LINK BUDGET FOR TUSSAT

Orbit Altitude = 750 KM

Frequency = 2.4 GHz

Wavelength = 0.12 M

Path Loss = 170.10 dB

Atmospheric Losses = 15 dB

Total Losses = 185.10 dB

System Noise Temp. = 585 K

Data Rate = 115.2 Kbps

Bandwidth = 288 Khz

Spacecraft Transmitter Output Power = 1 dB

Spacecraft Antenna Gain = 14 dBi

Spacecraft EIRP = 14 dBW

Isotropic Signal Level At Ground = -171.1 dBW

Ground Station Antenna Gain = 27.3 dBi

Ground Station Transmission Line Loss = 3 dB

Signal Power At Ground Station = -146.8 dBW

Ground Station Receiver Noise Power = -146.33 dBW

Signal To Noise Power Ratio = -0.47 dBW

Calculated Eb/No = 21.52 dB

Required Eb/No = 13.5 dB