
NATIONAL RADIO ASTRONOMY OBSERVATORY
Socorro, New Mexico

VLBA Antenna Memo Series No.50

North Liberty – Drive #2 wheel/bearing replacement

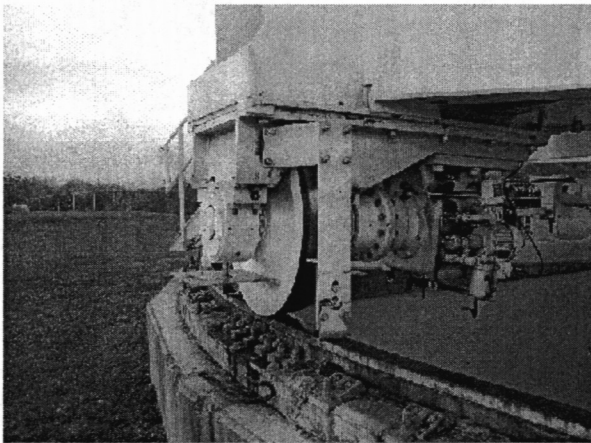
October 20 – 23, 2003 - Trip Report

J. E. Thunborg

Metal particles were found in the grease on the inside drive #2 azimuth bearing during the North Liberty maintenance visit. The drive assembly was then scheduled for replacement. A team consisting of Steve Aragon, Eric Carlowe, Ramon Gutierrez and Jon Thunborg traveled to North Liberty on October 20 –23, 2003 to replace the wheel assembly.

Before the wheel assembly was replaced the following measurements were made on the original wheel assembly.

| | <u>BEFORE</u> | |
|-----------------------|----------------------|------------------------|
| | Measured | Specified |
| Conic radius | 300.024" | 300" \pm ¼ |
| Coupling runout | N/A | Not Specified |
| Axle Vertical Slope | 93° 23' 14" | 93° 26' 23" \pm 1.4' |
| Axle Horizontal error | 3' 08" | < 1.4' |



The new wheel/axle assembly was installed and aligned. After two days of operation, the following alignment parameters were recorded for the new axle/wheel assembly. The antenna rotated smoothly without popping sounds.

| | <u>AFTER</u> | |
|-----------------------|---------------------|------------------------|
| | Measured | Specified |
| Conic radius | 299.894" | 300" \pm ¼ |
| Coupling runout | 0.001 TIR | Not Specified |
| Axle Vertical Slope | 93° 25' 35" | 93° 26' 23" \pm 1.4' |
| Axle Horizontal error | 43" | < 1.4' |

