

VariSat-1 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.

Two identical satellites are launched together, VariSat-1A and VariSat-1B. The following description applies to each.

Part A: Space to Earth Downlink Data

Satellite Transmitter Data

Transmit Frequency: 24.585 MHz 24.5864 MHz 24.687 MHz 24.6884 MHz		
Satellite Name: VariSat-1A, VariSat-1B		
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_3____ BEAMWIDTH 60_____ XAD = XAD01 03G060B	(NTIA format (XAD), EXAMPLE, XAD01 16G030B)
Type of satellite (State = SP) (City = geo or non)	Type = NON	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__114_____, APOGEE IN KILOMETERS__300_____, PERIGEE IN KILOMETERS__200_____, ORBITAL PERIOD IN HOURS __1__ AND FRACTIONS OF HOURS IN DECIMAL_.49_____, THE NUMBER OF SATELLITES IN THE SYSTEM__2_____, ORB = ORB,114IN00300AP00200PE001.49H02NRT01	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)		
State (RSC)	RSC = WV	
City Name (RAL)	RAL = HILLSBORO	
Latitude (DDMMSS)	Lat = 380645 NORTH	
Longitude (DDDMMSS)	Lon = 0801558 WEST	
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 = 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__2.5_____, BEAMWIDTH__60_____, AZIMUTHAL RANGE__000-360_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS __975____ THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____12____ RAD = RAD01 02G060B000-360A00975H012	EXAMPLE ASSUMING NONGEOSTATIONARY, RAD01 16G030B000-360A00357H006
FCC notes: 1. Use S-Note S945. 2. REM AGN, Cubesat, VariSat-1		

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

Earth Station Transmitter Data

Transmit Frequency: 24.585 MHz 24.5864 MHz 24.687 MHz 24.6884 MHz		
State (XSC)	XSC = WV	
City Name (XAL)	XAL = Hillsboro	
Latitude (DDMMSS)	Lat = 380645 NORTH	
Longitude (DDDMMSS)	Lon = 0801558 WEST	
Antenna Polarization (XAP)	XAP = 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 (XAZ)	XAZ = XAZ01 05	THE EARTH STATION Transmitter ANTENNA AZIMUTH (XAZ), THE MINIMUM ANGLE OF ELEVATION, V00 TO V90, EXAMPLE, XAZ01 V00
Antenna Dimensions (XAD)	ANTENNA GAIN__2.5_____, BEAMWIDTH__60_____, AZIMUTHAL RANGE__000-360_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS __975_____ THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____12_____ XAD = XAD01 02G060B000-360A00975H012	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 ___3___ BEAMWIDTH ___60___ RAD = RAD01 03G060B	(NTIA format (RAD), EXAMPLE, RAD01 16G030B)
Type of satellite (State = SP) City = G/No	Type = NON	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 ___114___, APOGEE IN KILOMETERS ___300___, PERIGEE IN KILOMETERS ___200___, ORBITAL PERIOD IN HOURS ___1___ AND FRACTIONS OF HOURS IN DECIMAL ___49___, THE NUMBER OF SATELLITES IN THE SYSTEM ___2___, ORB = ORB,114IN00300AP00200PE001.49H02NRR01	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