

Key technique for the new Na lidar (2): Fast laser wavelength shifts using Acousto-Optic (AO) modulator

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An AO (acousto-optic) modulator technique is one of the most essential key techniques for the new Na lidar which is going to be deployed at EISCAT radar site at Tromso (Norway). The new lidar is capable of 4W laser output, 1kHz repetition rate, which enable us to acquire only a few minutes equivalent to 1 hour data quality of old Na lidar. To measure temperature using the laser wavelength shift between 2 wavelengths in the sodium D2 profiles, fast wavelength shift using AO is crucial. In this presentation, we show the concepts of the new Na lidar and some experimental results using AO.