NATIONAL RADIO ASTRONOMY OBSERVATORY
Socorro, New Mexico

VLBA Antenna Memo 102

Hancock- Drive #2 Wheel/Bearing Assembly Replacement

July 14 – July 18, 2019

J. Gallegos
October 7-9, 2020

The Hancock VLBA Site Technicians reported loud popping from the Azimuth Drive Wheel #2. A maintenance team consisting of Dominic Zamora, David Dirmeyer, Michael Romero and Jeremy Gallegos traveled to New Hampshire to address the issue. The wheel was removed and it was immediately clear that the outer bearing on the drive wheel assembly had failed. The new wheel/bearing assembly was installed and aligned to the following parameters. After the alignment procedure was complete the antenna was rotated in azimuth smoothly and with no popping noises multiple times.

	Measured	Specified
Conic Radius	Error	300” $\pm \frac{1}{4}$
Coupling Runout Horizontal	0.000	0.005”
Coupling Runout Vertical	0.000	0.005”
Vertical Angle Error	0.002	< 0.013
Horizontal Angle Error	0.000	< 0.023