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January 15, 2013

#### By Electronic Filing

Ms. Marlene H. Dortch Secretary Federal Communications Commission 445 12th Street, S.W. Washington, D.C. 20554

Re: Gogo LLC STA Request for In-Flight Testing File No. SES-STA-20130107-00018, Call Sign E120106

Dear Ms. Dortch:

Gogo LLC ("Gogo"), by its attorney and pursuant to Section 1.65 of the Commission's rules, 47 C.F.R. § 1.65, hereby updates the record regarding Gogo's above-referenced request for special temporary authority to perform in-flight testing (the "Gogo STA Request"). Specifically, Gogo is providing additional information regarding the satellites, frequencies, and coverage areas for the operations proposed in the Gogo STA Request.

As described in the request, Gogo proposes to use two satellites for in-flight testing, SES-1 and NSS-703. The uplink spectrum will be in the conventional Ku-band in all cases, but the downlink spectrum varies depending on the specific satellite and beam being used, as shown in the table below.

Satellite	Location	Beam Coverage Area	Tx (GHz)	Rx (GHz)	Satellite Operator
SES-1	101W	U.S. & Canada	14-14.5	11.7 – 12.2	
NSS-703	313E (47W)	Spot beam 1 - North Atlantic	14-14.5	10.95 – 11.2; 11.45-11.7	
		Spot beam 2 – Northeastern U.S., Canada, North Atlantic	14-14.5	11.7 – 11.95	SES
		Spot beam 3 - North Atlantic & W. Europe	14-14.5	12.5-12.75	

Gogo is also attaching hereto for the Commission's convenience the coverage maps depicting the three NSS-703 spot beams that were submitted in support of Gogo's application for a blanket license for aeronautical operations. As shown in these maps, the only NSS-703 beam with coverage of the U.S. is spot beam 2, which will use conventional Ku-band frequencies. NSS-703 spot beam 1, which uses extended Ku-band downlink frequencies, does not cover the U.S. and will not be used for Gogo in-flight testing in U.S. airspace. As previously discussed, the coverage of NSS-703 spot beam 3, which uses downlink frequencies in the 12.5-12.75 GHz band, is limited to ITU Region 1.<sup>2</sup>

Please let me know if you have any questions regarding this matter.

Respectfully submitted,

/s/ Karis A. Hastings

Karis A. Hastings Counsel for Gogo LLC karis@satcomlaw.com

cc: Andrea Kelly Stephen Duall Paul Blais

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 $<sup>^{\</sup>rm 1}$  See Gogo LLC, Call Sign E120106, File No. SES-AFS-20121008-00902, Annex 1.

<sup>&</sup>lt;sup>2</sup> See Gogo STA Request, Narrative at 2. Furthermore, Gogo will use this spectrum in foreign airspace only if it has received either enabling authority granted by the relevant foreign regulator or a confirmation that no such authority is required. See *id*.

# **NSS-703 Spot Beam Coverage Maps**

Fig. 1
KSpot 1 Downlink Beam, Ku-band
Peak EIRP = 51.5 dBW
Peak Beam Gain = 35.9 dBi
Polarization Vertical
Schedule S beam designator: KS1D

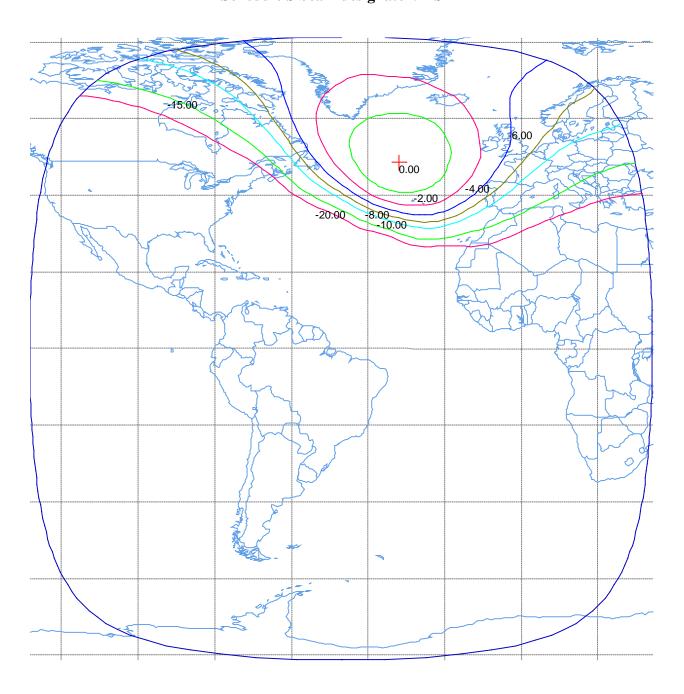


Fig. 2

### KSpot 2 Downlink Beam, Ku-band Peak EIRP = 48.2 dBW Peak Beam Gain = 34.4 dBi Polarization Horizontal

Schedule S beam designator: KS2D

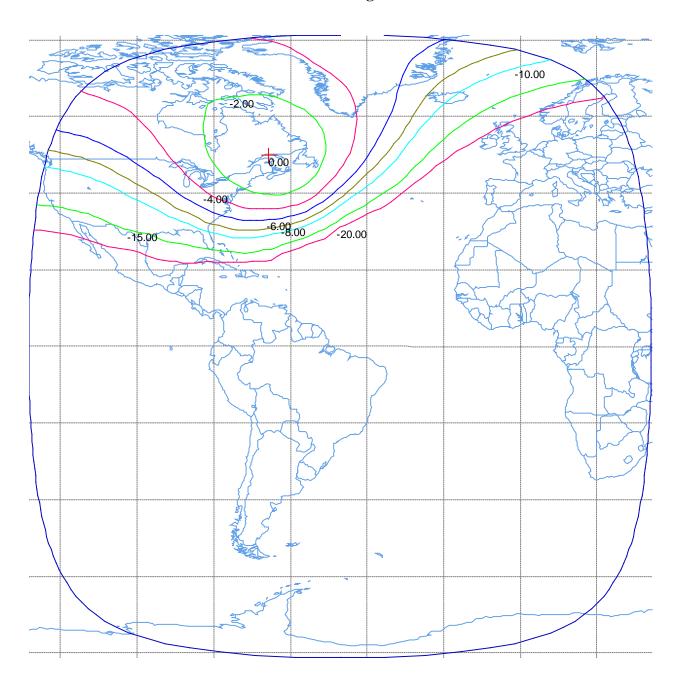


Fig. 3

## KSpot 3 Downlink Beam, Ku-band Peak EIRP = 51.1 dBW Peak Beam Gain = 36.6 dBi Polarization Horizontal

Schedule S beam designator: KS3D

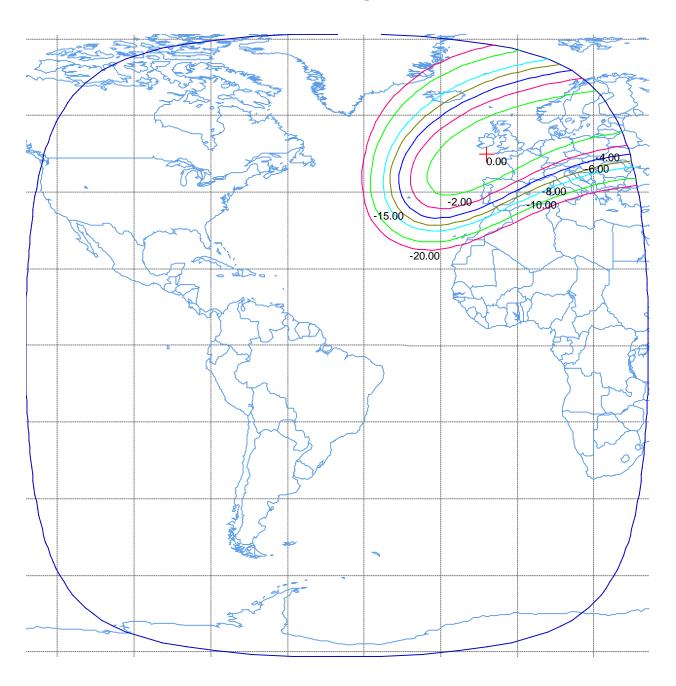


Fig. 4

# KSpot 1 Uplink Beam, Ku-band Peak G/T = 8.9 dB/K Peak Beam Gain = 36.9 dBi Min. Saturation Flux Density = -94 dBW/m<sup>2</sup> Polarization Horizontal

Schedule S beam designator: KS1U

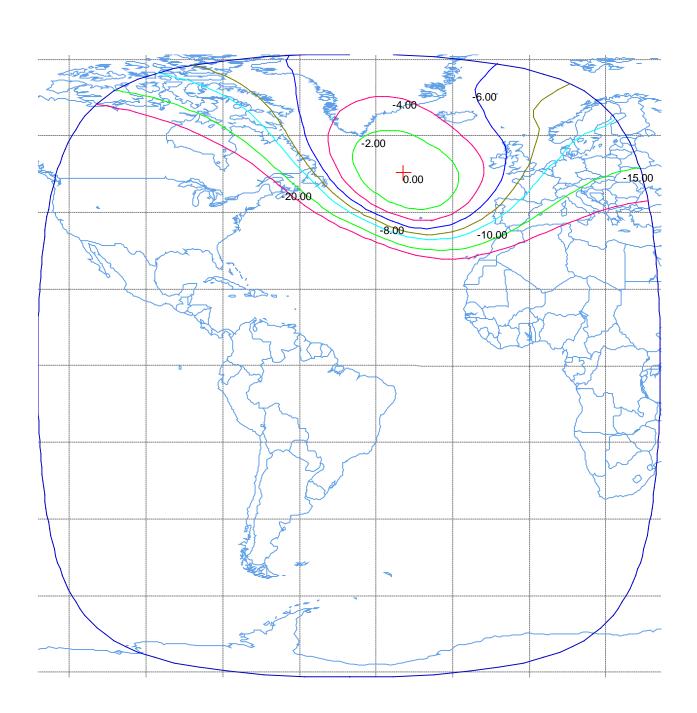


Fig. 5

KSpot 2 Uplink Beam, Ku-band
West Hemi Uplink Beam
Peak G/T = 6.6 dB/K
Peak Beam Gain = 34.9 dBi
Min. Saturation Flux Density = -92 dBW/m²
Polarization Vertical
Schedule S beam designator: KS2U

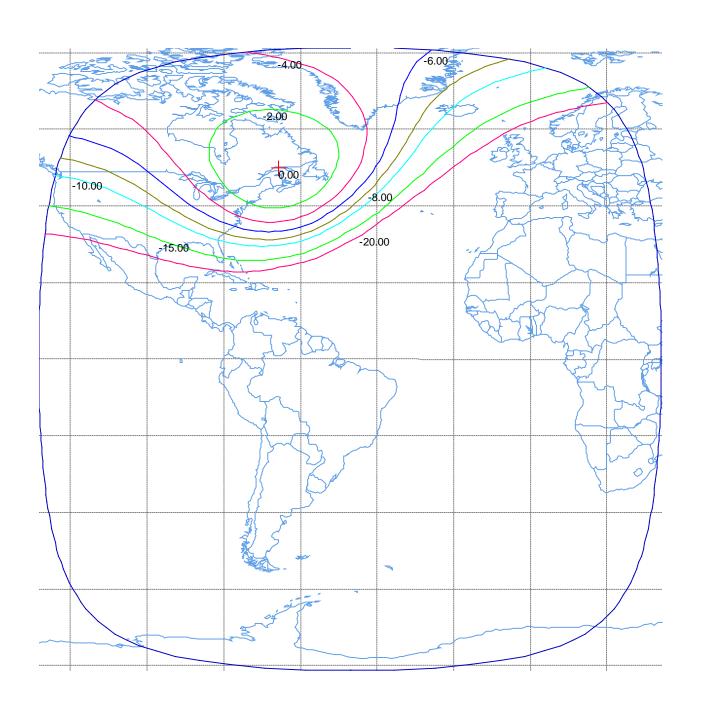


Fig. 6

#### KSpot 3 Uplink Beam, Ku-band Peak G/T = 9.4 dB/K Peak Beam Gain = 37.8 dBi Saturation Flux Density = -90 dBW.

Min. Saturation Flux Density = -90 dBW/m<sup>2</sup> Polarization Vertical

Schedule S beam designator: KS3U

