

## ATS/CIRA Colloquium

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### An Overview of SoWMEX/TiMREX

Hosted by James Ruppert

**Monday, September 16<sup>th</sup>**

**ATS room 101; Discussion will begin at 3:00pm  
Refreshments will be served at 2:30pm in the Weather Lab.**

Interaction of southwesterly wind surges over South China Sea and the steep terrain of Taiwan during the Meiyu (May and June) period of the East Asian summer monsoon often produce severe heavy rainfall and flash floods. The Southwest Monsoon Experiment (SoWMEX) / Terrain-influenced Monsoon Rainfall Experiment (TiMREX) is a cooperative field observational programs conducted jointly by the scientists of United States and Taiwan to study the mesoscale environment and the precipitation characteristics of these heavy rain storms. The goal of the field campaign is to improve the understanding of orographically-induced storm processes and to establish the ability of quantitative precipitation estimation and forecasting in order to meet the urgent need for disaster reduction due to the heavy monsoon rainfall.

The actual special observing period (SOP) of SoWMEX/TiMREX was from May 19 to June 26, 2008, including 9 intensive observing periods (IOP) with a total of 24 IOP days within which a continuous 9-day enhanced operation period (EOP) lasted from May 29 to June 6. During IOPs, 3 hourly soundings were launched in order to catch the diurnal variations of the heavy rain systems. The observations include 14 aircraft dropsonde missions with 38 hours flight time and 188 dropsondes released. More than 2000 upper air soundings launched over ground and shipboard. These soundings are good to study the kinematic and thermodynamic characteristics of the southwest monsoon flow upstream of south Taiwan. NCAR S-band polarimetric radar system (SPOL), mobile X-band polarimetric radar (TEAM-R), vertical rain profiler (Verti-X), and disdrometers were deployed to study the storm microphysics and evolution over the coastal and mountainous regions of southwestern Taiwan. In the presentation, a brief summary of the field program will be given and scientific results of the experiment will be discussed. The future perspective of monsoon rain storm study in this region will be presented.

Link to colloquium videos and announcement page: <http://www.atmos.colostate.edu/dept/colloquia.php>