

EISCAT_3D Capabilities and Status

HEINSELMAN, Craig^{1*}

¹EISCAT Scientific Association

The EISCAT Scientific Association has operated incoherent scatter radars in northern Norway, Sweden, and Finland for over three solar cycles. At present, the EISCAT Associate nations include China, Finland, Japan, Norway, Sweden, and the United Kingdom. EISCAT radars have provided new insights into a number of Geospace-related topics by directly measuring the influences of auroral particles on the ionosphere as well as the neutral atmosphere. While many discoveries have been made, there remains a good deal of uncertainty concerning the detailed aspects of the influences, especially at smaller spatial scales and shorter time scales. The EISCAT_3D project was initiated to address some of these issues. An extensive science case for the new instrument is described in the document found at <https://www.eiscat3d.se/content/deliverable-36-final-version-eiscat3d-science-case>.

EISCAT_3D has now completed both a Design Study and a Preparatory Phase, both funded by the European Commission. The funding for construction of the system is presently being pursued. In addition to describing the system and some of the new Geospace research that it will enable, this presentation will describe the present state of this funding effort.

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