Approved by OMB 3060-0678
Estimated Burden: up to 80 hours
April 2016

Federal Communications Commission

312 File Number: **SATMOD2022111400159**

Filing Description

Question	Response
Description	Intelsat 11 at 317E 43W License Extension and C band reflector repositioning

Satellite Information

Question	Response
Select Orbit Type	GSO
Space Station or Satellite Network Name	Intelsat 11
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 (5)

Nature of service	Description	Frequency Band(s)	Mode Type
Fixed-Satellite Service		10700.0 MHz -11450.0 MHz	Transmit
Fixed-Satellite Service		13750.0 MHz -14000.0 MHz	Receive
Fixed-Satellite Service		12750.0 MHz -13250.0 MHz	Receive
Fixed-Satellite Service		3700.0 MHz -4200.0 MHz	Transmit
Fixed-Satellite Service		5925.0 MHz -6425.0 MHz	Receive

Orbital Information For Geostationary Satellites

Section	Question	Response
Orbital Longitude Information	Orbital Longitude	43.0 degrees
	Hemisphere of Orbital Longitude	W
Longitudinal Tolerance or East /West Station-Keeping	Toward West	0.05 degrees
	Toward East	0.05 degrees
Inclination Excursion or North /South Station-Keeping Tolerance	Inclination Excursion or North /South Station-Keeping Tolerance	0.1 degrees
Antenna Axis Attitude Accuracy	Roll	0.1 degrees
	Pitch	0.1 degrees
	Yaw	0.0 degrees

Receiving Beams 1:

Question	Response
Beam ID	ACHU
Receive Beam Frequency	5925.0 MHz -6425.0 MHz
Beam Type	Steerable
Polarization	H
Peak Gain	31.08 dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.34 degrees
Polarization Switchable	Yes
Polarization Alignment Relative to the Equatorial Plane	0.0 degrees
G/T at Max. Gain Point	4.7 dB/K
Min. Saturation Flux Density	-109.3 dBW/m2
Max. Saturation Flux Density	-73.3 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	This Reflector has a RPM and covers North, South America and Europe

Receiving Beams 2:

Question	Response
Beam ID	ACVU
Receive Beam Frequency	5925.0 MHz -6425.0 MHz
Beam Type	Steerable
Polarization	V
Peak Gain	30.67 dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.03 degrees

Polarization Switchable	Yes
Polarization Alignment Relative to the Equatorial Plane	90.0 degrees
G/T at Max. Gain Point	4.2 dB/K
Min. Saturation Flux Density	-109.5 dBW/m2
Max. Saturation Flux Density	-73.5 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	This Reflector has a RPM and covers North, South America and Europe

Receiving Beams 3:

Question	Response
Beam ID	AKHU
Receive Beam Frequency	12750.0 MHz -13250.0 MHz
Beam Type	Steerable
Polarization	H
Peak Gain	37.73 dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.34 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	0.0 degrees
G/T at Max. Gain Point	3.5 dB/K
Min. Saturation Flux Density	-109.4 dBW/m2
Max. Saturation Flux Density	-73.4 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	This Reflector has a RPM and covers North, South America and Europe

Receiving Beams 4:

Question	Response
Beam ID	A1HU
Receive Beam Frequency	13750.0 MHz -14000.0 MHz
Beam Type	Steerable
Polarization	H
Peak Gain	29.66 dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.34 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	0.0 degrees
G/T at Max. Gain Point	3.5 dB/K
Min. Saturation Flux Density	-109.4 dBW/m2
Max. Saturation Flux Density	-73.4 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	This Reflector has a RPM and covers North, South America and Europe

Receiving Beams 5:

Question	Response
Beam ID	AKVU
Receive Beam Frequency	12750.0 MHz -13250.0 MHz
Beam Type	Steerable
Polarization	V
Peak Gain	29.94 dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.03 degrees
Polarization Switchable	

Polarization Alignment Relative to the Equatorial Plane	90.0 degrees
G/T at Max. Gain Point	3.8 dB/K
Min. Saturation Flux Density	-109.1 dBW/m2
Max. Saturation Flux Density	-73.1 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	This Reflector has a RPM and covers North, South America and Europe

Receiving Beams 6:

Question	Response
Beam ID	A1VU
Receive Beam Frequency	13750.0 MHz -14000.0 MHz
Beam Type	Steerable
Polarization	V
Peak Gain	29.94 dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.34 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	0.0 degrees
G/T at Max. Gain Point	3.8 dB/K
Min. Saturation Flux Density	-109.1 dBW/m2
Max. Saturation Flux Density	-73.1 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	This Reflector has a RPM and covers North, South America and Europe

Receiving Beams 7:

Question	Response

Beam ID	CMD1
Receive Beam Frequency	13246.0 MHz -13247.0 MHz
Beam Type	Fixed
Polarization	H
Peak Gain	dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.34 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	0.0 degrees
G/T at Max. Gain Point	-34.3 dB/K
Min. Saturation Flux Density	-80.0 dBW/m2
Max. Saturation Flux Density	-79.0 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	CM1 Global

Receiving Beams 8:

Question	Response
Beam ID	CMD2
Receive Beam Frequency	13246.0 MHz -13247.0 MHz
Beam Type	Fixed
Polarization	LHCP
Peak Gain	dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.34 degrees
Polarization Switchable	

Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
G/T at Max. Gain Point	-34.4 dB/K
Min. Saturation Flux Density	-80.0 dBW/m2
Max. Saturation Flux Density	-79.0 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	CM1 LHCP Global

Receiving Beams 9:

Question	Response
Beam ID	CMD4
Receive Beam Frequency	13995.0 MHz -13996.0 MHz
Beam Type	Fixed
Polarization	V
Peak Gain	dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.34 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	90.0 degrees
G/T at Max. Gain Point	-34.3 dB/K
Min. Saturation Flux Density	-80.0 dBW/m2
Max. Saturation Flux Density	-79.0 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	CM2 Vertical Global

Receiving Beams 10:

Question	Response

Beam ID	CMD5
Receive Beam Frequency	13995.0 MHz -13996.0 MHz
Beam Type	Fixed
Polarization	LHCP
Peak Gain	dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.34 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
G/T at Max. Gain Point	-34.4 dB/K
Min. Saturation Flux Density	-80.0 dBW/m2
Max. Saturation Flux Density	-79.0 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	CM2 LHCP Global

Receiving Channels (19)

Channel ID	Channel Bandwidth (MHz)	Center Frequency s (MHz)	Feeder Link, Service Link or TT&C
KU03	36.0	12932.0	Service Link
KU04	36.0	13022.0	Service Link
KU05	36.0	13102.0	Service Link
CMD1	1.0	13246.5	TT&C
CU03	54.0	6075.0	Service Link
CU02	54.0	6015.0	Service Link
CU01	54.0	5955.0	Service Link
CU04	64.0	6140.0	Service Link
CU05	54.0	6205.0	Service Link
CU06	54.0	6265.0	Service Link
CU07	54.0	6325.0	Service Link
CU08	56.0	6390.0	Service Link
KU01	36.0	12772.0	Feeder Link
KU02	36.0	12852.0	Service Link
CMD4	1.0	13995.5	TT&C
KU09	36.0	13934.0	Service Link
KU08	36.0	13854.0	Service Link
KU07	36.0	13774.0	Service Link
KU06	36.0	13182.0	Service Link

Transmitting Beams 1:

Question	Response
Beam ID	TLME
Transmit Beam Frequency	11448.825 MHz -11449.175 MHz
Beam Type	Fixed
Polarization	RHCP
Peak Gain	dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.34 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-41.9 dBW/Hz
Max. Transmit EIRP	13.5 dBW
Co- or Cross Polar Mode	C
Service Area Description	TM2 RHCP Global

Max. Power Flux Density

* BW:	* 0° - 5° (dbW/m^2 /BW):	* 5° - 10° (dbW/m^2 /BW):	* 10° - 15° (dbW/m^2 /BW):	* 15° - 20° (dbW/m^2 /BW):	* 20° - 25° (dbW/m^2 /BW):	* 25° - 90° (dbW/m^2 /BW):
4.0 kHz	-169.2	-169.1	-169.0	-168.9	-168.7	-168.0

Transmitting Beams 2:

Question	Response
Beam ID	ULP1
Transmit Beam Frequency	3700.987 MHz -3701.012 MHz

Beam Type	Fixed
Polarization	H
Peak Gain	dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.34 degrees
Polarization Switchable	Yes
Polarization Alignment Relative to the Equatorial Plane	0.0 degrees
Max. Transmit EIRP Density	-35.0 dBW/Hz
Max. Transmit EIRP	9.0 dBW
Co- or Cross Polar Mode	C
Service Area Description	ULPC1 Horizontal Global

Max. Power Flux Density

* BW:	* 0° - 5° (dbW/m^2 /BW):	* 5° - 10° (dbW/m^2 /BW):	* 10° - 15° (dbW/m^2 /BW):	* 15° - 20° (dbW/m^2 /BW):	* 20° - 25° (dbW/m^2 /BW):	* 25° - 90° (dbW/m^2 /BW):
4.0 kHz	-162.2	-162.1	-162.0	-161.9	-161.8	-161.0

Transmitting Beams 3:

Question	Response
Beam ID	ULP2
Transmit Beam Frequency	4199.487 MHz -4199.512 MHz
Beam Type	Fixed
Polarization	V
Peak Gain	dBi
Antenna Pointing Error	0.19 degrees

Antenna Rotational Error	0.34 degrees
Polarization Switchable	Yes
Polarization Alignment Relative to the Equatorial Plane	90.0 degrees
Max. Transmit EIRP Density	-35.0 dBW/Hz
Max. Transmit EIRP	9.0 dBW
Co- or Cross Polar Mode	C
Service Area Description	ULPC2 Vertical global

Max. Power Flux Density

* BW:	* 0° - 5° (dbW/m^2 /BW):	* 5° - 10° (dbW/m^2 /BW):	* 10° - 15° (dbW/m^2 /BW):	* 15° - 20° (dbW/m^2 /BW):	* 20° - 25° (dbW/m^2 /BW):	* 25° - 90° (dbW/m^2 /BW):
4.0 kHz	-162.2	-162.1	-162.0	-161.9	-161.8	-161.0

Transmitting Beams 4:

Question	Response
Beam ID	ACHD
Transmit Beam Frequency	3700.0 MHz -4200.0 MHz
Beam Type	Steerable
Polarization	H
Peak Gain	28.15 dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.34 degrees
Polarization Switchable	Yes
Polarization Alignment Relative to the Equatorial Plane	0.0 degrees
Max. Transmit EIRP Density	-33.8 dBW/Hz

Max. Transmit EIRP	43.5 dBW
Co- or Cross Polar Mode	C
Service Area Description	This Reflector has a RPM and covers North, South America and Europe

Max. Power Flux Density

* BW:	* 0° - 5° (dbW/m^2 /BW):	* 5° - 10° (dbW/m^2 /BW):	* 10° - 15° (dbW/m^2 /BW):	* 15° - 20° (dbW/m^2 /BW):	* 20° - 25° (dbW/m^2 /BW):	* 25° - 90° (dbW/m^2 /BW):
4.0 kHz	-161.1	-161.0	-160.8	-160.7	-160.6	-159.9

Transmitting Beams 5:

Question	Response
Beam ID	ACVD
Transmit Beam Frequency	3700.0 MHz -4200.0 MHz
Beam Type	Steerable
Polarization	V
Peak Gain	28.12 dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.34 degrees
Polarization Switchable	Yes
Polarization Alignment Relative to the Equatorial Plane	90.0 degrees
Max. Transmit EIRP Density	-33.9 dBW/Hz
Max. Transmit EIRP	43.4 dBW
Co- or Cross Polar Mode	C
Service Area Description	This Reflector has a RPM and covers North, South America and Europe

Max. Power Flux Density

* BW:	* 0° - 5° (dbW/m^2 /BW):	* 5° - 10° (dbW/m^2 /BW):	* 10° - 15° (dbW/m^2 /BW):	* 15° - 20° (dbW/m^2 /BW):	* 20° - 25° (dbW/m^2 /BW):	* 25° - 90° (dbW/m^2 /BW):
4.0 kHz	-161.2	-161.1	-160.9	-160.8	-160.7	-160.0

Transmitting Beams 6:

Question	Response
Beam ID	BKHD
Transmit Beam Frequency	10700.0 MHz -11450.0 MHz
Beam Type	Steerable
Polarization	H
Peak Gain	37.73 dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.34 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	0.0 degrees
Max. Transmit EIRP Density	-19.3 dBW/Hz
Max. Transmit EIRP	56.3 dBW
Co- or Cross Polar Mode	C
Service Area Description	this reflector has RPM and covers Brasil

Max. Power Flux Density

* BW:	* 0° - 5° (dbW/m^2 /BW):	* 5° - 10° (dbW/m^2 /BW):	* 10° - 15° (dbW/m^2 /BW):	* 15° - 20° (dbW/m^2 /BW):	* 20° - 25° (dbW/m^2 /BW):	* 25° - 90° (dbW/m^2 /BW):

4.0 kHz	-146.5	-146.4	-146.3	-146.2	-146.1	-145.3

Transmitting Beams 7:

Question	Response
Beam ID	BKVD
Transmit Beam Frequency	10700.0 MHz -11450.0 MHz
Beam Type	Steerable
Polarization	V
Peak Gain	37.79 dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.34 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	90.0 degrees
Max. Transmit EIRP Density	-19.1 dBW/Hz
Max. Transmit EIRP	56.5 dBW
Co- or Cross Polar Mode	C
Service Area Description	this reflector has a RPM and covers Brasil

Max. Power Flux Density

* BW:	* 0° - 5° (dbW/m^2 /BW):	* 5° - 10° (dbW/m^2 /BW):	* 10° - 15° (dbW/m^2 /BW):	* 15° - 20° (dbW/m^2 /BW):	* 20° - 25° (dbW/m^2 /BW):	* 25° - 90° (dbW/m^2 /BW):
4.0 kHz	-146.3	-146.2	-146.1	-146.0	-145.9	-145.1

Transmitting Beams 8:

Question	Response

Beam ID	TLMA
Transmit Beam Frequency	11447.825 MHz -11448.175 MHz
Beam Type	Fixed
Polarization	H
Peak Gain	dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.34 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	0.0 degrees
Max. Transmit EIRP Density	-41.9 dBW/Hz
Max. Transmit EIRP	13.5 dBW
Co- or Cross Polar Mode	C
Service Area Description	TM1 H Global

Max. Power Flux Density

* BW:	* 0° - 5° (dbW/m^2 /BW):	* 5° - 10° (dbW/m^2 /BW):	* 10° - 15° (dbW/m^2 /BW):	* 15° - 20° (dbW/m^2 /BW):	* 20° - 25° (dbW/m^2 /BW):	* 25° - 90° (dbW/m^2 /BW):
4.0 kHz	-169.2	-169.1	-169.0	-168.9	-168.7	-168.0

Transmitting Beams 9:

Question	Response
Beam ID	TLMB
Transmit Beam Frequency	11447.825 MHz -11448.17 MHz
Beam Type	Fixed
Polarization	RHCP

Peak Gain	dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.34 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-41.9 dBW/Hz
Max. Transmit EIRP	13.5 dBW
Co- or Cross Polar Mode	C
Service Area Description	TM1 RHCP Global

Max. Power Flux Density

* BW:	* 0° - 5° (dbW/m^2 /BW):	* 5° - 10° (dbW/m^2 /BW):	* 10° - 15° (dbW/m^2 /BW):	* 15° - 20° (dbW/m^2 /BW):	* 20° - 25° (dbW/m^2 /BW):	* 25° - 90° (dbW/m^2 /BW):
4.0 kHz	-169.2	-169.1	-169.0	-168.9	-168.7	-168.0

Transmitting Beams 10:

Question	Response
Beam ID	TLMD
Transmit Beam Frequency	11448.825 MHz -11449.175 MHz
Beam Type	Fixed
Polarization	H
Peak Gain	dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.34 degrees
Polarization Switchable	

Polarization Alignment Relative to the Equatorial Plane	0.0 degrees
Max. Transmit EIRP Density	-41.9 dBW/Hz
Max. Transmit EIRP	13.5 dBW
Co- or Cross Polar Mode	C
Service Area Description	TM2 Horizontal Global

Max. Power Flux Density

* BW:	* 0° - 5° (dbW/m^2 /BW):	* 5° - 10° (dbW/m^2 /BW):	* 10° - 15° (dbW/m^2 /BW):	* 15° - 20° (dbW/m^2 /BW):	* 20° - 25° (dbW/m^2 /BW):	* 25° - 90° (dbW/m^2 /BW):
4.0 kHz	-169.2	-169.1	-169.0	-168.9	-168.7	-168.0

Transmitting Channels (21)

Channel ID	Channel Bandwidth (MHz)	Center Frequency s (MHz)	Feeder Link, Service Link or TT&C
UPC1	0.025	3701.0	TT&C
TLM2	0.35	11449.0	TT&C
TLM1	0.35	11448.0	TT&C
UPC2	0.025	4199.5	TT&C
CD05	54.0	3980.0	Service Link
CD06	54.0	4040.0	Service Link
CD07	54.0	4100.0	Service Link
KD07	36.0	11222.0	Service Link
KD06	36.0	11130.0	Service Link
KD05	36.0	11050.0	Service Link
KD04	36.0	10970.0	Service Link
KD03	36.0	10882.0	Service Link
KD02	36.0	10802.0	Service Link
KD01	36.0	10722.0	Service Link
CD08	64.0	4165.0	Service Link
KD09	36.0	11382.0	Service Link
KD08	36.0	11302.0	Service Link
CD04	64.0	3915.0	Service Link
CD03	54.0	3850.0	Service Link
CD02	54.0	3790.0	Service Link
CD01	54.0	3730.0	Service Link

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?	N/A
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?	Yes
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?	N/A
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
IS-11.mdb		GSO Antenna Gain Contour Data	GIMS file (*.mdb)	