

Interference Showings

2200-2290 MHz

The Commission's rules do not specify a PFD limit for the 2200-2290 MHz band. However, rule No. 21.16 of the International Telecommunication Union (ITU) Radio Regulations does. Aethero has calculated the maximum PFD levels for transmissions from Phobos in accordance with these ITU PFD limits.

Figure 4 below represents the maximum transmitted EIRP at the nominal altitude of 500 km. Figure 5 below represents the maximum transmitted EIRP at the worst-case altitude of 350 km.

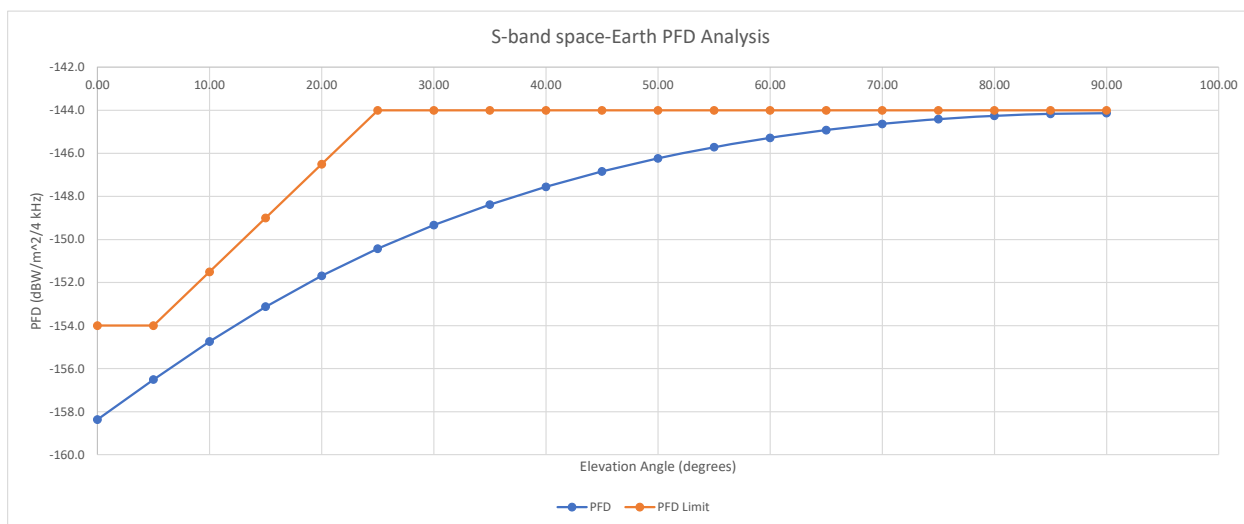


Figure 4 S-band PFD from 500 km Orbit Altitude with EIRP of -1.2 dBW over a Bandwidth of 250 kHz

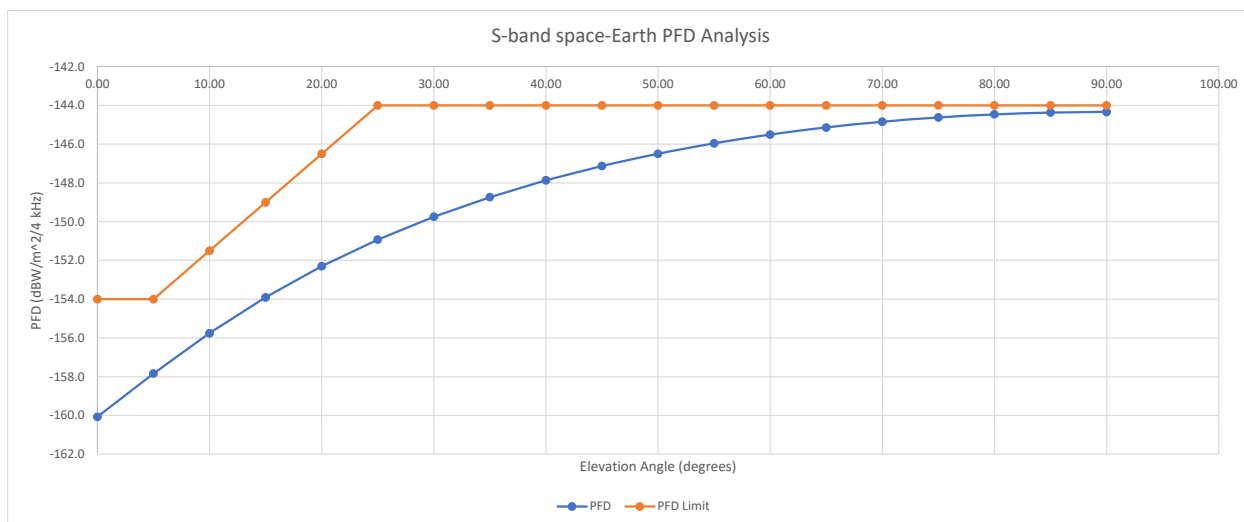


Figure 5 S-band PFD from 350 km Orbit Altitude with EIRP of -4.5 dBW over a Bandwidth of 250 kHz

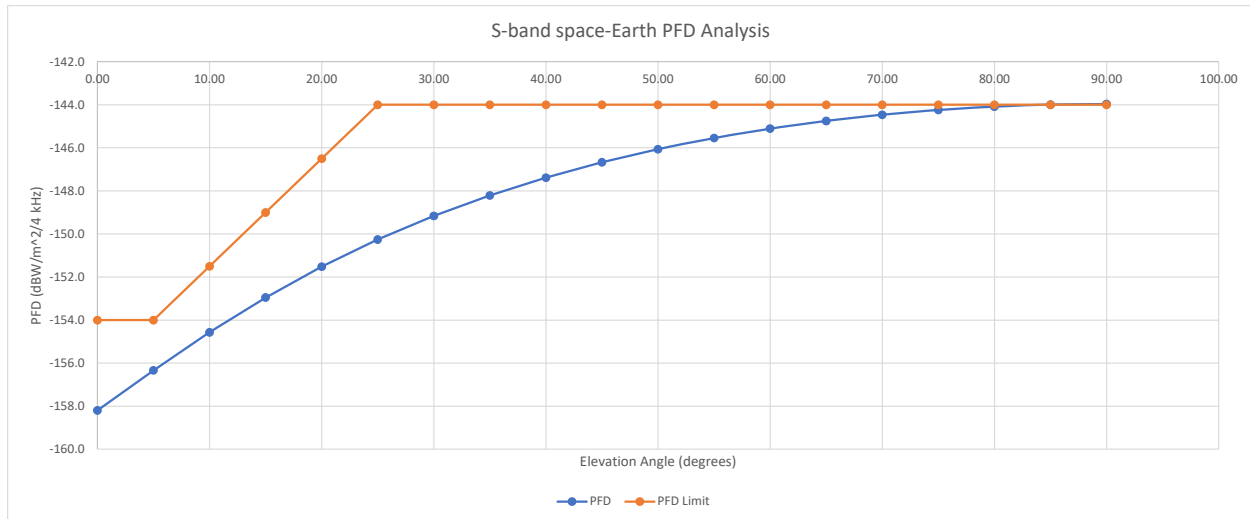


Figure 6 S-band PFD from 500 km Orbit Altitude with EIRP of 8 dBW over a Bandwidth of 2 MHz

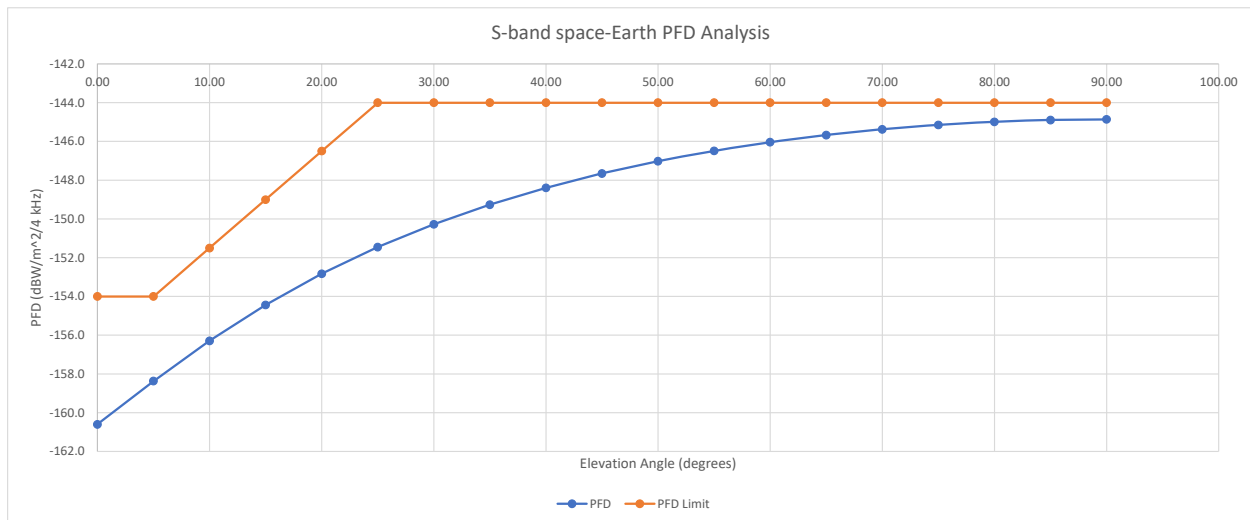


Figure 7 S-band PFD from 350 km Orbit Altitude with EIRP of 4 dBW over a Bandwidth of 2MHz

Phobos will have the ability to reduce the power and power density of its downlink transmissions as it descends in altitude. Aethero will actively manage and reduce power as needed to ensure compliance with applicable PFD limits.

8025-8400 MHz

The Commission's rules do not specify a PFD limit for the 8025-8400 MHz band. However, rule No. 21.16 of the International Telecommunication Union (ITU) Radio Regulations does. Aethero has calculated the maximum PFD levels for transmissions from Titan in accordance with these ITU PFD limits. Aethero's operations will also be consistent with the ITU Recommendation SA.1157-1 in order to protect adjacent band deep-space research operations.

Figures 5-8 below represents the maximum transmitted EIRP at both the nominal orbit altitude of 510km and the worst-case altitude of 350 km, for the X-band downlinks.

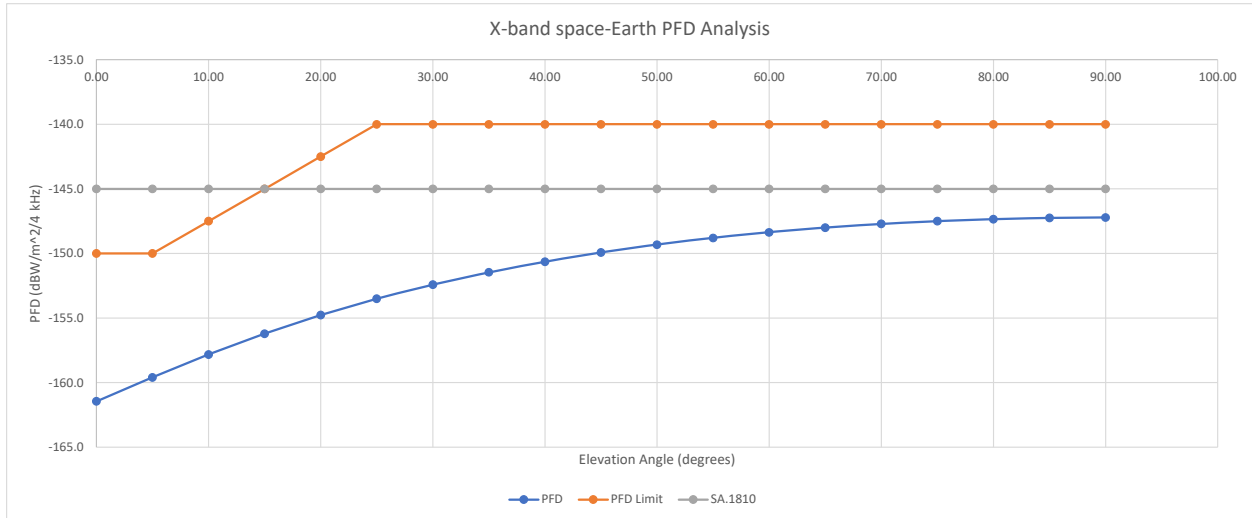


Figure 8 X-band PFD from 500 km Orbit Altitude with EIRP of 22.6 dBW over a Bandwidth of 170 MHz

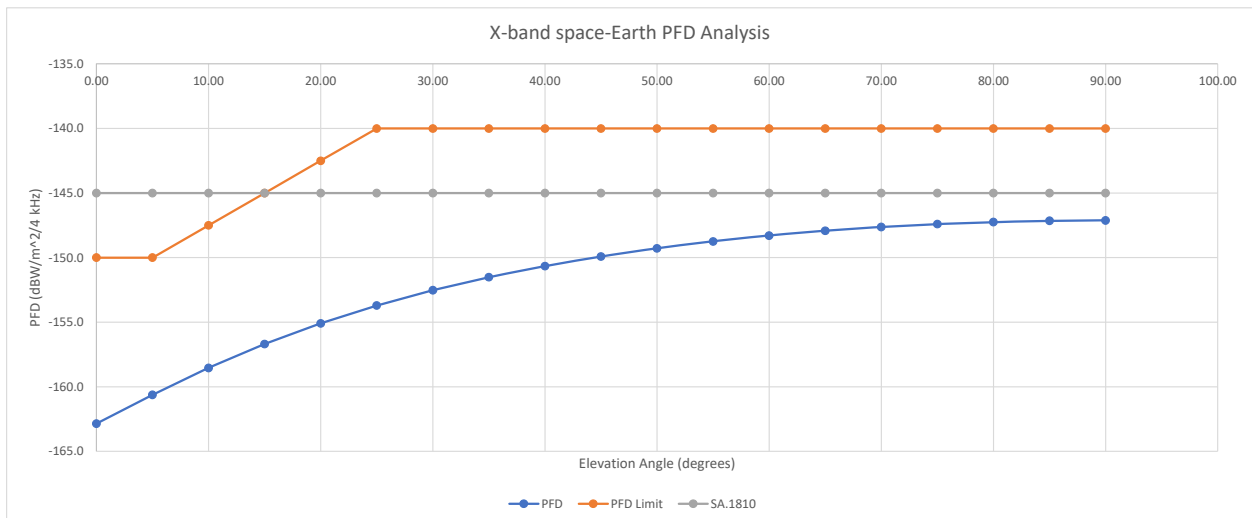


Figure 9 X-band PFD from 350 km Orbit Altitude with EIRP of 19.6 dBW over a Bandwidth of 170 MHz

Titan will have the ability to reduce the power and power density of its downlink transmissions as it descends in altitude. Aethero will actively manage and reduce power as needed to ensure compliance with applicable PFD limits.