

VLA/VLBA NEWSLETTER

From the World's Premier Centimeter Wave Radio Synthesis Telescopes

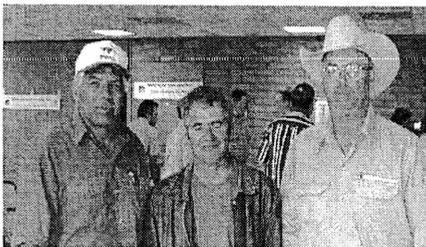
WEATHER STATS

	HIGH	LOW
Mar	71.4° (31st)	-5.1° (3rd)
Apr	78.2° (23rd)	16.8° (21st)
Total Precipitation: .03"		

AROUND THE VLA

Welcome aboard Joe Paez, Guard; Jay Apachito, Frank McCutcheon, and Carlos Soto, Painters; Carl Cano and Wade Dixon, Track Crew; and Richard Torres, Auto Mechanic Helper.

Carl Oler completed a Dozer Operator I course at NMIMT.



Martin Lopez, Godin Otero, Tom Olney, and Marlin Smith (not pictured) were presented with Star Awards

An "All Hands Presentation" took place at the VLA on April 25. Jim Ulvestad, Socorro Operations Assistant Director, relayed information on subjects ranging from the Director search and AUI contract to personnel changes and budget information. Mark McKinnon presented Star Awards to the Transporter Crew for devising a timely and less expensive repair to the Transporter, and to Godin Otero for developing a new method for making manhole installation easier and more effective. Wayne Koski, Co-chair of the Employee Committee spoke of the efforts and purpose of the Employee Committee.

NOTES FROM THE A. D.

On behalf of NRAO management, I'd like to thank all the employees at the AOC and the VLA site who participated in one or more of the public tours held monthly from January through April. Our visitors have been very

grateful for the personalized tours, and I'm pleased that we were able to show the VLA to more than 2000 members of the general public. During the summer months, the NRAO summer students will conduct tours on the weekends. We currently are evaluating the results of the winter and spring tours in order to determine whether to resume them, perhaps every 3 or 4 months, starting this autumn.

The NRAO AUI Visiting Committee met in Socorro in April, and was very impressed with the activities throughout NRAO in the last year. They told the NRAO Director that 2001 was a "banner year" for NRAO. In May, the NRAO Users Committee meets in Green Bank. As stated on the Director's web site, "The Users Committee is made up of users and potential users of NRAO facilities from throughout the scientific community. It advises the Director and the Observatory staff on all aspects of Observatory activities that affect the users of the telescopes." To many of us, the Users Committee is a key barometer about how well we are serving our customers in maintenance of current operations, implementation of new capabilities, and general user services. For those who would like details about the specific items of most interest to our observers, the Users Committee reports for the last five years can be found on the web at http://www.nrao.edu/administration/directors_office/external_committees.shtml.

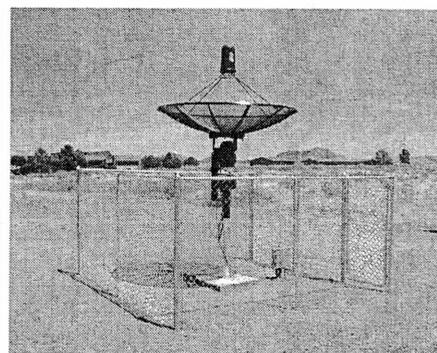
In May, significant pieces of the first ALMA Test Antenna will arrive at the VLA site. This will be a very important event, on top of the usual bustle of summer activity at the VLA. The antenna arriving this year will be under contract from the U.S. part of the ALMA project; a prototype contracted by the European part of the project is expected to arrive in 2003. Ultimately, the production ALMA antennas will operate at frequencies as high as 900 GHz, about 10 times higher than the VLBA antennas and nearly 20 times

higher than a VLA antenna! Please welcome the contractors who are putting the antenna together, as well as the members of the ALMA Antenna Evaluation Group who will be arriving to test the antenna performance.

J. Ulvestad

THE SMALL RADIO TELESCOPE HAS ARRIVED!

The new baby antenna that recently appeared behind the Visitor Center is our newest exhibit! Three senior design students from New Mexico Tech, Brian Rajala, Gerald Bivens, and Sam Field, took on the project last fall. They built the telescope from a kit and spent a considerable amount of time tweaking the software to make it understandable by the general public. By using a touchscreen visitors will be able to point the antenna toward the Sun, Cygnus A or Cassiopeia A. The computer and touchscreen will be located inside the back door of the center so visitors can watch the telescope as it tracks.



The Small Radio Telescope behind the Visitor Center

Screens devised by the students will provide an explanation of what the telescope is doing and "seeing." Thanks to all those who helped on the project, and especially to Clint Janes for overseeing the students' work.

R. Harrison

Win \$\$\$

A contest is being held to name each of the two VLA antenna transporters. Artwork and design ideas for a logo are also welcome. The transporters have carried names in past years but the names were removed a few years ago (reason unknown). Transporter #1 was named "Hein's Train" after Hein Hvatum, Associate Director for NRAO in the 1970's. Transporter #2 was named "Cam Track" after the first VLA Assistant Director (1980) Cam Wade. Contest winners can win up to \$100 (\$50 dollars per transporter).

The Contest rules are as follows: Any active NRAO employee may enter and entries can be a logo or a name but cannot be a name of an employee past or present. Entry should be sent to Patty Lindsey, ES Division, at VLA and must be received by June 15, 2002. All entries will be reviewed by a panel of employees and selections will be made by the end of June.

L. Serna

CALIFORNIA SUNSHINE

On April 4, 2002, the Owens Valley VLBA Antenna was removed from service because of frequent "azimuth current motor sums greater than 30 amps" errors. After a complete check of the drive electronics, the Site Techs (Jim Brown and Bill Robins) found that the antenna had tight spots in rotation.

On April 5, 2002, Phillip Sanchez and John Wall left for Owens Valley in the Volvo truck. The truck was loaded with all the tools and parts required to repair any element of the azimuth drive system. Phillip and John were joined by Steve Tenorio and Jon Thunborg who had flown in via Las Vegas. After an inspection of the azimuth rail and drive wheel bearings, the gearbox was disassembled and inspected. The sun gears and thrust bearings had excessive wear. A spare gearbox was disassembled and most of its parts were placed in the Az#1 gearbox. Az gearbox #2 was also disassembled and inspected.

The sun gears in Az#1 gearbox were worn on the counter clockwise rotation side while the sun gears in Az#2 gearbox were worn on the clockwise side. This uneven wear is probably due to the 30% servo preload used to reduce backlash. During maintenance visits to other sites, we will inspect the gearboxes. If these gearboxes show identical

wear patterns, we should be able to extend the life of the gears by reversing the direction of the preload or swapping the gears from one gearbox to another. After several days of service, the Owens Valley motor currents looked typical and the periodic current fluctuation had disappeared.

J. Thunborg

EMPLOYEE COMMITTEE

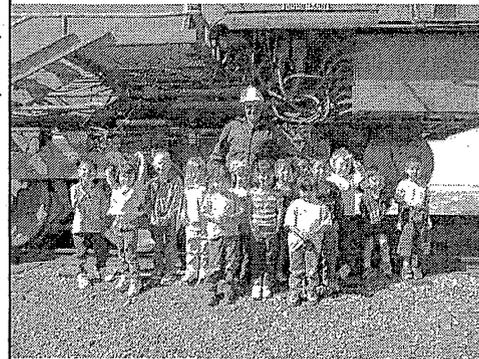
The first employee committee meeting of the year was held recently. This was also the first opportunity for our new AD, Jim Ulvestad, to address the committee members. The focus of the discussion was a clarification of the overall role of the employee committee. The employee committee exists as a liaison between the AD and the employees. One example of a key role the employee committee has played in the past is in communicating the desire of AOC employees to have a modified '9-80' work schedule, another is the installation of the water coolers that have been installed on each floor of the AOC.

If you have any suggestions that might improve our work environment that you'd like to convey to management, please don't hesitate to contact a committee member. Peggy Perley still serves on the committee but has stepped down as chairperson, and has been replaced by the dual 'chairperson ship' of Marie Glendenning and Wayne Koski. The rest of the committee members are Laurel Armijo, Claire Chandler, Charlie Chavez, Bill Hancock, Patty Lindsey, Peggy Perley, Melcolm Peralta, Paul Savedra, Tom Baldwin, Sheila Reasner, Boyd Waters, and Brent Willoughby.

B. Willoughby

SPECIAL VISITORS

On Wednesday April 10, fifteen (possibly) future scientists visited the Very Large Array. They sat on the floor of the Antenna Assembly Building and pondered the height of Antenna 16. Then they went outside and stood next to the Transporter, noting that its wheels were taller than many of them. On the observation deck they observed the jack rabbits. Oh, and the antennas in the array. The highlight of the day was lunch at the picnic tables. Throughout their tour, they conferred with distinguished VLA employees, namely Lonnie "Dad" Guin, Melcolm "Grandpa" Peralta, "Uncle" Ramon Molina, Jimmy "Grandpa" Sanchez, and Patty "Grammie" Lindsey. The one they all called "Grandma" is known as "Mom" to Michael Torres.



Jimmy Sanchez with the Magdalena HeadStart class

We hope to see the Magdalena HeadStart make a visit to the VLA an annual event!

R. Harrison

MAY SKIES

Mercury will be at its greatest elongation on the 4th but will be gone from our view by mid month. I hope you get a chance to see the planetary alignment of Mercury, Venus, Mars, Saturn and Jupiter before Mercury departs, as you'll have to wait until 2044 to see it again!

The moon will be in its last quarter on the 4th, new on the 12th, first quarter on the 19th and full again on the 26th. Once again it will stair step past the planets as it progresses from new to full.

Spring is here and Summer is on the way. I've always associated the upside down Big Dipper with summer. Next time you have a chance, look at the star that forms the bend in the handle. See if you notice anything "different" about this star. I'll explain more in next month's column.

While the pointer stars of the dipper lead us to the "North Star" the handle actually performs a similar task. If you follow the arc of the handle it will lead you to a bright orange giant star named "Arcturus" in the constellation Bootes--The Herdsman. Arcturus is Greek for "Bear Keeper" and the bear, in this case, is Ursa Major or The Big Dipper! It is the 4th brightest star you can see from Earth and is 18 times larger than our sun. It is also a very neighborly 37 light years away.

Continuing on south, we come to the 14th brightest star Spica, in the constellation Virgo--The Virgin. Spica, which means "Ear of Wheat," is 7.4 times the diameter of our Sun and 262 light years away. Actually, Spica is a double star whose luminosity will vary slightly as the two stars orbit about and eclipse each other. Happy stargazing!

J. Spargo