

Radiation Hazard Study

1.2 meter fly-away KU Band (14.25 GHz)

Antenna Type / Size = Circular 1.2 m diameter

Antenna Gain = 43.23 dBi

Power to the antenna 400 W

Far Field Calculation

Rff = 41.1 m

Sff = 39.6 mW/cm² - Potential Hazard (limits 5.0 / 1.0 mW/cm²)

Near Field Calculation

Rnf = 17.1 m

Snf = 93.4 mW/cm² - Potential Hazard (limits 5.0 / 1.0 mW/cm²)

Transition Region

Stf <= 93.4 mW/cm² - Potential Hazard (limits 5.0 / 1.0 mW/cm²)

Off Axis Radiation will be => than 20 dB below the on axis radiation therefore the off axis radiation values will be below the limits for human exposure.

CONCLUSION: Based on the above analysis it is concluded that harmful levels of radiation will exist in regions in the main axis of the antenna. At each deployment of this transportable earth station appropriate site control measures will be taken to ensure that the area where radiation is above the permitted limits is not accessible. The appropriate measures will always include the posting of warning signs along with other markings and temporary access control measures as required. To ensure compliance with the safety limits, the earth station transmitters will be turned off whenever maintenance and repair personnel are required to work in an area where the radiation level exceeds the level recommended by applicable guidelines.