

| Telemetry Room | | | |
|-------------------------------|--------|---------|---------|
| | Units | Chain | Clear |
| Frequency | GHz | 19.70 | 19.70 |
| Elevation Angle | deg. | 43.61 | 43.61 |
| Slant Range | km | 37511 | 37511 |
| Downlink Availability | % | 99.96 | |
| RF power (peak CW) | W | 50 | 50 |
| Xmtr Power (peak CW) | dBW | 16.99 | 16.99 |
| 2 Carrier Output Back-off | dBW | -4.20 | -4.20 |
| Output Loss | dB | -3.05 | -3.05 |
| S/C TLM Ant Directivity | dB | 22.30 | 22.30 |
| S/C EIRP (dBW) | dBW | 32.04 | 32.04 |
| Required EIRP (dBW) | dBW | 31.50 | 31.50 |
| Margin (dBW) | dBW | 0.54 | 0.54 |
| 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 | -181.70 | -178.89 |
| Polarization Loss | dB | -0.02 | -0.02 |
| Pointing Loss | dB | -0.50 | -0.50 |
| 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 | 82.56 | 87.39 |
| 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 | 31.63 | 36.46 |
| Margin* (SIMO mode) | dB | 25.94 | 30.77 |
| With interference | | | |
| C/I _o | dB-Hz | 61.39 | 61.39 |
| Total C/(No+Io) | dB-Hz | 61.39 | 61.41 |
| 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 | 10.46 | 10.48 |
| Margin* (SIMO mode) | dB | 4.76 | 4.79 |