

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

| Transmit Frequency: UHF, 400.74MHz | | |
|---|---|---|
| Satellite Name: TYVAK-0129 | | |
| Data Field | Data Answer | Description/Comments |
| Polarization (XAP) | XAP = R | 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 ___ OdBic ___ BEAMWIDTH ___ 360° HPBW ___ XAD = 0G360B | (NTIA format (XAD), EXAMPLE, XAD01 16G030B) |
| Type of satellite (State = SP) (City = geo or non) | Type = SP, NON | Choose either: Geostationary or Nongeostationary |
| For Geostationary | Longitude = N/A | 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 ___ 98° ___ APOGEE IN KILOMETERS ___ 500km ___ PERIGEE IN KILOMETERS ___ 500km ___ ORBITAL PERIOD IN HOURS ___ 1 ___ AND FRACTIONS OF HOURS IN DECIMAL ___ 58 ___ THE NUMBER OF SATELLITES IN THE SYSTEM ___ 1 ___ ORB = 98.0IN00500AP00500PE001.58H01NRT01 | 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 |
| Earth Station Data (Receiver) - UHF | | |
| State (RSC) | RSC = CA | |

| | | |
|---|---|--|
| City Name (RAL) | RAL = SAN DIEGO | |
| Latitude | Lat = 0325349 | (DDMMSS) |
| Longitude | Lon = 1171236 | (DDMMSS) |
| 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 = V00 | THE EARTH STATION RECEIVER ANTENNA AZIMUTH (RAZ), THE MINIMUM ANGLE OF ELEVATION, V00 TO V90, EXAMPLE, RAZ01 V00 |
| Antenna Dimensions (RAD) | ANTENNA GAIN____20.2dBic_____ BEAMWIDTH____40°_____ AZIMUTHAL RANGE__0 to 360_____ THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS __22m_____ THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____6m_____ RAD = 20.2G040B000-360A00022H006 | EXAMPLE ASSUMING NONGEOSTATIONARY, RAD01 16G030B000-360A00357H006 |
| Earth Station Data (Receiver) – UHF | | |
| State (RSC) | RSC = AK | |
| City Name (RAL) | RAL = FAIRBANKS | |
| Latitude | Lat = 0645118 | (DDMMSS) |
| Longitude | Lon = 1474110 | (DDMMSS) |
| 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 = V00 | THE EARTH STATION RECEIVER ANTENNA AZIMUTH (RAZ), THE MINIMUM ANGLE OF ELEVATION, V00 TO V90, EXAMPLE, RAZ01 V00 |
| Antenna Dimensions (RAD) | ANTENNA GAIN____20.2dBic_____ BEAMWIDTH____40°_____ AZIMUTHAL RANGE__0 to 360_____ THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS __13m_____ THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____0m_____ RAD = 20.2G040B000-360A00013H000 | EXAMPLE ASSUMING NONGEOSTATIONARY, RAD01 16G030B000-360A00357H006 |
| FCC notes: 1. Use S-Note S945. 2. REM AGN, Cubesat, (insert name) | | |

Satellite Transmitter Data

| Transmit Frequency: S-Band, 2235 MHz | | |
|---|--|---|
| Satellite Name: TYVAK-0129 | | |
| Data Field | Data Answer | Description/Comments |
| Polarization (XAP) | XAP = R | 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 ___ 5dBic ___ BEAMWIDTH ___ 65° HPBW ___ XAD = 5G065B | (NTIA format (XAD), EXAMPLE, XAD01 16G030B) |
| Type of satellite (State = SP) (City = geo or non) | Type = SP, NON | Choose either: Geostationary or Nongeostationary |
| For Geostationary | Longitude = N/A | 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 ___ 98° ___, APOGEE IN KILOMETERS ___ 500km ___, PERIGEE IN KILOMETERS ___ 500km ___, ORBITAL PERIOD IN HOURS ___ 1 ___ AND FRACTIONS OF HOURS IN DECIMAL ___ 58 __, THE NUMBER OF SATELLITES IN THE SYSTEM ___ 1 ____, ORB = 98.0IN00500AP00500PE001.58H01NRT01 | 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 |

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

Earth Station Transmitter Data

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| Transmit Frequency: UHF, 401.205MHz | | |
| State (XSC) | XSC = CA | |
| City Name (XAL) | XAL = SAN DIEGO | |
| Latitude | Lat = 0325349 | (DDMMSS) |
| Longitude | Lon = 1171236 | (DDDMMSS) |
| 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 | THE EARTH STATION Transmitter ANTENNA AZIMUTH (XAZ), THE MINIMUM ANGLE OF ELEVATION, V00 TO V90, EXAMPLE, XAZ01 V00 |
| Antenna Dimensions (XAD) | ANTENNA GAIN____20.2dBic_____, BEAMWIDTH____40°_____, AZIMUTHAL RANGE____0 to 360_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS ____22m_____ THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS ____6m_____ XAD = 20.2G040B000-360A00022H006 | EXAMPLE ASSUMING NONGEOSTATIONARY, XAD01 16G030B000-360A00357H006 |
| Transmit Frequency: UHF, 401.205MHz | | |
| State (XSC) | XSC = AK | |
| City Name (XAL) | XAL = FAIRBANKS | |
| Latitude | Lat = 0645118 | (DDMMSS) |
| Longitude | Lon = 1474110 | (DDDMMSS) |
| 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 | THE EARTH STATION Transmitter ANTENNA AZIMUTH (XAZ), THE MINIMUM ANGLE OF ELEVATION, V00 TO V90, EXAMPLE, XAZ01 V00 |
| Antenna Dimensions (XAD) | ANTENNA GAIN____20.2dBic_____, BEAMWIDTH____40°_____, AZIMUTHAL RANGE____0 to 360_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS ____13m_____ THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS ____0m_____ XAD = 20.2G040B000-360A00013H006 | EXAMPLE ASSUMING NONGEOSTATIONARY, XAD01 16G030B000-360A00357H006 |

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| | XAD = 20.2G040B000-360A00013H000 | |
| Satellite Receive Specifications - UHF | | |
| Polarization (RAP) | RAP = R | 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 = V00 | STATION RECEIVER ANTENNA AZIMUTH (XAZ), THE MINIMUM ANGLE OF ELEVATION, V00 TO V90, EXAMPLE, RAZ01 V00 |
| Dimension (RAD) | ANTENNA GAIN ___ 0dBic ___ BEAMWIDTH ___ 360° HPBW ___ RAD = 0G360B | (NTIA format (RAD), EXAMPLE, RAD01 16G030B) |
| Type of satellite (State = SP) City = G/No | Type = SP, No | Choose either: Geostationary or Nongeostationary |
| For Geostationary | Longitude = N/A | 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 ___ 98° ___, APOGEE IN KILOMETERS ___ 500km ___, PERIGEE IN KILOMETERS ___ 500km ___, ORBITAL PERIOD IN HOURS ___ 1 ___ AND FRACTIONS OF HOURS IN DECIMAL ___ 58 ___, THE NUMBER OF SATELLITES IN THE SYSTEM ___ 1 ___, ORB = 98.0IN00500AP00500PE001.58H01NRR 01 | 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,98.0IN00510AP00510PE001.58H01NRTO 1, AND FOR SPACE-TO-SPACE COMMUNICATIONS WITH ANOTHER NONGEOSTATIONARY SATELLITE ADD AN ADDITIONAL *ORB FOR IT ENDING IN R01, EXAMPLE, REM05 *ORB,72.9IN03209AP00655PE013.46H01NRR0 1 |
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