

This exhibit accompanies a request for renewal of experimental-class license associated with file no. 0287-EX-CR-2026, callsign WI2XJS. The licensed station is used in pursuit of a grant from the National Science Foundation no. AGS-2516142 which was recently awarded to Cornell University for continuation of research that has been underway for a number of years. The purpose of this research is to study ionospheric radio wave propagation, ionospheric irregularities, and the impacts on critical operational systems, including DoD and civilian systems. The research is done in concert with a similar radar system when recently renewed its FCC experimental class license. Our radars measure backscatter from natural *E*-region ionospheric irregularities which we then characterize, model, and relate to effects observed on other radio services. The research is conducted by the applicant along with graduate and undergraduate engineering students. Multiple publications in peer-reviewed journals have resulted from previous efforts, and multiple graduate students have received engineering degrees on the basis of this work.

NSF research grants typically run for three years and may be renewed based on accomplishment. Multiple experimental-class license renewals therefore must be sought over the lifetime of the award(s).