

SeaWinds on QuikSCAT Mission and Early Science Results

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SeaWinds on QuikSCAT (QSCAT) is a dedicated satellite remote sensing mission for measuring ocean surface wind speed and direction, using a spinning, pencil-beam Ku-band scatterometer. It is a replacement mission for NASA Scatterometer (NSCAT), which was launched on board of the Japan's Advanced Earth Observation System (ADEOS-1) in August 1996 and returned 10 months of high quality data before the mission was terminated in June, 1997 due to the failure of the ADEOS-1 spacecraft. Since the next NASA scatterometer mission, *SeaWinds on ADEOS-2 (SeaWinds)*, will not be launched until November 2000, NASA decided to fill the data gap by launching the QSCAT mission. Furthermore, after year 2000, the potential exists for using both the QSCAT and SeaWinds to provide approximately 6 hours global coverage of the marine winds. QSCAT is currently scheduled for launch in April, 1999 from Vandenberg Air Force Base, using Titan-II launch vehicle.

The purpose of this paper is to first present the mission objectives, the spacecraft and instrument design, ground receiving systems, the science data processing system, and the data products. We will then present the post-launch calibration and verification results of the QSCAT end-to-end sensor system. Finally, we present some of the key results obtained from the first two months of the mission, which include ocean surface wind measurements, ice detection and classification, global snow cover detection, and flood detection.