

EISCAT observations during the International Polar Year

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<http://polaris.nipr.ac.jp/~eiscat/eiscatdata/>

The European Incoherent Scatter (EISCAT) scientific association is a cooperative project between seven countries including Japan, and upper atmospheric research using the EISCAT radar system has been intensively conducted. In particular, the EISCAT Svalbard Radar (ESR), located in Longyearbyen Svalbard, operated continuously during the first year of the International Polar Year (IPY) interval between March 1, 2007 and February 29, 2008, in order to provide a continuous data set which can be used for various statistical studies of the polar upper atmosphere. A new pulse coding of the ESR, covering low altitude (first returns at about 40 km) to 500 km, was developed for studies of vertical energy transport and budget, and used during the continuous IPY run. The pulse coding includes plasma line measurement with high range resolution, and also enables us to study plasma physics (e.g. generation mechanisms of plasma irregularities and plasma acceleration). The continuous ESR data were actively analyzed in various ways and made available through the EISCAT database in Japan.

In this talk, we report current status of data archive and scientific results of the EISCAT observations during the IPY interval, and discuss future collaboration with other observations such as optics, radars, and satellites.