High Frequency Active Auroral Research Program (HAARP)

Geophysical Institute
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HAARP Ionospheric and Radio Science Laboratory

World Class Sub-arctic Research Facility

The world's most capable high-power, high-frequency transmitter and open observatory for studying the sub-auroral ionosphere, located at 62°23' (63.44° magnetic) North Latitude and 145°09' West Longitude, about 2.5° south of Fairbanks

Advantages

- A permanent, secure, year-round facility in the United States subarctic with maintained road access
- Central, sub-auroral latitude with great discovery class science potential; multi-instrument coordinated observations
- Service center for scientists and researchers; remote station set-up, custom fabrication, technical support and repair, materials and supplies, alternative energy, and shipping and receiving
- Infrastructure for geoscience observing instruments, technology testing, and training; trends in atmospheric and ionospheric conditions, including long term/global change

Facilities

World-class facilities including a 22,168 square foot operations center, 2,400 square foot maintenance storage building, 12MW power plant, 8 science pads, 10 semi-portable arctic grade shelters, optical shelters, fiber and power to all site locations

Research Disciplines

Plasma physics, radio science, mesosphere-thermosphere diagnostics, space weather, arctic maritime domain awareness, magnetosphere-radiation belt, sub-auroral physics, plasma duct generation, ELF propagation, detection of cavities in the Earth, over-the-horizon radar, citizen science and amateur radio, trends in ionospheric and atmospheric conditions, including trends in global change

Collaborative Opportunities

The HAARP site is an ideal location for deploying synergistic instrumentation for studying radio and space physics. Investigators interested in deploying diagnostic apparatus including radio receivers and radar, lidar, optical imagers and spectrometers, and interferometers are encouraged to contact the HAARP program at:

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