

VLA/VLBA NEWSLETTER

From the World's Premier Centimeter Wave Radio Synthesis Telescopes

WEATHER STATS		
	HIGH	LOW
March	69° (27, 28, 29)	10° (3rd)
Off the air 17.6 hours due to weather, (wind and snow) during March.		
L. Brothers		

AROUND THE VLA

The VLA summer schedule of four ten hour days per week begins on April 10. The VLA buses will leave the AOC at 5:30 a.m. and Magdalena at 6:00 a.m. They will still leave the site in the afternoon at 4:30.

A luncheon was held at the Eagle Guest Ranch in Datil on March 16 for employees who had used no sick leave in 1999. Attending from the VLA were Stella Gutierrez and Paul Savedra. From VLBA Pie Town was Kelly Gatlin.

Charley Chavez, Steve Aragon, Jim Rexrode, Jon Thunborg, and Patty Lindsey attended a seminar called "Excelling as a First-Time Manager or Supervisor" in Albuquerque on March 13. Many new skills and ideas were presented that should be useful at the VLA.

MORE KITT PEAK ADDRESSES

The article in last month's VLA news mentioned a new shipping address to the KP VLBA location. The address shown in the article was for mailing. If one desired to ship something by FedEx, a different address is required. This is:

National Radio Astronomy Observatory
NRAO Kitt Peak VLBA Station
1/4 mile off State Route 86 at Route 386
Tucson, AZ 85735

Shipments via UPS and motor freight should be coordinated in advance with the station technicians. Call 520 318-8778.

S. Lagoyda

AAB NEWS

When Antenna #26 was moved into the Barn for a scheduled overhaul, the Focus Rotation Mount (FRM) failed the repeatability test. This test determines the condition of the FRM and if it will do what

it was designed to do. After the Antenna Mechanics replaced gears and cleaned the mount, another repeatability test was run and again it failed. The decision was made to remove the FRM and do a complete overhaul. This was also a good time to inspect the bearing races installed 10 to 15 years ago. We found the bearing races in good condition. We found one roller bearing bad and two others had rust accumulations. With all the people involved, we put in at least 600 man hours of labor and it cost close to \$3,000 in parts to repair. Because of the high cost and the large amount of hours we have decided to repair the FRMs as they fail. The last repeatability test done was successful and the antenna is back in operation.

Thanks to Dennis Polyard (and his many years with the VLA) who reported Antenna #1 did not sound right while it was being stowed. We were called out to inspect it and found that Azimuth gearbox #2 had separated from its mounting place. We are now in the process of repairing it. More on that in the next newsletter.

Now for the good news. We have at the AAB a person (who wishes to remain nameless) who aced a test in Computer Class. All the other employees taking the Computer Class are doing well also.

R. Molina

SITE & WYE NEWS

The weather stayed dry long enough to dry the north arm for the Track Crew to begin the French drain from CN-8 to 9. They started on Wednesday the 15th. You guessed it, it began to snow and rain on the 21st! However, they continue to work. Si, webbed feet. At least they have a good excuse to wait on the north arm, the new (@#%) track tamper (fresh toy) has arrived. Socorro Electric is going to install new underground feeder lines on the east arm at

BE-7. Godin, Johnny and Jaime have begun the excavation for the casements across VLA power, waveguide, wyecom and track. Of course, the excavation began the day it started to snow!

Godin and Johnny have begun attempting to salvage our Ponderosa Pine trees. They have had sporadic help from several people: Patty L., Jon T., Paul S. and Co., Charley C, and others. The work done around the trees is a great improvement, but for some of the trees it may be too late. A big thank you to all who helped.

Rexrode and Co. have been very busy. Now that the new tamper is here and they have had a chance to look it over, Jim and Rich have decided that they are going to give that piece of equipment to Tony. Tony just smiled (between tears and sobs) and said "OK." Querias jale!

Charley generally stays pretty busy, but now with his new "crew", he is really kept hopping. If he keeps going in circles, someone will nail his other foot to the floor. Buen jale, Charles.

P. Lewis

HARD HATS

Please review your safety manual regarding hard hat usage. Wearing hard hats is mandatory in the following areas: in all outdoor work areas at the VLA Site (see 7.1.1); when working at or near any construction area including trenching operations.

7.1.1 Hard Hats

In addition to the areas listed in Section 2.18, the following policy is in force for all ES Division Personnel: Hard hats must be worn at all times in all work areas including while working on indoor construction projects. Exceptions include areas of obvious low risk such as offices, coffee areas and low-risk shops such as the Servo, Machine, Carpenters, Electrical, Cryo, and Auto Mechanics shops. This rule also applies to all visitors to VLA work areas.

G Cole

INGENUITY

Gary Duff choked when Lambda Power Supply Company said they wanted over \$700 each for replacement power supplies. The Lambda power supplies at the VLA are old and the company doesn't want to fix them anymore. The power supplies are a low-noise linear design best suited for the VLA RF-noise sensitive environment. So Gary bought an AMREL Programmable Electronic Load to aid in repairing the power supplies in house. Once Gary completes a LabView control panel for his computer, he can conveniently troubleshoot the old supplies as they fail. The AMREL can simulate up to 300 W dissipation by switching a resistor bank. Gary expects that the \$2550 instrument will pay for itself in the first four power supply repairs.

C. Janes

A NOTE FROM PERSONNEL

The following list of events should occur after an employee accident. It's important to follow these procedures so that NRAO stays in compliance and the employee maintains his or her rights under the Workers' Comp laws. Please read the Workman's Comp poster, which is kept on the bulletin board.

1. First and foremost, be sure the employee receives appropriate medical attention. If it is a minor injury, the employee should either see a site EMT or be directed to Socorro Medical Associates. If the injury is more severe, the employee should be transported to the emergency room or wherever is most appropriate (e.g., air evacuation). To ensure that the doctor is informed, the employee should always tell the provider when it is a Workers' Comp visit, to ensure it is billed correctly. Employees requiring prescription medication resulting from an accident, should go to Big Value Pharmacy (Furr's does not accept Worker Compensation claims) and inform them to bill NRAO's Worker Compensation carrier for the charge. Note: The employee should NOT use the RxPrime Insurance Prescription card for Workers' Comp Charges.

2. Notify Personnel (Allen or Theresa) or Skip Lagoyda immediately by phone of injuries requiring outside medical attention. A representative from Personnel will notify the provider and send authorization to treat

the employee by facsimile. The fax will contain billing information for the provider.

3. An NRAO Accident/Incident Report must be completed for any accident immediately by the employee or supervisor and sent to the Safety Officer for review, investigation and recommendations.

4. If an employee has any sort of accident (whether or not they think they are injured and need medical attention!), that EMPLOYEE must complete a NOTICE OF ACCIDENT form (attached to Worker's Comp posters on bulletin boards) within 15 days of that accident. The supervisor should be responsible for ensuring that this happens. Both the employee and the supervisor must sign the form. The employee should keep a copy and then send the original to Personnel. The form is important, because it is the only signed document that actually comes directly from the employee and ensures their rights to receive Workers' Comp benefits (if needed).

A. Lewis

PIE TOWN WATER SUPPLY

Pie Town was not awarded the grant applied for earlier, but another application, for a different source of funds, is underway. Preliminary to receiving money for the project, Pie Town was required to commission an engineering study on the overall project. This entailed requests for bid and selection of an engineering company. It seems that this portion of the process has been completed and approved by the County Commission.

Apparently the immediate next step is to start the engineering process, to determine the best approach for replacing the existing water system. This is expected to begin quite soon.

Also, word is that some test wells were drilled to the North and West of town, and they were good producers. It's unknown if new wells will be used for the village water system upgrade, or if an arrangement will be worked out to continue with the existing well(s) on Mr. McKee's property.

K. Gatlin

THE NEW AFJ00

For a number of years now, work has been proceeding to bring perfection to the crudely

conceived idea of a device that would not only supply inverse reactive current for use in unilateral phase detractors, but would also be capable of automatically synchronizing cardinal grammeters. Such a device is the AFJ00. Basically, the only new principle involved is that instead of power being generated by the relative motion of conductors and fluxes, it is produced by the modal interaction of magneto-reluctance and capacitive directance.

The original device had a base-plate of pre-fabulated amulite, surmounted by a malleable logarithmic casing in such a way that the two spurving bearings were in a direct line with the pentametric fan. The latter consisted simply of six hydrocoptic marzelvanes, so fitted to the ambifacient lunar waneshaft that side fumbling was effectively prevented. The main winding was of the normal lotus-o-delta type placed in panendermic semi-boloid slots in the stator, every seventh conductor being connected by a non-reversible tremie pipe to the differential girdlespring on the "up" end of the grammeters.

Electrical engineers will appreciate the difficulty of nubing together a regurgitative purwell and a supramitive wannel-sprocket. Indeed, this proved to be a stumbling block to further development until, in 1999, it was found that the use of anhydrous nangling pins enabled a kryptonastic boiling shim to be tankered.

The early attempts to construct a sufficiently robust spiral decommunicator failed largely because of a lack of appreciation of the large quasi-piestic stresses in the gremlin studs; the latter were specially designed to hold the roffit bars to the spamshaft. When, however, it was discovered that wending could be prevented by a simple addition to the livening sprockets, almost perfect running was secured.

The operating point is maintained as near as possible to the h.f. rem peak by constantly fromaging the bitumogenous spandrels. This is a distinct advance on the standard nivelsheave in that no dramcock oil is required after the phase detractors have been remissed.

Undoubtedly, the AFJ00 has now reached a very high level of technical development. It has been successfully used for operating nofer trunnions. In addition, whenever a barescent skor motion is required, it may be employed in conjunction with a drawn reciprocating dingle arm to reduce sinusoidal depletion. The author is deeply indebted to IEEE Grid, April 1988, for early research on this study.

A. Fool