

QuikSCAT Support (from page 24)

already proven, and the S-band receivers were in place. However, the receive downlink (return telemetry data) required three different data rates on the same pass.

The COTR (Medora Macie) and the ATR (Paul Garza) got to work, and within a short time were able to draft up a contract modification that defined the required work to reconfigure the station. A unilateral contract modification was issued in short order by the Contracting officer, Ann Kearny, and the Engineers were given a task to proceed with the work of getting ASF ready for QuikSCAT.



Alaska SAR Facility's 11-meter parabolic dish

Contractor Engineers Pati Paskett and Don Hess quickly dusted off a configuration that was done for Merritt Island, Florida, found some equipment, and sent it to Alaska. The ASF engineers feverishly worked to install the bit syncs and the Programmable Telemetry Processor (PTP), and Don Hess was dispatched to

Alaska to help with the integration and training of the ASF personnel. Mr. Hess did an outstanding job and received many kudos from the ASF crew and NASA.

With the configuration of the new equipment, final alignments completed, and simulated data flowing locally, it was time for the real test of tracking and receiving the downlink from the real satellite. The shadow passes started and data started to be analyzed locally before it was sent to the Laboratory for Space Physics (LASP) at the University of Colorado in Boulder. The data distribution was tricky because this was the first time that the ASF had done real-time data transmissions.

The Standard Autonomous File Server at ASF that had been used for ADEOS-II was reconfigured to process the QuikSCAT data and distribute it to the LASP, JPL, and the NOAA facility in Suitland, Maryland. The data had to travel from Space to Alaska to Goddard Space Flight Center and then to Colorado and California. All three locations had to receive the needed files and confirm good data. Once this was done, the station was ready to start receiving the QuikSCAT downlink alone. This one spacecraft challenged the ASF people and system to the point of breaking down a few times. For a while it appeared as if it would never work; however, with persistence and hard work by the talented and enthusiastic team, it worked superbly.

The QuickSCAT project is now enjoying about seven to ten passes a day over the ASF with apparently very few problems. Even though problems can still crop up, the ASF is once again in full operation with three spacecraft to support daily.

By Paul Garza
 Contact at (301) 286-7359
 Paulino.Garza-1@nasa.gov

4
5
3

.....

McMurdo Ground Station Demonstration

A demonstration is underway to deliver high-rate, high-volume data to customers in a different and faster method using McMurdo Ground Station (MGS) and McMurdo TDRS Relay System 2 (MTRS2).

With this demonstration, Radarsat data dumps will be directed to an upgraded high-speed telemetry system (with a 240GB RAID), which will frame sync and store the data on LTO tapes (200 GB) using a newly installed

LTO tape library. These tapes will take the place of the existing AMPEX tape storage. Along with shipping LTO tapes to the Radarsat data facility in Alaska, the Radarsat data can be delivered over TDRS via MTRS2. At White Sands Complex (WSC), a new and similar high-speed telemetry system (with LTO tape library) is available to receive and record the Radarsat data from

continued on page 26