

| 12 GHz Telemetry Link Budget              |        |             |
|-------------------------------------------|--------|-------------|
| Link Parameters                           |        | Contingency |
| Frequency                                 | (MHz)  | 12,201      |
| Transmit Power                            | (dBW)  | 15.4        |
| Line Losses                               | (dB)   | 5.2         |
| Antenna Gain (maximum)                    | (dBi)  | -4.0        |
| EIRP (towards Cheyenne)                   | (dBW)  | 6.2         |
| Polarization Loss                         | (dB)   | 4.0         |
| Free Space Path Loss                      | (dB)   | 206.5       |
| Rx E/S G/T                                | (dB/K) | 39.2        |
| Downlink C/N <sub>0</sub>                 | (dB)   | 63.6        |
| C/N <sub>0</sub> Required (for telemetry) | (dB)   | 61.8        |
| Margin                                    | (dB)   | 1.8         |