

February 1, 2018

*Via Electronic Filing*

Walter Johnston  
 Chief, Electromagnetic Compatibility Division  
 Office of Engineering and Technology  
 Federal Communications Commission  
 445 Twelfth Street, S.W.  
 Washington, DC 20554

Re: *Slight Revision in Initial Operating Altitude, File No. 0298-EX-CN-2016*

Dear Mr. Johnston:

Following on to my letter of January 16, 2018, this is to confirm some additional information with regard to the above referenced experimental authorization issued to Space Exploration Technologies Corp. (“SpaceX”) for two experimental non-geostationary orbit satellites, Microsat-2a and -2b. As I previously mentioned, SpaceX intends to launch these two demonstration satellites next month as a secondary payload on a Falcon 9 launch in which the primary customer of the launch mission (PAZ) has specified an injection altitude for its payload of approximately 511 km in order to ensure proper flight trajectory for its spacecraft. As a result, SpaceX plans to adjust slightly the altitude of the initial operations of its own Microsat-2a and -2b spacecraft to the identical 511 km, versus the 514 km altitude specified in its granted authorization. Accordingly, at insertion, the expected orbital parameters<sup>1</sup> for Microsat-2a and -2b are as set forth in the following table:

Perigee	511	km
Apogee	511	km
Period	1.58	hrs
Inclination	97.44	deg

As set forth in the original application, after system checkouts are performed and the system is evaluated as ready to proceed, SpaceX will engage in orbit-raising maneuvers until the spacecraft reach a circular orbit at an altitude of 1,125 km.

<sup>1</sup> Given the injection accuracy of the launch vehicle, the actual altitude achieved may fall within a  $\pm 10$  km range around the 511 km altitude.

As a secondary payload, SpaceX has little grounds to reject the request by the primary payload for such a small change in altitude. The 3 km difference from the authorized altitude of 514 km amounts to a 0.6% change in altitude at the inception of the Microsat mission. This *de minimis* change in altitude will have a *de minimis* effect on the orbital period of the satellites but will not change the circular nature of the orbit. We also can confirm that this very minor change in initial operating altitude will have no effect on other aspects of the Microsat satellites' mission, including the orbital debris mitigation plan filed with SpaceX's original application.

You have indicated that this minimal change to initial planned orbital operations of these experimental satellites requires no further action from SpaceX with respect to its existing authorization. We very much appreciate your expedited consideration of and response to our letter, and look forward to discussing the results of the Microsat experimental operations once the data are available.

Should you have any questions or require any further information, please do not hesitate to contact me at the email address below or at Tel. 202-649-2634.

Sincerely yours,



Patricia Cooper  
Vice President of Satellite Government Affairs

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