



312 File Number: **SATMOD2017081000115**

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## Filing Description

Question	Response
Description	This Schedule S is submitted in support of the modification application of SES Americom, Inc. seeking authority to relocate AMC-1 to 130.9 W.L.

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## Satellite Information

Question	Response
Select Orbit Type	GSO
Space Station or Satellite Network Name	AMC-1
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 (4)

Nature of service	Description	Frequency Band(s)	Mode Type
<b>Fixed-Satellite Service</b>		11700.0 MHz -12200.0 MHz	Transmit
<b>Fixed-Satellite Service</b>		5925.0 MHz -6425.0 MHz	Receive
<b>Fixed-Satellite Service</b>		14000.0 MHz -14500.0 MHz	Receive
<b>Fixed-Satellite Service</b>		3700.0 MHz -4200.0 MHz	Transmit

## Orbital Information For Geostationary Satellites

Section	Question	Response
<b>Orbital Longitude Information</b>	Orbital Longitude	131.0 degrees
	Hemisphere of Orbital Longitude	W
<b>Longitudinal Tolerance or East /West Station-Keeping</b>	Toward West	0.05 degrees
	Toward East	0.05 degrees
<b>Inclination Excursion or North /South Station-Keeping Tolerance</b>	Inclination Excursion or North /South Station-Keeping Tolerance	1.73 degrees
<b>Antenna Axis Attitude Accuracy</b>	Roll	0.14 degrees
	Pitch	0.11 degrees
	Yaw	0.33 degrees

## Receiving Beams 1:

Question	Response
Beam ID	KRV
Receive Beam Frequency	14000.0 MHz -14500.0 MHz
Beam Type	Fixed
Polarization	V
Peak Gain	34.1 dBi
Antenna Pointing Error	0.15 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	64.0 degrees
G/T at Max. Gain Point	7.2 dB/K
Min. Saturation Flux Density	-99.3 dBW/m <sup>2</sup>
Max. Saturation Flux Density	-77.3 dBW/m <sup>2</sup>
Co- or Cross Polar Mode	C
Service Area Description	Contiguous US, Alaska, Hawaii, Mexico, and parts of Canada and the Caribbean

## Receiving Beams 2:

Question	Response
Beam ID	KRH
Receive Beam Frequency	14000.0 MHz -14500.0 MHz
Beam Type	Fixed
Polarization	H
Peak Gain	34.2 dBi
Antenna Pointing Error	0.15 degrees
Antenna Rotational Error	0.0 degrees

Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	-26.0 degrees
G/T at Max. Gain Point	6.6 dB/K
Min. Saturation Flux Density	-98.6 dBW/m2
Max. Saturation Flux Density	-77.6 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	Contiguous US, Alaska, Hawaii, Mexico, and parts of Canada and the Caribbean

**Receiving Beams 3:**

Question	Response
Beam ID	CRV
Receive Beam Frequency	5925.0 MHz -6425.0 MHz
Beam Type	Steerable
Polarization	V
Peak Gain	32.3 dBi
Antenna Pointing Error	0.15 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	No
Polarization Alignment Relative to the Equatorial Plane	90.0 degrees
G/T at Max. Gain Point	5.5 dB/K
Min. Saturation Flux Density	-104.2 dBW/m2
Max. Saturation Flux Density	-83.2 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	Contiguous US, Alaska, Hawaii, Mexico, and parts of Canada and the Caribbean

## Receiving Beams 4:

Question	Response
Beam ID	GBLH
Receive Beam Frequency	5925.0 MHz -6425.0 MHz
Beam Type	Fixed
Polarization	H
Peak Gain	10.3 dBi
Antenna Pointing Error	0.15 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	-12.6 dB/K
Min. Saturation Flux Density	-999.9 dBW/m2
Max. Saturation Flux Density	-999.0 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	Visible Earth

## Receiving Beams 5:

Question	Response
Beam ID	CRH
Receive Beam Frequency	5925.0 MHz -6425.0 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	No

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Polarization Alignment Relative to the Equatorial Plane	0.0 degrees
G/T at Max. Gain Point	5.9 dB/K
Min. Saturation Flux Density	-105.1 dBW/m <sup>2</sup>
Max. Saturation Flux Density	-84.1 dBW/m <sup>2</sup>
Co- or Cross Polar Mode	C
Service Area Description	Contiguous US, Alaska, Hawaii, Mexico, and parts of Canada and the Caribbean

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## Receiving Channels (50)

Channel ID	Channel Bandwidth (MHz)	Center Frequency s (MHz)	Feeder Link, Service Link or TT&C
TCV	0.8	6423.5	TT&C
TCH	0.8	6423.5	TT&C
KR24	36.0	14480.0	Service Link
KR23	36.0	14460.0	Service Link
KR13	36.0	14260.0	Service Link
KR12	36.0	14240.0	Service Link
KR11	36.0	14220.0	Service Link
KR10	36.0	14200.0	Service Link
KR09	36.0	14180.0	Service Link
KR08	36.0	14160.0	Service Link
KR07	36.0	14140.0	Service Link
KR06	36.0	14120.0	Service Link
KR05	36.0	14100.0	Service Link
KR04	36.0	14080.0	Service Link
KR03	36.0	14060.0	Service Link
KR02	36.0	14040.0	Service Link
KR01	36.0	14020.0	Service Link
KR22	36.0	14440.0	Service Link
KR21	36.0	14420.0	Service Link
KR20	36.0	14400.0	Service Link
KR19	36.0	14380.0	Service Link
KR18	36.0	14360.0	Service Link
KR17	36.0	14340.0	Service Link
KR16	36.0	14320.0	Service Link

<b>KR15</b>	36.0	14300.0	Service Link
<b>KR14</b>	36.0	14280.0	Service Link
<b>CR24</b>	36.0	6405.0	Service Link
<b>CR23</b>	36.0	6385.0	Service Link
<b>CR22</b>	36.0	6365.0	Service Link
<b>CR21</b>	36.0	6345.0	Service Link
<b>CR20</b>	36.0	6325.0	Service Link
<b>CR19</b>	36.0	6305.0	Service Link
<b>CR18</b>	36.0	6285.0	Service Link
<b>CR17</b>	36.0	6265.0	Service Link
<b>CR16</b>	36.0	6245.0	Service Link
<b>CR15</b>	36.0	6225.0	Service Link
<b>CR14</b>	36.0	6205.0	Service Link
<b>CR13</b>	36.0	6185.0	Service Link
<b>CR09</b>	36.0	6105.0	Service Link
<b>CR08</b>	36.0	6085.0	Service Link
<b>CR07</b>	36.0	6065.0	Service Link
<b>CR06</b>	36.0	6045.0	Service Link
<b>CR05</b>	36.0	6025.0	Service Link
<b>CR04</b>	36.0	6005.0	Service Link
<b>CR03</b>	36.0	5985.0	Service Link
<b>CR02</b>	36.0	5965.0	Service Link
<b>CR01</b>	36.0	5945.0	Service Link
<b>CR12</b>	36.0	6165.0	Service Link
<b>CR11</b>	36.0	6145.0	Service Link
<b>CR10</b>	36.0	6125.0	Service Link

## Transmitting Beams 1:

Question	Response
Beam ID	KTV
Transmit Beam Frequency	11700.0 MHz -12200.0 MHz
Beam Type	Fixed
Polarization	V
Peak Gain	33.9 dBi
Antenna Pointing Error	0.15 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	64.0 degrees
Max. Transmit EIRP Density	-24.4 dBW/Hz
Max. Transmit EIRP	50.4 dBW
Co- or Cross Polar Mode	C
Service Area Description	Contiguous US, Alaska, Hawaii, Mexico, and parts of Canada and the Caribbean

### Max. Power Flux Density

Information not provided.

## Transmitting Beams 2:

Question	Response
Beam ID	KTH
Transmit Beam Frequency	11700.0 MHz -12200.0 MHz
Beam Type	Fixed
Polarization	H
Peak Gain	33.1 dBi
Antenna Pointing Error	0.15 degrees
Antenna Rotational Error	0.0 degrees

Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	-26.0 degrees
Max. Transmit EIRP Density	-25.0 dBW/Hz
Max. Transmit EIRP	49.8 dBW
Co- or Cross Polar Mode	C
Service Area Description	Contiguous US, Alaska, Hawaii, Mexico, and parts of Canada and the Caribbean

### Max. Power Flux Density

Information not provided.

### Transmitting Beams 3:

Question	Response
Beam ID	CTV
Transmit Beam Frequency	3700.0 MHz -4200.0 MHz
Beam Type	Steerable
Polarization	V
Peak Gain	30.9 dBi
Antenna Pointing Error	0.15 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	No
Polarization Alignment Relative to the Equatorial Plane	90.0 degrees
Max. Transmit EIRP Density	-33.5 dBW/Hz
Max. Transmit EIRP	41.3 dBW
Co- or Cross Polar Mode	C
Service Area Description	Contiguous US, Alaska, Hawaii, Mexico, and parts of Canada and the Caribbean

### Max. Power Flux Density

	* 0° - 5°	* 5° - 10°	* 10° - 15°	* 15° - 20°	* 20° - 25°	* 25° - 90°
*	(dBW/m <sup>2</sup>	(dBW/m <sup>2</sup>	(dBW/m <sup>2</sup>	(dBW/m <sup>2</sup>	(dBW/m <sup>2</sup>	(dBW/m <sup>2</sup>
BW:	/BW):	/BW):	/BW):	/BW):	/BW):	/BW):
<b>4.0</b>	-161.1	-160.9	-160.8	-160.5	-160.3	-159.5
<b>kHz</b>						

## Transmitting Beams 4:

Question	Response
Beam ID	CTH
Transmit Beam Frequency	3700.0 MHz -4200.0 MHz
Beam Type	Steerable
Polarization	H
Peak Gain	29.9 dBi
Antenna Pointing Error	0.15 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	No
Polarization Alignment Relative to the Equatorial Plane	0.0 degrees
Max. Transmit EIRP Density	-34.0 dBW/Hz
Max. Transmit EIRP	40.8 dBW
Co- or Cross Polar Mode	C
Service Area Description	Contiguous US, Alaska, Hawaii, Mexico, and parts of Canada and the Caribbean

## Max. Power Flux Density

	* 0° - 5°	* 5° - 10°	* 10° - 15°	* 15° - 20°	* 20° - 25°	* 25° - 90°
*	(dBW/m <sup>2</sup>	(dBW/m <sup>2</sup>	(dBW/m <sup>2</sup>	(dBW/m <sup>2</sup>	(dBW/m <sup>2</sup>	(dBW/m <sup>2</sup>
BW:	/BW):	/BW):	/BW):	/BW):	/BW):	/BW):
<b>4.0</b>	-162.7	-162.6	-162.5	-162.4	-162.3	-160.0
<b>kHz</b>						

## Transmitting Beams 5:

Question	Response
Beam ID	GBLV
Transmit Beam Frequency	3700.0 MHz -4200.0 MHz
Beam Type	Fixed
Polarization	V
Peak Gain	11.3 dBi
Antenna Pointing Error	0.15 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	No
Polarization Alignment Relative to the Equatorial Plane	90.0 degrees
Max. Transmit EIRP Density	-12.8 dBW/Hz
Max. Transmit EIRP	6.0 dBW
Co- or Cross Polar Mode	C
Service Area Description	Visible Earth

### Max. Power Flux Density

	* 0° - 5°	* 5° - 10°	* 10° - 15°	* 15° - 20°	* 20° - 25°	* 25° - 90°
*	(dBW/m <sup>2</sup>	(dBW/m <sup>2</sup>	(dBW/m <sup>2</sup>	(dBW/m <sup>2</sup>	(dBW/m <sup>2</sup>	(dBW/m <sup>2</sup>
BW:	/BW):	/BW):	/BW):	/BW):	/BW):	/BW):
<b>4.0 kHz</b>	-176.0	-175.9	-175.8	-175.7	-175.6	-174.8

## Transmitting Channels (52)

Channel ID	Channel Bandwidth (MHz)	Center Frequency s (MHz)	Feeder Link, Service Link or TT&C
CT24	36.0	4180.0	Service Link
TM2V	0.3	4199.5	TT&C
TM2H	0.3	4199.5	TT&C
TM01	0.3	3700.5	TT&C
KT24	36.0	12180.0	Service Link
KT23	36.0	12160.0	Service Link
KT22	36.0	12140.0	Service Link
KT21	36.0	12120.0	Service Link
KT20	36.0	12100.0	Service Link
KT19	36.0	12080.0	Service Link
KT18	36.0	12060.0	Service Link
KT17	36.0	12040.0	Service Link
KT16	36.0	12020.0	Service Link
KT15	36.0	12000.0	Service Link
KT14	36.0	11980.0	Service Link
KT13	36.0	11960.0	Service Link
KT12	36.0	11940.0	Service Link
KT11	36.0	11920.0	Service Link
KT10	36.0	11900.0	Service Link
KT09	36.0	11880.0	Service Link
KT08	36.0	11860.0	Service Link
KT07	36.0	11840.0	Service Link
KT06	36.0	11820.0	Service Link
KT05	36.0	11800.0	Service Link

<b>KT04</b>	36.0	11780.0	Service Link
<b>KT03</b>	36.0	11760.0	Service Link
<b>KT02</b>	36.0	11740.0	Service Link
<b>TM3</b>	0.3	12198.0	TT&C
<b>CT23</b>	36.0	4160.0	Service Link
<b>CT22</b>	36.0	4140.0	Service Link
<b>CT21</b>	36.0	4120.0	Service Link
<b>CT20</b>	36.0	4100.0	Service Link
<b>CT19</b>	36.0	4080.0	Service Link
<b>CT18</b>	36.0	4060.0	Service Link
<b>CT17</b>	36.0	4040.0	Service Link
<b>CT16</b>	36.0	4020.0	Service Link
<b>CT04</b>	36.0	3780.0	Service Link
<b>CT03</b>	36.0	3760.0	Service Link
<b>CT02</b>	36.0	3740.0	Service Link
<b>CT01</b>	36.0	3720.0	Service Link
<b>KT01</b>	36.0	11720.0	Service Link
<b>CT15</b>	36.0	4000.0	Service Link
<b>CT14</b>	36.0	3980.0	Service Link
<b>CT13</b>	36.0	3960.0	Service Link
<b>CT12</b>	36.0	3940.0	Service Link
<b>CT11</b>	36.0	3920.0	Service Link
<b>CT10</b>	36.0	3900.0	Service Link
<b>CT09</b>	36.0	3880.0	Service Link
<b>CT08</b>	36.0	3860.0	Service Link
<b>CT07</b>	36.0	3840.0	Service Link



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<b>CT06</b>	36.0	3820.0	Service Link
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<b>CT05</b>	36.0	3800.0	Service Link
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## 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
<a href="#"><u>AMC-1 130.9°W CRH.gxt</u></a>	CRH	GSO Antenna Gain Contour Data	GXT file (*.gxt)	AMC-1 CRH beam
<a href="#"><u>AMC-1 130.9°W CRV.gxt</u></a>	CRV	GSO Antenna Gain Contour Data	GXT file (*.gxt)	AMC-1 CRV beam
<a href="#"><u>AMC-1 130.9°W CTH.gxt</u></a>	CTH	GSO Antenna Gain Contour Data	GXT file (*.gxt)	AMC-1 CTH beam
<a href="#"><u>AMC-1 130.9°W CTV.gxt</u></a>	CTV	GSO Antenna Gain Contour Data	GXT file (*.gxt)	AMC-1 CTV beam
<a href="#"><u>AMC-1 130.9°W KRH.gxt</u></a>	KRH	GSO Antenna Gain Contour Data	GXT file (*.gxt)	AMC-1 KRH beam
<a href="#"><u>AMC-1 130.9°W KTH.gxt</u></a>	KTH	GSO Antenna Gain Contour Data	GXT file (*.gxt)	AMC-1 KTH beam
<a href="#"><u>AMC-1 130.9°W KTV.gxt</u></a>	KTV	GSO Antenna Gain Contour Data	GXT file (*.gxt)	AMC-1 KTV beam
<a href="#"><u>AMC-1 130.9°W KRV.gxt</u></a>	KRV	GSO Antenna Gain Contour Data	GXT file (*.gxt)	AMC-1 KRV beam