



NAAPO (North American AstroPhysical Observatory)

**"NAAPO News"
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FIRST NAAPO STUDENTS ON BOARD

On June 16 the NAAPO experiment got under way. Two guinea pigs presented themselves to the coordinator's office with the challenge to 'make us a part of this experiment.' Mark Eickhoff, a May graduate of Oberlin College and Mark Johnston, a senior Physics major at Oberlin (now known as Mark I and Hark II in no particular order) entered the twilight zone of NAAPO and Big Ear with no more introduction than a slide presentation and a few hopeful promises from the consortium coordinator a few weeks before school was out this spring. Both recognized some sacrifice was necessary to make the move. Little did they realize that they form the ideal basis for building the procedures we will use as the numbers of participants increase.

One of the big tasks assigned to them will be the generation of a facilities handbook to outline the procedures, policies, equipment, technologies and expectations that member institutions and visiting interns can expect. What better authors of such a document?

They are involved already in the formidable task of installing security measures at the radio observatory. Vandalism has the staff in a stew so the attempt is being

made to fence out' the culprit. It is long, hard and hot work this summer season.

We will hear more and more from these two intrepid volunteers as the summer progresses.

CAUTION TO CASUAL VISITORS!!!

With the installation of a new security system at Big Ear it is necessary to warn the casual visitor that certain precautions might be wise during a visit to the facility. We wish to continue encouraging any and all interested people to visit Big Ear, but we would prefer not to have to discuss SETI or the application for internships in the Delaware County Jail.

If you are contemplating a visit, let us know as far ahead of time when you would like to drop in. This way we can assure that someone will be there to meet you and desensitize the alarm system. The system is designed for quick response and though we have not tested it in actual use we would hate to do so using a friend as the test subject.

A call to either:

Bob Dixon - - - (614) 292 4843

or

Phil Barnhart - - (614) 898 1516

should assure that your visit will be set up and you will have no trouble in an unintentional Close Encounter with a Sheriff of the Third Kind.

WORKING SESSION JULY 5 1986

--- AGENDA ---

The regular RADOBS working session will occur at 10:00 a. m. Saturday July 5 in the conference room at the radio observatory. All interested parties are invited to attend. The order of business follows:

1. Brief reports of the meetings attended by Dixon-R and Barnhart-P.
2. Briefing for all not yet informed on the new security system.

- a. Procedure
- b. What to do in case of emergency
- c. Cost comparison
- d. Where to be aware of the system.

3. Report on horn blinder project.

4. Status reports:

- a. Air conditioner
- b. DEC 11/23
- c. Software development
- d. Security fence
- e. Ground plane repair
- f. Weed and shrub control
- g. Antenna painting
- h. - - other - -

5. Development of Scientific Program for the Observatory.

6. Report and request for help on the July 11 - 12 NAAPO orientation meeting.

7. Announcements

The next working session will be July 19, here at the Observatory.

COMPUTER SOFTWARE COMING SLOWLY

Software to guide the DEC 11/23 in its control and data gathering task at Big Ear is coming off the consoles rather slowly. We hope in the next few days to get a few more programmers on line to get the show on the road as quickly after installation of the air conditioner as possible. Mark I and Mark II are now able to begin programming from the Data Center at Otterbein College. In the next few days Bob Dixon will indoctrinate them on the various protocols and quirks of the system. They will then have free reign to develop programs needed by the system.

The 11/23 is now located on the top floor of Drees Lab on the Ohio State

University campus in the RADOBS office/lab. As soon as the air conditioner is installed at the observatory site, we will be ready to install the computer in the focus room and try to go on-line from there.

Until this week, programming has been handled by Jim Bolinger, Paul Ave, Mark Abel (Mark 0) and Ron Huck under the watchful eye and programming hand of Bob Dixon. This is one of the most critical jobs to get done before return to the air after the cooling crew gets done.

COORDINATOR'S CORNER

It seems like a vacation, but the amount of stuff piled up to do on return indicates that the price may have been too high. Shortly after a delightful excursion to the west coast, I went to the AAS meeting in Ames, Iowa and mingled with other astronomers long enough to find out there is a strange sociology of scientific research. I have previously seen only parts of it, as when the chips were down in the play to hold Big Ear hostage. Now I am convinced there is widespread antipathy toward fundamental research.

One of the most exciting invited papers at the AAS meeting was presented by George Gatewood of the Allegheny Observatory on the techniques of improving the accuracy of positional measurement (parallax determination) by factors of from 10 to 100! This means, of course, we will extend our knowledge of distances to nearby stars to a thousand parsecs and increase the accuracy of distances to the nearby stars by a comparable amount. Since parallax measurements form the foundation upon which the science of astrophysics rests, it would be absurd to argue that because the Thaw Refractor did its pioneering work nearly a century ago, it is no longer a useful instrument and should be abandoned. There is always a job for creative scientists to do, even with telescopes that have been superceded by new technologies. Just ask any astrophysicist where his science would be without the fundamental data of the astrophysicist, the classifier of spectra, the Palomar Sky Survey, or for that matter, the radio sky surveys.

Why does the membership of a rapidly advancing science feel the need to rid themselves of instruments not directly involved in the pursuit of the 'high gee-whiz index' observations. Such princes of obsolescence may find in the process that they would be pulling the underpinnings from beneath the house of cards upon which

they have stood for so few precious weeks. Look what happened to the 157 arc second "double" quasar that indicated the presence of a superstring. That idea was sunk in three weeks by a casual observation of the two separate quasars in the red region of the spectrum. We can not afford to dismiss fundamental observation because it is no longer 'fun and games'.

PROFESSIONAL LIABILITY INSURANCE

Have you considered your liability insurance position? There are risks involved beyond the asking of impossible questions on final exams. OCA offers an association insurance policy that covers you up to \$1 million. Whenever you deal with a situation in which you direct students into activities that may be hazardous or possible to lead to property damage, it pays to be covered in case of a suit from an "injured" party.

For a sample contract and application form, those of you who are members of Ohio College Association institutions may write to:

Richard T. White, Administrator
Suite 106
3733 Park East
Cleveland, Ohio 44122

or call;
(216) 464 - 6920.

Those of you outside the state of Ohio should check with your college administration for the policy available through your state college association.

WORKING SESSION -- JUNE 7, 1986 at Big Ear

In attendance: Barnhart, Bolinger, Dixon, Houk, Helwig, Mikesell, Johnston, Eikhoff.

Agenda:

1. Security System:

Due to several recent attempted break-ins, NAAPO is presently looking into several security system options for the observatory. Numerous companies and their respective bids were examined. A decision should be made within the next couple of weeks and a security system installed immediately thereafter. In the meantime Mikesell, Eikhoff, Johnston and Bolinger and any other available hands will work on replacing and improving the fence surrounding Big Ear.

2. Welcome NAAPO interns:

NAAPO welcomes Mark Eikhoff and Mark Johnston to the working team. They have been working and reading this past week while jobs for the observatory are being prioritized.

3. AAPT Conference:

Throughout the next week OSU will host the American Association of Physics Teachers Conference. Numerous interesting seminars were pointed out and all in attendance were encouraged to attend.

4. ICOM Receiver:

The ICOM receiver has been tested and is now working effectively monitoring weather services. It will eventually be transported to the observatory when the observatory is again fully operational.

5. West Recorder:

The West recorder would be operational, but needs ink. Barnhart has some ink that will work.

6. Speedomax:

The Speedomax has been received and is now located on the grounds, however there appears to be some discrepancy in the cost of shipping and what was

originally quoted. Dixon will get his secretary to look into it. In the meantime Mark I and Mark II will work on bringing it up to operation level.

7. Establishment of NAAPO as a Supply Distribution Receiver:

It was discussed to try and get NAAPO to qualify as a supply distribution receiver. This would enable the organization to buy merchandise through surplus, and thus, at a lower cost.

8. Ground Plane Revision:

Numerous problems inherent to the ground plane, as well as possible solutions were discussed. The goal is to prevent wheels from sinking into the soft asphalt pavement.

9. Board of Regents Rejection:

The most recent application for a Board of Regents grant was rejected. It appears that they felt we emphasized too heavily students, and not enough research.

Announcements:

Barnhart reported that he had tickets available for all of the Otterbein Summer Theatre productions. Anyone interested please see him. They are all for the Wednesday night productions.

VACATION SCHEDULE

In order to maintain sanity, we allow members of the NAAPO volunteer staff to occasionally get some rest and rehabilitation. Those interested in getting in touch with Bob Dixon should be aware that he will be out of touch with anything but 15,000 meter transmissions the last week of July and the first two weeks in August. Don't call him, he'll call you.

Barnhart was on vacation earlier this decade so should be around the rest of the summer.

No one else has earned enough time off to go anywhere until 1992.

OBSERVATORY VISITS

Big Ear is a popular place to visit. From time to time people stop in to say hello, inquire as to the state of affairs and just to satisfy curiosity. Over the past few months visitors to the observing site have included:

May 13 Prof. Subotowicz -- Polish physicist (atomic fusion) and avid SETI fan.
Host Bob Dixon.

May 31 Akron Amateur Astronomy club (about 50 members) . Host Jim Bolinger.

June 27 Prof. Wm. Lonc -- Halifax, Nova Scotia -- interested in undergraduate research opportunities, roof-top radio astronomy and SETI. Hosts John Kraus and Phil Barnhart

Anyone interested in touring the observatory or seeing any of us feel free to call ahead and set up a tour. We think things are really beginning to look up around here.

VOLUNTEER COMMENTS

Occasionally we receive comments from our volunteers about what it means to work on projects like this. I hope to share some of these from time to time with those interested in our project. I admit that I have solicited such comments, but that in no way affects the pay scale of those who respond.

To: Barnhart-P

Approximately one year ago, the radio observatory needed an electronic technician for various tasks. I applied and was accepted.

I have found my work thus far to be very challenging, and an invaluable learning experience, one that certainly cannot be obtained in the classroom. The universe is a vast exciting challenge, with many unanswered questions, and I am glad to be a part of its exploration.

Sincerely yours,

Paul W. Ave

(Ed. note. Paul is a Senior EE student at OSU. He talks to electrons. They listen.
PEB

NAAPO MAILING LIST

Our current mailing list is reproduced on the over side of this sheet (*i.e., below*). We would like to ask you to look it over carefully, check your address and make any corrections you see fit. Also, it will be helpful if you could send us your telephone number(s) in case the need arises to give you a call. At the present time the list includes volunteers and those who have expressed the desire to be members of the consortium and a few who are still thinking about joining.

Please send us the names of anyone you know who would make good use of the knowledge of NAAPO and might be ready to join this growing group. There are a number of prospect institutions that we are seeking to join us. Your help in filling in some of the blanks will be greatly appreciated.

Please take the few minutes necessary to provide some feedback in the enclosed self-addressed, un-stamped envelope. If you have any news to share with the radobs include that as well.

P. S. Don't forget the orientation meeting this coming Friday and Saturday. For details, call me at the office, (514) 898 1516.

PEB

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Note. Our group has decided that, for privacy reasons, only the names should be reproduced here; the addresses have been deleted.

- CAROL ABBOTT
- MARC ABEL

- RICHARD ARNOLD
- PAUL AVE
- JAMES BOLINGER
- MICHAEL BROOKS
- DAVID BRYANT
- ELAINE BRYANT
- JOSEPH BYRD
- DR. ROBERT DIXON
- JERRY EHMAN
- JONATHAN GUTHRIE
- DR. KAREN HACKNEY
- ANN HENDERSON
- DR. LYLE HOFFMAN
- RONALD HUCK
- DR. MALCOLM HULTS
- MR. JEFFREY L. HUNT
- HERB JOHNSON
- DR. GABRIEL KOJOIAN
- JOHN KRAUS
- DR. NATHAN KRUMM
- RONALD KUNKEL
- CATHERINE LANGRIDGE
- DR. JERRY LASALA
- GENE MIKESELL
- DR. WALTER E. MITCHELL
- WILLIAM MOOK
- DAVID AND SYLVIA RAUB
- DAVE REYNOLDS
- DR. EDWARD SANFORD
- MARK SELOVER
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- ROBERT STEPHENS
- DR. JACK TAYLOR
- DR. WARREN YOUNG

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Designed by Jerry Ehman

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