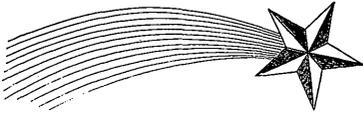




THE POINT SOURCE

Volume 7, No. 1

Spring 2001



New Employee Recognition Award Program Announced

I am pleased to announce the introduction of two new programs to recognize the contributions of our employees. NRAO employees from every site and job classification have contributed to the success of the Observatory. These new programs are intended to provide an additional means of recognizing some of these outstanding contributions.

The **Star Award** and The **Distinguished Performance Award** provide a monetary award along with a certificate/plaque recognizing the outstanding performance. The Star Award is a spot award designed to recognize exceptional contributions by employees or groups of employees in a timely manner. Awards will be from \$50 to \$900, and can be for individual achievement or group accomplishment. Each Assistant/Associate Director has been allocated a specific number of awards based on the number of eligible employees at their site.

The Distinguished Performance Award provides a \$2,500 prize and as many as four can be granted each year. This award is to recognize a sustained outstanding contribution by an employee to the NRAO. These are Observatory-wide awards; a selection committee will review the nominations that will be solicited each fall.

These programs are being introduced on a trial basis and are intended to foster an atmosphere of continued excellence at the Observatory. After the first year, I will review the results and make a determination as to whether to continue or modify these programs or not.

Details of both awards may be found beginning on page 4.

by Paul Vanden Bout

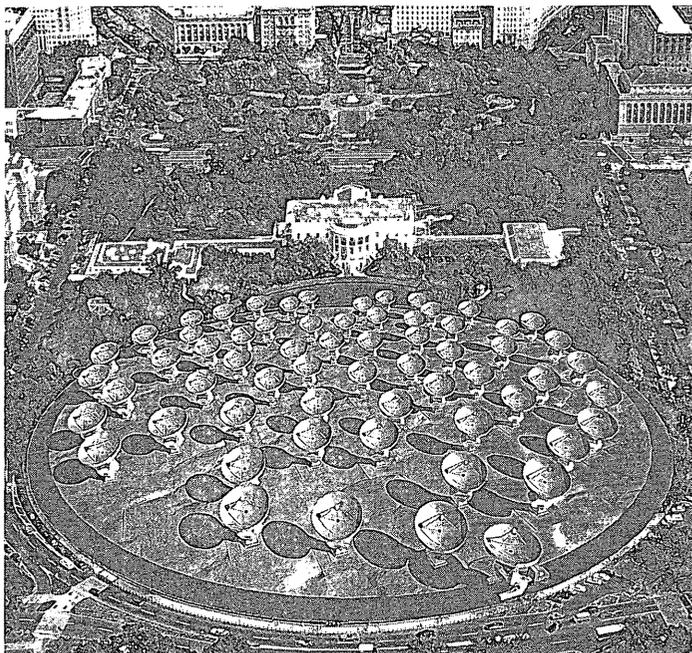
Europe, Japan, and North America Prepare for Joint Construction of the Giant Radio Telescope ALMA

Representatives from Europe, Japan, and North America met in Tokyo on April 6 and signed a Resolution affirming their mutual intent to construct and operate a giant radio telescope in cooperation with the Republic of Chile, where the telescope will be located.

The Atacama Large Millimeter/Submillimeter Array (ALMA) is conceived as a radio telescope comprised of sixty-four transportable 12 meter diameter antennas distributed over an area 14 km in extent. By pointing all the antennas in unison toward a single astronomical object, and combining the signals detected by all the antennas with a super-fast digital signal processor, this gigantic radio telescope achieves an imaging detail 10 times better than that of the Hubble Space Telescope. The combined area of all 64 antennas used to collect signals from celestial objects is more than 40 times larger than that available to astronomers using existing submillimeter telescopes. ALMA will be built on the Andean plateau at 5,000 meters altitude near the Atacama Desert of northern Chile. This site provides the exceptionally dry atmospheric conditions necessary for astronomical observations at millimeter and submillimeter wavelengths (wavelengths between the radio and far-infrared spectral regions).

Observations with this telescope will have a profound impact on virtually all fields of astrophysical research. The most important targets include the most distant (i.e., the youngest) galaxies as they emerged in the early Universe. These are expected to have become rapidly enshrouded in the dust produced by the first stars; the dust absorbs much of the starlight making the galaxies difficult to see in the optical wavebands, but these same galaxies shine brightly at millimeter and submillimeter wavelengths. In our own Galaxy, ALMA will study the morphology, the motions, and the chemistry of dust-enshrouded regions where stars and planets are being formed. ALMA will shed light on these optically 'dark' celestial regions that carry key information on the origin of the richness of structure in the Universe and clues to the origin of life.

(continued page 2)



ALMA array in its smallest configuration shown on White House ellipse. (Antennas are drawn to scale).

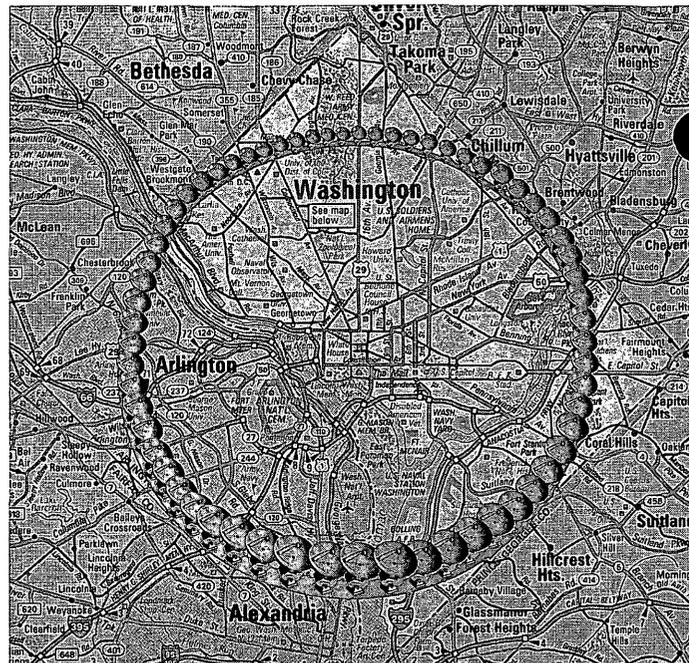
ALMA is a merger of three large projects - The Millimeter Array (MMA) of the United States, the Large Southern Array (LSA) of Europe, and the Large Millimeter and Submillimeter Array (LMSA) of Japan - each of which has been endorsed as the top-priority project in their respective astronomical communities. The European and North American projects were merged into ALMA in 1999 and joint design and development of ALMA began at that time. The National Research Council of Canada is participating with the U.S. in the project. With Japan joining the project as a third partner equal with North America and Europe, and with Chile also taking part, ALMA has become one of the first truly global projects in the history of fundamental science.

In the agreement signed on Friday, the partners pledge to use their best efforts to obtain full approval and funding for their participation in ALMA. With the schedule planned, the telescope should be in full operation in 2010.

NOTE: This Press Release is issued jointly by ESO for its members, plus U.K. and Spain, by the National Astronomical Observatory of Japan (NAOJ), and by the U.S. National Science Foundation (NSF).

ALMA Gets Ready For Construction

At the end of September 2001, just a few months from now, ALMA will officially complete a four- year design and development phase. While the exact schedule for the start of construction depends on congressional budget action, we have already begun to make organizational changes to prepare to build ALMA. Most visibly, Darrel Emerson and Dick Sramek have been appointed Deputy ADs for ALMA,



Alma array in its largest configuration shown surrounding the District of Columbia. (Antennas are not drawn to scale).

Tucson and Socorro, respectively. They are each the administrative lead for ALMA at their locations and represent ALMA at each facility.

Another change is the creation of the ALMA Tucson Electronics Division (ATED). ATED consists of a pool of engineers and technicians assigned to the various ALMA tasks being carried out in Tucson. John Payne has been appointed to lead the ATED. John is responsible for coordinating assignments of engineering resources to the various ALMA tasks carried out in Tucson. This change should provide the maximum flexibility for managing assignments of critical resources as we react to the dynamic environment during this transition period. In addition to this new role, John will continue to lead the U.S. portion of the Front-end development task.

One of the major activities during this period will be the arrival of the prototype antennas and their integration into the Test Interferometer. This is a critical activity as it allows detailed testing of the prototype antenna designs and will lead to selection of the best design to procure for the ALMA array. Integration of the Test Interferometer requires significant coordination of activities across the entire ALMA project, both here and in Europe. Dick Sramek has been appointed to lead this integration effort and he has selected Jeff Mangum to be his deputy.

The transition to construction is also influencing how we organize the collaboration with our European partners. The ALMA Executive Committee (AEC) has selected the Integrated Product Team (IPT) organizational structure for Phase 2. IPTs are teams comprised of members from different organizations who cooperate to carry out specific well-defined tasks. Each IPT will have a single leader who is responsible for coordinating the team's work.

Finally, the presence of ALMA is already being felt in Chile. Over the last few years three Chilean students profited from an NRAO program designed to bring engineering students to work on their thesis in our labs. In Chile, an engineering degree normally takes six years of studies and requires completion of a thesis. Students in the NRAO program remain enrolled at their University in Chile while working in the USA under the supervision of our staff. In this way, the NRAO is making a contribution to the development of a solid high-level technological basis in Chile. Because ALMA is arguably the most involved technological project ever to come to Chile, exposing Chilean engineers to some of its aspects is likely to raise the local engineering standards. It will also help to generate a group of Chilean engineers and scientists fully aware of ALMA's characteristics and capabilities. It will also open channels of communications with the Chilean universities and institutions.

Previously, this program brought Pablo Altamirano and Paulo Cortes to Socorro in 1998 and 1999, respectively. Pablo, an electrical engineering student, worked on demultiplexing for the ALMA project with Dick Sramek and Bill Brundage while Paulo, a computing engineering student, worked with Athol Kembal on parallel computing applications for interferometric data reduction. Pablo is now in Chile collaborating with Caltech's CBI project. Paulo returned to Chile but is now enrolled in the Astronomy PhD program at the University of Illinois. Currently, Rodrigo Brito, an electrical engineering student, is in Tucson to work with Mick Brooks in high-speed networking. Brito is associated with Eduardo Vera's communications laboratory at the University of Chile.

In order to give this program more exposure and open it to a wider choice of engineering students, the NRAO is planning to involve the Chilean Commission for Science and Technology (CONICYT) in the selection of future candidates.

by Marc Rafal



Ulvestad and McKinnon named DAs in Socorro

James Ulvestad became Deputy Assistant Director for Scientific Services, Operations and Computing Divisions in Socorro, January 2001. He has been with Socorro operations since 1996 and has been Division Head for Scientific Services since 1999. Jim was an REU Student in Socorro in 1978 and a Jansky Research Associate in Charlottesville from 1981 to 1984.

Previously Jim was at JPL (Jet Propulsion Lab) from 1984 to 1996. During this time, Jim worked with the Voyager Project. The VLA was one of the sites used to monitor and

receive data from Voyager; thus, he was a frequent visitor to the VLA during 1985 to 1989.

Jim graduated with a B.A. in Astronomy (summa cum laude) from the University of California at Los Angeles June 1976. He attended the University of Maryland from 1976 to 1981 where he graduated with an M.S. and Ph.D. in Astronomy.

Jim uses the VLA and VLBA to study objects such as Seyfert galaxies and to study bursts of star formation in other nearby galaxies.

Mark McKinnon will return to Socorro Operations mid 2001 as Deputy Assistant Director for Engineering Services and Electronics Divisions. He first joined the NRAO in May 1986. He was a Research Assistant in Socorro until September 1992, when he transferred to Green Bank to the position of a Jansky Research Associate. In 1995, Mark became a member of the Scientific Staff in Green Bank and was promoted to Deputy Site Director/Deputy GBT Project Manager in 1997.



Prior to coming to the NRAO, Mark held engineering positions with R. L. Frailey, Inc., in Tulsa, OK, and with Marathon Oil Company in Artesia, N.M..

In 1979, Mark graduated from Colorado School of Mines, with a B.Sc. in Chemical and Petroleum Refining Engineering. He attended New Mexico Institute of Mining and Technology in Socorro, and graduated with a M.Sc. in 1989 and a Ph.D in Physics in 1992.

Mark's research interests include pulsar astrophysics, radio polarimetry, stochastic processes, and radio astronomy instrumentation.

by W. Miller Goss



Richard Prestage named new Deputy Assistant Director for Green Bank

I am pleased to announce that Richard M. Prestage has been named the new Deputy Assistant Director for Green Bank Operations. The appointment will take effect on June 15, 2001 when Mark McKinnon departs for his new post as Deputy Assistant Director for Technical Services in Socorro Operations.

Richard will assume management responsibility for the Green Bank Telescope (GBT) commissioning program and will have overall responsibility, through the division heads, for the Green Bank Computing, Electronics, and Mechanical Engineering Divisions. In addition, he will also have overall project management responsibility for GBT instrument and computing development initiatives, which will be quite active in the next few years.

Richard brings a great deal of relevant experience to this position, including his recent responsibilities as Head of the Green Bank Computing Division, and several years of experience in coordination of both technical and operational groups at the James Clerk Maxwell Telescope. He also brings considerable experience in project management. A search is underway for a replacement for Richard as Head of Computing in Green Bank.

I would like to thank Mark McKinnon for his outstanding service to Green Bank as a staff scientist, as Deputy Project Manager for the GBT, and as Deputy Assistant Director for Green Bank. Mark's departure is a loss for Green Bank, but we are pleased that he is staying in the NRAO family and we know that he will be a great asset to Socorro Operations.

by Phil Jewell

Examining your Pay Stub It's your Responsibility

Employees are encouraged to review the balances on their pay stub each pay period. Employee time cards and leave reports must be reviewed carefully as well. It is important that you, the employee, know exactly what earnings and benefits you can expect. It is also important that you don't exceed those available benefits.

The Fiscal Division is proud of its record in providing accurate and professional service to the NRAO employees, but it is the employee that must be the final auditor of his/her own pay and benefits. The balances on an employee's pay stub include more than just the gross earnings and net earnings (after taxes and other deductions are withheld). Other benefit accumulators are listed as well. Examples of benefit accumulators would be the available hours of vacation, sick, and doctor's visit versus the hours the employee has already used.

Below is an example from the Fiscal Division files of a problem that you may encounter if you are not reviewing your pay stub regularly.

Out of Leave? What happens to my pay check?

Sometimes it does happen. You've marked 8 hours of sick leave on your time report and you actually do not have enough sick hours available! Will you be penalized and not paid for the time you didn't have?

The Fiscal Division will, by default, use vacation balance to make up for any shortages if you run out of sick, family sick, or doctor visit leave time. If you do not have any remaining vacation balance, then the hours in question will be recorded as Leave Without Pay.

If you do not wish to have such time charged to your vacation balance and simply want to take the time as Leave Without Pay, contact your supervisor to request the change with the Fiscal Division.

by The Fiscal Division

The NRAO Star Award Program Objective and Administration

The Star Award Program enables the NRAO supervisors to recognize exceptional contributions and noteworthy achievements of their employees or groups of employees. The objectives of this program are:

- 1) To reward specific one-time achievements (event driven).
- 2) To provide an incentive for continued excellence through the recognition and reward of exceptional performance.

The Human Resources Office, on behalf of the Director, administers the Star Award Program.

Eligibility. Eligibility for the award includes all current employees EXCEPT the following:

- 1) Division Heads, Deputy Division Heads, Deputy Assistant Directors, Assistant/Associate Directors, Deputy Director and Director.
- 2) Tenured and Continuing Scientific Staff.

Award Amount. Award amounts are determined by the cognizant Assistant/Associate Director and may be granted in \$50 increments. The individual gross award amount may range from \$50 to \$900, before mandatory taxes.

Award Allocation. Awards are allocated, for the fiscal year, according to the eligible population within each Assistant/Associate Director's organization. Allocations are calculated and provided with instructions to Observatory managers at the start of each fiscal year. Allocations may not be carried forward to future periods. The use of all awards is not required each year.

The allocations for FY 2001 are:

Green Bank Operations	\$5,000
Socorro Operations	\$10,000
Data Management	\$1,000
Administration	\$1,000
Central Development Lab	\$1,000
ALMA Project	\$2,500
Director's Office	\$1,000

Award Conferral. Awards are presented by the Observatory organizations at the completion of the extraordinary accomplishment, and after required approvals are obtained. Awards may be granted at any time during a fiscal year as long as funds are available. Names of recipients may be published in the *Point Source*, with division approval.

Nomination Procedure. A Star Award form is used to obtain Assistant/Associate Director approval on individual selection's, and Human Resources Office approval on availability of award budget funds for that organization. The form is available through the Human Resources Office at each site. A description of the extraordinary performance is required on the form to document that the award is consistent with program objectives. For recognition of team achievement there should be a description of the extraordinary performance and a statement to characterize the contribution of each member and the recommended amount of each award. After Assistant/Associate Director approval is obtained, the form is forwarded to the Human Resources Office for final approval and processing. Once processed by the Fiscal Division, the Human Resources Office will forward the check and a Star Award certificate to the employee's organization head for presentation.

Criteria for Selection. Supervisors may nominate an employee or team of employees who have demonstrated short-term performance of an extraordinary nature. The performance may be related to a particular assignment given by a supervisor, or be an accomplishment initiated by the individual or the group.

In general, the award is intended to recognize short-term performance of a period from several weeks to several months. It should not replace recognition by promotion for significant permanent changes in responsibility or salary increase for sustained performance levels.

To assist in ensuring consistency throughout the Observatory in granting awards, two criteria are used to choose individual accomplishments appropriate for an award. The criteria definitions are:

- 1) *Benefit to the Observatory* - The Observatory should benefit in a **significant** way through cost savings, efficiency of operations, satisfaction of some work requirement, or some similar gain; and
- 2) *Exceptional Nature of Effort Required* - It is expected that award recipients will have overcome problems which would be considered the most difficult for their classification or even beyond the expectations for employees in their classification.

Tax Withholding. A Star Award is taxable as earned income and appropriate taxes will be withheld by the Fiscal Division. Awards do not increase an employee's base pay rate therefore, an award will not be included in the calculation of benefits. The Fair Labor Standards Act considers awards as a discretionary bonus. An award to nonexempt employees will NOT be included as regular pay for calculation of overtime.

The NRAO Distinguished Performance Award

Program Objectives and Administration. The Distinguished Performance Award recognizes Observatory employees who have distinguished themselves by their outstanding contributions and performance in support of the Observatory's mission. Outstanding, sustained performance in the fields of science, technology, management, and administration can be recognized under this program. The objective of this program is to recognize outstanding contributions and foster an atmosphere of excellence. The Human Resources Office administers this program on behalf of the Director.

Eligibility. All employees except for Assistant/Associate Directors, Deputy Director, and Director.

Award Amount/Number. The Distinguished Performance Award gross amount is \$2,500. A maximum of four awards will be granted each year throughout the Observatory.

Award Conferral. Awards will consist of a check and an engraved memento indicating the award name, the employee's name, the purpose of the award and the year of the award. Award checks and mementos are to be presented at an annual ceremony and reception. In addition, the award recipients achievement will be publicized in *The Point Source*.

Nomination Procedure. Nominations are to be forwarded by Associate/Assistant Directors to the Human Resources Office after a solicitation period in the fall of each year. Because this award is Observatory wide Associate/Assistant Director's may nominate employees from other observatory organizations after informing the affected AD. Nominations will be made privately, and nominees will not be informed that they have been submitted for consideration.

Selection Committee. The selection committee consists of an Associate/Assistant Director, Deputy Director, Observatory Chief Scientist, and the Human Resources Manager. The committee will screen the nominations and recommend a maximum of four award recipients to the Director who will have final approval on selections.

Required Documentation. Nominating Associate/ Assistant Directors will prepare documentation in support of their nominee which clearly describes the distinguished performance and specifically addresses how this performance meets the award criteria. Endorsement letters from other supervisors, coworkers, or collaborators may be submitted.

Evaluation Criteria. The overall criterion for the award is an employee's exceptional contribution to the Observatory. The committee will evaluate each nominee specifically with respect to these five criteria:

by Robert D'Angio

(continued on page 6)

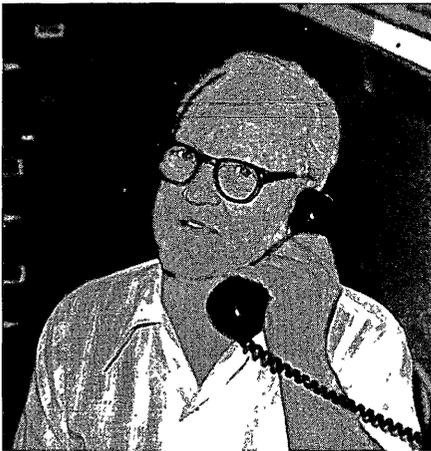
- 1) the exceptional nature of the employee's contribution(s);
 - 2) the difficulty level of the contribution(s);
 - 3) the benefit of contribution(s) to the Observatory;
 - 4) the consistency of sustained superior performance level; and
 - 5) the length of time over which contribution(s) were made.
- The review committee will consider the nominee's job level and job function when evaluating the exceptional nature, difficulty, and benefit of the contribution(s) to the Observatory.

Tax Withholding. The Distinguished Performance Award is fully taxable as earned income. Appropriate taxes will be withheld by the Fiscal Division. Awards do not increase an employee's base pay rate; therefore, an award will not be included in the calculation of benefits. The Fair Labor Standards Act considers awards a discretionary bonus. An award to nonexempt employees will not be included as regular pay for calculation of overtime.

by Robert D'Angio

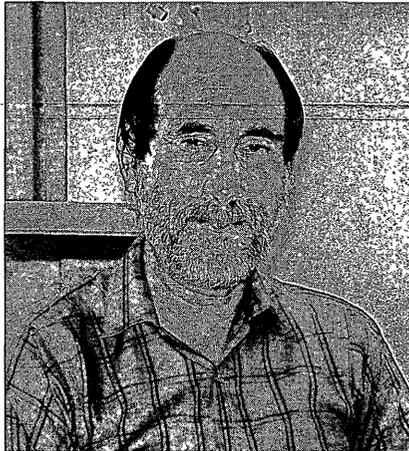
NRAO 2000 SERVICE AWARD RECIPIENTS

40 Year Recipient

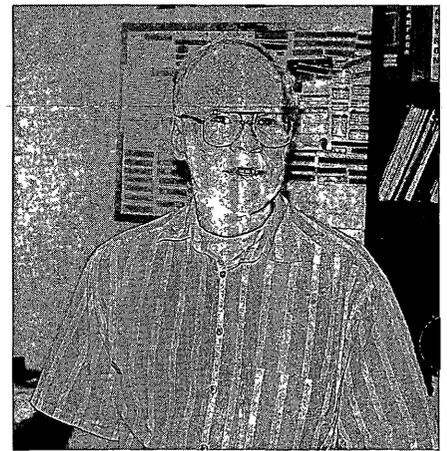


Omar Bowyer
GB (deceased)

30 Year Recipient

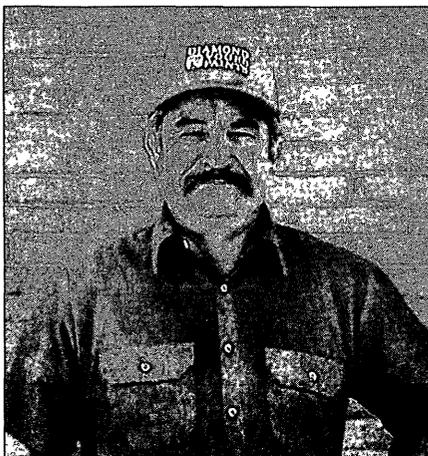


Edward Fomalont
Scientist, CV



Gene Runion
Electronics Engineer I, CV

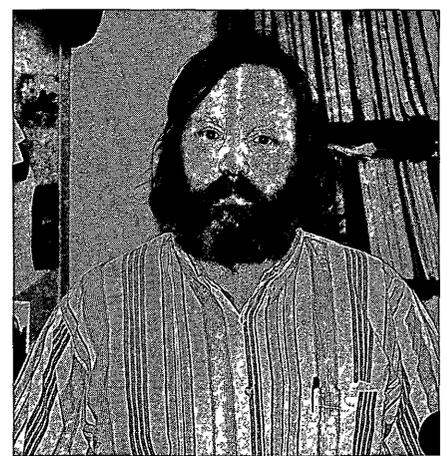
20 Year Recipient



Charles Chavez
Technical Specialist II, SO



Tim Cornwell
Assistant Director, SO



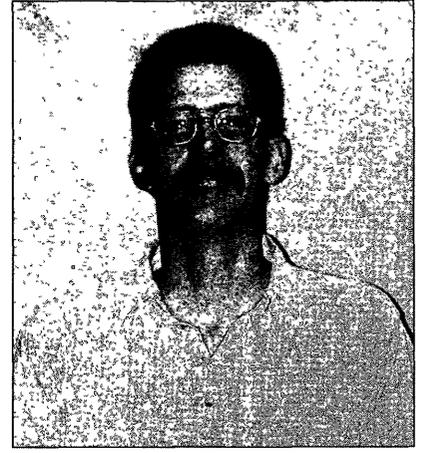
William Cotton
Scientist, CV



James Gregg
Specialist II, SO



Terry Romero
Senior Admin. Assist., SO



Nathan Sharp
Telescope Operator I, GB

10 Year Recipient



Betty Trujillo
Administrative Assist., SO



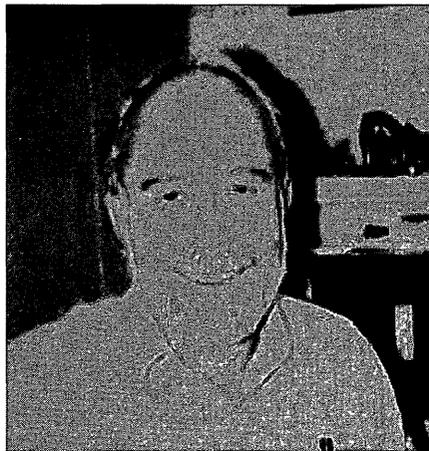
Nelson Atencio
Senior Technician, SO



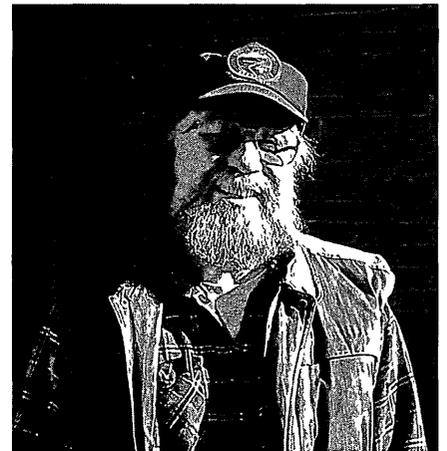
Mary Ellen Chavez
Intermediate Technician, SO



Terry Cotter
Electronics Engineer I, SO

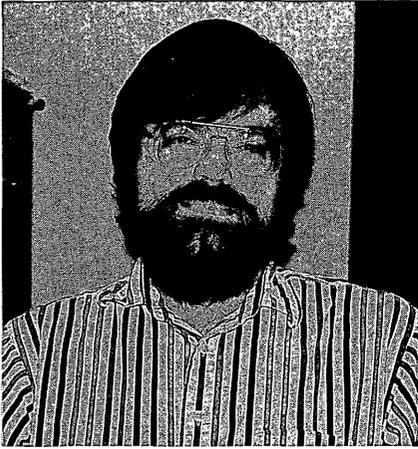


Eugene Dunn
Technical Specialist III, VLBA



Thomas Frost
Technical Specialist II, SO

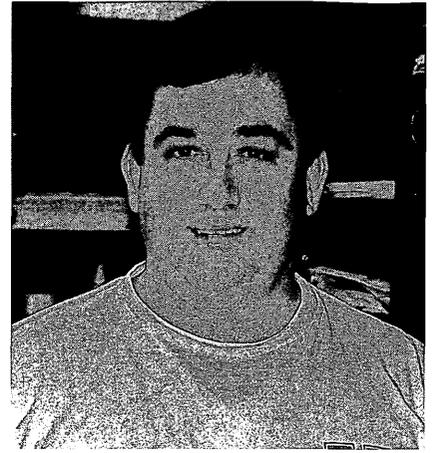
Photos were unavailable for the following 10 year recipients: Dale Frail, Scientist, SO; Barbara Taylor, Housekeeper/Foodhandler, GB.



Robert Garwood
Associate Scientist, CV



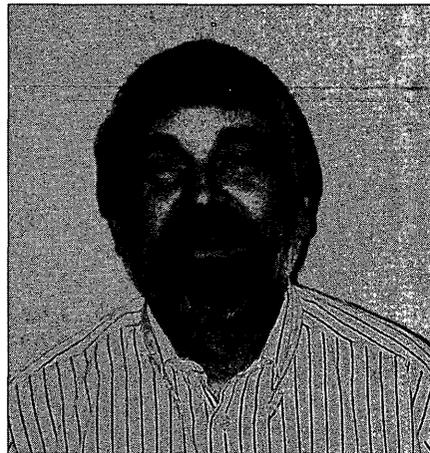
Brian Glendenning
ALMA Computing Div. Head, SO



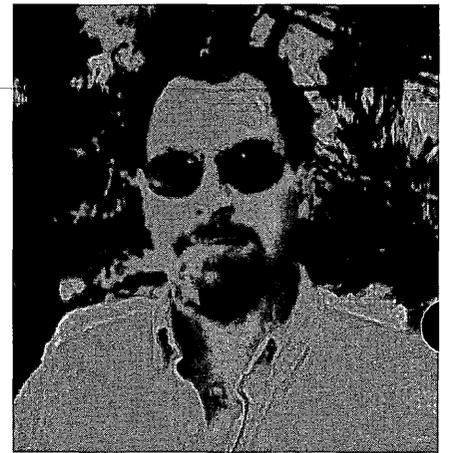
Anthony Marshall
Technical Specialist II, CV



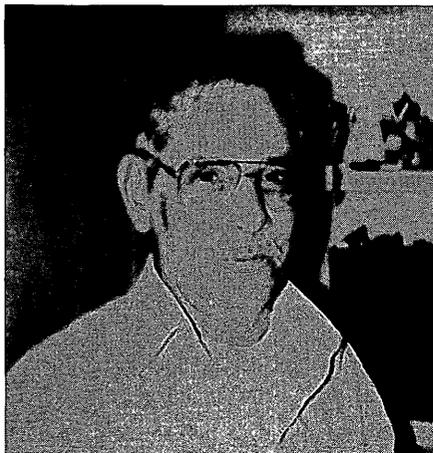
Ruth Milner
Asst. to AD, Data Mgmt., SO



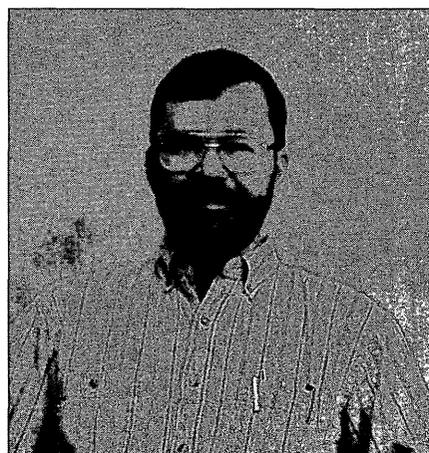
David Parker
Electronics Engineer I, GB



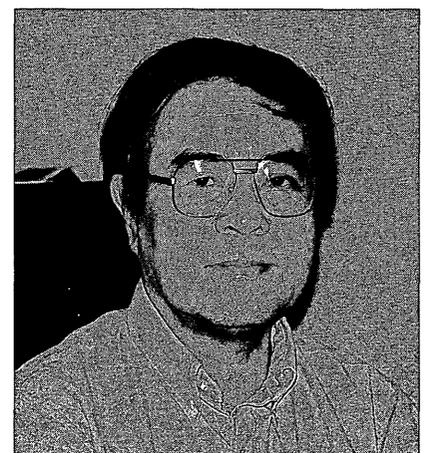
William Sahr
Senior Scien. Prog. Analyst, SO



Robert Sanderson
Technical Specialist II, VLBA



Timothy Weadon
Electronics Engineer I, GB



Qifeng Yin
Scientist, CV

Congratulations to All!

PPE?

Personal Protective Equipment (PPE) is exactly what it aims to be.

Personal – It belongs to you.

Protective – Generally a barrier to keep you safe from chemical and physical hazards.

Equipment – It is a device that is worn and can include glasses, gloves, and shoes.

Personal Protective Equipment, PPE, is provided by the NRAO for your use. The NRAO is committed to minimizing hazards as much as possible at the source, but this is not always possible. When work controls are not available or are not fully capable of protecting you, you must wear PPE. Where hazards are present or may be present, the NRAO does not expect you to rely only on PPE to protect against hazards, but rather to use PPE along with guards, engineering controls and sound work practices.

A variety of safety equipment is available to keep you safe and injury free. The NRAO provides prescription lenses for participating employees. Protective eye and face equipment must comply with ANSI guidelines and be marked directly on the piece of equipment. For your eye safety:

1. Make sure equipment guards are in place on machinery.
2. Wear your eye protection.
3. Know location and operation of emergency eye washes.
4. Use face shields with other eye protection such as goggles or glasses.
5. Don't use street-wear eyeglasses as safety glasses.
6. Replace defective safety equipment.
7. Have your eyes tested regularly. If you need corrective lenses, get them and use them!

Keep these points in mind to protect your hands as you work:

1. Gloves should fit you properly and be maintained as other safety equipment.
2. Lotions or barrier creams may be used when other forms of protection are not practical.
3. Wear proper protective gloves when working with chemicals which may injure the skin.

Hard hats must be worn at all times in all work areas, including indoor construction projects in areas, that represent the potential for head injury. Exceptions include areas of obvious low risk such as offices, coffee areas, and low-risk work areas. The use of hard hats applies to all visitors to the hard hat designated areas as well.

A pair of safety shoes will be provided to each employee who is required to wear protective footwear due to potential foot hazards in the work area. When safety shoes are

purchased, the shoes must meet the ANSI Standard for protective shoes. Since there are a variety of methods for obtaining safety footwear, you should be aware that **ANY** safety footwear the NRAO purchases or reimburses an employee for must meet the ANSI Standard.

With any purchase of personal protective equipment, the Safety Officer should be consulted. The Safety Officer will assist you in the selection and procedures for obtaining your PPE. In all cases where protective equipment is provided, the NRAO requires that you wear the equipment while at work and encourages the use at home.

by John Spargo and Jody Bolyard

Socorro Summer Students Make Startling Brown-Dwarf Discovery

NRAO's Socorro summer students always get some observing time on the VLA to use as they please. The group observing project is intended to provide the students with valuable experience in formulating and executing a research program, not necessarily to advance the frontiers of science. However, that's exactly what happened when last summer's students took a long-shot gamble with their VLA observing time. Their gamble paid off when they made the first-ever detection of radio emission from a brown dwarf, an enigmatic object that is neither a star nor a planet, but something in between. Their surprising discovery is forcing experts to re-think their theories about how brown dwarfs work.

When the students sought ideas on how to use their VLA time, NRAO astronomer Dale Frail suggested they look at the Chandra X-ray satellite's Web site to see what interesting objects Chandra may have observed. At that time, Chandra had just recorded an X-ray flare from the brown dwarf LP944-20. The only problem was that no one had ever detected any radio emission from a brown dwarf.

"Everybody we talked to said there was almost no chance that we'd see anything at all," said Kate Becker, a student at Oberlin College in Ohio. The students decided to try anyway.

Then luck took over, right in the middle of their observation, the brown dwarf flared at radio wavelengths. "The radio emission these students discovered coming from this brown dwarf is 10,000 times stronger than anyone expected," Frail said.

When Edo Berger, a graduate student at Caltech, finished processing the observational data the day after their observation, he was shocked to see a bright object at the brown dwarf's location. "I was pretty sure I had made a mistake," he said. Ten minutes later, the rest of the students, working independently, produced the same result. "We all got excited," said Berger, who, with further analysis, showed that the brown dwarf had undergone a rapid flare.

(continued page 10)



Ian Hoffman (left), Dave Finley and Ashley Zauderer, back at the AOC after their ride to the VLA in KRQE-TV's helicopter.

(Photo by Miller Goss)

Subsequently, the students received more observing time and captured two more flares from the object. Their results were published in the March 15 edition of the prestigious scientific journal *Nature*.

The students' discovery also was reported in the *New York Times*, other newspapers, and space-related Web sites. Two of them got to ride an Albuquerque TV station's helicopter to the VLA to be interviewed in front of the VLA's antennas. Senator Pete Domenici (R - NM) issued a press release congratulating the students and placed his commendation in the *Congressional Record*.

Brown dwarfs are too big to be planets but too small to be true stars, as they have too little mass to trigger hydrogen fusion reactions at their cores, the source of the energy output in larger stars. With roughly 15 to 80 times the mass of Jupiter, the largest planet in our Solar System, brown dwarfs had long been thought to exist. Actually finding them, however, proved difficult. After decades of searching, the first one was discovered in 1995 and a few dozen now are known. The strong radio emission was unexpected because brown dwarfs, according to conventional theories, are not supposed to have magnetic fields strong enough to generate the radio emission. "The presumed internal structure of a brown dwarf will not permit a strong enough magnetic field," said Frail. "It looks like we're going to have to re-examine how we believe brown dwarfs work," he said.

The students, in addition to Becker and Berger, are: Steven Ball from New Mexico Tech in Socorro; Melanie Clarke from Carleton College in Northfield, MN; Therese Fukuda from the University of Denver; Ian Hoffman from the University of New Mexico in Albuquerque; Richard Mellon from The Pennsylvania State University; Emmanuel Momjian from the University of Kentucky; Nathaniel Murphy from Amherst College in Amherst, MA; Stacey Teng from the University of Maryland; Timothy Woodruff from Southwestern University in

Georgetown, TX; Ashley Zauderer from Agnes Scott College in Decatur, GA; and Robert Zavala from New Mexico State University in Las Cruces, NM.

"What is so cool is that this is research that probably nobody else would have tried to do because of its low chance of success. That made it ideal for summer students -- we had almost nothing to lose," said Becker.

by Dave Finley

Dispute With COMSAT Over GBT Contract Ends

The Observatory has been in a contract dispute for several years with COMSAT Corp., the contractor for the Green Bank Telescope. COMSAT had sought additional compensation beyond the contract amount. The dispute had gone to binding arbitration after the collapse of settlement negotiations. When the arbitrator issued his decision on February 8 the matter was ended. COMSAT had filed claims for \$29M and AUI filed counterclaims for \$13M. The arbitrator decided that AUI owed COMSAT a net amount of \$4M. This award was paid on March 2, bringing the matter to a close.

Given the amount that COMSAT had sought, we are very happy to put this matter behind us for only \$4M, even though we do not agree with every aspect of the arbitrator's decision. Our legal team and those on the Observatory staff who worked long and hard on our defense case deserve congratulations and thanks for a job well done. It is anticipated that the NSF will provide us with sufficient funds so that this decision will not have any impact on our programs.

by Paul Vanden Bout

President's Blueprint Budget for 2002

On February 28, President Bush released his blueprint for the 2002 budget. It contained three items of interest to the NRAO. First, the proposed increase for the NSF was very small, about 1%. Second, there were no new starts in the NSF Major Research Equipment line, meaning that construction of ALMA was not being proposed for 2002. Finally, a blue-ribbon panel is to be appointed to study the question of whether NSF astronomy programs should be moved to NASA. All three of these items are matters of concern.

With respect to the budget increase for the NSF, it is worth remembering that this is a budget proposal. There is strong bi-partisan support in the Congress for continuing the increases that would double the NSF budget over a period of years. In a compromise, it is likely that the NSF will get more than 1%.

Starting ALMA construction as soon as possible, namely in 2002, is a very high priority—and that is still a possibility. What is most important, however, is to build momentum in the project. If a bridge year is required in 2002 between the present Design and Development phase and actual construction in 2003, it is the level of funding in 2002 that is critical. We are working to make that as high as possible.

by Paul Vanden Bout

A Reminder to All Employees...

If a change in your family status occurs, such as divorce, change in spouse's employer or insurance, a 19-year old non-student dependent, or a change in a full-time student who drops out of school or graduates, please let the Human Resources Office know immediately. These changes in family status do affect your insurance premiums, so please help us identify them immediately.

If you have a change of address or home phone number, please submit a completed Change of Address form to the Human Resources Office.

And finally, please remember that your confidential employment information can only be given or mailed to you, except in situations where your written authorization has been provided. This restriction applies to your spouse as well. Often spouses call the Fiscal Division to request information pertaining to the employee's withholding or salary. The RAO's policy is to refuse such requests. If there is a problem with your salary payment, please be sure you deal directly with the Fiscal Division.

Personnel Changes 9/1/2000 thru 2/28/2001

Promotions

Robin Harrison to Public Education Specialist, SO
 Richard Prestage to Head of Computing, GB
 Peggy Perley to Head of Array Operations, SO
 Kevin Long to Systems Support Analyst, TU
 Jim Ulvestad to Deputy Assistant Director, Socorro Operations
 Laurel Armijo to Accounting Assistant, SO
 Ellen Bouton to Observatory Librarian, CV
 Liz Cryer to Secretary A, SO
 Joe Sanchez to Bldg/Grounds Utility Worker, SO
 James Muehlberg to Engineer III, SO
 Bob McGoldrick to Technical Specialist II, SO
 Bill Robbins to Sr Technician, SO
 Brent Avery to Supply & Material Coordinator, SO
 Gayle Rhodes to Administrative Aide, SO
 Robert Long to Technical Specialist I, SO
 Mario Torres to Sr Technician, SO
 Michael Fowler to Advanced Technician, GB
 Jonah Bauserman to Intermediate Technician, GB
 James Campbell to Array Operator II, SO
 Samuel Gilmore to Array Operator II, SO

New Employees

CHARLOTTEVILLE

Robert D'Angio, Human Resources
 Mary Mayo, Business
 Matthew Lister, Basic Research

GREEN BANK

Karen Bickford, Fiscal
 David Burner, Mechanical Eng
 Lisa Irvine, Fiscal
 James Johnson, Mechanical Eng
 Rosalind Kirupavathy, Scientific Services
 Gregg Merithew, Administrative Services
 Ingrid Stairs, Basic Research

ST. CROIX

Peter Allen, Electronics
 Tazwell Reed, Electronics

SOCORRO

Zachariah Barnes, ALMA
 Michael Bradford, Array Operations
 Crystal Brogan, Basic Research
 Paul Dyer, Array Operations
 Donald Haenichen, Electronics
 Darrel Hicks, Electronics
 Troy Jensen, Electronics
 Amy Mioduszewski, Scientific Services
 Henrique Schmitt, Basic Research
 Kerry Shores, Electronics
 Nathan Thomas, Student Support
 Christine Wingenter, Fiscal

TUCSON

George Behrens, ALMA
 Ferdinand Patt, ALMA
 Martin Pokorny, ALMA
 Brian Tarr, ALMA

Departures

CHARLOTTEVILLE
 Anthony "Tony" Beasley
 Rebecca Johnson

Departures (cont.)

Megan Kohring
 Bob McConnel
 Helen Sim

GREEN BANK

Thomas Bailey
 Mary Clendenen
 Charlotte Ervine
 Michael Goldman
 Arno Granados
 Catherine Mallow
 Christina Holstine
 Valarie McLaughlin
 Sara Petty-Powell
 Gabriel Prochter
 Henrietta Reigel
 Susan Roy
 Andrew Sharp
 Nathaniel Sizemore
 Timothy Spuck

SOCORRO

John Battle
 Steven Blachman
 Larry Brothers
 Christopher Fassnacht
 Cornelia Lang
 Neal Miller
 Nathaniel Murphy
 Joe Rodriguez
 Ryan Schmidt
 Carlos Soto
 James Trujillo
 David VanHorn
 Marcus Verheijen

RETIREES

CHARLOTTEVILLE

Robert Hall, 11 yrs

GREEN BANK

Ray Hanshaw, 16 yrs
 Wendell Monk, 35 yrs
 Lewis Beale, 34 yrs

ST. CROIX

Herb Winchell, 16 yrs

SOCORRO

Jack Campbell, 28 yrs

IN REMEMBRANCE:

John Williams 12/22/29-11/29/2000

A Note from the Editor:

Articles or ideas for the Point Source newsletter are welcomed. If you would like to submit an article, please contact the editor at phone (804) 296-0265 or by email to: norvill@nrao.edu.

Deadline for article submission for the upcoming Summer Issue is August 10, 2001.

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