

Signals			
	Units	Clear	Clear
Frequency	GHz	19.70	19.70
Elevation Angle	deg.	43.61	43.61
Slant Range	km	37511	37511
Downlink Availability	%	99.95	
RF power (peak CW)	W	15	15
Xmtr Power (peak CW)	dBW	11.76	11.76
2 Carrier Output Back-off	dBW		
Output Loss	dB	-5.24	-5.24
S/C TLM Ant Directivity	dB	-0.70	-0.70
S/C EIRP (dBW)	dBW	5.82	5.82
Required EIRP (dBW)	dBW	5.30	5.30
Margin (dBW)	dBW	0.52	0.52
Free Space loss	dB	-209.51	-209.51
Gaseous Att	dB	-0.46	-0.37
Cloud Att	dB	-0.36	
Rain Fade	dB	-2.57	
Total Atmospheric loss	dB	-3.39	-0.37
Rain fade		-3.02	
Min Rx Isotropic Power (RIP)	dBW	-207.90	-204.89
Polarization Loss	dB	-0.10	-0.10
Pointing Loss	dB	0.00	0.00
Ground Station G/T	dB/K	38.00	38.00
Receiver Temperature	K	225	225
Background Temperature	K	152	23
G/T Degradation	dB	-1.81	0.00
Boltzmann's Constant	dBW/Hz	-228.60	-228.60
C/No Received	dB-Hz	56.78	61.61
Data demodulation at BER=1E-6			
PCM Data Rate	kbps	4	4
Required C/No (single mode)	dB-Hz	50.93	50.93
Required C/No (SIMO mode)	dB-Hz	56.62	56.62
Margin* (single mode)	dB	5.85	10.68
Margin* (SIMO mode)	dB	0.16	4.99