2012 Workshop: WACCMX tutorial

Long title
CESM/WACCM-X: A Tutorial
Conveners
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Description

The Whole Atmosphere Community Climate Model with thermosphere/ionosphere extension (WACCM-X) has been released as one of the atmosphere components of the NCAR Community Earth System Model (CESM) version 1.0.4. WACCM-X is designed to be a numerical tool that seamlessly simulates the atmosphere system from the earth's surface to the upper thermosphere for study of the coupling of atmospheric regions through energetic, dynamical, chemical, and radiative processes. Within CESM, WACCM-X canbe coupled to other CESM components, for example, interactive land and ocean models. This tutorial will introduce the WACCM-X model to the CEDAR community, highlighting new capabilities relevant to CEDAR science. It will discuss the overall structure and major components of CESM and WACCM/WACCM-X, and go through the steps to obtain, set up and run the model.

Agenda

Overview (Liu) (pdf)

CESM1 Tutorial (Santos) (pdf)

WACCM Tutorial (Marsh) (pdf)

WACCM-X Tutorial (McInerney) (pdf)

Justification

As a new numerical tool for studying coupling all atmospheric region, WACCMX addresses every aspects of the CEDAR strategic plan (sections 2, 3, 4, and 5). In section 3b the Plan specifically identifies the need to support whole atmosphere modeling.

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