

NCAR Update No. 16

CEDAR: Focusing on Atmospheric Interactions

1987 The Coupling, Energetics, and Dynamics of Atmospheric Regions (CEDAR) program began its second year of official existence on 1 October. At the program's annual workshop, held at NCAR on 29 June-2 July, the 160 attendants planned campaigns and experimental studies to be held throughout 1987 and early 1988.

CEDAR is part of the NSF-sponsored Global Geosciences Initiative. It grew out of a recognition of two problems in aeronomy. First, upper-atmosphere studies are limited by the types and quality of instrumentation available. On top of that, many studies have not even been able to use the best modern techniques and technology, much of which is relatively expensive. Second, although previous experiments had given aeronomists a thorough understanding of certain components of the solar-terrestrial environments, there are still large gaps between these pockets of knowledge. For example, there is little understanding of interactions-such as the interchange of energy, momentum, and particles-among the stratosphere, thermosphere, magnetosphere, interplanetary medium, and sun. CEDAR, therefore, is an attempt to understand the coupling of these "regions" as well as their behavior, globally and as a whole.

In the coming year, the project will attack its objectives through a unified program of observations made with existing instrumentation and by analyzing and compiling existing data sets, such as NCAR's Incoherent-Scatter Radar Data Base. NCAR will serve as a repository of the newly gathered data and a center for data analysis. The CEDAR data base will contain only high-quality, verified data with easy access. Arthur Richmond of the NCAR High Altitude Observatory (HAO) is among eight scientists charged with setting guidelines for what to include in the data base.

An important part of the project is a new postdoctoral position funded by CEDAR. The appointee will work with Raymond Roble at NCAR/HAO to coordinate modeling and data analysis efforts there with the experimental and theoretical work taking place at other institutions. Applications have already been received, and the position is expected to be filled in early December.

The End

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