

NRAO NM NEWS

Vol. 8 - Issue 3 - SUMMER 2006

NOTES FROM THE AD

I have been making some observations using the VLA in August and September, and have been very pleased to see three or four EVLA antennas showing up in the VLA. There are occasional glitches due to problems in a few modules, but on the whole, the antennas are working very well. In fact, antennas 13, 14, and 16 appear to be the best antennas in the VLA at 6 cm, beginning to fulfill the expectations of the EVLA Project. I look forward to seeing antennas 24, 26, and 23 rejoin the array later this year; in fact, 24 may be back by the time this column is published!

Our stalwart VLBA traveling maintenance team made an extended trip to Mauna Kea in July and the beginning of August, and achieved a tremendous amount of work. They diagnosed a failed azimuth wheel assembly and had to extend the trip in order to replace it, while achieving numerous other repair and maintenance tasks. As I write this column, many of the same team members are in Hancock for the last major VLBA maintenance trip of the year. Thanks to all the hard workers who make the trips, and to the support group that helps with preparations, shipping of equipment, and all the things that need to be done to make the VLBA site visits successful.

We have just installed a Mark 5 disk-based system for VLBI data recording at the VLA. This will replace the last of the obsolete tape drives at NRAO telescopes; some tape drives already have been removed, and the last few are being unplugged. Along with increased ease of use and reliability, the Mark 5 disk systems can record 2-4 Terabytes of data (depending on disk size) vs. 0.6 Terabytes for the large instrumentation tapes. Toward the end of the year, we will receive three more Mark 5 playback drives at the VLBA correlator, bringing the total number of Mark 5 playbacks to 17. At that time, we plan to decommission the last remaining tape drives on the correlator, marking the end of the tape era for VLBI at NRAO.

In early October, the Board of Trustees of Associated Universities, Inc. will meet for two days in Socorro. AUI plays the important role of signing your paychecks, but they also make huge contributions to NRAO by means of their involvement in activities such as the ALMA antenna procurement and the representation of NRAO interests in the federal budget process. The AUI Board hasn't been to Socorro for three years, and we will be delighted to show them the tremendous progress on both the EVLA and ALMA since they were last here in 2003. In honor of the hard work of all our employees, AUI will host the birthday lunch at the VLA site and a dinner for all employees during their visit. I hope that all of you are able to attend at least one of these events, and take the opportunity to interact with our visitors.

Jim Ulvestad

WELCOME

Drew Medlin, ALMA; Esteban Araya, Andrew Michael, Wei-Hao Wang, DSAA; Eric Chavez, Cody James, Tanner Oakes, Electronics; Brandon Benavidez, Elias Jojola, Engineering Services.

VLA SITE: 2006 MONSOON RAINS

The VLA has experienced very heavy rainfalls this year. The vegetation is much greener now than in years past. On August 4, 2006, the rainfall was recorded at 2.94 inches, most of which fell in a matter of a few hours. New roof leaks were revealed in buildings and antennas. New arroyos were created, washing out the fiber trenches

down to the fiber tape and nearly exposing the fiber itself. Several areas along the Array Track System were damaged where the ballast was washed away leaving an area of the track suspended in mid air.

Repairs and improvements have finally been made but the damage kept the Antenna Mechanics, Track crew, Carpenters and the Grounds Crew busy for some time.

Lew Serna

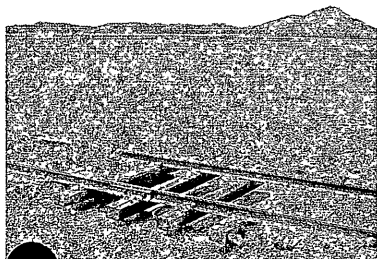
2006 JANSKY LECTURE

The forty-first annual Jansky Lecture that was to be given in Socorro, on October 6, 2006, HAS BEEN CANCELLED. The Lecture may be re-scheduled for sometime in 2007

CONGRATULATIONS

The ALMA Backend Electronics IPT (Integrated Product Team) awarded the Star Award to Silversun Sturgis in June 2006, for his design of a fiber optics antenna cable wrap.

The ALMA Photonics LO design group realized in September 2004, that a tightly-controlled fiber optic cable wrap was needed for the ALMA antenna in order to relay the ultra stable LO reference, from the base of the antennas through the azimuth and elevation bearings, to the ALMA receivers. Silver created an original design after a survey of the market, and completed assembly and initial testing of his design



Track Washout



Fiber Washout



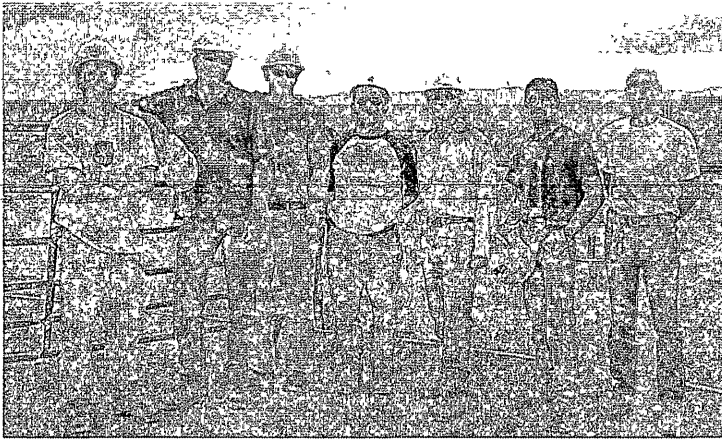
in a little over a year. The units have met with acclaim after successful testing in Socorro and at the University of Kent fiber optic labs. The success of the cable wraps removed a substantial risk from the LO Photonics design. It has saved the project an estimated \$250,000, in non-recurring engineering charges and other costs, to have an outside firm study the problem.

Silver is a graduate of NM Tech in Mechanical Engineering.

Clint Janes

SAFETY CORNER: MAKING OUR WORK AREAS SAFER

Rope Rescue: The VLA Rope Rescue team is under new leadership. Joshua Mitchell, the new team Leader/Chief, has been working hard on bringing the team up-to-date with rope techniques. Joshua took over the responsibilities back in February of this year. In May, he attended classes at the NM State Firefighters Training Academy and received a certificate in Rope Rescue Awareness and Operations in accordance with the NFPA (National Fire Protection Association) 1670 and 1001 standard. On August 23, 2006, Joshua



Left to Right: Bob Broilo, Ben Ramer, Joshua Mitchell, Rob Simpson, James Sullivan, Dominic Zamora and Gerald O'Connell

held an all day training session for the members of the rope rescue team on Antenna 26 at the master pad. The team practiced skills that they had learned during the monthly training sessions. The team practiced the use of Prusik cord, repelling, lowering a load, hoisting a load, anchoring, ascending and descending. The members that attended the training are listed in the photo above.

The team conducts a training session once a month, on new skills and techniques. If you are interested in being a member, please contact Joshua Mitchell @ telephone extension 7127.

James B Sullivan, NRAO Safety Representative

LIVING WITH THE PEOPLESOFT-P2P MODULE

A User's Perspective: In August 2006, NRAO installed the latest tools release for the PeopleSoft Procure to Pay (P2P) Module that included a number of enhancements. One of these enhancements will have a significant positive impact for purchase requisition approvers. As you may know, there are two types of attachments that can be entered on a purchase requisition, a header and a line attachment. The header attachment is basically an internal note to the Purchasing department. It typically contains the vender list or the sole source justification. The line attachments contain information for the vendors such as technical specifications and product descriptions. In the past, viewing the attachments while trying to approve a requisition was a test of patience as it required the approver to navigate through multiple screens and functional areas. With the new tools release implemented, approvers can now launch the Approve Requisition Area and with a single click, view either the header or line attachments while reviewing the requisition. This enhancement is a tremendous improvement that will allow those approving a requisition to focus on submitting clean,

complete requisitions instead of spending time navigating the P2P software.

Steven Durand

LIBRARY CORNER

Did you know

- You must notify the NRAO Library whenever you submit/have accepted a paper for publication?
- The NRAO Library provides Library Chat for those who prefer Chat to e-mail or telephone for questions? www.nrao.edu/library
- All IEEE standards are available via the NRAO Library Web Page? Go to www.nrao.edu/library and look under "Engineers" or "Astronomers - Resources."
- Full-text sources for many of the primary publications in Engineering, Physics, and Chemistry are available via the Library Web page. Look for "KNOVEL" and use general search or, for those who need mechanical, electrical, or chemical properties, use "Advanced Search."
- IEE and IEEE journals and proceedings are available electronically? See: www.nrao.edu/library "Engineers," or Astronomers - Resources."
- The NRAO Library needs YOUR feedback, to make your information needs a breeze.

Marsha Bishop

VOLLEYBALL AT NRAO

The volleyball tournament is done for 2006. We have our champions, a team who struggled mightily through seven games on the last evening of competition, Team ONE!

The name of this event was the Six Pack Attack, a three on three co-ed competition. Preliminary matches started after work, in the grass and sand on 25 July 2006, and continued through 20 August 2006. This season started and ended with eight teams. The monsoon season caused the play to be moved to the New Mexico Tech Gym for the finals. The rain did cause one day of match play to be cancelled. When the rain stopped, the nets went up and pick-up games were played despite the cancellation. These folks really like to play volleyball!

In the finals, Team ONE prevailed over the Berserkers, captained by Stian Aafloy. Team ONE fought their way into the championship round by beating the Old School team, captained by Hollis Dinwiddie. Team ONE was comprised of Paula Metzner, Hichem Ben Frej, Alexis Martinez (super sub) and Captain Matt Luce.

For their valiant efforts, these teams received very cool commemorative tee shirts and a six pack of cold liquid refreshment.

Many thanks to the PRA for equipment and funds, to Zia Graphics for final design of shirts, to NM Tech for use of the gym and to all those who came out and stepped out on the court to bump, set and spike.

This tournament was successful in many different ways. Getting out and meeting new people, exercise and finding out who wants to do it again, are just a few. For those who missed out and want to get some playing time in, please contact Doug Scott or Mario Torres. We'll be having pick-up games (Tuesday, Wednesdays and Thursdays) after work.

Doug Scott



Team ONE Hichem Ben Frej, Paula Metzner, Captain Matt Luce.