

GOVERNMENT CONTRACT EXHIBIT

The radar station that Colorado State University is petitioning to license will be part of the experimental radar network currently being deployed in the DFW Metroplex under FCC license WD2XLI.

This experimental radar network is based on the new technologies and user research conducted by the CASA (Collaborative Adaptive Sensing of the Atmosphere) project. CASA is an NSF Engineering Research Center supported primarily by the Engineering Research Centers Program of the National Science Foundation **under NSF Cooperative Agreement No. EEC-0313747**. Colorado State University is a core member of the NSF's CASA Engineering Research Center.

CASA is dedicated to revolutionizing our ability to observe, understand, predict, and respond to hazardous weather events. The center has pursued an innovative, densely networked radar sensing paradigm to overcome the resolution and coverage limitations of traditional weather radars. The low-power, short-range and close spacing of these radars gives them the ability to scan low to the ground with very high spatial resolution. Overlapping coverage allows each voxel in the network to be simultaneously viewed by two or more radars, allowing for multi-Doppler wind vector retrievals and a solution to the increased attenuation experienced at X-band. The CASA concept and related enabling technologies developed by the CASA enterprise have been validated and evaluated in a prototype system-level test bed located in southwestern Oklahoma. The test bed has been relocated to the DFW Metroplex with the following project goals:

1. To develop high-resolution, two and three-dimensional mapping of current and future atmospheric conditions, focusing on the lower atmosphere, to detect and forecast severe wind, tornado, hail, ice, and flash flood hazards.
2. To create impacts-based, urban-scale warnings and forecasts for a range of public and private decision-makers that result in measureable benefit for public safety and the economy.
3. To demonstrate the value of collaborative, adaptive X-band radar networks to existing and future sensors, products, performance metrics, and decision-making; and assess optimal combinations of observing systems.
4. To develop models for federal/municipal/private partnerships that fund new observation technologies and on-going interdisciplinary weather system research.

Additional information on the project can be obtained by contacting:

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