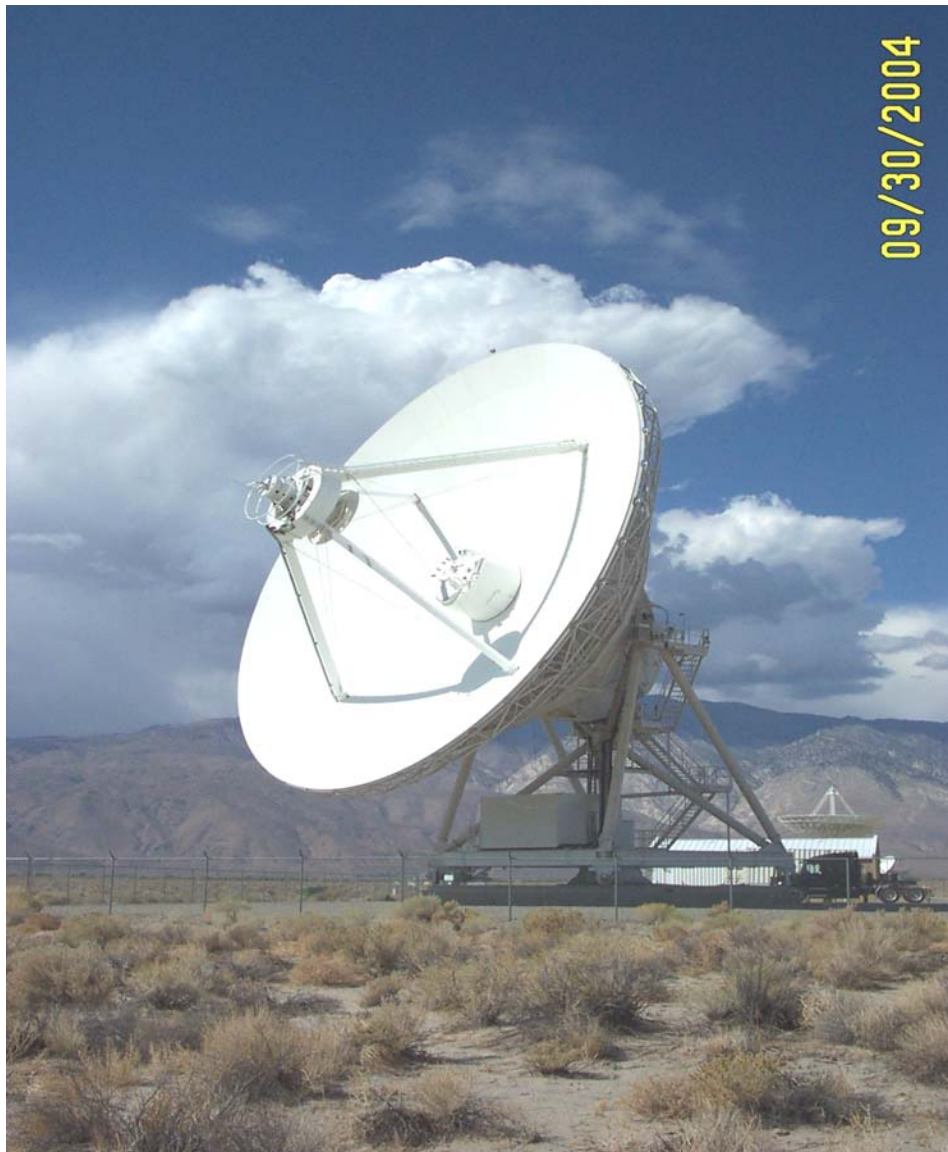


National Radio Astronomy Observatory  
Socorro, New Mexico

VLBA Antenna Memo #57

Owens Valley, CA. VLBA Maintenance Visit Sept. 23 thru Oct. 1 2004.

Team members consisted of Steve Aragon, Eric Carlowe, Ramon Gutierrez, Ken Lakies, Bob McGoldrick and Phillip Sanchez. VLBA Site Technicians Jim Brown and Bill Robbins assisted in all areas of maintenance during the visit. A completed task list is attached.





FRM was given a thorough inspection. A focus flex shaft was replaced and the new encoder coupling modification was installed.

**FRM INA BEARING CHECK 50LBS PULL ON EAST MOTOR**

East Travel:	+ .001	West Travel:	- .001
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**FRM INA BEARING CHECK 50LBS PULL ON WEST MOTOR**

East Travel:	- .001	West Travel:	+ .001
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Subreflector is in good condition. Six 1inch holes were drilled in the center of the reflector for extra drainage. The snow tarp was removed.



Feed cone was spot sealed and painted with elastomeric.



Dish panels, and the panels paint is in good condition. Quad leg paint is excellent. Guy wires are in good condition.





Dichroic reflector is good condition. Elipsoid reflector is in good condition.



New digital tachs were installed on EL and AZ motors. Elevation #1 motor was replaced. The ACU power supply modification was previously installed by the site techs. The ACU backplane upgrade was installed and tested. An ACU +12 voltage regulator (U1) was replaced and tested.



Both the encoder and synchro side elevation cable wraps were repaired by repositioning and replacing both sides strain relief brackets.



A backup AC was previously installed by the site techs in the ped room.



AZ bearings were inspected. AZ idler #1 outside bearing was replaced.

#### AZIMUTH BEARING GREASE INSPECTION

	INNER BEARING	OUTER BEARING
D1	Metallic looking grease.	Same as inner bearing
D2	Needs to be replaced	Outer race severely grooved.
I1	OK	Replaced bearing.
I2	OK	OK
All bearings were very well lubricated. Azimuth D2 needs to be replaced.		

#### ELEVATION BEARING GREASE INSPECTION

Encoder	Good grease with no metal flakes.
Synchro	Good grease with no metal flakes.

Pintle bearing is well greased with no metal flakes.





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



Feed cone and feed windows are in good condition. Apex paint is excellent.



Backup structure paint is in excellent condition.



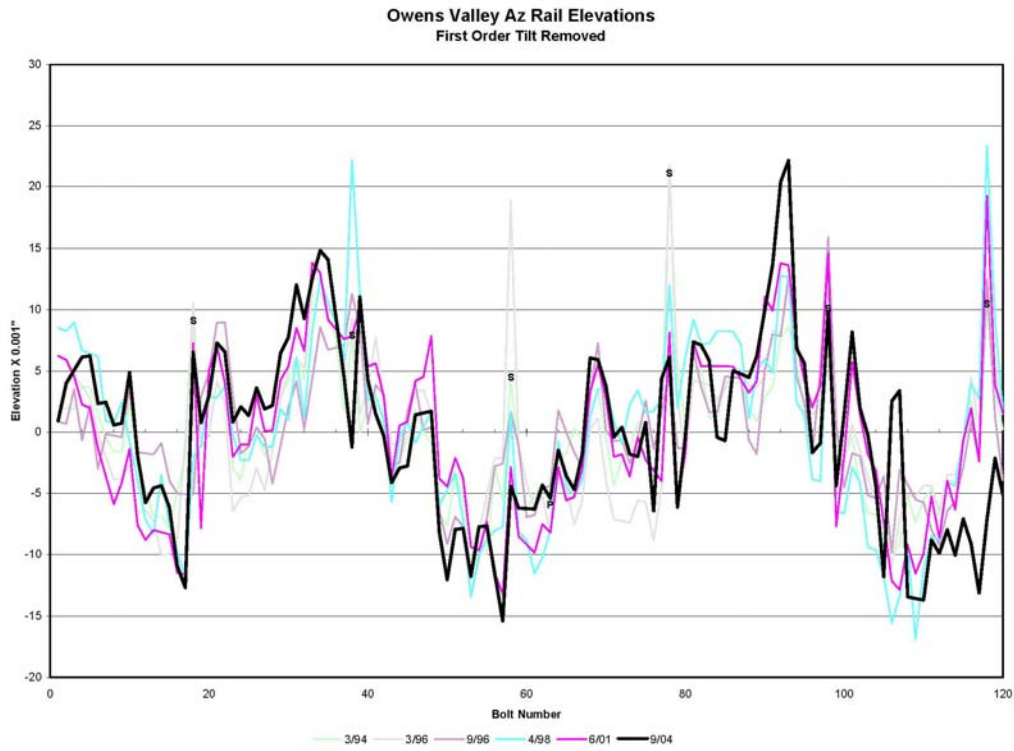
Overall paint on the OV antenna is in excellent condition.





Vulchem is beginning to show signs of deterioration. Otherwise it is in fair to good condition all around the rail.





Owens Valley rail Elevations.

**ACTION ITEMS:**

1. Azimuth drive #2 Wheel/Bearing assembly needs to be replaced.
2. Elevation #2 motor needs replaced.