

Exhibit 5: Link Budgets

SATELLITE DATA	Satellite : IS-706 Uplink Beam: GLOBAL Uplink POL: , Dnlink POL: , EIRP, beam center: 33.5 dBW G/T:-11.5 dB/K, SFD:-73.1 dBW/m2 Dnlink EIRP: 29.5 dBW	Location: 54.85E Dnlink Beam: GLOBAL		
TRANSPONDER DATA	Trans Bandwidth :41 MHz Uplink Frequency:6.175 GHz IBO (Nominal) : 9.5 dB	Trans Type: LTWTA Dnlink Freq: 3.950 GHz OBO (Nominal): 3.7 dB		
CARRIER DATA	Type: TV/FM, Format: PAL, PreEmphasis+Weighting: 15.6dB RF BW: 30.0 MHz, P-Dev: 9.0 MHz, VideoBW: 6.0 MHz,			
LINK BUDGET				
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	80.3	n/a	n/a
	- Uplink Path Loss, clear sky (dB)	-200.2	n/a	n/a
	- Uplink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Satellite G/T (dB/K)	-11.5	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-74.8	n/a	n/a
	C/N Uplink (dB)	22.4	n/a	n/a
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	29.5	n/a	n/a
	- Carrier Output Backoff (dB)	-3.7	n/a	n/a
	Downlink EIRP per carrier (dBW)	25.8	n/a	n/a
	- Earth Station Pointing Error (dB)	-.5	n/a	n/a
	- Downlink Path Loss, clear sky (dB)	-196.3	n/a	n/a
	- Downlink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Earth Station G/T (dB/K)	33.0	n/a	n/a
- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a	
- Carrier Noise Bandwidth (dB-Hz)	-74.8	n/a	n/a	
	C/N Dnlink (dB)	15.9	n/a	n/a
COMPOSITE PERFORMANCE	C/N Uplink (dB)	22.4	n/a	n/a
	C/N Dnlink (dB)	15.9	n/a	n/a
	C/I Uplink Co-channel (dB)	28.4	n/a	n/a
	C/I Dnlink Co-Channel (dB)	28.4	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-1) (dB)	22.2	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	17.3	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-2) (dB)	22.2	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	18.2	n/a	n/a
	C/(N+I) COMPOSITE (dB)	11.0	n/a	n/a
	- Required System Margin (dB)	-1.0	n/a	n/a
Net C/(N+I) COMPOSITE (dB)	10.0	n/a	n/a	
- Minimum Required C/N (dB)	-10.0	n/a	n/a	
	Excess Link Margin (dB)	0.0	n/a	n/a
	Video Signal-to-Noise Ratio (dB)	43.9	n/a	n/a
	Audio Signal-to-Noise Ratio (dB)	57.6	n/a	n/a
TRANSMIT EARTH STATION	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 245.4 watts			
RECEIVE EARTH STA.	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr			
DENSITY INFORMATION	Uplink Pwr Den: -50.9 dBW/Hz, Dnlink EIRP Den: -44.9 dBW/Hz Max Dnlink PFD: -171.8 dB(W/m2/4kHz) @ Beam Center			
LOSS IN C/(N+I) DUE TO ADJ SAT INTF: SAT-1 = 1.6dB, SAT-2 = 1.3dB				

----- SATELLITE -----

Satellite Name	: IS-706	Location (deg)	: 54.85E
Uplink Beam	: GLOBAL	Dnlink Beam	: GLOBAL
Trans. BW (MHz)	: 41 MHz	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency (GHz)	: 6.175	Dnlink Frequency (GHz)	: 3.950
G/T, beam center (dB/K)	: -7.5	EIRP, beam center (dBW)	: 33.5
G/T, beam edge (dB/K)	: -11.5	EIRP, beam edge (dBW)	: 29.5
G/T, toward Tx ES (dB/K)	: -11.5	EIRP, toward Rx ES (dBW)	: 29.5
SFD, beam edge (dBW/m2)	: -73.1		
SFD, toward Tx ES (dBW/m2)	: -73.1		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB)	: 14	Nominal Uplink Co-Chan C/I (dB)	: 27.0
Input Backoff (dB)	: 9.2, 9.49	Nominal Dnlink Co-Chan C/I (dB)	: 27.0
Output Backoff (dB)	: *	Minimum Uplink Rain Margin (dB)	: 0.0
(C/Im) - Nominal (dB)	: *	Actual Uplink Rain Margin (dB)	: n/a
Min. System Margin (dB)	: 1.0	Uplink Power Control Margin (dB)	: .0
Max No Carriers / Trans:	: 1	Minimum Dnlink Rain Margin (dB)	: 0.0
		Actual Dnlink Rain Margin (dB)	: n/a
		Dnlink Pointing Error (dB)	: 0.5

-- ADJACENT SATELLITE INTERFERENCE ----- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg)	:	52.85E	56.85E
Uplink Interference (dB or dBW/Hz)	:	-38.7	-38.7
Uplink Polarization Advantage (dB)	:	0.0	0.0
Downlink Interference (dB or dBW/Hz)	:	-34.7	-34.7
Downlink Polarization Advantage (dB)	:	0.0	0.0
Rx E/S Topocentric Angle (deg)	:	2.09	2.09
Rx E/S Pointing Error (deg)	:	-0.08	0.08
Rx E/S Off-Axis Angle (deg)	:	2.01	2.17
Rx E/S Adj. Sat. Discrimination (dB)	:	31.6	32.4

----- TV/FM CARRIER PARAMETERS -----

Video Format	: PAL	Peak Deviation (MHz)	: 9.0
RF Noise BW (MHz)	: 30.0	PreEmphasis+Weighting (dB)	: 15.6
Video BW (MHz)	: 6.0	Threshold C/N (dB)	: 10.0

----- AUDIO SUB-CARRIER PARAMETERS -----

Sub-Carrier Freq (MHz)	: 6.6	Highest Audio Freq (kHz)	: 15.0
P-Dev of Video by Audio (MHz)	: 2.0	Companding Advantage (dB)	: 0.0
Peak Dev of Audio (kHz)	: 75.0		

----- Transmit Earth Station ----- Receive Earth Station -----

Location: -4_dB_Gain_Contour	Location: -4_dB_Gain_Contour
Latitude (deg): *	Latitude (deg): *
Longitude (deg): *	Longitude (deg): *
Rain Rate (mm/hr): 42*	Rain Rate (mm/hr): 42*
E/S Type or Model No:	E/S Type or Model No:
E/S Manufacturer : STANDARD	E/S Manufacturer : STANDARD
E/S Diam. (m): 13.0	E/S Diam. (m): 13.1
E/S Freq (nom, GHz): 6.175	E/S Freq (nom, GHz): 3.95
E/S Tx Gain (dBi): 56.4	E/S Gain (nom, dBi): 53.5
ULPC Margin (dB): .0	E/S Feed Loss (dB): 0.20
	E/S Ant. Temp(deg K): 30
	E/S LNA Temp (deg K): 65
	E/S G/T (nom, dB/K): *

SATELLITE DATA	Satellite : IS-706 Uplink Beam: GLOBAL Uplink POL: , Dnlink POL: , EIRP, beam center: 33.5 dBW G/T:-11.5 dB/K, SFD:-87.1 dBW/m2 Dnlink EIRP: 29.5 dBW	Location: 54.85E Dnlink Beam: GLOBAL				
TRANSPONDER DATA	Trans Bandwidth :41 MHz Uplink Frequency:6.175 GHz IBO (Nominal) : 0.0 dB	Trans Type: LTWTA Dnlink Freq: 3.950 GHz OBO (Nominal): 0.0 dB				
CARRIER DATA	Type: NTC26%, Info Rate: 27981 kbps, Mod: QPSK, 1/2x188/204 BWo: 34310kHz, BWa: 41000kHz, C/N: 3.36dB, C/N_thresh: 3.36					
LINK BUDGET						
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	75.8	UP FADE	n/a	DN FADE	n/a
	- Uplink Path Loss, clear sky (dB)	-200.2	n/a	n/a	n/a	n/a
	- Uplink Rain Attenuation (dB)	0.0	n/a	n/a	n/a	n/a
	+ Satellite G/T (dB/K)	-11.5	n/a	n/a	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-75.4	n/a	n/a	n/a	n/a
	C/N Uplink (dB)	17.3	n/a	n/a	n/a	n/a
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	29.5	n/a	n/a	n/a	n/a
	- Carrier Output Backoff (dB)	0.0	n/a	n/a	n/a	n/a
	Downlink EIRP per carrier (dBW)	29.5	n/a	n/a	n/a	n/a
	- Earth Station Pointing Error (dB)	-.5	n/a	n/a	n/a	n/a
	- Downlink Path Loss, clear sky (dB)	-196.3	n/a	n/a	n/a	n/a
	- Downlink Rain Attenuation (dB)	0.0	n/a	n/a	n/a	n/a
	+ Earth Station G/T (dB/K)	23.6	n/a	n/a	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-75.4	n/a	n/a	n/a	n/a
	C/N Dnlink (dB)	9.5	n/a	n/a	n/a	n/a
COMPOSITE PERFORMANCE	C/N Uplink (dB)	17.3	n/a	n/a	n/a	n/a
	C/N Dnlink (dB)	9.5	n/a	n/a	n/a	n/a
	C/I Uplink Co-channel (dB)	27.0	n/a	n/a	n/a	n/a
	C/I Dnlink Co-Channel (dB)	27.0	n/a	n/a	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-1) (dB)	17.1	n/a	n/a	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	9.9	n/a	n/a	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-2) (dB)	17.1	n/a	n/a	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	12.4	n/a	n/a	n/a	n/a
	C/(N+I) COMPOSITE (dB)	4.8	n/a	n/a	n/a	n/a
	- Required System Margin (dB)	-1.0	n/a	n/a	n/a	n/a
	Net C/(N+I) COMPOSITE (dB)	3.8	n/a	n/a	n/a	n/a
	- Minimum Required C/N (dB)	-3.4	n/a	n/a	n/a	n/a
	Excess Link Margin (dB)	.4	n/a	n/a	n/a	n/a
TRANSPONDER UTILIZATION	% BW/CARR: 100.00, % PWR/CARR: 100.00, Max No. Carriers: 1.0 Downlink EIRP per carrier toward beam center: 33.5 dBW					
TRANSMIT EARTH STATION	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 301.9 watts					
RECEIVE EARTH STA.	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr					
DENSITY INFORMATION	Uplink Pwr Den: -50.6 dBW/Hz, Dnlink EIRP Den: -41.9 dBW/Hz Max Dnlink PFD: -168.8 dB(W/m2/4kHz) @ Beam Center					
LOSS IN C/(N+I) DUE TO ADJ SAT INTF: SAT-1 = 2.0dB, SAT-2 = 1.1dB						

GLOBAL-GLOBAL (41 MHZ): 41MOG7W
[Input Data]

----- SATELLITE -----

Satellite Name	: IS-706	Location (deg)	: 54.85E
Uplink Beam	: GLOBAL	Dnlink Beam	: GLOBAL
Trans. BW (MHz)	: 41 MHZ	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency (GHz)	: 6.175	Dnlink Frequency (GHz)	: 3.950
G/T, beam center (dB/K)	: -7.5	EIRP, beam center (dBW)	: 33.5
G/T, beam edge (dB/K)	: -11.5	EIRP, beam edge (dBW)	: 29.5
G/T, toward Tx ES (dB/K)	: -11.5	EIRP, toward Rx ES (dBW)	: 29.5
SFD, beam edge (dBW/m2)	: -87.1		
SFD, toward Tx ES (dBW/m2)	: -87.1		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB)	: 0	Nominal Uplink Co-Chan C/I (dB)	: 27.0
Input Backoff (dB)	: 0.0	Nominal Dnlink Co-Chan C/I (dB)	: 27.0
Output Backoff (dB)	: *	Minimum Uplink Rain Margin (dB)	: 0.0
(C/Im) - Nominal (dB)	: *	Actual Uplink Rain Margin (dB)	: n/a
Min. System Margin (dB)	: 1.0	Uplink Power Control Margin (dB)	: .0
Max No Carriers / Trans	: 1	Minimum Dnlink Rain Margin (dB)	: 0.0
		Actual Dnlink Rain Margin (dB)	: n/a
		Dnlink Pointing Error (dB)	: 0.5

-- ADJACENT SATELLITE INTERFERENCE ----- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg)	:	52.85E	56.85E
Uplink Interference (dB or dBW/Hz)	:	-38.7	-38.7
Uplink Polarization Advantage (dB)	:	0.0	0.0
Downlink Interference (dB or dBW/Hz)	:	-34.7	-34.7
Downlink Polarization Advantage (dB)	:	0.0	0.0
Rx E/S Topocentric Angle (deg)	:	2.09	2.09
Rx E/S Pointing Error (deg)	:	-0.24	0.24
Rx E/S Off-Axis Angle (deg)	:	1.85	2.33
Rx E/S Adj. Sat. Discrimination (dB)	:	21.1	23.6

----- CARRIER PARAMETERS -----

Modem Type	: NTC26%	C/N (operating, dB)	: 3.36
Modulation	: QPSK	Eb/No (operating, dB)	: 4.2
Code Rate	: 1/2x188/204-V	C/N (threshold, dB)	: 3.36
Info Rate (kbps)	: 27981	Eb/No (threshold, dB)	: 4.2
Occupied Bandwidth (kHz)	: 34310		
Allocated Bandwidth (kHz)	: 41000		

----- Transmit Earth Station ----- ----- Receive Earth Station -----

Location: -4_dB_Gain_Contour	Location: -4_dB_Gain_Contour
Latitude (deg): *	Latitude (deg): *
Longitude (deg): *	Longitude (deg): *
Rain Rate (mm/hr): 42*	Rain Rate (mm/hr): 42*
E/S Type or Model No:	E/S Type or Model No:
E/S Manufacturer : STANDARD	E/S Manufacturer : STANDARD
E/S Diam. (m): 7.0	E/S Diam. (m): 4.5
E/S Freq (nom, GHz): 6.175	E/S Freq (nom, GHz): 3.95
E/S Tx Gain (dBi): 51.0	E/S Gain (nom, dBi): 43.9
ULPC Margin (dB): .0	E/S Feed Loss (dB): 0.20
	E/S Ant. Temp(deg K): 25
	E/S LNA Temp (deg K): 65
	E/S G/T (nom, dB/K): *

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SATELLITE DATA	Satellite : IS-706 Uplink Beam: GLOBAL Uplink POL: , Dnlink POL: , EIRP, beam center: 33.5 dBW G/T:-11.5 dB/K, SFD:-85.1 dBW/m2 Dnlink EIRP: 29.5 dBW	Location: 54.85E Dnlink Beam: GLOBAL				
TRANSPONDER DATA	Trans Bandwidth :41 MHz Uplink Frequency:6.175 GHz IBO (Nominal) : 8.2 dB	Trans Type: LTWTA Dnlink Freq: 3.950 GHz OBO (Nominal): 3.5 dB				
CARRIER DATA	Type: EF9000, Info Rate: 6000 kbps, Mod: QPSK, 1/2x188/204- BWo: 6771.1kHz, BWa: 10300kHz, C/N: 3.87dB, C/N_thresh: 3.5					
LINK BUDGET						
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	65.1	UP FADE	n/a	DN FADE	n/a
	- Uplink Path Loss, clear sky (dB)	-200.2		n/a		n/a
	- Uplink Rain Attenuation (dB)	0.0		n/a		n/a
	+ Satellite G/T (dB/K)	-11.5		n/a		n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6		n/a		n/a
	- Carrier Noise Bandwidth (dB-Hz)	-68.3		n/a		n/a
	C/N Uplink (dB)	13.7		n/a		n/a
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	29.5		n/a		n/a
	- Carrier Output Backoff (dB)	-8.0		n/a		n/a
	Downlink EIRP per carrier (dBW)	21.5		n/a		n/a
	- Earth Station Pointing Error (dB)	-.5		n/a		n/a
	- Downlink Path Loss, clear sky (dB)	-196.3		n/a		n/a
	- Downlink Rain Attenuation (dB)	0.0		n/a		n/a
	+ Earth Station G/T (dB/K)	26.2		n/a		n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6		n/a		n/a
	- Carrier Noise Bandwidth (dB-Hz)	-68.3		n/a		n/a
	C/N Dnlink (dB)	11.2		n/a		n/a
COMPOSITE PERFORMANCE	C/N Uplink (dB)	13.7		n/a		n/a
	C/N Dnlink (dB)	11.2		n/a		n/a
	C/I Intermod (dB)	20.0		n/a		n/a
	C/I Uplink Co-channel (dB)	28.5		n/a		n/a
	C/I Dnlink Co-Channel (dB)	28.5		n/a		n/a
	C/I Uplink Adj. Sat. (SAT-1) (dB)	13.5		n/a		n/a
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	11.9		n/a		n/a
	C/I Uplink Adj. Sat. (SAT-2) (dB)	13.5		n/a		n/a
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	13.8		n/a		n/a
	C/(N+I) COMPOSITE (dB)	4.9		n/a		n/a
- Required System Margin (dB)	-1.0		n/a		n/a	
	Net C/(N+I) COMPOSITE (dB)	3.9		n/a		n/a
	- Minimum Required C/N (dB)	-3.9		n/a		n/a
	Excess Link Margin (dB)	0.0		n/a		n/a
TRANSPONDER UTILIZATION	% BW/CARR: 25.12, % PWR/CARR: 35.74, Max No. Carriers: 2.8 Downlink EIRP per carrier toward beam center: 25.5 dBW					
TRANSMIT EARTH STATION	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 25.9 watts					
RECEIVE EARTH STA.	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr					
DENSITY INFORMATION	Uplink Pwr Den: -54.2 dBW/Hz, Dnlink EIRP Den: -42.8 dBW/Hz Max Dnlink PFD: -169.7 dB(W/m2/4kHz) @ Beam Center					
LOSS IN C/(N+I) DUE TO ADJ SAT INTF: SAT-1 = 1.8dB, SAT-2 = 1.3dB						

GLOBAL-GLOBAL (41 MHZ): 10M3G7W
[Input Data]

----- SATELLITE -----

Satellite Name	: IS-706	Location (deg)	: 54.85E
Uplink Beam	: GLOBAL	Dnlink Beam	: GLOBAL
Trans. BW (MHz)	: 41 MHz	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency (GHz)	: 6.175	Dnlink Frequency (GHz)	: 3.950
G/T, beam center (dB/K)	: -7.5	EIRP, beam center (dBW)	: 33.5
G/T, beam edge (dB/K)	: -11.5	EIRP, beam edge (dBW)	: 29.5
G/T, toward Tx ES (dB/K)	: -11.5	EIRP, toward Rx ES (dBW)	: 29.5
SFD, beam edge (dBW/m2)	: -85.1		
SFD, toward Tx ES (dBW/m2)	: -85.1		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB)	: 2	Nominal Uplink Co-Chan C/I (dB)	: 27.0
Input Backoff (dB)	: 8.2*	Nominal Dnlink Co-Chan C/I (dB)	: 27.0
Output Backoff (dB)	: *	Minimum Uplink Rain Margin (dB)	: 0.0
(C/Im) - Nominal (dB)	: *	Actual Uplink Rain Margin (dB)	: n/a
Min. System Margin (dB)	: 1.0	Uplink Power Control Margin (dB)	: .0
Max No Carriers / Trans	: *	Minimum Dnlink Rain Margin (dB)	: 0.0
		Actual Dnlink Rain Margin (dB)	: n/a
		Dnlink Pointing Error (dB)	: 0.5

-- ADJACENT SATELLITE INTERFERENCE ----- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg)	:	52.85E	56.85E
Uplink Interference (dB or dBW/Hz)	:	-38.7	-38.7
Uplink Polarization Advantage (dB)	:	0.0	0.0
Downlink Interference (dB or dBW/Hz)	:	-34.7	-34.7
Downlink Polarization Advantage (dB)	:	0.0	0.0
Rx E/S Topocentric Angle (deg)	:	2.09	2.09
Rx E/S Pointing Error (deg)	:	-0.18	0.18
Rx E/S Off-Axis Angle (deg)	:	1.91	2.27
Rx E/S Adj. Sat. Discrimination (dB)	:	24.0	25.9

----- CARRIER PARAMETERS -----

Modem Type	: EF9000	C/N (operating, dB)	: 3.87
Modulation	: QPSK	Eb/No (operating, dB)	: 4.4
Code Rate	: 1/2x188/204-V	C/N (threshold, dB)	: 3.57
Info Rate (kbps)	: 6000	Eb/No (threshold, dB)	: 4.1
Occupied Bandwidth (kHz)	: 6771.1		
Allocated Bandwidth (kHz)	: 10300		

----- Transmit Earth Station -----

----- Receive Earth Station -----

Location: -4_dB_Gain_Contour	Location: -4_dB_Gain_Contour
Latitude (deg): *	Latitude (deg): *
Longitude (deg): *	Longitude (deg): *
Rain Rate (mm/hr): 42*	Rain Rate (mm/hr): 42*
E/S Type or Model No:	E/S Type or Model No:
E/S Manufacturer : STANDARD	E/S Manufacturer : STANDARD
E/S Diam. (m): 7.0	E/S Diam. (m): 6.1
E/S Freq (nom, GHz): 6.175	E/S Freq (nom, GHz): 3.95
E/S Tx Gain (dBi): 51.0	E/S Gain (nom, dBi): 46.5
ULPC Margin (dB): .0	E/S Feed Loss (dB): 0.20
	E/S Ant. Temp(deg K): 25
	E/S LNA Temp (deg K): 65
	E/S G/T (nom, dB/K): *

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SATELLITE DATA	Satellite : IS-706 Uplink Beam: GLOBAL Uplink POL: , Dnlink POL: , EIRP, beam center: 33.5 dBW G/T:-11.5 dB/K, SFD:-85.1 dBW/m2 Dnlink EIRP: 29.5 dBW	Location: 54.85E Dnlink Beam: GLOBAL		
TRANSPONDER DATA	Trans Bandwidth :41 MHz Uplink Frequency:6.175 GHz IBO (Nominal) : 8.2 dB	Trans Type: LTWTA Dnlink Freq: 3.950 GHz OBO (Nominal): 3.5 dB		
CARRIER DATA	Type: CS701, Info Rate: 64 kbps, Mod: QPSK, 1/2x239/256-V BWo: 75.4kHz, BWa: 100kHz, C/N: 2.99dB, C/N_thresh: 2.79dB			
LINK BUDGET				
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	44.7	n/a	n/a
	- Uplink Path Loss, clear sky (dB)	-200.2	n/a	n/a
	- Uplink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Satellite G/T (dB/K)	-11.5	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-48.8	n/a	n/a
	C/N Uplink (dB)	12.8	n/a	n/a
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	29.5	n/a	n/a
	- Carrier Output Backoff (dB)	-28.4	n/a	n/a
	Downlink EIRP per carrier (dBW)	1.1	n/a	n/a
	- Earth Station Pointing Error (dB)	-.5	n/a	n/a
	- Downlink Path Loss, clear sky (dB)	-196.3	n/a	n/a
	- Downlink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Earth Station G/T (dB/K)	26.2	n/a	n/a
- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a	
- Carrier Noise Bandwidth (dB-Hz)	-48.8	n/a	n/a	
C/N Dnlink (dB)	10.3	n/a	n/a	
COMPOSITE PERFORMANCE	C/N Uplink (dB)	12.8	n/a	n/a
	C/N Dnlink (dB)	10.3	n/a	n/a
	C/I Intermod (dB)	19.1	n/a	n/a
	C/I Uplink Co-channel (dB)	28.2	n/a	n/a
	C/I Dnlink Co-Channel (dB)	28.2	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-1) (dB)	12.6	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	11.1	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-2) (dB)	12.6	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	12.9	n/a	n/a
	C/(N+I) COMPOSITE (dB)	4.0	n/a	n/a
	- Required System Margin (dB)	-1.0	n/a	n/a
	Net C/(N+I) COMPOSITE (dB)	3.0	n/a	n/a
	- Minimum Required C/N (dB)	-3.0	n/a	n/a
Excess Link Margin (dB)	0.0	n/a	n/a	
TRANSPONDER UTILIZATION	% BW/CARR: 0.24, % PWR/CARR: 0.32, Max No. Carriers: 308.0 Downlink EIRP per carrier toward beam center: 5.1 dBW			
TRANSMIT EARTH STATION	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 0.2 watts			
RECEIVE EARTH STA.	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr			
DENSITY INFORMATION	Uplink Pwr Den: -55.1 dBW/Hz, Dnlink EIRP Den: -43.7 dBW/Hz Max Dnlink PFD: -170.6 dB(W/m2/4kHz) @ Beam Center			
LOSS IN C/(N+I) DUE TO ADJ SAT INTF: SAT-1 = 1.8dB, SAT-2 = 1.3dB				

GLOBAL-GLOBAL (41 MHZ): 100KG7W
[Input Data]

----- SATELLITE -----

Satellite Name	: IS-706	Location (deg)	: 54.85E
Uplink Beam	: GLOBAL	Dnlink Beam	: GLOBAL
Trans. BW (MHz)	: 41 MHz	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency (GHz)	: 6.175	Dnlink Frequency (GHz)	: 3.950
G/T, beam center (dB/K)	: -7.5	EIRP, beam center (dBW)	: 33.5
G/T, beam edge (dB/K)	: -11.5	EIRP, beam edge (dBW)	: 29.5
G/T, toward Tx ES (dB/K)	: -11.5	EIRP, toward Rx ES (dBW)	: 29.5
SFD, beam edge (dBW/m2)	: -85.1		
SFD, toward Tx ES (dBW/m2)	: -85.1		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB)	: 2	Nominal Uplink Co-Chan C/I (dB)	: 27.0
Input Backoff (dB)	: 8.2*	Nominal Dnlink Co-Chan C/I (dB)	: 27.0
Output Backoff (dB)	: *	Minimum Uplink Rain Margin (dB)	: 0.0
(C/Im) - Nominal (dB)	: *	Actual Uplink Rain Margin (dB)	: n/a
Min. System Margin (dB)	: 1.0	Uplink Power Control Margin (dB)	: .0
Max No Carriers / Trans	: *	Minimum Dnlink Rain Margin (dB)	: 0.0
		Actual Dnlink Rain Margin (dB)	: n/a
		Dnlink Pointing Error (dB)	: 0.5

-- ADJACENT SATELLITE INTERFERENCE ----- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg)	:	52.85E	56.85E
Uplink Interference (dB or dBW/Hz)	:	-38.7	-38.7
Uplink Polarization Advantage (dB)	:	0.0	0.0
Downlink Interference (dB or dBW/Hz)	:	-34.7	-34.7
Downlink Polarization Advantage (dB)	:	0.0	0.0
Rx E/S Topocentric Angle (deg)	:	2.09	2.09
Rx E/S Pointing Error (deg)	:	-0.18	0.18
Rx E/S Off-Axis Angle (deg)	:	1.91	2.27
Rx E/S Adj. Sat. Discrimination (dB)	:	24.0	25.9

----- CARRIER PARAMETERS -----

Modem Type	: CS701	C/N (operating, dB)	: 2.99
Modulation	: QPSK	Eb/No (operating, dB)	: 3.7
Code Rate	: 1/2x239/256-V	C/N (threshold, dB)	: 2.79
Info Rate (kbps)	: 64	Eb/No (threshold, dB)	: 3.5
Occupied Bandwidth (kHz)	: 75.4		
Allocated Bandwidth (kHz)	: 100		

----- Transmit Earth Station ----- ----- Receive Earth Station -----

Location: -4_dB_Gain_Contour	:	Location: -4_dB_Gain_Contour	
Latitude (deg)	: *	Latitude (deg)	: *
Longitude (deg)	: *	Longitude (deg)	: *
Rain Rate (mm/hr)	: 42*	Rain Rate (mm/hr)	: 42*
E/S Type or Model No:		E/S Type or Model No:	
E/S Manufacturer	: STANDARD	E/S Manufacturer	: STANDARD
E/S Diam. (m)	: 7.0	E/S Diam. (m)	: 6.1
E/S Freq (nom, GHz)	: 6.175	E/S Freq (nom, GHz)	: 3.95
E/S Tx Gain (dBi)	: 51.0	E/S Gain (nom, dBi)	: 46.5
ULPC Margin (dB)	: .0	E/S Feed Loss (dB)	: 0.20
		E/S Ant. Temp (deg K)	: 25
		E/S LNA Temp (deg K)	: 65
		E/S G/T (nom, dB/K)	: *

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SATELLITE DATA	Satellite : IS-706 Uplink Beam: GLOBAL Uplink POL: , Dnlink POL: , EIRP, beam center: 36.6 dBW G/T:-11.5 dB/K, SFD:-73.1 dBW/m2 Dnlink EIRP: 32.6 dBW	Location: 54.85E Dnlink Beam: HEMI		
TRANSPONDER DATA	Trans Bandwidth :36 MHz Uplink Frequency:6.175 GHz IBO (Nominal) : 10.2 dB	Trans Type: LTWTA Dnlink Freq: 3.950 GHz OBO (Nominal): 4.3 dB		
CARRIER DATA	Type: TV/FM, Format: PAL, PreEmphasis+Weighting: 15.6dB RF BW: 30.0 MHz, P-Dev: 9.0 MHz, VideoBW: 6.0 MHz,			
LINK BUDGET				
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	79.6	n/a	n/a
	- Uplink Path Loss, clear sky (dB)	-200.2	n/a	n/a
	- Uplink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Satellite G/T (dB/K)	-11.5	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-74.8	n/a	n/a
	C/N Uplink (dB)	21.7	n/a	n/a
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	32.6	n/a	n/a
	- Carrier Output Backoff (dB)	-4.3	n/a	n/a
	Downlink EIRP per carrier (dBW)	28.3	n/a	n/a
	- Earth Station Pointing Error (dB)	-.5	n/a	n/a
	- Downlink Path Loss, clear sky (dB)	-196.3	n/a	n/a
	- Downlink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Earth Station G/T (dB/K)	31.0	n/a	n/a
- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a	
- Carrier Noise Bandwidth (dB-Hz)	-74.8	n/a	n/a	
	C/N Dnlink (dB)	16.3	n/a	n/a
COMPOSITE PERFORMANCE	C/N Uplink (dB)	21.7	n/a	n/a
	C/N Dnlink (dB)	16.3	n/a	n/a
	C/I Uplink Co-channel (dB)	27.8	n/a	n/a
	C/I Dnlink Co-Channel (dB)	27.8	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-1) (dB)	21.5	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	17.6	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-2) (dB)	21.5	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	18.6	n/a	n/a
	C/(N+I) COMPOSITE (dB)	11.0	n/a	n/a
	- Required System Margin (dB)	-1.0	n/a	n/a
Net C/(N+I) COMPOSITE (dB)	10.0	n/a	n/a	
- Minimum Required C/N (dB)	-10.0	n/a	n/a	
	Excess Link Margin (dB)	0.0	n/a	n/a
	Video Signal-to-Noise Ratio (dB)	43.9	n/a	n/a
	Audio Signal-to-Noise Ratio (dB)	57.7	n/a	n/a
TRANSMIT EARTH STATION	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 262.9 watts			
RECEIVE EARTH STA.	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr			
DENSITY INFORMATION	Uplink Pwr Den: -50.6 dBW/Hz, Dnlink EIRP Den: -42.5 dBW/Hz Max Dnlink PFD: -169.4 dB(W/m2/4kHz) @ Beam Center			
LOSS IN C/(N+I) DUE TO ADJ SAT INTF: SAT-1 = 1.6dB, SAT-2 = 1.3dB				

GLOBAL-HEMI (36 MHz): 30M0F3F
[Input Data]

----- SATELLITE -----

Satellite Name	: IS-706	Location (deg)	: 54.85E
Uplink Beam	: GLOBAL	Dnlink Beam	: HEMI
Trans. BW (MHz)	: 36 MHz	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency (GHz)	: 6.175	Dnlink Frequency (GHz)	: 3.950
G/T, beam center (dB/K)	: -7.5	EIRP, beam center (dBW)	: 36.6
G/T, beam edge (dB/K)	: -11.5	EIRP, beam edge (dBW)	: 32.6
G/T, toward Tx ES (dB/K)	: -11.5	EIRP, toward Rx ES (dBW)	: 32.6
SFD, beam edge (dBW/m2)	: -73.1		
SFD, toward Tx ES (dBW/m2)	: -73.1		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB)	: 14	Nominal Uplink Co-Chan C/I (dB)	: 27.0
Input Backoff (dB)	: 10, 10.2	Nominal Dnlink Co-Chan C/I (dB)	: 27.0
Output Backoff (dB)	: *	Minimum Uplink Rain Margin (dB)	: 0.0
(C/Im) - Nominal (dB)	: *	Actual Uplink Rain Margin (dB)	: n/a
Min. System Margin (dB)	: 1.0	Uplink Power Control Margin (dB)	: .0
Max No Carriers / Trans	: 1	Minimum Dnlink Rain Margin (dB)	: 0.0
		Actual Dnlink Rain Margin (dB)	: n/a
		Dnlink Pointing Error (dB)	: 0.5

-- ADJACENT SATELLITE INTERFERENCE ----- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg)	:	52.85E	56.85E
Uplink Interference (dB or dBW/Hz)	:	-38.7	-38.7
Uplink Polarization Advantage (dB)	:	0.0	0.0
Downlink Interference (dB or dBW/Hz)	:	-34.2	-34.2
Downlink Polarization Advantage (dB)	:	0.0	0.0
Rx E/S Topocentric Angle (deg)	:	2.09	2.09
Rx E/S Pointing Error (deg)	:	-0.10	0.10
Rx E/S Off-Axis Angle (deg)	:	1.99	2.19
Rx E/S Adj. Sat. Discrimination (dB)	:	29.9	30.9

----- TV/FM CARRIER PARAMETERS -----

Video Format	: PAL	Peak Deviation (MHz)	: 9.0
RF Noise BW (MHz)	: 30.0	PreEmphasis+Weighting (dB)	: 15.6
Video BW (MHz)	: 6.0	Threshold C/N (dB)	: 10.0

----- AUDIO SUB-CARRIER PARAMETERS -----

Sub-Carrier Freq (MHz)	: 6.6	Highest Audio Freq (kHz)	: 15.0
P-Dev of Video by Audio (MHz)	: 2.0	Companding Advantage (dB)	: 0.0
Peak Dev of Audio (kHz)	: 75.0		

----- Transmit Earth Station ----- Receive Earth Station -----

Location: -4_dB_Gain_Contour		Location: -4_dB_Gain_Contour	
Latitude (deg): *		Latitude (deg): *	
Longitude (deg): *		Longitude (deg): *	
Rain Rate (mm/hr): 42*		Rain Rate (mm/hr): 42*	
E/S Type or Model No:		E/S Type or Model No:	
E/S Manufacturer : STANDARD		E/S Manufacturer : STANDARD	
E/S Diam. (m): 11.0		E/S Diam. (m): 11.0	
E/S Freq (nom, GHz): 6.175		E/S Freq (nom, GHz): 3.95	
E/S Tx Gain (dBi): 55.4		E/S Gain (nom, dBi): 51.9	
ULPC Margin (dB): .0		E/S Feed Loss (dB): 0.15	
		E/S Ant. Temp (deg K): 45	
		E/S LNA Temp (deg K): 65	
		E/S G/T (nom, dB/K): *	

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SATELLITE DATA	Satellite : IS-706 Uplink Beam: GLOBAL Uplink POL: , Dnlink POL: , EIRP, beam center: 36.6 dBW G/T:-11.5 dB/K, SFD:-87.1 dBW/m2 Dnlink EIRP: 32.6 dBW	Location: 54.85E Dnlink Beam: HEMI		
TRANSPONDER DATA	Trans Bandwidth :36 MHz Uplink Frequency:6.175 GHz IBO (Nominal) : 0.0 dB	Trans Type: LTWTA Dnlink Freq: 3.950 GHz OBO (Nominal): 0.0 dB		
CARRIER DATA	Type: NTC26%, Info Rate: 24575 kbps, Mod: QPSK, 1/2x188/204 BWo: 30133kHz, BWa: 36000kHz, C/N: 3.36dB, C/N_thresh: 3.36			
LINK BUDGET				
		CLR SKY	UP FADE	DN FADE
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	75.8	n/a	n/a
	- Uplink Path Loss, clear sky (dB)	-200.2	n/a	n/a
	- Uplink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Satellite G/T (dB/K)	-11.5	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-74.8	n/a	n/a
	C/N Uplink (dB)	17.9	n/a	n/a
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	32.6	n/a	n/a
	- Carrier Output Backoff (dB)	0.0	n/a	n/a
	Downlink EIRP per carrier (dBW)	32.6	n/a	n/a
	- Earth Station Pointing Error (dB)	-.5	n/a	n/a
	- Downlink Path Loss, clear sky (dB)	-196.3	n/a	n/a
	- Downlink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Earth Station G/T (dB/K)	21.0	n/a	n/a
- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a	
- Carrier Noise Bandwidth (dB-Hz)	-74.8	n/a	n/a	
C/N Dnlink (dB)	10.6	n/a	n/a	
COMPOSITE PERFORMANCE	C/N Uplink (dB)	17.9	n/a	n/a
	C/N Dnlink (dB)	10.6	n/a	n/a
	C/I Uplink Co-channel (dB)	27.0	n/a	n/a
	C/I Dnlink Co-Channel (dB)	27.0	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-1) (dB)	17.7	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	8.3	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-2) (dB)	17.7	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	13.1	n/a	n/a
	C/(N+I) COMPOSITE (dB)	4.7	n/a	n/a
	- Required System Margin (dB)	-1.0	n/a	n/a
Net C/(N+I) COMPOSITE (dB)	3.7	n/a	n/a	
- Minimum Required C/N (dB)	-3.4	n/a	n/a	
Excess Link Margin (dB)	.4	n/a	n/a	
TRANSPONDER UTILIZATION	% BW/CARR: 100.00, % PWR/CARR: 100.00, Max No. Carriers: 1.0 Downlink EIRP per carrier toward beam center: 36.6 dBW			
TRANSMIT EARTH STATION	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 301.9 watts			
RECEIVE EARTH STA.	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr			
DENSITY INFORMATION	Uplink Pwr Den: -50.0 dBW/Hz, Dnlink EIRP Den: -38.2 dBW/Hz Max Dnlink PFD: -165.1 dB(W/m2/4kHz) @ Beam Center			
LOSS IN C/(N+I) DUE TO ADJ SAT INTF: SAT-1 = 2.9dB, SAT-2 = 0.9dB				

GLOBAL-HEMI (36 MHZ): 36MOG7W
[Input Data]

----- SATELLITE -----

Satellite Name	: IS-706	Location (deg)	: 54.85E
Uplink Beam	: GLOBAL	Dnlink Beam	: HEMI
Trans. BW (MHz)	: 36 MHz	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency (GHz)	: 6.175	Dnlink Frequency (GHz)	: 3.950
G/T, beam center (dB/K)	: -7.5	EIRP, beam center (dBW)	: 36.6
G/T, beam edge (dB/K)	: -11.5	EIRP, beam edge (dBW)	: 32.6
G/T, toward Tx ES (dB/K)	: -11.5	EIRP, toward Rx ES (dBW)	: 32.6
SFD, beam edge (dBW/m2)	: -87.1		
SFD, toward Tx ES (dBW/m2)	: -87.1		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB)	: 0	Nominal Uplink Co-Chan C/I (dB)	: 27.0
Input Backoff (dB)	: 0.0	Nominal Dnlink Co-Chan C/I (dB)	: 27.0
Output Backoff (dB)	: *	Minimum Uplink Rain Margin (dB)	: 0.0
(C/Im) - Nominal (dB)	: *	Actual Uplink Rain Margin (dB)	: n/a
Min. System Margin (dB)	: 1.0	Uplink Power Control Margin (dB)	: .0
Max No Carriers / Trans	: 1	Minimum Dnlink Rain Margin (dB)	: 0.0
		Actual Dnlink Rain Margin (dB)	: n/a
		Dnlink Pointing Error (dB)	: 0.5

-- ADJACENT SATELLITE INTERFERENCE ----- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg)	:	52.85E	56.85E
Uplink Interference (dB or dBW/Hz)	:	-38.7	-38.7
Uplink Polarization Advantage (dB)	:	0.0	0.0
Downlink Interference (dB or dBW/Hz)	:	-34.2	-34.2
Downlink Polarization Advantage (dB)	:	0.0	0.0
Rx E/S Topocentric Angle (deg)	:	2.09	2.09
Rx E/S Pointing Error (deg)	:	-0.31	0.31
Rx E/S Off-Axis Angle (deg)	:	1.78	2.40
Rx E/S Adj. Sat. Discrimination (dB)	:	16.3	21.1

----- CARRIER PARAMETERS -----

Modem Type	: NTC26%	C/N (operating, dB)	: 3.36
Modulation	: QPSK	Eb/No (operating, dB)	: 4.2
Code Rate	: 1/2x188/204-V	C/N (threshold, dB)	: 3.36
Info Rate (kbps)	: 24575	Eb/No (threshold, dB)	: 4.2
Occupied Bandwidth (kHz)	: 30133		
Allocated Bandwidth (kHz)	: 36000		

----- Transmit Earth Station ----- ----- Receive Earth Station -----

Location: -4_dB_Gain_Contour	Location: -4_dB_Gain_Contour
Latitude (deg): *	Latitude (deg): *
Longitude (deg): *	Longitude (deg): *
Rain Rate (mm/hr): 42*	Rain Rate (mm/hr): 42*
E/S Type or Model No:	E/S Type or Model No:
E/S Manufacturer : STANDARD	E/S Manufacturer : STANDARD
E/S Diam. (m): 7.0	E/S Diam. (m): 3.5
E/S Freq (nom, GHz): 6.175	E/S Freq (nom, GHz): 3.95
E/S Tx Gain (dBi): 51.0	E/S Gain (nom, dBi): 41.1
ULPC Margin (dB): .0	E/S Feed Loss (dB): 0.15
	E/S Ant. Temp(deg K): 25
	E/S LNA Temp (deg K): 65
	E/S G/T (nom, dB/K): *

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29-Oct-08 6:37
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SATELLITE DATA	Satellite : IS-706 Uplink Beam: GLOBAL Uplink POL: , Dnlink POL: , EIRP, beam center: 36.6 dBW G/T:-11.5 dB/K, SFD:-80.1 dBW/m2 Dnlink EIRP: 32.6 dBW	Location: 54.85E Dnlink Beam: HEMI		
TRANSPONDER DATA	Trans Bandwidth :36 MHz Uplink Frequency:6.175 GHz IBO (Nominal) : 8.2 dB	Trans Type: LTWTA Dnlink Freq: 3.950 GHz OBO (Nominal): 3.5 dB		
CARRIER DATA	Type: EF9000, Info Rate: 6000 kbps, Mod: QPSK, 1/2x188/204- BWo: 6771.1kHz, BWa: 10300kHz, C/N: 3.87dB, C/N_thresh: 3.5			
LINK BUDGET				
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	70.9	n/a	n/a
	- Uplink Path Loss, clear sky (dB)	-200.2	n/a	n/a
	- Uplink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Satellite G/T (dB/K)	-11.5	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-68.3	n/a	n/a
	C/N Uplink (dB)	19.5	n/a	n/a
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	32.6	n/a	n/a
	- Carrier Output Backoff (dB)	-7.2	n/a	n/a
	Downlink EIRP per carrier (dBW)	25.4	n/a	n/a
	- Earth Station Pointing Error (dB)	- .5	n/a	n/a
	- Downlink Path Loss, clear sky (dB)	-196.3	n/a	n/a
	- Downlink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Earth Station G/T (dB/K)	20.9	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-68.3	n/a	n/a
	C/N Dnlink (dB)	9.8	n/a	n/a
COMPOSITE PERFORMANCE	C/N Uplink (dB)	19.5	n/a	n/a
	C/N Dnlink (dB)	9.8	n/a	n/a
	C/I Intermod (dB)	20.2	n/a	n/a
	C/I Uplink Co-channel (dB)	28.7	n/a	n/a
	C/I Dnlink Co-Channel (dB)	28.7	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-1) (dB)	19.3	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	9.4	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-2) (dB)	19.3	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	12.4	n/a	n/a
	C/(N+I) COMPOSITE (dB)	4.9	n/a	n/a
	- Required System Margin (dB)	-1.0	n/a	n/a
Net C/(N+I) COMPOSITE (dB)	3.9	n/a	n/a	
- Minimum Required C/N (dB)	-3.9	n/a	n/a	
	Excess Link Margin (dB)	0.0	n/a	n/a
TRANSPONDER UTILIZATION	% BW/CARR: 28.61, % PWR/CARR: 42.75, Max No. Carriers: 2.3 Downlink EIRP per carrier toward beam center: 29.4 dBW			
TRANSMIT EARTH STATION	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 97.9 watts			
RECEIVE EARTH STA.	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr			
DENSITY INFORMATION	Uplink Pwr Den: -48.4 dBW/Hz, Dnlink EIRP Den: -38.9 dBW/Hz Max Dnlink PFD: -165.8 dB(W/m2/4kHz) @ Beam Center			
LOSS IN C/(N+I) DUE TO ADJ SAT INTF: SAT-1 = 2.2dB, SAT-2 = 1.0dB				

GLOBAL-HEMI (36): 10M3G7W
[Input Data]

----- SATELLITE -----

Satellite Name	: IS-706	Location (deg)	: 54.85E
Uplink Beam	: GLOBAL	Dnlink Beam	: HEMI
Trans. BW (MHz)	: 36 MHz	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency (GHz)	: 6.175	Dnlink Frequency (GHz)	: 3.950
G/T, beam center (dB/K)	: -7.5	EIRP, beam center (dBW)	: 36.6
G/T, beam edge (dB/K)	: -11.5	EIRP, beam edge (dBW)	: 32.6
G/T, toward Tx ES (dB/K)	: -11.5	EIRP, toward Rx ES (dBW)	: 32.6
SFD, beam edge (dBW/m2)	: -80.1		
SFD, toward Tx ES (dBW/m2)	: -80.1		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB)	: 7	Nominal Uplink Co-Chan C/I (dB)	: 27.0
Input Backoff (dB)	: 8.2*	Nominal Dnlink Co-Chan C/I (dB)	: 27.0
Output Backoff (dB)	: *	Minimum Uplink Rain Margin (dB)	: 0.0
(C/Im) - Nominal (dB)	: *	Actual Uplink Rain Margin (dB)	: n/a
Min. System Margin (dB)	: 1.0	Uplink Power Control Margin (dB)	: .0
Max No Carriers / Trans	: *	Minimum Dnlink Rain Margin (dB)	: 0.0
		Actual Dnlink Rain Margin (dB)	: n/a
		Dnlink Pointing Error (dB)	: 0.5

----- ADJACENT SATELLITE INTERFERENCE ----- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg)	:	52.85E	56.85E
Uplink Interference (dB or dBW/Hz)	:	-38.7	-38.7
Uplink Polarization Advantage (dB)	:	0.0	0.0
Downlink Interference (dB or dBW/Hz)	:	-34.2	-34.2
Downlink Polarization Advantage (dB)	:	0.0	0.0
Rx E/S Topocentric Angle (deg)	:	2.09	2.09
Rx E/S Pointing Error (deg)	:	-0.29	0.29
Rx E/S Off-Axis Angle (deg)	:	1.80	2.38
Rx E/S Adj. Sat. Discrimination (dB)	:	18.1	21.1

----- CARRIER PARAMETERS -----

Modem Type	: EF9000	C/N (operating, dB)	: 3.87
Modulation	: QPSK	Eb/No (operating, dB)	: 4.4
Code Rate	: 1/2x188/204-V	C/N (threshold, dB)	: 3.57
Info Rate (kbps)	: 6000	Eb/No (threshold, dB)	: 4.1
Occupied Bandwidth (kHz)	: 6771.1		
Allocated Bandwidth (kHz)	: 10300		

----- Transmit Earth Station ----- ----- Receive Earth Station -----

Location: -4_dB_Gain_Contour	Location: -4_dB_Gain_Contour
Latitude (deg): *	Latitude (deg): *
Longitude (deg): *	Longitude (deg): *
Rain Rate (mm/hr): 42*	Rain Rate (mm/hr): 42*
E/S Type or Model No:	E/S Type or Model No:
E/S Manufacturer : STANDARD	E/S Manufacturer : STANDARD
E/S Diam. (m): 7.0	E/S Diam. (m): 3.7
E/S Freq (nom, GHz): 6.175	E/S Freq (nom, GHz): 3.95
E/S Tx Gain (dBi): 51.0	E/S Gain (nom, dBi): 41.2
ULPC Margin (dB): .0	E/S Feed Loss (dB): 0.20
	E/S Ant. Temp(deg K): 25
	E/S LNA Temp (deg K): 65
	E/S G/T (nom, dB/K): *

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SATELLITE DATA	Satellite : IS-706 Uplink Beam: GLOBAL Uplink POL: , Dnlink POL: , EIRP, beam center: 36.6 dBW G/T:-11.5 dB/K, SFD:-80.1 dBW/m2 Dnlink EIRP: 32.6 dBW	Location: 54.85E Dnlink Beam: HEMI		
TRANSPONDER DATA	Trans Bandwidth :36 MHz Uplink Frequency:6.175 GHz IBO (Nominal) : 8.2 dB	Trans Type: LTWTA Dnlink Freq: 3.950 GHz OBO (Nominal): 3.5 dB		
CARRIER DATA	Type: CS701, Info Rate: 64 kbps, Mod: QPSK, 1/2x239/256-V BWo: 75.4kHz, BWa: 100kHz, C/N: 2.99dB, C/N_thresh: 2.79dB			
LINK BUDGET				
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	50.5	n/a	n/a
	- Uplink Path Loss, clear sky (dB)	-200.2	n/a	n/a
	- Uplink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Satellite G/T (dB/K)	-11.5	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-48.8	n/a	n/a
	C/N Uplink (dB)	18.6	n/a	n/a
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	32.6	n/a	n/a
	- Carrier Output Backoff (dB)	-27.6	n/a	n/a
	Downlink EIRP per carrier (dBW)	5.0	n/a	n/a
	- Earth Station Pointing Error (dB)	-.5	n/a	n/a
	- Downlink Path Loss, clear sky (dB)	-196.3	n/a	n/a
	- Downlink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Earth Station G/T (dB/K)	20.9	n/a	n/a
- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a	
- Carrier Noise Bandwidth (dB-Hz)	-48.8	n/a	n/a	
C/N Dnlink (dB)	8.9	n/a	n/a	
COMPOSITE PERFORMANCE	C/N Uplink (dB)	18.6	n/a	n/a
	C/N Dnlink (dB)	8.9	n/a	n/a
	C/I Intermod (dB)	19.3	n/a	n/a
	C/I Uplink Co-channel (dB)	28.5	n/a	n/a
	C/I Dnlink Co-Channel (dB)	28.5	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-1) (dB)	18.4	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	8.5	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-2) (dB)	18.4	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	11.5	n/a	n/a
	C/(N+I) COMPOSITE (dB)	4.0	n/a	n/a
	- Required System Margin (dB)	-1.0	n/a	n/a
Net C/(N+I) COMPOSITE (dB)	3.0	n/a	n/a	
- Minimum Required C/N (dB)	-3.0	n/a	n/a	
Excess Link Margin (dB)	0.0	n/a	n/a	
TRANSPONDER UTILIZATION	% BW/CARR: 0.28, % PWR/CARR: 0.39, Max No. Carriers: 257.5 Downlink EIRP per carrier toward beam center: 9.0 dBW			
TRANSMIT EARTH STATION	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 0.9 watts			
RECEIVE EARTH STA.	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr			
DENSITY INFORMATION	Uplink Pwr Den: -49.3 dBW/Hz, Dnlink EIRP Den: -39.8 dBW/Hz Max Dnlink PFD: -166.7 dB(W/m2/4kHz) @ Beam Center			
LOSS IN C/(N+I) DUE TO ADJ SAT INTF: SAT-1 = 2.2dB, SAT-2 = 1.0dB				

GLOBAL-HEMI (36 MHZ): 100KG7W
[Input Data]

----- SATELLITE -----

Satellite Name	: IS-706	Location (deg):	54.85E
Uplink Beam	: GLOBAL	Dnlink Beam	: HEMI
Trans. BW (MHz)	: 36 MHz	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency (GHz)	: 6.175	Dnlink Frequency (GHz)	: 3.950
G/T, beam center (dB/K)	: -7.5	EIRP, beam center (dBW)	: 36.6
G/T, beam edge (dB/K)	: -11.5	EIRP, beam edge (dBW)	: 32.6
G/T, toward Tx ES (dB/K)	: -11.5	EIRP, toward Rx ES (dBW)	: 32.6
SFD, beam edge (dBW/m2)	: -80.1		
SFD, toward Tx ES (dBW/m2)	: -80.1		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB)	: 7	Nominal Uplink Co-Chan C/I (dB)	: 27.0
Input Backoff (dB)	: 8.2*	Nominal Dnlink Co-Chan C/I (dB)	: 27.0
Output Backoff (dB)	: *	Minimum Uplink Rain Margin (dB)	: 0.0
(C/Im) - Nominal (dB)	: *	Actual Uplink Rain Margin (dB)	: n/a
Min. System Margin (dB)	: 1.0	Uplink Power Control Margin (dB)	: .0
Max No Carriers / Trans:	*	Minimum Dnlink Rain Margin (dB)	: 0.0
		Actual Dnlink Rain Margin (dB)	: n/a
		Dnlink Pointing Error (dB)	: 0.5

--- ADJACENT SATELLITE INTERFERENCE ----- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg)	:	52.85E	56.85E
Uplink Interference (dB or dBW/Hz)	:	-38.7	-38.7
Uplink Polarization Advantage (dB)	:	0.0	0.0
Downlink Interference (dB or dBW/Hz)	:	-34.2	-34.2
Downlink Polarization Advantage (dB)	:	0.0	0.0
Rx E/S Topocentric Angle (deg)	:	2.09	2.09
Rx E/S Pointing Error (deg)	:	-0.29	0.29
Rx E/S Off-Axis Angle (deg)	:	1.80	2.38
Rx E/S Adj. Sat. Discrimination (dB)	:	18.1	21.1

----- CARRIER PARAMETERS -----

Modem Type	: CS701	C/N (operating, dB)	: 2.99
Modulation	: QPSK	Eb/No (operating, dB)	: 3.7
Code Rate	: 1/2x239/256-V	C/N (threshold, dB)	: 2.79
Info Rate (kbps)	: 64	Eb/No (threshold, dB)	: 3.5
Occupied Bandwidth (kHz)	: 75.4		
Allocated Bandwidth (kHz)	: 100		

----- Transmit Earth Station ----- ----- Receive Earth Station -----

Location: -4_dB_Gain_Contour	Location: -4_dB_Gain_Contour
Latitude (deg): *	Latitude (deg): *
Longitude (deg): *	Longitude (deg): *
Rain Rate (mm/hr): 42*	Rain Rate (mm/hr): 42*
E/S Type or Model No:	E/S Type or Model No:
E/S Manufacturer : STANDARD	E/S Manufacturer : STANDARD
E/S Diam. (m): 7.0	E/S Diam. (m): 3.7
E/S Freq (nom, GHz): 6.175	E/S Freq (nom, GHz): 3.95
E/S Tx Gain (dBi): 51.0	E/S Gain (nom, dBi): 41.2
ULPC Margin (dB): .0	E/S Feed Loss (dB): 0.20
	E/S Ant. Temp(deg K): 25
	E/S LNA Temp (deg K): 65
	E/S G/T (nom, dB/K): *

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SATELLITE DATA	Satellite : IS-706 Uplink Beam: GLOBAL Uplink POL: , Dnlink POL: , EIRP, beam center: 40.6 dBW G/T:-11.5 dB/K, SFD:-73.1 dBW/m2 Dnlink EIRP: 36.6 dBW	Location: 54.85E Dnlink Beam: CSPOT		
TRANSPONDER DATA	Trans Bandwidth :41 Mhz Uplink Frequency:6.175 GHz IBO (Nominal) : 12.0 dB	Trans Type: LTWIA Dnlink Freq: 3.950 GHz OBO (Nominal): 6.1 dB		
CARRIER DATA	Type: TV/FM, Format: PAL, PreEmphasis+Weighting: 15.6dB RF BW: 30.0 MHz, P-Dev: 9.0 MHz, VideoBW: 6.0 MHz,			
LINK BUDGET				
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	77.8	n/a	n/a
	- Uplink Path Loss, clear sky (dB)	-200.2	n/a	n/a
	- Uplink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Satellite G/T (dB/K)	-11.5	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-74.8	n/a	n/a
	C/N Uplink (dB)	19.9	n/a	n/a
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	36.6	n/a	n/a
	- Carrier Output Backoff (dB)	-6.1	n/a	n/a
	Downlink EIRP per carrier (dBW)	30.5	n/a	n/a
	- Earth Station Pointing Error (dB)	-.5	n/a	n/a
	- Downlink Path Loss, clear sky (dB)	-196.3	n/a	n/a
	- Downlink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Earth Station G/T (dB/K)	29.4	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-74.8	n/a	n/a
	C/N Dnlink (dB)	16.9	n/a	n/a
COMPOSITE PERFORMANCE	C/N Uplink (dB)	19.9	n/a	n/a
	C/N Dnlink (dB)	16.9	n/a	n/a
	C/I Uplink Co-channel (dB)	28.4	n/a	n/a
	C/I Dnlink Co-Channel (dB)	28.4	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-1) (dB)	19.7	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	18.6	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-2) (dB)	19.7	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	19.8	n/a	n/a
	C/(N+I) COMPOSITE (dB)	11.0	n/a	n/a
	- Required System Margin (dB)	-1.0	n/a	n/a
Net C/(N+I) COMPOSITE (dB)	10.0	n/a	n/a	
- Minimum Required C/N (dB)	-10.0	n/a	n/a	
	Excess Link Margin (dB)	0.0	n/a	n/a
	Video Signal-to-Noise Ratio (dB)	43.9	n/a	n/a
	Audio Signal-to-Noise Ratio (dB)	57.7	n/a	n/a
TRANSMIT EARTH STATION	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 269.0 watts			
RECEIVE EARTH STA.,	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr			
DENSITY INFORMATION	Uplink Pwr Den: -50.5 dBW/Hz, Dnlink EIRP Den: -40.3 dBW/Hz Max Dnlink PFD: -167.2 dB(W/m2/4kHz) @ Beam Center			
LOSS IN C/(N+I) DUE TO ADJ SAT INTF: SAT-1 = 1.6dB, SAT-2 = 1.3dB				

GLOBAL-CSPOT (41 MHZ): 30M0F3F
[Input Data]

----- SATELLITE -----

Satellite Name	: IS-706	Location (deg)	: 54.85E
Uplink Beam	: GLOBAL	Dnlink Beam	: CSPOT
Trans. BW (MHz)	: 41 MHz	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency (GHz)	: 6.175	Dnlink Frequency (GHz)	: 3.950
G/T, beam center (dB/K)	: -7.5	EIRP, beam center (dBW)	: 40.6
G/T, beam edge (dB/K)	: -11.5	EIRP, beam edge (dBW)	: 36.6
G/T, toward Tx ES (dB/K)	: -11.5	EIRP, toward Rx ES (dBW)	: 36.6
SFD, beam edge (dBW/m2)	: -73.1		
SFD, toward Tx ES (dBW/m2)	: -73.1		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB)	: 14	Nominal Uplink Co-Chan C/I (dB)	: 27.0
Input Backoff (dB)	: 12	Nominal Dnlink Co-Chan C/I (dB)	: 27.0
Output Backoff (dB)	: *	Minimum Uplink Rain Margin (dB)	: 0.0
(C/Im) - Nominal (dB)	: *	Actual Uplink Rain Margin (dB)	: n/a
Min. System Margin (dB)	: 1.0	Uplink Power Control Margin (dB)	: .0
Max No Carriers / Trans	: 1	Minimum Dnlink Rain Margin (dB)	: 0.0
		Actual Dnlink Rain Margin (dB)	: n/a
		Dnlink Pointing Error (dB)	: 0.5

-- ADJACENT SATELLITE INTERFERENCE ----- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg)	:	52.85E	56.85E
Uplink Interference (dB or dBW/Hz)	:	-38.7	-38.7
Uplink Polarization Advantage (dB)	:	0.0	0.0
Downlink Interference (dB or dBW/Hz)	:	-34.7	-34.7
Downlink Polarization Advantage (dB)	:	0.0	0.0
Rx E/S Topocentric Angle (deg)	:	2.09	2.09
Rx E/S Pointing Error (deg)	:	-0.12	0.12
Rx E/S Off-Axis Angle (deg)	:	1.97	2.21
Rx E/S Adj. Sat. Discrimination (dB)	:	28.2	29.4

----- TV/FM CARRIER PARAMETERS -----

Video Format	: PAL	Peak Deviation (MHz)	: 9.0
RF Noise BW (MHz)	: 30.0	PreEmphasis+Weighting (dB)	: 15.6
Video BW (MHz)	: 6.0	Threshold C/N (dB)	: 10.0

----- AUDIO SUB-CARRIER PARAMETERS -----

Sub-Carrier Freq (MHz)	: 6.6	Highest Audio Freq (kHz)	: 15.0
P-Dev of Video by Audio (MHz)	: 2.0	Companding Advantage (dB)	: 0.0
Peak Dev of Audio (kHz)	: 75.0		

----- Transmit Earth Station ----- ----- Receive Earth Station -----

Location: -4_dB_Gain_Contour		Location: -4_dB_Gain_Contour	
Latitude (deg): *		Latitude (deg): *	
Longitude (deg): *		Longitude (deg): *	
Rain Rate (mm/hr): 42*		Rain Rate (mm/hr): 42*	
E/S Type or Model No:		E/S Type or Model No:	
E/S Manufacturer : STANDARD		E/S Manufacturer : STANDARD	
E/S Diam. (m): 9.2		E/S Diam. (m): 9.2	
E/S Freq (nom, GHz): 6.175		E/S Freq (nom, GHz): 3.95	
E/S Tx Gain (dBi): 53.5		E/S Gain (nom, dBi): 50.3	
ULPC Margin (dB): .0		E/S Feed Loss (dB): 0.15	
		E/S Ant. Temp(deg K): 45	
		E/S LNA Temp (deg K): 65	
		E/S G/T (nom, dB/K): *	

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SATELLITE DATA	Satellite : IS-706 Uplink Beam: GLOBAL Uplink POL: , Dnlink POL: , EIRP, beam center: 40.6 dBW G/T:-11.5 dB/K, SFD:-87.1 dBW/m2 Dnlink EIRP: 36.6 dBW	Location: 54.85E Dnlink Beam: CSPOT		
TRANSPONDER DATA	Trans Bandwidth :41 Mhz Uplink Frequency:6.175 GHz IBO (Nominal) : 0.0 dB	Trans Type: LTWTA Dnlink Freq: 3.950 GHz OBO (Nominal): 0.0 dB		
CARRIER DATA	Type: NTC26%, Info Rate: 27981 kbps, Mod: QPSK, 1/2x188/204 BWo: 34310kHz, BWa: 41000kHz, C/N: 3.36dB, C/N_thresh: 3.36			
LINK BUDGET				
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	75.8	n/a	n/a
	- Uplink Path Loss, clear sky (dB)	-200.2	n/a	n/a
	- Uplink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Satellite G/T (dB/K)	-11.5	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-75.4	n/a	n/a
	C/N Uplink (dB)	17.3	n/a	n/a
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	36.6	n/a	n/a
	- Carrier Output Backoff (dB)	0.0	n/a	n/a
	Downlink EIRP per carrier (dBW)	36.6	n/a	n/a
	- Earth Station Pointing Error (dB)	-.5	n/a	n/a
	- Downlink Path Loss, clear sky (dB)	-196.3	n/a	n/a
	- Downlink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Earth Station G/T (dB/K)	19.2	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-75.4	n/a	n/a
	C/N Dnlink (dB)	12.2	n/a	n/a
COMPOSITE PERFORMANCE	C/N Uplink (dB)	17.3	n/a	n/a
	C/N Dnlink (dB)	12.2	n/a	n/a
	C/I Uplink Co-channel (dB)	27.0	n/a	n/a
	C/I Dnlink Co-Channel (dB)	27.0	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-1) (dB)	17.1	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	7.1	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-2) (dB)	17.1	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	15.9	n/a	n/a
	C/(N+I) COMPOSITE (dB)	4.7	n/a	n/a
	- Required System Margin (dB)	-1.0	n/a	n/a
	Net C/(N+I) COMPOSITE (dB)	3.7	n/a	n/a
	- Minimum Required C/N (dB)	-3.4	n/a	n/a
	Excess Link Margin (dB)	.3	n/a	n/a
TRANSPONDER UTILIZATION	% BW/CARR: 100.00, % PWR/CARR: 100.00, Max No. Carriers: 1.0 Downlink EIRP per carrier toward beam center: 40.6 dBW			
TRANSMIT EARTH STATION	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 301.9 watts			
RECEIVE EARTH STA.	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr			
DENSITY INFORMATION	Uplink Pwr Den: -50.6 dBW/Hz, Dnlink EIRP Den: -34.8 dBW/Hz Max Dnlink PFD: -161.7 dB(W/m2/4kHz) @ Beam Center			
LOSS IN C/(N+I) DUE TO ADJ SAT INTF: SAT-1 = 4.3dB, SAT-2 = 0.6dB				

GLOBAL-CSPOT (41 MHZ): 41MOG7W
[Input Data]

----- SATELLITE -----

Satellite Name	: IS-706	Location (deg)	: 54.85E
Uplink Beam	: GLOBAL	Dnlink Beam	: CSPOT
Trans. BW (MHz)	: 41 MHz	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency (GHz)	: 6.175	Dnlink Frequency (GHz)	: 3.950
G/T, beam center (dB/K)	: -7.5	EIRP, beam center (dBW)	: 40.6
G/T, beam edge (dB/K)	: -11.5	EIRP, beam edge (dBW)	: 36.6
G/T, toward Tx ES (dB/K)	: -11.5	EIRP, toward Rx ES (dBW)	: 36.6
SFD, beam edge (dBW/m2)	: -87.1		
SFD, toward Tx ES (dBW/m2)	: -87.1		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB)	: 0	Nominal Uplink Co-Chan C/I (dB)	: 27.0
Input Backoff (dB)	: 0.0	Nominal Dnlink Co-Chan C/I (dB)	: 27.0
Output Backoff (dB)	: *	Minimum Uplink Rain Margin (dB)	: 0.0
(C/Im) - Nominal (dB)	: *	Actual Uplink Rain Margin (dB)	: n/a
Min. System Margin (dB)	: 1.0	Uplink Power Control Margin (dB)	: .0
Max No Carriers / Trans	: 1	Minimum Dnlink Rain Margin (dB)	: 0.0
		Actual Dnlink Rain Margin (dB)	: n/a
		Dnlink Pointing Error (dB)	: 0.5

-- ADJACENT SATELLITE INTERFERENCE ----- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg)	:	52.85E	56.85E
Uplink Interference (dB or dBW/Hz)	:	-38.7	-38.7
Uplink Polarization Advantage (dB)	:	0.0	0.0
Downlink Interference (dB or dBW/Hz)	:	-34.7	-34.7
Downlink Polarization Advantage (dB)	:	0.0	0.0
Rx E/S Topocentric Angle (deg)	:	2.09	2.09
Rx E/S Pointing Error (deg)	:	-0.36	0.36
Rx E/S Off-Axis Angle (deg)	:	1.73	2.45
Rx E/S Adj. Sat. Discrimination (dB)	:	11.2	19.9

----- CARRIER PARAMETERS -----

Modem Type	: NTC26%	C/N (operating, dB)	: 3.36
Modulation	: QPSK	Eb/No (operating, dB)	: 4.2
Code Rate	: 1/2x188/204-V	C/N (threshold, dB)	: 3.36
Info Rate (kbps)	: 27981	Eb/No (threshold, dB)	: 4.2
Occupied Bandwidth (kHz)	: 34310		
Allocated Bandwidth (kHz)	: 41000		

----- Transmit Earth Station ----- ----- Receive Earth Station -----

Location: -4_dB_Gain_Contour	Location: -4_dB_Gain_Contour
Latitude (deg): *	Latitude (deg): *
Longitude (deg): *	Longitude (deg): *
Rain Rate (mm/hr): 42*	Rain Rate (mm/hr): 42*
E/S Type or Model No:	E/S Type or Model No:
E/S Manufacturer : STANDARD	E/S Manufacturer : STANDARD
E/S Diam. (m): 7.0	E/S Diam. (m): 3.0
E/S Freq (nom, GHz): 6.175	E/S Freq (nom, GHz): 3.95
E/S Tx Gain (dBi): 51.0	E/S Gain (nom, dBi): 39.7
ULPC Margin (dB): .0	E/S Feed Loss (dB): 0.15
	E/S Ant. Temp (deg K): 35
	E/S LNA Temp (deg K): 65
	E/S G/T (nom, dB/K): *

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SATELLITE DATA	Satellite : IS-706 Uplink Beam: GLOBAL Uplink POL: , Dnlink POL: , EIRP, beam center: 40.6 dBW G/T:-11.5 dB/K, SFD:-86.1 dBW/m2 Dnlink EIRP: 36.6 dBW	Location: 54.85E Dnlink Beam: CSPOT		
TRANSPONDER DATA	Trans Bandwidth :41 MHz Uplink Frequency:6.175 GHz IBO (Nominal) : 8.2 dB	Trans Type: LTWTA Dnlink Freq: 3.950 GHz OBO (Nominal): 3.5 dB		
CARRIER DATA	Type: EP9000, Info Rate: 6000 kbps, Mod: QPSK, 1/2x188/204- BWo: 6771.1kHz, BWa: 10300kHz, C/N: 3.87dB, C/N_thresh: 3.5			
LINK BUDGET				
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	64.1	n/a	n/a
	- Uplink Path Loss, clear sky (dB)	-200.2	n/a	n/a
	- Uplink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Satellite G/T (dB/K)	-11.5	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-68.3	n/a	n/a
	C/N Uplink (dB)	12.7	n/a	n/a
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	36.6	n/a	n/a
	- Carrier Output Backoff (dB)	-8.0	n/a	n/a
	Downlink EIRP per carrier (dBW)	28.6	n/a	n/a
	- Earth Station Pointing Error (dB)	- .5	n/a	n/a
	- Downlink Path Loss, clear sky (dB)	-196.3	n/a	n/a
	- Downlink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Earth Station G/T (dB/K)	21.0	n/a	n/a
- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a	
- Carrier Noise Bandwidth (dB-Hz)	-68.3	n/a	n/a	
C/N Dnlink (dB)	13.1	n/a	n/a	
COMPOSITE PERFORMANCE	C/N Uplink (dB)	12.7	n/a	n/a
	C/N Dnlink (dB)	13.1	n/a	n/a
	C/I Intermod (dB)	20.0	n/a	n/a
	C/I Uplink Co-channel (dB)	28.5	n/a	n/a
	C/I Dnlink Co-Channel (dB)	28.5	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-1) (dB)	12.5	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	11.3	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-2) (dB)	12.5	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	16.1	n/a	n/a
	C/(N+I) COMPOSITE (dB)	4.9	n/a	n/a
	- Required System Margin (dB)	-1.0	n/a	n/a
Net C/(N+I) COMPOSITE (dB)	3.9	n/a	n/a	
- Minimum Required C/N (dB)	-3.9	n/a	n/a	
Excess Link Margin (dB)	0.0	n/a	n/a	
TRANSPONDER UTILIZATION	% BW/CARR: 25.12, % PWR/CARR: 35.69, Max No. Carriers: 2.8 Downlink EIRP per carrier toward beam center: 32.6 dBW			
TRANSMIT EARTH STATION	Loc: -4 dB Gain Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 20.5 watts			
RECEIVE EARTH STA.	Loc: -4 dB Gain Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr			
DENSITY INFORMATION	Uplink Pwr Den: -55.2 dBW/Hz, Dnlink EIRP Den: -35.7 dBW/Hz Max Dnlink PFD: -162.6 dB(W/m2/4kHz) @ Beam Center			
LOSS IN C/(N+I) DUE TO ADJ SAT INTF: SAT-1 = 2.2dB, SAT-2 = 1.2dB				

GLOBAL-CSPOT (41 MHz): 10M3G7W
[Input Data]

----- SATELLITE -----

Satellite Name	: IS-706	Location (deg)	: 54.85E
Uplink Beam	: GLOBAL	Dnlink Beam	: CSPOT
Trans. BW (MHz)	: 41 MHz	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency (GHz)	: 6.175	Dnlink Frequency (GHz)	: 3.950
G/T, beam center (dB/K)	: -7.5	EIRP, beam center (dBW)	: 40.6
G/T, beam edge (dB/K)	: -11.5	EIRP, beam edge (dBW)	: 36.6
G/T, toward Tx ES (dB/K)	: -11.5	EIRP, toward Rx ES (dBW)	: 36.6
SFD, beam edge (dBW/m2)	: -86.1		
SFD, toward Tx ES (dBW/m2)	: -86.1		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB)	: 1	Nominal Uplink Co-Chan C/I (dB)	: 27.0
Input Backoff (dB)	: 8.2*	Nominal Dnlink Co-Chan C/I (dB)	: 27.0
Output Backoff (dB)	: *	Minimum Uplink Rain Margin (dB)	: 0.0
(C/Im) - Nominal (dB)	: *	Actual Uplink Rain Margin (dB)	: n/a
Min. System Margin (dB)	: 1.0	Uplink Power Control Margin (dB)	: .0
Max No Carriers / Trans	: *	Minimum Dnlink Rain Margin (dB)	: 0.0
		Actual Dnlink Rain Margin (dB)	: n/a
		Dnlink Pointing Error (dB)	: 0.5

-- ADJACENT SATELLITE INTERFERENCE ----- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg)	:	52.85E	56.85E
Uplink Interference (dB or dBW/Hz)	:	-38.7	-38.7
Uplink Polarization Advantage (dB)	:	0.0	0.0
Downlink Interference (dB or dBW/Hz)	:	-34.7	-34.7
Downlink Polarization Advantage (dB)	:	0.0	0.0
Rx E/S Topocentric Angle (deg)	:	2.09	2.09
Rx E/S Pointing Error (deg)	:	-0.31	0.31
Rx E/S Off-Axis Angle (deg)	:	1.78	2.40
Rx E/S Adj. Sat. Discrimination (dB)	:	16.3	21.1

----- CARRIER PARAMETERS -----

Modem Type	: EF9000	C/N (operating, dB)	: 3.87
Modulation	: QPSK	Eb/No (operating, dB)	: 4.4
Code Rate	: 1/2x188/204-V	C/N (threshold, dB)	: 3.57
Info Rate (kbps)	: 6000	Eb/No (threshold, dB)	: 4.1
Occupied Bandwidth (kHz)	: 6771.1		
Allocated Bandwidth (kHz)	: 10300		

----- Transmit Earth Station ----- ----- Receive Earth Station -----

Location: -4_dB_Gain_Contour	Location: -4_dB_Gain_Contour
Latitude (deg): *	Latitude (deg): *
Longitude (deg): *	Longitude (deg): *
Rain Rate (mm/hr): 42*	Rain Rate (mm/hr): 42*
E/S Type or Model No:	E/S Type or Model No:
E/S Manufacturer : STANDARD	E/S Manufacturer : STANDARD
E/S Diam. (m): 7.0	E/S Diam. (m): 3.5
E/S Freq (nom, GHz): 6.175	E/S Freq (nom, GHz): 3.95
E/S Tx Gain (dBi): 51.0	E/S Gain (nom, dBi): 41.1
ULPC Margin (dB): .0	E/S Feed Loss (dB): 0.15
	E/S Ant. Temp(deg K): 25
	E/S LNA Temp (deg K): 65
	E/S G/T (nom, dB/K): *

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SATELLITE DATA	Satellite : IS-706 Uplink Beam: GLOBAL Uplink POL: , Dnlink POL: , EIRP, beam center: 40.6 dBW G/T:-11.5 dB/K, SFD:-86.1 dBW/m2	Location: 54.85E Dnlink Beam: CSPOT Dnlink EIRP: 36.6 dBW				
TRANSPONDER DATA	Trans Bandwidth :41 MHz Uplink Frequency:6.175 GHz IBO (Nominal) : 8.2 dB	Trans Type: LTWTA Dnlink Freq: 3.950 GHz OBO (Nominal): 3.5 dB				
CARRIER DATA	Type: CS701, Info Rate: 64 kbps, Mod: QPSK, 1/2x239/256-V BWo: 75.4kHz, BWa: 100kHz, C/N: 2.99dB, C/N_thresh: 2.79dB					
LINK BUDGET						
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	43.7	UP FADE	n/a	DN FADE	n/a
	- Uplink Path Loss, clear sky (dB)	-200.2	n/a	n/a	n/a	n/a
	- Uplink Rain Attenuation (dB)	0.0	n/a	n/a	n/a	n/a
	+ Satellite G/T (dB/K)	-11.5	n/a	n/a	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-48.8	n/a	n/a	n/a	n/a
	C/N Uplink (dB)	11.8	n/a	n/a	n/a	n/a
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	36.6	n/a	n/a	n/a	n/a
	- Carrier Output Backoff (dB)	-28.4	n/a	n/a	n/a	n/a
	Downlink EIRP per carrier (dBW)	8.2	n/a	n/a	n/a	n/a
	- Earth Station Pointing Error (dB)	- .5	n/a	n/a	n/a	n/a
	- Downlink Path Loss, clear sky (dB)	-196.3	n/a	n/a	n/a	n/a
	- Downlink Rain Attenuation (dB)	0.0	n/a	n/a	n/a	n/a
	+ Earth Station G/T (dB/K)	21.0	n/a	n/a	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-48.8	n/a	n/a	n/a	n/a
	C/N Dnlink (dB)	12.2	n/a	n/a	n/a	n/a
COMPOSITE PERFORMANCE	C/N Uplink (dB)	11.8	n/a	n/a	n/a	n/a
	C/N Dnlink (dB)	12.2	n/a	n/a	n/a	n/a
	C/I Intermod (dB)	19.1	n/a	n/a	n/a	n/a
	C/I Uplink Co-channel (dB)	28.2	n/a	n/a	n/a	n/a
	C/I Dnlink Co-Channel (dB)	28.2	n/a	n/a	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-1) (dB)	11.6	n/a	n/a	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	10.5	n/a	n/a	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-2) (dB)	11.6	n/a	n/a	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	15.2	n/a	n/a	n/a	n/a
	C/(N+I) COMPOSITE (dB)	4.0	n/a	n/a	n/a	n/a
	- Required System Margin (dB)	-1.0	n/a	n/a	n/a	n/a
Net C/(N+I) COMPOSITE (dB)	3.0	n/a	n/a	n/a	n/a	
- Minimum Required C/N (dB)	-3.0	n/a	n/a	n/a	n/a	
	Excess Link Margin (dB)	0.0	n/a	n/a	n/a	n/a
TRANSPONDER UTILIZATION	% BW/CARR: 0.24, % PWR/CARR: 0.32, Max No. Carriers: 308.5 Downlink EIRP per carrier toward beam center: 12.2 dBW					
TRANSMIT EARTH STATION	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 0.2 watts					
RECEIVE EARTH STA.	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr					
DENSITY INFORMATION	Uplink Pwr Den: -56.1 dBW/Hz, Dnlink EIRP Den: -36.6 dBW/Hz Max Dnlink PFD: -163.5 dB(W/m2/4kHz) @ Beam Center					
LOSS IN C/(N+I) DUE TO ADJ SAT INTF: SAT-1 = 2.2dB, SAT-2 = 1.2dB						

GLOBAL-CSPOT (41 MHZ): 100KG7W
[Input Data]

----- SATELLITE -----

Satellite Name	: IS-706	Location (deg)	: 54.85E
Uplink Beam	: GLOBAL	Dnlink Beam	: CSPOT
Trans. BW (MHz)	: 41 MHz	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency (GHz)	: 6.175	Dnlink Frequency (GHz)	: 3.950
G/T, beam center (dB/K)	: -7.5	EIRP, beam center (dBW)	: 40.6
G/T, beam edge (dB/K)	: -11.5	EIRP, beam edge (dBW)	: 36.6
G/T, toward Tx ES (dB/K)	: -11.5	EIRP, toward Rx ES (dBW)	: 36.6
SFD, beam edge (dBW/m2)	: -86.1		
SFD, toward Tx ES (dBW/m2)	: -86.1		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB)	: 1	Nominal Uplink Co-Chan C/I (dB)	: 27.0
Input Backoff (dB)	: 8.2*	Nominal Dnlink Co-Chan C/I (dB)	: 27.0
Output Backoff (dB)	: *	Minimum Uplink Rain Margin (dB)	: 0.0
(C/Im) - Nominal (dB)	: *	Actual Uplink Rain Margin (dB)	: n/a
Min. System Margin (dB)	: 1.0	Uplink Power Control Margin (dB)	: .0
Max No Carriers / Trans:	*	Minimum Dnlink Rain Margin (dB)	: 0.0
		Actual Dnlink Rain Margin (dB)	: n/a
		Dnlink Pointing Error (dB)	: 0.5

-- ADJACENT SATELLITE INTERFERENCE ----- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg)	:	52.85E	56.85E
Uplink Interference (dB or dBW/Hz)	:	-38.7	-38.7
Uplink Polarization Advantage (dB)	:	0.0	0.0
Downlink Interference (dB or dBW/Hz)	:	-34.7	-34.7
Downlink Polarization Advantage (dB)	:	0.0	0.0
Rx E/S Topocentric Angle (deg)	:	2.09	2.09
Rx E/S Pointing Error (deg)	:	-0.31	0.31
Rx E/S Off-Axis Angle (deg)	:	1.78	2.40
Rx E/S Adj. Sat. Discrimination (dB)	:	16.3	21.1

----- CARRIER PARAMETERS -----

Modem Type	: CS701	C/N (operating, dB)	: 2.99
Modulation	: QPSK	Eb/No (operating, dB)	: 3.7
Code Rate	: 1/2x239/256-V	C/N (threshold, dB)	: 2.79
Info Rate (kbps)	: 64	Eb/No (threshold, dB)	: 3.5
Occupied Bandwidth (kHz)	: 75.4		
Allocated Bandwidth (kHz)	: 100		

----- Transmit Earth Station ----- ----- Receive Earth Station -----

Location: -4_dB_Gain_Contour	Location: -4_dB_Gain_Contour
Latitude (deg): *	Latitude (deg): *
Longitude (deg): *	Longitude (deg): *
Rain Rate (mm/hr): 42*	Rain Rate (mm/hr): 42*
E/S Type or Model No:	E/S Type or Model No:
E/S Manufacturer : STANDARD	E/S Manufacturer : STANDARD
E/S Diam. (m): 7.0	E/S Diam. (m): 3.5
E/S Freq (nom, GHz): 6.175	E/S Freq (nom, GHz): 3.95
E/S Tx Gain (dBi): 51.0	E/S Gain (nom, dBi): 41.1
ULPC Margin (dB): .0	E/S Feed Loss (dB): 0.15
	E/S Ant. Temp (deg K): 25
	E/S LNA Temp (deg K): 65
	E/S G/T (nom, dB/K): *

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SATELLITE DATA	Satellite : IS-706 Uplink Beam: HEMI Uplink POL: , Dnlink POL: , EIRP, beam center: 36.6 dBW G/T:-5.5 dB/K, SFD:-73.5 dBW/m2 Dnlink EIRP: 32.6 dBW	Location: 54.85E Dnlink Beam: HEMI		
TRANSPONDER DATA	Trans Bandwidth :72 MHz Uplink Frequency:6.175 GHz IBO (Nominal) : 8.2 dB	Trans Type: LTWTA Dnlink Freq: 3.950 GHz OBO (Nominal): 3.5 dB		
CARRIER DATA	Type: TV/FM, Format: PAL, PreEmphasis+Weighting: 15.6dB RF BW: 30.0 MHz, P-Dev: 9.0 MHz, VideoBW: 6.0 MHz,			
LINK BUDGET				
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	78.1	n/a	n/a
	- Uplink Path Loss, clear sky (dB)	-200.2	n/a	n/a
	- Uplink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Satellite G/T (dB/K)	-5.5	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-74.8	n/a	n/a
C/N Uplink (dB)		26.3	n/a	n/a
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	32.6	n/a	n/a
	- Carrier Output Backoff (dB)	-6.6	n/a	n/a
	Downlink EIRP per carrier (dBW)	26.0	n/a	n/a
	- Earth Station Pointing Error (dB)	-.5	n/a	n/a
	- Downlink Path Loss, clear sky (dB)	-196.3	n/a	n/a
	- Downlink Rain Attenuation (dB)	0.0	n/a	n/a
+ Earth Station G/T (dB/K)	34.5	n/a	n/a	
- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a	
- Carrier Noise Bandwidth (dB-Hz)	-74.8	n/a	n/a	
C/N Dnlink (dB)		17.5	n/a	n/a
COMPOSITE PERFORMANCE	C/N Uplink (dB)	26.3	n/a	n/a
	C/N Dnlink (dB)	17.5	n/a	n/a
	C/I Intermod (dB)	17.4	n/a	n/a
	C/I Uplink Co-channel (dB)	27.7	n/a	n/a
	C/I Dnlink Co-Channel (dB)	27.7	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-1) (dB)	20.1	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	20.1	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-2) (dB)	20.1	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	20.8	n/a	n/a
	C/(N+I) COMPOSITE (dB)	11.0	n/a	n/a
	- Required System Margin (dB)	-1.0	n/a	n/a
Net C/(N+I) COMPOSITE (dB)	10.0	n/a	n/a	
- Minimum Required C/N (dB)	-10.0	n/a	n/a	
Excess Link Margin (dB)		0.0	n/a	n/a
Video Signal-to-Noise Ratio (dB)		43.9	n/a	n/a
Audio Signal-to-Noise Ratio (dB)		57.7	n/a	n/a
TRANSMIT EARTH STATION	Loc: -4 dB Gain Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 253.7 watts			
RECEIVE EARTH STA.	Loc: -4 dB Gain Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr			
DENSITY INFORMATION	Uplink Pwr Den: -50.7 dBW/Hz, Dnlink EIRP Den: -44.7 dBW/Hz Max Dnlink PFD: -171.6 dB(W/m2/4kHz) @ Beam Center			
LOSS IN C/(N+I) DUE TO ADJ SAT INTF: SAT-1 = 1.2dB, SAT-2 = 1.1dB				

HEMI-HEMI (72): 30M0F3F
[Input Data]

----- SATELLITE -----

Satellite Name	: IS-706	Location (deg)	: 54.85E
Uplink Beam	: HEMI	Dnlink Beam	: HEMI
Trans. BW (MHz)	: 72 MHz	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency (GHz)	: 6.175	Dnlink Frequency (GHz)	: 3.950
G/T, beam center (dB/K)	: -1.5	EIRP, beam center (dBW)	: 36.6
G/T, beam edge (dB/K)	: -5.5	EIRP, beam edge (dBW)	: 32.6
G/T, toward Tx ES (dB/K)	: -5.5	EIRP, toward Rx ES (dBW)	: 32.6
SFD, beam edge (dBW/m2)	: -73.5		
SFD, toward Tx ES (dBW/m2)	: -73.5		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB)	: 14	Nominal Uplink Co-Chan C/I (dB)	: 27.0
Input Backoff (dB)	: 8.2*	Nominal Dnlink Co-Chan C/I (dB)	: 27.0
Output Backoff (dB)	: *	Minimum Uplink Rain Margin (dB)	: 0.0
(C/Im) - Nominal (dB)	: *	Actual Uplink Rain Margin (dB)	: n/a
Min. System Margin (dB)	: 1.0	Uplink Power Control Margin (dB)	: .0
Max No Carriers / Trans	: *	Minimum Dnlink Rain Margin (dB)	: 0.0
		Actual Dnlink Rain Margin (dB)	: n/a
		Dnlink Pointing Error (dB)	: 0.5

--- ADJACENT SATELLITE INTERFERENCE ----- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg)	:	52.85E	56.85E
Uplink Interference (dB or dBW/Hz)	:	-38.7	-38.7
Uplink Polarization Advantage (dB)	:	0.0	0.0
Downlink Interference (dB or dBW/Hz)	:	-35.7	-35.7
Downlink Polarization Advantage (dB)	:	0.0	0.0
Rx E/S Topocentric Angle (deg)	:	2.09	2.09
Rx E/S Pointing Error (deg)	:	-0.07	0.07
Rx E/S Off-Axis Angle (deg)	:	2.02	2.16
Rx E/S Adj. Sat. Discrimination (dB)	:	33.1	33.9

----- TV/FM CARRIER PARAMETERS -----

Video Format	: PAL	Peak Deviation (MHz)	: 9.0
RF Noise BW (MHz)	: 30.0	PreEmphasis+Weighting (dB)	: 15.6
Video BW (MHz)	: 6.0	Threshold C/N (dB)	: 10.0

----- AUDIO SUB-CARRIER PARAMETERS -----

Sub-Carrier Freq (MHz)	: 6.6	Highest Audio Freq (kHz)	: 15.0
P-Dev of Video by Audio (MHz)	: 2.0	Companding Advantage (dB)	: 0.0
Peak Dev of Audio (kHz)	: 75.0		

----- Transmit Earth Station ----- ----- Receive Earth Station -----

Location: -4_dB_Gain_Contour		Location: -4_dB_Gain_Contour	
Latitude (deg): *		Latitude (deg): *	
Longitude (deg): *		Longitude (deg): *	
Rain Rate (mm/hr): 42*		Rain Rate (mm/hr): 42*	
E/S Type or Model No:		E/S Type or Model No:	
E/S Manufacturer : STANDARD		E/S Manufacturer : STANDARD	
E/S Diam. (m): 10.0		E/S Diam. (m): 15.2	
E/S Freq (nom, GHz): 6.175		E/S Freq (nom, GHz): 3.95	
E/S Tx Gain (dBi): 54.1		E/S Gain (nom, dBi): 55.0	
ULPC Margin (dB): .0		E/S Feed Loss (dB): 0.20	
		E/S Ant. Temp(deg K): 30	
		E/S LNA Temp (deg K): 65	
		E/S G/T (nom, dB/K): *	

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SATELLITE DATA	Satellite : IS-706 Uplink Beam: HEMI Uplink POL: , Dnlink POL: , EIRP, beam center: 36.6 dBW G/T:-5.5 dB/K, SFD:-87.5 dBW/m2 Dnlink EIRP: 32.6 dBW	Location: 54.85E Dnlink Beam: HEMI		
TRANSPONDER DATA	Trans Bandwidth :72 MHz Uplink Frequency:6.175 GHz IBO (Nominal) : 0.0 dB	Trans Type: LTWTA Dnlink Freq: 3.950 GHz OBO (Nominal): 0.0 dB		
CARRIER DATA	Type: NTC26%, Info Rate: 49138 kbps, Mod: QPSK, 1/2x188/204 BWo: 60251kHz, Bwa: 72000kHz, C/N: 3.36dB, C/N_thresh: 3.36			
LINK BUDGET				
		CLR SKY	UP FADE	DN FADE
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	75.4	n/a	n/a
	- Uplink Path Loss, clear sky (dB)	-200.2	n/a	n/a
	- Uplink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Satellite G/T (dB/K)	-5.5	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-77.8	n/a	n/a
	C/N Uplink (dB)	20.5	n/a	n/a
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	32.6	n/a	n/a
	- Carrier Output Backoff (dB)	0.0	n/a	n/a
	Downlink EIRP per carrier (dBW)	32.6	n/a	n/a
	- Earth Station Pointing Error (dB)	- .5	n/a	n/a
	- Downlink Path Loss, clear sky (dB)	-196.3	n/a	n/a
	- Downlink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Earth Station G/T (dB/K)	23.6	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-77.8	n/a	n/a
	C/N Dnlink (dB)	10.2	n/a	n/a
COMPOSITE PERFORMANCE	C/N Uplink (dB)	20.5	n/a	n/a
	C/N Dnlink (dB)	10.2	n/a	n/a
	C/I Uplink Co-channel (dB)	27.0	n/a	n/a
	C/I Dnlink Co-Channel (dB)	27.0	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-1) (dB)	14.3	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	11.6	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-2) (dB)	14.3	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	14.1	n/a	n/a
	C/(N+I) COMPOSITE (dB)	5.4	n/a	n/a
	- Required System Margin (dB)	-1.0	n/a	n/a
	Net C/(N+I) COMPOSITE (dB)	4.4	n/a	n/a
- Minimum Required C/N (dB)	-3.4	n/a	n/a	
	Excess Link Margin (dB)	1.0	n/a	n/a
TRANSPONDER UTILIZATION	% BW/CARR: 100.00, % PWR/CARR: 100.00, Max No. Carriers: 1.0 Downlink EIRP per carrier toward beam center: 36.6 dBW			
TRANSMIT EARTH STATION	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 275.3 watts			
RECEIVE EARTH STA.	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr			
DENSITY INFORMATION	Uplink Pwr Den: -53.4 dBW/Hz, Dnlink EIRP Den: -41.2 dBW/Hz Max Dnlink PFD: -168.1 dB(W/m2/4kHz) @ Beam Center			
LOSS IN C/(N+I) DUE TO ADJ SAT INTF: SAT-1 = 2.0dB, SAT-2 = 1.3dB				

HEMI-HEMI (72 MHZ): 72M0G7W
[Input Data]

----- SATELLITE -----

Satellite Name	: IS-706	Location (deg)	: 54.85E
Uplink Beam	: HEMI	Dnlink Beam	: HEMI
Trans. BW (MHz)	: 72 MHz	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency (GHz)	: 6.175	Dnlink Frequency (GHz)	: 3.950
G/T, beam center (dB/K)	: -1.5	EIRP, beam center (dBW)	: 36.6
G/T, beam edge (dB/K)	: -5.5	EIRP, beam edge (dBW)	: 32.6
G/T, toward Tx ES (dB/K)	: -5.5	EIRP, toward Rx ES (dBW)	: 32.6
SFD, beam edge (dBW/m2)	: -87.5		
SFD, toward Tx ES (dBW/m2)	: -87.5		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB)	: 0	Nominal Uplink Co-Chan C/I (dB)	: 27.0
Input Backoff (dB)	: 0.0	Nominal Dnlink Co-Chan C/I (dB)	: 27.0
Output Backoff (dB)	: *	Minimum Uplink Rain Margin (dB)	: 0.0
(C/Im) - Nominal (dB)	: *	Actual Uplink Rain Margin (dB)	: n/a
Min. System Margin (dB)	: 1.0	Uplink Power Control Margin (dB)	: .0
Max No Carriers / Trans	: 1	Minimum Dnlink Rain Margin (dB)	: 0.0
		Actual Dnlink Rain Margin (dB)	: n/a
		Dnlink Pointing Error (dB)	: 0.5

-- ADJACENT SATELLITE INTERFERENCE ----- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg)	:	52.85E	56.85E
Uplink Interference (dB or dBW/Hz)	:	-38.7	-38.7
Uplink Polarization Advantage (dB)	:	0.0	0.0
Downlink Interference (dB or dBW/Hz)	:	-35.7	-35.7
Downlink Polarization Advantage (dB)	:	0.0	0.0
Rx E/S Topocentric Angle (deg)	:	2.09	2.09
Rx E/S Pointing Error (deg)	:	-0.24	0.24
Rx E/S Off-Axis Angle (deg)	:	1.85	2.33
Rx E/S Adj. Sat. Discrimination (dB)	:	21.1	23.6

----- CARRIER PARAMETERS -----

Modem Type	: NTC26%	C/N (operating, dB)	: 3.36
Modulation	: QPSK	Eb/No (operating, dB)	: 4.2
Code Rate	: 1/2x188/204-V	C/N (threshold, dB)	: 3.36
Info Rate (kbps)	: 49138	Eb/No (threshold, dB)	: 4.2
Occupied Bandwidth (kHz)	: 60251		
Allocated Bandwidth (kHz)	: 72000		

----- Transmit Earth Station ----- ----- Receive Earth Station -----

Location: -4_dB_Gain_Contour	Location: -4_dB_Gain_Contour
Latitude (deg): *	Latitude (deg): *
Longitude (deg): *	Longitude (deg): *
Rain Rate (mm/hr): 42*	Rain Rate (mm/hr): 42*
E/S Type or Model No:	E/S Type or Model No:
E/S Manufacturer : STANDARD	E/S Manufacturer : STANDARD
E/S Diam. (m): 7.0	E/S Diam. (m): 4.5
E/S Freq (nom, GHz): 6.175	E/S Freq (nom, GHz): 3.95
E/S Tx Gain (dBi): 51.0	E/S Gain (nom, dBi): 43.9
ULPC Margin (dB): .0	E/S Feed Loss (dB): 0.20
	E/S Ant. Temp(deg K): 25
	E/S LNA Temp (deg K): 65
	E/S G/T (nom, dB/K): *

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SATELLITE DATA	Satellite : IS-706 Uplink Beam: HEMI Uplink POL: , Dnlink POL: , EIRP, beam center: 36.6 dBW G/T:-5.5 dB/K, SFD:-81.5 dBW/m2 Dnlink EIRP: 32.6 dBW	Location: 54.85E Dnlink Beam: HEMI		
TRANSPONDER DATA	Trans Bandwidth :72 MHz Uplink Frequency:6.175 GHz IBO (Nominal) : 8.2 dB	Trans Type: LTWTA Dnlink Freq: 3.950 GHz OBO (Nominal): 3.5 dB		
CARRIER DATA	Type: EF9000, Info Rate: 6000 kbps, Mod: QPSK, 1/2x188/204- BWo: 6771.1kHz, BWa: 10300kHz, C/N: 3.87dB, C/N_thresh: 3.5			
LINK BUDGET				
		CLR SKY	UP FADE	DN FADE
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	66.5	n/a	n/a
	- Uplink Path Loss, clear sky (dB)	-200.2	n/a	n/a
	- Uplink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Satellite G/T (dB/K)	-5.5	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-68.3	n/a	n/a
	C/N Uplink (dB)	21.1	n/a	n/a
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	32.6	n/a	n/a
	- Carrier Output Backoff (dB)	-10.2	n/a	n/a
	Downlink EIRP per carrier (dBW)	22.4	n/a	n/a
	- Earth Station Pointing Error (dB)	-.5	n/a	n/a
	- Downlink Path Loss, clear sky (dB)	-196.3	n/a	n/a
	- Downlink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Earth Station G/T (dB/K)	23.6	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-68.3	n/a	n/a
	C/N Dnlink (dB)	9.5	n/a	n/a
COMPOSITE PERFORMANCE	C/N Uplink (dB)	21.1	n/a	n/a
	C/N Dnlink (dB)	9.5	n/a	n/a
	C/I Intermod (dB)	20.2	n/a	n/a
	C/I Uplink Co-channel (dB)	28.8	n/a	n/a
	C/I Dnlink Co-Channel (dB)	28.8	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-1) (dB)	14.9	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	10.9	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-2) (dB)	14.9	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	13.4	n/a	n/a
	C/(N+I) COMPOSITE (dB)	4.9	n/a	n/a
	- Required System Margin (dB)	-1.0	n/a	n/a
Net C/(N+I) COMPOSITE (dB)	3.9	n/a	n/a	
- Minimum Required C/N (dB)	-3.9	n/a	n/a	
	Excess Link Margin (dB)	0.0	n/a	n/a
TRANSPONDER UTILIZATION	% BW/CARR: 14.31, % PWR/CARR: 21.42, Max No. Carriers: 4.7 Downlink EIRP per carrier toward beam center: 26.4 dBW			
TRANSMIT EARTH STATION	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 35.5 watts			
RECEIVE EARTH STA.	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr			
DENSITY INFORMATION	Uplink Pwr Den: -52.8 dBW/Hz, Dnlink EIRP Den: -41.9 dBW/Hz Max Dnlink PFD: -168.8 dB(W/m2/4kHz) @ Beam Center			
LOSS IN C/(N+I) DUE TO ADJ SAT INTF: SAT-1 = 1.9dB, SAT-2 = 1.2dB				

HEMI-HEMI (72 MHz): 10M3G7W
[Input Data]

----- SATELLITE -----

Satellite Name	: IS-706	Location (deg)	: 54.85E
Uplink Beam	: HEMI	Dnlink Beam	: HEMI
Trans. BW (MHz)	: 72 MHz	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency (GHz)	: 6.175	Dnlink Frequency (GHz)	: 3.950
G/T, beam center (dB/K)	: -1.5	EIRP, beam center (dBW)	: 36.6
G/T, beam edge (dB/K)	: -5.5	EIRP, beam edge (dBW)	: 32.6
G/T, toward Tx ES (dB/K)	: -5.5	EIRP, toward Rx ES (dBW)	: 32.6
SFD, beam edge (dBW/m2)	: -81.5		
SFD, toward Tx ES (dBW/m2)	: -81.5		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB)	: 6	Nominal Uplink Co-Chan C/I (dB)	: 27.0
Input Backoff (dB)	: 8.2*	Nominal Dnlink Co-Chan C/I (dB)	: 27.0
Output Backoff (dB)	: *	Minimum Uplink Rain Margin (dB)	: 0.0
(C/Im) - Nominal (dB)	: *	Actual Uplink Rain Margin (dB)	: n/a
Min. System Margin (dB)	: 1.0	Uplink Power Control Margin (dB)	: .0
Max No Carriers / Trans:	*	Minimum Dnlink Rain Margin (dB)	: 0.0
		Actual Dnlink Rain Margin (dB)	: n/a
		Dnlink Pointing Error (dB)	: 0.5

-- ADJACENT SATELLITE INTERFERENCE ----- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg)	:	52.85E	56.85E
Uplink Interference (dB or dBW/Hz)	:	-38.7	-38.7
Uplink Polarization Advantage (dB)	:	0.0	0.0
Downlink Interference (dB or dBW/Hz)	:	-35.7	-35.7
Downlink Polarization Advantage (dB)	:	0.0	0.0
Rx E/S Topocentric Angle (deg)	:	2.09	2.09
Rx E/S Pointing Error (deg)	:	-0.24	0.24
Rx E/S Off-Axis Angle (deg)	:	1.85	2.33
Rx E/S Adj. Sat. Discrimination (dB)	:	21.1	23.6

----- CARRIER PARAMETERS -----

Modem Type	: EF9000	C/N (operating, dB)	: 3.87
Modulation	: QPSK	Eb/No (operating, dB)	: 4.4
Code Rate	: 1/2x188/204-V	C/N (threshold, dB)	: 3.57
Info Rate (kbps)	: 6000	Eb/No (threshold, dB)	: 4.1
Occupied Bandwidth (kHz)	: 6771.1		
Allocated Bandwidth (kHz)	: 10300		

----- Transmit Earth Station ----- ----- Receive Earth Station -----

Location: -4_dB_Gain_Contour	Location: -4_dB_Gain_Contour
Latitude (deg): *	Latitude (deg): *
Longitude (deg): *	Longitude (deg): *
Rain Rate (mm/hr): 42*	Rain Rate (mm/hr): 42*
E/S Type or Model No:	E/S Type or Model No:
E/S Manufacturer : STANDARD	E/S Manufacturer : STANDARD
E/S Diam. (m): 7.0	E/S Diam. (m): 4.5
E/S Freq (nom, GHz): 6.175	E/S Freq (nom, GHz): 3.95
E/S Tx Gain (dBi): 51.0	E/S Gain (nom, dBi): 43.9
ULPC Margin (dB): .0	E/S Feed Loss (dB): 0.20
	E/S Ant. Temp(deg K): 25
	E/S LNA Temp (deg K): 65
	E/S G/T (nom, dB/K): *

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SATELLITE DATA	Satellite : IS-706 Uplink Beam: HEMI Uplink POL: , Dnlink POL: , EIRP, beam center: 36.6 dBW G/T:-5.5 dB/K, SFD:-81.5 dBW/m2 Dnlink EIRP: 32.6 dBW	Location: 54.85E Dnlink Beam: HEMI		
TRANSPONDER DATA	Trans Bandwidth :72 MHz Uplink Frequency:6.175 GHz IBO (Nominal) : 8.2 dB	Trans Type: LTWTA Dnlink Freq: 3.950 GHz OBO (Nominal): 3.5 dB		
CARRIER DATA	Type: CS701, Info Rate: 64 kbps, Mod: QPSK, 1/2x239/256-V BWo: 75.4kHz, BWa: 100kHz, C/N: 2.99dB, C/N_thresh: 2.79dB			
LINK BUDGET				
		CLR SKY UP FADE DN FADE		
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	46.1	n/a	n/a
	- Uplink Path Loss, clear sky (dB)	-200.2	n/a	n/a
	- Uplink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Satellite G/T (dB/K)	-5.5	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-48.8	n/a	n/a
	C/N Uplink (dB)	20.2	n/a	n/a
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	32.6	n/a	n/a
	- Carrier Output Backoff (dB)	-30.6	n/a	n/a
	Downlink EIRP per carrier (dBW)	2.0	n/a	n/a
	- Earth Station Pointing Error (dB)	-.5	n/a	n/a
	- Downlink Path Loss, clear sky (dB)	-196.3	n/a	n/a
	- Downlink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Earth Station G/T (dB/K)	23.6	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-48.8	n/a	n/a
	C/N Dnlink (dB)	8.6	n/a	n/a
COMPOSITE PERFORMANCE	C/N Uplink (dB)	20.2	n/a	n/a
	C/N Dnlink (dB)	8.6	n/a	n/a
	C/I Intermod (dB)	19.3	n/a	n/a
	C/I Uplink Co-channel (dB)	28.5	n/a	n/a
	C/I Dnlink Co-Channel (dB)	28.5	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-1) (dB)	14.0	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	10.0	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-2) (dB)	14.0	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	12.5	n/a	n/a
	C/(N+I) COMPOSITE (dB)	4.0	n/a	n/a
	- Required System Margin (dB)	-1.0	n/a	n/a
Net C/(N+I) COMPOSITE (dB)	3.0	n/a	n/a	
- Minimum Required C/N (dB)	-3.0	n/a	n/a	
	Excess Link Margin (dB)	0.0	n/a	n/a
TRANSPONDER UTILIZATION	% BW/CARR: 0.14, % PWR/CARR: 0.19, Max No. Carriers: 514.0 Downlink EIRP per carrier toward beam center: 6.0 dBW			
TRANSMIT EARTH STATION	Loc: -4 dB Gain Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 0.3 watts			
RECEIVE EARTH STA.	Loc: -4 dB Gain Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr			
DENSITY INFORMATION	Uplink Pwr Den: -53.7 dBW/Hz, Dnlink EIRP Den: -42.8 dBW/Hz Max Dnlink PFD: -169.7 dB(W/m2/4kHz) @ Beam Center			
LOSS IN C/(N+I) DUE TO ADJ SAT INTF: SAT-1 = 1.9dB, SAT-2 = 1.2dB				

HEMI-HEMI (72 MHz): 100KG7W
[Input Data]

----- SATELLITE -----

Satellite Name	: IS-706	Location (deg)	: 54.85E
Uplink Beam	: HEMI	Dnlink Beam	: HEMI
Trans. BW (MHz)	: 72 MHz	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency (GHz)	: 6.175	Dnlink Frequency (GHz)	: 3.950
G/T, beam center (dB/K)	: -1.5	EIRP, beam center (dBW)	: 36.6
G/T, beam edge (dB/K)	: -5.5	EIRP, beam edge (dBW)	: 32.6
G/T, toward Tx ES (dB/K)	: -5.5	EIRP, toward Rx ES (dBW)	: 32.6
SFD, beam edge (dBW/m2)	: -81.5		
SFD, toward Tx ES (dBW/m2)	: -81.5		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB)	: 6	Nominal Uplink Co-Chan C/I (dB)	: 27.0
Input Backoff (dB)	: 8.2*	Nominal Dnlink Co-Chan C/I (dB)	: 27.0
Output Backoff (dB)	: *	Minimum Uplink Rain Margin (dB)	: 0.0
(C/Im) - Nominal (dB)	: *	Actual Uplink Rain Margin (dB)	: n/a
Min. System Margin (dB)	: 1.0	Uplink Power Control Margin (dB)	: .0
Max No Carriers / Trans	: *	Minimum Dnlink Rain Margin (dB)	: 0.0
		Actual Dnlink Rain Margin (dB)	: n/a
		Dnlink Pointing Error (dB)	: 0.5

----- ADJACENT SATELLITE INTERFERENCE ----- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg)	:	52.85E	56.85E
Uplink Interference (dB or dBW/Hz)	:	-38.7	-38.7
Uplink Polarization Advantage (dB)	:	0.0	0.0
Downlink Interference (dB or dBW/Hz)	:	-35.7	-35.7
Downlink Polarization Advantage (dB)	:	0.0	0.0
Rx E/S Topocentric Angle (deg)	:	2.09	2.09
Rx E/S Pointing Error (deg)	:	-0.24	0.24
Rx E/S Off-Axis Angle (deg)	:	1.85	2.33
Rx E/S Adj. Sat. Discrimination (dB)	:	21.1	23.6

----- CARRIER PARAMETERS -----

Modem Type	: CS701	C/N (operating, dB)	: 2.99
Modulation	: QPSK	Eb/No (operating, dB)	: 3.7
Code Rate	: 1/2x239/256-V	C/N (threshold, dB)	: 2.79
Info Rate (kbps)	: 64	Eb/No (threshold, dB)	: 3.5
Occupied Bandwidth (kHz)	: 75.4		
Allocated Bandwidth (kHz)	: 100		

----- Transmit Earth Station ----- ----- Receive Earth Station -----

Location: -4_dB_Gain_Contour	Location: -4_dB_Gain_Contour
Latitude (deg): *	Latitude (deg): *
Longitude (deg): *	Longitude (deg): *
Rain Rate (mm/hr): 42*	Rain Rate (mm/hr): 42*
E/S Type or Model No:	E/S Type or Model No:
E/S Manufacturer : STANDARD	E/S Manufacturer : STANDARD
E/S Diam. (m): 7.0	E/S Diam. (m): 4.5
E/S Freq (nom, GHz): 6.175	E/S Freq (nom, GHz): 3.95
E/S Tx Gain (dBi): 51.0	E/S Gain (nom, dBi): 43.9
ULPC Margin (dB): .0	E/S Feed Loss (dB): 0.20
	E/S Ant. Temp(deg K): 25
	E/S LNA Temp (deg K): 65
	E/S G/T (nom, dB/K): *

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29-Oct-08 15:23

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SATELLITE DATA	Satellite : IS-705 Uplink Beam: HEMI Uplink POL: , Dnlink POL: , EIRP, beam center: 33.5 dBW G/T:-5.5 dB/K, SFD:-73.5 dBW/m2 Dnlink EIRP: 29.5 dBW	Location: 54.85E Dnlink Beam: GLOBAL		
TRANSPONDER DATA	Trans Bandwidth :36.0 MHz Uplink Frequency:6.175 GHz IBO (Nominal) : 9.4 dB	Trans Type: LTWTA Dnlink Freq: 3.950 GHz OBO (Nominal): 3.6 dB		
CARRIER DATA	Type: TV/FM, Format: PAL, PreEmphasis+Weighting: 15.6dB RF BW: 30.0 MHz, P-Dev: 9.0 MHz, VideoBW: 6.0 MHz,			
LINK BUDGET				
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	80.0	n/a	n/a
	- Uplink Path Loss, clear sky (dB)	-200.2	n/a	n/a
	- Uplink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Satellite G/T (dB/K)	-5.5	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-74.8	n/a	n/a
	C/N Uplink (dB)	28.1	n/a	n/a
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	29.5	n/a	n/a
	- Carrier Output Backoff (dB)	-3.6	n/a	n/a
	Downlink EIRP per carrier (dBW)	25.9	n/a	n/a
	- Earth Station Pointing Error (dB)	-.5	n/a	n/a
	- Downlink Path Loss, clear sky (dB)	-196.3	n/a	n/a
	- Downlink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Earth Station G/T (dB/K)	33.0	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-74.8	n/a	n/a
	C/N Dnlink (dB)	16.0	n/a	n/a
COMPOSITE PERFORMANCE	C/N Uplink (dB)	28.1	n/a	n/a
	C/N Dnlink (dB)	16.0	n/a	n/a
	C/I Uplink Co-channel (dB)	27.8	n/a	n/a
	C/I Dnlink Co-channel (dB)	27.8	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-1) (dB)	21.9	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	16.9	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-2) (dB)	21.9	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	17.8	n/a	n/a
	C/(N+I) COMPOSITE (dB)	11.0	n/a	n/a
	- Required System Margin (dB)	-1.0	n/a	n/a
	Net C/(N+I) COMPOSITE (dB)	10.0	n/a	n/a
	- Minimum Required C/N (dB)	-10.0	n/a	n/a
	Excess Link Margin (dB)	0.0	n/a	n/a
	Video Signal-to-Noise Ratio (dB)	43.9	n/a	n/a
	Audio Signal-to-Noise Ratio (dB)	57.6	n/a	n/a
TRANSMIT EARTH STATION	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 288.3 watts			
RECEIVE EARTH STA.	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr			
DENSITY INFORMATION	Uplink Pwr Den: -50.2 dBW/Hz, Dnlink EIRP Den: -44.8 dBW/Hz Max Dnlink PFD: -171.7 dB(W/m2/4kHz) @ Beam Center			
LOSS IN C/(N+I) DUE TO ADJ SAT INTF: SAT-1 = 1.8dB, SAT-2 = 1.5dB				

HEMI-GLOBAL (36 MHZ): 30M0F3F
[Input Data]

----- SATELLITE -----

Satellite Name	: IS-705	Location (deg)	: 54.85E
Uplink Beam	: HEMI	Dnlink Beam	: GLOBAL
Trans. BW (MHz)	: 36.0 MHz	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency (GHz)	: 6.175	Dnlink Frequency (GHz)	: 3.950
G/T, beam center (dB/K)	: -1.5	EIRP, beam center (dBW)	: 33.5
G/T, beam edge (dB/K)	: -5.5	EIRP, beam edge (dBW)	: 29.5
G/T, toward Tx ES (dB/K)	: -5.5	EIRP, toward Rx ES (dBW)	: 29.5
SFD, beam edge (dBW/m2)	: -73.5		
SFD, toward Tx ES (dBW/m2)	: -73.5		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB)	: 14	Nominal Uplink Co-Chan C/I (dB)	: 27.0
Input Backoff (dB)	: 10, 9.40	Nominal Dnlink Co-Chan C/I (dB)	: 27.0
Output Backoff (dB)	: *	Minimum Uplink Rain Margin (dB)	: 0.0
(C/Im) - Nominal (dB)	: *	Actual Uplink Rain Margin (dB)	: n/a
Min. System Margin (dB)	: 1.0	Uplink Power Control Margin (dB)	: .0
Max No Carriers / Trans:	1	Minimum Dnlink Rain Margin (dB)	: 0.0
		Actual Dnlink Rain Margin (dB)	: n/a
		Dnlink Pointing Error (dB)	: 0.5

----- ADJACENT SATELLITE INTERFERENCE ----- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg)	:	52.85E	56.85E
Uplink Interference (dB or dBW/Hz)	:	-38.7	-38.7
Uplink Polarization Advantage (dB)	:	0.0	0.0
Downlink Interference (dB or dBW/Hz)	:	-34.2	-34.2
Downlink Polarization Advantage (dB)	:	0.0	0.0
Rx E/S Topocentric Angle (deg)	:	2.09	2.09
Rx E/S Pointing Error (deg)	:	-0.08	0.08
Rx E/S Off-Axis Angle (deg)	:	2.01	2.17
Rx E/S Adj. Sat. Discrimination (dB)	:	31.6	32.4

----- TV/FM CARRIER PARAMETERS -----

Video Format	: PAL	Peak Deviation (MHz)	: 9.0
RF Noise BW (MHz)	: 30.0	PreEmphasis+Weighting (dB)	: 15.6
Video BW (MHz)	: 6.0	Threshold C/N (dB)	: 10.0

----- AUDIO SUB-CARRIER PARAMETERS -----

Sub-Carrier Freq (MHz)	: 6.6	Highest Audio Freq (kHz)	: 15.0
P-Dev of Video by Audio (MHz)	: 2.0	Companding Advantage (dB)	: 0.0
Peak Dev of Audio (kHz)	: 75.0		

----- Transmit Earth Station ----- ----- Receive Earth Station -----

Location: -4_dB_Gain_Contour		Location: -4_dB_Gain_Contour	
Latitude (deg): *		Latitude (deg): *	
Longitude (deg): *		Longitude (deg): *	
Rain Rate (mm/hr): 42*		Rain Rate (mm/hr): 42*	
E/S Type or Model No:		E/S Type or Model No:	
E/S Manufacturer : STANDARD		E/S Manufacturer : STANDARD	
E/S Diam. (m): 11.0		E/S Diam. (m): 13.1	
E/S Freq (nom, GHz): 6.175		E/S Freq (nom, GHz): 3.95	
E/S Tx Gain (dBi): 55.4		E/S Gain (nom, dBi): 53.5	
ULPC Margin (dB): .0		E/S Feed Loss (dB): 0.20	
		E/S Ant. Temp(deg K): 30	
		E/S LNA Temp (deg K): 65	
		E/S G/T (nom, dB/K): *	

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SATELLITE DATA	Satellite : IS-705 Uplink Beam: HEMI Uplink POL: , Dnlink POL: , EIRP, beam center: 33.5 dBW G/T:-5.5 dB/K, SFD:-87.5 dBW/m2 Dnlink EIRP: 29.5 dBW	Location: 54.85E Dnlink Beam: GLOBAL		
TRANSPONDER DATA	Trans Bandwidth :36.0 MHz Uplink Frequency:6.175 GHz IBO (Nominal) : 0.0 dB	Trans Type: LTWTA Dnlink Freq: 3.950 GHz OBO (Nominal): 0.0 dB		
CARRIER DATA	Type: NTC26%, Info Rate: 24575 kbps, Mod: QPSK, 1/2x188/204 BWo: 30133kHz, BWa: 36000kHz, C/N: 3.36dB, C/N_thresh: 3.36			
LINK BUDGET				
		CLR SKY	UP FADE	DN FADE
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	75.4	n/a	n/a
	- Uplink Path Loss, clear sky (dB)	-200.2	n/a	n/a
	- Uplink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Satellite G/T (dB/K)	-5.5	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-74.8	n/a	n/a
	C/N Uplink (dB)	23.5	n/a	n/a
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	29.5	n/a	n/a
	- Carrier Output Backoff (dB)	0.0	n/a	n/a
	Downlink EIRP per carrier (dBW)	29.5	n/a	n/a
	- Earth Station Pointing Error (dB)	-.5	n/a	n/a
	- Downlink Path Loss, clear sky (dB)	-196.3	n/a	n/a
	- Downlink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Earth Station G/T (dB/K)	23.6	n/a	n/a
- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a	
- Carrier Noise Bandwidth (dB-Hz)	-74.8	n/a	n/a	
C/N Dnlink (dB)	10.1	n/a	n/a	
COMPOSITE PERFORMANCE	C/N Uplink (dB)	23.5	n/a	n/a
	C/N Dnlink (dB)	10.1	n/a	n/a
	C/I Uplink Co-channel (dB)	27.0	n/a	n/a
	C/I Dnlink Co-Channel (dB)	27.0	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-1) (dB)	17.3	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	10.0	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-2) (dB)	17.3	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	12.5	n/a	n/a
	C/(N+I) COMPOSITE (dB)	5.2	n/a	n/a
	- Required System Margin (dB)	-1.0	n/a	n/a
Net C/(N+I) COMPOSITE (dB)	4.2	n/a	n/a	
- Minimum Required C/N (dB)	-3.4	n/a	n/a	
Excess Link Margin (dB)	.9	n/a	n/a	
TRANSPONDER UTILIZATION	% BW/CARR: 100.00, % PWR/CARR: 100.00, Max No. Carriers: 1.0 Downlink EIRP per carrier toward beam center: 33.5 dBW			
TRANSMIT EARTH STATION	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 275.3 watts			
RECEIVE EARTH STA.	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr			
DENSITY INFORMATION	Uplink Pwr Den: -50.4 dBW/Hz, Dnlink EIRP Den: -41.3 dBW/Hz Max Dnlink PFD: -168.2 dB(W/m2/4kHz) @ Beam Center			
LOSS IN C/(N+I) DUE TO ADJ SAT INTF: SAT-1 = 2.2dB, SAT-2 = 1.2dB				

HEMI-GLOBAL (36 MHZ): 36M0G7W
[Input Data]

----- SATELLITE -----

Satellite Name	: IS-705	Location (deg)	: 54.85E
Uplink Beam	: HEMI	Dnlink Beam	: GLOBAL
Trans. BW (MHz)	: 36.0 MHz	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency (GHz)	: 6.175	Dnlink Frequency (GHz)	: 3.950
G/T, beam center (dB/K)	: -1.5	EIRP, beam center (dBW)	: 33.5
G/T, beam edge (dB/K)	: -5.5	EIRP, beam edge (dBW)	: 29.5
G/T, toward Tx ES (dB/K)	: -5.5	EIRP, toward Rx ES (dBW)	: 29.5
SFD, beam edge (dBW/m2)	: -87.5		
SFD, toward Tx ES (dBW/m2)	: -87.5		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB)	: 0	Nominal Uplink Co-Chan C/I (dB)	: 27.0
Input Backoff (dB)	: 0.0	Nominal Dnlink Co-Chan C/I (dB)	: 27.0
Output Backoff (dB)	: *	Minimum Uplink Rain Margin (dB)	: 0.0
(C/Im) - Nominal (dB)	: *	Actual Uplink Rain Margin (dB)	: n/a
Min. System Margin (dB)	: 1.0	Uplink Power Control Margin (dB)	: .0
Max No Carriers / Trans:	: 1	Minimum Dnlink Rain Margin (dB)	: 0.0
		Actual Dnlink Rain Margin (dB)	: n/a
		Dnlink Pointing Error (dB)	: 0.5

--- ADJACENT SATELLITE INTERFERENCE ----- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg)	:	52.85E	56.85E
Uplink Interference (dB or dBW/Hz)	:	-38.7	-38.7
Uplink Polarization Advantage (dB)	:	0.0	0.0
Downlink Interference (dB or dBW/Hz)	:	-34.2	-34.2
Downlink Polarization Advantage (dB)	:	0.0	0.0
Rx E/S Topocentric Angle (deg)	:	2.09	2.09
Rx E/S Pointing Error (deg)	:	-0.24	0.24
Rx E/S Off-Axis Angle (deg)	:	1.85	2.33
Rx E/S Adj. Sat. Discrimination (dB)	:	21.1	23.6

----- CARRIER PARAMETERS -----

Modem Type	: NTC26%	C/N (operating, dB)	: 3.36
Modulation	: QPSK	Eb/No (operating, dB)	: 4.2
Code Rate	: 1/2x188/204-V	C/N (threshold, dB)	: 3.36
Info Rate (kbps)	: 24575	Eb/No (threshold, dB)	: 4.2
Occupied Bandwidth (kHz)	: 30133		
Allocated Bandwidth (kHz)	: 36000		

----- Transmit Earth Station ----- ----- Receive Earth Station -----

Location: -4_dB_Gain_Contour	Location: -4_dB_Gain_Contour
Latitude (deg): *	Latitude (deg): *
Longitude (deg): *	Longitude (deg): *
Rain Rate (mm/hr): 42*	Rain Rate (mm/hr): 42*
E/S Type or Model No:	E/S Type or Model No:
E/S Manufacturer : STANDARD	E/S Manufacturer : STANDARD
E/S Diam. (m): 7.0	E/S Diam. (m): 4.5
E/S Freq (nom, GHz): 6.175	E/S Freq (nom, GHz): 3.95
E/S Tx Gain (dBi): 51.0	E/S Gain (nom, dBi): 43.9
ULPC Margin (dB): .0	E/S Feed Loss (dB): 0.20
	E/S Ant. Temp(deg K): 25
	E/S LNA Temp (deg K): 65
	E/S G/T (nom, dB/K): *

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2-Nov-08 13:27
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SATELLITE DATA	Satellite : IS-705 Uplink Beam: HEMI Uplink POL: , Dnlink POL: , EIRP, beam center: 33.5 dBW G/T:-5.5 dB/K, SFD:-77.5 dBW/m2 Dnlink EIRP: 29.5 dBW	Location: 54.85E Dnlink Beam: GLOBAL		
TRANSPONDER DATA	Trans Bandwidth :36.0 MHz Uplink Frequency:6.175 GHz IBO (Nominal) : 8.2 dB	Trans Type: LTWIA Dnlink Freq: 3.950 GHz OBO (Nominal): 3.5 dB		
CARRIER DATA	Type: EF9000, Info Rate: 6000 kbps, Mod: QPSK, 1/2x188/204- BWo: 6771.1kHz, BWa: 10300kHz, C/N: 3.87dB, C/N_thresh: 3.5			
LINK BUDGET				
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	73.5	n/a	n/a
	- Uplink Path Loss, clear sky (dB)	-200.2	n/a	n/a
	- Uplink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Satellite G/T (dB/K)	-5.5	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-68.3	n/a	n/a
	C/N Uplink (dB)	28.1	n/a	n/a
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	29.5	n/a	n/a
	- Carrier Output Backoff (dB)	-7.2	n/a	n/a
	Downlink EIRP per carrier (dBW)	22.3	n/a	n/a
	- Earth Station Pointing Error (dB)	- .5	n/a	n/a
	- Downlink Path Loss, clear sky (dB)	-196.3	n/a	n/a
	- Downlink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Earth Station G/T (dB/K)	23.6	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-68.3	n/a	n/a
	C/N Dnlink (dB)	9.4	n/a	n/a
COMPOSITE PERFORMANCE	C/N Uplink (dB)	28.1	n/a	n/a
	C/N Dnlink (dB)	9.4	n/a	n/a
	C/I Intermod (dB)	20.2	n/a	n/a
	C/I Uplink Co-channel (dB)	28.8	n/a	n/a
	C/I Dnlink Co-Channel (dB)	28.8	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-1) (dB)	21.9	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	9.3	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-2) (dB)	21.9	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	11.8	n/a	n/a
	C/(N+I) COMPOSITE (dB)	4.9	n/a	n/a
	- Required System Margin (dB)	-1.0	n/a	n/a
Net C/(N+I) COMPOSITE (dB)	3.9	n/a	n/a	
- Minimum Required C/N (dB)	-3.9	n/a	n/a	
	Excess Link Margin (dB)	0.0	n/a	n/a
TRANSPONDER UTILIZATION	% BW/CARR: 28.61, % PWR/CARR: 42.96, Max No. Carriers: 2.3 Downlink EIRP per carrier toward beam center: 26.3 dBW			
TRANSMIT EARTH STATION	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 179.0 watts			
RECEIVE EARTH STA.	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr			
DENSITY INFORMATION	Uplink Pwr Den: -45.8 dBW/Hz, Dnlink EIRP Den: -42.0 dBW/Hz Max Dnlink PFD: -168.9 dB(W/m2/4kHz) @ Beam Center			
LOSS IN C/(N+I) DUE TO ADJ SAT INTF: SAT-1 = 2.1dB, SAT-2 = 1.1dB				

HEMI-GLOBAL (36 MHZ): 10M3G7W
[Input Data]

----- SATELLITE -----

Satellite Name	: IS-705	Location (deg)	: 54.85E
Uplink Beam	: HEMI	Dnlink Beam	: GLOBAL
Trans. BW (MHz)	: 36.0 MHz	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency (GHz)	: 6.175	Dnlink Frequency (GHz)	: 3.950
G/T, beam center (dB/K)	: -1.5	EIRP, beam center (dBW)	: 33.5
G/T, beam edge (dB/K)	: -5.5	EIRP, beam edge (dBW)	: 29.5
G/T, toward Tx ES (dB/K)	: -5.5	EIRP, toward Rx ES (dBW)	: 29.5
SFD, beam edge (dBW/m2)	: -77.5		
SFD, toward Tx ES (dBW/m2)	: -77.5		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB)	: 10	Nominal Uplink Co-Chan C/I (dB)	: 27.0
Input Backoff (dB)	: 8.2*	Nominal Dnlink Co-Chan C/I (dB)	: 27.0
Output Backoff (dB)	: *	Minimum Uplink Rain Margin (dB)	: 0.0
(C/Im) - Nominal (dB)	: *	Actual Uplink Rain Margin (dB)	: n/a
Min. System Margin (dB)	: 1.0	Uplink Power Control Margin (dB)	: .0
Max No Carriers / Trans:	: *	Minimum Dnlink Rain Margin (dB)	: 0.0
		Actual Dnlink Rain Margin (dB)	: n/a
		Dnlink Pointing Error (dB)	: 0.5

--- ADJACENT SATELLITE INTERFERENCE ----- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg)	:	52.85E	56.85E
Uplink Interference (dB or dBW/Hz)	:	-38.7	-38.7
Uplink Polarization Advantage (dB)	:	0.0	0.0
Downlink Interference (dB or dBW/Hz)	:	-34.2	-34.2
Downlink Polarization Advantage (dB)	:	0.0	0.0
Rx E/S Topocentric Angle (deg)	:	2.09	2.09
Rx E/S Pointing Error (deg)	:	-0.24	0.24
Rx E/S Off-Axis Angle (deg)	:	1.85	2.33
Rx E/S Adj. Sat. Discrimination (dB)	:	21.1	23.6

----- CARRIER PARAMETERS -----

Modem Type	: EF9000	C/N (operating, dB)	: 3.87
Modulation	: QPSK	Eb/No (operating, dB)	: 4.4
Code Rate	: 1/2x188/204-V	C/N (threshold, dB)	: 3.57
Info Rate (kbps)	: 6000	Eb/No (threshold, dB)	: 4.1
Occupied Bandwidth (kHz)	: 6771.1		
Allocated Bandwidth (kHz)	: 10300		

----- Transmit Earth Station ----- ----- Receive Earth Station -----

Location: -4_dB_Gain_Contour	Location: -4_dB_Gain_Contour
Latitude (deg): *	Latitude (deg): *
Longitude (deg): *	Longitude (deg): *
Rain Rate (mm/hr): 42*	Rain Rate (mm/hr): 42*
E/S Type or Model No:	E/S Type or Model No:
E/S Manufacturer : STANDARD	E/S Manufacturer : STANDARD
E/S Diam. (m): 7.0	E/S Diam. (m): 4.5
E/S Freq (nom, GHz): 6.175	E/S Freq (nom, GHz): 3.95
E/S Tx Gain (dBi): 51.0	E/S Gain (nom, dBi): 43.9
ULPC Margin (dB): .0	E/S Feed Loss (dB): 0.20
	E/S Ant. Temp(deg K): 25
	E/S LNA Temp (deg K): 65
	E/S G/T (nom, dB/K): *

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SATELLITE DATA	Satellite : IS-705 Uplink Beam: HEMI Uplink POL: , Dnlink POL: , EIRP, beam center: 33.5 dBW G/T:-5.5 dB/K, SFD:-77.5 dBW/m2 Dnlink EIRP: 29.5 dBW	Location: 54.85E Dnlink Beam: GLOBAL		
TRANSPONDER DATA	Trans Bandwidth :36.0 MHz Uplink Frequency:6.175 GHz IBO (Nominal) : 8.2 dB	Trans Type: LTWTA Dnlink Freq: 3.950 GHz OBO (Nominal): 3.5 dB		
CARRIER DATA	Type: CS701, Info Rate: 64 kbps, Mod: QPSK, 1/2x239/256-V BWo: 75.4kHz, BWa: 100kHz, C/N: 2.99dB, C/N_thresh: 2.79dB			
LINK BUDGET				
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	53.1	n/a	n/a
	- Uplink Path Loss, clear sky (dB)	-200.2	n/a	n/a
	- Uplink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Satellite G/T (dB/K)	-5.5	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-48.8	n/a	n/a
	C/N Uplink (dB)	27.2	n/a	n/a
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	29.5	n/a	n/a
	- Carrier Output Backoff (dB)	-27.6	n/a	n/a
	Downlink EIRP per carrier (dBW)	1.9	n/a	n/a
	- Earth Station Pointing Error (dB)	-0.5	n/a	n/a
	- Downlink Path Loss, clear sky (dB)	-196.3	n/a	n/a
	- Downlink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Earth Station G/T (dB/K)	23.6	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-48.8	n/a	n/a
	C/N Dnlink (dB)	8.5	n/a	n/a
COMPOSITE PERFORMANCE	C/N Uplink (dB)	27.2	n/a	n/a
	C/N Dnlink (dB)	8.5	n/a	n/a
	C/I Intermod (dB)	19.3	n/a	n/a
	C/I Uplink Co-channel (dB)	28.5	n/a	n/a
	C/I Dnlink Co-Channel (dB)	28.5	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-1) (dB)	21.0	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	8.4	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-2) (dB)	21.0	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	10.9	n/a	n/a
	C/(N+I) COMPOSITE (dB)	4.0	n/a	n/a
- Required System Margin (dB)	-1.0	n/a	n/a	
Net C/(N+I) COMPOSITE (dB)	3.0	n/a	n/a	
- Minimum Required C/N (dB)	-3.0	n/a	n/a	
	Excess Link Margin (dB)	0.0	n/a	n/a
TRANSPONDER UTILIZATION	% BW/CARR: 0.28, % PWR/CARR: 0.39, Max No. Carriers: 256.2 Downlink EIRP per carrier toward beam center: 5.9 dBW			
TRANSMIT EARTH STATION	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 1.6 watts			
RECEIVE EARTH STA.	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr			
DENSITY INFORMATION	Uplink Pwr Den: -46.7 dBW/Hz, Dnlink EIRP Den: -42.9 dBW/Hz Max Dnlink PFD: -169.8 dB(W/m2/4kHz) @ Beam Center			
LOSS IN C/(N+I) DUE TO ADJ SAT INTF: SAT-1 = 2.1dB, SAT-2 = 1.1dB				

HEMI-GLOBAL (36 MHZ): 100KG7W
[Input Data]

----- SATELLITE -----

Satellite Name	: IS-705	Location (deg)	: 54.85E
Uplink Beam	: HEMI	Dnlink Beam	: GLOBAL
Trans. BW (MHz)	: 36.0 MHz	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency (GHz)	: 6.175	Dnlink Frequency (GHz)	: 3.950
G/T, beam center (dB/K)	: -1.5	EIRP, beam center (dBW)	: 33.5
G/T, beam edge (dB/K)	: -5.5	EIRP, beam edge (dBW)	: 29.5
G/T, toward Tx ES (dB/K)	: -5.5	EIRP, toward Rx ES (dBW)	: 29.5
SFD, beam edge (dBW/m2)	: -77.5		
SFD, toward Tx ES (dBW/m2)	: -77.5		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB)	: 10	Nominal Uplink Co-Chan C/I (dB)	: 27.0
Input Backoff (dB)	: 8.2*	Nominal Dnlink Co-Chan C/I (dB)	: 27.0
Output Backoff (dB)	: *	Minimum Uplink Rain Margin (dB)	: 0.0
(C/Im) - Nominal (dB)	: *	Actual Uplink Rain Margin (dB)	: n/a
Min. System Margin (dB)	: 1.0	Uplink Power Control Margin (dB)	: .0
Max No Carriers / Trans:	: *	Minimum Dnlink Rain Margin (dB)	: 0.0
		Actual Dnlink Rain Margin (dB)	: n/a
		Dnlink Pointing Error (dB)	: 0.5

-- ADJACENT SATELLITE INTERFERENCE ----- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg)	:	52.85E	56.85E
Uplink Interference (dB or dBW/Hz)	:	-38.7	-38.7
Uplink Polarization Advantage (dB)	:	0.0	0.0
Downlink Interference (dB or dBW/Hz)	:	-34.2	-34.2
Downlink Polarization Advantage (dB)	:	0.0	0.0
Rx E/S Topocentric Angle (deg)	:	2.09	2.09
Rx E/S Pointing Error (deg)	:	-0.24	0.24
Rx E/S Off-Axis Angle (deg)	:	1.85	2.33
Rx E/S Adj. Sat. Discrimination (dB)	:	21.1	23.6

----- CARRIER PARAMETERS -----

Modem Type	: CS701	C/N (operating, dB)	: 2.99
Modulation	: QPSK	Eb/No (operating, dB)	: 3.7
Code Rate	: 1/2x239/256-V	C/N (threshold, dB)	: 2.79
Info Rate (kbps)	: 64	Eb/No (threshold, dB)	: 3.5
Occupied Bandwidth (kHz)	: 75.4		
Allocated Bandwidth (kHz)	: 100		

----- Transmit Earth Station ----- ----- Receive Earth Station -----

Location: -4_dB_Gain_Contour	Location: -4_dB_Gain_Contour
Latitude (deg): *	Latitude (deg): *
Longitude (deg): *	Longitude (deg): *
Rain Rate (mm/hr): 42*	Rain Rate (mm/hr): 42*
E/S Type or Model No:	E/S Type or Model No:
E/S Manufacturer : STANDARD	E/S Manufacturer : STANDARD
E/S Diam. (m): 7.0	E/S Diam. (m): 4.5
E/S Freq (nom, GHz): 6.175	E/S Freq (nom, GHz): 3.95
E/S Tx Gain (dBi): 51.0	E/S Gain (nom, dBi): 43.9
ULPC Margin (dB): .0	E/S Feed Loss (dB): 0.20
	E/S Ant. Temp(deg K): 25
	E/S LNA Temp (deg K): 65
	E/S G/T (nom, dB/K): *

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SATELLITE DATA	Satellite : IS-706 Uplink Beam: HEMI Uplink POL: , Dnlink POL: , EIRP, beam center: 37.3 dBW G/T:-5.5 dB/K, SFD:-73.5 dBW/m2 Dnlink EIRP: 33.3 dBW	Location: 54.85E Dnlink Beam: ZONE		
TRANSPONDER DATA	Trans Bandwidth :36.0 MHz Uplink Frequency:6.175 GHz IBO (Nominal) : 11.0 dB	Trans Type: LTWTA Dnlink Freq: 3.950 GHz OBO (Nominal): 5.1 dB		
CARRIER DATA	Type: TV/FM, Format: PAL, PreEmphasis+Weighting: 15.6dB RF BW: 30.0 MHz, P-Dev: 9.0 MHz, VideoBW: 6.0 MHz,			
LINK BUDGET				
		CLR SKY	UP FADE	DN FADE
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	78.4	n/a	n/a
	- Uplink Path Loss, clear sky (dB)	-200.2	n/a	n/a
	- Uplink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Satellite G/T (dB/K)	-5.5	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-74.8	n/a	n/a
	C/N Uplink (dB)	26.5	n/a	n/a
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	33.3	n/a	n/a
	- Carrier Output Backoff (dB)	-5.1	n/a	n/a
	Downlink EIRP per carrier (dBW)	28.2	n/a	n/a
	- Earth Station Pointing Error (dB)	- .5	n/a	n/a
	- Downlink Path Loss, clear sky (dB)	-196.3	n/a	n/a
	- Downlink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Earth Station G/T (dB/K)	31.0	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-74.8	n/a	n/a
	C/N Dnlink (dB)	16.2	n/a	n/a
COMPOSITE PERFORMANCE	C/N Uplink (dB)	26.5	n/a	n/a
	C/N Dnlink (dB)	16.2	n/a	n/a
	C/I Uplink Co-channel (dB)	27.8	n/a	n/a
	C/I Dnlink Co-Channel (dB)	27.8	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-1) (dB)	20.3	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	17.5	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-2) (dB)	20.3	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	18.5	n/a	n/a
	C/(N+I) COMPOSITE (dB)	11.0	n/a	n/a
	- Required System Margin (dB)	-1.0	n/a	n/a
	Net C/(N+I) COMPOSITE (dB)	10.0	n/a	n/a
- Minimum Required C/N (dB)	-10.0	n/a	n/a	
	Excess Link Margin (dB)	0.0	n/a	n/a
	Video Signal-to-Noise Ratio (dB)	43.9	n/a	n/a
	Audio Signal-to-Noise Ratio (dB)	57.6	n/a	n/a
TRANSMIT EARTH STATION	Loc: -4 dB Gain Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 269.0 watts			
RECEIVE EARTH STA.	Loc: -4 dB Gain Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr			
DENSITY INFORMATION	Uplink Pwr Den: -50.5 dBW/Hz, Dnlink EIRP Den: -42.6 dBW/Hz Max Dnlink PFD: -169.5 dB(W/m2/4kHz) @ Beam Center			
LOSS IN C/(N+I) DUE TO ADJ SAT INTF: SAT-1 = 1.8dB, SAT-2 = 1.5dB				

HEMI-ZONE (36 MHZ): 30M0F3F
[Input Data]

----- SATELLITE -----

Satellite Name	: IS-706	Location (deg)	: 54.85E
Uplink Beam	: HEMI	Dnlink Beam	: ZONE
Trans. BW (MHz)	: 36.0 MHz	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency (GHz)	: 6.175	Dnlink Frequency (GHz)	: 3.950
G/T, beam center (dB/K)	: -1.5	EIRP, beam center (dBW)	: 37.3
G/T, beam edge (dB/K)	: -5.5	EIRP, beam edge (dBW)	: 33.3
G/T, toward Tx ES (dB/K)	: -5.5	EIRP, toward Rx ES (dBW)	: 33.3
SFD, beam edge (dBW/m2)	: -73.5		
SFD, toward Tx ES (dBW/m2)	: -73.5		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB)	: 14	Nominal Uplink Co-Chan C/I (dB)	: 27.0
Input Backoff (dB)	: 11	Nominal Dnlink Co-Chan C/I (dB)	: 27.0
Output Backoff (dB)	: *	Minimum Uplink Rain Margin (dB)	: 0.0
(C/Im) - Nominal (dB)	: *	Actual Uplink Rain Margin (dB)	: n/a
Min. System Margin (dB)	: 1.0	Uplink Power Control Margin (dB)	: .0
Max No Carriers / Trans	: 1	Minimum Dnlink Rain Margin (dB)	: 0.0
		Actual Dnlink Rain Margin (dB)	: n/a
		Dnlink Pointing Error (dB)	: 0.5

-- ADJACENT SATELLITE INTERFERENCE ----- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg)	:	52.85E	56.85E
Uplink Interference (dB or dBW/Hz)	:	-38.7	-38.7
Uplink Polarization Advantage (dB)	:	0.0	0.0
Downlink Interference (dB or dBW/Hz)	:	-34.2	-34.2
Downlink Polarization Advantage (dB)	:	0.0	0.0
Rx E/S Topocentric Angle (deg)	:	2.09	2.09
Rx E/S Pointing Error (deg)	:	-0.10	0.10
Rx E/S Off-Axis Angle (deg)	:	1.99	2.19
Rx E/S Adj. Sat. Discrimination (dB)	:	29.9	30.9

----- TV/FM CARRIER PARAMETERS -----

Video Format	: PAL	Peak Deviation (MHz)	: 9.0
RF Noise BW (MHz)	: 30.0	PreEmphasis+Weighting (dB)	: 15.6
Video BW (MHz)	: 6.0	Threshold C/N (dB)	: 10.0

----- AUDIO SUB-CARRIER PARAMETERS -----

Sub-Carrier Freq (MHz)	: 6.6	Highest Audio Freq (kHz)	: 15.0
P-Dev of Video by Audio (MHz)	: 2.0	Companding Advantage (dB)	: 0.0
Peak Dev of Audio (kHz)	: 75.0		

----- Transmit Earth Station ----- ----- Receive Earth Station -----

Location: -4_dB_Gain_Contour		Location: -4_dB_Gain_Contour	
Latitude (deg): *		Latitude (deg): *	
Longitude (deg): *		Longitude (deg): *	
Rain Rate (mm/hr): 42*		Rain Rate (mm/hr): 42*	
E/S Type or Model No:		E/S Type or Model No:	
E/S Manufacturer : STANDARD		E/S Manufacturer : STANDARD	
E/S Diam. (m): 10.0		E/S Diam. (m): 11.0	
E/S Freq (nom, GHz): 6.175		E/S Freq (nom, GHz): 3.95	
E/S Tx Gain (dBi): 54.1		E/S Gain (nom, dBi): 51.9	
ULPC Margin (dB): .0		E/S Feed Loss (dB): 0.15	
		E/S Ant. Temp (deg K): 45	
		E/S LNA Temp (deg K): 65	
		E/S G/T (nom, dB/K): *	

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SATELLITE DATA	Satellite : IS-706 Uplink Beam: HEMI Uplink POL: , Dnlink POL: , EIRP, beam center: 37.3 dBW G/T:-5.5 dB/K, SFD:-87.5 dBW/m2	Location: 54.85E Dnlink Beam: ZONE Dnlink EIRP: 33.3 dBW		
TRANSPONDER DATA	Trans Bandwidth :36.0 MHz Uplink Frequency:6.175 GHz IBO (Nominal) : 0.0 dB	Trans Type: LTWTA Dnlink Freq: 3.950 GHz OBO (Nominal): 0.0 dB		
CARRIER DATA	Type: NTC26%, Info Rate: 24575 kbps, Mod: QPSK, 1/2x188/204 BWo: 30133kHz, BWa: 36000kHz, C/N: 3.36dB, C/N_thresh: 3.36			
LINK BUDGET				
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	75.4	n/a	n/a
	- Uplink Path Loss, clear sky (dB)	-200.2	n/a	n/a
	- Uplink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Satellite G/T (dB/K)	-5.5	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-74.8	n/a	n/a
	C/N Uplink (dB)	23.5	n/a	n/a
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	33.3	n/a	n/a
	- Carrier Output Backoff (dB)	0.0	n/a	n/a
	Downlink EIRP per carrier (dBW)	33.3	n/a	n/a
	- Earth Station Pointing Error (dB)	-.5	n/a	n/a
	- Downlink Path Loss, clear sky (dB)	-196.3	n/a	n/a
	- Downlink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Earth Station G/T (dB/K)	21.0	n/a	n/a
- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a	
- Carrier Noise Bandwidth (dB-Hz)	-74.8	n/a	n/a	
	C/N Dnlink (dB)	11.3	n/a	n/a
COMPOSITE PERFORMANCE	C/N Uplink (dB)	23.5	n/a	n/a
	C/N Dnlink (dB)	11.3	n/a	n/a
	C/I Uplink Co-channel (dB)	27.0	n/a	n/a
	C/I Dnlink Co-Channel (dB)	27.0	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-1) (dB)	17.3	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	9.0	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-2) (dB)	17.3	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	13.8	n/a	n/a
	C/(N+I) COMPOSITE (dB)	5.4	n/a	n/a
	- Required System Margin (dB)	-1.0	n/a	n/a
Net C/(N+I) COMPOSITE (dB)	4.4	n/a	n/a	
- Minimum Required C/N (dB)	-3.4	n/a	n/a	
	Excess Link Margin (dB)	1.1	n/a	n/a
TRANSPONDER UTILIZATION	% BW/CARR: 100.00, % PWR/CARR: 100.00, Max No. Carriers: 1.0 Downlink EIRP per carrier toward beam center: 37.3 dBW			
TRANSMIT EARTH STATION	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 275.3 watts			
RECEIVE EARTH STA.	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr			
DENSITY INFORMATION	Uplink Pwr Den: -50.4 dBW/Hz, Dnlink EIRP Den: -37.5 dBW/Hz Max Dnlink PFD: -164.4 dB(W/m2/4kHz) @ Beam Center			
LOSS IN C/(N+I) DUE TO ADJ SAT INTF: SAT-1 = 3.0dB, SAT-2 = 1.0dB				

HEMI-ZONE (36 MHz): 36M0G7W

[Input Data]

----- SATELLITE -----

Satellite Name	: IS-706	Location (deg)	: 54.85E
Uplink Beam	: HEMI	Dnlink Beam	: ZONE
Trans. BW (MHz)	: 36.0 MHz	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency	(GHz): 6.175	Dnlink Frequency	(GHz): 3.950
G/T, beam center	(dB/K): -1.5	EIRP, beam center	(dBW): 37.3
G/T, beam edge	(dB/K): -5.5	EIRP, beam edge	(dBW): 33.3
G/T, toward Tx ES	(dB/K): -5.5	EIRP, toward Rx ES	(dBW): 33.3
SFD, beam edge	(dBW/m2): -87.5		
SFD, toward Tx ES	(dBW/m2): -87.5		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB)	: 0	Nominal Uplink Co-Chan C/I (dB)	: 27.0
Input Backoff (dB)	: 0.0	Nominal Dnlink Co-Chan C/I (dB)	: 27.0
Output Backoff (dB)	: *	Minimum Uplink Rain Margin (dB)	: 0.0
(C/Im) - Nominal (dB)	: *	Actual Uplink Rain Margin (dB)	: n/a
Min. System Margin (dB)	: 1.0	Uplink Power Control Margin (dB)	: .0
Max No Carriers / Trans:	1	Minimum Dnlink Rain Margin (dB)	: 0.0
		Actual Dnlink Rain Margin (dB)	: n/a
		Dnlink Pointing Error (dB)	: 0.5

--- ADJACENT SATELLITE INTERFERENCE ----- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg)	:	52.85E	56.85E
Uplink Interference (dB or dBW/Hz)	:	-38.7	-38.7
Uplink Polarization Advantage (dB)	:	0.0	0.0
Downlink Interference (dB or dBW/Hz)	:	-34.2	-34.2
Downlink Polarization Advantage (dB)	:	0.0	0.0
Rx E/S Topocentric Angle (deg)	:	2.09	2.09
Rx E/S Pointing Error (deg)	:	-0.31	0.31
Rx E/S Off-Axis Angle (deg)	:	1.78	2.40
Rx E/S Adj. Sat. Discrimination (dB)	:	16.3	21.1

----- CARRIER PARAMETERS -----

Modem Type	: NTC26%	C/N	(operating, dB): 3.36
Modulation	: QPSK	Eb/No	(operating, dB): 4.2
Code Rate	: 1/2x188/204-V	C/N	(threshold, dB): 3.36
Info Rate (kbps)	: 24575	Eb/No	(threshold, dB): 4.2
Occupied Bandwidth (kHz)	: 30133		
Allocated Bandwidth (kHz)	: 36000		

----- Transmit Earth Station ----- ----- Receive Earth Station -----

Location: -4_dB_Gain_Contour	Location: -4_dB_Gain_Contour
Latitude (deg): *	Latitude (deg): *
Longitude (deg): *	Longitude (deg): *
Rain Rate (mm/hr): 42*	Rain Rate (mm/hr): 42*
E/S Type or Model No:	E/S Type or Model No:
E/S Manufacturer : STANDARD	E/S Manufacturer : STANDARD
E/S Diam. (m): 7.0	E/S Diam. (m): 3.5
E/S Freq (nom, GHz): 6.175	E/S Freq (nom, GHz): 3.95
E/S Tx Gain (dBi): 51.0	E/S Gain (nom, dBi): 41.1
ULPC Margin (dB): .0	E/S Feed Loss (dB): 0.15
	E/S Ant. Temp(deg K): 25
	E/S LNA Temp (deg K): 65
	E/S G/T (nom, dB/K): *

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SATELLITE DATA	Satellite : IS-706 Uplink Beam: HEMI Uplink POL: , Dnlink POL: , EIRP, beam center: 37.3 dBW G/T:-5.5 dB/K, SFD:-80.5 dBW/m2	Location: 54.85E Dnlink Beam: ZONE Dnlink EIRP: 33.3 dBW		
TRANSPONDER DATA	Trans Bandwidth :36.0 MHz Uplink Frequency:6.175 GHz IBO (Nominal) : 8.2 dB	Trans Type: LTWTA Dnlink Freq: 3.950 GHz OBO (Nominal): 3.5 dB		
CARRIER DATA	Type: EF9000, Info Rate: 6000 kbps, Mod: QPSK, 1/2x188/204- BWo: 6771.1kHz, BWa: 10300kHz, C/N: 3.87dB, C/N_thresh: 3.5			
LINK BUDGET				
		CLR SKY UP FADE DN FADE		
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	70.5	n/a	n/a
	- Uplink Path Loss, clear sky (dB)	-200.2	n/a	n/a
	- Uplink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Satellite G/T (dB/K)	-5.5	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-68.3	n/a	n/a
	C/N Uplink (dB)	25.1	n/a	n/a
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	33.3	n/a	n/a
	- Carrier Output Backoff (dB)	-7.2	n/a	n/a
	Downlink EIRP per carrier (dBW)	26.1	n/a	n/a
	- Earth Station Pointing Error (dB)	-.5	n/a	n/a
	- Downlink Path Loss, clear sky (dB)	-196.3	n/a	n/a
	- Downlink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Earth Station G/T (dB/K)	21.0	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-68.3	n/a	n/a
	C/N Dnlink (dB)	10.5	n/a	n/a
COMPOSITE PERFORMANCE	C/N Uplink (dB)	25.1	n/a	n/a
	C/N Dnlink (dB)	10.5	n/a	n/a
	C/I Intermod (dB)	20.2	n/a	n/a
	C/I Uplink Co-channel (dB)	28.7	n/a	n/a
	C/I Dnlink Co-Channel (dB)	28.7	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-1) (dB)	18.9	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	8.3	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-2) (dB)	18.9	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	13.1	n/a	n/a
	C/(N+I) COMPOSITE (dB)	4.9	n/a	n/a
	- Required System Margin (dB)	-1.0	n/a	n/a
Net C/(N+I) COMPOSITE (dB)	3.9	n/a	n/a	
- Minimum Required C/N (dB)	-3.9	n/a	n/a	
	Excess Link Margin (dB)	0.0	n/a	n/a
TRANSPONDER UTILIZATION	% BW/CARR: 28.61, % PWR/CARR: 42.7, Max No. Carriers: 2.3 Downlink EIRP per carrier toward beam center: 30.1 dBW			
TRANSMIT EARTH STATION	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 89.2 watts			
RECEIVE EARTH STA.	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr			
DENSITY INFORMATION	Uplink Pwr Den: -48.8 dBW/Hz, Dnlink EIRP Den: -38.2 dBW/Hz Max Dnlink PFD: -165.1 dB(W/m2/4kHz) @ Beam Center			
LOSS IN C/(N+I) DUE TO ADJ SAT INTF: SAT-1 = 2.9dB, SAT-2 = 0.9dB				

HEMI-ZONE (36 MHz): 10M3G7W
[Input Data]

----- SATELLITE -----

Satellite Name	: IS-706	Location (deg)	: 54.85E
Uplink Beam	: HEMI	Dnlink Beam	: ZONE
Trans. BW (MHz)	: 36.0 MHz	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency (GHz)	: 6.175	Dnlink Frequency (GHz)	: 3.950
G/T, beam center (dB/K)	: -1.5	EIRP, beam center (dBW)	: 37.3
G/T, beam edge (dB/K)	: -5.5	EIRP, beam edge (dBW)	: 33.3
G/T, toward Tx ES (dB/K)	: -5.5	EIRP, toward Rx ES (dBW)	: 33.3
SFD, beam edge (dBW/m2)	: -80.5		
SFD, toward Tx ES (dBW/m2)	: -80.5		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB)	: 7	Nominal Uplink Co-Chan C/I (dB)	: 27.0
Input Backoff (dB)	: 8.2*	Nominal Dnlink Co-Chan C/I (dB)	: 27.0
Output Backoff (dB)	: *	Minimum Uplink Rain Margin (dB)	: 0.0
(C/Im) - Nominal (dB)	: *	Actual Uplink Rain Margin (dB)	: n/a
Min. System Margin (dB)	: 1.0	Uplink Power Control Margin (dB)	: .0
Max No Carriers / Trans:	: *	Minimum Dnlink Rain Margin (dB)	: 0.0
		Actual Dnlink Rain Margin (dB)	: n/a
		Dnlink Pointing Error (dB)	: 0.5

----- ADJACENT SATELLITE INTERFERENCE ----- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg)	:	52.85E	56.85E
Uplink Interference (dB or dBW/Hz)	:	-38.7	-38.7
Uplink Polarization Advantage (dB)	:	0.0	0.0
Downlink Interference (dB or dBW/Hz)	:	-34.2	-34.2
Downlink Polarization Advantage (dB)	:	0.0	0.0
Rx E/S Topocentric Angle (deg)	:	2.09	2.09
Rx E/S Pointing Error (deg)	:	-0.31	0.31
Rx E/S Off-Axis Angle (deg)	:	1.78	2.40
Rx E/S Adj. Sat. Discrimination (dB)	:	16.3	21.1

----- CARRIER PARAMETERS -----

Modem Type	: EF9000	C/N (operating, dB)	: 3.87
Modulation	: QPSK	Eb/No (operating, dB)	: 4.4
Code Rate	: 1/2x188/204-V	C/N (threshold, dB)	: 3.57
Info Rate (kbps)	: 6000	Eb/No (threshold, dB)	: 4.1
Occupied Bandwidth (kHz)	: 6771.1		
Allocated Bandwidth (kHz)	: 10300		

----- Transmit Earth Station ----- ----- Receive Earth Station -----

Location: -4_dB_Gain_Contour	Location: -4_dB_Gain_Contour
Latitude (deg): *	Latitude (deg): *
Longitude (deg): *	Longitude (deg): *
Rain Rate (mm/hr): 42*	Rain Rate (mm/hr): 42*
E/S Type or Model No:	E/S Type or Model No:
E/S Manufacturer : STANDARD	E/S Manufacturer : STANDARD
E/S Diam. (m): 7.0	E/S Diam. (m): 3.5
E/S Freq (nom, GHz): 6.175	E/S Freq (nom, GHz): 3.95
E/S Tx Gain (dBi): 51.0	E/S Gain (nom, dBi): 41.1
ULPC Margin (dB): .0	E/S Feed Loss (dB): 0.15
	E/S Ant. Temp(deg K): 25
	E/S LNA Temp (deg K): 65
	E/S G/T (nom, dB/K): *

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SATELLITE DATA	Satellite : IS-706 Uplink Beam: HEMI Uplink POL: , Dnlink POL: , EIRP, beam center: 37.3 dBW G/T:-5.5 dB/K, SFD:-80.5 dBW/m2 Dnlink EIRP: 33.3 dBW	Location: 54.85E Dnlink Beam: ZONE		
TRANSPONDER DATA	Trans Bandwidth :36.0 MHz Uplink Frequency:6.175 GHz IBO (Nominal) : 8.2 dB	Trans Type: LTWTA Dnlink Freq: 3.950 GHz OBO (Nominal): 3.5 dB		
CARRIER DATA	Type: CS701, Info Rate: 64 kbps, Mod: QPSK, 1/2x239/256-V BWo: 75.4kHz, BWa: 100kHz, C/N: 2.99dB, C/N_thresh: 2.79dB			
LINK BUDGET				
		CLR SKY UP FADE DN FADE		
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	50.1	n/a	n/a
	- Uplink Path Loss, clear sky (dB)	-200.2	n/a	n/a
	- Uplink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Satellite G/T (dB/K)	-5.5	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-48.8	n/a	n/a
	C/N Uplink (dB)	24.2	n/a	n/a
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	33.3	n/a	n/a
	- Carrier Output Backoff (dB)	-27.6	n/a	n/a
	Downlink EIRP per carrier (dBW)	5.7	n/a	n/a
	- Earth Station Pointing Error (dB)	-.5	n/a	n/a
	- Downlink Path Loss, clear sky (dB)	-196.3	n/a	n/a
	- Downlink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Earth Station G/T (dB/K)	21.0	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-48.8	n/a	n/a
	C/N Dnlink (dB)	9.7	n/a	n/a
COMPOSITE PERFORMANCE	C/N Uplink (dB)	24.2	n/a	n/a
	C/N Dnlink (dB)	9.7	n/a	n/a
	C/I Intermod (dB)	19.3	n/a	n/a
	C/I Uplink Co-channel (dB)	28.4	n/a	n/a
	C/I Dnlink Co-Channel (dB)	28.4	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-1) (dB)	18.0	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	7.4	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-2) (dB)	18.0	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	12.2	n/a	n/a
	C/(N+I) COMPOSITE (dB)	4.0	n/a	n/a
	- Required System Margin (dB)	-1.0	n/a	n/a
Net C/(N+I) COMPOSITE (dB)	3.0	n/a	n/a	
- Minimum Required C/N (dB)	-3.0	n/a	n/a	
	Excess Link Margin (dB)	0.0	n/a	n/a
TRANSPONDER UTILIZATION	% BW/CARR: 0.28, % PWR/CARR: 0.39, Max No. Carriers: 257.8 Downlink EIRP per carrier toward beam center: 9.7 dBW			
TRANSMIT EARTH STATION	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 0.8 watts			
RECEIVE EARTH STA.	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr			
DENSITY INFORMATION	Uplink Pwr Den: -49.7 dBW/Hz, Dnlink EIRP Den: -39.1 dBW/Hz Max Dnlink PFD: -166.0 dB(W/m2/4kHz) @ Beam Center			
LOSS IN C/(N+I) DUE TO ADJ SAT INTF: SAT-1 = 2.9dB, SAT-2 = 0.9dB				

HEMI-ZONE (36 MHZ): 100KG7W

[Input Data]

----- SATELLITE -----

Satellite Name	: IS-706	Location (deg)	: 54.85E
Uplink Beam	: HEMI	Dnlink Beam	: ZONE
Trans. BW (MHz)	: 36.0 MHz	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency	(GHz): 6.175	Dnlink Frequency	(GHz): 3.950
G/T, beam center	(dB/K): -1.5	EIRP, beam center	(dBW): 37.3
G/T, beam edge	(dB/K): -5.5	EIRP, beam edge	(dBW): 33.3
G/T, toward Tx ES	(dB/K): -5.5	EIRP, toward Rx ES	(dBW): 33.3
SFD, beam edge	(dBW/m2): -80.5		
SFD, toward Tx ES	(dBW/m2): -80.5		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB)	: 7	Nominal Uplink Co-Chan C/I (dB)	: 27.0
Input Backoff (dB)	: 8.2*	Nominal Dnlink Co-Chan C/I (dB)	: 27.0
Output Backoff (dB)	: *	Minimum Uplink Rain Margin (dB)	: 0.0
(C/Im) - Nominal (dB)	: *	Actual Uplink Rain Margin (dB)	: n/a
Min. System Margin (dB)	: 1.0	Uplink Power Control Margin (dB)	: .0
Max No Carriers / Trans:	*	Minimum Dnlink Rain Margin (dB)	: 0.0
		Actual Dnlink Rain Margin (dB)	: n/a
		Dnlink Pointing Error (dB)	: 0.5

--- ADJACENT SATELLITE INTERFERENCE ----- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg)	:	52.85E	56.85E
Uplink Interference (dB or dBW/Hz)	:	-38.7	-38.7
Uplink Polarization Advantage (dB)	:	0.0	0.0
Downlink Interference (dB or dBW/Hz)	:	-34.2	-34.2
Downlink Polarization Advantage (dB)	:	0.0	0.0
Rx E/S Topocentric Angle (deg)	:	2.09	2.09
Rx E/S Pointing Error (deg)	:	-0.31	0.31
Rx E/S Off-Axis Angle (deg)	:	1.78	2.40
Rx E/S Adj. Sat. Discrimination (dB)	:	16.3	21.1

----- CARRIER PARAMETERS -----

Modem Type	: CS701	C/N (operating, dB)	: 2.99
Modulation	: QPSK	Eb/No (operating, dB)	: 3.7
Code Rate	: 1/2x239/256-V	C/N (threshold, dB)	: 2.79
Info Rate (kbps)	: 64	Eb/No (threshold, dB)	: 3.5
Occupied Bandwidth (kHz)	: 75.4		
Allocated Bandwidth (kHz)	: 100		

----- Transmit Earth Station ----- ----- Receive Earth Station -----

Location: -4_dB_Gain_Contour	Location: -4_dB_Gain_Contour
Latitude (deg): *	Latitude (deg): *
Longitude (deg): *	Longitude (deg): *
Rain Rate (mm/hr): 42*	Rain Rate (mm/hr): 42*
E/S Type or Model No:	E/S Type or Model No:
E/S Manufacturer : STANDARD	E/S Manufacturer : STANDARD
E/S Diam. (m): 7.0	E/S Diam. (m): 3.5
E/S Freq (nom, GHz): 6.175	E/S Freq (nom, GHz): 3.95
E/S Tx Gain (dBi): 51.0	E/S Gain (nom, dBi): 41.1
ULPC Margin (dB): .0	E/S Feed Loss (dB): 0.15
	E/S Ant. Temp(deg K): 25
	E/S LNA Temp (deg K): 65
	E/S G/T (nom, dB/K): *

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SATELLITE DATA	Satellite : IS-706 Uplink Beam: HEMI Uplink POL: , Dnlink POL: , EIRP, beam center: 40.6 dBW G/T:-5.5 dB/K, SFD:-73.5 dBW/m2 Dnlink EIRP: 36.6 dBW	Location: 54.85E Dnlink Beam: CSPOT		
TRANSPONDER DATA	Trans Bandwidth :36.0 MHz Uplink Frequency:6.175 GHz IBO (Nominal) : 11.5 dB	Trans Type: LTWTA Dnlink Freq: 3.950 GHz OBO (Nominal): 5.6 dB		
CARRIER DATA	Type: TV/FM, Format: PAL, PreEmphasis+Weighting: 15.6dB RF BW: 30.0 MHz, P-Dev: 9.0 MHz, VideoBW: 6.0 MHz,			
LINK BUDGET				
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	77.9	n/a	n/a
	- Uplink Path Loss, clear sky (dB)	-200.2	n/a	n/a
	- Uplink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Satellite G/T (dB/K)	-5.5	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-74.8	n/a	n/a
C/N Uplink (dB)		26.0	n/a	n/a
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	36.6	n/a	n/a
	- Carrier Output Backoff (dB)	-5.6	n/a	n/a
	Downlink EIRP per carrier (dBW)	31.0	n/a	n/a
	- Earth Station Pointing Error (dB)	-.5	n/a	n/a
	- Downlink Path Loss, clear sky (dB)	-196.3	n/a	n/a
	- Downlink Rain Attenuation (dB)	0.0	n/a	n/a
+ Earth Station G/T (dB/K)	28.4	n/a	n/a	
- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a	
- Carrier Noise Bandwidth (dB-Hz)	-74.8	n/a	n/a	
C/N Dnlink (dB)		16.4	n/a	n/a
COMPOSITE PERFORMANCE	C/N Uplink (dB)	26.0	n/a	n/a
	C/N Dnlink (dB)	16.4	n/a	n/a
	C/I Uplink Co-channel (dB)	27.8	n/a	n/a
	C/I Dnlink Co-Channel (dB)	27.8	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-1) (dB)	19.8	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	17.5	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-2) (dB)	19.8	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	18.9	n/a	n/a
	C/(N+I) COMPOSITE (dB)	11.0	n/a	n/a
	- Required System Margin (dB)	-1.0	n/a	n/a
Net C/(N+I) COMPOSITE (dB)	10.0	n/a	n/a	
- Minimum Required C/N (dB)	-10.0	n/a	n/a	
Excess Link Margin (dB)		0.0	n/a	n/a
Video Signal-to-Noise Ratio (dB)		43.9	n/a	n/a
Audio Signal-to-Noise Ratio (dB)		57.6	n/a	n/a
TRANSMIT EARTH STATION	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 275.3 watts			
RECEIVE EARTH STA.	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr			
DENSITY INFORMATION	Uplink Pwr Den: -50.4 dBW/Hz, Dnlink EIRP Den: -39.8 dBW/Hz Max Dnlink PFD: -166.7 dB(W/m2/4kHz) @ Beam Center			
LOSS IN C/(N+I) DUE TO ADJ SAT INTF: SAT-1 = 1.9dB, SAT-2 = 1.5dB				

HEMI-CSPOT (36 MHZ): 30M0F3F
[Input Data]

----- SATELLITE -----

Satellite Name	: IS-706	Location (deg)	: 54.85E
Uplink Beam	: HEMI	Dnlink Beam	: CSPOT
Trans. BW (MHz)	: 36.0 MHz	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency (GHz)	: 6.175	Dnlink Frequency (GHz)	: 3.950
G/T, beam center (dB/K)	: -1.5	EIRP, beam center (dBW)	: 40.6
G/T, beam edge (dB/K)	: -5.5	EIRP, beam edge (dBW)	: 36.6
G/T, toward Tx ES (dB/K)	: -5.5	EIRP, toward Rx ES (dBW)	: 36.6
SFD, beam edge (dBW/m2)	: -73.5		
SFD, toward Tx ES (dBW/m2)	: -73.5		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB)	: 14	Nominal Uplink Co-Chan C/I (dB)	: 27.0
Input Backoff (dB)	: 12, 11.5	Nominal Dnlink Co-Chan C/I (dB)	: 27.0
Output Backoff (dB)	: *	Minimum Uplink Rain Margin (dB)	: 0.0
(C/Im) - Nominal (dB)	: *	Actual Uplink Rain Margin (dB)	: n/a
Min. System Margin (dB)	: 1.0	Uplink Power Control Margin (dB)	: .0
Max No Carriers / Trans:	1	Minimum Dnlink Rain Margin (dB)	: 0.0
		Actual Dnlink Rain Margin (dB)	: n/a
		Dnlink Pointing Error (dB)	: 0.5

--- ADJACENT SATELLITE INTERFERENCE ----- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg)	:	52.85E	56.85E
Uplink Interference (dB or dBW/Hz)	:	-38.7	-38.7
Uplink Polarization Advantage (dB)	:	0.0	0.0
Downlink Interference (dB or dBW/Hz)	:	-34.2	-34.2
Downlink Polarization Advantage (dB)	:	0.0	0.0
Rx E/S Topocentric Angle (deg)	:	2.09	2.09
Rx E/S Pointing Error (deg)	:	-0.13	0.13
Rx E/S Off-Axis Angle (deg)	:	1.96	2.22
Rx E/S Adj. Sat. Discrimination (dB)	:	27.1	28.5

----- TV/FM CARRIER PARAMETERS -----

Video Format	: PAL	Peak Deviation (MHz)	: 9.0
RF Noise BW (MHz)	: 30.0	PreEmphasis+Weighting (dB)	: 15.6
Video BW (MHz)	: 6.0	Threshold C/N (dB)	: 10.0

----- AUDIO SUB-CARRIER PARAMETERS -----

Sub-Carrier Freq (MHz)	: 6.6	Highest Audio Freq (kHz)	: 15.0
P-Dev of Video by Audio (MHz)	: 2.0	Companding Advantage (dB)	: 0.0
Peak Dev of Audio (kHz)	: 75.0		

----- Transmit Earth Station ----- ----- Receive Earth Station -----

Location: -4_dB_Gain_Contour		Location: -4_dB_Gain_Contour	
Latitude (deg): *		Latitude (deg): *	
Longitude (deg): *		Longitude (deg): *	
Rain Rate (mm/hr): 42*		Rain Rate (mm/hr): 42*	
E/S Type or Model No:		E/S Type or Model No:	
E/S Manufacturer : STANDARD		E/S Manufacturer : STANDARD	
E/S Diam. (m): 9.2		E/S Diam. (m): 8.1	
E/S Freq (nom, GHz): 6.175		E/S Freq (nom, GHz): 3.95	
E/S Tx Gain (dBi): 53.5		E/S Gain (nom, dBi): 49.3	
ULPC Margin (dB): .0		E/S Feed Loss (dB): 0.15	
		E/S Ant. Temp(deg K): 45	
		E/S LNA Temp (deg K): 65	
		E/S G/T (nom, dB/K): *	

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SATELLITE DATA	Satellite : IS-706 Uplink Beam: HEMI Uplink POL: , Dnlink POL: , EIRP, beam center: 40.6 dBW G/T:-5.5 dB/K, SFD:-87.5 dBW/m2	Location: 54.85E Dnlink Beam: CSPOT Dnlink EIRP: 36.6 dBW		
TRANSPONDER DATA	Trans Bandwidth :36.0 MHz Uplink Frequency:6.175 GHz IBO (Nominal) : 0.0 dB	Trans Type: LTWTA Dnlink Freq: 3.950 GHz OBO (Nominal): 0.0 dB		
CARRIER DATA	Type: NTC26%, Info Rate: 24575 kbps, Mod: QPSK, 1/2x188/204 BWo: 30133kHz, BWa: 36000kHz, C/N: 3.36dB, C/N_thresh: 3.36			
LINK BUDGET				
		CLR SKY	UP FADE	DN FADE
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	75.4	n/a	n/a
	- Uplink Path Loss, clear sky (dB)	-200.2	n/a	n/a
	- Uplink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Satellite G/T (dB/K)	-5.5	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-74.8	n/a	n/a
	C/N Uplink (dB)	23.5	n/a	n/a
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	36.6	n/a	n/a
	- Carrier Output Backoff (dB)	0.0	n/a	n/a
	Downlink EIRP per carrier (dBW)	36.6	n/a	n/a
	- Earth Station Pointing Error (dB)	-.5	n/a	n/a
	- Downlink Path Loss, clear sky (dB)	-196.3	n/a	n/a
	- Downlink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Earth Station G/T (dB/K)	19.2	n/a	n/a
- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a	
- Carrier Noise Bandwidth (dB-Hz)	-74.8	n/a	n/a	
	C/N Dnlink (dB)	12.8	n/a	n/a
COMPOSITE PERFORMANCE	C/N Uplink (dB)	23.5	n/a	n/a
	C/N Dnlink (dB)	12.8	n/a	n/a
	C/I Uplink Co-channel (dB)	27.0	n/a	n/a
	C/I Dnlink Co-Channel (dB)	27.0	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-1) (dB)	17.3	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	7.2	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-2) (dB)	17.3	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	15.9	n/a	n/a
	C/(N+I) COMPOSITE (dB)	5.0	n/a	n/a
	- Required System Margin (dB)	-1.0	n/a	n/a
Net C/(N+I) COMPOSITE (dB)	4.0	n/a	n/a	
- Minimum Required C/N (dB)	-3.4	n/a	n/a	
	Excess Link Margin (dB)	.7	n/a	n/a
TRANSPONDER UTILIZATION	% BW/CARR: 100.00, % PWR/CARR: 100.00, Max No. Carriers: 1.0 Downlink EIRP per carrier toward beam center: 40.6 dBW			
TRANSMIT EARTH STATION	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 275.3 watts			
RECEIVE EARTH STA.	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr			
DENSITY INFORMATION	Uplink Pwr Den: -50.4 dBW/Hz, Dnlink EIRP Den: -34.2 dBW/Hz Max Dnlink PFD: -161.1 dB(W/m2/4kHz) @ Beam Center			
LOSS IN C/(N+I) DUE TO ADJ SAT INTF: SAT-1 = 4.7dB, SAT-2 = 0.7dB				

HEMI-CSPOT (36 MHZ): 36M0G7W
[Input Data]

----- SATELLITE -----

Satellite Name	: IS-706	Location (deg):	54.85E
Uplink Beam	: HEMI	Dnlink Beam	: CSPOT
Trans. BW (MHz)	: 36.0 MHz	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency (GHz)	: 6.175	Dnlink Frequency (GHz)	: 3.950
G/T, beam center (dB/K)	: -1.5	EIRP, beam center (dBW)	: 40.6
G/T, beam edge (dB/K)	: -5.5	EIRP, beam edge (dBW)	: 36.6
G/T, toward Tx ES (dB/K)	: -5.5	EIRP, toward Rx ES (dBW)	: 36.6
SFD, beam edge (dBW/m2)	: -87.5		
SFD, toward Tx ES (dBW/m2)	: -87.5		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB):	0	Nominal Uplink Co-Chan C/I (dB):	27.0
Input Backoff (dB):	0.0	Nominal Dnlink Co-Chan C/I (dB):	27.0
Output Backoff (dB):	*	Minimum Uplink Rain Margin (dB):	0.0
(C/Im) - Nominal (dB):	*	Actual Uplink Rain Margin (dB):	n/a
Min. System Margin (dB):	1.0	Uplink Power Control Margin (dB):	.0
Max No Carriers / Trans:	1	Minimum Dnlink Rain Margin (dB):	0.0
		Actual Dnlink Rain Margin (dB):	n/a
		Dnlink Pointing Error (dB):	0.5

--- ADJACENT SATELLITE INTERFERENCE ----- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg):		52.85E	56.85E
Uplink Interference (dB or dBW/Hz):		-38.7	-38.7
Uplink Polarization Advantage (dB):		0.0	0.0
Downlink Interference (dB or dBW/Hz):		-34.2	-34.2
Downlink Polarization Advantage (dB):		0.0	0.0
Rx E/S Topocentric Angle (deg):		2.09	2.09
Rx E/S Pointing Error (deg):		-0.36	0.36
Rx E/S Off-Axis Angle (deg):		1.73	2.45
Rx E/S Adj. Sat. Discrimination (dB):		11.2	19.9

----- CARRIER PARAMETERS -----

Modem Type	: NTC26%	C/N (operating, dB):	3.36
Modulation	: QPSK	Eb/No (operating, dB):	4.2
Code Rate	: 1/2x188/204-V	C/N (threshold, dB):	3.36
Info Rate (kbps):	24575	Eb/No (threshold, dB):	4.2
Occupied Bandwidth (kHz):	30133		
Allocated Bandwidth (kHz):	36000		

----- Transmit Earth Station ----- ----- Receive Earth Station -----

Location: -4_dB_Gain_Contour	Location: -4_dB_Gain_Contour
Latitude (deg): *	Latitude (deg): *
Longitude (deg): *	Longitude (deg): *
Rain Rate (mm/hr): 42*	Rain Rate (mm/hr): 42*
E/S Type or Model No:	E/S Type or Model No:
E/S Manufacturer : STANDARD	E/S Manufacturer : STANDARD
E/S Diam. (m): 7.0	E/S Diam. (m): 3.0
E/S Freq (nom, GHz): 6.175	E/S Freq (nom, GHz): 3.95
E/S Tx Gain (dBi): 51.0	E/S Gain (nom, dBi): 39.7
ULPC Margin (dB): .0	E/S Feed Loss (dB): 0.15
	E/S Ant. Temp(deg K): 35
	E/S LNA Temp (deg K): 65
	E/S G/T (nom, dB/K): *

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SATELLITE DATA	Satellite : IS-706 Uplink Beam: HEMI Uplink POL: , Dnlink POL: , EIRP, beam center: 40.6 dBW G/T:-5.5 dB/K, SFD:-78.5 dBW/m2	Location: 54.85E Dnlink Beam: CSPOT Dnlink EIRP: 36.6 dBW		
TRANSPONDER DATA	Trans Bandwidth :36.0 MHz Uplink Frequency:6.175 GHz IBO (Nominal) : 8.2 dB	Trans Type: LTWTA Dnlink Freq: 3.950 GHz OBO (Nominal): 3.5 dB		
CARRIER DATA	Type: EF9000, Info Rate: 6000 kbps, Mod: QPSK, 1/2x188/204- BWo: 6771.1kHz, BWa: 10300kHz, C/N: 3.87dB, C/N_thresh: 3.5			
LINK BUDGET				
		CLR SKY UP FADE DN FADE		
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	69.5	n/a	n/a
	- Uplink Path Loss, clear sky (dB)	-200.2	n/a	n/a
	- Uplink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Satellite G/T (dB/K)	-5.5	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-68.3	n/a	n/a
	C/N Uplink (dB)	24.1	n/a	n/a
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	36.6	n/a	n/a
	- Carrier Output Backoff (dB)	-10.2	n/a	n/a
	Downlink EIRP per carrier (dBW)	26.4	n/a	n/a
	- Earth Station Pointing Error (dB)	-.5	n/a	n/a
	- Downlink Path Loss, clear sky (dB)	-196.3	n/a	n/a
	- Downlink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Earth Station G/T (dB/K)	21.0	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-68.3	n/a	n/a
	C/N Dnlink (dB)	10.9	n/a	n/a
COMPOSITE PERFORMANCE	C/N Uplink (dB)	24.1	n/a	n/a
	C/N Dnlink (dB)	10.9	n/a	n/a
	C/I Intermod (dB)	17.2	n/a	n/a
	C/I Uplink Co-channel (dB)	25.7	n/a	n/a
	C/I Dnlink Co-Channel (dB)	25.7	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-1) (dB)	17.9	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	8.6	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-2) (dB)	17.9	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	13.4	n/a	n/a
	C/(N+I) COMPOSITE (dB)	4.9	n/a	n/a
	- Required System Margin (dB)	-1.0	n/a	n/a
Net C/(N+I) COMPOSITE (dB)	3.9	n/a	n/a	
- Minimum Required C/N (dB)	-3.9	n/a	n/a	
	Excess Link Margin (dB)	0.0	n/a	n/a
TRANSPONDER UTILIZATION	% BW/CARR: 28.61, % PWR/CARR: 21.45, Max No. Carriers: 3.5 Downlink EIRP per carrier toward beam center: 30.4 dBW			
TRANSMIT EARTH STATION	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 71.0 watts			
RECEIVE EARTH STA.	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr			
DENSITY INFORMATION	Uplink Pwr Den: -49.8 dBW/Hz, Dnlink EIRP Den: -37.9 dBW/Hz Max Dnlink PFD: -164.8 dB(W/m2/4kHz) @ Beam Center			
LOSS IN C/(N+I) DUE TO ADJ SAT INTF: SAT-1 = 2.8dB, SAT-2 = 0.9dB				

HEMI-CSPOT (36 MHz): 10M3G7W
[Input Data]

----- SATELLITE -----

Satellite Name	: IS-706	Location (deg)	: 54.85E
Uplink Beam	: HEMI	Dnlink Beam	: CSPOT
Trans. BW (MHz)	: 36.0 MHz	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency (GHz)	: 6.175	Dnlink Frequency (GHz)	: 3.950
G/T, beam center (dB/K)	: -1.5	EIRP, beam center (dBW)	: 40.6
G/T, beam edge (dB/K)	: -5.5	EIRP, beam edge (dBW)	: 36.6
G/T, toward Tx ES (dB/K)	: -5.5	EIRP, toward Rx ES (dBW)	: 36.6
SFD, beam edge (dBW/m2)	: -78.5		
SFD, toward Tx ES (dBW/m2)	: -78.5		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB)	: 9	Nominal Uplink Co-Chan C/I (dB)	: 27.0
Input Backoff (dB)	: 8.2*	Nominal Dnlink Co-Chan C/I (dB)	: 27.0
Output Backoff (dB)	: *	Minimum Uplink Rain Margin (dB)	: 0.0
(C/Im) - Nominal (dB)	: *	Actual Uplink Rain Margin (dB)	: n/a
Min. System Margin (dB)	: 1.0	Uplink Power Control Margin (dB)	: .0
Max No Carriers / Trans	: *	Minimum Dnlink Rain Margin (dB)	: 0.0
		Actual Dnlink Rain Margin (dB)	: n/a
		Dnlink Pointing Error (dB)	: 0.5

--- ADJACENT SATELLITE INTERFERENCE ----- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg)	:	52.85E	56.85E
Uplink Interference (dB or dBW/Hz)	:	-38.7	-38.7
Uplink Polarization Advantage (dB)	:	0.0	0.0
Downlink Interference (dB or dBW/Hz)	:	-34.2	-34.2
Downlink Polarization Advantage (dB)	:	0.0	0.0
Rx E/S Topocentric Angle (deg)	:	2.09	2.09
Rx E/S Pointing Error (deg)	:	-0.31	0.31
Rx E/S Off-Axis Angle (deg)	:	1.78	2.40
Rx E/S Adj. Sat. Discrimination (dB)	:	16.3	21.1

----- CARRIER PARAMETERS -----

Modem Type	: EF9000	C/N (operating, dB)	: 3.87
Modulation	: QPSK	Eb/No (operating, dB)	: 4.4
Code Rate	: 1/2x188/204-V	C/N (threshold, dB)	: 3.57
Info Rate (kbps)	: 6000	Eb/No (threshold, dB)	: 4.1
Occupied Bandwidth (kHz)	: 6771.1		
Allocated Bandwidth (kHz)	: 10300		

----- Transmit Earth Station ----- ----- Receive Earth Station -----

Location: -4_dB_Gain_Contour	Location: -4_dB_Gain_Contour
Latitude (deg): *	Latitude (deg): *
Longitude (deg): *	Longitude (deg): *
Rain Rate (mm/hr): 42*	Rain Rate (mm/hr): 42*
E/S Type or Model No:	E/S Type or Model No:
E/S Manufacturer : STANDARD	E/S Manufacturer : STANDARD
E/S Diam. (m): 7.0	E/S Diam. (m): 3.5
E/S Freq (nom, GHz): 6.175	E/S Freq (nom, GHz): 3.95
E/S Tx Gain (dBi): 51.0	E/S Gain (nom, dBi): 41.1
ULPC Margin (dB): .0	E/S Feed Loss (dB): 0.15
	E/S Ant. Temp(deg K): 25
	E/S LNA Temp (deg K): 65
	E/S G/T (nom, dB/K): *

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SATELLITE DATA	Satellite : IS-706 Uplink Beam: HEMI Uplink POL: , Dnlink POL: , EIRP, beam center: 40.6 dBW G/T:-5.5 dB/K, SFD:-78.5 dBW/m2 Dnlink EIRP: 36.6 dBW	Location: 54.85E Dnlink Beam: CSPOT		
TRANSPONDER DATA	Trans Bandwidth :36.0 MHz Uplink Frequency:6.175 GHz IBO (Nominal) : 8.2 dB	Trans Type: LTWTA Dnlink Freq: 3.950 GHz OBO (Nominal): 3.5 dB		
CARRIER DATA	Type: CS701, Info Rate: 64 kbps, Mod: QPSK, 1/2x239/256-V BWo: 75.4kHz, BWa: 100kHz, C/N: 2.99dB, C/N_thresh: 2.79dB			
LINK BUDGET				
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	52.4	n/a	n/a
	- Uplink Path Loss, clear sky (dB)	-200.2	n/a	n/a
	- Uplink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Satellite G/T (dB/K)	-5.5	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-48.8	n/a	n/a
	C/N Uplink (dB)	26.5	n/a	n/a
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	36.6	n/a	n/a
	- Carrier Output Backoff (dB)	-27.3	n/a	n/a
	Downlink EIRP per carrier (dBW)	9.3	n/a	n/a
	- Earth Station Pointing Error (dB)	- .5	n/a	n/a
	- Downlink Path Loss, clear sky (dB)	-196.3	n/a	n/a
	- Downlink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Earth Station G/T (dB/K)	19.2	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-48.8	n/a	n/a
	C/N Dnlink (dB)	11.4	n/a	n/a
COMPOSITE PERFORMANCE	C/N Uplink (dB)	26.5	n/a	n/a
	C/N Dnlink (dB)	11.4	n/a	n/a
	C/I Intermod (dB)	19.6	n/a	n/a
	C/I Uplink Co-channel (dB)	28.7	n/a	n/a
	C/I Dnlink Co-Channel (dB)	28.7	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-1) (dB)	20.3	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	5.9	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-2) (dB)	20.3	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	14.6	n/a	n/a
	C/(N+I) COMPOSITE (dB)	4.0	n/a	n/a
	- Required System Margin (dB)	-1.0	n/a	n/a
Net C/(N+I) COMPOSITE (dB)	3.0	n/a	n/a	
- Minimum Required C/N (dB)	-3.0	n/a	n/a	
	Excess Link Margin (dB)	0.0	n/a	n/a
TRANSPONDER UTILIZATION	% BW/CARR: 0.28, % PWR/CARR: 0.42, Max No. Carriers: 240.9 Downlink EIRP per carrier toward beam center: 13.3 dBW			
TRANSMIT EARTH STATION	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 1.4 watts			
RECEIVE EARTH STA.	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr			
DENSITY INFORMATION	Uplink Pwr Den: -47.4 dBW/Hz, Dnlink EIRP Den: -35.5 dBW/Hz Max Dnlink PFD: -162.4 dB(W/m2/4kHz) @ Beam Center			
LOSS IN C/(N+I) DUE TO ADJ SAT INTF: SAT-1 = 4.8dB, SAT-2 = 0.5dB				

HEMI-CSPOT (36 MHz): 100KG7W
[Input Data]

----- SATELLITE -----

Satellite Name	: IS-706	Location (deg)	: 54.85E
Uplink Beam	: HEMI	Dnlink Beam	: CSPOT
Trans. BW (MHz)	: 36.0 MHz	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency (GHz)	: 6.175	Dnlink Frequency (GHz)	: 3.950
G/T, beam center (dB/K)	: -1.5	EIRP, beam center (dBW)	: 40.6
G/T, beam edge (dB/K)	: -5.5	EIRP, beam edge (dBW)	: 36.6
G/T, toward Tx ES (dB/K)	: -5.5	EIRP, toward Rx ES (dBW)	: 36.6
SFD, beam edge (dBW/m2)	: -78.5		
SFD, toward Tx ES (dBW/m2)	: -78.5		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB)	: 9	Nominal Uplink Co-Chan C/I (dB)	: 27.0
Input Backoff (dB)	: 8.2*	Nominal Dnlink Co-Chan C/I (dB)	: 27.0
Output Backoff (dB)	: *	Minimum Uplink Rain Margin (dB)	: 0.0
(C/Im) - Nominal (dB)	: *	Actual Uplink Rain Margin (dB)	: n/a
Min. System Margin (dB)	: 1.0	Uplink Power Control Margin (dB)	: .0
Max No Carriers / Trans:	*	Minimum Dnlink Rain Margin (dB)	: 0.0
		Actual Dnlink Rain Margin (dB)	: n/a
		Dnlink Pointing Error (dB)	: 0.5

-- ADJACENT SATELLITE INTERFERENCE ----- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg)	:	52.85E	56.85E
Uplink Interference (dB or dBW/Hz)	:	-38.7	-38.7
Uplink Polarization Advantage (dB)	:	0.0	0.0
Downlink Interference (dB or dBW/Hz)	:	-34.2	-34.2
Downlink Polarization Advantage (dB)	:	0.0	0.0
Rx E/S Topocentric Angle (deg)	:	2.09	2.09
Rx E/S Pointing Error (deg)	:	-0.36	0.36
Rx E/S Off-Axis Angle (deg)	:	1.73	2.45
Rx E/S Adj. Sat. Discrimination (dB)	:	11.2	19.9

----- CARRIER PARAMETERS -----

Modem Type	: CS701	C/N (operating, dB)	: 2.99
Modulation	: QPSK	Eb/No (operating, dB)	: 3.7
Code Rate	: 1/2x239/256-V	C/N (threshold, dB)	: 2.79
Info Rate (kbps)	: 64	Eb/No (threshold, dB)	: 3.5
Occupied Bandwidth (kHz)	: 75.4		
Allocated Bandwidth (kHz)	: 100		

----- Transmit Earth Station ----- ----- Receive Earth Station -----

Location: -4_dB_Gain_Contour	Location: -4_dB_Gain_Contour
Latitude (deg): *	Latitude (deg): *
Longitude (deg): *	Longitude (deg): *
Rain Rate (mm/hr): 42*	Rain Rate (mm/hr): 42*
E/S Type or Model No:	E/S Type or Model No:
E/S Manufacturer : STANDARD	E/S Manufacturer : STANDARD
E/S Diam. (m): 7.0	E/S Diam. (m): 3.0
E/S Freq (nom, GHz): 6.175	E/S Freq (nom, GHz): 3.95
E/S Tx Gain (dBi): 51.0	E/S Gain (nom, dBi): 39.7
ULPC Margin (dB): .0	E/S Feed Loss (dB): 0.15
	E/S Ant. Temp (deg K): 35
	E/S LNA Temp (deg K): 65
	E/S G/T (nom, dB/K): *

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SATELLITE DATA	Satellite : IS-706 Uplink Beam: HEMI Uplink POL: , Dnlink POL: , EIRP, beam center: 47.5 dBW G/T:-5.5 dB/K, SFD:-73.5 dBW/m2	Location: 54.85E Dnlink Beam: KSPOT Dnlink EIRP: 43.5 dBW		
TRANSPONDER DATA	Trans Bandwidth :77.0 MHz Uplink Frequency:6.175 GHz IBO (Nominal) : 8.2 dB	Trans Type: LTWTA Dnlink Freq: 11.950 GHz OBO (Nominal): 3.1 dB		
CARRIER DATA	Type: TV/FM, Format: PAL, PreEmphasis+Weighting: 15.6dB RF BW: 30.0 MHz, P-Dev: 9.0 MHz, VideoBW: 6.0 MHz,			
LINK BUDGET				
		CLR SKY	UP FADE	DN FADE
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	78.2	78.2	78.2
	- Uplink Path Loss, clear sky (dB)	-200.2	-200.2	-200.2
	- Uplink Rain Attenuation (dB)	0.0	-1.9	0.0
	+ Satellite G/T (dB/K)	-5.5	-5.5	-5.5
	- Boltzman's Constant (dBW/K-Hz)	228.6	228.6	228.6
	- Carrier Noise Bandwidth (dB-Hz)	-74.8	-74.8	-74.8
	C/N Uplink (dB)	26.3	24.4	26.3
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	43.5	43.5	43.5
	- Carrier Output Backoff (dB)	-6.2	-7.8	-6.2
	Downlink EIRP per carrier (dBW)	37.3	35.7	37.3
	- Earth Station Pointing Error (dB)	-.5	-.5	-.5
	- Downlink Path Loss, clear sky (dB)	-205.9	-205.9	-205.9
	- Downlink Rain Attenuation (dB)	0.0	0.0	-2.1
	+ Earth Station G/T (dB/K)	33.1	33.1	31.0
	- Boltzman's Constant (dBW/K-Hz)	228.6	228.6	228.6
	- Carrier Noise Bandwidth (dB-Hz)	-74.8	-74.8	-74.8
	C/N Dnlink (dB)	17.8	16.1	13.6
COMPOSITE PERFORMANCE	C/N Uplink (dB)	26.3	24.4	26.3
	C/N Dnlink (dB)	17.8	16.1	13.6
	C/I Uplink Co-channel (dB)	28.1	26.1	28.1
	C/I Dnlink Co-Channel (dB)	28.1	26.4	28.1
	C/I Uplink Adj. Sat. (SAT-1) (dB)	20.1	18.2	20.1
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	22.3	20.6	22.3
	C/I Uplink Adj. Sat. (SAT-2) (dB)	20.1	18.2	20.1
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	22.9	21.2	22.9
	C/(N+I) COMPOSITE (dB)	12.8	11.0	11.0
	- Required System Margin (dB)	-1.0	-1.0	-1.0
	Net C/(N+I) COMPOSITE (dB)	11.8	10.0	10.0
	- Minimum Required C/N (dB)	-10.0	-10.0	-10.0
	Excess Link Margin (dB)	1.8	0.0	0.0
	Video Signal-to-Noise Ratio (dB)	45.7	43.9	43.9
	Audio Signal-to-Noise Ratio (dB)	59.5	57.7	57.7
TRANSMIT EARTH STATION	Loc: -4 dB Gain Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 301.1 watts			
RECEIVE EARTH STA.	Loc: -4 dB Gain Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr			
DENSITY INFORMATION	Uplink Pwr Den: -50.0 dBW/Hz, Dnlink EIRP Den: -33.4 dBW/Hz Max Dnlink PFD: -160.3 dB(W/m2/4kHz) @ Beam Center			
AVAILABILITY	Uplink: 99.991 %, Dnlink: 99.715 %, Composite Link: 99.706			
LOSS IN C/(N+I) DUE TO ADJ SAT INTF: SAT-1 = 1.5dB, SAT-2 = 1.4dB				

HEMI-KSPOT (77 MHz): 30M0F3F
[Input Data]

----- SATELLITE -----

Satellite Name	: IS-706	Location (deg)	: 54.85E
Uplink Beam	: HEMI	Dnlink Beam	: KSPOT
Trans. BW (MHz)	: 77.0 MHz	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency (GHz)	: 6.175	Dnlink Frequency (GHz)	: 11.950
G/T, beam center (dB/K)	: -1.5	EIRP, beam center (dBW)	: 47.5
G/T, beam edge (dB/K)	: -5.5	EIRP, beam edge (dBW)	: 43.5
G/T, toward Tx ES (dB/K)	: -5.5	EIRP, toward Rx ES (dBW)	: 43.5
SFD, beam edge (dBW/m2)	: -73.5		
SFD, toward Tx ES (dBW/m2)	: -73.5		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB)	: 14	Nominal Uplink Co-Chan C/I (dB)	: 27.0
Input Backoff (dB)	: 8.2	Nominal Dnlink Co-Chan C/I (dB)	: 27.0
Output Backoff (dB)	: *	Minimum Uplink Rain Margin (dB)	: 0.5*
(C/Im) - Nominal (dB)	: *	Actual Uplink Rain Margin (dB)	: 1.9
Min. System Margin (dB)	: 1.0	Uplink Power Control Margin (dB)	: .0
Max No Carriers / Trans	: 2	Minimum Dnlink Rain Margin (dB)	: 0.5*
Required Link Availability	: 99.5	Actual Dnlink Rain Margin (dB)	: 4.2
		Dnlink Pointing Error (dB)	: 0.5

-- ADJACENT SATELLITE INTERFERENCE ----- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg)	:	52.85E	56.85E
Uplink Interference (dB or dBW/Hz)	:	-38.7	-38.7
Uplink Polarization Advantage (dB)	:	0.0	0.0
Downlink Interference (dB or dBW/Hz)	:	-26	-26
Downlink Polarization Advantage (dB)	:	0.0	0.0
Rx E/S Topocentric Angle (deg)	:	2.09	2.09
Rx E/S Pointing Error (deg)	:	-0.06	0.06
Rx E/S Off-Axis Angle (deg)	:	2.03	2.15
Rx E/S Adj. Sat. Discrimination (dB)	:	33.7	34.3

----- TV/FM CARRIER PARAMETERS -----

Video Format	: PAL	Peak Deviation (MHz)	: 9.0
RF Noise BW (MHz)	: 30.0	PreEmphasis+Weighting (dB)	: 15.6
Video BW (MHz)	: 6.0	Threshold C/N (dB)	: 10.0

----- AUDIO SUB-CARRIER PARAMETERS -----

Sub-Carrier Freq (MHz)	: 6.6	Highest Audio Freq (kHz)	: 15.0
P-Dev of Video by Audio (MHz)	: 2.0	Companding Advantage (dB)	: 0.0
Peak Dev of Audio (kHz)	: 75.0		

----- Transmit Earth Station ----- Receive Earth Station -----

Location: -4_dB_Gain_Contour	Latitude (deg): *	Location: -4_dB_Gain_Contour	Latitude (deg): *
Longitude (deg): *	Rain Rate (mm/hr): 42*	Longitude (deg): *	Rain Rate (mm/hr): 42*
E/S Type or Model No:	E/S Manufacturer : STANDARD	E/S Type or Model No:	E/S Manufacturer : STANDARD
E/S Diam. (m): 9.0	E/S Freq (nom, GHz): 6.175	E/S Diam. (m): 6.1	E/S Freq (nom, GHz): 11.95
E/S Tx Gain (dBi): 53.4	ULPC Margin (dB): .0	E/S Gain (nom, dBi): 55.5	E/S Feed Loss (dB): 0.25
		E/S Ant. Temp(deg K): 40	E/S LNA Temp (deg K): 110
		E/S G/T (nom, dB/K): *	

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SATELLITE DATA	Satellite : IS-706 Uplink Beam: HEMI Uplink POL: , Dnlink POL: , EIRP, beam center: 47.5 dBW G/T:-5.5 dB/K, SFD:-87.5 dBW/m2 Dnlink EIRP: 43.5 dBW	Location: 54.85E Dnlink Beam: KSPOT		
TRANSPONDER DATA	Trans Bandwidth :77.0 MHz Uplink Frequency:6.175 GHz IBO (Nominal) : 0.0 dB	Trans Type: LTWTA Dnlink Freq: 11.950 GHz OBO (Nominal): 0.0 dB		
CARRIER DATA	Type: NTC26%, Info Rate: 52550 kbps, Mod: QPSK, 1/2x188/204 BWo: 64435kHz, BWA: 77000kHz, C/N: 3.36dB, C/N_thresh: 3.36			
LINK BUDGET				
		CLR SKY UP FADE DN FADE		
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	75.4	75.4	75.4
	- Uplink Path Loss, clear sky (dB)	-200.2	-200.2	-200.2
	- Uplink Rain Attenuation (dB)	0.0	-3.1	0.0
	+ Satellite G/T (dB/K)	-5.5	-5.5	-5.5
	- Boltzman's Constant (dBW/K-Hz)	228.6	228.6	228.6
	- Carrier Noise Bandwidth (dB-Hz)	-78.1	-78.1	-78.1
	C/N Uplink (dB)	20.2	17.1	20.2
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	43.5	43.5	43.5
	- Carrier Output Backoff (dB)	0.0	-1.1	0.0
	Downlink EIRP per carrier (dBW)	43.5	43.4	43.5
	- Earth Station Pointing Error (dB)	-0.5	-0.5	-0.5
	- Downlink Path Loss, clear sky (dB)	-205.9	-205.9	-205.9
	- Downlink Rain Attenuation (dB)	0.0	0.0	-1.4
	+ Earth Station G/T (dB/K)	22.3	22.3	20.8
	- Boltzman's Constant (dBW/K-Hz)	228.6	228.6	228.6
	- Carrier Noise Bandwidth (dB-Hz)	-78.1	-78.1	-78.1
	C/N Dnlink (dB)	9.8	9.7	6.9
COMPOSITE PERFORMANCE	C/N Uplink (dB)	20.2	17.1	20.2
	C/N Dnlink (dB)	9.8	9.7	6.9
	C/I Uplink Co-channel (dB)	27.0	23.9	27.0
	C/I Dnlink Co-channel (dB)	27.0	26.9	27.0
	C/I Uplink Adj. Sat. (SAT-1) (dB)	14.0	10.9	14.0
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	13.6	13.5	13.6
	C/I Uplink Adj. Sat. (SAT-2) (dB)	14.0	10.9	14.0
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	15.7	15.6	15.7
	C/(N+I) COMPOSITE (dB)	5.7	4.4	4.4
	- Required System Margin (dB)	-1.0	-1.0	-1.0
Net C/(N+I) COMPOSITE (dB)	4.7	3.4	3.4	
- Minimum Required C/N (dB)	-3.4	-3.4	-3.4	
	Excess Link Margin (dB)	1.4	0.0	0.0
TRANSPONDER UTILIZATION	% BW/CARR: 100.00, % PWR/CARR: 100.00, Max No. Carriers: 1.0 Downlink EIRP per carrier toward beam center: 47.5 dBW			
TRANSMIT EARTH STATION	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 275.3 watts			
RECEIVE EARTH STA.	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr			
DENSITY INFORMATION	Uplink Pwr Den: -53.7 dBW/Hz, Dnlink EIRP Den: -30.6 dBW/Hz Max Dnlink PFD: -157.5 dB(W/m2/4kHz) @ Beam Center			
AVAILABILITY	Uplink: 99.997 %, Dnlink: 99.441 %, Composite Link: 99.437			
LOSS IN C/(N+I) DUE TO ADJ SAT INTF:	SAT-1 = 1.6dB, SAT-2 = 1.2dB			

HEMI-KSPOT (77 MHz): 77M0G7W
[Input Data]

----- SATELLITE -----

Satellite Name	: IS-706	Location (deg)	: 54.85E
Uplink Beam	: HEMI	Dnlink Beam	: KSPOT
Trans. BW (MHz)	: 77.0 MHz	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency (GHz)	: 6.175	Dnlink Frequency (GHz)	: 11.950
G/T, beam center (dB/K)	: -1.5	EIRP, beam center (dBW)	: 47.5
G/T, beam edge (dB/K)	: -5.5	EIRP, beam edge (dBW)	: 43.5
G/T, toward Tx ES (dB/K)	: -5.5	EIRP, toward Rx ES (dBW)	: 43.5
SFD, beam edge (dBW/m2)	: -87.5		
SFD, toward Tx ES (dBW/m2)	: -87.5		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB)	: 0	Nominal Uplink Co-Chan C/I (dB)	: 27.0
Input Backoff (dB)	: 0.0	Nominal Dnlink Co-Chan C/I (dB)	: 27.0
Output Backoff (dB)	: *	Minimum Uplink Rain Margin (dB)	: 0.5*
(C/Im) - Nominal (dB)	: *	Actual Uplink Rain Margin (dB)	: 3.1
Min. System Margin (dB)	: 1.0	Uplink Power Control Margin (dB)	: .0
Max No Carriers / Trans	: 1	Minimum Dnlink Rain Margin (dB)	: 0.5*
Required Link Availability	: 99.5	Actual Dnlink Rain Margin (dB)	: 2.9
		Dnlink Pointing Error (dB)	: 0.5

--- ADJACENT SATELLITE INTERFERENCE --- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg)	:	52.85E	56.85E
Uplink Interference (dB or dBW/Hz)	:	-38.7	-38.7
Uplink Polarization Advantage (dB)	:	0.0	0.0
Downlink Interference (dB or dBW/Hz)	:	-26	-26
Downlink Polarization Advantage (dB)	:	0.0	0.0
Rx E/S Topocentric Angle (deg)	:	2.09	2.09
Rx E/S Pointing Error (deg)	:	-0.20	0.20
Rx E/S Off-Axis Angle (deg)	:	1.89	2.29
Rx E/S Adj. Sat. Discrimination (dB)	:	22.2	24.3

----- CARRIER PARAMETERS -----

Modem Type	: NTC26%	C/N (operating, dB)	: 3.36
Modulation	: QPSK	Eb/No (operating, dB)	: 4.2
Code Rate	: 1/2x188/204-V	C/N (threshold, dB)	: 3.36
Info Rate (kbps)	: 52550	Eb/No (threshold, dB)	: 4.2
Occupied Bandwidth (kHz)	: 64435		
Allocated Bandwidth (kHz)	: 77000		

----- Transmit Earth Station ----- ----- Receive Earth Station -----

Location: -4_dB_Gain_Contour	Location: -4_dB_Gain_Contour
Latitude (deg): *	Latitude (deg): *
Longitude (deg): *	Longitude (deg): *
Rain Rate (mm/hr): 42*	Rain Rate (mm/hr): 42*
E/S Type or Model No:	E/S Type or Model No:
E/S Manufacturer : STANDARD	E/S Manufacturer : STANDARD
E/S Diam. (m): 7.0	E/S Diam. (m): 1.8
E/S Freq (nom, GHz): 6.175	E/S Freq (nom, GHz): 11.95
E/S Tx Gain (dBi): 51.0	E/S Gain (nom, dBi): 44.8
ULPC Margin (dB): .0	E/S Feed Loss (dB): 0.25
	E/S Ant. Temp(deg K): 45
	E/S LNA Temp (deg K): 110
	E/S G/T (nom, dB/K): *

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SATELLITE DATA	Satellite : IS-706 Uplink Beam: HEMI Uplink POL: , Dnlink POL: , EIRP, beam center: 47.5 dBW G/T:-5.5 dB/K, SFD:-84.5 dBW/m2 Dnlink EIRP: 43.5 dBW	Location: 54.85E Dnlink Beam: KSPOT		
TRANSPONDER DATA	Trans Bandwidth :77.0 MHz Uplink Frequency:6.175 GHz IBO (Nominal) : 8.2 dB	Trans Type: LTWTA Dnlink Freq: 11.950 GHz OBO (Nominal): 3.5 dB		
CARRIER DATA	Type: EF9000, Info Rate: 6000 kbps, Mod: QPSK, 1/2x188/204-BWo: 6771.1kHz, BWa: 10300kHz, C/N: 3.87dB, C/N_thresh: 3.5			
LINK BUDGET				
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	63.2	63.2	63.2
	- Uplink Path Loss, clear sky (dB)	-200.2	-200.2	-200.2
	- Uplink Rain Attenuation (dB)	0.0	-1.1	0.0
	+ Satellite G/T (dB/K)	-5.5	-5.5	-5.5
	- Boltzman's Constant (dBW/K-Hz)	228.6	228.6	228.6
	- Carrier Noise Bandwidth (dB-Hz)	-68.3	-68.3	-68.3
C/N Uplink (dB)		17.8	16.7	17.8
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	43.5	43.5	43.5
	- Carrier Output Backoff (dB)	-10.5	-11.5	-10.5
	Downlink EIRP per carrier (dBW)	33.0	32.0	33.0
	- Earth Station Pointing Error (dB)	-.5	-.5	-.5
	- Downlink Path Loss, clear sky (dB)	-205.9	-205.9	-205.9
	- Downlink Rain Attenuation (dB)	0.0	0.0	-1.6
+ Earth Station G/T (dB/K)	25.0	25.0	23.3	
- Boltzman's Constant (dBW/K-Hz)	228.6	228.6	228.6	
- Carrier Noise Bandwidth (dB-Hz)	-68.3	-68.3	-68.3	
C/N Dnlink (dB)		11.8	10.8	8.6
COMPOSITE PERFORMANCE	C/N Uplink (dB)	17.8	16.7	17.8
	C/N Dnlink (dB)	11.8	10.8	8.6
	C/I Intermod (dB)	20.2	19.6	20.2
	C/I Uplink Co-channel (dB)	28.8	27.7	28.8
	C/I Dnlink Co-Channel (dB)	28.8	27.8	28.8
	C/I Uplink Adj. Sat. (SAT-1) (dB)	11.6	10.5	11.6
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	15.9	14.9	15.9
	C/I Uplink Adj. Sat. (SAT-2) (dB)	11.6	10.5	11.6
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	17.4	16.5	17.4
	C/(N+I) COMPOSITE (dB)	5.6	4.6	4.6
- Required System Margin (dB)	-1.0	-1.0	-1.0	
Net C/(N+I) COMPOSITE (dB)	4.6	3.6	3.6	
- Minimum Required C/N (dB)	-3.9	-3.6	-3.6	
Excess Link Margin (dB)		.7	0.0	0.0
TRANSPONDER UTILIZATION	% BW/CARR: 13.38, % PWR/CARR: 20.02, Max No. Carriers: 5.0 Downlink EIRP per carrier toward beam center: 37.0 dBW			
TRANSMIT EARTH STATION	Loc: -4 dB Gain Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 16.6 watts			
RECEIVE EARTH STA.	Loc: -4 dB Gain Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr			
DENSITY INFORMATION	Uplink Pwr Den: -56.1 dBW/Hz, Dnlink EIRP Den: -31.3 dBW/Hz Max Dnlink PFD: -158.2 dB(W/m2/4kHz) @ Beam Center			
AVAILABILITY	Uplink: 99.971 %, Dnlink: 99.539 %, Composite Link: 99.509			
LOSS IN C/(N+I) DUE TO ADJ SAT INTF: SAT-1 = 1.8dB, SAT-2 = 1.6dB				

HEMI-KSPOT (77 MHZ): 10M3G7W
[Input Data]

----- SATELLITE -----

Satellite Name	: IS-706	Location (deg)	: 54.85E
Uplink Beam	: HEMI	Dnlink Beam	: KSPOT
Trans. BW (MHz)	: 77.0 MHz	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency (GHz)	: 6.175	Dnlink Frequency (GHz)	: 11.950
G/T, beam center (dB/K)	: -1.5	EIRP, beam center (dBW)	: 47.5
G/T, beam edge (dB/K)	: -5.5	EIRP, beam edge (dBW)	: 43.5
G/T, toward Tx ES (dB/K)	: -5.5	EIRP, toward Rx ES (dBW)	: 43.5
SFD, beam edge (dBW/m2)	: -84.5		
SFD, toward Tx ES (dBW/m2)	: -84.5		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB)	: 3	Nominal Uplink Co-Chan C/I (dB)	: 27.0
Input Backoff (dB)	: 8.2	Nominal Dnlink Co-Chan C/I (dB)	: 27.0
Output Backoff (dB)	: *	Minimum Uplink Rain Margin (dB)	: 0.5*
(C/Im) - Nominal (dB)	: *	Actual Uplink Rain Margin (dB)	: 1.1
Min. System Margin (dB)	: 1.0	Uplink Power Control Margin (dB)	: .0
Max No Carriers / Trans	: *	Minimum Dnlink Rain Margin (dB)	: 0.5*
Required Link Availability	: 99.5	Actual Dnlink Rain Margin (dB)	: 3.2
		Dnlink Pointing Error (dB)	: 0.5

-- ADJACENT SATELLITE INTERFERENCE ----- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg)	:	52.85E	56.85E
Uplink Interference (dB or dBW/Hz)	:	-38.7	-38.7
Uplink Polarization Advantage (dB)	:	0.0	0.0
Downlink Interference (dB or dBW/Hz)	:	-26	-26
Downlink Polarization Advantage (dB)	:	0.0	0.0
Rx E/S Topocentric Angle (deg)	:	2.09	2.09
Rx E/S Pointing Error (deg)	:	-0.15	0.15
Rx E/S Off-Axis Angle (deg)	:	1.94	2.24
Rx E/S Adj. Sat. Discrimination (dB)	:	25.2	26.8

----- CARRIER PARAMETERS -----

Modem Type	: EF9000	C/N (operating, dB)	: 3.87
Modulation	: QPSK	Eb/No (operating, dB)	: 4.4
Code Rate	: 1/2x188/204-V	C/N (threshold, dB)	: 3.57
Info Rate (kbps)	: 6000	Eb/No (threshold, dB)	: 4.1
Occupied Bandwidth (kHz)	: 6771.1		
Allocated Bandwidth (kHz)	: 10300		

----- Transmit Earth Station ----- ----- Receive Earth Station -----

Location: -4_dB_Gain_Contour	Location: -4_dB_Gain_Contour
Latitude (deg): *	Latitude (deg): *
Longitude (deg): *	Longitude (deg): *
Rain Rate (mm/hr): 42*	Rain Rate (mm/hr): 42*
E/S Type or Model No:	E/S Type or Model No:
E/S Manufacturer : STANDARD	E/S Manufacturer : STANDARD
E/S Diam. (m): 7.0	E/S Diam. (m): 2.4
E/S Freq (nom, GHz): 6.175	E/S Freq (nom, GHz): 11.95
E/S Tx Gain (dBi): 51.0	E/S Gain (nom, dBi): 47.5
ULPC Margin (dB): .0	E/S Feed Loss (dB): 0.25
	E/S Ant. Temp(deg K): 45
	E/S LNA Temp (deg K): 110
	E/S G/T (nom, dB/K): *

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SATELLITE DATA	Satellite : IS-706 Uplink Beam: HEMI Uplink POL: , Dnlink POL: , EIRP, beam center: 47.5 dBW G/T:-5.5 dB/K, SFD:-84.5 dBW/m2 Dnlink EIRP: 43.5 dBW	Location: 54.85E Dnlink Beam: KSPOT		
TRANSPONDER DATA	Trans Bandwidth :77.0 MHz Uplink Frequency:6.175 GHz IBO (Nominal) : 8.2 dB	Trans Type: LTWTA Dnlink Freq: 11.950 GHz OBO (Nominal): 3.5 dB		
CARRIER DATA	Type: CS701, Info Rate: 64 kbps, Mod: QPSK, 1/2x239/256-V BWo: 75.4kHz, BWa: 100kHz, C/N: 2.99dB, C/N_thresh: 2.79dB			
LINK BUDGET				
		CLR SKY	UP FADE	DN FADE
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	42.9	42.9	42.9
	- Uplink Path Loss, clear sky (dB)	-200.2	-200.2	-200.2
	- Uplink Rain Attenuation (dB)	0.0	-1.0	0.0
	+ Satellite G/T (dB/K)	-5.5	-5.5	-5.5
	- Boltzman's Constant (dBW/K-Hz)	228.6	228.6	228.6
	- Carrier Noise Bandwidth (dB-Hz)	-48.8	-48.8	-48.8
	C/N Uplink (dB)	17.0	16.0	17.0
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	43.5	43.5	43.5
	- Carrier Output Backoff (dB)	-30.8	-31.8	-30.8
	Downlink EIRP per carrier (dBW)	12.7	11.7	12.7
	- Earth Station Pointing Error (dB)	-.5	-.5	-.5
	- Downlink Path Loss, clear sky (dB)	-205.9	-205.9	-205.9
	- Downlink Rain Attenuation (dB)	0.0	0.0	-1.6
	+ Earth Station G/T (dB/K)	25.0	25.0	23.3
	- Boltzman's Constant (dBW/K-Hz)	228.6	228.6	228.6
	- Carrier Noise Bandwidth (dB-Hz)	-48.8	-48.8	-48.8
	C/N Dnlink (dB)	11.0	10.0	7.8
COMPOSITE PERFORMANCE	C/N Uplink (dB)	17.0	16.0	17.0
	C/N Dnlink (dB)	11.0	10.0	7.8
	C/I Intermod (dB)	19.4	18.4	19.4
	C/I Uplink Co-channel (dB)	28.6	27.5	28.6
	C/I Dnlink Co-channel (dB)	28.6	27.5	28.6
	C/I Uplink Adj. Sat. (SAT-1) (dB)	10.8	9.8	10.8
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	15.1	14.1	15.1
	C/I Uplink Adj. Sat. (SAT-2) (dB)	10.8	9.8	10.8
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	16.7	15.6	16.7
	C/(N+I) COMPOSITE (dB)	4.8	3.8	3.8
	- Required System Margin (dB)	-1.0	-1.0	-1.0
Net C/(N+I) COMPOSITE (dB)	3.8	2.8	2.8	
- Minimum Required C/N (dB)	-3.0	-2.8	-2.8	
	Excess Link Margin (dB)	.8	0.0	0.0
TRANSPONDER UTILIZATION	% BW/CARR: 0.13, % PWR/CARR: 0.19, Max No. Carriers: 536.8 Downlink EIRP per carrier toward beam center: 16.7 dBW			
TRANSMIT EARTH STATION	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 0.2 watts			
RECEIVE EARTH STA.	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr			
DENSITY INFORMATION	Uplink Pwr Den: -56.9 dBW/Hz, Dnlink EIRP Den: -32.1 dBW/Hz Max Dnlink PFD: -159.0 dB(W/m2/4kHz) @ Beam Center			
AVAILABILITY	Uplink: 99.968 %, Dnlink: 99.541 %, Composite Link: 99.510			
LOSS IN C/(N+I) DUE TO ADJ SAT INTF:	SAT-1 = 1.8dB, SAT-2 = 1.6dB			

HEMI-KSPOT (77 MHz): 100KG7W
[Input Data]

----- SATELLITE -----

Satellite Name	: IS-706	Location (deg)	: 54.85E
Uplink Beam	: HEMI	Dnlink Beam	: KSPOT
Trans. BW (MHz)	: 77.0 MHz	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency (GHz)	: 6.175	Dnlink Frequency (GHz)	: 11.950
G/T, beam center (dB/K)	: -1.5	EIRP, beam center (dBW)	: 47.5
G/T, beam edge (dB/K)	: -5.5	EIRP, beam edge (dBW)	: 43.5
G/T, toward Tx ES (dB/K)	: -5.5	EIRP, toward Rx ES (dBW)	: 43.5
SFD, beam edge (dBW/m2)	: -84.5		
SFD, toward Tx ES (dBW/m2)	: -84.5		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB)	: 3	Nominal Uplink Co-Chan C/I (dB)	: 27.0
Input Backoff (dB)	: 8.2	Nominal Dnlink Co-Chan C/I (dB)	: 27.0
Output Backoff (dB)	: *	Minimum Uplink Rain Margin (dB)	: 0.5*
(C/Im) - Nominal (dB)	: *	Actual Uplink Rain Margin (dB)	: 1.0
Min. System Margin (dB)	: 1.0	Uplink Power Control Margin (dB)	: .0
Max No Carriers / Trans	: *	Minimum Dnlink Rain Margin (dB)	: 0.5*
Required Link Availability	: 99.5	Actual Dnlink Rain Margin (dB)	: 3.3
		Dnlink Pointing Error (dB)	: 0.5

-- ADJACENT SATELLITE INTERFERENCE ----- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg)	:	52.85E	56.85E
Uplink Interference (dB or dBW/Hz)	:	-38.7	-38.7
Uplink Polarization Advantage (dB)	:	0.0	0.0
Downlink Interference (dB or dBW/Hz)	:	-26	-26
Downlink Polarization Advantage (dB)	:	0.0	0.0
Rx E/S Topocentric Angle (deg)	:	2.09	2.09
Rx E/S Pointing Error (deg)	:	-0.15	0.15
Rx E/S Off-Axis Angle (deg)	:	1.94	2.24
Rx E/S Adj. Sat. Discrimination (dB)	:	25.2	26.8

----- CARRIER PARAMETERS -----

Modem Type	: CS701	C/N (operating, dB)	: 2.99
Modulation	: QPSK	Eb/No (operating, dB)	: 3.7
Code Rate	: 1/2x239/256-V	C/N (threshold, dB)	: 2.79
Info Rate (kbps)	: 64	Eb/No (threshold, dB)	: 3.5
Occupied Bandwidth (kHz)	: 75.4		
Allocated Bandwidth (kHz)	: 100		

----- Transmit Earth Station ----- ----- Receive Earth Station -----

Location: -4_dB_Gain_Contour	Location: -4_dB_Gain_Contour
Latitude (deg): *	Latitude (deg): *
Longitude (deg): *	Longitude (deg): *
Rain Rate (mm/hr): 42*	Rain Rate (mm/hr): 42*
E/S Type or Model No:	E/S Type or Model No:
E/S Manufacturer : STANDARD	E/S Manufacturer : STANDARD
E/S Diam. (m): 7.0	E/S Diam. (m): 2.4
E/S Freq (nom, GHz): 6.175	E/S Freq (nom, GHz): 11.95
E/S Tx Gain (dBi): 51.0	E/S Gain (nom, dBi): 47.5
ULPC Margin (dB): .0	E/S Feed Loss (dB): 0.25
	E/S Ant. Temp(deg K): 45
	E/S LNA Temp (deg K): 110
	E/S G/T (nom, dB/K): *

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SATELLITE DATA	Satellite : IS-706 Uplink Beam: ZONE Uplink POL: , Dnlink POL: , EIRP, beam center: 37.3 dBW G/T:-3.0 dB/K, SFD:-74.2 dBW/m2 Dnlink EIRP: 33.3 dBW	Location: 54.85E Dnlink Beam: ZONE		
TRANSPONDER DATA	Trans Bandwidth :36.0 MHz Uplink Frequency:6.175 GHz IBO (Nominal) : 9.6 dB	Trans Type: LTWTA Dnlink Freq: 3.950 GHz OBO (Nominal): 3.8 dB		
CARRIER DATA	Type: TV/FM, Format: PAL, PreEmphasis+Weighting: 15.6dB RF BW: 30.0 MHz, P-Dev: 9.0 MHz, VideoBW: 6.0 MHz,			
LINK BUDGET				
		CLR SKY UP FADE DN FADE		
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	79.1	n/a	n/a
	- Uplink Path Loss, clear sky (dB)	-200.2	n/a	n/a
	- Uplink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Satellite G/T (dB/K)	-3.0	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-74.8	n/a	n/a
	C/N Uplink (dB)	29.7	n/a	n/a
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	33.3	n/a	n/a
	- Carrier Output Backoff (dB)	-3.8	n/a	n/a
	Downlink EIRP per carrier (dBW)	29.5	n/a	n/a
	- Earth Station Pointing Error (dB)	-.5	n/a	n/a
	- Downlink Path Loss, clear sky (dB)	-196.3	n/a	n/a
	- Downlink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Earth Station G/T (dB/K)	29.4	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-74.8	n/a	n/a
	C/N Dnlink (dB)	16.0	n/a	n/a
COMPOSITE PERFORMANCE	C/N Uplink (dB)	29.7	n/a	n/a
	C/N Dnlink (dB)	16.0	n/a	n/a
	C/I Uplink Co-channel (dB)	27.8	n/a	n/a
	C/I Dnlink Co-Channel (dB)	27.8	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-1) (dB)	21.0	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	17.1	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-2) (dB)	21.0	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	18.4	n/a	n/a
	C/(N+I) COMPOSITE (dB)	11.0	n/a	n/a
	- Required System Margin (dB)	-1.0	n/a	n/a
Net C/(N+I) COMPOSITE (dB)	10.0	n/a	n/a	
- Minimum Required C/N (dB)	-10.0	n/a	n/a	
	Excess Link Margin (dB)	0.0	n/a	n/a
	Video Signal-to-Noise Ratio (dB)	43.9	n/a	n/a
	Audio Signal-to-Noise Ratio (dB)	57.7	n/a	n/a
TRANSMIT EARTH STATION	Loc: -4 dB Gain Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 234.3 watts			
RECEIVE EARTH STA.	Loc: -4 dB Gain Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr			
DENSITY INFORMATION	Uplink Pwr Den: -51.1 dBW/Hz, Dnlink EIRP Den: -41.2 dBW/Hz Max Dnlink PFD: -168.1 dB(W/m2/4kHz) @ Beam Center			
LOSS IN C/(N+I) DUE TO ADJ SAT INTF: SAT-1 = 1.8dB, SAT-2 = 1.4dB				

ZONE-ZONE (36 MHz): 30M0F3F
[Input Data]

----- SATELLITE -----

Satellite Name	: IS-706	Location (deg)	: 54.85E
Uplink Beam	: ZONE	Dnlink Beam	: ZONE
Trans. BW (MHz)	: 36.0 MHz	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency (GHz)	: 6.175	Dnlink Frequency (GHz)	: 3.950
G/T, beam center (dB/K)	: 1.0	EIRP, beam center (dBW)	: 37.3
G/T, beam edge (dB/K)	: -3.0	EIRP, beam edge (dBW)	: 33.3
G/T, toward Tx ES (dB/K)	: -3.0	EIRP, toward Rx ES (dBW)	: 33.3
SFD, beam edge (dBW/m2)	: -74.2		
SFD, toward Tx ES (dBW/m2)	: -74.2		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB)	: 14	Nominal Uplink Co-Chan C/I (dB)	: 27.0
Input Backoff (dB)	: 10, 9.6	Nominal Dnlink Co-Chan C/I (dB)	: 27.0
Output Backoff (dB)	: *	Minimum Uplink Rain Margin (dB)	: 0.0
(C/Im) - Nominal (dB)	: *	Actual Uplink Rain Margin (dB)	: n/a
Min. System Margin (dB)	: 1.0	Uplink Power Control Margin (dB)	: .0
Max No Carriers / Trans	: 1	Minimum Dnlink Rain Margin (dB)	: 0.0
		Actual Dnlink Rain Margin (dB)	: n/a
		Dnlink Pointing Error (dB)	: 0.5

-- ADJACENT SATELLITE INTERFERENCE ----- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg)	:	52.85E	56.85E
Uplink Interference (dB or dBW/Hz)	:	-38.7	-38.7
Uplink Polarization Advantage (dB)	:	0.0	0.0
Downlink Interference (dB or dBW/Hz)	:	-34.2	-34.2
Downlink Polarization Advantage (dB)	:	0.0	0.0
Rx E/S Topocentric Angle (deg)	:	2.09	2.09
Rx E/S Pointing Error (deg)	:	-0.12	0.12
Rx E/S Off-Axis Angle (deg)	:	1.97	2.21
Rx E/S Adj. Sat. Discrimination (dB)	:	28.2	29.4

----- TV/FM CARRIER PARAMETERS -----

Video Format	: PAL	Peak Deviation (MHz)	: 9.0
RF Noise BW (MHz)	: 30.0	PreEmphasis+Weighting (dB)	: 15.6
Video BW (MHz)	: 6.0	Threshold C/N (dB)	: 10.0

----- AUDIO SUB-CARRIER PARAMETERS -----

Sub-Carrier Freq (MHz)	: 6.6	Highest Audio Freq (kHz)	: 15.0
P-Dev of Video by Audio (MHz)	: 2.0	Companding Advantage (dB)	: 0.0
Peak Dev of Audio (kHz)	: 75.0		

----- Transmit Earth Station ----- ----- Receive Earth Station -----

Location: -4_dB_Gain_Contour		Location: -4_dB_Gain_Contour	
Latitude (deg): *		Latitude (deg): *	
Longitude (deg): *		Longitude (deg): *	
Rain Rate (mm/hr): 42*		Rain Rate (mm/hr): 42*	
E/S Type or Model No:		E/S Type or Model No:	
E/S Manufacturer : STANDARD		E/S Manufacturer : STANDARD	
E/S Diam. (m): 11.0		E/S Diam. (m): 9.2	
E/S Freq (nom, GHz): 6.175		E/S Freq (nom, GHz): 3.95	
E/S Tx Gain (dBi): 55.4		E/S Gain (nom, dBi): 50.3	
ULPC Margin (dB): .0		E/S Feed Loss (dB): 0.15	
		E/S Ant. Temp(deg K): 45	
		E/S LNA Temp (deg K): 65	
		E/S G/T (nom, dB/K): *	

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SATELLITE DATA	Satellite : IS-706 Uplink Beam: ZONE Uplink POL: , Dnlink POL: , EIRP, beam center: 37.3 dBW G/T:-3.0 dB/K, SFD:-88.2 dBW/m2 Dnlink EIRP: 33.3 dBW	Location: 54.85E Dnlink Beam: ZONE		
TRANSPONDER DATA	Trans Bandwidth :36.0 MHz Uplink Frequency:6.175 GHz IBO (Nominal) : 0.0 dB	Trans Type: LTWTA Dnlink Freq: 3.950 GHz OBO (Nominal): 0.0 dB		
CARRIER DATA	Type: NTC26%, Info Rate: 24575 kbps, Mod: QPSK, 1/2x188/204 BWo: 30133kHz, BWa: 36000kHz, C/N: 3.36dB, C/N_thresh: 3.36			
LINK BUDGET				
		CLR SKY	UP FADE	DN FADE
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	74.7	n/a	n/a
	- Uplink Path Loss, clear sky (dB)	-200.2	n/a	n/a
	- Uplink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Satellite G/T (dB/K)	-3.0	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-74.8	n/a	n/a
	C/N Uplink (dB)	25.3	n/a	n/a
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	33.3	n/a	n/a
	- Carrier Output Backoff (dB)	0.0	n/a	n/a
	Downlink EIRP per carrier (dBW)	33.3	n/a	n/a
	- Earth Station Pointing Error (dB)	-.5	n/a	n/a
	- Downlink Path Loss, clear sky (dB)	-196.3	n/a	n/a
	- Downlink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Earth Station G/T (dB/K)	21.0	n/a	n/a
- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a	
- Carrier Noise Bandwidth (dB-Hz)	-74.8	n/a	n/a	
	C/N Dnlink (dB)	11.3	n/a	n/a
COMPOSITE PERFORMANCE	C/N Uplink (dB)	25.3	n/a	n/a
	C/N Dnlink (dB)	11.3	n/a	n/a
	C/I Uplink Co-channel (dB)	27.0	n/a	n/a
	C/I Dnlink Co-Channel (dB)	27.0	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-1) (dB)	16.6	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	9.0	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-2) (dB)	16.6	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	13.8	n/a	n/a
	C/(N+I) COMPOSITE (dB)	5.4	n/a	n/a
	- Required System Margin (dB)	-1.0	n/a	n/a
	Net C/(N+I) COMPOSITE (dB)	4.4	n/a	n/a
- Minimum Required C/N (dB)	-3.4	n/a	n/a	
	Excess Link Margin (dB)	1.0	n/a	n/a
TRANSPONDER UTILIZATION	% BW/CARR: 100.00, % PWR/CARR: 100.00, Max No. Carriers: 1.0 Downlink EIRP per carrier toward beam center: 37.3 dBW			
TRANSMIT EARTH STATION	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 234.3 watts			
RECEIVE EARTH STA.	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr			
DENSITY INFORMATION	Uplink Pwr Den: -51.1 dBW/Hz, Dnlink EIRP Den: -37.5 dBW/Hz Max Dnlink PFD: -164.4 dB(W/m2/4kHz) @ Beam Center			
LOSS IN C/(N+I) DUE TO ADJ SAT INTF: SAT-1 = 3.0dB, SAT-2 = 1.1dB				

ZONE-ZONE (36 MHZ): 36M0G7W
[Input Data]

----- SATELLITE -----

Satellite Name	: IS-706	Location (deg)	: 54.85E
Uplink Beam	: ZONE	Dnlink Beam	: ZONE
Trans. BW (MHz)	: 36.0 MHz	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency (GHz)	: 6.175	Dnlink Frequency (GHz)	: 3.950
G/T, beam center (dB/K)	: 1.0	EIRP, beam center (dBW)	: 37.3
G/T, beam edge (dB/K)	: -3.0	EIRP, beam edge (dBW)	: 33.3
G/T, toward Tx ES (dB/K)	: -3.0	EIRP, toward Rx ES (dBW)	: 33.3
SFD, beam edge (dBW/m2)	: -88.2		
SFD, toward Tx ES (dBW/m2)	: -88.2		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB)	: 0	Nominal Uplink Co-Chan C/I (dB)	: 27.0
Input Backoff (dB)	: 0.0	Nominal Dnlink Co-Chan C/I (dB)	: 27.0
Output Backoff (dB)	: *	Minimum Uplink Rain Margin (dB)	: 0.0
(C/Im) - Nominal (dB)	: *	Actual Uplink Rain Margin (dB)	: n/a
Min. System Margin (dB)	: 1.0	Uplink Power Control Margin (dB)	: .0
Max No Carriers / Trans	: 1	Minimum Dnlink Rain Margin (dB)	: 0.0
		Actual Dnlink Rain Margin (dB)	: n/a
		Dnlink Pointing Error (dB)	: 0.5

-- ADJACENT SATELLITE INTERFERENCE ----- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg)	:	52.85E	56.85E
Uplink Interference (dB or dBW/Hz)	:	-38.7	-38.7
Uplink Polarization Advantage (dB)	:	0.0	0.0
Downlink Interference (dB or dBW/Hz)	:	-34.2	-34.2
Downlink Polarization Advantage (dB)	:	0.0	0.0
Rx E/S Topocentric Angle (deg)	:	2.09	2.09
Rx E/S Pointing Error (deg)	:	-0.31	0.31
Rx E/S Off-Axis Angle (deg)	:	1.78	2.40
Rx E/S Adj. Sat. Discrimination (dB)	:	16.3	21.1

----- CARRIER PARAMETERS -----

Modem Type	: NTC26%	C/N (operating, dB)	: 3.36
Modulation	: QPSK	Eb/No (operating, dB)	: 4.2
Code Rate	: 1/2x188/204-V	C/N (threshold, dB)	: 3.36
Info Rate (kbps)	: 24575	Eb/No (threshold, dB)	: 4.2
Occupied Bandwidth (kHz)	: 30133		
Allocated Bandwidth (kHz)	: 36000		

----- Transmit Earth Station -----

Location: -4_dB_Gain_Contour
Latitude (deg): *
Longitude (deg): *
Rain Rate (mm/hr): 42*
E/S Type or Model No:
E/S Manufacturer : STANDARD
E/S Diam. (m): 7.0
E/S Freq (nom, GHz): 6.175
E/S Tx Gain (dBi): 51.0
ULPC Margin (dB): .0

----- Receive Earth Station -----

Location: -4_dB_Gain_Contour
Latitude (deg): *
Longitude (deg): *
Rain Rate (mm/hr): 42*
E/S Type or Model No:
E/S Manufacturer : STANDARD
E/S Diam. (m): 3.5
E/S Freq (nom, GHz): 3.95
E/S Gain (nom, dBi): 41.1
E/S Feed Loss (dB): 0.15
E/S Ant. Temp (deg K): 25
E/S LNA Temp (deg K): 65
E/S G/T (nom, dB/K): *

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SATELLITE DATA	Satellite : IS-706 Uplink Beam: ZONE Uplink POL: , Dnlink POL: , EIRP, beam center: 37.3 dBW G/T:-3.0 dB/K, SFD:-80.2 dBW/m2 Dnlink EIRP: 33.3 dBW	Location: 54.85E Dnlink Beam: ZONE		
TRANSPONDER DATA	Trans Bandwidth :36.0 MHz Uplink Frequency:6.175 GHz IBO (Nominal) : 8.2 dB	Trans Type: LTWTA Dnlink Freq: 3.950 GHz OBO (Nominal): 3.5 dB		
CARRIER DATA	Type: EF9000, Info Rate: 6000 kbps, Mod: QPSK, 1/2x188/204- BWo: 6771.1kHz, BWa: 10300kHz, C/N: 3.87dB, C/N_thresh: 3.5			
LINK BUDGET				
		CLR SKY	UP FADE	DN FADE
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	70.8	n/a	n/a
	- Uplink Path Loss, clear sky (dB)	-200.2	n/a	n/a
	- Uplink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Satellite G/T (dB/K)	-3.0	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-68.3	n/a	n/a
	C/N Uplink (dB)	27.8	n/a	n/a
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	33.3	n/a	n/a
	- Carrier Output Backoff (dB)	-7.3	n/a	n/a
	Downlink EIRP per carrier (dBW)	26.0	n/a	n/a
	- Earth Station Pointing Error (dB)	- .5	n/a	n/a
	- Downlink Path Loss, clear sky (dB)	-196.3	n/a	n/a
	- Downlink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Earth Station G/T (dB/K)	21.0	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-68.3	n/a	n/a
	C/N Dnlink (dB)	10.5	n/a	n/a
COMPOSITE PERFORMANCE	C/N Uplink (dB)	27.8	n/a	n/a
	C/N Dnlink (dB)	10.5	n/a	n/a
	C/I Intermod (dB)	20.1	n/a	n/a
	C/I Uplink Co-channel (dB)	28.7	n/a	n/a
	C/I Dnlink Co-Channel (dB)	28.7	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-1) (dB)	19.2	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	8.3	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-2) (dB)	19.2	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	13.0	n/a	n/a
	C/(N+I) COMPOSITE (dB)	4.9	n/a	n/a
	- Required System Margin (dB)	-1.0	n/a	n/a
	Net C/(N+I) COMPOSITE (dB)	3.9	n/a	n/a
	- Minimum Required C/N (dB)	-3.9	n/a	n/a
	Excess Link Margin (dB)	0.0	n/a	n/a
TRANSPONDER UTILIZATION	% BW/CARR: 28.61, % PWR/CARR: 42.28, Max No. Carriers: 2.4 Downlink EIRP per carrier toward beam center: 30.0 dBW			
TRANSMIT EARTH STATION	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 94.6 watts			
RECEIVE EARTH STA.	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr			
DENSITY INFORMATION	Uplink Pwr Den: -48.5 dBW/Hz, Dnlink EIRP Den: -38.3 dBW/Hz Max Dnlink PFD: -165.2 dB(W/m2/4kHz) @ Beam Center			
LOSS IN C/(N+I) DUE TO ADJ SAT INTF: SAT-1 = 3.0dB, SAT-2 = 0.9dB				

ZONE-ZONE (36 MHz): 10M3G7W
[Input Data]

----- SATELLITE -----

Satellite Name	: IS-706	Location (deg)	: 54.85E
Uplink Beam	: ZONE	Dnlink Beam	: ZONE
Trans. BW (MHz)	: 36.0 MHz	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency (GHz)	: 6.175	Dnlink Frequency (GHz)	: 3.950
G/T, beam center (dB/K)	: 1.0	EIRP, beam center (dBW)	: 37.3
G/T, beam edge (dB/K)	: -3.0	EIRP, beam edge (dBW)	: 33.3
G/T, toward Tx ES (dB/K)	: -3.0	EIRP, toward Rx ES (dBW)	: 33.3
SFD, beam edge (dBW/m2)	: -80.2		
SFD, toward Tx ES (dBW/m2)	: -80.2		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB)	: 8	Nominal Uplink Co-Chan C/I (dB)	: 27.0
Input Backoff (dB)	: 8.2*	Nominal Dnlink Co-Chan C/I (dB)	: 27.0
Output Backoff (dB)	: *	Minimum Uplink Rain Margin (dB)	: 0.0
(C/Im) - Nominal (dB)	: *	Actual Uplink Rain Margin (dB)	: n/a
Min. System Margin (dB)	: 1.0	Uplink Power Control Margin (dB)	: .0
Max No Carriers / Trans:	*	Minimum Dnlink Rain Margin (dB)	: 0.0
		Actual Dnlink Rain Margin (dB)	: n/a
		Dnlink Pointing Error (dB)	: 0.5

-- ADJACENT SATELLITE INTERFERENCE ----- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg)	:	52.85E	56.85E
Uplink Interference (dB or dBW/Hz)	:	-38.7	-38.7
Uplink Polarization Advantage (dB)	:	0.0	0.0
Downlink Interference (dB or dBW/Hz)	:	-34.2	-34.2
Downlink Polarization Advantage (dB)	:	0.0	0.0
Rx E/S Topocentric Angle (deg)	:	2.09	2.09
Rx E/S Pointing Error (deg)	:	-0.31	0.31
Rx E/S Off-Axis Angle (deg)	:	1.78	2.40
Rx E/S Adj. Sat. Discrimination (dB)	:	16.3	21.1

----- CARRIER PARAMETERS -----

Modem Type	: EF9000	C/N (operating, dB)	: 3.87
Modulation	: QPSK	Eb/No (operating, dB)	: 4.4
Code Rate	: 1/2x188/204-V	C/N (threshold, dB)	: 3.57
Info Rate (kbps)	: 6000	Eb/No (threshold, dB)	: 4.1
Occupied Bandwidth (kHz)	: 6771.1		
Allocated Bandwidth (kHz)	: 10300		

----- Transmit Earth Station -----

Location: -4_dB_Gain_Contour
Latitude (deg): *
Longitude (deg): *
Rain Rate (mm/hr): 42*
E/S Type or Model No:
E/S Manufacturer : STANDARD
E/S Diam. (m): 7.0
E/S Freq (nom, GHz): 6.175
E/S Tx Gain (dBi): 51.0
ULPC Margin (dB): .0

----- Receive Earth Station -----

Location: -4_dB_Gain_Contour
Latitude (deg): *
Longitude (deg): *
Rain Rate (mm/hr): 42*
E/S Type or Model No:
E/S Manufacturer : STANDARD
E/S Diam. (m): 3.5
E/S Freq (nom, GHz): 3.95
E/S Gain (nom, dBi): 41.1
E/S Feed Loss (dB): 0.15
E/S Ant. Temp(deg K): 25
E/S LNA Temp (deg K): 65
E/S G/T (nom, dB/K): *

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SATELLITE DATA	Satellite : IS-706 Uplink Beam: ZONE Uplink POL: , Dnlink POL: , EIRP, beam center: 37.3 dBW G/T:-3.0 dB/K, SFD:-80.2 dBW/m2 Dnlink EIRP: 33.3 dBW	Location: 54.85E Dnlink Beam: ZONE		
TRANSPONDER DATA	Trans Bandwidth :36.0 MHz Uplink Frequency:6.175 GHz IBO (Nominal) : 8.2 dB	Trans Type: LTWTA Dnlink Freq: 3.950 GHz OBO (Nominal): 3.5 dB		
CARRIER DATA	Type: CS701, Info Rate: 64 kbps, Mod: QPSK, 1/2x239/256-V BWo: 75.4kHz, BWa: 100kHz, C/N: 2.99dB, C/N_thresh: 2.79dB			
LINK BUDGET				
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	50.3	n/a	n/a
	- Uplink Path Loss, clear sky (dB)	-200.2	n/a	n/a
	- Uplink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Satellite G/T (dB/K)	-3.0	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-48.8	n/a	n/a
	C/N Uplink (dB)	27.0	n/a	n/a
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	33.3	n/a	n/a
	- Carrier Output Backoff (dB)	-27.7	n/a	n/a
	Downlink EIRP per carrier (dBW)	5.6	n/a	n/a
	- Earth Station Pointing Error (dB)	-.5	n/a	n/a
	- Downlink Path Loss, clear sky (dB)	-196.3	n/a	n/a
	- Downlink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Earth Station G/T (dB/K)	21.0	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-48.8	n/a	n/a
	C/N Dnlink (dB)	9.6	n/a	n/a
COMPOSITE PERFORMANCE	C/N Uplink (dB)	27.0	n/a	n/a
	C/N Dnlink (dB)	9.6	n/a	n/a
	C/I Intermod (dB)	19.3	n/a	n/a
	C/I Uplink Co-channel (dB)	28.4	n/a	n/a
	C/I Dnlink Co-Channel (dB)	28.4	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-1) (dB)	18.3	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	7.4	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-2) (dB)	18.3	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	12.2	n/a	n/a
	C/(N+I) COMPOSITE (dB)	4.0	n/a	n/a
	- Required System Margin (dB)	-1.0	n/a	n/a
	Net C/(N+I) COMPOSITE (dB)	3.0	n/a	n/a
	- Minimum Required C/N (dB)	-3.0	n/a	n/a
	Excess Link Margin (dB)	0.0	n/a	n/a
TRANSPONDER UTILIZATION	% BW/CARR: 0.28, % PWR/CARR: 0.38, Max No. Carriers: 260.4 Downlink EIRP per carrier toward beam center: 9.6 dBW			
TRANSMIT EARTH STATION	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 0.9 watts			
RECEIVE EARTH STA.	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr			
DENSITY INFORMATION	Uplink Pwr Den: -49.4 dBW/Hz, Dnlink EIRP Den: -39.1 dBW/Hz Max Dnlink PFD: -166.0 dB(W/m2/4kHz) @ Beam Center			
LOSS IN C/(N+I) DUE TO ADJ SAT INTF: SAT-1 = 3.0dB, SAT-2 = 0.9dB				

ZONE-ZONE (36 MHZ): 100KG7W
[Input Data]

----- SATELLITE -----

Satellite Name	: IS-706	Location (deg)	: 54.85E
Uplink Beam	: ZONE	Dnlink Beam	: ZONE
Trans. BW (MHz)	: 36.0 MHz	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency (GHz)	: 6.175	Dnlink Frequency (GHz)	: 3.950
G/T, beam center (dB/K)	: 1.0	EIRP, beam center (dBW)	: 37.3
G/T, beam edge (dB/K)	: -3.0	EIRP, beam edge (dBW)	: 33.3
G/T, toward Tx ES (dB/K)	: -3.0	EIRP, toward Rx ES (dBW)	: 33.3
SFD, beam edge (dBW/m2)	: -80.2		
SFD, toward Tx ES (dBW/m2)	: -80.2		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB)	: 8	Nominal Uplink Co-Chan C/I (dB)	: 27.0
Input Backoff (dB)	: 8.2*	Nominal Dnlink Co-Chan C/I (dB)	: 27.0
Output Backoff (dB)	: *	Minimum Uplink Rain Margin (dB)	: 0.0
(C/Im) - Nominal (dB)	: *	Actual Uplink Rain Margin (dB)	: n/a
Min. System Margin (dB)	: 1.0	Uplink Power Control Margin (dB)	: .0
Max No Carriers / Trans:	*	Minimum Dnlink Rain Margin (dB)	: 0.0
		Actual Dnlink Rain Margin (dB)	: n/a
		Dnlink Pointing Error (dB)	: 0.5

-- ADJACENT SATELLITE INTERFERENCE ----- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg)	:	52.85E	56.85E
Uplink Interference (dB or dBW/Hz)	:	-38.7	-38.7
Uplink Polarization Advantage (dB)	:	0.0	0.0
Downlink Interference (dB or dBW/Hz)	:	-34.2	-34.2
Downlink Polarization Advantage (dB)	:	0.0	0.0
Rx E/S Topocentric Angle (deg)	:	2.09	2.09
Rx E/S Pointing Error (deg)	:	-0.31	0.31
Rx E/S Off-Axis Angle (deg)	:	1.78	2.40
Rx E/S Adj. Sat. Discrimination (dB)	:	16.3	21.1

----- CARRIER PARAMETERS -----

Modem Type	: CS701	C/N (operating, dB)	: 2.99
Modulation	: QPSK	Eb/No (operating, dB)	: 3.7
Code Rate	: 1/2x239/256-V	C/N (threshold, dB)	: 2.79
Info Rate (kbps)	: 64	Eb/No (threshold, dB)	: 3.5
Occupied Bandwidth (kHz)	: 75.4		
Allocated Bandwidth (kHz)	: 100		

----- Transmit Earth Station ----- ----- Receive Earth Station -----

Location: -4_dB_Gain_Contour	Location: -4_dB_Gain_Contour
Latitude (deg): *	Latitude (deg): *
Longitude (deg): *	Longitude (deg): *
Rain Rate (mm/hr): 42*	Rain Rate (mm/hr): 42*
E/S Type or Model No:	E/S Type or Model No:
E/S Manufacturer : STANDARD	E/S Manufacturer : STANDARD
E/S Diam. (m): 7.0	E/S Diam. (m): 3.5
E/S Freq (nom, GHz): 6.175	E/S Freq (nom, GHz): 3.95
E/S Tx Gain (dBi): 51.0	E/S Gain (nom, dBi): 41.1
ULPC Margin (dB): .0	E/S Feed Loss (dB): 0.15
	E/S Ant. Temp(deg K): 25
	E/S LNA Temp (deg K): 65
	E/S G/T (nom, dB/K): *

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SATELLITE DATA	Satellite : IS-706 Uplink Beam: ZONE Uplink POL: , Dnlink POL: , EIRP, beam center: 36.6 dBW G/T:-3.0 dB/K, SFD:-74.2 dBW/m2 Dnlink EIRP: 32.6 dBW	Location: 54.85E Dnlink Beam: HEMI		
TRANSPONDER DATA	Trans Bandwidth :72.0 MHz Uplink Frequency:6.175 GHz IBO (Nominal) : 7.4 dB	Trans Type: LTWTA Dnlink Freq: 3.950 GHz OBO (Nominal): 2.7 dB		
CARRIER DATA	Type: TV/FM, Format: PAL, PreEmphasis+Weighting: 15.6dB RF BW: 24.0 MHz, P-Dev: 9.0 MHz, VideoBW: 6.0 MHz,			
LINK BUDGET				
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	78.9	n/a	n/a
	- Uplink Path Loss, clear sky (dB)	-200.2	n/a	n/a
	- Uplink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Satellite G/T (dB/K)	-3.0	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-73.8	n/a	n/a
	C/N Uplink (dB)	30.5	n/a	n/a
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	32.6	n/a	n/a
	- Carrier Output Backoff (dB)	-5.1	n/a	n/a
	Downlink EIRP per carrier (dBW)	27.5	n/a	n/a
	- Earth Station Pointing Error (dB)	-.5	n/a	n/a
	- Downlink Path Loss, clear sky (dB)	-196.3	n/a	n/a
	- Downlink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Earth Station G/T (dB/K)	29.4	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-73.8	n/a	n/a
	C/N Dnlink (dB)	14.9	n/a	n/a
COMPOSITE PERFORMANCE	C/N Uplink (dB)	30.5	n/a	n/a
	C/N Dnlink (dB)	14.9	n/a	n/a
	C/I Uplink Co-channel (dB)	29.4	n/a	n/a
	C/I Dnlink Co-Channel (dB)	29.4	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-1) (dB)	21.8	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	17.6	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-2) (dB)	21.8	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	18.8	n/a	n/a
	C/(N+I) COMPOSITE (dB)	11.0	n/a	n/a
	- Required System Margin (dB)	-1.0	n/a	n/a
	Net C/(N+I) COMPOSITE (dB)	10.0	n/a	n/a
- Minimum Required C/N (dB)	-10.0	n/a	n/a	
	Excess Link Margin (dB)	0.0	n/a	n/a
	Video Signal-to-Noise Ratio (dB)	42.9	n/a	n/a
	Audio Signal-to-Noise Ratio (dB)	56.7	n/a	n/a
TRANSMIT EARTH STATION	Loc: -4 dB Gain Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 301.1 watts			
RECEIVE EARTH STA.	Loc: -4 dB Gain Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr			
DENSITY INFORMATION	Uplink Pwr Den: -49.0 dBW/Hz, Dnlink EIRP Den: -42.3 dBW/Hz Max Dnlink PFD: -169.2 dB(W/m2/4kHz) @ Beam Center			
LOSS IN C/(N+I) DUE TO ADJ SAT INTF: SAT-1 = 1.6dB, SAT-2 = 1.2dB				

ZONE-HEMI (72 MHZ): 30M0F3F
[Input Data]

----- SATELLITE -----

Satellite Name	: IS-706	Location (deg)	: 54.85E
Uplink Beam	: ZONE	Dnlink Beam	: HEMI
Trans. BW (MHz)	: 72.0 MHz	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency (GHz)	: 6.175	Dnlink Frequency (GHz)	: 3.950
G/T, beam center (dB/K)	: 1.0	EIRP, beam center (dBW)	: 36.6
G/T, beam edge (dB/K)	: -3.0	EIRP, beam edge (dBW)	: 32.6
G/T, toward Tx ES (dB/K)	: -3.0	EIRP, toward Rx ES (dBW)	: 32.6
SFD, beam edge (dBW/m2)	: -74.2		
SFD, toward Tx ES (dBW/m2)	: -74.2		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB)	: 14	Nominal Uplink Co-Chan C/I (dB)	: 27.0
Input Backoff (dB)	: 8.2*, 7.44	Nominal Dnlink Co-Chan C/I (dB)	: 27.0
Output Backoff (dB)	: *	Minimum Uplink Rain Margin (dB)	: 0.0
(C/Im) - Nominal (dB)	: *	Actual Uplink Rain Margin (dB)	: n/a
Min. System Margin (dB)	: 1.0	Uplink Power Control Margin (dB)	: .0
Max No Carriers / Trans:	: 2	Minimum Dnlink Rain Margin (dB)	: 0.0
		Actual Dnlink Rain Margin (dB)	: n/a
		Dnlink Pointing Error (dB)	: 0.5

--- ADJACENT SATELLITE INTERFERENCE ----- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg)	:	52.85E	56.85E
Uplink Interference (dB or dBW/Hz)	:	-38.7	-38.7
Uplink Polarization Advantage (dB)	:	0.0	0.0
Downlink Interference (dB or dBW/Hz)	:	-35.7	-35.7
Downlink Polarization Advantage (dB)	:	0.0	0.0
Rx E/S Topocentric Angle (deg)	:	2.09	2.09
Rx E/S Pointing Error (deg)	:	-0.12	0.12
Rx E/S Off-Axis Angle (deg)	:	1.97	2.21
Rx E/S Adj. Sat. Discrimination (dB)	:	28.2	29.4

----- TV/FM CARRIER PARAMETERS -----

Video Format	: PAL	Peak Deviation (MHz)	: 9.0
RF Noise BW (MHz)	: 24.0	PreEmphasis+Weighting (dB)	: 15.6
Video BW (MHz)	: 6.0	Threshold C/N (dB)	: 10.0

----- AUDIO SUB-CARRIER PARAMETERS -----

Sub-Carrier Freq (MHz)	: 6.6	Highest Audio Freq (kHz)	: 15.0
P-Dev of Video by Audio (MHz)	: 2.0	Companding Advantage (dB)	: 0.0
Peak Dev of Audio (kHz)	: 75.0		

----- Transmit Earth Station ----- ----- Receive Earth Station -----

Location: -4_dB_Gain_Contour	Location: -4_dB_Gain_Contour
Latitude (deg): *	Latitude (deg): *
Longitude (deg): *	Longitude (deg): *
Rain Rate (mm/hr): 42*	Rain Rate (mm/hr): 42*
E/S Type or Model No:	E/S Type or Model No:
E/S Manufacturer : STANDARD	E/S Manufacturer : STANDARD
E/S Diam. (m): 10.0	E/S Diam. (m): 9.2
E/S Freq (nom, GHz): 6.175	E/S Freq (nom, GHz): 3.95
E/S Tx Gain (dBi): 54.1	E/S Gain (nom, dBi): 50.3
ULPC Margin (dB): .0	E/S Feed Loss (dB): 0.15
	E/S Ant. Temp(deg K): 45
	E/S LNA Temp (deg K): 65
	E/S G/T (nom, dB/K): *

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SATELLITE DATA	Satellite : IS-706 Uplink Beam: ZONE Uplink POL: , Dnlink POL: , EIRP, beam center: 36.6 dBW G/T:-3.0 dB/K, SFD:-88.2 dBW/m2	Location: 54.85E Dnlink Beam: HEMI Dnlink EIRP: 32.6 dBW		
TRANSPONDER DATA	Trans Bandwidth :72.0 MHz Uplink Frequency:6.175 GHz IBO (Nominal) : 0.0 dB	Trans Type: LTWTA Dnlink Freq: 3.950 GHz OBO (Nominal): 0.0 dB		
CARRIER DATA	Type: NTC26%, Info Rate: 49138 kbps, Mod: QPSK, 1/2x188/204 BWo: 60251kHz, BWa: 72000kHz, C/N: 3.36dB, C/N_thresh: 3.36			
LINK BUDGET				
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	74.7	n/a	n/a
	- Uplink Path Loss, clear sky (dB)	-200.2	n/a	n/a
	- Uplink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Satellite G/T (dB/K)	-3.0	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-77.8	n/a	n/a
	C/N Uplink (dB)	22.3	n/a	n/a
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	32.6	n/a	n/a
	- Carrier Output Backoff (dB)	0.0	n/a	n/a
	Downlink EIRP per carrier (dBW)	32.6	n/a	n/a
	- Earth Station Pointing Error (dB)	-.5	n/a	n/a
	- Downlink Path Loss, clear sky (dB)	-196.3	n/a	n/a
	- Downlink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Earth Station G/T (dB/K)	23.6	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-77.8	n/a	n/a
	C/N Dnlink (dB)	10.2	n/a	n/a
COMPOSITE PERFORMANCE	C/N Uplink (dB)	22.3	n/a	n/a
	C/N Dnlink (dB)	10.2	n/a	n/a
	C/I Uplink Co-channel (dB)	27.0	n/a	n/a
	C/I Dnlink Co-Channel (dB)	27.0	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-1) (dB)	13.6	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	11.6	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-2) (dB)	13.6	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	14.1	n/a	n/a
	C/(N+I) COMPOSITE (dB)	5.2	n/a	n/a
	- Required System Margin (dB)	-1.0	n/a	n/a
Net C/(N+I) COMPOSITE (dB)	4.2	n/a	n/a	
- Minimum Required C/N (dB)	-3.4	n/a	n/a	
	Excess Link Margin (dB)	.8	n/a	n/a
TRANSPONDER UTILIZATION	% BW/CARR: 100.00, % PWR/CARR: 100.00, Max No. Carriers: 1.0 Downlink EIRP per carrier toward beam center: 36.6 dBW			
TRANSMIT EARTH STATION	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 234.3 watts			
RECEIVE EARTH STA.	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr			
DENSITY INFORMATION	Uplink Pwr Den: -54.1 dBW/Hz, Dnlink EIRP Den: -41.2 dBW/Hz Max Dnlink PFD: -168.1 dB(W/m2/4kHz) @ Beam Center			
LOSS IN C/(N+I) DUE TO ADJ SAT INTF: SAT-1 = 2.0dB, SAT-2 = 1.4dB				

ZONE-HEMI (72 MHz): 72M0G7W
[Input Data]

----- SATELLITE -----

Satellite Name	: IS-706	Location (deg)	: 54.85E
Uplink Beam	: ZONE	Dnlink Beam	: HEMI
Trans. BW (MHz)	: 72.0 MHz	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency (GHz)	: 6.175	Dnlink Frequency (GHz)	: 3.950
G/T, beam center (dB/K)	: 1.0	EIRP, beam center (dBW)	: 36.6
G/T, beam edge (dB/K)	: -3.0	EIRP, beam edge (dBW)	: 32.6
G/T, toward Tx ES (dB/K)	: -3.0	EIRP, toward Rx ES (dBW)	: 32.6
SFD, beam edge (dBW/m2)	: -88.2		
SFD, toward Tx ES (dBW/m2)	: -88.2		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB)	: 0	Nominal Uplink Co-Chan C/I (dB)	: 27.0
Input Backoff (dB)	: 0.0	Nominal Dnlink Co-Chan C/I (dB)	: 27.0
Output Backoff (dB)	: *	Minimum Uplink Rain Margin (dB)	: 0.0
(C/Im) - Nominal (dB)	: *	Actual Uplink Rain Margin (dB)	: n/a
Min. System Margin (dB)	: 1.0	Uplink Power Control Margin (dB)	: .0
Max No Carriers / Trans	: 1	Minimum Dnlink Rain Margin (dB)	: 0.0
		Actual Dnlink Rain Margin (dB)	: n/a
		Dnlink Pointing Error (dB)	: 0.5

-- ADJACENT SATELLITE INTERFERENCE ----- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg)	:	52.85E	56.85E
Uplink Interference (dB or dBW/Hz)	:	-38.7	-38.7
Uplink Polarization Advantage (dB)	:	0.0	0.0
Downlink Interference (dB or dBW/Hz)	:	-35.7	-35.7
Downlink Polarization Advantage (dB)	:	0.0	0.0
Rx E/S Topocentric Angle (deg)	:	2.09	2.09
Rx E/S Pointing Error (deg)	:	-0.24	0.24
Rx E/S Off-Axis Angle (deg)	:	1.85	2.33
Rx E/S Adj. Sat. Discrimination (dB)	:	21.1	23.6

----- CARRIER PARAMETERS -----

Modem Type	: NTC26%	C/N (operating, dB)	: 3.36
Modulation	: QPSK	Eb/No (operating, dB)	: 4.2
Code Rate	: 1/2x188/204-V	C/N (threshold, dB)	: 3.36
Info Rate (kbps)	: 49138	Eb/No (threshold, dB)	: 4.2
Occupied Bandwidth (kHz)	: 60251		
Allocated Bandwidth (kHz)	: 72000		

----- Transmit Earth Station ----- ----- Receive Earth Station -----

Location: -4_dB_Gain_Contour	Location: -4_dB_Gain_Contour
Latitude (deg): *	Latitude (deg): *
Longitude (deg): *	Longitude (deg): *
Rain Rate (mm/hr): 42*	Rain Rate (mm/hr): 42*
E/S Type or Model No:	E/S Type or Model No:
E/S Manufacturer : STANDARD	E/S Manufacturer : STANDARD
E/S Diam. (m): 7.0	E/S Diam. (m): 4.5
E/S Freq (nom, GHz): 6.175	E/S Freq (nom, GHz): 3.95
E/S Tx Gain (dBi): 51.0	E/S Gain (nom, dBi): 43.9
ULPC Margin (dB): .0	E/S Feed Loss (dB): 0.20
	E/S Ant. Temp(deg K): 25
	E/S LNA Temp (deg K): 65
	E/S G/T (nom, dB/K): *

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SATELLITE DATA	Satellite : IS-706 Uplink Beam: ZONE Uplink POL: , Dnlink POL: , EIRP, beam center: 36.6 dBW G/T:-3.0 dB/K, SFD:-81.2 dBW/m2 Dnlink EIRP: 32.6 dBW	Location: 54.85E Dnlink Beam: HEMI		
TRANSPONDER DATA	Trans Bandwidth :72.0 MHz Uplink Frequency:6.175 GHz IBO (Nominal) : 8.2 dB	Trans Type: LTWTA Dnlink Freq: 3.950 GHz OBO (Nominal): 3.5 dB		
CARRIER DATA	Type: EF9000, Info Rate: 6000 kbps, Mod: QPSK, 1/2x188/204- BWo: 6771.1kHz, BWa: 10300kHz, C/N: 3.87dB, C/N_thresh: 3.5			
LINK BUDGET				
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	66.7	n/a	n/a
	- Uplink Path Loss, clear sky (dB)	-200.2	n/a	n/a
	- Uplink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Satellite G/T (dB/K)	-3.0	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-68.3	n/a	n/a
	C/N Uplink (dB)	23.8	n/a	n/a
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	32.6	n/a	n/a
	- Carrier Output Backoff (dB)	-10.3	n/a	n/a
	Downlink EIRP per carrier (dBW)	22.3	n/a	n/a
	- Earth Station Pointing Error (dB)	-.5	n/a	n/a
	- Downlink Path Loss, clear sky (dB)	-196.3	n/a	n/a
	- Downlink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Earth Station G/T (dB/K)	23.6	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-68.3	n/a	n/a
	C/N Dnlink (dB)	9.4	n/a	n/a
COMPOSITE PERFORMANCE	C/N Uplink (dB)	23.8	n/a	n/a
	C/N Dnlink (dB)	9.4	n/a	n/a
	C/I Intermod (dB)	20.1	n/a	n/a
	C/I Uplink Co-channel (dB)	28.6	n/a	n/a
	C/I Dnlink Co-Channel (dB)	28.6	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-1) (dB)	15.1	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	10.8	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-2) (dB)	15.1	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	13.3	n/a	n/a
	C/(N+I) COMPOSITE (dB)	4.9	n/a	n/a
- Required System Margin (dB)	-1.0	n/a	n/a	
Net C/(N+I) COMPOSITE (dB)	3.9	n/a	n/a	
- Minimum Required C/N (dB)	-3.9	n/a	n/a	
	Excess Link Margin (dB)	0.0	n/a	n/a
TRANSPONDER UTILIZATION	% BW/CARR: 14.31, % PWR/CARR: 20.89, Max No. Carriers: 4.8 Downlink EIRP per carrier toward beam center: 26.3 dBW			
TRANSMIT EARTH STATION	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 37.1 watts			
RECEIVE EARTH STA.	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr			
DENSITY INFORMATION	Uplink Pwr Den: -52.6 dBW/Hz, Dnlink EIRP Den: -42.0 dBW/Hz Max Dnlink PFD: -168.9 dB(W/m2/4kHz) @ Beam Center			
LOSS IN C/(N+I) DUE TO ADJ SAT INTF: SAT-1 = 1.9dB, SAT-2 = 1.2dB				

ZONE-HEMI (72 MHZ): 10M3G7W
[Input Data]

----- SATELLITE -----

Satellite Name	: IS-706	Location (deg)	: 54.85E
Uplink Beam	: ZONE	Dnlink Beam	: HEMI
Trans. BW (MHz)	: 72.0 MHz	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency (GHz)	: 6.175	Dnlink Frequency (GHz)	: 3.950
G/T, beam center (dB/K)	: 1.0	EIRP, beam center (dBW)	: 36.6
G/T, beam edge (dB/K)	: -3.0	EIRP, beam edge (dBW)	: 32.6
G/T, toward Tx ES (dB/K)	: -3.0	EIRP, toward Rx ES (dBW)	: 32.6
SFD, beam edge (dBW/m2)	: -81.2		
SFD, toward Tx ES (dBW/m2)	: -81.2		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB)	: 7	Nominal Uplink Co-Chan C/I (dB)	: 27.0
Input Backoff (dB)	: 8.2*	Nominal Dnlink Co-Chan C/I (dB)	: 27.0
Output Backoff (dB)	: *	Minimum Uplink Rain Margin (dB)	: 0.0
(C/Im) - Nominal (dB)	: *	Actual Uplink Rain Margin (dB)	: n/a
Min. System Margin (dB)	: 1.0	Uplink Power Control Margin (dB)	: .0
Max No Carriers / Trans:	*	Minimum Dnlink Rain Margin (dB)	: 0.0
		Actual Dnlink Rain Margin (dB)	: n/a
		Dnlink Pointing Error (dB)	: 0.5

-- ADJACENT SATELLITE INTERFERENCE ----- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg)	:	52.85E	56.85E
Uplink Interference (dB or dBW/Hz)	:	-38.7	-38.7
Uplink Polarization Advantage (dB)	:	0.0	0.0
Downlink Interference (dB or dBW/Hz)	:	-35.7	-35.7
Downlink Polarization Advantage (dB)	:	0.0	0.0
Rx E/S Topocentric Angle (deg)	:	2.09	2.09
Rx E/S Pointing Error (deg)	:	-0.24	0.24
Rx E/S Off-Axis Angle (deg)	:	1.85	2.33
Rx E/S Adj. Sat. Discrimination (dB)	:	21.1	23.6

----- CARRIER PARAMETERS -----

Modem Type	: EF9000	C/N (operating, dB)	: 3.87
Modulation	: QPSK	Eb/No (operating, dB)	: 4.4
Code Rate	: 1/2x188/204-V	C/N (threshold, dB)	: 3.57
Info Rate (kbps)	: 6000	Eb/No (threshold, dB)	: 4.1
Occupied Bandwidth (kHz)	: 6771.1		
Allocated Bandwidth (kHz)	: 10300		

----- Transmit Earth Station -----

----- Receive Earth Station -----

Location: -4_dB_Gain_Contour	Location: -4_dB_Gain_Contour
Latitude (deg): *	Latitude (deg): *
Longitude (deg): *	Longitude (deg): *
Rain Rate (mm/hr): 42*	Rain Rate (mm/hr): 42*
E/S Type or Model No:	E/S Type or Model No:
E/S Manufacturer : STANDARD	E/S Manufacturer : STANDARD
E/S Diam. (m): 7.0	E/S Diam. (m): 4.5
E/S Freq (nom, GHz): 6.175	E/S Freq (nom, GHz): 3.95
E/S Tx Gain (dBi): 51.0	E/S Gain (nom, dBi): 43.9
ULPC Margin (dB): .0	E/S Feed Loss (dB): 0.20
	E/S Ant. Temp(deg K): 25
	E/S LNA Temp (deg K): 65
	E/S G/T (nom, dB/K): *

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SATELLITE DATA	Satellite : IS-706 Uplink Beam: ZONE Uplink POL: , Dnlink POL: , EIRP, beam center: 36.6 dBW G/T:-3.0 dB/K, SFD:-81.2 dBW/m2 Dnlink EIRP: 32.6 dBW	Location: 54.85E Dnlink Beam: HEMI		
TRANSPONDER DATA	Trans Bandwidth :72.0 MHz Uplink Frequency:6.175 GHz IBO (Nominal) : 8.2 dB	Trans Type: LTWTA Dnlink Freq: 3.950 GHz OBO (Nominal): 3.5 dB		
CARRIER DATA	Type: CS701, Info Rate: 64 kbps, Mod: QPSK, 1/2x239/256-V BWo: 75.4kHz, BWa: 100kHz, C/N: 2.99dB, C/N_thresh: 2.79dB			
LINK BUDGET				
		CLR SKY	UP FADE	DN FADE
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	46.3	n/a	n/a
	- Uplink Path Loss, clear sky (dB)	-200.2	n/a	n/a
	- Uplink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Satellite G/T (dB/K)	-3.0	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-48.8	n/a	n/a
	C/N Uplink (dB)	22.9	n/a	n/a
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	32.6	n/a	n/a
	- Carrier Output Backoff (dB)	-30.7	n/a	n/a
	Downlink EIRP per carrier (dBW)	1.9	n/a	n/a
	- Earth Station Pointing Error (dB)	- .5	n/a	n/a
	- Downlink Path Loss, clear sky (dB)	-196.3	n/a	n/a
	- Downlink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Earth Station G/T (dB/K)	23.6	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-48.8	n/a	n/a
	C/N Dnlink (dB)	8.5	n/a	n/a
COMPOSITE PERFORMANCE	C/N Uplink (dB)	22.9	n/a	n/a
	C/N Dnlink (dB)	8.5	n/a	n/a
	C/I Intermod (dB)	19.2	n/a	n/a
	C/I Uplink Co-channel (dB)	28.4	n/a	n/a
	C/I Dnlink Co-Channel (dB)	28.4	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-1) (dB)	14.2	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	9.9	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-2) (dB)	14.2	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	12.4	n/a	n/a
	C/(N+I) COMPOSITE (dB)	4.0	n/a	n/a
	- Required System Margin (dB)	-1.0	n/a	n/a
Net C/(N+I) COMPOSITE (dB)	3.0	n/a	n/a	
- Minimum Required C/N (dB)	-3.0	n/a	n/a	
	Excess Link Margin (dB)	0.0	n/a	n/a
TRANSPONDER UTILIZATION	% BW/CARR: 0.14, % PWR/CARR: 0.19, Max No. Carriers: 527.0 Downlink EIRP per carrier toward beam center: 5.9 dBW			
TRANSMIT EARTH STATION	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 0.3 watts			
RECEIVE EARTH STA.	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr			
DENSITY INFORMATION	Uplink Pwr Den: -53.5 dBW/Hz, Dnlink EIRP Den: -42.9 dBW/Hz Max Dnlink PFD: -169.8 dB(W/m2/4kHz) @ Beam Center			
LOSS IN C/(N+I) DUE TO ADJ SAT INTF: SAT-1 = 1.9dB, SAT-2 = 1.2dB				

ZONE-HEMI (72 MHz): 100KG7W
[Input Data]

----- SATELLITE -----

Satellite Name	: IS-706	Location (deg)	: 54.85E
Uplink Beam	: ZONE	Dnlink Beam	: HEMI
Trans. BW (MHz)	: 72.0 MHz	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency (GHz)	: 6.175	Dnlink Frequency (GHz)	: 3.950
G/T, beam center (dB/K)	: 1.0	EIRP, beam center (dBW)	: 36.6
G/T, beam edge (dB/K)	: -3.0	EIRP, beam edge (dBW)	: 32.6
G/T, toward Tx ES (dB/K)	: -3.0	EIRP, toward Rx ES (dBW)	: 32.6
SFD, beam edge (dBW/m2)	: -81.2		
SFD, toward Tx ES (dBW/m2)	: -81.2		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB)	: 7	Nominal Uplink Co-Chan C/I (dB)	: 27.0
Input Backoff (dB)	: 8.2*	Nominal Dnlink Co-Chan C/I (dB)	: 27.0
Output Backoff (dB)	: *	Minimum Uplink Rain Margin (dB)	: 0.0
(C/Im) - Nominal (dB)	: *	Actual Uplink Rain Margin (dB)	: n/a
Min. System Margin (dB)	: 1.0	Uplink Power Control Margin (dB)	: .0
Max No Carriers / Trans:	*	Minimum Dnlink Rain Margin (dB)	: 0.0
		Actual Dnlink Rain Margin (dB)	: n/a
		Dnlink Pointing Error (dB)	: 0.5

-- ADJACENT SATELLITE INTERFERENCE ----- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg)	:	52.85E	56.85E
Uplink Interference (dB or dBW/Hz)	:	-38.7	-38.7
Uplink Polarization Advantage (dB)	:	0.0	0.0
Downlink Interference (dB or dBW/Hz)	:	-35.7	-35.7
Downlink Polarization Advantage (dB)	:	0.0	0.0
Rx E/S Topocentric Angle (deg)	:	2.09	2.09
Rx E/S Pointing Error (deg)	:	-0.24	0.24
Rx E/S Off-Axis Angle (deg)	:	1.85	2.33
Rx E/S Adj. Sat. Discrimination (dB)	:	21.1	23.6

----- CARRIER PARAMETERS -----

Modem Type	: CS701	C/N (operating, dB)	: 2.99
Modulation	: QPSK	Eb/No (operating, dB)	: 3.7
Code Rate	: 1/2x239/256-V	C/N (threshold, dB)	: 2.79
Info Rate (kbps)	: 64	Eb/No (threshold, dB)	: 3.5
Occupied Bandwidth (kHz)	: 75.4		
Allocated Bandwidth (kHz)	: 100		

----- Transmit Earth Station ----- ----- Receive Earth Station -----

Location: -4_dB_Gain_Contour	Location: -4_dB_Gain_Contour
Latitude (deg): *	Latitude (deg): *
Longitude (deg): *	Longitude (deg): *
Rain Rate (mm/hr): 42*	Rain Rate (mm/hr): 42*
E/S Type or Model No:	E/S Type or Model No:
E/S Manufacturer : STANDARD	E/S Manufacturer : STANDARD
E/S Diam. (m): 7.0	E/S Diam. (m): 4.5
E/S Freq (nom, GHz): 6.175	E/S Freq (nom, GHz): 3.95
E/S Tx Gain (dBi): 51.0	E/S Gain (nom, dBi): 43.9
ULPC Margin (dB): .0	E/S Feed Loss (dB): 0.20
	E/S Ant. Temp(deg K): 25
	E/S LNA Temp (deg K): 65
	E/S G/T (nom, dB/K): *

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SATELLITE DATA	Satellite : IS-706 Uplink Beam: ZONE Uplink POL: , Dnlink POL: , EIRP, beam center: 47.5 dBW G/T:-3.0 dB/K, SFD:-74.2 dBW/m2 Dnlink EIRP: 43.5 dBW	Location: 54.85E Dnlink Beam: KSPOT		
TRANSPONDER DATA	Trans Bandwidth :77.0 MHz Uplink Frequency:6.175 GHz IBO (Nominal) : 8.2 dB	Trans Type: LTWTA Dnlink Freq: 11.950 GHz OBO (Nominal): 3.1 dB		
CARRIER DATA	Type: TV/FM, Format: PAL, PreEmphasis+Weighting: 15.6dB RF BW: 30.0 MHz, P-Dev: 9.0 MHz, VideoBW: 6.0 MHz,			
LINK BUDGET				
		CLR SKY	UP FADE	DN FADE
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	77.5	77.5	77.5
	- Uplink Path Loss, clear sky (dB)	-200.2	-200.2	-200.2
	- Uplink Rain Attenuation (dB)	0.0	-1.7	0.0
	+ Satellite G/T (dB/K)	-3.0	-3.0	-3.0
	- Boltzman's Constant (dBW/K-Hz)	228.6	228.6	228.6
	- Carrier Noise Bandwidth (dB-Hz)	-74.8	-74.8	-74.8
	C/N Uplink (dB)	28.1	26.4	28.1
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	43.5	43.5	43.5
	- Carrier Output Backoff (dB)	-6.2	-7.6	-6.2
	Downlink EIRP per carrier (dBW)	37.3	35.9	37.3
	- Earth Station Pointing Error (dB)	-.5	-.5	-.5
	- Downlink Path Loss, clear sky (dB)	-205.9	-205.9	-205.9
	- Downlink Rain Attenuation (dB)	0.0	0.0	-2.0
	+ Earth Station G/T (dB/K)	33.1	33.1	31.1
	- Boltzman's Constant (dBW/K-Hz)	228.6	228.6	228.6
	- Carrier Noise Bandwidth (dB-Hz)	-74.8	-74.8	-74.8
	C/N Dnlink (dB)	17.8	16.4	13.9
COMPOSITE PERFORMANCE	C/N Uplink (dB)	28.1	26.4	28.1
	C/N Dnlink (dB)	17.8	16.4	13.9
	C/I Uplink Co-channel (dB)	28.1	26.4	28.1
	C/I Dnlink Co-Channel (dB)	28.1	26.6	28.1
	C/I Uplink Adj. Sat. (SAT-1) (dB)	19.4	17.7	19.4
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	22.3	20.8	22.3
	C/I Uplink Adj. Sat. (SAT-2) (dB)	19.4	17.7	19.4
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	22.9	21.4	22.9
	C/(N+I) COMPOSITE (dB)	12.6	11.0	11.0
	- Required System Margin (dB)	-1.0	-1.0	-1.0
	Net C/(N+I) COMPOSITE (dB)	11.6	10.0	10.0
	- Minimum Required C/N (dB)	-10.0	-10.0	-10.0
	Excess Link Margin (dB)	1.6	0.0	0.0
	Video Signal-to-Noise Ratio (dB)	45.5	43.9	43.9
	Audio Signal-to-Noise Ratio (dB)	59.3	57.7	57.7
TRANSMIT EARTH STATION	Loc: -4 dB Gain Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 256.3 watts			
RECEIVE EARTH STA.	Loc: -4 dB Gain Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr			
DENSITY INFORMATION	Uplink Pwr Den: -50.7 dBW/Hz, Dnlink EIRP Den: -33.4 dBW/Hz Max Dnlink PFD: -160.3 dB(W/m2/4kHz) @ Beam Center			
AVAILABILITY	Uplink: 99.988 %, Dnlink: 99.672 %, Composite Link: 99.659			
LOSS IN C/(N+I) DUE TO ADJ SAT INTF:	SAT-1 = 1.6dB, SAT-2 = 1.6dB			

ZONE-KSPOT (77 MHz): 30M0F3F
[Input Data]

----- SATELLITE -----

Satellite Name	: IS-706	Location (deg)	: 54.85E
Uplink Beam	: ZONE	Dnlink Beam	: KSPOT
Trans. BW (MHz)	: 77.0 MHz	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency (GHz)	: 6.175	Dnlink Frequency (GHz)	: 11.950
G/T, beam center (dB/K)	: 1.0	EIRP, beam center (dBW)	: 47.5
G/T, beam edge (dB/K)	: -3.0	EIRP, beam edge (dBW)	: 43.5
G/T, toward Tx ES (dB/K)	: -3.0	EIRP, toward Rx ES (dBW)	: 43.5
SFD, beam edge (dBW/m2)	: -74.2		
SFD, toward Tx ES (dBW/m2)	: -74.2		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB)	: 14	Nominal Uplink Co-Chan C/I (dB)	: 27.0
Input Backoff (dB)	: 8.2	Nominal Dnlink Co-Chan C/I (dB)	: 27.0
Output Backoff (dB)	: *	Minimum Uplink Rain Margin (dB)	: 0.5*
(C/Im) - Nominal (dB)	: *	Actual Uplink Rain Margin (dB)	: 1.7
Min. System Margin (dB)	: 1.0	Uplink Power Control Margin (dB)	: .0
Max No Carriers / Trans	: 2	Minimum Dnlink Rain Margin (dB)	: 0.5*
Required Link Availability	: 99.5	Actual Dnlink Rain Margin (dB)	: 3.9
		Dnlink Pointing Error (dB)	: 0.5

-- ADJACENT SATELLITE INTERFERENCE ----- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg)	:	52.85E	56.85E
Uplink Interference (dB or dBW/Hz)	:	-38.7	-38.7
Uplink Polarization Advantage (dB)	:	0.0	0.0
Downlink Interference (dB or dBW/Hz)	:	-26	-26
Downlink Polarization Advantage (dB)	:	0.0	0.0
Rx E/S Topocentric Angle (deg)	:	2.09	2.09
Rx E/S Pointing Error (deg)	:	-0.06	0.06
Rx E/S Off-Axis Angle (deg)	:	2.03	2.15
Rx E/S Adj. Sat. Discrimination (dB)	:	33.7	34.3

----- TV/FM CARRIER PARAMETERS -----

Video Format	: PAL	Peak Deviation (MHz)	: 9.0
RF Noise BW (MHz)	: 30.0	PreEmphasis+Weighting (dB)	: 15.6
Video BW (MHz)	: 6.0	Threshold C/N (dB)	: 10.0

----- AUDIO SUB-CARRIER PARAMETERS -----

Sub-Carrier Freq (MHz)	: 6.6	Highest Audio Freq (kHz)	: 15.0
P-Dev of Video by Audio (MHz)	: 2.0	Companding Advantage (dB)	: 0.0
Peak Dev of Audio (kHz)	: 75.0		

----- Transmit Earth Station ----- ----- Receive Earth Station -----

Location: -4_dB_Gain_Contour		Location: -4_dB_Gain_Contour	
Latitude (deg)	: *	Latitude (deg)	: *
Longitude (deg)	: *	Longitude (deg)	: *
Rain Rate (mm/hr)	: 42*	Rain Rate (mm/hr)	: 42*
E/S Type or Model No:		E/S Type or Model No:	
E/S Manufacturer	: STANDARD	E/S Manufacturer	: STANDARD
E/S Diam. (m)	: 9.0	E/S Diam. (m)	: 6.1
E/S Freq (nom, GHz)	: 6.175	E/S Freq (nom, GHz)	: 11.95
E/S Tx Gain (dBi)	: 53.4	E/S Gain (nom, dBi)	: 55.5
ULPC Margin (dB)	: .0	E/S Feed Loss (dB)	: 0.25
		E/S Ant. Temp(deg K)	: 40
		E/S LNA Temp (deg K)	: 110
		E/S G/T (nom, dB/K)	: *

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SATELLITE DATA	Satellite : IS-706 Uplink Beam: ZONE Uplink POL: , Dnlink POL: , EIRP, beam center: 47.5 dBW G/T:-3.0 dB/K, SFD:-87.2 dBW/m2 Dnlink EIRP: 43.5 dBW	Location: 54.85E Dnlink Beam: KSPOT		
TRANSPONDER DATA	Trans Bandwidth :77.0 MHz Uplink Frequency:6.175 GHz IBO (Nominal) : 0.0 dB	Trans Type: LTWTA Dnlink Freq: 11.950 GHz OBO (Nominal): 0.0 dB		
CARRIER DATA	Type: NTC26%, Info Rate: 52550 kbps, Mod: QPSK, 1/2x188/204 BWo: 64435kHz, BWa: 77000kHz, C/N: 3.36dB, C/N_thresh: 3.36			
LINK BUDGET				
		CLR SKY UP FADE DN FADE		
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	75.6	75.6	75.6
	- Uplink Path Loss, clear sky (dB)	-200.2	-200.2	-200.2
	- Uplink Rain Attenuation (dB)	0.0	-3.3	0.0
	+ Satellite G/T (dB/K)	-3.0	-3.0	-3.0
	- Boltzman's Constant (dBW/K-Hz)	228.6	228.6	228.6
	- Carrier Noise Bandwidth (dB-Hz)	-78.1	-78.1	-78.1
	C/N Uplink (dB)	22.9	19.6	22.9
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	43.5	43.5	43.5
	- Carrier Output Backoff (dB)	-.1	-.3	-.1
	Downlink EIRP per carrier (dBW)	43.4	43.2	43.4
	- Earth Station Pointing Error (dB)	-.5	-.5	-.5
	- Downlink Path Loss, clear sky (dB)	-205.9	-205.9	-205.9
	- Downlink Rain Attenuation (dB)	0.0	0.0	-1.4
	+ Earth Station G/T (dB/K)	22.3	22.3	20.7
	- Boltzman's Constant (dBW/K-Hz)	228.6	228.6	228.6
- Carrier Noise Bandwidth (dB-Hz)	-78.1	-78.1	-78.1	
	C/N Dnlink (dB)	9.7	9.5	6.8
COMPOSITE PERFORMANCE	C/N Uplink (dB)	22.9	19.6	22.9
	C/N Dnlink (dB)	9.7	9.5	6.8
	C/I Uplink Co-channel (dB)	26.9	23.6	26.9
	C/I Dnlink Co-Channel (dB)	26.9	26.7	26.9
	C/I Uplink Adj. Sat. (SAT-1) (dB)	14.2	10.9	14.2
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	13.5	13.3	13.5
	C/I Uplink Adj. Sat. (SAT-2) (dB)	14.2	10.9	14.2
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	15.6	15.4	15.6
	C/(N+I) COMPOSITE (dB)	5.8	4.4	4.4
	- Required System Margin (dB)	-1.0	-1.0	-1.0
	Net C/(N+I) COMPOSITE (dB)	4.8	3.4	3.4
- Minimum Required C/N (dB)	-3.4	-3.4	-3.4	
	Excess Link Margin (dB)	1.4	0.0	0.0
TRANSPONDER UTILIZATION	% BW/CARR: 100.00, % PWR/CARR: 97.72, Max No. Carriers: 1.0 Downlink EIRP per carrier toward beam center: 47.4 dBW			
TRANSMIT EARTH STATION	Loc: -4 dB Gain Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 288.3 watts			
RECEIVE EARTH STA.	Loc: -4 dB Gain Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr			
DENSITY INFORMATION	Uplink Pwr Den: -53.5 dBW/Hz, Dnlink EIRP Den: -30.7 dBW/Hz Max Dnlink PFD: -157.6 dB(W/m2/4kHz) @ Beam Center			
AVAILABILITY	Uplink: 99.997 %, Dnlink: 99.453 %, Composite Link: 99.450			
LOSS IN C/(N+I) DUE TO ADJ SAT INTF:	SAT-1 = 1.6dB, SAT-2 = 1.2dB			

ZONE-KSPOT (77 MHz): 77M0G7W
[Input Data]

----- SATELLITE -----

Satellite Name	: IS-706	Location (deg)	: 54.85E
Uplink Beam	: ZONE	Dnlink Beam	: KSPOT
Trans. BW (MHz)	: 77.0 MHz	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency (GHz)	: 6.175	Dnlink Frequency (GHz)	: 11.950
G/T, beam center (dB/K)	: 1.0	EIRP, beam center (dBW)	: 47.5
G/T, beam edge (dB/K)	: -3.0	EIRP, beam edge (dBW)	: 43.5
G/T, toward Tx ES (dB/K)	: -3.0	EIRP, toward Rx ES (dBW)	: 43.5
SFD, beam edge (dBW/m2)	: -87.2		
SFD, toward Tx ES (dBW/m2)	: -87.2		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB)	: 1	Nominal Uplink Co-Chan C/I (dB)	: 27.0
Input Backoff (dB)	: 0.0	Nominal Dnlink Co-Chan C/I (dB)	: 27.0
Output Backoff (dB)	: *	Minimum Uplink Rain Margin (dB)	: 0.5*
(C/Im) - Nominal (dB)	: *	Actual Uplink Rain Margin (dB)	: 3.3
Min. System Margin (dB)	: 1.0	Uplink Power Control Margin (dB)	: .0
Max No Carriers / Trans	: 1	Minimum Dnlink Rain Margin (dB)	: 0.5*
Required Link Availability	: 99.5	Actual Dnlink Rain Margin (dB)	: 3.0
		Dnlink Pointing Error (dB)	: 0.5

-- ADJACENT SATELLITE INTERFERENCE ----- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg)	:	52.85E	56.85E
Uplink Interference (dB or dBW/Hz)	:	-38.7	-38.7
Uplink Polarization Advantage (dB)	:	0.0	0.0
Downlink Interference (dB or dBW/Hz)	:	-26	-26
Downlink Polarization Advantage (dB)	:	0.0	0.0
Rx E/S Topocentric Angle (deg)	:	2.09	2.09
Rx E/S Pointing Error (deg)	:	-0.20	0.20
Rx E/S Off-Axis Angle (deg)	:	1.89	2.29
Rx E/S Adj. Sat. Discrimination (dB)	:	22.2	24.3

----- CARRIER PARAMETERS -----

Modem Type	: NTC26%	C/N (operating, dB)	: 3.36
Modulation	: QPSK	Eb/No (operating, dB)	: 4.2
Code Rate	: 1/2x188/204-V	C/N (threshold, dB)	: 3.36
Info Rate (kbps)	: 52550	Eb/No (threshold, dB)	: 4.2
Occupied Bandwidth (kHz)	: 64435		
Allocated Bandwidth (kHz)	: 77000		

----- Transmit Earth Station ----- Receive Earth Station -----

Location: -4_dB_Gain_Contour	Location: -4_dB_Gain_Contour
Latitude (deg): *	Latitude (deg): *
Longitude (deg): *	Longitude (deg): *
Rain Rate (mm/hr): 42*	Rain Rate (mm/hr): 42*
E/S Type or Model No:	E/S Type or Model No:
E/S Manufacturer : STANDARD	E/S Manufacturer : STANDARD
E/S Diam. (m): 7.0	E/S Diam. (m): 1.8
E/S Freq (nom, GHz): 6.175	E/S Freq (nom, GHz): 11.95
E/S Tx Gain (dBi): 51.0	E/S Gain (nom, dBi): 44.8
ULPC Margin (dB): .0	E/S Feed Loss (dB): 0.25
	E/S Ant. Temp (deg K): 45
	E/S LNA Temp (deg K): 110
	E/S G/T (nom, dB/K): *

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SATELLITE DATA	Satellite : IS-706 Uplink Beam: ZONE Uplink POL: , Dnlink POL: , EIRP, beam center: 47.5 dBW G/T:-3.0 dB/K, SFD:-84.2 dBW/m2 Dnlink EIRP: 43.5 dBW	Location: 54.85E Dnlink Beam: KSPOT		
TRANSPONDER DATA	Trans Bandwidth :77.0 MHz Uplink Frequency:6.175 GHz IBO (Nominal) : 8.2 dB	Trans Type: LTWTA Dnlink Freq: 11.950 GHz OBO (Nominal): 3.5 dB		
CARRIER DATA	Type: EF9000, Info Rate: 6000 kbps, Mod: QPSK, 1/2x188/204-BWo: 6771.1kHz, BWa: 10300kHz, C/N: 3.87dB, C/N_thresh: 3.5			
LINK BUDGET				
		CLR SKY UP FADE DN FADE		
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	63.3	63.3	63.3
	- Uplink Path Loss, clear sky (dB)	-200.2	-200.2	-200.2
	- Uplink Rain Attenuation (dB)	0.0	-1.1	0.0
	+ Satellite G/T (dB/K)	-3.0	-3.0	-3.0
	- Boltzman's Constant (dBW/K-Hz)	228.6	228.6	228.6
	- Carrier Noise Bandwidth (dB-Hz)	-68.3	-68.3	-68.3
	C/N Uplink (dB)	20.4	19.3	20.4
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	43.5	43.5	43.5
	- Carrier Output Backoff (dB)	-10.7	-11.8	-10.7
	Downlink EIRP per carrier (dBW)	32.8	31.7	32.8
	- Earth Station Pointing Error (dB)	-.5	-.5	-.5
	- Downlink Path Loss, clear sky (dB)	-205.9	-205.9	-205.9
	- Downlink Rain Attenuation (dB)	0.0	0.0	-1.6
	+ Earth Station G/T (dB/K)	25.0	25.0	23.3
- Boltzman's Constant (dBW/K-Hz)	228.6	228.6	228.6	
- Carrier Noise Bandwidth (dB-Hz)	-68.3	-68.3	-68.3	
C/N Dnlink (dB)	11.6	10.6	8.4	
COMPOSITE PERFORMANCE	C/N Uplink (dB)	20.4	19.3	20.4
	C/N Dnlink (dB)	11.6	10.6	8.4
	C/I Intermod (dB)	20.0	19.3	20.0
	C/I Uplink Co-channel (dB)	28.5	27.4	28.5
	C/I Dnlink Co-Channel (dB)	28.5	27.5	28.5
	C/I Uplink Adj. Sat. (SAT-1) (dB)	11.7	10.6	11.7
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	15.7	14.6	15.7
	C/I Uplink Adj. Sat. (SAT-2) (dB)	11.7	10.6	11.7
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	17.2	16.2	17.2
	C/(N+I) COMPOSITE (dB)	5.6	4.6	4.6
	- Required System Margin (dB)	-1.0	-1.0	-1.0
	Net C/(N+I) COMPOSITE (dB)	4.6	3.6	3.6
	- Minimum Required C/N (dB)	-3.9	-3.6	-3.6
Excess Link Margin (dB)	.8	0.0	0.0	
TRANSPONDER UTILIZATION	% BW/CARR: 13.38, % PWR/CARR: 19.02, Max No. Carriers: 5.3 Downlink EIRP per carrier toward beam center: 36.8 dBW			
TRANSMIT EARTH STATION	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 16.9 watts			
RECEIVE EARTH STA.	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr			
DENSITY INFORMATION	Uplink Pwr Den: -56.0 dBW/Hz, Dnlink EIRP Den: -31.5 dBW/Hz Max Dnlink PFD: -158.4 dB(W/m2/4kHz) @ Beam Center			
AVAILABILITY	Uplink: 99.973 %, Dnlink: 99.533 %, Composite Link: 99.506			
LOSS IN C/(N+I) DUE TO ADJ SAT INTF: SAT-1 = 1.9dB, SAT-2 = 1.7dB				

ZONE-KSPOT (77 MHZ): 10M3G7W
[Input Data]

----- SATELLITE -----

Satellite Name	: IS-706	Location (deg)	: 54.85E
Uplink Beam	: ZONE	Dnlink Beam	: KSPOT
Trans. BW (MHz)	: 77.0 MHz	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency (GHz)	: 6.175	Dnlink Frequency (GHz)	: 11.950
G/T, beam center (dB/K)	: 1.0	EIRP, beam center (dBW)	: 47.5
G/T, beam edge (dB/K)	: -3.0	EIRP, beam edge (dBW)	: 43.5
G/T, toward Tx ES (dB/K)	: -3.0	EIRP, toward Rx ES (dBW)	: 43.5
SFD, beam edge (dBW/m2)	: -84.2		
SFD, toward Tx ES (dBW/m2)	: -84.2		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB)	: 4	Nominal Uplink Co-Chan C/I (dB)	: 27.0
Input Backoff (dB)	: 8.2	Nominal Dnlink Co-Chan C/I (dB)	: 27.0
Output Backoff (dB)	: *	Minimum Uplink Rain Margin (dB)	: 0.5*
(C/Im) - Nominal (dB)	: *	Actual Uplink Rain Margin (dB)	: 1.1
Min. System Margin (dB)	: 1.0	Uplink Power Control Margin (dB)	: .0
Max No Carriers / Trans:	*	Minimum Dnlink Rain Margin (dB)	: 0.5*
Required Link Availability:	99.5	Actual Dnlink Rain Margin (dB)	: 3.2
		Dnlink Pointing Error (dB)	: 0.5

--- ADJACENT SATELLITE INTERFERENCE ----- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg)	:	52.85E	56.85E
Uplink Interference (dB or dBW/Hz)	:	-38.7	-38.7
Uplink Polarization Advantage (dB)	:	0.0	0.0
Downlink Interference (dB or dBW/Hz)	:	-26	-26
Downlink Polarization Advantage (dB)	:	0.0	0.0
Rx E/S Topocentric Angle (deg)	:	2.09	2.09
Rx E/S Pointing Error (deg)	:	-0.15	0.15
Rx E/S Off-Axis Angle (deg)	:	1.94	2.24
Rx E/S Adj. Sat. Discrimination (dB)	:	25.2	26.8

----- CARRIER PARAMETERS -----

Modem Type	: EF9000	C/N (operating, dB)	: 3.87
Modulation	: QPSK	Eb/No (operating, dB)	: 4.4
Code Rate	: 1/2x188/204-V	C/N (threshold, dB)	: 3.57
Info Rate (kbps)	: 6000	Eb/No (threshold, dB)	: 4.1
Occupied Bandwidth (kHz)	: 6771.1		
Allocated Bandwidth (kHz)	: 10300		

----- Transmit Earth Station ----- ----- Receive Earth Station -----

Location: -4_dB_Gain_Contour	Location: -4_dB_Gain_Contour
Latitude (deg): *	Latitude (deg): *
Longitude (deg): *	Longitude (deg): *
Rain Rate (mm/hr): 42*	Rain Rate (mm/hr): 42*
E/S Type or Model No:	E/S Type or Model No:
E/S Manufacturer : STANDARD	E/S Manufacturer : STANDARD
E/S Diam. (m): 7.0	E/S Diam. (m): 2.4
E/S Freq (nom, GHz): 6.175	E/S Freq (nom, GHz): 11.95
E/S Tx Gain (dBi): 51.0	E/S Gain (nom, dBi): 47.5
ULPC Margin (dB): .0	E/S Feed Loss (dB): 0.25
	E/S Ant. Temp(deg K): 45
	E/S LNA Temp (deg K): 110
	E/S G/T (nom, dB/K): *

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SATELLITE DATA	Satellite : IS-706 Uplink Beam: ZONE Uplink POL: , Dnlink POL: , EIRP, beam center: 47.5 dBW G/T:-3.0 dB/K, SFD:-84.2 dBW/m2 Dnlink EIRP: 43.5 dBW	Location: 54.85E Dnlink Beam: KSPOT		
TRANSPONDER DATA	Trans Bandwidth :77.0 MHz Uplink Frequency:6.175 GHz IBO (Nominal) : 8.2 dB	Trans Type: LTWTA Dnlink Freq: 11.950 GHz OBO (Nominal): 3.5 dB		
CARRIER DATA	Type: CS701, Info Rate: 64 kbps, Mod: QPSK, 1/2x239/256-V BWo: 75.4kHz, BWa: 100kHz, C/N: 2.99dB, C/N_thresh: 2.79dB			
LINK BUDGET				
		CLR SKY UP FADE DN FADE		
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	43.0	43.0	43.0
	- Uplink Path Loss, clear sky (dB)	-200.2	-200.2	-200.2
	- Uplink Rain Attenuation (dB)	0.0	-1.1	0.0
	+ Satellite G/T (dB/K)	-3.0	-3.0	-3.0
	- Boltzman's Constant (dBW/K-Hz)	228.6	228.6	228.6
	- Carrier Noise Bandwidth (dB-Hz)	-48.8	-48.8	-48.8
	C/N Uplink (dB)	19.6	18.5	19.6
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	43.5	43.5	43.5
	- Carrier Output Backoff (dB)	-31.0	-32.1	-31.0
	Downlink EIRP per carrier (dBW)	12.5	11.4	12.5
	- Earth Station Pointing Error (dB)	-.5	-.5	-.5
	- Downlink Path Loss, clear sky (dB)	-205.9	-205.9	-205.9
	- Downlink Rain Attenuation (dB)	0.0	0.0	-1.6
	+ Earth Station G/T (dB/K)	25.0	25.0	23.3
	- Boltzman's Constant (dBW/K-Hz)	228.6	228.6	228.6
	- Carrier Noise Bandwidth (dB-Hz)	-48.8	-48.8	-48.8
	C/N Dnlink (dB)	10.8	9.7	7.6
COMPOSITE PERFORMANCE	C/N Uplink (dB)	19.6	18.5	19.6
	C/N Dnlink (dB)	10.8	9.7	7.6
	C/I Intermod (dB)	19.2	18.1	19.2
	C/I Uplink Co-channel (dB)	28.3	27.3	28.3
	C/I Dnlink Co-Channel (dB)	28.3	27.3	28.3
	C/I Uplink Adj. Sat. (SAT-1) (dB)	10.9	9.8	10.9
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	14.9	13.8	14.9
	C/I Uplink Adj. Sat. (SAT-2) (dB)	10.9	9.8	10.9
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	16.4	15.4	16.4
	C/(N+I) COMPOSITE (dB)	4.9	3.8	3.8
	- Required System Margin (dB)	-1.0	-1.0	-1.0
	Net C/(N+I) COMPOSITE (dB)	3.9	2.8	2.8
- Minimum Required C/N (dB)	-3.0	-2.8	-2.8	
	Excess Link Margin (dB)	.9	0.0	0.0
TRANSPONDER UTILIZATION	% BW/CARR: 0.13, % PWR/CARR: 0.18, Max No. Carriers: 565.1 Downlink EIRP per carrier toward beam center: 16.5 dBW			
TRANSMIT EARTH STATION	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 0.2 watts			
RECEIVE EARTH STA.	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr			
DENSITY INFORMATION	Uplink Pwr Den: -56.8 dBW/Hz, Dnlink EIRP Den: -32.3 dBW/Hz Max Dnlink PFD: -159.2 dB(W/m2/4kHz) @ Beam Center			
AVAILABILITY	Uplink: 99.971 %, Dnlink: 99.536 %, Composite Link: 99.507			
LOSS IN C/(N+I) DUE TO ADJ SAT INTF:	SAT-1 = 1.9dB, SAT-2 = 1.7dB			

ZONE-KSPOT (77 MHz): 100KG7W
[Input Data]

----- SATELLITE -----

Satellite Name	: IS-706	Location (deg)	: 54.85E
Uplink Beam	: ZONE	Dnlink Beam	: KSPOT
Trans. BW (MHz)	: 77.0 MHz	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency (GHz)	: 6.175	Dnlink Frequency (GHz)	: 11.950
G/T, beam center (dB/K)	: 1.0	EIRP, beam center (dBW)	: 47.5
G/T, beam edge (dB/K)	: -3.0	EIRP, beam edge (dBW)	: 43.5
G/T, toward Tx ES (dB/K)	: -3.0	EIRP, toward Rx ES (dBW)	: 43.5
SFD, beam edge (dBW/m2)	: -84.2		
SFD, toward Tx ES (dBW/m2)	: -84.2		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB)	: 4	Nominal Uplink Co-Chan C/I (dB)	: 27.0
Input Backoff (dB)	: 8.2	Nominal Dnlink Co-Chan C/I (dB)	: 27.0
Output Backoff (dB)	: *	Minimum Uplink Rain Margin (dB)	: 0.5*
(C/Im) - Nominal (dB)	: *	Actual Uplink Rain Margin (dB)	: 1.1
Min. System Margin (dB)	: 1.0	Uplink Power Control Margin (dB)	: .0
Max No Carriers / Trans:	*	Minimum Dnlink Rain Margin (dB)	: 0.5*
Required Link Availability:	99.5	Actual Dnlink Rain Margin (dB)	: 3.2
		Dnlink Pointing Error (dB)	: 0.5

-- ADJACENT SATELLITE INTERFERENCE ----- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg)	:	52.85E	56.85E
Uplink Interference (dB or dBW/Hz)	:	-38.7	-38.7
Uplink Polarization Advantage (dB)	:	0.0	0.0
Downlink Interference (dB or dBW/Hz)	:	-26	-26
Downlink Polarization Advantage (dB)	:	0.0	0.0
Rx E/S Topocentric Angle (deg)	:	2.09	2.09
Rx E/S Pointing Error (deg)	:	-0.15	0.15
Rx E/S Off-Axis Angle (deg)	:	1.94	2.24
Rx E/S Adj. Sat. Discrimination (dB)	:	25.2	26.8

----- CARRIER PARAMETERS -----

Modem Type	: CS701	C/N (operating, dB)	: 2.99
Modulation	: QPSK	Eb/No (operating, dB)	: 3.7
Code Rate	: 1/2x239/256-V	C/N (threshold, dB)	: 2.79
Info Rate (kbps)	: 64	Eb/No (threshold, dB)	: 3.5
Occupied Bandwidth (kHz)	: 75.4		
Allocated Bandwidth (kHz)	: 100		

----- Transmit Earth Station ----- ----- Receive Earth Station -----

Location: -4_dB_Gain_Contour	Location: -4_dB_Gain_Contour
Latitude (deg): *	Latitude (deg): *
Longitude (deg): *	Longitude (deg): *
Rain Rate (mm/hr): 42*	Rain Rate (mm/hr): 42*
E/S Type or Model No:	E/S Type or Model No:
E/S Manufacturer : STANDARD	E/S Manufacturer : STANDARD
E/S Diam. (m): 7.0	E/S Diam. (m): 2.4
E/S Freq (nom, GHz): 6.175	E/S Freq (nom, GHz): 11.95
E/S Tx Gain (dBi): 51.0	E/S Gain (nom, dBi): 47.5
ULPC Margin (dB): .0	E/S Feed Loss (dB): 0.25
	E/S Ant. Temp(deg K): 45
	E/S LNA Temp (deg K): 110
	E/S G/T (nom, dB/K): *

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SATELLITE DATA	Satellite : IS-706 Uplink Beam: CSPOT Uplink POL: , Dnlink POL: , EIRP, beam center: 40.6 dBW G/T:-1.0 dB/K, SFD:-75.1 dBW/m2 Dnlink EIRP: 36.6 dBW	Location: 54.85E Dnlink Beam: CSPOT		
TRANSPONDER DATA	Trans Bandwidth :41.0 MHz Uplink Frequency:6.175 GHz IBO (Nominal) : 10.0 dB	Trans Type: LTWIA Dnlink Freq: 3.950 GHz OBO (Nominal): 4.1 dB		
CARRIER DATA	Type: TV/FM, Format: PAL, PreEmphasis+Weighting: 15.6dB RF BW: 30.0 MHz, P-Dev: 9.0 MHz, VideoBW: 6.0 MHz,			
LINK BUDGET				
		CLR SKY UP FADE DN FADE		
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	77.8	n/a	n/a
	- Uplink Path Loss, clear sky (dB)	-200.2	n/a	n/a
	- Uplink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Satellite G/T (dB/K)	-1.0	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-74.8	n/a	n/a
	C/N Uplink (dB)	30.4	n/a	n/a
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	36.6	n/a	n/a
	- Carrier Output Backoff (dB)	-4.1	n/a	n/a
	Downlink EIRP per carrier (dBW)	32.5	n/a	n/a
	- Earth Station Pointing Error (dB)	-.5	n/a	n/a
	- Downlink Path Loss, clear sky (dB)	-196.3	n/a	n/a
	- Downlink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Earth Station G/T (dB/K)	26.6	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-74.8	n/a	n/a
	C/N Dnlink (dB)	16.1	n/a	n/a
COMPOSITE PERFORMANCE	C/N Uplink (dB)	30.4	n/a	n/a
	C/N Dnlink (dB)	16.1	n/a	n/a
	C/I Uplink Co-channel (dB)	28.4	n/a	n/a
	C/I Dnlink Co-Channel (dB)	28.4	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-1) (dB)	19.7	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	17.6	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-2) (dB)	19.7	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	19.2	n/a	n/a
	C/(N+I) COMPOSITE (dB)	11.0	n/a	n/a
	- Required System Margin (dB)	-1.0	n/a	n/a
	Net C/(N+I) COMPOSITE (dB)	10.0	n/a	n/a
- Minimum Required C/N (dB)	-10.0	n/a	n/a	
	Excess Link Margin (dB)	0.0	n/a	n/a
	Video Signal-to-Noise Ratio (dB)	43.9	n/a	n/a
	Audio Signal-to-Noise Ratio (dB)	57.7	n/a	n/a
TRANSMIT EARTH STATION	Loc: -4 dB Gain Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 275.3 watts			
RECEIVE EARTH STA.	Loc: -4 dB Gain Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr			
DENSITY INFORMATION	Uplink Pwr Den: -50.4 dBW/Hz, Dnlink EIRP Den: -38.3 dBW/Hz Max Dnlink PFD: -165.2 dB(W/m2/4kHz) @ Beam Center			
LOSS IN C/(N+I) DUE TO ADJ SAT INTF: SAT-1 = 1.9dB, SAT-2 = 1.5dB				

CSPOT-CSPOT (41 MHz): 30M0F3F
[Input Data]

----- SATELLITE -----

Satellite Name	: IS-706	Location (deg)	: 54.85E
Uplink Beam	: CSPOT	Dnlink Beam	: CSPOT
Trans. BW (MHz)	: 41.0 MHz	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency (GHz)	: 6.175	Dnlink Frequency (GHz)	: 3.950
G/T, beam center (dB/K)	: 3.0	EIRP, beam center (dBW)	: 40.6
G/T, beam edge (dB/K)	: -1.0	EIRP, beam edge (dBW)	: 36.6
G/T, toward Tx ES (dB/K)	: -1.0	EIRP, toward Rx ES (dBW)	: 36.6
SFD, beam edge (dBW/m2)	: -75.1		
SFD, toward Tx ES (dBW/m2)	: -75.1		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB)	: 14	Nominal Uplink Co-Chan C/I (dB)	: 27.0
Input Backoff (dB)	: 10	Nominal Dnlink Co-Chan C/I (dB)	: 27.0
Output Backoff (dB)	: *	Minimum Uplink Rain Margin (dB)	: 0.0
(C/Im) - Nominal (dB)	: *	Actual Uplink Rain Margin (dB)	: n/a
Min. System Margin (dB)	: 1.0	Uplink Power Control Margin (dB)	: .0
Max No Carriers / Trans	: 1	Minimum Dnlink Rain Margin (dB)	: 0.0
		Actual Dnlink Rain Margin (dB)	: n/a
		Dnlink Pointing Error (dB)	: 0.5

-- ADJACENT SATELLITE INTERFERENCE ----- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg)	:	52.85E	56.85E
Uplink Interference (dB or dBW/Hz)	:	-38.7	-38.7
Uplink Polarization Advantage (dB)	:	0.0	0.0
Downlink Interference (dB or dBW/Hz)	:	-34.7	-34.7
Downlink Polarization Advantage (dB)	:	0.0	0.0
Rx E/S Topocentric Angle (deg)	:	2.09	2.09
Rx E/S Pointing Error (deg)	:	-0.15	0.15
Rx E/S Off-Axis Angle (deg)	:	1.94	2.24
Rx E/S Adj. Sat. Discrimination (dB)	:	25.2	26.8

----- TV/FM CARRIER PARAMETERS -----

Video Format	: PAL	Peak Deviation (MHz)	: 9.0
RF Noise BW (MHz)	: 30.0	PreEmphasis+Weighting (dB)	: 15.6
Video BW (MHz)	: 6.0	Threshold C/N (dB)	: 10.0

----- AUDIO SUB-CARRIER PARAMETERS -----

Sub-Carrier Freq (MHz)	: 6.6	Highest Audio Freq (kHz)	: 15.0
P-Dev of Video by Audio (MHz)	: 2.0	Companding Advantage (dB)	: 0.0
Peak Dev of Audio (kHz)	: 75.0		

----- Transmit Earth Station ----- Receive Earth Station -----

Location: -4_dB_Gain_Contour		Location: -4_dB_Gain_Contour	
Latitude (deg): *		Latitude (deg): *	
Longitude (deg): *		Longitude (deg): *	
Rain Rate (mm/hr): 42*		Rain Rate (mm/hr): 42*	
E/S Type or Model No:		E/S Type or Model No:	
E/S Manufacturer : STANDARD		E/S Manufacturer : STANDARD	
E/S Diam. (m): 9.0		E/S Diam. (m): 7.0	
E/S Freq (nom, GHz): 6.175		E/S Freq (nom, GHz): 3.95	
E/S Tx Gain (dBi): 53.4		E/S Gain (nom, dBi): 47.5	
ULPC Margin (dB): .0		E/S Feed Loss (dB): 0.15	
		E/S Ant. Temp(deg K): 45	
		E/S LNA Temp (deg K): 65	
		E/S G/T (nom, dB/K): *	

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SATELLITE DATA	Satellite : IS-706 Uplink Beam: CSPOT Uplink POL: , Dnlink POL: , EIRP, beam center: 40.6 dBW G/T:-1.0 dB/K, SFD:-89.1 dBW/m2 Dnlink EIRP: 36.6 dBW	Location: 54.85E Dnlink Beam: CSPOT		
TRANSPONDER DATA	Trans Bandwidth :41.0 MHz Uplink Frequency:6.175 GHz IBO (Nominal) : 0.0 dB	Trans Type: LTWTA Dnlink Freq: 3.950 GHz OBO (Nominal): 0.0 dB		
CARRIER DATA	Type: NTC26%, Info Rate: 27981 kbps, Mod: QPSK, 1/2x188/204 BWo: 34310kHz, BWa: 41000kHz, C/N: 3.36dB, C/N_thresh: 3.36			
LINK BUDGET				
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	73.8	n/a	n/a
	- Uplink Path Loss, clear sky (dB)	-200.2	n/a	n/a
	- Uplink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Satellite G/T (dB/K)	-1.0	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-75.4	n/a	n/a
	C/N Uplink (dB)	25.8	n/a	n/a
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	36.6	n/a	n/a
	- Carrier Output Backoff (dB)	0.0	n/a	n/a
	Downlink EIRP per carrier (dBW)	36.6	n/a	n/a
	- Earth Station Pointing Error (dB)	-.5	n/a	n/a
	- Downlink Path Loss, clear sky (dB)	-196.3	n/a	n/a
	- Downlink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Earth Station G/T (dB/K)	19.2	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-75.4	n/a	n/a
	C/N Dnlink (dB)	12.2	n/a	n/a
COMPOSITE PERFORMANCE	C/N Uplink (dB)	25.8	n/a	n/a
	C/N Dnlink (dB)	12.2	n/a	n/a
	C/I Uplink Co-channel (dB)	27.0	n/a	n/a
	C/I Dnlink Co-Channel (dB)	27.0	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-1) (dB)	15.1	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	7.1	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-2) (dB)	15.1	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	15.9	n/a	n/a
	C/(N+I) COMPOSITE (dB)	4.6	n/a	n/a
	- Required System Margin (dB)	-1.0	n/a	n/a
	Net C/(N+I) COMPOSITE (dB)	3.6	n/a	n/a
- Minimum Required C/N (dB)	-3.4	n/a	n/a	
	Excess Link Margin (dB)	.2	n/a	n/a
TRANSPONDER UTILIZATION	% BW/CARR: 100.00, % PWR/CARR: 100.00, Max No. Carriers: 1.0 Downlink EIRP per carrier toward beam center: 40.6 dBW			
TRANSMIT EARTH STATION	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 190.5 watts			
RECEIVE EARTH STA.	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr			
DENSITY INFORMATION	Uplink Pwr Den: -52.6 dBW/Hz, Dnlink EIRP Den: -34.8 dBW/Hz Max Dnlink PFD: -161.7 dB(W/m2/4kHz) @ Beam Center			
LOSS IN C/(N+I) DUE TO ADJ SAT INTF: SAT-1 = 4.5dB, SAT-2 = 0.8dB				

CSPOT-CSPOT (41 MHZ): 41M0G7W
[Input Data]

----- SATELLITE -----

Satellite Name	: IS-706	Location (deg)	: 54.85E
Uplink Beam	: CSPOT	Dnlink Beam	: CSPOT
Trans. BW (MHz)	: 41.0 MHz	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency (GHz)	: 6.175	Dnlink Frequency (GHz)	: 3.950
G/T, beam center (dB/K)	: 3.0	EIRP, beam center (dBW)	: 40.6
G/T, beam edge (dB/K)	: -1.0	EIRP, beam edge (dBW)	: 36.6
G/T, toward Tx ES (dB/K)	: -1.0	EIRP, toward Rx ES (dBW)	: 36.6
SFD, beam edge (dBW/m2)	: -89.1		
SFD, toward Tx ES (dBW/m2)	: -89.1		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB)	: 0	Nominal Uplink Co-Chan C/I (dB)	: 27.0
Input Backoff (dB)	: 0.0	Nominal Dnlink Co-Chan C/I (dB)	: 27.0
Output Backoff (dB)	: *	Minimum Uplink Rain Margin (dB)	: 0.0
(C/Im) - Nominal (dB)	: *	Actual Uplink Rain Margin (dB)	: n/a
Min. System Margin (dB)	: 1.0	Uplink Power Control Margin (dB)	: .0
Max No Carriers / Trans	: 1	Minimum Dnlink Rain Margin (dB)	: 0.0
		Actual Dnlink Rain Margin (dB)	: n/a
		Dnlink Pointing Error (dB)	: 0.5

-- ADJACENT SATELLITE INTERFERENCE ----- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg)	:	52.85E	56.85E
Uplink Interference (dB or dBW/Hz)	:	-38.7	-38.7
Uplink Polarization Advantage (dB)	:	0.0	0.0
Downlink Interference (dB or dBW/Hz)	:	-34.7	-34.7
Downlink Polarization Advantage (dB)	:	0.0	0.0
Rx E/S Topocentric Angle (deg)	:	2.09	2.09
Rx E/S Pointing Error (deg)	:	-0.36	0.36
Rx E/S Off-Axis Angle (deg)	:	1.73	2.45
Rx E/S Adj. Sat. Discrimination (dB)	:	11.2	19.9

----- CARRIER PARAMETERS -----

Modem Type	: NTC26%	C/N (operating, dB)	: 3.36
Modulation	: QPSK	Eb/No (operating, dB)	: 4.2
Code Rate	: 1/2x188/204-V	C/N (threshold, dB)	: 3.36
Info Rate (kbps)	: 27981	Eb/No (threshold, dB)	: 4.2
Occupied Bandwidth (kHz)	: 34310		
Allocated Bandwidth (kHz)	: 41000		

----- Transmit Earth Station ----- ----- Receive Earth Station -----

Location: -4_dB_Gain_Contour	Location: -4_dB_Gain_Contour
Latitude (deg): *	Latitude (deg): *
Longitude (deg): *	Longitude (deg): *
Rain Rate (mm/hr): 42*	Rain Rate (mm/hr): 42*
E/S Type or Model No:	E/S Type or Model No:
E/S Manufacturer : STANDARD	E/S Manufacturer : STANDARD
E/S Diam. (m): 7.0	E/S Diam. (m): 3.0
E/S Freq (nom, GHz): 6.175	E/S Freq (nom, GHz): 3.95
E/S Tx Gain (dBi): 51.0	E/S Gain (nom, dBi): 39.7
ULPC Margin (dB): .0	E/S Feed Loss (dB): 0.15
	E/S Ant. Temp (deg K): 35
	E/S LNA Temp (deg K): 65
	E/S G/T (nom, dB/K): *

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SATELLITE DATA	Satellite : IS-706 Uplink Beam: CSPOT Uplink POL: , Dnlink POL: , EIRP, beam center: 40.6 dBW G/T:-1.0 dB/K, SFD:-87.1 dBW/m2 Dnlink EIRP: 36.6 dBW	Location: 54.85E Dnlink Beam: CSPOT				
TRANSPONDER DATA	Trans Bandwidth :41.0 MHz Uplink Frequency:6.175 GHz IBO (Nominal) : 8.2 dB	Trans Type: LTWTA Dnlink Freq: 3.950 GHz OBO (Nominal): 3.5 dB				
CARRIER DATA	Type: EF9000, Info Rate: 6000 kbps, Mod: QPSK, 1/2x188/204- Bwo: 6771.1kHz, Bwa: 10300kHz, C/N: 3.87dB, C/N_thresh: 3.5					
LINK BUDGET						
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	62.9	UP FADE	n/a	DN FADE	n/a
	- Uplink Path Loss, clear sky (dB)	-200.2	n/a	n/a	n/a	n/a
	- Uplink Rain Attenuation (dB)	0.0	n/a	n/a	n/a	n/a
	+ Satellite G/T (dB/K)	-1.0	n/a	n/a	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-68.3	n/a	n/a	n/a	n/a
	C/N Uplink (dB)	22.0	n/a	n/a	n/a	n/a
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	36.6	n/a	n/a	n/a	n/a
	- Carrier Output Backoff (dB)	-8.3	n/a	n/a	n/a	n/a
	Downlink EIRP per carrier (dBW)	28.3	n/a	n/a	n/a	n/a
	- Earth Station Pointing Error (dB)	- .5	n/a	n/a	n/a	n/a
	- Downlink Path Loss, clear sky (dB)	-196.3	n/a	n/a	n/a	n/a
	- Downlink Rain Attenuation (dB)	0.0	n/a	n/a	n/a	n/a
	+ Earth Station G/T (dB/K)	21.0	n/a	n/a	n/a	n/a
- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a	n/a	n/a	
- Carrier Noise Bandwidth (dB-Hz)	-68.3	n/a	n/a	n/a	n/a	
C/N Dnlink (dB)	12.8	n/a	n/a	n/a	n/a	
COMPOSITE PERFORMANCE	C/N Uplink (dB)	22.0	n/a	n/a	n/a	n/a
	C/N Dnlink (dB)	12.8	n/a	n/a	n/a	n/a
	C/I Intermod (dB)	19.7	n/a	n/a	n/a	n/a
	C/I Uplink Co-channel (dB)	28.3	n/a	n/a	n/a	n/a
	C/I Dnlink Co-Channel (dB)	28.3	n/a	n/a	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-1) (dB)	11.3	n/a	n/a	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	11.1	n/a	n/a	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-2) (dB)	11.3	n/a	n/a	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	15.9	n/a	n/a	n/a	n/a
	C/(N+I) COMPOSITE (dB)	4.9	n/a	n/a	n/a	n/a
	- Required System Margin (dB)	-1.0	n/a	n/a	n/a	n/a
Net C/(N+I) COMPOSITE (dB)	3.9	n/a	n/a	n/a	n/a	
- Minimum Required C/N (dB)	-3.9	n/a	n/a	n/a	n/a	
Excess Link Margin (dB)	0.0	n/a	n/a	n/a	n/a	
TRANSPONDER UTILIZATION	% BW/CARR: 25.12, % PWR/CARR: 33.65, Max No. Carriers: 3.0 Downlink EIRP per carrier toward beam center: 32.3 dBW					
TRANSMIT EARTH STATION	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 15.4 watts					
RECEIVE EARTH STA.	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr					
DENSITY INFORMATION	Uplink Pwr Den: -56.4 dBW/Hz, Dnlink EIRP Den: -36.0 dBW/Hz Max Dnlink PFD: -162.9 dB(W/m2/4kHz) @ Beam Center					
LOSS IN C/(N+I) DUE TO ADJ SAT INTF: SAT-1 = 2.7dB, SAT-2 = 1.6dB						

CSPOT-CSPOT (41 MHZ): 10M3G7W
[Input Data]

----- SATELLITE -----

Satellite Name	: IS-706	Location (deg)	: 54.85E
Uplink Beam	: CSPOT	Dnlink Beam	: CSPOT
Trans. BW (MHz)	: 41.0 MHz	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency (GHz)	: 6.175	Dnlink Frequency (GHz)	: 3.950
G/T, beam center (dB/K)	: 3.0	EIRP, beam center (dBW)	: 40.6
G/T, beam edge (dB/K)	: -1.0	EIRP, beam edge (dBW)	: 36.6
G/T, toward Tx ES (dB/K)	: -1.0	EIRP, toward Rx ES (dBW)	: 36.6
SFD, beam edge (dBW/m2)	: -87.1		
SFD, toward Tx ES (dBW/m2)	: -87.1		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB)	: 2	Nominal Uplink Co-Chan C/I (dB)	: 27.0
Input Backoff (dB)	: 8.2*	Nominal Dnlink Co-Chan C/I (dB)	: 27.0
Output Backoff (dB)	: *	Minimum Uplink Rain Margin (dB)	: 0.0
(C/Im) - Nominal (dB)	: *	Actual Uplink Rain Margin (dB)	: n/a
Min. System Margin (dB)	: 1.0	Uplink Power Control Margin (dB)	: .0
Max No Carriers / Trans	: *	Minimum Dnlink Rain Margin (dB)	: 0.0
		Actual Dnlink Rain Margin (dB)	: n/a
		Dnlink Pointing Error (dB)	: 0.5

-- ADJACENT SATELLITE INTERFERENCE ----- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg)	:	52.85E	56.85E
Uplink Interference (dB or dBW/Hz)	:	-38.7	-38.7
Uplink Polarization Advantage (dB)	:	0.0	0.0
Downlink Interference (dB or dBW/Hz)	:	-34.7	-34.7
Downlink Polarization Advantage (dB)	:	0.0	0.0
Rx E/S Topocentric Angle (deg)	:	2.09	2.09
Rx E/S Pointing Error (deg)	:	-0.31	0.31
Rx E/S Off-Axis Angle (deg)	:	1.78	2.40
Rx E/S Adj. Sat. Discrimination (dB)	:	16.3	21.1

----- CARRIER PARAMETERS -----

Modem Type	: EF9000	C/N (operating, dB)	: 3.87
Modulation	: QPSK	Eb/No (operating, dB)	: 4.4
Code Rate	: 1/2x188/204-V	C/N (threshold, dB)	: 3.57
Info Rate (kbps)	: 6000	Eb/No (threshold, dB)	: 4.1
Occupied Bandwidth (kHz)	: 6771.1		
Allocated Bandwidth (kHz)	: 10300		

----- Transmit Earth Station ----- ----- Receive Earth Station -----

Location: -4_dB_Gain_Contour	Location: -4_dB_Gain_Contour
Latitude (deg): *	Latitude (deg): *
Longitude (deg): *	Longitude (deg): *
Rain Rate (mm/hr): 42*	Rain Rate (mm/hr): 42*
E/S Type or Model No:	E/S Type or Model No:
E/S Manufacturer : STANDARD	E/S Manufacturer : STANDARD
E/S Diam. (m): 7.0	E/S Diam. (m): 3.5
E/S Freq (nom, GHz): 6.175	E/S Freq (nom, GHz): 3.95
E/S Tx Gain (dBi): 51.0	E/S Gain (nom, dBi): 41.1
ULPC Margin (dB): .0	E/S Feed Loss (dB): 0.15
	E/S Ant. Temp(deg K): 25
	E/S LNA Temp (deg K): 65
	E/S G/T (nom, dB/K): *

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SATELLITE DATA	Satellite : IS-706 Uplink Beam: CSPOT Uplink POL: , Dnlink POL: , EIRP, beam center: 40.6 dBW G/T:-1.0 dB/K, SFD:-87.1 dBW/m2	Location: 54.85E Dnlink Beam: CSPOT Dnlink EIRP: 36.6 dBW		
TRANSPONDER DATA	Trans Bandwidth :41.0 MHz Uplink Frequency:6.175 GHz IBO (Nominal) : 8.2 dB	Trans Type: LTWTA Dnlink Freq: 3.950 GHz OBO (Nominal): 3.5 dB		
CARRIER DATA	Type: CS701, Info Rate: 64 kbps, Mod: QPSK, 1/2x239/256-V BWo: 75.4kHz, BWa: 100kHz, C/N: 2.99dB, C/N_thresh: 2.79dB			
LINK BUDGET				
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	42.4	n/a	n/a
	- Uplink Path Loss, clear sky (dB)	-200.2	n/a	n/a
	- Uplink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Satellite G/T (dB/K)	-1.0	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-48.8	n/a	n/a
	C/N Uplink (dB)	21.1	n/a	n/a
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	36.6	n/a	n/a
	- Carrier Output Backoff (dB)	-28.7	n/a	n/a
	Downlink EIRP per carrier (dBW)	7.9	n/a	n/a
	- Earth Station Pointing Error (dB)	-.5	n/a	n/a
	- Downlink Path Loss, clear sky (dB)	-196.3	n/a	n/a
	- Downlink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Earth Station G/T (dB/K)	21.0	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-48.8	n/a	n/a
	C/N Dnlink (dB)	11.9	n/a	n/a
COMPOSITE PERFORMANCE	C/N Uplink (dB)	21.1	n/a	n/a
	C/N Dnlink (dB)	11.9	n/a	n/a
	C/I Intermod (dB)	18.8	n/a	n/a
	C/I Uplink Co-channel (dB)	28.0	n/a	n/a
	C/I Dnlink Co-Channel (dB)	28.0	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-1) (dB)	10.4	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	10.2	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-2) (dB)	10.4	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	15.0	n/a	n/a
	C/(N+I) COMPOSITE (dB)	4.0	n/a	n/a
- Required System Margin (dB)	-1.0	n/a	n/a	
	Net C/(N+I) COMPOSITE (dB)	3.0	n/a	n/a
	- Minimum Required C/N (dB)	-3.0	n/a	n/a
	Excess Link Margin (dB)	0.0	n/a	n/a
TRANSPONDER UTILIZATION	% BW/CARR: 0.24, % PWR/CARR: 0.31, Max No. Carriers: 327.2 Downlink EIRP per carrier toward beam center: 11.9 dBW			
TRANSMIT EARTH STATION	Loc: -4 dB Gain Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 0.1 watts			
RECEIVE EARTH STA.	Loc: -4 dB Gain Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr			
DENSITY INFORMATION	Uplink Pwr Den: -57.3 dBW/Hz, Dnlink EIRP Den: -36.8 dBW/Hz Max Dnlink PFD: -163.7 dB(W/m2/4kHz) @ Beam Center			
LOSS IN C/(N+I) DUE TO ADJ SAT INTF: SAT-1 = 2.7dB, SAT-2 = 1.6dB				

CSPOT-CSPOT (41 MHz): 100KG7W
[Input Data]

----- SATELLITE -----

Satellite Name	: IS-706	Location (deg)	: 54.85E
Uplink Beam	: CSPOT	Dnlink Beam	: CSPOT
Trans. BW (MHz)	: 41.0 MHz	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency (GHz)	: 6.175	Dnlink Frequency (GHz)	: 3.950
G/T, beam center (dB/K)	: 3.0	EIRP, beam center (dBW)	: 40.6
G/T, beam edge (dB/K)	: -1.0	EIRP, beam edge (dBW)	: 36.6
G/T, toward Tx ES (dB/K)	: -1.0	EIRP, toward Rx ES (dBW)	: 36.6
SFD, beam edge (dBW/m2)	: -87.1		
SFD, toward Tx ES (dBW/m2)	: -87.1		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB)	: 2	Nominal Uplink Co-Chan C/I (dB)	: 27.0
Input Backoff (dB)	: 8.2*	Nominal Dnlink Co-Chan C/I (dB)	: 27.0
Output Backoff (dB)	: *	Minimum Uplink Rain Margin (dB)	: 0.0
(C/Im) - Nominal (dB)	: *	Actual Uplink Rain Margin (dB)	: n/a
Min. System Margin (dB)	: 1.0	Uplink Power Control Margin (dB)	: .0
Max No Carriers / Trans	: *	Minimum Dnlink Rain Margin (dB)	: 0.0
		Actual Dnlink Rain Margin (dB)	: n/a
		Dnlink Pointing Error (dB)	: 0.5

-- ADJACENT SATELLITE INTERFERENCE ----- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg)	:	52.85E	56.85E
Uplink Interference (dB or dBW/Hz)	:	-38.7	-38.7
Uplink Polarization Advantage (dB)	:	0.0	0.0
Downlink Interference (dB or dBW/Hz)	:	-34.7	-34.7
Downlink Polarization Advantage (dB)	:	0.0	0.0
Rx E/S Topocentric Angle (deg)	:	2.09	2.09
Rx E/S Pointing Error (deg)	:	-0.31	0.31
Rx E/S Off-Axis Angle (deg)	:	1.78	2.40
Rx E/S Adj. Sat. Discrimination (dB)	:	16.3	21.1

----- CARRIER PARAMETERS -----

Modem Type	: CS701	C/N (operating, dB)	: 2.99
Modulation	: QPSK	Eb/No (operating, dB)	: 3.7
Code Rate	: 1/2x239/256-V	C/N (threshold, dB)	: 2.79
Info Rate (kbps)	: 64	Eb/No (threshold, dB)	: 3.5
Occupied Bandwidth (kHz)	: 75.4		
Allocated Bandwidth (kHz)	: 100		

----- Transmit Earth Station ----- ----- Receive Earth Station -----

Location: -4_dB_Gain_Contour	Location: -4_dB_Gain_Contour
Latitude (deg): *	Latitude (deg): *
Longitude (deg): *	Longitude (deg): *
Rain Rate (mm/hr): 42*	Rain Rate (mm/hr): 42*
E/S Type or Model No:	E/S Type or Model No:
E/S Manufacturer : STANDARD	E/S Manufacturer : STANDARD
E/S Diam. (m): 7.0	E/S Diam. (m): 3.5
E/S Freq (nom, GHz): 6.175	E/S Freq (nom, GHz): 3.95
E/S Tx Gain (dBi): 51.0	E/S Gain (nom, dBi): 41.1
ULPC Margin (dB): .0	E/S Feed Loss (dB): 0.15
	E/S Ant. Temp (deg K): 25
	E/S LNA Temp (deg K): 65
	E/S G/T (nom, dB/K): *

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SATELLITE DATA	Satellite : IS-706 Uplink Beam: CSPOT Uplink POL: , Dnlink POL: , EIRP, beam center: 33.5 dBW G/T:-1.0 dB/K, SFD:-75.1 dBW/m2 Dnlink EIRP: 29.5 dBW	Location: 54.85E Dnlink Beam: CSPOT		
TRANSPONDER DATA	Trans Bandwidth :41.0 MHz Uplink Frequency:6.175 GHz IBO (Nominal) : 7.7 dB	Trans Type: LTWTA Dnlink Freq: 3.950 GHz OBO (Nominal): 2.1 dB		
CARRIER DATA	Type: TV/FM, Format: PAL, PreEmphasis+Weighting: 15.6dB RF BW: 30.0 MHz, P-Dev: 9.0 MHz, VideoBW: 6.0 MHz,			
LINK BUDGET				
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	80.1	n/a	n/a
	- Uplink Path Loss, clear sky (dB)	-200.2	n/a	n/a
	- Uplink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Satellite G/T (dB/K)	-1.0	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-74.8	n/a	n/a
	C/N Uplink (dB)	32.7	n/a	n/a
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	29.5	n/a	n/a
	- Carrier Output Backoff (dB)	-2.1	n/a	n/a
	Downlink EIRP per carrier (dBW)	27.4	n/a	n/a
	- Earth Station Pointing Error (dB)	-.5	n/a	n/a
	- Downlink Path Loss, clear sky (dB)	-196.3	n/a	n/a
	- Downlink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Earth Station G/T (dB/K)	31.0	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-74.8	n/a	n/a
	C/N Dnlink (dB)	15.4	n/a	n/a
COMPOSITE PERFORMANCE	C/N Uplink (dB)	32.7	n/a	n/a
	C/N Dnlink (dB)	15.4	n/a	n/a
	C/I Uplink Co-channel (dB)	28.4	n/a	n/a
	C/I Dnlink Co-Channel (dB)	28.4	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-1) (dB)	22.0	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	17.2	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-2) (dB)	22.0	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	18.2	n/a	n/a
	C/(N+I) COMPOSITE (dB)	11.0	n/a	n/a
	- Required System Margin (dB)	-1.0	n/a	n/a
Net C/(N+I) COMPOSITE (dB)	10.0	n/a	n/a	
- Minimum Required C/N (dB)	-10.0	n/a	n/a	
	Excess Link Margin (dB)	0.0	n/a	n/a
	Video Signal-to-Noise Ratio (dB)	43.9	n/a	n/a
	Audio Signal-to-Noise Ratio (dB)	57.7	n/a	n/a
TRANSMIT EARTH STATION	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 295.0 watts			
RECEIVE EARTH STA.	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr			
DENSITY INFORMATION	Uplink Pwr Den: -50.1 dBW/Hz, Dnlink EIRP Den: -43.4 dBW/Hz Max Dnlink PFD: -170.3 dB(W/m2/4kHz) @ Beam Center			
LOSS IN C/(N+I) DUE TO ADJ SAT INTF: SAT-1 = 1.7dB, SAT-2 = 1.4dB				

CSPOT-GLOBAL (41 MHZ): 30M0F3F
[Input Data]

----- SATELLITE -----

Satellite Name	: IS-706	Location (deg)	: 54.85E
Uplink Beam	: CSPOT	Dnlink Beam	: CSPOT
Trans. BW (MHz)	: 41.0 MHz	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency (GHz)	: 6.175	Dnlink Frequency (GHz)	: 3.950
G/T, beam center (dB/K)	: 3.0	EIRP, beam center (dBW)	: 33.5
G/T, beam edge (dB/K)	: -1.0	EIRP, beam edge (dBW)	: 29.5
G/T, toward Tx ES (dB/K)	: -1.0	EIRP, toward Rx ES (dBW)	: 29.5
SFD, beam edge (dBW/m2)	: -75.1		
SFD, toward Tx ES (dBW/m2)	: -75.1		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB)	: 14	Nominal Uplink Co-Chan C/I (dB)	: 27.0
Input Backoff (dB)	: 8, 7.7	Nominal Dnlink Co-Chan C/I (dB)	: 27.0
Output Backoff (dB)	: *	Minimum Uplink Rain Margin (dB)	: 0.0
(C/Im) - Nominal (dB)	: *	Actual Uplink Rain Margin (dB)	: n/a
Min. System Margin (dB)	: 1.0	Uplink Power Control Margin (dB)	: .0
Max No Carriers / Trans	: 1	Minimum Dnlink Rain Margin (dB)	: 0.0
		Actual Dnlink Rain Margin (dB)	: n/a
		Dnlink Pointing Error (dB)	: 0.5

-- ADJACENT SATELLITE INTERFERENCE ----- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg)	:	52.85E	56.85E
Uplink Interference (dB or dBW/Hz)	:	-38.7	-38.7
Uplink Polarization Advantage (dB)	:	0.0	0.0
Downlink Interference (dB or dBW/Hz)	:	-34.7	-34.7
Downlink Polarization Advantage (dB)	:	0.0	0.0
Rx E/S Topocentric Angle (deg)	:	2.09	2.09
Rx E/S Pointing Error (deg)	:	-0.10	0.10
Rx E/S Off-Axis Angle (deg)	:	1.99	2.19
Rx E/S Adj. Sat. Discrimination (dB)	:	29.9	30.9

----- TV/FM CARRIER PARAMETERS -----

Video Format	: PAL	Peak Deviation (MHz)	: 9.0
RF Noise BW (MHz)	: 30.0	PreEmphasis+Weighting (dB)	: 15.6
Video BW (MHz)	: 6.0	Threshold C/N (dB)	: 10.0

----- AUDIO SUB-CARRIER PARAMETERS -----

Sub-Carrier Freq (MHz)	: 6.6	Highest Audio Freq (kHz)	: 15.0
P-Dev of Video by Audio (MHz)	: 2.0	Companding Advantage (dB)	: 0.0
Peak Dev of Audio (kHz)	: 75.0		

----- Transmit Earth Station ----- ----- Receive Earth Station -----

Location: -4_dB_Gain_Contour		Location: -4_dB_Gain_Contour	
Latitude (deg): *		Latitude (deg): *	
Longitude (deg): *		Longitude (deg): *	
Rain Rate (mm/hr): 42*		Rain Rate (mm/hr): 42*	
E/S Type or Model No:		E/S Type or Model No:	
E/S Manufacturer : STANDARD		E/S Manufacturer : STANDARD	
E/S Diam. (m): 11.0		E/S Diam. (m): 11.0	
E/S Freq (nom, GHz): 6.175		E/S Freq (nom, GHz): 3.95	
E/S Tx Gain (dBi): 55.4		E/S Gain (nom, dBi): 51.9	
ULPC Margin (dB): .0		E/S Feed Loss (dB): 0.15	
		E/S Ant. Temp(deg K): 45	
		E/S LNA Temp (deg K): 65	
		E/S G/T (nom, dB/K): *	

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SATELLITE DATA	Satellite : IS-706 Uplink Beam: CSPOT Uplink POL: , Dnlink POL: , EIRP, beam center: 33.5 dBW G/T:-1.0 dB/K, SFD:-89.1 dBW/m2	Location: 54.85E Dnlink Beam: CSPOT Dnlink EIRP: 29.5 dBW		
TRANSPONDER DATA	Trans Bandwidth :41.0 MHz Uplink Frequency:6.175 GHz IBO (Nominal) : 0.0 dB	Trans Type: LTWTA Dnlink Freq: 3.950 GHz OBO (Nominal): 0.0 dB		
CARRIER DATA	Type: NTC26%, Info Rate: 27981 kbps, Mod: QPSK, 1/2x188/204 BWo: 34310kHz, BWa: 41000kHz, C/N: 3.36dB, C/N_thresh: 3.36			
LINK BUDGET				
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	73.8	n/a	n/a
	- Uplink Path Loss, clear sky (dB)	-200.2	n/a	n/a
	- Uplink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Satellite G/T (dB/K)	-1.0	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-75.4	n/a	n/a
	C/N Uplink (dB)	25.8	n/a	n/a
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	29.5	n/a	n/a
	- Carrier Output Backoff (dB)	0.0	n/a	n/a
	Downlink EIRP per carrier (dBW)	29.5	n/a	n/a
	- Earth Station Pointing Error (dB)	-.5	n/a	n/a
	- Downlink Path Loss, clear sky (dB)	-196.3	n/a	n/a
	- Downlink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Earth Station G/T (dB/K)	23.6	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-75.4	n/a	n/a
	C/N Dnlink (dB)	9.5	n/a	n/a
COMPOSITE PERFORMANCE	C/N Uplink (dB)	25.8	n/a	n/a
	C/N Dnlink (dB)	9.5	n/a	n/a
	C/I Uplink Co-channel (dB)	27.0	n/a	n/a
	C/I Dnlink Co-Channel (dB)	27.0	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-1) (dB)	15.1	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	9.9	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-2) (dB)	15.1	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	12.4	n/a	n/a
	C/(N+I) COMPOSITE (dB)	4.7	n/a	n/a
	- Required System Margin (dB)	-1.0	n/a	n/a
	Net C/(N+I) COMPOSITE (dB)	3.7	n/a	n/a
	- Minimum Required C/N (dB)	-3.4	n/a	n/a
	Excess Link Margin (dB)	.4	n/a	n/a
TRANSPONDER UTILIZATION	% BW/CARR: 100.00, % PWR/CARR: 100.00, Max No. Carriers: 1.0 Downlink EIRP per carrier toward beam center: 33.5 dBW			
TRANSMIT EARTH STATION	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 190.5 watts			
RECEIVE EARTH STA.	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr			
DENSITY INFORMATION	Uplink Pwr Den: -52.6 dBW/Hz, Dnlink EIRP Den: -41.9 dBW/Hz Max Dnlink PFD: -168.8 dB(W/m2/4kHz) @ Beam Center			
LOSS IN C/(N+I) DUE TO ADJ SAT INTF: SAT-1 = 2.2dB, SAT-2 = 1.3dB				

CSPOT-GLOBAL (41 MHz): 41MOG7W
[Input Data]

----- SATELLITE -----

Satellite Name	: IS-706	Location (deg):	54.85E
Uplink Beam	: CSPOT	Dnlink Beam	: CSPOT
Trans. BW (MHz)	: 41.0 MHz	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency (GHz)	: 6.175	Dnlink Frequency (GHz)	: 3.950
G/T, beam center (dB/K)	: 3.0	EIRP, beam center (dBW)	: 33.5
G/T, beam edge (dB/K)	: -1.0	EIRP, beam edge (dBW)	: 29.5
G/T, toward Tx ES (dB/K)	: -1.0	EIRP, toward Rx ES (dBW)	: 29.5
SFD, beam edge (dBW/m2)	: -89.1		
SFD, toward Tx ES (dBW/m2)	: -89.1		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB)	: 0	Nominal Uplink Co-Chan C/I (dB)	: 27.0
Input Backoff (dB)	: 0.0	Nominal Dnlink Co-Chan C/I (dB)	: 27.0
Output Backoff (dB)	: *	Minimum Uplink Rain Margin (dB)	: 0.0
(C/Im) - Nominal (dB)	: *	Actual Uplink Rain Margin (dB)	: n/a
Min. System Margin (dB)	: 1.0	Uplink Power Control Margin (dB)	: .0
Max No Carriers / Trans	: 1	Minimum Dnlink Rain Margin (dB)	: 0.0
		Actual Dnlink Rain Margin (dB)	: n/a
		Dnlink Pointing Error (dB)	: 0.5

-- ADJACENT SATELLITE INTERFERENCE ----- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg)	:	52.85E	56.85E
Uplink Interference (dB or dBW/Hz)	:	-38.7	-38.7
Uplink Polarization Advantage (dB)	:	0.0	0.0
Downlink Interference (dB or dBW/Hz)	:	-34.7	-34.7
Downlink Polarization Advantage (dB)	:	0.0	0.0
Rx E/S Topocentric Angle (deg)	:	2.09	2.09
Rx E/S Pointing Error (deg)	:	-0.24	0.24
Rx E/S Off-Axis Angle (deg)	:	1.85	2.33
Rx E/S Adj. Sat. Discrimination (dB)	:	21.1	23.6

----- CARRIER PARAMETERS -----

Modem Type	: NTC26%	C/N (operating, dB)	: 3.36
Modulation	: QPSK	Eb/No (operating, dB)	: 4.2
Code Rate	: 1/2x188/204-V	C/N (threshold, dB)	: 3.36
Info Rate (kbps)	: 27981	Eb/No (threshold, dB)	: 4.2
Occupied Bandwidth (kHz)	: 34310		
Allocated Bandwidth (kHz)	: 41000		

----- Transmit Earth Station ----- ----- Receive Earth Station -----

Location: -4_dB_Gain_Contour	Location: -4_dB_Gain_Contour
Latitude (deg): *	Latitude (deg): *
Longitude (deg): *	Longitude (deg): *
Rain Rate (mm/hr): 42*	Rain Rate (mm/hr): 42*
E/S Type or Model No:	E/S Type or Model No:
E/S Manufacturer : STANDARD	E/S Manufacturer : STANDARD
E/S Diam. (m): 7.0	E/S Diam. (m): 4.5
E/S Freq (nom, GHz): 6.175	E/S Freq (nom, GHz): 3.95
E/S Tx Gain (dBi): 51.0	E/S Gain (nom, dBi): 43.9
ULPC Margin (dB): .0	E/S Feed Loss (dB): 0.20
	E/S Ant. Temp(deg K): 25
	E/S LNA Temp (deg K): 65
	E/S G/T (nom, dB/K): *

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SATELLITE DATA	Satellite : IS-706 Uplink Beam: CSPOT Uplink POL: , Dnlink POL: , EIRP, beam center: 33.5 dBW G/T:-1.0 dB/K, SFD:-77.1 dBW/m2 Dnlink EIRP: 29.5 dBW	Location: 54.85E Dnlink Beam: CSPOT		
TRANSPONDER DATA	Trans Bandwidth :41.0 MHz Uplink Frequency:6.175 GHz IBO (Nominal) : 8.2 dB	Trans Type: LTWTA Dnlink Freq: 3.950 GHz OBO (Nominal): 3.5 dB		
CARRIER DATA	Type: EF9000, Info Rate: 6000 kbps, Mod: QPSK, 1/2x188/204- BWo: 6771.1kHz, BWa: 10300kHz, C/N: 3.87dB, C/N_thresh: 3.5			
LINK BUDGET				
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	71.2	n/a	n/a
	- Uplink Path Loss, clear sky (dB)	-200.2	n/a	n/a
	- Uplink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Satellite G/T (dB/K)	-1.0	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-68.3	n/a	n/a
	C/N Uplink (dB)	30.3	n/a	n/a
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	29.5	n/a	n/a
	- Carrier Output Backoff (dB)	-9.9	n/a	n/a
	Downlink EIRP per carrier (dBW)	19.6	n/a	n/a
	- Earth Station Pointing Error (dB)	-.5	n/a	n/a
	- Downlink Path Loss, clear sky (dB)	-196.3	n/a	n/a
	- Downlink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Earth Station G/T (dB/K)	26.2	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-68.3	n/a	n/a
	C/N Dnlink (dB)	9.3	n/a	n/a
COMPOSITE PERFORMANCE	C/N Uplink (dB)	30.3	n/a	n/a
	C/N Dnlink (dB)	9.3	n/a	n/a
	C/I Intermod (dB)	18.0	n/a	n/a
	C/I Uplink Co-channel (dB)	26.6	n/a	n/a
	C/I Dnlink Co-Channel (dB)	26.6	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-1) (dB)	19.6	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	10.0	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-2) (dB)	19.6	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	11.9	n/a	n/a
	C/(N+I) COMPOSITE (dB)	4.9	n/a	n/a
- Required System Margin (dB)	-1.0	n/a	n/a	
Net C/(N+I) COMPOSITE (dB)	3.9	n/a	n/a	
- Minimum Required C/N (dB)	-3.9	n/a	n/a	
Excess Link Margin (dB)	0.0	n/a	n/a	
TRANSPONDER UTILIZATION	% BW/CARR: 25.12, % PWR/CARR: 22.95, Max No. Carriers: 4.0 Downlink EIRP per carrier toward beam center: 23.6 dBW			
TRANSMIT EARTH STATION	Loc: -4 dB Gain Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 104.9 watts			
RECEIVE EARTH STA.	Loc: -4 dB Gain Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr			
DENSITY INFORMATION	Uplink Pwr Den: -48.1 dBW/Hz, Dnlink EIRP Den: -44.7 dBW/Hz Max Dnlink PFD: -171.6 dB(W/m2/4kHz) @ Beam Center			
LOSS IN C/(N+I) DUE TO ADJ SAT INTF: SAT-1 = 1.8dB, SAT-2 = 1.2dB				

CSPOT-GLOBAL (41 MHz): 10M3G7W
[Input Data]

----- SATELLITE -----

Satellite Name	: IS-706	Location (deg)	: 54.85E
Uplink Beam	: CSPOT	Dnlink Beam	: CSPOT
Trans. BW (MHz)	: 41.0 MHz	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency (GHz)	: 6.175	Dnlink Frequency (GHz)	: 3.950
G/T, beam center (dB/K)	: 3.0	EIRP, beam center (dBW)	: 33.5
G/T, beam edge (dB/K)	: -1.0	EIRP, beam edge (dBW)	: 29.5
G/T, toward Tx ES (dB/K)	: -1.0	EIRP, toward Rx ES (dBW)	: 29.5
SFD, beam edge (dBW/m2)	: -77.1		
SFD, toward Tx ES (dBW/m2)	: -77.1		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB)	: 12	Nominal Uplink Co-Chan C/I (dB)	: 27.0
Input Backoff (dB)	: 8.2*	Nominal Dnlink Co-Chan C/I (dB)	: 27.0
Output Backoff (dB)	: *	Minimum Uplink Rain Margin (dB)	: 0.0
(C/Im) - Nominal (dB)	: *	Actual Uplink Rain Margin (dB)	: n/a
Min. System Margin (dB)	: 1.0	Uplink Power Control Margin (dB)	: .0
Max No Carriers / Trans:	: *	Minimum Dnlink Rain Margin (dB)	: 0.0
		Actual Dnlink Rain Margin (dB)	: n/a
		Dnlink Pointing Error (dB)	: 0.5

-- ADJACENT SATELLITE INTERFERENCE ----- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg)	:	52.85E	56.85E
Uplink Interference (dB or dBW/Hz)	:	-38.7	-38.7
Uplink Polarization Advantage (dB)	:	0.0	0.0
Downlink Interference (dB or dBW/Hz)	:	-34.7	-34.7
Downlink Polarization Advantage (dB)	:	0.0	0.0
Rx E/S Topocentric Angle (deg)	:	2.09	2.09
Rx E/S Pointing Error (deg)	:	-0.18	0.18
Rx E/S Off-Axis Angle (deg)	:	1.91	2.27
Rx E/S Adj. Sat. Discrimination (dB)	:	24.0	25.9

----- CARRIER PARAMETERS -----

Modem Type	: EF9000	C/N (operating, dB)	: 3.87
Modulation	: QPSK	Eb/No (operating, dB)	: 4.4
Code Rate	: 1/2x188/204-V	C/N (threshold, dB)	: 3.57
Info Rate (kbps)	: 6000	Eb/No (threshold, dB)	: 4.1
Occupied Bandwidth (kHz)	: 6771.1		
Allocated Bandwidth (kHz)	: 10300		

----- Transmit Earth Station ----- ----- Receive Earth Station -----

Location: -4_dB_Gain_Contour	Location: -4_dB_Gain_Contour
Latitude (deg): *	Latitude (deg): *
Longitude (deg): *	Longitude (deg): *
Rain Rate (mm/hr): 42*	Rain Rate (mm/hr): 42*
E/S Type or Model No:	E/S Type or Model No:
E/S Manufacturer : STANDARD	E/S Manufacturer : STANDARD
E/S Diam. (m): 7.0	E/S Diam. (m): 6.1
E/S Freq (nom, GHz): 6.175	E/S Freq (nom, GHz): 3.95
E/S Tx Gain (dBi): 51.0	E/S Gain (nom, dBi): 46.5
ULPC Margin (dB): .0	E/S Feed Loss (dB): 0.20
	E/S Ant. Temp(deg K): 25
	E/S LNA Temp (deg K): 65
	E/S G/T (nom, dB/K): *

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SATELLITE DATA	Satellite : IS-706 Uplink Beam: CSPOT Uplink POL: , Dnlink POL: , EIRP, beam center: 33.5 dBW G/T:-1.0 dB/K, SFD:-77.1 dBW/m2 Dnlink EIRP: 29.5 dBW	Location: 54.85E Dnlink Beam: CSPOT		
TRANSPONDER DATA	Trans Bandwidth :41.0 MHz Uplink Frequency:6.175 GHz IBO (Nominal) : 8.2 dB	Trans Type: LTWTA Dnlink Freq: 3.950 GHz OBO (Nominal): 3.5 dB		
CARRIER DATA	Type: CS701, Info Rate: 64 kbps, Mod: QPSK, 1/2x239/256-V BWo: 75.4kHz, BWa: 100kHz, C/N: 2.99dB, C/N_thresh: 2.79dB			
LINK BUDGET				
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	53.2	n/a	n/a
	- Uplink Path Loss, clear sky (dB)	-200.2	n/a	n/a
	- Uplink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Satellite G/T (dB/K)	-1.0	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-48.8	n/a	n/a
C/N Uplink (dB)		31.8	n/a	n/a
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	29.5	n/a	n/a
	- Carrier Output Backoff (dB)	-27.9	n/a	n/a
	Downlink EIRP per carrier (dBW)	1.6	n/a	n/a
	- Earth Station Pointing Error (dB)	-.5	n/a	n/a
	- Downlink Path Loss, clear sky (dB)	-196.3	n/a	n/a
	- Downlink Rain Attenuation (dB)	0.0	n/a	n/a
+ Earth Station G/T (dB/K)		23.6	n/a	n/a
- Boltzman's Constant (dBW/K-Hz)		228.6	n/a	n/a
- Carrier Noise Bandwidth (dB-Hz)		-48.8	n/a	n/a
C/N Dnlink (dB)		8.2	n/a	n/a
COMPOSITE PERFORMANCE	C/N Uplink (dB)	31.8	n/a	n/a
	C/N Dnlink (dB)	8.2	n/a	n/a
	C/I Intermod (dB)	19.6	n/a	n/a
	C/I Uplink Co-channel (dB)	28.7	n/a	n/a
	C/I Dnlink Co-Channel (dB)	28.7	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-1) (dB)	21.1	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	8.6	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-2) (dB)	21.1	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	11.1	n/a	n/a
	C/(N+I) COMPOSITE (dB)		4.0	n/a
- Required System Margin (dB)		-1.0	n/a	n/a
Net C/(N+I) COMPOSITE (dB)		3.0	n/a	n/a
- Minimum Required C/N (dB)		-3.0	n/a	n/a
Excess Link Margin (dB)		0.0	n/a	n/a
TRANSPONDER UTILIZATION	% BW/CARR: 0.24, % PWR/CARR: 0.36, Max No. Carriers: 276.3 Downlink EIRP per carrier toward beam center: 5.6 dBW			
TRANSMIT EARTH STATION	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 1.7 watts			
RECEIVE EARTH STA.	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr			
DENSITY INFORMATION	Uplink Pwr Den: -46.6 dBW/Hz, Dnlink EIRP Den: -43.2 dBW/Hz Max Dnlink PFD: -170.1 dB(W/m2/4kHz) @ Beam Center			
LOSS IN C/(N+I) DUE TO ADJ SAT INTF: SAT-1 = 2.0dB, SAT-2 = 1.1dB				

CSPOT-GLOBAL (41 MHZ): 100KG7W
[Input Data]

----- SATELLITE -----

Satellite Name	: IS-706	Location (deg)	: 54.85E
Uplink Beam	: CSPOT	Dnlink Beam	: CSPOT
Trans. BW (MHz)	: 41.0 MHz	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency (GHz)	: 6.175	Dnlink Frequency (GHz)	: 3.950
G/T, beam center (dB/K)	: 3.0	EIRP, beam center (dBW)	: 33.5
G/T, beam edge (dB/K)	: -1.0	EIRP, beam edge (dBW)	: 29.5
G/T, toward Tx ES (dB/K)	: -1.0	EIRP, toward Rx ES (dBW)	: 29.5
SFD, beam edge (dBW/m2)	: -77.1		
SFD, toward Tx ES (dBW/m2)	: -77.1		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB)	: 12	Nominal Uplink Co-Chan C/I (dB)	: 27.0
Input Backoff (dB)	: 8.2*	Nominal Dnlink Co-Chan C/I (dB)	: 27.0
Output Backoff (dB)	: *	Minimum Uplink Rain Margin (dB)	: 0.0
(C/Im) - Nominal (dB)	: *	Actual Uplink Rain Margin (dB)	: n/a
Min. System Margin (dB)	: 1.0	Uplink Power Control Margin (dB)	: .0
Max No Carriers / Trans:	: *	Minimum Dnlink Rain Margin (dB)	: 0.0
		Actual Dnlink Rain Margin (dB)	: n/a
		Dnlink Pointing Error (dB)	: 0.5

-- ADJACENT SATELLITE INTERFERENCE ----- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg)	:	52.85E	56.85E
Uplink Interference (dB or dBW/Hz)	:	-38.7	-38.7
Uplink Polarization Advantage (dB)	:	0.0	0.0
Downlink Interference (dB or dBW/Hz)	:	-34.7	-34.7
Downlink Polarization Advantage (dB)	:	0.0	0.0
Rx E/S Topocentric Angle (deg)	:	2.09	2.09
Rx E/S Pointing Error (deg)	:	-0.24	0.24
Rx E/S Off-Axis Angle (deg)	:	1.85	2.33
Rx E/S Adj. Sat. Discrimination (dB)	:	21.1	23.6

----- CARRIER PARAMETERS -----

Modem Type	: CS701	C/N (operating, dB)	: 2.99
Modulation	: QPSK	Eb/No (operating, dB)	: 3.7
Code Rate	: 1/2x239/256-V	C/N (threshold, dB)	: 2.79
Info Rate (kbps)	: 64	Eb/No (threshold, dB)	: 3.5
Occupied Bandwidth (kHz)	: 75.4		
Allocated Bandwidth (kHz)	: 100		

----- Transmit Earth Station ----- ----- Receive Earth Station -----

Location: -4_dB_Gain_Contour	Location: -4_dB_Gain_Contour
Latitude (deg): *	Latitude (deg): *
Longitude (deg): *	Longitude (deg): *
Rain Rate (mm/hr): 42*	Rain Rate (mm/hr): 42*
E/S Type or Model No:	E/S Type or Model No:
E/S Manufacturer : STANDARD	E/S Manufacturer : STANDARD
E/S Diam. (m): 7.0	E/S Diam. (m): 4.5
E/S Freq (nom, GHz): 6.175	E/S Freq (nom, GHz): 3.95
E/S Tx Gain (dBi): 51.0	E/S Gain (nom, dBi): 43.9
ULPC Margin (dB): .0	E/S Feed Loss (dB): 0.20
	E/S Ant. Temp(deg K): 25
	E/S LNA Temp (deg K): 65
	E/S G/T (nom, dB/K): *

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SATELLITE DATA	Satellite : IS-706 Uplink Beam: CSPOT Uplink POL: , Dnlink POL: , EIRP, beam center: 36.6 dBW G/T:-1.0 dB/K, SFD:-75.1 dBW/m2 Dnlink EIRP: 32.6 dBW	Location: 54.85E Dnlink Beam: HEMI		
TRANSPONDER DATA	Trans Bandwidth :36.0 MHz Uplink Frequency:6.175 GHz IBO (Nominal) : 8.8 dB	Trans Type: LTWTA Dnlink Freq: 3.950 GHz OBO (Nominal): 3.0 dB		
CARRIER DATA	Type: TV/FM, Format: PAL, PreEmphasis+Weighting: 15.6dB RF BW: 30.0 MHz, P-Dev: 9.0 MHz, VideoBW: 6.0 MHz,			
LINK BUDGET				
		CLR SKY	UP FADE	DN FADE
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	79.0	n/a	n/a
	- Uplink Path Loss, clear sky (dB)	-200.2	n/a	n/a
	- Uplink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Satellite G/T (dB/K)	-1.0	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-74.8	n/a	n/a
	C/N Uplink (dB)	31.6	n/a	n/a
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	32.6	n/a	n/a
	- Carrier Output Backoff (dB)	-3.0	n/a	n/a
	Downlink EIRP per carrier (dBW)	29.6	n/a	n/a
	- Earth Station Pointing Error (dB)	- .5	n/a	n/a
	- Downlink Path Loss, clear sky (dB)	-196.3	n/a	n/a
	- Downlink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Earth Station G/T (dB/K)	29.4	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-74.8	n/a	n/a
	C/N Dnlink (dB)	16.0	n/a	n/a
COMPOSITE PERFORMANCE	C/N Uplink (dB)	31.6	n/a	n/a
	C/N Dnlink (dB)	16.0	n/a	n/a
	C/I Uplink Co-channel (dB)	27.8	n/a	n/a
	C/I Dnlink Co-Channel (dB)	27.8	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-1) (dB)	20.9	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	17.2	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-2) (dB)	20.9	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	18.4	n/a	n/a
	C/(N+I) COMPOSITE (dB)	11.0	n/a	n/a
	- Required System Margin (dB)	-1.0	n/a	n/a
	Net C/(N+I) COMPOSITE (dB)	10.0	n/a	n/a
- Minimum Required C/N (dB)	-10.0	n/a	n/a	
	Excess Link Margin (dB)	0.0	n/a	n/a
	Video Signal-to-Noise Ratio (dB)	43.9	n/a	n/a
	Audio Signal-to-Noise Ratio (dB)	57.7	n/a	n/a
TRANSMIT EARTH STATION	Loc: -4 dB Gain Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 308.9 watts			
RECEIVE EARTH STA.	Loc: -4 dB Gain Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr			
DENSITY INFORMATION	Uplink Pwr Den: -49.9 dBW/Hz, Dnlink EIRP Den: -41.2 dBW/Hz Max Dnlink PFD: -168.1 dB(W/m2/4kHz) @ Beam Center			
LOSS IN C/(N+I) DUE TO ADJ SAT INTF: SAT-1 = 1.8dB, SAT-2 = 1.5dB				

CSPOT-HEMI (36 MHz): 30M0F3F
[Input Data]

----- SATELLITE -----

Satellite Name	: IS-706	Location (deg)	: 54.85E
Uplink Beam	: CSPOT	Dnlink Beam	: HEMI
Trans. BW (MHz)	: 36.0 MHz	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency (GHz)	: 6.175	Dnlink Frequency (GHz)	: 3.950
G/T, beam center (dB/K)	: 3.0	EIRP, beam center (dBW)	: 36.6
G/T, beam edge (dB/K)	: -1.0	EIRP, beam edge (dBW)	: 32.6
G/T, toward Tx ES (dB/K)	: -1.0	EIRP, toward Rx ES (dBW)	: 32.6
SFD, beam edge (dBW/m2)	: -75.1		
SFD, toward Tx ES (dBW/m2)	: -75.1		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB)	: 14	Nominal Uplink Co-Chan C/I (dB)	: 27.0
Input Backoff (dB)	: 9, 8.8	Nominal Dnlink Co-Chan C/I (dB)	: 27.0
Output Backoff (dB)	: *	Minimum Uplink Rain Margin (dB)	: 0.0
(C/Im) - Nominal (dB)	: *	Actual Uplink Rain Margin (dB)	: n/a
Min. System Margin (dB)	: 1.0	Uplink Power Control Margin (dB)	: .0
Max No Carriers / Trans:	: 1	Minimum Dnlink Rain Margin (dB)	: 0.0
		Actual Dnlink Rain Margin (dB)	: n/a
		Dnlink Pointing Error (dB)	: 0.5

-- ADJACENT SATELLITE INTERFERENCE ----- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg)	:	52.85E	56.85E
Uplink Interference (dB or dBW/Hz)	:	-38.7	-38.7
Uplink Polarization Advantage (dB)	:	0.0	0.0
Downlink Interference (dB or dBW/Hz)	:	-34.2	-34.2
Downlink Polarization Advantage (dB)	:	0.0	0.0
Rx E/S Topocentric Angle (deg)	:	2.09	2.09
Rx E/S Pointing Error (deg)	:	-0.12	0.12
Rx E/S Off-Axis Angle (deg)	:	1.97	2.21
Rx E/S Adj. Sat. Discrimination (dB)	:	28.2	29.4

----- TV/FM CARRIER PARAMETERS -----

Video Format	: PAL	Peak Deviation (MHz)	: 9.0
RF Noise BW (MHz)	: 30.0	PreEmphasis+Weighting (dB)	: 15.6
Video BW (MHz)	: 6.0	Threshold C/N (dB)	: 10.0

----- AUDIO SUB-CARRIER PARAMETERS -----

Sub-Carrier Freq (MHz)	: 6.6	Highest Audio Freq (kHz)	: 15.0
P-Dev of Video by Audio (MHz)	: 2.0	Companding Advantage (dB)	: 0.0
Peak Dev of Audio (kHz)	: 75.0		

----- Transmit Earth Station ----- ----- Receive Earth Station -----

Location: -4_dB_Gain_Contour		Location: -4_dB_Gain_Contour	
Latitude (deg): *		Latitude (deg): *	
Longitude (deg): *		Longitude (deg): *	
Rain Rate (mm/hr): 42*		Rain Rate (mm/hr): 42*	
E/S Type or Model No:		E/S Type or Model No:	
E/S Manufacturer : STANDARD		E/S Manufacturer : STANDARD	
E/S Diam. (m): 10.0		E/S Diam. (m): 9.2	
E/S Freq (nom, GHz): 6.175		E/S Freq (nom, GHz): 3.95	
E/S Tx Gain (dBi): 54.1		E/S Gain (nom, dBi): 50.3	
ULPC Margin (dB): .0		E/S Feed Loss (dB): 0.15	
		E/S Ant. Temp (deg K): 45	
		E/S LNA Temp (deg K): 65	
		E/S G/T (nom, dB/K): *	

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SATELLITE DATA	Satellite : IS-706 Uplink Beam: CSPOT Uplink POL: , Dnlink POL: , EIRP, beam center: 36.6 dBW G/T:-1.0 dB/K, SFD:-89.1 dBW/m2	Location: 54.85E Dnlink Beam: HEMI Dnlink EIRP: 32.6 dBW		
TRANSPONDER DATA	Trans Bandwidth :36.0 MHz Uplink Frequency:6.175 GHz IBO (Nominal) : 0.0 dB	Trans Type: LTWTA Dnlink Freq: 3.950 GHz OBO (Nominal): 0.0 dB		
CARRIER DATA	Type: NTC26%, Info Rate: 24575 kbps, Mod: QPSK, 1/2x188/204 BWo: 30133kHz, BWa: 36000kHz, C/N: 3.36dB, C/N_thresh: 3.36			
LINK BUDGET				
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	73.8	n/a	n/a
	- Uplink Path Loss, clear sky (dB)	-200.2	n/a	n/a
	- Uplink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Satellite G/T (dB/K)	-1.0	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-74.8	n/a	n/a
	C/N Uplink (dB)	26.4	n/a	n/a
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	32.6	n/a	n/a
	- Carrier Output Backoff (dB)	0.0	n/a	n/a
	Downlink EIRP per carrier (dBW)	32.6	n/a	n/a
	- Earth Station Pointing Error (dB)	-.5	n/a	n/a
	- Downlink Path Loss, clear sky (dB)	-196.3	n/a	n/a
	- Downlink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Earth Station G/T (dB/K)	21.0	n/a	n/a
- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a	
- Carrier Noise Bandwidth (dB-Hz)	-74.8	n/a	n/a	
	C/N Dnlink (dB)	10.6	n/a	n/a
COMPOSITE PERFORMANCE	C/N Uplink (dB)	26.4	n/a	n/a
	C/N Dnlink (dB)	10.6	n/a	n/a
	C/I Uplink Co-channel (dB)	27.0	n/a	n/a
	C/I Dnlink Co-Channel (dB)	27.0	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-1) (dB)	15.7	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	8.3	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-2) (dB)	15.7	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	13.1	n/a	n/a
	C/(N+I) COMPOSITE (dB)	4.7	n/a	n/a
	- Required System Margin (dB)	-1.0	n/a	n/a
	Net C/(N+I) COMPOSITE (dB)	3.7	n/a	n/a
- Minimum Required C/N (dB)	-3.4	n/a	n/a	
	Excess Link Margin (dB)	.3	n/a	n/a
TRANSPONDER UTILIZATION	% BW/CARR: 100.00, % PWR/CARR: 100.00, Max No. Carriers: 1.0 Downlink EIRP per carrier toward beam center: 36.6 dBW			
TRANSMIT EARTH STATION	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 190.5 watts			
RECEIVE EARTH STA.	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr			
DENSITY INFORMATION	Uplink Pwr Den: -52.0 dBW/Hz, Dnlink EIRP Den: -38.2 dBW/Hz Max Dnlink PFD: -165.1 dB(W/m2/4kHz) @ Beam Center			
LOSS IN C/(N+I) DUE TO ADJ SAT INTF: SAT-1 = 3.1dB, SAT-2 = 1.1dB				

CSPOT-HEMI (36 MHz): 36M0G7W
[Input Data]

----- SATELLITE -----

Satellite Name	: IS-706	Location (deg)	: 54.85E
Uplink Beam	: CSPOT	Dnlink Beam	: HEMI
Trans. BW (MHz)	: 36.0 MHz	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency (GHz)	: 6.175	Dnlink Frequency (GHz)	: 3.950
G/T, beam center (dB/K)	: 3.0	EIRP, beam center (dBW)	: 36.6
G/T, beam edge (dB/K)	: -1.0	EIRP, beam edge (dBW)	: 32.6
G/T, toward Tx ES (dB/K)	: -1.0	EIRP, toward Rx ES (dBW)	: 32.6
SFD, beam edge (dBW/m2)	: -89.1		
SFD, toward Tx ES (dBW/m2)	: -89.1		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB)	: 0	Nominal Uplink Co-Chan C/I (dB)	: 27.0
Input Backoff (dB)	: 0.0	Nominal Dnlink Co-Chan C/I (dB)	: 27.0
Output Backoff (dB)	: *	Minimum Uplink Rain Margin (dB)	: 0.0
(C/Im) - Nominal (dB)	: *	Actual Uplink Rain Margin (dB)	: n/a
Min. System Margin (dB)	: 1.0	Uplink Power Control Margin (dB)	: .0
Max No Carriers / Trans:	1	Minimum Dnlink Rain Margin (dB)	: 0.0
		Actual Dnlink Rain Margin (dB)	: n/a
		Dnlink Pointing Error (dB)	: 0.5

----- ADJACENT SATELLITE INTERFERENCE ----- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg)	:	52.85E	56.85E
Uplink Interference (dB or dBW/Hz)	:	-38.7	-38.7
Uplink Polarization Advantage (dB)	:	0.0	0.0
Downlink Interference (dB or dBW/Hz)	:	-34.2	-34.2
Downlink Polarization Advantage (dB)	:	0.0	0.0
Rx E/S Topocentric Angle (deg)	:	2.09	2.09
Rx E/S Pointing Error (deg)	:	-0.31	0.31
Rx E/S Off-Axis Angle (deg)	:	1.78	2.40
Rx E/S Adj. Sat. Discrimination (dB)	:	16.3	21.1

----- CARRIER PARAMETERS -----

Modem Type	: NTC26%	C/N (operating, dB)	: 3.36
Modulation	: QPSK	Eb/No (operating, dB)	: 4.2
Code Rate	: 1/2x188/204-V	C/N (threshold, dB)	: 3.36
Info Rate (kbps)	: 24575	Eb/No (threshold, dB)	: 4.2
Occupied Bandwidth (kHz)	: 30133		
Allocated Bandwidth (kHz)	: 36000		

----- Transmit Earth Station -----

Location: -4_dB_Gain_Contour
Latitude (deg): *
Longitude (deg): *
Rain Rate (mm/hr): 42*
E/S Type or Model No:
E/S Manufacturer : STANDARD
E/S Diam. (m): 7.0
E/S Freq (nom, GHz): 6.175
E/S Tx Gain (dBi): 51.0
ULPC Margin (dB): .0

----- Receive Earth Station -----

Location: -4_dB_Gain_Contour
Latitude (deg): *
Longitude (deg): *
Rain Rate (mm/hr): 42*
E/S Type or Model No:
E/S Manufacturer : STANDARD
E/S Diam. (m): 3.5
E/S Freq (nom, GHz): 3.95
E/S Gain (nom, dBi): 41.1
E/S Feed Loss (dB): 0.15
E/S Ant. Temp (deg K): 25
E/S LNA Temp (deg K): 65
E/S G/T (nom, dB/K): *

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SATELLITE DATA	Satellite : IS-706 Uplink Beam: CSPOT Uplink POL: , Dnlink POL: , EIRP, beam center: 36.6 dBW G/T:-1.0 dB/K, SFD:-84.1 dBW/m2 Dnlink EIRP: 32.6 dBW	Location: 54.85E Dnlink Beam: HEMI		
TRANSPONDER DATA	Trans Bandwidth :36.0 MHz Uplink Frequency:6.175 GHz IBO (Nominal) : 8.2 dB	Trans Type: LTWTA Dnlink Freq: 3.950 GHz OBO (Nominal): 3.5 dB		
CARRIER DATA	Type: EF9000, Info Rate: 6000 kbps, Mod: QPSK, 1/2x188/204- BWo: 6771.1kHz, BWa: 10300kHz, C/N: 3.87dB, C/N_thresh: 3.5			
LINK BUDGET				
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	65.2	n/a	n/a
	- Uplink Path Loss, clear sky (dB)	-200.2	n/a	n/a
	- Uplink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Satellite G/T (dB/K)	-1.0	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-68.3	n/a	n/a
	C/N Uplink (dB)	24.3	n/a	n/a
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	32.6	n/a	n/a
	- Carrier Output Backoff (dB)	-8.9	n/a	n/a
	Downlink EIRP per carrier (dBW)	23.7	n/a	n/a
	- Earth Station Pointing Error (dB)	- .5	n/a	n/a
	- Downlink Path Loss, clear sky (dB)	-196.3	n/a	n/a
	- Downlink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Earth Station G/T (dB/K)	23.6	n/a	n/a
- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a	
- Carrier Noise Bandwidth (dB-Hz)	-68.3	n/a	n/a	
C/N Dnlink (dB)	10.8	n/a	n/a	
COMPOSITE PERFORMANCE	C/N Uplink (dB)	24.3	n/a	n/a
	C/N Dnlink (dB)	10.8	n/a	n/a
	C/I Intermod (dB)	18.5	n/a	n/a
	C/I Uplink Co-channel (dB)	27.1	n/a	n/a
	C/I Dnlink Co-Channel (dB)	27.1	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-1) (dB)	13.6	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	10.7	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-2) (dB)	13.6	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	13.2	n/a	n/a
	C/(N+I) COMPOSITE (dB)	4.9	n/a	n/a
	- Required System Margin (dB)	-1.0	n/a	n/a
Net C/(N+I) COMPOSITE (dB)	3.9	n/a	n/a	
- Minimum Required C/N (dB)	-3.9	n/a	n/a	
Excess Link Margin (dB)	0.0	n/a	n/a	
TRANSPONDER UTILIZATION	% BW/CARR: 28.61, % PWR/CARR: 29.00, Max No. Carriers: 3.4 Downlink EIRP per carrier toward beam center: 27.7 dBW			
TRANSMIT EARTH STATION	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 26.4 watts			
RECEIVE EARTH STA.	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr			
DENSITY INFORMATION	Uplink Pwr Den: -54.1 dBW/Hz, Dnlink EIRP Den: -40.6 dBW/Hz Max Dnlink PFD: -167.5 dB(W/m2/4kHz) @ Beam Center			
LOSS IN C/(N+I) DUE TO ADJ SAT INTF: SAT-1 = 2.2dB, SAT-2 = 1.4dB				

CSPOT-HEMI (36 MHz): 10M3G7W
[Input Data]

----- SATELLITE -----

Satellite Name	: IS-706	Location (deg)	: 54.85E
Uplink Beam	: CSPOT	Dnlink Beam	: HEMI
Trans. BW (MHz)	: 36.0 MHz	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency (GHz)	: 6.175	Dnlink Frequency (GHz)	: 3.950
G/T, beam center (dB/K)	: 3.0	EIRP, beam center (dBW)	: 36.6
G/T, beam edge (dB/K)	: -1.0	EIRP, beam edge (dBW)	: 32.6
G/T, toward Tx ES (dB/K)	: -1.0	EIRP, toward Rx ES (dBW)	: 32.6
SFD, beam edge (dBW/m2)	: -84.1		
SFD, toward Tx ES (dBW/m2)	: -84.1		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB)	: 5	Nominal Uplink Co-Chan C/I (dB)	: 27.0
Input Backoff (dB)	: 8.2*	Nominal Dnlink Co-Chan C/I (dB)	: 27.0
Output Backoff (dB)	: *	Minimum Uplink Rain Margin (dB)	: 0.0
(C/Im) - Nominal (dB)	: *	Actual Uplink Rain Margin (dB)	: n/a
Min. System Margin (dB)	: 1.0	Uplink Power Control Margin (dB)	: .0
Max No Carriers / Trans	: *	Minimum Dnlink Rain Margin (dB)	: 0.0
		Actual Dnlink Rain Margin (dB)	: n/a
		Dnlink Pointing Error (dB)	: 0.5

-- ADJACENT SATELLITE INTERFERENCE ----- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg)	:	52.85E	56.85E
Uplink Interference (dB or dBW/Hz)	:	-38.7	-38.7
Uplink Polarization Advantage (dB)	:	0.0	0.0
Downlink Interference (dB or dBW/Hz)	:	-34.2	-34.2
Downlink Polarization Advantage (dB)	:	0.0	0.0
Rx E/S Topocentric Angle (deg)	:	2.09	2.09
Rx E/S Pointing Error (deg)	:	-0.24	0.24
Rx E/S Off-Axis Angle (deg)	:	1.85	2.33
Rx E/S Adj. Sat. Discrimination (dB)	:	21.1	23.6

----- CARRIER PARAMETERS -----

Modem Type	: EF9000	C/N (operating, dB)	: 3.87
Modulation	: QPSK	Eb/No (operating, dB)	: 4.4
Code Rate	: 1/2x188/204-V	C/N (threshold, dB)	: 3.57
Info Rate (kbps)	: 6000	Eb/No (threshold, dB)	: 4.1
Occupied Bandwidth (kHz)	: 6771.1		
Allocated Bandwidth (kHz)	: 10300		

----- Transmit Earth Station -----

Location: -4_dB_Gain_Contour
Latitude (deg): *
Longitude (deg): *
Rain Rate (mm/hr): 42*
E/S Type or Model No:
E/S Manufacturer : STANDARD
E/S Diam. (m): 7.0
E/S Freq (nom, GHz): 6.175
E/S Tx Gain (dBi): 51.0
ULPC Margin (dB): .0

----- Receive Earth Station -----

Location: -4_dB_Gain_Contour
Latitude (deg): *
Longitude (deg): *
Rain Rate (mm/hr): 42*
E/S Type or Model No:
E/S Manufacturer : STANDARD
E/S Diam. (m): 4.5
E/S Freq (nom, GHz): 3.95
E/S Gain (nom, dBi): 43.9
E/S Feed Loss (dB): 0.20
E/S Ant. Temp(deg K): 25
E/S LNA Temp (deg K): 65
E/S G/T (nom, dB/K): *

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SATELLITE DATA	Satellite : IS-706 Uplink Beam: CSPOT Uplink POL: , Dnlink POL: , EIRP, beam center: 36.6 dBW G/T:-1.0 dB/K, SFD:-84.1 dBW/m2 Dnlink EIRP: 32.6 dBW	Location: 54.85E Dnlink Beam: HEMI		
TRANSPONDER DATA	Trans Bandwidth :36.0 MHz Uplink Frequency:6.175 GHz IBO (Nominal) : 8.2 dB	Trans Type: LTWTA Dnlink Freq: 3.950 GHz OBO (Nominal): 3.5 dB		
CARRIER DATA	Type: CS701, Info Rate: 64 kbps, Mod: QPSK, 1/2x239/256-V Bwo: 75.4kHz, Bwa: 100kHz, C/N: 2.99dB, C/N_thresh: 2.79dB			
LINK BUDGET				
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	46.8	n/a	n/a
	- Uplink Path Loss, clear sky (dB)	-200.2	n/a	n/a
	- Uplink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Satellite G/T (dB/K)	-1.0	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-48.8	n/a	n/a
	C/N Uplink (dB)	25.4	n/a	n/a
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	32.6	n/a	n/a
	- Carrier Output Backoff (dB)	-27.3	n/a	n/a
	Downlink EIRP per carrier (dBW)	5.3	n/a	n/a
	- Earth Station Pointing Error (dB)	-.5	n/a	n/a
	- Downlink Path Loss, clear sky (dB)	-196.3	n/a	n/a
	- Downlink Rain Attenuation (dB)	0.0	n/a	n/a
	+ Earth Station G/T (dB/K)	20.9	n/a	n/a
	- Boltzman's Constant (dBW/K-Hz)	228.6	n/a	n/a
	- Carrier Noise Bandwidth (dB-Hz)	-48.8	n/a	n/a
	C/N Dnlink (dB)	9.2	n/a	n/a
COMPOSITE PERFORMANCE	C/N Uplink (dB)	25.4	n/a	n/a
	C/N Dnlink (dB)	9.2	n/a	n/a
	C/I Intermod (dB)	19.6	n/a	n/a
	C/I Uplink Co-channel (dB)	28.8	n/a	n/a
	C/I Dnlink Co-Channel (dB)	28.8	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-1) (dB)	14.8	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	8.8	n/a	n/a
	C/I Uplink Adj. Sat. (SAT-2) (dB)	14.8	n/a	n/a
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	11.9	n/a	n/a
	C/(N+I) COMPOSITE (dB)	4.0	n/a	n/a
	- Required System Margin (dB)	-1.0	n/a	n/a
	Net C/(N+I) COMPOSITE (dB)	3.0	n/a	n/a
	- Minimum Required C/N (dB)	-3.0	n/a	n/a
	Excess Link Margin (dB)	0.0	n/a	n/a
TRANSPONDER UTILIZATION	% BW/CARR: 0.28, % PWR/CARR: 0.42, Max No. Carriers: 237.9 Downlink EIRP per carrier toward beam center: 9.3 dBW			
TRANSMIT EARTH STATION	Loc: -4 dB Gain Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 0.4 watts			
RECEIVE EARTH STA.	Loc: -4 dB Gain Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr			
DENSITY INFORMATION	Uplink Pwr Den: -52.9 dBW/Hz, Dnlink EIRP Den: -39.5 dBW/Hz Max Dnlink PFD: -166.4 dB(W/m2/4kHz) @ Beam Center			
LOSS IN C/(N+I) DUE TO ADJ SAT INTF: SAT-1 = 2.3dB, SAT-2 = 1.2dB				

CSPOT-HEMI (36 MHz): 100KG7W
[Input Data]

----- SATELLITE -----

Satellite Name	: IS-706	Location (deg)	: 54.85E
Uplink Beam	: CSPOT	Dnlink Beam	: HEMI
Trans. BW (MHz)	: 36.0 MHz	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency (GHz)	: 6.175	Dnlink Frequency (GHz)	: 3.950
G/T, beam center (dB/K)	: 3.0	EIRP, beam center (dBW)	: 36.6
G/T, beam edge (dB/K)	: -1.0	EIRP, beam edge (dBW)	: 32.6
G/T, toward Tx ES (dB/K)	: -1.0	EIRP, toward Rx ES (dBW)	: 32.6
SFD, beam edge (dBW/m2)	: -84.1		
SFD, toward Tx ES (dBW/m2)	: -84.1		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB)	: 5	Nominal Uplink Co-Chan C/I (dB)	: 27.0
Input Backoff (dB)	: 8.2*	Nominal Dnlink Co-Chan C/I (dB)	: 27.0
Output Backoff (dB)	: *	Minimum Uplink Rain Margin (dB)	: 0.0
(C/Im) - Nominal (dB)	: *	Actual Uplink Rain Margin (dB)	: n/a
Min. System Margin (dB)	: 1.0	Uplink Power Control Margin (dB)	: .0
Max No Carriers / Trans	: *	Minimum Dnlink Rain Margin (dB)	: 0.0
		Actual Dnlink Rain Margin (dB)	: n/a
		Dnlink Pointing Error (dB)	: 0.5

-- ADJACENT SATELLITE INTERFERENCE ----- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg)	:	52.85E	56.85E
Uplink Interference (dB or dBW/Hz)	:	-38.7	-38.7
Uplink Polarization Advantage (dB)	:	0.0	0.0
Downlink Interference (dB or dBW/Hz)	:	-34.2	-34.2
Downlink Polarization Advantage (dB)	:	0.0	0.0
Rx E/S Topocentric Angle (deg)	:	2.09	2.09
Rx E/S Pointing Error (deg)	:	-0.29	0.29
Rx E/S Off-Axis Angle (deg)	:	1.80	2.38
Rx E/S Adj. Sat. Discrimination (dB)	:	18.1	21.1

----- CARRIER PARAMETERS -----

Modem Type	: CS701	C/N (operating, dB)	: 2.99
Modulation	: QPSK	Eb/No (operating, dB)	: 3.7
Code Rate	: 1/2x239/256-V	C/N (threshold, dB)	: 2.79
Info Rate (kbps)	: 64	Eb/No (threshold, dB)	: 3.5
Occupied Bandwidth (kHz)	: 75.4		
Allocated Bandwidth (kHz)	: 100		

----- Transmit Earth Station -----

Location: -4_dB_Gain_Contour
Latitude (deg): *
Longitude (deg): *
Rain Rate (mm/hr): 42*
E/S Type or Model No:
E/S Manufacturer : STANDARD
E/S Diam. (m): 7.0
E/S Freq (nom, GHz): 6.175
E/S Tx Gain (dBi): 51.0
ULPC Margin (dB): .0

----- Receive Earth Station -----

Location: -4_dB_Gain_Contour
Latitude (deg): *
Longitude (deg): *
Rain Rate (mm/hr): 42*
E/S Type or Model No:
E/S Manufacturer : STANDARD
E/S Diam. (m): 3.7
E/S Freq (nom, GHz): 3.95
E/S Gain (nom, dBi): 41.2
E/S Feed Loss (dB): 0.20
E/S Ant. Temp(deg K): 25
E/S LNA Temp (deg K): 65
E/S G/T (nom, dB/K): *

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SATELLITE DATA	Satellite : IS-706 Uplink Beam: KSPOT Uplink POL: , Dnlink POL: , EIRP, beam center: 47.5 dBW G/T:5.5 dB/K, SFD:-77.5 dBW/m2 Dnlink EIRP: 43.5 dBW	Location: 54.85E Dnlink Beam: KSPOT		
TRANSPONDER DATA	Trans Bandwidth :112.0 MHz Uplink Frequency:14.250 GHz IBO (Nominal) : 8.2 dB	Trans Type: LTWTA Dnlink Freq: 11.950 GHz OBO (Nominal): 3.5 dB		
CARRIER DATA	Type: TV/FM, Format: PAL, PreEmphasis+Weighting: 15.6dB RF BW: 30.0 MHz, P-Dev: 9.0 MHz, VideoBW: 6.0 MHz,			
LINK BUDGET				
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	73.6	73.6	73.6
	- Uplink Path Loss, clear sky (dB)	-207.5	-207.5	-207.5
	- Uplink Rain Attenuation (dB)	0.0	-3.1	0.0
	+ Satellite G/T (dB/K)	5.5	5.5	5.5
	- Boltzman's Constant (dBW/K-Hz)	228.6	228.6	228.6
	- Carrier Noise Bandwidth (dB-Hz)	-74.8	-74.8	-74.8
	C/N Uplink (dB)	25.4	22.3	25.4
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	43.5	43.5	43.5
	- Carrier Output Backoff (dB)	-7.1	-9.9	-7.1
	Downlink EIRP per carrier (dBW)	36.4	33.6	36.4
	- Earth Station Pointing Error (dB)	-.5	-.5	-.5
	- Downlink Path Loss, clear sky (dB)	-205.9	-205.9	-205.9
	- Downlink Rain Attenuation (dB)	0.0	0.0	-2.7
	+ Earth Station G/T (dB/K)	34.6	34.6	32.2
- Boltzman's Constant (dBW/K-Hz)	228.6	228.6	228.6	
- Carrier Noise Bandwidth (dB-Hz)	-74.8	-74.8	-74.8	
C/N Dnlink (dB)	18.3	15.6	13.3	
COMPOSITE PERFORMANCE	C/N Uplink (dB)	25.4	22.3	25.4
	C/N Dnlink (dB)	18.3	15.6	13.3
	C/I Intermod (dB)	18.7	18.5	18.7
	C/I Uplink Co-channel (dB)	29.1	26.0	29.1
	C/I Dnlink Co-Channel (dB)	29.1	26.4	29.1
	C/I Uplink Adj. Sat. (SAT-1) (dB)	26.8	23.7	26.8
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	22.8	20.1	22.8
	C/I Uplink Adj. Sat. (SAT-2) (dB)	26.8	23.7	26.8
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	23.3	20.6	23.3
	C/(N+I) COMPOSITE (dB)	13.2	11.0	11.0
	- Required System Margin (dB)	-1.0	-1.0	-1.0
	Net C/(N+I) COMPOSITE (dB)	12.2	10.0	10.0
	- Minimum Required C/N (dB)	-10.0	-10.0	-10.0
Excess Link Margin (dB)	2.2	0.0	0.0	
Video Signal-to-Noise Ratio (dB)		46.1	43.9	43.9
Audio Signal-to-Noise Ratio (dB)		59.9	57.7	57.7
TRANSMIT EARTH STATION	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 35.2 watts			
RECEIVE EARTH STA.	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr			
DENSITY INFORMATION	Uplink Pwr Den: -59.3 dBW/Hz, Dnlink EIRP Den: -34.4 dBW/Hz Max Dnlink PFD: -161.3 dB(W/m2/4kHz) @ Beam Center			
AVAILABILITY	Uplink: 99.700 %, Dnlink: 99.803 %, Composite Link: 99.503			
LOSS IN C/(N+I) DUE TO ADJ SAT INTF: SAT-1 = 0.7dB, SAT-2 = 0.7dB				

[Input Data]

----- SATELLITE -----

Satellite Name	: IS-706	Location (deg)	: 54.85E
Uplink Beam	: KSPOT	Dnlink Beam	: KSPOT
Trans. BW (MHz)	: 112.0 MHz	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency (GHz)	: 14.250	Dnlink Frequency (GHz)	: 11.950
G/T, beam center (dB/K)	: 9.5	EIRP, beam center (dBW)	: 47.5
G/T, beam edge (dB/K)	: 5.5	EIRP, beam edge (dBW)	: 43.5
G/T, toward Tx ES (dB/K)	: 5.5	EIRP, toward Rx ES (dBW)	: 43.5
SFD, beam edge (dBW/m2)	: -77.5		
SFD, toward Tx ES (dBW/m2)	: -77.5		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB)	: 14	Nominal Uplink Co-Chan C/I (dB)	: 27.0
Input Backoff (dB)	: 8.2	Nominal Dnlink Co-Chan C/I (dB)	: 27.0
Output Backoff (dB)	: *	Minimum Uplink Rain Margin (dB)	: 0.5*
(C/Im) - Nominal (dB)	: *	Actual Uplink Rain Margin (dB)	: 3.1
Min. System Margin (dB)	: 1.0	Uplink Power Control Margin (dB)	: .0
Max No Carriers / Trans	: *	Minimum Dnlink Rain Margin (dB)	: 0.5*
Required Link Availability	: 99.5	Actual Dnlink Rain Margin (dB)	: 5.0
		Dnlink Pointing Error (dB)	: 0.5

-- ADJACENT SATELLITE INTERFERENCE ----- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1		SAT-2
Interfering Satellite Location (deg)	:	52.85E		56.85E
Uplink Interference (dB or dBW/Hz)	:	-50		-50
Uplink Polarization Advantage (dB)	:	0.0		0.0
Downlink Interference (dB or dBW/Hz)	:	-26		-26
Downlink Polarization Advantage (dB)	:	0.0		0.0
Rx E/S Topocentric Angle (deg)	:	2.09		2.09
Rx E/S Pointing Error (deg)	:	-0.05		0.05
Rx E/S Off-Axis Angle (deg)	:	2.04		2.14
Rx E/S Adj. Sat. Discrimination (dB)	:	35.2		35.8

----- TV/FM CARRIER PARAMETERS -----

Video Format	: PAL	Peak Deviation (MHz)	: 9.0
RF Noise BW (MHz)	: 30.0	PreEmphasis+Weighting (dB)	: 15.6
Video BW (MHz)	: 6.0	Threshold C/N (dB)	: 10.0

----- AUDIO SUB-CARRIER PARAMETERS -----

Sub-Carrier Freq (MHz)	: 6.6	Highest Audio Freq (kHz)	: 15.0
P-Dev of Video by Audio (MHz)	: 2.0	Companding Advantage (dB)	: 0.0
Peak Dev of Audio (kHz)	: 75.0		

----- Transmit Earth Station ----- ----- Receive Earth Station -----

Location: -4_dB_Gain_Contour		Location: -4_dB_Gain_Contour	
Latitude (deg): *		Latitude (deg): *	
Longitude (deg): *		Longitude (deg): *	
Rain Rate (mm/hr): 42*		Rain Rate (mm/hr): 42*	
E/S Type or Model No:		E/S Type or Model No:	
E/S Manufacturer : STANDARD		E/S Manufacturer : STANDARD	
E/S Diam. (m): 7.0		E/S Diam. (m): 7.0	
E/S Freq (nom, GHz): 14.250		E/S Freq (nom, GHz): 11.95	
E/S Tx Gain (dBi): 58.1		E/S Gain (nom, dBi): 57.0	
ULPC Margin (dB): .0		E/S Feed Loss (dB): 0.25	
		E/S Ant. Temp(deg K): 40	
		E/S LNA Temp (deg K): 110	
		E/S G/T (nom, dB/K): *	

SATELLITE DATA	Satellite : IS-706 Uplink Beam: KSPOT Uplink POL: , Dnlink POL: , EIRP, beam center: 47.5 dBW G/T:5.5 dB/K, SFD:-81.5 dBW/m2 Dnlink EIRP: 43.5 dBW	Location: 54.85E Dnlink Beam: KSPOT		
TRANSPONDER DATA	Trans Bandwidth :112.0 MHz Uplink Frequency:14.250 GHz IBO (Nominal) : 0.0 dB	Trans Type: LTWTA Dnlink Freq: 11.950 GHz OBO (Nominal): 0.0 dB		
CARRIER DATA	Type: NTC26%, Info Rate: 76436 kbps, Mod: QPSK, 1/2x188/204 BWO: 93724kHz, BWa: 112000kHz, C/N: 3.36dB, C/N_thresh: 3.3			
LINK BUDGET				
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	81.4	81.4	81.4
	- Uplink Path Loss, clear sky (dB)	-207.5	-207.5	-207.5
	- Uplink Rain Attenuation (dB)	0.0	-9.5	0.0
	+ Satellite G/T (dB/K)	5.5	5.5	5.5
	- Boltzman's Constant (dBW/K-Hz)	228.6	228.6	228.6
	- Carrier Noise Bandwidth (dB-Hz)	-79.7	-79.7	-79.7
	C/N Uplink (dB)	28.3	18.8	28.3
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	43.5	43.5	43.5
	- Carrier Output Backoff (dB)	0.0	-3.6	0.0
	Downlink EIRP per carrier (dBW)	43.5	39.9	43.5
	- Earth Station Pointing Error (dB)	-.5	-.5	-.5
	- Downlink Path Loss, clear sky (dB)	-205.9	-205.9	-205.9
	- Downlink Rain Attenuation (dB)	0.0	0.0	-3.2
	+ Earth Station G/T (dB/K)	25.0	25.0	22.4
	- Boltzman's Constant (dBW/K-Hz)	228.6	228.6	228.6
- Carrier Noise Bandwidth (dB-Hz)	-79.7	-79.7	-79.7	
	C/N Dnlink (dB)	10.9	7.3	5.2
COMPOSITE PERFORMANCE	C/N Uplink (dB)	28.3	18.8	28.3
	C/N Dnlink (dB)	10.9	7.3	5.2
	C/I Uplink Co-channel (dB)	27.0	17.5	27.0
	C/I Dnlink Co-channel (dB)	27.0	23.4	27.0
	C/I Uplink Adj. Sat. (SAT-1) (dB)	29.7	20.2	29.7
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	15.0	11.3	15.0
	C/I Uplink Adj. Sat. (SAT-2) (dB)	29.7	20.2	29.7
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	16.5	12.9	16.5
	C/(N+I) COMPOSITE (dB)	8.5	4.4	4.4
	- Required System Margin (dB)	-1.0	-1.0	-1.0
	Net C/(N+I) COMPOSITE (dB)	7.5	3.4	3.4
	- Minimum Required C/N (dB)	-3.4	-3.4	-3.4
	Excess Link Margin (dB)	4.1	0.0	0.0
TRANSPONDER UTILIZATION	% BW/CARR: 100.00, % PWR/CARR: 100.00, Max No. Carriers: 1.0 Downlink EIRP per carrier toward beam center: 47.5 dBW			
TRANSMIT EARTH STATION	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 213.7 watts			
RECEIVE EARTH STA.	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr			
DENSITY INFORMATION	Uplink Pwr Den: -56.4 dBW/Hz, Dnlink EIRP Den: -32.2 dBW/Hz Max Dnlink PFD: -159.1 dB(W/m2/4kHz) @ Beam Center			
AVAILABILITY	Uplink: 99.962 %, Dnlink: 99.856 %, Composite Link: 99.818			
LOSS IN C/(N+I) DUE TO ADJ SAT INTF:	SAT-1 = 1.1dB, SAT-2 = 0.8dB			

KSPOT-KSPOT (112 MHz): 112M0G7W
[Input Data]

----- SATELLITE -----

Satellite Name	: IS-706	Location (deg)	: 54.85E
Uplink Beam	: KSPOT	Dnlink Beam	: KSPOT
Trans. BW (MHz)	: 112.0 MHz	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency (GHz)	: 14.250	Dnlink Frequency (GHz)	: 11.950
G/T, beam center (dB/K)	: 9.5	EIRP, beam center (dBW)	: 47.5
G/T, beam edge (dB/K)	: 5.5	EIRP, beam edge (dBW)	: 43.5
G/T, toward Tx ES (dB/K)	: 5.5	EIRP, toward Rx ES (dBW)	: 43.5
SFD, beam edge (dBW/m2)	: -81.5		
SFD, toward Tx ES (dBW/m2)	: -81.5		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB)	: *	Nominal Uplink Co-Chan C/I (dB)	: 27.0
Input Backoff (dB)	: 0	Nominal Dnlink Co-Chan C/I (dB)	: 27.0
Output Backoff (dB)	: *	Minimum Uplink Rain Margin (dB)	: 0.5*
(C/Im) -- Nominal (dB)	: *	Actual Uplink Rain Margin (dB)	: 9.5
Min. System Margin (dB)	: 1.0	Uplink Power Control Margin (dB)	: .0
Max No Carriers / Trans	: 1	Minimum Dnlink Rain Margin (dB)	: 0.5*
Required Link Availability	: 99.5	Actual Dnlink Rain Margin (dB)	: 5.8
		Dnlink Pointing Error (dB)	: 0.5

-- ADJACENT SATELLITE INTERFERENCE ----- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg)	:	52.85E	56.85E
Uplink Interference (dB or dBW/Hz)	:	-50	-50
Uplink Polarization Advantage (dB)	:	0.0	0.0
Downlink Interference (dB or dBW/Hz)	:	-26	-26
Downlink Polarization Advantage (dB)	:	0.0	0.0
Rx E/S Topocentric Angle (deg)	:	2.09	2.09
Rx E/S Pointing Error (deg)	:	-0.15	0.15
Rx E/S Off-Axis Angle (deg)	:	1.94	2.24
Rx E/S Adj. Sat. Discrimination (dB)	:	25.2	26.8

----- CARRIER PARAMETERS -----

Modem Type	: NTC26%	C/N (operating, dB)	: 3.36
Modulation	: QPSK	Eb/No (operating, dB)	: 4.2
Code Rate	: 1/2x188/204-V	C/N (threshold, dB)	: 3.36
Info Rate (kbps)	: 76436	Eb/No (threshold, dB)	: 4.2
Occupied Bandwidth (kHz)	: 93724		
Allocated Bandwidth (kHz)	: 112000		

----- Transmit Earth Station -----

Location: -4_dB_Gain_Contour
Latitude (deg): *
Longitude (deg): *
Rain Rate (mm/hr): 42*
E/S Type or Model No:
E/S Manufacturer : STANDARD
E/S Diam. (m): 7.0
E/S Freq (nom, GHz): 14.250
E/S Tx Gain (dBi): 58.1
ULPC Margin (dB): .0

----- Receive Earth Station -----

Location: -4_dB_Gain_Contour
Latitude (deg): *
Longitude (deg): *
Rain Rate (mm/hr): 42*
E/S Type or Model No:
E/S Manufacturer : STANDARD
E/S Diam. (m): 2.4
E/S Freq (nom, GHz): 11.95
E/S Gain (nom, dBi): 47.5
E/S Feed Loss (dB): 0.25
E/S Ant. Temp(deg K): 45
E/S LNA Temp (deg K): 110
E/S G/T (nom, dB/K): *

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SATELLITE DATA	Satellite : IS-706 Uplink Beam: KSPOT Uplink POL: , Dnlink POL: , EIRP, beam center: 47.5 dBW G/T:5.5 dB/K, SFD:-87.5 dBW/m2 Dnlink EIRP: 43.5 dBW	Location: 54.85E Dnlink Beam: KSPOT		
TRANSPONDER DATA	Trans Bandwidth :112.0 MHz Uplink Frequency:14.250 GHz IBO (Nominal) : 8.2 dB	Trans Type: LTWTA Dnlink Freq: 11.950 GHz OBO (Nominal): 3.5 dB		
CARRIER DATA	Type: EF9000, Info Rate: 6000 kbps, Mod: QPSK, 1/2x188/204- BWo: 6771.1kHz, Bwa: 10300kHz, C/N: 3.87dB, C/N_thresh: 3.5			
LINK BUDGET				
		CLR SKY UP FADE DN FADE		
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	58.3	58.3	58.3
	- Uplink Path Loss, clear sky (dB)	-207.5	-207.5	-207.5
	- Uplink Rain Attenuation (dB)	0.0	-3.0	0.0
	+ Satellite G/T (dB/K)	5.5	5.5	5.5
	- Boltzman's Constant (dBW/K-Hz)	228.6	228.6	228.6
	- Carrier Noise Bandwidth (dB-Hz)	-68.3	-68.3	-68.3
	C/N Uplink (dB)	16.6	13.7	16.6
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	43.5	43.5	43.5
	- Carrier Output Backoff (dB)	-12.4	-15.3	-12.4
	Downlink EIRP per carrier (dBW)	31.1	28.2	31.1
	- Earth Station Pointing Error (dB)	-.5	-.5	-.5
	- Downlink Path Loss, clear sky (dB)	-205.9	-205.9	-205.9
	- Downlink Rain Attenuation (dB)	0.0	0.0	-2.9
	+ Earth Station G/T (dB/K)	26.7	26.7	24.2
	- Boltzman's Constant (dBW/K-Hz)	228.6	228.6	228.6
- Carrier Noise Bandwidth (dB-Hz)	-68.3	-68.3	-68.3	
	C/N Dnlink (dB)	11.6	8.8	6.2
COMPOSITE PERFORMANCE	C/N Uplink (dB)	16.6	13.7	16.6
	C/N Dnlink (dB)	11.6	8.8	6.2
	C/I Intermod (dB)	19.9	17.7	19.9
	C/I Uplink Co-channel (dB)	28.5	25.5	28.5
	C/I Dnlink Co-Channel (dB)	28.5	25.6	28.5
	C/I Uplink Adj. Sat. (SAT-1) (dB)	18.0	15.0	18.0
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	15.8	13.0	15.8
	C/I Uplink Adj. Sat. (SAT-2) (dB)	18.0	15.0	18.0
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	17.1	14.2	17.1
	C/(N+I) COMPOSITE (dB)	7.4	4.6	4.6
	- Required System Margin (dB)	-1.0	-1.0	-1.0
	Net C/(N+I) COMPOSITE (dB)	6.4	3.6	3.6
	- Minimum Required C/N (dB)	-3.9	-3.6	-3.6
	Excess Link Margin (dB)	2.6	0.0	0.0
TRANSPONDER UTILIZATION	% BW/CARR: 9.2, % PWR/CARR: 12.92, Max No. Carriers: 7.7 Downlink EIRP per carrier toward beam center: 35.1 dBW			
TRANSMIT EARTH STATION	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 1.0 watts			
RECEIVE EARTH STA.	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr			
DENSITY INFORMATION	Uplink Pwr Den: -68.1 dBW/Hz, Dnlink EIRP Den: -33.2 dBW/Hz Max Dnlink PFD: -160.1 dB(W/m2/4kHz) @ Beam Center			
AVAILABILITY	Uplink: 99.668 %, Dnlink: 99.831 %, Composite Link: 99.500			
LOSS IN C/(N+I) DUE TO ADJ SAT INTF:	SAT-1 = 1.1dB, SAT-2 = 0.9dB			

KSPOT-KSPOT (112 MHz): 10M3G7W
[Input Data]

----- SATELLITE -----

Satellite Name	: IS-706	Location (deg)	: 54.85E
Uplink Beam	: KSPOT	Dnlink Beam	: KSPOT
Trans. BW (MHz)	: 112.0 MHz	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency (GHz)	: 14.250	Dnlink Frequency (GHz)	: 11.950
G/T, beam center (dB/K)	: 9.5	EIRP, beam center (dBW)	: 47.5
G/T, beam edge (dB/K)	: 5.5	EIRP, beam edge (dBW)	: 43.5
G/T, toward Tx ES (dB/K)	: 5.5	EIRP, toward Rx ES (dBW)	: 43.5
SFD, beam edge (dBW/m2)	: -87.5		
SFD, toward Tx ES (dBW/m2)	: -87.5		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB)	: 4	Nominal Uplink Co-Chan C/I (dB)	: 27.0
Input Backoff (dB)	: 8.2	Nominal Dnlink Co-Chan C/I (dB)	: 27.0
Output Backoff (dB)	: *	Minimum Uplink Rain Margin (dB)	: 0.5*
(C/Im) - Nominal (dB)	: *	Actual Uplink Rain Margin (dB)	: 3.0
Min. System Margin (dB)	: 1.0	Uplink Power Control Margin (dB)	: .0
Max No Carriers / Trans:	: *	Minimum Dnlink Rain Margin (dB)	: 0.5*
Required Link Availability:	: 99.5	Actual Dnlink Rain Margin (dB)	: 5.4
		Dnlink Pointing Error (dB)	: 0.5

-- ADJACENT SATELLITE INTERFERENCE ----- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg)	:	52.85E	56.85E
Uplink Interference (dB or dBW/Hz)	:	-50	-50
Uplink Polarization Advantage (dB)	:	0.0	0.0
Downlink Interference (dB or dBW/Hz)	:	-26	-26
Downlink Polarization Advantage (dB)	:	0.0	0.0
Rx E/S Topocentric Angle (deg)	:	2.09	2.09
Rx E/S Pointing Error (deg)	:	-0.12	0.12
Rx E/S Off-Axis Angle (deg)	:	1.97	2.21
Rx E/S Adj. Sat. Discrimination (dB)	:	27.1	28.3

----- CARRIER PARAMETERS -----

Modem Type	: EF9000	C/N (operating, dB)	: 3.87
Modulation	: QPSK	Eb/No (operating, dB)	: 4.4
Code Rate	: 1/2x188/204-V	C/N (threshold, dB)	: 3.57
Info Rate (kbps)	: 6000	Eb/No (threshold, dB)	: 4.1
Occupied Bandwidth (kHz)	: 6771.1		
Allocated Bandwidth (kHz)	: 10300		

----- Transmit Earth Station ----- ----- Receive Earth Station -----

Location: -4_dB_Gain_Contour	Location: -4_dB_Gain_Contour
Latitude (deg): *	Latitude (deg): *
Longitude (deg): *	Longitude (deg): *
Rain Rate (mm/hr): 42*	Rain Rate (mm/hr): 42*
E/S Type or Model No:	E/S Type or Model No:
E/S Manufacturer : STANDARD	E/S Manufacturer : STANDARD
E/S Diam. (m): 7.0	E/S Diam. (m): 3.0
E/S Freq (nom, GHz): 14.250	E/S Freq (nom, GHz): 11.95
E/S Tx Gain (dBi): 58.1	E/S Gain (nom, dBi): 49.2
ULPC Margin (dB): .0	E/S Feed Loss (dB): 0.25
	E/S Ant. Temp(deg K): 45
	E/S LNA Temp (deg K): 110
	E/S G/T (nom, dB/K): *

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SATELLITE DATA	Satellite : IS-706 Uplink Beam: KSPOT Uplink POL: , Dnlink POL: , EIRP, beam center: 47.5 dBW G/T:5.5 dB/K, SFD:-87.5 dBW/m2 Dnlink EIRP: 43.5 dBW	Location: 54.85E Dnlink Beam: KSPOT		
TRANSPONDER DATA	Trans Bandwidth :112.0 MHz Uplink Frequency:14.250 GHz IBO (Nominal) : 8.2 dB	Trans Type: LTWTA Dnlink Freq: 11.950 GHz OBO (Nominal): 3.5 dB		
CARRIER DATA	Type: CS701, Info Rate: 64 kbps, Mod: QPSK, 1/2x239/256-V BWo: 75.4kHz, BWa: 100kHz, C/N: 2.99dB, C/N_thresh: 2.79dB			
LINK BUDGET				
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	38.1	38.1	38.1
	- Uplink Path Loss, clear sky (dB)	-207.5	-207.5	-207.5
	- Uplink Rain Attenuation (dB)	0.0	-2.9	0.0
	+ Satellite G/T (dB/K)	5.5	5.5	5.5
	- Boltzman's Constant (dBW/K-Hz)	228.6	228.6	228.6
	- Carrier Noise Bandwidth (dB-Hz)	-48.8	-48.8	-48.8
	C/N Uplink (dB)	15.9	13.0	15.9
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	43.5	43.5	43.5
	- Carrier Output Backoff (dB)	-32.7	-35.6	-32.7
	Downlink EIRP per carrier (dBW)	10.8	7.9	10.8
	- Earth Station Pointing Error (dB)	-.5	-.5	-.5
	- Downlink Path Loss, clear sky (dB)	-205.9	-205.9	-205.9
	- Downlink Rain Attenuation (dB)	0.0	0.0	-3.0
	+ Earth Station G/T (dB/K)	26.7	26.7	24.2
	- Boltzman's Constant (dBW/K-Hz)	228.6	228.6	228.6
	- Carrier Noise Bandwidth (dB-Hz)	-48.8	-48.8	-48.8
	C/N Dnlink (dB)	10.9	8.0	5.4
COMPOSITE PERFORMANCE	C/N Uplink (dB)	15.9	13.0	15.9
	C/N Dnlink (dB)	10.9	8.0	5.4
	C/I Intermod (dB)	19.2	16.3	19.2
	C/I Uplink Co-channel (dB)	28.4	25.4	28.4
	C/I Dnlink Co-Channel (dB)	28.4	25.4	28.4
	C/I Uplink Adj. Sat. (SAT-1) (dB)	17.3	14.4	17.3
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	15.1	12.2	15.1
	C/I Uplink Adj. Sat. (SAT-2) (dB)	17.3	14.4	17.3
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	16.4	13.4	16.4
	C/(N+I) COMPOSITE (dB)	6.7	3.8	3.8
	- Required System Margin (dB)	-1.0	-1.0	-1.0
	Net C/(N+I) COMPOSITE (dB)	5.7	2.8	2.8
- Minimum Required C/N (dB)	-3.0	-2.8	-2.8	
	Excess Link Margin (dB)	2.7	0.0	0.0
TRANSPONDER UTILIZATION	% BW/CARR: 0.09, % PWR/CARR: 0.12, Max No. Carriers: 819.4 Downlink EIRP per carrier toward beam center: 14.8 dBW			
TRANSMIT EARTH STATION	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 0.0 watts			
RECEIVE EARTH STA.	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr			
DENSITY INFORMATION	Uplink Pwr Den: -68.8 dBW/Hz, Dnlink EIRP Den: -33.9 dBW/Hz Max Dnlink PFD: -160.8 dB(W/m2/4kHz) @ Beam Center			
AVAILABILITY	Uplink: 99.661 %, Dnlink: 99.838 %, Composite Link: 99.500			
LOSS IN C/(N+I) DUE TO ADJ SAT INTF:	SAT-1 = 1.1dB, SAT-2 = 0.9dB			

KSPOT-KSPOT (112 MHZ): 100KG7W
[Input Data]

----- SATELLITE -----

Satellite Name : IS-706 Location (deg): 54.85E
Uplink Beam : KSPOT Dnlink Beam : KSPOT
Trans. BW (MHz): 112.0 MHz Trans. Type : LTWTA
Uplink Pol. : Dnlink Pol. :
Uplink Chan. : Dnlink Chan. :
Uplink Frequency (GHz): 14.250 Dnlink Frequency (GHz): 11.950
G/T, beam center (dB/K): 9.5 EIRP, beam center (dBW): 47.5
G/T, beam edge (dB/K): 5.5 EIRP, beam edge (dBW): 43.5
G/T, toward Tx ES (dB/K): 5.5 EIRP, toward Rx ES (dBW): 43.5
SFD, beam edge (dBW/m2): -87.5
SFD, toward Tx ES (dBW/m2): -87.5

----- OPERATING CONDITIONS -----

Attenuator Setting (dB): 4 Nominal Uplink Co-Chan C/I (dB): 27.0
Input Backoff (dB): 8.2 Nominal Dnlink Co-Chan C/I (dB): 27.0
Output Backoff (dB): * Minimum Uplink Rain Margin (dB): 0.5*
(C/Im) - Nominal (dB): * Actual Uplink Rain Margin (dB): 2.9
Min. System Margin (dB): 1.0 Uplink Power Control Margin (dB): .0
Max No Carriers / Trans: * Minimum Dnlink Rain Margin (dB): 0.5*
Required Link Availability: 99.5 Actual Dnlink Rain Margin (dB): 5.5
Dnlink Pointing Error (dB): 0.5

-- ADJACENT SATELLITE INTERFERENCE ----- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg):		52.85E	56.85E
Uplink Interference (dB or dBW/Hz):		-50	-50
Uplink Polarization Advantage (dB):		0.0	0.0
Downlink Interference (dB or dBW/Hz):		-26	-26
Downlink Polarization Advantage (dB):		0.0	0.0
Rx E/S Topocentric Angle (deg):		2.09	2.09
Rx E/S Pointing Error (deg):		-0.12	0.12
Rx E/S Off-Axis Angle (deg):		1.97	2.21
Rx E/S Adj. Sat. Discrimination (dB):		27.1	28.3

----- CARRIER PARAMETERS -----

Modem Type	:	CS701	C/N	(operating, dB): 2.99
Modulation	:	QPSK	Eb/No	(operating, dB): 3.7
Code Rate	:	1/2x239/256-V	C/N	(threshold, dB): 2.79
Info Rate (kbps)	:	64	Eb/No	(threshold, dB): 3.5
Occupied Bandwidth (kHz):		75.4		
Allocated Bandwidth (kHz):		100		

----- Transmit Earth Station ----- Receive Earth Station -----

Location: -4_dB_Gain_Contour		Location: -4_dB_Gain_Contour
Latitude (deg): *		Latitude (deg): *
Longitude (deg): *		Longitude (deg): *
Rain Rate (mm/hr): 42*		Rain Rate (mm/hr): 42*
E/S Type or Model No:		E/S Type or Model No:
E/S Manufacturer : STANDARD		E/S Manufacturer : STANDARD
E/S Diam. (m): 7.0		E/S Diam. (m): 3.0
E/S Freq (nom, GHz): 14.250		E/S Freq (nom, GHz): 11.95
E/S Tx Gain (dBi): 58.1		E/S Gain (nom, dBi): 49.2
ULPC Margin (dB): .0		E/S Feed Loss (dB): 0.25
		E/S Ant. Temp(deg K): 45
		E/S LNA Temp (deg K): 110
		E/S G/T (nom, dB/K): *

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SATELLITE DATA	Satellite : IS-706 Uplink Beam: KSPOT Uplink POL: , Dnlink POL: , EIRP, beam center: 47.5 dBW G/T:5.5 dB/K, SFD:-87.5 dBW/m2	Location: 54.85E Dnlink Beam: KSPOT Dnlink EIRP: 43.5 dBW		
TRANSPONDER DATA	Trans Bandwidth :112.0 MHz Uplink Frequency:14.250 GHz IBO (Nominal) : 8.2 dB	Trans Type: LTWTA Dnlink Freq: 11.950 GHz OBO (Nominal): 3.5 dB		
CARRIER DATA	Type: VSAT-Out, Info Rate: 512 kbps, Mod: BPSK, R1/2 Bwo: 1229.0kHz, Bwa: 1450.0kHz, C/N: 3.4dB, C/N_thresh: 2.7			
LINK BUDGET				
		CLR SKY	UP FADE	DN FADE
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	50.1	50.1	50.1
	- Uplink Path Loss, clear sky (dB)	-207.5	-207.5	-207.5
	- Uplink Rain Attenuation (dB)	0.0	-2.9	0.0
	+ Satellite G/T (dB/K)	5.5	5.5	5.5
	- Boltzman's Constant (dBW/K-Hz)	228.6	228.6	228.6
	- Carrier Noise Bandwidth (dB-Hz)	-60.9	-60.9	-60.9
	C/N Uplink (dB)	15.8	12.9	15.8
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	43.5	43.5	43.5
	- Carrier Output Backoff (dB)	-20.6	-23.6	-20.6
	Downlink EIRP per carrier (dBW)	22.9	19.9	22.9
	- Earth Station Pointing Error (dB)	-.5	-.5	-.5
	- Downlink Path Loss, clear sky (dB)	-205.9	-205.9	-205.9
	- Downlink Rain Attenuation (dB)	0.0	0.0	-3.0
	+ Earth Station G/T (dB/K)	26.7	26.7	24.2
	- Boltzman's Constant (dBW/K-Hz)	228.6	228.6	228.6
- Carrier Noise Bandwidth (dB-Hz)	-60.9	-60.9	-60.9	
	C/N Dnlink (dB)	10.8	7.9	5.3
COMPOSITE PERFORMANCE	C/N Uplink (dB)	15.8	12.9	15.8
	C/N Dnlink (dB)	10.8	7.9	5.3
	C/I Intermod (dB)	19.1	16.3	19.1
	C/I Uplink Co-channel (dB)	28.8	25.8	28.8
	C/I Dnlink Co-channel (dB)	28.8	25.8	28.8
	C/I Uplink Adj. Sat. (SAT-1) (dB)	17.2	14.2	17.2
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	15.0	12.1	15.0
	C/I Uplink Adj. Sat. (SAT-2) (dB)	17.2	14.2	17.2
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	16.3	13.4	16.3
	C/(N+I) COMPOSITE (dB)	6.6	3.7	3.7
	- Required System Margin (dB)	-1.0	-1.0	-1.0
	Net C/(N+I) COMPOSITE (dB)	5.6	2.7	2.7
	- Minimum Required C/N (dB)	-3.4	-2.7	-2.7
	Excess Link Margin (dB)	2.2	0.0	0.0
TRANSPONDER UTILIZATION	% BW/CARR: 1.29, % PWR/CARR: 1.94, Max No. Carriers: 51.5 Downlink EIRP per carrier toward beam center: 26.9 dBW			
TRANSMIT EARTH STATION	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 0.2 watts			
RECEIVE EARTH STA.	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr			
DENSITY INFORMATION	Uplink Pwr Den: -68.9 dBW/Hz, Dnlink EIRP Den: -34.0 dBW/Hz Max Dnlink PFD: -160.9 dB(W/m2/4kHz) @ Beam Center			
AVAILABILITY	Uplink: 99.662 %, Dnlink: 99.837 %, Composite Link: 99.500			
LOSS IN C/(N+I) DUE TO ADJ SAT INTF:	SAT-1 = 1.1dB, SAT-2 = 0.9dB			

KSPOT-KSPOT (112 MHZ): 1M45G7W
[Input Data]

----- SATELLITE -----

Satellite Name	: IS-706	Location (deg)	: 54.85E
Uplink Beam	: KSPOT	Dnlink Beam	: KSPOT
Trans. BW (MHz)	: 112.0 MHz	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency (GHz)	: 14.250	Dnlink Frequency (GHz)	: 11.950
G/T, beam center (dB/K)	: 9.5	EIRP, beam center (dBW)	: 47.5
G/T, beam edge (dB/K)	: 5.5	EIRP, beam edge (dBW)	: 43.5
G/T, toward Tx ES (dB/K)	: 5.5	EIRP, toward Rx ES (dBW)	: 43.5
SFD, beam edge (dBW/m2)	: -87.5		
SFD, toward Tx ES (dBW/m2)	: -87.5		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB)	: 4	Nominal Uplink Co-Chan C/I (dB)	: 27.0
Input Backoff (dB)	: 8.2	Nominal Dnlink Co-Chan C/I (dB)	: 27.0
Output Backoff (dB)	: *	Minimum Uplink Rain Margin (dB)	: 0.5*
(C/Im) - Nominal (dB)	: *	Actual Uplink Rain Margin (dB)	: 2.9
Min. System Margin (dB)	: 1.0	Uplink Power Control Margin (dB)	: .0
Max No Carriers / Trans	: *	Minimum Dnlink Rain Margin (dB)	: 0.5*
Required Link Availability	: 99.5	Actual Dnlink Rain Margin (dB)	: 5.5
		Dnlink Pointing Error (dB)	: 0.5

--- ADJACENT SATELLITE INTERFERENCE --- Sat. No. 1 --- Sat. No. 2 ---

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg)	:	52.85E	56.85E
Uplink Interference (dB or dBW/Hz)	:	-50	-50
Uplink Polarization Advantage (dB)	:	0.0	0.0
Downlink Interference (dB or dBW/Hz)	:	-26	-26
Downlink Polarization Advantage (dB)	:	0.0	0.0
Rx E/S Topocentric Angle (deg)	:	2.09	2.09
Rx E/S Pointing Error (deg)	:	-0.12	0.12
Rx E/S Off-Axis Angle (deg)	:	1.97	2.21
Rx E/S Adj. Sat. Discrimination (dB)	:	27.1	28.3

----- CARRIER PARAMETERS -----

Modem Type	: VSAT-Out	C/N (operating, dB)	: 3.4
Modulation	: BPSK	Eb/No (operating, dB)	: 7.2
Code Rate	: R1/2	C/N (threshold, dB)	: 2.7
Info Rate (kbps)	: 512	Eb/No (threshold, dB)	: 6.5
Occupied Bandwidth (kHz)	: 1229.0		
Allocated Bandwidth (kHz)	: 1450.0		

----- Transmit Earth Station ----- Receive Earth Station -----

Location: -4_dB_Gain_Contour	Latitude (deg): *	Longitude (deg): *	Rain Rate (mm/hr): 42*	E/S Type or Model No:	E/S Manufacturer : STANDARD	E/S Diam. (m): 7.0	E/S Freq (nom, GHz): 14.250	E/S Tx Gain (dBi): 58.1	ULPC Margin (dB): .0			
Location: -4_dB_Gain_Contour	Latitude (deg): *	Longitude (deg): *	Rain Rate (mm/hr): 42*	E/S Type or Model No:	E/S Manufacturer : STANDARD	E/S Diam. (m): 3.0	E/S Freq (nom, GHz): 11.95	E/S Gain (nom, dBi): 49.2	E/S Feed Loss (dB): 0.25	E/S Ant. Temp(deg K): 45	E/S LNA Temp (deg K): 110	E/S G/T (nom, dB/K): *

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SATELLITE DATA	Satellite : IS-706 Uplink Beam: KSPOT Uplink POL: , Dnlink POL: , EIRP, beam center: 47.5 dBW G/T:5.5 dB/K, SFD:-87.5 dBW/m2 Dnlink EIRP: 43.5 dBW	Location: 54.85E Dnlink Beam: KSPOT		
TRANSPONDER DATA	Trans Bandwidth :112.0 MHz Uplink Frequency:14.250 GHz IBO (Nominal) : 8.2 dB	Trans Type: LTWTA Dnlink Freq: 11.950 GHz OBO (Nominal): 3.5 dB		
CARRIER DATA	Type: VSAT-In, Info Rate: 128 kbps, Mod: BPSK, R1/2 BWo: 307.0kHz, BWa: 400.0kHz, C/N: 3.4dB, C/N_thresh: 2.7dB			
LINK BUDGET				
		CLR SKY UP FADE DN FADE		
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	40.3	40.3	40.3
	- Uplink Path Loss, clear sky (dB)	-207.5	-207.5	-207.5
	- Uplink Rain Attenuation (dB)	0.0	-2.5	0.0
	+ Satellite G/T (dB/K)	5.5	5.5	5.5
	- Boltzman's Constant (dBW/K-Hz)	228.6	228.6	228.6
	- Carrier Noise Bandwidth (dB-Hz)	-54.9	-54.9	-54.9
	C/N Uplink (dB)	12.1	9.6	12.1
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	43.5	43.5	43.5
	- Carrier Output Backoff (dB)	-30.4	-32.9	-30.4
	Downlink EIRP per carrier (dBW)	13.1	10.6	13.1
	- Earth Station Pointing Error (dB)	-.5	-.5	-.5
	- Downlink Path Loss, clear sky (dB)	-205.9	-205.9	-205.9
	- Downlink Rain Attenuation (dB)	0.0	0.0	-5.2
	+ Earth Station G/T (dB/K)	34.6	34.6	31.4
	- Boltzman's Constant (dBW/K-Hz)	228.6	228.6	228.6
	- Carrier Noise Bandwidth (dB-Hz)	-54.9	-54.9	-54.9
	C/N Dnlink (dB)	15.0	12.5	6.6
COMPOSITE PERFORMANCE	C/N Uplink (dB)	12.1	9.6	12.1
	C/N Dnlink (dB)	15.0	12.5	6.6
	C/I Intermod (dB)	15.4	12.9	15.4
	C/I Uplink Co-channel (dB)	24.6	22.1	24.6
	C/I Dnlink Co-Channel (dB)	24.6	22.1	24.6
	C/I Uplink Adj. Sat. (SAT-1) (dB)	13.5	11.0	13.5
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	19.5	17.0	19.5
	C/I Uplink Adj. Sat. (SAT-2) (dB)	13.5	11.0	13.5
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	20.0	17.5	20.0
	C/(N+I) COMPOSITE (dB)	6.2	3.7	3.7
	- Required System Margin (dB)	-1.0	-1.0	-1.0
	Net C/(N+I) COMPOSITE (dB)	5.2	2.7	2.7
	- Minimum Required C/N (dB)	-3.4	-2.7	-2.7
	Excess Link Margin (dB)	1.8	0.0	0.0
TRANSPONDER UTILIZATION	% BW/CARR: 0.36, % PWR/CARR: 0.21, Max No. Carriers: 280.0 Downlink EIRP per carrier toward beam center: 17.1 dBW			
TRANSMIT EARTH STATION	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 0.1 watts			
RECEIVE EARTH STA.	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr			
DENSITY INFORMATION	Uplink Pwr Den: -64.2 dBW/Hz, Dnlink EIRP Den: -37.7 dBW/Hz Max Dnlink PFD: -164.6 dB(W/m2/4kHz) @ Beam Center			
AVAILABILITY	Uplink: 99.562 %, Dnlink: 99.938 %, Composite Link: 99.500			
LOSS IN C/(N+I) DUE TO ADJ SAT INTF: SAT-1 = 1.2dB, SAT-2 = 1.1dB				

KSPOT-KSPOT (112 MHz): 400KG7W
[Input Data]

----- SATELLITE -----

Satellite Name	: IS-706	Location (deg)	: 54.85E
Uplink Beam	: KSPOT	Dnlink Beam	: KSPOT
Trans. BW (MHz)	: 112.0 MHz	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency (GHz)	: 14.250	Dnlink Frequency (GHz)	: 11.950
G/T, beam center (dB/K)	: 9.5	EIRP, beam center (dBW)	: 47.5
G/T, beam edge (dB/K)	: 5.5	EIRP, beam edge (dBW)	: 43.5
G/T, toward Tx ES (dB/K)	: 5.5	EIRP, toward Rx ES (dBW)	: 43.5
SFD, beam edge (dBW/m2)	: -87.5		
SFD, toward Tx ES (dBW/m2)	: -87.5		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB)	: 4	Nominal Uplink Co-Chan C/I (dB)	: 27.0
Input Backoff (dB)	: 8.2	Nominal Dnlink Co-Chan C/I (dB)	: 27.0
Output Backoff (dB)	: *	Minimum Uplink Rain Margin (dB)	: 0.5*
(C/Im) - Nominal (dB)	: *	Actual Uplink Rain Margin (dB)	: 2.5
Min. System Margin (dB)	: 1.0	Uplink Power Control Margin (dB)	: .0
Max No Carriers / Trans:	*	Minimum Dnlink Rain Margin (dB)	: 0.5*
Required Link Availability:	99.5	Actual Dnlink Rain Margin (dB)	: 8.4
		Dnlink Pointing Error (dB)	: 0.5

--- ADJACENT SATELLITE INTERFERENCE --- Sat. No. 1 --- Sat. No. 2 ---

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg)	:	52.85E	56.85E
Uplink Interference (dB or dBW/Hz)	:	-50	-50
Uplink Polarization Advantage (dB)	:	0.0	0.0
Downlink Interference (dB or dBW/Hz)	:	-26	-26
Downlink Polarization Advantage (dB)	:	0.0	0.0
Rx E/S Topocentric Angle (deg)	:	2.09	2.09
Rx E/S Pointing Error (deg)	:	-0.05	0.05
Rx E/S Off-Axis Angle (deg)	:	2.04	2.14
Rx E/S Adj. Sat. Discrimination (dB)	:	35.2	35.8

----- CARRIER PARAMETERS -----

Modem Type	: VSAT-In	C/N (operating, dB)	: 3.4
Modulation	: BPSK	Eb/No (operating, dB)	: 7.2
Code Rate	: R1/2	C/N (threshold, dB)	: 2.7
Info Rate (kbps)	: 128	Eb/No (threshold, dB)	: 6.5
Occupied Bandwidth (kHz)	: 307.0		
Allocated Bandwidth (kHz)	: 400.0		

----- Transmit Earth Station ----- Receive Earth Station -----

Location: -4_dB_Gain_Contour	Location: -4_dB_Gain_Contour
Latitude (deg): *	Latitude (deg): *
Longitude (deg): *	Longitude (deg): *
Rain Rate (mm/hr): 42*	Rain Rate (mm/hr): 42*
E/S Type or Model No:	E/S Type or Model No:
E/S Manufacturer : STANDARD	E/S Manufacturer : STANDARD
E/S Diam. (m): 3.0	E/S Diam. (m): 7.0
E/S Freq (nom, GHz): 14.250	E/S Freq (nom, GHz): 11.95
E/S Tx Gain (dBi): 49.7	E/S Gain (nom, dBi): 57.0
ULPC Margin (dB): .0	E/S Feed Loss (dB): 0.25
	E/S Ant. Temp(deg K): 40
	E/S LNA Temp (deg K): 110
	E/S G/T (nom, dB/K): *

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SATELLITE DATA	Satellite : IS-706 Uplink Beam: KSPOT Uplink POL: , Dnlink POL: , EIRP, beam center: 36.6 dBW G/T:5.5 dB/K, SFD:-77.5 dBW/m2	Location: 54.85E Dnlink Beam: HEMI Dnlink EIRP: 32.6 dBW
TRANSPONDER DATA	Trans Bandwidth :72.0 MHz Uplink Frequency:14.250 GHz IBO (Nominal) : 8.1 dB	Trans Type: LTWTA Dnlink Freq: 3.950 GHz OBO (Nominal): 3.1 dB
CARRIER DATA	Type: TV/FM, Format: PAL, PreEmphasis+Weighting: 15.6dB RF BW: 30.0 MHz, P-Dev: 9.0 MHz, VideoBW: 6.0 MHz,	
LINK BUDGET		
		CLR SKY UP FADE DN FADE
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	74.4 74.4 74.4
	- Uplink Path Loss, clear sky (dB)	-207.5 -207.5 -207.5
	- Uplink Rain Attenuation (dB)	0.0 -2.0 0.0
	+ Satellite G/T (dB/K)	5.5 5.5 5.5
	- Boltzman's Constant (dBW/K-Hz)	228.6 228.6 228.6
	- Carrier Noise Bandwidth (dB-Hz)	-74.8 -74.8 -74.8
	C/N Uplink (dB)	26.2 24.3 26.2
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	32.6 32.6 32.6
	- Carrier Output Backoff (dB)	-6.0 -7.7 -6.0
	Downlink EIRP per carrier (dBW)	26.6 24.9 26.6
	- Earth Station Pointing Error (dB)	-.5 -.5 -.5
	- Downlink Path Loss, clear sky (dB)	-196.3 -196.3 -196.3
	- Downlink Rain Attenuation (dB)	0.0 0.0 -1.3
	+ Earth Station G/T (dB/K)	33.0 33.0 30.9
	- Boltzman's Constant (dBW/K-Hz)	228.6 228.6 228.6
	- Carrier Noise Bandwidth (dB-Hz)	-74.8 -74.8 -74.8
	C/N Dnlink (dB)	16.6 14.9 13.2
COMPOSITE PERFORMANCE	C/N Uplink (dB)	26.2 24.3 26.2
	C/N Dnlink (dB)	16.6 14.9 13.2
	C/I Uplink Co-channel (dB)	27.9 25.9 27.9
	C/I Dnlink Co-Channel (dB)	27.9 26.2 27.9
	C/I Uplink Adj. Sat. (SAT-1) (dB)	27.6 25.6 27.6
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	19.1 17.4 19.1
	C/I Uplink Adj. Sat. (SAT-2) (dB)	27.6 25.6 27.6
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	20.0 18.2 20.0
	C/(N+I) COMPOSITE (dB)	12.7 11.0 11.0
	- Required System Margin (dB)	-1.0 -1.0 -1.0
	Net C/(N+I) COMPOSITE (dB)	11.7 10.0 10.0
	- Minimum Required C/N (dB)	-10.0 -10.0 -10.0
	Excess Link Margin (dB)	1.7 0.0 0.0
	Video Signal-to-Noise Ratio (dB)	45.6 43.9 43.9
	Audio Signal-to-Noise Ratio (dB)	59.4 57.7 57.7
TRANSMIT EARTH STATION	Loc: -4 dB Gain Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 42.5 watts	
RECEIVE EARTH STA.	Loc: -4 dB Gain Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr	
DENSITY INFORMATION	Uplink Pwr Den: -58.5 dBW/Hz, Dnlink EIRP Den: -44.2 dBW/Hz Max Dnlink PFD: -171.0 dB(W/m2/4kHz) @ Beam Center	
AVAILABILITY	Uplink: 99.374 %, Dnlink: 99.998 %, Composite Link: 99.372	
LOSS IN C/(N+I) DUE TO ADJ SAT INTF: SAT-1 = 1.3dB, SAT-2 = 1.1dB		

KSPOT-HEMI (72 MHZ): 30M0F3F
[Input Data]

----- SATELLITE -----

Satellite Name	: IS-706	Location (deg):	54.85E
Uplink Beam	: KSPOT	Dnlink Beam	: HEMI
Trans. BW (MHz)	: 72.0 MHz	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency (GHz)	: 14.250	Dnlink Frequency (GHz)	: 3.950
G/T, beam center (dB/K)	: 9.5	EIRP, beam center (dBW)	: 36.6
G/T, beam edge (dB/K)	: 5.5	EIRP, beam edge (dBW)	: 32.6
G/T, toward Tx ES (dB/K)	: 5.5	EIRP, toward Rx ES (dBW)	: 32.6
SFD, beam edge (dBW/m2)	: -77.5		
SFD, toward Tx ES (dBW/m2)	: -77.5		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB)	: 14	Nominal Uplink Co-Chan C/I (dB)	: 27.0
Input Backoff (dB)	: 8.2*, 8.09	Nominal Dnlink Co-Chan C/I (dB)	: 27.0
Output Backoff (dB)	: *	Minimum Uplink Rain Margin (dB)	: 0.5*
(C/Im) - Nominal (dB)	: *	Actual Uplink Rain Margin (dB)	: 2.0
Min. System Margin (dB)	: 1.0	Uplink Power Control Margin (dB)	: .0
Max No Carriers / Trans	: 2	Minimum Dnlink Rain Margin (dB)	: 0.5*
Required Link Availability	: 99.5	Actual Dnlink Rain Margin (dB)	: 3.5
		Dnlink Pointing Error (dB)	: 0.5

----- ADJACENT SATELLITE INTERFERENCE ----- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg)	:	52.85E	56.85E
Uplink Interference (dB or dBW/Hz)	:	-50	-50
Uplink Polarization Advantage (dB)	:	0.0	0.0
Downlink Interference (dB or dBW/Hz)	:	-35.7	-35.7
Downlink Polarization Advantage (dB)	:	0.0	0.0
Rx E/S Topocentric Angle (deg)	:	2.09	2.09
Rx E/S Pointing Error (deg)	:	-0.08	0.08
Rx E/S Off-Axis Angle (deg)	:	2.01	2.17
Rx E/S Adj. Sat. Discrimination (dB)	:	31.6	32.4

----- TV/FM CARRIER PARAMETERS -----

Video Format	: PAL	Peak Deviation (MHz)	: 9.0
RF Noise BW (MHz)	: 30.0	PreEmphasis+Weighting (dB)	: 15.6
Video BW (MHz)	: 6.0	Threshold C/N (dB)	: 10.0

----- AUDIO SUB-CARRIER PARAMETERS -----

Sub-Carrier Freq (MHz)	: 6.6	Highest Audio Freq (kHz)	: 15.0
P-Dev of Video by Audio (MHz)	: 2.0	Companding Advantage (dB)	: 0.0
Peak Dev of Audio (kHz)	: 75.0		

----- Transmit Earth Station ----- ----- Receive Earth Station -----

Location: -4_dB_Gain_Contour	Location: -4_dB_Gain_Contour
Latitude (deg): *	Latitude (deg): *
Longitude (deg): *	Longitude (deg): *
Rain Rate (mm/hr): 42*	Rain Rate (mm/hr): 42*
E/S Type or Model No:	E/S Type or Model No:
E/S Manufacturer : STANDARD	E/S Manufacturer : STANDARD
E/S Diam. (m): 7.0	E/S Diam. (m): 13.1
E/S Freq (nom, GHz): 14.250	E/S Freq (nom, GHz): 3.95
E/S Tx Gain (dBi): 58.1	E/S Gain (nom, dBi): 53.5
ULPC Margin (dB): .0	E/S Feed Loss (dB): 0.20
	E/S Ant. Temp(deg K): 30
	E/S LNA Temp (deg K): 65
	E/S G/T (nom, dB/K): *

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SATELLITE DATA	Satellite : IS-706 Uplink Beam: KSPOT Uplink POL: , Dnlink POL: , EIRP, beam center: 36.6 dBW G/T:5.5 dB/K, SFD:-81.5 dBW/m2 Dnlink EIRP: 32.6 dBW	Location: 54.85E Dnlink Beam: HEMI		
TRANSPONDER DATA	Trans Bandwidth :72.0 MHz Uplink Frequency:14.250 GHz IBO (Nominal) : 0.0 dB	Trans Type: LTWTA Dnlink Freq: 3.950 GHz OBO (Nominal): 0.0 dB		
CARRIER DATA	Type: NTC26%, Info Rate: 49138 kbps, Mod: QPSK, 1/2x188/204 BWo: 60251kHz, BWa: 72000kHz, C/N: 3.36dB, C/N_thresh: 3.36			
LINK BUDGET				
		CLR SKY UP FADE DN FADE		
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	81.4	81.4	81.4
	- Uplink Path Loss, clear sky (dB)	-207.5	-207.5	-207.5
	- Uplink Rain Attenuation (dB)	0.0	-7.8	0.0
	+ Satellite G/T (dB/K)	5.5	5.5	5.5
	- Boltzman's Constant (dBW/K-Hz)	228.6	228.6	228.6
	- Carrier Noise Bandwidth (dB-Hz)	-77.8	-77.8	-77.8
	C/N Uplink (dB)	30.2	22.4	30.2
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	32.6	32.6	32.6
	- Carrier Output Backoff (dB)	0.0	-2.2	0.0
	Downlink EIRP per carrier (dBW)	32.6	30.4	32.6
	- Earth Station Pointing Error (dB)	-.5	-.5	-.5
	- Downlink Path Loss, clear sky (dB)	-196.3	-196.3	-196.3
	- Downlink Rain Attenuation (dB)	0.0	0.0	-1.6
	+ Earth Station G/T (dB/K)	23.6	23.6	21.0
	- Boltzman's Constant (dBW/K-Hz)	228.6	228.6	228.6
	- Carrier Noise Bandwidth (dB-Hz)	-77.8	-77.8	-77.8
	C/N Dnlink (dB)	10.2	8.0	6.0
COMPOSITE PERFORMANCE	C/N Uplink (dB)	30.2	22.4	30.2
	C/N Dnlink (dB)	10.2	8.0	6.0
	C/I Uplink Co-channel (dB)	27.0	19.2	27.0
	C/I Dnlink Co-Channel (dB)	27.0	24.8	27.0
	C/I Uplink Adj. Sat. (SAT-1) (dB)	31.6	23.8	31.6
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	11.6	9.5	11.6
	C/I Uplink Adj. Sat. (SAT-2) (dB)	31.6	23.8	31.6
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	14.0	11.9	14.0
	C/(N+I) COMPOSITE (dB)	6.8	4.4	4.4
	- Required System Margin (dB)	-1.0	-1.0	-1.0
	Net C/(N+I) COMPOSITE (dB)	5.8	3.4	3.4
- Minimum Required C/N (dB)	-3.4	-3.4	-3.4	
	Excess Link Margin (dB)	2.4	0.0	0.0
TRANSPONDER UTILIZATION	% BW/CARR: 100.00, % PWR/CARR: 100.00, Max No. Carriers: 1.0 Downlink EIRP per carrier toward beam center: 36.6 dBW			
TRANSMIT EARTH STATION	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 213.7 watts			
RECEIVE EARTH STA.	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr			
DENSITY INFORMATION	Uplink Pwr Den: -54.5 dBW/Hz, Dnlink EIRP Den: -41.2 dBW/Hz Max Dnlink PFD: -168.1 dB(W/m2/4kHz) @ Beam Center			
AVAILABILITY	Uplink: 99.940 %, Dnlink: 99.998 %, Composite Link: 99.937			
LOSS IN C/(N+I) DUE TO ADJ SAT INTF:	SAT-1 = 1.7dB, SAT-2 = 0.9dB			

KSPOT-HEMI (72 MHZ): 72M0G7W
[Input Data]

----- SATELLITE -----

Satellite Name	: IS-706	Location (deg)	: 54.85E
Uplink Beam	: KSPOT	Dnlink Beam	: HEMI
Trans. BW (MHz)	: 72.0 MHz	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency (GHz)	: 14.250	Dnlink Frequency (GHz)	: 3.950
G/T, beam center (dB/K)	: 9.5	EIRP, beam center (dBW)	: 36.6
G/T, beam edge (dB/K)	: 5.5	EIRP, beam edge (dBW)	: 32.6
G/T, toward Tx ES (dB/K)	: 5.5	EIRP, toward Rx ES (dBW)	: 32.6
SFD, beam edge (dBW/m2)	: -81.5		
SFD, toward Tx ES (dBW/m2)	: -81.5		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB)	: 10	Nominal Uplink Co-Chan C/I (dB)	: 27.0
Input Backoff (dB)	: 0.0	Nominal Dnlink Co-Chan C/I (dB)	: 27.0
Output Backoff (dB)	: *	Minimum Uplink Rain Margin (dB)	: 0.5*
(C/Im) - Nominal (dB)	: *	Actual Uplink Rain Margin (dB)	: 7.8
Min. System Margin (dB)	: 1.0	Uplink Power Control Margin (dB)	: .0
Max No Carriers / Trans	: 1	Minimum Dnlink Rain Margin (dB)	: 0.5*
Required Link Availability	: 99.5	Actual Dnlink Rain Margin (dB)	: 4.2
		Dnlink Pointing Error (dB)	: 0.5

-- ADJACENT SATELLITE INTERFERENCE ----- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg)	:	52.85E	56.85E
Uplink Interference (dB or dBW/Hz)	:	-50	-50
Uplink Polarization Advantage (dB)	:	0.0	0.0
Downlink Interference (dB or dBW/Hz)	:	-35.7	-35.7
Downlink Polarization Advantage (dB)	:	0.0	0.0
Rx E/S Topocentric Angle (deg)	:	2.09	2.09
Rx E/S Pointing Error (deg)	:	-0.23	0.23
Rx E/S Off-Axis Angle (deg)	:	1.86	2.32
Rx E/S Adj. Sat. Discrimination (dB)	:	21.1	23.5

----- CARRIER PARAMETERS -----

Modem Type	: NTC26%	C/N (operating, dB)	: 3.36
Modulation	: QPSK	Eb/No (operating, dB)	: 4.2
Code Rate	: 1/2x188/204-V	C/N (threshold, dB)	: 3.36
Info Rate (kbps)	: 49138	Eb/No (threshold, dB)	: 4.2
Occupied Bandwidth (kHz)	: 60251		
Allocated Bandwidth (kHz)	: 72000		

----- Transmit Earth Station -----

Location: -4_dB_Gain_Contour
Latitude (deg): *
Longitude (deg): *
Rain Rate (mm/hr): 42*
E/S Type or Model No:
E/S Manufacturer : STANDARD
E/S Diam. (m): 7.0
E/S Freq (nom, GHz): 14.250
E/S Tx Gain (dBi): 58.1
ULPC Margin (dB): .0

----- Receive Earth Station -----

Location: -4_dB_Gain_Contour
Latitude (deg): *
Longitude (deg): *
Rain Rate (mm/hr): 42*
E/S Type or Model No:
E/S Manufacturer : STANDARD
E/S Diam. (m): 4.6
E/S Freq (nom, GHz): 3.95
E/S Gain (nom, dBi): 43.9
E/S Feed Loss (dB): 0.20
E/S Ant. Temp(deg K): 25
E/S LNA Temp (deg K): 65
E/S G/T (nom, dB/K): *

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SATELLITE DATA	Satellite : IS-706 Uplink Beam: KSPOT Uplink POL: , Dnlink POL: , EIRP, beam center: 36.6 dBW G/T:5.5 dB/K, SFD:-90.5 dBW/m2 Dnlink EIRP: 32.6 dBW	Location: 54.85E Dnlink Beam: HEMI		
TRANSPONDER DATA	Trans Bandwidth :72.0 MHz Uplink Frequency:14.250 GHz IBO (Nominal) : 8.2 dB	Trans Type: LTWTA Dnlink Freq: 3.950 GHz OBO (Nominal): 3.5 dB		
CARRIER DATA	Type: EF9000, Info Rate: 6000 kbps, Mod: QPSK, 1/2x188/204- BWo: 6771.1kHz, BWa: 10300kHz, C/N: 3.87dB, C/N_thresh: 3.5			
LINK BUDGET				
		CLR SKY UP FADE DN FADE		
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	57.4	57.4	57.4
	- Uplink Path Loss, clear sky (dB)	-207.5	-207.5	-207.5
	- Uplink Rain Attenuation (dB)	0.0	-2.3	0.0
	+ Satellite G/T (dB/K)	5.5	5.5	5.5
	- Boltzman's Constant (dBW/K-Hz)	228.6	228.6	228.6
	- Carrier Noise Bandwidth (dB-Hz)	-68.3	-68.3	-68.3
	C/N Uplink (dB)	15.7	13.4	15.7
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	32.6	32.6	32.6
	- Carrier Output Backoff (dB)	-10.3	-12.5	-10.3
	Downlink EIRP per carrier (dBW)	22.3	20.1	22.3
	- Earth Station Pointing Error (dB)	-.5	-.5	-.5
	- Downlink Path Loss, clear sky (dB)	-196.3	-196.3	-196.3
	- Downlink Rain Attenuation (dB)	0.0	0.0	-2.1
	+ Earth Station G/T (dB/K)	26.2	26.2	23.3
- Boltzman's Constant (dBW/K-Hz)	228.6	228.6	228.6	
- Carrier Noise Bandwidth (dB-Hz)	-68.3	-68.3	-68.3	
C/N Dnlink (dB)	12.0	9.8	7.0	
COMPOSITE PERFORMANCE	C/N Uplink (dB)	15.7	13.4	15.7
	C/N Dnlink (dB)	12.0	9.8	7.0
	C/I Intermod (dB)	20.1	18.8	20.1
	C/I Uplink Co-channel (dB)	28.6	26.3	28.6
	C/I Dnlink Co-Channel (dB)	28.6	26.5	28.6
	C/I Uplink Adj. Sat. (SAT-1) (dB)	17.1	14.8	17.1
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	13.7	11.6	13.7
	C/I Uplink Adj. Sat. (SAT-2) (dB)	17.1	14.8	17.1
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	15.6	13.4	15.6
	C/(N+I) COMPOSITE (dB)	6.7	4.6	4.6
	- Required System Margin (dB)	-1.0	-1.0	-1.0
	Net C/(N+I) COMPOSITE (dB)	5.7	3.6	3.6
	- Minimum Required C/N (dB)	-3.9	-3.6	-3.6
Excess Link Margin (dB)	1.9	0.0	0.0	
TRANSPONDER UTILIZATION	% BW/CARR: 14.31, % PWR/CARR: 20.88, Max No. Carriers: 4.8 Downlink EIRP per carrier toward beam center: 26.3 dBW			
TRANSMIT EARTH STATION	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 0.9 watts			
RECEIVE EARTH STA.	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr			
DENSITY INFORMATION	Uplink Pwr Den: -69.0 dBW/Hz, Dnlink EIRP Den: -42.0 dBW/Hz Max Dnlink PFD: -168.9 dB(W/m2/4kHz) @ Beam Center			
AVAILABILITY	Uplink: 99.504 %, Dnlink: 99.998 %, Composite Link: 99.502			
LOSS IN C/(N+I) DUE TO ADJ SAT INTF: SAT-1 = 1.5dB, SAT-2 = 1.1dB				

KSPOT-HEMI (72 MHz): 10M3G7W
[Input Data]

----- SATELLITE -----

Satellite Name : IS-706 Location (deg): 54.85E
Uplink Beam : KSPOT Dnlink Beam : HEMI
Trans. BW (MHz): 72.0 MHz Trans. Type : LTWTA
Uplink Pol. : Dnlink Pol. :
Uplink Chan. : Dnlink Chan. :
Uplink Frequency (GHz): 14.250 Dnlink Frequency (GHz): 3.950
G/T, beam center (dB/K): 9.5 EIRP, beam center (dBW): 36.6
G/T, beam edge (dB/K): 5.5 EIRP, beam edge (dBW): 32.6
G/T, toward Tx ES (dB/K): 5.5 EIRP, toward Rx ES (dBW): 32.6
SFD, beam edge (dBW/m2): -90.5
SFD, toward Tx ES (dBW/m2): -90.5

----- OPERATING CONDITIONS -----

Attenuator Setting (dB): 1 Nominal Uplink Co-Chan C/I (dB): 27.0
Input Backoff (dB): 8.2* Nominal Dnlink Co-Chan C/I (dB): 27.0
Output Backoff (dB): * Minimum Uplink Rain Margin (dB): 0.5*
(C/Im) - Nominal (dB): * Actual Uplink Rain Margin (dB): 2.3
Min. System Margin (dB): 1.0 Uplink Power Control Margin(dB): .0
Max No Carriers / Trans: * Minimum Dnlink Rain Margin (dB): 0.5*
Required Link Availability: 99.5 Actual Dnlink Rain Margin (dB): 5.0
Dnlink Pointing Error (dB): 0.5

-- ADJACENT SATELLITE INTERFERENCE ----- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg)	:	52.85E	56.85E
Uplink Interference (dB or dBW/Hz)	:	-50	-50
Uplink Polarization Advantage (dB)	:	0.0	0.0
Downlink Interference (dB or dBW/Hz)	:	-35.7	-35.7
Downlink Polarization Advantage (dB)	:	0.0	0.0
Rx E/S Topocentric Angle (deg)	:	2.09	2.09
Rx E/S Pointing Error (deg)	:	-0.18	0.18
Rx E/S Off-Axis Angle (deg)	:	1.91	2.27
Rx E/S Adj. Sat. Discrimination (dB)	:	24.0	25.9

----- CARRIER PARAMETERS -----

Modem Type : EF9000 C/N (operating, dB): 3.87
Modulation : QPSK Eb/No (operating, dB): 4.4
Code Rate : 1/2x188/204-V C/N (threshold, dB): 3.57
Info Rate (kbps): 6000 Eb/No (threshold, dB): 4.1
Occupied Bandwidth (kHz): 6771.1
Allocated Bandwidth (kHz): 10300

----- Transmit Earth Station ----- Receive Earth Station -----

Location: -4_dB_Gain_Contour	Location: -4_dB_Gain_Contour
Latitude (deg): *	Latitude (deg): *
Longitude (deg): *	Longitude (deg): *
Rain Rate (mm/hr): 42*	Rain Rate (mm/hr): 42*
E/S Type or Model No:	E/S Type or Model No:
E/S Manufacturer : STANDARD	E/S Manufacturer : STANDARD
E/S Diam. (m): 7.0	E/S Diam. (m): 6.1
E/S Freq (nom, GHz): 14.250	E/S Freq (nom, GHz): 3.95
E/S Tx Gain (dBi): 58.1	E/S Gain (nom, dBi): 46.5
ULPC Margin (dB): .0	E/S Feed Loss (dB): 0.20
	E/S Ant. Temp(deg K): 25
	E/S LNA Temp (deg K): 65
	E/S G/T (nom, dB/K): *

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SATELLITE DATA	Satellite : IS-706 Uplink Beam: KSPOT Uplink POL: , Dnlink POL: , EIRP, beam center: 36.6 dBW G/T:5.5 dB/K, SFD:-90.5 dBW/m2 Dnlink EIRP: 32.6 dBW	Location: 54.85E Dnlink Beam: HEMI		
TRANSPONDER DATA	Trans Bandwidth :72.0 MHz Uplink Frequency:14.250 GHz IBO (Nominal) : 8.2 dB	Trans Type: LWTWA Dnlink Freq: 3.950 GHz OBO (Nominal): 3.5 dB		
CARRIER DATA	Type: CS701, Info Rate: 64 kbps, Mod: QPSK, 1/2x239/256-V BWo: 75.4kHz, BWa: 100kHz, C/N: 2.99dB, C/N_thresh: 2.79dB			
LINK BUDGET				
		CLR SKY	UP FADE	DN FADE
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	37.2	37.2	37.2
	- Uplink Path Loss, clear sky (dB)	-207.5	-207.5	-207.5
	- Uplink Rain Attenuation (dB)	0.0	-2.3	0.0
	+ Satellite G/T (dB/K)	5.5	5.5	5.5
	- Boltzman's Constant (dBW/K-Hz)	228.6	228.6	228.6
	- Carrier Noise Bandwidth (dB-Hz)	-48.8	-48.8	-48.8
	C/N Uplink (dB)	15.1	12.8	15.1
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	32.6	32.6	32.6
	- Carrier Output Backoff (dB)	-30.5	-32.8	-30.5
	Downlink EIRP per carrier (dBW)	2.1	-.2	2.1
	- Earth Station Pointing Error (dB)	-.5	-.5	-.5
	- Downlink Path Loss, clear sky (dB)	-196.3	-196.3	-196.3
	- Downlink Rain Attenuation (dB)	0.0	0.0	-2.2
	+ Earth Station G/T (dB/K)	26.2	26.2	23.2
	- Boltzman's Constant (dBW/K-Hz)	228.6	228.6	228.6
- Carrier Noise Bandwidth (dB-Hz)	-48.8	-48.8	-48.8	
	C/N Dnlink (dB)	11.3	9.0	6.1
COMPOSITE PERFORMANCE	C/N Uplink (dB)	15.1	12.8	15.1
	C/N Dnlink (dB)	11.3	9.0	6.1
	C/I Intermod (dB)	19.4	17.1	19.4
	C/I Uplink Co-channel (dB)	28.6	26.3	28.6
	C/I Dnlink Co-channel (dB)	28.6	26.3	28.6
	C/I Uplink Adj. Sat. (SAT-1) (dB)	16.4	14.1	16.4
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	13.0	10.8	13.0
	C/I Uplink Adj. Sat. (SAT-2) (dB)	16.4	14.1	16.4
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	14.9	12.6	14.9
	C/(N+I) COMPOSITE (dB)	6.1	3.8	3.8
	- Required System Margin (dB)	-1.0	-1.0	-1.0
	Net C/(N+I) COMPOSITE (dB)	5.1	2.8	2.8
	- Minimum Required C/N (dB)	-3.0	-2.8	-2.8
	Excess Link Margin (dB)	2.1	0.0	0.0
TRANSPONDER UTILIZATION	% BW/CARR: 0.14, % PWR/CARR: 0.2, Max No. Carriers: 499.7 Downlink EIRP per carrier toward beam center: 6.1 dBW			
TRANSMIT EARTH STATION	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 0.0 watts			
RECEIVE EARTH STA.	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr			
DENSITY INFORMATION	Uplink Pwr Den: -69.7 dBW/Hz, Dnlink EIRP Den: -42.7 dBW/Hz Max Dnlink PFD: -169.6 dB(W/m2/4kHz) @ Beam Center			
AVAILABILITY	Uplink: 99.503 %, Dnlink: 99.998 %, Composite Link: 99.501			
LOSS IN C/(N+I) DUE TO ADJ SAT INTF:	SAT-1 = 1.5dB, SAT-2 = 1.1dB			

KSPOT-HEMI (72 MHz): 100KG7W
[Input Data]

----- SATELLITE -----

Satellite Name	: IS-706	Location (deg)	: 54.85E
Uplink Beam	: KSPOT	Dnlink Beam	: HEMI
Trans. BW (MHz)	: 72.0 MHz	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency (GHz)	: 14.250	Dnlink Frequency (GHz)	: 3.950
G/T, beam center (dB/K)	: 9.5	EIRP, beam center (dBW)	: 36.6
G/T, beam edge (dB/K)	: 5.5	EIRP, beam edge (dBW)	: 32.6
G/T, toward Tx ES (dB/K)	: 5.5	EIRP, toward Rx ES (dBW)	: 32.6
SFD, beam edge (dBW/m2)	: -90.5		
SFD, toward Tx ES (dBW/m2)	: -90.5		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB)	: 1	Nominal Uplink Co-Chan C/I (dB)	: 27.0
Input Backoff (dB)	: 8.2*	Nominal Dnlink Co-Chan C/I (dB)	: 27.0
Output Backoff (dB)	: *	Minimum Uplink Rain Margin (dB)	: 0.5*
(C/Im) - Nominal (dB)	: *	Actual Uplink Rain Margin (dB)	: 2.3
Min. System Margin (dB)	: 1.0	Uplink Power Control Margin (dB)	: .0
Max No Carriers / Trans	: *	Minimum Dnlink Rain Margin (dB)	: 0.5*
Required Link Availability	: 99.5	Actual Dnlink Rain Margin (dB)	: 5.2
		Dnlink Pointing Error (dB)	: 0.5

-- ADJACENT SATELLITE INTERFERENCE ----- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg)	:	52.85E	56.85E
Uplink Interference (dB or dBW/Hz)	:	-50	-50
Uplink Polarization Advantage (dB)	:	0.0	0.0
Downlink Interference (dB or dBW/Hz)	:	-35.7	-35.7
Downlink Polarization Advantage (dB)	:	0.0	0.0
Rx E/S Topocentric Angle (deg)	:	2.09	2.09
Rx E/S Pointing Error (deg)	:	-0.18	0.18
Rx E/S Off-Axis Angle (deg)	:	1.91	2.27
Rx E/S Adj. Sat. Discrimination (dB)	:	24.0	25.9

----- CARRIER PARAMETERS -----

Modem Type	: CS701	C/N (operating, dB)	: 2.99
Modulation	: QPSK	Eb/No (operating, dB)	: 3.7
Code Rate	: 1/2x239/256-V	C/N (threshold, dB)	: 2.79
Info Rate (kbps)	: 64	Eb/No (threshold, dB)	: 3.5
Occupied Bandwidth (kHz)	: 75.4		
Allocated Bandwidth (kHz)	: 100		

----- Transmit Earth Station ----- ----- Receive Earth Station -----

Location: -4_dB_Gain_Contour	Location: -4_dB_Gain_Contour
Latitude (deg): *	Latitude (deg): *
Longitude (deg): *	Longitude (deg): *
Rain Rate (mm/hr): 42*	Rain Rate (mm/hr): 42*
E/S Type or Model No:	E/S Type or Model No:
E/S Manufacturer : STANDARD	E/S Manufacturer : STANDARD
E/S Diam. (m): 7.0	E/S Diam. (m): 6.1
E/S Freq (nom, GHz): 14.250	E/S Freq (nom, GHz): 3.95
E/S Tx Gain (dBi): 58.1	E/S Gain (nom, dBi): 46.5
ULPC Margin (dB): .0	E/S Feed Loss (dB): 0.20
	E/S Ant. Temp(deg K): 25
	E/S LNA Temp (deg K): 65
	E/S G/T (nom, dB/K): *

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4-Nov-08 6:45
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SATELLITE DATA	Satellite : IS-706 Uplink Beam: KSPOT Uplink POL: , Dnlink POL: , G/T:5.5 dB/K, SFD:-77.5 dBW/m2	Location: 54.85E Dnlink Beam: ZONE EIRP, beam center: 37.3 dBW Dnlink EIRP: 33.3 dBW		
TRANSPONDER DATA	Trans Bandwidth :72.0 MHz Uplink Frequency:14.250 GHz IBO (Nominal) : 8.2 dB	Trans Type: LTWTA Dnlink Freq: 3.950 GHz OBO (Nominal): 3.1 dB		
CARRIER DATA	Type: TV/FM, Format: PAL, PreEmphasis+Weighting: 15.6dB RF BW: 30.0 MHz, P-Dev: 9.0 MHz, VideoBW: 6.0 MHz,			
LINK BUDGET				
		CLR SKY UP FADE DN FADE		
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	74.2	74.2	74.2
	- Uplink Path Loss, clear sky (dB)	-207.5	-207.5	-207.5
	- Uplink Rain Attenuation (dB)	0.0	-2.1	0.0
	+ Satellite G/T (dB/K)	5.5	5.5	5.5
	- Boltzman's Constant (dBW/K-Hz)	228.6	228.6	228.6
	- Carrier Noise Bandwidth (dB-Hz)	-74.8	-74.8	-74.8
	C/N Uplink (dB)	26.0	23.9	26.0
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	33.3	33.3	33.3
	- Carrier Output Backoff (dB)	-6.2	-8.0	-6.2
	Downlink EIRP per carrier (dBW)	27.1	25.3	27.1
	- Earth Station Pointing Error (dB)	-.5	-.5	-.5
	- Downlink Path Loss, clear sky (dB)	-196.3	-196.3	-196.3
	- Downlink Rain Attenuation (dB)	0.0	0.0	-1.1
	+ Earth Station G/T (dB/K)	31.0	31.0	29.3
	- Boltzman's Constant (dBW/K-Hz)	228.6	228.6	228.6
	- Carrier Noise Bandwidth (dB-Hz)	-74.8	-74.8	-74.8
	C/N Dnlink (dB)	15.2	13.3	12.3
COMPOSITE PERFORMANCE	C/N Uplink (dB)	26.0	23.9	26.0
	C/N Dnlink (dB)	15.2	13.3	12.3
	C/I Uplink Co-channel (dB)	27.8	25.7	27.8
	C/I Dnlink Co-Channel (dB)	27.8	25.9	27.8
	C/I Uplink Adj. Sat. (SAT-1) (dB)	27.4	25.3	27.4
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	21.9	20.1	21.9
	C/I Uplink Adj. Sat. (SAT-2) (dB)	27.4	25.3	27.4
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	23.0	21.1	23.0
	C/(N+I) COMPOSITE (dB)	12.9	11.0	11.0
	- Required System Margin (dB)	-1.0	-1.0	-1.0
	Net C/(N+I) COMPOSITE (dB)	11.9	10.0	10.0
- Minimum Required C/N (dB)	-10.0	-10.0	-10.0	
	Excess Link Margin (dB)	1.9	0.0	0.0
	Video Signal-to-Noise Ratio (dB)	45.8	43.9	43.9
	Audio Signal-to-Noise Ratio (dB)	59.6	57.7	57.7
TRANSMIT EARTH STATION	Loc: -4 dB Gain Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 40.6 watts			
RECEIVE EARTH STA.	Loc: -4 dB Gain Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr			
DENSITY INFORMATION	Uplink Pwr Den: -58.7 dBW/Hz, Dnlink EIRP Den: -43.6 dBW/Hz Max Dnlink PFD: -170.5 dB(W/m2/4kHz) @ Beam Center			
AVAILABILITY	Uplink: 99.438 %, Dnlink: 99.998 %, Composite Link: 99.436			
LOSS IN C/(N+I) DUE TO ADJ SAT INTF: SAT-1 = 0.8dB, SAT-2 = 0.6dB				

----- SATELLITE -----

Satellite Name	: IS-706	Location (deg):	54.85E
Uplink Beam	: KSPOT	Dnlink Beam	: ZONE
Trans. BW (MHz)	: 72.0 MHz	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency (GHz)	: 14.250	Dnlink Frequency (GHz)	: 3.950
G/T, beam center (dB/K)	: 9.5	EIRP, beam center (dBW)	: 37.3
G/T, beam edge (dB/K)	: 5.5	EIRP, beam edge (dBW)	: 33.3
G/T, toward Tx ES (dB/K)	: 5.5	EIRP, toward Rx ES (dBW)	: 33.3
SFD, beam edge (dBW/m2)	: -77.5		
SFD, toward Tx ES (dBW/m2)	: -77.5		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB)	: 14	Nominal Uplink Co-Chan C/I (dB)	: 27.0
Input Backoff (dB)	: 8.2*	Nominal Dnlink Co-Chan C/I (dB)	: 27.0
Output Backoff (dB)	: *	Minimum Uplink Rain Margin (dB)	: 0.5*
(C/Im) - Nominal (dB)	: *	Actual Uplink Rain Margin (dB)	: 2.1
Min. System Margin (dB)	: 1.0	Uplink Power Control Margin (dB)	: .0
Max No Carriers / Trans:	2	Minimum Dnlink Rain Margin (dB)	: 0.5*
Required Link Availability:	99.5	Actual Dnlink Rain Margin (dB)	: 2.8
		Dnlink Pointing Error (dB)	: 0.5

-- ADJACENT SATELLITE INTERFERENCE ----- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg)	:	52.85E	56.85E
Uplink Interference (dB or dBW/Hz)	:	-50	-50
Uplink Polarization Advantage (dB)	:	0.0	0.0
Downlink Interference (dB or dBW/Hz)	:	-39.7	-39.7
Downlink Polarization Advantage (dB)	:	0.0	0.0
Rx E/S Topocentric Angle (deg)	:	2.09	2.09
Rx E/S Pointing Error (deg)	:	-0.10	0.10
Rx E/S Off-Axis Angle (deg)	:	1.99	2.19
Rx E/S Adj. Sat. Discrimination (dB)	:	29.9	30.9

----- TV/FM CARRIER PARAMETERS -----

Video Format	: PAL	Peak Deviation (MHz)	: 9.0
RF Noise BW (MHz)	: 30.0	PreEmphasis+Weighting (dB)	: 15.6
Video BW (MHz)	: 6.0	Threshold C/N (dB)	: 10.0

----- AUDIO SUB-CARRIER PARAMETERS -----

Sub-Carrier Freq (MHz)	: 6.6	Highest Audio Freq (kHz)	: 15.0
P-Dev of Video by Audio (MHz)	: 2.0	Companding Advantage (dB)	: 0.0
Peak Dev of Audio (kHz)	: 75.0		

----- Transmit Earth Station -----

----- Receive Earth Station -----

Location: -4_dB_Gain_Contour		Location: -4_dB_Gain_Contour	
Latitude (deg): *		Latitude (deg): *	
Longitude (deg): *		Longitude (deg): *	
Rain Rate (mm/hr): 42*		Rain Rate (mm/hr): 42*	
E/S Type or Model No:		E/S Type or Model No:	
E/S Manufacturer : STANDARD		E/S Manufacturer : STANDARD	
E/S Diam. (m): 7.0		E/S Diam. (m): 11.0	
E/S Freq (nom, GHz): 14.250		E/S Freq (nom, GHz): 3.95	
E/S Tx Gain (dBi): 58.1		E/S Gain (nom, dBi): 51.9	
ULPC Margin (dB): .0		E/S Feed Loss (dB): 0.15	
		E/S Ant. Temp(deg K): 45	
		E/S LNA Temp (deg K): 65	
		E/S G/T (nom, dB/K): *	

SATELLITE DATA	Satellite : IS-706 Uplink Beam: KSPOT Uplink POL: , Dnlink POL: , EIRP, beam center: 37.3 dBW G/T:5.5 dB/K, SFD:-81.5 dBW/m2 Dnlink EIRP: 33.3 dBW	Location: 54.85E Dnlink Beam: ZONE		
TRANSPONDER DATA	Trans Bandwidth :72.0 MHz Uplink Frequency:14.250 GHz IBO (Nominal) : 0.0 dB	Trans Type: LTWTA Dnlink Freq: 3.950 GHz OBO (Nominal): 0.0 dB		
CARRIER DATA	Type: NTC26%, Info Rate: 49138 kbps, Mod: QPSK, 1/2x188/204 BWo: 60251kHz, BWa: 72000kHz, C/N: 3.36dB, C/N_thresh: 3.36			
LINK BUDGET				
		CLR SKY UP FADE DN FADE		
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	81.4	81.4	81.4
	- Uplink Path Loss, clear sky (dB)	-207.5	-207.5	-207.5
	- Uplink Rain Attenuation (dB)	0.0	-6.8	0.0
	+ Satellite G/T (dB/K)	5.5	5.5	5.5
	- Boltzman's Constant (dBW/K-Hz)	228.6	228.6	228.6
	- Carrier Noise Bandwidth (dB-Hz)	-77.8	-77.8	-77.8
	C/N Uplink (dB)	30.2	23.4	30.2
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	33.3	33.3	33.3
	- Carrier Output Backoff (dB)	0.0	-1.5	0.0
	Downlink EIRP per carrier (dBW)	33.3	31.8	33.3
	- Earth Station Pointing Error (dB)	-.5	-.5	-.5
	- Downlink Path Loss, clear sky (dB)	-196.3	-196.3	-196.3
	- Downlink Rain Attenuation (dB)	0.0	0.0	-.9
	+ Earth Station G/T (dB/K)	21.0	21.0	19.3
	- Boltzman's Constant (dBW/K-Hz)	228.6	228.6	228.6
	- Carrier Noise Bandwidth (dB-Hz)	-77.8	-77.8	-77.8
	C/N Dnlink (dB)	8.3	6.8	5.7
COMPOSITE PERFORMANCE	C/N Uplink (dB)	30.2	23.4	30.2
	C/N Dnlink (dB)	8.3	6.8	5.7
	C/I Uplink Co-channel (dB)	27.0	20.2	27.0
	C/I Dnlink Co-Channel (dB)	27.0	25.5	27.0
	C/I Uplink Adj. Sat. (SAT-1) (dB)	31.6	24.8	31.6
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	11.5	10.0	11.5
	C/I Uplink Adj. Sat. (SAT-2) (dB)	31.6	24.8	31.6
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	16.3	14.8	16.3
	C/(N+I) COMPOSITE (dB)	6.0	4.4	4.4
	- Required System Margin (dB)	-1.0	-1.0	-1.0
	Net C/(N+I) COMPOSITE (dB)	5.0	3.4	3.4
- Minimum Required C/N (dB)	-3.4	-3.4	-3.4	
	Excess Link Margin (dB)	1.7	0.0	0.0
TRANSPONDER UTILIZATION	% BW/CARR: 100.00, % PWR/CARR: 100.00, Max No. Carriers: 1.0 Downlink EIRP per carrier toward beam center: 37.3 dBW			
TRANSMIT EARTH STATION	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 213.7 watts			
RECEIVE EARTH STA.	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr			
DENSITY INFORMATION	Uplink Pwr Den: -54.5 dBW/Hz, Dnlink EIRP Den: -40.5 dBW/Hz Max Dnlink PFD: -167.4 dB(W/m2/4kHz) @ Beam Center			
AVAILABILITY	Uplink: 99.920 %, Dnlink: 99.998 %, Composite Link: 99.917			
LOSS IN C/(N+I) DUE TO ADJ SAT INTF:	SAT-1 = 1.5dB, SAT-2 = 0.4dB			

KSPOT-ZONE (72 MHz): 72M0G7W
[Input Data]

----- SATELLITE -----

Satellite Name	: IS-706	Location (deg)	: 54.85E
Uplink Beam	: KSPOT	Dnlink Beam	: ZONE
Trans. BW (MHz)	: 72.0 MHz	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency (GHz)	: 14.250	Dnlink Frequency (GHz)	: 3.950
G/T, beam center (dB/K)	: 9.5	EIRP, beam center (dBW)	: 37.3
G/T, beam edge (dB/K)	: 5.5	EIRP, beam edge (dBW)	: 33.3
G/T, toward Tx ES (dB/K)	: 5.5	EIRP, toward Rx ES (dBW)	: 33.3
SFD, beam edge (dBW/m2)	: -81.5		
SFD, toward Tx ES (dBW/m2)	: -81.5		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB)	: 10	Nominal Uplink Co-Chan C/I (dB)	: 27.0
Input Backoff (dB)	: 0.0	Nominal Dnlink Co-Chan C/I (dB)	: 27.0
Output Backoff (dB)	: *	Minimum Uplink Rain Margin (dB)	: 0.5*
(C/Im) - Nominal (dB)	: *	Actual Uplink Rain Margin (dB)	: 6.8
Min. System Margin (dB)	: 1.0	Uplink Power Control Margin (dB)	: .0
Max No Carriers / Trans	: 1	Minimum Dnlink Rain Margin (dB)	: 0.5*
Required Link Availability	: 99.5	Actual Dnlink Rain Margin (dB)	: 2.5
		Dnlink Pointing Error (dB)	: 0.5

-- ADJACENT SATELLITE INTERFERENCE ----- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1		SAT-2
Interfering Satellite Location (deg)	:	52.85E		56.85E
Uplink Interference (dB or dBW/Hz)	:	-50		-50
Uplink Polarization Advantage (dB)	:	0.0		0.0
Downlink Interference (dB or dBW/Hz)	:	-39.7		-39.7
Downlink Polarization Advantage (dB)	:	0.0		0.0
Rx E/S Topocentric Angle (deg)	:	2.09		2.09
Rx E/S Pointing Error (deg)	:	-0.31		0.31
Rx E/S Off-Axis Angle (deg)	:	1.78		2.40
Rx E/S Adj. Sat. Discrimination (dB)	:	16.3		21.1

----- CARRIER PARAMETERS -----

Modem Type	: NTC26%	C/N (operating, dB)	: 3.36
Modulation	: QPSK	Eb/No (operating, dB)	: 4.2
Code Rate	: 1/2x188/204-V	C/N (threshold, dB)	: 3.36
Info Rate (kbps)	: 49138	Eb/No (threshold, dB)	: 4.2
Occupied Bandwidth (kHz)	: 60251		
Allocated Bandwidth (kHz)	: 72000		

----- Transmit Earth Station ----- ----- Receive Earth Station -----

Location: -4_dB_Gain_Contour		Location: -4_dB_Gain_Contour	
Latitude (deg): *		Latitude (deg): *	
Longitude (deg): *		Longitude (deg): *	
Rain Rate (mm/hr): 42*		Rain Rate (mm/hr): 42*	
E/S Type or Model No:		E/S Type or Model No:	
E/S Manufacturer : STANDARD		E/S Manufacturer : STANDARD	
E/S Diam. (m): 7.0		E/S Diam. (m): 3.5	
E/S Freq (nom, GHz): 14.250		E/S Freq (nom, GHz): 3.95	
E/S Tx Gain (dBi): 58.1		E/S Gain (nom, dBi): 41.1	
ULPC Margin (dB): .0		E/S Feed Loss (dB): 0.15	
		E/S Ant. Temp(deg K): 25	
		E/S LNA Temp (deg K): 65	
		E/S G/T (nom, dB/K): *	

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SATELLITE DATA	Satellite : IS-706 Uplink Beam: KSPOT Uplink POL: , Dnlink POL: , EIRP, beam center: 37.3 dBW G/T:5.5 dB/K, SFD:-89.5 dBW/m2 Dnlink EIRP: 33.3 dBW	Location: 54.85E Dnlink Beam: ZONE		
TRANSPONDER DATA	Trans Bandwidth :72.0 MHz Uplink Frequency:14.250 GHz IBO (Nominal) : 8.2 dB	Trans Type: LTWTA Dnlink Freq: 3.950 GHz OBO (Nominal): 3.5 dB		
CARRIER DATA	Type: EF9000, Info Rate: 6000 kbps, Mod: QPSK, 1/2x188/204- BWo: 6771.1kHz, BWa: 10300kHz, C/N: 3.87dB, C/N_thresh: 3.5			
LINK BUDGET				
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	58.3	58.3	58.3
	- Uplink Path Loss, clear sky (dB)	-207.5	-207.5	-207.5
	- Uplink Rain Attenuation (dB)	0.0	-2.3	0.0
	+ Satellite G/T (dB/K)	5.5	5.5	5.5
	- Boltzman's Constant (dBW/K-Hz)	228.6	228.6	228.6
	- Carrier Noise Bandwidth (dB-Hz)	-68.3	-68.3	-68.3
C/N Uplink (dB)	16.6	14.3	16.6	
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	33.3	33.3	33.3
	- Carrier Output Backoff (dB)	-10.4	-12.6	-10.4
	Downlink EIRP per carrier (dBW)	22.9	20.7	22.9
	- Earth Station Pointing Error (dB)	-.5	-.5	-.5
	- Downlink Path Loss, clear sky (dB)	-196.3	-196.3	-196.3
	- Downlink Rain Attenuation (dB)	0.0	0.0	-1.4
+ Earth Station G/T (dB/K)	23.6	23.6	21.3	
- Boltzman's Constant (dBW/K-Hz)	228.6	228.6	228.6	
- Carrier Noise Bandwidth (dB-Hz)	-68.3	-68.3	-68.3	
C/N Dnlink (dB)	10.0	7.8	6.2	
COMPOSITE PERFORMANCE	C/N Uplink (dB)	16.6	14.3	16.6
	C/N Dnlink (dB)	10.0	7.8	6.2
	C/I Intermod (dB)	20.0	18.6	20.0
	C/I Uplink Co-channel (dB)	28.5	26.2	28.5
	C/I Dnlink Co-Channel (dB)	28.5	26.4	28.5
	C/I Uplink Adj. Sat. (SAT-1) (dB)	18.0	15.7	18.0
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	15.4	13.2	15.4
	C/I Uplink Adj. Sat. (SAT-2) (dB)	18.0	15.7	18.0
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	17.9	15.7	17.9
	C/(N+I) COMPOSITE (dB)	6.7	4.6	4.6
- Required System Margin (dB)	-1.0	-1.0	-1.0	
Net C/(N+I) COMPOSITE (dB)	5.7	3.6	3.6	
- Minimum Required C/N (dB)	-3.9	-3.6	-3.6	
Excess Link Margin (dB)	1.8	0.0	0.0	
TRANSPONDER UTILIZATION	% BW/CARR: 14.31, % PWR/CARR: 20.42, Max No. Carriers: 4.9 Downlink EIRP per carrier toward beam center: 26.9 dBW			
TRANSMIT EARTH STATION	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 1.0 watts			
RECEIVE EARTH STA.	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr			
DENSITY INFORMATION	Uplink Pwr Den: -68.1 dBW/Hz, Dnlink EIRP Den: -41.4 dBW/Hz Max Dnlink PFD: -168.3 dB(W/m2/4kHz) @ Beam Center			
AVAILABILITY	Uplink: 99.504 %, Dnlink: 99.998 %, Composite Link: 99.502			
LOSS IN C/(N+I) DUE TO ADJ SAT INTF: SAT-1 = 1.0dB, SAT-2 = 0.7dB				

KSPOT-ZONE (72 MHz): 10M3G7W
[Input Data]

----- SATELLITE -----

Satellite Name	: IS-706	Location (deg)	: 54.85E
Uplink Beam	: KSPOT	Dnlink Beam	: ZONE
Trans. BW (MHz)	: 72.0 MHz	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency (GHz)	: 14.250	Dnlink Frequency (GHz)	: 3.950
G/T, beam center (dB/K)	: 9.5	EIRP, beam center (dBW)	: 37.3
G/T, beam edge (dB/K)	: 5.5	EIRP, beam edge (dBW)	: 33.3
G/T, toward Tx ES (dB/K)	: 5.5	EIRP, toward Rx ES (dBW)	: 33.3
SFD, beam edge (dBW/m2)	: -89.5		
SFD, toward Tx ES (dBW/m2)	: -89.5		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB)	: 2	Nominal Uplink Co-Chan C/I (dB)	: 27.0
Input Backoff (dB)	: 8.2*	Nominal Dnlink Co-Chan C/I (dB)	: 27.0
Output Backoff (dB)	: *	Minimum Uplink Rain Margin (dB)	: 0.5*
(C/Im) - Nominal (dB)	: *	Actual Uplink Rain Margin (dB)	: 2.3
Min. System Margin (dB)	: 1.0	Uplink Power Control Margin (dB)	: .0
Max No Carriers / Trans	: *	Minimum Dnlink Rain Margin (dB)	: 0.5*
Required Link Availability	: 99.5	Actual Dnlink Rain Margin (dB)	: 3.7
		Dnlink Pointing Error (dB)	: 0.5

-- ADJACENT SATELLITE INTERFERENCE ----- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg)	:	52.85E	56.85E
Uplink Interference (dB or dBW/Hz)	:	-50	-50
Uplink Polarization Advantage (dB)	:	0.0	0.0
Downlink Interference (dB or dBW/Hz)	:	-39.7	-39.7
Downlink Polarization Advantage (dB)	:	0.0	0.0
Rx E/S Topocentric Angle (deg)	:	2.09	2.09
Rx E/S Pointing Error (deg)	:	-0.24	0.24
Rx E/S Off-Axis Angle (deg)	:	1.85	2.33
Rx E/S Adj. Sat. Discrimination (dB)	:	21.1	23.6

----- CARRIER PARAMETERS -----

Modem Type	: EF9000	C/N (operating, dB)	: 3.87
Modulation	: QPSK	Eb/No (operating, dB)	: 4.4
Code Rate	: 1/2x188/204-V	C/N (threshold, dB)	: 3.57
Info Rate (kbps)	: 6000	Eb/No (threshold, dB)	: 4.1
Occupied Bandwidth (kHz)	: 6771.1		
Allocated Bandwidth (kHz)	: 10300		

----- Transmit Earth Station ----- ----- Receive Earth Station -----

Location: -4_dB_Gain_Contour	Location: -4_dB_Gain_Contour
Latitude (deg): *	Latitude (deg): *
Longitude (deg): *	Longitude (deg): *
Rain Rate (mm/hr): 42*	Rain Rate (mm/hr): 42*
E/S Type or Model No:	E/S Type or Model No:
E/S Manufacturer : STANDARD	E/S Manufacturer : STANDARD
E/S Diam. (m): 7.0	E/S Diam. (m): 4.5
E/S Freq (nom, GHz): 14.250	E/S Freq (nom, GHz): 3.95
E/S Tx Gain (dBi): 58.1	E/S Gain (nom, dBi): 43.9
ULPC Margin (dB): .0	E/S Feed Loss (dB): 0.20
	E/S Ant. Temp(deg K): 25
	E/S LNA Temp (deg K): 65
	E/S G/T (nom, dB/K): *

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4-Nov-08 7:02
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SATELLITE DATA	Satellite : IS-706 Uplink Beam: KSPOT Uplink POL: , Dnlink POL: , EIRP, beam center: 37.3 dBW G/T:5.5 dB/K, SFD:-89.5 dBW/m2 Dnlink EIRP: 33.3 dBW	Location: 54.85E Dnlink Beam: ZONE		
TRANSPONDER DATA	Trans Bandwidth :72.0 MHz Uplink Frequency:14.250 GHz IBO (Nominal) : 8.2 dB	Trans Type: LTWTA Dnlink Freq: 3.950 GHz OBO (Nominal): 3.5 dB		
CARRIER DATA	Type: CS701, Info Rate: 64 kbps, Mod: QPSK, 1/2x239/256-V BWo: 75.4kHz, BWa: 100kHz, C/N: 2.99dB, C/N_thresh: 2.79dB			
LINK BUDGET				
		CLR SKY UP FADE DN FADE		
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	38.1	38.1	38.1
	- Uplink Path Loss, clear sky (dB)	-207.5	-207.5	-207.5
	- Uplink Rain Attenuation (dB)	0.0	-2.3	0.0
	+ Satellite G/T (dB/K)	5.5	5.5	5.5
	- Boltzman's Constant (dBW/K-Hz)	228.6	228.6	228.6
	- Carrier Noise Bandwidth (dB-Hz)	-48.8	-48.8	-48.8
	C/N Uplink (dB)	16.0	13.7	16.0
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	33.3	33.3	33.3
	- Carrier Output Backoff (dB)	-30.6	-32.9	-30.6
	Downlink EIRP per carrier (dBW)	2.7	.4	2.7
	- Earth Station Pointing Error (dB)	-.5	-.5	-.5
	- Downlink Path Loss, clear sky (dB)	-196.3	-196.3	-196.3
	- Downlink Rain Attenuation (dB)	0.0	0.0	-1.5
	+ Earth Station G/T (dB/K)	23.6	23.6	21.2
	- Boltzman's Constant (dBW/K-Hz)	228.6	228.6	228.6
- Carrier Noise Bandwidth (dB-Hz)	-48.8	-48.8	-48.8	
	C/N Dnlink (dB)	9.3	7.0	5.4
COMPOSITE PERFORMANCE	C/N Uplink (dB)	16.0	13.7	16.0
	C/N Dnlink (dB)	9.3	7.0	5.4
	C/I Intermod (dB)	19.3	17.1	19.3
	C/I Uplink Co-channel (dB)	28.5	26.2	28.5
	C/I Dnlink Co-Channel (dB)	28.5	26.2	28.5
	C/I Uplink Adj. Sat. (SAT-1) (dB)	17.3	15.1	17.3
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	14.7	12.4	14.7
	C/I Uplink Adj. Sat. (SAT-2) (dB)	17.3	15.1	17.3
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	17.2	14.9	17.2
	C/(N+I) COMPOSITE (dB)	6.1	3.8	3.8
	- Required System Margin (dB)	-1.0	-1.0	-1.0
	Net C/(N+I) COMPOSITE (dB)	5.1	2.8	2.8
	- Minimum Required C/N (dB)	-3.0	-2.8	-2.8
	Excess Link Margin (dB)	2.1	0.0	0.0
TRANSPONDER UTILIZATION	% BW/CARR: 0.14, % PWR/CARR: 0.2, Max No. Carriers: 510.3 Downlink EIRP per carrier toward beam center: 6.7 dBW			
TRANSMIT EARTH STATION	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 0.0 watts			
RECEIVE EARTH STA.	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr			
DENSITY INFORMATION	Uplink Pwr Den: -68.8 dBW/Hz, Dnlink EIRP Den: -42.1 dBW/Hz Max Dnlink PFD: -169.0 dB(W/m2/4kHz) @ Beam Center			
AVAILABILITY	Uplink: 99.503 %, Dnlink: 99.998 %, Composite Link: 99.501			
LOSS IN C/(N+I) DUE TO ADJ SAT INTF: SAT-1 = 1.0dB, SAT-2 = 0.7dB				

KSPOT-ZONE (72 MHZ): 100KG7W
[Input Data]

----- SATELLITE -----

Satellite Name	: IS-706	Location (deg)	: 54.85E
Uplink Beam	: KSPOT	Dnlink Beam	: ZONE
Trans. BW (MHz)	: 72.0 MHz	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency (GHz)	: 14.250	Dnlink Frequency (GHz)	: 3.950
G/T, beam center (dB/K)	: 9.5	EIRP, beam center (dBW)	: 37.3
G/T, beam edge (dB/K)	: 5.5	EIRP, beam edge (dBW)	: 33.3
G/T, toward Tx ES (dB/K)	: 5.5	EIRP, toward Rx ES (dBW)	: 33.3
SFD, beam edge (dBW/m2)	: -89.5		
SFD, toward Tx ES (dBW/m2)	: -89.5		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB)	: 2	Nominal Uplink Co-Chan C/I (dB)	: 27.0
Input Backoff (dB)	: 8.2*	Nominal Dnlink Co-Chan C/I (dB)	: 27.0
Output Backoff (dB)	: *	Minimum Uplink Rain Margin (dB)	: 0.5*
(C/Im) - Nominal (dB)	: *	Actual Uplink Rain Margin (dB)	: 2.3
Min. System Margin (dB)	: 1.0	Uplink Power Control Margin (dB)	: .0
Max No Carriers / Trans:	: *	Minimum Dnlink Rain Margin (dB)	: 0.5*
Required Link Availability:	: 99.5	Actual Dnlink Rain Margin (dB)	: 3.9
		Dnlink Pointing Error (dB)	: 0.5

-- ADJACENT SATELLITE INTERFERENCE ----- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg)	:	52.85E	56.85E
Uplink Interference (dB or dBW/Hz)	:	-50	-50
Uplink Polarization Advantage (dB)	:	0.0	0.0
Downlink Interference (dB or dBW/Hz)	:	-39.7	-39.7
Downlink Polarization Advantage (dB)	:	0.0	0.0
Rx E/S Topocentric Angle (deg)	:	2.09	2.09
Rx E/S Pointing Error (deg)	:	-0.24	0.24
Rx E/S Off-Axis Angle (deg)	:	1.85	2.33
Rx E/S Adj. Sat. Discrimination (dB)	:	21.1	23.6

----- CARRIER PARAMETERS -----

Modem Type	: CS701	C/N (operating, dB)	: 2.99
Modulation	: QPSK	Eb/No (operating, dB)	: 3.7
Code Rate	: 1/2x239/256-V	C/N (threshold, dB)	: 2.79
Info Rate (kbps)	: 64	Eb/No (threshold, dB)	: 3.5
Occupied Bandwidth (kHz)	: 75.4		
Allocated Bandwidth (kHz)	: 100		

----- Transmit Earth Station ----- ----- Receive Earth Station -----

Location: -4_dB_Gain_Contour	Location: -4_dB_Gain_Contour
Latitude (deg): *	Latitude (deg): *
Longitude (deg): *	Longitude (deg): *
Rain Rate (mm/hr): 42*	Rain Rate (mm/hr): 42*
E/S Type or Model No:	E/S Type or Model No:
E/S Manufacturer : STANDARD	E/S Manufacturer : STANDARD
E/S Diam. (m): 7.0	E/S Diam. (m): 4.5
E/S Freq (nom, GHz): 14.250	E/S Freq (nom, GHz): 3.95
E/S Tx Gain (dBi): 58.1	E/S Gain (nom, dBi): 43.9
ULPC Margin (dB): .0	E/S Feed Loss (dB): 0.20
	E/S Ant. Temp(deg K): 25
	E/S LNA Temp (deg K): 65
	E/S G/T (nom, dB/K): *

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SATELLITE DATA	Satellite : IS-706 Uplink Beam: KSPOT Uplink POL: , Dnlink POL: , EIRP, beam center: 33.5 dBW G/T:5.5 dB/K, SFD:-84.5 dBW/m2 Dnlink EIRP: 33.3 dBW	Location: 54.85E Dnlink Beam: GLOBAL		
TRANSPONDER DATA	Trans Bandwidth :41.0 MHz Uplink Frequency:14.250 GHz IBO (Nominal) : 0.0 dB	Trans Type: LTWTA Dnlink Freq: 3.950 GHz OBO (Nominal): 0.0 dB		
CARRIER DATA	Type: TV/FM, Format: PAL, PreEmphasis+Weighting: 15.6dB RF BW: 30.0 MHz, P-Dev: 9.0 MHz, VideoBW: 6.0 MHz,			
LINK BUDGET				
		CLR SKY UP FADE DN FADE		
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	78.4	78.4	78.4
	- Uplink Path Loss, clear sky (dB)	-207.5	-207.5	-207.5
	- Uplink Rain Attenuation (dB)	0.0	-5.5	0.0
	+ Satellite G/T (dB/K)	5.5	5.5	5.5
	- Boltzman's Constant (dBW/K-Hz)	228.6	228.6	228.6
	- Carrier Noise Bandwidth (dB-Hz)	-74.8	-74.8	-74.8
	C/N Uplink (dB)	30.3	24.8	30.3
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	33.3	33.3	33.3
	- Carrier Output Backoff (dB)	0.0	- .8	0.0
	Downlink EIRP per carrier (dBW)	33.3	32.5	33.3
	- Earth Station Pointing Error (dB)	- .5	- .5	- .5
	- Downlink Path Loss, clear sky (dB)	-196.3	-196.3	-196.3
	- Downlink Rain Attenuation (dB)	0.0	0.0	-1.0
	+ Earth Station G/T (dB/K)	26.2	26.2	24.4
	- Boltzman's Constant (dBW/K-Hz)	228.6	228.6	228.6
- Carrier Noise Bandwidth (dB-Hz)	-74.8	-74.8	-74.8	
	C/N Dnlink (dB)	16.5	15.7	13.7
COMPOSITE PERFORMANCE	C/N Uplink (dB)	30.3	24.8	30.3
	C/N Dnlink (dB)	16.5	15.7	13.7
	C/I Uplink Co-channel (dB)	28.4	22.9	28.4
	C/I Dnlink Co-channel (dB)	28.4	27.6	28.4
	C/I Uplink Adj. Sat. (SAT-1) (dB)	31.6	26.1	31.6
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	17.3	16.5	17.3
	C/I Uplink Adj. Sat. (SAT-2) (dB)	31.6	26.1	31.6
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	19.1	18.3	19.1
	C/(N+I) COMPOSITE (dB)	12.3	11.0	11.0
	- Required System Margin (dB)	-1.0	-1.0	-1.0
	Net C/(N+I) COMPOSITE (dB)	11.3	10.0	10.0
	- Minimum Required C/N (dB)	-10.0	-10.0	-10.0
	Excess Link Margin (dB)	1.3	0.0	0.0
	Video Signal-to-Noise Ratio (dB)	45.2	43.9	43.9
	Audio Signal-to-Noise Ratio (dB)	59.0	57.7	57.7
TRANSMIT EARTH STATION	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 107.1 watts			
RECEIVE EARTH STA.	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr			
DENSITY INFORMATION	Uplink Pwr Den: -54.5 dBW/Hz, Dnlink EIRP Den: -41.3 dBW/Hz Max Dnlink PFD: -168.2 dB(W/m2/4kHz) @ Beam Center			
AVAILABILITY	Uplink: 99.885 %, Dnlink: 99.998 %, Composite Link: 99.883			
LOSS IN C/(N+I) DUE TO ADJ SAT INTF: SAT-1 = 1.8dB, SAT-2 = 1.1dB				

KSPOT-GLOBAL (41 MHz): 30M0F3F
[Input Data]

----- SATELLITE -----

Satellite Name	: IS-706	Location (deg)	: 54.85E
Uplink Beam	: KSPOT	Dnlink Beam	: GLOBAL
Trans. BW (MHz)	: 41.0 MHz	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency (GHz)	: 14.250	Dnlink Frequency (GHz)	: 3.950
G/T, beam center (dB/K)	: 9.5	EIRP, beam center (dBW)	: 33.5
G/T, beam edge (dB/K)	: 5.5	EIRP, beam edge (dBW)	: 29.5
G/T, toward Tx ES (dB/K)	: 5.5	EIRP, toward Rx ES (dBW)	: 33.3
SFD, beam edge (dBW/m2)	: -84.5		
SFD, toward Tx ES (dBW/m2)	: -84.5		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB)	: 7	Nominal Uplink Co-Chan C/I (dB)	: 27.0
Input Backoff (dB)	: 0.0	Nominal Dnlink Co-Chan C/I (dB)	: 27.0
Output Backoff (dB)	: *	Minimum Uplink Rain Margin (dB)	: 0.5*
(C/Im) - Nominal (dB)	: *	Actual Uplink Rain Margin (dB)	: 5.5
Min. System Margin (dB)	: 1.0	Uplink Power Control Margin (dB)	: .0
Max No Carriers / Trans	: 1	Minimum Dnlink Rain Margin (dB)	: 0.5*
Required Link Availability	: 99.5	Actual Dnlink Rain Margin (dB)	: 2.9
		Dnlink Pointing Error (dB)	: 0.5

--- ADJACENT SATELLITE INTERFERENCE ----- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg)	:	52.85E	56.85E
Uplink Interference (dB or dBW/Hz)	:	-50	-50
Uplink Polarization Advantage (dB)	:	0.0	0.0
Downlink Interference (dB or dBW/Hz)	:	-34.7	-34.7
Downlink Polarization Advantage (dB)	:	0.0	0.0
Rx E/S Topocentric Angle (deg)	:	2.09	2.09
Rx E/S Pointing Error (deg)	:	-0.18	0.18
Rx E/S Off-Axis Angle (deg)	:	1.91	2.27
Rx E/S Adj. Sat. Discrimination (dB)	:	24.0	25.9

----- TV/FM CARRIER PARAMETERS -----

Video Format	: PAL	Peak Deviation (MHz)	: 9.0
RF Noise BW (MHz)	: 30.0	PreEmphasis+Weighting (dB)	: 15.6
Video BW (MHz)	: 6.0	Threshold C/N (dB)	: 10.0

----- AUDIO SUB-CARRIER PARAMETERS -----

Sub-Carrier Freq (MHz)	: 6.6	Highest Audio Freq (kHz)	: 15.0
P-Dev of Video by Audio (MHz)	: 2.0	Companding Advantage (dB)	: 0.0
Peak Dev of Audio (kHz)	: 75.0		

----- Transmit Earth Station -----

Location: -4_dB_Gain_Contour
Latitude (deg): *
Longitude (deg): *
Rain Rate (mm/hr): 42*
E/S Type or Model No:
E/S Manufacturer : STANDARD
E/S Diam. (m): 7.0
E/S Freq (nom, GHz): 14.250
E/S Tx Gain (dBi): 58.1
ULPC Margin (dB): .0

----- Receive Earth Station -----

Location: -4_dB_Gain_Contour
Latitude (deg): *
Longitude (deg): *
Rain Rate (mm/hr): 42*
E/S Type or Model No:
E/S Manufacturer : STANDARD
E/S Diam. (m): 6.1
E/S Freq (nom, GHz): 3.95
E/S Gain (nom, dBi): 46.5
E/S Feed Loss (dB): 0.20
E/S Ant. Temp(deg K): 25
E/S LNA Temp (deg K): 65
E/S G/T (nom, dB/K): *

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SATELLITE DATA	Satellite : IS-706 Uplink Beam: KSPOT Uplink POL: , Dnlink POL: , EIRP, beam center: 33.5 dBW G/T:5.5 dB/K, SFD:-81.5 dBW/m2 Dnlink EIRP: 33.3 dBW	Location: 54.85E Dnlink Beam: GLOBAL		
TRANSPONDER DATA	Trans Bandwidth :41.0 MHz Uplink Frequency:14.250 GHz IBO (Nominal) : 0.0 dB	Trans Type: LTWTA Dnlink Freq: 3.950 GHz OBO (Nominal): 0.0 dB		
CARRIER DATA	Type: NTC26%, Info Rate: 27981 kbps, Mod: QPSK, 1/2x188/204 BWo: 34310kHz, BWa: 41000kHz, C/N: 3.36dB, C/N_thresh: 3.36			
LINK BUDGET				
		CLR SKY	UP FADE	DN FADE
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	81.4	81.4	81.4
	- Uplink Path Loss, clear sky (dB)	-207.5	-207.5	-207.5
	- Uplink Rain Attenuation (dB)	0.0	-6.6	0.0
	+ Satellite G/T (dB/K)	5.5	5.5	5.5
	- Boltzman's Constant (dBW/K-Hz)	228.6	228.6	228.6
	- Carrier Noise Bandwidth (dB-Hz)	-75.4	-75.4	-75.4
	C/N Uplink (dB)	32.7	26.1	32.7
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	33.3	33.3	33.3
	- Carrier Output Backoff (dB)	0.0	-1.4	0.0
	Downlink EIRP per carrier (dBW)	33.3	31.9	33.3
	- Earth Station Pointing Error (dB)	-.5	-.5	-.5
	- Downlink Path Loss, clear sky (dB)	-196.3	-196.3	-196.3
	- Downlink Rain Attenuation (dB)	0.0	0.0	-1.3
	+ Earth Station G/T (dB/K)	21.0	21.0	18.7
- Boltzman's Constant (dBW/K-Hz)	228.6	228.6	228.6	
- Carrier Noise Bandwidth (dB-Hz)	-75.4	-75.4	-75.4	
	C/N Dnlink (dB)	10.7	9.3	7.2
COMPOSITE PERFORMANCE	C/N Uplink (dB)	32.7	26.1	32.7
	C/N Dnlink (dB)	10.7	9.3	7.2
	C/I Uplink Co-channel (dB)	27.0	20.4	27.0
	C/I Dnlink Co-Channel (dB)	27.0	25.6	27.0
	C/I Uplink Adj. Sat. (SAT-1) (dB)	34.0	27.5	34.0
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	9.0	7.6	9.0
	C/I Uplink Adj. Sat. (SAT-2) (dB)	34.0	27.5	34.0
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	13.8	12.4	13.8
	C/(N+I) COMPOSITE (dB)	5.9	4.4	4.4
	- Required System Margin (dB)	-1.0	-1.0	-1.0
	Net C/(N+I) COMPOSITE (dB)	4.9	3.4	3.4
- Minimum Required C/N (dB)	-3.4	-3.4	-3.4	
	Excess Link Margin (dB)	1.5	0.0	0.0
TRANSPONDER UTILIZATION	% BW/CARR: 100.00, % PWR/CARR: 100.00, Max No. Carriers: 1.0 Downlink EIRP per carrier toward beam center: 33.5 dBW			
TRANSMIT EARTH STATION	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 213.7 watts			
RECEIVE EARTH STA.	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr			
DENSITY INFORMATION	Uplink Pwr Den: -52.1 dBW/Hz, Dnlink EIRP Den: -41.9 dBW/Hz Max Dnlink PFD: -168.8 dB(W/m2/4kHz) @ Beam Center			
AVAILABILITY	Uplink: 99.916 %, Dnlink: 99.998 %, Composite Link: 99.913			
LOSS IN C/(N+I) DUE TO ADJ SAT INTF:	SAT-1 = 2.9dB, SAT-2 = 0.8dB			

KSPOT-GLOBAL (41 MHz): 41MOG7W
[Input Data]

----- SATELLITE -----

Satellite Name	: IS-706	Location (deg)	: 54.85E
Uplink Beam	: KSPOT	Dnlink Beam	: GLOBAL
Trans. BW (MHz)	: 41.0 MHz	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency (GHz)	: 14.250	Dnlink Frequency (GHz)	: 3.950
G/T, beam center (dB/K)	: 9.5	EIRP, beam center (dBW)	: 33.5
G/T, beam edge (dB/K)	: 5.5	EIRP, beam edge (dBW)	: 29.5
G/T, toward Tx ES (dB/K)	: 5.5	EIRP, toward Rx ES (dBW)	: 33.3
SFD, beam edge (dBW/m2)	: -81.5		
SFD, toward Tx ES (dBW/m2)	: -81.5		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB)	: 10	Nominal Uplink Co-Chan C/I (dB)	: 27.0
Input Backoff (dB)	: 0.0	Nominal Dnlink Co-Chan C/I (dB)	: 27.0
Output Backoff (dB)	: *	Minimum Uplink Rain Margin (dB)	: 0.5*
(C/Im) - Nominal (dB)	: *	Actual Uplink Rain Margin (dB)	: 6.6
Min. System Margin (dB)	: 1.0	Uplink Power Control Margin (dB)	: .0
Max No Carriers / Trans	: 1	Minimum Dnlink Rain Margin (dB)	: 0.5*
Required Link Availability	: 99.5	Actual Dnlink Rain Margin (dB)	: 3.6
		Dnlink Pointing Error (dB)	: 0.5

-- ADJACENT SATELLITE INTERFERENCE ----- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg)	:	52.85E	56.85E
Uplink Interference (dB or dBW/Hz)	:	-50	-50
Uplink Polarization Advantage (dB)	:	0.0	0.0
Downlink Interference (dB or dBW/Hz)	:	-34.7	-34.7
Downlink Polarization Advantage (dB)	:	0.0	0.0
Rx E/S Topocentric Angle (deg)	:	2.09	2.09
Rx E/S Pointing Error (deg)	:	-0.31	0.31
Rx E/S Off-Axis Angle (deg)	:	1.78	2.40
Rx E/S Adj. Sat. Discrimination (dB)	:	16.3	21.1

----- CARRIER PARAMETERS -----

Modem Type	: NTC26%	C/N (operating, dB)	: 3.36
Modulation	: QPSK	Eb/No (operating, dB)	: 4.2
Code Rate	: 1/2x188/204-V	C/N (threshold, dB)	: 3.36
Info Rate (kbps)	: 27981	Eb/No (threshold, dB)	: 4.2
Occupied Bandwidth (kHz)	: 34310		
Allocated Bandwidth (kHz)	: 41000		

----- Transmit Earth Station ----- ----- Receive Earth Station -----

Location: -4_dB_Gain_Contour	Location: -4_dB_Gain_Contour
Latitude (deg): *	Latitude (deg): *
Longitude (deg): *	Longitude (deg): *
Rain Rate (mm/hr): 42*	Rain Rate (mm/hr): 42*
E/S Type or Model No:	E/S Type or Model No:
E/S Manufacturer : STANDARD	E/S Manufacturer : STANDARD
E/S Diam. (m): 7.0	E/S Diam. (m): 3.5
E/S Freq (nom, GHz): 14.250	E/S Freq (nom, GHz): 3.95
E/S Tx Gain (dBi): 58.1	E/S Gain (nom, dBi): 41.1
ULPC Margin (dB): .0	E/S Feed Loss (dB): 0.15
	E/S Ant. Temp(deg K): 25
	E/S LNA Temp (deg K): 65
	E/S G/T (nom, dB/K): *

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SATELLITE DATA	Satellite : IS-706 Uplink Beam: KSPOT Uplink POL: , Dnlink POL: , EIRP, beam center: 33.5 dBW G/T:5.5 dB/K, SFD:-91.5 dBW/m2 Dnlink EIRP: 33.3 dBW	Location: 54.85E Dnlink Beam: GLOBAL		
TRANSPONDER DATA	Trans Bandwidth :41.0 MHz Uplink Frequency:14.250 GHz IBO (Nominal) : 8.2 dB	Trans Type: LTWTA Dnlink Freq: 3.950 GHz OBO (Nominal): 3.5 dB		
CARRIER DATA	Type: EF9000, Info Rate: 6000 kbps, Mod: QPSK, 1/2x188/204- BWo: 6771.1kHz, BWa: 10300kHz, C/N: 3.87dB, C/N_thresh: 3.5			
LINK BUDGET				
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	58.4	58.4	58.4
	- Uplink Path Loss, clear sky (dB)	-207.5	-207.5	-207.5
	- Uplink Rain Attenuation (dB)	0.0	-2.3	0.0
	+ Satellite G/T (dB/K)	5.5	5.5	5.5
	- Boltzman's Constant (dBW/K-Hz)	228.6	228.6	228.6
	- Carrier Noise Bandwidth (dB-Hz)	-68.3	-68.3	-68.3
C/N Uplink (dB)		16.7	14.4	16.7
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	33.3	33.3	33.3
	- Carrier Output Backoff (dB)	-8.3	-10.4	-8.3
	Downlink EIRP per carrier (dBW)	25.0	22.9	25.0
	- Earth Station Pointing Error (dB)	-.5	-.5	-.5
	- Downlink Path Loss, clear sky (dB)	-196.3	-196.3	-196.3
	- Downlink Rain Attenuation (dB)	0.0	0.0	-2.0
+ Earth Station G/T (dB/K)	23.6	23.6	20.7	
- Boltzman's Constant (dBW/K-Hz)	228.6	228.6	228.6	
- Carrier Noise Bandwidth (dB-Hz)	-68.3	-68.3	-68.3	
C/N Dnlink (dB)		12.0	10.0	7.1
COMPOSITE PERFORMANCE	C/N Uplink (dB)	16.7	14.4	16.7
	C/N Dnlink (dB)	12.0	10.0	7.1
	C/I Intermod (dB)	19.6	18.9	19.6
	C/I Uplink Co-channel (dB)	28.2	25.9	28.2
	C/I Dnlink Co-channel (dB)	28.2	26.1	28.2
	C/I Uplink Adj. Sat. (SAT-1) (dB)	18.1	15.8	18.1
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	12.4	10.4	12.4
	C/I Uplink Adj. Sat. (SAT-2) (dB)	18.1	15.8	18.1
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	14.9	12.9	14.9
	C/(N+I) COMPOSITE (dB)	6.6	4.6	4.6
	- Required System Margin (dB)	-1.0	-1.0	-1.0
	Net C/(N+I) COMPOSITE (dB)	5.6	3.6	3.6
- Minimum Required C/N (dB)	-3.9	-3.6	-3.6	
Excess Link Margin (dB)		1.7	0.0	0.0
TRANSPONDER UTILIZATION	% BW/CARR: 25.12, % PWR/CARR: 33.01, Max No. Carriers: 3.0 Downlink EIRP per carrier toward beam center: 25.2 dBW			
TRANSMIT EARTH STATION	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 1.1 watts			
RECEIVE EARTH STA.	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr			
DENSITY INFORMATION	Uplink Pwr Den: -68.0 dBW/Hz, Dnlink EIRP Den: -43.1 dBW/Hz Max Dnlink PFD: -170.0 dB(W/m2/4kHz) @ Beam Center			
AVAILABILITY	Uplink: 99.503 %, Dnlink: 99.998 %, Composite Link: 99.501			
LOSS IN C/(N+I) DUE TO ADJ SAT INTF: SAT-1 = 1.8dB, SAT-2 = 1.1dB				

KSPOT-GLOBAL (41 MHZ): 10M3G7W
[Input Data]

----- SATELLITE -----

Satellite Name	: IS-706	Location (deg)	: 54.85E
Uplink Beam	: KSPOT	Dnlink Beam	: GLOBAL
Trans. BW (MHz)	: 41.0 MHz	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency (GHz)	: 14.250	Dnlink Frequency (GHz)	: 3.950
G/T, beam center (dB/K)	: 9.5	EIRP, beam center (dBW)	: 33.5
G/T, beam edge (dB/K)	: 5.5	EIRP, beam edge (dBW)	: 29.5
G/T, toward Tx ES (dB/K)	: 5.5	EIRP, toward Rx ES (dBW)	: 33.3
SFD, beam edge (dBW/m2)	: -91.5		
SFD, toward Tx ES (dBW/m2)	: -91.5		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB)	: 0	Nominal Uplink Co-Chan C/I (dB)	: 27.0
Input Backoff (dB)	: 8.2*	Nominal Dnlink Co-Chan C/I (dB)	: 27.0
Output Backoff (dB)	: *	Minimum Uplink Rain Margin (dB)	: 0.5*
(C/Im) - Nominal (dB)	: *	Actual Uplink Rain Margin (dB)	: 2.3
Min. System Margin (dB)	: 1.0	Uplink Power Control Margin (dB)	: .0
Max No Carriers / Trans:	: *	Minimum Dnlink Rain Margin (dB)	: 0.5*
Required Link Availability:	: 99.5	Actual Dnlink Rain Margin (dB)	: 4.9
		Dnlink Pointing Error (dB)	: 0.5

----- ADJACENT SATELLITE INTERFERENCE ----- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg)	:	52.85E	56.85E
Uplink Interference (dB or dBW/Hz)	:	-50	-50
Uplink Polarization Advantage (dB)	:	0.0	0.0
Downlink Interference (dB or dBW/Hz)	:	-34.7	-34.7
Downlink Polarization Advantage (dB)	:	0.0	0.0
Rx E/S Topocentric Angle (deg)	:	2.09	2.09
Rx E/S Pointing Error (deg)	:	-0.24	0.24
Rx E/S Off-Axis Angle (deg)	:	1.85	2.33
Rx E/S Adj. Sat. Discrimination (dB)	:	21.1	23.6

----- CARRIER PARAMETERS -----

Modem Type	: EF9000	C/N (operating, dB)	: 3.87
Modulation	: QPSK	Eb/No (operating, dB)	: 4.4
Code Rate	: 1/2x188/204-V	C/N (threshold, dB)	: 3.57
Info Rate (kbps)	: 6000	Eb/No (threshold, dB)	: 4.1
Occupied Bandwidth (kHz)	: 6771.1		
Allocated Bandwidth (kHz)	: 10300		

----- Transmit Earth Station ----- ----- Receive Earth Station -----

Location: -4_dB_Gain_Contour	:	Location: -4_dB_Gain_Contour	
Latitude (deg)	: *	Latitude (deg)	: *
Longitude (deg)	: *	Longitude (deg)	: *
Rain Rate (mm/hr)	: 42*	Rain Rate (mm/hr)	: 42*
E/S Type or Model No:	:	E/S Type or Model No:	:
E/S Manufacturer	: STANDARD	E/S Manufacturer	: STANDARD
E/S Diam. (m)	: 7.0	E/S Diam. (m)	: 4.5
E/S Freq (nom, GHz)	: 14.250	E/S Freq (nom, GHz)	: 3.95
E/S Tx Gain (dBi)	: 58.1	E/S Gain (nom, dBi)	: 43.9
ULPC Margin (dB)	: .0	E/S Feed Loss (dB)	: 0.20
		E/S Ant. Temp (deg K)	: 25
		E/S LNA Temp (deg K)	: 65
		E/S G/T (nom, dB/K)	: *

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SATELLITE DATA	Satellite : IS-706 Uplink Beam: KSPOT Uplink POL: , Dnlink POL: , EIRP, beam center: 33.5 dBW G/T:5.5 dB/K, SFD:-91.5 dBW/m2 Dnlink EIRP: 33.3 dBW	Location: 54.85E Dnlink Beam: GLOBAL		
TRANSPONDER DATA	Trans Bandwidth :41.0 MHz Uplink Frequency:14.250 GHz IBO (Nominal) : 8.2 dB	Trans Type: LTWTA Dnlink Freq: 3.950 GHz OBO (Nominal): 3.5 dB		
CARRIER DATA	Type: CS701, Info Rate: 64 kbps, Mod: QPSK, 1/2x239/256-V BWo: 75.4kHz, BWa: 100kHz, C/N: 2.99dB, C/N_thresh: 2.79dB			
LINK BUDGET				
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	38.3	38.3	38.3
	- Uplink Path Loss, clear sky (dB)	-207.5	-207.5	-207.5
	- Uplink Rain Attenuation (dB)	0.0	-2.3	0.0
	+ Satellite G/T (dB/K)	5.5	5.5	5.5
	- Boltzman's Constant (dBW/K-Hz)	228.6	228.6	228.6
	- Carrier Noise Bandwidth (dB-Hz)	-48.8	-48.8	-48.8
	C/N Uplink (dB)	16.2	13.9	16.2
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	33.3	33.3	33.3
	- Carrier Output Backoff (dB)	-28.4	-30.7	-28.4
	Downlink EIRP per carrier (dBW)	4.9	2.6	4.9
	- Earth Station Pointing Error (dB)	-.5	-.5	-.5
	- Downlink Path Loss, clear sky (dB)	-196.3	-196.3	-196.3
	- Downlink Rain Attenuation (dB)	0.0	0.0	-2.3
	+ Earth Station G/T (dB/K)	23.6	23.6	20.5
	- Boltzman's Constant (dBW/K-Hz)	228.6	228.6	228.6
	- Carrier Noise Bandwidth (dB-Hz)	-48.8	-48.8	-48.8
	C/N Dnlink (dB)	11.5	9.2	6.2
COMPOSITE PERFORMANCE	C/N Uplink (dB)	16.2	13.9	16.2
	C/N Dnlink (dB)	11.5	9.2	6.2
	C/I Intermod (dB)	19.1	16.8	19.1
	C/I Uplink Co-channel (dB)	28.2	25.9	28.2
	C/I Dnlink Co-Channel (dB)	28.2	25.9	28.2
	C/I Uplink Adj. Sat. (SAT-1) (dB)	17.5	15.2	17.5
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	11.9	9.6	11.9
	C/I Uplink Adj. Sat. (SAT-2) (dB)	17.5	15.2	17.5
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	14.4	12.1	14.4
	C/(N+I) COMPOSITE (dB)	6.1	3.8	3.8
	- Required System Margin (dB)	-1.0	-1.0	-1.0
Net C/(N+I) COMPOSITE (dB)	5.1	2.8	2.8	
- Minimum Required C/N (dB)	-3.0	-2.8	-2.8	
	Excess Link Margin (dB)	2.1	0.0	0.0
TRANSPONDER UTILIZATION	% BW/CARR: 0.24, % PWR/CARR: 0.32, Max No. Carriers: 308.4 Downlink EIRP per carrier toward beam center: 5.1 dBW			
TRANSMIT EARTH STATION	Loc: -4 dB Gain Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 0.0 watts			
RECEIVE EARTH STA.	Loc: -4 dB Gain Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr			
DENSITY INFORMATION	Uplink Pwr Den: -68.6 dBW/Hz, Dnlink EIRP Den: -43.7 dBW/Hz Max Dnlink PFD: -170.6 dB(W/m2/4kHz) @ Beam Center			
AVAILABILITY	Uplink: 99.503 %, Dnlink: 99.998 %, Composite Link: 99.501			
LOSS IN C/(N+I) DUE TO ADJ SAT INTF:	SAT-1 = 1.8dB, SAT-2 = 1.1dB			

KSPOT-GLOBAL (41 MHZ): 100KG7W
[Input Data]

----- SATELLITE -----

Satellite Name	: IS-706	Location (deg)	: 54.85E
Uplink Beam	: KSPOT	Dnlink Beam	: GLOBAL
Trans. BW (MHz)	: 41.0 MHz	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency (GHz)	: 14.250	Dnlink Frequency (GHz)	: 3.950
G/T, beam center (dB/K)	: 9.5	EIRP, beam center (dBW)	: 33.5
G/T, beam edge (dB/K)	: 5.5	EIRP, beam edge (dBW)	: 29.5
G/T, toward Tx ES (dB/K)	: 5.5	EIRP, toward Rx ES (dBW)	: 33.3
SFD, beam edge (dBW/m2)	: -91.5		
SFD, toward Tx ES (dBW/m2)	: -91.5		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB)	: 0	Nominal Uplink Co-Chan C/I (dB)	: 27.0
Input Backoff (dB)	: 8.2*	Nominal Dnlink Co-Chan C/I (dB)	: 27.0
Output Backoff (dB)	: *	Minimum Uplink Rain Margin (dB)	: 0.5*
(C/Im) - Nominal (dB)	: *	Actual Uplink Rain Margin (dB)	: 2.3
Min. System Margin (dB)	: 1.0	Uplink Power Control Margin (dB)	: .0
Max No Carriers / Trans	: *	Minimum Dnlink Rain Margin (dB)	: 0.5*
Required Link Availability	: 99.5	Actual Dnlink Rain Margin (dB)	: 5.3
		Dnlink Pointing Error (dB)	: 0.5

----- ADJACENT SATELLITE INTERFERENCE ----- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg)	:	52.85E	56.85E
Uplink Interference (dB or dBW/Hz)	:	-50	-50
Uplink Polarization Advantage (dB)	:	0.0	0.0
Downlink Interference (dB or dBW/Hz)	:	-34.7	-34.7
Downlink Polarization Advantage (dB)	:	0.0	0.0
Rx E/S Topocentric Angle (deg)	:	2.09	2.09
Rx E/S Pointing Error (deg)	:	-0.24	0.24
Rx E/S Off-Axis Angle (deg)	:	1.85	2.33
Rx E/S Adj. Sat. Discrimination (dB)	:	21.1	23.6

----- CARRIER PARAMETERS -----

Modem Type	: CS701	C/N (operating, dB)	: 2.99
Modulation	: QPSK	Eb/No (operating, dB)	: 3.7
Code Rate	: 1/2x239/256-V	C/N (threshold, dB)	: 2.79
Info Rate (kbps)	: 64	Eb/No (threshold, dB)	: 3.5
Occupied Bandwidth (kHz)	: 75.4		
Allocated Bandwidth (kHz)	: 100		

----- Transmit Earth Station ----- ----- Receive Earth Station -----

Location: -4_dB_Gain_Contour	Location: -4_dB_Gain_Contour
Latitude (deg): *	Latitude (deg): *
Longitude (deg): *	Longitude (deg): *
Rain Rate (mm/hr): 42*	Rain Rate (mm/hr): 42*
E/S Type or Model No:	E/S Type or Model No:
E/S Manufacturer : STANDARD	E/S Manufacturer : STANDARD
E/S Diam. (m): 7.0	E/S Diam. (m): 4.5
E/S Freq (nom, GHz): 14.250	E/S Freq (nom, GHz): 3.95
E/S Tx Gain (dBi): 58.1	E/S Gain (nom, dBi): 43.9
ULPC Margin (dB): .0	E/S Feed Loss (dB): 0.20
	E/S Ant. Temp(deg K): 25
	E/S LNA Temp (deg K): 65
	E/S G/T (nom, dB/K): *

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SATELLITE DATA	Satellite : IS-706 Uplink Beam: KSPOT Uplink POL: , Dnlink POL: , EIRP, beam center: 40.6 dBW G/T:5.5 dB/K, SFD:-82.5 dBW/m2 Dnlink EIRP: 36.6 dBW	Location: 54.85E Dnlink Beam: CSPOT		
TRANSPONDER DATA	Trans Bandwidth :41.0 MHz Uplink Frequency:14.250 GHz IBO (Nominal) : 0.4 dB	Trans Type: LTWTA Dnlink Freq: 3.950 GHz OBO (Nominal): 0.0 dB		
CARRIER DATA	Type: TV/FM, Format: PAL, PreEmphasis+Weighting: 15.6dB RF BW: 30.0 MHz, P-Dev: 9.0 MHz, VideoBW: 6.0 MHz,			
LINK BUDGET				
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	80.0	80.0	80.0
	- Uplink Path Loss, clear sky (dB)	-207.5	-207.5	-207.5
	- Uplink Rain Attenuation (dB)	0.0	-6.3	0.0
	+ Satellite G/T (dB/K)	5.5	5.5	5.5
	- Boltzman's Constant (dBW/K-Hz)	228.6	228.6	228.6
	- Carrier Noise Bandwidth (dB-Hz)	-74.8	-74.8	-74.8
	C/N Uplink (dB)	31.9	25.5	31.9
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	36.6	36.6	36.6
	- Carrier Output Backoff (dB)	0.0	-1.4	0.0
	Downlink EIRP per carrier (dBW)	36.6	35.2	36.6
	- Earth Station Pointing Error (dB)	-.5	-.5	-.5
	- Downlink Path Loss, clear sky (dB)	-196.3	-196.3	-196.3
	- Downlink Rain Attenuation (dB)	0.0	0.0	-1.6
	+ Earth Station G/T (dB/K)	23.6	23.6	21.1
	- Boltzman's Constant (dBW/K-Hz)	228.6	228.6	228.6
	- Carrier Noise Bandwidth (dB-Hz)	-74.8	-74.8	-74.8
	C/N Dnlink (dB)	17.2	15.8	13.2
COMPOSITE PERFORMANCE	C/N Uplink (dB)	31.9	25.5	31.9
	C/N Dnlink (dB)	17.2	15.8	13.2
	C/I Uplink Co-channel (dB)	28.4	22.0	28.4
	C/I Dnlink Co-Channel (dB)	28.4	26.9	28.4
	C/I Uplink Adj. Sat. (SAT-1) (dB)	33.2	26.9	33.2
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	17.6	16.2	17.6
	C/I Uplink Adj. Sat. (SAT-2) (dB)	33.2	26.9	33.2
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	20.1	18.7	20.1
	C/(N+I) COMPOSITE (dB)	13.0	11.0	11.0
	- Required System Margin (dB)	-1.0	-1.0	-1.0
	Net C/(N+I) COMPOSITE (dB)	12.0	10.0	10.0
- Minimum Required C/N (dB)	-10.0	-10.0	-10.0	
	Excess Link Margin (dB)	2.0	0.0	0.0
	Video Signal-to-Noise Ratio (dB)	45.8	43.9	43.9
	Audio Signal-to-Noise Ratio (dB)	59.6	57.7	57.7
TRANSMIT EARTH STATION	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 154.8 watts			
RECEIVE EARTH STA.	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr			
DENSITY INFORMATION	Uplink Pwr Den: -52.9 dBW/Hz, Dnlink EIRP Den: -34.2 dBW/Hz Max Dnlink PFD: -161.1 dB(W/m2/4kHz) @ Beam Center			
AVAILABILITY	Uplink: 99.910 %, Dnlink: 99.998 %, Composite Link: 99.907			
LOSS IN C/(N+I) DUE TO ADJ SAT INTF: SAT-1 = 1.9dB, SAT-2 = 1.0dB				

----- SATELLITE -----

Satellite Name	: IS-706	Location (deg):	54.85E
Uplink Beam	: KSPOT	Dnlink Beam	: CSPOT
Trans. BW (MHz)	: 41.0 MHz	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency (GHz)	: 14.250	Dnlink Frequency (GHz)	: 3.950
G/T, beam center (dB/K)	: 9.5	EIRP, beam center (dBW)	: 40.6
G/T, beam edge (dB/K)	: 5.5	EIRP, beam edge (dBW)	: 36.6
G/T, toward Tx ES (dB/K)	: 5.5	EIRP, toward Rx ES (dBW)	: 36.6
SFD, beam edge (dBW/m2)	: -82.5		
SFD, toward Tx ES (dBW/m2)	: -82.5		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB)	: 9	Nominal Uplink Co-Chan C/I (dB)	: 27.0
Input Backoff (dB)	: 0.0, .400	Nominal Dnlink Co-Chan C/I (dB)	: 27.0
Output Backoff (dB)	: *	Minimum Uplink Rain Margin (dB)	: 0.5*
(C/Im) - Nominal (dB)	: *	Actual Uplink Rain Margin (dB)	: 6.3
Min. System Margin (dB)	: 1.0	Uplink Power Control Margin (dB)	: .0
Max No Carriers / Trans	: 1	Minimum Dnlink Rain Margin (dB)	: 0.5*
Required Link Availability	: 99.5	Actual Dnlink Rain Margin (dB)	: 4.0
		Dnlink Pointing Error (dB)	: 0.5

--- ADJACENT SATELLITE INTERFERENCE ----- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg)	:	52.85E	56.85E
Uplink Interference (dB or dBW/Hz)	:	-50	-50
Uplink Polarization Advantage (dB)	:	0.0	0.0
Downlink Interference (dB or dBW/Hz)	:	-34.7	-34.7
Downlink Polarization Advantage (dB)	:	0.0	0.0
Rx E/S Topocentric Angle (deg)	:	2.09	2.09
Rx E/S Pointing Error (deg)	:	-0.24	0.24
Rx E/S Off-Axis Angle (deg)	:	1.85	2.33
Rx E/S Adj. Sat. Discrimination (dB)	:	21.1	23.6

----- TV/FM CARRIER PARAMETERS -----

Video Format	: PAL	Peak Deviation (MHz)	: 9.0
RF Noise BW (MHz)	: 30.0	PreEmphasis+Weighting (dB)	: 15.6
Video BW (MHz)	: 6.0	Threshold C/N (dB)	: 10.0

----- AUDIO SUB-CARRIER PARAMETERS -----

Sub-Carrier Freq (MHz)	: 6.6	Highest Audio Freq (kHz)	: 15.0
P-Dev of Video by Audio (MHz)	: 2.0	Companding Advantage (dB)	: 0.0
Peak Dev of Audio (kHz)	: 75.0		

----- Transmit Earth Station ----- ----- Receive Earth Station -----

Location: -4_dB_Gain_Contour	Location: -4_dB_Gain_Contour
Latitude (deg): *	Latitude (deg): *
Longitude (deg): *	Longitude (deg): *
Rain Rate (mm/hr): 42*	Rain Rate (mm/hr): 42*
E/S Type or Model No:	E/S Type or Model No:
E/S Manufacturer : STANDARD	E/S Manufacturer : STANDARD
E/S Diam. (m): 7.0	E/S Diam. (m): 4.5
E/S Freq (nom, GHz): 14.250	E/S Freq (nom, GHz): 3.95
E/S Tx Gain (dBi): 58.1	E/S Gain (nom, dBi): 43.9
ULPC Margin (dB): .0	E/S Feed Loss (dB): 0.20
	E/S Ant. Temp(deg K): 25
	E/S LNA Temp (deg K): 65
	E/S G/T (nom, dB/K): *

SATELLITE DATA	Satellite : IS-706 Uplink Beam: KSPOT Uplink POL: , Dnlink POL: , EIRP, beam center: 40.6 dBW G/T:5.5 dB/K, SFD:-81.5 dBW/m2 Dnlink EIRP: 36.6 dBW	Location: 54.85E Dnlink Beam: CSPOT		
TRANSPONDER DATA	Trans Bandwidth :41.0 MHz Uplink Frequency:14.250 GHz IBO (Nominal) : 0.0 dB	Trans Type: LTWTA Dnlink Freq: 3.950 GHz OBO (Nominal): 0.0 dB		
CARRIER DATA	Type: NTC26%, Info Rate: 27981 kbps, Mod: QPSK, 1/2x188/204 BWo: 34310kHz, BWa: 41000kHz, C/N: 3.36dB, C/N_thresh: 3.36			
LINK BUDGET				
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	81.4	81.4	81.4
	- Uplink Path Loss, clear sky (dB)	-207.5	-207.5	-207.5
	- Uplink Rain Attenuation (dB)	0.0	-10.9	0.0
	+ Satellite G/T (dB/K)	5.5	5.5	5.5
	- Boltzman's Constant (dBW/K-Hz)	228.6	228.6	228.6
	- Carrier Noise Bandwidth (dB-Hz)	-75.4	-75.4	-75.4
	C/N Uplink (dB)	32.7	21.7	32.7
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	36.6	36.6	36.6
	- Carrier Output Backoff (dB)	0.0	-5.0	0.0
	Downlink EIRP per carrier (dBW)	36.6	31.6	36.6
	- Earth Station Pointing Error (dB)	-.5	-.5	-.5
	- Downlink Path Loss, clear sky (dB)	-196.3	-196.3	-196.3
	- Downlink Rain Attenuation (dB)	0.0	0.0	-4.5
	+ Earth Station G/T (dB/K)	20.9	20.9	16.7
- Boltzman's Constant (dBW/K-Hz)	228.6	228.6	228.6	
- Carrier Noise Bandwidth (dB-Hz)	-75.4	-75.4	-75.4	
	C/N Dnlink (dB)	13.9	8.9	5.2
COMPOSITE PERFORMANCE	C/N Uplink (dB)	32.7	21.7	32.7
	C/N Dnlink (dB)	13.9	8.9	5.2
	C/I Uplink Co-channel (dB)	27.0	16.1	27.0
	C/I Dnlink Co-Channel (dB)	27.0	22.0	27.0
	C/I Uplink Adj. Sat. (SAT-1) (dB)	34.0	23.1	34.0
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	14.0	9.0	14.0
	C/I Uplink Adj. Sat. (SAT-2) (dB)	34.0	23.1	34.0
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	17.1	12.0	17.1
	C/(N+I) COMPOSITE (dB)	9.8	4.4	4.4
	- Required System Margin (dB)	-1.0	-1.0	-1.0
Net C/(N+I) COMPOSITE (dB)	8.8	3.4	3.4	
- Minimum Required C/N (dB)	-3.4	-3.4	-3.4	
	Excess Link Margin (dB)	5.4	0.0	0.0
TRANSPONDER UTILIZATION	% BW/CARR: 100.00, % PWR/CARR: 100.00, Max No. Carriers: 1.0 Downlink EIRP per carrier toward beam center: 40.6 dBW			
TRANSMIT EARTH STATION	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 213.7 watts			
RECEIVE EARTH STA.	Loc: -4_dB_Gain_Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr			
DENSITY INFORMATION	Uplink Pwr Den: -52.1 dBW/Hz, Dnlink EIRP Den: -34.8 dBW/Hz Max Dnlink PFD: -161.7 dB(W/m2/4kHz) @ Beam Center			
AVAILABILITY	Uplink: 99.972 %, Dnlink: 99.998 %, Composite Link: 99.970			
LOSS IN C/(N+I) DUE TO ADJ SAT INTF:	SAT-1 = 2.1dB, SAT-2 = 0.9dB			

----- SATELLITE -----

Satellite Name	: IS-706	Location (deg)	: 54.85E
Uplink Beam	: KSPOT	Dnlink Beam	: CSPOT
Trans. BW (MHz)	: 41.0 MHz	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency	(GHz): 14.250	Dnlink Frequency	(GHz): 3.950
G/T, beam center	(dB/K): 9.5	EIRP, beam center	(dBW): 40.6
G/T, beam edge	(dB/K): 5.5	EIRP, beam edge	(dBW): 36.6
G/T, toward Tx ES	(dB/K): 5.5	EIRP, toward Rx ES	(dBW): 36.6
SFD, beam edge	(dBW/m2): -81.5		
SFD, toward Tx ES	(dBW/m2): -81.5		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB)	: 10	Nominal Uplink Co-Chan C/I (dB)	: 27.0
Input Backoff (dB)	: 0.0	Nominal Dnlink Co-Chan C/I (dB)	: 27.0
Output Backoff (dB)	: *	Minimum Uplink Rain Margin (dB)	: 0.5*
(C/Im) - Nominal (dB)	: *	Actual Uplink Rain Margin (dB)	: 10.9
Min. System Margin (dB)	: 1.0	Uplink Power Control Margin (dB)	: .0
Max No Carriers / Trans	: 1	Minimum Dnlink Rain Margin (dB)	: 0.5*
Required Link Availability	: 99.5	Actual Dnlink Rain Margin (dB)	: 8.7
		Dnlink Pointing Error (dB)	: 0.5

--- ADJACENT SATELLITE INTERFERENCE ----- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg)	:	52.85E	56.85E
Uplink Interference (dB or dBW/Hz)	:	-50	-50
Uplink Polarization Advantage (dB)	:	0.0	0.0
Downlink Interference (dB or dBW/Hz)	:	-34.7	-34.7
Downlink Polarization Advantage (dB)	:	0.0	0.0
Rx E/S Topocentric Angle (deg)	:	2.09	2.09
Rx E/S Pointing Error (deg)	:	-0.29	0.29
Rx E/S Off-Axis Angle (deg)	:	1.80	2.38
Rx E/S Adj. Sat. Discrimination (dB)	:	18.1	21.1

----- CARRIER PARAMETERS -----

Modem Type	: NTC26%	C/N (operating, dB)	: 3.36
Modulation	: QPSK	Eb/No (operating, dB)	: 4.2
Code Rate	: 1/2x188/204-V	C/N (threshold, dB)	: 3.36
Info Rate (kbps)	: 27981	Eb/No (threshold, dB)	: 4.2
Occupied Bandwidth (kHz)	: 34310		
Allocated Bandwidth (kHz)	: 41000		

----- Transmit Earth Station -----

Location: -4_dB_Gain_Contour
Latitude (deg): *
Longitude (deg): *
Rain Rate (mm/hr): 42*
E/S Type or Model No:
E/S Manufacturer : STANDARD
E/S Diam. (m): 7.0
E/S Freq (nom, GHz): 14.250
E/S Tx Gain (dBi): 58.1
ULPC Margin (dB): .0

----- Receive Earth Station -----

Location: -4_dB_Gain_Contour
Latitude (deg): *
Longitude (deg): *
Rain Rate (mm/hr): 42*
E/S Type or Model No:
E/S Manufacturer : STANDARD
E/S Diam. (m): 3.7
E/S Freq (nom, GHz): 3.95
E/S Gain (nom, dBi): 41.2
E/S Feed Loss (dB): 0.20
E/S Ant. Temp(deg K): 25
E/S LNA Temp (deg K): 65
E/S G/T (nom, dB/K): *

SATELLITE DATA	Satellite : IS-706 Uplink Beam: KSPOT Uplink POL: , Dnlink POL: , EIRP, beam center: 40.6 dBW G/T:5.5 dB/K, SFD:-91.5 dBW/m2	Location: 54.85E Dnlink Beam: CSPOT Dnlink EIRP: 36.6 dBW		
TRANSPONDER DATA	Trans Bandwidth :41.0 MHz Uplink Frequency:14.250 GHz IBO (Nominal) : 8.2 dB	Trans Type: LTWTA Dnlink Freq: 3.950 GHz OBO (Nominal): 3.5 dB		
CARRIER DATA	Type: EF9000, Info Rate: 6000 kbps, Mod: QPSK, 1/2x188/204- BWo: 6771.1kHz, BWa: 10300kHz, C/N: 3.87dB, C/N_thresh: 3.5			
LINK BUDGET				
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	58.5	58.5	58.5
	- Uplink Path Loss, clear sky (dB)	-207.5	-207.5	-207.5
	- Uplink Rain Attenuation (dB)	0.0	-2.3	0.0
	+ Satellite G/T (dB/K)	5.5	5.5	5.5
	- Boltzman's Constant (dBW/K-Hz)	228.6	228.6	228.6
	- Carrier Noise Bandwidth (dB-Hz)	-68.3	-68.3	-68.3
C/N Uplink (dB)		16.8	14.6	16.8
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	36.6	36.6	36.6
	- Carrier Output Backoff (dB)	-8.2	-10.2	-8.2
	Downlink EIRP per carrier (dBW)	28.4	26.4	28.4
	- Earth Station Pointing Error (dB)	- .5	- .5	- .5
	- Downlink Path Loss, clear sky (dB)	-196.3	-196.3	-196.3
	- Downlink Rain Attenuation (dB)	0.0	0.0	-2.3
C/N Dnlink (dB)		12.9	10.8	7.4
COMPOSITE PERFORMANCE	C/N Uplink (dB)	16.8	14.6	16.8
	C/N Dnlink (dB)	12.9	10.8	7.4
	C/I Intermod (dB)	19.8	19.1	19.8
	C/I Uplink Co-channel (dB)	28.3	26.0	28.3
	C/I Dnlink Co-Channel (dB)	28.3	26.3	28.3
	C/I Uplink Adj. Sat. (SAT-1) (dB)	18.2	15.9	18.2
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	11.1	9.1	11.1
	C/I Uplink Adj. Sat. (SAT-2) (dB)	18.2	15.9	18.2
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	15.9	13.9	15.9
	C/(N+I) COMPOSITE (dB)	6.6	4.6	4.6
	- Required System Margin (dB)	-1.0	-1.0	-1.0
	Net C/(N+I) COMPOSITE (dB)	5.6	3.6	3.6
- Minimum Required C/N (dB)	-3.9	-3.6	-3.6	
Excess Link Margin (dB)		1.7	0.0	0.0
TRANSPONDER UTILIZATION	% BW/CARR: 25.12, % PWR/CARR: 34.14, Max No. Carriers: 2.9 Downlink EIRP per carrier toward beam center: 32.4 dBW			
TRANSMIT EARTH STATION	Loc: -4 dB Gain Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 1.1 watts			
RECEIVE EARTH STA.	Loc: -4 dB Gain Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr			
DENSITY INFORMATION	Uplink Pwr Den: -67.9 dBW/Hz, Dnlink EIRP Den: -35.9 dBW/Hz Max Dnlink PFD: -162.8 dB(W/m2/4kHz) @ Beam Center			
AVAILABILITY	Uplink: 99.504 %, Dnlink: 99.998 %, Composite Link: 99.501			
LOSS IN C/(N+I) DUE TO ADJ SAT INTF: SAT-1 = 2.4dB, SAT-2 = 0.9dB				

KSPOT-CSPOT (41 MHZ): 10M3G7W
[Input Data]

----- SATELLITE -----

Satellite Name	: IS-706	Location (deg)	: 54.85E
Uplink Beam	: KSPOT	Dnlink Beam	: CSPOT
Trans. BW (MHz)	: 41.0 MHz	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency (GHz)	: 14.250	Dnlink Frequency (GHz)	: 3.950
G/T, beam center (dB/K)	: 9.5	EIRP, beam center (dBW)	: 40.6
G/T, beam edge (dB/K)	: 5.5	EIRP, beam edge (dBW)	: 36.6
G/T, toward Tx ES (dB/K)	: 5.5	EIRP, toward Rx ES (dBW)	: 36.6
SFD, beam edge (dBW/m2)	: -91.5		
SFD, toward Tx ES (dBW/m2)	: -91.5		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB)	: 0	Nominal Uplink Co-Chan C/I (dB)	: 27.0
Input Backoff (dB)	: 8.2*	Nominal Dnlink Co-Chan C/I (dB)	: 27.0
Output Backoff (dB)	: *	Minimum Uplink Rain Margin (dB)	: 0.5*
(C/Im) - Nominal (dB)	: *	Actual Uplink Rain Margin (dB)	: 2.3
Min. System Margin (dB)	: 1.0	Uplink Power Control Margin (dB)	: .0
Max No Carriers / Trans	: *	Minimum Dnlink Rain Margin (dB)	: 0.5*
Required Link Availability	: 99.5	Actual Dnlink Rain Margin (dB)	: 5.5
		Dnlink Pointing Error (dB)	: 0.5

--- ADJACENT SATELLITE INTERFERENCE ----- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg)	:	52.85E	56.85E
Uplink Interference (dB or dBW/Hz)	:	-50	-50
Uplink Polarization Advantage (dB)	:	0.0	0.0
Downlink Interference (dB or dBW/Hz)	:	-34.7	-34.7
Downlink Polarization Advantage (dB)	:	0.0	0.0
Rx E/S Topocentric Angle (deg)	:	2.09	2.09
Rx E/S Pointing Error (deg)	:	-0.31	0.31
Rx E/S Off-Axis Angle (deg)	:	1.78	2.40
Rx E/S Adj. Sat. Discrimination (dB)	:	16.3	21.1

----- CARRIER PARAMETERS -----

Modem Type	: EF9000	C/N (operating, dB)	: 3.87
Modulation	: QPSK	Eb/No (operating, dB)	: 4.4
Code Rate	: 1/2x188/204-V	C/N (threshold, dB)	: 3.57
Info Rate (kbps)	: 6000	Eb/No (threshold, dB)	: 4.1
Occupied Bandwidth (kHz)	: 6771.1		
Allocated Bandwidth (kHz)	: 10300		

----- Transmit Earth Station ----- ----- Receive Earth Station -----

Location: -4_dB_Gain_Contour	Location: -4_dB_Gain_Contour
Latitude (deg): *	Latitude (deg): *
Longitude (deg): *	Longitude (deg): *
Rain Rate (mm/hr): 42*	Rain Rate (mm/hr): 42*
E/S Type or Model No:	E/S Type or Model No:
E/S Manufacturer : STANDARD	E/S Manufacturer : STANDARD
E/S Diam. (m): 7.0	E/S Diam. (m): 3.5
E/S Freq (nom, GHz): 14.250	E/S Freq (nom, GHz): 3.95
E/S Tx Gain (dBi): 58.1	E/S Gain (nom, dBi): 41.1
ULPC Margin (dB): .0	E/S Feed Loss (dB): 0.15
	E/S Ant. Temp(deg K): 25
	E/S LNA Temp (deg K): 65
	E/S G/T (nom, dB/K): *

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SATELLITE DATA	Satellite : IS-706 Uplink Beam: KSPOT Uplink POL: , Dnlink POL: , EIRP, beam center: 40.6 dBW G/T:5.5 dB/K, SFD:-91.5 dBW/m2 Dnlink EIRP: 36.6 dBW	Location: 54.85E Dnlink Beam: CSPOT		
TRANSPONDER DATA	Trans Bandwidth :41.0 MHz Uplink Frequency:14.250 GHz IBO (Nominal) : 8.2 dB	Trans Type: LTWTA Dnlink Freq: 3.950 GHz OBO (Nominal): 3.5 dB		
CARRIER DATA	Type: CS701, Info Rate: 64 kbps, Mod: QPSK, 1/2x239/256-V BWo: 75.4kHz, BWa: 100kHz, C/N: 2.99dB, C/N_thresh: 2.79dB			
LINK BUDGET				
UPLINK PERFORMANCE	Earth Station EIRP (dBW)	38.5	38.5	38.5
	- Uplink Path Loss, clear sky (dB)	-207.5	-207.5	-207.5
	- Uplink Rain Attenuation (dB)	0.0	-2.3	0.0
	+ Satellite G/T (dB/K)	5.5	5.5	5.5
	- Boltzman's Constant (dBW/K-Hz)	228.6	228.6	228.6
	- Carrier Noise Bandwidth (dB-Hz)	-48.8	-48.8	-48.8
	C/N Uplink (dB)	16.3	14.0	16.3
DOWNLINK PERFORMANCE	Satellite Saturation EIRP (dBW)	36.6	36.6	36.6
	- Carrier Output Backoff (dB)	-28.3	-30.5	-28.3
	Downlink EIRP per carrier (dBW)	8.3	6.1	8.3
	- Earth Station Pointing Error (dB)	-.5	-.5	-.5
	- Downlink Path Loss, clear sky (dB)	-196.3	-196.3	-196.3
	- Downlink Rain Attenuation (dB)	0.0	0.0	-2.6
	+ Earth Station G/T (dB/K)	21.0	21.0	17.6
	- Boltzman's Constant (dBW/K-Hz)	228.6	228.6	228.6
	- Carrier Noise Bandwidth (dB-Hz)	-48.8	-48.8	-48.8
	C/N Dnlink (dB)	12.3	10.0	6.4
COMPOSITE PERFORMANCE	C/N Uplink (dB)	16.3	14.0	16.3
	C/N Dnlink (dB)	12.3	10.0	6.4
	C/I Intermod (dB)	19.2	17.0	19.2
	C/I Uplink Co-channel (dB)	28.4	26.1	28.4
	C/I Dnlink Co-Channel (dB)	28.4	26.1	28.4
	C/I Uplink Adj. Sat. (SAT-1) (dB)	17.7	15.4	17.7
	C/I Dnlink Adj. Sat. (SAT-1) (dB)	10.6	8.3	10.6
	C/I Uplink Adj. Sat. (SAT-2) (dB)	17.7	15.4	17.7
	C/I Dnlink Adj. Sat. (SAT-2) (dB)	15.4	13.1	15.4
	C/(N+I) COMPOSITE (dB)	6.1	3.8	3.8
	- Required System Margin (dB)	-1.0	-1.0	-1.0
	Net C/(N+I) COMPOSITE (dB)	5.1	2.8	2.8
	- Minimum Required C/N (dB)	-3.0	-2.8	-2.8
	Excess Link Margin (dB)	2.1	0.0	0.0
TRANSPONDER UTILIZATION	% BW/CARR: 0.24, % PWR/CARR: 0.34, Max No. Carriers: 297.7 Downlink EIRP per carrier toward beam center: 12.3 dBW			
TRANSMIT EARTH STATION	Loc: -4 dB Gain Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr Carrier Power: 0.0 watts			
RECEIVE EARTH STA.	Loc: -4 dB Gain Contour ID: AZ: 0.0 Elev: 20.0 LAT: * LON: * ALT: 0.0m RainRate: 42.0mm/hr			
DENSITY INFORMATION	Uplink Pwr Den: -68.4 dBW/Hz, Dnlink EIRP Den: -36.4 dBW/Hz Max Dnlink PFD: -163.3 dB(W/m2/4kHz) @ Beam Center			
AVAILABILITY	Uplink: 99.503 %, Dnlink: 99.998 %, Composite Link: 99.501			
LOSS IN C/(N+I) DUE TO ADJ SAT INTF: SAT-1 = 2.4dB, SAT-2 = 0.9dB				

KSPOT-CSPOT (41 MHz): 100KG7W
[Input Data]

----- SATELLITE -----

Satellite Name	: IS-706	Location (deg)	: 54.85E
Uplink Beam	: KSPOT	Dnlink Beam	: CSPOT
Trans. BW (MHz)	: 41.0 MHz	Trans. Type	: LTWTA
Uplink Pol.	:	Dnlink Pol.	:
Uplink Chan.	:	Dnlink Chan.	:
Uplink Frequency (GHz)	: 14.250	Dnlink Frequency (GHz)	: 3.950
G/T, beam center (dB/K)	: 9.5	EIRP, beam center (dBW)	: 40.6
G/T, beam edge (dB/K)	: 5.5	EIRP, beam edge (dBW)	: 36.6
G/T, toward Tx ES (dB/K)	: 5.5	EIRP, toward Rx ES (dBW)	: 36.6
SFD, beam edge (dBW/m2)	: -91.5		
SFD, toward Tx ES (dBW/m2)	: -91.5		

----- OPERATING CONDITIONS -----

Attenuator Setting (dB)	: 0	Nominal Uplink Co-Chan C/I (dB)	: 27.0
Input Backoff (dB)	: 8.2*	Nominal Dnlink Co-Chan C/I (dB)	: 27.0
Output Backoff (dB)	: *	Minimum Uplink Rain Margin (dB)	: 0.5*
(C/Im) - Nominal (dB)	: *	Actual Uplink Rain Margin (dB)	: 2.3
Min. System Margin (dB)	: 1.0	Uplink Power Control Margin (dB)	: .0
Max No Carriers / Trans:	: *	Minimum Dnlink Rain Margin (dB)	: 0.5*
Required Link Availability:	: 99.5	Actual Dnlink Rain Margin (dB)	: 5.9
		Dnlink Pointing Error (dB)	: 0.5

--- ADJACENT SATELLITE INTERFERENCE --- Sat. No. 1 ----- Sat. No. 2 -----

Interfering Satellite Name	:	SAT-1	SAT-2
Interfering Satellite Location (deg)	:	52.85E	56.85E
Uplink Interference (dB or dBW/Hz)	:	-50	-50
Uplink Polarization Advantage (dB)	:	0.0	0.0
Downlink Interference (dB or dBW/Hz)	:	-34.7	-34.7
Downlink Polarization Advantage (dB)	:	0.0	0.0
Rx E/S Topocentric Angle (deg)	:	2.09	2.09
Rx E/S Pointing Error (deg)	:	-0.31	0.31
Rx E/S Off-Axis Angle (deg)	:	1.78	2.40
Rx E/S Adj. Sat. Discrimination (dB)	:	16.3	21.1

----- CARRIER PARAMETERS -----

Modem Type	: CS701	C/N (operating, dB)	: 2.99
Modulation	: QPSK	Eb/No (operating, dB)	: 3.7
Code Rate	: 1/2x239/256-V	C/N (threshold, dB)	: 2.79
Info Rate (kbps)	: 64	Eb/No (threshold, dB)	: 3.5
Occupied Bandwidth (kHz)	: 75.4		
Allocated Bandwidth (kHz)	: 100		

----- Transmit Earth Station ----- Receive Earth Station -----

Location: -4_dB_Gain_Contour	Location: -4_dB_Gain_Contour
Latitude (deg): *	Latitude (deg): *
Longitude (deg): *	Longitude (deg): *
Rain Rate (mm/hr): 42*	Rain Rate (mm/hr): 42*
E/S Type or Model No:	E/S Type or Model No:
E/S Manufacturer : STANDARD	E/S Manufacturer : STANDARD
E/S Diam. (m): 7.0	E/S Diam. (m): 3.5
E/S Freq (nom, GHz): 14.250	E/S Freq (nom, GHz): 3.95
E/S Tx Gain (dBi): 58.1	E/S Gain (nom, dBi): 41.1
ULPC Margin (dB): .0	E/S Feed Loss (dB): 0.15
	E/S Ant. Temp(deg K): 25
	E/S LNA Temp (deg K): 65
	E/S G/T (nom, dB/K): *

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