

The Green Bank Tattler

You better read it, we could be talking about you!

Volume 5, Number 3 October 1997

Edited by F.Ghigo

Calendar of Upcoming Events

- Oct.23 **Billiards** tournament at 5:30 pm in the residence hall. See Chuck Beverage or Bob Simmons to sign up.
- Oct.23-25 On-site **deer hunt** (Bows only).
- Oct.25 **Halloween party** 8-12 pm in the Tour center.
- Oct 26 **Kids' Halloween party** 2-4 pm in the Tour center.
- Nov.20 **Rec.Association** - General Meeting at 3:00 pm.
- Nov.27-28 **Thanksgiving** holidays.
- Dec.5 **RESA 4 Science Bowl**, in the Auditorium.
- Dec.8-13 On-site **deer hunt**.
- Dec.18-20 On-site **deer hunt**.
- Dec.24 Half holiday.
- Dec 25-26 **Christmas** holidays.
- Jan.1 Holiday.
- Jan.2-9 **Teachers Institute** (Glenville State College) in the Auditorium.
- May 8-15 **Teachers Institute** (Glenville State College) in the Auditorium.
- May 18-20 **Chautauqua** course (Green Bank) in the Auditorium.
- May 21-23 **Chautauqua** course (Univ.of Hawaii) in the Auditorium.
- July 12-14 **SARA** Meeting.

Check the new weekly calendar on the GB web site!

Welcome to new employees:

Arno Granados, GBT monitor and control.
Pamela Jackson, Cafeteria staff.
Gerald Lawrence, GBT operations supervisor.
Wanda Morgan, Cafeteria staff.
Charles Myers, Computer division.
Cara Rose, Tour program.
Ann Westor, Electronics.

Regular activities:

Aerobics every Tuesday and Thursday from 5:30 to 6:30 p.m. in the Tour Center. Call Janet Ghigo for info at 456-4893.

TaeKwonDo every Monday and Wednesday at 6:00 pm at the Tour Center. Call David Gordon for info at extension 315 or 106.

Volleyball at the Hannah House Sundays and Mondays at 5:00 pm as long as the weather cooperates. Call Wendell Monk for info at extension 281.

Sunday Menus at the Cafeteria

Oct.19 Barbecue chicken, parsley potatoes, baked beans, corn.

Oct.26 Stuffed peppers w/tomato suace, browned potatoes, peas&carrots, cauliflower.

Nov.2 Hot roast beef w/gravy, mashed potatoes, baked beans, peas.

Nov.9 Baked chicken w/noodles, succotash, carrots.

Nov.16 Cubed steak in gravy, rice, mixed vegetables.

Nov.23 Hot roast turkey w/dressing & gravy, mashed potatoes, green beans, corn.

Nov.30 Beef stew w/cornbread.

Dec.7 Pepper steak [my personal favorite ..ed.], macaroni&cheese, spinach, lima beans.

Dec.14 Spaghetti w/meat sauce and garlic roll.

Dec.21 Fried ham w/apple sauce, mashed potatoes, baked beans, peas.

Dec.28 Chicken cordon bleu, sweet potatoes, mixed vegetables, cauliflower.

Farewell and best wishes to

Rich Hall, who is now pursuing a teaching career at WV.Tech. His TaeKwonDo class has been taken over by David Gordon.

News from Plant Maintenance

by Mike Holstine

Plant Maintenance (PM) is in the middle of a very busy schedule right now. As most of you know, all of the site houses are occupied or are promised to incoming people. Three houses are empty, giving PM the opportunity to do repair work and some remodeling. Bathroom remodeling is chief on our list for the houses left by Dave Parker, Glen Langston and Bill Tiff. Dave's house, once finished, will soon be occupied by an existing employee, which in turn will empty another house for us to work on.

The Residence Hall is also about to undergo some changes as PM is going to perform a little remodeling there. In an effort to reduce the amount of "noise" in the Residence Hall, for the benefit of the Observers, PM is going to install a couple of sound insulated walls in the corridor and install sound-soak material in a few of the rooms. New carpeting will be added in various areas, as well. This remodeling will require some small electrical and fire alarm additions to the area, but should provide the quieting effect we are looking for.

As part of this sound limiting project, PM will also install sound absorbing material in the hallway outside of the Fiscal division on the Jansky Lab second floor in an effort to reduce sound transmission between the existing Lab and the Lab Addition.

PM is also working on the dismantling at the ICB and reinstallation at the 140' of the weather tower and instrumentation package. The weather package is part of the laser group's efforts to fine tune their system through the monitoring and "factoring" of air density and temperature.

The "surplus equipment" system has been quite beneficial to NRAO in the past years and this year is no exception. Many of you may have seen several military dump trucks delivered to the site lately. These were acquired from Columbus, OH for the Socorro site in exchange for a tractor and a "surprise" that should arrive soon. Keep your eyes open.

Congratulations for helping beautify the environment:

** to the Pedtke family for growing and tending flowers in the formerly decrepit "hummingbird garden" in front of the Tour center.

** to Glen Langston, Richard Fleming, Plant Maintenance, and the WV Highway Department for getting flower beds planted at the NRAO entrance.

** and, of course, to Sue Ann Heatherly for cleaning up her office!

GOLF!

In a close match at the Grandview Country Club on October 3rd, four teams from NRAO-Green Bank competed, with the following results:

- 1) In first place were Dave Williams, John Ralston, Brian Ellison, and Jim Gibb.
- 2) In second place: Sid Smith, Bob Vance, Mike Hedrick, and Harold Crist.
- 3) Wendell Monk, Richard Fleming, Scott Gibb, and Ron Monk.
- 4) Ray Hanshew, Russ Poling, John Matheny, and Wally Oref.

Let's Tour the Electronics Division

with your tour guide, Tim Weadon

Visitors coming to NRAO Green Bank today see a multitude of different projects going on. Not too long ago a couple of engineers from a European observatory stopped in to visit the site. What they expected was quite different from what they saw. They had been told that Green Bank was a rather old site, with not much going on. Then they saw the GBT, OVLBI, the new USNO telescope, learned about the research being done by the Interferometers and, of course, at the 140 ft. They were very impressed and excited for us.

Well, when you think of these activities, it is often easy to see the astronomy and miss the engineering. The Electronics division is composed roughly of 30 engineers, technicians and support personnel. Duties range from writing specifications and requirements, designing microwave, analog, digital, cryogenic, and software systems, and repairing just about anything electronic on-site.

On a quick tour of the site one would first encounter the 45-ft antenna being used for the Orbiting Very Long Baseline Interferometer (OVLBI). Larry D'Addario designed and supervised the building and testing of the electronics for this project, starting in the early 90s. Dan Pedtke now maintains the system and is responsible for all new designs.

Next on the right is the new 20 Meter USNO telescope. Steve White, Bill Shank and Chuck Niday are responsible for the electronics on this project. They are also responsible for all RF/IF systems for the three Interferometer telescopes on the site.

A little further down the road is the 140 Foot, the world's largest polar mounted telescope. Almost everybody in Electronics is responsible for systems there. Dwayne Schiebel and Rich Lacasse maintain systems like the Auto-Correlator that was designed by Art Shalloway in the late 70s, and the Honeywell H316 servo computer that was

designed in the late 60s. In addition, they support a multitude of other digital systems up to the complexity of the Spectral Processor which was designed in the mid-80s. Gary Anderson and Bill Shank are responsible for the SETI receiver and some associated electronics. Until recently, Mike Stennes and Tom Dunbrack maintained all of the Cassegrain receivers. Lately, Gary Anderson and Wes Grammer have taken responsibility for the X-Band and C-Band, respectively. In late August, Wes Grammer and Bob Simon installed the new GBT C-Band receiver on the 140 Foot for a VLBI observation, the first run looked great. The Laser Metrology group (Dave Parker, Mike Goldman, John Shelton, and Bill Radcliff) has lasers stationed around the 140 Foot, with retro-reflectors strategically placed on its backup structure. What better way is there to test your pointing algorithms than to use a large telescope that you have been pointing for more than 30 years!

Next along the way one would pass the GBT. The Electronics division is responsible for basically all electronic systems on the GBT. The servo system is the only system that is not being designed in-house. Rich Lacasse is the engineer over the group responsible for monitoring RSI's progress on this system. In addition, Rich is also the engineer responsible for the design and implementation of the Active Surface system. David Parker is the engineer over the Laser Metrology group. The Laser Metrology system is very high-tech and can locate an object's distance to about the thickness of a human hair at the range of 100 meters. Tim Weadon is the engineer responsible for the group known as GBT Electronics. This group is responsible for the rest of the electronics on and supporting the GBT. George Behrens is the engineer designing the Prime Focus receiver. This receiver has five discrete bands ranging from 290 MHz through 1230 MHz. Mike Stennes is responsible for the

[Electronics division, continued]

L-, S-, Ku-, and K-band receivers. In addition, he and his group are responsible for the LO Reference system, the 86 GHz Water Vapor Radiometer and many other systems designed for the GBT. Wes Grammer is responsible for a large part of the IF system. This includes the GBT converter racks and analog filter rack. Included in these racks are various high and low band filters, mixers, and precision frequency synthesizers and oscillators. John Ford and Ed Childers are responsible for various digital systems that allow Monitor and Control software to control each system. Dwayne Schiebel is a real "jack of all trades" and works with many of the different groups, providing digital and analog systems experience to many. Steve White and Roger Norrod are working on a very difficult fiber optic problem dealing with the transmission of the IF signals from the receiver room to the

equipment room.

In addition to these unique projects, basic support of the site-wide LAN, workstations and peripherals is provided by Ed Childers and the Digital group. Steve White and Dave Williams support all cryogenic systems for Green Bank and Charlottesville. Interference Protection and monitoring of on-site systems, as well as acceptance testing of newly designed or purchased systems, is the responsibility of the Interference Protection Group (IPG). Rich Lacasse, Chuck Niday and Tim Weadon are the Electronics members of this team.

These are only some of the tasks that the Electronics Division is responsible for on a daily basis. Over the next few issues we will focus on different individuals within the Electronics division, their background and their contributions to the Electronics Division.

PCHS-NRAO Partnership Picnic

by C. Beverage



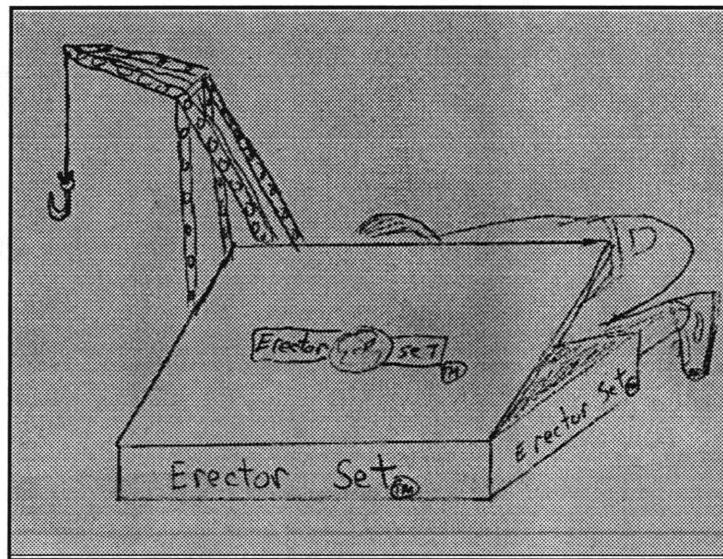
Rich Lacasse is busy grilling burgers, joined by Jake Seaman and Glen Wade.

The staffs of Pocahontas County High School and National Radio Astronomy Observatory held a covered dish picnic Sunday September 7, 1997 at the NRAO recreation area. The picnic was in relation to the Business Partnership between PCHS and NRAO. Approximately 100 attendees showed up on a perfect picnic day. Hamburgers, hotdogs, and drinks were supplied by PCHS and NRAO. Many people played softball while others just socialized. The picnic was considered a success and thanks to everyone for participating of helping. A special thanks to the NRAO maintenance department for the recreation area setup.

Cartoon Page
by "Sparky" Minter



Tell those guys in the lounge to keep quiet -- I thought I heard something !



Little Johnny designs a better crane for the GBT.

Who are the Green Bank Site Directors?

In the last issue of the Tattler, a contest was announced in which readers were asked to identify these former (and present) Green Bank Site Directors. Well, the response was pretty disappointing. Only one entry was received, and we thank Sid Smith for going to the trouble of sending it in. Unfortunately, he didn't get it exactly right, having swapped Bill Howard and Dave Hogg in 1970-1976, a mistake anyone could make -- I have trouble telling them apart myself. Could it be that the lack of interest was because no prize was announced for the winner? Well, too bad -- whatever the prize was, nobody won it!



Otto Struve 1957-61. Dave Heeschen 1961-66. John Findlay 1966-69. Mort Roberts 1969-70.

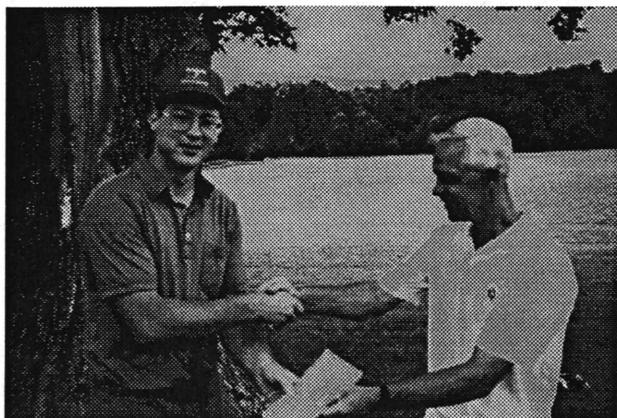


Dave Hogg, 1970-74 and 1992-93. Bill Howard, 1974-76. Ken Kellermann, 1977. Bob Brown 1977-80.



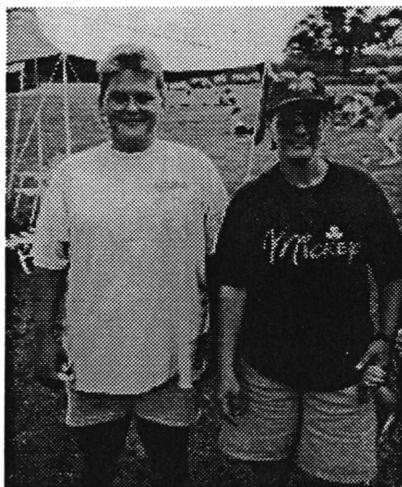
Rick Fisher, 1980-81. Martha Haynes, 1981-83. George Seielstad, 1984-92. Jay Lockman, 1993-?

The Green Bank annual summer picnic was held July 26th, with the usual games, activities, good food, and general jollity.



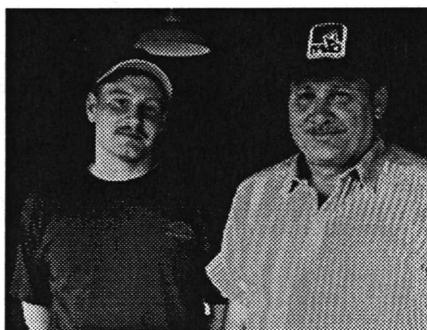
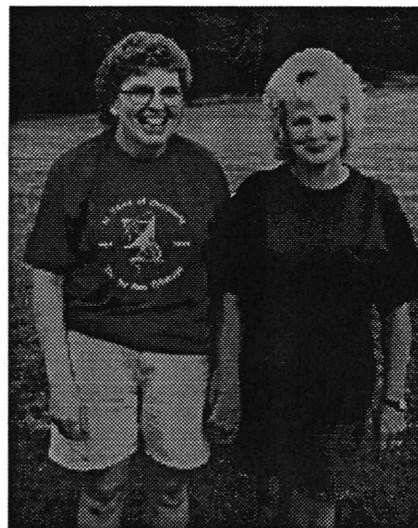
At left, Wendell Monk presents the prize for the **Golf driving** contest to Dave Seaman.

Mini-golf winners were John Monk and Steve Workman.



Betty Gordon and Jane Gordon (at right) took first place in Ladies Horseshoes.

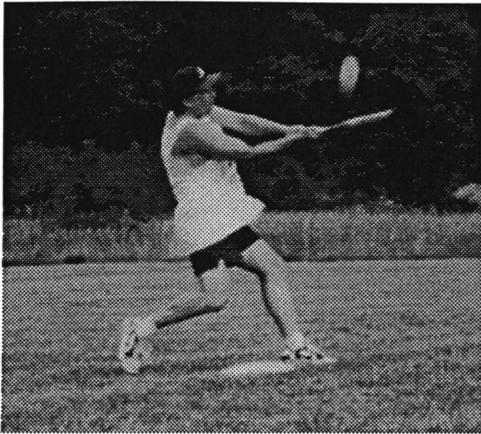
The runners-up (at the left) were Bobbie Jo Currie and Maggie Morgan.



In Men's horseshoes, Ron Gordon and Mark Gordon were in first place (at left) and Roger Norrod and John Wayne in second place (at right).



More scenes from the summer picnic.



Toney Minter at bat.



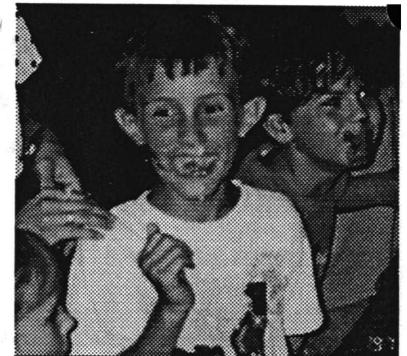
Pete Chestnut, Nathan Sharp, Wally Oref.



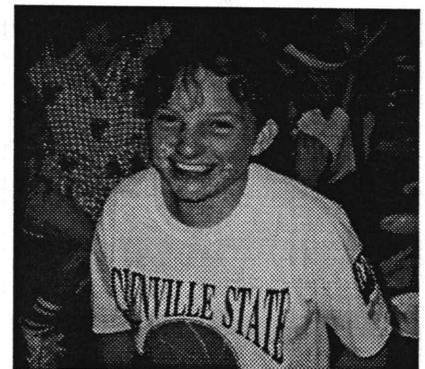
Pie eating is still a popular sport, as one can see from these enthusiastic participants.



Laura
Brandt



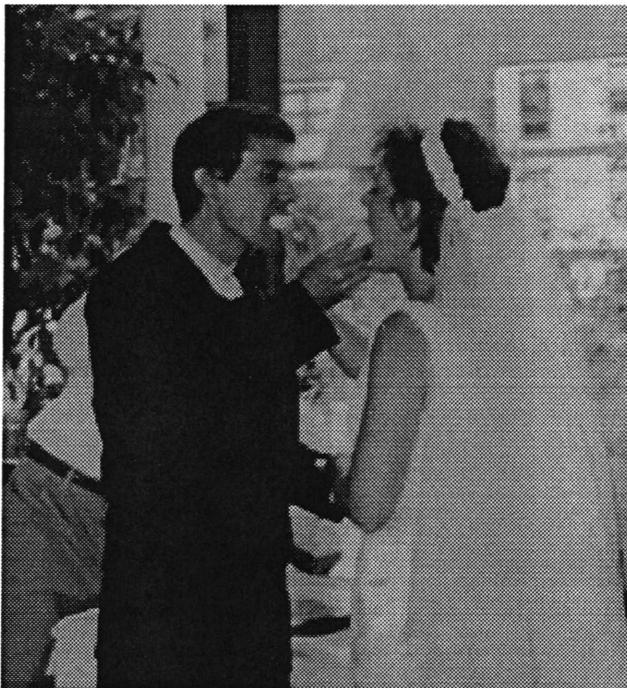
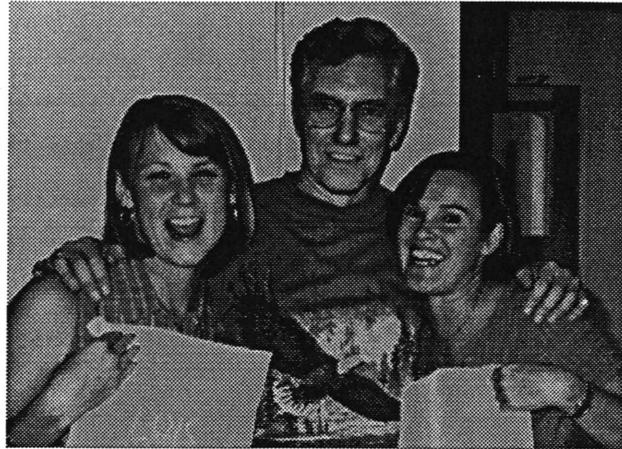
Grant
Langston



Rachel
Wayne

[Thanks to Tessy Schlemmer for the photos of the pie-eating contest]

Unidentified NRAO astronomer may be having just a little too much fun as a science mentor for the August teacher's institute.



McMullins Wedding

Joe McMullin, a new astronomer on the GB staff, is also a newly-wed! His wedding to Mary in Philadelphia on September 6 was attended by the Minters. The McMullins are now living in the Nut Bin, but if they follow NRAO traditions, they may soon be moving to the Rabbit Patch!

DIRECT DEPOSIT THOSE PAYCHECKS

The folks in Fiscal encourage everyone to have their paychecks automatically deposited in their bank accounts. Your check gets deposited on schedule with no delays due to the slow mail delivery, or after it's delivered, having the check eaten by the dog, or the goat, and you have to give up buying high priced cigars for a whole month as well as food. So just ask those friendly folks in fiscal to sign you up.