

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: 401.900 MHz		
Satellite Name: Anand		
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 0.00 dBi BEAMWIDTH 360 XAD = 00G360B	(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 97.5 degrees, APOGEE IN KILOMETERS 550, PERIGEE IN KILOMETERS 550, ORBITAL PERIOD IN HOURS 1 AND FRACTIONS OF HOURS IN DECIMAL 61, THE NUMBER OF SATELLITES IN THE SYSTEM 1,  ORB = 97.5IN00550AP00550PE001.61H01NRT01	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 A)		
State (RSC)	RSC = Lombardy	
City Name (RAL)	RAL = Vimercate	
Latitude (DDMMSS)	Lat = 453524N	
Longitude (DDMMSS)	Lon = 0092136E	
Antenna Polarization (RAP)	RAP = L	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 = V05	THE EARTH STATION RECEIVER ANTENNA AZIMUTH (RAZ), THE MINIMUM ANGLE OF ELEVATION, V00 TO V90, EXAMPLE, RAZ01 V00
Antenna Dimensions (RAD)	ANTENNA GAIN 14.8, BEAMWIDTH 27, AZIMUTHAL RANGE 0-360 degrees, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS 188, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS 3.1  RAD = 15G027B000-360A00188H003	EXAMPLE ASSUMING NONGEOSTATIONARY, RAD01 16G030B000-360A00357H006
FCC notes: <ol style="list-style-type: none"> <li>1. Use S-Note S945.</li> <li>2. REM AGN, Cubesat, (insert name)</li> </ol>		

Transmit Frequency: 2243 MHz		
Satellite Name: Anand		
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 = NB	NB= NARROWBEAM EC = EARTH COVERAGE
Antenna Dimension (XAD)	ANTENNA GAIN 6.00 dBi BEAMWIDTH 80 XAD = 06G080B	(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 97.5 degrees, APOGEE IN KILOMETERS 550, PERIGEE IN KILOMETERS 550, ORBITAL PERIOD IN HOURS 1 AND FRACTIONS OF HOURS IN DECIMAL 61, THE NUMBER OF SATELLITES IN THE SYSTEM 1,  ORB = 97.5IN00550AP00550PE001.61H01NRT01	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

<b>Earth Station Data (Receiver A)</b>		
State (RSC)	RSC = <a href="#">Munster</a>	
City Name (RAL)	RAL = <a href="#">Cork</a>	
Latitude (DDMMSS)	Lat = <a href="#">515700N</a>	
Longitude (DDMMSS)	Lon = <a href="#">0081012W</a>	
Antenna Polarization (RAP)	RAP = <a href="#">L</a>	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 = <a href="#">V05</a>	THE EARTH STATION RECEIVER ANTENNA AZIMUTH (RAZ), THE MINIMUM ANGLE OF ELEVATION, V00 TO V90, EXAMPLE, RAZ01 V00
Antenna Dimensions (RAD)	ANTENNA GAIN <a href="#">33.8</a> , BEAMWIDTH <a href="#">3</a> , AZIMUTHAL RANGE <a href="#">0-360</a> degrees, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS <a href="#">95</a> , THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS <a href="#">3.1</a>  RAD = <a href="#">34G003B000-360A00095H003</a>	EXAMPLE ASSUMING NONGEOSTATIONARY, RAD01 16G030B000-360A00357H006
FCC notes: <ol style="list-style-type: none"> <li>Use S-Note S945.</li> <li>REM AGN, Cubesat, (insert name)</li> </ol>		

<b>Earth Station Data (Receiver B)</b>		
State (RSC)	RSC = <a href="#">Southland</a>	
City Name (RAL)	RAL = <a href="#">Invercargill</a>	
Latitude (DDMMSS)	Lat = <a href="#">463143S</a>	
Longitude (DDMMSS)	Lon = <a href="#">1682244E</a>	
Antenna Polarization (RAP)	RAP = <a href="#">L</a>	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 = <a href="#">V05</a>	THE EARTH STATION RECEIVER ANTENNA AZIMUTH (RAZ), THE MINIMUM ANGLE OF ELEVATION, V00 TO V90, EXAMPLE, RAZ01 V00
Antenna Dimensions (RAD)	ANTENNA GAIN <a href="#">36</a> , BEAMWIDTH <a href="#">2.4</a> , AZIMUTHAL RANGE <a href="#">0-360</a> degrees,	EXAMPLE ASSUMING NONGEOSTATIONARY, RAD01 16G030B000-360A00357H006

	<p>THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS 10, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS 2.2</p> <p>RAD = 36G002B000-360A00010H002</p>	
<p>FCC notes:</p> <ol style="list-style-type: none"> <li>1. Use S-Note S945.</li> <li>2. REM AGN, Cubesat, (insert name)</li> </ol>		

Earth Station Data (Receiver C)		
State (RSC)	RSC = Central Province	
City Name (RAL)	RAL = Pallekele	
Latitude (DDMMSS)	Lat = 071633N	
Longitude (DDDMMSS)	Lon = 0804332E	
Antenna Polarization (RAP)	RAP = L	<p>POLARIZATIONS INCLUDE :</p> <p>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</p>
Antenna Azimuth (RAZ)	RAZ = V05	<p>THE EARTH STATION RECEIVER ANTENNA AZIMUTH (RAZ), THE MINIMUM ANGLE OF ELEVATION, V00 TO V90, EXAMPLE, RAZ01 V00</p>
Antenna Dimensions (RAD)	<p>ANTENNA GAIN 33.8, BEAMWIDTH 3, AZIMUTHAL RANGE 0-360 degrees, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS 464, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS 3.2</p> <p>RAD = 34G003B000-360A00464H003</p>	<p>EXAMPLE ASSUMING NONGEOSTATIONARY, RAD01 16G030B000-360A00357H006</p>
<p>FCC notes:</p> <ol style="list-style-type: none"> <li>1. Use S-Note S945.</li> <li>2. REM AGN, Cubesat, (insert name)</li> </ol>		

Earth Station Data (Receiver D)		
State (RSC)	RSC = Azores	
City Name (RAL)	RAL = Santa Maria	
Latitude (DDMMSS)	Lat = 365951N	

Longitude (DDMMSS)	Lon = 250809W	
Antenna Polarization (RAP)	RAP = L	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 = V05	THE EARTH STATION RECEIVER ANTENNA AZIMUTH (RAZ), THE MINIMUM ANGLE OF ELEVATION, V00 TO V90, EXAMPLE, RAZ01 V00
Antenna Dimensions (RAD)	ANTENNA GAIN 33.8, BEAMWIDTH 3, AZIMUTHAL RANGE 0-360 degrees, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS 194, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS 3.1  RAD = 34G003B000-360A00194H003	EXAMPLE ASSUMING NONGEOSTATIONARY, RAD01 16G030B000-360A00357H006
FCC notes: 1. Use S-Note S945. 2. REM AGN, Cubesat, (insert name)		

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

Satellite Receive Specifications		
Polarization (RAP)	RAP = 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
Azimuth (RAZ)	RAZ = EC	NB= NARROWBEAM EC = EARTH COVERAGE
Dimension (RAD)	ANTENNA GAIN 0.00 dBi BEAMWIDTH 360  RAD = 00G360B	(NTIA format (RAD), EXAMPLE, RAD01 16G030B)
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)	<p>INCLINATION ANGLE 97.5 degrees,  APOGEE IN KILOMETERS 550,  PERIGEE IN KILOMETERS 550,  ORBITAL PERIOD IN HOURS 1 AND  FRACTIONS OF HOURS IN DECIMAL 61,  THE NUMBER OF SATELLITES IN THE  SYSTEM 1,</p> <p>ORB =  97.5IN00550AP00550PE001.61H01NRT01</p>	<p>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</p> <p>*ORB,98.0IN00510AP00510PE001.58H01NRT01, AND FOR SPACE-TO-SPACE COMMUNICATIONS WITH ANOTHER NONGEOSTATIONARY SATELLITE ADD AN ADDITIONAL</p> <p>*ORB FOR IT ENDING IN R01, EXAMPLE, REM05</p> <p>*ORB,72.9IN03209AP00655PE013.46H01NRR01</p>