NTIA Space Record Data Form for Meson

The National Telecommunications and Information Administration ("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.

Part A: Space to Space Downlink Data

From Meson to the Iridium Constellation

Satellite Transmitter Data

Transmit Frequencies: 174 Channels, range from low end of low channel 1618.75 MHz to high end of high channel 1626 MHz, channel spacing 41.6667 kHz.		
Satellite Name: Meson		
Data Field	**Data Answer**	**Description/Comments**
Transmit Power (PWR)	PWR = 1.25 W	TRANSMIT POWER SUPPLIED TO THE ANTENNA INPUT TERMINAL, EXAMPLE, PWR01 W2 TRANSMIT POWER UNITS INCLUDE: W = WATT, K = KILOWATT, M = MEGAWATT
Necessary Bandwidth	35 kHz	THE WIDTH OF FREQUENCY BAND WHICH IS JUST SUFFICIENT TO SUCCESSFULLY TRANSFER DATA. FORMULAS CAN BE FOUND IN ANNEX J OF THE NTIA MANUAL.
RF Emissions Data		2-SIDED EMISSION BANDWIDTH VALUES
-3 dB bandwidth	NA	
-20 dB bandwidth	NA	
-40 dB bandwidth	NA	
-60 dB bandwidth	NA	
Modulation Type	DQPSK	THE METHOD USED TO SUPERIMPOSE DATA ON THE CARRIER, EXAMPLE, BPSK, QPSK, GMSK.
Data Rate	50 kbps	INFORMATION DATA RATE
Forward Error Correction Coding	Is FEC used? Yes ☒ No ☐ FEC Type: __BCH(32,21)_____, FEC Rate: _____50 kbps_____,	
Total Symbol Rate	25 ksps	DATA RATE COMBINED WITH FEC AND FRAME OVERHEAD RESULTING IN THE TOTAL SYMBOL RATE AT THE INPUTE TO THE SYMBOL MAPPER/MODULATOR.

Does transmitter have a beacon mode?	Yes ☐ No ☒	BEACON MODE IS NORMALLY CONSIDERED A REGULAR AND PERIODIC SHORT DURATION TRANSMISSION THAT IS OFTEN USED TO ASSIST WITH TRACKING, DOPPLER COMPENSATION, OR SMALL SATELLITE IDENTIFICATION WHOSE TRANSMISSIONS ARE NOT LIMITED TO DURATIONS WHEN SUPPORTING GROUND STATIONS ARE VISIBLE.
If transmitter has a beacon mode, can the beacon be commanded off?	Yes ☐ No ☐	

Polarization (XAP)	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
Transmit Antenna Orientation (XAZ)	XAZ = XAZ01 NB	NB= NARROWBEAM EC = EARTH COVERAGE
Transmit Antenna Dimension (XAD)	ANTENNA GAIN____3.7_____ BEAMWIDTH _____80_____ XAD = XAD01 3.7G160B	(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)	For Meson: INCLINATION ANGLE_____97.4_____, APOGEE IN KILOMETERS_____ 500 _____, PERIGEE IN KILOMETERS_____ 500 _____, ORBITAL PERIOD IN HOURS __1_____AND FRACTIONS OF HOURS IN DECIMAL_.594 __, THE NUMBER OF SATELLITES IN THE SYSTEM____1 _____, For Iridium constellation: INCLINATION ANGLE____86.4_____, APOGEE IN KILOMETERS_780_____, PERIGEE IN KILOMETERS____780_____, ORBITAL PERIOD IN HOURS _1__AND FRACTIONS OF HOURS IN DECIMAL_.73__, THE NUMBER OF SATELLITES IN THE SYSTEM___66_____, ORB = ORB,97.4IN00500AP00500PE001.59H01NRR01 ORB,86.4IN00780AP00780PE001.73H66NRR01	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,72.9IN03209AP00655PE013.46H01NRT01
For SunSynchronous Nongeostationary Orbits	Mean Local Time of Ascending Node (MLTAN) = 22:00 For Meson	MLTAN IS THE ANGLE BETWEEN AN ORBIT'S ASCENDING NODE AND THE MEAN SUN, OFTEN EXPRESSED AS UNIT OF TIME (HH:MM)

FCC notes:

1. Use S-Note S945.
2. REM AGN, Cubesat, Meson

Receiver Data Iridium Satellite

Iridium Satellite Receive Specifications		
Receive Antenna Polarization (RAP)	RAP = RAP 01 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 = NB	NB= NARROWBEAM EC = EARTH COVERAGE

Receive Antenna Dimension (RAD)	ANTENNA GAIN_20_____ BEAMWIDTH ____12_____ RAD = RAD01 20G012B	(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)	For Meson: INCLINATION ANGLE_____97.4_____, APOGEE IN KILOMETERS_____ 500 _____, PERIGEE IN KILOMETERS_____ 500 _____, ORBITAL PERIOD IN HOURS __1_____AND FRACTIONS OF HOURS IN DECIMAL_.594 __, THE NUMBER OF SATELLITES IN THE SYSTEM____1 _____, For Iridium constellation: INCLINATION ANGLE____86.4_____, APOGEE IN KILOMETERS_780_____, PERIGEE IN KILOMETERS____780_____, ORBITAL PERIOD IN HOURS _1__AND FRACTIONS OF HOURS IN DECIMAL_.73__, THE NUMBER OF SATELLITES IN THE SYSTEM___66_____, ORB = ORB,97.4IN00500AP00500PE001.59H01NRR01 ORB,86.4IN00780AP00780PE001.73H66NRR01	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

Number of Satellite Contacts Supported Per Day	N/A due to ISL	NUMBER OF TIMES THE SATELLITE WILL COMMUNICATE WITH THE EARTH STATION IN THE SPACE TO EARTH DIRECTION (DOWNLINKS) EACH DAY
Expected Duration of Each Contact	10 Seconds Max	AVERAGE DURATION OF EACH CONTACT
Supported Operations	Satellite Health and Status Data ☒ Mission Payload Data ☒	SATELLITE HEALTH AND STATUS TELEMETRY AND/OR MISSION PAYLOAD DATA
FCC notes: 1. Use S-Note S945. 2. REM AGN, Cubesat, Meson		

From Meson to the Inmarsat Constellation

Satellite Transmitter Data

Transmit Frequencies: 1626.5 - 1660.5 MHz, centered 1643.5 MHz		
Satellite Name: Meson		
Data Field	**Data Answer**	**Description/Comments**
Transmit Power (PWR)	PWR = 1.26 W	TRANSMIT POWER SUPPLIED TO THE ANTENNA INPUT TERMINAL, EXAMPLE, PWR01 W2 TRANSMIT POWER UNITS INCLUDE: W = WATT, K = KILOWATT, M = MEGAWATT
Necessary Bandwidth	200 kHz	THE WIDTH OF FREQUENCY BAND WHICH IS JUST SUFFICIENT TO SUCCESSFULLY TRANSFER DATA. FORMULAS CAN BE FOUND IN ANNEX J OF THE NTIA MANUAL.
RF Emissions Data		2-SIDED EMISSION BANDWIDTH VALUES
-3 dB bandwidth	NA	
-20 dB bandwidth	NA	
-40 dB bandwidth	NA	
-60 dB bandwidth	NA	
Modulation Type	QPSK	THE METHOD USED TO SUPERIMPOSE DATA ON THE CARRIER, EXAMPLE, BPSK, QPSK, GMSK.
Data Rate	200 kbps	INFORMATION DATA RATE
Forward Error Correction Coding	Is FEC used? Yes ☒ No ☐ FEC Type: ___Turbo_____, FEC Rate: ____1/3 - 1 _____,	
Total Symbol Rate	151.2 ksps	DATA RATE COMBINED WITH FEC AND FRAME OVERHEAD RESULTING IN THE TOTAL SYMBOL RATE AT THE INPUTE TO THE SYMBOL MAPPER/MODULATOR.
Does transmitter have a beacon mode?	Yes ☐ No ☒	BEACON MODE IS NORMALLY CONSIDERED A REGULAR AND PERIODIC SHORT DURATION TRANSMISSION THAT IS OFTEN USED TO ASSIST WITH TRACKING, DOPPLER COMPENSATION, OR SMALL SATELLITE IDENTIFICATION WHOSE TRANSMISSIONS ARE NOT LIMITED TO DURATIONS WHEN SUPPORTING GROUND STATIONS ARE VISIBLE.

If transmitter has a beacon mode, can the beacon be commanded off?	Yes ☐ No ☐	

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
Transmit Antenna Orientation (XAZ)	XAZ = NB	NB= NARROWBEAM EC = EARTH COVERAGE
Transmit Antenna Dimension (XAD)	ANTENNA GAIN____10_____ BEAMWIDTH _____53.26_____ XAD = XAD01 10G053B	(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)	For Meson: INCLINATION ANGLE_____97.4_____, APOGEE IN KILOMETERS_____ 500 _____, PERIGEE IN KILOMETERS_____ 500 _____, ORBITAL PERIOD IN HOURS __1_____AND FRACTIONS OF HOURS IN DECIMAL_.594 __, THE NUMBER OF SATELLITES IN THE SYSTEM____1 _____, For Inmarsat constellation: INCLINATION ANGLE____0_____, APOGEE IN KILOMETERS___35786_____, PERIGEE IN KILOMETERS____35786_____, ORBITAL PERIOD IN HOURS _24__AND FRACTIONS OF HOURS IN DECIMAL_00__, THE NUMBER OF SATELLITES IN THE SYSTEM___4_____, ORB = ORB,97.4IN00500AP00500PE001.59H01NRR01 ORB,00.0IN35786AP35786PE024.00H4GRT01	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,72.9IN03209AP00655PE013.46H01NRT01
For SunSynchronous Nongeostationary Orbits	Mean Local Time of Ascending Node (MLTAN) = 22:00 For Meson	MLTAN IS THE ANGLE BETWEEN AN ORBIT'S ASCENDING NODE AND THE MEAN SUN, OFTEN EXPRESSED AS UNIT OF TIME (HH:MM)

FCC notes:

3. Use S-Note S945.
4. REM AGN, Cubesat, Meson

Receiver Data Inmarsat Satellite

Iridium Satellite Receive Specifications		
Receive Antenna Polarization (RAP)	RAP = RAP 01 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 = NB	NB= NARROWBEAM EC = EARTH COVERAGE

Receive Antenna Dimension (RAD)	ANTENNA GAIN_44_____ BEAMWIDTH ____1.07_____ RAD = RAD01 44G001B	(NTIA format (RAD), EXAMPLE, RAD01 16G030B)
Type of satellite (State = SP) City = G/No	Type = Geo	Choose either: Geostationary or Nongeostationary
For Geostationary	Longitude = 143.5E, 63.9E, 98W, 24.9E	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)	For Meson: INCLINATION ANGLE_____97.4_____, APOGEE IN KILOMETERS_____ 500 _____, PERIGEE IN KILOMETERS_____ 500 _____, ORBITAL PERIOD IN HOURS __1_____AND FRACTIONS OF HOURS IN DECIMAL_.594 __, THE NUMBER OF SATELLITES IN THE SYSTEM____1 _____, For Inmarsat constellation: INCLINATION ANGLE____0_____, APOGEE IN KILOMETERS___35786_____, PERIGEE IN KILOMETERS____35786_____, ORBITAL PERIOD IN HOURS _24__AND FRACTIONS OF HOURS IN DECIMAL_00__, THE NUMBER OF SATELLITES IN THE SYSTEM___4_____, ORB = ORB,97.4IN00500AP00500PE001.59H01NRR01 ORB,00.0IN35786AP35786PE024.00H4GRT01	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

Number of Satellite Contacts Supported Per Day	N/A due to ISL	NUMBER OF TIMES THE SATELLITE WILL COMMUNICATE WITH THE EARTH STATION IN THE SPACE TO EARTH DIRECTION (DOWNLINKS) EACH DAY
Expected Duration of Each Contact	10 Seconds Max	AVERAGE DURATION OF EACH CONTACT
Supported Operations	Satellite Health and Status Data ☒ Mission Payload Data ☒	SATELLITE HEALTH AND STATUS TELEMETRY AND/OR MISSION PAYLOAD DATA

FCC notes:

3. Use S-Note S945.
4. REM AGN, Cubesat, Meson

Part B:

Iridium Constellation to Meson:

Satellite Transmitter Data

Transmit Frequencies: 174 Channels spaced 41.6667 kHz apart, plus ring tone. Low end of low channel 1618.75 MHz, High end of High channel 1626.2912 MHz.
Satellite Name: IRIDIUM CONSTELLATION

Data Field	Data Answer	Description/Comments
Polarization (XAP)	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)	XAZ = XAZ01 NB	NB= NARROWBEAM EC = EARTH COVERAGE
Antenna Dimension (XAD)	ANTENNA GAIN_20_____ BEAMWIDTH ____12_____ XAD = XAD01 20G012B	(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)	For Iridium constellation: INCLINATION ANGLE____86.4_____, APOGEE IN KILOMETERS_780_____, PERIGEE IN KILOMETERS____780_____, ORBITAL PERIOD IN HOURS _1__AND FRACTIONS OF HOURS IN DECIMAL_.73__, THE NUMBER OF SATELLITES IN THE SYSTEM___66_____, For Meson: INCLINATION ANGLE_____97.4_____, APOGEE IN KILOMETERS_____ 500 _____, PERIGEE IN KILOMETERS_____ 500 _____, ORBITAL PERIOD IN HOURS __1_____AND FRACTIONS OF HOURS IN DECIMAL_.594 __, THE NUMBER OF SATELLITES IN THE SYSTEM____1 _____, ORB = ORB,86.4IN00780AP00780PE001.73H66NRT01 ORB, 97.4IN00500AP00500PE001.59H01NRR01	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,72.9IN03209AP00655PE013.46H01NRT01

FCC notes:

1. Use S-Note S945.
2. REM AGN, Cubesat, Meson

Receiver Data Meson Satellite Iridium Transceiver Receive from Iridium Constellation

Satellite Receive Specifications		
Polarization (RAP)	RAP = RAP 01 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 = NB	NB= NARROWBEAM EC = EARTH COVERAGE

Dimension (RAD)	ANTENNA GAIN__3.7_____ BEAMWIDTH ____80_____ RAD = RAD01 RAD01 02G160B	(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)	For Iridium constellation: INCLINATION ANGLE____86.4_____, APOGEE IN KILOMETERS_780_____, PERIGEE IN KILOMETERS____780_____, ORBITAL PERIOD IN HOURS _1__AND FRACTIONS OF HOURS IN DECIMAL_.73__, THE NUMBER OF SATELLITES IN THE SYSTEM___66_____, For Meson: INCLINATION ANGLE_____97.4_____, APOGEE IN KILOMETERS_____ 500 _____, PERIGEE IN KILOMETERS_____ 500 _____, ORBITAL PERIOD IN HOURS __1_____AND FRACTIONS OF HOURS IN DECIMAL_.594 __, THE NUMBER OF SATELLITES IN THE SYSTEM____1 _____, ORB = ORB,86.4IN00780AP00780PE001.73H66NRT01 ORB,97.4IN00500AP00500PE001.59H01NRR01	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

Inmarsat Constellation to Meson:

Satellite Transmitter Data

Transmit Frequencies: 1525 MHz - 1559 MHz, centered at 1542 MHz		
Satellite Name: INMARSAT CONSTELLATION		
Data Field	**Data Answer**	**Description/Comments**

Polarization (XAP)	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)	XAZ = XAZ01 NB	NB= NARROWBEAM EC = EARTH COVERAGE
Antenna Dimension (XAD)	ANTENNA GAIN_44_____ BEAMWIDTH ____1.07_____ XAD = XAD01 44G001B	(NTIA format (XAD), EXAMPLE, XAD01 16G030B)
Type of satellite (State = SP) (City = geo or non)	Type = GEO	Choose either: Geostationary or Nongeostationary
For Geostationary	Longitude = 143.5E, 63.9E, 98W, 24.9E	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)	For Inmarsat constellation: INCLINATION ANGLE____0_____, APOGEE IN KILOMETERS___35786_____, PERIGEE IN KILOMETERS____35786_____, ORBITAL PERIOD IN HOURS _24__AND FRACTIONS OF HOURS IN DECIMAL_00__, THE NUMBER OF SATELLITES IN THE SYSTEM___4____, For Meson: INCLINATION ANGLE_____97.4_____, APOGEE IN KILOMETERS_____ 500 _____, PERIGEE IN KILOMETERS_____ 500 _____, ORBITAL PERIOD IN HOURS __1_____AND FRACTIONS OF HOURS IN DECIMAL_.594 __, THE NUMBER OF SATELLITES IN THE SYSTEM____1 _____, ORB = ORB,00.0IN35786AP35786PE024.00H4GRT01 ORB,97.4IN00500AP00500PE001.59H01NRR01	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,72.9IN03209AP00655PE013.46H01NRT01

FCC notes: 3. Use S-Note S945. 4. REM AGN, Cubesat, Meson

Receiver Data Meson Satellite Iridium Transceiver Receive from Inmarsat Constellation

Satellite Receive Specifications		
Polarization (RAP)	RAP = RAP 01 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 = NB	NB= NARROWBEAM EC = EARTH COVERAGE
Dimension (RAD)	ANTENNA GAIN__9.7_____ BEAMWIDTH ____58_____ RAD = RAD01 RAD01 9.7G058B	(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)	For Inmarsat constellation: INCLINATION ANGLE____0_____, APOGEE IN KILOMETERS___35786_____, PERIGEE IN KILOMETERS____35786_____, ORBITAL PERIOD IN HOURS _24__AND FRACTIONS OF HOURS IN DECIMAL_00__, THE NUMBER OF SATELLITES IN THE SYSTEM__4____, For Meson: INCLINATION ANGLE_____97.4_____, APOGEE IN KILOMETERS_____ 500 _____, PERIGEE IN KILOMETERS_____ 500 _____, ORBITAL PERIOD IN HOURS __1_____AND FRACTIONS OF HOURS IN DECIMAL_.594 __, THE NUMBER OF SATELLITES IN THE SYSTEM____1 _____,	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

	ORB = ORB,00.0IN35786AP35786PE024.00H4GRT01 ORB,97.4IN00500AP00500PE001.59H01NRR01	