



High Frequency Active Auroral Research Program

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Space Vehicles Directorate

Air Force Research Laboratory

FACT SHEET



The High Frequency Active Auroral Research Program (HAARP) provides significant new capabilities for conducting experimental research on high-power, radio wave interactions in the ionosphere and space, as well as in related military-system applications. The facility for experimental research is located in Gakona, Alaska.

The program is jointly managed by the Air Force Research Laboratory, Space Vehicles Directorate, Kirtland Air Force Base, N.M., and the Office of Naval Research, Arlington, Va.

Programs include the assessment of the viability of exploiting emerging ionosphere-radio technology for next generation communications, radar, and navigation systems.

Radio and optical diagnostic instruments at the facility provide real-time data on geophysical parameters that characterize the state of the ionosphere and magnetosphere,

including observations of the earth's magnetic field, electron densities, and radio wave absorption, under both normal and (solar-related) disturbed conditions. As such, the diagnostic instruments provide, in their own right, a ground-based space weather station.

The HAARP facility is a unique asset that will provide important scientific infrastructure to expand the nation's ionosphere-radio technology base well into the 21st century.

The soon to be completed high frequency transmitting system will consist of 180 antenna elements arranged as a rectangular array of 15 columns by 12 rows with a radiated power of 3,600 kilowatts. Currently, the site employs 48 active antennas, which produce 960 kilowatts of power.

For more information on HAARP, visit www.haarp.alaska.edu.