

*International Cooperative Project of the Arctic Middle and
Upper Atmosphere Observation in Alaska (Abstract)*

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A program of remote-sensing technology development and comprehensive Arctic atmosphere observation, "Alaska Project," is now being conducted by Communications Research Laboratory (CRL) of Japan, with the most major cooperative partner of Geophysical Institute of University of Alaska Fairbanks (GI/UAF), since 1993. In the last few years a wide range of new ground-based measurements started at Poker Flat, Alaska (65N, 147W) such as Fabry-Perot interferometers (FPIs), all sky airglow imagers (ASIs), MF radar, Rayleigh lidar, millimeter-wave radiometer, and FTIR, covering dynamical, chemical, and ionospheric processes in the stratosphere up to thermosphere in the auroral zone. Recent results of CRL and GI observations include multi-point FPI observations of thermospheric vertical winds which changed directions upward/downward related to auroral arc locations. Mesospheric winds of MF radar show significant 1- and 1/2-day oscillations and their correlation to solar proton flux and/or mean winds.