

National Radio Astronomy Observatory
Socorro, New Mexico
VLBA Antenna Memo #74

Owens Valley, California VLBA Maintenance Visit August 18-25, 2008. Team members consisted of Steve Aragon, Mike Burgert, Eric Carlowe, Ray McFarlin and Phillip Sanchez. VLBA Site Technicians Jim Brown and Bill Robbins assisted in all areas of antenna maintenance.

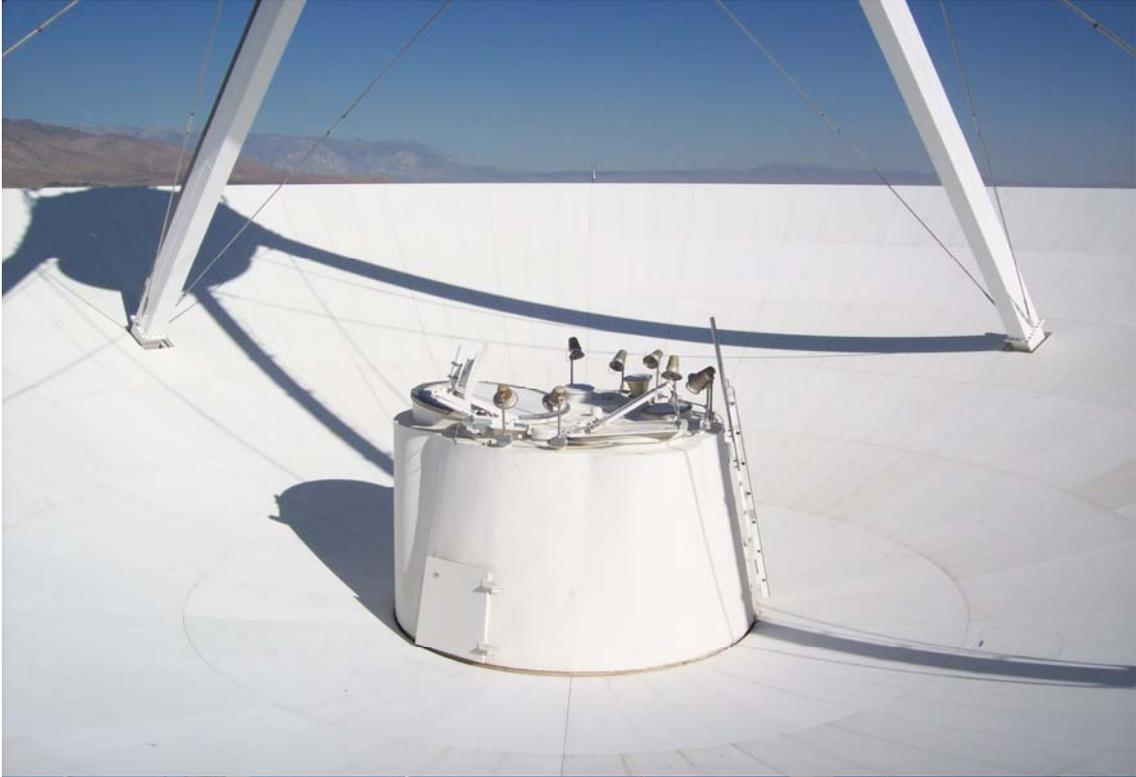




FRM was given a thorough inspection and the focus flex shaft was replaced. Three 1 inch drain holes were drilled in the center of the sub reflector for extra drainage.



Sub reflector is in good condition.



Dish panels are in good condition. The feed cone's elastomeric paint job is holding up well. The feed cone was sealed and painted during the last maintenance trip in 2004.



The Dichroic reflector is in excellent condition. The Ellipsoid reflector is in good condition. Ellipsoid actuator operates correctly.



Azimuth #1 and Elevation #2 motors were both replaced.



The new IF cable wrap was installed and tested. Azimuth #1 and Azimuth #2 gear box seals were leaking. Both seals were replaced.



The servo drive cabinet power supply upgrade was completed. The lock out tag out switch tested bad and was replaced. Both Contempo condenser variable speed controllers were replaced after Contempo #2 tested bad.



A new Elevation HVAC extension platform was installed. All antenna bearing were inspected.

AZIMUTH BEARING GREASE INSPECTION

	INNER BEARING	OUTER BEARING
D1	New Wheel.	New Wheel.
D2	New Wheel.	New Wheel.
I1	Good, no metal.	Good, no metal.
I2	Good, no metal.	Good, no metal.

All bearings are very well lubricated.

ELEVATION BEARING GREASE INSPECTION

Encoder	Good grease with no metal flakes.
Synchro	Good grease with no metal flakes.
All bearings are very well lubricated.	

Pintle bearing is well lubricated with no metal flakes.



Elevation axle has no visible signs of cracks. Paint is in good condition.



The feed heaters and FE windows are in good condition. Apex paint is in good condition.



Antenna backup structure is in good condition. Paint is in good condition.

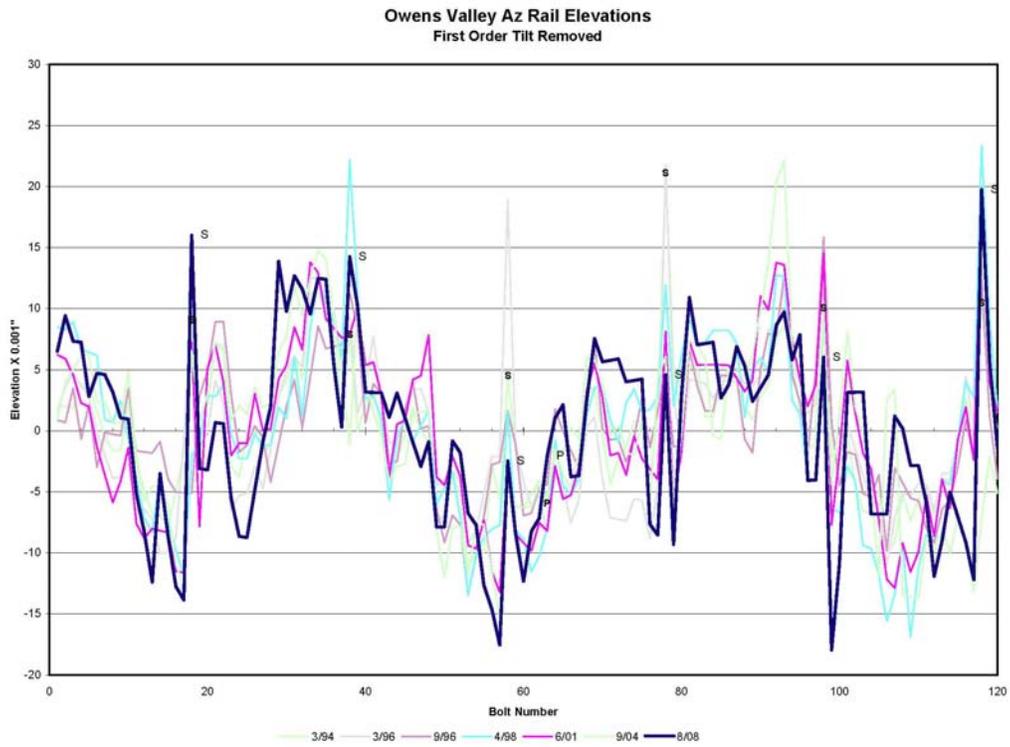


Azimuth #1 Wheel assembly was replaced. The new drive wheel assembly rotated smoothly without any popping or grinding noises.

	MEASURED	SPECIFIED
Conic Radius	300.201	300.00 +/- .25
Coupling Runout	.003	<.005
Vertical	93.447	93.440 +/- .023
Horizontal	.006	<.023



The Owens Valley rail is in good condition. The vulchem still looks as though it has been recently applied.



Owens Valley Site Rail Elevations.