

AERI Replacement Report (RESET-11N)

by John Short and Ralph Dedecker of the University of Wisconsin

The following is a brief summary of work completed to replace the AERI-06 with AERI-08 at the Nauru TWP site. John Short and Ralph Dedecker arrived in Nauru on July 4, 2000 and left on July 10, 2000.

Despite having received verification that the AERI-08 hardware had arrived at Nauru from two separate contacts in the chain of shippers, we were informed upon arrival that the shipment had not arrived. Several telephone calls reconfirmed the information we had received prior to leaving the US and follow up contacts a Nauru resulted in locating the AERI-08 and associated tools at a local NPC warehouse. It had arrived at Nauru along with a shipment to the NPC. With the help of TWP site personnel (Nicolas, Franklin, and Henry) the AERI and support equipment were transferred to the TWP site. Inspection of the shipping containers and their contents indicated no mal treatment.

After confirming the marginal operating condition of AERI-06 and recording sample data on DAT tape for later analysis back at the UW, the AERI-06 was shut down on 4 July. The AERI-06 hardware was disassembled and dry nitrogen gas used to purge the interferometer prior to exposure to the warm and humid outside environment. The AERI-08 hardware was then installed and test operation began on 5 July with all subsystems operating with the exception of the GPS power supply. The power supply was replaced with that of the AERI-06.

There were numerous stops and restarts of AERI-08 from approximately 5 July through 8 July during which several system test and configuration updates were applied to insure proper and robust system operation. Included was the measurement of a reference black body (a.k.a. 3rd BB test) to confirm end to end system alignment and valid calibration. The results of this test indicate that the AERI is operational well within normal specifications. All data collected during this period (both test and normal nadir view data) was archived to DAT and returned to the US for future examination/reference.

It is also noted that the AERI hatch operation was observed while we were on site. Several instances of rain indicate that hatch controller properly closes the hatch but that the AERI usually detects the rain and acts to "safe" the mirror prior to the hatch being closed. The resultant data quality flags manifest this situation. Some mechanical maintenance was performed by both the RESET team (present during the UW visit until 7 July) and by John Short.

In addition to the AERI hardware replacement, Ralph Dedecker restored software to the corrupted hard disk on the MADS system located at the site in the "I" van. In addition to restoring the software, several software updates were applied. The MADS system now routinely provides an additional DAT backup of AERI data.

All software on both the AERI and the MADS hard disks were backed up to DAT and labeled. The tapes were left on site and are stored under the keyboard of the AERI computer.

Site personnel provided able help though out the visit and also initiated shipment of the AERI-06 back to the UW. The AERI-06 shipment arrived at the UW-SSEC on 25 July. Inspection of the containers does not indicate mal treatment.