

This exhibit accompanies a request for renewal of the experimental class license associated with file no:0572-EX-CR-2026, callsign: WI2XJT.

The licensed station is a research radar used in pursuit of grants from the Air Force Office of Scientific Research (FA9550-23-1-0164) and the National Science Foundation (AGS-2146187), the latter of which is undergoing renewal. The purpose of the research is to study ionospheric radio wave propagation and its impacts on critical operational systems, including DoW and civilian systems. The radar system in question is located at an ionospheric modification facility owned and operated by the University of Alaska, Fairbanks. That facility is used to induce effects on the ionosphere, mimicking conditions that may occur in nature. One purpose of the radar is to assess the effects. We are specifically interested in so-called "dusty plasmas" which occur in nature in the mesosphere where charged ice grains form. Dusty plasmas are also generated by meteoric impacts and by the reentry of space vehicles such as spent motors and de-orbited satellites. Part of our research involves determining the fate of this material as it is transported by mesospheric flows which are dynamic and turbulent.

The radar system is used in conjunction with schools run by the University of Alaska, Fairbanks, and is an important pedagogical tool for training graduate students interested in radio science.