NTIA Space record data form For GEARRS-3
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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, (or in this case, satellite to Globalstar). Part B is for all ground to space transmit links (and also Globalstar to satellite transmissions).

Part A: Space to ~~Earth~~ Space Downlink Data

Satellite Transmitter Data Globalstar Simplex Radio

Transmit Frequency: 1616.25 MHz		
Satellite Name: GEARRS-3		
Data Field	**Data Answer**	**Description/Comments**
Polarization (XAP)	XAP = XAP01 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
Orientation (XAZ)	XAZ = XAZ01 NB	NB= NARROWBEAM EC = EARTH COVERAGE
Antenna Dimension (XAD)	ANTENNA GAIN____5_____ BEAMWIDTH _____100_____ XAD = XAD01 05G100B	(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).

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For Nongeostationary (Orbital Data)	INCLINATION ANGLE_____45_____, APOGEE IN KILOMETERS_____500_____, PERIGEE IN KILOMETERS_____500_____, ORBITAL PERIOD IN HOURS __1_____AND FRACTIONS OF HOURS IN DECIMAL_.6__, THE NUMBER OF SATELLITES IN THE SYSTEM____1_____, ORB = ORB,45IN00500AP00500PE001.60H01NRR01	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) GlobalStar Constellation		
State (RSC)	RSC = SP	
City Name (RAL)	RAL = non	
Antenna Polarization (RAP)	RAP = RAP01 T	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 NB	THE EARTH STATION RECEIVER ANTENNA AZIMUTH (RAZ), THE MINIMUM ANGLE OF ELEVATION, V00 TO V90, EXAMPLE, RAZ01 V00
Antenna Dimensions (RAD)	ANTENNA GAIN___12_____, BEAMWIDTH_____37____, RAD = 12G037B	EXAMPLE ASSUMING NONGEOSTATIONARY, RAD01 16G030B000-360A00357H006
FCC notes: 1. Use S-Note S945. 2. REM AGN, Cubesat, (GEARRS-3)		

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Satellite Transmitter Data Globalstar Duplex Radio

Transmit Frequency: 1615.65 MHz / 1616.88 MHz		
Satellite Name: GEARRS-3		
Data Field	**Data Answer**	**Description/Comments**
Polarization (XAP)	XAP = XAP02 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
Orientation (XAZ)	XAZ = XAZ02 NB	NB= NARROWBEAM EC = EARTH COVERAGE
Antenna Dimension (XAD)	ANTENNA GAIN____4.31_____ BEAMWIDTH _____110_____ XAD = XAD02 04.31G110B	(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_____45_____, APOGEE IN KILOMETERS_____500_____, PERIGEE IN KILOMETERS_____500_____, ORBITAL PERIOD IN HOURS __1_____AND FRACTIONS OF HOURS IN DECIMAL_.6__, THE NUMBER OF SATELLITES IN THE SYSTEM____1_____, ORB = ORB,45IN00500AP00500PE001.60H01NRR01	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

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~~**Earth Station Data**~~ **(Receiver) GlobalStar Constellation**		
State (RSC)	RSC = SP	
City Name (RAL)	RAL = non	
Antenna Polarization (RAP)	RAP = RAP01 T	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 NB	THE EARTH STATION RECEIVER ANTENNA AZIMUTH (RAZ), THE MINIMUM ANGLE OF ELEVATION, V00 TO V90, EXAMPLE, RAZ01 V00
Antenna Dimensions (RAD)	ANTENNA GAIN___12_____, BEAMWIDTH____37_____, RAD = 12G037B	EXAMPLE ASSUMING NONGEOSTATIONARY, RAD01 16G030B000-360A00357H006
FCC notes: 1. Use S-Note S945. 2. REM AGN, Cubesat, (GEARRS-3)		

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Part B: Earth Ground Station Uplink and GlobalStar Contellation Tx to GEARRS-3 link data:

~~Earth Station~~ GlobalStar Constellation Transmitter

Transmit Frequencies (MHz): 2484.39 2485.62 2486.85 2488.08 2489.31 2490.54 2491.77 2493 2494.23 2495.46 2496.69 2497.92 2499.15		
State (XSC)	XSC = SP	
City Name (XAL)	XAL = non	
Antenna Polarization (XAP)	XAP = XAP01 T	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 NB	THE EARTH STATION Transmitter ANTENNA AZIMUTH (XAZ), THE MINIMUM ANGLE OF ELEVATION, V00 TO V90, EXAMPLE, XAZ01 V00
Antenna Dimensions (XAD)	ANTENNA GAIN____12_____, BEAMWIDTH_____37___, XAD = 12G037B	EXAMPLE ASSUMING NONGEOSTATIONARY, XAD01 16G030B000-360A00357H006
Satellite Globalstar Duplex Receive Specifications		
Polarization (RAP)	RAP = RAP 01 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

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Azimuth (RAZ)	RAZ = NB	NB= NARROWBEAM EC = EARTH COVERAGE
Dimension (RAD)	ANTENNA GAIN____4_____ BEAMWIDTH _____110_____ RAD = 04G110B	(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_____45_____, APOGEE IN KILOMETERS_____500_____, PERIGEE IN KILOMETERS_____500_____, ORBITAL PERIOD IN HOURS ___1____AND FRACTIONS OF HOURS IN DECIMAL__.6____, THE NUMBER OF SATELLITES IN THE SYSTEM____1_____, ORB,45IN00500AP00500PE001.60H01NRR01	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 S Band Transmitter

Transmit Frequency: 2467 MHz		
State (XSC)	XSC = IN	
City Name (XAL)	XAL = UPLAND	
Latitude (DDMMSS)	Lat = 402533 N	
Longitude (DDDMMSS)	Lon = 853030 W	

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Antenna Polarization (XAP)	XAP = XAP01 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
Antenna Azimuth (XAZ)	XAZ = XAZ01 V60	THE EARTH STATION Transmitter ANTENNA AZIMUTH (XAZ), THE MINIMUM ANGLE OF ELEVATION, V00 TO V90, EXAMPLE, XAZ01 V00
Antenna Dimensions (XAD)	ANTENNA GAIN___30_____, BEAMWIDTH___5____, AZIMUTHAL RANGE_000-360__, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _276__ THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS ___2____ XAD = 30G005B000-360A00276H002	EXAMPLE ASSUMING NONGEOSTATIONARY, XAD01 16G030B000-360A00357H006
Satellite S Band Receive Specifications		
Polarization (RAP)	RAP = RAP 01 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
Azimuth (RAZ)	RAZ = NB	NB= NARROWBEAM EC = EARTH COVERAGE
Dimension (RAD)	ANTENNA GAIN____4_____ BEAMWIDTH _____110_____ RAD01 04G110B	(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).

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For Nongeostationary (Orbital Data)	INCLINATION ANGLE_____45_____, APOGEE IN KILOMETERS_____500_____, PERIGEE IN KILOMETERS_____500_____, ORBITAL PERIOD IN HOURS ___1____AND FRACTIONS OF HOURS IN DECIMAL__.6____, THE NUMBER OF SATELLITES IN THE SYSTEM____1_____, ORB,45IN00500AP00500PE001.60H01NRR01	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