



312 File Number: **SATMOD2017031600051**

Filing Description

Question	Response
Description	This Schedule S is submitted in support of the modification application of SES Americom, Inc. seeking authority for the relocate AMC-6 to 85 W.L.

**Satellite
Information**

Question	Response
Select Orbit Type	GSO
Space Station or Satellite Network Name	AMC-6
Estimated Lifetime of Satellite(s) From Date of Launch	20 Years
Will the space station(s) operate on a Common Carrier basis?	No

Operating Frequency Bands (8)

Nature of service	Description	Frequency Band (s)	Mode Type
Direct-to-Home in the Fixed-Satellite Service		11450.0 MHz -12200.0 MHz	Transmit
Direct-to-Home in the Fixed-Satellite Service		13750.0 MHz -14500.0 MHz	Receive
Fixed-Satellite Service		11450.0 MHz -12200.0 MHz	Transmit
Fixed-Satellite Service		13750.0 MHz -14500.0 MHz	Receive
Direct-to-Home in the Fixed-Satellite Service		3700.0 MHz -4200.0 MHz	Transmit
Direct-to-Home in the Fixed-Satellite Service		5925.0 MHz -6425.0 MHz	Receive
Fixed-Satellite Service		5925.0 MHz -6425.0 MHz	Receive
Fixed-Satellite Service		3700.0 MHz -4200.0 MHz	Transmit

Orbital Information For Geostationary Satellites

Section	Question	Response
Orbital Longitude Information	Orbital Longitude	85.0 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	0.14 degrees
	Pitch	0.11 degrees
	Yaw	0.33 degrees

Receiving Beams 1:

Question	Response
Beam ID	STRV
Receive Beam Frequency	13750.0 MHz -14500.0 MHz
Beam Type	Steerable
Polarization	V
Peak Gain	33.5 dBi
Antenna Pointing Error	0.15 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	90.0 degrees
G/T at Max. Gain Point	4.53 dB/K
Min. Saturation Flux Density	-100.3 dBW/m ²
Max. Saturation Flux Density	-88.0 dBW/m ²
Co- or Cross Polar Mode	C
Service Area Description	CONUS and parts of Canada and Mexico

Receiving Beams 2:

Question	Response
Beam ID	STRH
Receive Beam Frequency	13750.0 MHz -14500.0 MHz
Beam Type	Steerable
Polarization	H
Peak Gain	33.5 dBi
Antenna Pointing Error	0.15 degrees
Antenna Rotational Error	0.0 degrees

Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	0.0 degrees
G/T at Max. Gain Point	3.72 dB/K
Min. Saturation Flux Density	-100.3 dBW/m2
Max. Saturation Flux Density	-88.0 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	CONUS and parts of Canada and Mexico

Receiving Beams 3:

Question	Response
Beam ID	NARH
Receive Beam Frequency	13750.0 MHz -14500.0 MHz
Beam Type	Fixed
Polarization	H
Peak Gain	33.8 dBi
Antenna Pointing Error	0.15 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	0.0 degrees
G/T at Max. Gain Point	7.08 dB/K
Min. Saturation Flux Density	-100.0 dBW/m2
Max. Saturation Flux Density	-78.5 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	CONUS, Hawaii and parts of Alaska, Canada and Mexico

Receiving Beams 4:

Question	Response
Beam ID	NARV
Receive Beam Frequency	13750.0 MHz -14500.0 MHz
Beam Type	Fixed
Polarization	V
Peak Gain	33.8 dBi
Antenna Pointing Error	0.15 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	90.0 degrees
G/T at Max. Gain Point	6.11 dB/K
Min. Saturation Flux Density	-100.0 dBW/m ²
Max. Saturation Flux Density	-78.5 dBW/m ²
Co- or Cross Polar Mode	C
Service Area Description	CONUS, Hawaii and parts of Alaska, Canada and Mexico

Receiving Beams 5:

Question	Response
Beam ID	CRH
Receive Beam Frequency	5925.0 MHz -6425.0 MHz
Beam Type	Fixed
Polarization	H
Peak Gain	33.0 dBi
Antenna Pointing Error	0.1 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	Yes

Polarization Alignment Relative to the Equatorial Plane	0.0 degrees
G/T at Max. Gain Point	5.37 dB/K
Min. Saturation Flux Density	-100.0 dBW/m2
Max. Saturation Flux Density	-82.0 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	CONUS, Puerto Rico and parts of Alaska, Canada and Mexico

Receiving Beams 6:

Question	Response
Beam ID	CRV
Receive Beam Frequency	5925.0 MHz -6425.0 MHz
Beam Type	Fixed
Polarization	V
Peak Gain	33.0 dBi
Antenna Pointing Error	0.1 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	Yes
Polarization Alignment Relative to the Equatorial Plane	90.0 degrees
G/T at Max. Gain Point	5.51 dB/K
Min. Saturation Flux Density	-100.0 dBW/m2
Max. Saturation Flux Density	-82.0 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	CONUS, Puerto Rico and parts of Alaska, Canada and Mexico

Receiving Beams 7:

Question	Response
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Beam ID	CMD
Receive Beam Frequency	6422.5 MHz -6424.5 MHz
Beam Type	Fixed
Polarization	H
Peak Gain	11.0 dBi
Antenna Pointing Error	0.1 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	No
Polarization Alignment Relative to the Equatorial Plane	0.0 degrees
G/T at Max. Gain Point	-13.6 dB/K
Min. Saturation Flux Density	-92.0 dBW/m ²
Max. Saturation Flux Density	-80.0 dBW/m ²
Co- or Cross Polar Mode	C
Service Area Description	Global

Receiving Channels (51)

Channel ID	Channel Bandwidth (MHz)	Center Frequency s (MHz)	Feeder Link, Service Link or TT&C
K2	36.0	14040.0	Service Link
K1	36.0	14020.0	Service Link
K10	36.0	14200.0	Service Link
K20	36.0	14400.0	Service Link
K19	36.0	14380.0	Service Link
K18	36.0	14360.0	Service Link
K9	36.0	14180.0	Service Link
K5	36.0	14100.0	Service Link
K4	36.0	14080.0	Service Link
K8	36.0	14160.0	Service Link
K7	36.0	14140.0	Service Link
K12	36.0	14240.0	Service Link
K11	36.0	14220.0	Service Link
K17	36.0	14340.0	Service Link
C9	36.0	6105.0	Service Link
C8	36.0	6085.0	Service Link
C7	36.0	6065.0	Service Link
C6	36.0	6045.0	Service Link
C5	36.0	6025.0	Service Link
C4	36.0	6005.0	Service Link
C3	36.0	5985.0	Service Link
C24	36.0	6405.0	Service Link
C20	36.0	6325.0	Service Link
C2	36.0	5965.0	Service Link

C19	36.0	6305.0	Service Link
C18	36.0	6285.0	Service Link
C17	36.0	6265.0	Service Link
C16	36.0	6245.0	Service Link
C15	36.0	6225.0	Service Link
C14	36.0	6205.0	Service Link
C13	36.0	6185.0	Service Link
C12	36.0	6165.0	Service Link
TC1	0.8	6423.5	TT&C
K28	72.0	13955.0	Service Link
K27	72.0	13955.0	Service Link
K26	72.0	13875.0	Service Link
K25	72.0	13875.0	Service Link
K3	36.0	14060.0	Service Link
K16	36.0	14320.0	Service Link
K15	36.0	14300.0	Service Link
K14	36.0	14280.0	Service Link
K23	36.0	14460.0	Service Link
K22	36.0	14440.0	Service Link
K21	36.0	14420.0	Service Link
K6	36.0	14120.0	Service Link
C23	36.0	6385.0	Service Link
C22	36.0	6365.0	Service Link
C21	36.0	6345.0	Service Link
C11	36.0	6145.0	Service Link
C10	36.0	6125.0	Service Link

C1

36.0

5945.0

Service Link

Transmitting Beams 1:

Question	Response
Beam ID	CTV
Transmit Beam Frequency	3700.0 MHz -4200.0 MHz
Beam Type	Fixed
Polarization	V
Peak Gain	30.0 dBi
Antenna Pointing Error	0.1 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	Yes
Polarization Alignment Relative to the Equatorial Plane	90.0 degrees
Max. Transmit EIRP Density	-33.4 dBW/Hz
Max. Transmit EIRP	42.19 dBW
Co- or Cross Polar Mode	C
Service Area Description	CONUS, Puerto Rico and parts of Alaska, Canada and Mexico

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):
4.0 kHz	-161.4	-161.2	-161.0	-160.7	-160.4	-159.4

Transmitting Beams 2:

Question	Response
Beam ID	CTH
Transmit Beam Frequency	3700.0 MHz -4200.0 MHz

Beam Type	Fixed
Polarization	H
Peak Gain	30.0 dBi
Antenna Pointing Error	0.1 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	Yes
Polarization Alignment Relative to the Equatorial Plane	0.0 degrees
Max. Transmit EIRP Density	-33.6 dBW/Hz
Max. Transmit EIRP	41.94 dBW
Co- or Cross Polar Mode	C
Service Area Description	CONUS, Puerto Rico and parts of Alaska, Canada and Mexico

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):	(dBW/m ² /BW):
4.0 kHz	-162.5	-162.4	-162.2	-162.2	-161.9	-159.7

Transmitting Beams 3:

Question	Response
Beam ID	NATH
Transmit Beam Frequency	11450.0 MHz -12200.0 MHz
Beam Type	Fixed
Polarization	H
Peak Gain	33.5 dBi
Antenna Pointing Error	0.15 degrees

Antenna Rotational Error	0.0 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	0.0 degrees
Max. Transmit EIRP Density	-22.5 dBW/Hz
Max. Transmit EIRP	52.97 dBW
Co- or Cross Polar Mode	C
Service Area Description	CONUS, Hawaii and parts of Alaska, Canada and Mexico

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):
4.0 kHz	-152.3	-151.9	-151.3	-150.6	-149.8	-148.6

Transmitting Beams 4:

Question	Response
Beam ID	NATV
Transmit Beam Frequency	11450.0 MHz -12200.0 MHz
Beam Type	Fixed
Polarization	V
Peak Gain	33.5 dBi
Antenna Pointing Error	0.15 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	90.0 degrees
Max. Transmit EIRP Density	-22.7 dBW/Hz

Max. Transmit EIRP	52.9 dBW
Co- or Cross Polar Mode	C
Service Area Description	CONUS, Hawaii and parts of Alaska, Canada and Mexico

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):
4.0 kHz	-152.7	-152.5	-152.0	-151.6	-151.5	-148.7

Transmitting Beams 5:

Question	Response
Beam ID	STTH
Transmit Beam Frequency	11450.0 MHz -12200.0 MHz
Beam Type	Steerable
Polarization	H
Peak Gain	33.2 dBi
Antenna Pointing Error	0.15 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	0.0 degrees
Max. Transmit EIRP Density	-24.8 dBW/Hz
Max. Transmit EIRP	50.75 dBW
Co- or Cross Polar Mode	C
Service Area Description	CONUS and parts of Canada and Mexico

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):
4.0 kHz	-154.1	-153.8	-153.3	-153.0	-152.7	-150.4

Transmitting Beams 6:

Question	Response
Beam ID	STTV
Transmit Beam Frequency	11450.0 MHz -12200.0 MHz
Beam Type	Steerable
Polarization	V
Peak Gain	33.2 dBi
Antenna Pointing Error	0.15 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	90.0 degrees
Max. Transmit EIRP Density	-24.3 dBW/Hz
Max. Transmit EIRP	51.26 dBW
Co- or Cross Polar Mode	C
Service Area Description	CONUS and parts of Canada and Mexico

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):

4.0	-154.5	-154.2	-153.7	-153.2	-152.5	-150.9
kHz						

Transmitting Beams 7:

Question	Response
Beam ID	CTM
Transmit Beam Frequency	3700.0 MHz -4200.0 MHz
Beam Type	Fixed
Polarization	V
Peak Gain	11.25 dBi
Antenna Pointing Error	0.0 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	No
Polarization Alignment Relative to the Equatorial Plane	90.0 degrees
Max. Transmit EIRP Density	-53.0 dBW/Hz
Max. Transmit EIRP	7.6 dBW
Co- or Cross Polar Mode	C
Service Area Description	Horn Antenna for emergency operations telemetry

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):
4.0	-177.8	-177.7	-177.6	-177.4	-177.3	-176.6
kHz						

Transmitting Channels (56)

Channel ID	Channel Bandwidth (MHz)	Center Frequency s (MHz)	Feeder Link, Service Link or TT&C
TB2	0.275	12198.0	TT&C
TB1	0.275	11702.0	TT&C
C9	36.0	3880.0	Service Link
C8	36.0	3860.0	Service Link
C6	36.0	3820.0	Service Link
K3	36.0	11760.0	Service Link
K28	72.0	11655.0	Service Link
K2	36.0	11740.0	Service Link
K25	72.0	11575.0	Service Link
TM1	0.65	3700.5	TT&C
TM2	0.65	4199.5	TT&C
K9	36.0	11880.0	Service Link
K8	36.0	11860.0	Service Link
K5	36.0	11800.0	Service Link
K4	36.0	11780.0	Service Link
K23	36.0	12160.0	Service Link
K22	36.0	12140.0	Service Link
K21	36.0	12120.0	Service Link
C1	36.0	3720.0	Service Link
K24	36.0	12180.0	Service Link
K20	36.0	12100.0	Service Link
C7	36.0	3840.0	Service Link
K12	36.0	11940.0	Service Link
K11	36.0	11920.0	Service Link

C19	36.0	4080.0	Service Link
C18	36.0	4060.0	Service Link
C17	36.0	4040.0	Service Link
C16	36.0	4020.0	Service Link
C15	36.0	4000.0	Service Link
C14	36.0	3980.0	Service Link
K13	36.0	11960.0	Service Link
K7	36.0	11840.0	Service Link
K6	36.0	11820.0	Service Link
K27	72.0	11655.0	Service Link
K26	72.0	11575.0	Service Link
K10	36.0	11900.0	Service Link
K19	36.0	12080.0	Service Link
K18	36.0	12060.0	Service Link
C13	36.0	3960.0	Service Link
C12	36.0	3940.0	Service Link
C11	36.0	3920.0	Service Link
C10	36.0	3900.0	Service Link
K17	36.0	12040.0	Service Link
K16	36.0	12020.0	Service Link
K15	36.0	12000.0	Service Link
K14	36.0	11980.0	Service Link
K1	36.0	11720.0	Service Link
C5	36.0	3800.0	Service Link
C4	36.0	3780.0	Service Link
C3	36.0	3760.0	Service Link

C24	36.0	4180.0	Service Link
C23	36.0	4160.0	Service Link
C22	36.0	4140.0	Service Link
C21	36.0	4120.0	Service Link
C20	36.0	4100.0	Service Link
C2	36.0	3740.0	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
<u>13C_GT.gxt</u>	CRH	GSO Antenna Gain Contour Data	GXT file (*.gxt)	
<u>12C_GT.gxt</u>	CRV	GSO Antenna Gain Contour Data	GXT file (*.gxt)	
<u>12C_EIRP.gxt</u>	CTH	GSO Antenna Gain Contour Data	GXT file (*.gxt)	
<u>13C_EIRP.gxt</u>	CTV	GSO Antenna Gain Contour Data	GXT file (*.gxt)	
<u>13KN_GT.gxt</u>	NARH	GSO Antenna Gain Contour Data	GXT file (*.gxt)	
<u>12KN_GT.gxt</u>	NARV	GSO Antenna Gain Contour Data	GXT file (*.gxt)	
<u>12KN_EIRP.gxt</u>	NATH	GSO Antenna Gain Contour Data	GXT file (*.gxt)	
<u>13KN_EIRP.gxt</u>	NATV	GSO Antenna Gain Contour Data	GXT file (*.gxt)	
<u>13KS_GT.gxt</u>	STRH	GSO Antenna Gain Contour Data	GXT file (*.gxt)	
<u>12KS_GT.gxt</u>	STRV	GSO Antenna Gain Contour Data	GXT file (*.gxt)	
<u>13KS_EIRP.gxt</u>	STTH	GSO Antenna Gain Contour Data	GXT file (*.gxt)	
<u>12KS_EIRP.gxt</u>	STTV	GSO Antenna Gain Contour Data	GXT file (*.gxt)	