

File Number: **DRAFT-SAT-LOA-20260722-00307**

Call Sign:

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
SES-29	Geostationary (GSO)	20	No	Applicant requests authority to launch and operate SES-29, a C-/Ku-band geostationary satellite, at the 99 W.L. orbital location. Please see narrative and exhibits.

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
FSS		Other	4160	4200	Space-to-Earth (Transmit)	No
FSS		Other	5885	5925	Earth-to-Space (Receive)	No
FSS		5925 - 6425	5925	6425	Earth-to-Space (Receive)	No
FSS		11700 - 12200	11700	12200	Space-to-Earth (Transmit)	No
FSS		14000 - 14500	14000	14500	Earth-to-Space (Receive)	No

S3. GSO Orbital Information

a. Orbital Longitude (°)	b. Hemisphere of Orbital Longitude (E/W)	c. East/West Station-Keeping Range: Toward East (°)	d. East/West Station-Keeping Range: Toward West (°)	e. North/South Station-Keeping Range: Toward North (°)	f. North/South Station-Keeping Range: Toward South (°)	g. Maximum Orbital Eccentricity	h. Antenna Axis Attitude Accuracy: Roll (°)	i. Antenna Axis Attitude Accuracy: Pitch (°)	j. Antenna Axis Attitude Accuracy: Yaw (°)
99	West	0.05	0.05	0.05	0.05		0.1	0.1	0.1

S4. Earth-to-Space (Receive) Beams

a. Beam ID:	C1RH	n. Beam Peak Flux Density at Command Threshold (dBW/m²):
b. Beam Frequency (Lower Band Edge) (MHz):	5885	o. Peak Isotropic Antenna Gain (dBi):
c. Beam Frequency (Upper Band Edge) (MHz):	5925	p. Isotropic Antenna Gain at 3 dB Beamwidth (dBi):
d. Polarization:	H	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):	Yes	v. Are all space stations in the NGSO constellation identical?:

j. Maximum G/T (dB/K):	6.5	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):	-75					
m. Minimum Saturation Flux Density (dBW/m²):	-100					
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
C01	36	5905	5887	5923	Service Link	

a. Beam ID:	K1RV	n. Beam Peak Flux Density at Command Threshold (dBW/m²):				
b. Beam Frequency (Lower Band Edge) (MHz):	14000	o. Peak Isotropic Antenna Gain (dBi):				
c. Beam Frequency (Upper Band Edge) (MHz):	14500	p. Isotropic Antenna Gain at 3 dB Beamwidth (dBi):				
d. Polarization:	V	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):	Yes	v. Are all space stations in the NGSO constellation identical?:				
j. Maximum G/T (dB/K):	8.5	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):	-77					
m. Minimum Saturation Flux Density (dBW/m²):	-102					
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
K05	36	14105	14087	14123	Service Link	
K01	36	14025	14007	14043	Service Link	
K03	36	14065	14047	14083	Service Link	
K07	36	14145	14127	14163	Service Link	
K09	36	14185	14167	14203	Service Link	
K11	36	14225	14207	14243	Service Link	
K13	36	14275	14257	14293	Service Link	
K15	36	14315	14297	14333	Service Link	
K17	36	14355	14337	14373	Service Link	
K19	36	14395	14377	14413	Service Link	
K21	36	14435	14417	14453	Service Link	
K23	36	14475	14457	14493	Service Link	
TC2	1	14003.8	14003.3	14004.3	TT&C	
TC1	1	14001.3	14000.8	14001.8	TT&C	
TC3	1	14496.2	14495.7	14496.7	TT&C	
TC4	1	14498.7	14498.2	14499.2	TT&C	

a. Beam ID:	C1RV	n. Beam Peak Flux Density at Command Threshold (dBW/m²):
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b. Beam Frequency (Lower Band Edge) (MHz):	5885	o. Peak Isotropic Antenna Gain (dBi):
c. Beam Frequency (Upper Band Edge) (MHz):	5925	p. Isotropic Antenna Gain at 3 dB Beamwidth (dBi):
d. Polarization:	V	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):	Yes	v. Are all space stations in the NGSO constellation identical?:
j. Maximum G/T (dB/K):	6.5	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):	-75	
m. Minimum Saturation Flux Density (dBW/m²):	-100	

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
C02	36	5905	5887	5923	Service Link	

a. Beam ID:	C2RH	n. Beam Peak Flux Density at Command Threshold (dBW/m²):
b. Beam Frequency (Lower Band Edge) (MHz):	5925	o. Peak Isotropic Antenna Gain (dBi):
c. Beam Frequency (Upper Band Edge) (MHz):	6425	p. Isotropic Antenna Gain at 3 dB Beamwidth (dBi):
d. Polarization:	H	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):	Yes	v. Are all space stations in the NGSO constellation identical?:
j. Maximum G/T (dB/K):	6.5	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):	-75	
m. Minimum Saturation Flux Density (dBW/m²):	-100	

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
C14	36	6155	6137	6173	Service Link	
C16	36	6195	6177	6213	Service Link	
C18	36	6235	6217	6253	Service Link	
C20	36	6275	6257	6293	Service Link	
C22	36	6315	6297	6333	Service Link	
C24	36	6355	6337	6373	Service Link	
C04	36	5945	5927	5963	Service Link	
C06	36	5985	5967	6003	Service Link	
C08	36	6025	6007	6043	Service Link	
C10	36	6065	6047	6083	Service Link	

C12	36	6105	6087	6123	Service Link	
C50	36	6405	6387	6423	Service Link	

a. Beam ID:	CMDL	n. Beam Peak Flux Density at Command Threshold (dBW/m²):	-99
b. Beam Frequency (Lower Band Edge) (MHz):	14000	o. Peak Isotropic Antenna Gain (dBi):	
c. Beam Frequency (Upper Band Edge) (MHz):	14500	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?:	No	r. Antenna Rotational Error (°):	
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):	-5	w. What information will be provided with the predicted antenna gain contours?:	
k. Minimum G/T (dB/K):	-5		
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
CG4		14498.7			TT&C	
CG3		14496.2			TT&C	
CG2		14003.8			TT&C	
CG1		14001.3			TT&C	

a. Beam ID:	CMDR	n. Beam Peak Flux Density at Command Threshold (dBW/m²):	-99
b. Beam Frequency (Lower Band Edge) (MHz):	14000	o. Peak Isotropic Antenna Gain (dBi):	
c. Beam Frequency (Upper Band Edge) (MHz):	14500	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):	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):	-5	w. What information will be provided with the predicted antenna gain contours?:	
k. Minimum G/T (dB/K):	-5		
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
CG4		14498.7			TT&C	
CG3		14496.2			TT&C	
CG2		14003.8			TT&C	

CG1		14001.3			TT&C	
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a. Beam ID:	K1RH	n. Beam Peak Flux Density at Command Threshold (dBW/m²):
b. Beam Frequency (Lower Band Edge) (MHz):	14000	o. Peak Isotropic Antenna Gain (dBi):
c. Beam Frequency (Upper Band Edge) (MHz):	14500	p. Isotropic Antenna Gain at 3 dB Beamwidth (dBi):
d. Polarization:	H	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):	Yes	v. Are all space stations in the NGSO constellation identical?:
j. Maximum G/T (dB/K):	8.5	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):	-77	
m. Minimum Saturation Flux Density (dBW/m²):	-102	

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
K10	36	14185	14167	14203	Service Link	
K12	36	14225	14207	14243	Service Link	
K22	36	14435	14417	14453	Service Link	
K02	36	14025	14007	14043	Service Link	
K04	36	14065	14047	14083	Service Link	
K06	36	14105	14087	14123	Service Link	
K08	36	14145	14127	14163	Service Link	
K24	36	14475	14457	14493	Service Link	
K14	36	14275	14257	14293	Service Link	
K16	36	14315	14297	14333	Service Link	
K18	36	14355	14337	14373	Service Link	
K20	36	14395	14377	14413	Service Link	
TC1	1	14001.3	14000.8	14001.8	TT&C	
TC2	1	14003.8	14003.3	14004.3	TT&C	
TC3	1	14496.2	14495.7	14496.7	TT&C	
TC4	1	14498.7	14498.2	14499.2	TT&C	

a. Beam ID:	C2RV	n. Beam Peak Flux Density at Command Threshold (dBW/m²):
b. Beam Frequency (Lower Band Edge) (MHz):	5925	o. Peak Isotropic Antenna Gain (dBi):
c. Beam Frequency (Upper Band Edge) (MHz):	6425	p. Isotropic Antenna Gain at 3 dB Beamwidth (dBi):
d. Polarization:	V	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):	Yes	v. Are all space stations in the NGSO constellation identical?:				
j. Maximum G/T (dB/K):	6.5	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):	-75					
m. Minimum Saturation Flux Density (dBW/m²):	-100					
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
C21	36	6315	6297	6333	Service Link	
C23	36	6355	6337	6373	Service Link	
C49	36	6405	6387	6423	Service Link	
C03	36	5945	5927	5963	Service Link	
C05	36	5985	5967	6003	Service Link	
C07	36	6025	6007	6043	Service Link	
C09	36	6065	6047	6083	Service Link	
C11	36	6105	6087	6123	Service Link	
C13	36	6155	6137	6173	Service Link	
C17	36	6235	6217	6253	Service Link	
C19	36	6275	6257	6293	Service Link	
C15	36	6195	6177	6213	Service Link	

S5. Space-to-Earth (Transmit) Beams

a. Beam ID:	K1TV	n. Beam Peak Flux Density at Command Threshold (dBW/m²):				
b. Beam Frequency (Lower Band Edge) (MHz):	11700	o. Peak Isotropic Antenna Gain (dBi):				
c. Beam Frequency (Upper Band Edge) (MHz):	12200	p. Isotropic Antenna Gain at 3 dB Beamwidth (dBi):				
d. Polarization:	V	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):	Yes	v. Are all space stations in the NGSO constellation identical?:				
j. Maximum Transmit EIRP Density (dBW/Ref BW):	17	w. What information will be provided with the predicted antenna gain contours?:				
k. Maximum Transmit EIRP (dBW):	56.5					
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
K24	36	12175	12157	12193	Service Link	
K04	36	11765	11747	11783	Service Link	
K08	36	11845	11827	11863	Service Link	
K10	36	11885	11867	11903	Service Link	

K12	36	11925	11907	11943	Service Link	
K16	36	12015	11997	12033	Service Link	
K18	36	12055	12037	12073	Service Link	
K02	36	11725	11707	11743	Service Link	
K06	36	11805	11787	11823	Service Link	
K14	36	11975	11957	11993	Service Link	
TM1	0.4	11700.9	11700.7	11701.1	TT&C	
TM2	0.4	11702.4	11702.2	11702.6	TT&C	
TM3	0.4	12197.6	12197.4	12197.8	TT&C	
K20	36	12095	12077	12113	Service Link	
K22	36	12135	12117	12153	Service Link	
TM4	0.4	12199.1	12198.9	12199.3	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)
		4 kHz	-150	-147.5	-146.1	-145.9	-145.8	-145.1					

a. Beam ID:	TLML	n. Beam Peak Flux Density at Command Threshold (dBW/m²):
b. Beam Frequency (Lower Band Edge) (MHz):	11700	o. Peak Isotropic Antenna Gain (dBi):
c. Beam Frequency (Upper Band Edge) (MHz):	12200	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?:	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):	7	w. What information will be provided with the predicted antenna gain contours?:
k. Maximum Transmit EIRP (dBW):	16	

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
TG4	0.4	12199.1	12198.9	12199.3	TT&C	
UPC1	0.2	11700.1	11700	11700.2	TT&C	
TG1	0.4	11700.9	11700.7	11701.1	TT&C	
TG2	0.4	11702.4	11702.2	11702.6	TT&C	
UPC2	0.2	12199.9	12199.8	12200	TT&C	
TG3	0.4	12197.6	12197.4	12197.8	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)
		4 kHz											

a. Beam ID:	K1TH	n. Beam Peak Flux Density at Command Threshold (dBW/m ²):
b. Beam Frequency (Lower Band Edge) (MHz):	11700	o. Peak Isotropic Antenna Gain (dBi):
c. Beam Frequency (Upper Band Edge) (MHz):	12200	p. Isotropic Antenna Gain at 3 dB Beamwidth (dBi):
d. Polarization:	H	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):	Yes	v. Are all space stations in the NGSO constellation identical?:
j. Maximum Transmit EIRP Density (dBW/Ref BW):	17	w. What information will be provided with the predicted antenna gain contours?:
k. Maximum Transmit EIRP (dBW):	56.5	

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
K03	36	11765	11747	11783	Service Link	
K07	36	11845	11827	11863	Service Link	
K01	36	11725	11707	11743	Service Link	
K05	36	11805	11787	11823	Service Link	
K13	36	11975	11957	11993	Service Link	
K09	36	11885	11867	11903	Service Link	
K11	36	11925	11907	11943	Service Link	
K15	36	12015	11997	12033	Service Link	
K17	36	12055	12037	12073	Service Link	
K19	36	12095	12077	12113	Service Link	
K21	36	12135	12117	12153	Service Link	
K23	36	12175	12157	12193	Service Link	
TM1	0.4	11700.9	11700.7	11701.1	TT&C	
TM2	0.4	11702.4	11702.2	11702.6	TT&C	
TM4	0.4	12199.1	12198.9	12199.3	TT&C	
TM3	0.4	12197.6	12197.4	12197.8	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)
		4 kHz	-150	-147.5	-146.1	-145.9	-145.8	-145.1					

a. Beam ID:	TLMR	n. Beam Peak Flux Density at Command Threshold (dBW/m ²):
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b. Beam Frequency (Lower Band Edge) (MHz):	11700	o. Peak Isotropic Antenna Gain (dBi):
c. Beam Frequency (Upper Band Edge) (MHz):	12200	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 Transmit EIRP Density (dBW/Ref BW):	7	w. What information will be provided with the predicted antenna gain contours?:
k. Maximum Transmit EIRP (dBW):	16	

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
TG1	0.4	11700.9	11700.7	11701.1	TT&C	
TG2	0.4	11702.4	11702.2	11702.6	TT&C	
UPC2	0.2	12199.9	12199.8	12200	TT&C	
TG3	0.4	12197.6	12197.4	12197.8	TT&C	
TG4	0.4	12199.1	12198.9	12199.3	TT&C	
UPC1	0.2	11700.1	11700	11700.2	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)
		4 kHz											

a. Beam ID:	C1TH	n. Beam Peak Flux Density at Command Threshold (dBW/m²):
b. Beam Frequency (Lower Band Edge) (MHz):	4160	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:	H	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):	Yes	v. Are all space stations in the NGSO constellation identical?:
j. Maximum Transmit EIRP Density (dBW/Ref BW):	7.1	w. What information will be provided with the predicted antenna gain contours?:
k. Maximum Transmit EIRP (dBW):	46.6	

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
C49	36	4180	4162	4198	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)
		4 kHz	-156.2	-156.2	-156.1	-155.8	-155.7	-155					

a. Beam ID:	C1TV	n. Beam Peak Flux Density at Command Threshold (dBW/m²):
b. Beam Frequency (Lower Band Edge) (MHz):	4160	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:	V	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):	Yes	v. Are all space stations in the NGSO constellation identical?:
j. Maximum Transmit EIRP Density (dBW/Ref BW):	7.1	w. What information will be provided with the predicted antenna gain contours?:
k. Maximum Transmit EIRP (dBW):	46.6	

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
C50	36	4180	4162	4198	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)
		4 kHz	-156.2	-156.2	-156.1	-155.8	-155.7	-155					

S6. Space-to-Space (Receive) Beams

S7. Space-to-Space (Transmit) Beams

S8. Attachments

Beam ID	Direction of Transmission	(i) Document Type	(ii) If Document Type is "Other", provide short description	(iii) File Name
C1RH	Earth-to-Space (Receive)	Receive Antenna Gain Contour Diagram		99W_C_Rx.gxt
C1RV	Earth-to-Space (Receive)	Receive Antenna Gain Contour Diagram		99W_C_Rx.gxt
C1TH	Space-to-Earth (Transmit)	Transmit Antenna Gain Contour Diagram		99W_C_Tx.gxt
C1TV	Space-to-Earth (Transmit)	Transmit Antenna Gain Contour Diagram		99W_C_Tx.gxt
C2RH	Earth-to-Space (Receive)	Receive Antenna Gain Contour Diagram		99W_C_Rx.gxt
C2RV	Earth-to-Space (Receive)	Receive Antenna Gain Contour Diagram		99W_C_Rx.gxt

K1RH	Earth-to-Space (Receive)	Receive Antenna Gain Contour Diagram		99W_Ku_Rx.gxt
K1RV	Earth-to-Space (Receive)	Receive Antenna Gain Contour Diagram		99W_Ku_Rx.gxt
K1TH	Space-to-Earth (Transmit)	Transmit Antenna Gain Contour Diagram		99W_Ku_Tx.gxt
K1TV	Space-to-Earth (Transmit)	Transmit Antenna Gain Contour Diagram		99W_Ku_Tx.gxt