

Experimentation Description

The request for a modification in the existing license is needed in order to improve the existing system to detect ionospheric events which most likely can be detected by lower frequency operations. Besides meteors, there are also electrical discharges occurring at the lower ionospheric region. These electrical discharges are called as “sprites” and 1 MHz – 10 MHz range is better to detect these kind of events due to the plasma frequency. We have chosen 5 MHz as our probing frequency in order to be in line with similar ionospheric diagnostic tools. 5 MHz radar system is almost identical to our existing 40 MHz radar system and using almost same equipment. The only difference is the transmitting antenna, which is a simple half-wave dipole and it is using relatively low power (500W).