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This attachment to FCC file no. 0852-EX-CN-2017 is submitted in response to correspondence no. 39907, dated 4 December 2017.

FCC's questions are reproduced below, with answers in-line.

a) THE TYPE OF SATELLITE, GEOSTATIONARY OR NONGEOSTATIONARY

The spacecraft is non-geostationary. It will be released from the upper stage of the SLS EM-1 ICPS on an Earth-escape, lunar flyby trajectory, into heliocentric orbit.

B.) IF ANY SATELLITES ARE NONGEOSTATIONARY, REPORT ITS INCLINATION ANGLE, APOGEE IN KILOMETERS, PERIGEE IN KILOMETERS, ORBITAL PERIOD IN HOURS AND FRACTIONS OF HOURS IN DECIMAL, THE NUMBER OF SATELLITES IN THE SYSTEM.

There is one satellite in this system. Since the orbit is hyperbolic with respect to the Earth, the other parameters requested are not relevant (and in some cases undefined) for this spacecraft.

b) THE SATELLITE TRANSMITTER ANTENNA GAIN AND BEAMWIDTH

The Team Miles Cubesat RF antenna has a peak gain of 8.5 - 9 dBi, and a half-power beamwidth of approximately 60 degrees.

c) THE SATELLITE TRANSMITTER ANTENNA AZIMUTH: NARROWBEAM (NB), EARTH COVERAGE (EC),

The antenna will have full Earth coverage, given the spacecraft's large distance from the Earth, and comparatively wide beam width.

d) THE EARTH STATION RECEIVER ANTENNA GAIN, BEAMWIDTH, AZIMUTHAL RANGE, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS AND THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS,

The NASA/JPL Deep Space Network 70-meter antennas at Goldstone (USA) Canberra (Australia), and Madrid (Spain) will be utilized to receive signals from the CubeSat. The parameters requested for these stations are listed on the following page:



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Antenna Site Name	Gain (dBi)	Beam-width	Azm. Range	Min Elev.	Altitude	Antenna Height	Latitude	Longitude
Goldstone (DSS-14)	63.59	0.162°	110° - 250°	10°	900m	6m	35°25'36" N	116°53'24" W
Canberra (DSS-43)	63.59	0.162°	90° - 270°	10°	550m	6m	35°24'05" S	148°58'54" E
Madrid (DSS-63)	63.59	0.162°	110° - 250°	10°	720m	6m	40°25'45" N	4°14'57" W

Please note: values are taken from *DSN 101: 70-m Subnet Telecommunications Interfaces*. Site geographic coordinates and elevations above sea level are taken from Wikipedia.

e) THE EARTH STATION RECEIVER ANTENNA AZIMUTH, THE MINIMUM ANGLE OF ELEVATION (V00 TO V90),

See table above.

f) THE TRANSMITTER ANTENNA ORIENTATION

The Miles spacecraft will downlink only. No DSN stations are expected to transmit to the Miles CubeSat during normal operation. The only case in which uplink to the Miles CubeSat might occur is if FCC or another USG agency orders a "kill signal" to be sent, to terminate the mission. In this case, the Goldstone antenna (DSS-14) would be utilized, as local regulations prevent the Madrid station from transmitting in S-band. The azimuth range of the Goldstone antenna is listed in the table above.