

Antarctica-based future space weather research project since 2022

*Ryuho Kataoka¹

1. National Institute of Polar Research

We are planning a new Antarctic-based space weather research project, for coming 6 years from April 2022, which covers the solar-maximum active period of solar cycle 25. We will arrange the international collaboration to investigate the high-latitude polar cap, by multiple ground-based all-sky imagers. The low-cost and maintenance-free all-sky cameras with a new housing system are under development. Both polar cap auroral electrons and the direct impact of solar protons are of interest in the open magnetic field region, and possible wavelengths to be observed would be 630.0 nm and 391.4 nm, respectively. We discuss the science goals, and share the latest situation of the preparation to enhance international collaborations.

Keywords: polar cap, aurora, solar proton