

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 CesiumAstro Skylark KAST antennas ("Skylark antennas"). The Skylark 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 Skylark antennas for mobile operations in several sites including Broomfield, Colorado; Bristow, Virginia; Hagerstown, Maryland; Mount Prospect, Illinois; and Ellenwood, Georgia. The Skylark 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 frequencies¹ and its SES-17 geostationary orbit satellite transmitting in the 28.35-29.10 and 29.5-30.0 GHz frequencies.

Time and dates of proposed operation

SES requests a license for six months from August 19, 2026, to February 19, 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

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

Hagerstown, MD
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
CesiumAstro	Skylark KAST-1010	50x70 cm
CesiumAstro	Skylark KAST-1924	50x80 cm

Maximum effective isotropic radiated power (EIRP).

For Skylark KAST-1010: Maximum transmitted EIRP will be 51.2 dBW and antenna gain of 38.2 dBi. The transmitted power is 20 W and the maximum EIRP density will be 18.2 dBW/4kHz.

For Skylark KAST-1924: Maximum transmitted EIRP will be 56.9 dBW and antenna gain of 42.1 dBi. The transmitted power is 30 W and the maximum EIRP density will be 23.9 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.