



312 File Number: **SESMOD2017011200030**

Filing Description

Question	Response
Description	Globalstar notifies the Commission of orbital adjustments to the non-geostationary mobile satellite service space stations in its Big LEO MSS constellation.

**Satellite
Information**

Question	Response
Select Orbit Type	NGSO
Space Station or Satellite Network Name	GLOBALSTAR
Estimated Lifetime of Satellite(s) From Date of Launch	15 Years
Will the space station(s) operate on a Common Carrier basis?	No

Operating
Frequency
Bands (4)

Nature of service	Description	Frequency Band (s)	Mode Type
Mobile-Satellite Service		2483.5 MHz -2500.0 MHz	Transmit
Other Satellite Service (please specify)	Feeder Link to support MSS	5091.0 MHz -5250.0 MHz	Receive
Other Satellite Service (please specify)	Feeder Link to support MSS	6875.0 MHz -7055.0 MHz	Transmit
Mobile-Satellite Service		1610.0 MHz -1618.725 MHz	Receive

**Orbital
Information For
Non-
Geostationary
Satellites**

Question	Response
Total Number of Satellites in the active constellation	24
Orbit Epoch Date	01/22/2017
Celestial Reference Body	Earth

Orbital Plane 1:

Question	Response
Number of Satellites in Plane	3
Inclination Angle	52.0 degrees
Right Ascension of Ascending Node	135.0 degrees
Argument of Perigee	90.0 degrees
Orbital Period	6840.0 seconds
Apogee	1414.0 km
Perigee	1414.0 km
Active Service Arc Begin Angle with respect to Ascending Node	0.0 degrees
Active Service Arc End Angle with respect to Ascending Node	360.0 degrees

Mean Anomaly For Each Satellite

Satellite Number	Mean Anomaly (degrees) at the Orbit Epoch Date
1	210.0
2	330.0
3	90.0

Orbital Plane 2:

Question	Response
Number of Satellites in Plane	3
Inclination Angle	52.0 degrees
Right Ascension of Ascending Node	180.0 degrees
Argument of Perigee	90.0 degrees
Orbital Period	6840.0 seconds
Apogee	1414.0 km
Perigee	1414.0 km
Active Service Arc Begin Angle with respect to Ascending Node	0.0 degrees

Active Service Arc End Angle with respect to Ascending Node	360.0 degrees
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Mean Anomaly For Each Satellite

Satellite Number	Mean Anomaly (degrees) at the Orbit Epoch Date
1	30.0
2	150.0
3	270.0

Orbital Plane 3:

Question	Response
Number of Satellites in Plane	3
Inclination Angle	52.0 degrees
Right Ascension of Ascending Node	225.0 degrees
Argument of Perigee	90.0 degrees
Orbital Period	6840.0 seconds
Apogee	1414.0 km
Perigee	1414.0 km
Active Service Arc Begin Angle with respect to Ascending Node	0.0 degrees
Active Service Arc End Angle with respect to Ascending Node	360.0 degrees

Mean Anomaly For Each Satellite

Satellite Number	Mean Anomaly (degrees) at the Orbit Epoch Date
1	330.0
2	90.0
3	210.0

Orbital Plane 4:

Question	Response
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Number of Satellites in Plane	3
Inclination Angle	52.0 degrees
Right Ascension of Ascending Node	0.0 degrees
Argument of Perigee	90.0 degrees
Orbital Period	6840.0 seconds
Apogee	1414.0 km
Perigee	1414.0 km
Active Service Arc Begin Angle with respect to Ascending Node	0.0 degrees
Active Service Arc End Angle with respect to Ascending Node	360.0 degrees

Mean Anomaly For Each Satellite

Satellite Number	Mean Anomaly (degrees) at the Orbit Epoch Date
1	150.0
2	270.0
3	30.0

Orbital Plane 5:

Question	Response
Number of Satellites in Plane	3
Inclination Angle	52.0 degrees
Right Ascension of Ascending Node	270.0 degrees
Argument of Perigee	90.0 degrees
Orbital Period	6840.0 seconds
Apogee	1414.0 km
Perigee	1414.0 km
Active Service Arc Begin Angle with respect to Ascending Node	0.0 degrees
Active Service Arc End Angle with respect to Ascending Node	360.0 degrees

Mean Anomaly For Each Satellite

Satellite Number	Mean Anomaly (degrees) at the Orbit Epoch Date
1	30.0
2	150.0
3	270.0

Orbital Plane 6:

Question	Response
Number of Satellites in Plane	3
Inclination Angle	52.0 degrees
Right Ascension of Ascending Node	45.0 degrees
Argument of Perigee	90.0 degrees
Orbital Period	6840.0 seconds
Apogee	1414.0 km
Perigee	1414.0 km
Active Service Arc Begin Angle with respect to Ascending Node	0.0 degrees
Active Service Arc End Angle with respect to Ascending Node	360.0 degrees

Mean Anomaly For Each Satellite

Satellite Number	Mean Anomaly (degrees) at the Orbit Epoch Date
1	330.0
2	90.0
3	210.0

Orbital Plane 7:

Question	Response
Number of Satellites in Plane	3
Inclination Angle	52.0 degrees

Right Ascension of Ascending Node	90.0 degrees
Argument of Perigee	90.0 degrees
Orbital Period	6840.0 seconds
Apogee	1414.0 km
Perigee	1414.0 km
Active Service Arc Begin Angle with respect to Ascending Node	0.0 degrees
Active Service Arc End Angle with respect to Ascending Node	360.0 degrees

Mean Anomaly For Each Satellite

Satellite Number	Mean Anomaly (degrees) at the Orbit Epoch Date
1	30.0
2	150.0
3	270.0

Orbital Plane 8:

Question	Response
Number of Satellites in Plane	3
Inclination Angle	52.0 degrees
Right Ascension of Ascending Node	315.0 degrees
Argument of Perigee	90.0 degrees
Orbital Period	6840.0 seconds
Apogee	1414.0 km
Perigee	1414.0 km
Active Service Arc Begin Angle with respect to Ascending Node	0.0 degrees
Active Service Arc End Angle with respect to Ascending Node	360.0 degrees

Mean Anomaly For Each Satellite

Satellite Number	Mean Anomaly (degrees) at the Orbit Epoch Date
1	210.0
2	330.0
3	90.0

Receiving Beams 1:

Question	Response
Beam ID	C1LH
Receive Beam Frequency	5091.0 MHz -5250.0 MHz
Beam Type	Fixed
Polarization	LHCP
Peak Gain	dBi
Antenna Pointing Error	0.0 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
G/T at Max. Gain Point	-20.6 dB/K
Min. Saturation Flux Density	-999.0 dBW/m2
Max. Saturation Flux Density	-151.2 dBW/m2
Co- or Cross Polar Mode	X
Service Area Description	Global Coverage between 73N and 73S latitudes

Receiving Beams 2:

Question	Response
Beam ID	C1RH
Receive Beam Frequency	5091.0 MHz -5250.0 MHz
Beam Type	Fixed
Polarization	RHCP
Peak Gain	dBi
Antenna Pointing Error	0.0 degrees
Antenna Rotational Error	0.0 degrees

Receiving Beams 3:

Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
G/T at Max. Gain Point	-20.6 dB/K
Min. Saturation Flux Density	-999.0 dBW/m2
Max. Saturation Flux Density	-151.2 dBW/m2
Co- or Cross Polar Mode	X
Service Area Description	Global Coverage between 73N and 73S latitudes

Question	Response
Beam ID	L03
Receive Beam Frequency	1610.0 MHz -1618.725 MHz
Beam Type	Fixed
Polarization	LHCP
Peak Gain	dBi
Antenna Pointing Error	0.0 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
G/T at Max. Gain Point	-6.89 dB/K
Min. Saturation Flux Density	-999.0 dBW/m2
Max. Saturation Flux Density	-151.0 dBW/m2
Co- or Cross Polar Mode	X
Service Area Description	Global Coverage between 73N and 73S latitudes

Receiving Beams 4:

Question	Response
Beam ID	L01
Receive Beam Frequency	1610.0 MHz -1618.725 MHz
Beam Type	Fixed
Polarization	LHCP
Peak Gain	dBi
Antenna Pointing Error	0.0 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
G/T at Max. Gain Point	-12.1 dB/K
Min. Saturation Flux Density	-999.0 dBW/m2
Max. Saturation Flux Density	-151.0 dBW/m2
Co- or Cross Polar Mode	X
Service Area Description	Global Coverage between 73N and 73S latitudes

Receiving Beams 5:

Question	Response
Beam ID	L04
Receive Beam Frequency	1610.0 MHz -1618.725 MHz
Beam Type	Fixed
Polarization	LHCP
Peak Gain	dBi
Antenna Pointing Error	0.0 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	

Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
G/T at Max. Gain Point	-7.23 dB/K
Min. Saturation Flux Density	-999.0 dBW/m2
Max. Saturation Flux Density	-151.0 dBW/m2
Co- or Cross Polar Mode	X
Service Area Description	Global Coverage between 73N and 73S latitudes

Receiving Beams 6:

Question	Response
Beam ID	L05
Receive Beam Frequency	1610.0 MHz -1618.725 MHz
Beam Type	Fixed
Polarization	LHCP
Peak Gain	dBi
Antenna Pointing Error	0.0 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
G/T at Max. Gain Point	-7.03 dB/K
Min. Saturation Flux Density	-999.0 dBW/m2
Max. Saturation Flux Density	-151.0 dBW/m2
Co- or Cross Polar Mode	X
Service Area Description	Global Coverage between 73N and 73S latitudes

Receiving Beams 7:

Question	Response
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Beam ID	L06
Receive Beam Frequency	1610.0 MHz -1618.725 MHz
Beam Type	Fixed
Polarization	LHCP
Peak Gain	dBi
Antenna Pointing Error	0.0 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
G/T at Max. Gain Point	-6.94 dB/K
Min. Saturation Flux Density	-999.0 dBW/m2
Max. Saturation Flux Density	-151.0 dBW/m2
Co- or Cross Polar Mode	X
Service Area Description	Global Coverage between 73N and 73S latitudes

Receiving Beams 8:

Question	Response
Beam ID	L07
Receive Beam Frequency	1610.0 MHz -1618.725 MHz
Beam Type	Fixed
Polarization	LHCP
Peak Gain	dBi
Antenna Pointing Error	0.0 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees

G/T at Max. Gain Point	-7.16 dB/K
Min. Saturation Flux Density	-999.0 dBW/m2
Max. Saturation Flux Density	-151.0 dBW/m2
Co- or Cross Polar Mode	X
Service Area Description	Global Coverage between 73N and 73S latitudes

Receiving Beams 9:

Question	Response
Beam ID	L02
Receive Beam Frequency	1610.0 MHz -1618.725 MHz
Beam Type	Fixed
Polarization	LHCP
Peak Gain	dBi
Antenna Pointing Error	0.0 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
G/T at Max. Gain Point	-7.07 dB/K
Min. Saturation Flux Density	-999.0 dBW/m2
Max. Saturation Flux Density	-151.0 dBW/m2
Co- or Cross Polar Mode	X
Service Area Description	Global Coverage between 73N and 73S latitudes

Receiving Beams 10:

Question	Response
Beam ID	L08

Receive Beam Frequency	1610.0 MHz -1618.725 MHz
Beam Type	Fixed
Polarization	LHCP
Peak Gain	dBi
Antenna Pointing Error	0.0 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
G/T at Max. Gain Point	-7.09 dB/K
Min. Saturation Flux Density	-999.0 dBW/m2
Max. Saturation Flux Density	-151.0 dBW/m2
Co- or Cross Polar Mode	X
Service Area Description	Global Coverage between 73N and 73S latitudes

Receiving Beams 11:

Question	Response
Beam ID	L09
Receive Beam Frequency	1610.0 MHz -1618.725 MHz
Beam Type	Fixed
Polarization	LHCP
Peak Gain	dBi
Antenna Pointing Error	0.0 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
G/T at Max. Gain Point	-6.98 dB/K

Min. Saturation Flux Density	-999.0 dBW/m2
Max. Saturation Flux Density	-151.0 dBW/m2
Co- or Cross Polar Mode	X
Service Area Description	Global Coverage between 73N and 73S latitudes

Receiving Beams 12:

Question	Response
Beam ID	L14
Receive Beam Frequency	1610.0 MHz -1618.725 MHz
Beam Type	Fixed
Polarization	LHCP
Peak Gain	dBi
Antenna Pointing Error	0.0 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
G/T at Max. Gain Point	-7.03 dB/K
Min. Saturation Flux Density	-999.0 dBW/m2
Max. Saturation Flux Density	-151.0 dBW/m2
Co- or Cross Polar Mode	X
Service Area Description	Global Coverage between 73N and 73S latitudes

Receiving Beams 13:

Question	Response
Beam ID	L15
Receive Beam Frequency	1610.0 MHz -1618.725 MHz

Beam Type	Fixed
Polarization	LHCP
Peak Gain	dBi
Antenna Pointing Error	0.0 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
G/T at Max. Gain Point	-7.23 dB/K
Min. Saturation Flux Density	-999.0 dBW/m2
Max. Saturation Flux Density	-151.0 dBW/m2
Co- or Cross Polar Mode	X
Service Area Description	Global Coverage between 73N and 73S latitudes

Receiving Beams 14:

Question	Response
Beam ID	L10
Receive Beam Frequency	1610.0 MHz -1618.725 MHz
Beam Type	Fixed
Polarization	LHCP
Peak Gain	dBi
Antenna Pointing Error	0.0 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
G/T at Max. Gain Point	-6.98 dB/K
Min. Saturation Flux Density	-999.0 dBW/m2

Max. Saturation Flux Density	-151.0 dBW/m2
Co- or Cross Polar Mode	X
Service Area Description	Global Coverage between 73N and 73S latitudes

Receiving Beams 15:

Question	Response
Beam ID	L16
Receive Beam Frequency	1610.0 MHz -1618.725 MHz
Beam Type	Fixed
Polarization	LHCP
Peak Gain	dBi
Antenna Pointing Error	0.0 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
G/T at Max. Gain Point	-6.89 dB/K
Min. Saturation Flux Density	-999.0 dBW/m2
Max. Saturation Flux Density	-151.0 dBW/m2
Co- or Cross Polar Mode	X
Service Area Description	Global Coverage between 73N and 73S latitudes

Receiving Beams 16:

Question	Response
Beam ID	L11
Receive Beam Frequency	1610.0 MHz -1618.725 MHz
Beam Type	Fixed

Polarization	LHCP
Peak Gain	dBi
Antenna Pointing Error	0.0 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
G/T at Max. Gain Point	-7.1 dB/K
Min. Saturation Flux Density	-999.0 dBW/m2
Max. Saturation Flux Density	-151.0 dBW/m2
Co- or Cross Polar Mode	X
Service Area Description	Global Coverage between 73N and 73S latitudes

Receiving Beams 17:

Question	Response
Beam ID	L12
Receive Beam Frequency	1610.0 MHz -1618.725 MHz
Beam Type	Fixed
Polarization	LHCP
Peak Gain	dBi
Antenna Pointing Error	0.0 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
G/T at Max. Gain Point	-7.16 dB/K
Min. Saturation Flux Density	-999.0 dBW/m2
Max. Saturation Flux Density	-151.0 dBW/m2

**Receiving
Beams 18:**

Co- or Cross Polar Mode	X
Service Area Description	Global Coverage between 73N and 73S latitudes
Question	Response
Beam ID	L13
Receive Beam Frequency	1610.0 MHz -1618.725 MHz
Beam Type	Fixed
Polarization	LHCP
Peak Gain	dBi
Antenna Pointing Error	0.0 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
G/T at Max. Gain Point	-6.94 dB/K
Min. Saturation Flux Density	-999.0 dBW/m2
Max. Saturation Flux Density	-151.0 dBW/m2
Co- or Cross Polar Mode	X
Service Area Description	Global Coverage between 73N and 73S latitudes

Receiving Channels (18)

Channel ID	Channel Bandwidth (MHz)	Center Frequency s (MHz)	Feeder Link, Service Link or TT&C
CSY3	16.5	5143.97	Feeder Link
CSY4	16.5	5163.35	Feeder Link
CSX8	16.5	5240.87	Feeder Link
CSX7	16.5	5221.49	Feeder Link
CSY2	16.5	5124.59	Feeder Link
CSY1	16.5	5105.21	Feeder Link
CSY8	16.5	5240.87	Feeder Link
CSX4	16.5	5163.35	Feeder Link
CSY7	16.5	5221.49	Feeder Link
CSY6	16.5	5201.11	Feeder Link
CSY5	16.5	5182.73	Feeder Link
CSX2	16.5	5124.59	Feeder Link
CSX1	16.5	5105.21	Feeder Link
L	8.725	1614.3625	Service Link
CMD	1.0	5091.5	TT&C
CSX6	16.5	5201.11	Feeder Link
CSX5	16.5	5182.73	Feeder Link
CSX3	16.5	5143.97	Feeder Link

Transmitting
Beams 1:

Question	Response
Beam ID	S03
Transmit Beam Frequency	2483.5 MHz -2500.0 MHz
Beam Type	Fixed
Polarization	LHCP
Peak Gain	dBi
Antenna Pointing Error	0.0 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-38.6 dBW/Hz
Max. Transmit EIRP	33.6 dBW
Co- or Cross Polar Mode	X
Service Area Description	Global Coverage between 73N and 73S latitudes

Max. Power Flux Density

	* 0° - 5°	* 5° - 10°	* 10° - 15°	* 15° - 20°	* 20° - 25°	* 25° - 90°
	(dBW/m ²	(dBW/m ²	(dBW/m ²	(dBW/m ²	(dBW/m ²	(dBW/m ²
* BW:	/BW):	/BW):	/BW):	/BW):	/BW):	/BW):
Hz	-126.0	-122.7	-119.5	-116.2	-113.0	-113.0

Transmitting
Beams 2:

Question	Response
Beam ID	S04
Transmit Beam Frequency	2483.5 MHz -2500.0 MHz
Beam Type	Fixed

Polarization	LHCP
Peak Gain	dBi
Antenna Pointing Error	0.0 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-38.6 dBW/Hz
Max. Transmit EIRP	33.6 dBW
Co- or Cross Polar Mode	X
Service Area Description	Global Coverage between 73N and 73S latitudes

Max. Power Flux Density

	* 0° - 5°	* 5° - 10°	* 10° - 15°	* 15° - 20°	* 20° - 25°	* 25° - 90°
	(dBW/m ²	(dBW/m ²	(dBW/m ²	(dBW/m ²	(dBW/m ²	(dBW/m ²
	/BW):	/BW):	/BW):	/BW):	/BW):	/BW):
Hz	-126.0	-122.7	-119.5	-116.2	-113.0	-113.0

Transmitting Beams 3:

Question	Response
Beam ID	S05
Transmit Beam Frequency	2483.5 MHz -2500.0 MHz
Beam Type	Fixed
Polarization	LHCP
Peak Gain	dBi
Antenna Pointing Error	0.0 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	

Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-38.6 dBW/Hz
Max. Transmit EIRP	33.6 dBW
Co- or Cross Polar Mode	X
Service Area Description	Global Coverage between 73N and 73S latitudes

Max. Power Flux Density

	* 0° - 5°	* 5° - 10°	* 10° - 15°	* 15° - 20°	* 20° - 25°	* 25° - 90°
	(dBW/m ²	(dBW/m ²	(dBW/m ²	(dBW/m ²	(dBW/m ²	(dBW/m ²
* BW:	/BW):	/BW):	/BW):	/BW):	/BW):	/BW):
Hz	-126.0	-122.7	-119.5	-116.2	-113.0	-113.0

Transmitting Beams 4:

Question	Response
Beam ID	C2RH
Transmit Beam Frequency	6875.0 MHz -7055.0 MHz
Beam Type	Fixed
Polarization	RHCP
Peak Gain	dBi
Antenna Pointing Error	0.0 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	No
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-51.5 dBW/Hz
Max. Transmit EIRP	17.3 dBW
Co- or Cross Polar Mode	X

Service Area Description	Global Coverage between 73N and 73S latitudes
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Max. Power Flux Density

	* 0° - 5°	* 5° - 10°	* 10° - 15°	* 15° - 20°	* 20° - 25°	* 25° - 90°
	(dBW/m ²	(dBW/m ²	(dBW/m ²	(dBW/m ²	(dBW/m ²	(dBW/m ²
* BW:	/BW):	/BW):	/BW):	/BW):	/BW):	/BW):
Hz	-126.0	-131.5	-129.0	-126.5	-124.0	-124.0

Transmitting Beams 5:

Question	Response
Beam ID	S01
Transmit Beam Frequency	2483.5 MHz -2500.0 MHz
Beam Type	Fixed
Polarization	LHCP
Peak Gain	dBi
Antenna Pointing Error	0.0 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-39.0 dBW/Hz
Max. Transmit EIRP	33.2 dBW
Co- or Cross Polar Mode	X
Service Area Description	Global Coverage between 73N and 73S latitudes

Max. Power Flux Density

Transmitting
Beams 6:

	* 0° - 5°	* 5° - 10°	* 10° - 15°	* 15° - 20°	* 20° - 25°	* 25° - 90°
*	(dbW/m ²	(dbW/m ²	(dbW/m ²	(dbW/m ²	(dbW/m ²	(dbW/m ²
BW:	/BW):	/BW):	/BW):	/BW):	/BW):	/BW):
Hz	-126.0	-122.7	-119.5	-116.2	-113.0	-113.0

Question	Response
Beam ID	S06
Transmit Beam Frequency	2483.5 MHz -2500.0 MHz
Beam Type	Fixed
Polarization	LHCP
Peak Gain	dBi
Antenna Pointing Error	0.0 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-38.6 dBW/Hz
Max. Transmit EIRP	33.6 dBW
Co- or Cross Polar Mode	X
Service Area Description	Global Coverage between 73N and 73S latitudes

Max. Power Flux Density

	* 0° - 5°	* 5° - 10°	* 10° - 15°	* 15° - 20°	* 20° - 25°	* 25° - 90°
*	(dbW/m ²	(dbW/m ²	(dbW/m ²	(dbW/m ²	(dbW/m ²	(dbW/m ²
BW:	/BW):	/BW):	/BW):	/BW):	/BW):	/BW):
Hz	-126.0	-122.7	-119.5	-116.2	-113.0	-113.0

Transmitting
Beams 7:

Question	Response
Beam ID	S07
Transmit Beam Frequency	2483.5 MHz -2500.0 MHz
Beam Type	Fixed
Polarization	LHCP
Peak Gain	dBi
Antenna Pointing Error	0.0 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-38.6 dBW/Hz
Max. Transmit EIRP	33.6 dBW
Co- or Cross Polar Mode	X
Service Area Description	Global Coverage between 73N and 73S latitudes

Max. Power Flux Density

	* 0° - 5°	* 5° - 10°	* 10° - 15°	* 15° - 20°	* 20° - 25°	* 25° - 90°
*	(dBW/m ²	(dBW/m ²	(dBW/m ²	(dBW/m ²	(dBW/m ²	(dBW/m ²
BW:	/BW):	/BW):	/BW):	/BW):	/BW):	/BW):
Hz	-126.0	-122.7	-119.5	-116.2	-113.0	-113.0

Transmitting
Beams 8:

Question	Response
Beam ID	S08
Transmit Beam Frequency	2483.5 MHz -2500.0 MHz
Beam Type	Fixed
Polarization	LHCP

Peak Gain	dBi
Antenna Pointing Error	0.0 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-36.7 dBW/Hz
Max. Transmit EIRP	35.5 dBW
Co- or Cross Polar Mode	X
Service Area Description	Global Coverage between 73N and 73S latitudes

Max. Power Flux Density

	* 0° - 5°	* 5° - 10°	* 10° - 15°	* 15° - 20°	* 20° - 25°	* 25° - 90°
	(dBW/m ²	(dBW/m ²	(dBW/m ²	(dBW/m ²	(dBW/m ²	(dBW/m ²
* BW:	/BW):	/BW):	/BW):	/BW):	/BW):	/BW):
Hz	-126.0	-122.7	-119.5	-116.2	-113.0	-113.0

Transmitting Beams 9:

Question	Response
Beam ID	S09
Transmit Beam Frequency	2483.5 MHz -2500.0 MHz
Beam Type	Fixed
Polarization	LHCP
Peak Gain	dBi
Antenna Pointing Error	0.0 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	

Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-36.7 dBW/Hz
Max. Transmit EIRP	35.5 dBW
Co- or Cross Polar Mode	X
Service Area Description	Global Coverage between 73N and 73S latitudes

Max. Power Flux Density

	* 0° - 5°	* 5° - 10°	* 10° - 15°	* 15° - 20°	* 20° - 25°	* 25° - 90°
	(dBW/m ²	(dBW/m ²	(dBW/m ²	(dBW/m ²	(dBW/m ²	(dBW/m ²
* BW:	/BW):	/BW):	/BW):	/BW):	/BW):	/BW):
Hz	-126.0	-122.7	-119.5	-116.2	-113.0	-113.0

Transmitting Beams 10:

Question	Response
Beam ID	S12
Transmit Beam Frequency	2483.5 MHz -2500.0 MHz
Beam Type	Fixed
Polarization	LHCP
Peak Gain	dBi
Antenna Pointing Error	0.0 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-36.7 dBW/Hz
Max. Transmit EIRP	35.5 dBW
Co- or Cross Polar Mode	X

Service Area Description	Global Coverage between 73N and 73S latitudes
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Max. Power Flux Density

	* 0° - 5°	* 5° - 10°	* 10° - 15°	* 15° - 20°	* 20° - 25°	* 25° - 90°
	(dbW/m ²	(dbW/m ²	(dbW/m ²	(dbW/m ²	(dbW/m ²	(dbW/m ²
* BW:	/BW):	/BW):	/BW):	/BW):	/BW):	/BW):
Hz	-126.0	-122.7	-119.5	-116.2	-113.0	-113.0

Transmitting Beams 11:

Question	Response
Beam ID	S02
Transmit Beam Frequency	2483.5 MHz -2500.0 MHz
Beam Type	Fixed
Polarization	LHCP
Peak Gain	dBi
Antenna Pointing Error	0.0 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-38.6 dBW/Hz
Max. Transmit EIRP	33.6 dBW
Co- or Cross Polar Mode	X
Service Area Description	Global Coverage between 73N and 73S latitudes

Max. Power Flux Density

Transmitting
Beams 12:

	* 0° - 5°	* 5° - 10°	* 10° - 15°	* 15° - 20°	* 20° - 25°	* 25° - 90°
*	(dbW/m ²	(dbW/m ²	(dbW/m ²	(dbW/m ²	(dbW/m ²	(dbW/m ²
BW:	/BW):	/BW):	/BW):	/BW):	/BW):	/BW):
Hz	-126.0	-122.7	-119.5	-116.2	-113.0	-113.0

Question	Response
Beam ID	C2LH
Transmit Beam Frequency	6875.0 MHz -7055.0 MHz
Beam Type	Fixed
Polarization	LHCP
Peak Gain	dBi
Antenna Pointing Error	0.0 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	No
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-51.5 dBW/Hz
Max. Transmit EIRP	17.3 dBW
Co- or Cross Polar Mode	X
Service Area Description	Global Coverage between 73N and 73S latitudes

Max. Power Flux Density

	* 0° - 5°	* 5° - 10°	* 10° - 15°	* 15° - 20°	* 20° - 25°	* 25° - 90°
*	(dbW/m ²	(dbW/m ²	(dbW/m ²	(dbW/m ²	(dbW/m ²	(dbW/m ²
BW:	/BW):	/BW):	/BW):	/BW):	/BW):	/BW):
Hz	-134.0	-131.5	-129.0	-126.5	-124.0	-124.0

Transmitting
Beams 13:

Question	Response
Beam ID	S10
Transmit Beam Frequency	2483.5 MHz -2500.0 MHz
Beam Type	Fixed
Polarization	LHCP
Peak Gain	dBi
Antenna Pointing Error	0.0 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-36.7 dBW/Hz
Max. Transmit EIRP	35.5 dBW
Co- or Cross Polar Mode	X
Service Area Description	Global Coverage between 73N and 73S latitudes

Max. Power Flux Density

	* 0° - 5°	* 5° - 10°	* 10° - 15°	* 15° - 20°	* 20° - 25°	* 25° - 90°
*	(dBW/m ²	(dBW/m ²	(dBW/m ²	(dBW/m ²	(dBW/m ²	(dBW/m ²
BW:	/BW):	/BW):	/BW):	/BW):	/BW):	/BW):
Hz	-126.0	-122.7	-119.5	-116.2	-113.0	-113.0

Transmitting
Beams 14:

Question	Response
Beam ID	S11
Transmit Beam Frequency	2483.5 MHz -2500.0 MHz
Beam Type	Fixed
Polarization	LHCP

Peak Gain	dBi
Antenna Pointing Error	0.0 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-36.6 dBW/Hz
Max. Transmit EIRP	35.6 dBW
Co- or Cross Polar Mode	X
Service Area Description	Global Coverage between 73N and 73S latitudes

Max. Power Flux Density

	* 0° - 5°	* 5° - 10°	* 10° - 15°	* 15° - 20°	* 20° - 25°	* 25° - 90°
	(dBW/m ²	(dBW/m ²	(dBW/m ²	(dBW/m ²	(dBW/m ²	(dBW/m ²
* BW:	/BW):	/BW):	/BW):	/BW):	/BW):	/BW):
Hz	-126.0	-122.7	-119.5	-116.2	-113.0	-113.0

Transmitting Beams 15:

Question	Response
Beam ID	S13
Transmit Beam Frequency	2483.5 MHz -2500.0 MHz
Beam Type	Fixed
Polarization	LHCP
Peak Gain	dBi
Antenna Pointing Error	0.0 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	

Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-36.7 dBW/Hz
Max. Transmit EIRP	35.5 dBW
Co- or Cross Polar Mode	X
Service Area Description	Global Coverage between 73N and 73S latitudes

Max. Power Flux Density

	* 0° - 5°	* 5° - 10°	* 10° - 15°	* 15° - 20°	* 20° - 25°	* 25° - 90°
	(dBW/m ²	(dBW/m ²	(dBW/m ²	(dBW/m ²	(dBW/m ²	(dBW/m ²
* BW:	/BW):	/BW):	/BW):	/BW):	/BW):	/BW):
Hz	-126.0	-122.7	-119.5	-116.2	-113.0	-113.0

Transmitting Beams 16:

Question	Response
Beam ID	S14
Transmit Beam Frequency	2483.5 MHz -2500.0 MHz
Beam Type	Fixed
Polarization	LHCP
Peak Gain	dBi
Antenna Pointing Error	0.0 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-36.7 dBW/Hz
Max. Transmit EIRP	35.5 dBW
Co- or Cross Polar Mode	X

Service Area Description	Global Coverage between 73N and 73S latitudes
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Max. Power Flux Density

	* 0° - 5°	* 5° - 10°	* 10° - 15°	* 15° - 20°	* 20° - 25°	* 25° - 90°
	(dbW/m ² /BW):	(dbW/m ² /BW):	(dbW/m ² /BW):	(dbW/m ² /BW):	(dbW/m ² /BW):	(dbW/m ² /BW):
Hz	-126.0	-122.7	-119.5	-116.2	-113.0	-113.0

Transmitting Beams 17:

Question	Response
Beam ID	S15
Transmit Beam Frequency	2483.5 MHz -2500.0 MHz
Beam Type	Fixed
Polarization	LHCP
Peak Gain	dBi
Antenna Pointing Error	0.0 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-36.7 dBW/Hz
Max. Transmit EIRP	35.5 dBW
Co- or Cross Polar Mode	X
Service Area Description	Global Coverage between 73N and 73S latitudes

Max. Power Flux Density

Transmitting
Beams 18:

	* 0° - 5°	* 5° - 10°	* 10° - 15°	* 15° - 20°	* 20° - 25°	* 25° - 90°
*	(dbW/m ²	(dbW/m ²	(dbW/m ²	(dbW/m ²	(dbW/m ²	(dbW/m ²
BW:	/BW):	/BW):	/BW):	/BW):	/BW):	/BW):
Hz	-126.0	-122.7	-119.5	-116.2	-113.0	-113.0

Question	Response
Beam ID	S16
Transmit Beam Frequency	2483.5 MHz -2500.0 MHz
Beam Type	Fixed
Polarization	LHCP
Peak Gain	dBi
Antenna Pointing Error	0.0 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-36.7 dBW/Hz
Max. Transmit EIRP	35.5 dBW
Co- or Cross Polar Mode	X
Service Area Description	Global Coverage between 73N and 73S latitudes

Max. Power Flux Density

	* 0° - 5°	* 5° - 10°	* 10° - 15°	* 15° - 20°	* 20° - 25°	* 25° - 90°
*	(dbW/m ²	(dbW/m ²	(dbW/m ²	(dbW/m ²	(dbW/m ²	(dbW/m ²
BW:	/BW):	/BW):	/BW):	/BW):	/BW):	/BW):
Hz	-126.0	-122.7	-119.5	-116.2	-113.0	-113.0

**Transmitting
Channels (18)**

Channel ID	Channel Bandwidth (MHz)	Center Frequency s (MHz)	Feeder Link, Service Link or TT&C
LCX1	16.5	6908.99	Feeder Link
S	16.5	2491.75	Service Link
LCY7	16.5	7025.27	Feeder Link
LCY6	16.5	7005.89	Feeder Link
LCY5	16.5	6986.51	Feeder Link
LCY4	16.5	6967.13	Feeder Link
LCY3	16.5	6947.75	Feeder Link
LCY2	16.5	6928.37	Feeder Link
LCY1	16.5	6908.99	Feeder Link
LCX7	16.5	7025.27	Feeder Link
LCX6	16.5	7005.89	Feeder Link
LCX4	16.5	6967.13	Feeder Link
LCX3	16.5	6947.75	Feeder Link
LCX2	16.5	6928.37	Feeder Link
LCX5	16.5	6986.51	Feeder Link
LCY8	16.5	7044.65	Feeder Link
LCX8	16.5	7044.65	Feeder Link
TLM	3.2	6877.5	TT&C

Certification Questions

Question	Response
Are the applicable service area coverage requirements of 25.143(b)(2) (ii) and (iii), or 25.144(a)(3)(i), or 25.145 (c)(1) and (2), or 25.146(i)(1) and (2), or 25.148(c), or 25.225 met?	Yes
Are the applicable frequency tolerances of 25.202(e) and out-of-band emission limits of 25.202(f)(1),(2), and (3) met?	Yes
Are the cessation of emissions requirements of 25.207 met?	Yes
Are the applicable power-flux-density limits of 25.208 met, and is the appropriate technical showing provided within the application?	
For NGSO applications, are the applicable equivalent-power-flux-density limits of 25.208 met, and is the appropriate technical showing provided within the application?	Yes
Are the applicable full-frequency-reuse requirements of 25.210 met?	Yes
If the application is for a 17/24 GHz BSS space station, will it be operated at an offset location with full power and interference protection in accordance with 25.262(b)?	

Attachments

File Name	Beam	Field	Attachment Type	Description
<u>Attachment to schedule S - All_Beams.pdf</u>		NGSO Antenna Gain Data	PDF file (*.pdf)	NGSO Antenna Gain Data