EXHIBIT D

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HISPASAT-1C

TECHNICAL INFORMATION

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INFORMATION FOR HISPASAT 1C SPACE STATION

(1) Name, address, and telephone number of the owner;

HISPASAT, S.A.
C/ Gobelas, 41
28023-MADRID
TEL: +34 91 710 25 40

(2) General description of overall system facilities, operations and services;

HISPASAT operates a fleet of geostationary communication satellites at 30° W.L. used to provide a wide range of telecommunications services, including routing and DTH delivery of video and audio programs, satellite news gathering, VSAT applications, Internet backbone services, etc. Both within Europe and between Europe and another parts of the worth. HISPASAT was established in 1989. Its first operational satellite was launched in 1992.

(3) a) Radio frequencies and polarization plan (including beacon, telemetry and telecommand functions);

The frequency and polarization plan of the HISPASAT-1C satellite is shown in Figure 1 and recapped in Table 1.

Polarization V and H are orthogonal linear polarizations and are defined as follows:

- Horizontal polarization (H) is defined as being parallel to the equatorial plane.
- Vertical polarization (V) is orthogonal to that of polarization H

The total number of operating transponders in the HISPASAT-1C satellite is 24, which can be selected by ground command.

The following frequencies and polarizations will be used for the telecommand and telemetry and beacon functions:

-Ku band:

TC frequency: 14000.0 MHz , horizontal polarization
TM/Ranging frequency (IBERIA/EUROPE): 12748.25 MHz, horizontal polarization.
Beacon frequency (IBERIA/EUROPE): 11702 MHz, vertical polarization
Beacon frequency (AMERICA): 11702 MHz, horizontal polarization

-S band (emergency):

TC frequency: 2052.0 MHz, Dual RHCP/LHCP polarization
TM frequency: 2228.4163 MHz, Dual RHCP/LHCP polarization

b) Center frequency and polarization of transponders (both receiving and transmitting frequencies); transponder bandwidth;

The receive and transmit center frequencies and polarizations of the 24 transponders are shown in Figure 1 and recapped in Table 1.

The bandwidth of each transponder is 36 MHz

c) Emission designators and allocated bandwidth of emission;

Emission designators: 76K8G1X-- to 36M0G7X--

Allocated bandwidth: 76.8 KHz to 36 MHz

d) Identification of which antenna beams are connected or switchable to each transponder and TT&C function,

The HISPASAT-1C satellite uses fixed receive and transmit beams over Europe (IBERIA/EUROPE beam) and over the Americas (AMERICA beam).

The HISPASAT-1C satellite is able to simultaneously operate within the different coverage zones, which are defined here in.

These coverage zones are:

- IBERIA/EUROPE Coverage, that covers Iberian Peninsula, Balearics, Canaries, Azores/Madeira Islands and most part of Europe and North of Africa

- AMERICA Coverage, that includes a large part of America, from South of Argentina to Canada.

Figure 1 and Table 1 show which receive beam and transmit beam can be connected to each transponder.

Figure 2 and Figure 3 show the coverage of the AMERICA receive beam and the AMERICA transmit beam respectively, as seen from 30° W.L. orbital location.

It is possible by ground command to establish any transponder configuration presented in table 2.

e) Final amplifier output power (identify any net losses between output of final amplifier and input of antenna and specify the maximum EIRP for each antenna beam),

Final amplifier output power: 18,5 dBW (net losses between output of final amplifier and input od antenna: 1,5 dB)

Maximum EIRP at saturation in each transmit beam:

- IBERIA/EUROPE transmit beam: 56 dBW
- AMERICA transmit beam: 50 dBW

Figures 3 and 5 give EIRP contours for IBERIA/EUROPE transmit beam and AMERICA trasnmit beam respectively.

f) Receiving system noise temperature,

446° K (with each receive antenna)

g) Relationship between satellite receive antenna gain patter and gain-to-temperature ratio and saturation flux density for each antenna beam (may be indicated on antenna gain plot),

Figures 2 and 4 give G/T contours for the IBERIA/EUROPE receive beam and the AMERICA receive beam respectively.

Saturation flux density for IBERIA/EUROPE receive beam is:

-(82.0 - X) dBW/m^2 at minimum gain setting (see 5 h below)
-(97.0 - X) dBW/m^2 at maximum gain setting (see 5 h below)

where X is the difference between the G/T peak value and the G/T value in the direction considered

Saturation flux density for AMERICA receive beam is:

-(81.0 - X) dBW/m^2 at minimum gain setting (see 5 h below)
-(96.0 - X) dBW/m^2 at maximum gain setting (see 5 h below)

where X is the difference between the G/T peak value and the G/T value in the direction considered

h) Gain of each transponder channel (between output of receiving antenna and input of transmitting antenna) including any adjustable gain step capabilities,

The gain of each transponder channel, between output of receiving antenna and input of transmitting antenna, will be adjustable by steps lower than 1 dB between a minimum gain of 112 dB and a maximum gain 130 of dB.

i) Predicted receiver and transmitted channel filter response characteristics;

See Tables 3 and 4.

(4) For satellites in geostationary-satellite orbit, orbital location or locations,

The HISPASAT-1C satellite is operated at the 30°W.L. orbital location. Operation of the HISPASAT-1C satellite has been coordinated with United States.

(5) Predicted space station antenna gain contours for each transmit and each receive antenna beam, plotted on an area map at 2dB intervals down to 10 dB below the peak value of the parameter and at 5 dB intervals between 10 dB and 20 dB below the peak value, with the peak value and sense of polarization clearly specified on each plotted contour;

See figures 2, 3, 4 and 5

(6) Description of types of services to be provided, and the areas to be served,

The HISPASAT-1C satellite is used for digital communications services, including video and internet applications, with bit rates ranging from 64 Kbit/s, possibly less, to 45 Mbit/s

The HISPASAT-1C satellite serves Iberian Peninsula, Balearics, Canaries, Azores/Madeira Islands and most part of Europe and North of America as well as a large part of America, from South of Argentina to Canada.

(7) For satellite in geostationary-satellite orbit, accuracy with which the orbital inclination, the antenna axis attitude, and longitudinal drift will be maintained;

The HISPASAT-1C satellite will be maintained at 30° W.L. with an accuracy of +/- 0.07 degree. Its orbital inclination will be maintained within +/- 0.1 degree.

Antenna axis stability: 0.1 degree.

(8) Calculation of power flux density levels within each coverage area and of the energy dispersal, if any, needed for compliance with Sec.25.208;

Power flux density levels will not exceed –152,64 dBW/m^2 per 4 KHz over the U.S. territory.

(9) Arrangement for tracking, telemetry and control;

TTC functions are performed at Arganda (Madrid), Spain (Longitude 3° 22' 40" (E)), Latitude 40° 16' 20" (N))

(10) Physical characteristics of the space station including weight and dimensions of spacecraft, detailed mass (on ground and in-orbit) and power (beginning and end of life) budgets, and estimated operational lifetime and reliability of the space station and the basis for that estimate;

Physical characteristics of the HISPASAT-1C satellite:

Dimensions	stowed:	3.27X2.5X5.1
	deployed:	6.95X28.9X5.1
Mass	on ground	1304 kg
	at launch	3112.5 kg
Power	beginning of life	6.7 kW
	end of life	5.6 kW
Estimated operational lifetime		15Y
Reliability		0.78

(11) Clear and detailed statement of whether the space station is to be operated on a common carrier basis, or whether non-common carrier transactions are proposed. If non-common carrier transactions are proposed, describe the nature of the transactions and specify the number of transponders to be offered on a non-common carrier basis;

The HISPASAT-1C satellite is operated on a non-common carrier basis and all the transponders will be available for use on a non-common carrier basis. HISPASAT leases capacity pursuant to commercial contracts.

It is not HISPASAT's customary practice to hold itself out as a common carrier for hire, and HISPASAT does not intend to make capacity available on a common carrier basis.

(12) Dates by which construction will be commenced and completed, launch date, and estimated date of placement into service;

The HISPASAT-1C satellite was launched on 16th february, 2000 and nowadays is into service.

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	FREQUENCY (MHz)		POLARIZATION		COVERAGE	
TRANSPONDER	UPLINK	DOWNLINK	UPLINK	DOWNLINK	UPLINK	DOWNLINK
41	13020	11731	V	H	IB/EUR	IB/EUR
42	13060	11771	V	H	IB/EUR	IB/EUR
43	13100	11811	V	H	IB/EUR	IB/EUR
44	13140	11851	V	H	IB/EUR	IB/EUR
45	13180	11891	V	H	IB/EUR	IB/EUR
46	13220	11931	V	H	IB/EUR	IB/EUR
47	13020	11731	H	V	IB/EUR	IB/EUR
48	13060	11771	H	V	IB/EUR	IB/EUR
49	13100	11811	H	V	IB/EUR	IB/EUR
50	13140	11851	H	V	IB/EUR	IB/EUR
51	13180	11891	H	V	IB/EUR	IB/EUR
52	13220	11931	H	V	IB/EUR	IB/EUR
53	13772	11972	V	H	IB/EUR IB/EUR AME AME	IBE/EUR AME AME IBE/EUR
54	13812	12012	V	H	IB/EUR IB/EUR AME AME	IBE/EUR AME AME IBE/EUR
55	13852	12052	V	H	IB/EUR IB/EUR AME AME	IBE/EUR AME AME IBE/EUR
56	13892	12092	V	H	IB/EUR IB/EUR AME AME	IBE/EUR AME AME IBE/EUR
57	13772	11972	H	V	IB/EUR IB/EUR AME AME	IBE/EUR AME AME IBE/EUR
58	13812	12012	H	V	IB/EUR IB/EUR AME AME	IBE/EUR AME AME IBE/EUR
59	13852	12052	H	V	IB/EUR IB/EUR AME AME	IBE/EUR AME AME IBE/EUR
60	13892	12092	H	V	IB/EUR IB/EUR AME AME	IBE/EUR AME AME IBE/EUR
61	13932	12132	V	H	IBE/EUR AME	AME AME
62	13972	12172	V	H	IBE/EUR AME	AME AME
63	13932	12132	H	V	IBE/EUR AME	AME AME
64	13972	12172	H	V	IBE/EUR AME	AME AME

Table 1.- Frequency Plan Definition

TRANSPONDER NUMBER	TRANSPONDER SELECTABILITY	
	UPLINK COVERAGE	DOWNLINK COVERAGE
41-52 (12)	IBERIA/EUROPE	IBERIA/EUROPE
53-60 (8)	IBERIA/EUROPE IBERIA/EUROPE AMERICA AMERICA	IBERIA/EUROPE AMERICA AMERICA IBERIA/EUROPE
61-64 (4)	IBERIA/EUROPA AMERICA	AMERICA AMERICA

Table 2.- Transponder interconnectivity

PART OF BAND, fc ± MHz		**10**	**15**	**16.5**	**18**
INPUT SECTION GAIN FLATNESS	dBpp	0.65	0.7	1.2	2.3
TOTAL GAIN FLATNESS	dBpp	0.85	1.3	2.4	4.6
INPUT SECTION GAIN SLOPE	dB/MHz	0.15	0.2	0.5	1.3
TOTAL GAIN SLOPE	dB/MHz	0.25	0.4	1.0	2.9

Table 3.- Amplitude in band response

Frequency Spacing from Fc (± MHz)	**22**	**22.75**	**30**	**35**	**45**
Input Demultiplexer (dB)	18	N/A	35	N/A	40
Output Multiplexer (dB)	11 (5)	18 (9)	25 (20)	N/A (23)	30 (27)

Values in brackets ( ) applies only to end channels

Table 4.- Minimum out of band rejection (dB)

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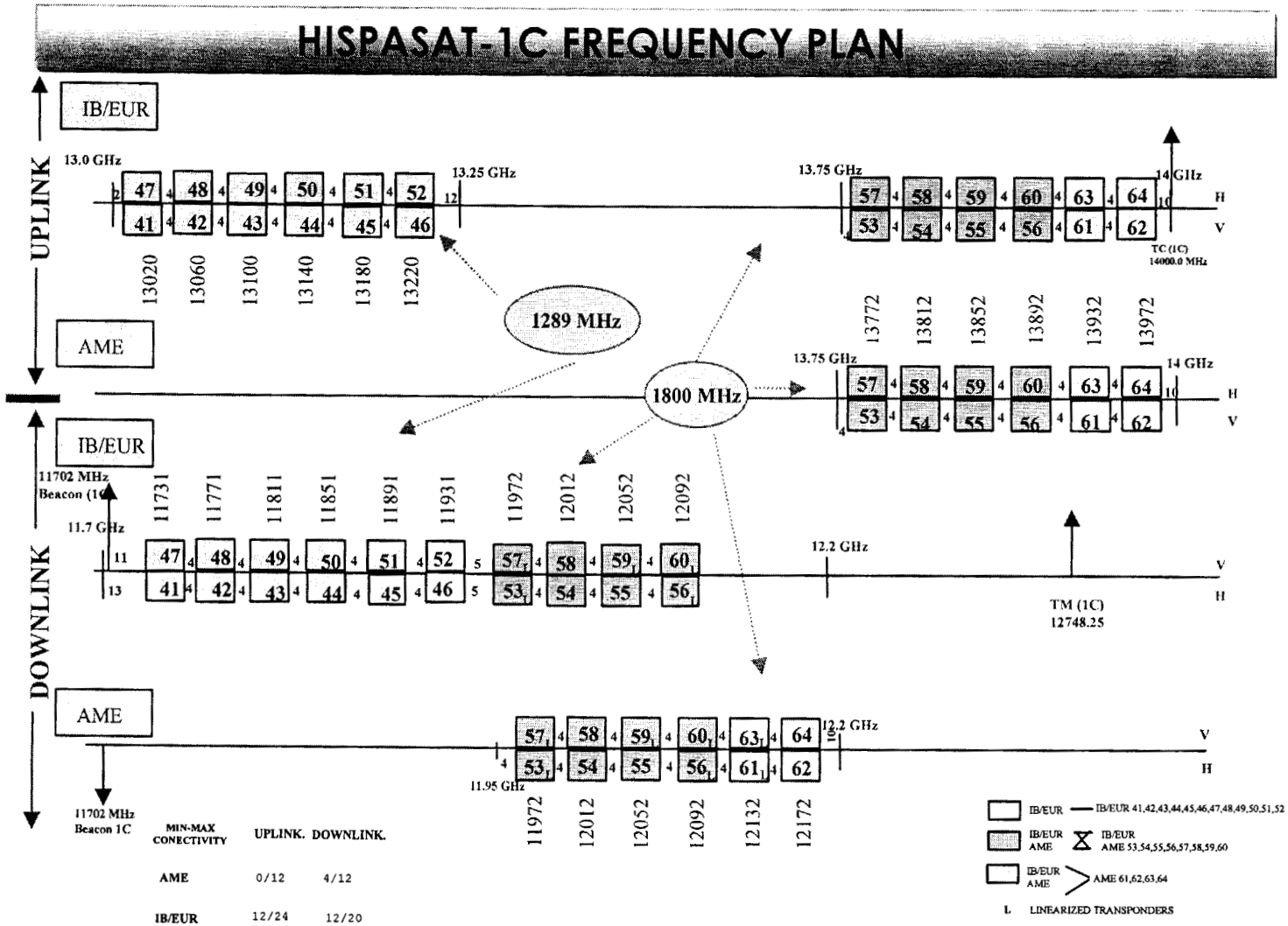

Figure 1.- HISPASAT-1C Frequency Plan

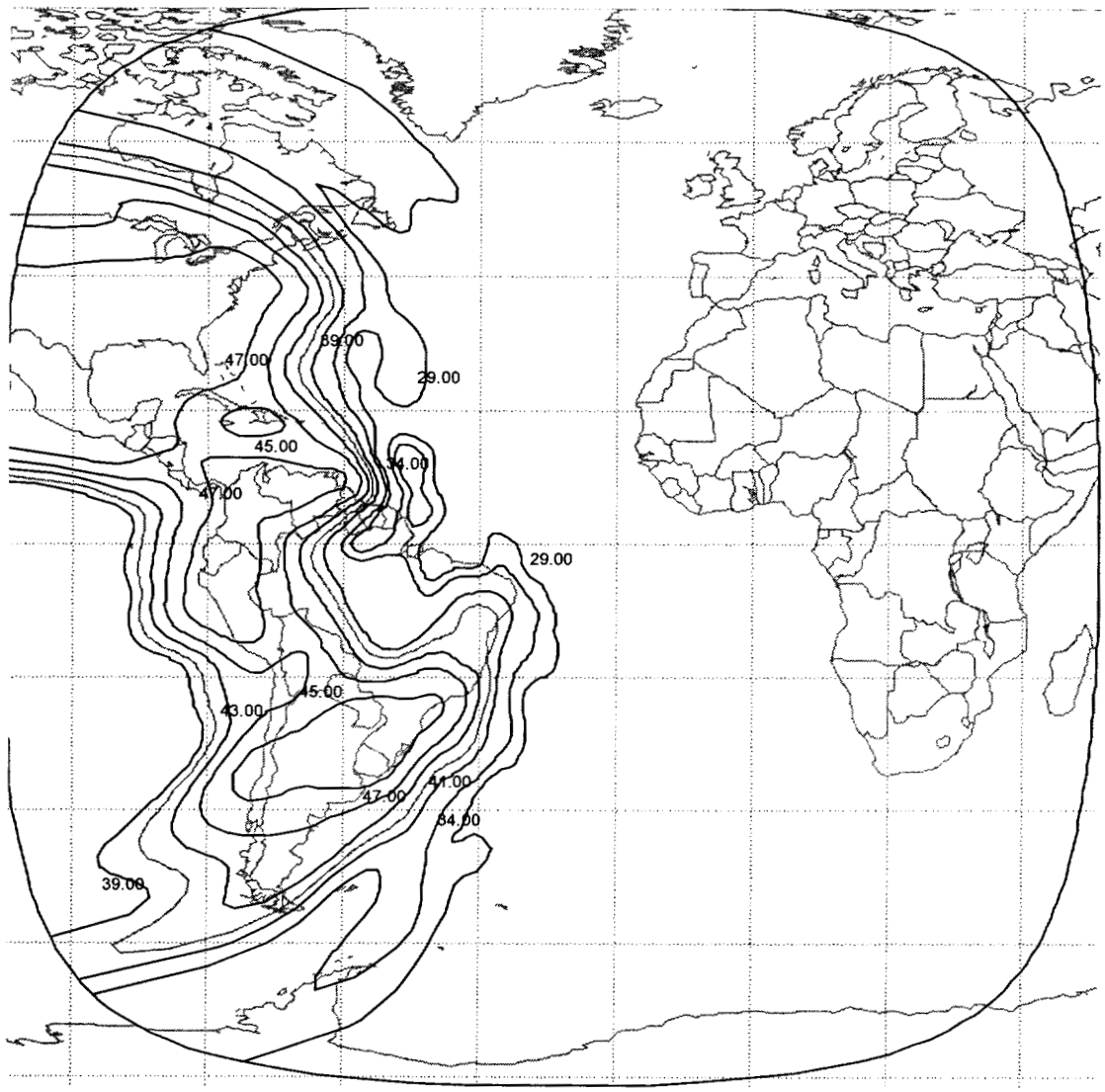

Figure 2.- Illustration of the HISPASAT-1C AMERICA transmit coverage (30°W). EIRP characteristics (dBW)

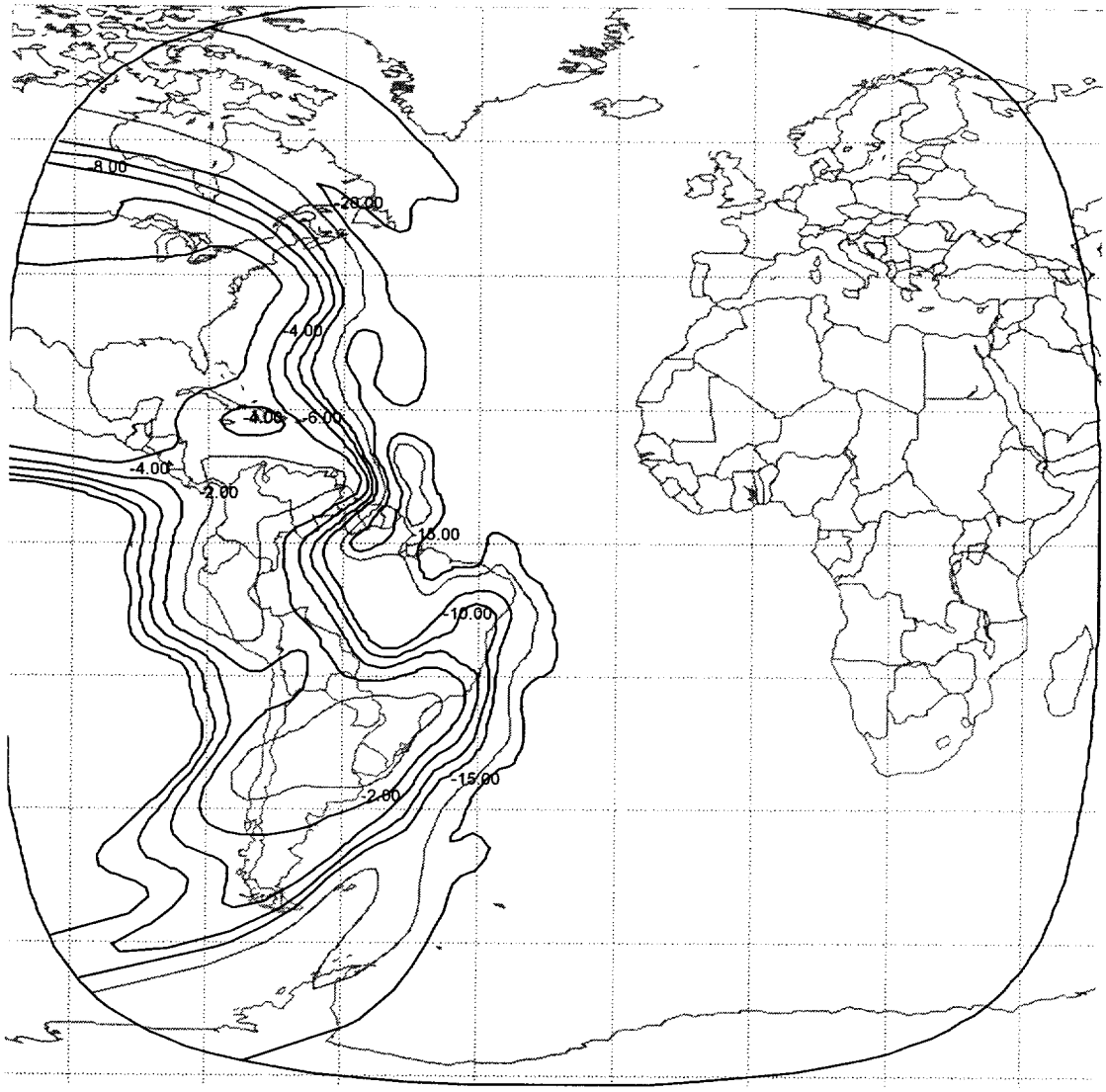

Figure 3.- Illustration of the HISPASAT-1C AMERICA transmit beam. Gain peak 30.7 dBi

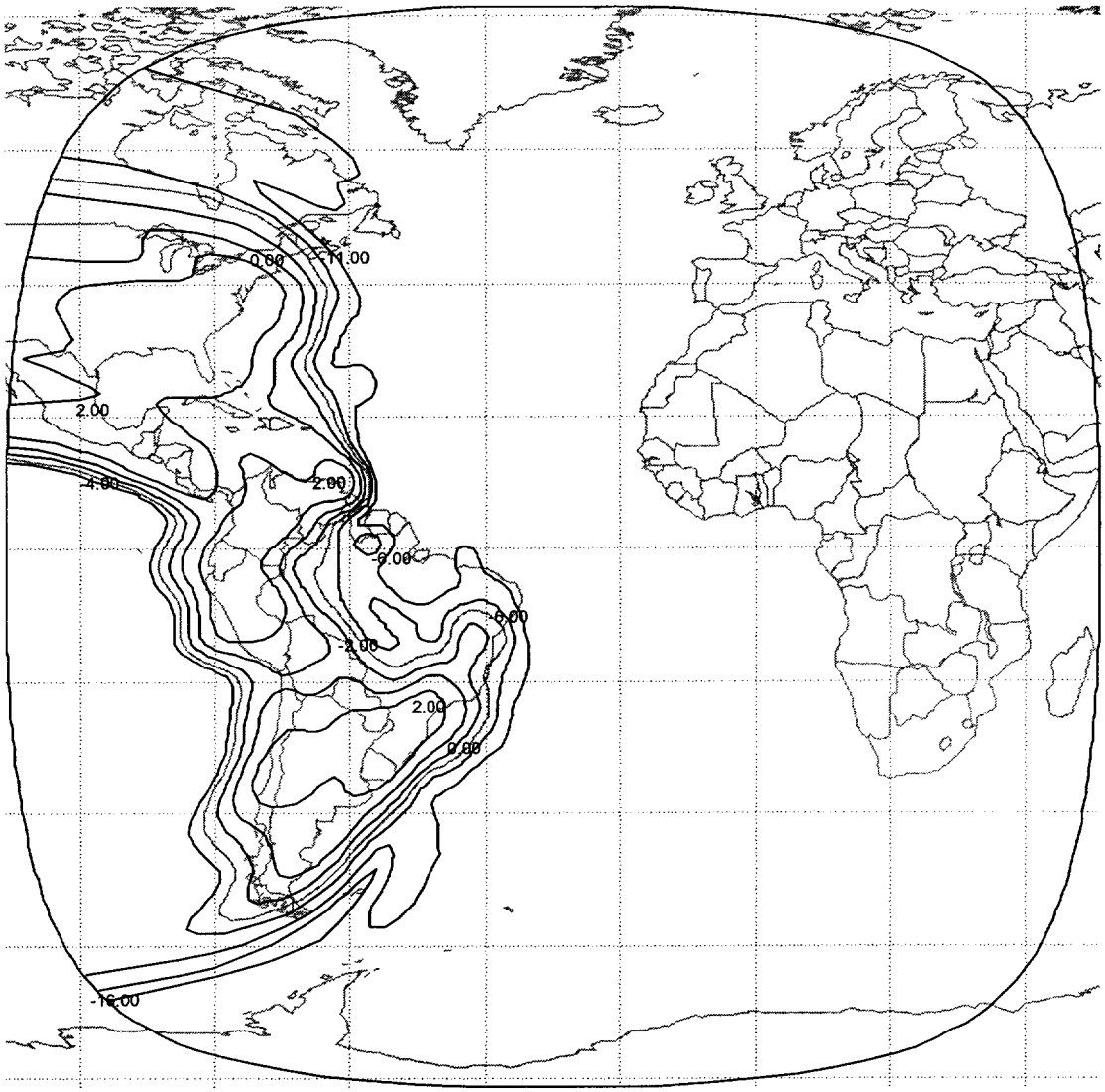

Figure 4.- Illustration of the HISPASAT-1C AMERICA receive coverage (30°W). G/T characteristics (dB/K)

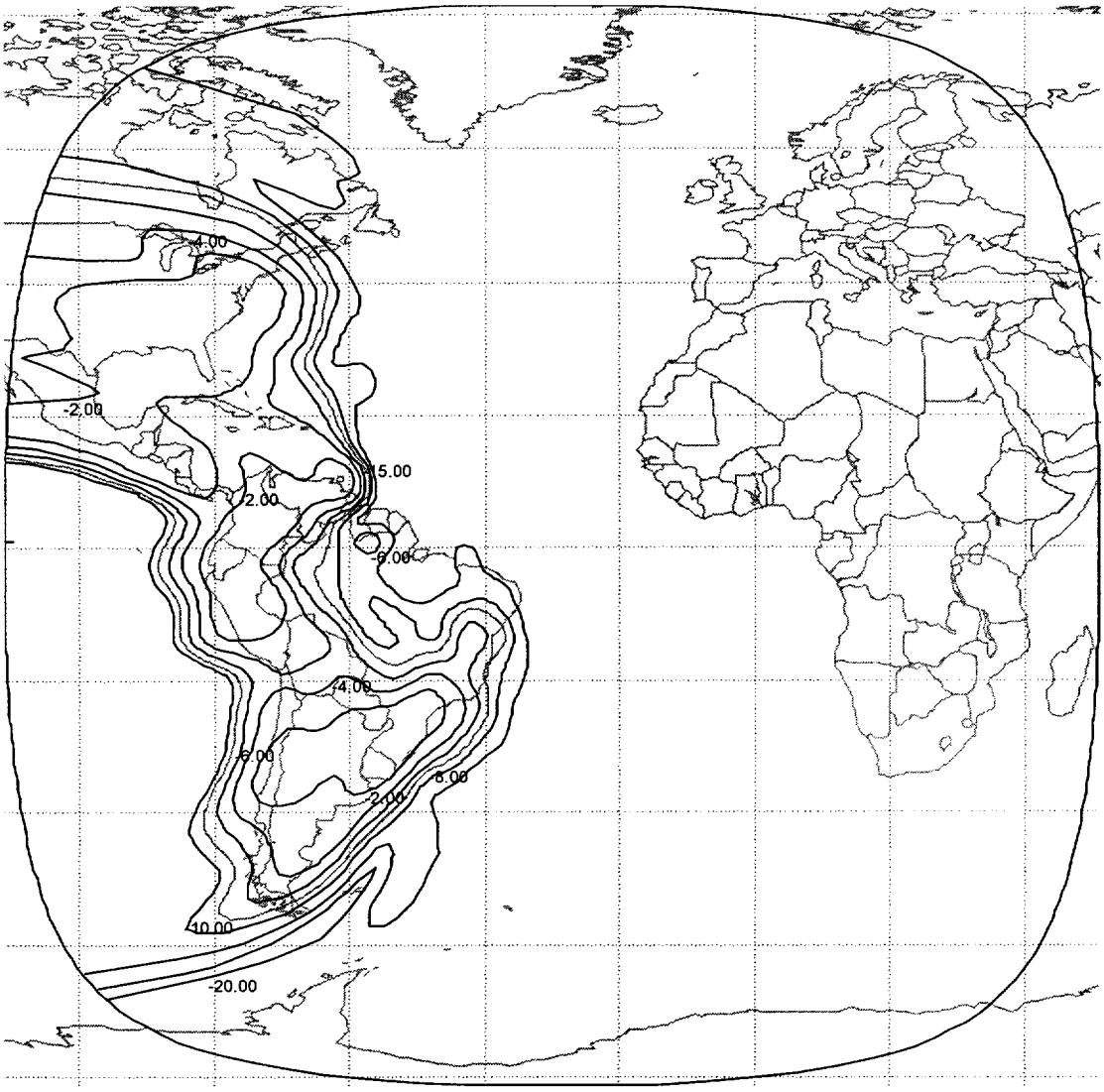

Figure 5.- Illustration of the HISPASAT 1C AMERICA receive beam. Gain peak 38.3 dBi