

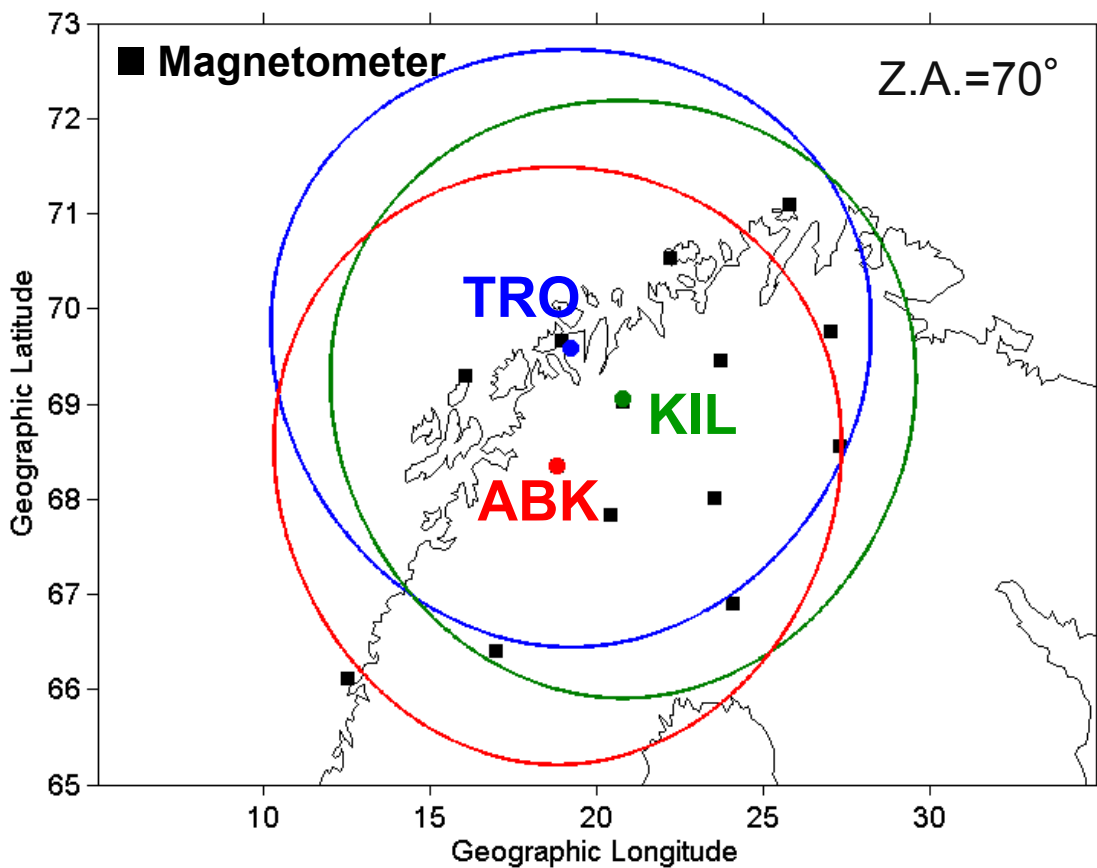
Examples of aurora tomography analysis

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National Institute of Polar Research

Aurora tomography analysis of spirals observed on March 9, 2013

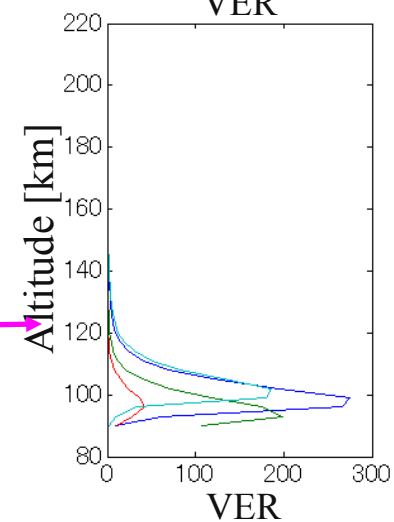
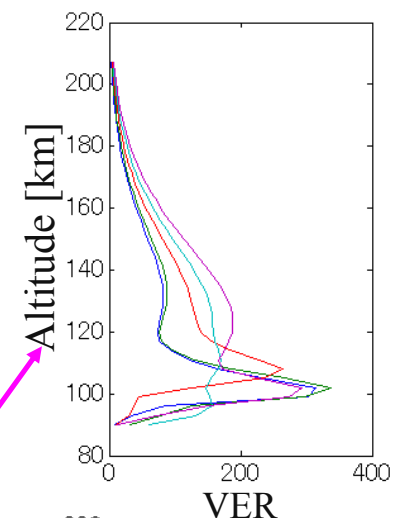
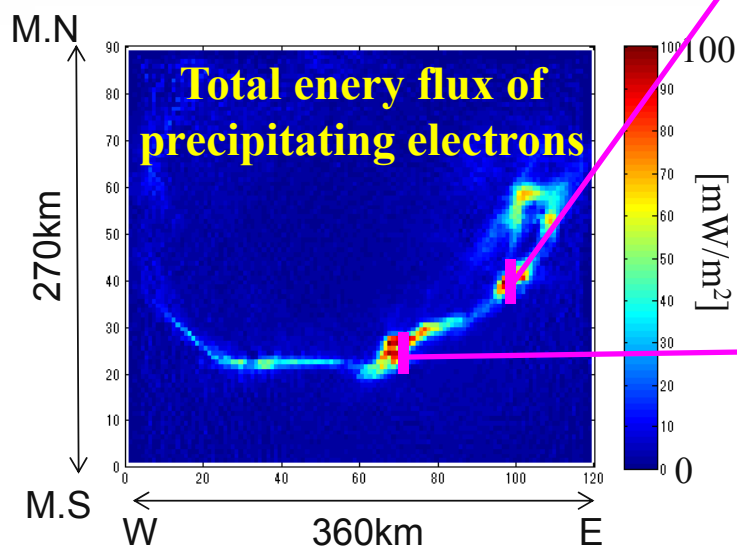
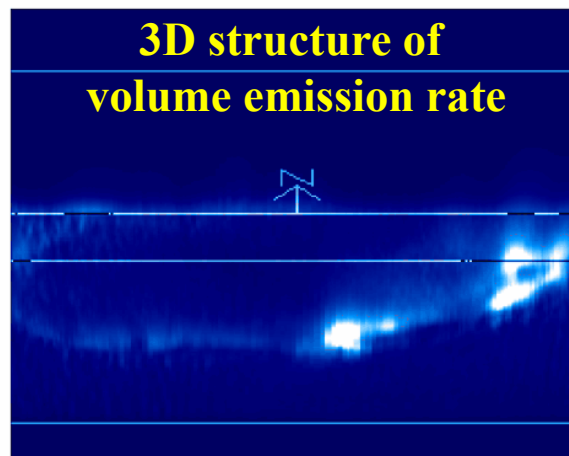
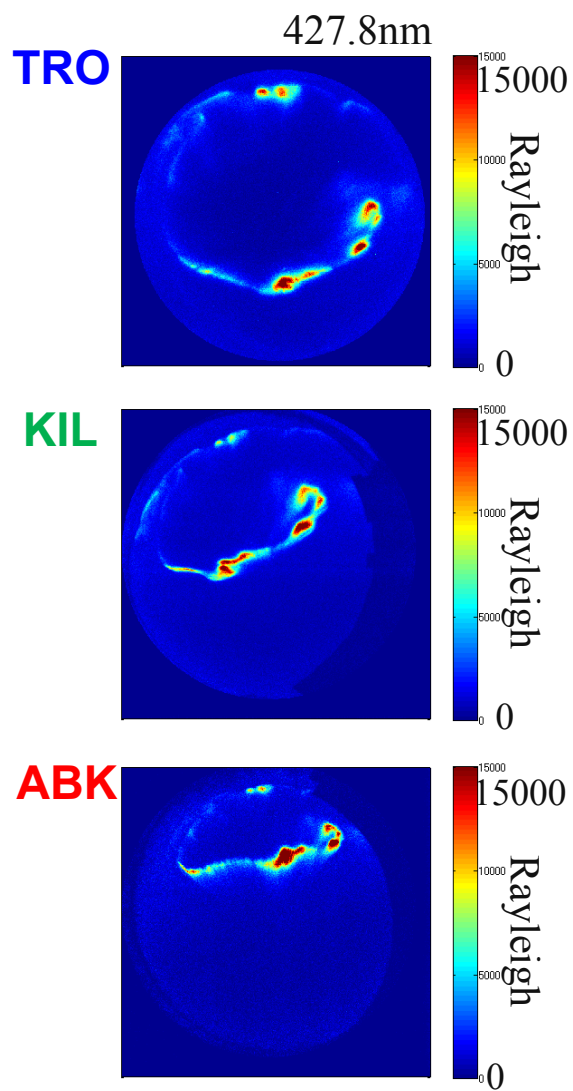
FOVs of EMCCD imagers at 130 km altitude



All-sky EMCCD imagers

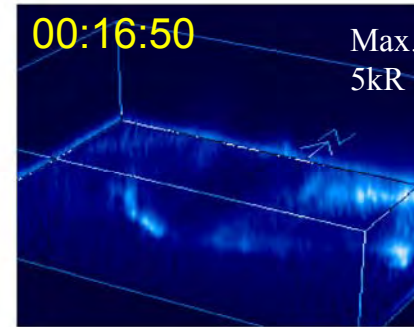
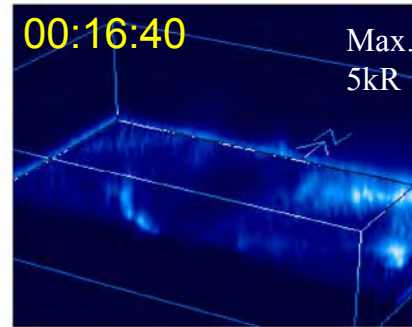
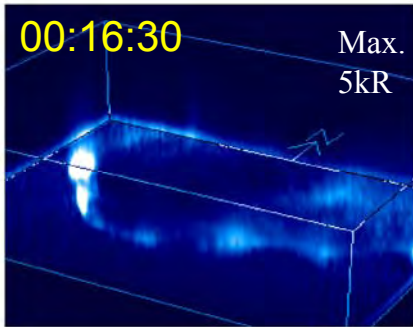
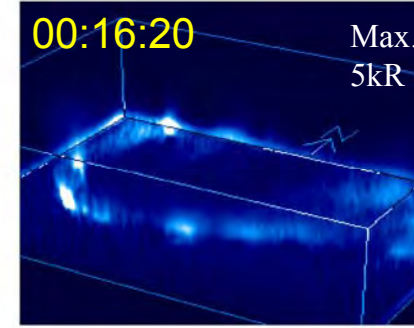
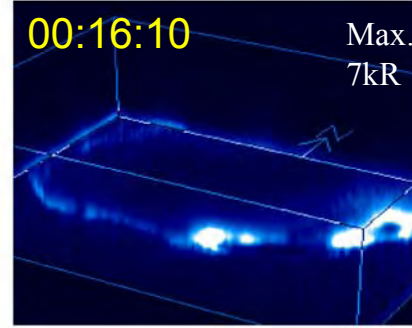
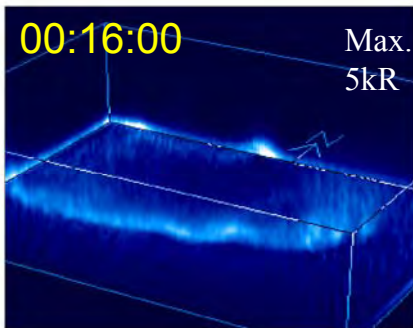
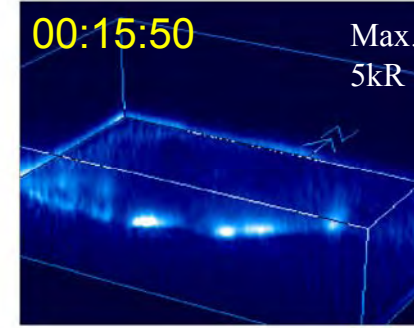
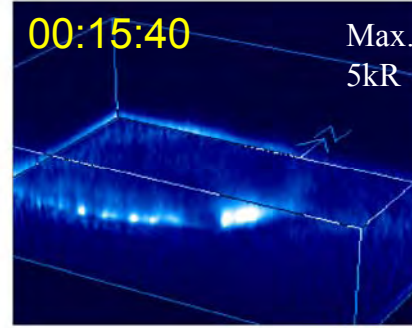
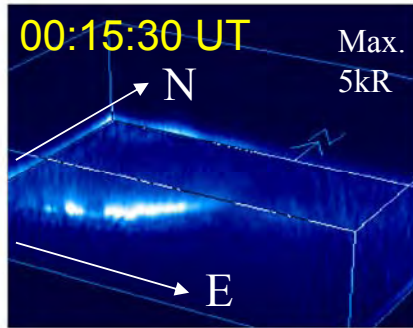
- Filters: 427.8nm
- Sites:
 - Tromsø (69.58N, 19.22E) : NIPR
 - Kilpisjärvi (69.05N, 20.78E) : FMI
 - Abisko (68.36N, 18.82E) : FMI, SGO
- Exposure: 2sec (TRO) , ~1sec (KIL), ~1.4sec (ABK)
- Cadence: 10sec

Aurora Computed Tomography (00:16:10UT on March 9, 2013)

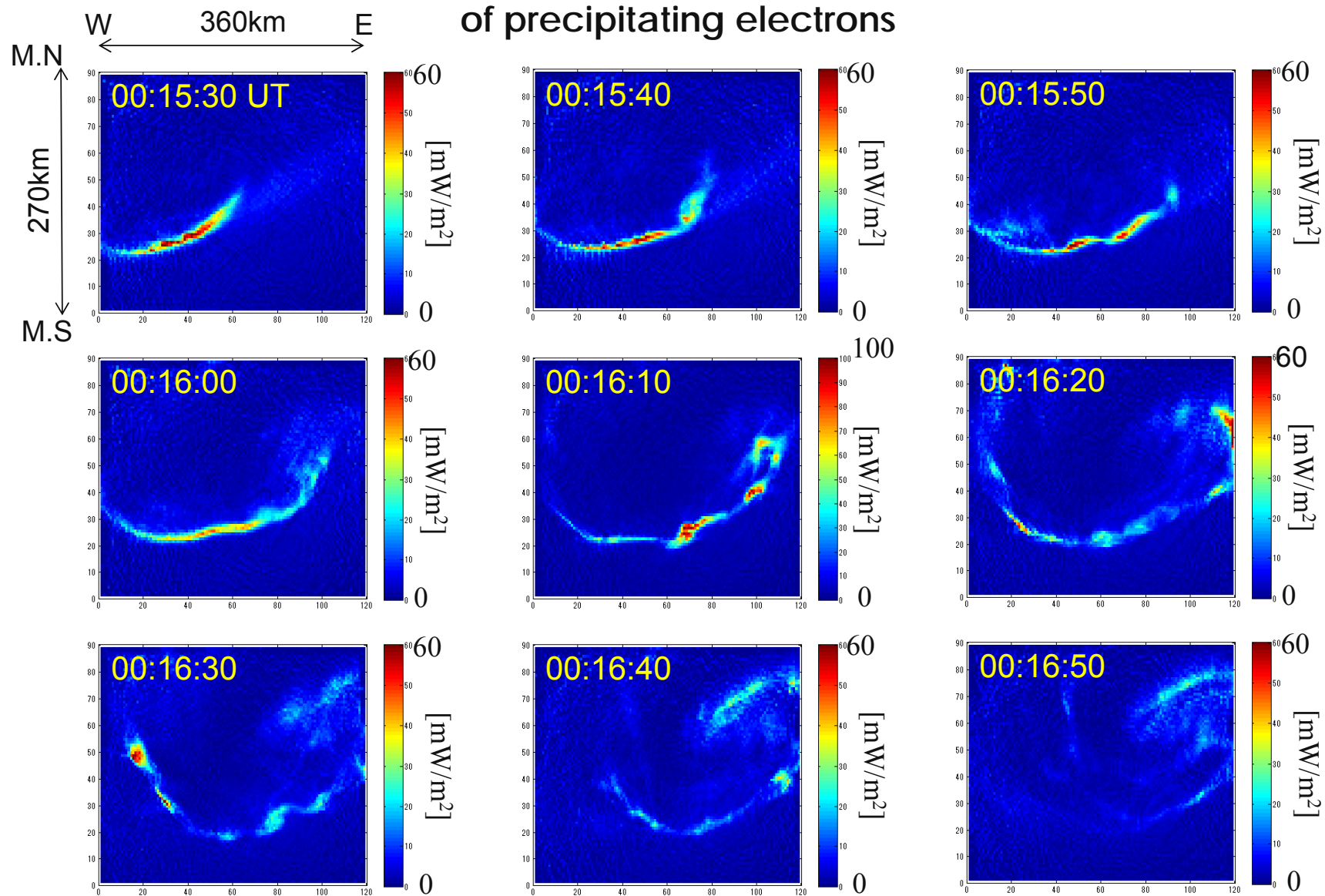


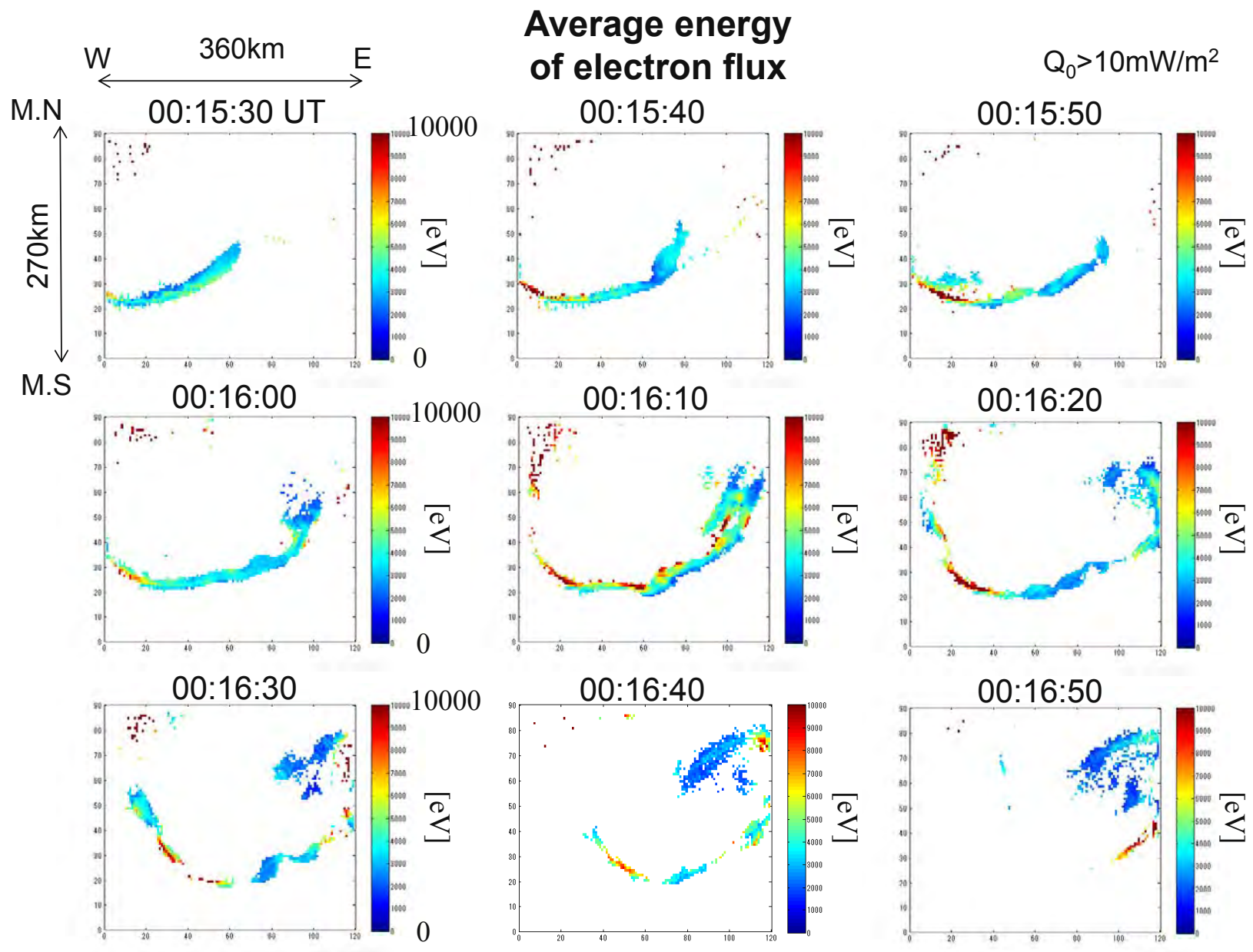
3D distribution of volume emission rate (427.8nm)

View from the southeast



Total energy flux of precipitating electrons

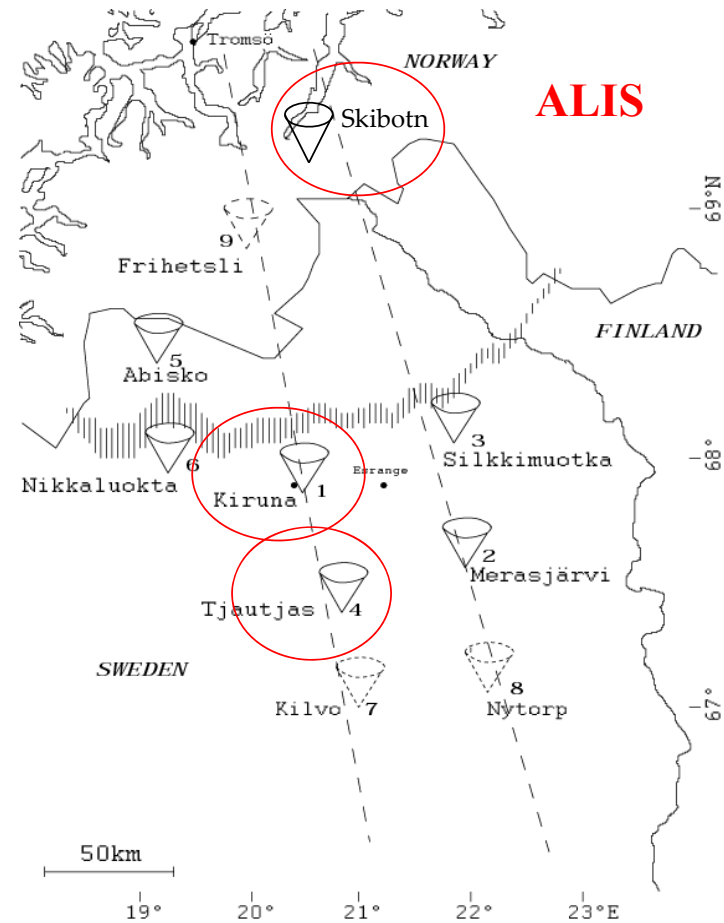




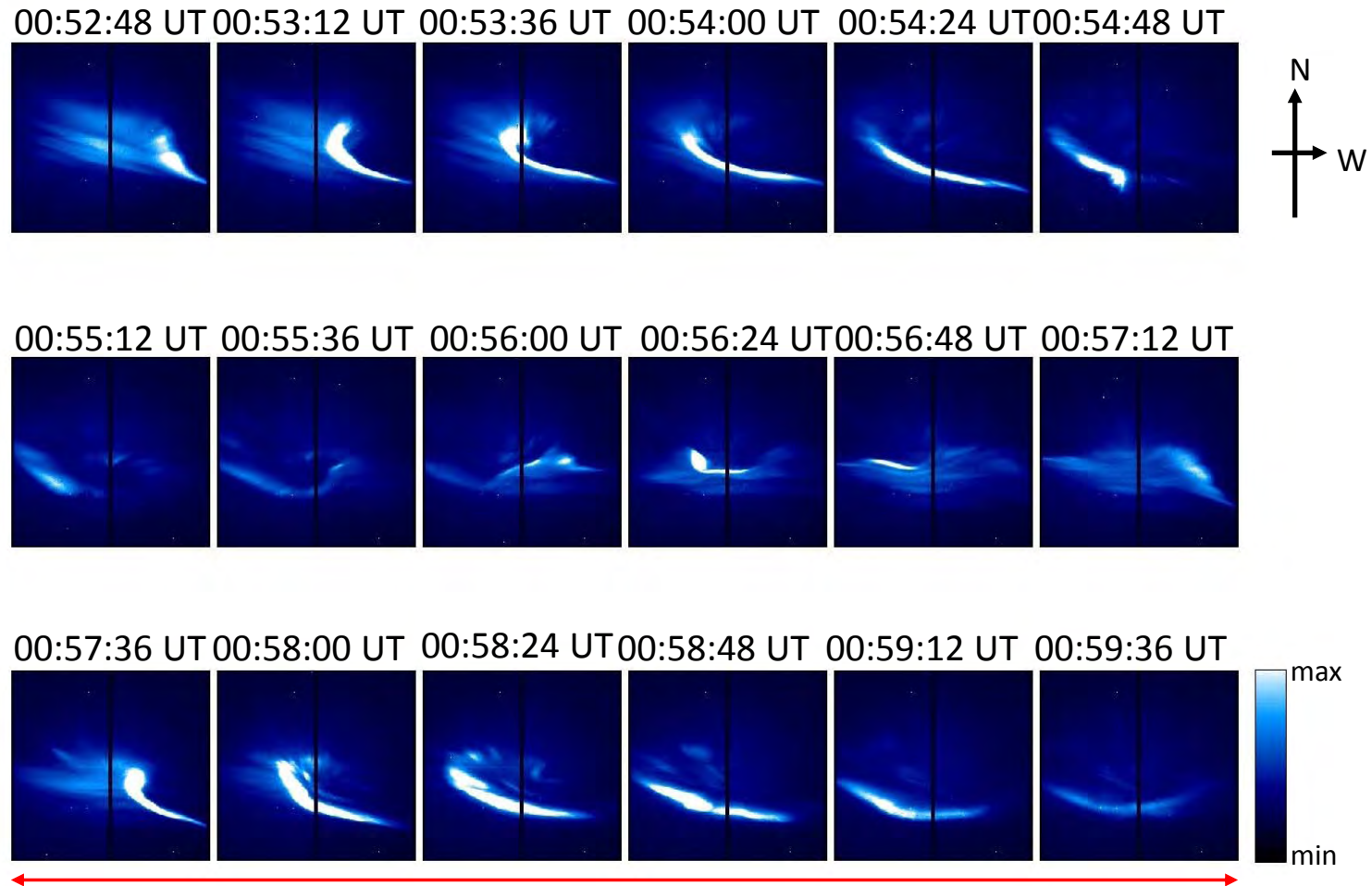
Aurora tomography analysis of spirals observed on October 25, 2005

ALIS (Auroral Large Imaging System)

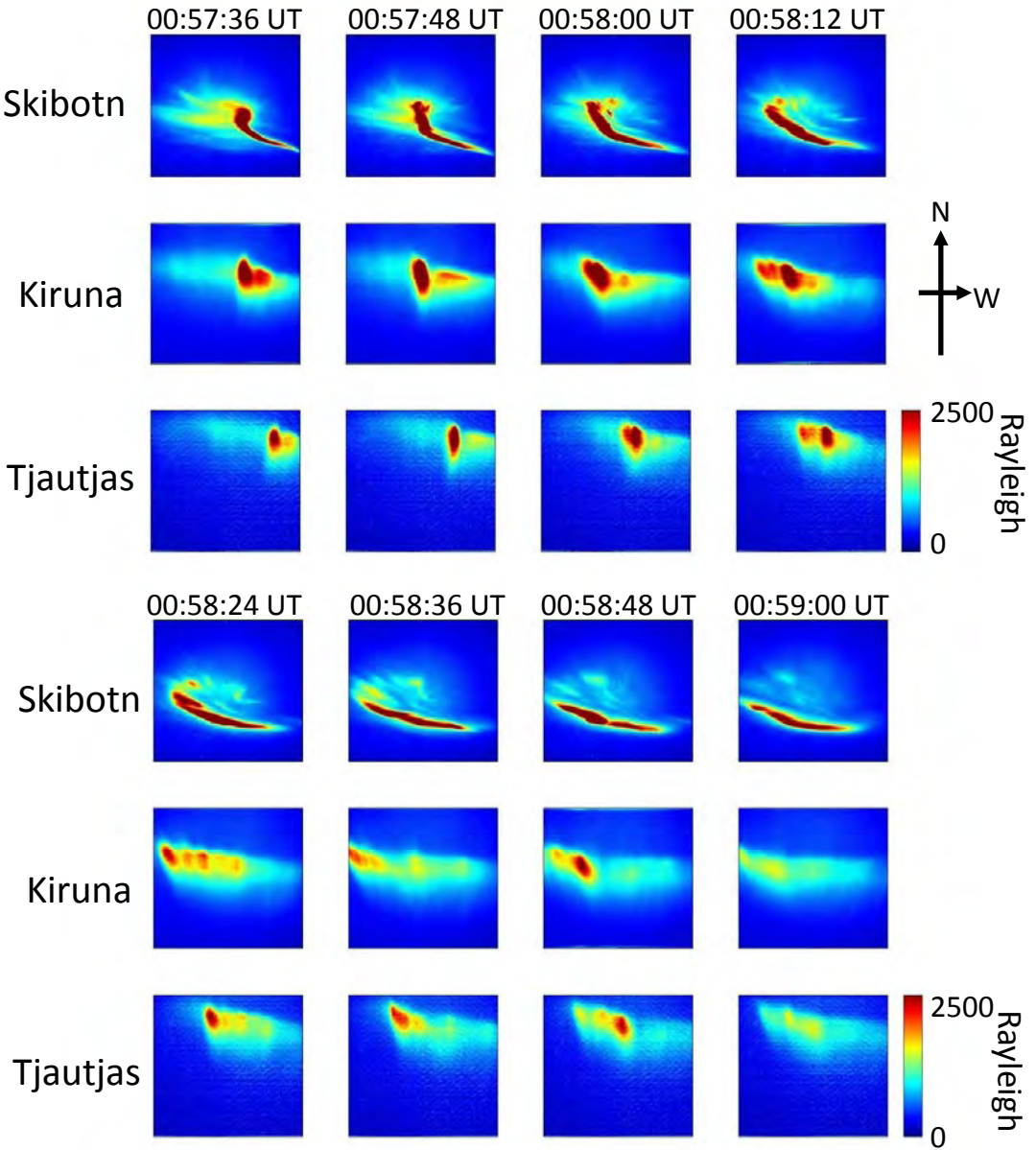
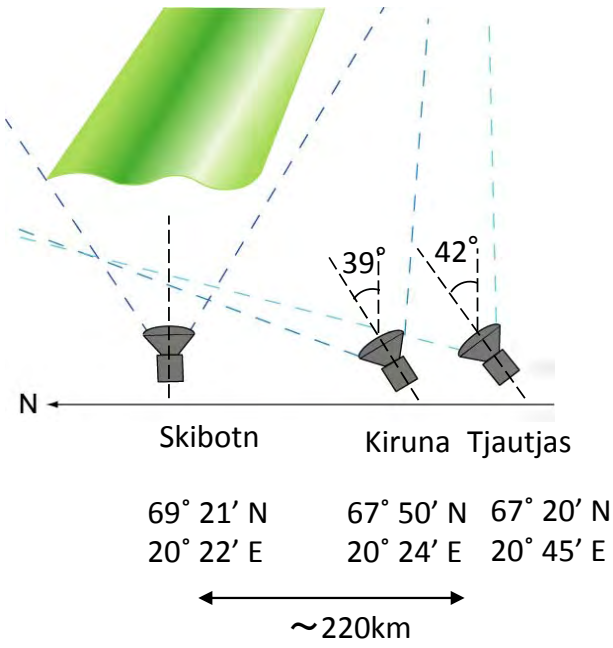
- Sites: Skibotn, Kiruna, Tjautjas
- Observation mode: EISCAT mode
- Filter: [427.8nm](#)
- Binning: 4×4
- Number of pixels: 256×256



2005/10/25 Skibotn 427.8nm



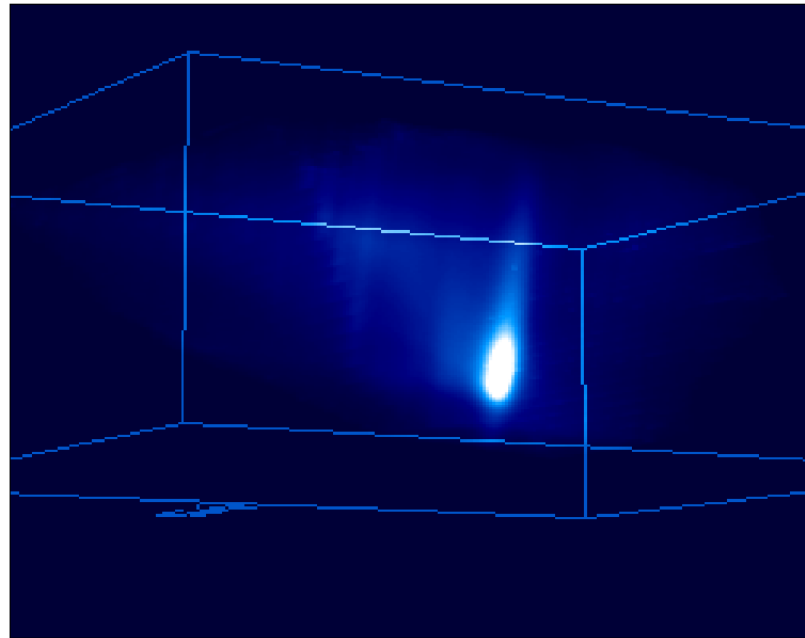
Spirals observed with the ALIS imagers



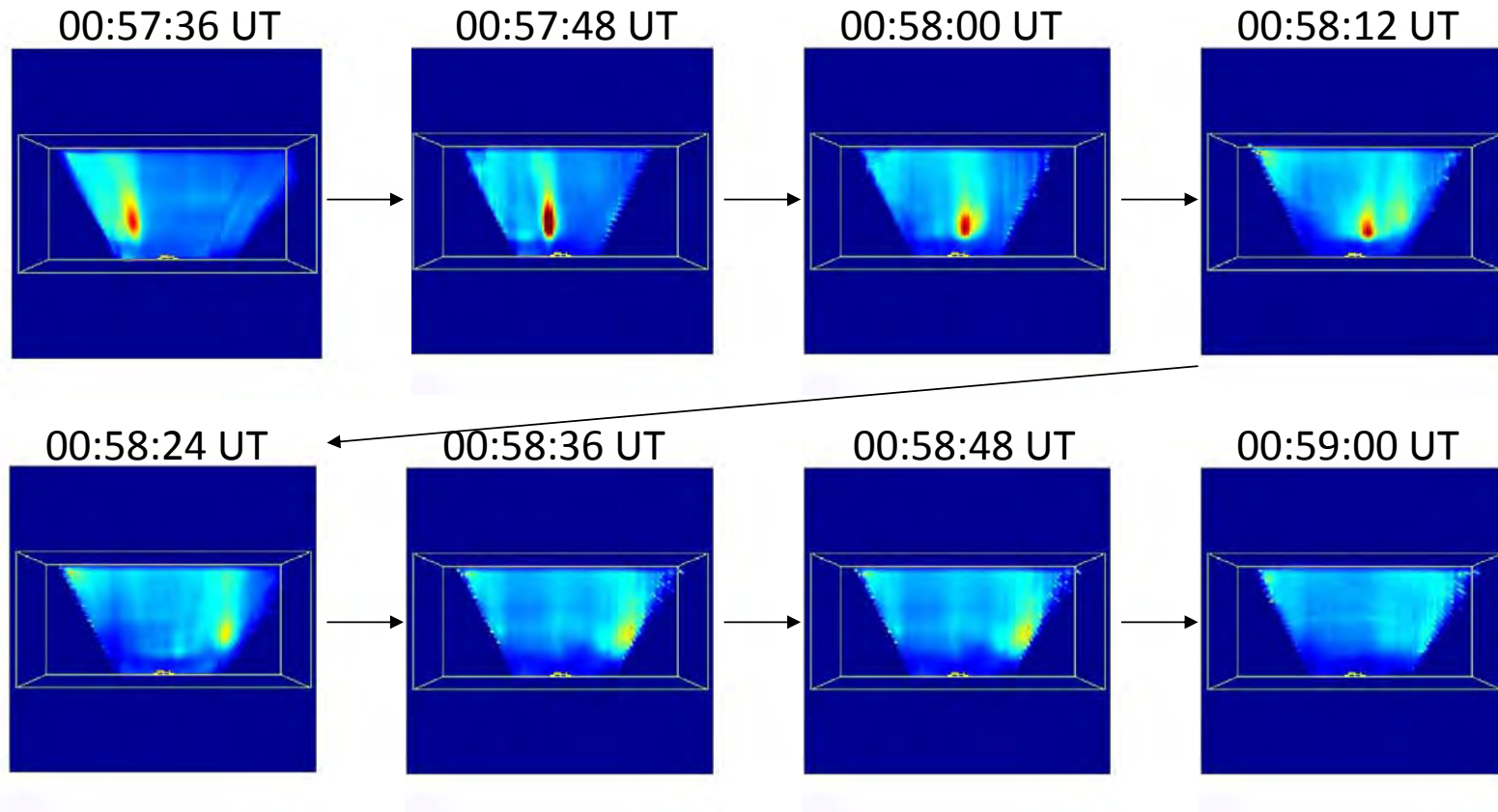
3D distribution of volume emission rate (427.8nm)

00:58:00 UT on Oct. 25, 2005

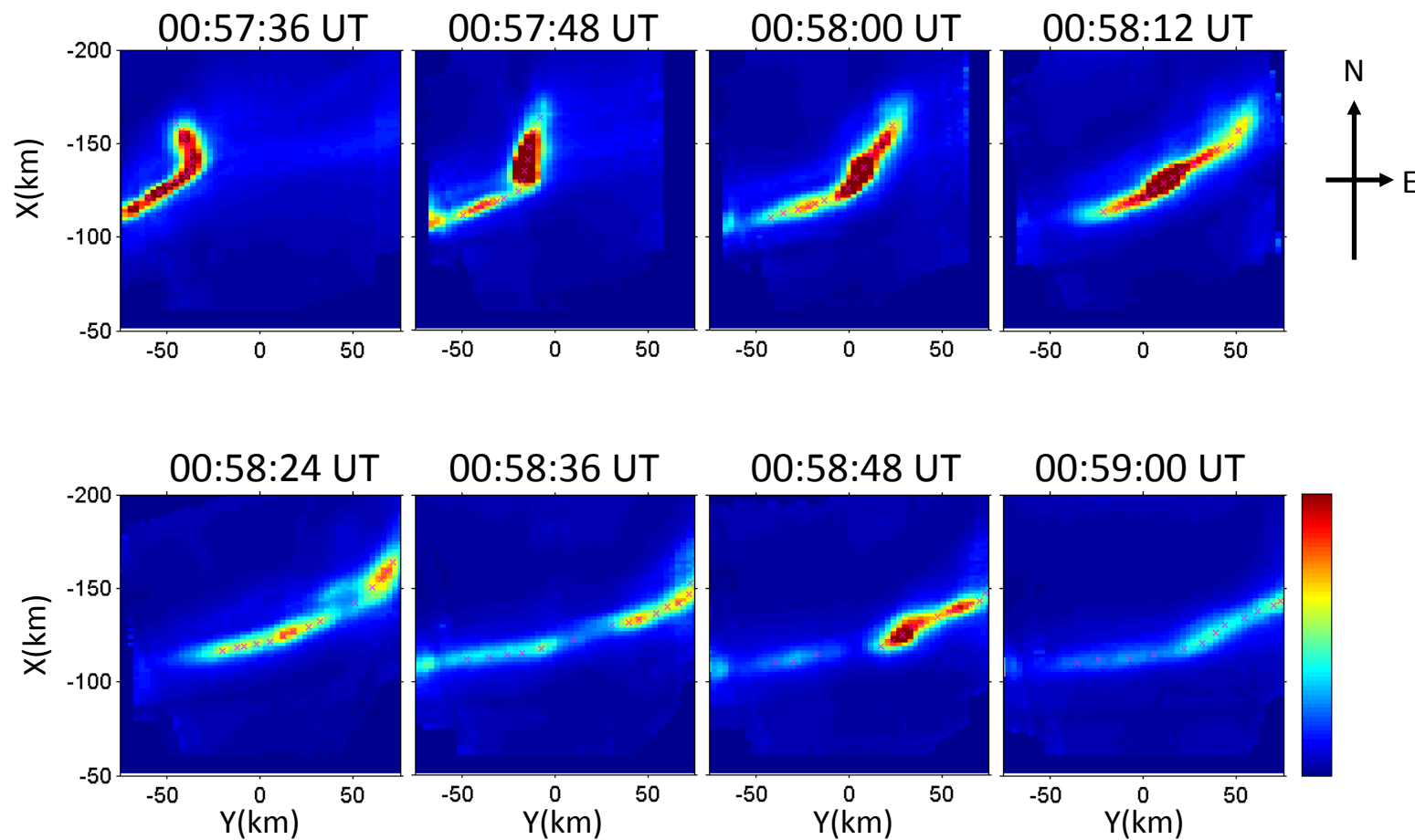
View from the southwest



Reconstruction results (View from the south)



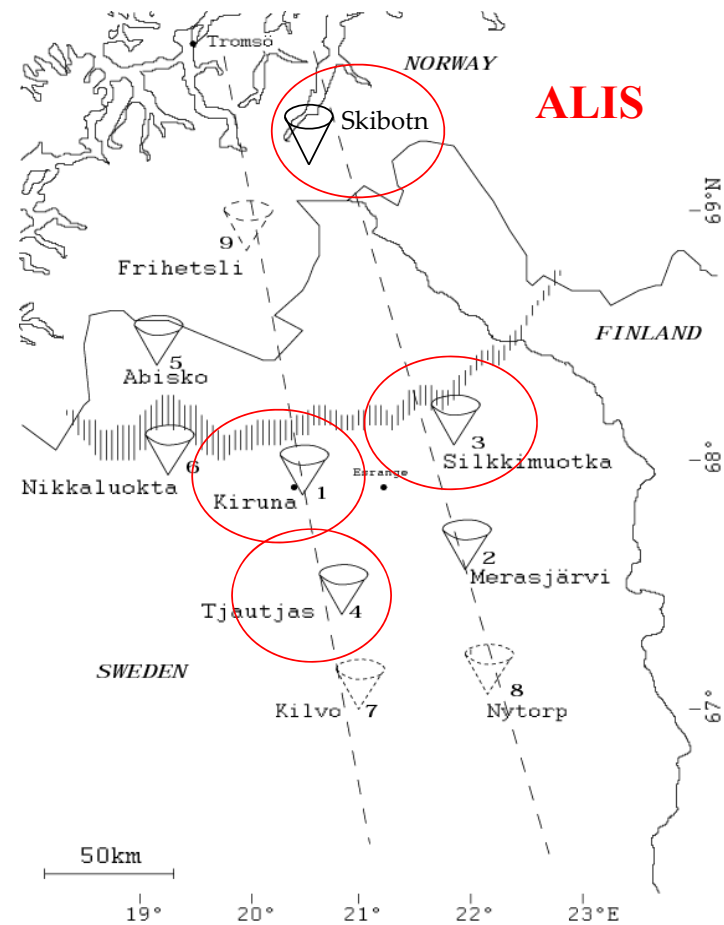
Horizontal distribution at 125km altitude



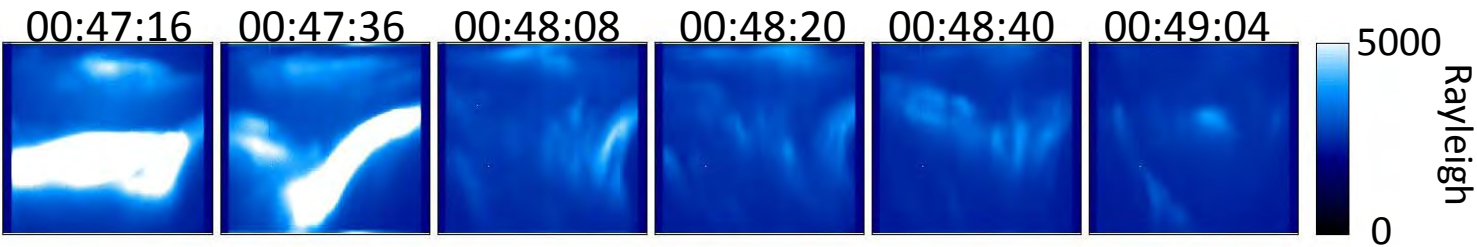
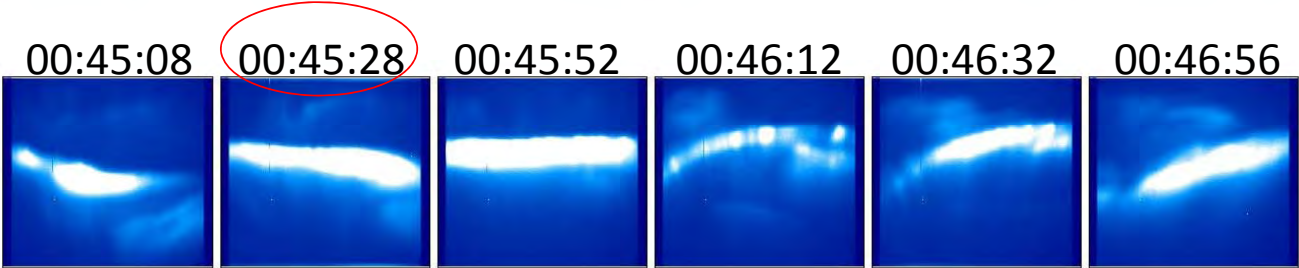
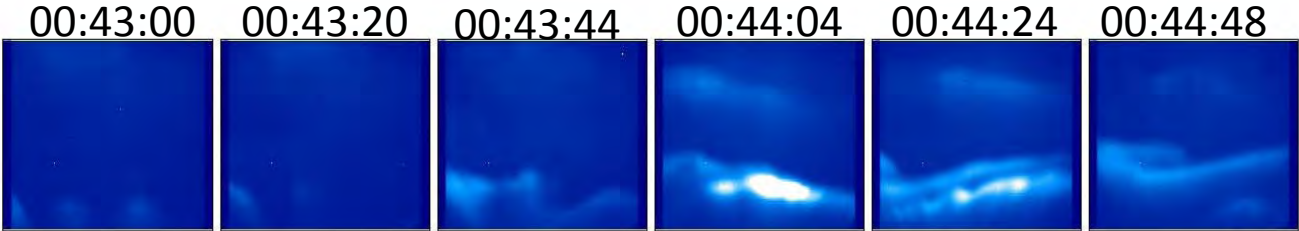
Aurora tomography analysis of the aurora arcs observed on November 1, 2005

ALIS (Auroral Large Imaging System)

- Sites: Skibotn, Kiruna, Silkkimuotka, Tjautjas
- Observation mode: EISCAT mode
- Filter: [427.8nm](#)
- Binning: 4×4
- Number of pixels: 256×256



2005/11/01 Kiruna 427.8nm

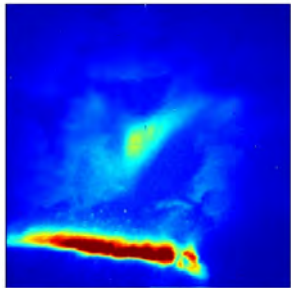


Reconstruction results

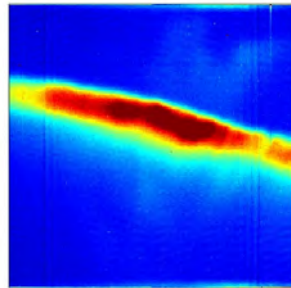
00:45:28 UT

Raw data

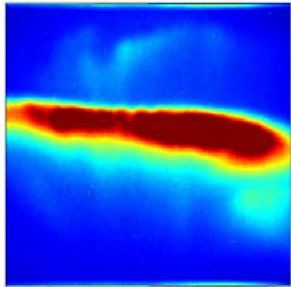
Skibotn



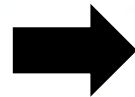
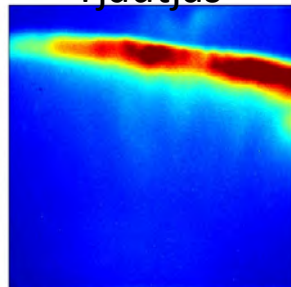
Silkkimuotka



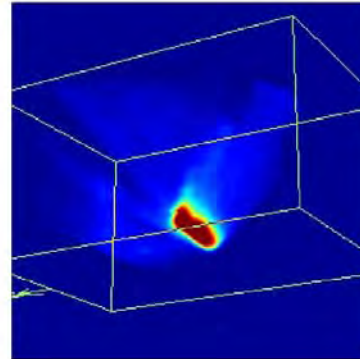
Kiruna



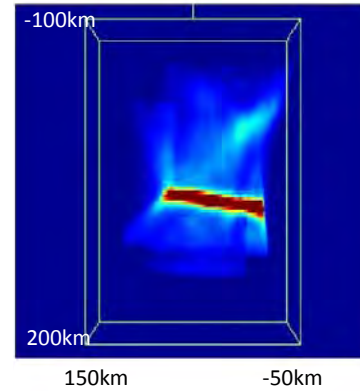
Tjautjas



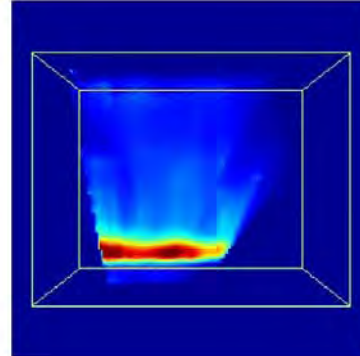
From the southwest



From the bottom



From the south



From the west

