The Cosmic X-Ray Background NanoSat-2 (CXBN-2)

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0.0 – Revision History

Rev	Date	Author	Details
1	2016-08-24	Ben Malphrus	Document Created. Initial Release.

a) THE TYPE OF SATELLITE, GEOSTATIONARY OR NONGEOSTATIONARY

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

Inclination angle: 51.6°
Apogee in kilometers: 416
Perigee in kilometers: 409
Orbital Period in hours and fractions of hours in decimal: 1.55
Number of satellites in the system: 1

b) THE SATELLITE TRANSMITTER ANTENNA GAIN AND BEAMWIDTH

Antenna gain: 0 dB
Beamwidth: 180° (quasi-omni directional)

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

Beam: 180° (HPBW)
Earth coverage: 4,000 km diameter circle earth coverage

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

Antenna gain: 32 dB
Beamwidth: 2°
Azimuthal range: 0°-360°
Site elevation above mean sea level in meters: 350
Antenna height above terrain in meters: 25.6

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

Azimuth: 0° - 360°
Angle of elevation: V00

f) THE TRANSMITTER ANTENNA ORIENTATION (XAP), EXAMPLE XAP01 J , AND THE RECEIVER ANTENNA ORIENTATION (RAP), EXAMPLE RAP01 J , WHERE J REPRESENTS LINEAR POLARIZATION. OTHER POLARIZATIONS INCLUDE H FOR HORIZONTAL, V FOR VERTICAL, S FOR HORIZONTAL AND VERTICAL, L FOR LEFT HAND CIRCULAR, R FOR RIGHT HAND CIRCULAR, T FOR RIGHT AND LEFT HAND CIRCULAR, E FOR ELLIPTICAL AND O FOR OBLIQUE ANGLED CROSSED.

Tx Antenna: XAP01 T
Rx Antenna: RAP01 T