

		<b>CLEAR SKY</b>	<b>FADED</b>
<b>General</b>			
Data rate (kbps)	(kbps)	57236	42312
Coding rate	-	0.90	0.67
Modulation	-	QPSK	QPSK
Carrier bandwidth	(kHz)	32000	32000
<b>Uplink</b>			
Frequency	(GHz)	28.6	28.6
Earth Station EIRP	(dBW)	76.4	87.0
Antenna diameter	m	7.5	7.5
Antenna tx gain	dBi	64.0	64.0
Uplink power	(dBW)	12.4	23.0
Uplink p.s.d.	(dBW/Hz)	-62.7	-52.1
Path loss	(dB)	213.3	213.3
Rain loss	(dB)	0.0	10.6
Mean atmospheric loss	(dB)	0.4	0.4
Satellite G/T (EOC)	(dB/K)	6.0	6.0
Boltzmann constant	(dBW/K/Hz)	-228.6	-228.6
Up-path C/No	(dBHz)	97.3	97.3
<b>Downlink</b>			
Frequency	(GHz)	19.95	19.95
Satellite EIRP (EOC)	(dBW)	51.0	51.0
Path loss	(dB)	210.1	210.1
Rain loss	(dB)	0.0	3.0
Mean atmospheric loss	(dB)	0.4	0.4
User terminal G/T	(dB/K)	16.1	16.1
T (clear sky)	K	270.0	270.0
G/T degradation due to rain	(dB)	0.0	1.7
Boltzmann constant	(dBW/K/Hz)	-228.6	-228.6
User terminal pointing loss	(dB)	0.5	0.5
Down-path C/No	(dBHz)	84.7	80.0
<b>Total</b>			
Mean satellite C/Imo	(dBHz)	93.0	93.0
Co-Channel Interference	(dBHz)	94.0	94.0
Other system interference allocation	(dB)	1.0	1.0
Mean Overall C/No	(dBHz)	82.5	78.5
Mean Overall C/N	(dB)	7.4	3.5
<b>Margin</b>			
C/N required	(dB)	6.5	3.2
Margin	(dB)	0.9	0.3
Availability	(%)	n/a	99.0%