New Capabilities for QuikSCAT Support at GN Alaska SAR Facility

Ground Network Project

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What do you do when one of your sensors begins to fail and you cannot support the required satellite load? In the world of space communications the science community depends on satellites that are in space to gather the information and transmit it to the ground. The Ground Network, which operates the world wide ground stations, is the eyes and ears for the scientists doing this amazing data gathering feat. All the tools need to work together like the human body to be efficient.

On November 28, 2003, the Ground Network experienced a catastrophic failure of one of the antennae at Poker Flat, Alaska. The loss of the PF1, 11-meter antenna meant that there was no other antenna readily available in case of another failure. With the upcoming launches of Gravity Probe-B and Aura, the forecasted load for X-band support would soon jump by about 20 to 30 passes a day.

As luck would have it, a recent failure of the ADEOS-II spacecraft (even though catastrophic) left a void in one of the apertures at the University of Alaska. The University hosts a 10-meter and 11-meter system. The situation was that this station had only been instrumented for support of RADARSAT-1, ERS-2 and ADEOS-II.

The situation was studied and a decision was made to add the QuiKSCAT support capability to the 11-meter antenna at ASF. The existing contract required modification to remove the ADEOS-II support and get the station ready to support QuiKSCAT.

QuikSCAT Satellite

This was not going to be a snap, even though there was some compatibility, the antenna RF links were

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