

From: Austin Weber

To: Nimesh Sangani

Date: April 27, 2021

Subject: Additional Information Request

Message:

Hello Nimesh,

Below are the responses to your requests.

1) Will the propulsion be used solely for the two indicated changes in inclination (97.6 to 96.6, and then 96.6 to 97.6), or will there be any additional usage, including for collision avoidance, changes in altitude or stationkeeping?

The thruster will primarily be used for the stated orbital maneuver. If we can assist in avoiding a collision using our thruster, we will attempt to do so, but no collision avoidance maneuvers are expected. We will also attempt station-keeping maneuvers as needed.

2) In the ODAR, each spacecraft is stated to be 14 kg (13.77 without fuel) with the exception of the calculations on page 10 (which show orbital lifetime compliance.) The DAS logs show a mass of 28 kg, along with a slight decrease in area-to-mass. Please provide a clarification or correction for this change in values.

Corrections have been made on page 11 (was page 10) regarding the spacecraft mass in our orbital lifetime compliance calculation. For clarification, the area-to-mass ratio in all calculations is equal to $0.008173 \text{ m}^2/\text{kg}$. The DAS software rounds this value to show $0.0082 \text{ m}^2/\text{kg}$ in some instances.

3) Please provide the dimensions of each of the solar arrays. Additionally, were the deployed solar arrays included in the calculations used to obtain the area-to-mass value?

Here are the three solar array dimensions at their maximums:

+X panel: 354.2 mm x 88.3 mm x 8.0 mm

+Y panel: 354.2 mm x 232.4 mm x 12.1 mm

-Y panel: 354.2 mm x 213.9 mm x 3.1 mm

These dimensions have been included in the updated ODAR as well. The solar arrays were included in the calculations to obtain the area-to-mass value.

Best,

Austin