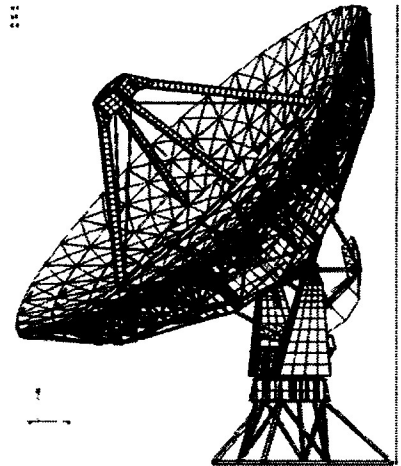

NATIONAL RADIO ASTRONOMY OBSERVATORY
Socorro, New Mexico

VLBA Antenna Memo Series No. 54

Mauna Kea Rail Repair

J. E. Thunborg
August 13, 2004



The original grout under the azimuth rail on the Mauna Kea, Hawaii VLBA antenna has slowly been degrading. On July 29 – August 8, 2004, a maintenance team consisting of Jay Apachito, Phillip Sanchez, Jon Thunborg and John Wall were dispatched to repair the grout with the help of site technicians Bill Hancock and Tony Sylvester.

Approximately half of the antenna rail grout had been repaired during a previous visit. This grout was inspected and showed no sign of degradation. The remaining original grout between the rail plates and under the rail was removed to a depth of approximately 3 inches. Burke High Strength Epoxy grout was then poured into the hole under the rail. The grout under bolts 51 – 56, 81 and 82 was severely degraded. At these locations, the grout under the rail plates was also removed and replaced with epoxy grout. This trip completes the grout repair at Mauna Kea.

The initial rail measurement showed that the rail was high from bolt 27 to bolt 36. The wear pattern on the rail indicated that only the outside edge of the rail was high. A hand grinder was used in an attempt to level this part of the rail. The high spot was alleviated slightly, but additional grinding is still needed to fully level the rail.

