

"QUESTION 7: PURPOSE OF EXPERIMENT"

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DeTect, Inc. specializes in remote sensing detection technologies and systems for aviation safety, avian survey and monitoring, airspace and ground security, weather detection, and wind measurement, supporting projects worldwide. DeTect is the world leader in development, deployment and support of radar systems for aircraft bird strike avoidance, avian risk assessment and migratory research. The company is a U.S. corporation (Florida) headquartered in Panama City, Florida, USA with divisional offices in Colorado, Kentucky and Virginia and representative offices worldwide. DeTect systems have been deployed at facilities and projects worldwide with a proven record of exceptional performance, reliability and operability and over 100,000 hours of operating experience. Professional staff resources include experienced engineers, scientists, biologists, and planners that are experts in remote sensing, radar engineering, system integration and environmental management.

This experimental license will support the development of x-band environmental profiling radars, for purposes as monitoring birds, insect populations, hydrometeors, and ice particles. The project includes development of the radar product and further development of specialized target signal processing methods. This system will lead investigators and plant operators to improved understanding of the evolution of small-target phenomena, and will lead to improve warning systems based upon the resulting identifications.

The proposed mobile radar instrument will be produced with the following subsystems: an antenna subsystem consisting of a single vertically-pointing, high-performance antenna, shielded to obtain low sidelobes; a transmitter subsystem utilizing a 25kW commercial pulsed radar transmitter capable of pulse lengths from approximately 0.1 to 1.2 microseconds; a specialized low noise receiver subsystem having optimum filtering capability; a signal processing subsystem performing target parameter extraction and identification, and a data processing/communication subsystem for charting, recording, and long line transmission of results. The antenna and transmitter subsystems will be designed to maximize interoperability among co-located X-band systems.