

NTIA Space record data form For ALTAIR Mission

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.

Bold Data Answers are ready for submission

Mission / Satellite Name: ALTAIR Pathfinder

Number of Spacecraft: 1

FCC Application Number: 0257-EX-ST-2016

Part A: Space to Earth Downlink Data

Satellite Transmitter Data

Data Field	Data Answer	Description/Comments
Polarization (XAP)	XAP01 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)	XAZ01 NB	NB= NARROWBEAM EC = EARTH COVERAGE
Antenna Dimension (XAD)	ANTENNA GAIN__7.3 dBi_____ BEAMWIDTH ____90_____ XAD01 07G090B	(NTIA format (XAD), EXAMPLE, XAD01 16G030B)
Type of satellite (State = SP) (City = geo or non)	TSC01 SP TAL01 NON Type = Nongeostationary	Choose either: Geostationary or Nongeostationary
For Geostationary (NA)	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__51.6 APOGEE IN KILOMETERS____416____, PERIGEE IN KILOMETERS__409____, ORBITAL PERIOD IN HOURS __1____ +FRACTIONS OF HOURS IN DECIMAL_.55 NUMBER OF SATS IN THE SYSTEM_1 *ORB, 51.6IN00410AP00409PE001.55H01NRT01	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

Data Field	Data Answer	Description/Comments
Earth Station Data		
State (RSC)	RSC01 HI	
City Name (RAL)	RAL01 OCEAN VIEW	
Latitude (DDMMSS)	Lat = 190050	
Longitude (DDDMMSS)	Lon = 1553947	
Antenna Polarization (RAP)	RAP01 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)	RAZ01 V10	THE EARTH STATION RECEIVER ANTENNA AZIMUTH (RAZ), THE MINIMUM ANGLE OF ELEVATION, V00 TO V90, EXAMPLE, RAZ01 V00
Antenna Dimensions (RAD)	ANTENNA GAIN___47.1dBi_, BEAMWIDTH 0.7 degree_show 1 degree, AZIMUTHAL RANGE___000-360 THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS __367_____ THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____13_____ RAD01 47G001B000-360A367H013	EXAMPLE ASSUMING NONGEOSTATIONARY, RAD01 16G030B000-360A00357H006
FCC notes, put at end of Part A: 1. Use S-Note S945 2. REM AGN, CUBESAT, ALTAIR PATHFINDER		

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

Earth Station Transmitter Data

Ground Station Transmit Frequency: 2072 MHz.

Data Field	Data Answer	Description/Comments
State (XSC)	XSC01 HI	
City Name (XAL)	XAL01 OCEAN VIEW	
Latitude (DDMMSS)	Lat = 190050	
Longitude (DDDMMSS)	Lon = 1553947	
Antenna Polarization (XAP)	XAP01 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)	XAZ01 V10	THE EARTH STATION Transmitter ANTENNA AZIMUTH (XAZ), THE MINIMUM ANGLE OF ELEVATION, V00 TO V90, EXAMPLE, XAZ01 V00
Antenna Dimensions (XAD)	ANTENNA GAIN 46.3 dBi_ BEAMWIDTH__0. 7 show as 1 degree AZIMUTHAL RANGE__000-360__, SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS __367 THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _13_ XAD01 46G001B000-360A00367H013	EXAMPLE ASSUMING NONGEOSTATIONARY, XAD01 16G030B000-360A00357H006

Satellite Receive Specifications		
Polarization (RAP)	RAP01 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 01 NB	STATION RECEIVER ANTENNA AZIMUTH (XAZ), THE MINIMUM ANGLE OF ELEVATION, V00 TO V90, EXAMPLE, RAZ01 V00
Dimension (RAD)	ANTENNA GAIN__7.7 dBi_____ BEAMWIDTH _____75 RAD01 08G075B	(NTIA format (RAD), EXAMPLE, RAD01 16G030B)
Type of satellite	Type = NON GEO	Choose either: Geostationary or

(State = SP) City = G/No		Nongeostationary
For Geostationary (NA)	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_51.6 APOGEE IN KILOMETERS__416__, PERIGEE IN KILOMETERS_409__, ORBITAL PERIOD IN HOURS __1__ +FRACTIONS OF HOURS IN DECIMAL_.55 NUMBER OF SATS IN THE SYSTEM_1 *ORB,51.6IN00410AP00409PE001.55H01NRR01	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,98.0IN00510AP00510PE001.58H01NR T 01, MLM should the T be an R?