



An overview of Auroral Light Fine Analysis multi-instrumental campaigns carried out from Scandinavia in December 2006 and 2007

Séran, E. (1), M. Godefroy (1), J.-C. Cerisier (1), K. Kauristie (6), L. Juusola (6), H. Yang (8), Z. Qinghe (8), Z. Hu (8), M. Lester (7), H. Frey (9), J.-J. Berthelier (1), M. Parrot (2), D. Lagoutte (2), J.-Y. Brochot (2), J. Lilensten (3), F. Pitout (3), L.-E. Sarri (5), U. Braendsroem (4), F. Sigernes (10)

(1) CETP, France, (2) LPCE, France, (3) LPG, France, (4) IRF, Sweden, (5) ESRANGE, Sweden, (6) FMI, Finland, (7) Leicester, UK, (8) PRIC, China, (9) SSL, USA, (10) UNIS, Norway

Two short-term campaigns were organised by ALFA team with aim to coordinate ground based optical and radars observations with DEMETER passes over Scandinavia. ALFA all-sky camera and photometers were operated from KEOPS/ESRANGE (68° N, 21° E) in 2006 and from KHO/Svalbard (78° N, 16° E) in 2007. Scientific instruments on-board DEMETER were running in "burst" mode up to $\sim 73^{\circ}$ and $\sim 79^{\circ}$ in 2006 and 2007, respectively. SuperDARN and EISCAT radars were operated in special modes in order to provide best temporal and spatial resolution of the ionospheric plasma parameters along the magnetic field lines of DEMETER observations. We present an overview of these campaigns and discuss in details few observations of auroral arcs dynamics. Our objective here is to analyse formation of meso- and small-scale irregularities of electron density along the arcs, relation between density perturbations and intensification of light emissions, mechanisms of acceleration of isolated structures etc.