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| --- |
| RUS - Russian Federation |
| **Centralizing office** | **Postal address** | **Telephone, Telefax, Electronic-mail** | **Remarks** |
|  |  |  |  |
| Federal State Unitary EnterpriseGeneral Radio Frequency Centre | Building 157, Derbenevskaya Embankment117997 Moscow | TF : +7 495 7481448FAX : +7 495 7480680EMAIL : int@grfc.ru |  |
|  |  |  |  |

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 BelgorodRussian Federation   | TF : +7 472 2337740FAX : +7 472 2337780EMAIL : belgorod@rfc-cfa.ru   |

|  |
| --- |
| **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** |
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|  |
| --- |
| 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** |
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| --- |
| 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** |
|  |  |  |  |
| **Khabarovsk (IMS)** | 17, Irtyshskiy proezd680006 KhabarovskRussian Federation   | TF : +7 421 2744000FAX : +7 421 2541212EMAIL : info@rfc-fefa.ru   |

|  |
| --- |
| **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** |
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|  |
| --- |
| 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** |
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| 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 SmolenskRussian Federation   | TF : +7 481 2642706FAX : +7 481 2642706EMAIL : smolensk@rfc-cfa.ru   |

|  |
| --- |
| **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 |
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| (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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