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## EISCAT\_3D – Volumetric Phased-Array Incoherent Scatter Radar in the European Arctic

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The EISCAT Scientific Association is currently building the most advanced 3-dimensional imaging radar for atmospheric, ionospheric and near-Earth space investigations. The fully steerable, tri-static, phased-array incoherent scatter radar is located in Skibotn (inland from Tromsø, Norway), Karesuvanto (Finland, north of Kiruna), and Kaiseniemi (Sweden, west of Kiruna). The transmit-receive array at Skibotn consists of about 10,000 aerials and ten 91-aerial outrigger receivers in the immediate vicinity. The receive-only arrays of Kaiseniemi and Karesuvanto consist of about 5,000 aerials each. Construction of the facility began after the project kick-off in September 2017. During 2024, EISCAT\_3D will gradually begin operations, starting with a seven-element test system and expanding from that. EISCAT\_3D will replace the EISCAT mainland radars, i.e. the mono-static, 930-MHz UHF radar at Tromsø and the tri-static, 224-MHz radar at Tromsø with additional receivers at Sodankylä (Finland) and Kiruna (Sweden). The EISCAT Svalbard Radar (ESR) and the Ionospheric Heating facility at Tromsø will not be affected by EISCAT\_3D becoming operational. Here we give an status update of the new facility. EISCAT\_3D is a European Strategy Forum for Research Infrastructures (ESFRI) Landmark in the Environment domain.

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