
NATIONAL RADIO ASTRONOMY OBSERVATORY
Socorro, New Mexico

VLBA Antenna Memo Series No.67

Fort Davis – Drive #1 Wheel/Bearing assembly replacement
January 3 - 6, 2007 - Trip Report

J. E. Thunborg

The Fort Davis VLBA Azimuth Drive #1 axle failed allowing the drive wheel to contact the structure. The antenna was removed from operation until a maintenance team consisting of Kelly Greene, Paul Rhodes, Phillip Sanchez and Jon Thunborg traveled to Fort Davis and with the help of the site technicians, John Jordan and John Smith replaced the wheel/axle assembly.

A new wheel/axle assembly was installed and aligned to the following parameters. The antenna rotated smoothly without popping sounds.

	<u>Before Run- In</u>	
	Measured	Specified
Conic Radius	299.931"	300" \pm 1/4
Coupling Runout	0.002 TIR	Not Specified
Axle Vertical Slope	93.461°	93.440" \pm 0.023°
Axle Horizontal error	0.005°	< 0.023°

The antenna was rotated approximately two hours and the following alignment parameters where measured.

	<u>AFTER Run In</u>	
	Measured	Specified
Conic Radius	299.968"	300" \pm 1/4
Coupling Runout	0.002 TIR	Not Specified
Axle Vertical Slope	93.464°	93.440" \pm 0.023°
Axle Horizontal error	0.018°	< 0.023°