



312 File Number: **SESLIC2020122201427**

Filing Description

Question	Response
Description	Universal Space 312 FalconEye-2 Schedule S ver 4

Satellite Information

Question	Response
Select Orbit Type	NGSO
Space Station or Satellite Network Name	FalconEye-2
Estimated Lifetime of Satellite(s) From Date of Launch	10 Years
Will the space station(s) operate on a Common Carrier basis?	No

Operating Frequency Bands (2)

Nature of service	Description	Frequency Band(s)	Mode Type
Space Operation Service		2085.03 MHz -2085.43 MHz	Receive
Space Operation Service		2264.2 MHz -2264.8 MHz	Transmit

**Orbital
Information For
Non-
Geostationary
Satellites**

Question	Response
Total Number of Satellites in the active constellation	1
Orbit Epoch Date	12/06/2020
Celestial Reference Body	Veis

Orbital Plane 1:

Question	Response
Number of Satellites in Plane	1
Inclination Angle	97.854 degrees
Right Ascension of Ascending Node	52.148 degrees
Argument of Perigee	90.0 degrees
Orbital Period	5822.1 seconds
Apogee	6997.6 km
Perigee	6980.4 km
Active Service Arc Begin Angle with respect to Ascending Node	0.0 degrees
Active Service Arc End Angle with respect to Ascending Node	0.0 degrees

Mean Anomaly For Each Satellite

Satellite Number	Mean Anomaly (degrees) at the Orbit Epoch Date
1	180.0

Receiving Beams 1:

Question	Response
Beam ID	1
Receive Beam Frequency	2085.03 MHz -2085.43 MHz
Beam Type	Spot
Polarization	RHCP
Peak Gain	2.0 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	-26.2 dB/K
Min. Saturation Flux Density	-94.0 dBW/m ²
Max. Saturation Flux Density	-3.0 dBW/m ²
Co- or Cross Polar Mode	C
Service Area Description	North Pole, Alaska, USA (Lat. 64 deg 48 min North / Long. 147 deg 39 min West) - 2200 km radius area around

**Receiving
Channels (1)**

Channel ID	Channel Bandwidth (MHz)	Center Frequency s (MHz)	Feeder Link, Service Link or TT&C
TC	0.4	2085.23	TT&C

Transmitting Beams 1:

Question	Response
Beam ID	OMN1
Transmit Beam Frequency	2264.2 MHz -2264.8 MHz
Beam Type	Spot
Polarization	RHCP
Peak Gain	2.5 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	-54.8 dBW/Hz
Max. Transmit EIRP	1.2 dBW
Co- or Cross Polar Mode	C
Service Area Description	North Pole, Alaska, USA (Lat. 64 deg 48 min North / Long. 147 deg 39 min West) - 2200 km radius area around

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	-155.7	-154.1	-152.6	-151.3	-150.1	-144.0

**Transmitting
Channels (1)**

Channel ID	Channel Bandwidth (MHz)	Center Frequency s (MHz)	Feeder Link, Service Link or TT&C
TC	0.6	2264.5	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?	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?	
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>OMNI1_pattern.pdf</u>	OMN1	NGSO Antenna Gain Data	PDF file (*.pdf)	Antenna Pattern
<u>OMNI2_pattern.pdf</u>	OMN1	NGSO Antenna Gain Data	PDF file (*.pdf)	Antenna Pattern