The Antarctic Incoherent Scatter Radar Project

The Next Big Step in Ground-based Solar-Terrestrial Research

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With support from NSF, a workshop was arranged in August of 2008 to consider the case for establishing a new high-latitude Incoherent Scatter Radar (ISR), and related instrumentation, in the southern hemisphere. Quasi-continuous ISR observations in the southern auroral oval and polar cap have huge potential for solar-terrestrial physics (STP) commensurate with the effort, and cost, of creating such a capability.

In this paper we will discuss some of the science drivers demanding the construction of a high latitude southern ISR. We will also discuss the possible locations, management plan, technological challenges and the roadmap we need to follow to have, for the first time, Incoherent Scatter Radar in Antarctica preferably by the next solar max.