

File Number: SAT-AMD-20251119-00328

Call Sign: S3177

S1. Satellite Information

a. Space Station or Satellite Network Name	b. Orbit Type	c. Estimated Operational Lifetime of Space Station(s) From Date of Launch (yrs)	d. Will the space station(s) operate on a Common Carrier basis?	e. Application Description
Xona System (or PULSAR)	Non-Geostationary (NGSO)	6	N/A	Applicant seeks authority to launch, operate, and replenish 258 non-geostationary orbit radionavigation-satellite, space operation, and inter-satellite service satellites.

S2. Operating Frequency Bands

a. Type of Service	b. If a. is Other, provide a service description	c. Satellite Frequency Band (MHz)	d. Satellite Frequency (Lower Band Edge) (MHz)	e. Satellite Frequency (Upper Band Edge) (MHz)	f. Direction of Transmission	g. Non Conforming Indicator
OTHER: Other Satellite Service	Intersatellite Service	Other	3700	4200	Space-to-Space (Receive)	Yes
OTHER: Other Satellite Service	Intersatellite Service	Other	1525	1559	Space-to-Space (Receive)	Yes
OTHER: Other Satellite Service	Intersatellite Service	Other	1626.5	1660.5	Space-to-Space (Transmit)	Yes
SOS		2025 - 2110	2025	2110	Earth-to-Space (Receive)	No
SOS		2200 - 2290	2200	2290	Space-to-Earth (Transmit)	No
RNSS		1559 - 1610	1559	1610	Space-to-Earth (Transmit)	No
RNSS		1164 - 1215	1164	1215	Space-to-Earth (Transmit)	No

S3. NGSO Orbital Information

a. Total Number of Simultaneously Operating Satellites in Constellation	b. Total Number of Satellites Deployed During the License Term	c. Orbit Epoch Date	d. Celestial Reference Body	e. If d. is "Other", provide the name of celestial body being referenced	f. Total Number of Orbital Planes
258	1,445	2026-10-01	Earth		18

g. Orbital Plane Information

(i) Orbital Plane No.	(ii) Number of Satellites in Plane	(iii) Inclination Angle (°)	(iv) Inclination Angle Tolerance (+/- °)	(v) Orbital Period (seconds)	(vi) Apogee (km)	(vii) Apogee Tolerance (+/- km)	(viii) Perigee (km)	(ix) Perigee Tolerance (+/- km)	(x) Argument of Perigee (°)	(xi) Right Ascension of Ascending Node (°)	(xii) Right Ascension of Ascending Node Tolerance (+/- °)	(xiii) Active Service Arc Begin Angle with Respect to Ascending Node (°)	(xiv) Active Service Arc End Angle with Respect to Ascending Node (°)	(xv) Is additional info on the active service arc provided in the application?	(xvi) Satellite Spacing	(xvii) Phase Angle Spacing (°)	(xviii) First Satellite Initial Phase Angle (°)	(xix) Maximum Orbital Eccentricity
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1	16	53	2	6,409	1,080	35	1,080	35	90	0	0.75	-53	53	No	Evenly-Spaced	23	0	
2	16	53	2	6,409	1,080	35	1,080	35	90	30	0.75	-53	53	No	Evenly-Spaced	23	226.875	
3	16	53	2	6,409	1,080	35	1,080	35	90	60	0.75	-53	53	No	Evenly-Spaced	23	341.25	
4	16	53	2	6,409	1,080	35	1,080	35	90	90	0.75	-53	53	No	Evenly-Spaced	23	343.125	
5	16	53	2	6,409	1,080	35	1,080	35	90	120	0.75	-53	53	No	Evenly-Spaced	23	7.5	
6	16	53	2	6,409	1,080	35	1,080	35	90	150	0.75	-53	53	No	Evenly-Spaced	23	346.875	
7	16	53	2	6,409	1,080	35	1,080	35	90	180	0.75	-53	53	No	Evenly-Spaced	23	348.75	
8	16	53	2	6,409	1,080	35	1,080	35	90	210	0.75	-53	53	No	Evenly-Spaced	23	350.625	
9	16	53	2	6,409	1,080	35	1,080	35	90	240	0.75	-53	53	No	Evenly-Spaced	23	352.5	
10	16	53	2	6,409	1,080	35	1,080	35	90	270	0.75	-53	53	No	Evenly-Spaced	23	354.375	
11	16	53	2	6,409	1,080	35	1,080	35	90	300	0.75	-53	53	No	Evenly-Spaced	23	356.25	
12	16	53	2	6,409	1,080	35	1,080	35	90	330	0.75	-53	53	No	Evenly-Spaced	23	358.125	
13	11	97	2	6,409	1,080	35	1,080	35	90	0	0.75	-90	90	No	Evenly-Spaced	33	327.27	
14	11	97	2	6,409	1,080	35	1,080	35	90	60	0.75	-90	90	No	Evenly-Spaced	33	332.73	
15	11	97	2	6,409	1,080	35	1,080	35	90	120	0.75	-90	90	No	Evenly-Spaced	33	338.18	
16	11	97	2	6,409	1,080	35	1,080	35	90	180	0.75	-90	90	No	Evenly-Spaced	33	343.64	
17	11	97	2	6,409	1,080	35	1,080	35	90	240	0.75	-90	90	No	Evenly-Spaced	33	349.09	
18	11	97	2	6,409	1,080	35	1,080	35	90	300	0.75	-90	90	No	Evenly-Spaced	33	256.36	

h. Initial Phase Angle Information

(i) Orbital Plane No.	(i) Satellite No.	(ii) Initial Phase Angle (°)
1	1	0
1	2	23
1	3	46
1	4	69
1	5	92
1	6	115

1	7	138
1	8	161
1	9	184
1	10	207
1	11	230
1	12	253
1	13	276
1	14	299
1	15	322
1	16	345
2	1	226.875
2	2	249.875
2	3	272.875
2	4	295.875
2	5	318.875
2	6	341.875
2	7	4.875
2	8	27.875
2	9	50.875
2	10	73.875
2	11	96.875
2	12	119.875
2	13	142.875
2	14	165.875
2	15	188.875
2	16	211.875
3	1	341.25
3	2	4.25
3	3	27.25
3	4	50.25
3	5	73.25
3	6	96.25
3	7	119.25
3	8	142.25
3	9	165.25
3	10	188.25
3	11	211.25
3	12	234.25
3	13	257.25
3	14	280.25
3	15	303.25
3	16	326.25

4	1	343.125
4	2	6.125
4	3	29.125
4	4	52.125
4	5	75.125
4	6	98.125
4	7	121.125
4	8	144.125
4	9	167.125
4	10	190.125
4	11	213.125
4	12	236.125
4	13	259.125
4	14	282.125
4	15	305.125
4	16	328.125
5	1	7.5
5	2	30.5
5	3	53.5
5	4	76.5
5	5	99.5
5	6	122.5
5	7	145.5
5	8	168.5
5	9	191.5
5	10	214.5
5	11	237.5
5	12	260.5
5	13	283.5
5	14	306.5
5	15	329.5
5	16	352.5
6	1	346.875
6	2	9.875
6	3	32.875
6	4	55.875
6	5	78.875
6	6	101.875
6	7	124.875
6	8	147.875
6	9	170.875
6	10	193.875

6	11	216.875
6	12	239.875
6	13	262.875
6	14	285.875
6	15	308.875
6	16	331.875
7	1	348.75
7	2	11.75
7	3	34.75
7	4	57.75
7	5	80.75
7	6	103.75
7	7	126.75
7	8	149.75
7	9	172.75
7	10	195.75
7	11	218.75
7	12	241.75
7	13	264.75
7	14	287.75
7	15	310.75
7	16	333.75
8	1	350.625
8	2	13.625
8	3	36.625
8	4	59.625
8	5	82.625
8	6	105.625
8	7	128.625
8	8	151.625
8	9	174.625
8	10	197.625
8	11	220.625
8	12	243.625
8	13	266.625
8	14	289.625
8	15	312.625
8	16	335.625
9	1	352.5
9	2	15.5
9	3	38.5
9	4	61.5

9	5	84.5
9	6	107.5
9	7	130.5
9	8	153.5
9	9	176.5
9	10	199.5
9	11	222.5
9	12	245.5
9	13	268.5
9	14	291.5
9	15	314.5
9	16	337.5
10	1	354.375
10	2	17.375
10	3	40.375
10	4	63.375
10	5	86.375
10	6	109.375
10	7	132.375
10	8	155.375
10	9	178.375
10	10	201.375
10	11	224.375
10	12	247.375
10	13	270.375
10	14	293.375
10	15	316.375
10	16	339.375
11	1	356.25
11	2	19.25
11	3	42.25
11	4	65.25
11	5	88.25
11	6	111.25
11	7	134.25
11	8	157.25
11	9	180.25
11	10	203.25
11	11	226.25
11	12	249.25
11	13	272.25
11	14	295.25

11	15	318.25
11	16	341.25
12	1	358.125
12	2	21.125
12	3	44.125
12	4	67.125
12	5	90.125
12	6	113.125
12	7	136.125
12	8	159.125
12	9	182.125
12	10	205.125
12	11	228.125
12	12	251.125
12	13	274.125
12	14	297.125
12	15	320.125
12	16	343.125
13	1	327.27
13	2	0.27
13	3	33.27
13	4	66.27
13	5	99.27
13	6	132.27
13	7	165.27
13	8	198.27
13	9	231.27
13	10	264.27
13	11	297.27
14	1	332.73
14	2	5.73
14	3	38.73
14	4	71.73
14	5	104.73
14	6	137.73
14	7	170.73
14	8	203.73
14	9	236.73
14	10	269.73
14	11	302.73
15	1	338.18
15	2	11.18

15	3	44.18
15	4	77.18
15	5	110.18
15	6	143.18
15	7	176.18
15	8	209.18
15	9	242.18
15	10	275.18
15	11	308.18
16	1	343.64
16	2	16.64
16	3	49.64
16	4	82.64
16	5	115.64
16	6	148.64
16	7	181.64
16	8	214.64
16	9	247.64
16	10	280.64
16	11	313.64
17	1	349.09
17	2	22.09
17	3	55.09
17	4	88.09
17	5	121.09
17	6	154.09
17	7	187.09
17	8	220.09
17	9	253.09
17	10	286.09
17	11	319.09
18	1	256.36
18	2	289.36
18	3	322.36
18	4	355.36
18	5	28.36
18	6	61.36
18	7	94.36
18	8	127.36
18	9	160.36
18	10	193.36
18	11	226.36

S4. Earth-to-Space (Receive) Beams

a. Beam ID:	SUL2	n. Beam Peak Flux Density at Command Threshold (dBW/m²):	-87.7
b. Beam Frequency (Lower Band Edge) (MHz):	2025	o. Peak Isotropic Antenna Gain (dBi):	6
c. Beam Frequency (Upper Band Edge) (MHz):	2110	p. Isotropic Antenna Gain at 3 dB Beamwidth (dBi):	
d. Polarization:	LHCP	q. Antenna Pointing Error (°):	0
e. Can the space station vary the channel bandwidth with on-board processing?:	Yes	r. Antenna Rotational Error (°):	0
f. Is this a command beam? (Check box if Yes):	Yes	s. Will a GIMS container file containing all antenna contour data be provided?:	
g. Is the beam shapeable? (Check box if Yes):	No	t. Under what rules will the associated antenna contours be submitted?:	
h. Is the beam steerable? (Check box if Yes):	No	u. Provide a list of each orbital plane in which this antenna beam is used.:	
i. Is the beam fed into transponders? (Check box if Yes):	No	v. Are all space stations in the NGSO constellation identical?:	
j. Maximum G/T (dB/K):	-21.2	w. What information will be provided with the predicted antenna gain contours?:	
k. Minimum G/T (dB/K):			
l. Maximum Saturation Flux Density (dBW/m²):			
m. Minimum Saturation Flux Density (dBW/m²):			

x. Receive Channels						
(i) Channel ID	(ii) Channel Bandwidth (MHz)	(iii) Center Frequency (MHz)	(iv) Channel Frequency (Lower Band Edge) (MHz)	(v) Channel Frequency (Upper Band Edge) (MHz)	(vi) Channel Type	(vii) Point of Communication
SR06	0.27	2050	2049.865	2050.135	TT&C	
SR05	0.14	2050	2049.93	2050.07	TT&C	
SR07	0.83	2050	2049.585	2050.415	TT&C	

a. Beam ID:	SUR1	n. Beam Peak Flux Density at Command Threshold (dBW/m²):	-87.7
b. Beam Frequency (Lower Band Edge) (MHz):	2025	o. Peak Isotropic Antenna Gain (dBi):	7
c. Beam Frequency (Upper Band Edge) (MHz):	2110	p. Isotropic Antenna Gain at 3 dB Beamwidth (dBi):	
d. Polarization:	RHCP	q. Antenna Pointing Error (°):	0
e. Can the space station vary the channel bandwidth with on-board processing?:	Yes	r. Antenna Rotational Error (°):	0
f. Is this a command beam? (Check box if Yes):	Yes	s. Will a GIMS container file containing all antenna contour data be provided?:	
g. Is the beam shapeable? (Check box if Yes):	No	t. Under what rules will the associated antenna contours be submitted?:	
h. Is the beam steerable? (Check box if Yes):	No	u. Provide a list of each orbital plane in which this antenna beam is used.:	
i. Is the beam fed into transponders? (Check box if Yes):	No	v. Are all space stations in the NGSO constellation identical?:	
j. Maximum G/T (dB/K):	-23	w. What information will be provided with the predicted antenna gain contours?:	
k. Minimum G/T (dB/K):			
l. Maximum Saturation Flux Density (dBW/m²):			
m. Minimum Saturation Flux Density (dBW/m²):			

x. Receive Channels						
(i) Channel ID	(ii) Channel Bandwidth (MHz)	(iii) Center Frequency (MHz)	(iv) Channel Frequency (Lower Band Edge) (MHz)	(v) Channel Frequency (Upper Band Edge) (MHz)	(vi) Channel Type	(vii) Point of Communication
SR03	1	2091.75	2091.25	2092.25	TT&C	
SR01	1	2050	2049.5	2050.5	TT&C	
SR02	1	2032.25	2031.75	2032.75	TT&C	
SR04	1	2104.75	2104.25	2105.25	TT&C	

a. Beam ID:	SUR2	n. Beam Peak Flux Density at Command Threshold (dBW/m²):	-87.7
b. Beam Frequency (Lower Band Edge) (MHz):	2025	o. Peak Isotropic Antenna Gain (dBi):	6
c. Beam Frequency (Upper Band Edge) (MHz):	2110	p. Isotropic Antenna Gain at 3 dB Beamwidth (dBi):	
d. Polarization:	RHCP	q. Antenna Pointing Error (°):	0
e. Can the space station vary the channel bandwidth with on-board processing?:	Yes	r. Antenna Rotational Error (°):	0
f. Is this a command beam? (Check box if Yes):	Yes	s. Will a GIMS container file containing all antenna contour data be provided?:	
g. Is the beam shapeable? (Check box if Yes):	No	t. Under what rules will the associated antenna contours be submitted?:	
h. Is the beam steerable? (Check box if Yes):	No	u. Provide a list of each orbital plane in which this antenna beam is used.:	
i. Is the beam fed into transponders? (Check box if Yes):	No	v. Are all space stations in the NGSO constellation identical?:	
j. Maximum G/T (dB/K):	-21.2	w. What information will be provided with the predicted antenna gain contours?:	
k. Minimum G/T (dB/K):			
l. Maximum Saturation Flux Density (dBW/m²):			
m. Minimum Saturation Flux Density (dBW/m²):			

x. Receive Channels						
(i) Channel ID	(ii) Channel Bandwidth (MHz)	(iii) Center Frequency (MHz)	(iv) Channel Frequency (Lower Band Edge) (MHz)	(v) Channel Frequency (Upper Band Edge) (MHz)	(vi) Channel Type	(vii) Point of Communication
SR05	0.14	2050	2049.93	2050.07	TT&C	
SR06	0.27	2050	2049.865	2050.135	TT&C	
SR07	0.83	2050	2049.585	2050.415	TT&C	

a. Beam ID:	SUL1	n. Beam Peak Flux Density at Command Threshold (dBW/m²):	-87.7
b. Beam Frequency (Lower Band Edge) (MHz):	2025	o. Peak Isotropic Antenna Gain (dBi):	7
c. Beam Frequency (Upper Band Edge) (MHz):	2110	p. Isotropic Antenna Gain at 3 dB Beamwidth (dBi):	
d. Polarization:	LHCP	q. Antenna Pointing Error (°):	0
e. Can the space station vary the channel bandwidth with on-board processing?:	Yes	r. Antenna Rotational Error (°):	0
f. Is this a command beam? (Check box if Yes):	Yes	s. Will a GIMS container file containing all antenna contour data be provided?:	
g. Is the beam shapeable? (Check box if Yes):	No	t. Under what rules will the associated antenna contours be submitted?:	
h. Is the beam steerable? (Check box if Yes):	No	u. Provide a list of each orbital plane in which this antenna beam is used.:	
i. Is the beam fed into transponders? (Check box if Yes):	No	v. Are all space stations in the NGSO constellation identical?:	
j. Maximum G/T (dB/K):	-23	w. What information will be provided with the predicted antenna gain contours?:	
k. Minimum G/T (dB/K):			
l. Maximum Saturation Flux Density (dBW/m²):			
m. Minimum Saturation Flux Density (dBW/m²):			

x. Receive Channels						
(i) Channel ID	(ii) Channel Bandwidth (MHz)	(iii) Center Frequency (MHz)	(iv) Channel Frequency (Lower Band Edge) (MHz)	(v) Channel Frequency (Upper Band Edge) (MHz)	(vi) Channel Type	(vii) Point of Communication
SR04	1	2104.75	2104.25	2105.25	TT&C	
SR02	1	2032.25	2031.75	2032.75	TT&C	
SR01	1	2050	2049.5	2050.5	TT&C	
SR03	1	2091.75	2091.25	2092.25	TT&C	

S5. Space-to-Earth (Transmit) Beams

a. Beam ID:	X5	n. Beam Peak Flux Density at Command Threshold (dBW/m ²):	
b. Beam Frequency (Lower Band Edge) (MHz):	1180.4	o. Peak Isotropic Antenna Gain (dBi):	4.6
c. Beam Frequency (Upper Band Edge) (MHz):	1200.6	p. Isotropic Antenna Gain at 3 dB Beamwidth (dBi):	
d. Polarization:	RHCP	q. Antenna Pointing Error (°):	0
e. Can the space station vary the channel bandwidth with on-board processing?:	Yes	r. Antenna Rotational Error (°):	0
f. Is this a command beam? (Check box if Yes):	No	s. Will a GIMS container file containing all antenna contour data be provided?:	
g. Is the beam shapeable? (Check box if Yes):	No	t. Under what rules will the associated antenna contours be submitted?:	
h. Is the beam steerable? (Check box if Yes):	No	u. Provide a list of each orbital plane in which this antenna beam is used.:	
i. Is the beam fed into transponders? (Check box if Yes):	No	v. Are all space stations in the NGSO constellation identical?:	
j. Maximum Transmit EIRP Density (dBW/Ref BW):	-46	w. What information will be provided with the predicted antenna gain contours?:	
k. Maximum Transmit EIRP (dBW):	23.2		

x. Transmit Channels													
(i) Channel ID		(ii) Channel Bandwidth (MHz)	(iii) Center Frequency (MHz)		(iv) Channel Frequency (Lower Band Edge) (MHz)		(v) Channel Frequency (Upper Band Edge) (MHz)		(vi) Channel Type		(vii) Point of Communication		
X5		20	1190.5163		1180.5163		1200.5163		Service Link				
y. Max. Power-Flux Densities													
			Angles of Arrival PFD						Geographic Region PFD				
(i) Beam Sub-Frequency (Lower Band Edge) (MHz)	(ii) Beam Sub-Frequency (Upper Band Edge) (MHz)	(iii) Reference Bandwidth (BW)	(iv) 0-2° (dBW/m²/BW)	(v) 2-5° (dBW/m²/BW)	(vi) 5-15° (dBW/m²/BW)	(vii) 15-20° (dBW/m²/BW)	(viii) 20-25° (dBW/m²/BW)	(ix) 25-90° (dBW/m²/BW)	(x) Southeastern Region (dBW/m²/BW)	(xi) Northeastern Region (dBW/m²/BW)	(xii) Western Region (dBW/m²/BW)	(xiii) Other Region (dBW/m²/BW)	(xiv) Energy Dispersal Bandwidth (kHz)
		1 MHz	-129.6	-129.6	-125.5	-124.1	-123.7	-122.1					

a. Beam ID:	SDR1	n. Beam Peak Flux Density at Command Threshold (dBW/m ²):	
b. Beam Frequency (Lower Band Edge) (MHz):	2200	o. Peak Isotropic Antenna Gain (dBi):	7
c. Beam Frequency (Upper Band Edge) (MHz):	2290	p. Isotropic Antenna Gain at 3 dB Beamwidth (dBi):	
d. Polarization:	RHCP	q. Antenna Pointing Error (°):	0
e. Can the space station vary the channel bandwidth with on-board processing?:	Yes	r. Antenna Rotational Error (°):	0
f. Is this a command beam? (Check box if Yes):	No	s. Will a GIMS container file containing all antenna contour data be provided?:	
g. Is the beam shapeable? (Check box if Yes):	No	t. Under what rules will the associated antenna contours be submitted?:	
h. Is the beam steerable? (Check box if Yes):	No	u. Provide a list of each orbital plane in which this antenna beam is used.:	
i. Is the beam fed into transponders? (Check box if Yes):	No	v. Are all space stations in the NGSO constellation identical?:	
j. Maximum Transmit EIRP Density (dBW/Ref BW):	-55.8	w. What information will be provided with the predicted antenna gain contours?:	
k. Maximum Transmit EIRP (dBW):	6		

x. Transmit Channels													
(i) Channel ID		(ii) Channel Bandwidth (MHz)	(iii) Center Frequency (MHz)		(iv) Channel Frequency (Lower Band Edge) (MHz)		(v) Channel Frequency (Upper Band Edge) (MHz)		(vi) Channel Type		(vii) Point of Communication		
SD01		1.5	2263.5		2262.75		2264.25		TT&C				
SD02		1.5	2204.75		2204		2205.5		TT&C				
SD04		1.5	2239.75		2239		2240.5		TT&C				
SD03		1.5	2226.25		2225.5		2227		TT&C				
y. Max. Power-Flux Densities													
			Angles of Arrival PFD						Geographic Region PFD				
(i) Beam Sub-	(ii) Beam Sub-	(iii) Reference	(iv) 0-2°	(v) 2-5°	(vi) 5-15°	(vii) 15-20°	(viii) 20-25°	(ix) 25-90°	(x)	(xi)	(xii) Western	(xiii) Other	(xiv) Energy

Frequency (Lower Band Edge) (MHz)	Frequency (Upper Band Edge) (MHz)	Bandwidth (BW)	(dBW/m ² /BW)	(dBW/m ² /BW)	(dBW/m ² /BW)	(dBW/m ² /BW)	(dBW/m ² /BW)	(dBW/m ² /BW)	Southeastern Region (dBW/m ² /BW)	Northeastern Region (dBW/m ² /BW)	Region (dBW/m ² /BW)	Region (dBW/m ² /BW)	Dispersal Bandwidth (kHz)
2203.5	2264.75	4 kHz	-162	-161.2	-158.9	-157.8	-156.8	-151.4					1500

a. Beam ID:	SDL1	n. Beam Peak Flux Density at Command Threshold (dBW/m ²):	
b. Beam Frequency (Lower Band Edge) (MHz):	2200	o. Peak Isotropic Antenna Gain (dBi):	7
c. Beam Frequency (Upper Band Edge) (MHz):	2290	p. Isotropic Antenna Gain at 3 dB Beamwidth (dBi):	
d. Polarization:	LHCP	q. Antenna Pointing Error (°):	0
e. Can the space station vary the channel bandwidth with on-board processing?:	Yes	r. Antenna Rotational Error (°):	0
f. Is this a command beam? (Check box if Yes):	No	s. Will a GIMS container file containing all antenna contour data be provided?:	
g. Is the beam shapeable? (Check box if Yes):	No	t. Under what rules will the associated antenna contours be submitted?:	
h. Is the beam steerable? (Check box if Yes):	No	u. Provide a list of each orbital plane in which this antenna beam is used.:	
i. Is the beam fed into transponders? (Check box if Yes):	No	v. Are all space stations in the NGSO constellation identical?:	
j. Maximum Transmit EIRP Density (dBW/Ref BW):	-55.8	w. What information will be provided with the predicted antenna gain contours?:	
k. Maximum Transmit EIRP (dBW):	6		

x. Transmit Channels						
(i) Channel ID	(ii) Channel Bandwidth (MHz)	(iii) Center Frequency (MHz)	(iv) Channel Frequency (Lower Band Edge) (MHz)	(v) Channel Frequency (Upper Band Edge) (MHz)	(vi) Channel Type	(vii) Point of Communication
SD04	1.5	2239.75	2239	2240.5	TT&C	
SD02	1.5	2204.75	2204	2205.5	TT&C	
SD01	1.5	2263.5	2262.75	2264.25	TT&C	
SD03	1.5	2226.25	2225.5	2227	TT&C	

y. Max. Power-Flux Densities														
			Angles of Arrival PFD						Geographic Region PFD					
(i) Beam Sub-Frequency (Lower Band Edge) (MHz)	(ii) Beam Sub-Frequency (Upper Band Edge) (MHz)	(iii) Reference Bandwidth (BW)	(iv) 0-2° (dBW/m ² /BW)	(v) 2-5° (dBW/m ² /BW)	(vi) 5-15° (dBW/m ² /BW)	(vii) 15-20° (dBW/m ² /BW)	(viii) 20-25° (dBW/m ² /BW)	(ix) 25-90° (dBW/m ² /BW)	(x) Southeastern Region (dBW/m ² /BW)	(xi) Northeastern Region (dBW/m ² /BW)	(xii) Western Region (dBW/m ² /BW)	(xiii) Other Region (dBW/m ² /BW)	(xiv) Energy Dispersal Bandwidth (kHz)	
2203.5	2264.75	4 kHz	-162	-161.2	-158.9	-157.8	-156.8	-151.4					1500	

a. Beam ID:	SDL2	n. Beam Peak Flux Density at Command Threshold (dBW/m ²):	
b. Beam Frequency (Lower Band Edge) (MHz):	2200	o. Peak Isotropic Antenna Gain (dBi):	6
c. Beam Frequency (Upper Band Edge) (MHz):	2290	p. Isotropic Antenna Gain at 3 dB Beamwidth (dBi):	
d. Polarization:	LHCP	q. Antenna Pointing Error (°):	0
e. Can the space station vary the channel bandwidth with on-board processing?:	Yes	r. Antenna Rotational Error (°):	0
f. Is this a command beam? (Check box if Yes):	No	s. Will a GIMS container file containing all antenna contour data be provided?:	
g. Is the beam shapeable? (Check box if Yes):	No	t. Under what rules will the associated antenna contours be submitted?:	
h. Is the beam steerable? (Check box if Yes):	No	u. Provide a list of each orbital plane in which this antenna beam is used.:	
i. Is the beam fed into transponders? (Check box if Yes):	No	v. Are all space stations in the NGSO constellation identical?:	
j. Maximum Transmit EIRP Density (dBW/Ref BW):	-59.1	w. What information will be provided with the predicted antenna gain contours?:	
k. Maximum Transmit EIRP (dBW):	0		

x. Transmit Channels						
(i) Channel ID	(ii) Channel Bandwidth (MHz)	(iii) Center Frequency (MHz)	(iv) Channel Frequency (Lower	(v) Channel Frequency (Upper	(vi) Channel Type	(vii) Point of Communication

			Band Edge) (MHz)	Band Edge) (MHz)		
SD07	5	2263.5	2261	2266	TT&C	
SD05	0.81	2263.5	2263.095	2263.905	TT&C	
SD06	1.62	2263.5	2262.69	2264.31	TT&C	

y. Max. Power-Flux Densities													
			Angles of Arrival PFD						Geographic Region PFD				
(i) Beam Sub-Frequency (Lower Band Edge) (MHz)	(ii) Beam Sub-Frequency (Upper Band Edge) (MHz)	(iii) Reference Bandwidth (BW)	(iv) 0-2° (dBW/m²/BW)	(v) 2-5° (dBW/m²/BW)	(vi) 5-15° (dBW/m²/BW)	(vii) 15-20° (dBW/m²/BW)	(viii) 20-25° (dBW/m²/BW)	(ix) 25-90° (dBW/m²/BW)	(x) Southeastern Region (dBW/m²/BW)	(xi) Northeastern Region (dBW/m²/BW)	(xii) Western Region (dBW/m²/BW)	(xiii) Other Region (dBW/m²/BW)	(xiv) Energy Dispersal Bandwidth (kHz)
2261	2266	4 kHz	-165.3	-164.6	-162.2	-161.1	-160.2	-154.7					810

a. Beam ID:	SDR2	n. Beam Peak Flux Density at Command Threshold (dBW/m²):	
b. Beam Frequency (Lower Band Edge) (MHz):	2200	o. Peak Isotropic Antenna Gain (dBi):	6
c. Beam Frequency (Upper Band Edge) (MHz):	2290	p. Isotropic Antenna Gain at 3 dB Beamwidth (dBi):	
d. Polarization:	RHCP	q. Antenna Pointing Error (°):	0
e. Can the space station vary the channel bandwidth with on-board processing?:	Yes	r. Antenna Rotational Error (°):	0
f. Is this a command beam? (Check box if Yes):	No	s. Will a GIMS container file containing all antenna contour data be provided?:	
g. Is the beam shapeable? (Check box if Yes):	No	t. Under what rules will the associated antenna contours be submitted?:	
h. Is the beam steerable? (Check box if Yes):	No	u. Provide a list of each orbital plane in which this antenna beam is used.:	
i. Is the beam fed into transponders? (Check box if Yes):	No	v. Are all space stations in the NGSO constellation identical?:	
j. Maximum Transmit EIRP Density (dBW/Ref BW):	-59.1	w. What information will be provided with the predicted antenna gain contours?:	
k. Maximum Transmit EIRP (dBW):	0		

x. Transmit Channels						
(i) Channel ID	(ii) Channel Bandwidth (MHz)	(iii) Center Frequency (MHz)	(iv) Channel Frequency (Lower Band Edge) (MHz)	(v) Channel Frequency (Upper Band Edge) (MHz)	(vi) Channel Type	(vii) Point of Communication
SD07	5	2263.5	2261	2266	TT&C	
SD06	1.62	2263.5	2262.69	2264.31	TT&C	
SD05	0.81	2263.5	2263.095	2263.905	TT&C	

y. Max. Power-Flux Densities													
			Angles of Arrival PFD						Geographic Region PFD				
(i) Beam Sub-Frequency (Lower Band Edge) (MHz)	(ii) Beam Sub-Frequency (Upper Band Edge) (MHz)	(iii) Reference Bandwidth (BW)	(iv) 0-2° (dBW/m²/BW)	(v) 2-5° (dBW/m²/BW)	(vi) 5-15° (dBW/m²/BW)	(vii) 15-20° (dBW/m²/BW)	(viii) 20-25° (dBW/m²/BW)	(ix) 25-90° (dBW/m²/BW)	(x) Southeastern Region (dBW/m²/BW)	(xi) Northeastern Region (dBW/m²/BW)	(xii) Western Region (dBW/m²/BW)	(xiii) Other Region (dBW/m²/BW)	(xiv) Energy Dispersal Bandwidth (kHz)
2261	2266	4 kHz	-165.3	-164.6	-162.2	-161.1	-160.2	-154.7					810

a. Beam ID:	X1	n. Beam Peak Flux Density at Command Threshold (dBW/m²):	
b. Beam Frequency (Lower Band Edge) (MHz):	1591.2	o. Peak Isotropic Antenna Gain (dBi):	10.5
c. Beam Frequency (Upper Band Edge) (MHz):	1595.5	p. Isotropic Antenna Gain at 3 dB Beamwidth (dBi):	
d. Polarization:	RHCP	q. Antenna Pointing Error (°):	0
e. Can the space station vary the channel bandwidth with on-board processing?:	Yes	r. Antenna Rotational Error (°):	0
f. Is this a command beam? (Check box if Yes):	No	s. Will a GIMS container file containing all antenna contour data be provided?:	
g. Is the beam shapeable? (Check box if Yes):	No	t. Under what rules will the associated antenna contours be submitted?:	

h. Is the beam steerable? (Check box if Yes):	No	u. Provide a list of each orbital plane in which this antenna beam is used.:
i. Is the beam fed into transponders? (Check box if Yes):	No	v. Are all space stations in the NGSO constellation identical?:
j. Maximum Transmit EIRP Density (dBW/Ref BW):	-33.5	w. What information will be provided with the predicted antenna gain contours?:
k. Maximum Transmit EIRP (dBW):	29.1	

x. Transmit Channels													
(i) Channel ID		(ii) Channel Bandwidth (MHz)	(iii) Center Frequency (MHz)		(iv) Channel Frequency (Lower Band Edge) (MHz)		(v) Channel Frequency (Upper Band Edge) (MHz)		(vi) Channel Type		(vii) Point of Communication		
X1		4	1593.3225		1591.3225		1595.3225		Service Link				

y. Max. Power-Flux Densities													
			Angles of Arrival PFD						Geographic Region PFD				
(i) Beam Sub-Frequency (Lower Band Edge) (MHz)	(ii) Beam Sub-Frequency (Upper Band Edge) (MHz)	(iii) Reference Bandwidth (BW)	(iv) 0-2° (dBW/m²/BW)	(v) 2-5° (dBW/m²/BW)	(vi) 5-15° (dBW/m²/BW)	(vii) 15-20° (dBW/m²/BW)	(viii) 20-25° (dBW/m²/BW)	(ix) 25-90° (dBW/m²/BW)	(x) Southeastern Region (dBW/m²/BW)	(xi) Northeastern Region (dBW/m²/BW)	(xii) Western Region (dBW/m²/BW)	(xiii) Other Region (dBW/m²/BW)	(xiv) Energy Dispersal Bandwidth (kHz)
1591.2	1595.5	1 MHz	-115.5	-115.5	-115.6	-115.7	-115.7	-115.7					

S6. Space-to-Space (Receive) Beams

a. Beam ID:	CGEO	n. Beam Peak Flux Density at Command Threshold (dBW/m²):
b. Beam Frequency (Lower Band Edge) (MHz):	3700	o. Peak Isotropic Antenna Gain (dBi):
c. Beam Frequency (Upper Band Edge) (MHz):	4200	p. Isotropic Antenna Gain at 3 dB Beamwidth (dBi):
d. Polarization:	LHCP	q. Antenna Pointing Error (°):
e. Can the space station vary the channel bandwidth with on-board processing?:	Yes	r. Antenna Rotational Error (°):
f. Is this a command beam? (Check box if Yes):	No	s. Will a GIMS container file containing all antenna contour data be provided?:
g. Is the beam shapeable? (Check box if Yes):	No	t. Under what rules will the associated antenna contours be submitted?:
h. Is the beam steerable? (Check box if Yes):	No	u. Provide a list of each orbital plane in which this antenna beam is used.:
i. Is the beam fed into transponders? (Check box if Yes):	No	v. Are all space stations in the NGSO constellation identical?:
j. Maximum G/T (dB/K):	-17	w. What information will be provided with the predicted antenna gain contours?:
k. Minimum G/T (dB/K):		
l. Maximum Saturation Flux Density (dBW/m²):		
m. Minimum Saturation Flux Density (dBW/m²):		

x. Receive Channels						
(i) Channel ID	(ii) Channel Bandwidth (MHz)	(iii) Center Frequency (MHz)	(iv) Channel Frequency (Lower Band Edge) (MHz)	(v) Channel Frequency (Upper Band Edge) (MHz)	(vi) Channel Type	(vii) Point of Communication
CGEO001	5	4100	4097.5	4102.5	Feeder Link	SES/Intelsat

a. Beam ID:	ISLR	n. Beam Peak Flux Density at Command Threshold (dBW/m²):
b. Beam Frequency (Lower Band Edge) (MHz):	1525	o. Peak Isotropic Antenna Gain (dBi):
c. Beam Frequency (Upper Band Edge) (MHz):	1559	p. Isotropic Antenna Gain at 3 dB Beamwidth (dBi):
d. Polarization:	RHCP	q. Antenna Pointing Error (°):
e. Can the space station vary the channel bandwidth with on-board processing?:	No	r. Antenna Rotational Error (°):
f. Is this a command beam? (Check box if Yes):	No	s. Will a GIMS container file containing all antenna contour data be provided?:
g. Is the beam shapeable? (Check box if Yes):	No	t. Under what rules will the associated antenna contours be submitted?:

- h. Is the beam steerable? (Check box if Yes): **No** u. Provide a list of each orbital plane in which this antenna beam is used.:
- i. Is the beam fed into transponders? (Check box if Yes): **No** v. Are all space stations in the NGSO constellation identical?:
- j. Maximum G/T (dB/K): **-18.6** w. What information will be provided with the predicted antenna gain contours?:
- k. Minimum G/T (dB/K):
- l. Maximum Saturation Flux Density (dBW/m²):
- m. Minimum Saturation Flux Density (dBW/m²):

x. Receive Channels						
(i) Channel ID	(ii) Channel Bandwidth (MHz)	(iii) Center Frequency (MHz)	(iv) Channel Frequency (Lower Band Edge) (MHz)	(v) Channel Frequency (Upper Band Edge) (MHz)	(vi) Channel Type	(vii) Point of Communication
IS018	0.2	1542	1542	1542	Feeder Link	Inmarsat
IS014	0.2	1538	1538	1538	Feeder Link	Inmarsat
IS016	0.2	1540	1540	1540	Feeder Link	Inmarsat
IS020	0.2	1543.9	1544	1544	Feeder Link	Inmarsat
IS022	0.2	1546	1546	1546	Feeder Link	Inmarsat
IS029	0.2	1553	1553	1553	Feeder Link	Inmarsat
IS031	0.2	1555	1555	1555	Feeder Link	Inmarsat
IS002	0.2	1526	1526	1526	Feeder Link	Inmarsat
IS008	0.2	1532	1532	1532	Feeder Link	Inmarsat
IS010	0.2	1534	1534	1534	Feeder Link	Inmarsat
IS012	0.2	1536	1536	1536	Feeder Link	Inmarsat
IS027	0.2	1551	1551	1551	Feeder Link	Inmarsat
IS023	0.2	1547	1547	1547	Feeder Link	Inmarsat
IS025	0.2	1549	1549	1549	Feeder Link	Inmarsat
IS032	0.2	1556	1556	1556	Feeder Link	Inmarsat
IS034	0.2	1558	1558	1558	Feeder Link	Inmarsat
IS001	0.2	1525.1	1525	1525	Feeder Link	Inmarsat
IS006	0.2	1530	1530	1530	Feeder Link	Inmarsat
IS004	0.2	1528	1528	1528	Feeder Link	Inmarsat
IS015	0.2	1539	1539	1539	Feeder Link	Inmarsat
IS017	0.2	1541	1541	1541	Feeder Link	Inmarsat
IS013	0.2	1537	1537	1537	Feeder Link	Inmarsat
IS028	0.2	1552	1552	1552	Feeder Link	Inmarsat
IS019	0.2	1543	1543	1543	Feeder Link	Inmarsat
IS021	0.2	1545.1	1545	1545	Feeder Link	Inmarsat
IS030	0.2	1554	1554	1554	Feeder Link	Inmarsat
IS003	0.2	1527	1527	1527	Feeder Link	Inmarsat
IS011	0.2	1535	1535	1535	Feeder Link	Inmarsat
IS009	0.2	1533	1533	1533	Feeder Link	Inmarsat
IS024	0.2	1548	1548	1548	Feeder Link	Inmarsat
IS026	0.2	1550	1550	1550	Feeder Link	Inmarsat
IS033	0.2	1557	1557	1557	Feeder Link	Inmarsat
IS035	0.2	1558.9	1559	1559	Feeder Link	Inmarsat

IS005	0.2	1529	1529	1529	Feeder Link	Inmarsat
IS007	0.2	1531	1531	1531	Feeder Link	Inmarsat

S7. Space-to-Space (Transmit) Beams

a. Beam ID:	ISTL	m. Beam Peak Flux Density at Command Threshold (dBW/m²):				
b. Beam Frequency (Lower Band Edge) (MHz):	1626.5	o. Peak Isotropic Antenna Gain (dBi):	9			
c. Beam Frequency (Upper Band Edge) (MHz):	1660.5	p. Isotropic Antenna Gain at 3 dB Beamwidth (dBi):	6			
d. Polarization:	RHCP	q. Antenna Pointing Error (°):				
e. Can the space station vary the channel bandwidth with on-board processing?:	No	r. Antenna Rotational Error (°):				
f. Is this a command beam? (Check box if Yes):	No	s. Will a GIMS container file containing all antenna contour data be provided?:				
g. Is the beam shapeable? (Check box if Yes):	No	t. Under what rules will the associated antenna contours be submitted?:				
h. Is the beam steerable? (Check box if Yes):	No	u. Provide a list of each orbital plane in which this antenna beam is used.:				
i. Is the beam fed into transponders? (Check box if Yes):	No	v. Are all space stations in the NGSO constellation identical?:				
j. Maximum Transmit EIRP Density (dBW/Ref BW):	-29.5	w. What information will be provided with the predicted antenna gain contours?:				
k. Maximum Transmit EIRP (dBW):	10.5					
x. Transmit Channels						
(i) Channel ID	(ii) Channel Bandwidth (MHz)	(iii) Center Frequency (MHz)	(iv) Channel Frequency (Lower Band Edge) (MHz)	(v) Channel Frequency (Upper Band Edge) (MHz)	(vi) Channel Type	(vii) Point of Communication
IS003	0.2	1628	1628	1628	Feeder Link	Inmarsat
IS005	0.2	1630	1630	1630	Feeder Link	Inmarsat
IS007	0.2	1632	1632	1632	Feeder Link	Inmarsat
IS009	0.2	1634	1634	1634	Feeder Link	Inmarsat
IS011	0.2	1636	1636	1636	Feeder Link	Inmarsat
IS004	0.2	1629	1629	1629	Feeder Link	Inmarsat
IS006	0.2	1631	1631	1631	Feeder Link	Inmarsat
IS008	0.2	1633	1633	1633	Feeder Link	Inmarsat
IS010	0.2	1635	1635	1635	Feeder Link	Inmarsat
IS013	0.2	1638	1638	1638	Feeder Link	Inmarsat
IS015	0.2	1640	1640	1640	Feeder Link	Inmarsat
IS012	0.2	1637	1637	1637	Feeder Link	Inmarsat
IS014	0.2	1639	1639	1639	Feeder Link	Inmarsat
IS016	0.2	1641	1641	1641	Feeder Link	Inmarsat
IS002	0.2	1627	1627	1627	Feeder Link	Inmarsat
IS022	0.2	1647	1647	1647	Feeder Link	Inmarsat
IS024	0.2	1649	1649	1649	Feeder Link	Inmarsat
IS026	0.2	1651	1651	1651	Feeder Link	Inmarsat
IS028	0.2	1653	1653	1653	Feeder Link	Inmarsat
IS030	0.2	1655	1655	1655	Feeder Link	Inmarsat
IS023	0.2	1648	1648	1648	Feeder Link	Inmarsat
IS025	0.2	1650	1650	1650	Feeder Link	Inmarsat

IS027	0.2	1652	1652	1652	Feeder Link	Inmarsat
IS029	0.2	1654	1654	1654	Feeder Link	Inmarsat
IS031	0.2	1656	1656	1656	Feeder Link	Inmarsat
IS032	0.2	1657	1657	1657	Feeder Link	Inmarsat
IS034	0.2	1659	1659	1659	Feeder Link	Inmarsat
IS033	0.2	1658	1658	1658	Feeder Link	Inmarsat
IS035	0.2	1660	1660	1660	Feeder Link	Inmarsat
IS018	0.2	1643	1643	1643	Feeder Link	Inmarsat
IS020	0.2	1644.4	1645	1645	Feeder Link	Inmarsat
IS017	0.2	1642	1642	1642	Feeder Link	Inmarsat
IS019	0.2	1644	1644	1644	Feeder Link	Inmarsat
IS021	0.2	1646	1646	1646	Feeder Link	Inmarsat

y. Max. Power-Flux Densities														
			Angles of Arrival PFD						Geographic Region PFD					
(i) Beam Sub-Frequency (Lower Band Edge) (MHz)	(ii) Beam Sub-Frequency (Upper Band Edge) (MHz)	(iii) Reference Bandwidth (BW)	(iv) 0-2° (dBW/m²/BW)	(v) 2-5° (dBW/m²/BW)	(vi) 5-15° (dBW/m²/BW)	(vii) 15-20° (dBW/m²/BW)	(viii) 20-25° (dBW/m²/BW)	(ix) 25-90° (dBW/m²/BW)	(x) Southeastern Region (dBW/m²/BW)	(xi) Northeastern Region (dBW/m²/BW)	(xii) Western Region (dBW/m²/BW)	(xiii) Other Region (dBW/m²/BW)	(xiv) Energy Dispersal Bandwidth (kHz)	
1626.5	1660.5	4 kHz	-147.1	-146.1	-142.8	-141.4	-140.1	-133.9					200	

S8. Attachments

