

Narrative

Applicant Information

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Purpose of Experimental License

SES Americom Inc. ("SES") respectfully requests experimental authority to test and demonstrate the efficacy and capabilities of the MDA Space ESMAKa ("MDA antennas"). The MDA antennas have the potential to deliver performance across multiple form factors and frequency bands that increases flexibility for reliable, efficient communications.

SES is requesting authority to conduct tests of the MDA antennas for mobile operations in several sites including Broomfield, Colorado; Bristow, Virginia; Hagerstown, Maryland; Mount Prospect, Illinois; and Ellenwood, Georgia. The MDA antennas will communicate with SES's O3b non-geostationary satellite and its SES-17 geostationary orbit satellite transmitting in the 28.35-29.10 and 29.5-30.0 GHz frequency bands.¹

Time and dates of proposed operation

SES requests a license for six months from October 5, 2026, to April 4, 2027.

Description of the location and geographical coordinates of the proposed operation

SES will test and operate the antennas for mobile operations at the following locations:

Broomfield, CO

Latitude: 39° 54' 10" N

Longitude: 105° 6' 44" W

Operating Range: 50 kilometers

Bristow, VA

Latitude: 38° 48' 00" N

Longitude: 77° 34' 30" W

Operating Range: 50 kilometers

Hagerstown, MD

¹ See O3b Limited, Order and Declaratory Ruling, 33 FCC Rcd 5508 (2018).

Latitude: 39° 35' 57" N
Longitude: 77° 45' 33" W
Operating Range: 50 kilometers

Mount Prospect, IL
Latitude: 42° 04' 42" N
Longitude: 87° 55' 06" W
Operating Range: 50 kilometers

Ellenwood, GA
Latitude: 33° 39' 53" N
Longitude: 84° 16' 19" W
Operating Range: 50 kilometers

Transmit equipment to be used

Manufacturer	Model	Size
MDA Space	ESMAKa	37 x 37 cm

Maximum effective isotropic radiated power (EIRP).

Maximum transmitted EIRP will be 45.0 dBW and antenna gain of 31.5 dBi. The transmitted power is 22.5 W and the maximum EIRP density will be 12.0 dBW/4kHz.

Overall height of antenna of antenna structure above the ground (if greater than 6 meters above the ground or an existing structure, see part 17 of this Chapter concerning notification to the FAA).

The overall height of the antenna above ground level and above existing structures will not exceed six meters.

Directional Antenna Information

Is a directional antenna used? Yes.

Width of the beam in degrees at the half power point	Orientation in horizontal plane (degrees from True North)	Orientation in vertical plane (degrees from horizontal)
1.8	0° to 360°	5° to 90°

Sharing with Primary GSO FSS Operators

Pursuant to Sections 25.115(f)(1) and 25.146(a)(2) of the Commission's rules, SES hereby certifies that the earth station operations proposed herein will comply with the applicable equivalent power flux-density levels in Article 22, Section II, and Resolution 76 of the International Telecommunication Union Radio Regulations.

Compliance with FCC 25.202

SES will comply with the out-of-band emissions limits specified in Section 25.202 of the Commission's rules regarding frequency tolerance and emission limits.