From: Richard Peal

To: Nimesh Sangani
Date: September 10, 2021

Subject: Additional Information Request

Message:

Hello,

in response to quest #5 from correspondence referenced by 64066 and on the topic of PFD Calculations, please see the response with calculation and results:

njection orbit: 560 km
End-of-life orbit: 350 km
Transmitter maximum EIRP = -4.2 dBW
Signal bandwidth: 1 MHz
Minimum distance to Earth: 350 km
Minimum distance to GSO: 35211 km
Calculation - PFD on Earth surface:

PFD=-4.2dBW-71-20*log10(350km)-10*log10(1MHz)-24
  =-150.08 dB(W/m2/4kHz)
Calculation - PFD on GSO:

PFD=-4.2dBW-71-20*log10(35211km)-10*log10(1MHz)-24
  =-190.13 dB(W/m2/4kHz)