

NTIA Space record data form – INCA CubeSat

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 TYVAK UHF Radio

Transmit Frequency: 437.125 MHz		
Satellite Name: INCA		
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 <u> 2 </u> BEAMWIDTH <u> 156 </u> XAD = XAD01 02G156B	(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 <u> 90 </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> .57 </u> , THE NUMBER OF SATELLITES IN THE SYSTEM <u> 1 </u> , ORB = 90.01N0500AP0500PE001.57H01NRR01	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,98.01N00510AP00510PE001.58H01NRT01, AND FOR SPACE-TO-SPACE COMMUNICATIONS WITH ANOTHER NONGEOSTATIONARY SATELLITE ADD AN ADDITIONAL *ORB FOR IT ENDING IN R01, EXAMPLE, REM05 *ORB,72.91N03209AP00655PE013.46H01NRR01

Earth Station Data (Receiver)		
State (RSC)	RSC = New Mexico	
City Name (RAL)	RAL = Las Cruces	
Latitude (DDMMSS)	Lat = 321652	
Longitude (DDDMMSS)	Lon = 1064515	
Antenna 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
Antenna Azimuth (RAZ)	RAZ = RAZ01 V05	THE EARTH STATION RECEIVER ANTENNA AZIMUTH (RAZ), THE MINIMUM ANGLE OF ELEVATION, V00 TO V90, EXAMPLE, RAZ01 V00
Antenna Dimensions (RAD)	ANTENNA GAIN __18_____, BEAMWIDTH __16_____, AZIMUTHAL RANGE __0 - 360_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS __1189____ THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS __18_____ RAD = RAD01 18G018B000-360A01189H018	EXAMPLE ASSUMING NONGEOSTATIONARY, RAD01 16G030B000-360A00357H006
FCC notes: <ol style="list-style-type: none"> 1. Use S-Note S945. 2. REM AGN, Cubesat, (insert name) 		

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

Earth Station Transmitter Data

Transmit Frequency: 437.125 MHz		
State (XSC)	XSC = New Mexico	
City Name (XAL)	XAL = Las Cruces	
Latitude (DDMMSS)	Lat = 321652	
Longitude (DDDMMSS)	Lon = 1064515	
Antenna 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
Antenna Azimuth (XAZ)	XAZ = XAZ01 V05	THE EARTH STATION Transmitter ANTENNA AZIMUTH (XAZ), THE MINIMUM ANGLE OF ELEVATION, V00 TO V90, EXAMPLE, XAZ01 V00
Antenna Dimensions (XAD)	ANTENNA GAIN__18____, BEAMWIDTH__16____, AZIMUTHAL RANGE__0-360____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS __1189____ THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS __18____ XAD = XAD01 18G016B000-360A01189H018	EXAMPLE ASSUMING NONGEOSTATIONARY, XAD01 16G030B000-360A00357H006
Satellite Receive Specifications		
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 = RAZ01 V05	STATION RECEIVER ANTENNA AZIMUTH (XAZ), THE MINIMUM ANGLE OF ELEVATION, V00 TO V90, EXAMPLE, RAZ01 V00
Dimension (RAD)	ANTENNA GAIN__2____ BEAMWIDTH__156____ RAD = RAD01 02G156B	(NTIA format (RAD), EXAMPLE, RAD01 16G030B)
Type of satellite (State = SP)	Type = Nongeostationary	Choose either: Geostationary or Nongeostationary

City = G/No		
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>90</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>.57</u> , THE NUMBER OF SATELLITES IN THE SYSTEM <u>1</u> , ORB = 90.0IN0500AP0500PE001.57H01NRR01	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