

From: Michael Miller

To: Nimesh Sangani  
Date: August 13, 2021

Subject: Additional Information Request

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Message:

1) What is the operational lifespan of the CubeSat(s)?&nbsp;

Answer: The nominal lifetimes vary, from about 7 years for the 1U Cubesats, to 12.2 and 12.9 years for the ThinSats.

2) What is the scientific purpose of the CubeSat(s)?&nbsp;

Answer: The purpose of the mission is to&nbsp;

2.1)&nbsp; Science: Fly the following scientific instruments and collect data in LEO:

Plasma Probe: Better characterize the plasma density and electron temperature of the atmosphere, leading to a deeper understanding of the sun-earth connection.

Particle Detector: Used to observe energetic particle radiation counts and dosage flux through the satellite avionics.

Temperature: Provides information on the heat dissipation and heat flow within the internal subsystems of the spacecraft.

2.2) demonstrate deploy&nbsp;of small satellites with two distinct form factors (ThinSat and Cubesat) from the same deployer:&nbsp;

2.3) to demonstrate ground station radar tracking of the ThinSats over a range of altitudes.&nbsp; This will also &quot;ground truth&quot; the TLE orbit data, derived from onboard GPS data, that the satellites will transmit back to Earth via the Globalstar network.

2.4) demonstrate rapid turnaround and deployment of these satellites from start time to deploy time.  
End of Answer for Item 2

3) Provide the exact application of each frequency request.

Answer:&nbsp;

3.1) The application requests use of the frequency 1616.25 MHz to transmit telemetry from the satellites to the Globalstar constellation.&nbsp;&nbsp;

3.2) The application identifies the uplink from the NSL ground station in Upland, Indiana, 2456 -2478 MHz, which is provided to send a stop transmitting command.&nbsp; This is separately licensed in a modification to the existing ground station license.

&nbsp;4) Are you providing commercial service under this experimental license?&nbsp;

Answer: No, this is a demonstration of technology and performance.&nbsp; It is a necessary demonstration that lays the groundwork for potential future commercial application, flying customer payloads, which would be licensed under part 25.

5) ODAR is still missing.

Answer: The ODAR and appendix have been uploaded as an exhibit to the application.