Information Request From Behnam Ghaffari, FCC OET, November 29, 2017

Provide the information notes below for the purposed CubeSat. Submit your response as .pdf to your application:

a) THE TYPE OF SATELLITE, GEOSTATIONARY OR NONGEOSTATIONARY
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,

Answer: Nongeostationary, Inclination 90 Degrees, Apogee 500 km, Perigee 500 km, Orbital period 1.57 Hours, Number of Satellites = 1.

b) THE SATELLITE TRANSMITTER ANTENNA GAIN AND BEAMWIDTH

Answer:

S Band 6.32 dBi, 120 Degrees
UHF 4.4 dBi, 150 Degrees

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

Answer: EC

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,

Answer:

UHF: 14.6 dBi, Beamwidth 28 Degrees, Azimuthal Range 0 – 360 Degrees
S Band: 20.9 dBi, Beamwidth 16 Degrees, Azimuthal Range 0 – 360 Degrees,

Site Elevation Above MSL: 23.47 Meters
Antenna Height Above Terrain: 24.4 Meters

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

Answer: For both S band and UHF, the Min angle of elevation is 10 Degrees, so it is V10 to V90.