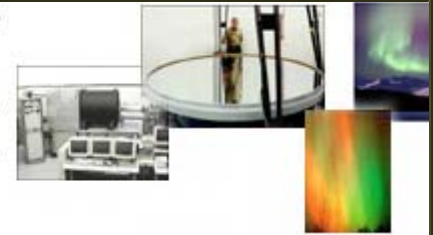


HIPAS Observatory

High Power Auroral Stimulation



HIPAS is located 30 miles Northeast of Fairbanks Alaska; in the small community of Two Rivers. It occupies 120 acres of land and has six buildings. The facility is located at: $64^{\circ} 52' 19''$ N latitude and $146^{\circ} 50' 33''$ W longitude.

The facility operates year-round. [Map](#)

The HIPAS facility is engaged in the study of the Ionosphere through the use of high power radio transmission as well as a state-of-the-art LIDAR (LIght Detection And Ranging) facility.

The Heater system consists of 8 transmitters capable of conducting amplitude modulation of 100 Hz - 20 kHz and phase modulation of 0 -20 kHz. Each transmitter can transmit up to 150kW at 2.85 or 4.53 MHz on CW mode.

The Heater antenna system consists of a circular array of 8 crossed dipoles, copper wire ground-planes and resonant triaxial baluns.

The LIDAR facility consists of a 2.7 meter LMT (LIquid MIRROR Telescope) with a 4.5 meter focal length as well as 6 state-of-the-art lasers.

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