



## NAAPO (North American AstroPhysical Observatory)

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### NAAPOnews STRIKES QUICKLY

Information received from Bob Dixon indicates "No sooner was the latest NAAPOnews off the presses, but I got a call from Geoff Hulse saying he has 'a pile' of RK07 disk packs available for us." Since that time the radio observatory has taken delivery on six disk packs. This means that we should now have an adequate supply of disc packs for the 11/44!

It is gratifying that not only is the newsletter read, but the commitment of the readers to the cause is clear and responsive. Many thanks to Geoff Hulse. This will assure asterisks on his mailing label for another year.

Jim Bolinger was heard to remark, "Too bad Phil didn't also mention the need for a FLOATING POINT PROCESSOR." That oversight is hereby being remedied.

## **NEXT WORK PARTY !!!**

**1 AUGUST 1987**

## **OUTER SPACE DAY CAMP BIG SUCCESS**

A NAAPO sponsored education enrichment experience was carried off the latter part of June. Dick and Rick Helwig organized and presented a one week "Outer Space Day Camp" for 23 4th - 6th grade students. In addition to an introduction to Radio Astronomy and solar system studies the participants shared opportunities to obtain hands-on experience with robotics, crystal radio construction and model rocketry.

Response of the parents and students to the program has been very enthusiastic. There is indication that a greatly extended program in the future would be strongly supported. The Education Arm of NAAPO is exploring possibly implementation of such a program. There is also considerable interest expressed by the school districts around central Ohio in the possibilities offered by NAAPO-Education.

After expenses it looks like the operation of NAAPO for the summer will gain about \$950 from the Day Camp. Dick and Rick should be commended for a job well done. There will be further news as this program continues.

## **WORKING SESSION**

**18 JULY 1987**

THOSE PRESENT: Abel, Boyd, Dixon, Bolinger, Helwig-D, Huck, Mitchell, Hain, Ave, van Horn, Barnhart.

ANNOUNCEMENTS: Malcolm Jones attended the Hungary SETI Conference and tried to push for an international acceptance of the 'Flag of Earth' as a symbol for the Search for Extraterrestrial Intelligence. He now proposes to pay Bob Dixon's way to Brighton, England to push for the same result. (See accompanying article on the Flag of Earth.) [sic; That "accompanying article" was inadvertently omitted.]

Dixon reports the OSU radio observatory turns up often and regularly in NASA reports and proposals on SETI.

A request was received from the Midwest Space Development Conference to visit the Radio Observatory the afternoon of 18 October 1987. Barnhart reported that he

has been invited to address the Conference the morning of 18 October. They want him to speak on the topic of modern cosmological theories and attempts to understand questions about the origin of the universe.

Dixon reported on his participation in the NASA Conference in Washington, D. C.

Abel reported that he had succeeded in programming the Icom receiver from the 11/23, no thanks to the instructions from the manufacturers. He is framing a nasty letter to them telling them where they can stuff their operator's manual.

STATUS REPORTS: Delivery of the 15 circuit boards for the synthesizer interface is now expected Wednesday, 22 July. Bolinger will pick them up.

Dixon is going to pull out all the 'lists' of things that must be done before the 11/23 can be moved to the focus room. Many of the tasks are complete, but he feels there may be a few hanging fire that have been forgotten. We hope to have a compilation before the next working session.

A brief, unaudited financial report was presented. There is currently about \$3200 to get us through the summer. As usual, expenditures not vital to the process of getting on the air as soon as possible will be curtailed.

OPERATIONAL CONCERNS: A lengthy discussion dealt with the question of whether there is a need to maintain an organizational entity to deal with the day to day operation of the radio observatory. Should we lose our identity as an organization the agency account at Otterbein will be meaningless. For funds to go directly to Otterbein College will commit the College to a stance that Barnhart is not ready to urge. Recommendation was made that further exploration of the role of Otterbein and the legal status of an operating group for the radio observatory be explored.

The next working session will be 1 August at 10 AM followed by a work party to ready the focus room for moving in the 11/23. All willing workers are invited to attend.

The meeting was adjourned and a work party commenced to operate till late in the afternoon.

## **DREESE LOSES TOP-NOTCH CLERICAL HELP**

It has just come to the attention of NAAPOnews that Andrea Fee has found it necessary to resign her position of clerical assistant in the Dreese Lab Radio Observatory office. She has carried out her duties with refreshing competence and was well on her way to getting the paperwork cleaned up in that area. She has indicated she will stay on to help train a new recruit, providing it doesn't take too long.

Thanks for many jobs well done, Andrea. Best wishes for the future.

## **COORDINATOR'S CORNER**

For the first time in years I have not had the obligation to teach a summer course. I view this as a mixed blessing. The income is down. The classroom routine is broken. I find myself doing jobs I never really developed the time to do before.

The biggest change I notice comes in the area of motivation and pacing. Without the mileposts of midterms and regular lectures I find it tempting, indeed almost impossible to avoid, drifting from job to job without generating the drive to get on with it and clean it up. I find many things I had let slide, knowing they would be great to pursue, and then simply forgot. Now, with the opportunity to do them I head off and try. I am now picking away at some things I thought of starting eight years (!) ago. If only there were six of me.

This brings up the nature of 'our' kind of operation. Watching the ten of us last Saturday engage in the jobs of clean-up and re-arrange at the radio observatory, I was impressed with how little each contribution seemed, yet, the over-all accomplishment was obvious — even impressive. The weather was hot and much ice water was consumed, but we got a lot of work done.

On the agenda for future working sessions we will begin to compile tasks suitable for visiting student groups to volunteer to do when they come on a field trip. When six or eight undergraduate physics students put in 3 hours of steady effort very visible accomplishments can be performed. We will be happy to entertain inquiries about this aspect of our program.

## **WORK PARTY WORKS**

Following the working session on Saturday 18 July the crew fell to and proceeded to devote approximately 35 man-hours to re-arrangement of parts, supplies and junk, weed control around the focus room entrance and completion of the barbed wire installation on the east fence along the ground plane.

Space is now available for the relocation of equipment from the focus room in preparation for moving in the 11/23. Vines and trees that were threatening to take over the air conditioner compressor and hide the focus room entrance have been cut back. The next phase will be a selective spraying of weeds in the critical areas of fences and reflector bases.

Tom Hain and Paul Ave completed the stringing of barbed wire along the top of the east security fence.

Many thanks to the work crew: Dixon, Hain, Abel, Boyd, Bolinger, Huck, Mitchell, Ave, and van Horn.

## **NEW COMPUTER DIAL-IN NUMBERS**

On August 3, 1987 the numbers used to dial in to the IRCC computers will change. For your information, the new numbers will be:

300 baud	292-3103
1200 baud	292-3112
2400 baud	292-3124

Note the last two digits specify the speed.

On the same date it may become necessary to type an additional carriage return when you first connect.

All this is still temporary and part of a larger grand scheme to eventually do autobaud at all speeds.

<Bob Dixon>

## **EQUIPMENT NEEDS**

Now that the 11/44 is up and running, we reiterate the need for the following equipment and software.

- Fortran 77 Compiler
- 11/44 FLOATING POINT PROCESSOR
- Manuals relating to
  - 11/44
  - RK07 disc drive
  - 11/44 memory
- 1600 BPI tape drive and unibus controller
- Additional memory
- Expansion backplane and box

## **BARNHART READY TO HIT THE ROAD**

For those beginning to plan your department programs for the year you might consider making room for a NAAPO presentation. Phil Barnhart is again ready to hit the road on behalf of NAAPO and the Radio Observatory. There are a number of topics from which to choose and there is always the opportunity to use him as a special lecturer in a classroom situation.

Topics that might be considered include:

- The Phoenix Phenomenon in Scientific Instrumentation
- NAAPO — A New Approach to Undergraduate Research
- Contributions of Radio to Astrophysics
- A History of Radio Astronomy
- Basic Cosmology
- (Special Topics will be considered on request)

The easiest schedule to fit for relatively nearby institutions would be Thursday and Friday from September through May and anytime from November 27 through December 19.

Any support for transportation will be appreciated. If you want to explore the use of

this as an option for your seminars, SPS meetings or a general lecture, contact Dr. Barnhart, c/o Physics Department, Otterbein College, Westerville, OHIO 43081, Area Code (614) 898-1516.

## NOTABLE QUOTES

"Students' examinations usually do not give an indication of the capacity for a subject but unfortunately they are a necessary evil. Oh, those examinations! They are needed to keep many a student from a profession for which he would be too lazy or too unskilled, and they don't always even perform that function. At any rate they are a torture for both parties, the recollection of which causes nightmares even in later years. The experience of life itself is the real test of capacity for any kind of profession."

---Wilhelm Conrad Roentgen,  
reflecting as a professor  
(Emphasis added by editor)

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Guess the subject and the decade of this entry in the Congressional Record. The closest estimate to the correct answer will gain the winner special recognition in the next NAAPOnews. Send your best estimate to NAAPO Headquarters before August 1.

"Never in history has society been confronted with a power so full of potential danger and at the same time so full of promise for the future of man and for the peace of the world. The dangers are obvious. Stores of \_\_\_\_\_ in the hands of people interested primarily in profit would constitute a . . . . hazard of the first rank . . . . . the discovery with which we are dealing involves forces of nature too dangerous to fit into our usual concepts"

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Designed by Jerry Ehman

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