

Calibration of the all-sky imagers for conjugate aurora observation

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Auroral shape and its intensity, spatial and temporal variations on geomagnetically conjugate points are expected to be affected by conditions in the magnetosphere and the acceleration regions, as well as those of ionospheres and the upper atmosphere over the two conjugate points. Therefore, conjugate observation of aurora will provide us with informations on physical parameters along a field line connecting the two sites.

In order to start conjugate observation of aurora with improved quantitative nature, a set of two digital all-sky imagers (Conjugate Auroral Imager ; CAI) was newly developed. The instruments will be installed at Syowa station in Antarctica and Iceland, and observation is planned to be started in September 2005.

CAIs have been calibrated using a 2-m integrating sphere and a spectrophotometer at NIPR. Test observation using one of CAIs, which will be deployed at Iceland, has been made at the Zao observatory and images of O1 557.7nm airglow were obtained.

The results of calibration and test observation will be presented.