

<b>General:</b>	<b>Units</b>	<b>Clear Sky</b>	<b>Faded</b>
Emission Designator		500MG7D	500MG7D
Data Rate	Mbit/s	746.3	746.3
Modulation		8-PSK	8-PSK
Coding Rate		0.5970	0.5970
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	4.2
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	15.2
System Noise Temp (LNA+Sky)	K	224	389
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	4.8
C/I Down - ASI	dB	11.2	11.2
C/(N+I) - Total Actual	dB	7.0	3.6
C/N - Required	dB	3.6	3.6
Excess Margin	dB	3.4	0.0