
NATIONAL RADIO ASTRONOMY OBSERVATORY
Socorro, New Mexico

VLBA Antenna Memo Series No.58

Owens Valley – Drive Wheel #2 replacement
February 14 – 17, 2005 - Trip Report

Ramon Gutierrez

DRIVE WHEEL REPLACEMENT

During the previous Owens Valley Tiger Team maintenance visit, we found a bad inside bearing on azimuth drive wheel #2. During this trip, the wheel assembly was replaced with a new one using a forklift that Eric Carlowe had arranged to borrow from OVRO.

After installing the new wheel, we checked the verticle angle and the coupling runout. We added shims accordingly to the pillow blocks. After verifying the coupling runout, we bolted the coupling together with a few bolts and ran the wheel position procedure to find the wheel radius and axle allignment. We discovered we could move the wheel assembly fairly easy, but without much control. We welded blocks with push bolts on both sides of the pillow blocks to help control their movement. We then added shims as needed to position the axle.

Final Results:

		<u>Specs</u>
Wheel Radius	300.133" in.	$300 \pm \frac{1}{4}$ in.
Horizontal Angle Error	.04"	<1.4'
Verticle Angle Error	.15"	<1.4'
Horizontal Hub TIR	.000 in.	<.005 in.
Verticle Hub TIR	.0025 in.	<.005 in.

Note:

The wheel radius could not be reduced because there wasn't any play left in the pillow block mounting holes. After verifying hub runout, we installed all the coupling bolts. They all went in easily indicating good alignment.

