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| RUS - Russian Federation | | | |
| **Centralizing office** | **Postal address** | **Telephone, Telefax, Electronic-mail** | **Remarks** |
|  |  |  |  |
| Federal State Unitary Enterprise General Radio Frequency Centre | Building 15 7, Derbenevskaya Embankment 117997 Moscow | TF : +7 495 7481448 FAX : +7 495 7480680 EMAIL : int@grfc.ru |  |
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Stations in the Space radiocommunication services

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| **Name of the station** | **Postal address** | **Telephone, Telefax, Electronic-mail** | |
|  |  |  |  |
| **Belgorod (IMS)** | 58, Oktyabrskaya str. 308001 Belgorod Russian Federation | TF : +7 472 2337740 FAX : +7 472 2337780 EMAIL : belgorod@rfc-cfa.ru | |

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| **1. Geographical coordinates** |
| |  | | --- | | 50°39'12" N | | 036°36'16" E | |
| **2. Hours of service** |
| |  | | --- | | 1300-2200 h from Monday to Thursday | | 1300-2045 h on Friday | |
| **3. Information on antennas in use** |
| |  | | --- | | 12 m Cassegrain antenna. | |
| **4. Range of azimuth and elevation angles** |
| |  | | --- | | 107° - 253°, 0.5° - 80° | |
| **5. Maximum attainable accuracy in determining orbital positions of space stations** |
| |  | | --- | | 0.1° | |
| **6. Information on system polarization** |
| |  | | --- | | For the 3400 - 4200 MHz, 10.7 - 12.75 GHz and 17.7 - 21.7 GHz frequency bands: | | − circular polarization (RHC and LHC), and | | − linear polarization (horizontal and vertical). | |
| **7. System noise temperature** |
| |  | | --- | | (a) C band: 3400 MHz - 4200 MHz: 66 K | | (b) Ku band: 10.7 GHz - 12.75 GHz: 170 K | | (c) Ka band: 17.7 GHz - 21.7 GHz: 342 K | |
| **8. Ranges of frequencies with the maximum attainable accuracy of frequency measurement for each frequency range** |
| |  | | --- | | (a) C band: 3400 MHz - 4200 MHz: 2 × 10-8 | | (b) Ku band: 10.7 GHz - 12.75 GHz: 2 × 10-8 | | (c) Ka band: 17.7 GHz - 21.7 GHz: 2 × 10-8 | |
| **9. Ranges of frequencies in which field strength or power flux-density measurements can be performed** |
| |  | | --- | | (a) C band: 3400 MHz - 4200 MHz | | (b) Ku band: 10.7 GHz - 12.75 GHz | | (c) Ka band: 17.7 GHz - 21.7 GHz | |
| **10. Minimum value of measurable field strength or power flux-density with indication of attainable accuracy of measurement** |
| |  | | --- | | (a) C band: 3400 MHz - 4200 MHz: -140 dBW/m² ± 3 dB | | (b) Ku band: 10.7 GHz - 12.75 GHz: -140 dBW/m² ± 3 dB | | (c) Ka band: 17.7 GHz - 21.7 GHz: -140 dBW/m² ± 3 dB | | Bandwidth 4 kHz. | |
| **11. Information available for bandwidth measurements** |
| |  | | --- | | Automatic bandwidth measurement is carried out in accordance with the ITU-R Recommendations and the Handbook on Spectrum Monitoring. | |
| **12. Information available for spectrum occupancy measurements** |
| |  | | --- | | The monitoring of spectrum occupancy is possible in the C band (3400 - 4200 MHz), Ku band (10.7 - 12.75 GHz) and Ka Band (17.7 - 21.7 GHz). The results are saved in database and may be tabulated or presented in spectrograms or in frequency-time diagrams. | |
| **13. Information available for orbit occupancy measurements** |
| |  | | --- | | The results of the monitoring of the orbit occupancy are saved in database and may be tabulated or presented in spectrograms. | |

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| **Name of the station** | **Postal address** | **Telephone, Telefax, Electronic-mail** | |
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| **Khabarovsk (IMS)** | 17, Irtyshskiy proezd 680006 Khabarovsk Russian Federation | TF : +7 421 2744000 FAX : +7 421 2541212 EMAIL : info@rfc-fefa.ru | |

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| **1. Geographical coordinates** |
| |  | | --- | | 48°28'43" N | | 135°16'39" E | |
| **2. Hours of service** |
| |  | | --- | | H24 | |
| **3. Information on antennas in use** |
| |  | | --- | | 7 m Cassegrain antenna in the 3400 - 4200 MHz and 10.7 - 12.75 GHz frequency bands. | |
| **4. Range of azimuth and elevation angles** |
| |  | | --- | | 90° - 270°, 0.5° - 80° | |
| **5. Maximum attainable accuracy in determining orbital positions of space stations** |
| |  | | --- | | 0.02° | |
| **6. Information on system polarization** |
| |  | | --- | | For the 3400 - 4200 MHz and 10.7 - 12.75 GHz frequency bands: | | − circular polarization (RHC and LHC), and | | − linear polarization (horizontal and vertical). | |
| **7. System noise temperature** |
| |  | | --- | | (a) C band: 3400 MHz - 4200 MHz: 70 K | | (b) Ku band: 10.7 GHz - 12.75 GHz: 120 K | |
| **8. Ranges of frequencies with the maximum attainable accuracy of frequency measurement for each frequency range** |
| |  | | --- | | (a) C band: 3400 MHz - 4200 MHz: 0.5 × 10-7 | | (b) Ku band: 10.7 GHz - 12.75 GHz: 0.5 × 10-7 | |
| **9. Ranges of frequencies in which field strength or power flux-density measurements can be performed** |
| |  | | --- | | (a) C band: 3400 MHz - 4200 MHz | | (b) Ku band: 10.7 GHz - 12.75 GHz | |
| **10. Minimum value of measurable field strength or power flux-density with indication of attainable accuracy of measurement** |
| |  | | --- | | (a) C band: 3400 MHz - 4200 MHz: -210 dBW/m² ± 1 dB | | (b) Ku band: 10.7 GHz - 12.75 GHz: -210 dBW/m² ± 1 dB | | Bandwidth 4 kHz, S/N ratio 3 dB. | |
| **11. Information available for bandwidth measurements** |
| |  | | --- | | Automatic bandwidth measurement is carried out in accordance with the ITU-R Recommendations and the Handbook on Spectrum Monitoring. | |
| **12. Information available for spectrum occupancy measurements** |
| |  | | --- | | The monitoring of spectrum occupancy is possible in the C band (3400 - 4200 MHz) and Ku band (10.7 - 12.75 GHz). | |
| **13. Information available for orbit occupancy measurements** |
| |  | | --- | | Search and detection of the emissions of the space station stayed in GSO in the sector from 65° E to 156° W; determination of the subsatellite point of the detected space station. | |

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| **Name of the station** | **Postal address** | **Telephone, Telefax, Electronic-mail** | |
|  |  |  |  |
| **Smolensk (IMS)** | 21, Nakhimova str. 214025 Smolensk Russian Federation | TF : +7 481 2642706 FAX : +7 481 2642706 EMAIL : smolensk@rfc-cfa.ru | |

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| **1. Geographical coordinates** |
| |  | | --- | | 54°50'40" N | | 032°05'35" E | |
| **2. Hours of service** |
| |  | | --- | | 1300-2200 h from Monday to Thursday | | 1300-2045 h on Friday | |
| **3. Information on antennas in use** |
| |  | | --- | | 12 m Cassegrain antenna. | |
| **4. Range of azimuth and elevation angles** |
| |  | | --- | | 107° - 253°, 0.5° - 80° | |
| **5. Maximum attainable accuracy in determining orbital positions of space stations** |
| |  | | --- | | 0.1° | |
| **6. Information on system polarization** |
| |  | | --- | | For the 3400 - 4200 MHz, 10.7 - 12.75 GHz and 17.7 - 21.7 GHz frequency bands: | | − circular polarization (RHC and LHC), and | | − linear polarization (horizontal and vertical). | |
| **7. System noise temperature** |
| |  | | --- | | (a) C band: 3400 MHz - 4200 MHz: 66 K | | (b) Ku band: 10.7 GHz - 12.75 GHz: 170 K | | (c) Ka band: 17.7 GHz - 21.7 GHz: 342 K | |
| **8. Ranges of frequencies with the maximum attainable accuracy of frequency measurement for each frequency range** |
| |  | | --- | | (a) C band: 3400 MHz - 4200 MHz: 2 × 10-8 | | (b) Ku band: 10.7 GHz - 12.75 GHz: 2 × 10-8 | | (c) Ka band: 17.7 GHz - 21.7 GHz: 2 × 10-8 | |
| **9. Ranges of frequencies in which field strength or power flux-density measurements can be performed** |
| |  | | --- | | (a) C band: 3400 MHz - 4200 MHz | | (b) Ku band: 10.7 GHz - 12.75 GHz | | (c) Ka band: 17.7 GHz - 21.7 GHz | |
| **10. Minimum value of measurable field strength or power flux-density with indication of attainable accuracy of measurement** |
| |  | | --- | | (a) C band: 3400 MHz - 4200 MHz: -140 dBW/m² ± 3 dB | | (b) Ku band: 10.7 GHz - 12.75 GHz: -140 dBW/m² ± 3 dB | | (c) Ka band: 17.7 GHz - 21.7 GHz: -140 dBW/m² ± 3 dB | | Bandwidth 4 kHz. | |
| **11. Information available for bandwidth measurements** |
| |  | | --- | | Automatic bandwidth measurement is carried out in accordance with the ITU-R Recommendations and the Handbook on Spectrum Monitoring. | |
| **12. Information available for spectrum occupancy measurements** |
| |  | | --- | | The monitoring of spectrum occupancy is possible in the C band (3400 - 4200 MHz), Ku band (10.7 - 12.75 GHz) and Ka Band (17.7 - 21.7 GHz). The results are saved in database and may be tabulated or presented in spectrograms or in frequency-time diagrams. | |
| **13. Information available for orbit occupancy measurements** |
| |  | | --- | | The results of the monitoring of the orbit occupancy are saved in database and may be tabulated or presented in spectrograms. | |

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