



The Cedar Post

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SPECIAL EDITION

Call for Proposals in Support of a Polar Cap Initiative

Over the past four years the concept of establishing a permanent upper atmospheric facility within the polar cap has been discussed, both informally and in ad hoc committee meetings with representatives from a broad range of scientific interests. A detailed report describing the results of these discussions was produced in 1990 and presented to the Atmospheric Sciences Division of the National Science Foundation. The instrumentation will include radiowave and optical remote sensing instruments, including a state-of-the-art incoherent scatter radar. The nominal site chosen for the Observatory is Resolute Bay in the Canadian Northwest Territories. The initiative to support the establishment of a Polar Cap Observatory (PCO) led to several study grants to investigate options in the site and in the design and development of the incoherent scatter radar and other ground-based remote sensing instruments operating at radiowave and optical wavelengths. The final reports from these studies have been completed and are available through the NSF.

Interest in the PCO has continued to grow both in the atmospheric science community and at NSF. The PCO was included in the Long Range Plan (FY 1994-1998) for NSF's Geosciences Directorate. Even though no funding has yet been allocated for the PCO, a significant number of recently submitted CEDAR proposals deal with science objectives, instrumentation, or facility infrastructure associated with the PCO. As a result of this on-going interest, the CEDAR steering committee is encouraging submission of other proposals related to PCO. If funded, these projects would be the first step in establishing a permanent observatory in the northern polar cap. The Polar Cap Observatory will play a crucial role in Global Change programs such as CEDAR and GEM, as well as in NSF STEP and the future Middle Atmosphere Science Initiative. Liaison with our Canadian colleagues is maintained through the Canadian Network for Space Research c/o Dr. Leroy Cogger (Dept. of Physics and Astronomy, University of Calgary, Calgary, Alberta, Canada T2N 1N4).

A first step in this Polar Cap Initiative (PCI) could be comprised of an award or awards supporting projects that will aid in establishing a permanent atmospheric observatory within the polar cap. The CEDAR steering committee anticipates that the PCI awards will be limited to a modest fraction of the available CEDAR funds. Interested investigators are referred to the following four documents describing

the scientific and instrumentation plans developed thus far: (1) *A Polar Cap Observatory: The Next Step in Upper Atmospheric Science*, (2) an SRI International final report on radar design, (3) *Proceedings of the Polar Cap Observatory Optical Design Workshop*, and (4) an MIT Haystack Observatory final report entitled *Design Study for a Polar Cap Observatory Data Processing and Radar Data Acquisition System*. These reports outline both the scientific research goals and instrumentation planned for the PCO. Proposals may fit into either of the following two categories: (1) development and fielding of instruments at Resolute Bay and accompanying scientific analysis of data with a primary goal being rapid science return, and (2) design, development, and maintenance of infrastructure to be used as the site for PCO instrumentation with scientific return a secondary goal. Proposals in category (2) must provide a detailed time schedule for inclusion of a significant science component. In preparation of instrumentation proposals, investigators should keep in mind that Resolute Bay does not yet possess existing U.S.-supported infrastructure. Investigators should make no assumptions with regard to the availability of buildings, power, site support, transportation, communication, etc.

The purpose of this announcement is solely to indicate to the community the possibility that CEDAR might fund PCI investigations and to allow interested parties additional time to prepare such proposals so that they can compete with other CEDAR proposals. It should be emphasized that this is not a formal NSF program announcement and that no funds have been set aside for the PCI. Any PCI proposals will have to compete with other CEDAR proposals for the available funds.

Although there is no deadline for proposal submission, those submitted before **February 1, 1993** will be reviewed by the same panel selected to review the CEDAR proposals. This target date, which constitutes an extension of the CEDAR proposal deadline for PCO-related proposals, has been approved by the CEDAR steering committee in an effort to promote fair competition among all investigators interested in participating in the PCO development. The steering committee sincerely feels that establishment of the PCO will benefit the entire CEDAR community by providing an observatory that will facilitate experiments in a region increasingly recognized as key to understanding critical problems in atmospheric sciences.

The CEDAR Steering Committee

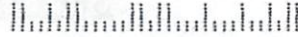


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