

Ny-Ålesund: New SLR Site in the Arctic at 79°N

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Ny-Ålesund is a new Satellite Laser Ranging (SLR) site located in the Arctic at 79° north. The first SLR subsystems have already been installed, and the gimbal and telescope arrive in 2023. The complete SLR is planned for on-site test in late 2024, with start of SLR operations in early 2025.

Ny-Ålesund will be the first of an initial three SLR stations developed by NASA as part of the Space Geodesy Satellite Laser Ranging (SGSLR) project, and NASA plans to further develop five or more similar stations in the coming decade.

After SLR operations start, Ny-Ålesund becomes a GGOS core site that co-locates the four space geodetic measurement techniques; SLR, VLBI, GNSS and DORIS, and gives valuable contributions to the terrestrial reference frame.

We will present status and plans for the Ny-Ålesund site, with emphasis on opportunities and challenges related to SLR operations at this very remote location. Laser safety for aircrafts is considered in particular, and we give a first overview of our Aircraft Avoidance System (AAS) currently under development.