

Research Fieldwork Report in Stø and Andenes, Norway

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Duration of the stay: 2026/08/1 - 08/9

Site and Country: Stø and Andenes, Norway

The duration of the journey from Nagoya to Andenes was about two days and one night, involving several flights and transfers. The day after arriving in Andenes, we traveled to Stø to remove the shutter from the OMTI camera because it sometimes could not open properly during winter. We also retrieved two ZWO cameras from the Stø observation site and brought them to Andenes for installation. The distance between Stø and Andenes is approximately 150 km, which takes about two and a half hours by car.

In Andenes, we installed the two ZWO cameras: Z010 for 630.0-nm airglow observations and ZWO011 for OH-band observations. We tested the cameras for three days. Z011 worked well, while Z010 appeared to have a technical problem. During the night, Z011 was able to capture images of the sky. However, since we visited during the summer, there was still considerable twilight around midnight, making the sky too bright for clear auroral observations. Therefore, we could not obtain clear auroral images during our stay. The Z011 camera is scheduled to begin observations in September 2026.

Since the problem with Z010 could not be repaired at the observation site, we brought the camera back to Japan for repair, while leaving the supporting equipment, such as the laptop and cables, at the Andenes site. After the repair is completed, we plan to send the camera back to Andenes by courier and coordinate with the local team to assist with its installation.

The Stø and Andenes observations are conducted in collaboration with the Leibniz Institute of Atmospheric Physics (IAP), University of Rostock, Germany. Near the Andenes observation site, the Middle Atmosphere Alomar Radar System (MAARSY) is operated by IAP, while the Arctic Lidar Observatory for Middle

Atmosphere Research (ALOMAR) is operated by Andøya Space. By combining these ground-based observations from airglow cameras, radar, and lidar, we hope to obtain complementary datasets for studying atmospheric gravity waves and auroral phenomena in the Arctic region of Northern Norway.

