

Question 7: Purpose of Experiment

This experiment is intended to validate and measure the use of surface wave transmission lines as matching and feeding methods for a physically short symmetric dipole antenna.

Recent theory indicates that higher antenna efficiency, resulting in smaller antennas with equivalent antenna factors, may be created by modeling an antenna in a different manner from the classic method. The experiment is intended to use real world transmission and reception as a substitute for a far-field antenna range, something that is extremely difficult if not impossible to construct in LF and MF frequency ranges.

The worldwide spotting network for WSPR mode transmissions will be employed as part of these measurements.

Additionally it is hoped that calorimetric measurements may be employed to arrive at a measurement of antenna efficiency.

Both the 2200 meter and the 600 meter bands are being selected for this experiment due to the existing base of monitoring stations and database.