

<b>General:</b>	<b>Units</b>	<b>Clear Sky</b>	<b>Faded</b>
Emission Designator		110MG7D	110MG7D
Data Rate	Mbit/s	2032.5	2032.5
Modulation		8PSK	8PSK
Coding Rate		0.8869	0.8869
Carrier Bandwidth	MHz	110	110
Uplink Frequency	GHz	28.4	28.4
Downlink Frequency	GHz	18.6	18.6
Elevation Angle	degrees	35	35
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<b>Uplink:</b>			
Tx E/S Antenna Diameter	m	7.3	7.3
Tx E/S Power to Antenna	W	21.1	210.9
Tx E/S Antenna Gain	dBi	64.9	64.9
Tx E/S EIRP per Carrier	dBW	78.1	88.1
Tx E/S Antenna Pointing Loss	dB	1.2	1.2
Atmospheric and Rain Losses	dB	0.5	10.5
Free Space Loss	dB	213.2	213.2
G/T toward Tx E/S (-3 dB)	dB/K	3.5	3.5
C/I - Intra-system	dB	30.0	30.0
<b>Downlink:</b>			
EIRP per Carrier towards Rx E/S (-3 dB)	dBW	58.2	58.2
Atmospheric and Rain Losses	dB	0.3	17
Free Space Loss	dB	209.5	209.5
Rx E/S Antenna Pointing Loss	dB	0.8	0.8
Rx E/S Antenna Diameter	m	7.3	7.3
Rx E/S Antenna Gain	dBi	61.2	61.2
Rx E/S G/T	dB/K	38.0	34.3
System Noise Temp (LNA+Sky)	K	210	483
C/I - Intra-system	dB	30.0	30.0
<b>End-to-End:</b>			
C/N - Thermal Uplink	dB	15.7	15.7
C/I Up - ASI	dB	29.0	29.0
C/N - Thermal Downlink	dB	34.5	14.2
C/I Down - ASI	dB	34.3	34.3
C/(N+I) - Total Actual	dB	15.1	11.6
C/N - Required	dB	11.2	11.2
Excess Margin	dB	3.9	0.4