

From: david hinkley

To: Nimesh Sangani
Date: August 28, 2020

Subject: Additional Information Request

Message:

Applicant: Aerospace Corporation, The
File Number: 0583-EX-CN-2020
Correspondence Reference Number: 56921
Date of Original Email: 08/20/2020

1) Use the latest Version9 ITU Spacecap software and provide SpaceCap.

Completed and uploaded

2) For the 5020 MHz DL transmit frequency, please provide a pfd calculation to ensure power levels are within required limits.

Uploaded as Exhibit 12

3) Correct the 3 fatal errors in the spacecap v9 file (see attached report)

Done

4) Complete the attached additional data form for ITU submission

Completed and uploaded as an Exhibit 22

5) Please answer the following ODAR related questions:

a. What is the area-to-mass of the satellite as it will be oriented during active mission lifetime? What is the large object collision risk during this timeframe?

The nominal spacecraft configuration is with its solar array is deployed. It will track the sun, so throughout its orbit, two different areas will be presented to the velocity direction. The area-to-mass ratio will effectively be the average of two orthogonal areas in the deployed configuration or 0.0098 m²/kg. The probability of a large object collision is 0.00000 per DAS 3.1.

b. What is the area-to-mass of the satellite as it will be oriented after the active mission lifetime and it is no longer operated? What is the large object collision risk during this timeframe?

After deactivation, the satellite will tumble. It will therefore have an effective area-to-mass ratio of 0.0079 m²/kg. The probability of large object collision is 0.00000 per DAS 3.1.

c. Provide further explanation of the three given cross-sectional area figures: "minimum", "maximum", and "average". What operational conditions do these refer to, specifically?

The minimum, maximum and average cross section areas were provided for completeness only. The ODAR has been revised to remove this language. In its place are the area/kg values for nominal mission operation and post-mission tumbling.