



The Quest for Astronomical Verification of the First Geodetic Reference Frame in Norway

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The first geodetic reference frame in Norway was established between 1779 and 1806. Geographical circles were used to triangulate the periphery of Southern Norway, thus establishing a continuous geodetic arc along the Norwegian-Swedish border from Halden to Trondheim and then along the west and south coast of Norway to close the arc. The closure allows longitude differences between sites to be calculated by two different trajectories. At selected sites, astronomical observations were carried out to determine latitudes and longitudes for the purpose of verifying the derived geodetic coordinates. This activity was continued for a full century after the geodetic observations had been completed. We track these efforts and compare the results to investigate the improvements over time.