

<b>General:</b>	<b>Units</b>	<b>Clear Sky</b>	<b>Faded</b>
Emission Designator		500MG7D	500MG7D
Data Rate	Mbit/s	205.9	205.9
Modulation		QPSK	QPSK
Coding Rate		0.2470	0.2470
Carrier Bandwidth	MHz	500	500
Uplink Frequency	GHz	29.75	29.75
Downlink Frequency	GHz	19.95	19.95
Elevation Angle	degrees	35	35
Elevation Angle	degrees	35	35
<b>Uplink:</b>			
Tx E/S Antenna Diameter	m	7.3	7.3
Tx E/S Power to Antenna	W	10.2	257.0
Tx E/S Antenna Gain	dBi	64.9	64.9
Tx E/S EIRP per Carrier	dBW	75	89.0
Tx E/S Antenna Pointing Loss	dB	1.2	1.2
Atmospheric and Rain Losses	dB	0.5	14.5
Free Space Loss	dB	213.6	213.6
G/T (peak)	dB/K	16.1	16.1
C/I - Intra-system	dB	25.5	25.5
<b>Downlink:</b>			
EIRP per Carrier towards Rx E/S	dBW	62	62
Atmospheric and Rain Losses	dB	0.5	10.6
Free Space Loss	dB	210.1	210.1
Rx E/S Antenna Pointing Loss	dB	0.5	0.5
Rx E/S Antenna Diameter	m	0.67	0.67
Rx E/S Antenna Gain	dBi	41.1	41.1
Rx E/S G/T	dB/K	17.6	14.3
System Noise Temp (LNA+Sky)	K	224	477
C/I - Intra-system	dB	18.7	18.7
<b>End-to-End:</b>			
C/N - Thermal Uplink	dB	18.2	18.2
C/I Up - ASI	dB	18.9	32.9
C/N - Thermal Downlink	dB	10.9	-2.5
C/I Down - ASI	dB	11.2	11.2
C/(N+I) - Total Actual	dB	7.0	-2.7
C/N - Required	dB	-2.8	-2.8
Excess Margin	dB	9.7	0.0