

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of)
)
SES AMERICOM, INC.) File No. SAT-STA-_____
) Call Sign S2135
Request for Special Temporary Authority to)
Alter the Coverage of AMC-4)

REQUEST OF SES AMERICOM, INC.

SES Americom, Inc. (“SES Americom,” doing business as “SES WORLD SKIES”¹), hereby respectfully requests special temporary authority (“STA”) for a period of 30 days beginning on or before April 21, 2011, to permit operation of the AMC-4 fixed-satellite space station with a slightly altered coverage pattern. Grant of the requested authority will enable SES WORLD SKIES to modify its operations to enhance service to the Caribbean and Central America in response to customer demand.

AMC-4 is a C/Ku-band hybrid spacecraft operating at 67° W.L. with service in the Ku-band only pursuant to the International Telecommunication Union (“ITU”) filings of the Colombian Administration, as Notifying Administration for the Andean Community (“CAN”).² In response to the service requirements of a new customer, SES WORLD SKIES proposes to

¹ SES WORLD SKIES is the commercial brand name for the integrated operations of two indirect subsidiaries of SES S.A.: SES Americom and New Skies Satellites B.V. (effective January 1, 2009). The brand name does not affect the underlying legal entities that hold Commission authorizations or U.S. market access rights.

² See Call Sign S2135, File No. SAT-MOD-20100623-00144 (grant-stamped Nov. 4, 2010). Specifically, AMC-4 is authorized to operate at 67° W.L. in the conventional Ku-band (11.7-12.2 GHz downlinks and 14.0-14.5 GHz uplinks) and extended Ku-band (11.45-11.7 GHz downlinks and 13.75-14.0 GHz uplinks). The satellite uses specific C-band frequencies for command and telemetry, but the C-band payload is otherwise not authorized for operations at 67° W.L. See *id.*

repoint the satellite slightly to improve service quality in the Caribbean and Central America. Specifically, SES WORLD SKIES is evaluating a .1 degree change in the azimuth of the satellite in order to strengthen the signal levels of the North American beam over those regions. SES WORLD SKIES will adjust the steerable South American beam in order to maintain the existing coverage of that antenna. Thus, no change in the footprint of the satellite's South American beam is planned.

Reorientation of AMC-4 as proposed will not adversely affect any other operators. Contour maps showing the AMC-4 North American beam coverage area with the proposed reorientation are included in the attached Technical Appendix. As the Technical Appendix demonstrates, the very small proposed shift in AMC-4's North American antenna coverage will have a negligible effect on the interference environment in which adjacent satellites operate. The operational Ku-band satellites adjacent to the 67°W.L. position are Star One C1 at 65°W.L. and Star One C2 at 70°W.L. Both are Brazilian-licensed satellites. The operations of AMC-4, even with the slight change in pointing proposed in the instant STA request, will continue to be consistent with SES WORLD SKIES' coordination agreements, including its agreements with Brazil.³

The Commission has generally permitted satellite operators the flexibility to design and modify their networks in response to customer requirements, absent compelling countervailing public interest considerations.⁴ Here, grant of the requested STA will permit SES WORLD SKIES to adjust the AMC-4 coverage pattern to respond to customer demand.

³ The reorientation will have a slight impact on the C-band TT&C coverage pattern, but the TT&C operations will continue to comply with the terms of SES WORLD SKIES' coordination agreement with Star One.

⁴ See, e.g. *AMSC Subsidiary Corporation*, 13 FCC Rcd 12316 at ¶ 8 (IB 1998) (the Commission generally leaves space station design decisions to the licensee "because the licensee

For the foregoing reasons, SES WORLD SKIES respectfully requests grant of special temporary authority to permit reorientation of the AMC-4 North American beam as described herein.

Respectfully submitted,

SES AMERICOM, INC.

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is in a better position to determine how to tailor its system to meet the particular needs of its customers.”) (footnote omitted).

TECHNICAL APPENDIX

An interference analysis was submitted to the Commission in connection with the initial operation of AMC-4 at 67° W.L. demonstrating that operation of AMC-4 was compatible with adjacent satellites and with the Commission's two-degree spacing requirements.¹ The analysis herein shows that the proposed repointing of the AMC-4 North American beam will have a negligible impact on the interference environment for adjacent satellites.

SES WORLD SKIES is attaching contour maps (Figures 1 to 8) showing the current and proposed revised C-band and Ku-band EIRP patterns for typical horizontally and vertically polarized transponders of AMC-4 at 67° W.L.² The changes to the EIRP are so small that they produce no visible change from the contours previously provided.

SES WORLD SKIES calculated the impact of the proposed repointing on EIRP values at numerous receiver locations throughout CONUS, Canada, Mexico, Central America, and the Caribbean region. In the vast majority of these locations, the difference between the EIRP values with current and proposed pointing is very small, typically within ± 0.5 dB. The increase in Ku-band EIRP was greater than 2 dB at only two sites (2.2 and 2.3 dB). In the C-band, the change in EIRP values with the proposed repointing is within ± 0.5 dB for all sites.

For example, in San Juan, Puerto Rico, the Ku-band EIRP for AMC-4 currently is in the range of 36 to 40 dBW. With the proposed repointing the range will be 38 to 41 dBW, an increase of between 1 and 2 dB. To determine the effect of a 2 dB increase in the EIRP, we have computed the C/I in a non-SES carrier from an orbital location that is two degrees away from 67° W.L., serving the Caribbean and Central America. The C/I computation is based on the following parameters:

- a) EIRP density of the wanted (i.e., non-SES) satellite: 5 dBW/4kHz
- b) EIRP of the interfering (SES) satellite: 36 dBW with current configuration of AMC-4, and 38 dBW with proposed repointing
- c) Receive earth station diameter: 1.2 m
- d) Wanted carrier threshold C/N: 7.0 dB
- e) C/I in the victim carrier with interference from AMC-4 current configuration: 25.6 dB
- f) C/I in the victim carrier with interference from AMC-4 after repointing: 23.6 dB
- g) C/(N+I) in victim carrier with interference from AMC-4 with current configuration: 7.0 dB, at threshold
- h) C/N in victim carrier with interference from AMC-4 with re-pointing: 7.0 dB, at threshold

¹ See Call Sign S2434, File No. SAT-MOD-20100623-00144, Technical Appendix, Annex 2.

² As discussed above, SES WORLD SKIES is only authorized to use the AMC-4 C-band frequencies for TT&C, and the proposed minimal changes in the C-band coverage conform to the existing coordination agreements relating to AMC-4 TT&C operations.

If AMC-4 is repointed as proposed, the interference component of the victim's system noise temperature changes by 0.5%, from 1.7% to 2.2%. The interference level is less than the 6% DeltaT/T ITU coordination trigger criteria; *i.e.*, internationally, if a 6% increase in noise temperature is not exceeded, then coordination is not needed between the concerned networks.

The proposed repointing will have no impact on Canadian or Mexican satellite systems, as the closest Canadian or Mexican FSS spacecraft to 67° W.L. is more than 40 degrees away. As discussed above in the narrative, the closest adjacent Ku-band satellites to 67° W.L. are licensed to Brazil. Operation of AMC-4 with the repointing proposed herein is consistent with the terms of the existing coordination agreements applicable to operation of AMC-4 and the Brazilian networks.

Figure 1

EIRP Pattern of AMC-4: Ku-band transponder 12, H-pol (down), current pointing

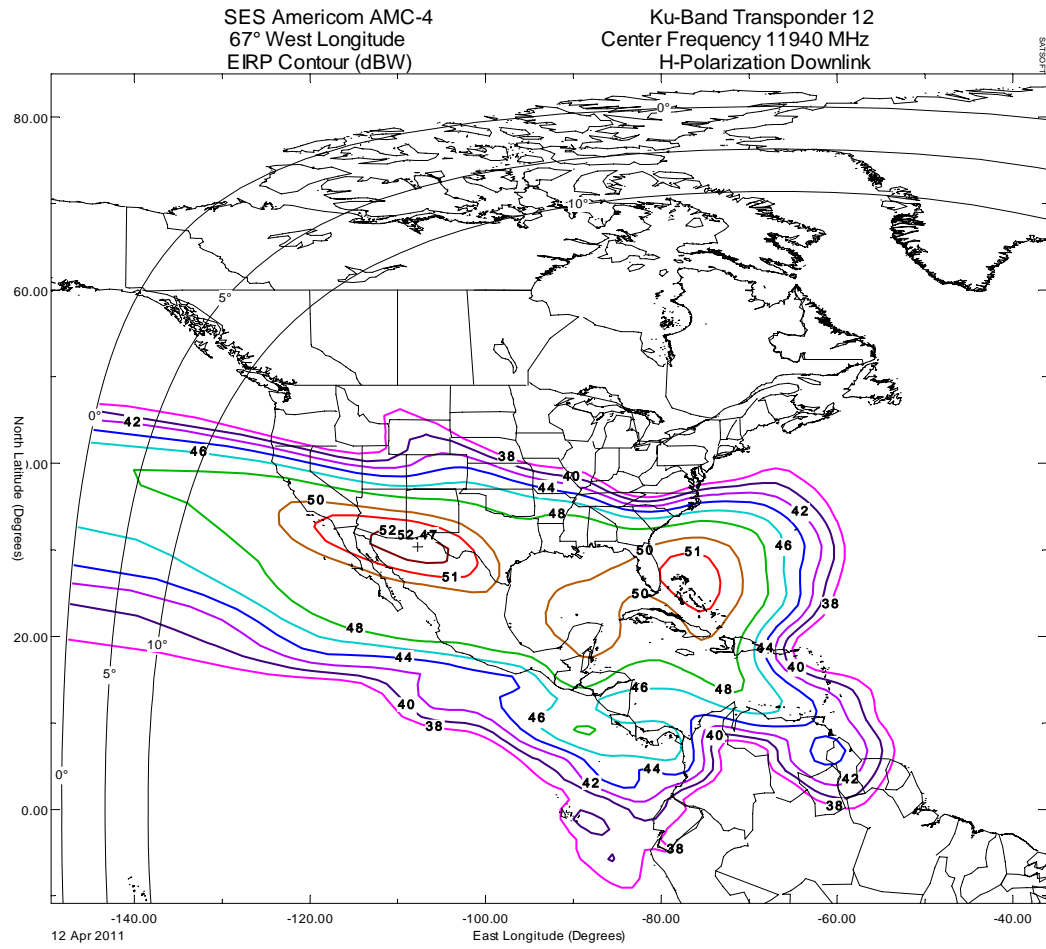


Figure 2

EIRP Pattern of AMC-4: Ku-band transponder 12, H-pol (down), proposed pointing

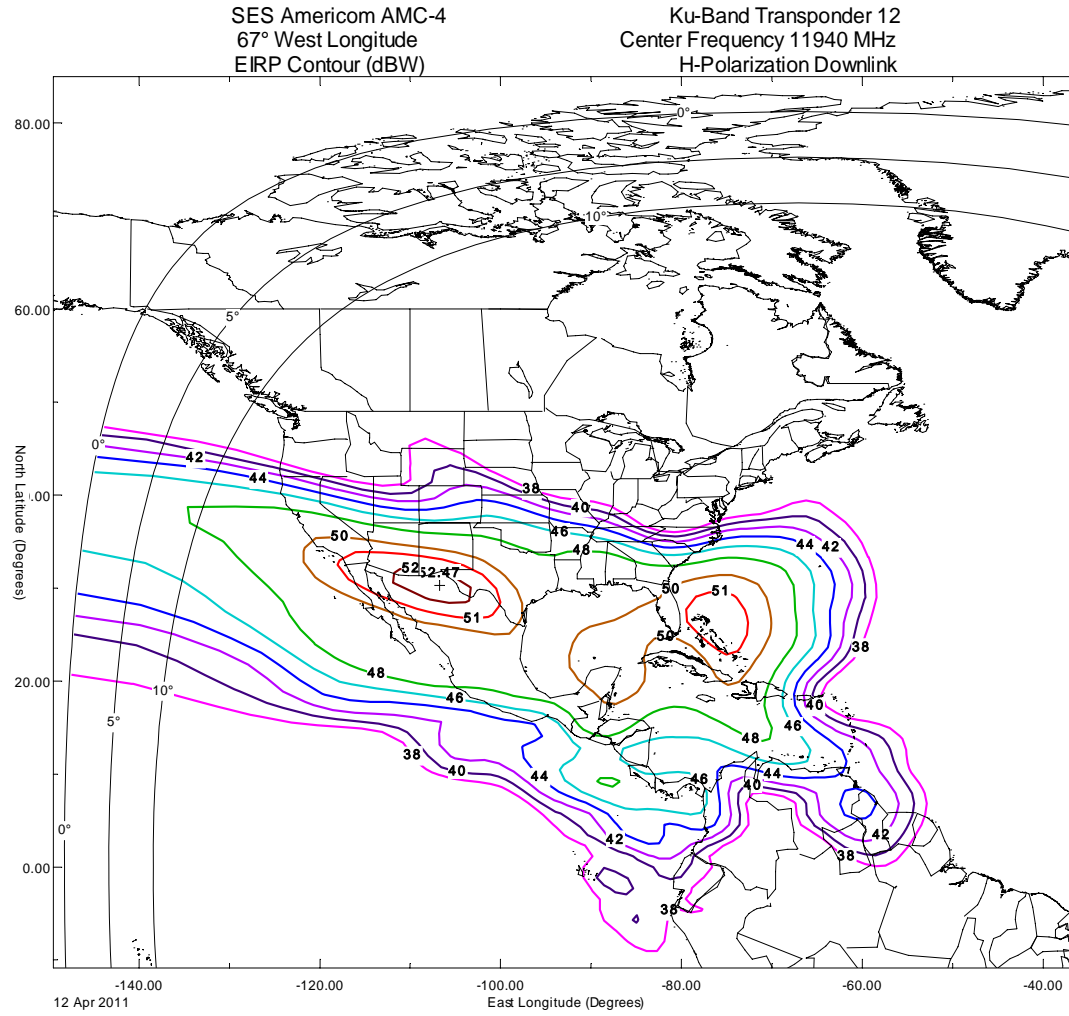


Figure 3

EIRP Pattern of AMC-4: Ku-band transponder 13, V-pol (down), current pointing

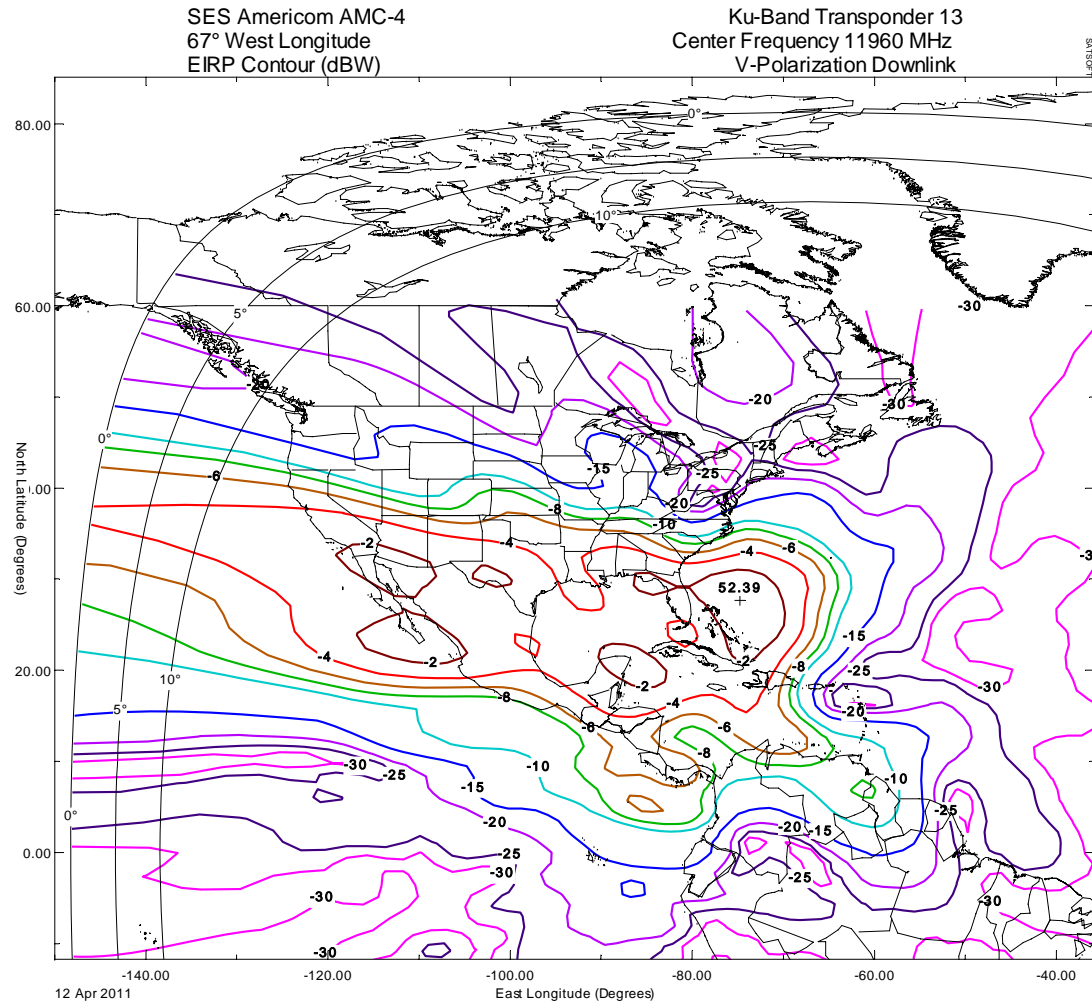


Figure 4

EIRP Pattern of AMC-4: Ku-band transponder 13, V-pol(down), proposed pointing

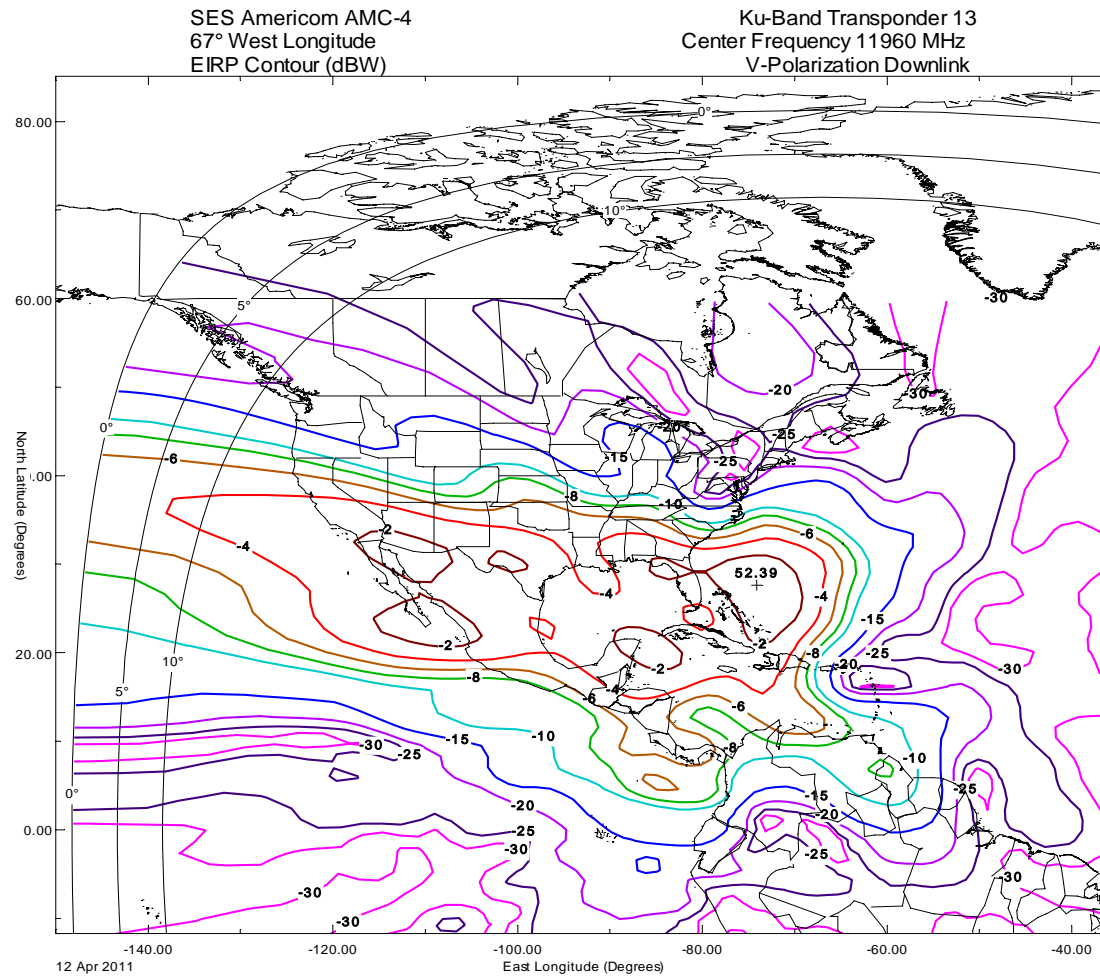


Figure 5

EIRP Pattern of AMC-4: C-band transponder 12, H-pol (down), current pointing

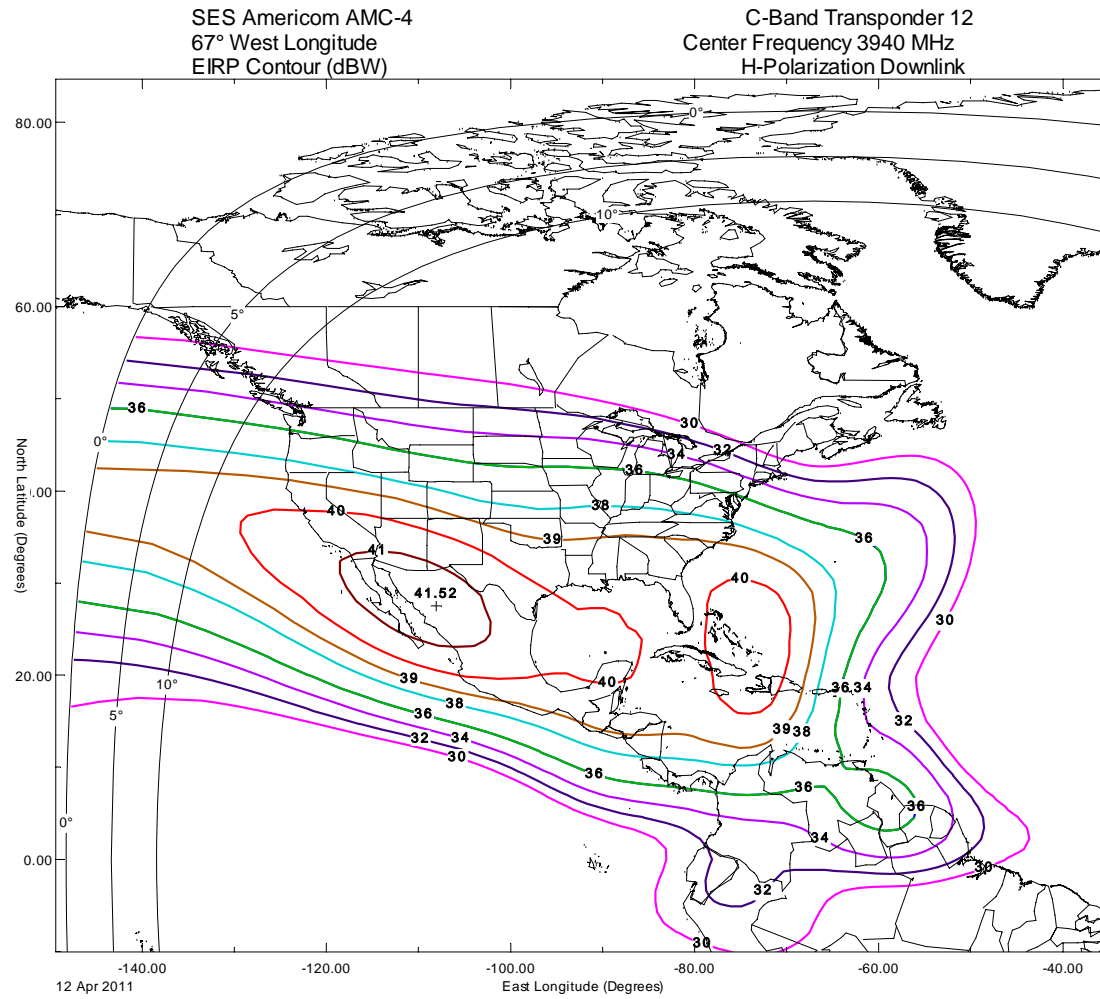


Figure 6

EIRP Pattern of AMC-4: C-band transponder 12, H-pol(down), proposed pointing

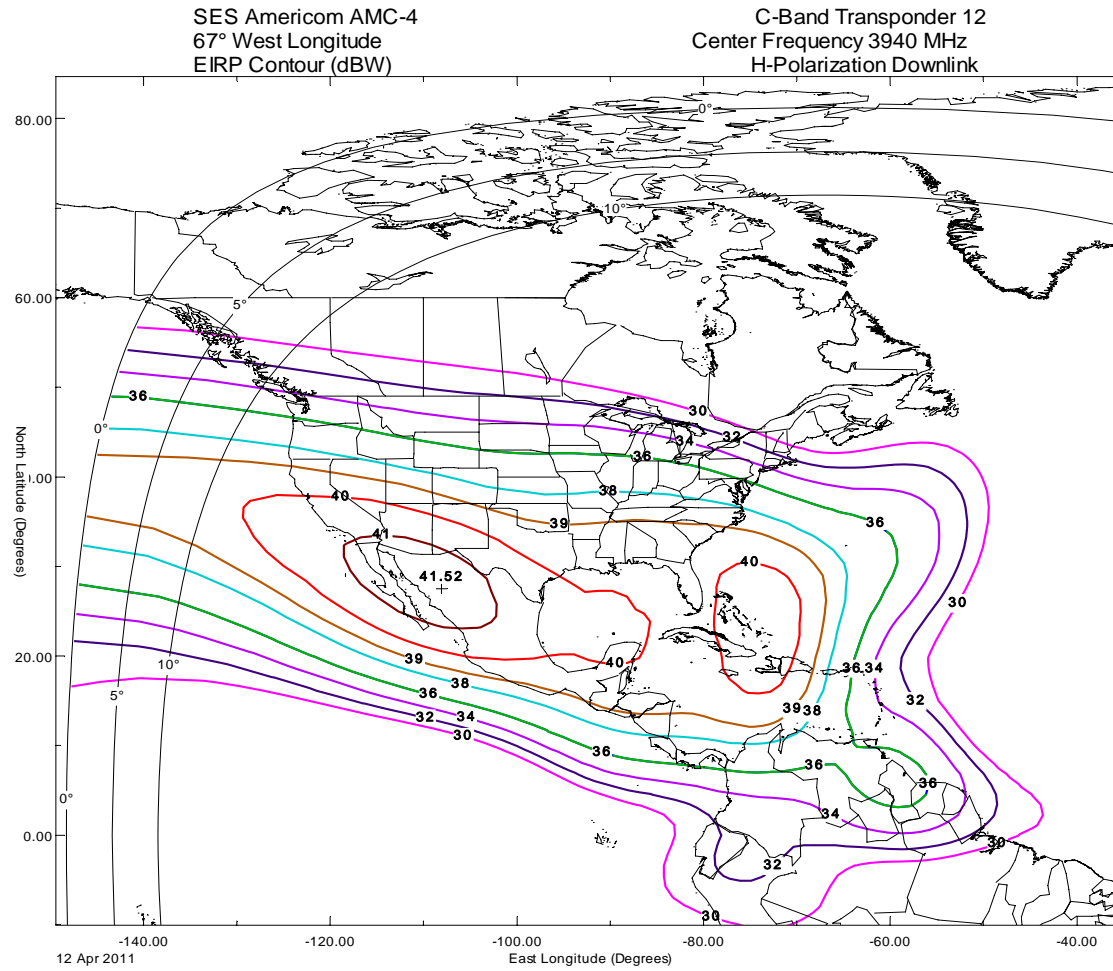


Figure 7

EIRP Pattern of AMC-4: C-band transponder 12, V-pol(down), current pointing

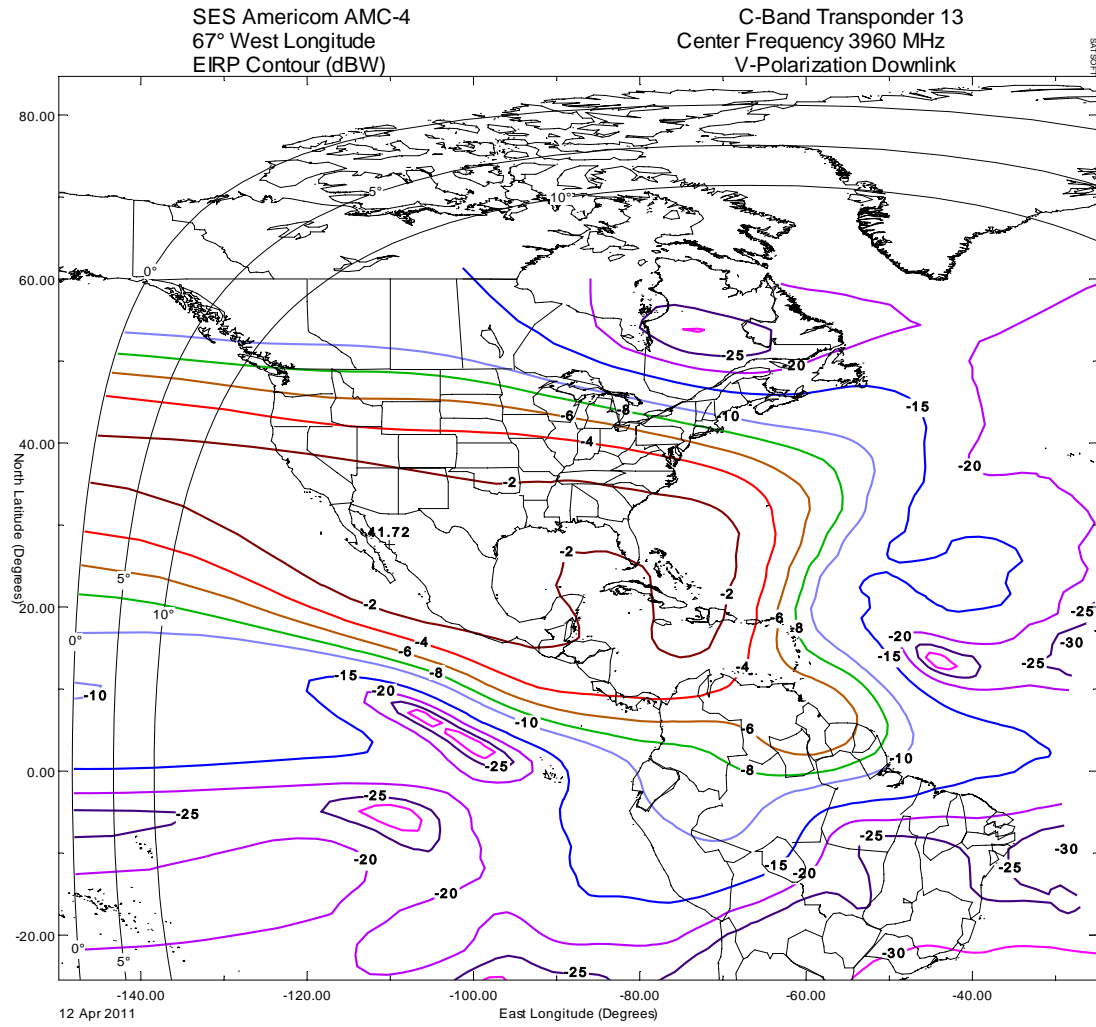
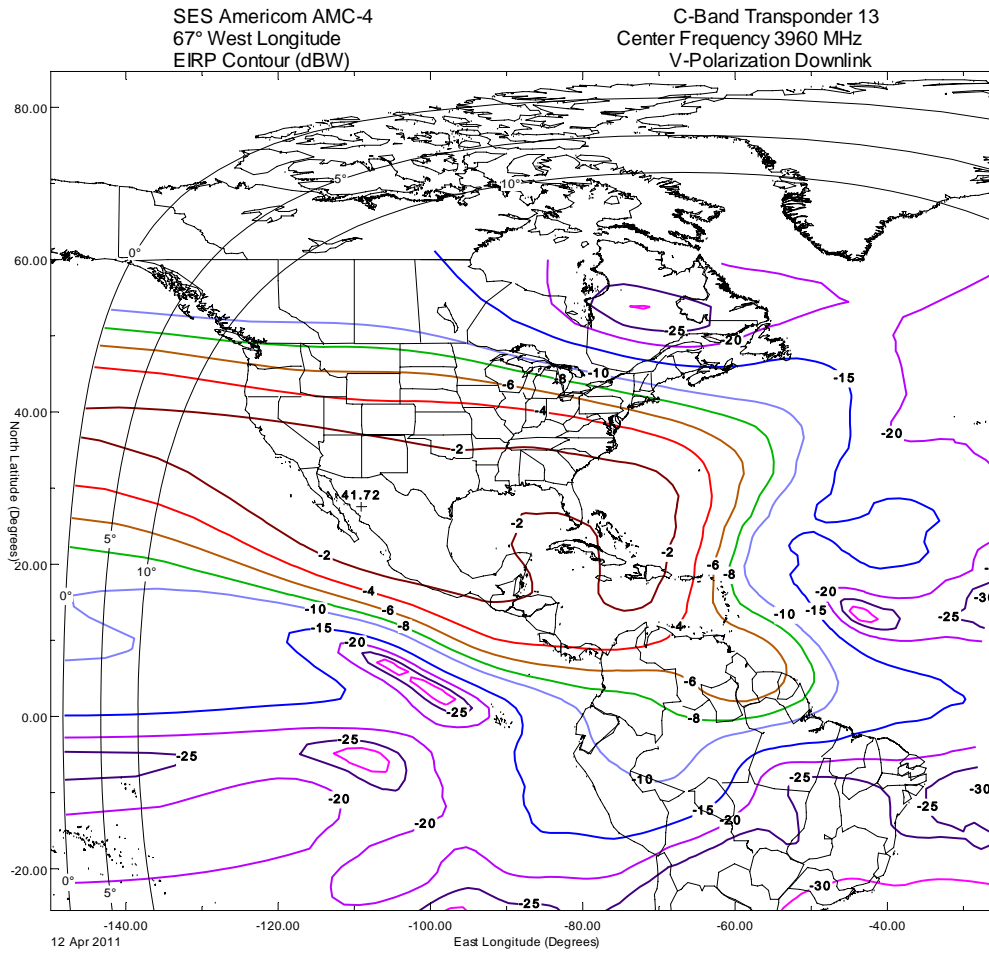


Figure 8

EIRP Pattern of AMC-4: C-band transponder 12, V-pol(down), proposed pointing



DECLARATION OF KRISH JONNALAGADDA

I, Krish Jonnalagadda, hereby certify under penalty of perjury that I am the technically qualified person responsible for preparation of the technical information contained in the foregoing exhibit; that I am familiar with the technical requirements of Part 25; and that I either prepared or reviewed the technical information contained in the exhibit and that it is complete and accurate to the best of my knowledge, information and belief.

/s/ Krish Jonnalagadda
SES Americom, Inc.

Dated: April 14, 2011