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NATIONAL RADIO ASTRONOMY OBSERVATORY  
CHARLOTTESVILLE, VA

# VLA/VLBA NEWSLETTER

SEPTEMBER WEATHER STATS	
HIGH	LOW
84.7° (3 <sup>rd</sup> & 4 <sup>th</sup> )	32.0° (9 <sup>th</sup> )
Total Precipitation: 2.32"	

From the World's Premier Centimeter Wave Radio Synthesis Telescopes

## AROUND THE VLA

Congratulations! Carl Oler has been added to the Track Crew as a regular full time member. Facio Gomez was hired to fill a vacancy in the Warehouse. The term of employment for Jay Apachito has been extended for two months and for Gerald O'Connell, three months. Employment has been extended for one month for Antenna Painters James Trujillo and Carlos Soto.

Congratulations to those who just passed their final tests for their Commercial Driver's Licenses: Frank Broaddus, Antenna Mechanic; Adrian Zamora, Antenna Mechanic; Gerald O'Connell, Carpenter's Helper; Jay Apachito, Track Crew; Ken Lakies, Servo Technician; and Brian Olney, Rio Grand Conservancy.

## STAR AWARD RECIPIENTS

Two NRAO Star Awards were presented by Mark McKinnon during the "End of Summer" lunch ceremony on Thursday, September 27. Tommy Montoya and Michael Zamora from the VLA Cryo Shop received Star Awards for



Tommy Montoya and Michael Zamora with their Star Awards

learning, under their own initiative, the skill of Stainless Steel Welding and washing the internal convolution of flexible metal tubing. A special technique is required in the welding of flexible metal tubing in order to achieve a 10-7 vacuum and helium tight hoses. Previous to this it was necessary to order each line fabricated to length at an average cost of about \$30 per foot. In a 3-year period around \$19,000 was spent on flexible lines. To date NRAO has realized a savings of \$20,000.00 in fabrication/repairs of flexible helium hoses and another \$2,000 in cleaning. Congratulations!

L. Serna

## HR ANNOUNCES NEW BENEFIT

NRAO has introduced the Employee Assistance Program (EAP). It is a free, voluntary, confidential service, providing employees with assessments, consultations, and referrals. It is designed to assist employees and household members in dealing with a variety of personal concerns such as depression, marital difficulties, concerns with children, alcoholism, and financial issues. Through the Employee Assistance Program, you can find productive solutions to personal problems and improve your health and well-being.

An EAP counselor, a licensed mental health professional, will listen to your concerns and identify key issues of your particular situation and assist you in devising a plan of action. You and all household members are welcome to call for appointments by simply calling (877) 622-4327.

A. Lewis

## NEW PERMANENT WORK SCHEDULE AT THE VLA

Over the last eight months the VLA has been on a trial schedule of four, ten-hour, workdays per week (4/10's) where special attention was given to safety and array support. There were

no problems or difficulties reported. The 4/10 schedule has been the normal "summer" schedule for many years and is considered a more efficient work schedule for work crews at the VLA. The 4/10 schedule also affords time for employees who work at the VLA to conduct personal business in town one day during the week. Leave time is charged at 10 hours per day, except during holiday weeks. With the new permanent schedule buses will arrive at the VLA at 0630 and will depart the VLA at 1630. Holiday weeks revert to 8 hour days and buses will arrive at the VLA at 0830 and depart at 1630.

L. Serna

## SITE & WYE NEWS

The Track Crew has completed replacement of the SR52 crossing. They are at present extending the "on-off" ramp at SR52 to provide space for track vehicles to get on or off the track at that point without having to use the highway in the process. Parts should soon be in for the Jackson tamper and as soon as Servo has time to install and test them, it should be operational. Paul Savedra and Jimmy Rexrode are looking at a used Nordberg spiker in Oklahoma and if it is in good shape, we will probably buy it.

The Carpentry Shop has completed the kitchen at the Control Building. Doors for the remodel job at the AOC are on order. The Control Building stairway will be repainted very soon. The Haz-Mat storage containment is done.

The Grounds Crew has completed the "long line potential" measurements. They have cut down some dead trees and pruned the juniper bushes at the Visitor Center. Soon, with the help of one person from Cryo and one Track Crew member, they will replace a manhole on the east arm.

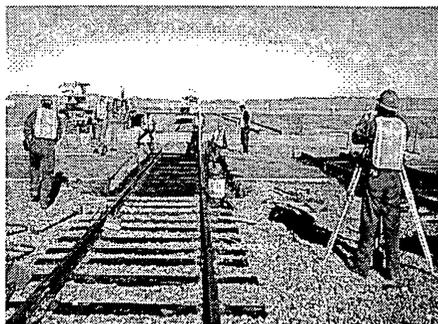
Richard Murillo and John Wall returned from Tucson with the crane Dale Webb acquired for us. A HUGE THANK YOU to Bosque del Apache (in particular Gary

Montoya) for all their help in getting a trailer to haul the crane. It is in great condition! Jimmy completed the engine overhaul stand and now the engine from the yellow MC-9 is being rebuilt. And wouldn't you know it, the MC-5 (Jurassic) had to be dead-lined. Oh well, here we go again!!

P. Lewis

## HWY 52 RAILROAD CROSSING

If you have ridden the bus to the VLA you probably remember being subjected to a spine-jarring jolt as the bus crossed the VLA rails on Highway 52. On September 18<sup>th</sup> the Track crew reconstructed the section of track crossing the highway. Traffic was detoured west of the highway where the Track Crew had previously removed the rails and prepared a temporary roadbed. The Track Crew then removed the rails and ties that crossed the highway and replaced them with new ones.



**The VLA Track Crew Working on the Highway #52 Rail Crossing**

After they leveled, aligned and tamped the new rails in place, they placed the crossing planks and spiked them in place. The Track Crew then spread cold mix that was delivered from Truth or Consequences. The next day, the State Highway Department oiled and rolled the cold mix in place. Soon the Track Crew will do all this again on the Durfee Canyon Road rail crossing.

J. Thunborg

## EFFICIENCY/ EFFECTIVENESS TIPS

How many times has it happened? You pack your tools, spare modules, and co-workers into your vehicle and head out from the AOC or your work center to close out a work order and you make the call to the Array Operator; "Can you park Antenna 3 so we can change out a module?" A few seconds later you get the bad news. "Sorry, I already have 2 antennas down and won't be able to release another until one of the other antennas comes back in service." Or

possibly this; "We've got lightning over the array and I can't let anybody on the antennas right now." A whole day or at least several hours wasted...right? Not necessarily. By following a few simple steps, and using a little creative thinking you can make the most of the time you spend working on problems on the array.

**Maintenance Day** – Logically, this is the best time to schedule any work requiring the parking of an antenna. The time allotted for weekly maintenance is generally Tuesdays and/or Wednesdays from 8:48 AM to 3:17 PM. During those times, you can generally have unrestricted access to all antennas. Of course not all work can be deferred until maintenance day, but scheduling technicians for major tasks during these times will practically guarantee work without interruptions.

**Call the Operator** – For those times when you must work on antennas on days other than Maintenance Day, call the operator at extension 7180 to see if there is a "best" time to perform the work. The Operator is your information source for these types of questions.

**Thunderstorm Season** – From late spring to early fall, thunderstorms are a common occurrence in New Mexico in general, and at the VLA in particular. Again, the operator is a good source of information for planning purposes.

**Safety** - This should always be the prime consideration for any job. The operators are responsible for maintaining traffic flow and clearing antennas during potentially unsafe conditions. Constant contact with the operator before, during, and after completion of work on the antennas is a must. If you don't get an immediate answer to your radio or telephone call, please be patient and try again in a couple of minutes. The operator will respond as soon as possible. When the operator tells you to clear an antenna due to lightning, high winds, or operational requirements, stop your work and assume a safe posture.

**Flexibility** - Using creative scheduling can also help you get the most out of allotted maintenance times. If you have several people in your shop, you can stagger lunch times so that half of your people are working while the other half are eating. That way, there is no "dead" time when nothing is getting done. Shifting your hours slightly on maintenance days to coincide with allotted times will also help you make the most of the available time. These, and other steps can help you utilize your people resources effectively, work safely, and reduce your work order backlogs.

J. Campbell

## OCTOBER SKIES

Walking to work recently, in the early morning, I was struck by being able to see Venus, Jupiter and Saturn in the pre dawn sky. But, Saturn and Jupiter are about to become evening objects. By the end of the month, Saturn will rise not long after the final light of twilight followed by Jupiter about two hours later. Right now Saturn's rings are nothing short of spectacular in a small telescope. Jupiter, at magnitude -2.4, is very bright and should be easily viewed with a modest pair of binoculars.

Venus will continue to shine brilliantly in the early morning sky. During the final week of the month Venus can be found keeping company with the planet Mercury about 40 minutes before sunrise.

Mars continues to shine, but not quite so brilliantly as the Earth begins to pull away and put more distance between the "Red Planet" and us. This will add some challenge to finding surface features such as the polar ice caps.

If you're really into planet hunting, find a good sky chart and locate the constellation Capricornus (the Sea Goat). Both Uranus and Neptune will spend most of the month in this constellation. Neptune, at magnitude 7.9, can be found between the stars Omicron and Upsilon Capricorni. Uranus, much brighter at magnitude 5.7, can be found just west of the star Delta Capricorni, the brightest star in the Sea Goat.

October also is the month for the 8<sup>th</sup> annual Enchanted Skies Star Party (ESSP) which takes place from the 18<sup>th</sup> through the 21<sup>st</sup>. This year's keynote speaker is Dr. Alan Hirshfeld from the Univ. of Massachusetts. His recent book, *Parallax: The Race to Measure the Cosmos*, has resulted in his appearance on more than a dozen TV and radio programs.

Dr. Hirshfeld will give his lecture, which is open to the general public, on Friday evening, the 19<sup>th</sup>, at 7 p.m. in Macey Center. Following the lecture, there will be an open house at the Etscorn Campus Observatory. The public is also cordially invited join star party participants at the Campus Observatory that evening. This will be a great opportunity to see a lot of great amateur telescopes and get in some deep sky observing in the bargain. For more ESSP information check: [www.socorro-nm.com/starparty.html](http://www.socorro-nm.com/starparty.html).

J. Spargo