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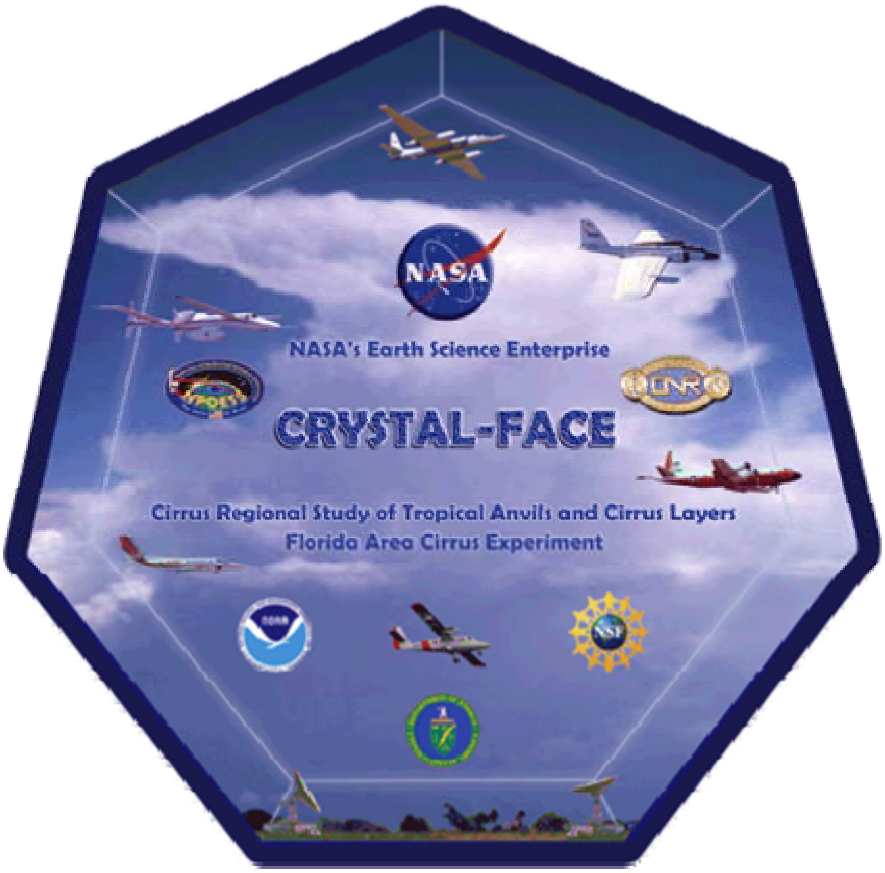
Welcome to the NASA Earth Science Mission

CRYSTAL-FACE

The Cirrus Regional Study of Tropical Anvils and Cirrus Layers - Florida Area Cirrus Experiment



Carbon dioxide and other greenhouse gases from human activities warm our climate. Two effects of this warming are the increase of clouds and the rise of water vapor in the atmosphere. Both of these in turn influence the impacts of the man-made gases on global warming. Clouds can reflect the sun rays away from the surface, cooling the climate, but they also act as "blankets," trapping sun's radiative heat. These various interactions are complex and not fully understood. However, the processes are crucial in determining the eventual overall effect of manmade greenhouse gases on the earth's climate. The detailed measurements from the Crystal-Face mission will assist in improving our climate models. Six aircraft will be equipped with state-of-the-art instruments to measure characteristics of clouds and how clouds alter the atmosphere's temperature. These measurements will be compared with ground based radars, satellites, and the results of advanced atmospheric models, in order to improve our ability to forecast future climate change. This large multi-agency

experiment will unite seven NASA centers, NOAA, National Science Foundation, Department of Energy, Office of Naval Research, U.S. Weather Research Program, Universities and other government weather researchers in this well coordinated study of our environment.

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