NTIA Space Record Data Form

(Note: Apex recognizes its frequency plan's complexity and, therefore, has summarized all inputs in its application's technical annex (table 1 and table 2) for convenience. Apex also notes no U.S.-based earth stations will communicate with the Apex Aries 1 satellite; in other words, no space-to-Earth or Earth-to-space transmissions will occur inside the United States.)

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 (Required for Each Frequency)

Transmit Frequency:400.5 MHz		
Satellite Name: Apex Aries 1		
Data Field	**Data Answer**	**Description/Comments**
Transmit Power (PWR)	PWR = 1.2 W	TRANSMIT POWER SUPPLIED TO THE ANTENNA INPUT TERMINAL, EXAMPLE, PWR01 W2 TRANSMIT POWER UNITS INCLUDE: W = WATT, K = KILOWATT, M = MEGAWATT
Necessary Bandwidth	2.64 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	3 kHz	
-20 dB bandwidth	17.5 kHz	
-40 dB bandwidth	25 kHz	
-60 dB bandwidth	40 kHz	
Modulation Type	2GFSK	THE METHOD USED TO SUPERIMPOSE DATA ON THE CARRIER, EXAMPLE, BPSK, QPSK, GMSK.
Data Rate	1.2 kbps	INFORMATION DATA RATE
Forward Error Correction Coding	Is FEC used? Yes ☐ No ☒ FEC Type: _____, FEC Rate: _____,	
Total Symbol Rate	1.2 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 ☐	
Transmit Antenna Polarization (XAP)	XAP = J	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 = EC	NB= NARROWBEAM EC = EARTH COVERAGE
Transmit Antenna Dimension (XAD)	ANTENNA GAIN___0 dBi_____, BEAMWIDTH ____360_____, XAD = 0G360B	NTIA FORMAT (XAD), EXAMPLE, FOR 16 DBI ANTENNA GAIN AND 30 DEGREE BEAMWIDTH XAD01 16G030B
Type of satellite (State = SPCE) (City = Geo or Nongeo)	Type = NONGEOSTATIONARY	CHOOSE EITHER: GEOSTATIONARY OR NONGEOSTATIONARY
For Geostationary Satellites	Longitude =	IF ANY SATELLITES ARE GEOSTATIONARY, REPORT ITS LATITUDE AS 000000N (XLA AND/OR RLA) AND REPORT ITS LONGITUDE IN DDDMMSS FORMAT (XLG AND/OR RLG).
For Nongeostationary (Orbital Data)	INCLINATION ANGLE_____97.4deg____, APOGEE IN KILOMETERS___525_km___, PERIGEE IN KILOMETERS___525 km___, ORBITAL PERIOD IN HOURS ___1__AND FRACTIONS OF HOURS IN DECIMAL___0.58___, THE NUMBER OF SATELLITES IN THE SYSTEM_____1_____, ORB = 97.4IN00525AP00525PE001.58H01T01	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
For SunSynchronous Nongeostationary Orbits	Mean Local Time of Ascending Node (MLTAN) =_____13:00_____	MLTAN IS THE ANGLE BETWEEN AN ORBIT'S ASCENDING NODE AND THE MEAN SUN, OFTEN EXPRESSED AS UNIT OF TIME (HH:MM)
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = South Africa	

City Name (RAL)	RAL = Pretoria	
Latitude (DDMMSS)	Lat = -255136	
Longitude (DDDMMSS)	Lon = 0282700	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00
Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	4	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Sweden	
City Name (RAL)	RAL = Boden	
Latitude (DDMMSS)	Lat = 654800	
Longitude (DDDMMSS)	Lon = 0214048	

Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00
Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	11	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	8 minutes	AVERAGE DURATION OF EACH CONTACT
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Southern Australia	
City Name (RAL)	RAL = Peterborough	
Latitude (DDMMSS)	Lat = -325743	
Longitude (DDDMMSS)	Lon = 1385058	
Receive Antenna Polarization (RAP)	RAP = J	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

Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00
Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Western Australia	
City Name (RAL)	RAL = Nangetty	
Latitude (DDMMSS)	Lat = -290037	
Longitude (DDDMMSS)	Lon = 1152030	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Azerbaijan	
City Name (RAL)	RAL = Absheron	
Latitude (DDMMSS)	Lat = 402758	
Longitude (DDDMMSS)	Lon = 492908	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Bulgaria	
City Name (RAL)	RAL = Plana	
Latitude (DDMMSS)	Lat = 422858	
Longitude (DDDMMSS)	Lon = 0232643	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Spain	
City Name (RAL)	RAL = Puertollano	
Latitude (DDMMSS)	Lat = 384026	
Longitude (DDDMMSS)	Lon = -0040943	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Iceland	
City Name (RAL)	RAL = Blönduós	
Latitude (DDMMSS)	Lat = 653850	
Longitude (DDDMMSS)	Lon = -0201445	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Italy	
City Name (RAL)	RAL = Vimercate	
Latitude (DDMMSS)	Lat = 453536	
Longitude (DDDMMSS)	Lon = 0092144	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Italy	
City Name (RAL)	RAL = Lomazzo	
Latitude (DDMMSS)	Lat = 454150	
Longitude (DDDMMSS)	Lon = 0090205	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Sri Lanka	
City Name (RAL)	RAL = Kandy	
Latitude (DDMMSS)	Lat = 071627	
Longitude (DDDMMSS)	Lon = 0804329	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = New Zealand	
City Name (RAL)	RAL = Awarua	
Latitude (DDMMSS)	Lat = -463141	
Longitude (DDDMMSS)	Lon = 1682245	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Azores, Portugal	
City Name (RAL)	RAL = Santa Maria	
Latitude (DDMMSS)	Lat = 365951	
Longitude (DDDMMSS)	Lon = 0250814	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = United Kingdom	
City Name (RAL)	RAL = Unst, Shetland	
Latitude (DDMMSS)	Lat = 604452	
Longitude (DDDMMSS)	Lon = -0005128	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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

Transmit Frequency:401.5 MHz		
Satellite Name: Apex Aries 1		
Data Field	**Data Answer**	**Description/Comments**
Transmit Power (PWR)	PWR = 1.2 W	TRANSMIT POWER SUPPLIED TO THE ANTENNA INPUT TERMINAL, EXAMPLE, PWR01 W2 TRANSMIT POWER UNITS INCLUDE: W = WATT, K = KILOWATT, M = MEGAWATT
Necessary Bandwidth	2.64 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	3 kHz	
-20 dB bandwidth	17.5 kHz	
-40 dB bandwidth	25 kHz	
-60 dB bandwidth	40 kHz	
Modulation Type	2GFSK	THE METHOD USED TO SUPERIMPOSE DATA ON THE CARRIER, EXAMPLE, BPSK, QPSK, GMSK.

Data Rate	1.2 kbps	INFORMATION DATA RATE
Forward Error Correction Coding	Is FEC used? Yes ☐ No ☒ FEC Type: _____, FEC Rate: _____,	
Total Symbol Rate	1.2 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 ☐	
Transmit Antenna Polarization (XAP)	XAP = J	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 = EC	NB= NARROWBEAM EC = EARTH COVERAGE
Transmit Antenna Dimension (XAD)	ANTENNA GAIN___0 dBi_____, BEAMWIDTH ____360_____, XAD = 0G360B	NTIA FORMAT (XAD), EXAMPLE, FOR 16 DBI ANTENNA GAIN AND 30 DEGREE BEAMWIDTH XAD01 16G030B
Type of satellite (State = SPCE) (City = Geo or Nongeo)	Type = NONGEOSTATIONARY	CHOOSE EITHER: GEOSTATIONARY OR NONGEOSTATIONARY
For Geostationary Satellites	Longitude =	IF ANY SATELLITES ARE GEOSTATIONARY, REPORT ITS LATITUDE AS 000000N (XLA AND/OR RLA) AND REPORT ITS LONGITUDE IN DDDMMSS FORMAT (XLG AND/OR RLG).
For Nongeostationary (Orbital Data)	INCLINATION ANGLE_____97.4deg____, APOGEE IN KILOMETERS___525_km___, PERIGEE IN KILOMETERS___525 km___, ORBITAL PERIOD IN HOURS ___1__AND FRACTIONS OF HOURS IN DECIMAL___0.58___, THE NUMBER OF SATELLITES IN THE SYSTEM_____1_____, ORB = 97.4IN00525AP00525PE001.58H01T01	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

For SunSynchronous Nongeostationary Orbits	Mean Local Time of Ascending Node (MLTAN) =_____13:00_____	MLTAN IS THE ANGLE BETWEEN AN ORBIT'S ASCENDING NODE AND THE MEAN SUN, OFTEN EXPRESSED AS UNIT OF TIME (HH:MM)
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = South Africa	
City Name (RAL)	RAL = Pretoria	
Latitude (DDMMSS)	Lat = -255136	
Longitude (DDDMMSS)	Lon = 0282700	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00
Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	4	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	8 minutes	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

Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Sweden	
City Name (RAL)	RAL = Boden	
Latitude (DDMMSS)	Lat = 654800	
Longitude (DDDMMSS)	Lon = 0214048	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00
Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	11	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	8 minutes	AVERAGE DURATION OF EACH CONTACT
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Southern Australia	
City Name (RAL)	RAL = Peterborough	
Latitude (DDMMSS)	Lat = -325743	
Longitude (DDDMMSS)	Lon = 1385058	

Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00
Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Western Australia	
City Name (RAL)	RAL = Nangetty	
Latitude (DDMMSS)	Lat = -290037	
Longitude (DDDMMSS)	Lon = 1152030	
Receive Antenna Polarization (RAP)	RAP = J	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

Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00
Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Azerbaijan	
City Name (RAL)	RAL = Absheron	
Latitude (DDMMSS)	Lat = 402758	
Longitude (DDDMMSS)	Lon = 492908	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Bulgaria	
City Name (RAL)	RAL = Plana	
Latitude (DDMMSS)	Lat = 422858	
Longitude (DDDMMSS)	Lon = 0232643	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Spain	
City Name (RAL)	RAL = Puertollano	
Latitude (DDMMSS)	Lat = 384026	
Longitude (DDDMMSS)	Lon = -0040943	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Iceland	
City Name (RAL)	RAL = Blönduós	
Latitude (DDMMSS)	Lat = 653850	
Longitude (DDDMMSS)	Lon = -0201445	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Italy	
City Name (RAL)	RAL = Vimercate	
Latitude (DDMMSS)	Lat = 453536	
Longitude (DDDMMSS)	Lon = 0092144	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Italy	
City Name (RAL)	RAL = Lomazzo	
Latitude (DDMMSS)	Lat = 454150	
Longitude (DDDMMSS)	Lon = 0090205	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Sri Lanka	
City Name (RAL)	RAL = Kandy	
Latitude (DDMMSS)	Lat = 071627	
Longitude (DDDMMSS)	Lon = 0804329	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = New Zealand	
City Name (RAL)	RAL = Awarua	
Latitude (DDMMSS)	Lat = -463141	
Longitude (DDDMMSS)	Lon = 1682245	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Azores, Portugal	
City Name (RAL)	RAL = Santa Maria	
Latitude (DDMMSS)	Lat = 365951	
Longitude (DDDMMSS)	Lon = 0250814	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = United Kingdom	
City Name (RAL)	RAL = Unst, Shetland	
Latitude (DDMMSS)	Lat = 604452	
Longitude (DDDMMSS)	Lon = -0005128	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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

Transmit Frequency:400.5 MHz		
Satellite Name: Apex Aries 1		
Data Field	**Data Answer**	**Description/Comments**
Transmit Power (PWR)	PWR = 2 W	TRANSMIT POWER SUPPLIED TO THE ANTENNA INPUT TERMINAL, EXAMPLE, PWR01 W2 TRANSMIT POWER UNITS INCLUDE: W = WATT, K = KILOWATT, M = MEGAWATT
Necessary Bandwidth	65.28 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	68.28 kHz	
-20 dB bandwidth	82.3 kHz	
-40 dB bandwidth	92 kHz	
-60 dB bandwidth	105 kHz	

Modulation Type	2GFSK	THE METHOD USED TO SUPERIMPOSE DATA ON THE CARRIER, EXAMPLE, BPSK, QPSK, GMSK.
Data Rate	1.2 kbps	INFORMATION DATA RATE
Forward Error Correction Coding	Is FEC used? Yes ☐ No ☒ FEC Type: _____, FEC Rate: _____,	
Total Symbol Rate	1.2 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 ☐	
Transmit Antenna Polarization (XAP)	XAP = J	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 = EC	NB= NARROWBEAM EC = EARTH COVERAGE
Transmit Antenna Dimension (XAD)	ANTENNA GAIN___0 dBi_____, BEAMWIDTH ____360_____, XAD = 0G360B	NTIA FORMAT (XAD), EXAMPLE, FOR 16 DBI ANTENNA GAIN AND 30 DEGREE BEAMWIDTH XAD01 16G030B
Type of satellite (State = SPCE) (City = Geo or Nongeo)	Type = NONGEOSTATIONARY	CHOOSE EITHER: GEOSTATIONARY OR NONGEOSTATIONARY
For Geostationary Satellites	Longitude =	IF ANY SATELLITES ARE GEOSTATIONARY, REPORT ITS LATITUDE AS 000000N (XLA AND/OR RLA) AND REPORT ITS LONGITUDE IN DDDMMSS FORMAT (XLG AND/OR RLG).

For Nongeostationary (Orbital Data)	INCLINATION ANGLE_____97.4deg____, APOGEE IN KILOMETERS___525_km___, PERIGEE IN KILOMETERS___525 km___, ORBITAL PERIOD IN HOURS ___1__AND FRACTIONS OF HOURS IN DECIMAL___0. 58___, THE NUMBER OF SATELLITES IN THE SYSTEM_____1_____, ORB = 97.4IN00525AP00525PE001.58H01T01	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
For SunSynchronous Nongeostationary Orbits	Mean Local Time of Ascending Node (MLTAN) =_____13:00_____	MLTAN IS THE ANGLE BETWEEN AN ORBIT'S ASCENDING NODE AND THE MEAN SUN, OFTEN EXPRESSED AS UNIT OF TIME (HH:MM)
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = South Africa	
City Name (RAL)	RAL = Pretoria	
Latitude (DDMMSS)	Lat = -255136	
Longitude (DDDMMSS)	Lon = 0282700	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00
Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	

Number of Satellite Contacts Supported Per Day	4	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Sweden	
City Name (RAL)	RAL = Boden	
Latitude (DDMMSS)	Lat = 654800	
Longitude (DDDMMSS)	Lon = 0214048	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00
Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	11	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Southern Australia	
City Name (RAL)	RAL = Peterborough	
Latitude (DDMMSS)	Lat = -325743	
Longitude (DDDMMSS)	Lon = 1385058	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00
Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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

Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Western Australia	
City Name (RAL)	RAL = Nangetty	
Latitude (DDMMSS)	Lat = -290037	
Longitude (DDDMMSS)	Lon = 1152030	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00
Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Azerbaijan	
City Name (RAL)	RAL = Absheron	
Latitude (DDMMSS)	Lat = 402758	

Longitude (DDDMMSS)	Lon = 492908	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00
Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Bulgaria	
City Name (RAL)	RAL = Plana	
Latitude (DDMMSS)	Lat = 422858	
Longitude (DDDMMSS)	Lon = 0232643	

Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00
Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Spain	
City Name (RAL)	RAL = Puertollano	
Latitude (DDMMSS)	Lat = 384026	
Longitude (DDDMMSS)	Lon = -0040943	
Receive Antenna Polarization (RAP)	RAP = J	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

Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00
Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Iceland	
City Name (RAL)	RAL = Blönduós	
Latitude (DDMMSS)	Lat = 653850	
Longitude (DDDMMSS)	Lon = -0201445	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Italy	
City Name (RAL)	RAL = Vimercate	
Latitude (DDMMSS)	Lat = 453536	
Longitude (DDDMMSS)	Lon = 0092144	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Italy	
City Name (RAL)	RAL = Lomazzo	
Latitude (DDMMSS)	Lat = 454150	
Longitude (DDDMMSS)	Lon = 0090205	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Sri Lanka	
City Name (RAL)	RAL = Kandy	
Latitude (DDMMSS)	Lat = 071627	
Longitude (DDDMMSS)	Lon = 0804329	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = New Zealand	
City Name (RAL)	RAL = Awarua	
Latitude (DDMMSS)	Lat = -463141	
Longitude (DDDMMSS)	Lon = 1682245	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Azores, Portugal	
City Name (RAL)	RAL = Santa Maria	
Latitude (DDMMSS)	Lat = 365951	
Longitude (DDDMMSS)	Lon = 0250814	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = United Kingdom	
City Name (RAL)	RAL = Unst, Shetland	
Latitude (DDMMSS)	Lat = 604452	
Longitude (DDDMMSS)	Lon = -0005128	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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, (Apex Aries 1)		

Transmit Frequency:401.5 MHz		
Satellite Name: Apex Aries 1		
Data Field	**Data Answer**	**Description/Comments**
Transmit Power (PWR)	PWR = 2 W	TRANSMIT POWER SUPPLIED TO THE ANTENNA INPUT TERMINAL, EXAMPLE, PWR01 W2 TRANSMIT POWER UNITS INCLUDE: W = WATT, K = KILOWATT, M = MEGAWATT
Necessary Bandwidth	65.28 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	68.28 kHz	
-20 dB bandwidth	82.3 kHz	

-40 dB bandwidth	92 kHz	
-60 dB bandwidth	105 kHz	
Modulation Type	2GFSK	THE METHOD USED TO SUPERIMPOSE DATA ON THE CARRIER, EXAMPLE, BPSK, QPSK, GMSK.
Data Rate	1.2 kbps	INFORMATION DATA RATE
Forward Error Correction Coding	Is FEC used? Yes ☐ No ☒ FEC Type: _____, FEC Rate: _____,	
Total Symbol Rate	1.2 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 ☐	
Transmit Antenna Polarization (XAP)	XAP = J	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 = EC	NB= NARROWBEAM EC = EARTH COVERAGE
Transmit Antenna Dimension (XAD)	ANTENNA GAIN___0 dBi_____, BEAMWIDTH ____360_____, XAD = 0G360B	NTIA FORMAT (XAD), EXAMPLE, FOR 16 DBI ANTENNA GAIN AND 30 DEGREE BEAMWIDTH XAD01 16G030B
Type of satellite (State = SPCE) (City = Geo or Nongeo)	Type = NONGEOSTATIONARY	CHOOSE EITHER: GEOSTATIONARY OR NONGEOSTATIONARY
For Geostationary Satellites	Longitude =	IF ANY SATELLITES ARE GEOSTATIONARY, REPORT ITS LATITUDE AS 000000N (XLA AND/OR RLA) AND REPORT ITS LONGITUDE IN DDDMMSS FORMAT (XLG AND/OR RLG).

For Nongeostationary (Orbital Data)	INCLINATION ANGLE_____97.4deg____, APOGEE IN KILOMETERS___525_km___, PERIGEE IN KILOMETERS___525 km___, ORBITAL PERIOD IN HOURS ___1__AND FRACTIONS OF HOURS IN DECIMAL___0. 58___, THE NUMBER OF SATELLITES IN THE SYSTEM_____1_____, ORB = 97.4IN00525AP00525PE001.58H01T01	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
For SunSynchronous Nongeostationary Orbits	Mean Local Time of Ascending Node (MLTAN) =_____13:00_____	MLTAN IS THE ANGLE BETWEEN AN ORBIT'S ASCENDING NODE AND THE MEAN SUN, OFTEN EXPRESSED AS UNIT OF TIME (HH:MM)
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = South Africa	
City Name (RAL)	RAL = Pretoria	
Latitude (DDMMSS)	Lat = -255136	
Longitude (DDDMMSS)	Lon = 0282700	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00
Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	

Number of Satellite Contacts Supported Per Day	4	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Sweden	
City Name (RAL)	RAL = Boden	
Latitude (DDMMSS)	Lat = 654800	
Longitude (DDDMMSS)	Lon = 0214048	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00
Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	11	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Southern Australia	
City Name (RAL)	RAL = Peterborough	
Latitude (DDMMSS)	Lat = -325743	
Longitude (DDDMMSS)	Lon = 1385058	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00
Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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

Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Western Australia	
City Name (RAL)	RAL = Nangetty	
Latitude (DDMMSS)	Lat = -290037	
Longitude (DDDMMSS)	Lon = 1152030	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00
Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Azerbaijan	
City Name (RAL)	RAL = Absheron	
Latitude (DDMMSS)	Lat = 402758	

Longitude (DDDMMSS)	Lon = 492908	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00
Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Bulgaria	
City Name (RAL)	RAL = Plana	
Latitude (DDMMSS)	Lat = 422858	
Longitude (DDDMMSS)	Lon = 0232643	

Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00
Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Spain	
City Name (RAL)	RAL = Puertollano	
Latitude (DDMMSS)	Lat = 384026	
Longitude (DDDMMSS)	Lon = -0040943	
Receive Antenna Polarization (RAP)	RAP = J	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

Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00
Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Iceland	
City Name (RAL)	RAL = Blönduós	
Latitude (DDMMSS)	Lat = 653850	
Longitude (DDDMMSS)	Lon = -0201445	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Italy	
City Name (RAL)	RAL = Vimercate	
Latitude (DDMMSS)	Lat = 453536	
Longitude (DDDMMSS)	Lon = 0092144	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Italy	
City Name (RAL)	RAL = Lomazzo	
Latitude (DDMMSS)	Lat = 454150	
Longitude (DDDMMSS)	Lon = 0090205	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Sri Lanka	
City Name (RAL)	RAL = Kandy	
Latitude (DDMMSS)	Lat = 071627	
Longitude (DDDMMSS)	Lon = 0804329	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = New Zealand	
City Name (RAL)	RAL = Awarua	
Latitude (DDMMSS)	Lat = -463141	
Longitude (DDDMMSS)	Lon = 1682245	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Azores, Portugal	
City Name (RAL)	RAL = Santa Maria	
Latitude (DDMMSS)	Lat = 365951	
Longitude (DDDMMSS)	Lon = 0250814	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = United Kingdom	
City Name (RAL)	RAL = Unst, Shetland	
Latitude (DDMMSS)	Lat = 604452	
Longitude (DDDMMSS)	Lon = -0005128	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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, (Apex Aries 1)		

Transmit Frequency:2287.5 MHz		
Satellite Name: Apex Aries 1		
Data Field	**Data Answer**	**Description/Comments**
Transmit Power (PWR)	PWR = 0.143 W	TRANSMIT POWER SUPPLIED TO THE ANTENNA INPUT TERMINAL, EXAMPLE, PWR01 W2 TRANSMIT POWER UNITS INCLUDE: W = WATT, K = KILOWATT, M = MEGAWATT
Necessary Bandwidth	168.8 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	170 kHz	
-20 dB bandwidth	200 kHz	

-40 dB bandwidth	240 kHz	
-60 dB bandwidth	400 kHz	
Modulation Type	BPSK	THE METHOD USED TO SUPERIMPOSE DATA ON THE CARRIER, EXAMPLE, BPSK, QPSK, GMSK.
Data Rate	54.7 kBps	INFORMATION DATA RATE
Forward Error Correction Coding	Is FEC used? Yes ☒ No ☐ FEC Type: __Reed-Solomon and ½ CC_ , FEC Rate: _____0.563_____,	
Total Symbol Rate	125 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 ☐	
Transmit 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
Transmit Antenna Orientation (XAZ)	XAZ = EC	NB= NARROWBEAM EC = EARTH COVERAGE
Transmit Antenna Dimension (XAD)	ANTENNA GAIN___6 dBi_____, BEAMWIDTH ____70_____, XAD = 6G070B	NTIA FORMAT (XAD), EXAMPLE, FOR 16 DBI ANTENNA GAIN AND 30 DEGREE BEAMWIDTH XAD01 16G030B
Type of satellite (State = SPCE) (City = Geo or Nongeo)	Type = NONGEOSTATIONARY	CHOOSE EITHER: GEOSTATIONARY OR NONGEOSTATIONARY
For Geostationary Satellites	Longitude =	IF ANY SATELLITES ARE GEOSTATIONARY, REPORT ITS LATITUDE AS 000000N (XLA AND/OR RLA) AND REPORT ITS LONGITUDE IN DDDMMSS FORMAT (XLG AND/OR RLG).

For Nongeostationary (Orbital Data)	INCLINATION ANGLE_____97.4deg____, APOGEE IN KILOMETERS___525_km___, PERIGEE IN KILOMETERS___525 km___, ORBITAL PERIOD IN HOURS ___1__AND FRACTIONS OF HOURS IN DECIMAL___0.58___, THE NUMBER OF SATELLITES IN THE SYSTEM_____1_____, ORB = 97.4IN00525AP00525PE001.58H01T01	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
For SunSynchronous Nongeostationary Orbits	Mean Local Time of Ascending Node (MLTAN) =_____13:00_____	MLTAN IS THE ANGLE BETWEEN AN ORBIT'S ASCENDING NODE AND THE MEAN SUN, OFTEN EXPRESSED AS UNIT OF TIME (HH:MM)
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = South Africa	
City Name (RAL)	RAL = Pretoria	
Latitude (DDMMSS)	Lat = -255136	
Longitude (DDDMMSS)	Lon = 0282700	
Receive 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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00
Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	

Number of Satellite Contacts Supported Per Day	4	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Sweden	
City Name (RAL)	RAL = Boden	
Latitude (DDMMSS)	Lat = 654800	
Longitude (DDDMMSS)	Lon = 0214048	
Receive 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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00
Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	11	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Australia	
City Name (RAL)	RAL = Currans Hill	
Latitude (DDMMSS)	Lat = -340224	
Longitude (DDDMMSS)	Lon = 1504612	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00
Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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

Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Bahrain	
City Name (RAL)	RAL = Zallaq	
Latitude (DDMMSS)	Lat = 260300	
Longitude (DDDMMSS)	Lon = 0503000	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00
Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Ireland	
City Name (RAL)	RAL = Dublin	
Latitude (DDMMSS)	Lat = 532400	

Longitude (DDDMMSS)	Lon = -0061312	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00
Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Southern Australia	
City Name (RAL)	RAL = Peterborough	
Latitude (DDMMSS)	Lat = -325743	
Longitude (DDDMMSS)	Lon = 1385058	

Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00
Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Western Australia	
City Name (RAL)	RAL = Nangetty	
Latitude (DDMMSS)	Lat = -290037	
Longitude (DDDMMSS)	Lon = 1152030	
Receive Antenna Polarization (RAP)	RAP = J	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

Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00
Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Azerbaijan	
City Name (RAL)	RAL = Absheron	
Latitude (DDMMSS)	Lat = 402758	
Longitude (DDDMMSS)	Lon = 492908	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Bulgaria	
City Name (RAL)	RAL = Plana	
Latitude (DDMMSS)	Lat = 422858	
Longitude (DDDMMSS)	Lon = 0232643	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Spain	
City Name (RAL)	RAL = Puertollano	
Latitude (DDMMSS)	Lat = 384026	
Longitude (DDDMMSS)	Lon = -0040943	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Iceland	
City Name (RAL)	RAL = Blönduós	
Latitude (DDMMSS)	Lat = 653850	
Longitude (DDDMMSS)	Lon = -0201445	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Italy	
City Name (RAL)	RAL = Vimercate	
Latitude (DDMMSS)	Lat = 453536	
Longitude (DDDMMSS)	Lon = 0092144	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Italy	
City Name (RAL)	RAL = Lomazzo	
Latitude (DDMMSS)	Lat = 454150	
Longitude (DDDMMSS)	Lon = 0090205	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Sri Lanka	
City Name (RAL)	RAL = Kandy	
Latitude (DDMMSS)	Lat = 071627	
Longitude (DDDMMSS)	Lon = 0804329	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = New Zealand	
City Name (RAL)	RAL = Awarua	
Latitude (DDMMSS)	Lat = -463141	
Longitude (DDDMMSS)	Lon = 1682245	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Azores, Portugal	
City Name (RAL)	RAL = Santa Maria	
Latitude (DDMMSS)	Lat = 365951	
Longitude (DDDMMSS)	Lon = 0250814	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = United Kingdom	
City Name (RAL)	RAL = Unst, Shetland	
Latitude (DDMMSS)	Lat = 604452	
Longitude (DDDMMSS)	Lon = -0005128	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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, (Apex Aries 1)		

Transmit Frequency:2287.5 MHz		
Satellite Name: Apex Aries 1		
Data Field	**Data Answer**	**Description/Comments**
Transmit Power (PWR)	PWR = 0.85 W	TRANSMIT POWER SUPPLIED TO THE ANTENNA INPUT TERMINAL, EXAMPLE, PWR01 W2 TRANSMIT POWER UNITS INCLUDE: W = WATT, K = KILOWATT, M = MEGAWATT
Necessary Bandwidth	1 MHz	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	1.02 MHz	
-20 dB bandwidth	1.08 MHz	

-40 dB bandwidth	1.14 MHz	
-60 dB bandwidth	1.20 MHz	
Modulation Type	BPSK	THE METHOD USED TO SUPERIMPOSE DATA ON THE CARRIER, EXAMPLE, BPSK, QPSK, GMSK.
Data Rate	54.7 kBps	INFORMATION DATA RATE
Forward Error Correction Coding	Is FEC used? Yes ☒ No ☐ FEC Type: __Reed-Solomon and ½ CC_ , FEC Rate: _____0.563_____,	
Total Symbol Rate	125 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 ☐	
Transmit 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
Transmit Antenna Orientation (XAZ)	XAZ = EC	NB= NARROWBEAM EC = EARTH COVERAGE
Transmit Antenna Dimension (XAD)	ANTENNA GAIN___5 dBi_____, BEAMWIDTH ____70_____, XAD = 5G070B	NTIA FORMAT (XAD), EXAMPLE, FOR 16 DBI ANTENNA GAIN AND 30 DEGREE BEAMWIDTH XAD01 16G030B
Type of satellite (State = SPCE) (City = Geo or Nongeo)	Type = NONGEOSTATIONARY	CHOOSE EITHER: GEOSTATIONARY OR NONGEOSTATIONARY
For Geostationary Satellites	Longitude =	IF ANY SATELLITES ARE GEOSTATIONARY, REPORT ITS LATITUDE AS 000000N (XLA AND/OR RLA) AND REPORT ITS LONGITUDE IN DDDMMSS FORMAT (XLG AND/OR RLG).

For Nongeostationary (Orbital Data)	INCLINATION ANGLE_____97.4deg____, APOGEE IN KILOMETERS___525_km___, PERIGEE IN KILOMETERS___525 km___, ORBITAL PERIOD IN HOURS ___1__AND FRACTIONS OF HOURS IN DECIMAL___0.58___, THE NUMBER OF SATELLITES IN THE SYSTEM_____1_____, ORB = 97.4IN00525AP00525PE001.58H01T01	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
For SunSynchronous Nongeostationary Orbits	Mean Local Time of Ascending Node (MLTAN) =_____13:00_____	MLTAN IS THE ANGLE BETWEEN AN ORBIT'S ASCENDING NODE AND THE MEAN SUN, OFTEN EXPRESSED AS UNIT OF TIME (HH:MM)
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = South Africa	
City Name (RAL)	RAL = Pretoria	
Latitude (DDMMSS)	Lat = -255136	
Longitude (DDDMMSS)	Lon = 0282700	
Receive 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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00
Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	

Number of Satellite Contacts Supported Per Day	4	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Sweden	
City Name (RAL)	RAL = Boden	
Latitude (DDMMSS)	Lat = 654800	
Longitude (DDDMMSS)	Lon = 0214048	
Receive 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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00
Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	11	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Australia	
City Name (RAL)	RAL = Currans Hill	
Latitude (DDMMSS)	Lat = -340224	
Longitude (DDDMMSS)	Lon = 1504612	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00
Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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

Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Bahrain	
City Name (RAL)	RAL = Zallaq	
Latitude (DDMMSS)	Lat = 260300	
Longitude (DDDMMSS)	Lon = 0503000	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00
Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Ireland	
City Name (RAL)	RAL = Dublin	
Latitude (DDMMSS)	Lat = 532400	

Longitude (DDDMMSS)	Lon = -0061312	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00
Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Southern Australia	
City Name (RAL)	RAL = Peterborough	
Latitude (DDMMSS)	Lat = -325743	
Longitude (DDDMMSS)	Lon = 1385058	

Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00
Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Western Australia	
City Name (RAL)	RAL = Nangetty	
Latitude (DDMMSS)	Lat = -290037	
Longitude (DDDMMSS)	Lon = 1152030	
Receive Antenna Polarization (RAP)	RAP = J	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

Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00
Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Azerbaijan	
City Name (RAL)	RAL = Absheron	
Latitude (DDMMSS)	Lat = 402758	
Longitude (DDDMMSS)	Lon = 492908	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Bulgaria	
City Name (RAL)	RAL = Plana	
Latitude (DDMMSS)	Lat = 422858	
Longitude (DDDMMSS)	Lon = 0232643	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Spain	
City Name (RAL)	RAL = Puertollano	
Latitude (DDMMSS)	Lat = 384026	
Longitude (DDDMMSS)	Lon = -0040943	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Iceland	
City Name (RAL)	RAL = Blönduós	
Latitude (DDMMSS)	Lat = 653850	
Longitude (DDDMMSS)	Lon = -0201445	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Italy	
City Name (RAL)	RAL = Vimercate	
Latitude (DDMMSS)	Lat = 453536	
Longitude (DDDMMSS)	Lon = 0092144	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Italy	
City Name (RAL)	RAL = Lomazzo	
Latitude (DDMMSS)	Lat = 454150	
Longitude (DDDMMSS)	Lon = 0090205	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Sri Lanka	
City Name (RAL)	RAL = Kandy	
Latitude (DDMMSS)	Lat = 071627	
Longitude (DDDMMSS)	Lon = 0804329	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = New Zealand	
City Name (RAL)	RAL = Awarua	
Latitude (DDMMSS)	Lat = -463141	
Longitude (DDDMMSS)	Lon = 1682245	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Azores, Portugal	
City Name (RAL)	RAL = Santa Maria	
Latitude (DDMMSS)	Lat = 365951	
Longitude (DDDMMSS)	Lon = 0250814	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = United Kingdom	
City Name (RAL)	RAL = Unst, Shetland	
Latitude (DDMMSS)	Lat = 604452	
Longitude (DDDMMSS)	Lon = -0005128	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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, (Apex Aries 1)		

Transmit Frequency:8212.5 MHz		
Satellite Name: Apex Aries 1		
Data Field	**Data Answer**	**Description/Comments**
Transmit Power (PWR)	PWR = 1 W	TRANSMIT POWER SUPPLIED TO THE ANTENNA INPUT TERMINAL, EXAMPLE, PWR01 W2 TRANSMIT POWER UNITS INCLUDE: W = WATT, K = KILOWATT, M = MEGAWATT
Necessary Bandwidth	13.5 MHz	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	65 MHz	
-20 dB bandwidth	75 MHz	
-40 dB bandwidth	85 MHz	
-60 dB bandwidth	100 MHz	

Modulation Type	16APSK	THE METHOD USED TO SUPERIMPOSE DATA ON THE CARRIER, EXAMPLE, BPSK, QPSK, GMSK.
Data Rate	103 Mbps	INFORMATION DATA RATE
Forward Error Correction Coding	Is FEC used? Yes ☒ No ☐ FEC Type: __LDPC 2/3_, FEC Rate: _____0.67_____,	
Total Symbol Rate	69.01 Mbps	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 ☐	
Transmit 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
Transmit Antenna Orientation (XAZ)	XAZ = EC	NB= NARROWBEAM EC = EARTH COVERAGE
Transmit Antenna Dimension (XAD)	ANTENNA GAIN___17 dBi_____, BEAMWIDTH ____18_____, XAD = 17G018B	NTIA FORMAT (XAD), EXAMPLE, FOR 16 DBI ANTENNA GAIN AND 30 DEGREE BEAMWIDTH XAD01 16G030B
Type of satellite (State = SPCE) (City = Geo or Nongeo)	Type = NONGEOSTATIONARY	CHOOSE EITHER: GEOSTATIONARY OR NONGEOSTATIONARY
For Geostationary Satellites	Longitude =	IF ANY SATELLITES ARE GEOSTATIONARY, REPORT ITS LATITUDE AS 000000N (XLA AND/OR RLA) AND REPORT ITS LONGITUDE IN DDDMMSS FORMAT (XLG AND/OR RLG).

For Nongeostationary (Orbital Data)	INCLINATION ANGLE_____97.4deg____, APOGEE IN KILOMETERS___525_km___, PERIGEE IN KILOMETERS___525 km___, ORBITAL PERIOD IN HOURS ___1__AND FRACTIONS OF HOURS IN DECIMAL___0.58___, THE NUMBER OF SATELLITES IN THE SYSTEM_____1_____, ORB = 97.4IN00525AP00525PE001.58H01T01	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
For SunSynchronous Nongeostationary Orbits	Mean Local Time of Ascending Node (MLTAN) =_____13:00_____	MLTAN IS THE ANGLE BETWEEN AN ORBIT'S ASCENDING NODE AND THE MEAN SUN, OFTEN EXPRESSED AS UNIT OF TIME (HH:MM)
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = South Africa	
City Name (RAL)	RAL = Pretoria	
Latitude (DDMMSS)	Lat = -255136	
Longitude (DDDMMSS)	Lon = 0282700	
Receive Antenna Polarization (RAP)	RAP = C	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00
Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	

Number of Satellite Contacts Supported Per Day	4	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Sweden	
City Name (RAL)	RAL = Boden	
Latitude (DDMMSS)	Lat = 654800	
Longitude (DDDMMSS)	Lon = 0214048	
Receive Antenna Polarization (RAP)	RAP = C	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00
Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	11	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	8 minutes	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

Transmit Frequency:8212.5 MHz		
Satellite Name: Apex Aries 1		
Data Field	**Data Answer**	**Description/Comments**
Transmit Power (PWR)	PWR = 2 W	TRANSMIT POWER SUPPLIED TO THE ANTENNA INPUT TERMINAL, EXAMPLE, PWR01 W2 TRANSMIT POWER UNITS INCLUDE: W = WATT, K = KILOWATT, M = MEGAWATT
Necessary Bandwidth	100 MHz	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	65 MHz	
-20 dB bandwidth	75 MHz	
-40 dB bandwidth	85 MHz	
-60 dB bandwidth	100 MHz	
Modulation Type	16APSK	THE METHOD USED TO SUPERIMPOSE DATA ON THE CARRIER, EXAMPLE, BPSK, QPSK, GMSK.
Data Rate	103 Mbps	INFORMATION DATA RATE
Forward Error Correction Coding	Is FEC used? Yes ☒ No ☐ FEC Type: __LDPC 2/3_, FEC Rate: _____0.67_____,	
Total Symbol Rate	69.01 Mbps	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 ☐	

Transmit 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
Transmit Antenna Orientation (XAZ)	XAZ = EC	NB= NARROWBEAM EC = EARTH COVERAGE
Transmit Antenna Dimension (XAD)	ANTENNA GAIN___17 dBi_____, BEAMWIDTH ____18_____, XAD = 17G018B	NTIA FORMAT (XAD), EXAMPLE, FOR 16 DBI ANTENNA GAIN AND 30 DEGREE BEAMWIDTH XAD01 16G030B
Type of satellite (State = SPCE) (City = Geo or Nongeo)	Type = NONGEOSTATIONARY	CHOOSE EITHER: GEOSTATIONARY OR NONGEOSTATIONARY
For Geostationary Satellites	Longitude =	IF ANY SATELLITES ARE GEOSTATIONARY, REPORT ITS LATITUDE AS 000000N (XLA AND/OR RLA) AND REPORT ITS LONGITUDE IN DDDMMSS FORMAT (XLG AND/OR RLG).
For Nongeostationary (Orbital Data)	INCLINATION ANGLE_____97.4deg____, APOGEE IN KILOMETERS___525_km___, PERIGEE IN KILOMETERS___525 km___, ORBITAL PERIOD IN HOURS ___1__AND FRACTIONS OF HOURS IN DECIMAL___0.58___, THE NUMBER OF SATELLITES IN THE SYSTEM_____1_____, ORB = 97.4IN00525AP00525PE001.58H01T01	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
For SunSynchronous Nongeostationary Orbits	Mean Local Time of Ascending Node (MLTAN) =_____13:00_____	MLTAN IS THE ANGLE BETWEEN AN ORBIT'S ASCENDING NODE AND THE MEAN SUN, OFTEN EXPRESSED AS UNIT OF TIME (HH:MM)
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = South Africa	
City Name (RAL)	RAL = Pretoria	
Latitude (DDMMSS)	Lat = -255136	
Longitude (DDDMMSS)	Lon = 0282700	
Receive Antenna Polarization (RAP)	RAP = C	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

Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00
Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	4	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Sweden	
City Name (RAL)	RAL = Boden	
Latitude (DDMMSS)	Lat = 654800	
Longitude (DDDMMSS)	Lon = 0214048	
Receive Antenna Polarization (RAP)	RAP = C	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	11	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		

Transmit Frequency:8212.5 MHz		
Satellite Name: Apex Aries 1		
Data Field	**Data Answer**	**Description/Comments**
Transmit Power (PWR)	PWR = 1 W	TRANSMIT POWER SUPPLIED TO THE ANTENNA INPUT TERMINAL, EXAMPLE, PWR01 W2 TRANSMIT POWER UNITS INCLUDE: W = WATT, K = KILOWATT, M = MEGAWATT
Necessary Bandwidth	13.5 MHz	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	65 MHz	
-20 dB bandwidth	75 MHz	
-40 dB bandwidth	85 MHz	
-60 dB bandwidth	100 MHz	
Modulation Type	16APSK	THE METHOD USED TO SUPERIMPOSE DATA ON THE CARRIER, EXAMPLE, BPSK, QPSK, GMSK.
Data Rate	103 Mbps	INFORMATION DATA RATE

Forward Error Correction Coding	Is FEC used? Yes ☒ No ☐ FEC Type: __LDPC 2/3_, FEC Rate: _____0.67_____,	
Total Symbol Rate	69.01 Mbps	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 ☐	
Transmit 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
Transmit Antenna Orientation (XAZ)	XAZ = EC	NB= NARROWBEAM EC = EARTH COVERAGE
Transmit Antenna Dimension (XAD)	ANTENNA GAIN___17 dBi_____, BEAMWIDTH ____18_____, XAD = 17G018B	NTIA FORMAT (XAD), EXAMPLE, FOR 16 DBI ANTENNA GAIN AND 30 DEGREE BEAMWIDTH XAD01 16G030B
Type of satellite (State = SPCE) (City = Geo or Nongeo)	Type = NONGEOSTATIONARY	CHOOSE EITHER: GEOSTATIONARY OR NONGEOSTATIONARY
For Geostationary Satellites	Longitude =	IF ANY SATELLITES ARE GEOSTATIONARY, REPORT ITS LATITUDE AS 000000N (XLA AND/OR RLA) AND REPORT ITS LONGITUDE IN DDDMMSS FORMAT (XLG AND/OR RLG).
For Nongeostationary (Orbital Data)	INCLINATION ANGLE_____97.4deg____, APOGEE IN KILOMETERS___525_km___, PERIGEE IN KILOMETERS___525 km___, ORBITAL PERIOD IN HOURS ___1__AND FRACTIONS OF HOURS IN DECIMAL___0.58___, THE NUMBER OF SATELLITES IN THE SYSTEM_____1_____, ORB = 97.4IN00525AP00525PE001.58H01T01	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

For SunSynchronous Nongeostationary Orbits	Mean Local Time of Ascending Node (MLTAN) =_____13:00_____	MLTAN IS THE ANGLE BETWEEN AN ORBIT'S ASCENDING NODE AND THE MEAN SUN, OFTEN EXPRESSED AS UNIT OF TIME (HH:MM)
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Australia	
City Name (RAL)	RAL = Currans Hill	
Latitude (DDMMSS)	Lat = -340224	
Longitude (DDDMMSS)	Lon = 1504612	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00
Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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

Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Bahrain	
City Name (RAL)	RAL = Zallaq	
Latitude (DDMMSS)	Lat = 260300	
Longitude (DDDMMSS)	Lon = 0503000	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00
Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Ireland	
City Name (RAL)	RAL = Dublin	
Latitude (DDMMSS)	Lat = 532400	

Longitude (DDDMMSS)	Lon = -0061312	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00
Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Southern Australia	
City Name (RAL)	RAL = Peterborough	
Latitude (DDMMSS)	Lat = -325743	
Longitude (DDDMMSS)	Lon = 1385058	

Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00
Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Western Australia	
City Name (RAL)	RAL = Nangetty	
Latitude (DDMMSS)	Lat = -290037	
Longitude (DDDMMSS)	Lon = 1152030	
Receive Antenna Polarization (RAP)	RAP = J	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

Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00
Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Azerbaijan	
City Name (RAL)	RAL = Absheron	
Latitude (DDMMSS)	Lat = 402758	
Longitude (DDDMMSS)	Lon = 492908	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Bulgaria	
City Name (RAL)	RAL = Plana	
Latitude (DDMMSS)	Lat = 422858	
Longitude (DDDMMSS)	Lon = 0232643	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Spain	
City Name (RAL)	RAL = Puertollano	
Latitude (DDMMSS)	Lat = 384026	
Longitude (DDDMMSS)	Lon = -0040943	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Iceland	
City Name (RAL)	RAL = Blönduós	
Latitude (DDMMSS)	Lat = 653850	
Longitude (DDDMMSS)	Lon = -0201445	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Italy	
City Name (RAL)	RAL = Vimercate	
Latitude (DDMMSS)	Lat = 453536	
Longitude (DDDMMSS)	Lon = 0092144	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Italy	
City Name (RAL)	RAL = Lomazzo	
Latitude (DDMMSS)	Lat = 454150	
Longitude (DDDMMSS)	Lon = 0090205	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Sri Lanka	
City Name (RAL)	RAL = Kandy	
Latitude (DDMMSS)	Lat = 071627	
Longitude (DDDMMSS)	Lon = 0804329	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = New Zealand	
City Name (RAL)	RAL = Awarua	
Latitude (DDMMSS)	Lat = -463141	
Longitude (DDDMMSS)	Lon = 1682245	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Azores, Portugal	
City Name (RAL)	RAL = Santa Maria	
Latitude (DDMMSS)	Lat = 365951	
Longitude (DDDMMSS)	Lon = 0250814	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = United Kingdom	
City Name (RAL)	RAL = Unst, Shetland	
Latitude (DDMMSS)	Lat = 604452	
Longitude (DDDMMSS)	Lon = -0005128	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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, (Apex Aries 1)		

Transmit Frequency:8212.5 MHz		
Satellite Name: Apex Aries 1		
Data Field	**Data Answer**	**Description/Comments**
Transmit Power (PWR)	PWR = 2 W	TRANSMIT POWER SUPPLIED TO THE ANTENNA INPUT TERMINAL, EXAMPLE, PWR01 W2 TRANSMIT POWER UNITS INCLUDE: W = WATT, K = KILOWATT, M = MEGAWATT
Necessary Bandwidth	100MHz	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	65 MHz	
-20 dB bandwidth	75 MHz	
-40 dB bandwidth	85 MHz	
-60 dB bandwidth	100 MHz	
Modulation Type	16APSK	THE METHOD USED TO SUPERIMPOSE DATA ON THE CARRIER, EXAMPLE, BPSK, QPSK, GMSK.

Data Rate	103 Mbps	INFORMATION DATA RATE
Forward Error Correction Coding	Is FEC used? Yes ☒ No ☐ FEC Type: __LDPC 2/3__, FEC Rate: _____0.67_____,	
Total Symbol Rate	69.01 Mbps	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 ☐	
Transmit 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
Transmit Antenna Orientation (XAZ)	XAZ = EC	NB= NARROWBEAM EC = EARTH COVERAGE
Transmit Antenna Dimension (XAD)	ANTENNA GAIN___17 dBi_____, BEAMWIDTH ____18_____, XAD = 17G018B	NTIA FORMAT (XAD), EXAMPLE, FOR 16 DBI ANTENNA GAIN AND 30 DEGREE BEAMWIDTH XAD01 16G030B
Type of satellite (State = SPCE) (City = Geo or Nongeo)	Type = NONGEOSTATIONARY	CHOOSE EITHER: GEOSTATIONARY OR NONGEOSTATIONARY
For Geostationary Satellites	Longitude =	IF ANY SATELLITES ARE GEOSTATIONARY, REPORT ITS LATITUDE AS 000000N (XLA AND/OR RLA) AND REPORT ITS LONGITUDE IN DDDMMSS FORMAT (XLG AND/OR RLG).
For Nongeostationary (Orbital Data)	INCLINATION ANGLE_____97.4deg____, APOGEE IN KILOMETERS___525_km___, PERIGEE IN KILOMETERS___525 km___, ORBITAL PERIOD IN HOURS ___1__AND FRACTIONS OF HOURS IN DECIMAL___0.58___, THE NUMBER OF SATELLITES IN THE SYSTEM_____1_____, ORB = 97.4IN00525AP00525PE001.58H01T01	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

For SunSynchronous Nongeostationary Orbits	Mean Local Time of Ascending Node (MLTAN) =_____13:00_____	MLTAN IS THE ANGLE BETWEEN AN ORBIT'S ASCENDING NODE AND THE MEAN SUN, OFTEN EXPRESSED AS UNIT OF TIME (HH:MM)
Earth Station Data (Receiver) at Each Earth Station Location		
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Australia	
City Name (RAL)	RAL = Currans Hill	
Latitude (DDMMSS)	Lat = -340224	
Longitude (DDDMMSS)	Lon = 1504612	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00
Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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

Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Bahrain	
City Name (RAL)	RAL = Zallaq	
Latitude (DDMMSS)	Lat = 260300	
Longitude (DDDMMSS)	Lon = 0503000	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00
Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Ireland	
City Name (RAL)	RAL = Dublin	
Latitude (DDMMSS)	Lat = 532400	

Longitude (DDDMMSS)	Lon = -0061312	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00
Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Southern Australia	
City Name (RAL)	RAL = Peterborough	
Latitude (DDMMSS)	Lat = -325743	
Longitude (DDDMMSS)	Lon = 1385058	

Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00
Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Western Australia	
City Name (RAL)	RAL = Nangetty	
Latitude (DDMMSS)	Lat = -290037	
Longitude (DDDMMSS)	Lon = 1152030	
Receive Antenna Polarization (RAP)	RAP = J	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

Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00
Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Azerbaijan	
City Name (RAL)	RAL = Absheron	
Latitude (DDMMSS)	Lat = 402758	
Longitude (DDDMMSS)	Lon = 492908	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Bulgaria	
City Name (RAL)	RAL = Plana	
Latitude (DDMMSS)	Lat = 422858	
Longitude (DDDMMSS)	Lon = 0232643	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Spain	
City Name (RAL)	RAL = Puertollano	
Latitude (DDMMSS)	Lat = 384026	
Longitude (DDDMMSS)	Lon = -0040943	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Iceland	
City Name (RAL)	RAL = Blönduós	
Latitude (DDMMSS)	Lat = 653850	
Longitude (DDDMMSS)	Lon = -0201445	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Italy	
City Name (RAL)	RAL = Vimercate	
Latitude (DDMMSS)	Lat = 453536	
Longitude (DDDMMSS)	Lon = 0092144	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Italy	
City Name (RAL)	RAL = Lomazzo	
Latitude (DDMMSS)	Lat = 454150	
Longitude (DDDMMSS)	Lon = 0090205	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Sri Lanka	
City Name (RAL)	RAL = Kandy	
Latitude (DDMMSS)	Lat = 071627	
Longitude (DDDMMSS)	Lon = 0804329	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = New Zealand	
City Name (RAL)	RAL = Awarua	
Latitude (DDMMSS)	Lat = -463141	
Longitude (DDDMMSS)	Lon = 1682245	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = Azores, Portugal	
City Name (RAL)	RAL = Santa Maria	
Latitude (DDMMSS)	Lat = 365951	
Longitude (DDDMMSS)	Lon = 0250814	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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
Earth Station Data (Receiver) at Each Earth Station Location		
State (RSC)	RSC = United Kingdom	
City Name (RAL)	RAL = Unst, Shetland	
Latitude (DDMMSS)	Lat = 604452	
Longitude (DDDMMSS)	Lon = -0005128	
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = RAZV00	THE EARTH STATION RECEIVER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (RAZ), V00 TO V90, EXAMPLE, RAZ01 V00

Receive Antenna Dimensions (RAD)	ANTENNA GAIN_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, RAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: RAD01 16G030B001-360A00357H006
Receive Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	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	8 minutes	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, (Apex Aries 1)		

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

Earth Station Transmitter Data (Required for Each Frequency at Each Earth Station Location)

Transmit Frequency: 402.7 MHz		
State (XSC)	XSC = South Africa	
City Name (XAL)	XAL = Pretoria	
Latitude (DDMMSS)	Lat = -255136	
Longitude (DDDMMSS)	Lon = 0282700	
Transmit Power (PWR)	PWR = 0.12 W	TRANSMIT POWER SUPPLIED TO THE ANTENNA INPUT TERMINAL, EXAMPLE, PWR01 W2 TRANSMIT POWER UNITS INCLUDE: W = WATT, K = KILOWATT, M = MEGAWATT
Necessary Bandwidth	5.76 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		
-20 dB bandwidth		
-40 dB bandwidth		
-60 dB bandwidth		
Modulation Type		THE METHOD USED TO SUPERIMPOSE DATA ON THE CARRIER, EXAMPLE, BPSK, QPSK, GMSK.
Data Rate		INFORMATION DATA RATE
Forward Error Correction Coding	Is FEC used? Yes ☐ No ☒ FEC Type: _____, FEC Rate: _____,	
Total Symbol Rate	1.2ksps	DATA RATE COMBINED WITH FEC AND FRAME OVERHEAD RESULTING IN THE TOTAL SYMBOL RATE AT THE INPUTE TO THE SYMBOL MAPPER/MODULATOR.
Transmit Antenna Polarization (XAP)	XAP =	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 =	THE EARTH STATION TRANSMITTER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (XAZ), V00 TO V90, EXAMPLE, XAZ01 V00

Transmit Antenna Dimensions (XAD)	ANTENNA GAIN__16.2 dBi_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, XAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: XAD01 16G030B001-360A00357H006
Transmit Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	4	NUMBER OF TIMES THE EARTH STATION WILL COMMUNICATE WITH THE STATELLITE IN THE EARTH TO SPACE DIRECTION (UPINKS) EACH DAY
Expected Duration of Each Contact	8 minutes	AVERAGE DURATION OF EACH CONTACT
Satellite Receive Specifications		
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = EC	NB= NARROWBEAM EC = EARTH COVERAGE
Receive Antenna Dimension (RAD)	ANTENNA GAIN_____, BEAMWIDTH _____, RAD =	NTIA FORMAT(RAD), EXAMPLE, FOR 16 DBI ANTENNA GAIN AND 30 DEGREE BEAMWIDTH RAD01 16G030B
Type of satellite (State = SPCE) City = Geo or Nongeo	Type = NONGEOSTATIONARY	CHOOSE EITHER: GEOSTATIONARY OR NONGEOSTATIONARY
For Geostationary Satellites	Longitude =	IF ANY SATELLITES ARE GEOSTATIONARY, REPORT ITS LATITUDE AS 000000N (XLA AND/OR RLA) AND REPORT ITS LONGITUDE IN DDDMMSS FORMAT (XLG AND/OR RLG).

For Nongeostationary (Orbital Data)	INCLINATION ANGLE_____97.4deg____, APOGEE IN KILOMETERS___525_km___, PERIGEE IN KILOMETERS___525 km___, ORBITAL PERIOD IN HOURS ___1__AND FRACTIONS OF HOURS IN DECIMAL___0.58___, THE NUMBER OF SATELLITES IN THE SYSTEM_____1_____, ORB = 97.4IN00525AP00525PE001.58H01T01	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
For SunSynchronous Nongeostationary Orbits	Mean Local Time of Ascending Node (MLTAN) =_____13:00_____	MLTAN IS THE ANGLE BETWEEN AN ORBIT'S ASCENDING NODE AND THE MEAN SUN, OFTEN EXPRESSED AS UNIT OF TIME (HH:MM)

Transmit Frequency: 402.7 MHz		
State (XSC)	XSC = Sweden	
City Name (XAL)	XAL = Boden	
Latitude (DDMMSS)	Lat = 654800	
Longitude (DDDMMSS)	Lon = 0214048	
Transmit Power (PWR)	PWR = 0.12W	TRANSMIT POWER SUPPLIED TO THE ANTENNA INPUT TERMINAL, EXAMPLE, PWR01 W2 TRANSMIT POWER UNITS INCLUDE: W = WATT, K = KILOWATT, M = MEGAWATT
Necessary Bandwidth	5.76 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		
-20 dB bandwidth		
-40 dB bandwidth		
-60 dB bandwidth		
Modulation Type		THE METHOD USED TO SUPERIMPOSE DATA ON THE CARRIER, EXAMPLE, BPSK, QPSK, GMSK.
Data Rate		INFORMATION DATA RATE
Forward Error Correction Coding	Is FEC used? Yes ☐ No ☒ FEC Type: _____, FEC Rate: _____,	
Total Symbol Rate	1.2ksps	DATA RATE COMBINED WITH FEC AND FRAME OVERHEAD RESULTING IN THE TOTAL SYMBOL RATE AT THE INPUTE TO THE SYMBOL MAPPER/MODULATOR.

Transmit Antenna Polarization (XAP)	XAP =	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 =	THE EARTH STATION TRANSMITTER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (XAZ), V00 TO V90, EXAMPLE, XAZ01 V00
Transmit Antenna Dimensions (XAD)	ANTENNA GAIN___16.2 dBi _____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, XAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: XAD01 16G030B001-360A00357H006
Transmit Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	11	NUMBER OF TIMES THE EARTH STATION WILL COMMUNICATE WITH THE STATELLITE IN THE EARTH TO SPACE DIRECTION (UPINKS) EACH DAY
Expected Duration of Each Contact	8 minutes	AVERAGE DURATION OF EACH CONTACT
Satellite Receive Specifications		
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = EC	NB= NARROWBEAM EC = EARTH COVERAGE
Receive Antenna Dimension (RAD)	ANTENNA GAIN_____, BEAMWIDTH _____, RAD =	NTIA FORMAT(RAD), EXAMPLE, FOR 16 DBI ANTENNA GAIN AND 30 DEGREE BEAMWIDTH RAD01 16G030B

Type of satellite (State = SPCE) City = Geo or Nongeo	Type = NONGEOSTATIONARY	CHOOSE EITHER: GEOSTATIONARY OR NONGEOSTATIONARY
For Geostationary Satellites	Longitude =	IF ANY SATELLITES ARE GEOSTATIONARY, REPORT ITS LATITUDE AS 000000N (XLA AND/OR RLA) AND REPORT ITS LONGITUDE IN DDDMMSS FORMAT (XLG AND/OR RLG).
For Nongeostationary (Orbital Data)	INCLINATION ANGLE_____97.4deg____, APOGEE IN KILOMETERS___525_km___, PERIGEE IN KILOMETERS___525 km___, ORBITAL PERIOD IN HOURS ___1__AND FRACTIONS OF HOURS IN DECIMAL___0.58___, THE NUMBER OF SATELLITES IN THE SYSTEM_____1_____, ORB = 97.4IN00525AP00525PE001.58H01T01	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
For SunSynchronous Nongeostationary Orbits	Mean Local Time of Ascending Node (MLTAN) =_____13:00_____	MLTAN IS THE ANGLE BETWEEN AN ORBIT'S ASCENDING NODE AND THE MEAN SUN, OFTEN EXPRESSED AS UNIT OF TIME (HH:MM)

Transmit Frequency: 402.7 MHz		
State (XSC)	XSC = Southern Australia	
City Name (XAL)	XAL = Peterborough	
Latitude (DDMMSS)	Lat = -325743	
Longitude (DDDMMSS)	Lon = 1385058	
Transmit Power (PWR)	PWR = 0.12W	TRANSMIT POWER SUPPLIED TO THE ANTENNA INPUT TERMINAL, EXAMPLE, PWR01 W2 TRANSMIT POWER UNITS INCLUDE: W = WATT, K = KILOWATT, M = MEGAWATT
Necessary Bandwidth	5.76 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		
-20 dB bandwidth		
-40 dB bandwidth		
-60 dB bandwidth		
Modulation Type		THE METHOD USED TO SUPERIMPOSE DATA ON THE CARRIER, EXAMPLE, BPSK, QPSK, GMSK.
Data Rate		INFORMATION DATA RATE

Forward Error Correction Coding	Is FEC used? Yes ☐ No ☒ FEC Type: _____, FEC Rate: _____,	
Total Symbol Rate	1.2ksps	DATA RATE COMBINED WITH FEC AND FRAME OVERHEAD RESULTING IN THE TOTAL SYMBOL RATE AT THE INPUTE TO THE SYMBOL MAPPER/MODULATOR.
Transmit Antenna Polarization (XAP)	XAP =	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 =	THE EARTH STATION TRANSMITTER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (XAZ), V00 TO V90, EXAMPLE, XAZ01 V00
Transmit Antenna Dimensions (XAD)	ANTENNA GAIN___16.2 dBi _____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, XAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: XAD01 16G030B001-360A00357H006
Transmit Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	>1	NUMBER OF TIMES THE EARTH STATION WILL COMMUNICATE WITH THE STATELLITE IN THE EARTH TO SPACE DIRECTION (UPINKS) EACH DAY
Expected Duration of Each Contact	8 minutes	AVERAGE DURATION OF EACH CONTACT
Satellite Receive Specifications		
Receive Antenna Polarization (RAP)	RAP = J	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

Receive Antenna Orientation (RAZ)	RAZ = EC	NB= NARROWBEAM EC = EARTH COVERAGE
Receive Antenna Dimension (RAD)	ANTENNA GAIN_____, BEAMWIDTH _____, RAD =	NTIA FORMAT(RAD), EXAMPLE, FOR 16 DBI ANTENNA GAIN AND 30 DEGREE BEAMWIDTH RAD01 16G030B
Type of satellite (State = SPCE) City = Geo or Nongeo	Type = NONGEOSTATIONARY	CHOOSE EITHER: GEOSTATIONARY OR NONGEOSTATIONARY
For Geostationary Satellites	Longitude =	IF ANY SATELLITES ARE GEOSTATIONARY, REPORT ITS LATITUDE AS 000000N (XLA AND/OR RLA) AND REPORT ITS LONGITUDE IN DDDMMSS FORMAT (XLG AND/OR RLG).
For Nongeostationary (Orbital Data)	INCLINATION ANGLE_____97.4deg____, APOGEE IN KILOMETERS___525_km___, PERIGEE IN KILOMETERS___525 km___, ORBITAL PERIOD IN HOURS ___1__AND FRACTIONS OF HOURS IN DECIMAL___0.58___, THE NUMBER OF SATELLITES IN THE SYSTEM_____1_____, ORB = 97.4IN00525AP00525PE001.58H01T01	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
For SunSynchronous Nongeostationary Orbits	Mean Local Time of Ascending Node (MLTAN) =_____13:00_____	MLTAN IS THE ANGLE BETWEEN AN ORBIT'S ASCENDING NODE AND THE MEAN SUN, OFTEN EXPRESSED AS UNIT OF TIME (HH:MM)

Transmit Frequency: 402.7 MHz		
State (XSC)	XSC = Western Australia	
City Name (XAL)	XAL = Nangetty	
Latitude (DDMMSS)	Lat = -290037	
Longitude (DDDMMSS)	Lon = 1152030	
Transmit Power (PWR)	PWR = 0.12W	TRANSMIT POWER SUPPLIED TO THE ANTENNA INPUT TERMINAL, EXAMPLE, PWR01 W2 TRANSMIT POWER UNITS INCLUDE: W = WATT, K = KILOWATT, M = MEGAWATT
Necessary Bandwidth	5.76 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		

-20 dB bandwidth		
-40 dB bandwidth		
-60 dB bandwidth		
Modulation Type		THE METHOD USED TO SUPERIMPOSE DATA ON THE CARRIER, EXAMPLE, BPSK, QPSK, GMSK.
Data Rate		INFORMATION DATA RATE
Forward Error Correction Coding	Is FEC used? Yes ☐ No ☒ FEC Type: _____, FEC Rate: _____,	
Total Symbol Rate	1.2ksps	DATA RATE COMBINED WITH FEC AND FRAME OVERHEAD RESULTING IN THE TOTAL SYMBOL RATE AT THE INPUTE TO THE SYMBOL MAPPER/MODULATOR.
Transmit Antenna Polarization (XAP)	XAP =	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 =	THE EARTH STATION TRANSMITTER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (XAZ), V00 TO V90, EXAMPLE, XAZ01 V00
Transmit Antenna Dimensions (XAD)	ANTENNA GAIN___16.2 dBi _____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, XAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: XAD01 16G030B001-360A00357H006
Transmit Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	>1	NUMBER OF TIMES THE EARTH STATION WILL COMMUNICATE WITH THE STATELLITE IN THE EARTH TO SPACE DIRECTION (UPINKS) EACH DAY
Expected Duration of Each Contact	8 minutes	AVERAGE DURATION OF EACH CONTACT
Satellite Receive Specifications		

Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = EC	NB= NARROWBEAM EC = EARTH COVERAGE
Receive Antenna Dimension (RAD)	ANTENNA GAIN_____, BEAMWIDTH _____, RAD =	NTIA FORMAT(RAD), EXAMPLE, FOR 16 DBI ANTENNA GAIN AND 30 DEGREE BEAMWIDTH RAD01 16G030B
Type of satellite (State = SPCE) City = Geo or Nongeo	Type = NONGEOSTATIONARY	CHOOSE EITHER: GEOSTATIONARY OR NONGEOSTATIONARY
For Geostationary Satellites	Longitude =	IF ANY SATELLITES ARE GEOSTATIONARY, REPORT ITS LATITUDE AS 000000N (XLA AND/OR RLA) AND REPORT ITS LONGITUDE IN DDDMMSS FORMAT (XLG AND/OR RLG).
For Nongeostationary (Orbital Data)	INCLINATION ANGLE_____97.4deg____, APOGEE IN KILOMETERS___525 km___, PERIGEE IN KILOMETERS___525 km___, ORBITAL PERIOD IN HOURS ___1__AND FRACTIONS OF HOURS IN DECIMAL___0.58___, THE NUMBER OF SATELLITES IN THE SYSTEM_____1_____, ORB = 97.4IN00525AP00525PE001.58H01T01	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
For SunSynchronous Nongeostationary Orbits	Mean Local Time of Ascending Node (MLTAN) =_____13:00_____	MLTAN IS THE ANGLE BETWEEN AN ORBIT'S ASCENDING NODE AND THE MEAN SUN, OFTEN EXPRESSED AS UNIT OF TIME (HH:MM)

Transmit Frequency: 402.7 MHz		
State (XSC)	XSC = Azerbaijan	
City Name (XAL)	XAL = Absheron	
Latitude (DDMMSS)	Lat = 402758	
Longitude (DDDMMSS)	Lon = 492908	

Transmit Power (PWR)	PWR = 0.12W	TRANSMIT POWER SUPPLIED TO THE ANTENNA INPUT TERMINAL, EXAMPLE, PWR01 W2 TRANSMIT POWER UNITS INCLUDE: W = WATT, K = KILOWATT, M = MEGAWATT
Necessary Bandwidth	5.76 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		
-20 dB bandwidth		
-40 dB bandwidth		
-60 dB bandwidth		
Modulation Type		THE METHOD USED TO SUPERIMPOSE DATA ON THE CARRIER, EXAMPLE, BPSK, QPSK, GMSK.
Data Rate		INFORMATION DATA RATE
Forward Error Correction Coding	Is FEC used? Yes ☐ No ☒ FEC Type: _____, FEC Rate: _____,	
Total Symbol Rate	1.2ksps	DATA RATE COMBINED WITH FEC AND FRAME OVERHEAD RESULTING IN THE TOTAL SYMBOL RATE AT THE INPUTE TO THE SYMBOL MAPPER/MODULATOR.
Transmit Antenna Polarization (XAP)	XAP =	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 =	THE EARTH STATION TRANSMITTER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (XAZ), V00 TO V90, EXAMPLE, XAZ01 V00
Transmit Antenna Dimensions (XAD)	ANTENNA GAIN___16.2 dBi _____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, XAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: XAD01 16G030B001-360A00357H006
Transmit Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	

Number of Satellite Contacts Supported Per Day	>1	NUMBER OF TIMES THE EARTH STATION WILL COMMUNICATE WITH THE STATELLITE IN THE EARTH TO SPACE DIRECTION (UPINKS) EACH DAY
Expected Duration of Each Contact	8 minutes	AVERAGE DURATION OF EACH CONTACT
Satellite Receive Specifications		
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = EC	NB= NARROWBEAM EC = EARTH COVERAGE
Receive Antenna Dimension (RAD)	ANTENNA GAIN_____, BEAMWIDTH _____, RAD =	NTIA FORMAT(RAD), EXAMPLE, FOR 16 DBI ANTENNA GAIN AND 30 DEGREE BEAMWIDTH RAD01 16G030B
Type of satellite (State = SPCE) City = Geo or Nongeo	Type = NONGEOSTATIONARY	CHOOSE EITHER: GEOSTATIONARY OR NONGEOSTATIONARY
For Geostationary Satellites	Longitude =	IF ANY SATELLITES ARE GEOSTATIONARY, REPORT ITS LATITUDE AS 000000N (XLA AND/OR RLA) AND REPORT ITS LONGITUDE IN DDDMMSS FORMAT (XLG AND/OR RLG).
For Nongeostationary (Orbital Data)	INCLINATION ANGLE_____97.4deg____, APOGEE IN KILOMETERS___525 km___, PERIGEE IN KILOMETERS___525 km___, ORBITAL PERIOD IN HOURS ___1__AND FRACTIONS OF HOURS IN DECIMAL___0.58___, THE NUMBER OF SATELLITES IN THE SYSTEM_____1_____, ORB = 97.4IN00525AP00525PE001.58H01T01	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
For SunSynchronous Nongeostationary Orbits	Mean Local Time of Ascending Node (MLTAN) =_____13:00_____	MLTAN IS THE ANGLE BETWEEN AN ORBIT'S ASCENDING NODE AND THE MEAN SUN, OFTEN EXPRESSED AS UNIT OF TIME (HH:MM)

Transmit Frequency: 402.7 MHz		
State (XSC)	XSC = Bulgaria	

City Name (XAL)	XAL = Plana	
Latitude (DDMMSS)	Lat = 422858	
Longitude (DDDMMSS)	Lon = 0232643	
Transmit Power (PWR)	PWR = 0.12W	TRANSMIT POWER SUPPLIED TO THE ANTENNA INPUT TERMINAL, EXAMPLE, PWR01 W2 TRANSMIT POWER UNITS INCLUDE: W = WATT, K = KILOWATT, M = MEGAWATT
Necessary Bandwidth	5.76 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		
-20 dB bandwidth		
-40 dB bandwidth		
-60 dB bandwidth		
Modulation Type		THE METHOD USED TO SUPERIMPOSE DATA ON THE CARRIER, EXAMPLE, BPSK, QPSK, GMSK.
Data Rate		INFORMATION DATA RATE
Forward Error Correction Coding	Is FEC used? Yes ☐ No ☒ FEC Type: _____, FEC Rate: _____,	
Total Symbol Rate	1.2ksps	DATA RATE COMBINED WITH FEC AND FRAME OVERHEAD RESULTING IN THE TOTAL SYMBOL RATE AT THE INPUTE TO THE SYMBOL MAPPER/MODULATOR.
Transmit Antenna Polarization (XAP)	XAP =	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 =	THE EARTH STATION TRANSMITTER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (XAZ), V00 TO V90, EXAMPLE, XAZ01 V00
Transmit Antenna Dimensions (XAD)	ANTENNA GAIN___16.2 dBi _____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, XAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: XAD01 16G030B001-360A00357H006

Transmit Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	>1	NUMBER OF TIMES THE EARTH STATION WILL COMMUNICATE WITH THE STATELLITE IN THE EARTH TO SPACE DIRECTION (UPINKS) EACH DAY
Expected Duration of Each Contact	8 minutes	AVERAGE DURATION OF EACH CONTACT
Satellite Receive Specifications		
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = EC	NB= NARROWBEAM EC = EARTH COVERAGE
Receive Antenna Dimension (RAD)	ANTENNA GAIN_____, BEAMWIDTH _____, RAD =	NTIA FORMAT(RAD), EXAMPLE, FOR 16 DBI ANTENNA GAIN AND 30 DEGREE BEAMWIDTH RAD01 16G030B
Type of satellite (State = SPCE) City = Geo or Nongeo	Type = NONGEOSTATIONARY	CHOOSE EITHER: GEOSTATIONARY OR NONGEOSTATIONARY
For Geostationary Satellites	Longitude =	IF ANY SATELLITES ARE GEOSTATIONARY, REPORT ITS LATITUDE AS 000000N (XLA AND/OR RLA) AND REPORT ITS LONGITUDE IN DDDMMSS FORMAT (XLG AND/OR RLG).
For Nongeostationary (Orbital Data)	INCLINATION ANGLE_____97.4deg_____, APOGEE IN KILOMETERS___525 km___, PERIGEE IN KILOMETERS___525 km___, ORBITAL PERIOD IN HOURS ___1__AND FRACTIONS OF HOURS IN DECIMAL___0.58___, THE NUMBER OF SATELLITES IN THE SYSTEM_____1_____, ORB = 97.4IN00525AP00525PE001.58H01T01	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
For SunSynchronous Nongeostationary Orbits	Mean Local Time of Ascending Node (MLTAN) =_____13:00_____	MLTAN IS THE ANGLE BETWEEN AN ORBIT'S ASCENDING NODE AND THE MEAN SUN, OFTEN EXPRESSED AS UNIT OF TIME (HH:MM)

Transmit Frequency: 402.7 MHz		
State (XSC)	XSC = Spain	
City Name (XAL)	XAL = Puertollano	
Latitude (DDMMSS)	Lat = 384026	
Longitude (DDDMMSS)	Lon = -0040943	
Transmit Power (PWR)	PWR = 0.12W	TRANSMIT POWER SUPPLIED TO THE ANTENNA INPUT TERMINAL, EXAMPLE, PWR01 W2 TRANSMIT POWER UNITS INCLUDE: W = WATT, K = KILOWATT, M = MEGAWATT
Necessary Bandwidth	5.76 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		
-20 dB bandwidth		
-40 dB bandwidth		
-60 dB bandwidth		
Modulation Type		THE METHOD USED TO SUPERIMPOSE DATA ON THE CARRIER, EXAMPLE, BPSK, QPSK, GMSK.
Data Rate		INFORMATION DATA RATE
Forward Error Correction Coding	Is FEC used? Yes ☐ No ☒ FEC Type: _____, FEC Rate: _____,	
Total Symbol Rate	1.2ksps	DATA RATE COMBINED WITH FEC AND FRAME OVERHEAD RESULTING IN THE TOTAL SYMBOL RATE AT THE INPUTE TO THE SYMBOL MAPPER/MODULATOR.
Transmit Antenna Polarization (XAP)	XAP =	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 =	THE EARTH STATION TRANSMITTER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (XAZ), V00 TO V90, EXAMPLE, XAZ01 V00

Transmit Antenna Dimensions (XAD)	ANTENNA GAIN___16.2 dBi _____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, XAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: XAD01 16G030B001-360A00357H006
Transmit Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	>1	NUMBER OF TIMES THE EARTH STATION WILL COMMUNICATE WITH THE STATELLITE IN THE EARTH TO SPACE DIRECTION (UPINKS) EACH DAY
Expected Duration of Each Contact	8 minutes	AVERAGE DURATION OF EACH CONTACT
Satellite Receive Specifications		
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = EC	NB= NARROWBEAM EC = EARTH COVERAGE
Receive Antenna Dimension (RAD)	ANTENNA GAIN_____, BEAMWIDTH _____, RAD =	NTIA FORMAT(RAD), EXAMPLE, FOR 16 DBI ANTENNA GAIN AND 30 DEGREE BEAMWIDTH RAD01 16G030B
Type of satellite (State = SPCE) City = Geo or Nongeo	Type = NONGEOSTATIONARY	CHOOSE EITHER: GEOSTATIONARY OR NONGEOSTATIONARY
For Geostationary Satellites	Longitude =	IF ANY SATELLITES ARE GEOSTATIONARY, REPORT ITS LATITUDE AS 000000N (XLA AND/OR RLA) AND REPORT ITS LONGITUDE IN DDDMMSS FORMAT (XLG AND/OR RLG).

For Nongeostationary (Orbital Data)	INCLINATION ANGLE_____97.4deg____, APOGEE IN KILOMETERS___525_km___, PERIGEE IN KILOMETERS___525 km___, ORBITAL PERIOD IN HOURS ___1__AND FRACTIONS OF HOURS IN DECIMAL___0.58___, THE NUMBER OF SATELLITES IN THE SYSTEM_____1_____, ORB = 97.4IN00525AP00525PE001.58H01T01	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
For SunSynchronous Nongeostationary Orbits	Mean Local Time of Ascending Node (MLTAN) =_____13:00_____	MLTAN IS THE ANGLE BETWEEN AN ORBIT'S ASCENDING NODE AND THE MEAN SUN, OFTEN EXPRESSED AS UNIT OF TIME (HH:MM)

Transmit Frequency: 402.7 MHz		
State (XSC)	XSC = Iceland	
City Name (XAL)	XAL = Blönduós	
Latitude (DDMMSS)	Lat = 653850	
Longitude (DDDMMSS)	Lon = -0201445	
Transmit Power (PWR)	PWR = 0.12W	TRANSMIT POWER SUPPLIED TO THE ANTENNA INPUT TERMINAL, EXAMPLE, PWR01 W2 TRANSMIT POWER UNITS INCLUDE: W = WATT, K = KILOWATT, M = MEGAWATT
Necessary Bandwidth	5.76 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		
-20 dB bandwidth		
-40 dB bandwidth		
-60 dB bandwidth		
Modulation Type		THE METHOD USED TO SUPERIMPOSE DATA ON THE CARRIER, EXAMPLE, BPSK, QPSK, GMSK.
Data Rate		INFORMATION DATA RATE
Forward Error Correction Coding	Is FEC used? Yes ☐ No ☒ FEC Type: _____, FEC Rate: _____,	
Total Symbol Rate	1.2ksps	DATA RATE COMBINED WITH FEC AND FRAME OVERHEAD RESULTING IN THE TOTAL SYMBOL RATE AT THE INPUTE TO THE SYMBOL MAPPER/MODULATOR.

Transmit Antenna Polarization (XAP)	XAP =	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 =	THE EARTH STATION TRANSMITTER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (XAZ), V00 TO V90, EXAMPLE, XAZ01 V00
Transmit Antenna Dimensions (XAD)	ANTENNA GAIN___16.2 dBi _____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, XAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: XAD01 16G030B001-360A00357H006
Transmit Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	>1	NUMBER OF TIMES THE EARTH STATION WILL COMMUNICATE WITH THE STATELLITE IN THE EARTH TO SPACE DIRECTION (UPINKS) EACH DAY
Expected Duration of Each Contact	8 minutes	AVERAGE DURATION OF EACH CONTACT
Satellite Receive Specifications		
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = EC	NB= NARROWBEAM EC = EARTH COVERAGE
Receive Antenna Dimension (RAD)	ANTENNA GAIN_____, BEAMWIDTH _____, RAD =	NTIA FORMAT(RAD), EXAMPLE, FOR 16 DBI ANTENNA GAIN AND 30 DEGREE BEAMWIDTH RAD01 16G030B

Type of satellite (State = SPCE) City = Geo or Nongeo	Type = NONGEOSTATIONARY	CHOOSE EITHER: GEOSTATIONARY OR NONGEOSTATIONARY
For Geostationary Satellites	Longitude =	IF ANY SATELLITES ARE GEOSTATIONARY, REPORT ITS LATITUDE AS 000000N (XLA AND/OR RLA) AND REPORT ITS LONGITUDE IN DDDMMSS FORMAT (XLG AND/OR RLG).
For Nongeostationary (Orbital Data)	INCLINATION ANGLE_____97.4deg____, APOGEE IN KILOMETERS___525_km___, PERIGEE IN KILOMETERS___525 km___, ORBITAL PERIOD IN HOURS ___1__AND FRACTIONS OF HOURS IN DECIMAL___0.58___, THE NUMBER OF SATELLITES IN THE SYSTEM_____1_____, ORB = 97.4IN00525AP00525PE001.58H01T01	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
For SunSynchronous Nongeostationary Orbits	Mean Local Time of Ascending Node (MLTAN) =_____13:00_____	MLTAN IS THE ANGLE BETWEEN AN ORBIT'S ASCENDING NODE AND THE MEAN SUN, OFTEN EXPRESSED AS UNIT OF TIME (HH:MM)

Transmit Frequency: 402.7 MHz		
State (XSC)	XSC = Italy	
City Name (XAL)	XAL = Vimercate	
Latitude (DDMMSS)	Lat = 453536	
Longitude (DDDMMSS)	Lon = 0092144	
Transmit Power (PWR)	PWR = 0.12W	TRANSMIT POWER SUPPLIED TO THE ANTENNA INPUT TERMINAL, EXAMPLE, PWR01 W2 TRANSMIT POWER UNITS INCLUDE: W = WATT, K = KILOWATT, M = MEGAWATT
Necessary Bandwidth	5.76 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		
-20 dB bandwidth		
-40 dB bandwidth		
-60 dB bandwidth		
Modulation Type		THE METHOD USED TO SUPERIMPOSE DATA ON THE CARRIER, EXAMPLE, BPSK, QPSK, GMSK.
Data Rate		INFORMATION DATA RATE

Forward Error Correction Coding	Is FEC used? Yes ☐ No ☒ FEC Type: _____, FEC Rate: _____,	
Total Symbol Rate	1.2ksps	DATA RATE COMBINED WITH FEC AND FRAME OVERHEAD RESULTING IN THE TOTAL SYMBOL RATE AT THE INPUTE TO THE SYMBOL MAPPER/MODULATOR.
Transmit Antenna Polarization (XAP)	XAP =	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 =	THE EARTH STATION TRANSMITTER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (XAZ), V00 TO V90, EXAMPLE, XAZ01 V00
Transmit Antenna Dimensions (XAD)	ANTENNA GAIN___16.2 dBi _____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, XAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: XAD01 16G030B001-360A00357H006
Transmit Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	>1	NUMBER OF TIMES THE EARTH STATION WILL COMMUNICATE WITH THE STATELLITE IN THE EARTH TO SPACE DIRECTION (UPINKS) EACH DAY
Expected Duration of Each Contact	8 minutes	AVERAGE DURATION OF EACH CONTACT
Satellite Receive Specifications		
Receive Antenna Polarization (RAP)	RAP = J	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

Receive Antenna Orientation (RAZ)	RAZ = EC	NB= NARROWBEAM EC = EARTH COVERAGE
Receive Antenna Dimension (RAD)	ANTENNA GAIN_____, BEAMWIDTH _____, RAD =	NTIA FORMAT(RAD), EXAMPLE, FOR 16 DBI ANTENNA GAIN AND 30 DEGREE BEAMWIDTH RAD01 16G030B
Type of satellite (State = SPCE) City = Geo or Nongeo	Type = NONGEOSTATIONARY	CHOOSE EITHER: GEOSTATIONARY OR NONGEOSTATIONARY
For Geostationary Satellites	Longitude =	IF ANY SATELLITES ARE GEOSTATIONARY, REPORT ITS LATITUDE AS 000000N (XLA AND/OR RLA) AND REPORT ITS LONGITUDE IN DDDMMSS FORMAT (XLG AND/OR RLG).
For Nongeostationary (Orbital Data)	INCLINATION ANGLE_____97.4deg____, APOGEE IN KILOMETERS___525_km___, PERIGEE IN KILOMETERS___525 km___, ORBITAL PERIOD IN HOURS ___1__AND FRACTIONS OF HOURS IN DECIMAL___0.58___, THE NUMBER OF SATELLITES IN THE SYSTEM_____1_____, ORB = 97.4IN00525AP00525PE001.58H01T01	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
For SunSynchronous Nongeostationary Orbits	Mean Local Time of Ascending Node (MLTAN) =_____13:00_____	MLTAN IS THE ANGLE BETWEEN AN ORBIT'S ASCENDING NODE AND THE MEAN SUN, OFTEN EXPRESSED AS UNIT OF TIME (HH:MM)

Transmit Frequency: 402.7 MHz		
State (XSC)	XSC = Italy	
City Name (XAL)	XAL = Lomazzo	
Latitude (DDMMSS)	Lat = 454150	
Longitude (DDDMMSS)	Lon = 0090205	
Transmit Power (PWR)	PWR = 0.12W	TRANSMIT POWER SUPPLIED TO THE ANTENNA INPUT TERMINAL, EXAMPLE, PWR01 W2 TRANSMIT POWER UNITS INCLUDE: W = WATT, K = KILOWATT, M = MEGAWATT
Necessary Bandwidth	5.76 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		
-20 dB bandwidth		
-40 dB bandwidth		

-60 dB bandwidth		
Modulation Type		THE METHOD USED TO SUPERIMPOSE DATA ON THE CARRIER, EXAMPLE, BPSK, QPSK, GMSK.
Data Rate		INFORMATION DATA RATE
Forward Error Correction Coding	Is FEC used? Yes ☐ No ☒ FEC Type: _____, FEC Rate: _____,	
Total Symbol Rate	1.2ksps	DATA RATE COMBINED WITH FEC AND FRAME OVERHEAD RESULTING IN THE TOTAL SYMBOL RATE AT THE INPUTE TO THE SYMBOL MAPPER/MODULATOR.
Transmit Antenna Polarization (XAP)	XAP =	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 =	THE EARTH STATION TRANSMITTER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (XAZ), V00 TO V90, EXAMPLE, XAZ01 V00
Transmit Antenna Dimensions (XAD)	ANTENNA GAIN___16.2 dBi _____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, XAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: XAD01 16G030B001-360A00357H006
Transmit Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	>1	NUMBER OF TIMES THE EARTH STATION WILL COMMUNICATE WITH THE STATELLITE IN THE EARTH TO SPACE DIRECTION (UPINKS) EACH DAY
Expected Duration of Each Contact	8 minutes	AVERAGE DURATION OF EACH CONTACT
Satellite Receive Specifications		

Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = EC	NB= NARROWBEAM EC = EARTH COVERAGE
Receive Antenna Dimension (RAD)	ANTENNA GAIN_____, BEAMWIDTH _____, RAD =	NTIA FORMAT(RAD), EXAMPLE, FOR 16 DBI ANTENNA GAIN AND 30 DEGREE BEAMWIDTH RAD01 16G030B
Type of satellite (State = SPCE) City = Geo or Nongeo	Type = NONGEOSTATIONARY	CHOOSE EITHER: GEOSTATIONARY OR NONGEOSTATIONARY
For Geostationary Satellites	Longitude =	IF ANY SATELLITES ARE GEOSTATIONARY, REPORT ITS LATITUDE AS 000000N (XLA AND/OR RLA) AND REPORT ITS LONGITUDE IN DDDMMSS FORMAT (XLG AND/OR RLG).
For Nongeostationary (Orbital Data)	INCLINATION ANGLE_____97.4deg____, APOGEE IN KILOMETERS___525 km___, PERIGEE IN KILOMETERS___525 km___, ORBITAL PERIOD IN HOURS ___1__AND FRACTIONS OF HOURS IN DECIMAL___0.58___, THE NUMBER OF SATELLITES IN THE SYSTEM_____1_____, ORB = 97.4IN00525AP00525PE001.58H01T01	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
For SunSynchronous Nongeostationary Orbits	Mean Local Time of Ascending Node (MLTAN) =_____13:00_____	MLTAN IS THE ANGLE BETWEEN AN ORBIT'S ASCENDING NODE AND THE MEAN SUN, OFTEN EXPRESSED AS UNIT OF TIME (HH:MM)

Transmit Frequency: 402.7 MHz		
State (XSC)	XSC = Sri Lanka	
City Name (XAL)	XAL = Kandy	
Latitude (DDMMSS)	Lat = 071627	
Longitude (DDDMMSS)	Lon = 0804329	

Transmit Power (PWR)	PWR = 0.12W	TRANSMIT POWER SUPPLIED TO THE ANTENNA INPUT TERMINAL, EXAMPLE, PWR01 W2 TRANSMIT POWER UNITS INCLUDE: W = WATT, K = KILOWATT, M = MEGAWATT
Necessary Bandwidth	5.76 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		
-20 dB bandwidth		
-40 dB bandwidth		
-60 dB bandwidth		
Modulation Type		THE METHOD USED TO SUPERIMPOSE DATA ON THE CARRIER, EXAMPLE, BPSK, QPSK, GMSK.
Data Rate		INFORMATION DATA RATE
Forward Error Correction Coding	Is FEC used? Yes ☐ No ☒ FEC Type: _____, FEC Rate: _____,	
Total Symbol Rate	1.2ksps	DATA RATE COMBINED WITH FEC AND FRAME OVERHEAD RESULTING IN THE TOTAL SYMBOL RATE AT THE INPUTE TO THE SYMBOL MAPPER/MODULATOR.
Transmit Antenna Polarization (XAP)	XAP =	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 =	THE EARTH STATION TRANSMITTER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (XAZ), V00 TO V90, EXAMPLE, XAZ01 V00
Transmit Antenna Dimensions (XAD)	ANTENNA GAIN___16.2 dBi _____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, XAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: XAD01 16G030B001-360A00357H006
Transmit Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	

Number of Satellite Contacts Supported Per Day	>1	NUMBER OF TIMES THE EARTH STATION WILL COMMUNICATE WITH THE STATELLITE IN THE EARTH TO SPACE DIRECTION (UPINKS) EACH DAY
Expected Duration of Each Contact	8 minutes	AVERAGE DURATION OF EACH CONTACT
Satellite Receive Specifications		
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = EC	NB= NARROWBEAM EC = EARTH COVERAGE
Receive Antenna Dimension (RAD)	ANTENNA GAIN_____, BEAMWIDTH _____, RAD =	NTIA FORMAT(RAD), EXAMPLE, FOR 16 DBI ANTENNA GAIN AND 30 DEGREE BEAMWIDTH RAD01 16G030B
Type of satellite (State = SPCE) City = Geo or Nongeo	Type = NONGEOSTATIONARY	CHOOSE EITHER: GEOSTATIONARY OR NONGEOSTATIONARY
For Geostationary Satellites	Longitude =	IF ANY SATELLITES ARE GEOSTATIONARY, REPORT ITS LATITUDE AS 000000N (XLA AND/OR RLA) AND REPORT ITS LONGITUDE IN DDDMMSS FORMAT (XLG AND/OR RLG).
For Nongeostationary (Orbital Data)	INCLINATION ANGLE_____97.4deg____, APOGEE IN KILOMETERS___525 km___, PERIGEE IN KILOMETERS___525 km___, ORBITAL PERIOD IN HOURS ___1__AND FRACTIONS OF HOURS IN DECIMAL___0.58___, THE NUMBER OF SATELLITES IN THE SYSTEM_____1_____, ORB = 97.4IN00525AP00525PE001.58H01T01	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
For SunSynchronous Nongeostationary Orbits	Mean Local Time of Ascending Node (MLTAN) =_____13:00_____	MLTAN IS THE ANGLE BETWEEN AN ORBIT'S ASCENDING NODE AND THE MEAN SUN, OFTEN EXPRESSED AS UNIT OF TIME (HH:MM)

Transmit Frequency: 402.7 MHz		
State (XSC)	XSC = New Zealand	

City Name (XAL)	XAL = Awarua	
Latitude (DDMMSS)	Lat = -463141	
Longitude (DDDMMSS)	Lon = 1682245	
Transmit Power (PWR)	PWR = 0.12W	TRANSMIT POWER SUPPLIED TO THE ANTENNA INPUT TERMINAL, EXAMPLE, PWR01 W2 TRANSMIT POWER UNITS INCLUDE: W = WATT, K = KILOWATT, M = MEGAWATT
Necessary Bandwidth	5.76 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		
-20 dB bandwidth		
-40 dB bandwidth		
-60 dB bandwidth		
Modulation Type		THE METHOD USED TO SUPERIMPOSE DATA ON THE CARRIER, EXAMPLE, BPSK, QPSK, GMSK.
Data Rate		INFORMATION DATA RATE
Forward Error Correction Coding	Is FEC used? Yes ☐ No ☒ FEC Type: _____, FEC Rate: _____,	
Total Symbol Rate	1.2ksps	DATA RATE COMBINED WITH FEC AND FRAME OVERHEAD RESULTING IN THE TOTAL SYMBOL RATE AT THE INPUTE TO THE SYMBOL MAPPER/MODULATOR.
Transmit Antenna Polarization (XAP)	XAP =	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 =	THE EARTH STATION TRANSMITTER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (XAZ), V00 TO V90, EXAMPLE, XAZ01 V00
Transmit Antenna Dimensions (XAD)	ANTENNA GAIN___16.2 dBi _____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, XAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: XAD01 16G030B001-360A00357H006

Transmit Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	>1	NUMBER OF TIMES THE EARTH STATION WILL COMMUNICATE WITH THE STATELLITE IN THE EARTH TO SPACE DIRECTION (UPINKS) EACH DAY
Expected Duration of Each Contact	8 minutes	AVERAGE DURATION OF EACH CONTACT
Satellite Receive Specifications		
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = EC	NB= NARROWBEAM EC = EARTH COVERAGE
Receive Antenna Dimension (RAD)	ANTENNA GAIN_____, BEAMWIDTH _____, RAD =	NTIA FORMAT(RAD), EXAMPLE, FOR 16 DBI ANTENNA GAIN AND 30 DEGREE BEAMWIDTH RAD01 16G030B
Type of satellite (State = SPCE) City = Geo or Nongeo	Type = NONGEOSTATIONARY	CHOOSE EITHER: GEOSTATIONARY OR NONGEOSTATIONARY
For Geostationary Satellites	Longitude =	IF ANY SATELLITES ARE GEOSTATIONARY, REPORT ITS LATITUDE AS 000000N (XLA AND/OR RLA) AND REPORT ITS LONGITUDE IN DDDMMSS FORMAT (XLG AND/OR RLG).
For Nongeostationary (Orbital Data)	INCLINATION ANGLE_____97.4deg_____, APOGEE IN KILOMETERS___525 km___, PERIGEE IN KILOMETERS___525 km___, ORBITAL PERIOD IN HOURS ___1__AND FRACTIONS OF HOURS IN DECIMAL___0.58___, THE NUMBER OF SATELLITES IN THE SYSTEM_____1_____, ORB = 97.4IN00525AP00525PE001.58H01T01	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
For SunSynchronous Nongeostationary Orbits	Mean Local Time of Ascending Node (MLTAN) =_____13:00_____	MLTAN IS THE ANGLE BETWEEN AN ORBIT'S ASCENDING NODE AND THE MEAN SUN, OFTEN EXPRESSED AS UNIT OF TIME (HH:MM)

Transmit Frequency: 402.7 MHz		
State (XSC)	XSC = Portugal	
City Name (XAL)	XAL = Santa Maria, Azores	
Latitude (DDMMSS)	Lat = 365951	
Longitude (DDDMMSS)	Lon = 0250814	
Transmit Power (PWR)	PWR = 0.12W	TRANSMIT POWER SUPPLIED TO THE ANTENNA INPUT TERMINAL, EXAMPLE, PWR01 W2 TRANSMIT POWER UNITS INCLUDE: W = WATT, K = KILOWATT, M = MEGAWATT
Necessary Bandwidth	5.76 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		
-20 dB bandwidth		
-40 dB bandwidth		
-60 dB bandwidth		
Modulation Type		THE METHOD USED TO SUPERIMPOSE DATA ON THE CARRIER, EXAMPLE, BPSK, QPSK, GMSK.
Data Rate		INFORMATION DATA RATE
Forward Error Correction Coding	Is FEC used? Yes ☐ No ☒ FEC Type: _____, FEC Rate: _____,	
Total Symbol Rate	1.2ksps	DATA RATE COMBINED WITH FEC AND FRAME OVERHEAD RESULTING IN THE TOTAL SYMBOL RATE AT THE INPUTE TO THE SYMBOL MAPPER/MODULATOR.
Transmit Antenna Polarization (XAP)	XAP =	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 =	THE EARTH STATION TRANSMITTER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (XAZ), V00 TO V90, EXAMPLE, XAZ01 V00

Transmit Antenna Dimensions (XAD)	ANTENNA GAIN___16.2 dBi _____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, XAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: XAD01 16G030B001-360A00357H006
Transmit Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	>1	NUMBER OF TIMES THE EARTH STATION WILL COMMUNICATE WITH THE STATELLITE IN THE EARTH TO SPACE DIRECTION (UPINKS) EACH DAY
Expected Duration of Each Contact	8 minutes	AVERAGE DURATION OF EACH CONTACT
Satellite Receive Specifications		
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = EC	NB= NARROWBEAM EC = EARTH COVERAGE
Receive Antenna Dimension (RAD)	ANTENNA GAIN_____, BEAMWIDTH _____, RAD =	NTIA FORMAT(RAD), EXAMPLE, FOR 16 DBI ANTENNA GAIN AND 30 DEGREE BEAMWIDTH RAD01 16G030B
Type of satellite (State = SPCE) City = Geo or Nongeo	Type = NONGEOSTATIONARY	CHOOSE EITHER: GEOSTATIONARY OR NONGEOSTATIONARY
For Geostationary Satellites	Longitude =	IF ANY SATELLITES ARE GEOSTATIONARY, REPORT ITS LATITUDE AS 000000N (XLA AND/OR RLA) AND REPORT ITS LONGITUDE IN DDDMMSS FORMAT (XLG AND/OR RLG).

For Nongeostationary (Orbital Data)	INCLINATION ANGLE_____97.4deg____, APOGEE IN KILOMETERS___525_km___, PERIGEE IN KILOMETERS__525 km___, ORBITAL PERIOD IN HOURS ___1__AND FRACTIONS OF HOURS IN DECIMAL___0.58___, THE NUMBER OF SATELLITES IN THE SYSTEM_____1_____, ORB = 97.4IN00525AP00525PE001.58H01T01	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
For SunSynchronous Nongeostationary Orbits	Mean Local Time of Ascending Node (MLTAN) =_____13:00_____	MLTAN IS THE ANGLE BETWEEN AN ORBIT'S ASCENDING NODE AND THE MEAN SUN, OFTEN EXPRESSED AS UNIT OF TIME (HH:MM)

Transmit Frequency: 402.7 MHz		
State (XSC)	XSC = United Kingdom	
City Name (XAL)	XAL = Unst, Shetland	
Latitude (DDMMSS)	Lat = 604452	
Longitude (DDDMMSS)	Lon = -0005128	
Transmit Power (PWR)	PWR = 0.12W	TRANSMIT POWER SUPPLIED TO THE ANTENNA INPUT TERMINAL, EXAMPLE, PWR01 W2 TRANSMIT POWER UNITS INCLUDE: W = WATT, K = KILOWATT, M = MEGAWATT
Necessary Bandwidth	5.76 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		
-20 dB bandwidth		
-40 dB bandwidth		
-60 dB bandwidth		
Modulation Type		THE METHOD USED TO SUPERIMPOSE DATA ON THE CARRIER, EXAMPLE, BPSK, QPSK, GMSK.
Data Rate		INFORMATION DATA RATE
Forward Error Correction Coding	Is FEC used? Yes ☐ No ☒ FEC Type: _____, FEC Rate: _____,	
Total Symbol Rate	1.2ksps	DATA RATE COMBINED WITH FEC AND FRAME OVERHEAD RESULTING IN THE TOTAL SYMBOL RATE AT THE INPUTE TO THE SYMBOL MAPPER/MODULATOR.

Transmit Antenna Polarization (XAP)	XAP =	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 =	THE EARTH STATION TRANSMITTER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (XAZ), V00 TO V90, EXAMPLE, XAZ01 V00
Transmit Antenna Dimensions (XAD)	ANTENNA GAIN___16.2 dBi _____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, XAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: XAD01 16G030B001-360A00357H006
Transmit Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	>1	NUMBER OF TIMES THE EARTH STATION WILL COMMUNICATE WITH THE STATELLITE IN THE EARTH TO SPACE DIRECTION (UPINKS) EACH DAY
Expected Duration of Each Contact	8 minutes	AVERAGE DURATION OF EACH CONTACT
Satellite Receive Specifications		
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = EC	NB= NARROWBEAM EC = EARTH COVERAGE
Receive Antenna Dimension (RAD)	ANTENNA GAIN_____, BEAMWIDTH _____, RAD =	NTIA FORMAT(RAD), EXAMPLE, FOR 16 DBI ANTENNA GAIN AND 30 DEGREE BEAMWIDTH RAD01 16G030B

Type of satellite (State = SPCE) City = Geo or Nongeo	Type = NONGEOSTATIONARY	CHOOSE EITHER: GEOSTATIONARY OR NONGEOSTATIONARY
For Geostationary Satellites	Longitude =	IF ANY SATELLITES ARE GEOSTATIONARY, REPORT ITS LATITUDE AS 000000N (XLA AND/OR RLA) AND REPORT ITS LONGITUDE IN DDDMMSS FORMAT (XLG AND/OR RLG).
For Nongeostationary (Orbital Data)	INCLINATION ANGLE_____97.4deg____, APOGEE IN KILOMETERS___525_km___, PERIGEE IN KILOMETERS___525 km___, ORBITAL PERIOD IN HOURS ___1__AND FRACTIONS OF HOURS IN DECIMAL___0.58___, THE NUMBER OF SATELLITES IN THE SYSTEM_____1_____, ORB = 97.4IN00525AP00525PE001.58H01T01	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
For SunSynchronous Nongeostationary Orbits	Mean Local Time of Ascending Node (MLTAN) =_____13:00_____	MLTAN IS THE ANGLE BETWEEN AN ORBIT'S ASCENDING NODE AND THE MEAN SUN, OFTEN EXPRESSED AS UNIT OF TIME (HH:MM)

Transmit Frequency: 2049 MHz		
State (XSC)	XSC = Australia	
City Name (XAL)	XAL =	
Latitude (DDMMSS)	Lat = 34.04° S	
Longitude (DDDMMSS)	Lon = 150.77° E	
Transmit Power (PWR)	PWR = 39.8 W	TRANSMIT POWER SUPPLIED TO THE ANTENNA INPUT TERMINAL, EXAMPLE, PWR01 W2 TRANSMIT POWER UNITS INCLUDE: W = WATT, K = KILOWATT, M = MEGAWATT
Necessary Bandwidth	150 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		
-20 dB bandwidth		
-40 dB bandwidth		
-60 dB bandwidth		
Modulation Type		THE METHOD USED TO SUPERIMPOSE DATA ON THE CARRIER, EXAMPLE, BPSK, QPSK, GMSK.
Data Rate		INFORMATION DATA RATE

Forward Error Correction Coding	Is FEC used? Yes ☐ No ☒ FEC Type: _____, FEC Rate: _____,	
Total Symbol Rate	1.2ksps	DATA RATE COMBINED WITH FEC AND FRAME OVERHEAD RESULTING IN THE TOTAL SYMBOL RATE AT THE INPUTE TO THE SYMBOL MAPPER/MODULATOR.
Transmit Antenna Polarization (XAP)	XAP =	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 =	THE EARTH STATION TRANSMITTER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (XAZ), V00 TO V90, EXAMPLE, XAZ01 V00
Transmit Antenna Dimensions (XAD)	ANTENNA GAIN____39.4 dBi_____, BEAMWIDTH_____, AZIMUTH28AL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, XAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: XAD01 16G030B001-360A00357H006
Transmit Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	NUMBER OF TIMES THE EARTH STATION WILL COMMUNICATE WITH THE STATELLITE IN THE EARTH TO SPACE DIRECTION (UPINKS) EACH DAY
Expected Duration of Each Contact	8 minutes	AVERAGE DURATION OF EACH CONTACT
Satellite Receive Specifications		
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = EC	NB= NARROWBEAM EC = EARTH COVERAGE

Receive Antenna Dimension (RAD)	ANTENNA GAIN_____, BEAMWIDTH _____, RAD =	NTIA FORMAT(RAD), EXAMPLE, FOR 16 DBI ANTENNA GAIN AND 30 DEGREE BEAMWIDTH RAD01 16G030B
Type of satellite (State = SPCE) City = Geo or Nongeo	Type = NONGEOSTATIONARY	CHOOSE EITHER: GEOSTATIONARY OR NONGEOSTATIONARY
For Geostationary Satellites	Longitude =	IF ANY SATELLITES ARE GEOSTATIONARY, REPORT ITS LATITUDE AS 000000N (XLA AND/OR RLA) AND REPORT ITS LONGITUDE IN DDDMMSS FORMAT (XLG AND/OR RLG).
For Nongeostationary (Orbital Data)	INCLINATION ANGLE_____97.4deg____, APOGEE IN KILOMETERS___525_km___, PERIGEE IN KILOMETERS__525 km___, ORBITAL PERIOD IN HOURS ___1__AND FRACTIONS OF HOURS IN DECIMAL___0.58___, THE NUMBER OF SATELLITES IN THE SYSTEM_____1_____, ORB = 97.4IN00525AP00525PE001.58H01T01	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
For SunSynchronous Nongeostationary Orbits	Mean Local Time of Ascending Node (MLTAN) =_____13:00_____	MLTAN IS THE ANGLE BETWEEN AN ORBIT'S ASCENDING NODE AND THE MEAN SUN, OFTEN EXPRESSED AS UNIT OF TIME (HH:MM)

Transmit Frequency: 2049 MHz		
State (XSC)	XSC = Bahrain	
City Name (XAL)	XAL = Zallaq	
Latitude (DDMMSS)	Lat = 260300	
Longitude (DDDMMSS)	Lon = 0503000	
Transmit Power (PWR)	PWR = 39.8 W	TRANSMIT POWER SUPPLIED TO THE ANTENNA INPUT TERMINAL, EXAMPLE, PWR01 W2 TRANSMIT POWER UNITS INCLUDE: W = WATT, K = KILOWATT, M = MEGAWATT
Necessary Bandwidth	150 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		
-20 dB bandwidth		
-40 dB bandwidth		

-60 dB bandwidth		
Modulation Type		THE METHOD USED TO SUPERIMPOSE DATA ON THE CARRIER, EXAMPLE, BPSK, QPSK, GMSK.
Data Rate		INFORMATION DATA RATE
Forward Error Correction Coding	Is FEC used? Yes ☐ No ☒ FEC Type: _____, FEC Rate: _____,	
Total Symbol Rate	1.2ksps	DATA RATE COMBINED WITH FEC AND FRAME OVERHEAD RESULTING IN THE TOTAL SYMBOL RATE AT THE INPUTE TO THE SYMBOL MAPPER/MODULATOR.
Transmit Antenna Polarization (XAP)	XAP =	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 =	THE EARTH STATION TRANSMITTER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (XAZ), V00 TO V90, EXAMPLE, XAZ01 V00
Transmit Antenna Dimensions (XAD)	ANTENNA GAIN____39.4 dBi_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, XAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: XAD01 16G030B001-360A00357H006
Transmit Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	<1	NUMBER OF TIMES THE EARTH STATION WILL COMMUNICATE WITH THE STATELLITE IN THE EARTH TO SPACE DIRECTION (UPINKS) EACH DAY
Expected Duration of Each Contact	8 minutes	AVERAGE DURATION OF EACH CONTACT
Satellite Receive Specifications		

Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = EC	NB= NARROWBEAM EC = EARTH COVERAGE
Receive Antenna Dimension (RAD)	ANTENNA GAIN_____, BEAMWIDTH _____, RAD =	NTIA FORMAT(RAD), EXAMPLE, FOR 16 DBI ANTENNA GAIN AND 30 DEGREE BEAMWIDTH RAD01 16G030B
Type of satellite (State = SPCE) City = Geo or Nongeo	Type = NONGEOSTATIONARY	CHOOSE EITHER: GEOSTATIONARY OR NONGEOSTATIONARY
For Geostationary Satellites	Longitude =	IF ANY SATELLITES ARE GEOSTATIONARY, REPORT ITS LATITUDE AS 000000N (XLA AND/OR RLA) AND REPORT ITS LONGITUDE IN DDDMMSS FORMAT (XLG AND/OR RLG).
For Nongeostationary (Orbital Data)	INCLINATION ANGLE_____97.4deg____, APOGEE IN KILOMETERS___525 km___, PERIGEE IN KILOMETERS___525 km___, ORBITAL PERIOD IN HOURS ___1__AND FRACTIONS OF HOURS IN DECIMAL___0.58___, THE NUMBER OF SATELLITES IN THE SYSTEM_____1_____, ORB = 97.4IN00525AP00525PE001.58H01T01	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
For SunSynchronous Nongeostationary Orbits	Mean Local Time of Ascending Node (MLTAN) =_____13:00_____	MLTAN IS THE ANGLE BETWEEN AN ORBIT'S ASCENDING NODE AND THE MEAN SUN, OFTEN EXPRESSED AS UNIT OF TIME (HH:MM)

Transmit Frequency: 2049 MHz		
State (XSC)	XSC = Ireland	
City Name (XAL)	XAL = Dublin	
Latitude (DDMMSS)	Lat = 532400	
Longitude (DDDMMSS)	Lon = -0061312	

Transmit Power (PWR)	PWR = 39.8 W	TRANSMIT POWER SUPPLIED TO THE ANTENNA INPUT TERMINAL, EXAMPLE, PWR01 W2 TRANSMIT POWER UNITS INCLUDE: W = WATT, K = KILOWATT, M = MEGAWATT
Necessary Bandwidth	150 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		
-20 dB bandwidth		
-40 dB bandwidth		
-60 dB bandwidth		
Modulation Type		THE METHOD USED TO SUPERIMPOSE DATA ON THE CARRIER, EXAMPLE, BPSK, QPSK, GMSK.
Data Rate		INFORMATION DATA RATE
Forward Error Correction Coding	Is FEC used? Yes ☐ No ☒ FEC Type: _____, FEC Rate: _____,	
Total Symbol Rate	1.2ksps	DATA RATE COMBINED WITH FEC AND FRAME OVERHEAD RESULTING IN THE TOTAL SYMBOL RATE AT THE INPUTE TO THE SYMBOL MAPPER/MODULATOR.
Transmit Antenna Polarization (XAP)	XAP =	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 =	THE EARTH STATION TRANSMITTER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (XAZ), V00 TO V90, EXAMPLE, XAZ01 V00
Transmit Antenna Dimensions (XAD)	ANTENNA GAIN____39.4 dBi_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, XAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: XAD01 16G030B001-360A00357H006
Transmit Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	

Number of Satellite Contacts Supported Per Day	<1	NUMBER OF TIMES THE EARTH STATION WILL COMMUNICATE WITH THE STATELLITE IN THE EARTH TO SPACE DIRECTION (UPINKS) EACH DAY
Expected Duration of Each Contact	8 minutes	AVERAGE DURATION OF EACH CONTACT
Satellite Receive Specifications		
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = EC	NB= NARROWBEAM EC = EARTH COVERAGE
Receive Antenna Dimension (RAD)	ANTENNA GAIN_____, BEAMWIDTH _____, RAD =	NTIA FORMAT(RAD), EXAMPLE, FOR 16 DBI ANTENNA GAIN AND 30 DEGREE BEAMWIDTH RAD01 16G030B
Type of satellite (State = SPCE) City = Geo or Nongeo	Type = NONGEOSTATIONARY	CHOOSE EITHER: GEOSTATIONARY OR NONGEOSTATIONARY
For Geostationary Satellites	Longitude =	IF ANY SATELLITES ARE GEOSTATIONARY, REPORT ITS LATITUDE AS 000000N (XLA AND/OR RLA) AND REPORT ITS LONGITUDE IN DDDMMSS FORMAT (XLG AND/OR RLG).
For Nongeostationary (Orbital Data)	INCLINATION ANGLE_____97.4deg____, APOGEE IN KILOMETERS___525 km___, PERIGEE IN KILOMETERS___525 km___, ORBITAL PERIOD IN HOURS ___1__AND FRACTIONS OF HOURS IN DECIMAL___0.58___, THE NUMBER OF SATELLITES IN THE SYSTEM_____1_____, ORB = 97.4IN00525AP00525PE001.58H01T01	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
For SunSynchronous Nongeostationary Orbits	Mean Local Time of Ascending Node (MLTAN) =_____13:00_____	MLTAN IS THE ANGLE BETWEEN AN ORBIT'S ASCENDING NODE AND THE MEAN SUN, OFTEN EXPRESSED AS UNIT OF TIME (HH:MM)

Transmit Frequency: 2049 MHz

State (XSC)	XSC = Southern Australia	
City Name (XAL)	XAL = Peterborough	
Latitude (DDMMSS)	Lat = -325743	
Longitude (DDDMMSS)	Lon = 1385058	
Transmit Power (PWR)	PWR = 39.8 W	TRANSMIT POWER SUPPLIED TO THE ANTENNA INPUT TERMINAL, EXAMPLE, PWR01 W2 TRANSMIT POWER UNITS INCLUDE: W = WATT, K = KILOWATT, M = MEGAWATT
Necessary Bandwidth	150 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		
-20 dB bandwidth		
-40 dB bandwidth		
-60 dB bandwidth		
Modulation Type		THE METHOD USED TO SUPERIMPOSE DATA ON THE CARRIER, EXAMPLE, BPSK, QPSK, GMSK.
Data Rate		INFORMATION DATA RATE
Forward Error Correction Coding	Is FEC used? Yes ☐ No ☒ FEC Type: _____, FEC Rate: _____,	
Total Symbol Rate	1.2ksps	DATA RATE COMBINED WITH FEC AND FRAME OVERHEAD RESULTING IN THE TOTAL SYMBOL RATE AT THE INPUTE TO THE SYMBOL MAPPER/MODULATOR.
Transmit Antenna Polarization (XAP)	XAP =	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 =	THE EARTH STATION TRANSMITTER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (XAZ), V00 TO V90, EXAMPLE, XAZ01 V00

Transmit Antenna Dimensions (XAD)	ANTENNA GAIN_____39.4 dBi _____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, XAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: XAD01 16G030B001-360A00357H006
Transmit Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	>1	NUMBER OF TIMES THE EARTH STATION WILL COMMUNICATE WITH THE STATELLITE IN THE EARTH TO SPACE DIRECTION (UPINKS) EACH DAY
Expected Duration of Each Contact	8 minutes	AVERAGE DURATION OF EACH CONTACT
Satellite Receive Specifications		
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = EC	NB= NARROWBEAM EC = EARTH COVERAGE
Receive Antenna Dimension (RAD)	ANTENNA GAIN_____, BEAMWIDTH _____, RAD =	NTIA FORMAT(RAD), EXAMPLE, FOR 16 DBI ANTENNA GAIN AND 30 DEGREE BEAMWIDTH RAD01 16G030B
Type of satellite (State = SPCE) City = Geo or Nongeo	Type = NONGEOSTATIONARY	CHOOSE EITHER: GEOSTATIONARY OR NONGEOSTATIONARY
For Geostationary Satellites	Longitude =	IF ANY SATELLITES ARE GEOSTATIONARY, REPORT ITS LATITUDE AS 000000N (XLA AND/OR RLA) AND REPORT ITS LONGITUDE IN DDDMMSS FORMAT (XLG AND/OR RLG).

For Nongeostationary (Orbital Data)	INCLINATION ANGLE_____97.4deg____, APOGEE IN KILOMETERS___525_km___, PERIGEE IN KILOMETERS___525 km___, ORBITAL PERIOD IN HOURS ___1__AND FRACTIONS OF HOURS IN DECIMAL___0.58___, THE NUMBER OF SATELLITES IN THE SYSTEM_____1_____, ORB = 97.4IN00525AP00525PE001.58H01T01	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
For SunSynchronous Nongeostationary Orbits	Mean Local Time of Ascending Node (MLTAN) =_____13:00_____	MLTAN IS THE ANGLE BETWEEN AN ORBIT'S ASCENDING NODE AND THE MEAN SUN, OFTEN EXPRESSED AS UNIT OF TIME (HH:MM)

Transmit Frequency: 2049 MHz		
State (XSC)	XSC = Nangetty	
City Name (XAL)	XAL = Western Australia	
Latitude (DDMMSS)	Lat = -290037	
Longitude (DDDMMSS)	Lon = 1152030	
Transmit Power (PWR)	PWR = 39.8 W	TRANSMIT POWER SUPPLIED TO THE ANTENNA INPUT TERMINAL, EXAMPLE, PWR01 W2 TRANSMIT POWER UNITS INCLUDE: W = WATT, K = KILOWATT, M = MEGAWATT
Necessary Bandwidth	150 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		
-20 dB bandwidth		
-40 dB bandwidth		
-60 dB bandwidth		
Modulation Type		THE METHOD USED TO SUPERIMPOSE DATA ON THE CARRIER, EXAMPLE, BPSK, QPSK, GMSK.
Data Rate		INFORMATION DATA RATE
Forward Error Correction Coding	Is FEC used? Yes ☐ No ☒ FEC Type: _____, FEC Rate: _____,	
Total Symbol Rate	1.2ksps	DATA RATE COMBINED WITH FEC AND FRAME OVERHEAD RESULTING IN THE TOTAL SYMBOL RATE AT THE INPUTE TO THE SYMBOL MAPPER/MODULATOR.

Transmit Antenna Polarization (XAP)	XAP =	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 =	THE EARTH STATION TRANSMITTER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (XAZ), V00 TO V90, EXAMPLE, XAZ01 V00
Transmit Antenna Dimensions (XAD)	ANTENNA GAIN_____39.4 dBi _____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, XAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: XAD01 16G030B001-360A00357H006
Transmit Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	>1	NUMBER OF TIMES THE EARTH STATION WILL COMMUNICATE WITH THE STATELLITE IN THE EARTH TO SPACE DIRECTION (UPINKS) EACH DAY
Expected Duration of Each Contact	8 minutes	AVERAGE DURATION OF EACH CONTACT
Satellite Receive Specifications		
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = EC	NB= NARROWBEAM EC = EARTH COVERAGE
Receive Antenna Dimension (RAD)	ANTENNA GAIN_____, BEAMWIDTH _____, RAD =	NTIA FORMAT(RAD), EXAMPLE, FOR 16 DBI ANTENNA GAIN AND 30 DEGREE BEAMWIDTH RAD01 16G030B

Type of satellite (State = SPCE) City = Geo or Nongeo	Type = NONGEOSTATIONARY	CHOOSE EITHER: GEOSTATIONARY OR NONGEOSTATIONARY
For Geostationary Satellites	Longitude =	IF ANY SATELLITES ARE GEOSTATIONARY, REPORT ITS LATITUDE AS 000000N (XLA AND/OR RLA) AND REPORT ITS LONGITUDE IN DDDMMSS FORMAT (XLG AND/OR RLG).
For Nongeostationary (Orbital Data)	INCLINATION ANGLE_____97.4deg____, APOGEE IN KILOMETERS___525_km___, PERIGEE IN KILOMETERS___525 km___, ORBITAL PERIOD IN HOURS ___1__AND FRACTIONS OF HOURS IN DECIMAL___0.58___, THE NUMBER OF SATELLITES IN THE SYSTEM_____1_____, ORB = 97.4IN00525AP00525PE001.58H01T01	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
For SunSynchronous Nongeostationary Orbits	Mean Local Time of Ascending Node (MLTAN) =_____13:00_____	MLTAN IS THE ANGLE BETWEEN AN ORBIT'S ASCENDING NODE AND THE MEAN SUN, OFTEN EXPRESSED AS UNIT OF TIME (HH:MM)

Transmit Frequency: 2049 MHz		
State (XSC)	XSC = Absheron	
City Name (XAL)	XAL = Azerbaijan	
Latitude (DDMMSS)	Lat = 402758	
Longitude (DDDMMSS)	Lon = 492908	
Transmit Power (PWR)	PWR = 39.8 W	TRANSMIT POWER SUPPLIED TO THE ANTENNA INPUT TERMINAL, EXAMPLE, PWR01 W2 TRANSMIT POWER UNITS INCLUDE: W = WATT, K = KILOWATT, M = MEGAWATT
Necessary Bandwidth	150 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		
-20 dB bandwidth		
-40 dB bandwidth		
-60 dB bandwidth		
Modulation Type		THE METHOD USED TO SUPERIMPOSE DATA ON THE CARRIER, EXAMPLE, BPSK, QPSK, GMSK.
Data Rate		INFORMATION DATA RATE

Forward Error Correction Coding	Is FEC used? Yes ☐ No ☒ FEC Type: _____, FEC Rate: _____,	
Total Symbol Rate	1.2ksps	DATA RATE COMBINED WITH FEC AND FRAME OVERHEAD RESULTING IN THE TOTAL SYMBOL RATE AT THE INPUTE TO THE SYMBOL MAPPER/MODULATOR.
Transmit Antenna Polarization (XAP)	XAP =	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 =	THE EARTH STATION TRANSMITTER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (XAZ), V00 TO V90, EXAMPLE, XAZ01 V00
Transmit Antenna Dimensions (XAD)	ANTENNA GAIN_____39.4 dBi _____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, XAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: XAD01 16G030B001-360A00357H006
Transmit Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	>1	NUMBER OF TIMES THE EARTH STATION WILL COMMUNICATE WITH THE STATELLITE IN THE EARTH TO SPACE DIRECTION (UPINKS) EACH DAY
Expected Duration of Each Contact	8 minutes	AVERAGE DURATION OF EACH CONTACT
Satellite Receive Specifications		
Receive Antenna Polarization (RAP)	RAP = J	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

Receive Antenna Orientation (RAZ)	RAZ = EC	NB= NARROWBEAM EC = EARTH COVERAGE
Receive Antenna Dimension (RAD)	ANTENNA GAIN_____, BEAMWIDTH _____, RAD =	NTIA FORMAT(RAD), EXAMPLE, FOR 16 DBI ANTENNA GAIN AND 30 DEGREE BEAMWIDTH RAD01 16G030B
Type of satellite (State = SPCE) City = Geo or Nongeo	Type = NONGEOSTATIONARY	CHOOSE EITHER: GEOSTATIONARY OR NONGEOSTATIONARY
For Geostationary Satellites	Longitude =	IF ANY SATELLITES ARE GEOSTATIONARY, REPORT ITS LATITUDE AS 000000N (XLA AND/OR RLA) AND REPORT ITS LONGITUDE IN DDDMMSS FORMAT (XLG AND/OR RLG).
For Nongeostationary (Orbital Data)	INCLINATION ANGLE_____97.4deg____, APOGEE IN KILOMETERS___525_km___, PERIGEE IN KILOMETERS___525 km___, ORBITAL PERIOD IN HOURS ___1__AND FRACTIONS OF HOURS IN DECIMAL___0.58___, THE NUMBER OF SATELLITES IN THE SYSTEM_____1_____, ORB = 97.4IN00525AP00525PE001.58H01T01	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
For SunSynchronous Nongeostationary Orbits	Mean Local Time of Ascending Node (MLTAN) =_____13:00_____	MLTAN IS THE ANGLE BETWEEN AN ORBIT'S ASCENDING NODE AND THE MEAN SUN, OFTEN EXPRESSED AS UNIT OF TIME (HH:MM)

Transmit Frequency: 2049 MHz		
State (XSC)	XSC = Plana	
City Name (XAL)	XAL = Bulgaria	
Latitude (DDMMSS)	Lat = 422858	
Longitude (DDDMMSS)	Lon = 0232643	
Transmit Power (PWR)	PWR = 39.8 W	TRANSMIT POWER SUPPLIED TO THE ANTENNA INPUT TERMINAL, EXAMPLE, PWR01 W2 TRANSMIT POWER UNITS INCLUDE: W = WATT, K = KILOWATT, M = MEGAWATT
Necessary Bandwidth	150 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		

-20 dB bandwidth		
-40 dB bandwidth		
-60 dB bandwidth		
Modulation Type		THE METHOD USED TO SUPERIMPOSE DATA ON THE CARRIER, EXAMPLE, BPSK, QPSK, GMSK.
Data Rate		INFORMATION DATA RATE
Forward Error Correction Coding	Is FEC used? Yes ☐ No ☒ FEC Type: _____, FEC Rate: _____,	
Total Symbol Rate	1.2ksps	DATA RATE COMBINED WITH FEC AND FRAME OVERHEAD RESULTING IN THE TOTAL SYMBOL RATE AT THE INPUTE TO THE SYMBOL MAPPER/MODULATOR.
Transmit Antenna Polarization (XAP)	XAP =	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 =	THE EARTH STATION TRANSMITTER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (XAZ), V00 TO V90, EXAMPLE, XAZ01 V00
Transmit Antenna Dimensions (XAD)	ANTENNA GAIN_____39.4 dBi _____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, XAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: XAD01 16G030B001-360A00357H006
Transmit Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	>1	NUMBER OF TIMES THE EARTH STATION WILL COMMUNICATE WITH THE STATELLITE IN THE EARTH TO SPACE DIRECTION (UPINKS) EACH DAY
Expected Duration of Each Contact	8 minutes	AVERAGE DURATION OF EACH CONTACT
Satellite Receive Specifications		

Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = EC	NB= NARROWBEAM EC = EARTH COVERAGE
Receive Antenna Dimension (RAD)	ANTENNA GAIN_____, BEAMWIDTH _____, RAD =	NTIA FORMAT(RAD), EXAMPLE, FOR 16 DBI ANTENNA GAIN AND 30 DEGREE BEAMWIDTH RAD01 16G030B
Type of satellite (State = SPCE) City = Geo or Nongeo	Type = NONGEOSTATIONARY	CHOOSE EITHER: GEOSTATIONARY OR NONGEOSTATIONARY
For Geostationary Satellites	Longitude =	IF ANY SATELLITES ARE GEOSTATIONARY, REPORT ITS LATITUDE AS 000000N (XLA AND/OR RLA) AND REPORT ITS LONGITUDE IN DDDMMSS FORMAT (XLG AND/OR RLG).
For Nongeostationary (Orbital Data)	INCLINATION ANGLE_____97.4deg____, APOGEE IN KILOMETERS___525 km___, PERIGEE IN KILOMETERS___525 km___, ORBITAL PERIOD IN HOURS ___1__AND FRACTIONS OF HOURS IN DECIMAL___0.58___, THE NUMBER OF SATELLITES IN THE SYSTEM_____1_____, ORB = 97.4IN00525AP00525PE001.58H01T01	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
For SunSynchronous Nongeostationary Orbits	Mean Local Time of Ascending Node (MLTAN) =_____13:00_____	MLTAN IS THE ANGLE BETWEEN AN ORBIT'S ASCENDING NODE AND THE MEAN SUN, OFTEN EXPRESSED AS UNIT OF TIME (HH:MM)

Transmit Frequency: 2049 MHz		
State (XSC)	XSC = Puertollano	
City Name (XAL)	XAL = Spain	
Latitude (DDMMSS)	Lat = 384026	
Longitude (DDDMMSS)	Lon = -0040943	

Transmit Power (PWR)	PWR = 39.8 W	TRANSMIT POWER SUPPLIED TO THE ANTENNA INPUT TERMINAL, EXAMPLE, PWR01 W2 TRANSMIT POWER UNITS INCLUDE: W = WATT, K = KILOWATT, M = MEGAWATT
Necessary Bandwidth	150 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		
-20 dB bandwidth		
-40 dB bandwidth		
-60 dB bandwidth		
Modulation Type		THE METHOD USED TO SUPERIMPOSE DATA ON THE CARRIER, EXAMPLE, BPSK, QPSK, GMSK.
Data Rate		INFORMATION DATA RATE
Forward Error Correction Coding	Is FEC used? Yes ☐ No ☒ FEC Type: _____, FEC Rate: _____,	
Total Symbol Rate	1.2ksps	DATA RATE COMBINED WITH FEC AND FRAME OVERHEAD RESULTING IN THE TOTAL SYMBOL RATE AT THE INPUTE TO THE SYMBOL MAPPER/MODULATOR.
Transmit Antenna Polarization (XAP)	XAP =	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 =	THE EARTH STATION TRANSMITTER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (XAZ), V00 TO V90, EXAMPLE, XAZ01 V00
Transmit Antenna Dimensions (XAD)	ANTENNA GAIN_____39.4 dBi _____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, XAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: XAD01 16G030B001-360A00357H006
Transmit Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	

Number of Satellite Contacts Supported Per Day	>1	NUMBER OF TIMES THE EARTH STATION WILL COMMUNICATE WITH THE STATELLITE IN THE EARTH TO SPACE DIRECTION (UPINKS) EACH DAY
Expected Duration of Each Contact	8 minutes	AVERAGE DURATION OF EACH CONTACT
Satellite Receive Specifications		
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = EC	NB= NARROWBEAM EC = EARTH COVERAGE
Receive Antenna Dimension (RAD)	ANTENNA GAIN_____, BEAMWIDTH _____, RAD =	NTIA FORMAT(RAD), EXAMPLE, FOR 16 DBI ANTENNA GAIN AND 30 DEGREE BEAMWIDTH RAD01 16G030B
Type of satellite (State = SPCE) City = Geo or Nongeo	Type = NONGEOSTATIONARY	CHOOSE EITHER: GEOSTATIONARY OR NONGEOSTATIONARY
For Geostationary Satellites	Longitude =	IF ANY SATELLITES ARE GEOSTATIONARY, REPORT ITS LATITUDE AS 000000N (XLA AND/OR RLA) AND REPORT ITS LONGITUDE IN DDDMMSS FORMAT (XLG AND/OR RLG).
For Nongeostationary (Orbital Data)	INCLINATION ANGLE_____97.4deg____, APOGEE IN KILOMETERS___525 km___, PERIGEE IN KILOMETERS___525 km___, ORBITAL PERIOD IN HOURS ___1__AND FRACTIONS OF HOURS IN DECIMAL___0.58___, THE NUMBER OF SATELLITES IN THE SYSTEM_____1_____, ORB = 97.4IN00525AP00525PE001.58H01T01	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
For SunSynchronous Nongeostationary Orbits	Mean Local Time of Ascending Node (MLTAN) =_____13:00_____	MLTAN IS THE ANGLE BETWEEN AN ORBIT'S ASCENDING NODE AND THE MEAN SUN, OFTEN EXPRESSED AS UNIT OF TIME (HH:MM)

Transmit Frequency: 2049 MHz		
State (XSC)	XSC = Blönduós	

City Name (XAL)	XAL = Iceland	
Latitude (DDMMSS)	Lat = 653850	
Longitude (DDDMMSS)	Lon = -0201445	
Transmit Power (PWR)	PWR = 39.8 W	TRANSMIT POWER SUPPLIED TO THE ANTENNA INPUT TERMINAL, EXAMPLE, PWR01 W2 TRANSMIT POWER UNITS INCLUDE: W = WATT, K = KILOWATT, M = MEGAWATT
Necessary Bandwidth	150 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		
-20 dB bandwidth		
-40 dB bandwidth		
-60 dB bandwidth		
Modulation Type		THE METHOD USED TO SUPERIMPOSE DATA ON THE CARRIER, EXAMPLE, BPSK, QPSK, GMSK.
Data Rate		INFORMATION DATA RATE
Forward Error Correction Coding	Is FEC used? Yes ☐ No ☒ FEC Type: _____, FEC Rate: _____,	
Total Symbol Rate	1.2ksps	DATA RATE COMBINED WITH FEC AND FRAME OVERHEAD RESULTING IN THE TOTAL SYMBOL RATE AT THE INPUTE TO THE SYMBOL MAPPER/MODULATOR.
Transmit Antenna Polarization (XAP)	XAP =	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 =	THE EARTH STATION TRANSMITTER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (XAZ), V00 TO V90, EXAMPLE, XAZ01 V00
Transmit Antenna Dimensions (XAD)	ANTENNA GAIN_____39.4 dBi _____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, XAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: XAD01 16G030B001-360A00357H006

Transmit Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	>1	NUMBER OF TIMES THE EARTH STATION WILL COMMUNICATE WITH THE STATELLITE IN THE EARTH TO SPACE DIRECTION (UPINKS) EACH DAY
Expected Duration of Each Contact	8 minutes	AVERAGE DURATION OF EACH CONTACT
Satellite Receive Specifications		
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = EC	NB= NARROWBEAM EC = EARTH COVERAGE
Receive Antenna Dimension (RAD)	ANTENNA GAIN_____, BEAMWIDTH _____, RAD =	NTIA FORMAT(RAD), EXAMPLE, FOR 16 DBI ANTENNA GAIN AND 30 DEGREE BEAMWIDTH RAD01 16G030B
Type of satellite (State = SPCE) City = Geo or Nongeo	Type = NONGEOSTATIONARY	CHOOSE EITHER: GEOSTATIONARY OR NONGEOSTATIONARY
For Geostationary Satellites	Longitude =	IF ANY SATELLITES ARE GEOSTATIONARY, REPORT ITS LATITUDE AS 000000N (XLA AND/OR RLA) AND REPORT ITS LONGITUDE IN DDDMMSS FORMAT (XLG AND/OR RLG).
For Nongeostationary (Orbital Data)	INCLINATION ANGLE_____97.4deg_____, APOGEE IN KILOMETERS___525 km___, PERIGEE IN KILOMETERS___525 km___, ORBITAL PERIOD IN HOURS ___1__AND FRACTIONS OF HOURS IN DECIMAL___0.58___, THE NUMBER OF SATELLITES IN THE SYSTEM_____1_____, ORB = 97.4IN00525AP00525PE001.58H01T01	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
For SunSynchronous Nongeostationary Orbits	Mean Local Time of Ascending Node (MLTAN) =_____13:00_____	MLTAN IS THE ANGLE BETWEEN AN ORBIT'S ASCENDING NODE AND THE MEAN SUN, OFTEN EXPRESSED AS UNIT OF TIME (HH:MM)

Transmit Frequency: 2049 MHz		
State (XSC)	XSC = Vimercate	
City Name (XAL)	XAL = Italy	
Latitude (DDMMSS)	Lat = 453536	
Longitude (DDDMMSS)	Lon = 0092144	
Transmit Power (PWR)	PWR = 39.8 W	TRANSMIT POWER SUPPLIED TO THE ANTENNA INPUT TERMINAL, EXAMPLE, PWR01 W2 TRANSMIT POWER UNITS INCLUDE: W = WATT, K = KILOWATT, M = MEGAWATT
Necessary Bandwidth	150 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		
-20 dB bandwidth		
-40 dB bandwidth		
-60 dB bandwidth		
Modulation Type		THE METHOD USED TO SUPERIMPOSE DATA ON THE CARRIER, EXAMPLE, BPSK, QPSK, GMSK.
Data Rate		INFORMATION DATA RATE
Forward Error Correction Coding	Is FEC used? Yes ☐ No ☒ FEC Type: _____, FEC Rate: _____,	
Total Symbol Rate	1.2ksps	DATA RATE COMBINED WITH FEC AND FRAME OVERHEAD RESULTING IN THE TOTAL SYMBOL RATE AT THE INPUTE TO THE SYMBOL MAPPER/MODULATOR.
Transmit Antenna Polarization (XAP)	XAP =	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 =	THE EARTH STATION TRANSMITTER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (XAZ), V00 TO V90, EXAMPLE, XAZ01 V00

Transmit Antenna Dimensions (XAD)	ANTENNA GAIN_____39.4 dBi _____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, XAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: XAD01 16G030B001-360A00357H006
Transmit Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	>1	NUMBER OF TIMES THE EARTH STATION WILL COMMUNICATE WITH THE STATELLITE IN THE EARTH TO SPACE DIRECTION (UPINKS) EACH DAY
Expected Duration of Each Contact	8 minutes	AVERAGE DURATION OF EACH CONTACT
Satellite Receive Specifications		
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = EC	NB= NARROWBEAM EC = EARTH COVERAGE
Receive Antenna Dimension (RAD)	ANTENNA GAIN_____, BEAMWIDTH _____, RAD =	NTIA FORMAT(RAD), EXAMPLE, FOR 16 DBI ANTENNA GAIN AND 30 DEGREE BEAMWIDTH RAD01 16G030B
Type of satellite (State = SPCE) City = Geo or Nongeo	Type = NONGEOSTATIONARY	CHOOSE EITHER: GEOSTATIONARY OR NONGEOSTATIONARY
For Geostationary Satellites	Longitude =	IF ANY SATELLITES ARE GEOSTATIONARY, REPORT ITS LATITUDE AS 000000N (XLA AND/OR RLA) AND REPORT ITS LONGITUDE IN DDDMMSS FORMAT (XLG AND/OR RLG).

For Nongeostationary (Orbital Data)	INCLINATION ANGLE_____97.4deg____, APOGEE IN KILOMETERS___525_km___, PERIGEE IN KILOMETERS___525 km___, ORBITAL PERIOD IN HOURS ___1__AND FRACTIONS OF HOURS IN DECIMAL___0.58___, THE NUMBER OF SATELLITES IN THE SYSTEM_____1_____, ORB = 97.4IN00525AP00525PE001.58H01T01	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
For SunSynchronous Nongeostationary Orbits	Mean Local Time of Ascending Node (MLTAN) =_____13:00_____	MLTAN IS THE ANGLE BETWEEN AN ORBIT'S ASCENDING NODE AND THE MEAN SUN, OFTEN EXPRESSED AS UNIT OF TIME (HH:MM)

Transmit Frequency: 2049 MHz		
State (XSC)	XSC = Lomazzo	
City Name (XAL)	XAL = Italy	
Latitude (DDMMSS)	Lat = 454150	
Longitude (DDDMMSS)	Lon = 0090205	
Transmit Power (PWR)	PWR = 39.8 W	TRANSMIT POWER SUPPLIED TO THE ANTENNA INPUT TERMINAL, EXAMPLE, PWR01 W2 TRANSMIT POWER UNITS INCLUDE: W = WATT, K = KILOWATT, M = MEGAWATT
Necessary Bandwidth	150 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		
-20 dB bandwidth		
-40 dB bandwidth		
-60 dB bandwidth		
Modulation Type		THE METHOD USED TO SUPERIMPOSE DATA ON THE CARRIER, EXAMPLE, BPSK, QPSK, GMSK.
Data Rate		INFORMATION DATA RATE
Forward Error Correction Coding	Is FEC used? Yes ☐ No ☒ FEC Type: _____, FEC Rate: _____,	
Total Symbol Rate	1.2ksps	DATA RATE COMBINED WITH FEC AND FRAME OVERHEAD RESULTING IN THE TOTAL SYMBOL RATE AT THE INPUTE TO THE SYMBOL MAPPER/MODULATOR.

Transmit Antenna Polarization (XAP)	XAP =	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 =	THE EARTH STATION TRANSMITTER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (XAZ), V00 TO V90, EXAMPLE, XAZ01 V00
Transmit Antenna Dimensions (XAD)	ANTENNA GAIN_____39.4 dBi _____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, XAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: XAD01 16G030B001-360A00357H006
Transmit Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	>1	NUMBER OF TIMES THE EARTH STATION WILL COMMUNICATE WITH THE STATELLITE IN THE EARTH TO SPACE DIRECTION (UPINKS) EACH DAY
Expected Duration of Each Contact	8 minutes	AVERAGE DURATION OF EACH CONTACT
Satellite Receive Specifications		
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = EC	NB= NARROWBEAM EC = EARTH COVERAGE
Receive Antenna Dimension (RAD)	ANTENNA GAIN_____, BEAMWIDTH _____, RAD =	NTIA FORMAT(RAD), EXAMPLE, FOR 16 DBI ANTENNA GAIN AND 30 DEGREE BEAMWIDTH RAD01 16G030B

Type of satellite (State = SPCE) City = Geo or Nongeo	Type = NONGEOSTATIONARY	CHOOSE EITHER: GEOSTATIONARY OR NONGEOSTATIONARY
For Geostationary Satellites	Longitude =	IF ANY SATELLITES ARE GEOSTATIONARY, REPORT ITS LATITUDE AS 000000N (XLA AND/OR RLA) AND REPORT ITS LONGITUDE IN DDDMMSS FORMAT (XLG AND/OR RLG).
For Nongeostationary (Orbital Data)	INCLINATION ANGLE_____97.4deg____, APOGEE IN KILOMETERS___525_km___, PERIGEE IN KILOMETERS___525 km___, ORBITAL PERIOD IN HOURS ___1__AND FRACTIONS OF HOURS IN DECIMAL___0.58___, THE NUMBER OF SATELLITES IN THE SYSTEM_____1_____, ORB = 97.4IN00525AP00525PE001.58H01T01	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
For SunSynchronous Nongeostationary Orbits	Mean Local Time of Ascending Node (MLTAN) =_____13:00_____	MLTAN IS THE ANGLE BETWEEN AN ORBIT'S ASCENDING NODE AND THE MEAN SUN, OFTEN EXPRESSED AS UNIT OF TIME (HH:MM)

Transmit Frequency: 2049 MHz		
State (XSC)	XSC = Kandy	
City Name (XAL)	XAL = Sri Lanka	
Latitude (DDMMSS)	Lat = 071627	
Longitude (DDDMMSS)	Lon = 0804329	
Transmit Power (PWR)	PWR = 39.8 W	TRANSMIT POWER SUPPLIED TO THE ANTENNA INPUT TERMINAL, EXAMPLE, PWR01 W2 TRANSMIT POWER UNITS INCLUDE: W = WATT, K = KILOWATT, M = MEGAWATT
Necessary Bandwidth	150 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		
-20 dB bandwidth		
-40 dB bandwidth		
-60 dB bandwidth		
Modulation Type		THE METHOD USED TO SUPERIMPOSE DATA ON THE CARRIER, EXAMPLE, BPSK, QPSK, GMSK.
Data Rate		INFORMATION DATA RATE

Forward Error Correction Coding	Is FEC used? Yes ☐ No ☒ FEC Type: _____, FEC Rate: _____,	
Total Symbol Rate	1.2ksps	DATA RATE COMBINED WITH FEC AND FRAME OVERHEAD RESULTING IN THE TOTAL SYMBOL RATE AT THE INPUTE TO THE SYMBOL MAPPER/MODULATOR.
Transmit Antenna Polarization (XAP)	XAP =	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 =	THE EARTH STATION TRANSMITTER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (XAZ), V00 TO V90, EXAMPLE, XAZ01 V00
Transmit Antenna Dimensions (XAD)	ANTENNA GAIN_____39.4 dBi _____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, XAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: XAD01 16G030B001-360A00357H006
Transmit Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	>1	NUMBER OF TIMES THE EARTH STATION WILL COMMUNICATE WITH THE STATELLITE IN THE EARTH TO SPACE DIRECTION (UPINKS) EACH DAY
Expected Duration of Each Contact	8 minutes	AVERAGE DURATION OF EACH CONTACT
Satellite Receive Specifications		
Receive Antenna Polarization (RAP)	RAP = J	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

Receive Antenna Orientation (RAZ)	RAZ = EC	NB= NARROWBEAM EC = EARTH COVERAGE
Receive Antenna Dimension (RAD)	ANTENNA GAIN_____, BEAMWIDTH _____, RAD =	NTIA FORMAT(RAD), EXAMPLE, FOR 16 DBI ANTENNA GAIN AND 30 DEGREE BEAMWIDTH RAD01 16G030B
Type of satellite (State = SPCE) City = Geo or Nongeo	Type = NONGEOSTATIONARY	CHOOSE EITHER: GEOSTATIONARY OR NONGEOSTATIONARY
For Geostationary Satellites	Longitude =	IF ANY SATELLITES ARE GEOSTATIONARY, REPORT ITS LATITUDE AS 000000N (XLA AND/OR RLA) AND REPORT ITS LONGITUDE IN DDDMMSS FORMAT (XLG AND/OR RLG).
For Nongeostationary (Orbital Data)	INCLINATION ANGLE_____97.4deg____, APOGEE IN KILOMETERS___525_km___, PERIGEE IN KILOMETERS___525 km___, ORBITAL PERIOD IN HOURS ___1__AND FRACTIONS OF HOURS IN DECIMAL___0.58___, THE NUMBER OF SATELLITES IN THE SYSTEM_____1_____, ORB = 97.4IN00525AP00525PE001.58H01T01	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
For SunSynchronous Nongeostationary Orbits	Mean Local Time of Ascending Node (MLTAN) =_____13:00_____	MLTAN IS THE ANGLE BETWEEN AN ORBIT'S ASCENDING NODE AND THE MEAN SUN, OFTEN EXPRESSED AS UNIT OF TIME (HH:MM)

Transmit Frequency: 2049 MHz		
State (XSC)	XSC = Awarua	
City Name (XAL)	XAL = New Zealand	
Latitude (DDMMSS)	Lat = -463141	
Longitude (DDDMMSS)	Lon = 1682245	
Transmit Power (PWR)	PWR = 39.8 W	TRANSMIT POWER SUPPLIED TO THE ANTENNA INPUT TERMINAL, EXAMPLE, PWR01 W2 TRANSMIT POWER UNITS INCLUDE: W = WATT, K = KILOWATT, M = MEGAWATT
Necessary Bandwidth	150 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		

-20 dB bandwidth		
-40 dB bandwidth		
-60 dB bandwidth		
Modulation Type		THE METHOD USED TO SUPERIMPOSE DATA ON THE CARRIER, EXAMPLE, BPSK, QPSK, GMSK.
Data Rate		INFORMATION DATA RATE
Forward Error Correction Coding	Is FEC used? Yes ☐ No ☒ FEC Type: _____, FEC Rate: _____,	
Total Symbol Rate	1.2ksps	DATA RATE COMBINED WITH FEC AND FRAME OVERHEAD RESULTING IN THE TOTAL SYMBOL RATE AT THE INPUTE TO THE SYMBOL MAPPER/MODULATOR.
Transmit Antenna Polarization (XAP)	XAP =	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 =	THE EARTH STATION TRANSMITTER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (XAZ), V00 TO V90, EXAMPLE, XAZ01 V00
Transmit Antenna Dimensions (XAD)	ANTENNA GAIN_____39.4 dBi _____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, XAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: XAD01 16G030B001-360A00357H006
Transmit Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	>1	NUMBER OF TIMES THE EARTH STATION WILL COMMUNICATE WITH THE STATELLITE IN THE EARTH TO SPACE DIRECTION (UPINKS) EACH DAY
Expected Duration of Each Contact	8 minutes	AVERAGE DURATION OF EACH CONTACT
Satellite Receive Specifications		

Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = EC	NB= NARROWBEAM EC = EARTH COVERAGE
Receive Antenna Dimension (RAD)	ANTENNA GAIN_____, BEAMWIDTH _____, RAD =	NTIA FORMAT(RAD), EXAMPLE, FOR 16 DBI ANTENNA GAIN AND 30 DEGREE BEAMWIDTH RAD01 16G030B
Type of satellite (State = SPCE) City = Geo or Nongeo	Type = NONGEOSTATIONARY	CHOOSE EITHER: GEOSTATIONARY OR NONGEOSTATIONARY
For Geostationary Satellites	Longitude =	IF ANY SATELLITES ARE GEOSTATIONARY, REPORT ITS LATITUDE AS 000000N (XLA AND/OR RLA) AND REPORT ITS LONGITUDE IN DDDMMSS FORMAT (XLG AND/OR RLG).
For Nongeostationary (Orbital Data)	INCLINATION ANGLE_____97.4deg____, APOGEE IN KILOMETERS___525 km___, PERIGEE IN KILOMETERS___525 km___, ORBITAL PERIOD IN HOURS ___1__AND FRACTIONS OF HOURS IN DECIMAL___0.58___, THE NUMBER OF SATELLITES IN THE SYSTEM_____1_____, ORB = 97.4IN00525AP00525PE001.58H01T01	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
For SunSynchronous Nongeostationary Orbits	Mean Local Time of Ascending Node (MLTAN) =_____13:00_____	MLTAN IS THE ANGLE BETWEEN AN ORBIT'S ASCENDING NODE AND THE MEAN SUN, OFTEN EXPRESSED AS UNIT OF TIME (HH:MM)

Transmit Frequency: 2049 MHz		
State (XSC)	XSC = Santa Maria, Azores	
City Name (XAL)	XAL = Portugal	
Latitude (DDMMSS)	Lat = 365951	
Longitude (DDDMMSS)	Lon = 0250814	

Transmit Power (PWR)	PWR = 39.8 W	TRANSMIT POWER SUPPLIED TO THE ANTENNA INPUT TERMINAL, EXAMPLE, PWR01 W2 TRANSMIT POWER UNITS INCLUDE: W = WATT, K = KILOWATT, M = MEGAWATT
Necessary Bandwidth	150 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		
-20 dB bandwidth		
-40 dB bandwidth		
-60 dB bandwidth		
Modulation Type		THE METHOD USED TO SUPERIMPOSE DATA ON THE CARRIER, EXAMPLE, BPSK, QPSK, GMSK.
Data Rate		INFORMATION DATA RATE
Forward Error Correction Coding	Is FEC used? Yes ☐ No ☒ FEC Type: _____, FEC Rate: _____,	
Total Symbol Rate	1.2ksps	DATA RATE COMBINED WITH FEC AND FRAME OVERHEAD RESULTING IN THE TOTAL SYMBOL RATE AT THE INPUTE TO THE SYMBOL MAPPER/MODULATOR.
Transmit Antenna Polarization (XAP)	XAP =	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 =	THE EARTH STATION TRANSMITTER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (XAZ), V00 TO V90, EXAMPLE, XAZ01 V00
Transmit Antenna Dimensions (XAD)	ANTENNA GAIN_____39.4 dBi _____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, XAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: XAD01 16G030B001-360A00357H006
Transmit Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	

Number of Satellite Contacts Supported Per Day	>1	NUMBER OF TIMES THE EARTH STATION WILL COMMUNICATE WITH THE STATELLITE IN THE EARTH TO SPACE DIRECTION (UPINKS) EACH DAY
Expected Duration of Each Contact	8 minutes	AVERAGE DURATION OF EACH CONTACT
Satellite Receive Specifications		
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = EC	NB= NARROWBEAM EC = EARTH COVERAGE
Receive Antenna Dimension (RAD)	ANTENNA GAIN_____, BEAMWIDTH _____, RAD =	NTIA FORMAT(RAD), EXAMPLE, FOR 16 DBI ANTENNA GAIN AND 30 DEGREE BEAMWIDTH RAD01 16G030B
Type of satellite (State = SPCE) City = Geo or Nongeo	Type = NONGEOSTATIONARY	CHOOSE EITHER: GEOSTATIONARY OR NONGEOSTATIONARY
For Geostationary Satellites	Longitude =	IF ANY SATELLITES ARE GEOSTATIONARY, REPORT ITS LATITUDE AS 000000N (XLA AND/OR RLA) AND REPORT ITS LONGITUDE IN DDDMMSS FORMAT (XLG AND/OR RLG).
For Nongeostationary (Orbital Data)	INCLINATION ANGLE_____97.4deg____, APOGEE IN KILOMETERS___525 km___, PERIGEE IN KILOMETERS___525 km___, ORBITAL PERIOD IN HOURS ___1__AND FRACTIONS OF HOURS IN DECIMAL___0.58___, THE NUMBER OF SATELLITES IN THE SYSTEM_____1_____, ORB = 97.4IN00525AP00525PE001.58H01T01	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
For SunSynchronous Nongeostationary Orbits	Mean Local Time of Ascending Node (MLTAN) =_____13:00_____	MLTAN IS THE ANGLE BETWEEN AN ORBIT'S ASCENDING NODE AND THE MEAN SUN, OFTEN EXPRESSED AS UNIT OF TIME (HH:MM)

Transmit Frequency: 2049 MHz		
State (XSC)	XSC = United Kingdom	

City Name (XAL)	XAL = Unst, Shetland	
Latitude (DDMMSS)	Lat = 604452	
Longitude (DDDMMSS)	Lon = -0005128	
Transmit Power (PWR)	PWR = 39.8 W	TRANSMIT POWER SUPPLIED TO THE ANTENNA INPUT TERMINAL, EXAMPLE, PWR01 W2 TRANSMIT POWER UNITS INCLUDE: W = WATT, K = KILOWATT, M = MEGAWATT
Necessary Bandwidth	150 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		
-20 dB bandwidth		
-40 dB bandwidth		
-60 dB bandwidth		
Modulation Type		THE METHOD USED TO SUPERIMPOSE DATA ON THE CARRIER, EXAMPLE, BPSK, QPSK, GMSK.
Data Rate		INFORMATION DATA RATE
Forward Error Correction Coding	Is FEC used? Yes ☐ No ☒ FEC Type: _____, FEC Rate: _____,	
Total Symbol Rate	1.2ksps	DATA RATE COMBINED WITH FEC AND FRAME OVERHEAD RESULTING IN THE TOTAL SYMBOL RATE AT THE INPUTE TO THE SYMBOL MAPPER/MODULATOR.
Transmit Antenna Polarization (XAP)	XAP =	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 =	THE EARTH STATION TRANSMITTER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (XAZ), V00 TO V90, EXAMPLE, XAZ01 V00
Transmit Antenna Dimensions (XAD)	ANTENNA GAIN_____39.4 dBi _____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, XAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: XAD01 16G030B001-360A00357H006

Transmit Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	>1	NUMBER OF TIMES THE EARTH STATION WILL COMMUNICATE WITH THE STATELLITE IN THE EARTH TO SPACE DIRECTION (UPINKS) EACH DAY
Expected Duration of Each Contact	8 minutes	AVERAGE DURATION OF EACH CONTACT
Satellite Receive Specifications		
Receive Antenna Polarization (RAP)	RAP = J	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
Receive Antenna Orientation (RAZ)	RAZ = EC	NB= NARROWBEAM EC = EARTH COVERAGE
Receive Antenna Dimension (RAD)	ANTENNA GAIN_____, BEAMWIDTH _____, RAD =	NTIA FORMAT(RAD), EXAMPLE, FOR 16 DBI ANTENNA GAIN AND 30 DEGREE BEAMWIDTH RAD01 16G030B
Type of satellite (State = SPCE) City = Geo or Nongeo	Type = NONGEOSTATIONARY	CHOOSE EITHER: GEOSTATIONARY OR NONGEOSTATIONARY
For Geostationary Satellites	Longitude =	IF ANY SATELLITES ARE GEOSTATIONARY, REPORT ITS LATITUDE AS 000000N (XLA AND/OR RLA) AND REPORT ITS LONGITUDE IN DDDMMSS FORMAT (XLG AND/OR RLG).
For Nongeostationary (Orbital Data)	INCLINATION ANGLE_____97.4deg_____, APOGEE IN KILOMETERS___525 km___, PERIGEE IN KILOMETERS___525 km___, ORBITAL PERIOD IN HOURS ___1__AND FRACTIONS OF HOURS IN DECIMAL___0.58___, THE NUMBER OF SATELLITES IN THE SYSTEM_____1_____, ORB = 97.4IN00525AP00525PE001.58H01T01	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
For SunSynchronous Nongeostationary Orbits	Mean Local Time of Ascending Node (MLTAN) =_____13:00_____	MLTAN IS THE ANGLE BETWEEN AN ORBIT'S ASCENDING NODE AND THE MEAN SUN, OFTEN EXPRESSED AS UNIT OF TIME (HH:MM)

HL HL HL

Transmit Frequency: 2049 MHz		
State (XSC)	XSC = Sweden	
City Name (XAL)	XAL = Boden	
Latitude (DDMMSS)	Lat = 654800	
Longitude (DDDMMSS)	Lon = 0214048	
Transmit Power (PWR)	PWR = 100 W	TRANSMIT POWER SUPPLIED TO THE ANTENNA INPUT TERMINAL, EXAMPLE, PWR01 W2 TRANSMIT POWER UNITS INCLUDE: W = WATT, K = KILOWATT, M = MEGAWATT
Necessary Bandwidth	150 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		
-20 dB bandwidth		
-40 dB bandwidth		
-60 dB bandwidth		
Modulation Type	BPSK	THE METHOD USED TO SUPERIMPOSE DATA ON THE CARRIER, EXAMPLE, BPSK, QPSK, GMSK.
Data Rate	54.7 kbps	INFORMATION DATA RATE
Forward Error Correction Coding	Is FEC used? Yes ☒ No ☐ FEC Type: _Reed-Solomon and 1/2CC___, FEC Rate: _____,	
Total Symbol Rate	125 ksps	DATA RATE COMBINED WITH FEC AND FRAME OVERHEAD RESULTING IN THE TOTAL SYMBOL RATE AT THE INPUTE TO THE SYMBOL MAPPER/MODULATOR.

Transmit 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
Transmit Antenna Orientation (XAZ)	XAZ = V00	THE EARTH STATION TRANSMITTER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (XAZ), V00 TO V90, EXAMPLE, XAZ01 V00
Transmit Antenna Dimensions (XAD)	ANTENNA GAIN_40 dBi_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, XAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: XAD01 16G030B001-360A00357H006
Transmit Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	11	NUMBER OF TIMES THE EARTH STATION WILL COMMUNICATE WITH THE STATELLITE IN THE EARTH TO SPACE DIRECTION (UPINKS) EACH DAY
Expected Duration of Each Contact	8 minutes	AVERAGE DURATION OF EACH CONTACT
Satellite Receive Specifications		
Receive 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
Receive Antenna Orientation (RAZ)	RAZ = EC	NB= NARROWBEAM EC = EARTH COVERAGE
Receive Antenna Dimension (RAD)	ANTENNA GAIN_____, BEAMWIDTH _____, RAD =	NTIA FORMAT(RAD), EXAMPLE, FOR 16 DBI ANTENNA GAIN AND 30 DEGREE BEAMWIDTH RAD01 16G030B
Type of satellite (State = SPCE) City = Geo or Nongeo	Type = NONGEOSTATIONARY	CHOOSE EITHER: GEOSTATIONARY OR NONGEOSTATIONARY

For Geostationary Satellites	Longitude =	IF ANY SATELLITES ARE GEOSTATIONARY, REPORT ITS LATITUDE AS 000000N (XLA AND/OR RLA) AND REPORT ITS LONGITUDE IN DDDMMSS FORMAT (XLG AND/OR RLG).
For Nongeostationary (Orbital Data)	INCLINATION ANGLE_____97.4deg____, APOGEE IN KILOMETERS___525_km___, PERIGEE IN KILOMETERS___525 km___, ORBITAL PERIOD IN HOURS ___1__AND FRACTIONS OF HOURS IN DECIMAL___0.58___, THE NUMBER OF SATELLITES IN THE SYSTEM_____1_____, ORB = 97.4IN00525AP00525PE001.58H01T01	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
For SunSynchronous Nongeostationary Orbits	Mean Local Time of Ascending Node (MLTAN) =_____13:00_____	MLTAN IS THE ANGLE BETWEEN AN ORBIT'S ASCENDING NODE AND THE MEAN SUN, OFTEN EXPRESSED AS UNIT OF TIME (HH:MM)

Transmit Frequency: 2049 MHz		
State (XSC)	XSC = South Africa	
City Name (XAL)	XAL = Pretoria	
Latitude (DDMMSS)	Lat = -255136	
Longitude (DDDMMSS)	Lon = 0282700	
Transmit Power (PWR)	PWR = 100 W	TRANSMIT POWER SUPPLIED TO THE ANTENNA INPUT TERMINAL, EXAMPLE, PWR01 W2 TRANSMIT POWER UNITS INCLUDE: W = WATT, K = KILOWATT, M = MEGAWATT
Necessary Bandwidth	150 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		
-20 dB bandwidth		
-40 dB bandwidth		
-60 dB bandwidth		
Modulation Type	BPSK	THE METHOD USED TO SUPERIMPOSE DATA ON THE CARRIER, EXAMPLE, BPSK, QPSK, GMSK.
Data Rate	54.7 kbps	INFORMATION DATA RATE
Forward Error Correction Coding	Is FEC used? Yes ☒ No ☐ FEC Type: _Reed-Solomon and 1/2CC___, FEC Rate: _____,	

Total Symbol Rate	125 ksps	DATA RATE COMBINED WITH FEC AND FRAME OVERHEAD RESULTING IN THE TOTAL SYMBOL RATE AT THE INPUTE TO THE SYMBOL MAPPER/MODULATOR.
Transmit 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
Transmit Antenna Orientation (XAZ)	XAZ = V00	THE EARTH STATION TRANSMITTER ANTENNA MINIMUM OPERATING ANGLE OF ELEVATION (XAZ), V00 TO V90, EXAMPLE, XAZ01 V00
Transmit Antenna Dimensions (XAD)	ANTENNA GAIN____40 dBi_____, BEAMWIDTH_____, AZIMUTHAL RANGE_____, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS _____, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS _____, XAD =	EXAMPLE ASSUMING NONGEOSTATIONARY, 16 DBI GAIN, 30 DEGREE BEAMWIDTH, AZIMUTHAL RANGE FROM 001-360, SITE ELEVATION OF 357 METERS, AND ANTENNA HEIGHT ABOVE TERRAIN OF 6 METERS: XAD01 16G030B001-360A00357H006
Transmit Antenna Additional Information (For Parabolic Antennas)	ANTENNA DIAMETER_____, ANTENNA EFFICIENCY_____,	
Number of Satellite Contacts Supported Per Day	4	NUMBER OF TIMES THE EARTH STATION WILL COMMUNICATE WITH THE STATELLITE IN THE EARTH TO SPACE DIRECTION (UPINKS) EACH DAY
Expected Duration of Each Contact	8 minutes	AVERAGE DURATION OF EACH CONTACT
Satellite Receive Specifications		
Receive 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
Receive Antenna Orientation (RAZ)	RAZ = EC	NB= NARROWBEAM EC = EARTH COVERAGE
Receive Antenna Dimension (RAD)	ANTENNA GAIN_____, BEAMWIDTH _____, RAD =	NTIA FORMAT(RAD), EXAMPLE, FOR 16 DBI ANTENNA GAIN AND 30 DEGREE BEAMWIDTH RAD01 16G030B

Type of satellite (State = SPCE) City = Geo or Nongeo	Type = NONGEOSTATIONARY	CHOOSE EITHER: GEOSTATIONARY OR NONGEOSTATIONARY
For Geostationary Satellites	Longitude =	IF ANY SATELLITES ARE GEOSTATIONARY, REPORT ITS LATITUDE AS 000000N (XLA AND/OR RLA) AND REPORT ITS LONGITUDE IN DDDMMSS FORMAT (XLG AND/OR RLG).
For Nongeostationary (Orbital Data)	INCLINATION ANGLE_____97.4deg____, APOGEE IN KILOMETERS___525_km___, PERIGEE IN KILOMETERS__525 km___, ORBITAL PERIOD IN HOURS ___1__AND FRACTIONS OF HOURS IN DECIMAL___0.58___, THE NUMBER OF SATELLITES IN THE SYSTEM_____1_____, ORB = 97.4IN00525AP00525PE001.58H01T01	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
For SunSynchronous Nongeostationary Orbits	Mean Local Time of Ascending Node (MLTAN) =_____13:00_____	MLTAN IS THE ANGLE BETWEEN AN ORBIT'S ASCENDING NODE AND THE MEAN SUN, OFTEN EXPRESSED AS UNIT OF TIME (HH:MM)