20th Anniversary of the First Fringes at the VLA

A ceremony at the VLA in February marked an important anniversary for that instrument and also provided a fascinating look back to a time when things were far different for NRAO staff working on the Plains of San Augustin.

On February 18, 1976, two VLA antennas were used together as an interferometer for the first time, an event known as “first fringes.” The twentieth anniversary of this event was celebrated on Feb. 16 at the VLA site. The anniversary ceremony brought together many of the people who were busy building the VLA two decades ago. Even people who could not attend the ceremony sent their greetings. Miller Goss read greetings and recollections from Paul Vanden Bout, Dave Heeschen, Gareth Hunt, and Ernst Raimond.

Reminiscences by VLA pioneers pointed out the striking difference between the relatively quiet, routine operation of the VLA today and the semi-controlled turmoil of the construction era. Two decades ago “was a time of great ferment here on the site,” said Barry Clark. Added Peter Napier, “Things are so good now that it couldn’t have been imagined back then.”

The milestone represented by the achievement of first fringes with VLA antennas was very important, said Jack Lancaster. “It proved that the VLA design was sound” at a time when continued funding for the project was a very real concern. With first fringes, the VLA “first started to seem real,” Clark said.

Twenty years ago, the control building at the VLA had yet to be built. Test observations were run from a trailer, which had been equipped with a single window after great agitation on the part of Jon Spargo. As telescope operator, Spargo insisted that he wanted to see the antennas to ensure no one was on them before they were moved. The digital correlator also was not built, and Clark had persuaded Ray Escoffier to build a preliminary, analog correlator to try to operate the first VLA antennas as an interferometer.

Test observations, according to Clark, usually had to wait until the normal work day was over. “We harassed the engineers to try to put things together at

(continued on page 2)

Ken Cottrell

We were saddened to learn of the death of Ken Cottrell from acute cardiorespiratory arrest on January 8, 1996. He was 60 years old. Ken came to the NRAO as a telescope operator in Green Bank in 1967, a time in which the operations of all three telescopes were becoming increasingly demanding. He operated at the 300-Foot Telescope for more than 10 years before moving over to the 140-Foot Telescope. He retired from the NRAO on disability in 1985.

For the many astronomer/observers who observed with him, Ken was a popular operator known for his meticulous observing logs done in precise block lettering. At a time when the astronomer’s only record of the observations was the operator’s ledger, his careful attention to detail was both important and widely appreciated. Ken made a valuable contribution to the success of the Observatory and we regret his loss.
First Fringes (from page 1)

quitting time so the astronomers could try to observe at night. "On one of those nights twenty years ago, we finally had enough parts working to get first fringes."

Despite the difficulties and challenges of building a trailblazing instrument, those who were part of the NRAO-New Mexico staff remembered the time two decades ago with considerable humor. After twenty years, Napier could even recall major mechanical problems with a smile on his face. Spargo brought a humorous outlook to many aspects of the early VLA days, from the staff's being overwhelmed by the public response to the first open house, to using the computer trailer's roof vibrations as a wind-speed indicator.

With Jack Lancaster, the AD of the VLA Construction Project, safely retired, Spargo decided that it was safe to let Jack in on a little secret. In 1975, Jack had driven to the VLA site from his office in Socorro to find no one working on the antenna then being outfitted. He sought out the supervisors, Spargo and Victor Herrero, and chewed them out. Though technicians were working in the shops on the antenna's equipment, Jack left no doubt that he wanted to see people working on the antenna.

From that point on, Jack always saw people working on the antennas when he arrived at the VLA site—because Spargo had persuaded Jack's secretary to make a warning call whenever Jack left the office for the site!

Going Bananas? by Gareth Hunt

NRAO has a few employees whose job it is to work with the community as representatives of the NRAO. Each of these individuals handles the day-to-day external communications that are essential for the smooth operation of the Observatory. We thought you might like to know more about these employees and the types of problems and issues they deal with. This is the first in a series of articles which will focus on the duties of these individuals and their work.

"Help, Charlottesville, I have an AIPS problem!" Er, well, your local guru is Pat Murphy. See him for all of your AIPS questions: performance queries, general set-up problems, etc. Well, of course, that's if you can get a moment when his ear isn't attached to a phone responding to the same queries from MIT, CalTech, Jodrell Bank, or a host of other sites around the world. "He's on the phone and I can't read my DAT tape." Oh, well, it'll only be a few moments (if you're lucky). Patience. But it may be preferable to send him e-mail.

"The Midnight Job at CalTech isn't working." Did you send e-mail to Pat Murphy? He responds very quickly to e-mail. If you describe it well, it'll give him a better shot at helping you.

"I can't install the 15JAN96 version of AIPS on my SGI machine." Did you talk to Pat Murphy? or send him e-mail?...

Pat, I see you're off the phone, could you install the new version of netscape for me on the all of the architectures here? You've just done it? Oh great, and by the way there's a line of customers waiting for you outside.

Pat Murphy

"I got my first question answered, but Pat's not answering his phone." Oh dear, it's after hours, he's gone home. Well, send him e-mail. He always checks his e-mail from home in the evening. If he can help you from home he will. [Thank goodness!]

Pat Murphy is one of the employees whose work is mainly with those outside the NRAO. He is currently responsible for the smooth running of AIPS, especially at non-NRAO sites and in Charlottesville. In that capacity, he is responsible for the installation procedure for AIPS, the routine update of AIPS at non-NRAO sites (the "Midnight Job" above), and whatever difficulties AIPS users may have with the program.

The questions and problems he deals with are varied. They keep Pat quite busy. For example, if AIPS is needed on a new type of computer, Pat figures out how to do it. He also doubles as a backup computer system administrator and is one of a select group of employees who has been employed at three of the major NRAO sites.

For our scientific community, Pat Murphy is a valuable contact.
Scoping the sites...

Charlottesville

- Charlottesville employees "adopted" two local families for the holidays through the Salvation Army. Each was a family of five, including parents and three children. Employees purchased coats, shoes, sleepwear, jeans, and shirts, as well as toys for each of the children. The families also received several boxes of groceries, including a ham and a turkey. Amy Shepherd, Warren Richardson, and Pat Smiley played Santa, delivering the wrapped gifts and foods items just before the holidays. Amy said that both families were appreciative of the gifts.

- The Chili Cook Off last fall was well attended by Charlottesville employees. There were 8 entrants, and each was unique. Tony Marshall won first place. Other chefs include:
  
  Matt Dillon - best use of road kill;
  Ed Fomalont - most like mom’s;
  Steve Mahle (Wendy’s husband) - the last and the least (Steve spilled it in the car and had to return home to clean up);
  Monroe Petty - the most "personnel" chili recipe,
  Bill Porter's GBT entrant - the Greatest Biggest Tasting chili;
  Warren Richardson - chunkiest; and
  Al Wootten - hottest chili east of Pecos.

There wasn’t a bite of chili left at the end of the evening!

Green Bank

- Guests of the Green Bank cafeteria and Residence Hall are seeing some new faces. Sylva Warner took Melvina Shinnaberry’s place when Melvina retired in 1994. When Maxine Foe retired last year, Louise Riley was promoted to the lead position. Sherry Sizemore and Barbara Taylor were both promoted from part-time call-in to regular full-time.

Look for some new items on the menu too! Becky Warner says they are always looking for healthy recipes.

Socorro

- The New Mexico Personnel Recreation Association would like to thank the departing board members (Dave Adler, Bob Broilo, Brent Willoughby and Patty Lindsey) for their work and efforts in helping organizing all of the NMPRA sponsored activities. We would also like to take this opportunity to thank all of the people who volunteer their time to help putting together the various activities for the NRAO staff.

Welcome to the new members of the NMPRA Board: Stephane Beland, Mary Ellen Chavez, Tom Frost, Chris Garcia, Richard Murillo, Steve Tenorio and Esther Vigil. If you have questions, requests, ideas concerning the NMPRA, please contact any one of the board members.


There was a bite of chili left at the end of the evening!

Tucson

- Last month, Tucson upgraded its phone system. While this upgrade does not offer true direct dial capabilities, it does provide callers with more direct access to the Tucson staff. Each employee has a 3-digit extension which may be dialed after reaching the recording at the main number. The upgrade also makes it possible for callers to leave voice messages.

Tucson employees can be reached by first dialing the main number — (520) 882-8250. Wait for the recording to...
Quick reaction to flooding prevents further damage
by Mike Holstine

On Friday, January 19, through the early morning hours, warm temperatures and a heavy rain (over 2 inches in about 6 hours), caused the 2.5 foot base of snow in Pocahontas County, WV to melt. This total water runoff subjected the County to its second "500 year flood" in 11 years. The County was subjected to a flood level just 12 inches or so higher than this one on November 15, 1985, in the town of Marlinton.

Damage to the Green Bank site from the most recent flood was minimal, except for a blown underground 4160V power feeder which served the Interferometer building, all 85' telescopes, and the new 20 Meter. Additionally, flooding occurred at the Jansky Lab. An EOS was called for the GB site, nevertheless quick work by Richard Fleming, Ron Monk, and Wes Sizemore minimized the flood water damage in the building. Pete Chestnut and Rusty Taylor's actions at the Interferometer saved the equipment from damage due to the electrical problems. Work throughout the day on Friday by Rusty Taylor and several of the Plant Maintenance staff located the power line section that was damaged and the Interferometer was backfed from the old 300' power feed to restore operation.

Cleanup of the Jansky Lab was completed on Saturday by the janitorial staff. Even though the flooding was discovered early Friday morning and an immediate salvage operation was performed, damages due to water in equipment, materials, supplies, carpeting, and absorber material in the downstairs conference room totaled almost $20,000.

The cause of the flooding problem was easily discerned. Work by the contractor on the new Lab Addition had severed the Lab basement drain line last summer. Although the line was repaired and checked, a joint of pipe 7' downstream of the break had pulled apart during the excavation. The soil around the pipe had hardend over time so that even though the joint had separated, the soil maintained a tubular cross-section and the separation had gone undetected. Over the months and rains that followed, the soil tunnel collapsed and filled the pipe with mud and gravel, plugging the drain line out of the basement.

Damage responsibility was accepted by the contractor, the line has been properly repaired, and hopefully, we will have things back to normal soon.

Health news

"Eat your veggies!"

Everyone knows the advantage of eating healthy, low-fat foods. "Eat your veggies" is great advice, but it is not very easy to follow if you find the taste boring compared to convenience meals and restaurant foods. Below are some ways to add some zip:

1. Spice things up. Give vegetables a lift by using unusual herbs and spices for flavoring instead of oil, butter, or margarine. Some good choices are curry powder, cajun spices, or herbal seasonings. Spice up your fish and lean meats too.

2. Add some juice. Use flavored liquids to marinate, steam, or stir fry vegetables and other foods instead of just cooking them in water. Try fruit juices, low sodium bouillon, or seafood stock. Tomato and lemon juice adds zest to both fish and poultry dishes.

3. Add international flair. To add some variety to low-fat meals, use condiments from around the world. Try adding salsa, Japanese green mustard, or Vietnamese fish sauce. Many varieties are sold at supermarkets and specialty food stores.

4. Hold the mayo. Mayonnaise is high in fat and calories, so use mustard instead. For a low-fat mayo substitute, try adding spices, onion, or garlic to mashed avocado. Avocado is high in monounsaturated fat—like olive oil—that may help lower "bad" cholesterol. One tablespoon has only 25 calories and 2 grams of fat, compared to 100 calories and 11 grams of fat in regular mayonnaise.

5. Do a munchie makeover. Satisfy between meal cravings with selections from this hold-the-fat snack pack: air-popped popcorn sprinkled with Mexican seasoning, pita chips with salsa or plain nonfat yogurt blended with fruit and cinnamon, rye crisps or rice cakes with a thin spread of natural peanut butter or low-fat cheese.

6. Use healthier recipes. Look for new recipes and meal ideas in one of the many healthy eating cookbooks available at bookstores or your local library.

If you have healthy food or snack ideas that you would like to share with readers, contact the editor at (804) 296-0265 or email wmahle@nrao.edu.
Your new paycheck
The switch to ADP by Jim Gibb

In mid-June 1995, NRAO began converting its personnel and payroll process to ADP (Automatic Data Processing). This is a very sophisticated system and a great deal of thought, time, and effort went into this project. Several Divisions were called on for their expertise and without their assistance, an undertaking of this magnitude would not have been successful. Toby Mann and Christine Plumley provided the spark that kept the payroll part of the project on track, while Billie Rodriguez was instrumental in setting up the Personnel side. This is an Interactive Personnel and Payroll System and many people are working together to bring about a successful conversion.

As with any new system, there are a few things that are done a little differently. Vacation, Sick Leave, and Doctor Visits are listed in hours rather than by days on the pay stub. Also, for those of you who are taxed on imputed income from your life insurance (see article entitled, "Portions of your Group Life Insurance benefit may be taxable" in the Fall 1994 issue), Federal and State Taxes will no longer be taken out on this income per IRS Regulation IRC Sec. 3401(a)(14). Since this income will be reported as "Other Compensation" on your W-2 Form and you are responsible for the tax on this income, you may find it necessary to adjust your withholding allowances.

Remember: It is important that you turn in your Time and Leave Reports promptly each pay period. As previously mentioned, changes in your payroll status (marital status, withholding allowances, benefit changes, direct deposit information, etc.) should be made at least 10 days in advance. For monthly employees, changes in direct deposit will take effect the second payroll after they are submitted. For bi-weekly employees, changes in direct deposit will take effect ten banking days after the next payroll is processed (usually the second payroll after they are submitted).

Your support during the transition period has been appreciated. If you have any questions about the new payroll system or your paycheck, contact the Fiscal Officer at (304) 456-2264.

Scoping the sites... (continued from page 3)

answer, then dial the 3-digit extension of the employee you wish to reach. (Dial the extension BEFORE the recording ends.) If the employee doesn't answer, callers will automatically be routed to Voice Mail where they may leave a message. In case of emergencies, callers should dial "0" to reach one of the Administration staff.

The system is placed into "Night Mode" at 4:00 p.m. MST. Under emergency situations, callers should dial a "7" when the night recording begins, but before it ends. This will make every phone in the office ring; Tucson employees who are working after hours have been instructed to answer such "all ring" calls.

As with anything new, it will take time before our employees and their callers become comfortable with this upgrade. We appreciate our callers' patience during this adjustment period.

Copies of the Tucson extension list were distributed in February. If you still need a copy, please contact Nancy Clarke at ext. 110.

Where are they now?

David G. Shalloway, son of Arthur and Johanna Shalloway, was an AUI scholarship winner in 1976. In 1980, he received his BS in Biology and in 1981 completed an addition year of study to become certified as a high school science teacher.

David presently is working as a chemist for Dionis, a goat soap company, and assists in a home for mentally disabled adults. He also does the fireworks shows for the Charlottesville Dogwood Festival and the 4th of July celebration, as well as other fireworks displays around the state. He lives near Scottsville, Virginia.

Heidi J. Shalloway, daughter of Arthur and Johanna Shalloway, was an AUI scholarship winner in 1978. In 1982, she received a BA in Arts with a concentration in photography from James Madison University. In 1984, she received an MA in Arts, also with a concentration in photography, from Rutgers in NJ.

Heidi works for Deutches Bank in Manhattan as assistant to the Economist and works part-time as a freelance photographer. She also speaks Chinese and arranges meetings between Chinese speaking individuals wishing to learn English and Americans wishing to learn to speak Chinese.

Art was an Electronics Engineer. After 21 years with NRAO, he retired in 1983. He lives with his wife, Johanna, in Charlottesville, Virginia.
Personnel news

New Retirement Investment Account Available

TIAA Real Estate Account

On October 2, the TIAA Real Estate Account became a new investment and payout choice under both regular and supplemental retirement plans. This new account offers additional diversification, with a portfolio based on directly owned commercial real estate. Its objective is a favorable, long-term rate of return through rental income and capital appreciation.

The focus will be on office, industrial, retail, and multifamily residential properties with established operating histories and predictable cash flows. At least initially, the new account will not invest in development projects or foreign real estate. The account will invest between 70 and 80 percent of its assets in real estate. Most of the remainder will be kept in liquid investments, such as money market instruments, to provide for withdrawals, new acquisitions, and other needs. The account will be managed by the experienced professionals who are also responsible for TIAA’s general account, which currently holds over $20 billion in its mortgage portfolio and over $7 billion in directly owned real estate.

The Real Estate Account is a separate investment choice offered by TIAA, though it operates more like a CREF account. It is a variable annuity, with accumulations and returns that fluctuate with investment performance, and it will have the same basic transfer and withdrawal flexibility as the CREF accounts. The account is available subject to approval by state regulatory agencies.

For more information about the TIAA Real Estate Account, including charges and expenses, call (800) 842-2733, extension 5509 for a prospectus. Always read the prospectus carefully before investing or sending money to any account. To allocate your regular retirement annuity or your supplemental retirement premiums, call the automated telephone service at (800) 842-2252. If you have questions about your retirement investments, contact the Personnel Office at (804) 296-0312.

Reminder: Don’t forget to precertify all hospitals stays by calling Intracorp before you or a family member are admitted to the hospital. In the case of an emergency, call Intracorp within 48 hours of admittance. The number is on the back of your insurance card. If you do not follow this procedure your medical insurance benefit will be reduced to cover only 50% of your hospital expenses, with a maximum penalty of $500. For more information, see your Employee Handbook or contact the Personnel Office.

Suggestion

I would like to suggest that we assign all employees an email address and allow access to a computer to read it (public terminals, borrow their supervisor’s terminal just to read email, etc.). Then all postings, announcements, etc. could be made electronically. This would save the cost of using the copier, the paper, and the operator/distributor’s time. When information needs to be distributed to employees, the only expense would be the time it takes to write the message, which should be no more than is spent composing the message now. Also, all employees at all sites would have access to messages at the same time.

Answer

The suggestion to distribute internal NRAO announcements and memos by way of email is a good idea, but perhaps one whose time has not yet come.

Many NRAO employees never use a computer in their normal work, so finding a terminal and learning to use email would take significant amounts of time and training. It seems impractical and unfair to expect all NRAO employees to master the use of email just to read memos, unless significant training and support are available.

Further, NRAO is not currently using an email system which can guarantee the identity of the sender. Presently, it is uncomfortably easy to send forged email messages! Significant changes (and perhaps expense) would be required before email could be used reliably for official notices and memos. I hope that in the near future there will be economical email packages which can meet the needs at NRAO for reliable, secure, and verifiable email.

We may not be able to eliminate all paper memos and notices, but we might be able to reduce the volume by using email to those employees who already routinely receive it.

Richard Simon

Notes from the Editor

Q & A

If you have a question you would like answered or a topic you would like addressed in this publication, please submit it in writing. All questions and topics will be referred to the appropriate person. Responses will be published in the next issue, as space is available.

Suggestion email Box

If you would like to make a suggestion to improve the operation of the NRAO or to improve worklife, submit the suggestion to me in the Personnel Office or send email to wmahle@nrao.edu.

Wendy Mahle, Editor