

ACTIVITIES OF THE SUMMER MONSOON IN THE SOUTH CHINA SEA AND SEVERE FLOODING IN CHINA IN 1998

Ding, Yihui

National Climate Center, Beijing 100081

The onset of the 1998 summer monsoon in the northern part of the South China Sea (SCS) is defined to be on 17 May, characterized with a near west-east oriented low-level wind shear line, or monsoon trough being stationary over this region. The rainfalls during pre-summer rainy season in South China were greatly enhanced.

Around 25 May, 1998, the summer monsoon in the SCS developed over the entire region of the SCS, thus leading to most intensive rainfalls in South China. As the Indian summer monsoon set in on 12-13 June, the monsoon over the SCS extensively enhanced, thus bringing the major seasonal rainbelt to the region to south of the Yangtze River and then maintained until end of June in this region. Due to the prolonged monsoon precipitation, the persistent heavy rains and severe flood occurred in this region.

During the second half of July 1998, as the subtropical high over West Pacific weakened and moved southward significantly, the enhanced summer monsoon in the SCS met with cold air over the Yangtze River Basin again, thus causing the second episode of heavy rainfalls and severe flood.

The South China Sea Monsoon Experiment (SCSMEX) which was undertaken from May to August, 1998, provides an excellent opportunity and data sets for study of the onset, break and active cycle and withdrawal of summer monsoon over the SCS and their relationship to prolonged heavy rainfalls and severe floods over the Yangtze River Basin.