

A 3-element Yagi antenna and associated MARDOC Meteor Wind Radar (MWR) transmitter system will be installed at the USU Bear Lake Observatory (BLO) Facility in Garden City, Utah. The BLO resides on a hillside overlooking Garden City. The population of Garden City is approximately 400 persons. The BLO has a boundary fence and private access road. The BLO grounds encompass an area of approximately 1 km².

The MWR will be used experimentally for 6 months following installation. The MWR emits 13.5us wide pulses at a nominal carrier frequency of 32.5 MHz with a pulse repetition frequency of 2.144 kHz. The un-modulated analog pulses are used to remotely probe the mesosphere for meteor plasma trails deposited in the earth's atmosphere by ablating incident meteors. The meteor trail movement and decay as monitored by the MWR are then real-time diagnostics of the local mesospheric neutral wind.

The MWR antenna is attached to the ground, pointed directly overhead (tilted vertically), and stands at a height of 3 m above ground.