

### Directional Antenna Information

Two helical antennas will radiate power over the described frequency range of 600-920 MHz. The HPBW will vary as a function of frequency but maintain high directivity by operating in the axial mode (i.e. end-fire radiation pattern). With respect to the orientation, if due North is  $0^\circ$  and due South is  $180^\circ$  degrees, then both antenna will be oriented  $133.6^\circ$  in the horizontal plane. The orientation in the vertical plane, or slang angle, will vary depending on the distance to a device under test (DUT). The DUT will be located 1 meter above ground for all experiments so that both helical axes will point down toward farm soil while radiating power.