

ARCE1 NTIA Space record data form

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.

This form has 3 parts, for the Downlink, the Crosslink, and the Uplink.

Part A: Space to Earth Downlink Data

Beam DOWNLINK

Satellite Transmitter Data

Transmit Frequency: 2416.7185 MHz		
Satellite Name: ARCE1-A, B and C		
Data Field	Data Answer	Description/Comments
Polarization (XAP)	XAP = V	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 <u> 5 </u> BEAMWIDTH <u> 80 </u> XAD = 05G080B	(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).

ARCE1 NTIA Space record data form

<p>For Nongeostationary (Orbital Data)</p>	<p>INCLINATION ANGLE__98____, APOGEE IN KILOMETERS__450____, PERIGEE IN KILOMETERS__450____, ORBITAL PERIOD IN HOURS__1____AND FRACTIONS OF HOURS IN DECIMAL__.55734____, THE NUMBER OF SATELLITES IN THE SYSTEM__3____, Orb,98.0IN99450AP00450PE001.56H01NRT01</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 *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</p>

Earth Station Data (Receiver)		
<p>State (RSC)</p>	<p>RSC = FL</p>	
<p>City Name (RAL)</p>	<p>RAL = TAMPA</p>	
<p>Latitude (DDMMSS)</p>	<p>Lat = 275722</p>	
<p>Longitude (DDDMMSS)</p>	<p>Lon = 0822616</p>	
<p>Antenna Polarization (RAP)</p>	<p>RAP = J</p>	<p>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</p>
<p>Antenna Azimuth (RAZ)</p>	<p>RAZ = V00</p>	<p>THE EARTH STATION RECEIVER ANTENNA AZIMUTH (RAZ), THE MINIMUM ANGLE OF ELEVATION, V00 TO V90, EXAMPLE, RAZ01 V00</p>
<p>Antenna Dimensions (RAD)</p>	<p>ANTENNA GAIN__25____, BEAMWIDTH__8.5____, AZIMUTHAL RANGE__0 - 360____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS__6____ THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS__11____ RAD = 25G008B000-360A00006H011</p>	<p>EXAMPLE ASSUMING NONGEOSTATIONARY, RAD01 16G030B000-360A00357H006</p>
<p>FCC notes: 1. Use S-Note S945. 2. REM AGN, Cubesat, (insert name)</p>		

ARCE1 NTIA Space record data form

Beam CXLINK (Cross Link to other ARCE1 Satellites) Satellites communicate with one another over a range of up to 4,500 km.

Satellite Transmitter Data

Transmit Frequency: 2449.28150 MHz		
Satellite Name: ARCE1-A, B and C		
Data Field	Data Answer	Description/Comments
Polarization (XAP)	XAP = V	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 ___ 5 ___ BEAMWIDTH ___ 80 ___ XAD = 05G080B	(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 ___ 98 ___, APOGEE IN KILOMETERS ___ 450 ___, PERIGEE IN KILOMETERS ___ 450 ___, ORBITAL PERIOD IN HOURS ___ 1 ___ AND FRACTIONS OF HOURS IN DECIMAL ___ .55734 ___, THE NUMBER OF SATELLITES IN THE SYSTEM ___ 3 ___, Orb,98.0IN99450AP00450PE001.56H01NRT01 Orb,98.0IN99450AP00450PE001.56H01NRR01	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

ARCE1 NTIA Space record data form

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

Beam UPLINK

Earth Station Transmitter Data

Transmit Frequency:		
State (XSC)	XSC = FL	
City Name (XAL)	XAL = TAMPA	
Latitude (DDMMSS)	Lat = 275722	
Longitude (DDDMMSS)	Lon = 0822616	
Antenna 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
Antenna Azimuth (XAZ)	XAZ = V05	THE EARTH STATION Transmitter ANTENNA AZIMUTH (XAZ), THE MINIMUM ANGLE OF ELEVATION, V00 TO V90, EXAMPLE, XAZ01 V00
Antenna Dimensions (XAD)	ANTENNA GAIN __25____, BEAMWIDTH __8.5____, AZIMUTHAL RANGE __0 - 360____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _6____ THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS __11____ XAD = 25G008B000-360A00006H011	EXAMPLE ASSUMING NONGEOSTATIONARY, XAD01 16G030B000-360A00357H006
Satellite Receive Specifications		
Polarization (RAP)	RAP = V	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 __5____ BEAMWIDTH __80____ RAD = RAD01 05G080B	(NTIA format (RAD), EXAMPLE, RAD01 16G030B)

ARCE1 NTIA Space record data form

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>98</u> , APOGEE IN KILOMETERS <u>450</u> , PERIGEE IN KILOMETERS <u>450</u> , ORBITAL PERIOD IN HOURS <u>1</u> AND FRACTIONS OF HOURS IN DECIMAL <u>.55734</u> , THE NUMBER OF SATELLITES IN THE SYSTEM <u>3</u> , Orb,98.0IN99450AP00450PE001.56H01NRT01	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