

# NRAO NM NEWS

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## NOTES FROM THE AD

The last several weeks have been difficult ones for NRAO staff and former employees. First let me express my condolences to the family and friends of Jack Campbell, Jay Apachito, and Dave Archuleta, all of whom passed away recently. We share your sense of loss, and offer our support and sympathy during trying times.

Second, NRAO extends best wishes to all employees and students who suffered damage to vehicles, homes, and other possessions during the violent hailstorm last week. We know that both the financial damage and the personal inconvenience are difficult to deal with, but we certainly are grateful that no NRAO employees were hurt. We hope that all supervisors will be understanding of any need for employees to take time off to interact with insurance adjusters, window repair shops, and other essential business relating to the hailstorm. In addition, we thank the employees who kept the operations going in the hours after the storm, despite the damage to their own personal property.

On a more positive note, I'd like to congratulate all those who were associated with the replacement of the subreflector at the Brewster VLBA station. This includes the work to measure and resurface the "new" subreflector (previously mounted at Pie Town), as well as the actual process of mounting and aligning the subreflector during the August maintenance visit. The 7mm aperture efficiency at Brewster nearly doubled with the replacement subreflector, going from 30% to 50%, with an improved gain curve as well. This will provide a significant benefit to our current high-frequency observers, and also provides reason for us to make an effort to mount a 3mm system at Brewster some time in the next year.

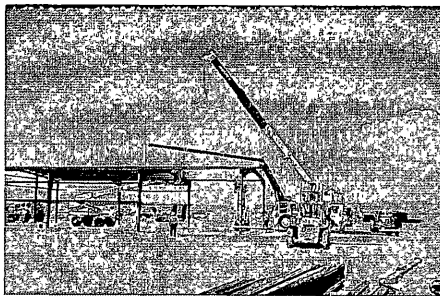
Jim Ulvestad

## WELCOME

Silvius Sturgis, Sylas Ashton, ALMA; Brian Willard, Array Operations; Shawn Hughes, ES; Vincent Fish, Edward Boyce, Jean-Pierre Macquart, DSAA; Andrew Baker-U of MD, Neal Miller-Johns Hopkins, Chi (Teddy) Cheung-MIT, DSAA-Jansky Post Docs-Remote.

## WHAT'S UP AT THE VLA

A new 5,000 square foot building, known as the EVLA Cold Storage Building, has been erected at the VLA site. This building was



Starting to build  
Photo courtesy of Kelly Gatlin.

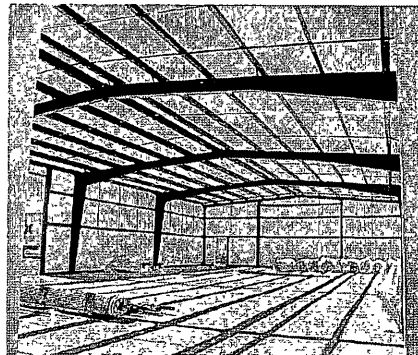
funded by the EVLA and ES Division. As the name implies the building will initially be used to store bulk material and equipment purchased for EVLA antenna outfitting. Bulk purchases are made primarily to save money. Additionally, bins, modules and other component parts requiring

assembly will be stored in this building. Warehouse personnel will manage and operate the storage building during the antenna outfitting phase of EVLA. After antennas have been outfitted and the building is no longer needed to store bulk EVLA material, the building will be turned over to ES Division to be used for shop space.

Erecting the building in-house, using ES Division employees instead of hiring a contractor saved several thousands of dollars. We estimate a savings of over \$80,000 on concrete, building erection, and

sprinkler installation.

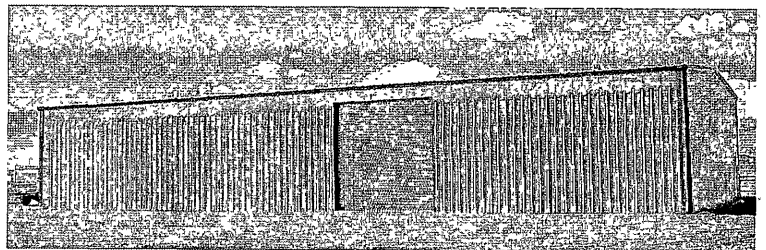
Charley Chavez and his crew, Gerald O'Connell, Joe Sanchez and



Work in Progress  
Photo courtesy of Guy Stanzione

Richard Torres built it from the ground up. He also had some help from Godin Otero, Johnny Gonzales and four crane operators, Martin Lopez, Paul Savedra, Richard Murillo and John Wall, depending on which operator was available at the time one was needed. Shane Baca will do the sprinkler work and Jaime Montero will do the electrical work in the building.

Lcw Serna



EVLA Cold Storage Building  
Photo courtesy of Guy Stanzione

## VLA TO RETIRE 9-TRACK TAPES

It was one year ago that we released the disk archiving system and John Benson created online access via the web page (<http://archive.nrao.edu/archive>). The average download rate from the



The National Radio Astronomy Observatory is a facility of the National Science Foundation operated under cooperative agreement by Associated Universities Inc.

on-line archive is 100 Gbytes/month, of which approximately 50% are data that are in the public domain, and the other 50% are recent VLA observations.

The web page is updated daily at UT Midnight, after which an observer may retrieve their data. If data are required before the web page is updated, online fillm may be used from within NRAO to retrieve data.

Instructions for online fillm are in:

[http://www.aoc.nrao.edu/new\\_computing/fillm.htm](http://www.aoc.nrao.edu/new_computing/fillm.htm)

During this year, we have also been testing the use of DAT tape drives on the Modcomps, to replace the tiring 9-tracks. This system has proven to be more economical and reliable; a DDS-3 tape can easily contain a full week's worth of VLA data.

By the end of 2004, we will retire the 9-track data recording system. The online archive system will be considered the primary source of VLA archive data and will be backed up by two DAT drives, one running on each of the main Modcomp computers. The DAT tapes will be changed on maintenance days, transferred to the AOC for verification, and one copy returned to the VLA.

Of course, this means that the familiar Exabyte tapes will no longer be available in the tape vault. These will be replaced by the weekly DAT backup.

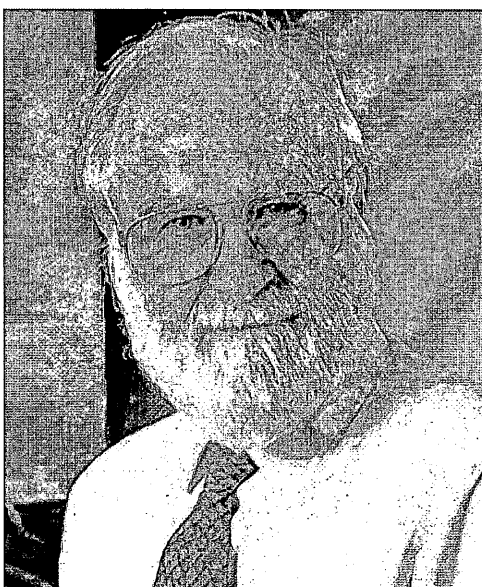
Many thanks to all who have made this transition possible, especially to Ken Sowinski, John Benson and Wes Young, for their development work, to JC Campbell and all the VLA Operators who have struggled patiently through our testing.

If you have any questions about the data archive process or tape availability, please contact Peggy Perley or Pat Van Buskirk.

P. Van Buskirk

## 2004 JANSKY LECTURE

This year, the thirty-ninth annual Karl G. Jansky Lecture will be given by Dr. Ronald D. Ekers. Ron was Assistant Director at the NRAO, in charge of the Very Large Array from 1980 to 1987. He was Foundation Director of the CSIRO's Australia Telescope National Facility from 1988 to 2003, and an Australian Federation Fellow.



Ronald D. Ekers  
2004 Jansky Lecturer

Professor Ekers also is President of the International Astronomical Union, the world's professional body for promoting astronomy through international cooperation.

This year's lecture entitled " **Paths to Discovery,**" will be held in the **Macey Center Auditorium, beginning at 8:00 p.m., on Wednesday, November 10, 2004.** You and your families and friends are invited

to the lecture and to a reception immediately following.

Ekers is being honored for his long series of accomplishments in radio astronomy, especially in the study of radio galaxies. He has been an innovator in the development of new techniques and instrumentation for radio astronomy.

## Making Our Work Areas Safer : "Misses and Near Misses"

In accident prevention, a lot of near misses mean a sure hit sooner or later. That is why safety-conscious people keep a close check on minor accidents and near misses. They know that a fraction of a second or a few thousandths of an inch may be all there is between a close call and a serious accident.

When a worker has a close call, people usually say, "Well, he was lucky that time." That also means: He may not be lucky the next time.

It's important to get quick treatment for any near miss injury. There's a twofold reason. First, it helps to ward off serious complications that can come out of minor cuts and bruises. Second, it impresses everyone with the importance of simple safety precautions.

Near misses should be investigated as thoroughly as real accidents. What were the circumstances surrounding the near miss? Is there a safety rule covering the situation? If so, was the work properly instructed in the rule? If not, is a new rule needed? Were safety devices used properly? What does the worker have to say about the near miss? Are there some personal factors that may account for the slip? Is the person a "repeater"? Does he/she frequently have near misses and accidents? How can you prevent lapses of safety consciousness? Brush up on safe practices. Follow safety rules. Accept the notion that every near miss is a caution sign.

Unlike the ballplayer sliding into second base, you are never, "safe by a mile." Near misses are important danger signals. They are symptoms of unsafe acts or unsafe conditions. Pay attention to them to prevent more serious mishaps.

In accident prevention, a miss is not as good as a mile.

See the Site Safety Officers for additional safety training on this topic.

James B. Sullivan, NRAO Safety Officer

## OCTOBER SKIES

This month the pre-dawn skies will offer the best views of the brighter planets. Saturn is first up, rising in the east around midnight on the 31<sup>st</sup>, when we quit daylight savings time, Saturn will rise as early as 10:00 p.m. Venus will continue to outshine all others and rises about three hours before sunrise.

By late in the month Jupiter and Mars will both reappear in the early morning skies just shortly before dawn. By the end of the month Jupiter will be easily visible about 45 minutes before sunrise. As the end of the month approaches, Venus will draw ever nearer to Jupiter heading towards a magnificent conjunction in early November.

Mars will also reappear from behind the sun and by the 31<sup>st</sup> will appear low in the east about 45 min before sunrise. You may need binoculars to find it as it passes three degrees north of the bright star Spica in Virgo.

The big show this month will be a total lunar eclipse on the 27<sup>th</sup> that will be visible to virtually all of North America. The moon will be last quarter on the 6<sup>th</sup>, new on the 13<sup>th</sup>, first quarter on the 20<sup>th</sup> and full on the 27<sup>th</sup>. On the 27<sup>th</sup>, partial eclipse will begin at 7:14 p.m. Mountain Daylight Time, with totality beginning at 8:23 p.m. and lasting until 9:45 p.m. This eclipse should be a dandy! Look for the reddish coloration of the fully eclipsed moon. This is the result of sunlight bent by the atmosphere around the edge of the Earth and into its shadow.

As mentioned before, daylight savings time ends on the 31<sup>st</sup>. Don't forget to set your clocks back one hour (Fall Back!) on the evening of the 30<sup>th</sup>.

October is also time for the 11<sup>th</sup> annual Enchanted Skies Star Party. Running from the 5<sup>th</sup> through the 9<sup>th</sup> this year, it features an expanded format and includes an observing session at 10,700 ft. at the site of the Magdalena Ridge Observatory. For more information contact the Socorro county Chamber of Commerce at 835-0424 or visit the star party web site at: <http://www.socorro-nm.com/starparty/>

Jon Spargo, New Mexico Tech Astronomy Club