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

Federal Communications Commission

312 File Number: **SATLOA2021010700004**

Filing Description

Question	Response
Description	Galaxy 32 replacing Galaxy 17 at 91.0 W.L

Satellite Information

Question	Response
Select Orbit Type	GSO
Space Station or Satellite Network Name	Galaxy 32
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
Fixed-Satellite Service		11450.0 MHz -11701.0 MHz	Transmit
Fixed-Satellite Service		3700.0 MHz -4200.0 MHz	Transmit
Fixed-Satellite Service		13750.0 MHz -14000.0 MHz	Receive
Fixed-Satellite Service		5925.0 MHz -6425.0 MHz	Receive

Orbital Information For Geostationary Satellites

Section	Question	Response
Orbital Longitude Information	Orbital Longitude	91.0 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	0.05 degrees
Antenna Axis Attitude Accuracy	Roll	0.1 degrees
	Pitch	0.1 degrees
	Yaw	0.1 degrees

Receiving Beams 1:

Question	Response
Beam ID	CAHU
Receive Beam Frequency	5925.0 MHz -6425.0 MHz
Beam Type	Fixed
Polarization	H
Peak Gain	30.8 dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.34 degrees
Polarization Switchable	No
Polarization Alignment Relative to the Equatorial Plane	0.0 degrees
G/T at Max. Gain Point	4.5 dB/K
Min. Saturation Flux Density	-102.0 dBW/m2
Max. Saturation Flux Density	-77.0 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	C band Fixed

Receiving Beams 2:

Question	Response
Beam ID	CAVU
Receive Beam Frequency	5925.0 MHz -6425.0 MHz
Beam Type	Fixed
Polarization	V
Peak Gain	30.8 dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.34 degrees

Polarization Switchable	No
Polarization Alignment Relative to the Equatorial Plane	90.0 degrees
G/T at Max. Gain Point	4.5 dB/K
Min. Saturation Flux Density	-102.0 dBW/m2
Max. Saturation Flux Density	-77.0 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	C band fixed wide beam

Receiving Beams 3:

Question	Response
Beam ID	KUHU
Receive Beam Frequency	13750.0 MHz -14000.0 MHz
Beam Type	Fixed
Polarization	H
Peak Gain	35.3 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	5.0 dB/K
Min. Saturation Flux Density	-95.0 dBW/m2
Max. Saturation Flux Density	-70.0 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	Ku Fixed CONUS

Receiving

Beams 4:

Question	Response
Beam ID	KUVU
Receive Beam Frequency	13750.0 MHz -14000.0 MHz
Beam Type	Fixed
Polarization	V
Peak Gain	35.3 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	5.0 dB/K
Min. Saturation Flux Density	-95.0 dBW/m2
Max. Saturation Flux Density	-70.0 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	Ku CONUS

Receiving Beams 5:

Question	Response
Beam ID	CMD1
Receive Beam Frequency	6421.5 MHz -6422.5 MHz
Beam Type	Fixed
Polarization	H
Peak Gain	dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.34 degrees
Polarization Switchable	No

Polarization Alignment Relative to the Equatorial Plane	0.0 degrees
G/T at Max. Gain Point	-99.0 dB/K
Min. Saturation Flux Density	-81.0 dBW/m2
Max. Saturation Flux Density	-80.0 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	CM1 H pol

Receiving Beams 6:

Question	Response
Beam ID	CMD2
Receive Beam Frequency	6421.5 MHz -6422.5 MHz
Beam Type	Fixed
Polarization	RHCP
Peak Gain	dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.34 degrees
Polarization Switchable	No
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
G/T at Max. Gain Point	-99.0 dB/K
Min. Saturation Flux Density	-81.0 dBW/m2
Max. Saturation Flux Density	-80.0 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	CM2 RHCP

Receiving Beams 7:

Question	Response

Beam ID	CMD3
Receive Beam Frequency	6424.0 MHz -6425.0 MHz
Beam Type	Fixed
Polarization	H
Peak Gain	dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.34 degrees
Polarization Switchable	No
Polarization Alignment Relative to the Equatorial Plane	0.0 degrees
G/T at Max. Gain Point	-99.0 dB/K
Min. Saturation Flux Density	-81.0 dBW/m2
Max. Saturation Flux Density	-80.0 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	CM3 H pol

Receiving Beams 8:

Question	Response
Beam ID	CMD4
Receive Beam Frequency	6424.0 MHz -6425.0 MHz
Beam Type	Fixed
Polarization	RHCP
Peak Gain	dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.34 degrees
Polarization Switchable	No

Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
G/T at Max. Gain Point	-99.0 dB/K
Min. Saturation Flux Density	-81.0 dBW/m2
Max. Saturation Flux Density	-80.0 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	CM4 RHCP

Receiving Channels (17)

Channel ID	Channel Bandwidth (MHz)	Center Frequency s (MHz)	Feeder Link, Service Link or TT&C
CMD1	1.0	6422.0	TT&C
CU01	126.0	5990.0	Service Link
CU03	36.0	6225.0	Service Link
CU04	36.0	6265.0	Service Link
CU05	36.0	6305.0	Service Link
CU06	36.0	6345.0	Service Link
CU07	43.0	6388.5	Service Link
CU08	126.0	6010.0	Service Link
CU09	126.0	6150.0	Service Link
CU10	36.0	6245.0	Service Link
CU11	36.0	6285.0	Service Link
CU12	36.0	6325.0	Service Link
CU13	36.0	6365.0	Service Link
CU14	36.0	6405.0	Service Link
CU02	126.0	6130.0	Service Link
CMD2	1.0	6424.5	TT&C
KU01	36.0	13825.0	Service Link

Transmitting Beams 1:

Question	Response
Beam ID	CAHD
Transmit Beam Frequency	3700.0 MHz -4200.0 MHz
Beam Type	Fixed
Polarization	H
Peak Gain	29.7 dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.34 degrees
Polarization Switchable	No
Polarization Alignment Relative to the Equatorial Plane	0.0 degrees
Max. Transmit EIRP Density	-28.6 dBW/Hz
Max. Transmit EIRP	47.0 dBW
Co- or Cross Polar Mode	C
Service Area Description	C band fixed

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	-155.8	-155.7	-155.6	-155.5	-155.4	-154.6

Transmitting Beams 2:

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

Beam Type	Fixed
Polarization	V
Peak Gain	29.7 dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.34 degrees
Polarization Switchable	No
Polarization Alignment Relative to the Equatorial Plane	90.0 degrees
Max. Transmit EIRP Density	-28.6 dBW/Hz
Max. Transmit EIRP	47.0 dBW
Co- or Cross Polar Mode	C
Service Area Description	C band fixed

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	-155.8	-155.7	-155.6	-155.5	-155.4	-154.6

Transmitting Beams 3:

Question	Response
Beam ID	KUHD
Transmit Beam Frequency	11450.0 MHz -11701.0 MHz
Beam Type	Fixed
Polarization	H
Peak Gain	33.3 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	-23.1 dBW/Hz
Max. Transmit EIRP	52.5 dBW
Co- or Cross Polar Mode	C
Service Area Description	Ku band Contiguous United States

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	-150.4	-150.2	-150.1	-150.0	-149.9	-149.1

Transmitting Beams 4:

Question	Response
Beam ID	KUVD
Transmit Beam Frequency	11450.0 MHz -11701.0 MHz
Beam Type	Fixed
Polarization	V
Peak Gain	33.3 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	-23.1 dBW/Hz
Max. Transmit EIRP	52.5 dBW

Co- or Cross Polar Mode	C
Service Area Description	Ku band Contiguous United States

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	-150.4	-150.3	-150.2	-150.1	-150.0	-149.1

Transmitting Beams 5:

Question	Response
Beam ID	TLMD
Transmit Beam Frequency	4198.0 MHz -4198.5 MHz
Beam Type	Fixed
Polarization	V
Peak Gain	dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.34 degrees
Polarization Switchable	No
Polarization Alignment Relative to the Equatorial Plane	90.0 degrees
Max. Transmit EIRP Density	-13.5 dBW/Hz
Max. Transmit EIRP	7.5 dBW
Co- or Cross Polar Mode	C
Service Area Description	TM dish Vertical

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	-176.7	-176.6	-176.5	-176.4	-176.3	-175.5

Transmitting Beams 6:

Question	Response
Beam ID	TLMO
Transmit Beam Frequency	4198.0 MHz -4198.5 MHz
Beam Type	Fixed
Polarization	LHCP
Peak Gain	dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.34 degrees
Polarization Switchable	No
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-49.5 dBW/Hz
Max. Transmit EIRP	7.5 dBW
Co- or Cross Polar Mode	C
Service Area Description	TM Omni

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	-176.7	-176.6	-176.5	-176.4	-176.3	-175.5

Transmitting Beams 7:

Question	Response
Beam ID	TLMP
Transmit Beam Frequency	4198.5 MHz -4199.0 MHz
Beam Type	Fixed
Polarization	V
Peak Gain	dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.34 degrees
Polarization Switchable	No
Polarization Alignment Relative to the Equatorial Plane	90.0 degrees
Max. Transmit EIRP Density	-49.5 dBW/Hz
Max. Transmit EIRP	7.5 dBW
Co- or Cross Polar Mode	C
Service Area Description	TM2 Dish

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	-176.7	-176.6	-176.5	-176.4	-176.3	-175.5

Transmitting Beams 8:

Question	Response
Beam ID	TLMM
Transmit Beam Frequency	4198.5 MHz -4199.0 MHz

Beam Type	Fixed
Polarization	LHCP
Peak Gain	dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.34 degrees
Polarization Switchable	No
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-49.5 dBW/Hz
Max. Transmit EIRP	7.5 dBW
Co- or Cross Polar Mode	C
Service Area Description	TM2 Omni

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	-176.7	-176.6	-176.5	-176.4	-176.3	-175.5

Transmitting Beams 9:

Question	Response
Beam ID	UPC1
Transmit Beam Frequency	4199.937 MHz -4199.962 MHz
Beam Type	Fixed
Polarization	RHCP
Peak Gain	dBi
Antenna Pointing Error	0.19 degrees

Antenna Rotational Error	0.34 degrees
Polarization Switchable	No
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-36.5 dBW/Hz
Max. Transmit EIRP	7.5 dBW
Co- or Cross Polar Mode	C
Service Area Description	UPC1 beacon

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	-163.8	-163.6	-163.5	-163.4	-163.3	-162.5

Transmitting Beams 10:

Question	Response
Beam ID	UPC2
Transmit Beam Frequency	11700.237 MHz -11700.262 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	-33.0 dBW/Hz

Max. Transmit EIRP	11.5 dBW
Co- or Cross Polar Mode	C
Service Area Description	UPC2 Ku Center at 11700.25 MHz with allocated bandwidth of 25 KHz

Max. Power Flux Density

Information not provided.

Transmitting Channels (19)

Channel ID	Channel Bandwidth (MHz)	Center Frequency s (MHz)	Feeder Link, Service Link or TT&C
CD11	36.0	4060.0	Service Link
CD10	36.0	4020.0	Service Link
CD09	126.0	3925.0	Service Link
CD08	126.0	3785.0	Service Link
CD07	43.0	4163.5	Service Link
CD06	36.0	4120.0	Service Link
CD05	36.0	4080.0	Service Link
CD04	36.0	4040.0	Service Link
CD03	36.0	4000.0	Service Link
CD02	126.0	3905.0	Service Link
CD01	126.0	3765.0	Service Link
UPC2	0.025	11700.25	TT&C
TLMP	0.5	4198.75	TT&C
TLMD	0.5	4198.25	TT&C
UPC1	0.025	4199.95	TT&C
KUD1	36.0	11475.0	Service Link
CD14	36.0	4180.0	Service Link
CD12	36.0	4100.0	Service Link
CD13	36.0	4140.0	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
G-32at 91.mdb		GSO Antenna Gain Contour Data	GIMS file (*.mdb)	