | 240    | 220 | E 230G | 220 | 200    | 220 | 195    | 225 | 220 | 220    | 220 | 200    | 270    | E 235B | E 250B | 300    | E 355B |
| 12       | E 335B | 350    | E 305A | 300    | 270    | 250    | E 240A | 255    | 220 | E 220G | 225 | 200    | 200 | 200    | 205 | 225 | E 225G | 210 | 200    | E 210B | E 210B | E 245E | E 260B | E 275A |
| 13       | E 275A | E 295B | E 285A | E 250A | E 285A | E 225E | E 265E | 240    | 230 | 205    | 200 | 210    | 190 | 200    | 220 | 225 | 210    | 200 | 200    | E 200A | E 280A | E 270A | E 275A | E 295A |
| 14       | E 305A | E 265A | E 320A | E 295E | E 305E | E 280E | E 260A | 245    | 205 | 210    | 215 | 225    | 210 | 200    | 195 | 215 | 220    | 210 | 205    | E 210A | E 220A | E 240A | E 275A | E 300B |
| 15       | E 280A | E 315A | E 290A | E 275A | E 280A | E 290A | E 270E | 270    | 235 | E 225G | 215 | 205    | 205 | 205    | 200 | 215 | 220    | 210 | E 205A | E 215A | E 230A | E 235A | E 250B | E 290B |
| 16       | E 290B | E 320B | E 320E | E 300E | E 275B | E 255A | E 240E | 250    | 220 | 215    | 195 | 185    | 210 | 210    | 215 | 220 | 220    | 210 | 195    | E 210B | E 215B | E 230E | E 235B | E 290B |
| 17       | E 280B | E 270B | E 260B | E 265A | E 245B | E 245E | E 245E | 250    | 220 | 220    | 210 | E 200A | 220 | 205    | 190 | 210 | 215    | 215 | 210    | E 205B | E 205B | E 205B | E 225B | E 300A |
| 18       | E 290A | E 275B | E 285A | E 265A | E 250A | E 240A | E 220A | 225    | 215 | 215    | 220 | 220    | 200 | 210    | 195 | 215 | 220    | 205 | 200    | E 210B | E 205B | E 220B | E 245B | E 280B |
| 19       | E 280B | E 275A | E 275A | E 250A | E 220A | E 230E | E 225E | 220    | 205 | 215    | 210 | 200    | 210 | 215    | 195 | 220 | 225    | 215 | 210    | E 215B | E 210B | E 235E | E 250B | E 250B |
| 20       | E 245B | E 245B | E 275A | E 300A | E 300A | E 240E | E 220E | 210    | 210 | 215    | 215 | 200    | 225 | 215    | 195 | 220 | 230    | 215 | 205    | E 215E | E 205B | E 200B | E 245B | E 275B |
| 21       | E 300B | E 280B | E 280E | E 255A | E 235E | E 225E | E 225E | 250    | 210 | 215    | 215 | 210    | 200 | 210    | 200 | 225 | 230    | 210 | 205    | E 215A | E 220A | E 220B | E 240A | E 235B |
| 22       | E 275A | E 270B | E 245E | E 255A | E 250A | E 230E | E 220A | 230    | 215 | 215    | 215 | 215    | 220 | 200    | 215 | 220 | 230    | 215 | 205    | E 215B | E 220B | E 225B | E 245B | E 265B |
| 23       | E 300B | E 265A | E 265A | E 260E | E 260E | E 270E | E 250E | 220    | 210 | 215    | 215 | 215    | 205 | 220    | 200 | 225 | 225    | 195 | 205    | 205    | E 210E | E 230B | E 230B | E 235B |
| 24       | E 265B | E 265E | E 285E | E 275E | E 260E | E 245E | 240    | 225    | 215 | 215    | 220 | 220    | 210 | 220    | 210 | 225 | 230    | 215 | 210    | E 210E | E 215B | E 210B | E 235B | E 260E |
| 25       | E 265B | E 250E | E 255E | E 255E | E 255E | E 250E | E 235E | 215    | 210 | 210    | 215 | 210    | 200 | 210    | 215 | 225 | 230    | 220 | 205    | E 205E | E 210E | E 215B | E 240B | E 230E |
| 26       | E 250B | E 280B | E 290E | E 290E | E 290E | E 275E | E 250E | 220    | 215 | 215    | 225 | 220    | 215 | 210    | 225 | 210 | 225    | 220 | 215    | E 215B | E 210B | E 225B | E 225B | E 230B |
| 27       | E 250B | E 285E | E 275E | E 260E | E 260E | E 265E | E 250E | 225    | 220 | 220    | 215 | 205    | 220 | 215    | 215 | 225 | 230    | 230 | 215    | E 230B | E 220B | E 230B | E 330B | E 360B |
| 28       | E 340B | E 280B | E 255E | E 285E | E 280B | E 280E | 275    | 260    | 215 | 220    | 215 | 215    | 210 | 220    | 210 | 220 | 225    | 220 | 210    | 215    | E 225B | E 225B | E 250B | E 300B |
| 29       |        |        |        |        |        |        |        |        |     |        |     |        |     |        |     |     |        |     |        |        |        |        |        |        |
| 30       |        |        |        |        |        |        |        |        |     |        |     |        |     |        |     |     |        |     |        |        |        |        |        |        |
| 31       |        |        |        |        |        |        |        |        |     |        |     |        |     |        |     |     |        |     |        |        |        |        |        |        |
| Дуоп.    | —      | —      | —      | —      | —      | —      | 30     | 10     | 20  | 20     | 15  | 10     | 10  | 25     | 10  | 15  | 05     | 10  | —      | —      | —      | —      | —      | —      |
| Мелана   | E 285B | E 275  | E 275A | E 270  | E 270E | E 250E | E 240E | U 235  | 215 | U 210  | 215 | 210    | 205 | 205    | 210 | 220 | 220    | 210 | 205    | E 210B | E 215B | E 225B | E 245B | E 280B |
| Учено    | 28     | 27     | 28     | 28     | 28     | 27     | 28     | 28     | 28  | 28     | 28  | 28     | 28  | 28     | 28  | 28  | 28     | 28  | 28     | 28     | 28     | 28     | 28     | 28     |
| Верх. КВ | E 270  | E 265  | E 260  | E 255  | E 260  | E 240  | E 230  | 220    | 210 | 210    | 210 | 200    | 200 | 200    | 195 | 215 | 215    | 210 | 200    | E 205  | E 210  | E 220  | E 240  | E 250  |
| Нижн. КВ | E 300  | E 295  | E 290  | E 300  | E 280  | E 270  | E 260  | 250    | 220 | 220    | 220 | 215    | 210 | 210    | 220 | 225 | 230    | 215 | 210    | E 215  | E 220  | E 235  | E 265  | E 300  |

Пробег частоты от 1.0 МГц до 18.0 МГц 20 Зв.

Станция автоматическая  
(ручная, автоматическая)

h'F2 км февраль 1969  
(характеристика) (единицы) (месяц) (год)

Станция Караганда  
Долгота 73°05'E широта 49°49'N

## ИОНОСФЕРНЫЕ ДАННЫЕ

поясное время 75°E

Кем составлена Анакиной

Кем подсчитана Какоша

| Дни     | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09    | 10    | 11    | 12    | 13    | 14    | 15    | 16  | 17 | 18 | 19 | 20 | 21 | 22 | 23 |  |  |
|---------|----|----|----|----|----|----|----|----|----|-------|-------|-------|-------|-------|-------|-------|-----|----|----|----|----|----|----|----|--|--|
| 1       |    |    |    |    |    |    |    |    |    | 225   | L     |       | U225L | 215   | 230   |       |     |    |    |    |    |    |    |    |  |  |
| 2       |    |    |    |    |    |    |    |    |    | 215   | 220   | 220   | 215   | L     | 235   |       |     |    |    |    |    |    |    |    |  |  |
| 3       |    |    |    |    |    |    |    |    |    |       |       | 235   | 225   | 220   | 225   |       |     |    |    |    |    |    |    |    |  |  |
| 4       |    |    |    |    |    |    |    |    |    |       | 220   | 225   | 215   | 220   |       |       |     |    |    |    |    |    |    |    |  |  |
| 5       |    |    |    |    |    |    |    |    |    |       |       | 230   | 210   | 230   | 215   |       |     |    |    |    |    |    |    |    |  |  |
| 6       |    |    |    |    |    |    |    |    |    | 205   | 220   | 225   | 230   | U220L |       |       |     |    |    |    |    |    |    |    |  |  |
| 7       |    |    |    |    |    |    |    |    |    |       | U215L | 210   | 225   | 210   | 235   | 225   | 220 |    |    |    |    |    |    |    |  |  |
| 8       |    |    |    |    |    |    |    |    |    |       | L     | 215   | 230   | 220   | 230   | L     | 215 |    |    |    |    |    |    |    |  |  |
| 9       |    |    |    |    |    |    |    |    |    | 215   | L     | 215   | 220   | 220   |       | 220   |     |    |    |    |    |    |    |    |  |  |
| 10      |    |    |    |    |    |    |    |    |    |       | 225   | 230   | 220   | U215L | L     | 230   |     |    |    |    |    |    |    |    |  |  |
| 11      |    |    |    |    |    |    |    |    |    | 225   | L     | 220   | 225   | 220   |       | 225   |     |    |    |    |    |    |    |    |  |  |
| 12      |    |    |    |    |    |    |    |    |    | 215   | 230   | L     | 230   | 235   | 215   | 225   | 215 |    |    |    |    |    |    |    |  |  |
| 13      |    |    |    |    |    |    |    |    |    | 215   | 210   | L     | 250   | 215   | 225   | 230   | 210 |    |    |    |    |    |    |    |  |  |
| 14      |    |    |    |    |    |    |    |    |    | 215   | 235   | 225   | 225   | L     | 240   | 220   |     |    |    |    |    |    |    |    |  |  |
| 15      |    |    |    |    |    |    |    |    |    | 220   | 240   | 235   | 230   | 215   | 230   | 225   |     |    |    |    |    |    |    |    |  |  |
| 16      |    |    |    |    |    |    |    |    |    | U225L | 220   | 235   | 230   | 235   | 225   | 225   |     |    |    |    |    |    |    |    |  |  |
| 17      |    |    |    |    |    |    |    |    |    | 220   | 280   | U245L | 240   | 230   | 225   | 220   |     |    |    |    |    |    |    |    |  |  |
| 18      |    |    |    |    |    |    |    |    |    | 220   | 235   | 235   | U230L | U240L | 225   |       |     |    |    |    |    |    |    |    |  |  |
| 19      |    |    |    |    |    |    |    |    |    |       | 220   | 230   | L     | 235   | 230   | 230   |     |    |    |    |    |    |    |    |  |  |
| 20      |    |    |    |    |    |    |    |    |    | L     | L     | 260   | 240   | U235L | 235   | 235   |     |    |    |    |    |    |    |    |  |  |
| 21      |    |    |    |    |    |    |    |    |    |       | L     | U235L | U240L | 240   | U230L | 240   |     |    |    |    |    |    |    |    |  |  |
| 22      |    |    |    |    |    |    |    |    |    | 225   | 220   |       | 235   | 260   |       | U240L |     |    |    |    |    |    |    |    |  |  |
| 23      |    |    |    |    |    |    |    |    |    | 215   | 230   | L     |       | 225   | 230   | 225   |     |    |    |    |    |    |    |    |  |  |
| 24      |    |    |    |    |    |    |    |    |    |       | 225   | 240   | L     | 235   | 230   |       |     |    |    |    |    |    |    |    |  |  |
| 25      |    |    |    |    |    |    |    |    |    |       | 225   |       |       | U235L | 230   |       |     |    |    |    |    |    |    |    |  |  |
| 26      |    |    |    |    |    |    |    |    |    |       |       | 220   |       | 240   | 225   | 220   |     |    |    |    |    |    |    |    |  |  |
| 27      |    |    |    |    |    |    |    |    |    | 225   | 215   | 255   | 230   | L     |       |       |     |    |    |    |    |    |    |    |  |  |
| 28      |    |    |    |    |    |    |    |    |    | U230L | 240   | 240   | U230L | 240   | 225   | 230   |     |    |    |    |    |    |    |    |  |  |
| 29      |    |    |    |    |    |    |    |    |    |       |       |       |       |       |       |       |     |    |    |    |    |    |    |    |  |  |
| 30      |    |    |    |    |    |    |    |    |    |       |       |       |       |       |       |       |     |    |    |    |    |    |    |    |  |  |
| 31      |    |    |    |    |    |    |    |    |    |       |       |       |       |       |       |       |     |    |    |    |    |    |    |    |  |  |
| Дуан    |    |    |    |    |    |    |    |    |    | 10    | 10    | 15    | 05    | 15    | 05    | 10    | 10  |    |    |    |    |    |    |    |  |  |
| Мелана  |    |    |    |    |    |    |    |    |    | 220   | 225   | 230   | 230   | 230   | 230   | 225   | 215 |    |    |    |    |    |    |    |  |  |
| Учтено  |    |    |    |    |    |    |    |    |    | 16    | 19    | 22    | 23    | 25    | 21    | 17    | 4   |    |    |    |    |    |    |    |  |  |
| Верх кв |    |    |    |    |    |    |    |    |    | 215   | 220   | 220   | 225   | 220   | 225   | 220   | 210 |    |    |    |    |    |    |    |  |  |
| Ниж кв  |    |    |    |    |    |    |    |    |    | 225   | 230   | 235   | 230   | 235   | 230   | 230   | 220 |    |    |    |    |    |    |    |  |  |

Пробег частоты от 1.0 МГц до 180 МГц 20 мин.

Станция автоматическая  
(ручная, автоматическая)

К'E км февраль 1969

(характеристика) (единица) (месяц) (год)

Станция Караганда

Долгота 73°05'F широта 49°49'N

## ИОНОСФЕРНЫЕ ДАННЫЕ

поясное время 75°E

Кем составлена А.накиной

Кем подсчитана Зейко

| Дни     | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07  | 08    | 09    | 10    | 11   | 12    | 13    | 14    | 15    | 16    | 17    | 18 | 19 | 20 | 21 | 22 | 23 |   |  |
|---------|----|----|----|----|----|----|----|-----|-------|-------|-------|------|-------|-------|-------|-------|-------|-------|----|----|----|----|----|----|---|--|
| 1       |    |    |    |    |    |    |    | E   | 105   | 103   | 100H  | 100H | 100H  | 100H  | 105H  | 105H  | I105B | 105H  | A  |    |    |    |    |    |   |  |
| 2       |    |    |    |    |    |    |    | E   | A     | 105H  | 105H  | 105  | 105   | 100H  | 105   | 105   | U110B | A     |    |    |    |    |    |    |   |  |
| 3       |    |    |    | E  | E  | E  | E  | E   | 100   | 100H  | 103   | 105  | 105   | 100   | 100   | 105H  | 100   | A     | B  |    |    |    |    |    |   |  |
| 4       |    |    |    |    |    |    | A  | E   | 100   | 100   | 100   | 100  | 100   | 100   | 100   | 100   | E120B | A     | A  |    |    |    |    |    |   |  |
| 5       |    |    |    |    |    |    |    | E   | 100   | 100   | U105A | 100  | U105A | U105A | U105A | 100   | 105   | A     | B  |    |    |    |    |    |   |  |
| 6       |    |    |    |    |    |    |    | E   | 100   | I100B | 100   | 100  | 100   | 105   | U115A | U115A | U110B | B     | B  |    |    |    |    |    |   |  |
| 7       |    |    |    |    |    |    |    | E   | A     | 105   | 105   | 100  | 65    | 100   | 100   | 105   | 100   | B     | A  |    |    |    |    |    |   |  |
| 8       |    |    |    |    |    |    |    | E   | 100   | 100   | 95    | 95   | 95    | A     | A     | A     | E120A | A     | A  |    |    |    |    |    |   |  |
| 9       |    |    |    |    |    |    |    | B   | A     | 100   | 100   | 100  | 100H  | 105   | 105   | 105   | 110   | A     | A  |    |    |    |    |    |   |  |
| 10      |    |    |    |    |    |    |    | B   | E120B | 100H  | 100   | 100  | 95    | 100   | 100   | 105   | 105   | A     | E  |    |    |    |    |    |   |  |
| 11      |    |    |    |    |    |    |    | E   | E120B | 105H  | 100   | 100  | 95    | 105H  | I100A | 105   | 110   | B     | B  | B  | B  | B  | B  | B  | B |  |
| 12      | B  | B  | E  | E  | E  | E  | E  | E   | B     | 105   | 100   | 100  | 100   | 105   | 100   | 100   | 105H  | B     | A  |    |    |    |    |    |   |  |
| 13      |    |    |    |    |    |    |    | E   | 95H   | 100H  | 105   | 95H  | 95    | 95    | 105   | E120A | E115A | 100   | A  |    |    |    |    |    |   |  |
| 14      |    |    |    |    |    |    |    | E   | B     | 100   | 100   | 100  | 95    | 100   | 100   | 95    | A     | A     | A  |    |    |    |    |    |   |  |
| 15      |    |    |    |    |    |    |    | B   | 105   | 105   | 100   | 100  | 95    | 105   | 95    | 105   | 105H  | E120A | A  |    |    |    |    |    |   |  |
| 16      |    |    |    |    |    | E  | E  | 110 | 100   | 100   | 100   | 100  | 100   | 105   | 100H  | 100H  | 105H  | E115B | B  |    |    |    |    |    |   |  |
| 17      |    |    |    |    |    |    |    | 105 | 105   | 100H  | 95    | 95   | I95B  | I100A | 105   | 105   | 105   | A     | A  |    |    |    |    |    |   |  |
| 18      |    |    |    |    |    |    |    | A   | 105   | 100   | 100   | 100  | 100   | 105   | 100   | 105   | 105   | A     | B  |    |    |    |    |    |   |  |
| 19      |    |    |    |    |    |    |    | E   | 105   | 100   | 95    | 100H | 100   | 100   | U110A | U110A | 95    | 100   | B  |    |    |    |    |    |   |  |
| 20      |    |    |    |    |    | E  |    | E   | 105   | 100   | 100   | 95   | 100   | 95H   | 106   | 100   | 105   | U110A | A  | E  |    |    |    |    |   |  |
| 21      |    |    |    |    |    |    |    | 100 | 100   | 100H  | 100   | 100  | 100   | 100   | 105   | 105   | 105   | E120A | A  |    |    |    |    |    |   |  |
| 22      |    |    |    |    | A  | E  | A  | 105 | I100A | 100   | 95    | 90   | U105A | 100   | 100   | 100   | U105A | E115A | A  |    |    |    |    |    |   |  |
| 23      |    |    |    |    |    |    | E  | 100 | 100H  | 100   | 100   | 100  | 100   | 100   | 100   | 100   | 100   | 105H  | E  | E  | E  | E  | B  |    |   |  |
| 24      |    |    |    |    |    |    | E  | 105 | 100   | 100   | 100   | 90   | 95    | 100   | 100   | 100H  | 100   | 105   | E  | B  | B  | B  |    |    |   |  |
| 25      |    |    |    | E  | E  | E  | E  | 110 | 100H  | 95    | 90    | 90   | 95    | 95    | 90    | 105   | 100   | 110H  | B  |    |    |    |    |    |   |  |
| 26      |    |    |    |    |    |    |    | 105 | 100H  | 95    | 100   | 100  | 95    | 95    | 100   | 100   | 100   | E120A | B  | B  |    |    |    |    |   |  |
| 27      |    |    |    |    |    |    | E  | E   | 105   | 100   | 100   | 100  | 100   | 100   | 100   | 100H  | 100   | 105   | B  |    |    |    | B  |    |   |  |
| 28      |    | B  | E  | E  |    | E  | E  | 100 | 100   | 95    | 95    | 95   | 95    | 90    | 90    | 90    | 90    | 100   | B  | B  | B  | B  | B  |    |   |  |
| 29      |    |    |    |    |    |    |    |     |       |       |       |      |       |       |       |       |       |       |    |    |    |    |    |    |   |  |
| 30      |    |    |    |    |    |    |    |     |       |       |       |      |       |       |       |       |       |       |    |    |    |    |    |    |   |  |
| 31      |    |    |    |    |    |    |    |     |       |       |       |      |       |       |       |       |       |       |    |    |    |    |    |    |   |  |
| Медiana |    |    | E  | E  | E  | E  | E  | E   | 100   | 100   | 100   | 100  | 100   | 100   | 100   | 105   | 105   | 110   | E  | E  | E  |    |    |    |   |  |
| Учтено  |    |    | 2  | 4  | 3  | 7  | 8  | 24  | 23    | 28    | 28    | 28   | 28    | 27    | 27    | 27    | 27    | 14    | 3  | 3  | 1  |    |    |    |   |  |

Пробег частоты от 1.0 МГц до 18.0 МГц 20 МГц

Станция автоматическая  
(ручная, автоматическая)

## МЕЖДУНАРОДНЫЙ ГЕОФИЗИЧЕСКИЙ ГОД

h'Es км февраль 1969  
(характеристика) (единица) (месяц) (год)АН Каз ССР  
(институт)

Станция Караганда

## ИОНОСФЕРНЫЕ ДАННЫЕ

Кем составлена Рева

Долгота 73°05'E широта 49°49'N

Поясное время 75°E

Кем подсчитана Зейко

| Дни     | 00  | 01   | 02  | 03  | 04  | 05  | 06  | 07    | 08    | 09    | 10    | 11  | 12    | 13    | 14    | 15    | 16    | 17    | 18  | 19  | 20  | 21  | 22  | 23  |  |  |
|---------|-----|------|-----|-----|-----|-----|-----|-------|-------|-------|-------|-----|-------|-------|-------|-------|-------|-------|-----|-----|-----|-----|-----|-----|--|--|
| 1       | B   | B    | 85  | 85  | 85  | E   | E   | G     | E240G | 80    | 75    | 75  | 75    | 75    | 75    | 80    | 85    | 90    | 100 | B   | B   | B   | E   | E   |  |  |
| 2       | E   | E    | 90H | 95  | 95H | C   | E   | G     | 90H   | 105   | 85    | 80Y | 80H   | 80    | 75Y   | 80H   | 80    | 90    | 90  | 95  | 90  | B   | B   | B   |  |  |
| 3       | 110 | C    | B   | G   | G   | G   | 100 | 105   | 100   | G     | 80    | 80  | 80    | G     | G     | G     | G     | 100   | G   | B   | B   | E   | E   | B   |  |  |
| 4       | 100 | 95   | 95  | B   | E   | B   | 100 | 100   | 100   | G     | G     | G   | 100   | G     | G     | 95    | 95    | 90    | 90  | B   | B   | B   | B   | B   |  |  |
| 5       | B   | B    | B   | E   | E   | E   | E   | G     | 105   | 105   | E170G | 100 | 100   | 95    | 95    | G     | G     | 90    | G   | B   | 100 | 100 | 95  | 95  |  |  |
| 6       | B   | B    | E   | E   | B   | E   | 95  | G     | 105   | 100   | 100   | 100 | E150G | E155G | 75    | 75    | 120   | G     | G   | B   | B   | 100 | 100 | 100 |  |  |
| 7       | B   | 95   | 95  | B   | 90  | E   | E   | G     | 95    | 100   | 105   | 100 | 100   | 100   | 100   | G     | 95    | 95    | 100 | B   | 100 | 95  | 100 | 100 |  |  |
| 8       | 100 | 95H  | 95H | 90  | E   | E   | E   | G     | 100   | 100   | 80    | 80  | 105Y  | 80    | E140G | 80H   | 75H   | 90H   | 90  | E   | B   | B   | B   | 95  |  |  |
| 9       | 95  | 95   | 90  | 90  | 105 | 90  | 95  | 90    | 100   | 75Y   | 75Y   | 75Y | 75H   | 75Y   | 75Y   | 75Y   | 75    | 75H   | 105 | 100 | E   | B   | B   | B   |  |  |
| 10      | E   | B    | 90  | 85  | 90  | E   | E   | 95    | 85    | 90    | 80    | 80  | 80    | 80    | 80    | 80    | 80    | 90    | G   | B   | B   | B   | E   | B   |  |  |
| 11      | B   | E    | E   | E   | E   | E   | E   | G     | 100   | 75Y   | 75Y   | 75Y | 75Y   | 75Y   | 105   | G     | 90Y   | G     | G   | G   | G   | G   | G   | G   |  |  |
| 12      | G   | G    | 120 | 115 | 105 | 105 | 105 | 100   | 100   | 105   | 80Y   | 80Y | 75Y   | 95    | 75Y   | 90    | 120   | G     | 100 | B   | B   | E   | B   | 100 |  |  |
| 13      | 100 | B    | 95  | 90  | 90  | E   | E   | G     | G     | 140   | 105   | 75  | 105   | E170G | 90    | E175G | 95    | 90    | 100 | 100 | 100 | 95  | 100 | 100 |  |  |
| 14      | 100 | 100H | 95  | 95H | E   | 95H | 95  | 100   | 100   | 105Y  | 110   | 100 | 95    | 100   | 95H   | E190G | 90    | 90    | 90  | 90  | 90  | 95  | 95  | B   |  |  |
| 15      | 95  | 95   | 90  | 90  | 90  | 90  | E   | G     | 105   | 100   | 100   | 100 | 75Y   | 70H   | 70H   | 75    | G     | 90    | 90  | 90  | 90  | 90  | B   | B   |  |  |
| 16      | B   | B    | 85  | 90  | B   | 100 | 100 | G     | 105   | 100   | 100   | 100 | 105   | 95    | 95H   | 95H   | 75    | 80    | G   | B   | B   | E   | B   | B   |  |  |
| 17      | B   | B    | 95  | 95  | B   | 90  | E   | G     | 100   | 105   | 95    | 95  | 95    | 95    | 90    | 85    | 80    | 95    | 95  | B   | B   | B   | B   | 100 |  |  |
| 18      | 95  | B    | 90  | 95  | 90  | 90  | 95  | 95    | G     | 80    | 80    | 75H | 80H   | 80H   | 80    | G     | 95    | 95    | G   | B   | 90  | B   | B   | B   |  |  |
| 19      | B   | 95   | 100 | 95  | 90  | E   | E   | 120   | 105   | 100   | 95    | 100 | 80    | 80H   | 90    | 90    | 95    | 100   | G   | B   | B   | E   | B   | B   |  |  |
| 20      | B   | B    | 95  | 100 | 100 | G   | E   | G     | 105   | 110   | 100   | 100 | 85    | 80    | E165G | 90    | 90    | 95    | 95  | G   | B   | B   | B   | B   |  |  |
| 21      | B   | B    | E   | 95  | E   | E   | E   | G     | 105   | 100   | 100   | 95  | 85    | 90    | 85    | 85    | E145G | 90    | 90  | 90  | 100 | B   | 100 | B   |  |  |
| 22      | 100 | B    | 95  | 90  | 95  | 95  | 90  | G     | 105   | 95    | 75    | 90  | 80H   | 95    | 95    | 90    | 90    | 90    | 90  | B   | B   | B   | B   | B   |  |  |
| 23      | B   | 100Y | 95Y | 95Y | E   | 95Y | G   | 115   | G     | 90    | 95    | 100 | 80    | 95    | 95    | 95    | 95    | 90    | G   | G   | G   | G   | B   | B   |  |  |
| 24      | B   | E    | E   | E   | E   | E   | G   | E130G | 100   | 105   | 100   | 85  | 90    | G     | 95    | 90    | 90    | G     | G   | G   | G   | B   | E   | E   |  |  |
| 25      | B   | E    | E   | G   | G   | G   | G   | G     | G     | 90    | 85    | 110 | 80    | 85    | 105   | G     | 75    | 90    | G   | E   | E   | B   | B   | E   |  |  |
| 26      | B   | B    | E   | E   | E   | E   | E   | G     | G     | E140G | 100   | 100 | 95    | 105   | E200G | 145   | 90Y   | E130G | G   | G   | B   | B   | B   | B   |  |  |
| 27      | B   | E    | E   | E   | 85  | E   | G   | 105   | E140G | G     | G     | 95  | 95    | 95    | 95    | 95    | G     | 95    | G   | B   | B   | G   | B   | B   |  |  |
| 28      | B   | G    | G   | 90  | B   | G   | G   | 95    | G     | 120   | 100   | 105 | 105   | 85    | 80    | 85    | 85    | 90    | G   | G   | G   | G   | G   | B   |  |  |
| 29      |     |      |     |     |     |     |     |       |       |       |       |     |       |       |       |       |       |       |     |     |     |     |     |     |  |  |
| 30      |     |      |     |     |     |     |     |       |       |       |       |     |       |       |       |       |       |       |     |     |     |     |     |     |  |  |
| 31      |     |      |     |     |     |     |     |       |       |       |       |     |       |       |       |       |       |       |     |     |     |     |     |     |  |  |
| Медиана | 100 | 95   | 95  | 90  | 90  | 95  | 95  | 100   | 100   | 100   | 95    | 95  | U80   | 90    | 90    | 90    | 90    | 90    | 90  | 90  | 95  | 95  | 100 | 100 |  |  |
| Учтенo  | 9   | 8    | 18  | 18  | 13  | 9   | 9   | 12    | 22    | 25    | 26    | 27  | 28    | 25    | 26    | 22    | 24    | 24    | 14  | 6   | 8   | 6   | 6   | 7   |  |  |

Пробег частоты от 1.0 Мгц до 18.0 Мгц 20 сек.

Станция автоматическая  
(ручная, автоматическая)



hpF2 км февраль 1969

(характеристика) (единицы) (месяц) (год)

Станция Караганда

Долгота 73°05'E широта 49°49'N

## ИОНОСФЕРНЫЕ ДАННЫЕ

поясное время 75°E

АН КазССР

(институт)

Кем составлена Рева

Кем подсчитана Бондаренко

| дни    | 00   | 01     | 02     | 03     | 04     | 05   | 06   | 07     | 08     | 09     | 10  | 11     | 12  | 13  | 14  | 15  | 16     | 17  | 18     | 19     | 20     | 21     | 22   | 23     |  |  |
|--------|------|--------|--------|--------|--------|------|------|--------|--------|--------|-----|--------|-----|-----|-----|-----|--------|-----|--------|--------|--------|--------|------|--------|--|--|
| 1      | 380N | 355N   | 355F   | 385F   | 380F   | 350  | 365F | 350    | 270    | 255    | 250 | 265    | 275 | 260 | 275 | 250 | 265    | 260 | 260    | 235    | 255    | 300    | 320  | 350    |  |  |
| 2      | 385  | 395    | 400    | 355    | 350    | C    | 335  | 340    | 255    | 240    | S   | 260    | 265 | 270 | 270 | 255 | 260    | 255 | Y 275S | 255    | 285    | 315    | 375  | 350    |  |  |
| 3      | 310  | C      | 480    | 425    | 340    | 450  | 410F | 370    | 325    | 275    | 290 | 280    | 275 | 295 | 275 | 265 | 295    | 285 | S      | 280    | 330    | 280    | 320  | 330F   |  |  |
| 4      | 340  | 390    | 350    | 445    | 380    | 355  | 305  | 305    | 255    | 240    | 275 | 255    | 275 | 275 | 270 | 255 | 260    | 255 | 265    | 275    | 270    | 305    | 325  | 380    |  |  |
| 5      | 360  | 350    | 355    | 355    | 380    | 350  | 355  | 335    | 260    | 270    | C   | 270    | 255 | 280 | 285 | 280 | 265    | 270 | U 265S | 255    | 280    | 280    | 360  | 400    |  |  |
| 6      | 355F | 340F   | 355F   | 330F   | 350F   | 325F | 305  | 320    | 245    | 235    | 255 | 280    | 275 | 285 | 280 | 280 | U 265S | 275 | S      | 265    | 275    | 275    | 285F | 335F   |  |  |
| 7      | 335F | 335N   | 345F   | 370F   | 335F   | 290F | 290F | 255F   | 255    | 255    | 275 | Y 305S | 295 | 280 | 285 | 285 | 285    | 285 | 280    | 260    | 290    | 305    | 320  | 355    |  |  |
| 8      | A    | 370N   | 390N   | 375F   | 370    | 330F | 280  | 330    | 255    | 260    | 275 | 280    | 290 | 300 | 275 | 280 | 280    | 270 | 290    | 275    | 280    | 305F   | 315F | F      |  |  |
| 9      | 390N | 355N   | 330F   | 325F   | 325F   | 315  | 295  | 285    | 240    | 260    | C   | 275    | 270 | 290 | 280 | 285 | 280    | 275 | 275    | U 270S | 275    | 270    | 315  | 335    |  |  |
| 10     | 340  | 335    | 320    | 360    | 355    | 320  | 290  | 295    | Y 260S | Y 270S | 270 | 265    | 265 | 290 | 285 | 285 | 275    | 270 | U 275S | U 255S | 290    | 280    | 330  | 375    |  |  |
| 11     | 355  | 340    | 360    | 340    | 400N   | 410  | 400  | 310    | S      | 270    | 280 | 300    | 275 | 290 | 310 | 290 | 300    | 280 | Y 295S | Y 340S | 355    | U 350S | 455  | 460    |  |  |
| 12     | 430  | U 470B | 405    | 415    | 385    | 355  | 320  | 315    | 270    | Y 255S | 270 | 300    | 300 | 285 | 290 | 280 | 275    | 270 | 280    | 280    | 290    | 315    | 340  | 355    |  |  |
| 13     | 360  | 400    | 375    | 325    | 330    | 320  | 330F | 295F   | 255    | 265    | 275 | 295    | 285 | 280 | 280 | 280 | 285    | 265 | 275    | 250    | 295    | 290    | 350F | 345F   |  |  |
| 14     | 375F | 335F   | 350F   | U 350F | 380F   | 340F | F    | 290F   | U 240S | 260    | 265 | 260    | 270 | 285 | 285 | 275 | 255    | 305 | 270    | 275    | 265    | 285    | 325  | 380    |  |  |
| 15     | 345  | 360F   | 340F   | 335F   | 335F   | 365F | 360F | 325    | U 275S | 255    | 265 | 275    | 285 | 260 | 280 | 275 | 270    | 270 | Y 270S | 280    | 285    | 300    | 330  | 390    |  |  |
| 16     | 365  | 410F   | 435F   | 415F   | 355F   | 345F | 300F | F      | 275    | 275    | 285 | 300    | 290 | 275 | 275 | 280 | 275    | 265 | U 290S | 285    | 285    | 315    | 335  | 385    |  |  |
| 17     | 360  | 355    | 335    | 345F   | 335    | 330  | 320  | 305    | U 255S | 265    | 275 | 290    | 275 | 280 | 285 | 280 | 275    | 275 | 275    | 280    | 275    | 280    | 290  | 355    |  |  |
| 18     | 360  | 365    | 355    | 320    | 290    | 305  | 280  | 275    | 260    | 260    | 275 | 285    | 295 | 300 | 280 | 295 | 275    | 270 | 270    | 275    | 260    | 270    | 320  | 380    |  |  |
| 19     | 360  | 345    | 360F   | 330F   | 300F   | 300F | F    | 275    | 245    | 255    | 275 | 280    | 300 | 290 | 290 | 305 | 285    | 275 | 285    | U 290S | 285    | 305    | 330  | 330    |  |  |
| 20     | 335  | 325    | 355    | 385    | 365    | 300  | 275  | 260    | U 250S | 270    | 285 | 310    | 310 | 305 | 305 | 295 | 290    | 280 | 280    | 290    | S      | 265    | 315  | 390    |  |  |
| 21     | 385  | 380    | 375    | 340    | 300    | 305F | 305  | 300    | 280    | 265    | 285 | 290    | 300 | 305 | 315 | 310 | 290    | 290 | 285    | 295    | 290    | 290    | 315  | 320    |  |  |
| 22     | 350  | 340    | 340    | 330    | 335    | 330  | 300  | 290    | 255    | 270    | 270 | 305    | 300 | 295 | 320 | 305 | 290    | 285 | 275    | 295    | 275    | 320    | 320  | 355    |  |  |
| 23     | 380  | 375    | 380    | 370    | 360    | 360  | 330  | 265    | 255    | 265    | 275 | 295    | 300 | 310 | 325 | 310 | 305    | 280 | 305    | U 285S | 290    | 305    | 305  | 355    |  |  |
| 24     | 370  | 360F   | 375F   | 380F   | U 370F | 355N | 330  | 285    | 275    | C      | 305 | 295    | 310 | 310 | 320 | 325 | 310    | 300 | 305    | 300    | 285    | 285    | 340  | 370    |  |  |
| 25     | 350  | 355    | 365    | 360    | 350    | 355  | 310  | 275    | 260    | 270    | 280 | 320    | 315 | 310 | 300 | 305 | 270    | 290 | 290    | 305    | S      | 310    | S    | 305F   |  |  |
| 26     | 355F | 360F   | U 375F | 380F   | F      | F    | 320  | Y 300S | 265    | 280    | 290 | 300    | 315 | 320 | 320 | 325 | 315    | 310 | 300    | 300    | U 310S | U 310S | 300  | U 310S |  |  |
| 27     | 340F | F      | 380F   | 360F   | 355F   | F    | F    | Y 305S | 270    | 285    | 280 | 295    | 305 | 325 | 315 | 315 | 310    | 285 | 305    | 310    | U 295S | S      | 445  | 490    |  |  |
| 28     | 425  | 380    | 400    | 410    | 405    | 380  | 375  | 310    | U 280S | 280    | C   | 305    | 310 | 305 | 310 | 305 | 310    | 275 | 300    | 300    | S      | 305    | 350  | 425    |  |  |
| 29     |      |        |        |        |        |      |      |        |        |        |     |        |     |     |     |     |        |     |        |        |        |        |      |        |  |  |
| 30     |      |        |        |        |        |      |      |        |        |        |     |        |     |     |     |     |        |     |        |        |        |        |      |        |  |  |
| 31     |      |        |        |        |        |      |      |        |        |        |     |        |     |     |     |     |        |     |        |        |        |        |      |        |  |  |
| Мелана | 360  | 360    | 360    | 360    | 355    | 340  | 320  | 300    | 260    | 265    | 275 | 290    | 290 | 290 | 285 | 285 | 280    | 275 | 280    | 280    | 285    | 300    | 325  | 355    |  |  |
| Учтено | 27   | 26     | 28     | 28     | 27     | 25   | 25   | 27     | 27     | 27     | 24  | 28     | 28  | 28  | 28  | 28  | 28     | 28  | 26     | 28     | 25     | 27     | 27   | 27     |  |  |

Пробег частоты от 1.0 МГц до 18.0 МГц 20 сек.

Станция автоматическая

(ручная, автоматическая)

## МЕЖДУНАРОДНЫЙ ГЕОФИЗИЧЕСКИЙ ГОД

Типы Es февраль 1969  
(характеристики) (сигниры) (месяц) (год)

АН КазССР  
(институт)

Станция Караганда

## ИОНОСФЕРНЫЕ ДАННЫЕ

Кем составлена Кокоша

Долгота 73°05'E широта 49°49'N

Полное время 75°E

Кем подсчитана

| Дни     | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07   | 08   | 09     | 10   | 11   | 12   | 13   | 14   | 15   | 16   | 17   | 18   | 19 | 20 | 21 | 22 | 23 |  |  |
|---------|----|----|----|----|----|----|----|------|------|--------|------|------|------|------|------|------|------|------|------|----|----|----|----|----|--|--|
| 1       |    |    | f1 | f1 | f1 |    |    |      | h1l1 | l1     | l1   | l1c1 | l1   | l1   | l1   | l1   | l1   | l1   | l1   |    |    |    |    |    |  |  |
| 2       |    |    | f1 | f1 | f1 |    |    |      | l1   | c1l1   | l1   | l1   | l1   | l1   | l1   | l1   | l1   | c2l1 | f1   | f2 | f1 |    |    |    |  |  |
| 3       | f1 |    |    |    |    |    | c1 | l1   | l1   |        | l1   | l1   | l1   |      |      |      |      | l1   |      |    |    |    |    |    |  |  |
| 4       | f1 | f1 | f1 |    |    |    | l1 | c1   | c2   |        |      |      | l1   |      |      | l1   | l1   | l2   | l1   |    |    |    |    |    |  |  |
| 5       |    |    |    |    |    |    |    |      | c1l1 | c1     | h1l1 | l2   | l1   | l2   | l1   |      |      | l1   | l1   |    | f1 | f1 | f1 | f1 |  |  |
| 6       |    |    |    |    |    |    | f1 |      | c2l1 | c1     | c1l1 | c1l1 | c1l1 | c1l1 | l1   | l1   | c1   |      |      |    |    | f1 | f2 | f1 |  |  |
| 7       |    | f2 | f1 |    | f1 |    |    |      | l1   | c1l1   | l1c1 | c2l1 | c2l1 | c2l1 | c1l1 |      | c3l1 | c2l1 | l1   |    | f3 | f1 | f2 | f4 |  |  |
| 8       | f3 | f2 | f4 | f3 |    |    |    |      | c2   | c3l1   | l1   | l1   | c1l1 | l1c2 | c1l1 | l2   | l2   | l3   | l1   |    |    |    |    | f1 |  |  |
| 9       | f1 | f1 | f2 | f1 | f1 | f2 | f2 | l1   | l1c2 | l1     | l2   | l2   | l1   | l1   | l1   | l1   | l1   | l1   | c1l1 | f1 |    |    |    |    |  |  |
| 10      |    |    | f1 | f1 | f1 |    |    | l1   | l1   | l1     | l1   | l1   | l1   | l1   | l1   | l1   | l1   | l1   |      |    |    |    |    |    |  |  |
| 11      |    |    |    |    |    |    |    |      | l1   | l1     | l1   | l1   | l1   | l1   | l1   |      | l1   |      |      |    |    |    |    |    |  |  |
| 12      |    |    | c6 | c4 | c2 | c2 | c2 | c2   | c3l1 | c3l1   | l1c1 | l1   | l1   | c1l1 | l1   | l1   | h1l1 |      | l1   |    |    |    |    | f1 |  |  |
| 13      | f2 |    | f1 | f3 | f2 |    |    |      |      | h2c2l1 | c2   | l1   | c1   | h1l1 | c1l1 | h1l2 | l2   | l1   | l1   | f2 | f2 | f3 | f1 | f1 |  |  |
| 14      | f1 | f1 | f6 | f2 |    | f1 | f1 | c2   | c2   | c1     | c2l1 | c1l1 | c2l1 | c2l1 | l1   | h1l1 | l3   | l3   | l2   | f1 | f1 | f2 | f1 |    |  |  |
| 15      | f1 | f1 | f2 | f2 | f2 | f3 |    |      | c3   | c2     | c1   | l1c1 | l1   | l1   | l1   | l1   |      | l1   | l2   | f3 | f1 | f1 |    |    |  |  |
| 16      |    |    | f1 | f1 |    | c1 | c1 |      | c3l1 | c2     | c2   | c1l1 | c1l1 | l1c1 | l1   | l1   | l1   | l1   |      |    |    |    |    |    |  |  |
| 17      |    |    | f1 | f1 |    | f1 |    |      | c3   | c3     | c2l1 | c3   | c1   | l1c1 | l1   | l1   | l1   | l1   | l1   |    |    |    |    | f1 |  |  |
| 18      | f1 |    | f1 | f2 | f2 | f2 | f1 | l1   |      | l1c2   | l1   | l1   | l1   | l1   | l1   |      | l1   | l1   |      |    | f1 |    |    |    |  |  |
| 19      |    | f1 | f1 | f1 | f1 |    |    | c1l1 | l2   | c1     | c2   | c2   | l1c1 | l1   | l1   | l1   | l3   | l2   |      |    |    |    |    |    |  |  |
| 20      |    |    | f1 | f1 | f1 |    |    |      | c1   | c1     | c3   | c2   | l1   | l1   | h1l1 | l1   | l1   | l1   | l1   |    |    |    |    |    |  |  |
| 21      |    |    |    | f1 |    |    |    |      | c1   | c2     | c3l1 | c2l1 | l1   | l2   | l2   | l1   | c1l1 | l1   | l1   | f1 | f1 |    | f1 |    |  |  |
| 22      | f1 |    | f1 | f2 | l2 | l1 | l1 |      | l2   | l1     | l1   | l1   | l1   | l1   | l2   | l1   | l3   | l3   | l1   |    |    |    |    |    |  |  |
| 23      |    | f1 | f1 | f1 |    | f1 |    | c1   |      | l1     | l1   | l1   | l1   | l2   | l1   | l1   | l1   | l1   |      |    |    |    |    |    |  |  |
| 24      |    |    |    |    |    |    |    | c1   | c2   | c1     | c1   | l1   | l1   |      | l1   | l1   | l1   |      |      |    |    |    |    |    |  |  |
| 25      |    |    |    |    |    |    |    |      |      | l1     | l1   | c1l1 | l1   | l1   | c1l1 |      | l1   | l1   |      |    |    |    |    |    |  |  |
| 26      |    |    |    |    |    |    |    |      |      | c1     | c1   | c1   | l1   | l1   | h1l1 | h1l2 | l1   | c1l1 |      |    |    |    |    |    |  |  |
| 27      |    |    |    |    | f1 |    |    | c1   | c2   |        |      | l1   | l1   | l1   | l1   | l1   |      | l1   |      |    |    |    |    |    |  |  |
| 28      |    |    |    | l1 |    |    |    | c1   |      | c1     | c2   | c1l1 | c1l1 | l1   | l1   | l1   | l1   | l1   |      |    |    |    |    |    |  |  |
| 29      |    |    |    |    |    |    |    |      |      |        |      |      |      |      |      |      |      |      |      |    |    |    |    |    |  |  |
| 30      |    |    |    |    |    |    |    |      |      |        |      |      |      |      |      |      |      |      |      |    |    |    |    |    |  |  |
| 31      |    |    |    |    |    |    |    |      |      |        |      |      |      |      |      |      |      |      |      |    |    |    |    |    |  |  |
| Медиана |    |    |    |    |    |    |    |      |      |        |      |      |      |      |      |      |      |      |      |    |    |    |    |    |  |  |
| Учтено  |    |    |    |    |    |    |    |      |      |        |      |      |      |      |      |      |      |      |      |    |    |    |    |    |  |  |

Пробег частоты от 1.0 МГц до 18.0 МГц 20 сек

Станция автоматизированная  
(ручная, автоматическая)