

To: Peter Dohm
E-Mail: Peter.Dohm@SpaceX.com
From: Jose Trevino
Date: November 09, 2011

Subject: FCC file number 0657-EX-ST-2011

Message:

Mr. Dohm,

NASA cannot concur with this request at this time. The additional information requested below is required to allow NASA to determine the RFI potential to NASA systems.

1. Please provide antenna patterns (azimuth and elevation versus gain) for the Dragon omnidirectional and directional S-band antennas. Also, please identify the antenna orientation relative to the vehicle coordinates and vehicle orientation/attitude relative to the receiving station.
2. For the return space-to-space link, what is the maximum transmit antenna gain of the Dragon antenna at 2216 MHz in the direction of TDRS? For the downlinks, what is the maximum transmit antenna gain of the Dragon antenna at 2231.5 MHz and 2228 MHz in the direction of the various earth stations?
3. Please confirm that this represents a complete list of all transmission modes that will be used for this flight.
4. Please provide a text or spreadsheet file with actual flight coordinate information (spherical or rectangular) at each time point, typically done in 1 second steps (Lat-Long-Alt or X-Y-Z for the duration). The file should indicate which antenna/ frequency(ies)/ emission(s) is in use at any given time. The portion of the mission when Dragon is docked with ISS may be excluded from this file, provided that SpaceX submit a text description of spacecraft docked attitude and antenna orientation in ISS coordinates.
5. Will switching between the omnidirectional antenna and the directional antenna be controlled by a command uplinked from a ground station or by an onboard controller based on the flight timeline?
6. Please provide minimum ground station antenna elevation angle planned for spacecraft coverage.
7. For the ground stations, is the "Output Power" the power at the output of the transmitter or the ERP from the antenna?
8. The uplink power from South Point is listed as 2000W. This is not consistent with the values listed for the other ground stations. Please verify and provide the correct value.
9. The emission designator for Wallops Island is listed as "54M0G2D." Should this actually be 54K0G2D?
10. "MOBILE: Space: TDRSS (TDRS SA Antenna)" is authorized by a Federal government RFA and should not be listed in this application.

The items indicated above must be submitted before processing can continue on the above referenced application. Failure to provide the requested information within 30 days of November 09, 2011 may result in application dismissal pursuant to Section 5.67 and forfeiture of the filing fee pursuant to Section 1.1108.

DO NOT Reply to this email by using the 'Reply' button. In order for your response to be processed expeditiously, you must upload your response via the Internet at <https://fjallfoss.fcc.gov/oetcf/els/index.cfm> by clicking on the "Reply to Correspondence" hyperlink.

Responses to this correspondence must contain the Reference number : 15444