

NTIA Space record data form

NTIA requires the following data for space related experiments using government shared spectrum. For each transmit frequency, please provide the data for both ends of the transmit-receive link. Use Part A to describe the satellite to ground information. Part B is for all ground to space transmit links.

Part A: Space to Earth Downlink Data

Satellite Transmitter Data

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| Transmit Frequency: 437.475 MHz | | |
| Satellite Name: RANGE-B | | |
| Data Field | Data Answer | Description/Comments |
| Polarization (XAP) | XAP = J | POLARIZATIONS INCLUDE : H = HORIZONTAL, V = VERTICAL, S = HORIZONTAL AND VERTICAL, L = LEFT HAND CIRCULAR, R = RIGHT HAND CIRCULAR, T = RIGHT AND LEFT HAND CIRCULAR, J = LINEAR POLARIZATION |
| Orientation (XAZ) | XAZ = EC | NB= NARROWBEAM EC = EARTH COVERAGE |
| Antenna Dimension (XAD) | ANTENNA GAIN__1.4 dBi_____ BEAMWIDTH __360_____ XAD = XAD01 02G360B | (NTIA format (XAD), EXAMPLE, XAD01 16G030B) |
| Type of satellite (State = SP) (City = geo or non) | Type = Nongeostationary | Choose either: Geostationary or Nongeostationary |
| For Geostationary | Longitude = | IF ANY SATELLITES ARE GEOSTATIONARY, REPORT ITS LATITUDE AS 000000N (XLA AND/OR RLA) AND REPORT ITS LONGITUDE (XLG AND/OR RLG). |
| For Nongeostationary (Orbital Data) | INCLINATION ANGLE__97.4_____, APOGEE IN KILOMETERS __500_____, PERIGEE IN KILOMETERS __500_____, ORBITAL PERIOD IN HOURS __1__AND FRACTIONS OF HOURS IN DECIMAL__0.53____, THE NUMBER OF SATELLITES IN THE SYSTEM__2_____, ORB = ORB,97.4IN00500AP00500PE001.53H02N RT01 | IF ANY SATELLITES ARE NONGEOSTATIONARY, REPORT ITS INCLINATION ANGLE, APOGEE IN KILOMETERS, PERIGEE IN KILOMETERS, ORBITAL PERIOD IN HOURS AND FRACTIONS OF HOURS IN DECIMAL, THE NUMBER OF SATELLITES IN THE SYSTEM, THEN T01, EXAMPLE, REM04 *ORB,98.0IN00510AP00510PE001.58H01NRT01, AND FOR SPACE-TO-SPACE COMMUNICATIONS WITH ANOTHER NONGEOSTATIONARY SATELLITE ADD AN ADDITIONAL *ORB FOR IT ENDING IN R01, EXAMPLE, REM05 *ORB,72.9IN03209AP00655PE013.46H01NRR01 |

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| | ORB,97.4IN00500AP00500PE001.53H02N RTR01 | |
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| Earth Station Data (Receiver) | | |
| State (RSC) | RSC = GA | |
| City Name (RAL) | RAL = Atlanta | |
| Latitude (DDMMSS) | Lat = 334619 | |
| Longitude (DDMMSS) | Lon = 842346 | |
| Antenna Polarization (RAP) | RAP = T | POLARIZATIONS INCLUDE : H = HORIZONTAL, V = VERTICAL, S = HORIZONTAL AND VERTICAL, L = LEFT HAND CIRCULAR, R = RIGHT HAND CIRCULAR, T = RIGHT AND LEFT HAND CIRCULAR, J = LINEAR POLARIZATION |
| Antenna Azimuth (RAZ) | RAZ = RAZ01 V00 | THE EARTH STATION RECEIVER ANTENNA AZIMUTH (RAZ), THE MINIMUM ANGLE OF ELEVATION, V00 TO V90, EXAMPLE, RAZ01 V00 |
| Antenna Dimensions (RAD) | ANTENNA GAIN _____18.9_____, BEAMWIDTH_____21_____, AZIMUTHAL RANGE___360_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS ___340_____ THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____10_____ RAD = RAD01 19G021B000-360A00340H010 | EXAMPLE ASSUMING NONGEOSTATIONARY, RAD01 16G030B000-360A00357H006 |
| FCC notes: | | |
| <ol style="list-style-type: none"> 1. Use S-Note S945. 2. REM AGN, Cubesat, RANGE-B | | |

Part B: Ground Stations, Earth to Space link data:

Earth Station Transmitter Data

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| Transmit Frequency: 437.475 MHz | | |
| State (XSC) | XSC = GA | |
| City Name (XAL) | XAL = Atlanta | |
| Latitude (DDMMSS) | Lat = 334619 | |
| Longitude (DDDMMSS) | Lon = 842346 | |
| Antenna Polarization (XAP) | XAP = T | POLARIZATIONS INCLUDE : H = HORIZONTAL, V = VERTICAL, S = HORIZONTAL AND VERTICAL, L = LEFT HAND CIRCULAR, R = RIGHT HAND CIRCULAR, T = RIGHT AND LEFT HAND CIRCULAR, J = LINEAR POLARIZATION |
| Antenna Azimuth (XAZ) | XAZ = V00 to V90 | THE EARTH STATION Transmitter ANTENNA AZIMUTH (XAZ), THE MINIMUM ANGLE OF ELEVATION, V00 TO V90, EXAMPLE, XAZ01 V00 |
| Antenna Dimensions (XAD) | ANTENNA GAIN____18.9 dBi_____ BEAMWIDTH____21_____ AZIMUTHAL RANGE____360_____ THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS ____340_____ THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS ____10_____ XAD = XAD01 19G021B000-360A00340H010 | EXAMPLE ASSUMING NONGEOSTATIONARY, XAD01 16G030B000-360A00357H006 |
| Satellite Receive Specifications | | |
| Polarization (RAP) | RAP = T | POLARIZATIONS INCLUDE : H = HORIZONTAL, V = VERTICAL, S = HORIZONTAL AND VERTICAL, L = LEFT HAND CIRCULAR, R = RIGHT HAND CIRCULAR, T = RIGHT AND LEFT HAND CIRCULAR, J = LINEAR POLARIZATION |
| Azimuth (RAZ) | RAZ = RAZ01 V00 | STATION RECEIVER ANTENNA AZIMUTH (XAZ), THE MINIMUM ANGLE OF ELEVATION, V00 TO V90, EXAMPLE, RAZ01 V00 |
| Dimension (RAD) | ANTENNA GAIN____1.4 dBi_____ BEAMWIDTH____360_____ RAD = RAD01 02G360B | (NTIA format (RAD), EXAMPLE, RAD01 16G030B) |

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| Type of satellite (State = SP) City = G/No | Type = Nongeostationary | Choose either: Geostationary or Nongeostationary |
| For Geostationary | Longitude = | IF ANY SATELLITES ARE GEOSTATIONARY, REPORT ITS LATITUDE AS 000000N (XLA AND/OR RLA) AND REPORT ITS LONGITUDE (XLG AND/OR RLG). |
| For Nongeostationary (Orbital Data) | INCLINATION ANGLE <u>97.4</u> , APOGEE IN KILOMETERS <u>500</u> , PERIGEE IN KILOMETERS <u>500</u> , ORBITAL PERIOD IN HOURS <u>1</u> AND FRACTIONS OF HOURS IN DECIMAL <u>0.53</u> , THE NUMBER OF SATELLITES IN THE SYSTEM <u>2</u> , ORB,97.4IN00500AP00500PE001.53H02N RT01 ORB,97.4IN00500AP00500PE001.53H02N RTR01 | IF ANY SATELLITES ARE NONGEOSTATIONARY, REPORT ITS INCLINATION ANGLE, APOGEE IN KILOMETERS, PERIGEE IN KILOMETERS, ORBITAL PERIOD IN HOURS AND FRACTIONS OF HOURS IN DECIMAL, THE NUMBER OF SATELLITES IN THE SYSTEM, THEN T01, EXAMPLE, REM04 *ORB,98.0IN00510AP00510PE001.58H01NRT01, AND FOR SPACE-TO-SPACE COMMUNICATIONS WITH ANOTHER NONGEOSTATIONARY SATELLITE ADD AN ADDITIONAL *ORB FOR IT ENDING IN R01, EXAMPLE, REM05 *ORB,72.9IN03209AP00655PE013.46H01NRR01 |
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