VAMOS Ocean-Cloud-Atmosphere-Land Study
Regional Experiment

http://www.eol.ucar.edu/projects/vocals/

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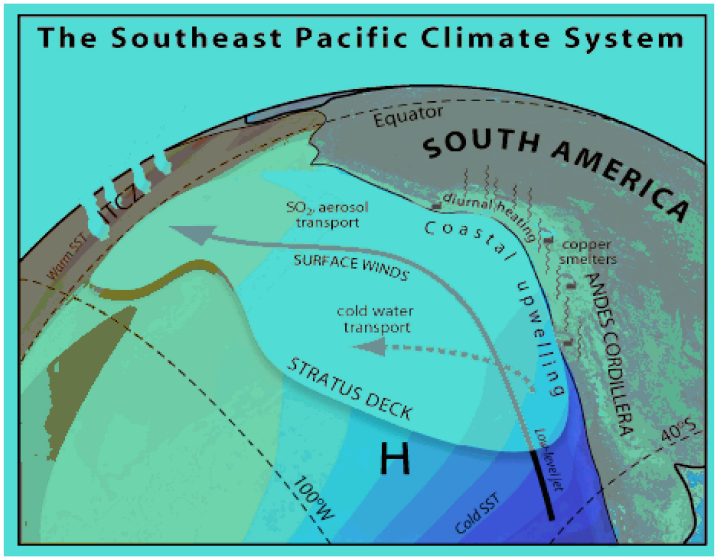
Objectives-



VOCALS is an international program for studies of the eastern tropical Pacific climate.

Science goals emphasize:

- 1. Interactions between the climate in the southeastern Pacific and remote climates, particularly over South America and its monsoon system,
- 2. Biases in coupled Global

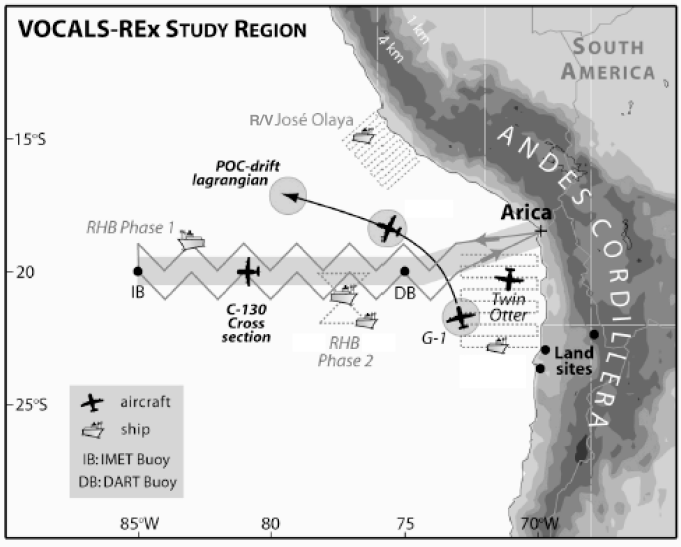
Circulation Models and effects on seasonal and interannual predictability,

- 3. Local air-sea interactions, including stratocumulus clouds.

Processes targeted include local feedbacks between atmosphere and oceans, coastal upwelling and oceanic heat transports, planetary boundary layer (PBL) cloud formation/destruction, aerosol-cloud interactions in the southeastern Pacific (SEP), interactions between regions of radiative sink and descent (in the SEP) with those of heating and ascent to the east (Amazonia), and teleconnections with remote regions.

- The program organization has one field component supported by numerical modeling and prediction components. The components complement and reinforce each other from design to execution

Research Domain -



Research time frame- *October 1- November 30, 2008*

Themes- *Oceanography, Meteorology, Chemistry, Climate*

Research Location- *(IMET buoy (20°S, 85°W), Arica, Iquique, Paposo, Chile)*

Is this continuation of previous research?

STRATUS-07 cruise and previous *R/V Ron Brown* cruises to the IMET buoy (20°S, 85°W) and partially, it is part of the Peruvian component of the Joint Regional Oceanographic Research Cruise in the SEP

Investigators Information

The VOCALS Project is an activity of the CLIVAR/GEWEX Variability of the American Monsoon System (VAMOS) Panel and is under the direction of an international Science Working Group chaired by Prof. Roberto Mechoso (UCLA)

Robert Wood (NSF C-130 Chief Scientist)	Department of Atmospheric Science	University of Washington, Seattle WA, USA
Peter Daum (DoE G-1 Chief Scientist)	Brookhaven National Laboratory	US Dept of Energy, Brookhaven , NY USA
Bruce Albrecht (ONR Scientist)	Rosenstiel School of Marine and Atmospheric Science	University of Miami, Miami, FL USA
Robert Weller (R/V Brown Chief Scientist)	Woods Hole Oceanographic Institute	Woods Hole, MA USA
Haflidi H. Jonsson (Chief Scientist, CIRPAS)	Naval Postgraduate School	Monterey, CA USA
Christopher Fairall	Earth Sciences Research Laboratory	US Dept of Commerce, NOAA, Boulder, CO USA
Sandra Yuter	Department of Marine, Earth and Atmospheric Sciences	North Carolina State University, Raleigh, NC USA

Antony Clarke	Hawaii Group for Environmental Aerosol Research	Univ of Hawai'i at Manoa, Honolulu, HI USA
Jim Anderson	Department of Mechanical and Aerospace Engineering	Arizona State University, Tempe, AZ USA
Cynthia Twohy	College of Oceanic and Atmospheric Sciences	Oregon State University, Corvallis, OR USA
Alan Bandy	Atmospheric and Analytical Chemistry	Drexel University Philadelphia, PA
David Leon	Department of Atmospheric Science	University of Wyoming Laramie, WY
Paquita Zuidema	Rosenstiel School of Marine and Atmospheric Science	University of Miami, Miami, FL
Barry Huebert	Department of Oceanography	University of Hawai'i Honolulu, HI
David Covert	Department of Atmospheric Sciences NOAA/JISAO	University of Washington,/ NOAA Seattle WA, USA
Jan Kazil	Cooperative Institute for Research in Environmental Science	University of Colorado/ NOAA Boulder, CO
Patricia A. Matrai	Bigelow Laboratory for Ocean Sciences	West Boothbay Harbor, Maine
Leo Donner	Geophysical Fluid Dynamics Laboratory	NOAA Princeton, NJ
Art Miller	Scripps Institution of Oceanography	La Jolla, CA
Patrick Chuang	Department of Earth and Planetary Sciences	University of California Santa Cruz, CA
Djamal Khelif	Department of Mechanical and Aerospace Engineering	University of California Irvine, CA

Funding Sources:

U.S. National Science Foundation, Dept of Commerce / NOAA Climate Program Office,

Dept of Energy / Atmospheric Science Program, Office of Naval Research.
Government of Perú
Comisión Nacional de Investigación en Ciencia y Tecnología (CONICyT), Government of Chile

Chilean Collaborators:

José Rutllant	Departamento de Geofísica	Universidad de Chile, Santiago, Chile
René Garreaud	Departamento de Geofísica	Universidad de Chile, Santiago, Chile
Ricardo Muñoz	Departamento de Geofísica	Universidad de Chile, Santiago, Chile
Laura Gallardo	Centro de Modelamiento Matemático	Universidad de Chile, Santiago, Chile
Oscar Pizarro	Departamento de Geofísica	Universidad de Concepción, Concepción, Chile
Ana Maria Córdova	Departamento de Meteorología	Universidad de Valparaiso, Valparaiso, Chile
Rosalino Fuenzalida	Departamento de Oceanografía	Universidad Arturo Pratt, Iquique, Chile

Peruvian Collaborators:

Carmen Grados *(R/V Olaya, Chief Scientist)*	Physical Oceanography Department	Instituto del Mar del Perú, Callao, Perú
Michelle Graco	Chemical Oceanography Department	Instituto del Mar del Perú, Callao, Perú
Sonia Sánchez	Biological Oceanography Department	Instituto del Mar del Perú, Callao, Perú
Patricia Ayón	Biological Oceanography Department	Instituto del Mar del Perú, Callao, Perú
Salvador Peraltilla	Marine Hydroacoustic Unit	Instituto del Mar del Perú, Callao, Perú
Jesús Ledesma	Chemical Oceanography Department	Instituto del Mar del Perú, Callao, Perú

Luis Vásquez	Physical Oceanography Department	Instituto del Mar del Perú, Callao, Perú
Yves du-Penhoat	Echanges Côte-Large (ECOLA), Physical Oceanography	Laboratoire d´Etudes en Géophysique et Océanographie Spatiales (LEGOS), Toulouse, France
Boris Dewitte	Echanges Côte-Large (ECOLA), Physical Oceanography	LEGOS, Toulouse, France
Gérard Eldin	Echanges Côte-Large (ECOLA), Physical Oceanography	LEGOS, Toulouse, France
Alexis Chaigneau	Physical Oceanography	Laboratoire d´Océanographie et du Climat: Expérimentation et Approche Numérique (LOCEAN), Paris, France
Vincent Echevin	Physical Oceanography	LOCEAN, Paris, France
Ken Takahashi	Meteorology	NOAA Geophysical Fluid Dynamics Laboratory, (GFDL) Princeton, NJ USA
Yamina Silva	Meteorology	Instituto Geofísico del Perú, Lima, Perú

Availability of Research Data:

All VAMOS project data are freely available from the archives:

VOCALS Data Archives.
VAMOS Data Information Server

Research Facilities

RESEARCH SHIPS

R/V Ron H Brown
National Oceanic & Atmospheric Administration
U.S. Department of Commerce, USA
Registration Number- R104
Captain's Name: *(Commanding Officer TBD)*
Port of Call: Arica, Chile

R/V José Olaya Balandra
Instituto del Mar del Perú (IMARPE)
Ministerio de la Producción, Perú
Registration Number- CO-17706-EM
Captain's Name: CdeF Raúl Rojas Turpaud
Port of Call: Callao, Peru

RESEARCH AIRCRAFT

NSF C-130
4 engine turboprop
Max weight 155,000 lbs
Maximum endurance: 10 hrs

Registration Number: N130AR

Owner: U.S. National Science Foundation, Washington, D.C. USA

Pilot Information: Henry Boynton Captain ATP Cert # 2245308
Lowell Genzlinger Captain ATP Cert # 2069296
Edward Ringleman Captain ATP Cert # 28924391

Destination: Arica, Chile

Grumman Model Gulfstream-159 (G-1)

2 engine turboprop
Maximum Gross Weight: 36,000 pounds
Range: 1,500 nautical miles
Maximum Endurance: 6 hours
Maximum crew: 7

Registration Number: N701BN

Owner: Battelle Memorial Institute, Columbus, OH, USA.

Pilot Information: Robert V. Hannigan Captain

Destination: Arica, Chile

DeHavilland Twin Otter (DHC-6)

2 engine turboprop
Maximum Gross Weight: 13,500 lb (6,140 kg)
Range: 950 nautical miles
Maximum Endurance: 5 hours
Maximum crew: 4

BUNO: 762256

Owner: Naval Postgraduate School / Center for Interdisciplinary Remotely-Piloted Aircraft Studies (CIRPAS) USA.

Pilot Information: Mike Hubbell - Chief Pilot

Destination: Iquique, Chile

British Aerospace BAe-146-301

4 engine jet
Maximum Gross Weight: 93,000 lb (42,184 kg)
Range: 1800 nautical miles

Maximum Endurance: 5 hours
Maximum crew: 20

Registration Number: G-LUXE

Owner: FACILITY for AIRBORNE ATMOSPHERIC MEASUREMENTS (FAAM) U.K.

Pilot Information: XXX Captain

Destination: Arica, Chile

Dornier-228

2 engine turboprop
Maximum Gross Weight: 13,184 lb (5,980 kg)
Range: 1610 nautical miles
Maximum Endurance: 9 hours
Maximum crew: 4

Registration Number: D-CALM

Owner: UK Natural Environment Research Council (NERC)

Pilot Information: Carl Joseph - Captain

Destination: Arica, Chile

RESEARCH RADIOSONDE: GPS Advance Upper-Air Sounding system (GAUS)

A balloon-borne rawinsonde system that measures wind, pressure, temperature and humidity.

Located at: *Universidad Arturo Pratt*, Iquique, Chile