

S2135 SAT-MOD-20110510-00086  
SES Americom, Inc.  
AMC-4

IB2011001351

\*\*see also  
SAT-AMD-20110802-00142



Date & Time Filed: May 10 2011 2:41:28:473PM  
File Number: SAT-MOD-20110510-00086

File # SAT-MOD-20110510-00086  
Call Sign S2135 Grant Date 09/21/11  
(or other identifier) Term Dates duration of  
From 09/21/11 To: license term  
Approved: Stephen J. Duall  
Stephen J. Duall  
Chief, Satellite Policy Branch

Approved by OMB  
3060-0678

FCC APPLICATION FOR SPACE AND EARTH STATION:MOD OR AMD - MAIN FORM

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APPLICANT INFORMATION


Enter a description of this application to identify it on the main menu:  
S2135 (AMC-4) Repeating at 67 W.L. -- 5/2011

1-8. Legal Name of Applicant

Name:	SES Americom, Inc.	Phone Number:	202-478-7181
DBA Name:		Fax Number:	202-478-7101
Street:	1129 20th Street NW Suite 1000	E-Mail:	suzanne.malloy@ses.com
City:	Washington	State:	DC
Country:	USA	Zipcode:	20036
Attention:	Suzanne Malloy		-

Attachment to Grant  
IBFS File Nos. SAT-MOD-20110510-00086 & SAT-AMD-20110802-00142  
Call Sign S2135  
September 21, 2011

The request of SES Americom, Inc. (SES Americom), IBFS File Nos. SAT-MOD-20110510-00086 & SAT-AMD-20110802-00142, to modify its authorization to operate the AMC-4 space station (Call Sign S2135) at the 67° W.L. orbital location in the 11.45-11.7 GHz and 11.7-12.2 GHz (space-to-Earth) and 13.75-14.0 GHz and 14.0-14.5 GHz (Earth-to-space) frequency bands IS GRANTED. Specifically, SES Americom is authorized to operate the AMC-4 space station with a 0.1-degree change in the azimuth of the satellite's North American beam from the orientation previously authorized.<sup>1</sup> In addition, SES Americom is authorized to operate a C-band beacon signal with a center frequency of 4199.5 MHz (space-to-Earth). This authorization shall be in accordance with the technical specifications set forth in SES Americom's application, Federal Communication Commission (Commission) rules, and is subject to the conditions placed on operations of the AMC-4 space station at 67° W.L. in IBFS File No. SAT-MOD-20100623-00144 (granted November 4, 2010).

 <b>GRANTED*</b> International Bureau *with conditions	<b>File #</b> SAT-AMD-20110802-00142 SAT-MOD-20110510-00086
	<b>Call Sign</b> S2135 <b>Grant Date</b> 09/21/11 (or other identifier)
	<b>Term Dates</b> duration of <b>From</b> 09/21/11 <b>To:</b> license term
	<b>Approved:</b> <i>Stephen J. Duall</i> Stephen J. Duall Chief, Satellite Policy Branch

<sup>1</sup> See IBFS File Nos. SAT-MOD-20100623-00144 (granted November 4, 2010).

9-16. Name of Contact Representative

<b>Name:</b>	Karis A. Hastings, Esq.	<b>Phone Number:</b>	202-637-5767
<b>Company:</b>	Hogan Lovells US LLP	<b>Fax Number:</b>	202-637-5910
<b>Street:</b>	555 Thirteenth Street, NW	<b>E-Mail:</b>	karis.hastings@hoganlovells.com
<b>City:</b>	Washington	<b>State:</b>	DC
<b>Country:</b>	USA	<b>Zipcode:</b>	20004-1109
<b>Attention:</b>		<b>Relationship:</b>	

CLASSIFICATION OF FILING

<p>17. Choose the button next to the classification that applies to this filing for both questions a. and b. Choose only one for 17a and only one for 17b.</p> <p><input type="radio"/> a1. Earth Station</p> <p><input checked="" type="radio"/> a2. Space Station</p>	<p>(N/A) b1. Application for License of New Station (N/A) b2. Application for Registration of New Domestic Receive-Only Station</p> <p><input type="radio"/> b3. Amendment to a Pending Application</p> <p><input checked="" type="radio"/> b4. Modification of License or Registration</p> <p>b5. Assignment of License or Registration</p> <p>b6. Transfer of Control of License or Registration</p> <p><input type="radio"/> b7. Notification of Minor Modification</p> <p>(N/A) b8. Application for License of New Receive-Only Station Using Non-U.S. Licensed Satellite</p> <p>(N/A) b9. Letter of Intent to Use Non-U.S. Licensed Satellite to Provide Service in the United States</p> <p>(N/A) b10. Other (Please specify)</p> <p>(N/A) b11. Application for Earth Station to Access a Non-U.S. satellite Not Currently Authorized to Provide the Proposed Service in the Proposed Frequencies in the United States</p> <p>(N/A) b12. Application for Database Entry</p> <p><input type="radio"/> b13. Amendment to a Pending Database Entry Application</p> <p><input type="radio"/> b14. Modification of Database Entry</p>
<p>17c. Is a fee submitted with this application?</p> <p><input checked="" type="radio"/> If Yes, complete and attach FCC Form 159. If No, indicate reason for fee exemption (see 47 C.F.R. Section 1.1114).</p> <p><input type="radio"/> Governmental Entity</p> <p><input type="radio"/> Noncommercial educational licensee</p> <p><input type="radio"/> Other (please explain):</p>	
<p>17d.</p> <p>Fee Classification BFY – Space Station Modification (Geostationary)</p>	

<p>18. If this filing is in reference to an existing station, enter:</p> <p>(a) Call sign of station: S2135</p>	<p>19. If this filing is an amendment to a pending application enter both fields, if this filing is a modification please enter only the file number:</p> <p>(a) Date pending application was filed:           (b) File number: SATMOD2010062300144</p>
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**TYPE OF SERVICE**

20. NATURE OF SERVICE: This filing is for an authorization to provide or use the following type(s) of service(s): Select all that apply:

- a. Fixed Satellite
- b. Mobile Satellite
- c. Radiodetermination Satellite
- d. Earth Exploration Satellite
- e. Direct to Home Fixed Satellite
- f. Digital Audio Radio Service
- g. Other (please specify)

21. STATUS: Choose the button next to the applicable status. Choose only one.

- Common Carrier
- Non-Common Carrier

22. If earth station applicant, check all that apply.

- Using U.S. licensed satellites
- Using Non-U.S. licensed satellites

23. If applicant is providing INTERNATIONAL COMMON CARRIER service, see instructions regarding Sec. 214 filings. Choose one. Are these facilities:

- Connected to a Public Switched Network
- Not connected to a Public Switched Network
- N/A

24. FREQUENCY BAND(S): Place an 'X' in the box(es) next to all applicable frequency band(s).

a. C-Band (4/6 GHz)

b. Ku-Band (12/14 GHz)

c. Other (Please specify upper and lower frequencies in MHz.)

Frequency Lower: \_\_\_\_\_ Frequency Upper: \_\_\_\_\_ (Please specify additional frequencies in an attachment)

TYPE OF STATION

25. CLASS OF STATION: Choose the button next to the class of station that applies. Choose only one.

a. Fixed Earth Station

b. Temporary-Fixed Earth Station

c. 12/14 GHz VSAT Network

d. Mobile Earth Station

e. Geostationary Space Station

f. Non-Geostationary Space Station

g. Other (please specify)

26. TYPE OF EARTH STATION FACILITY:

Transmit/Receive

Transmit-Only

Receive-Only

N/A

"For Space Station applications, select N/A."

PURPOSE OF MODIFICATION

27. The purpose of this proposed modification is to: (Place an 'X' in the box(es) next to all that apply.)

- a --- authorization to add new emission designator and related service
- b --- authorization to change emission designator and related service
- c --- authorization to increase EIRP and EIRP density
- d --- authorization to replace antenna
- e --- authorization to add antenna
- f --- authorization to relocate fixed station
- g --- authorization to change frequency(ies)
- h --- authorization to add frequency
- i --- authorization to add Points of Communication (satellites & countries)
- j --- authorization to change Points of Communication (satellites & countries)
- k --- authorization for facilities for which environmental assessment and radiation hazard reporting is required
- l --- authorization to change orbit location
- m --- authorization to perform fleet management
- n --- authorization to extend milestones
- o --- Other (Please specify)

ENVIRONMENTAL POLICY

28. Would a Commission grant of any proposal in this application or amendment have a significant environmental impact as defined by 47 CFR 1.1307? If YES, submit the statement as required by Sections 1.1308 and 1.1311 of the Commission's rules, 47 C.F.R. 1.1308 and 1.1311, as an exhibit to this application. A Radiation Hazard Study must accompany all applications for new transmitting facilities, major modifications, or major amendments.

Yes  No

ALIEN OWNERSHIP Earth station applicants not proposing to provide broadcast, common carrier, aeronautical en route or aeronautical fixed radio station services are not required to respond to Items 30–34.

29. Is the applicant a foreign government or the representative of any foreign government?

Yes  No

30. Is the applicant an alien or the representative of an alien?

Yes  No  N/A

31. Is the applicant a corporation organized under the laws of any foreign government?

Yes  No  N/A

32. Is the applicant a corporation of which more than one-fifth of the capital stock is owned of record or voted by aliens or their representatives or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country?

Yes  No  N/A



<p>33. Is the applicant a corporation directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock is owned of record or voted by aliens, their representatives, or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country?</p>	<p><input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A</p>
<p>34. If any answer to questions 29, 30, 31, 32 and/or 33 is Yes, attach as an exhibit an identification of the aliens or foreign entities, their nationality, their relationship to the applicant, and the percentage of stock they own or vote.</p>	<p>Exhibit A</p>

**BASIC QUALIFICATIONS**

<p>35. Does the Applicant request any waivers or exemptions from any of the Commission's Rules? If Yes, attach as an exhibit, copies of the requests for waivers or exceptions with supporting documents.</p>	<p><input type="radio"/> Yes <input checked="" type="radio"/> No</p>
<p>36. Has the applicant or any party to this application or amendment had any FCC station authorization or license revoked or had any application for an initial, modification or renewal of FCC station authorization, license, or construction permit denied by the Commission? If Yes, attach as an exhibit, an explanation of circumstances.</p>	<p><input type="radio"/> Yes <input checked="" type="radio"/> No</p>

<p>37. Has the applicant, or any party to this application or amendment, or any party directly or indirectly controlling the applicant ever been convicted of a felony by any state or federal court? If Yes, attach as an exhibit, an explanation of circumstances.</p>	<p style="text-align: center;"> <input type="radio"/> Yes      <input checked="" type="radio"/> No         </p>
<p>38. Has any court finally adjudged the applicant, or any person directly or indirectly controlling the applicant, guilty of unlawfully monopolizing or attempting unlawfully to monopolize radio communication, directly or indirectly, through control of manufacture or sale of radio apparatus, exclusive traffic arrangement or any other means or unfair methods of competition? If Yes, attach as an exhibit, an explanation of circumstances</p>	<p style="text-align: center;"> <input type="radio"/> Yes      <input checked="" type="radio"/> No         </p>
<p>39. Is the applicant, or any person directly or indirectly controlling the applicant, currently a party in any pending matter referred to in the preceding two items? If yes, attach as an exhibit, an explanation of the circumstances.</p>	<p style="text-align: center;"> <input type="radio"/> Yes      <input checked="" type="radio"/> No         </p>
<p>40. If the applicant is a corporation and is applying for a space station license, attach as an exhibit the names, address, and citizenship of those stockholders owning a record and/or voting 10 percent or more of the Filer's voting stock and the percentages so held. In the case of fiduciary control, indicate the beneficiary(ies) or class of beneficiaries. Also list the names and addresses of the officers and directors of the Filer.</p> <p style="text-align: right;">Exhibit B</p>	

<p>41. By checking Yes, the undersigned certifies, that neither applicant nor any other party to the application is subject to a denial of Federal benefits that includes FCC benefits pursuant to Section 5301 of the Anti-Drug Act of 1988, 21 U.S.C. Section 862, because of a conviction for possession or distribution of a controlled substance. See 47 CFR 1.2002(b) for the meaning of "party to the application"; for these purposes.</p>	<p style="text-align: center;"> <input checked="" type="radio"/> Yes      <input type="radio"/> No         </p>
<p>42a. Does the applicant intend to use a non-U.S. licensed satellite to provide service in the United States? If Yes, answer 42b and attach an exhibit providing the information specified in 47 C.F.R. 25.137, as appropriate. If No, proceed to question 43.</p>	<p style="text-align: center;"> <input type="radio"/> Yes      <input checked="" type="radio"/> No         </p>
<p>42b. What administration has licensed or is in the process of licensing the space station? If no license will be issued, what administration has coordinated or is in the process of coordinating the space station?</p>	<p>43. Description. (Summarize the nature of the application and the services to be provided). (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)</p> <div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> <p>SES Americom, Inc. hereby seeks a modification of the license for AMC-4, call sign S2135, to reflect a 0.1 degree change in the azimuth of the satellite's North American beam from the orientation previously authorized for the satellite at this orbital location.</p> </div> <p>Narrative</p>

43a. Geographic Service Rule Certification

By selecting A, the undersigned certifies that the applicant is not subject to the geographic service or geographic coverage requirements specified in 47 C.F.R. Part 25.

A

By selecting B, the undersigned certifies that the applicant is subject to the geographic service or geographic coverage requirements specified in 47 C.F.R. Part 25 and will comply with such requirements.

B

By selecting C, the undersigned certifies that the applicant is subject to the geographic service or geographic coverage requirements specified in 47 C.F.R. Part 25 and will not comply with such requirements because it is not feasible as a technical matter to do so, or that, while technically feasible, such services would require so many compromises in satellite design and operation as to make it economically unreasonable. A narrative description and technical analysis demonstrating this claim are attached.

C

CERTIFICATION

The Applicant waives any claim to the use of any particular frequency or of the electromagnetic spectrum as against the regulatory power of the United States because of the previous use of the same, whether by license or otherwise, and requests an authorization in accordance with this application. The applicant certifies that grant of this application would not cause the applicant to be in violation of the spectrum aggregation limit in 47 CFR Part 20. All statements made in exhibits are a material part hereof and are incorporated herein as if set out in full in this application. The undersigned, individually and for the applicant, hereby certifies that all statements made in this application and in all attached exhibits are true, complete and correct to the best of his or her knowledge and belief, and are made in good faith.

44. Applicant is a (an): (Choose the button next to applicable response.)

- Individual
- Unincorporated Association
- Partnership
- Corporation
- Governmental Entity
- Other (please specify)

45. Name of Person Signing  
Suzanne H. Malloy

-->

46. Title of Person Signing  
Executive Dir., International & Regulatory Affairs

WILLFUL FALSE STATEMENTS MADE ON THIS FORM ARE PUNISHABLE BY FINE AND / OR IMPRISONMENT  
(U.S. Code, Title 18, Section 1001), AND/OR REVOCATION OF ANY STATION AUTHORIZATION  
(U.S. Code, Title 47, Section 312(a)(1)), AND/OR FORFEITURE (U.S. Code, Title 47, Section 503).

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**THE FOREGOING NOTICE IS REQUIRED BY THE PAPERWORK REDUCTION ACT OF 1995, PUBLIC LAW 104-13, OCTOBER 1, 1995, 44 U.S.C. SECTION 3507.**

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

In the Matter of	)	
	)	
SES AMERICOM, INC.	)	File No. SAT-MOD-_____
	)	Call Sign S2135
Application for Modification of AMC-4	)	
Fixed-Satellite Space Station License	)	

**REQUEST OF SES AMERICOM, INC.**

SES Americom, Inc. ("SES Americom," doing business as "SES WORLD SKIES"<sup>1</sup>), hereby respectfully requests modification of its license for the AMC-4 fixed-satellite space station at 67° W.L. to reflect a slightly altered coverage pattern than what was originally authorized for the satellite at this orbital location. Grant of the requested authority will enable SES WORLD SKIES to provide enhanced service to the Caribbean and Central America in response to customer demand.

A completed FCC Form 312 is attached, and SES WORLD SKIES incorporates by reference the technical information previously provided in support of AMC-4.<sup>2</sup> In addition, SES WORLD SKIES is providing information relating to the proposed modification to the AMC-4 license in the attached Technical Appendix.

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<sup>1</sup> 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.

<sup>2</sup> See File Nos. SAT-LOA-19940310-00007; SAT-AMD-19941114-00064; SAT-MOD-19970130-00012; SAT-MOD-19981023-00076; SAT-MOD-20080314-00072; & SAT-MOD-20100623-00144.

## MODIFICATION

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”).<sup>3</sup> In response to the service requirements of a new customer, SES WORLD SKIES seeks modification of the AMC-4 license to reflect a slight repointing of the satellite to improve service quality in the Caribbean and Central America. SES WORLD SKIES has already implemented this change pursuant to a grant of Special Temporary Authority,<sup>4</sup> and now seeks modification of the AMC-4 license in order to retain the altered coverage configuration on a long-term basis.

As SES WORLD SKIES described in the AMC-4 STA Request, the repointing involved a .1 degree change in the azimuth of the satellite in order to strengthen the signal levels of the North American beam over the Caribbean and Central American regions.<sup>5</sup> SES WORLD SKIES adjusted the steerable South American beam to compensate for the satellite repointing and maintain the original coverage of South America. Thus, no change in the footprint of the AMC-4 South American beam is proposed.

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<sup>3</sup> 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.*

<sup>4</sup> See Call Sign S2135, File No. SAT-STA-20110414-00072 (“AMC-4 STA Request”), grant-stamped Apr. 21, 2011.

<sup>5</sup> *See id.*, Narrative at 2.



Retaining the revised orientation of AMC-4 will not adversely affect any other operators. Contour maps showing the AMC-4 North American beam coverage area with the original and revised orientations are included in the attached Technical Appendix. As the Technical Appendix demonstrates, the very small shift in AMC-4's North American antenna coverage has 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 with the slight change in pointing discussed herein continue to be consistent with SES WORLD SKIES' coordination agreements, including its agreements with Brazil.<sup>6</sup>

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.<sup>7</sup> Here, grant of the requested modification will permit SES WORLD SKIES to operate AMC-4 with a coverage pattern that has been adjusted to respond to customer demand.

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<sup>6</sup> The reorientation has a slight impact on the C-band TT&C coverage pattern, but the TT&C operations continue to comply with the terms of SES WORLD SKIES' coordination agreement with Star One.

<sup>7</sup> *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 is in a better position to determine how to tailor its system to meet the particular needs of its customers.") (footnote omitted).

For the foregoing reasons, SES WORLD SKIES respectfully requests modification of the AMC-4 license to reflect repointing of the North American beam as described herein.

Respectfully submitted,

SES AMERICOM, INC.

By: /s/ Suzanne H. Malloy

Of Counsel

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Suzanne H. Malloy  
Assistant Secretary  
SES Americom, Inc.  
Four Research Way  
Princeton, NJ 08540

Dated: May 10, 2011

## Technical Appendix

### **1. Introduction**

This technical appendix is submitted in support of the application of SES Americom, Inc. ("SES Americom," doing business as "SES WORLD SKIES") for a modification of its license for the AMC-4 spacecraft at 67° W.L. to reflect a slightly altered coverage pattern than what was originally authorized for the satellite at this orbital location. SES WORLD SKIES incorporates by reference herein the technical information it has already provided with respect to AMC-4,<sup>1</sup> and provides here technical information that is changing as a result of the proposed modification.

### **2. Gain Contours**

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

### **3. Link Budgets and Interference Analysis**

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 is compatible with adjacent satellites and with the Commission's two-degree spacing requirements.<sup>3</sup> The analysis herein shows that the revised pointing of the AMC-4 North American beam has a negligible impact on the interference environment for adjacent satellites.

SES WORLD SKIES calculated the impact of the 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 the original and revised pointing is very small, typically within  $\pm 0.5$  dB. The increase in Ku-band EIRP is 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 repointing is within  $\pm 0.5$  dB for all sites.

For example, in San Juan, Puerto Rico, the Ku-band EIRP for AMC-4 with the original spacecraft orientation was in the range of 36 to 40 dBW. With the repointing, the range is 38 to 41 dBW, an increase of between 1 and 2 dB. To determine the effect of a 2 dB

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<sup>1</sup> See File Nos. SAT-LOA-19940310-00007; SAT-AMD-19941114-00064; SAT-MOD-19970130-00012; SAT-MOD-19981023-00076; SAT-MOD-20080314-00072; & SAT-MOD-20100623-00144.

<sup>2</sup> 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.

<sup>3</sup> See Call Sign S2434, File No. SAT-MOD-20100623-00144, Technical Appendix, Annex 2.

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 original configuration of AMC-4, and 38 dBW with 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 original 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 original configuration: 7.0 dB, at threshold
- h) C/N in victim carrier with interference from AMC-4 after re-pointing: 7.0 dB, at threshold

Thus, the repointing of AMC-4 results in a 0.5% change to the interference component of the victim's system noise temperature, 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 repointing has 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 discussed herein is consistent with the terms of the existing coordination agreements applicable to operation of AMC-4 and the Brazilian networks.

#### **4. Schedule S**

As discussed above, the proposed modification of the AMC-4 license will not result in any material changes to the spacecraft's operating characteristics or to the interference environment. As a result, the information requested in Schedule S duplicates information that is already on file with the Commission concerning the technical parameters of AMC-4's operation. In similar cases involving requests for minor operational changes, such as slight offsets from the nominal orbital position, the Satellite Division has not required the submission of a new Schedule S.<sup>4</sup> Accordingly, SES WORLD SKIES is not filing a new Schedule S with this application. SES Americom will nevertheless prepare and submit a Schedule S if requested to do so by the Satellite Division.

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<sup>4</sup> See, *e.g.*, File No. SAT-MOD-20040405-00076 (PanAmSat request for authority to operate SBS-6 at 74.05° W.L. rather than 74.0° W.L.).

**5. Orbital Debris Mitigation Statement**

The information required under Section 25.114(d)(14) of the Commission's Rules regarding operations of AMC-4 at 67° W.L. is already on file with the Commission,<sup>5</sup> and the proposed modification to reflect a change in the AMC-4 coverage pattern does not alter the information previously provided.

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<sup>5</sup> See Call Sign S2434, File No. SAT-MOD-20100623-00144, Technical Appendix, Section 8.

Figure 1

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

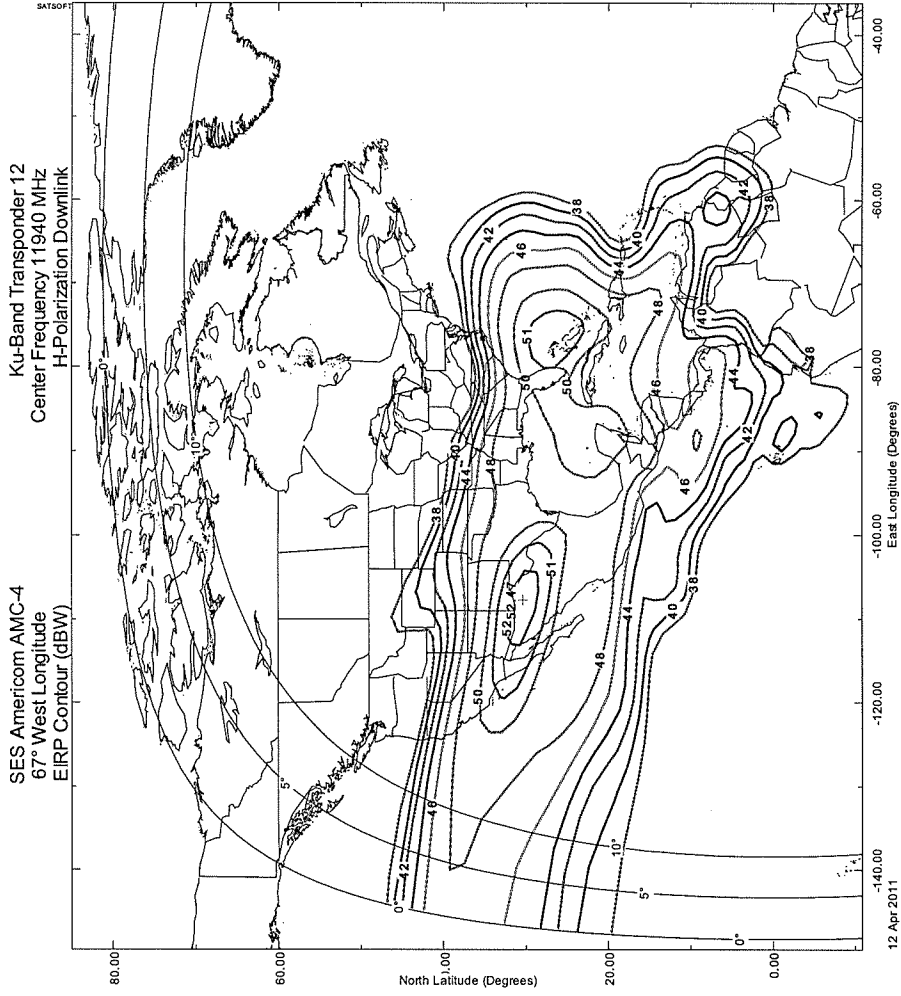


Figure 2

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

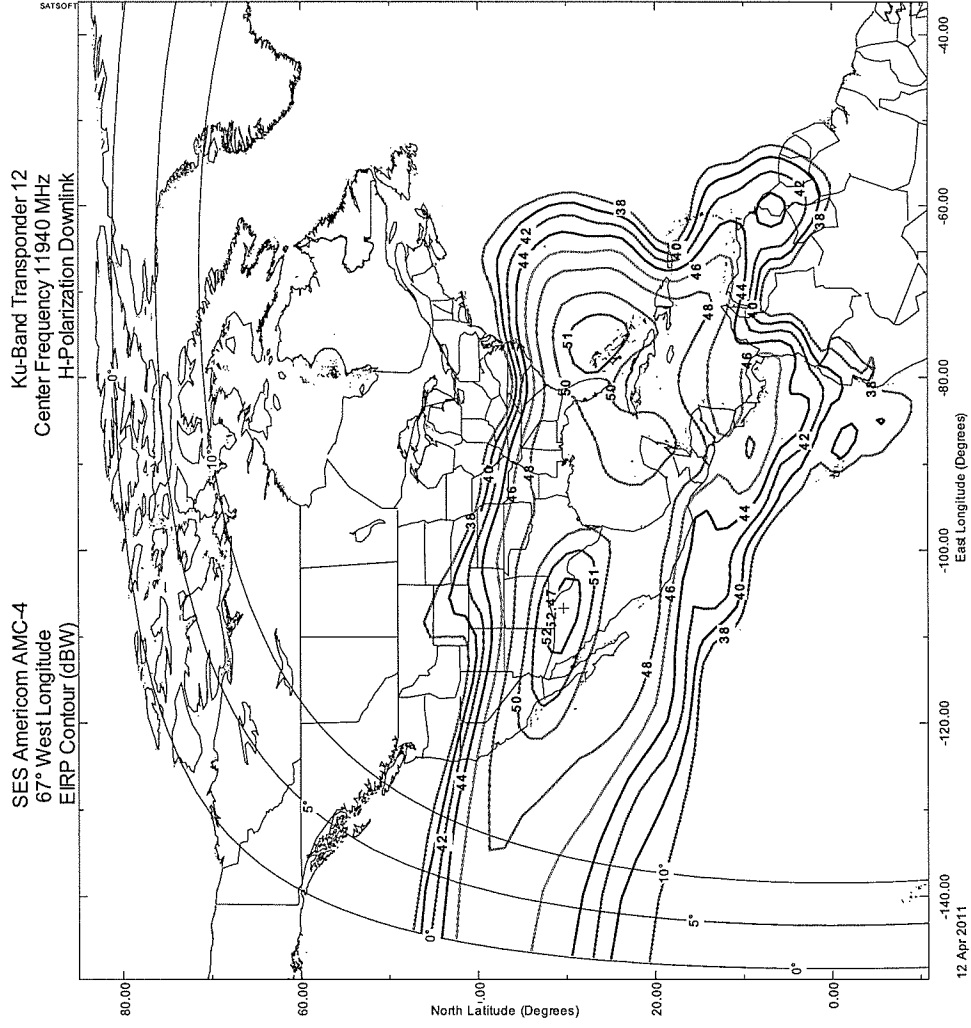






Figure 4

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

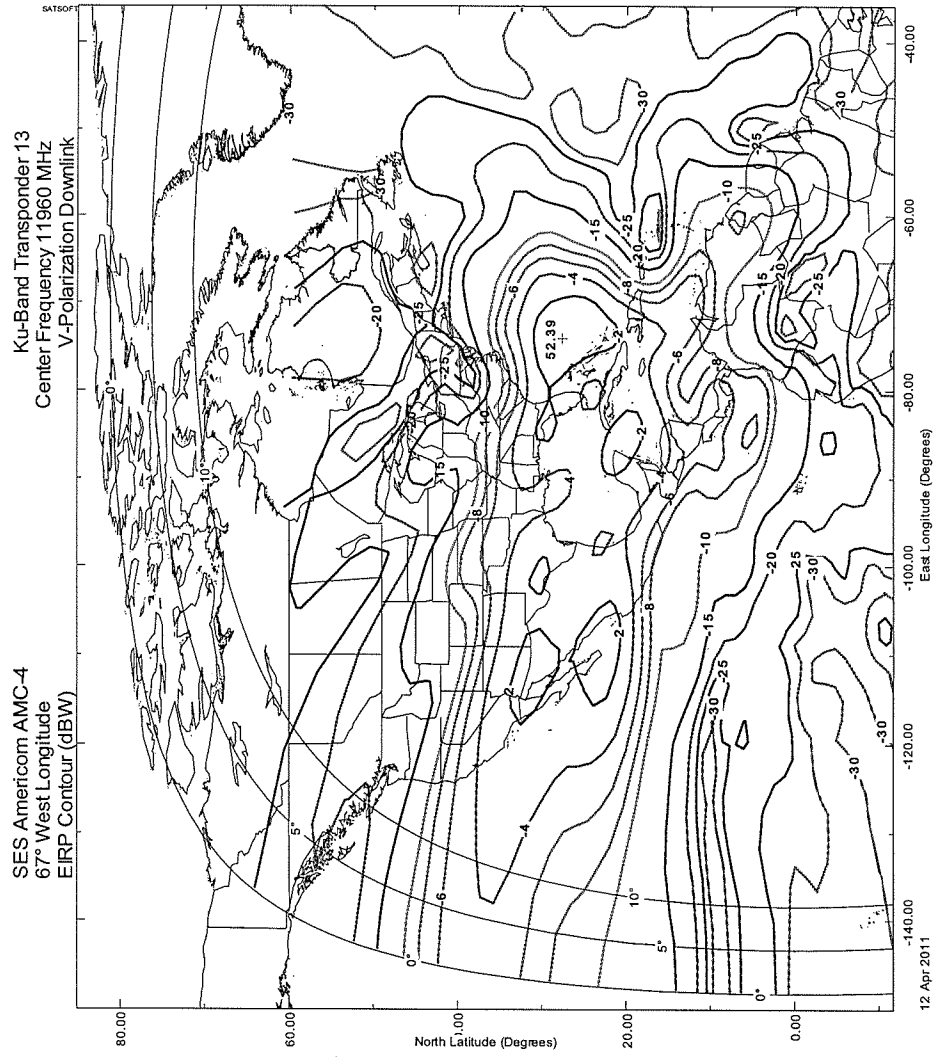


Figure 5

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

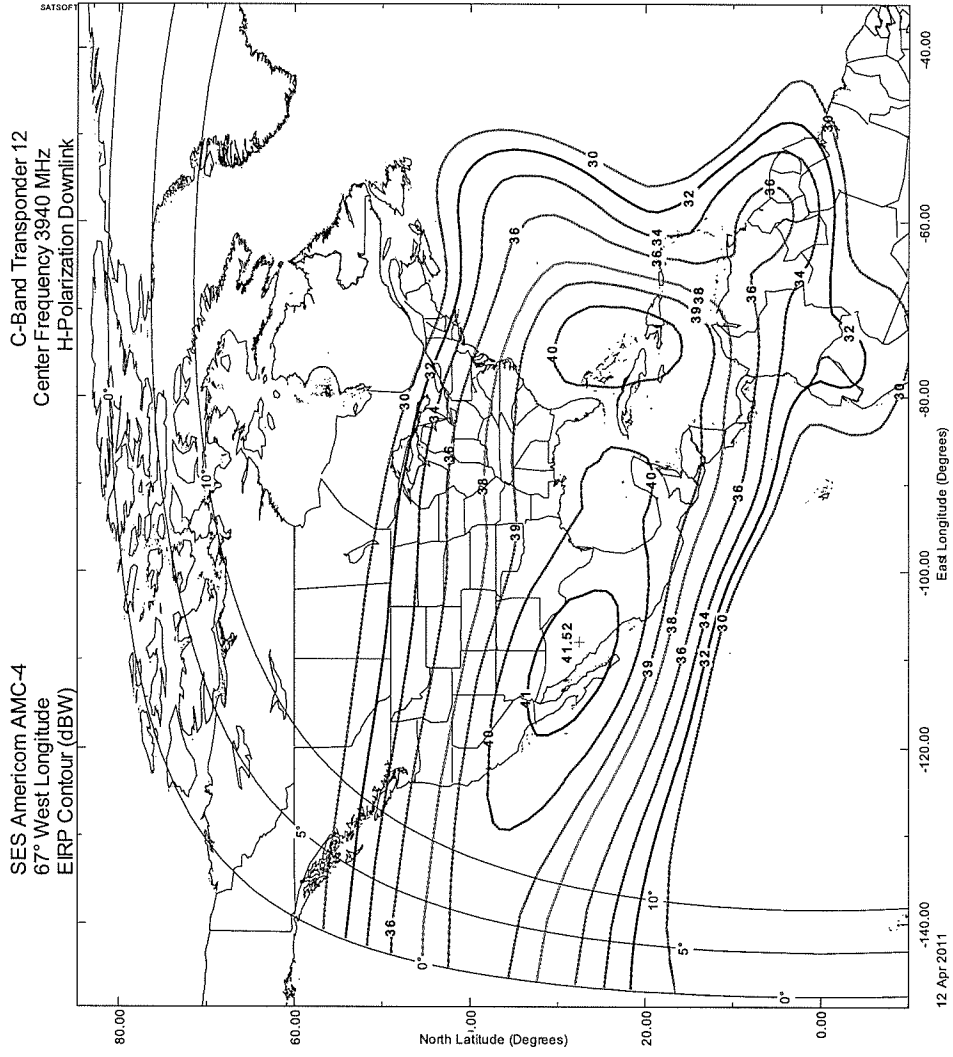


Figure 6

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

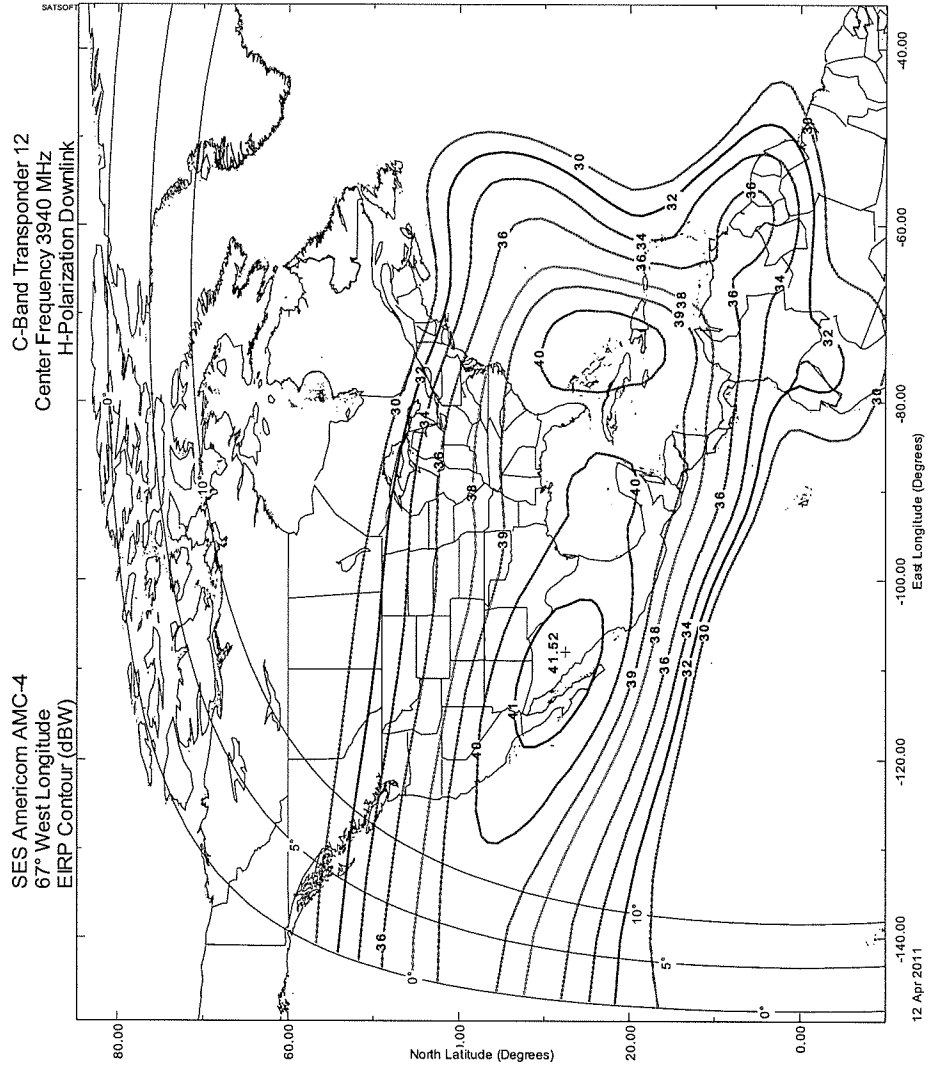


Figure 7

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

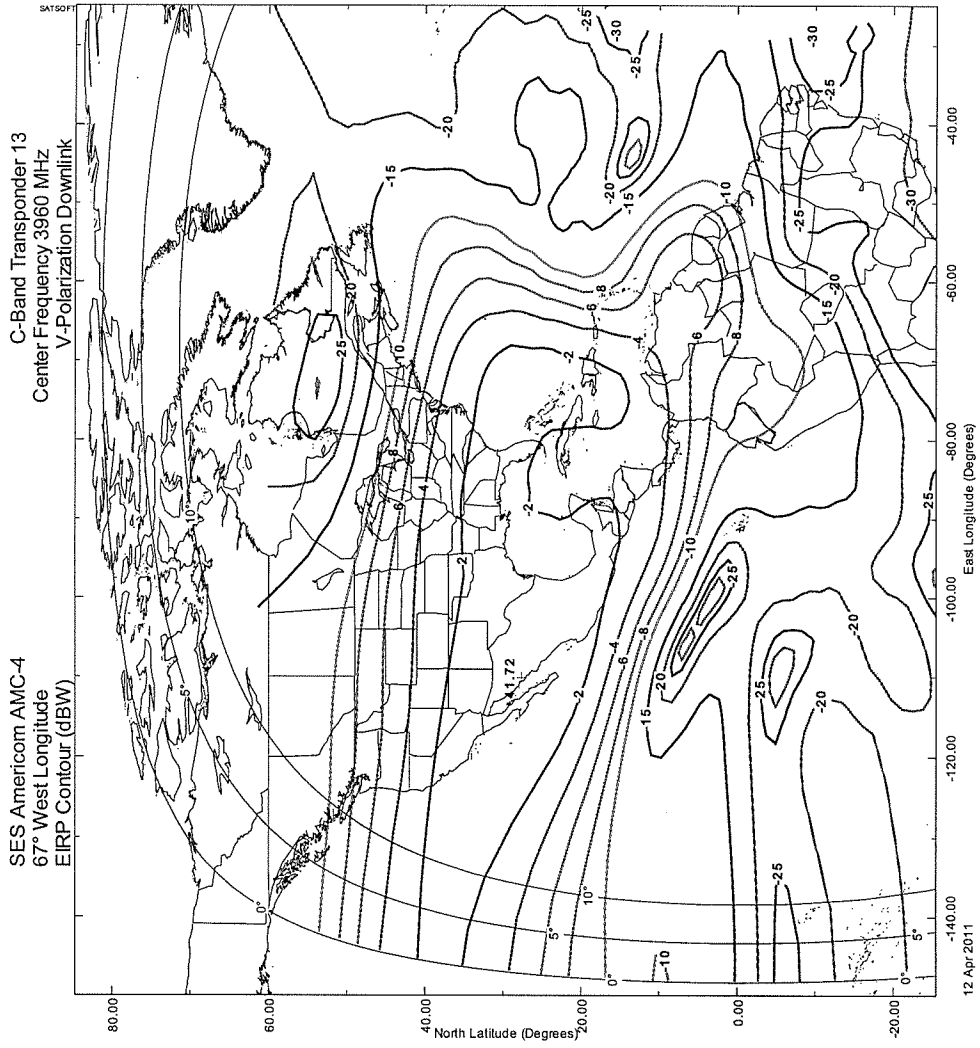
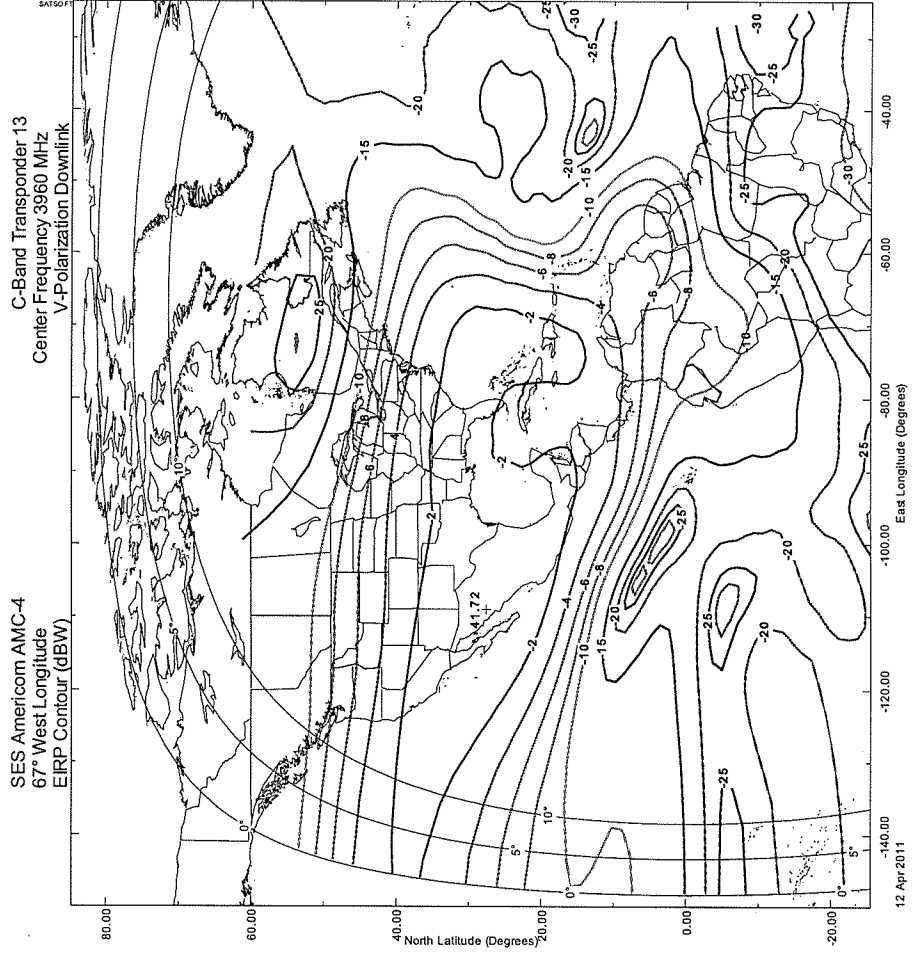


Figure 8

EIRP Pattern of AMC-4: C-band transponder 12, V-pol(down), revised 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: May 10, 2011