

NEWS

Southeastern Pacific Coupled Climate Field Experiment

During October and November 2008, some 150 scientists from 40 institutions in eight nations will take part in the Variability of the American Monsoon Systems' (VAMOS) Ocean-Cloud-Atmosphere-Land Study Regional Experiment (VOCALS-REx). VOCALS-REx is an international field program designed to make observations of critical components of the coupled climate system of the southeastern Pacific that are poorly understood and poorly represented in global climate models. The region is dominated by strong coastal upwelling and extensive cold sea surface temperatures (SSTs) and home to the largest subtropical deck of stratocumulus clouds on Earth.

A total of five aircraft—including the U.S. National Science Foundation's C-130, the U.S. Department of Energy's G-1, the Naval Postgraduate School's Center for Interdisciplinary Remotely-Piloted Aircraft Studies' Twin Otter, and two aircraft from the United Kingdom (the Facility for Airborne Atmospheric Measurements' BAE 146 jet and the Natural Environment Research Council's Dornier 228 remote sensing platform)—and two research vessels (the U.S. National Oceanic and Atmospheric Administration's *Ronald H. Brown* and the Instituto del Mar del Perú's *José Olaya*) will sample the lower atmosphere and upper ocean during the experi-

ment (see Figure 1). These platforms will be complemented by two land-based sampling sites with research groups from Chile, Sweden, and the United States.

With VOCALS-REx providing a unique multidisciplinary opportunity to understand the physical and chemical couplings between different components of a regional climate system, specific foci will be on processes controlling the properties of stratocumulus clouds (including continental aerosols from smelters and volcanoes), processes controlling the ocean transport of cold freshwater offshore, and the chemical and physical interactions between the lower atmosphere and upper ocean.

The experiment is a component of its parent program (VOCALS)—an international Climate Variability and Predictability (CLIVAR)/VAMOS program—chaired by C. Roberto Mechoso at the University of California, Los Angeles. The major goal of the VOCALS program is to develop and promote scientific activities leading to improved understanding, model simulations, and predictions of the southeastern Pacific coupled ocean-atmosphere-land system on diurnal to interannual timescales. The other major components of VOCALS are a modeling program with a model hier-

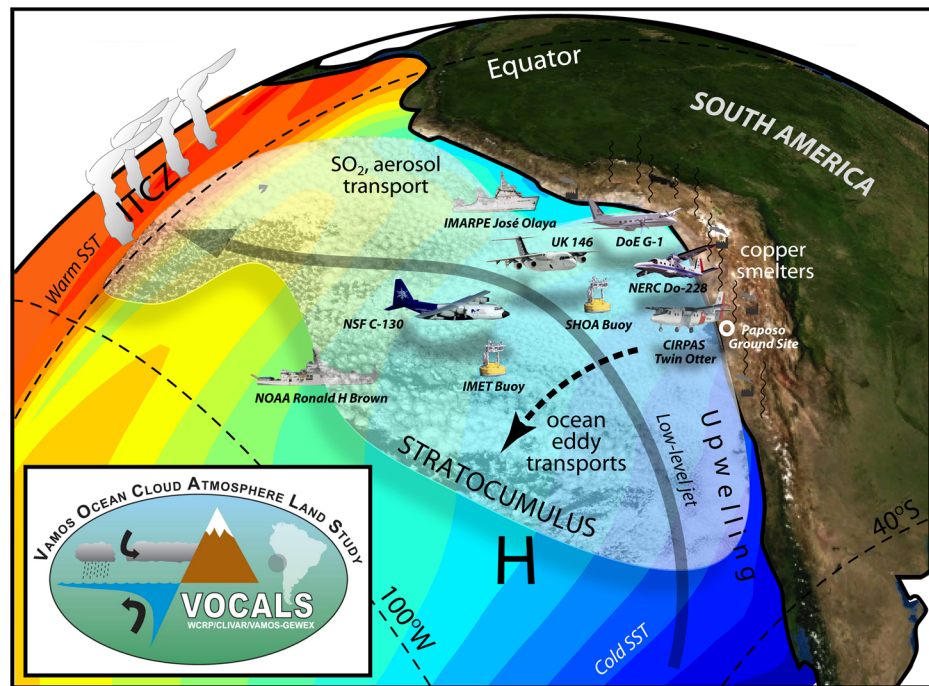


Fig. 1. Schematic of the Variability of the American Monsoon Systems' (VAMOS) Ocean-Cloud-Atmosphere-Land Study Regional Experiment (VOCALS-REx). The figure also shows the locations of extended observational buoys: the Improved Meteorology (IMET) buoy and the Servicio Hidrográfico y Oceanográfico de la Armada de Chile (SHOA) buoy. ITCZ is the Inter-tropical Convergence Zone.

archy ranging from local to global scales, and a suite of extended observations from regular research cruises, instrumented moorings, and satellites. The combination of intensive field measurements, long-term observations, and modeling will provide important insights that could directly benefit climate modeling.

For more information, visit the Web site <http://www.eol.ucar.edu/projects/vocals/>.

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