

KAIRA – A Multipurpose Radio Receiver in Support of EISCAT_3D

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Abstract Text: The Kilpisjärvi Atmospheric Imaging Receiver Array (KAIRA) was built in 2011 and 2012 in order to support the development of EISCAT_3D. KAIRA is a LOFAR radio telescope operating in the frequency ranges 20-85 MHz (LBA) and 110-270 MHz (HBA). While the receiver has many applications in geophysics, as presented elsewhere in this conference, one of its prime objectives is to act as a multi-beam receiver for the EISCAT VHF radar in Tromsø, Norway.

The construction of KAIRA was filmed using a specialist time-lapse camera system. Additional filming took place after completion of the construction in late Arctic winter 2012 at KAIRA as well as Tromsø and Sodankylä.

Here we present the short, 10-min film, which has been produced to document the construction as well as to detail the scientific use and context of KAIRA within the EISCAT_3D project.