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JAPANESE ACTIVITY FOR THE ICESTAR PROGRAM DURING THE IPY2007-2008 PERIOD

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Japanese activity corresponding to the ICESTAR program during the IPY2007-2008 period will be introduced.

We proposed two EoIs (Expression of Intent) #422 and #550 to the IPY2007-2008, which titles are "Interhemispheric Study on Conjugacy and Non-conjugacy of Auroral and Polar Ionospheric Disturbances using Ground-based Observation Network" and "Coordinated radar studies of the Arctic and Antarctic middle and upper atmosphere during IPY-4 period", respectively. Those EoIs are included in the umbrella program ICESTAR/IHY.

Main objectives of the EoI#422 are: (1) To maintain and intensify the conjugate observation network in both hemispheres; (2) To contribute to the international data portal, virtual observatory project with supplying our data in near-real time. As for the first point, we would like to main and intensify the following facilities and networks: (a) Conjugate observation between Syowa Station in the Antarctic and Iceland; (b) Unmanned magnetometer network around East Queen Maud Land; (c) SuperDARN HF-radar network; (d) Imaging Riometer network; (e) Conjugate observation between Zhongshan Station and Svalbard; (f) Conjugate observation between South Pole and Canada. As for the Syowa - Iceland conjugate observation, we have installed a well-calibrated monochromatic all-sky imager (Conjugate Auroral Imager (CAI)) at Husafell in Iceland in 2005, which is identical to the one at Syowa Station, in order to investigate the conjugacy of the auroral intensity quantitatively. CAI is operated automatically during whole auroral season and its data are transferred to Japan in near-real time via internet. As for the unmanned observation, we are now developing a new system using the Iridium satellite data transfer system. Two of the new systems have been deployed near Syowa Station during December, 2005 to January, 2006. As for the South Pole - Canada conjugate observation, we plan to construct this new conjugate pair during the IPY period to investigate the conjugacy of auroral activity around the poleward boundary of the auroral oval in collaboration with U.S. and Canadian Scientists.