

September 16, 2019

Secretary
Office of the Secretary
Federal Communications Commission
445 Twelfth Street, S.W.
Washington, D.C. 20554

Subject: Amendment of FCC Experimental Application

Reference: FCC Experimental Application – ELS File Number: 0011-EX-CN-2019

Dear FCC Secretary,

Space Sciences & Engineering (SSE), doing business as PlanetiQ, hereby amends its above-referenced experimental license application originally submitted on January 3, 2019 to reflect a change in launch.

In summary, PlanetiQ plans to launch our satellite to a 620 km sun-synchronous 6am/6pm orbit, during a new launch window of February to March of 2020. We plan to operate the satellite at the launch drop-off altitude for a period of no longer than 18 months, and then will use the satellite's on-board propulsion system to transfer to a 650 km sun-synchronous orbit with same node time. As described in the original application, we plan to operate our satellite at that altitude for a mission lifetime of 7 years, and subsequently, deorbit naturally from atmospheric forces or accelerated by our propulsion system.

The overall mission plan is nearly identical to what was stated in our original application, with the only change being our launch. Analysis completed at the new initial launch parameters for the ODAR all returned as compliant within the DAS specifications. The frequency plan, power emitted, and NTIA data all remain the same to what was shown in our previous versions of the application.

The summary of changes to our application are shown below.

Narrative changes

- The launch window has shifted from Q4 2019 to Q1 2020.
- The satellite will now be initially launched to a dawn/dusk sun-synchronous orbit (SSO) with an altitude of 620 km. We still plan to move the satellite to 650 km SSO, as described in our previous application.
- The power flux density (PFD) was recalculated at the new launch altitude and was found to be better than the worst case launch scenario of our previous application.

- A subset of list of ground stations in our previous application were chosen as the operational stations that we are licensing through the ground station suppliers and using for communications with this satellite.
- References to launches and orbits that are no longer options for this satellite were removed.

ODAR changes

- The launch window and vehicle were updated.
- Recalculated collision with large objects likelihood (Req. 4.5-1) in DAS v.2.1.1 for the new injection orbit altitude and inclination.
- Recalculated collision with small objects likelihood (Req. 4.5-2) in DAS v.2.1.1 for the new injection orbit altitude and inclination.
- Removed calculations and analysis for other obsolete orbits.
- Updated DAS v.2.1.1 output.

We have also added an Appendix containing the transmit and receive patterns of the antennas for both space and ground stations, as requested by the FCC.

Please address any correspondence to the following point of contact:

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Sincerely,

Erin Griggs