

M E E T I N G S

Fifth Annual IPRC Symposium Held May 4–6, 2005



The Fifth Annual IPRC Symposium was held May 4–6 at the East-West Center in Honolulu. At this event, IPRC scientists present the highlights of their research for the year. This annual sharing is a time to pause and reflect upon the progress that has been made in understanding climate phenomena, particularly those affecting the Asia-Pacific region. It is an occasion to solicit comments and suggestions from peers and to detect common research threads.

Axel Timmermann, co-leader of the Impacts of Global Environmental Change Research Team, organized this fifth symposium.

The *Atmospheric Dynamics and Modeling* section featured work on modeling hurricanes, improvements in simulating the daily tropical rainfall cycle over the ocean by altering the convective entrainment and detrainment parameterizations, and the use of simulations with high-resolution general atmospheric models as a source of information for low-resolution models. The *Climate Change* section featured research dealing with global warming effects on tropical storms in the western North Pacific and paleoclimate studies, including the global response to a shutdown of the thermohaline circulation. *Climate Variability* presentations ranged from a description of a link between the Pacific North American atmospheric pattern and Southwest Indian Ocean sea

[Participants of the 2005 Annual IPRC Symposium in the Japanese Gardens of the East-West Center.](#)

surface temperature to the modeling of North Pacific decadal variability, to a study of eastern Pacific climate with the recently developed IPRC Regional Ocean–Atmosphere Model (iROAM). The *Ocean Circulation and Modeling* presentations included studies of the influence of the Indonesian Throughflow on the circulations in the Indian and Pacific Oceans, a description of the source and nature of the upwelling off Java and Sumatra and its influence on the region's sea surface temperature, the successful numerical modeling of the important Southern Tsuchiya Jet, and the discovery of alternating zonal jets in the upper ocean.

For the agenda, visit the IPRC website at iprc.soest.hawaii.edu/meetings/workshops.html/. [iprc](#)

IPRC Regional Ocean–Atmosphere Model Meeting



The iROAM Team, from left, Yuqing Wang, Shang-Ping Xie, Justin Small, Simone de Szoeki, Hideki Okajima, Kelvin Richards, Toru Miyama, Takashi Mochizuki, and Minoru Chikira.

The IPRC Regional Ocean–Atmosphere Model (iROAM) is the most recent model developed at the IPRC. Currently the model is running on Japan’s Super Computer, the Earth Simulator, as part of a collaboration between the IPRC and JAMSTEC on the Kyosei-7 Project, an ambitious project to develop a system for seasonal to interannual climate forecasts. To discuss the current status of model development and experiments to be conducted with iROAM, **Toru Miyama** and **Takashi Mochizuki** from Frontier Research Center for Global Change and JAMSTEC met with IPRC team members

in October 2005. Planned projects with the model include further study of the effects of the Andes, ocean mixing, and boundary layer clouds on the coupled eastern Pacific climate system. The goal of these studies is to understand the air–sea coupled processes in the eastern Pacific in order to improve coupled climate models, which tend to simulate a cold tongue that stretches too far to the west, an eastern Pacific coastal region that tends to be too warm, and a climate that is too symmetrical with respect to the equator. iROAM will also be used to study the climate of the Hawaiian Islands. [iprc](#)

IPRC Hosts NASA Science Team for Earth Observing System



IPRC’s Xiouhua Fu (left front) with the NASA AMSR-E Science Team at Jefferson Hall, East-West Center.

The IPRC co-hosted a meeting on September 13–15, 2005, at the East-West Center for the science team of the NASA Advanced Microwave Scanning Radiometer for the Earth Observing System, or AMSR-E. This very important observing system, which is flying on NASA’s Aqua polar orbiting satellite, can see through clouds and has good global coverage. The system yields the following advanced products: for the ocean—surface wind speed, sea surface temperature, atmospheric water vapor, cloud liquid water; for land—surface soil moisture, vegetation water content, surface temperature; for sea ice—sea-ice concentration and surface temperature,

snow over sea ice, and also global rainfall and snow-water equivalent. At the workshop, recent database developments, procedures for data assimilation, various applications of the data, and validation studies were presented.

IPRC researchers are heavy users of NASA satellite data products and the Asia-Pacific Data-Research Center serves part of the AMSR-E datasets at apdrc.soest.hawaii.edu/. The detailed description of AMSR and available datasets can be found at the AMSR-E official website www.ghcc.msfc.nasa.gov/AMSR/. [iprc](#)