

From: Mark Mills

To: Anthony Serafini
Date: August 21, 2012

Subject:

Message:

Response to questions received 8/21/12 from the Air Force regarding STA application 0611-EX-ST-2012:

I apologize for the confusion I have created by the exhibit I attached to this STA application regarding number of telemetry links for the Antares launch vehicle. I had been asked by the NTIA to provide an explanation as to number of telemetry links used by Antares. I uploaded a general explanation that covered a series of Antares vehicles/flights, not just the vehicle/flight in which this current STA application is addressing. It appears it is the information contained in this exhibit that is the source of many of these questions.

1) Question: Are all three flights on the same date? If not, what are the proposed launch dates? Is a STA required for each separate flight?

Yes, we are operating with the understanding that an STA is required for each separate vehicle/flight. This current STA application addresses the single launch of an Antares vehicle, referred to in the previously submitted exhibit as Flight 2. The proposed launch dates for the first 3 vehicle launches are as follows:

- Flight 1 - 9/22/12 (STA already granted)
- Flight 2 - 11/23/12 (Subject of current STA application)
- Flight 3 - 3/6/13 (Subject of future STA application)

2. Question: Why is telemetry freq = 2259.5 MHz not listed on the STA?

The 2259.5 MHz telemetry is not used by Antares for Flight 2. It is only used on the Flight 1 Antares vehicle. This link will provide data for the simulated payload on Flight 1. Beginning with Flight 2, the simulated payload is not flown, as a real payload is flown (called Cygnus), with its own space vehicle telemetry links (and STAs).

3. Question: If Flight 1 requires 5 telemetry links, why does the STA only list 4 telemetry frequency bands?

Flight 1 uses 5 telemetry links and has already been granted an STA for those 5 links. This application is for Flight 2. The Antares launch vehicle for Flight 2 does not use the payload simulator telemetry link, therefore, there are only 4 vehicle telemetry links, not 5.

4. Question: Does Antares launch vehicle require 5 telemetry links? If so, which 4 of the 5 telemetry links does Flight 2 require.

Only Antares Flight 1 requires 5 telemetry links. Flight 2 requires 4 telemetry links. The 2259.5 MHz link that is needed for Flight 1 is eliminated for Flight 2. The remaining 4 telemetry links for Flight 2 are the same as were used on Flight 1.
(2225.5, 2241.5, 2269.5, and 2288.5 MHz)

5. Question: Per Flight 3, which 3 telemetry links are required?

Beginning with Flight 3, the 2225.5 MHz video telemetry link will be eliminated from Antares, leaving the 3 required links of 2241.5, 2269.5, and 2288.5 MHz.