

**PRELIMINARY PLAN FOR THE SOUTH CHINA SEA MONSOON
EXPERIMENT (SCSMEX)**

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ABSTRACT

The Asian monsoon regime can be divided into two major components: The South Asian monsoon centered over the Indian Subcontinent and covers Indian Ocean, Arabian Sea, and Bay of Bengal, and the East Asian monsoon encompassing East and Southeast Asia, South China Sea, and the tropical western Pacific. The summer monsoon almost always appears in East Asia before South Asia, and the earliest onset occurs over the South China Sea, usually in the early to middle May. It has been known for some time that the transition from northern winter to northern summer monsoon is one of the most difficult period for long-range forecasting and short-term climate prediction. Increasing evidence now suggests that this boreal spring transition season may be very important in determining the subsequent evolution of the monsoon as well as the interannual variability of the coupled ocean-atmosphere-land system. Furthermore, the summer monsoon onset leads to heavy rainfall systems that affect the entire Southeast and East Asia region. The moisture and energy transports associated with these systems play important roles in the global large-scale water and energy budget. The variability of these systems also have enormous social-economical impacts for the region. Thus, the summer monsoon onset over the South China Sea has both global and local implications, both scientifically and economically.

In spite of this importance, the meteorological and oceanographic studies of summer monsoon outside of China and Japan during the past two decades, including field experiment activities, have been concentrated on two other aspects: The South Asian monsoon centered over India and the surrounding oceans, and planetary scale circulations in which the Asia continent is often considered as a whole with the Qinghai-Xizang (Tibetan) Plateau sometimes considered as the main center of the forcing. This lack of research over the South China Sea is partly due to the fact that the South China Sea remains as the last tropical ocean in the vicinity of the Asia-Africa land mass where special observation efforts during summer never took place. Recognizing this, an initiative to conduct a field experiment to study the summer monsoon onset over the South China Sea has recently been proposed by scientists participating in the U.S.-P.R.C. Cooperative Program in Monsoon Research. During the past year, the idea of a multi-year South China Sea Monsoon Experiment (SCSMEX) has attracted increasing interest from scientists in several nations. This talk will present an overview of the current status of the proposed experiment, including a brief summary of the preliminary scientific plan that is under active discussion by the international scientific community.