## NTIA Space record data form

NTIA requires the following data for space related experiments using government shared spectrum. For each transmit frequency, please provide the data for both ends of the transmit-receive link. Use Part A to describe the satellite to ground information. Part B is for all ground to space transmit links.

## Part A: Space to Earth Downlink Data

Satellite Transmitter Data

Transmit Frequen	cy: 9600 MHz	
Satellite Name: Capella-2 (Sequoia)		
Data Field	Data Answer	Description/Comments
Polarization (XAP)	XAP = H	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 = LIENAR POLARIZATION
Orientation (XAZ)	XAZ = NB	NB = NARROWBEAM EC = EARTH COVERAGE
Antenna Dimension (XAD)	ANTENNA GAIN 49.0 dB, BEAMWIDTH 0.7 degrees,	(NTIA format (XAD), EXAMPLE, XAD01 16G030B)
	XAD = XAD01 49G001B	
Type of Satellite (State = SP)	Type = Nongeostationary	Choose either: Geostationary or Nongeostationary
(City = geo or non)		
For Geostationary	Longitude =	IF ANY SATELLITE ARE GEOSTATIONARY, REPORT ITS LATITUDE AS 000000N (XLA AND/OR RLA) AND REPORT ITS LONGITUDE (XLG AND/OR RLG)
For Nongeostationar y (Orbit Data)	INCLINATION ANGLE 45.00 degrees, APOGEE IN KILOMETERS 525 km, PERIGEE IN KILOMETERS 525 km, ORBITAL PERIOD IN HOURS 1 AND FACTIONS OF HOURS IN DECIMAL 58, THE NUMBER OF SATELLITES IN THE SYSTEM 1,	IF ANY SATELLITES ARE NONGEOSTATIONARY REPORT ITS INCLINATION ANGLE, APOGEE, IN KILOMETERS, PERIGEE IN KILOMETERS, ORBITAL PERIOD IN HOURS AND FRACTIONS OF HOURS IN DECIMAL, THE NUMBER OF SATELLITES IN THE SYSTEM, THEN T01, EXAMPLE, REM04 *ORB,98.0IN00510AP00510PE001.58H01NRT0 1, AND FOR SPACE-TO-SPACE COMMUNICATIONS WITH ANOTHER NONGEOSTATIONARY SATELLITE ADD AN ADDITIONAL *ORB FOR IT END IN R01, EXAMPLE, REM05

	ORB = 45.0IN00525AP00525PE001.58H01NRT 01	*ORB,72.9IN03209AP00655PE013.46H01NRR0 1
Note: This frequency is used for the spacecraft radar Earth remote sensing payload, therefore		
no corresponding receive stations are listed.		

Transmit Frequence	y: 8027 MHz	
Satellite Name: Cap	pella-2 (Sequoia)	
Data Field	Data Answer	Description/Comments
Polarization (XAP)	XAP = R	POLARIZATIONS INCLUDE: H = HORIZONTAL, V = VERTICAL, S = HORIZONTAL AND VERTICAL, L = LEFT HAND CIRCULAR, R = RIGHT HAND CIRCULAR, T = RIGHT AND LEFT HAND CIRCULAR, J = LIENAR POLARIZATION
Orientation (XAZ)	XAZ = NB	NB = NARROWBEAM EC = EARTH COVERAGE
Antenna Dimension (XAD)	ANTENNA GAIN 5.6 dB, BEAMWIDTH 98 degrees, XAD = XAD02 05G098B	(NTIA format (XAD), EXAMPLE, XAD01 16G030B)
Type of Satellite (State = SP) (City = geo or non)	Type = Nongeostationary	Choose either: Geostationary or Nongeostationary
For Geostationary	Longitude =	IF ANY SATELLITE ARE GEOSTATIONARY, REPORT ITS LATITUDE AS 000000N (XLA AND/OR RLA) AND REPORT ITS LONGITUDE (XLG AND/OR RLG)
For Nongeostationary (Orbit Data)	INCLINATION ANGLE 45.00 degrees, APOGEE IN KILOMETERS 525 km, PERIGEE IN KILOMETERS 525 km, ORBITAL PERIOD IN HOURS 1 AND FACTIONS OF HOURS IN DECIMAL 58, THE NUMBER OF SATELLITES IN THE SYSTEM 1, ORB = 45.0IN00525AP00525PE001.58H01NRT01	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 END IN R01, EXAMPLE, REM05 *ORB,72.9IN03209AP00655PE013.46H01NRR01
Fauth Ctation Date	(Dessiver 1)	
Earth Station Data State (RSC)	(Receiver 1) RSC = Oregon	
State (RSC)	NOC - OLEGOII	

City Name (RAL)	RAL = Boardman	
Latitude	Lat = 455116 N	
(DDMMSS)		
Longitude	Lon = 1193754 W	
(DDDMMSS)		
Antenna Polarization (RAP)	RAP = T	POLARIZATIONS INCLUDE: H = HORIZONTAL, V = VERTICAL, S = HORIZONTAL AND VERTICAL, L = LEFT HAND CIRCULAR, R = RIGHT HAND CIRCULAR, T = RIGHT AND LEFT HAND CIRCULAR, J = LIENAR POLARIZATION
Antenna Azimuth (RAZ)	RAZ = RAZ01 V00	THE EARTH STATION RECEIVER ANTENNA AZIMUTH (RAZ), THE MINIMUM ANGLE OF ELEVATION V00 TO V90, EXAMPLE, RAZ01 V00
Antenna Dimension (RAD)	ANTENNA GAIN 38.1 dB, BEAMWIDTH 2.0 degrees, AZIMUTH RANGE 0 – 360 degrees, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS 101 meters, THE ANTENNA HEIGHT ABOUT TERRAIN IN METERS 3 meters, RAD01 38G002B000-360A00101H003	EXAMPLE ASSUMING NONGEOSTATIONARY RAD01 16G030B000-360A00357H006
Earth Station Data	(Receiver 2)	
State (RSC)	RSC = Ohio	
City Name (RAL)	RAL = Kilevile	
Latitude (DDMMSS)	Lat = 400600 N	
Longitude (DDDMMSS)	Lon = 0831149 W	
Antenna Polarization (RAP)	RAP = T	POLARIZATIONS INCLUDE: H = HORIZONTAL, V = VERTICAL, S = HORIZONTAL AND VERTICAL, L = LEFT HAND CIRCULAR, R = RIGHT HAND CIRCULAR, T = RIGHT AND LEFT HAND CIRCULAR, J = LIENAR POLARIZATION
Antenna Azimuth (RAZ)	RAZ = RAZ02 V00	THE EARTH STATION RECEIVER ANTENNA AZIMUTH (RAZ), THE MINIMUM ANGLE OF ELEVATION V00 TO V90, EXAMPLE, RAZ01 V00
Antenna Dimension (RAD)	ANTENNA GAIN 38.1 dB, BEAMWIDTH 2.0 degrees, AZIMUTH RANGE 0 – 360 degrees, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS 288 meters,	EXAMPLE ASSUMING NONGEOSTATIONARY RAD01 16G030B000-360A00357H006

IN METERS 3 meters,	
RADU2 38G002B000-360A00288H003	
(Dessiver 2)	
Lat = 532044  N	
00000000	
Lon = 0061651 W	
	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 = LIENAR POLARIZATION
RAZ = RAZ03 V00	THE EARTH STATION RECEIVER ANTENNA AZIMUTH (RAZ), THE MINIMUM ANGLE OF ELEVATION V00 TO V90, EXAMPLE, RAZ01 V00
ANTENNA GAIN 38.1 dB,	EXAMPLE ASSUMING NONGEOSTATIONARY
BEAMWIDTH 2.0 degrees,	RAD01 16G030B000-360A00357H006
AZIMUTH RANGE 0 – 360 degrees,	
THE SITE ELEVATION ABOVE MEAN SEA	
LEVEL IN METERS 8 meters,	
THE ANTENNA HEIGHT ABOUT TERRAIN	
IN METERS 3 meters,	
RAD03 38G002B000-360A00008H003	
	1
Lat = 593654 N	
Lon = 0163846 E	
RAP = T	POLARIZATIONS INCLUDE: H = HORIZONTAL, V = VERTICAL, S = HORIZONTAL AND VERTICAL, L = LEFT HAND CIRCULAR, R = RIGHT HAND CIRCULAR, T = RIGHT AND LEFT HAND CIRCULAR, J = LIENAR POLARIZATION
	ANTENNA GAIN 38.1 dB, BEAMWIDTH 2.0 degrees, AZIMUTH RANGE 0 – 360 degrees, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS 8 meters, THE ANTENNA HEIGHT ABOUT TERRAIN IN METERS 3 meters,

Antenna Azimuth (RAZ)	RAZ = RAZ04 V00	THE EARTH STATION RECEIVER ANTENNA AZIMUTH (RAZ), THE MINIMUM ANGLE OF ELEVATION V00 TO V90, EXAMPLE, RAZ01 V00
Antenna Dimension (RAD)	ANTENNA GAIN 38.1 dB, BEAMWIDTH 2.0 degrees, AZIMUTH RANGE 0 – 360 degrees, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS 22 meters, THE ANTENNA HEIGHT ABOUT TERRAIN IN METERS 22 meters,	EXAMPLE ASSUMING NONGEOSTATIONARY RAD01 16G030B000-360A00357H006
	RAD04 38G002B000-360A00022H003	
Earth Station Data	(Receiver 5)	
State (RSC)	RSC = South Africa	
City Name (RAL)	RAL = Cape Town	
Latitude (DDMMSS)	Lat = 335556 S	
Longitude (DDDMMSS)	Lon = 0183152 E	
Antenna Polarization (RAP)	RAP = T	POLARIZATIONS INCLUDE: H = HORIZONTAL, V = VERTICAL, S = HORIZONTAL AND VERTICAL, L = LEFT HAND CIRCULAR, R = RIGHT HAND CIRCULAR, T = RIGHT AND LEFT HAND CIRCULAR, J = LIENAR POLARIZATION
Antenna Azimuth (RAZ)	RAZ = RAZ05 V00	THE EARTH STATION RECEIVER ANTENNA AZIMUTH (RAZ), THE MINIMUM ANGLE OF ELEVATION V00 TO V90, EXAMPLE, RAZ01 V00
Antenna Dimension (RAD)	ANTENNA GAIN 38.1 dB, BEAMWIDTH 2.0 degrees, AZIMUTH RANGE 0 – 360 degrees, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS 20 meters, THE ANTENNA HEIGHT ABOUT TERRAIN IN METERS 3 meters, RAD05 38G002B000-360A00020H003	EXAMPLE ASSUMING NONGEOSTATIONARY RAD01 16G030B000-360A00357H006
Earth Station Data	(Receiver 6)	
State (RSC)	RSC = Bahrain	
City Name (RAL)	RAL = Manama	
Latitude	Lat = 260448 N	
(DDMMSS)		
Longitude (DDDMMSS)	Lon = 0503302 E	

Antenna	RAP = T	POLARIZATIONS INCLUDE:
		H = HORIZONTAL,
Polarization (RAP)		V = VERTICAL, S = HORIZONTAL AND VERTICAL,
		L = LEFT HAND CIRCULAR,
		R = RIGHT HAND CIRCULAR,
		T = RIGHT AND LEFT HAND CIRCULAR, J = LIENAR POLARIZATION
Antenna Azimuth	RAZ = RAZ06 V00	THE EARTH STATION RECEIVER ANTENNA
(RAZ)		AZIMUTH (RAZ), THE MINIMUM ANGLE OF ELEVATION V00 TO V90, EXAMPLE, RAZ01 V00
Antenna	ANTENNA GAIN 38.1 dB,	EXAMPLE ASSUMING NONGEOSTATIONARY
Dimension (RAD)	BEAMWIDTH 2.0 degrees,	RAD01 16G030B000-360A00357H006
	AZIMUTH RANGE 0 – 360 degrees,	
	THE SITE ELEVATION ABOVE MEAN SEA	
	LEVEL IN METERS 65 meters,	
	THE ANTENNA HEIGHT ABOUT TERRAIN	
	IN METERS 3 meters,	
	RAD06 38G002B000-360A00065H003	
Earth Station Data	(Receiver 7)	
State (RSC)	RSC = Australia	
City Name (RAL)	RAL = Sydney	
Latitude	Lat = 335045 S	
(DDMMSS)		
Longitude	Lon = 1510418 E	
(DDDMMSS)		
Antenna	RAP = T	POLARIZATIONS INCLUDE:
Polarization (RAP)		H = HORIZONTAL, V = VERTICAL,
(		S = HORIZONTAL AND VERTICAL,
		L = LEFT HAND CIRCULAR, R = RIGHT HAND CIRCULAR,
		T = RIGHT AND LEFT HAND CIRCULAR,
		J = LIENAR POLARIZATION
Antenna Azimuth	RAZ = RAZ07 V00	THE EARTH STATION RECEIVER ANTENNA AZIMUTH (RAZ), THE MINIMUM ANGLE OF
(RAZ)		ELEVATION VOO TO V90, EXAMPLE, RAZO1 V00
Antenna	ANTENNA GAIN 38.1 dB,	EXAMPLE ASSUMING NONGEOSTATIONARY RAD01 16G030B000-360A00357H006
Dimension (RAD)	BEAMWIDTH 2.0 degrees,	
	AZIMUTH RANGE 0 – 360 degrees,	
	THE SITE ELEVATION ABOVE MEAN SEA	
	LEVEL IN METERS 22 meters,	
	THE ANTENNA HEIGHT ABOUT TERRAIN	
	IN METERS 3 meters,	
	RAD07 38G002B000-360A00022H003	
Earth Station Data		1
State (RSC)	RSC = Norway	

City Name (RAL)	RAL = Svalbard	
Latitude	Lat = 781354 N	
(DDMMSS)		
Longitude	Lon = 0152238 E	
(DDDMMSS)		
Antenna Polarization (RAP)	RAP = T	POLARIZATIONS INCLUDE: H = HORIZONTAL, V = VERTICAL, S = HORIZONTAL AND VERTICAL, L = LEFT HAND CIRCULAR, R = RIGHT HAND CIRCULAR, T = RIGHT AND LEFT HAND CIRCULAR, J = LIENAR POLARIZATION
Antenna Azimuth (RAZ)	RAZ = RAZ08 V00	THE EARTH STATION RECEIVER ANTENNA AZIMUTH (RAZ), THE MINIMUM ANGLE OF ELEVATION V00 TO V90, EXAMPLE, RAZ01 V00
Antenna Dimension (RAD)	ANTENNA GAIN 38.1 dB, BEAMWIDTH 2.0 degrees, AZIMUTH RANGE 0 – 360 degrees, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS 450 meters, THE ANTENNA HEIGHT ABOUT TERRAIN IN METERS 3 meters, RAD08 38G002B000-360A00008H003	EXAMPLE ASSUMING NONGEOSTATIONARY RAD01 16G030B000-360A00357H006
	RAD08 3800020000-300A000080003	
Earth Station Data	(Possiver 9)	
State (RSC)	RSC = Norway	
City Name (RAL)	RAL = Troll	
Latitude	Lat = 720041 S	
(DDMMSS)	Lat - 720041 5	
Longitude (DDDMMSS)	Lon = 0023317 E	
Antenna Polarization (RAP)	RAP = T	POLARIZATIONS INCLUDE: H = HORIZONTAL, V = VERTICAL, S = HORIZONTAL AND VERTICAL, L = LEFT HAND CIRCULAR, R = RIGHT HAND CIRCULAR, T = RIGHT AND LEFT HAND CIRCULAR, J = LIENAR POLARIZATION
Antenna Azimuth (RAZ)	RAZ = RAZ09 V00	THE EARTH STATION RECEIVER ANTENNA AZIMUTH (RAZ), THE MINIMUM ANGLE OF ELEVATION V00 TO V90, EXAMPLE, RAZ01 V00
Antenna Dimension (RAD)	ANTENNA GAIN 38.1 dB, BEAMWIDTH 2.0 degrees, AZIMUTH RANGE 0 – 360 degrees, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS 1371 meters,	EXAMPLE ASSUMING NONGEOSTATIONARY RAD01 16G030B000-360A00357H006

	THE ANTENNA HEIGHT ABOUT TERRAIN	
	IN METERS 3 meters,	
	RAD09 38G002B000-360A01371H003	
Earth Station Data	(Receiver 10)	1
State (RSC)	RSC = Chile	
City Name (RAL)	RAL = Punta Arenas	
Latitude (DDMMSS)	Lat = 530950 S	
Longitude (DDDMMSS)	Lon = 0705502 W	
Antenna Polarization (RAP)	RAP = T	POLARIZATIONS INCLUDE: H = HORIZONTAL, V = VERTICAL, S = HORIZONTAL AND VERTICAL, L = LEFT HAND CIRCULAR, R = RIGHT HAND CIRCULAR, T = RIGHT AND LEFT HAND CIRCULAR, J = LIENAR POLARIZATION
Antenna Azimuth (RAZ)	RAZ = RAZ10 V00	THE EARTH STATION RECEIVER ANTENNA AZIMUTH (RAZ), THE MINIMUM ANGLE OF ELEVATION V00 TO V90, EXAMPLE, RAZ01 V00
Antenna Dimension (RAD)	ANTENNA GAIN 38.1 dB, BEAMWIDTH 2.0 degrees, AZIMUTH RANGE 0 – 360 degrees, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS 24 meters, THE ANTENNA HEIGHT ABOUT TERRAIN IN METERS 3 meters,	EXAMPLE ASSUMING NONGEOSTATIONARY RAD01 16G030B000-360A00357H006
	RAD10 38G002B000-360A00024H003	
	(Deceiver 11)	
Earth Station Data		1
State (RSC)	RSC = Greece	
City Name (RAL)	RAL = Tripoli	
Latitude (DDMMSS)	Lat = 375901 N	
Longitude (DDDMMSS)	Lon = 0234339 E	
Antenna Polarization (RAP)	RAP = T	POLARIZATIONS INCLUDE: H = HORIZONTAL, V = VERTICAL, S = HORIZONTAL AND VERTICAL, L = LEFT HAND CIRCULAR, R = RIGHT HAND CIRCULAR, T = RIGHT AND LEFT HAND CIRCULAR, J = LIENAR POLARIZATION

Antenna Azimuth (RAZ)	RAZ = RAZ11 V00	THE EARTH STATION RECEIVER ANTENNA AZIMUTH (RAZ), THE MINIMUM ANGLE OF ELEVATION V00 TO V90, EXAMPLE, RAZ01 V00
Antenna	ANTENNA GAIN 38.1 dB,	EXAMPLE ASSUMING NONGEOSTATIONARY
Dimension (RAD)	BEAMWIDTH 2.0 degrees,	RAD01 16G030B000-360A00357H006
	AZIMUTH RANGE 0 – 360 degrees,	
	THE SITE ELEVATION ABOVE MEAN SEA	
	LEVEL IN METERS 84 meters,	
	THE ANTENNA HEIGHT ABOUT TERRAIN	
	IN METERS 3 meters,	
	RAD11 38G002B000-360A00084H003	
<b>Earth Station Data</b>	(Receiver 12)	
State (RSC)	RSC = New Zealand	
City Name (RAL)	RAL = Awarua	
Latitude	Lat = 463003 S	
(DDMMSS)		
Longitude	Lon = 1682212 E	
(DDDMMSS)		
Antenna	RAP = T	POLARIZATIONS INCLUDE:
Polarization (RAP)		H = HORIZONTAL, V = VERTICAL,
		S = HORIZONTAL AND VERTICAL,
		L = LEFT HAND CIRCULAR, R = RIGHT HAND CIRCULAR,
		T = RIGHT AND LEFT HAND CIRCULAR,
Antenna Azimuth	RAZ = RAZ12 V00	J = LIENAR POLARIZATION THE EARTH STATION RECEIVER ANTENNA
(RAZ)		AZIMUTH (RAZ), THE MINIMUM ANGLE OF
Antenna	ANTENNA GAIN 38.1 dB,	ELEVATION V00 TO V90, EXAMPLE, RAZ01 V00 EXAMPLE ASSUMING NONGEOSTATIONARY
Dimension (RAD)	BEAMWIDTH 2.0 degrees,	RAD01 16G030B000-360A00357H006
	AZIMUTH RANGE 0 – 360 degrees,	
	THE SITE ELEVATION ABOVE MEAN SEA	
	LEVEL IN METERS 9 meters,	
	THE ANTENNA HEIGHT ABOUT TERRAIN	
	IN METERS 3 meters,	
	RAD12 38G002B000-360A00009H003	
Earth Station Data	(Receiver 13)	1
State (RSC)	RSC = South Africa	
City Name (RAL)	RAL = Hartebeesthoek	
Latitude	Lat = 255325 S	
(DDMMSS)		
Longitude	Lon = 0274109 E	
(DDDMMSS)		

Antenna Polarization (RAP)	RAP = T	POLARIZATIONS INCLUDE: H = HORIZONTAL, V = VERTICAL, S = HORIZONTAL AND VERTICAL, L = LEFT HAND CIRCULAR, R = RIGHT HAND CIRCULAR, T = RIGHT AND LEFT HAND CIRCULAR, J = LIENAR POLARIZATION
Antenna Azimuth (RAZ)	RAZ = RAZ13 V00	THE EARTH STATION RECEIVER ANTENNA AZIMUTH (RAZ), THE MINIMUM ANGLE OF ELEVATION V00 TO V90, EXAMPLE, RAZ01 V00
Antenna Dimension (RAD)	ANTENNA GAIN 38.1 dB, BEAMWIDTH 2.0 degrees, AZIMUTH RANGE 0 – 360 degrees, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS 1386 meters, THE ANTENNA HEIGHT ABOUT TERRAIN IN METERS 3 meters,	EXAMPLE ASSUMING NONGEOSTATIONARY RAD01 16G030B000-360A00357H006
	RAD13 38G002B000-360A01386H003	

Transmit Frequency: 8212.5 MHz			
Satellite Name: Cap	Satellite Name: Capella-2 (Sequoia)		
Data Field	Data Answer	Description/Comments	
Polarization (XAP)	XAP = T	POLARIZATIONS INCLUDE: H = HORIZONTAL, V = VERTICAL, S = HORIZONTAL AND VERTICAL, L = LEFT HAND CIRCULAR, R = RIGHT HAND CIRCULAR, T = RIGHT AND LEFT HAND CIRCULAR, J = LIENAR POLARIZATION	
Orientation (XAZ)	XAZ = NB	NB = NARROWBEAM EC = EARTH COVERAGE	
Antenna Dimension (XAD)	ANTENNA GAIN 20.6 dB, BEAMWIDTH 19.5 degrees, XAD = XAD03 20G019B	(NTIA format (XAD), EXAMPLE, XAD01 16G030B)	
Type of Satellite (State = SP) (City = geo or non)	Type = Nongeostationary	Choose either: Geostationary or Nongeostationary	
For Geostationary	Longitude =	IF ANY SATELLITE ARE GEOSTATIONARY, REPORT ITS LATITUDE AS 000000N (XLA AND/OR RLA) AND REPORT ITS LONGITUDE (XLG AND/OR RLG)	
For Nongeostationary (Orbit Data)	INCLINATION ANGLE 45.00 degrees, APOGEE IN KILOMETERS 525 km, PERIGEE IN KILOMETERS 525 km,	IF ANY SATELLITES ARE NONGEOSTATIONARY REPORT ITS INCLINATION ANGLE, APOGEE, IN KILOMETERS, PERIGEE IN KILOMETERS, ORBITAL PERIOD IN HOURS AND FRACTIONS OF HOURS	

	ORBITAL PERIOD IN HOURS 1 AND FACTIONS OF HOURS IN DECIMAL 58, THE NUMBER OF SATELLITES IN THE SYSTEM 1, ORB = 45.0IN00525AP00525PE001.58H01NRT01	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 END IN R01, EXAMPLE, REM05 *ORB,72.9IN03209AP00655PE013.46H01NRR01
Earth Station Data		
State (RSC)	RSC = Oregon	
City Name (RAL)	RAL = Boardman	
Latitude	Lat = 455116 N	
(DDMMSS)		
Longitude	Lon = 1193754 W	
(DDDMMSS) Antenna Polarization (RAP)	RAP = T	POLARIZATIONS INCLUDE: H = HORIZONTAL, V = VERTICAL, S = HORIZONTAL AND VERTICAL, L = LEFT HAND CIRCULAR, R = RIGHT HAND CIRCULAR, T = RIGHT AND LEFT HAND CIRCULAR, J = LIENAR POLARIZATION
Antenna Azimuth (RAZ)	RAZ = RAZ01 V00	THE EARTH STATION RECEIVER ANTENNA AZIMUTH (RAZ), THE MINIMUM ANGLE OF ELEVATION V00 TO V90, EXAMPLE, RAZ01 V00
Antenna Dimension (RAD)	ANTENNA GAIN 38.1 dB, BEAMWIDTH 2.0 degrees, AZIMUTH RANGE 0 – 360 degrees, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS 101 meters, THE ANTENNA HEIGHT ABOUT TERRAIN IN METERS 3 meters, RAD01 38G002B000-360A00101H003	EXAMPLE ASSUMING NONGEOSTATIONARY RAD01 16G030B000-360A00357H006
Earth Station Data	(Receiver 2)	
State (RSC)	RSC = Ohio	
City Name (RAL)	RAL = Kilevile	
Latitude (DDMMSS)	Lat = 400600 N	
Longitude (DDDMMSS)	Lon = 0831149 W	
Antenna Polarization (RAP)	RAP = T	POLARIZATIONS INCLUDE: H = HORIZONTAL, V = VERTICAL, S = HORIZONTAL AND VERTICAL,

		L = LEFT HAND CIRCULAR,
		R = RIGHT HAND CIRCULAR,
		T = RIGHT AND LEFT HAND CIRCULAR, J = LIENAR POLARIZATION
Antenna Azimuth	RAZ = RAZ02 V00	THE EARTH STATION RECEIVER ANTENNA
(RAZ)		AZIMUTH (RAZ), THE MINIMUM ANGLE OF ELEVATION V00 TO V90, EXAMPLE, RAZ01 V00
Antenna	ANTENNA GAIN 38.1 dB,	EXAMPLE ASSUMING NONGEOSTATIONARY RAD01 16G030B000-360A00357H006
Dimension (RAD)	BEAMWIDTH 2.0 degrees,	KAD01 1000308000-300A003371000
	AZIMUTH RANGE 0 – 360 degrees,	
	THE SITE ELEVATION ABOVE MEAN SEA	
	LEVEL IN METERS 288 meters,	
	THE ANTENNA HEIGHT ABOUT TERRAIN	
	IN METERS 3 meters,	
	RAD02 38G002B000-360A00288H003	
Earth Station Data		1
State (RSC)	RSC = Ireland	
City Name (RAL)	RAL = Dublin	
Latitude	Lat = 532044 N	
(DDMMSS)		
Longitude	Lon = 0061651 W	
(DDDMMSS)		
Antenna	RAP = T	POLARIZATIONS INCLUDE: H = HORIZONTAL,
Polarization (RAP)		V = VERTICAL,
		S = HORIZONTAL AND VERTICAL, L = LEFT HAND CIRCULAR,
		R = RIGHT HAND CIRCULAR,
		T = RIGHT AND LEFT HAND CIRCULAR,
Antonno Azimuth		J = LIENAR POLARIZATION THE EARTH STATION RECEIVER ANTENNA
Antenna Azimuth (RAZ)	RAZ = RAZ03 V00	AZIMUTH (RAZ), THE MINIMUM ANGLE OF ELEVATION V00 TO V90, EXAMPLE, RAZ01 V00
Antenna	ANTENNA GAIN 38.1 dB,	EXAMPLE ASSUMING NONGEOSTATIONARY RAD01 16G030B000-360A00357H006
Dimension (RAD)	BEAMWIDTH 2.0 degrees,	10001 1000200000-20040022/1000
	AZIMUTH RANGE 0 – 360 degrees,	
	THE SITE ELEVATION ABOVE MEAN SEA	
	LEVEL IN METERS 8 meters,	
	THE ANTENNA HEIGHT ABOUT TERRAIN	
	IN METERS 3 meters,	
	RAD03 38G002B000-360A00008H003	
Earth Station Data	(Receiver 4)	1
State (RSC)	RSC = Sweden	
State (RSC) City Name (RAL)	RSC = Sweden RAL = Vasteras	

Latituda	1 at = 502654 N	
Latitude	Lat = 593654 N	
(DDMMSS)	$L_{00} = 0.162846 \Gamma$	
Longitude	Lon = 0163846 E	
(DDDMMSS)	RAP = T	POLARIZATIONS INCLUDE:
Antenna	RAP = I	H = HORIZONTAL,
Polarization (RAP)		V = VERTICAL, S = HORIZONTAL AND VERTICAL,
		L = LEFT HAND CIRCULAR,
		R = RIGHT HAND CIRCULAR, T = RIGHT AND LEFT HAND CIRCULAR,
		J = LIENAR POLARIZATION
Antenna Azimuth	RAZ = RAZ04 V00	THE EARTH STATION RECEIVER ANTENNA AZIMUTH (RAZ), THE MINIMUM ANGLE OF
(RAZ)		ELEVATION V00 TO V90, EXAMPLE, RAZ01 V00
Antenna	ANTENNA GAIN 38.1 dB,	EXAMPLE ASSUMING NONGEOSTATIONARY RAD01 16G030B000-360A00357H006
Dimension (RAD)	BEAMWIDTH 2.0 degrees,	
	AZIMUTH RANGE 0 – 360 degrees,	
	THE SITE ELEVATION ABOVE MEAN SEA	
	LEVEL IN METERS 22 meters,	
	THE ANTENNA HEIGHT ABOUT TERRAIN	
	IN METERS 22 meters,	
	RAD04 38G002B000-360A00022H003	
Earth Station Data		1
State (RSC)	RSC = South Africa	
City Name (RAL)	RAL = Cape Town	
Latitude	Lat = 335556 S	
(DDMMSS)		
Longitude	Lon = 0183152 E	
(DDDMMSS)		
Antenna	RAP = T	POLARIZATIONS INCLUDE: H = HORIZONTAL,
Polarization (RAP)		V = VERTICAL,
		S = HORIZONTAL AND VERTICAL, L = LEFT HAND CIRCULAR,
		R = RIGHT HAND CIRCULAR,
		T = RIGHT AND LEFT HAND CIRCULAR, J = LIENAR POLARIZATION
Antenna Azimuth	RAZ = RAZ05 V00	THE EARTH STATION RECEIVER ANTENNA
(RAZ)		AZIMUTH (RAZ), THE MINIMUM ANGLE OF ELEVATION V00 TO V90, EXAMPLE, RAZ01 V00
Antenna	ANTENNA GAIN 38.1 dB,	EXAMPLE ASSUMING NONGEOSTATIONARY
Dimension (RAD)	BEAMWIDTH 2.0 degrees,	RAD01 16G030B000-360A00357H006
. ,	AZIMUTH RANGE 0 – 360 degrees,	
	THE SITE ELEVATION ABOVE MEAN SEA	
	LEVEL IN METERS 20 meters,	
	THE ANTENNA HEIGHT ABOUT TERRAIN	
	IN METERS 3 meters,	

	RAD05 38G002B000-360A00020H003	
Earth Station Data	(Posoiver 6)	
State (RSC)	RSC = Bahrain	
	RAL = Manama	
City Name (RAL) Latitude		
(DDMMSS)	Lat = 260448 N	
Longitude (DDDMMSS)	Lon = 0503302 E	
Antenna Polarization (RAP)	RAP = T	POLARIZATIONS INCLUDE: H = HORIZONTAL, V = VERTICAL, S = HORIZONTAL AND VERTICAL, L = LEFT HAND CIRCULAR, R = RIGHT HAND CIRCULAR, T = RIGHT AND LEFT HAND CIRCULAR, J = LIENAR POLARIZATION
Antenna Azimuth (RAZ)	RAZ = RAZ06 V00	THE EARTH STATION RECEIVER ANTENNA AZIMUTH (RAZ), THE MINIMUM ANGLE OF ELEVATION V00 TO V90, EXAMPLE, RAZ01 V00
Antenna Dimension (RAD)	ANTENNA GAIN 38.1 dB, BEAMWIDTH 2.0 degrees, AZIMUTH RANGE 0 – 360 degrees, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS 65 meters, THE ANTENNA HEIGHT ABOUT TERRAIN IN METERS 3 meters,	EXAMPLE ASSUMING NONGEOSTATIONARY RAD01 16G030B000-360A00357H006
	RAD06 38G002B000-360A00065H003	
Earth Station Data	(Receiver 7)	
State (RSC)	RSC = Australia	
City Name (RAL)	RAL = Sydney	
Latitude (DDMMSS)	Lat = 335045 S	
Longitude (DDDMMSS)	Lon = 1510418 E	
Antenna Polarization (RAP)	RAP = T	POLARIZATIONS INCLUDE: H = HORIZONTAL, V = VERTICAL, S = HORIZONTAL AND VERTICAL, L = LEFT HAND CIRCULAR, R = RIGHT HAND CIRCULAR, T = RIGHT AND LEFT HAND CIRCULAR, J = LIENAR POLARIZATION
Antenna Azimuth (RAZ)	RAZ = RAZ07 V00	THE EARTH STATION RECEIVER ANTENNA AZIMUTH (RAZ), THE MINIMUM ANGLE OF ELEVATION V00 TO V90, EXAMPLE, RAZ01 V00
Antenna	ANTENNA GAIN 38.1 dB,	EXAMPLE ASSUMING NONGEOSTATIONARY
Dimension (RAD)	BEAMWIDTH 2.0 degrees,	RAD01 16G030B000-360A00357H006

	AZIMUTH RANGE 0 – 360 degrees, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS 22 meters, THE ANTENNA HEIGHT ABOUT TERRAIN IN METERS 3 meters,	
	RAD07 38G002B000-360A00022H003	
Earth Station Data	(Receiver 8)	
State (RSC)	RSC = Norway	
City Name (RAL)	RAL = Svalbard	
Latitude	Lat = 781354 N	
(DDMMSS)		
Longitude	Lon = 0152238 E	
(DDDMMSS)		
Antenna Polarization (RAP)	RAP = T	POLARIZATIONS INCLUDE: H = HORIZONTAL, V = VERTICAL, S = HORIZONTAL AND VERTICAL, L = LEFT HAND CIRCULAR, R = RIGHT HAND CIRCULAR, T = RIGHT AND LEFT HAND CIRCULAR, J = LIENAR POLARIZATION
Antenna Azimuth (RAZ)	RAZ = RAZ08 V00	THE EARTH STATION RECEIVER ANTENNA AZIMUTH (RAZ), THE MINIMUM ANGLE OF ELEVATION V00 TO V90, EXAMPLE, RAZ01 V00
Antenna Dimension (RAD)	ANTENNA GAIN 38.1 dB, BEAMWIDTH 2.0 degrees, AZIMUTH RANGE 0 – 360 degrees, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS 450 meters, THE ANTENNA HEIGHT ABOUT TERRAIN IN METERS 3 meters,	EXAMPLE ASSUMING NONGEOSTATIONARY RAD01 16G030B000-360A00357H006
	RAD08 38G002B000-360A00008H003	
Earth Station Data	(Receiver 9)	
State (RSC)	RSC = Norway	
City Name (RAL)	RAL = Troll	
Latitude	Lat = 720041 S	
(DDMMSS)		
Longitude (DDDMMSS)	Lon = 0023317 E	
Antenna Polarization (RAP)	RAP = T	POLARIZATIONS INCLUDE: H = HORIZONTAL, V = VERTICAL, S = HORIZONTAL AND VERTICAL, L = LEFT HAND CIRCULAR, R = RIGHT HAND CIRCULAR,

		T = RIGHT AND LEFT HAND CIRCULAR,
Antenna Azimuth (RAZ)	RAZ = RAZ09 V00	J = LIENAR POLARIZATION THE EARTH STATION RECEIVER ANTENNA AZIMUTH (RAZ), THE MINIMUM ANGLE OF ELEVATION V00 TO V90, EXAMPLE, RAZ01 V00
Antenna	ANTENNA GAIN 38.1 dB,	EXAMPLE ASSUMING NONGEOSTATIONARY
Dimension (RAD)	BEAMWIDTH 2.0 degrees,	RAD01 16G030B000-360A00357H006
	AZIMUTH RANGE 0 – 360 degrees,	
	THE SITE ELEVATION ABOVE MEAN SEA	
	LEVEL IN METERS 1371 meters,	
	THE ANTENNA HEIGHT ABOUT TERRAIN	
	IN METERS 3 meters,	
	RAD09 38G002B000-360A01371H003	
Earth Station Data	(Receiver 10)	
State (RSC)	RSC = Chile	
City Name (RAL)	RAL = Punta Arenas	
Latitude	Lat = 530950 S	
(DDMMSS)		
Longitude	Lon = 0705502 W	
(DDDMMSS)		
Antenna Polarization (RAP)	RAP = T	POLARIZATIONS INCLUDE: H = HORIZONTAL, V = VERTICAL, S = HORIZONTAL AND VERTICAL, L = LEFT HAND CIRCULAR, R = RIGHT HAND CIRCULAR, T = RIGHT AND LEFT HAND CIRCULAR, J = LIENAR POLARIZATION
Antenna Azimuth (RAZ)	RAZ = RAZ10 V00	THE EARTH STATION RECEIVER ANTENNA AZIMUTH (RAZ), THE MINIMUM ANGLE OF ELEVATION V00 TO V90, EXAMPLE, RAZ01 V00
Antenna Dimension (RAD)	ANTENNA GAIN 38.1 dB, BEAMWIDTH 2.0 degrees, AZIMUTH RANGE 0 – 360 degrees, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS 24 meters, THE ANTENNA HEIGHT ABOUT TERRAIN IN METERS 3 meters,	EXAMPLE ASSUMING NONGEOSTATIONARY RAD01 16G030B000-360A00357H006
	RAD10 38G002B000-360A00024H003	
Earth Station Data	(Receiver 11)	
State (RSC)	RSC = Greece	
City Name (RAL)	RAL = Tripoli	
Latitude (DDMMSS)	Lat = 375901 N	

RAP = T	POLARIZATIONS INCLUDE: H = HORIZONTAL, V = VERTICAL, S = HORIZONTAL AND VERTICAL, L = LEFT HAND CIRCULAR, R = RIGHT HAND CIRCULAR, T = RIGHT AND LEFT HAND CIRCULAR, J = LIENAR POLARIZATION
RAZ = RAZ11 V00	THE EARTH STATION RECEIVER ANTENNA AZIMUTH (RAZ), THE MINIMUM ANGLE OF ELEVATION V00 TO V90, EXAMPLE, RAZ01 V00
ANTENNA GAIN 38.1 dB, BEAMWIDTH 2.0 degrees, AZIMUTH RANGE 0 – 360 degrees, ITHE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS 84 meters, ITHE ANTENNA HEIGHT ABOUT TERRAIN N METERS 3 meters, RAD11 38G002B000-360A00084H003	EXAMPLE ASSUMING NONGEOSTATIONARY RAD01 16G030B000-360A00357H006
Receiver 12)	
RSC = New Zealand	
RAL = Awarua	
.at = 463003 S	
on = 1682212 E	
RAP = T	POLARIZATIONS INCLUDE: H = HORIZONTAL, V = VERTICAL, S = HORIZONTAL AND VERTICAL, L = LEFT HAND CIRCULAR, R = RIGHT HAND CIRCULAR, T = RIGHT AND LEFT HAND CIRCULAR, J = LIENAR POLARIZATION
RAZ = RAZ12 V00	THE EARTH STATION RECEIVER ANTENNA AZIMUTH (RAZ), THE MINIMUM ANGLE OF ELEVATION V00 TO V90, EXAMPLE, RAZ01 V00
ANTENNA GAIN 38.1 dB,	EXAMPLE ASSUMING NONGEOSTATIONARY RAD01 16G030B000-360A00357H006
BEAMWIDTH 2.0 degrees,	LAPAT TOORSOBOOD-SONAOOS2/HOOD
AZIMUTH RANGE 0 – 360 degrees,	
THE SITE ELEVATION ABOVE MEAN SEA	
EVEL IN METERS 9 meters,	
THE ANTENNA HEIGHT ABOUT TERRAIN	
N METERS 3 meters,	
	AZ = RAZ11 V00 ANTENNA GAIN 38.1 dB, SEAMWIDTH 2.0 degrees, AZIMUTH RANGE 0 – 360 degrees, THE SITE ELEVATION ABOVE MEAN SEA EVEL IN METERS 84 meters, THE ANTENNA HEIGHT ABOUT TERRAIN N METERS 3 meters, AD11 38G002B000-360A00084H003 Ecceiver 12) ACC = New Zealand AL = Awarua at = 463003 S on = 1682212 E AP = T AAP = T AAZ = RAZ12 V00 ANTENNA GAIN 38.1 dB, SEAMWIDTH 2.0 degrees, AZIMUTH RANGE 0 – 360 degrees, THE SITE ELEVATION ABOVE MEAN SEA EVEL IN METERS 9 meters, THE ANTENNA HEIGHT ABOUT TERRAIN

Earth Station Data	(Receiver 13)	
State (RSC)	RSC = South Africa	
City Name (RAL)	RAL = Hartebeesthoek	
Latitude (DDMMSS)	Lat = 255325 S	
Longitude (DDDMMSS)	Lon = 0274109 E	
Antenna Polarization (RAP)	RAP = T	POLARIZATIONS INCLUDE: H = HORIZONTAL, V = VERTICAL, S = HORIZONTAL AND VERTICAL, L = LEFT HAND CIRCULAR, R = RIGHT HAND CIRCULAR, T = RIGHT AND LEFT HAND CIRCULAR, J = LIENAR POLARIZATION
Antenna Azimuth (RAZ)	RAZ = RAZ13 V00	THE EARTH STATION RECEIVER ANTENNA AZIMUTH (RAZ), THE MINIMUM ANGLE OF ELEVATION V00 TO V90, EXAMPLE, RAZ01 V00
Antenna Dimension (RAD)	ANTENNA GAIN 38.1 dB, BEAMWIDTH 2.0 degrees, AZIMUTH RANGE 0 – 360 degrees, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS 1386 meters, THE ANTENNA HEIGHT ABOUT TERRAIN IN METERS 3 meters,	EXAMPLE ASSUMING NONGEOSTATIONARY RAD01 16G030B000-360A00357H006
	RAD13 38G002B000-360A01386H003	

Transmit Frequenc	y: 1643.5 MHz	
Satellite Name: Cap	pella-2 (Sequoia)	
Data Field	Data Answer	Description/Comments
Polarization (XAP)	XAP = R	POLARIZATIONS INCLUDE: H = HORIZONTAL, V = VERTICAL, S = HORIZONTAL AND VERTICAL, L = LEFT HAND CIRCULAR, R = RIGHT HAND CIRCULAR, T = RIGHT AND LEFT HAND CIRCULAR, J = LIENAR POLARIZATION
Orientation (XAZ)	XAZ = NB	NB = NARROWBEAM EC = EARTH COVERAGE
Antenna Dimension (XAD)	ANTENNA GAIN 9.5 dB, BEAMWIDTH 60 degrees, XAD = XAD04 09G060B	(NTIA format (XAD), EXAMPLE, XAD01 16G030B)
Type of Satellite (State = SP)	Type = Nongeostationary	Choose either: Geostationary or Nongeostationary

(City = geo or		
non)		
For Geostationary	Longitude = R14 RLA 000000 N RLG 1433000 E R15 RLA 000000 N RLG 0642400 E R16 RLA 000000 N RLG 0980000 W R17 RLA 000000 N RLG 0244800 E	IF ANY SATELLITE ARE GEOSTATIONARY, REPORT ITS LATITUDE AS 000000N (XLA AND/OR RLA) AND REPORT ITS LONGITUDE (XLG AND/OR RLG)
	NOTE: These are receive satellites for a space-	
-	to-space link.	IF ANY SATELLITES ARE NONGEOSTATIONARY
For Nongeostationary (Orbit Data)	INCLINATION ANGLE 45.00 degrees, APOGEE IN KILOMETERS 525 km, PERIGEE IN KILOMETERS 525 km, ORBITAL PERIOD IN HOURS 1 AND FACTIONS OF HOURS IN DECIMAL 58, THE NUMBER OF SATELLITES IN THE SYSTEM 1, ORB = 45.0IN00525AP00525PE001.58H01NRT01	IF ANT SATELLITES ARE NONOCOSTATIONART 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 END IN R01, EXAMPLE, REM05 *ORB,72.9IN03209AP00655PE013.46H01NRR01
Satellite Receivers	(Receiver 14-16)	1
Antenna Polarization (RAP)	RAP = R	POLARIZATIONS INCLUDE: H = HORIZONTAL, V = VERTICAL, S = HORIZONTAL AND VERTICAL, L = LEFT HAND CIRCULAR, R = RIGHT HAND CIRCULAR, T = RIGHT AND LEFT HAND CIRCULAR, J = LIENAR POLARIZATION
Antenna Azimuth (RAZ)	RAZ = EC	NB = NARROWBEAM EC = EARTH COVERAGE
Antenna Dimension (RAD)	ANTENNA GAIN 27.5 dB, BEAMWIDTH 17.4 degrees, RAD = RAD14 28G017B RAD15 28G017B RAD16 28G017B	(NTIA format (RAD), EXAMPLE, RAD01 16G030B)
Satellite Receivers	(Receiver 17)	
Antenna Polarization (RAP)	RAP = R	POLARIZATIONS INCLUDE: H = HORIZONTAL, V = VERTICAL, S = HORIZONTAL AND VERTICAL, L = LEFT HAND CIRCULAR, R = RIGHT HAND CIRCULAR, T = RIGHT AND LEFT HAND CIRCULAR, J = LIENAR POLARIZATION
Antenna Azimuth (RAZ)	RAZ = EC	NB = NARROWBEAM EC = EARTH COVERAGE
Antenna Dimension (RAD)	ANTENNA GAIN 27.5 dB, BEAMWIDTH 13.6 degrees,	(NTIA format (RAD), EXAMPLE, RAD01 16G030B)

RAD = RAD17 28G014B	
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Satellite Name: Capella-2 (Sequoia)		
Data Field	Data Answer	Description/Comments
Polarization (XAP)	XAP = R	POLARIZATIONS INCLUDE: H = HORIZONTAL, V = VERTICAL, S = HORIZONTAL AND VERTICAL, L = LEFT HAND CIRCULAR, R = RIGHT HAND CIRCULAR, T = RIGHT AND LEFT HAND CIRCULAR, J = LIENAR POLARIZATION
Orientation (XAZ)	XAZ = NB	NB = NARROWBEAM EC = EARTH COVERAGE
Antenna Dimension (XAD)	ANTENNA GAIN 9.5 dB, BEAMWIDTH 60 degrees, XAD = XAD05 09G060B	(NTIA format (XAD), EXAMPLE, XAD01 16G030B)
Type of Satellite (State = SP) (City = geo or non)	Type = Nongeostationary	Choose either: Geostationary or Nongeostationary
For Geostationary	Longitude = R14 RLA 000000 N RLG 1433000 E R15 RLA 000000 N RLG 0642400 E R16 RLA 000000 N RLG 0980000 W R17 RLA 000000 N RLG 0244800 E NOTE: These are receive satellites for a space- to-space link.	IF ANY SATELLITE ARE GEOSTATIONARY, REPORT ITS LATITUDE AS 000000N (XLA AND/OR RLA) AND REPORT ITS LONGITUDE (XLG AND/OR RLG)
For Nongeostationary (Orbit Data)	INCLINATION ANGLE 45.00 degrees, APOGEE IN KILOMETERS 525 km, PERIGEE IN KILOMETERS 525 km, ORBITAL PERIOD IN HOURS 1 AND FACTIONS OF HOURS IN DECIMAL 58, THE NUMBER OF SATELLITES IN THE SYSTEM 1, ORB = 45.0IN00525AP00525PE001.58H01NRT01	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 END IN R01, EXAMPLE, REM05 *ORB,72.9IN03209AP00655PE013.46H01NRR01
Satellite Receivers	(Receiver 14-16)	
Antenna Polarization (RAP)	RAP = R	POLARIZATIONS INCLUDE: H = HORIZONTAL, V = VERTICAL, S = HORIZONTAL AND VERTICAL,

Antenna Azimuth (RAZ)	RAZ = EC	L = LEFT HAND CIRCULAR, R = RIGHT HAND CIRCULAR, T = RIGHT AND LEFT HAND CIRCULAR, J = LIENAR POLARIZATION NB = NARROWBEAM EC = EARTH COVERAGE
Antenna Dimension (RAD)	ANTENNA GAIN 27.5 dB, BEAMWIDTH 17.4 degrees, RAD = RAD14 28G017B RAD15 28G017B RAD16 28G017B	(NTIA format (RAD), EXAMPLE, RAD01 16G030B)
Satellite Receivers (Receiver 17)		
Antenna Polarization (RAP)	RAP = R	POLARIZATIONS INCLUDE: H = HORIZONTAL, V = VERTICAL, S = HORIZONTAL AND VERTICAL, L = LEFT HAND CIRCULAR, R = RIGHT HAND CIRCULAR, T = RIGHT AND LEFT HAND CIRCULAR, J = LIENAR POLARIZATION
Antenna Azimuth (RAZ)	RAZ = EC	NB = NARROWBEAM EC = EARTH COVERAGE
Antenna Dimension (RAD)	ANTENNA GAIN 27.5 dB, BEAMWIDTH 13.6 degrees, RAD = RAD17 28G014B	(NTIA format (RAD), EXAMPLE, RAD01 16G030B)

## Part B: Ground Stations, Earth to Space Link data:

The proposed Capella system will also receive transmissions on the following frequencies. Because the Capella system will not transmit on these frequencies, Capella is not seeking corresponding experimental authorization to engage in these transmissions. However, in each case, these transmissions will be permitted by authorizations held by third parties. These receive-only frequencies are listed here for informational purposes only.

- 2035-2037 MHz Earth to space.
- 1518 MHz-1559 GEO to LEO (Inmarsat to Capella).