

City	Old EIRPs	Old EIRPs + 2.7	4/20 Turbo 8PSK 2/3 EIRPs	Delta (4/21 EIRPs - 4/20 EIRPs)	4/21 Turbo 8PSK 2/3 EIRPs	Delta (8PSK 2/3 - Old EIRPs)	Turbo 8PSK 3/4 EIRPs	Delta (8PSK 3/4 - Old EIRPs)
HONOLULU HI	50.00	52.70	50.00	#REF!	#REF!	#REF!	#REF!	#REF!
TAMPA FL	54.00	56.70	58.00	#REF!	#REF!	#REF!	#REF!	#REF!
ST PETERSBUR	54.00	56.70	58.00	#REF!	#REF!	#REF!	#REF!	#REF!
SARASOTA FL	54.00	56.70	58.00	#REF!	#REF!	#REF!	#REF!	#REF!
CHARLESTON S	54.00	56.70	58.00	#REF!	#REF!	#REF!	#REF!	#REF!
NEW ORLEANS	54.00	56.70	57.50	#REF!	#REF!	#REF!	#REF!	#REF!
HOUSTON TX	53.00	55.70	56.70	#REF!	#REF!	#REF!	#REF!	#REF!
SAN ANTONIO T	50.00	52.70	51.60	#REF!	#REF!	#REF!	#REF!	#REF!
ATLANTA GA	54.00	56.70	55.50	#REF!	#REF!	#REF!	#REF!	#REF!
NASHVILLE TN	54.00	56.70	55.70	#REF!	#REF!	#REF!	#REF!	#REF!
EL PASO TX	48.00	50.70	50.00	#REF!	#REF!	#REF!	#REF!	#REF!
LAS CRUCES N	48.00	50.70	50.00	#REF!	#REF!	#REF!	#REF!	#REF!
SHREVEPORT L	52.00	54.70	54.40	#REF!	#REF!	#REF!	#REF!	#REF!
PHOENIX AZ	48.00	50.70	50.00	#REF!	#REF!	#REF!	#REF!	#REF!
PRESCOTT AZ	48.00	50.70	50.00	#REF!	#REF!	#REF!	#REF!	#REF!
OKLAHOMA CIT	49.50	52.20	52.20	#REF!	#REF!	#REF!	#REF!	#REF!
LOS ANGELES C	48.00	50.70	50.00	#REF!	#REF!	#REF!	#REF!	#REF!
WASHINGTON D	54.00	56.70	55.30	#REF!	#REF!	#REF!	#REF!	#REF!
HAGERSTOWN	54.00	56.70	55.30	#REF!	#REF!	#REF!	#REF!	#REF!
ST LOUIS MO	50.50	53.20	53.20	#REF!	#REF!	#REF!	#REF!	#REF!
SAN FRANCISCO	48.00	50.70	50.00	#REF!	#REF!	#REF!	#REF!	#REF!
OAKLAND CA	48.00	50.70	50.00	#REF!	#REF!	#REF!	#REF!	#REF!
SAN JOSE CA	48.00	50.70	50.00	#REF!	#REF!	#REF!	#REF!	#REF!
DENVER CO	48.00	50.70	50.00	#REF!	#REF!	#REF!	#REF!	#REF!
SALT LAKE CITY	48.00	50.70	50.00	#REF!	#REF!	#REF!	#REF!	#REF!
CLEVELAND OH	51.10	53.80	54.50	#REF!	#REF!	#REF!	#REF!	#REF!
AKRON OH	51.10	53.80	54.50	#REF!	#REF!	#REF!	#REF!	#REF!
CANTON OH	51.10	53.80	54.50	#REF!	#REF!	#REF!	#REF!	#REF!
CHICAGO IL	51.50	54.20	53.90	#REF!	#REF!	#REF!	#REF!	#REF!
BOISE ID	48.00	50.70	50.00	#REF!	#REF!	#REF!	#REF!	#REF!
MARQUETTE IA	50.80	53.50	53.50	#REF!	#REF!	#REF!	#REF!	#REF!
MARQUETTE IL	51.50	54.20	53.60	#REF!	#REF!	#REF!	#REF!	#REF!
MARQUETTE KS	49.00	51.70	51.10	#REF!	#REF!	#REF!	#REF!	#REF!
MARQUETTE MI	50.50	53.20	53.00	#REF!	#REF!	#REF!	#REF!	#REF!
MARQUETTE NE	49.00	51.70	51.30	#REF!	#REF!	#REF!	#REF!	#REF!
MARQUETTE W	50.50	53.20	52.40	#REF!	#REF!	#REF!	#REF!	#REF!
MINNEAPOLIS M	50.00	52.70	52.10	#REF!	#REF!	#REF!	#REF!	#REF!
ST PAUL MN	50.00	52.70	52.10	#REF!	#REF!	#REF!	#REF!	#REF!
SEATTLE WA	49.00	51.70	50.50	#REF!	#REF!	#REF!	#REF!	#REF!
TACOMA WA	49.00	51.70	50.50	#REF!	#REF!	#REF!	#REF!	#REF!
PORTLAND OR	49.00	51.70	50.50	#REF!	#REF!	#REF!	#REF!	#REF!
GREAT FALLS M	54.00	56.70	55.30	#REF!	#REF!	#REF!	#REF!	#REF!
GREAT FALLS N	48.00	50.70	50.00	#REF!	#REF!	#REF!	#REF!	#REF!
GREAT FALLS S	54.00	56.70	56.70	#REF!	#REF!	#REF!	#REF!	#REF!
GREAT FALLS V	54.00	56.70	55.30	#REF!	#REF!	#REF!	#REF!	#REF!
MINOT ND	49.40	52.10	51.90	#REF!	#REF!	#REF!	#REF!	#REF!
BISMARCK ND	49.40	52.10	51.80	#REF!	#REF!	#REF!	#REF!	#REF!
DICKINSON ND	49.40	52.10	50.00	#REF!	#REF!	#REF!	#REF!	#REF!
MIAMI FL	54.00	56.70	58.00	#REF!	#REF!	#REF!	#REF!	#REF!
ANCHORAGE A	49.00	51.70	51.70	#REF!	#REF!	#REF!	#REF!	#REF!
CORPUS CHRIS	51.00	53.70	51.60	#REF!	#REF!	#REF!	#REF!	#REF!
LUBBOCK TX	49.00	51.70	50.40	#REF!	#REF!	#REF!	#REF!	#REF!
BAKERSFIELD C	48.00	50.70	50.00	#REF!	#REF!	#REF!	#REF!	#REF!
INDIANAPOLIS I	53.00	55.70	55.30	#REF!	#REF!	#REF!	#REF!	#REF!
TOPEKA KS	49.00	51.70	52.50	#REF!	#REF!	#REF!	#REF!	#REF!
SIOUX FALLS S	49.00	51.70	51.60	#REF!	#REF!	#REF!	#REF!	#REF!
EUGENE OR	48.00	50.70	50.00	#REF!	#REF!	#REF!	#REF!	#REF!
IDAHO FALLS ID	48.00	50.70	50.00	#REF!	#REF!	#REF!	#REF!	#REF!
FARGO ND	49.00	51.70	52.00	#REF!	#REF!	#REF!	#REF!	#REF!
SPOKANE WA	48.00	50.70	50.00	#REF!	#REF!	#REF!	#REF!	#REF!
			# decreased:	0.00	Average:	#REF!	Average:	#REF!

Green: lower than old EIRPs + 2.7 dB  
Red: higher

**BSS @129W**

	<b>Eb/No</b>	<b>datarate</b>			<b>EIRP values?</b>
DVB S2 QPSK 1/4	0.75	9804.86	#DIV/0!		n/a
DVB S2 QPSK 1/3	0.59	13128.96	#DIV/0!		n/a
DVB S2 QPSK 2/5	0.73	15788.24	#DIV/0!		n/a
Turbo QPSK 1/2	1.7	18974.44	#DIV/0!	updated 3/23	Old EIRPs
DVB S2 QPSK 3/5	1.48	23766.08	#DIV/0!		n/a
Turbo QPSK 2/3	2.7	#REF!	#REF!	updated 3/23	Old EIRPs
Turbo QPSK 3/4	3.1	#REF!	#REF!	updated 3/23	Old EIRPs
DVB S2 QPSK 4/5	2.67	#REF!	#REF!		n/a
Turbo QPSK 5/6	3.7	#REF!	#REF!	updated 4/18 u:	4/19 EIRPs
Turbo QPSK 7/8	4.2	#REF!	#REF!	updated 4/19 u:	4/19 EIRPs
DVB S2 QPSK 9/10	3.89	#REF!	#REF!		n/a
Turbo 8PSK 2/3	4.4	#REF!	#REF!	updated 4/18 u:	4/19 EIRPs
Turbo 8PSK 3/4	4.9	#REF!	#REF!	updated 4/18 u:	4/19 EIRPs
Turbo 8PSK 5/6	6.4	#REF!	#REF!	updated 4/18 u:	4/19 EIRPs
Turbo 8PSK 8/9	6.7	#REF!	#REF!	updated 4/18 u:	n/a

Earth Station G/T degrade by:	0.5	dB
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DATA RATE  
 NUMBER OF PHASES  
 LDPC  
 SPECTRAL EFFICIENCY  
 REQUIRED Eb/No  
 IF BANDWIDTH  
 C/N REQUIRED  
 Faded System Margin  
 Antenna Efficiency

9804.86	kbps
4	
1 / 4	
0.490243	
0.75	dB
20000.0	kHz
-2.35	dB
0.3	dB
63.00%	

sat #REF!  
 xpdr #REF!  
 loc #REF!

UPLINK SITE #NAME? #NAME?  
 UPLINK SFD #NAME? dBW/m2  
 ATTENUATOR #NAME? dB  
 UPLINK G/T #NAME? dB/K  
 UPLINK FREQ #REF! MHz  
 DOWNLINK FREQ #REF! MHz  
 UPLINK EIRP #NAME? dBW  
 Uncompensated U/L Fade 0.0 dB  
 UPLINK C/N #NAME? dB

Spacing Factor  
 Required Bandwidth  
 Allocated Bandwidth  
 Transponder SCPC IBO  
 Transponder SCPC OBO  
 Carrier IBO  
 Carrier OBO

1.2	
24.000	MHz
24.000	MHz
0.0	dB
0.0	dB
0.00	dB
0.00	dB

Transponder Bandwidth #NAME? MHz  
 Required Bandwidth 100.00 %  
 Allocated Bandwidth 100.00 %  
 Carrier Allocated Power 100.00 %

RECEIVE SITE	0.45	ANT	ES	ANT	Assumed	MINIMUM	XPDR		CLEAR-SKY	MARGIN	
		DIA	Tsys	G/T	C/I	C/N	SAT	CXR	DOWNLINK	TO	
	(m)	(K)	(dB/K)	(dB)	(dB)	(dB)	(dBW)	(dBW)	(dB)	MIN C/Ndn	
		(dB)	(dB)	(dB)	(dB)	(dB)	(dBW)	(dBW)	(dB)	(dB)	
#NAME?	0.45	#NAME?	#REF!	14.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	14.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	14.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	14.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	14.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	14.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	14.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	14.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	14.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	14.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	14.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	14.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
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#NAME?	0.45	#NAME?	#REF!	14.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
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#NAME?	0.45	#NAME?	#REF!	14.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
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#NAME?	0.45	#NAME?	#REF!	14.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	14.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	14.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	14.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	14.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
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#NAME?	0.45	#NAME?	#REF!	14.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	14.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
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#NAME?	0.45	#NAME?	#REF!	14.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
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#NAME?	0.45	#NAME?	#REF!	14.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	14.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#

DATA RATE  
NUMBER OF PHASES  
LDPC  
SPECTRAL EFFICIENCY  
REQUIRED Eb/No  
IF BANDWIDTH  
C/N REQUIRED  
Faded System Margin  
Antenna Efficiency  
  
Spacing Factor  
Required Bandwidth  
Allocated Bandwidth  
Transponder SCPC IBO  
Transponder SCPC OBO  
Carrier IBO  
Carrier OBO

13128.96	kbps
4	
1 / 3	
0.656448	
0.59	dB
20000.0	kHz
-1.24	dB
0.3	dB
63.00%	
1.2	
24.000	MHz
24.000	MHz
0.0	dB
0.0	dB
0.00	dB
0.00	dB

sat #REF!  
xpdr #REF!  
loc #REF!

UPLINK SITE #NAME? #NAME?  
UPLINK SFD #NAME? dBW/m2  
ATTENUATOR #REF! 10.0 dB  
UPLINK G/T #NAME? dB/K  
UPLINK FREQ #REF! MHz  
DOWNLINK FREQ #REF! MHz  
UPLINK EIRP #NAME? dBW  
Uncompensated U/L Fade 0.0 dB  
UPLINK C/N #NAME? dB

Transponder Bandwidth #REF! 24.0 MHz  
Required Bandwidth 100.00 %  
Allocated Bandwidth 100.00 %  
Carrier Allocated Power 100.00 %

RECEIVE SITE	ANT DIA (m)	0.45	ES Tsys (K)	ANT G/T (dB/K)	Assumed C/I (dB)	MINIMUM C/N DOWN (dB)	XPDR SAT EIRP (dBW)	CXR EIRP (dBW)	CLEAR-SKY DOWNLINK C/N (dB)	MARGIN TO MIN C/Ndn (dB)
#NAME?	0.45	#NAME?	#REF!	14.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	14.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	14.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	14.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	14.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	14.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	14.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	14.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	14.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	14.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	14.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	14.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	14.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	14.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
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#NAME?	0.45	#NAME?	#REF!	14.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
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#NAME?	0.45	#NAME?	#REF!	14.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
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#NAME?	<b>0.45</b>	#NAME?	#REF!	<b>14.0</b>	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	<b>0.45</b>	#NAME?	#REF!	<b>14.0</b>	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	<b>0.45</b>	#NAME?	#REF!	<b>14.0</b>	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	<b>0.45</b>	#NAME?	#REF!	<b>14.0</b>	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	<b>0.45</b>	#NAME?	#REF!	<b>14.0</b>	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	<b>0.45</b>	#NAME?	#REF!	<b>14.0</b>	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	<b>0.45</b>	#NAME?	#REF!	<b>14.0</b>	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	<b>0.45</b>	#NAME?	#REF!	<b>14.0</b>	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	<b>0.45</b>	#NAME?	#REF!	<b>14.0</b>	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	<b>0.45</b>	#NAME?	#REF!	<b>14.0</b>	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	<b>0.45</b>	#NAME?	#REF!	<b>14.0</b>	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	<b>0.45</b>	#NAME?	#REF!	<b>14.0</b>	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	<b>0.45</b>	#NAME?	#REF!	<b>14.0</b>	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	<b>0.45</b>	#NAME?	#REF!	<b>14.0</b>	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	<b>0.45</b>	#NAME?	#REF!	<b>14.0</b>	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	<b>0.45</b>	#NAME?	#REF!	<b>14.0</b>	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#

DATA RATE  
 NUMBER OF PHASES  
 LDPC  
 SPECTRAL EFFICIENCY  
 REQUIRED Eb/No  
 IF BANDWIDTH  
 C/N REQUIRED  
 Faded System Margin  
 Antenna Efficiency

15788.24	kbps
4	
2 / 5	
0.789412	
0.73	dB

sat #REF!  
 xpdr #REF!  
 loc #REF!

UPLINK SITE #NAME? #NAME?  
 UPLINK SFD #NAME? dBW/m2  
 ATTENUATOR 10.0 dB  
 UPLINK G/T #NAME? dB/K  
 UPLINK FREQ #REF! MHz  
 DOWNLINK FREQ #REF! MHz  
 UPLINK EIRP #NAME? dBW  
 Uncompensated U/L Fade 0.0 dB  
 UPLINK C/N #NAME? dB

Spacing Factor  
 Required Bandwidth  
 Allocated Bandwidth  
 Transponder SCPC IBO  
 Transponder SCPC OBO  
 Carrier IBO  
 Carrier OBO

1.2	
24.000	MHz
24.000	MHz
0.0	dB
0.0	dB
0.00	dB
0.00	dB

Adjacent satellite C/I 16  
 Spot beam C/I 15.0  
 Transponder Bandwidth 24.0 MHz  
 Required Bandwidth 100.00 %  
 Allocated Bandwidth 100.00 %  
 Carrier Allocated Power 100.00 %

	0.45	ANT	ES	ANT	Assumed	MINIMUM	XPDR	CXR	CLEAR-SKY	MARGIN	
RECEIVE SITE		DIA	Tsys	G/T	C/I	C/N	SAT	EIRP	DOWNLINK	TO	
		(m)	(K)	(dB/K)	(dB)	(dB)	(dBW)	(dBW)	C/N	MIN C/Ndn	(dB)
#NAME?	0.45	#NAME?	#REF!	12.5	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	12.5	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	12.5	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	12.5	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	12.5	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	12.5	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	12.5	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	12.5	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	12.5	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	12.5	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	12.5	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	12.5	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	12.5	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	12.5	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	12.5	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	12.5	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	12.5	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	12.5	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	12.5	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	12.5	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	12.5	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	12.5	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	12.5	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	12.5	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	12.5	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	12.5	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	12.5	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	12.5	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	12.5	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	12.5	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	12.5	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	12.5	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	12.5	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	12.5	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#

#NAME?	0.45	#NAME?	#REF!	12.5	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	12.5	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	12.5	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	12.5	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	12.5	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	12.5	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	12.5	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	12.5	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	12.5	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	12.5	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	12.5	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	12.5	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	12.5	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	12.5	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	12.5	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	12.5	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	12.5	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	12.5	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	12.5	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	12.5	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	12.5	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	#NAME?	#REF!	12.5	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#



DATA RATE  
 NUMBER OF PHASES  
 LDPC  
 SPECTRAL EFFICIENCY  
 REQUIRED Eb/No  
 IF BANDWIDTH  
 C/N REQUIRED  
 Faded System Margin  
 Antenna Efficiency

18974.44	kbps
4	
1 / 2	
0.948722	
1.70	dB
20000.0	kHz
1.47	dB
0.3	dB
63.00%	

sat #REF!  
 xpdr #REF!  
 loc #REF!

UPLINK SITE #NAME? #NAME?  
 UPLINK SFD #NAME? dBW/m2  
 ATTENUATOR 10.0 dB  
 UPLINK G/T #NAME? dB/K  
 UPLINK FREQ #REF! MHz  
 DOWNLINK FREQ #REF! MHz  
 UPLINK EIRP #NAME? dBW  
 Uncompensated U/L Fade 0.0 dB  
 UPLINK C/N #NAME? dB

Spacing Factor  
 Required Bandwidth  
 Allocated Bandwidth  
 Transponder SCPC IBO  
 Transponder SCPC OBO  
 Carrier IBO  
 Carrier OBO

1.2	
24.000	MHz
24.000	MHz
0.0	dB
0.0	dB
0.00	dB
0.00	dB

Adjacent satellite C/I 15  
 Spot beam C/I 15.0  
 Transponder Bandwidth 24.0 MHz  
 Required Bandwidth 100.00 %  
 Allocated Bandwidth 100.00 %  
 Carrier Allocated Power 100.00 %

RECEIVE SITE	0.45	ANT DIA (m)	ES Tsys (K)	ANT G/T (dB/K)	Assumed C/I (dB)	MINIMUM C/N DOWN (dB)	XPDR SAT EIRP (dBW)	CXR EIRP (dBW)	CLEAR-SKY DOWNLINK C/N (dB)	MARGIN TO MIN C/Ndn (dB)
#NAME?	0.45	110.0	13.6	12.0	#NAME?	50.00	50.00	#NAME?	#NAME?	#
#NAME?	0.45	110.0	13.6	12.0	#NAME?	52.60	52.60	#NAME?	#NAME?	#
#NAME?	0.45	110.0	13.6	12.0	#NAME?	52.60	52.60	#NAME?	#NAME?	#
#NAME?	0.45	110.0	13.6	12.0	#NAME?	52.60	52.60	#NAME?	#NAME?	#
#NAME?	0.45	110.0	13.6	12.0	#NAME?	53.80	53.80	#NAME?	#NAME?	#
#NAME?	0.45	110.0	13.6	12.0	#NAME?	51.50	51.50	#NAME?	#NAME?	#
#NAME?	0.45	110.0	13.6	12.0	#NAME?	51.00	51.00	#NAME?	#NAME?	#
#NAME?	0.45	110.0	13.6	12.0	#NAME?	50.00	50.00	#NAME?	#NAME?	#
#NAME?	0.45	110.0	13.6	12.0	#NAME?	52.60	52.60	#NAME?	#NAME?	#
#NAME?	0.45	110.0	13.6	12.0	#NAME?	52.50	52.50	#NAME?	#NAME?	#
#NAME?	0.45	110.0	13.6	12.0	#NAME?	48.00	48.00	#NAME?	#NAME?	#
#NAME?	0.45	110.0	13.6	12.0	#NAME?	48.00	48.00	#NAME?	#NAME?	#
#NAME?	0.45	110.0	13.6	12.0	#NAME?	52.00	52.00	#NAME?	#NAME?	#
#NAME?	0.45	110.0	13.6	12.0	#NAME?	48.00	48.00	#NAME?	#NAME?	#
#NAME?	0.45	110.0	13.6	12.0	#NAME?	48.00	48.00	#NAME?	#NAME?	#
#NAME?	0.45	110.0	13.6	12.0	#NAME?	49.50	49.50	#NAME?	#NAME?	#
#NAME?	0.45	110.0	13.6	12.0	#NAME?	48.00	48.00	#NAME?	#NAME?	#
#NAME?	0.45	110.0	13.6	12.0	#NAME?	52.50	52.50	#NAME?	#NAME?	#
#NAME?	0.45	110.0	13.6	12.0	#NAME?	52.50	52.50	#NAME?	#NAME?	#
#NAME?	0.45	110.0	13.6	12.0	#NAME?	50.00	50.00	#NAME?	#NAME?	#
#NAME?	0.45	110.0	13.6	12.0	#NAME?	48.00	48.00	#NAME?	#NAME?	#
#NAME?	0.45	110.0	13.6	12.0	#NAME?	48.00	48.00	#NAME?	#NAME?	#
#NAME?	0.45	110.0	13.6	12.0	#NAME?	48.00	48.00	#NAME?	#NAME?	#
#NAME?	0.45	110.0	13.6	12.0	#NAME?	48.00	48.00	#NAME?	#NAME?	#
#NAME?	0.45	110.0	13.6	12.0	#NAME?	48.00	48.00	#NAME?	#NAME?	#
#NAME?	0.45	110.0	13.6	12.0	#NAME?	48.00	48.00	#NAME?	#NAME?	#
#NAME?	0.45	110.0	13.6	12.0	#NAME?	48.00	48.00	#NAME?	#NAME?	#
#NAME?	0.45	110.0	13.6	12.0	#NAME?	51.50	51.50	#NAME?	#NAME?	#
#NAME?	0.45	110.0	13.6	12.0	#NAME?	51.50	51.50	#NAME?	#NAME?	#
#NAME?	0.45	110.0	13.6	12.0	#NAME?	51.50	51.50	#NAME?	#NAME?	#
#NAME?	0.45	110.0	13.6	12.0	#NAME?	51.00	51.00	#NAME?	#NAME?	#
#NAME?	0.45	110.0	13.6	12.0	#NAME?	48.00	48.00	#NAME?	#NAME?	#
#NAME?	0.45	110.0	13.6	12.0	#NAME?	50.50	50.50	#NAME?	#NAME?	#

#NAME?	0.45	110.0	13.6	12.0	#NAME?	50.50	50.50	#NAME?	#NAME?	#
#NAME?	0.45	110.0	13.6	12.0	#NAME?	48.50	48.50	#NAME?	#NAME?	#
#NAME?	0.45	110.0	13.6	12.0	#NAME?	50.00	50.00	#NAME?	#NAME?	#
#NAME?	0.45	110.0	13.6	12.0	#NAME?	48.50	48.50	#NAME?	#NAME?	#
#NAME?	0.45	110.0	13.6	12.0	#NAME?	50.00	50.00	#NAME?	#NAME?	#
#NAME?	0.45	110.0	13.6	12.0	#NAME?	49.10	49.10	#NAME?	#NAME?	#
#NAME?	0.45	110.0	13.6	12.0	#NAME?	49.10	49.10	#NAME?	#NAME?	#
#NAME?	0.45	110.0	13.6	12.0	#NAME?	48.00	48.00	#NAME?	#NAME?	#
#NAME?	0.45	110.0	13.6	12.0	#NAME?	48.00	48.00	#NAME?	#NAME?	#
#NAME?	0.45	110.0	13.6	12.0	#NAME?	48.00	48.00	#NAME?	#NAME?	#
#NAME?	0.45	110.0	13.6	12.0	#NAME?	48.00	48.00	#NAME?	#NAME?	#
#NAME?	0.45	110.0	13.6	12.0	#NAME?	48.30	48.30	#NAME?	#NAME?	#
#NAME?	0.45	110.0	13.6	12.0	#NAME?	48.30	48.30	#NAME?	#NAME?	#
#NAME?	0.45	110.0	13.6	12.0	#NAME?	48.90	48.90	#NAME?	#NAME?	#
#NAME?	0.45	110.0	13.6	12.0	#NAME?	48.90	48.90	#NAME?	#NAME?	#
#NAME?	0.45	110.0	13.6	12.0	#NAME?	48.90	48.90	#NAME?	#NAME?	#
#NAME?	0.45	110.0	13.6	12.0	#NAME?	53.00	53.00	#NAME?	#NAME?	#
#NAME?	0.45	110.0	13.6	12.0	#NAME?	49.00	49.00	#NAME?	#NAME?	#

DATA RATE	23766.08	kbps
NUMBER OF PHASES	4	
LDPC	3 / 5	
SPECTRAL EFFICIENCY	1.188304	
REQUIRED Eb/No	1.48	dB
IF BANDWIDTH	20000.0	kHz
C/N REQUIRED	2.23	dB
Faded System Margin	0.3	dB
Antenna Efficiency	63.00%	
Spacing Factor	1.2	
Required Bandwidth	24.000	MHz
Allocated Bandwidth	24.000	MHz
Transponder SCPC IBO	0.0	dB
Transponder SCPC OBO	0.0	dB
Carrier IBO	0.00	dB
Carrier OBO	0.00	dB

sat	#REF!
xpdr	#REF!
loc	#REF!

UPLINK SITE	#NAME?	#NAME?
UPLINK SFD		#NAME? dBW/m2
ATTENUATOR		10.0 dB
UPLINK G/T		#NAME? dB/K
UPLINK FREQ		#REF! MHz
DOWNLINK FREQ		#REF! MHz
UPLINK EIRP	#NAME?	dBW
Uncompensated U/L Fade		0.0 dB
UPLINK C/N	#NAME?	dB
Adjacent satellite C/I		15
Spot beam C/I		15.0
Transponder Bandwidth		24.0 MHz
Required Bandwidth		100.00 %
Allocated Bandwidth		100.00 %
Carrier Allocated Power		100.00 %

RECEIVE SITE	0.45	ANT DIA (m)	ES Tsys (K)	ANT G/T (dB/K)	Assumed C/I (dB)	MINIMUM C/N DOWN (dB)	XPDR SAT EIRP (dBW)	CXR EIRP (dBW)	CLEAR-SKY DOWNLINK C/N (dB)	MARGIN TO MIN C/Ndn (dB)
#NAME?	0.45		110.0	13.6	12.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?
#NAME?	0.45		110.0	13.6	12.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?
#NAME?	0.45		110.0	13.6	12.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?
#NAME?	0.45		110.0	13.6	12.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?
#NAME?	0.45		110.0	13.6	12.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?
#NAME?	0.45		110.0	13.6	12.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?
#NAME?	0.45		110.0	13.6	12.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?
#NAME?	0.45		110.0	13.6	12.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?
#NAME?	0.45		110.0	13.6	12.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?
#NAME?	0.45		110.0	13.6	12.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?
#NAME?	0.45		110.0	13.6	12.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?
#NAME?	0.45		110.0	13.6	12.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?
#NAME?	0.45		110.0	13.6	12.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?
#NAME?	0.45		110.0	13.6	12.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?
#NAME?	0.45		110.0	13.6	12.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?
#NAME?	0.45		110.0	13.6	12.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?
#NAME?	0.45		110.0	13.6	12.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?
#NAME?	0.45		110.0	13.6	12.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?
#NAME?	0.45		110.0	13.6	12.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?
#NAME?	0.45		110.0	13.6	12.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?
#NAME?	0.45		110.0	13.6	12.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?
#NAME?	0.45		110.0	13.6	12.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?
#NAME?	0.45		110.0	13.6	12.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?
#NAME?	0.45		110.0	13.6	12.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?
#NAME?	0.45		110.0	13.6	12.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?
#NAME?	0.45		110.0	13.6	12.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?
#NAME?	0.45		110.0	13.6	12.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?
#NAME?	0.45		110.0	13.6	12.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?
#NAME?	0.45		110.0	13.6	12.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?

#NAME?	0.45	110.0	13.6	12.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	110.0	13.6	12.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	110.0	13.6	12.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	110.0	13.6	12.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	110.0	13.6	12.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	110.0	13.6	12.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	110.0	13.6	12.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	110.0	13.6	12.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	110.0	13.6	12.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	110.0	13.6	12.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	110.0	13.6	12.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	110.0	13.6	12.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	110.0	13.6	12.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	110.0	13.6	12.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	110.0	13.6	12.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	110.0	13.6	12.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	110.0	13.6	12.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	110.0	13.6	12.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	110.0	13.6	12.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	110.0	13.6	12.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	110.0	13.6	12.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#
#NAME?	0.45	110.0	13.6	12.0	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#

