



## **NAAPO (North American AstroPhysical Observatory)**

**"NAAPO News"**

**Volume 3 Number 1**

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### **WORK PARTY 18 JULY -- GENERAL CALL --**

Everyone is encouraged to appear for the work party on 18 July at the Radio Observatory. Among the tasks to be undertaken include:

1. Label the things put away in the garage on the 27th.
2. Clean out the office building, trailer and pod as needed to make more room.
3. Move the IBM 1130 computer out of the focus room into the office

building.

4. Rearrange the focus room equipment in preparation for moving the 11/23 in at some future date.

5. Address the problem of condensate leaking from the air conditioner into the focus room.

6. Install top two barbed wire strands on east fence around ground plane.

**ALL WILLING WORKERS ARE WELCOME!!!**

## **PO BOX LAPSE**

Around the first of this month, Bob Dixon announced that the post office box in Delaware had expired. It was important to reinstate the box as soon as possible. People attempting to contact us through the Delaware address might conclude that we have prematurely dissolved.

The PO Box has been reinstated and the Radio Observatory will continue to receive direct mail to PO Box 293, Delaware, Ohio, 43015.

## **GAP IN NAAPOnews**

For those who are very aware, this issue of NAAPOnews comes at a time when no NAAPOnews has appeared for two months. This does not signal a crisis in the world of Ohio Radio Astronomy. There was full intention (now paving some very notable roads) to get the newsletter out. The editor suffered a lapse and will try to get things back on track soon. If you have difficulty with your serials librarian, I will be happy to send some sheets indicating missing issues so that the catalogs will be complete. You may go ahead and bind Volume II.

## **OBSERVATORY SECURITY NOW PART OF ROUTINE**

When the Radio Observatory lost Gene Mikesell we lost one of the important aspects of observatory management. There was no longer a continuous, daily presence at the Observatory site. With the continuing threat of vandalism in the neighborhood this represents a distinct lowering of security at the Radio Observatory.

To partially alleviate this problem, a regular rotation of inspection tours is being manned by the present observatory staff. This assures that there is a daily presence at the observatory and that problems can be discovered as soon as they arise.

## COORDINATOR'S CORNER

Why is it I should feel guilty for not getting the NAAPOnews out for the last four or five scheduled deadlines? I did have pangs of conscience each time the appropriate dates came round and I found myself unable to grab the time to sit down and write the appropriate copy. It is like the old school days when I knew there was a deadline for papers and reports and I put them off to the last minute rather than work my schedule to accommodate them when they would be easier to compose and correct.

I could list a long string of excuses and rationalizations, but you have better things to do than judge my level of ineptness. At the heart of the matter is an introductory astronomy class with 132 students and a very busy spring term of committee assignments at the college. The life of a volunteer meets occasional uncompromising conflicts.

As in the past, my ruminations in this corner again turn to the role (or from the standpoint of the organization, the plight) of the volunteer. I never cease amazement at what is accomplished by the volunteer. NAAPO owes a tremendous debt of gratitude to the efforts of its corps of volunteers. When forced to operate without large quantities of money, the immediate progress seems slow, but over a period of time large strides are evident and progress does show. One problem with so many volunteer operations is lack of patience to see the growth, causing a tendency on the part of a volunteer to say, "it's not moving, I guess I'll drop out!"

NAAPO is moving and I hope this issue of NAAPOnews will illustrate the strides one can see if we just wait a month or two and let them accumulate.

## WORK PARTY SUCCESS

-- 27 JUNE --

An eager work crew [consisting of Andrea and Tom Fee, Carol Abbott, Jim Bolinger, Ron Huck, Bob Dixon, Bill Mook, Herb James, Tom van Horn, and Jon Guthrie] succeeded in cleaning out the garage and yard area, welding the horn cart winch to the ground, and storing the truck in the garage.

Such work sessions obviously get a lot of work done in a short period of time. Future Saturday meetings will contain the option for such happenings.

## **11/23 PROGRAM PROGRESS**

The 11/23 is now able to take continuum data and archive it indefinitely. One floppy disk will hold about 25 full days of continuum data, so we should plan to use one floppy every two weeks, and allow for slippage as needed.

There are about 20 blank floppies on hand so we should be able to run for a long time. Copying the data from the hard disc to the floppy disk is not yet doable by a simple command by someone not familiar with RSX-11, but takes a few RSX commands.

(Dixon)

## **PDP 11/44 UP AND RUNNING**

The second computer in the Radio Observatory stable is now operating. It was announced at the 20 June working session that Jim Bolinger in a superhuman effort succeeded in bringing the PDP 11/44 up and getting the diagnostics and other system routines to operate.

For this computer we have need of at least two DEC RK07 discpacs. ANYONE WHO HAS ACCESS TO SUCH AN ITEM LET US KNOW. We would prefer not to pay too much for them.

## **WORKING SESSION**

**20 JUNE 1987**

THOSE PRESENT: Hain, Caple, Huck, Dixon, Bolinger, Helwig-D, Helwig-R, vanHorn, Barnhart.

### **ANNOUNCEMENTS:**

1. SARA member, John Moon of Cambrian College of Applied Arts and Technology, Sudbury, Ontario dropped off an A/D convertor for use by the Radio Observatory. He was on his way back to Canada from the SARA meeting at Green Bank and filled Bob Dixon in on the events of that meeting. Many thanks to John for the loan of the instrument.

2. A radio station is requesting a license to operate a 3 KW FM transmitter 4 miles northeast of the Radio Observatory. We will monitor this application as it goes

forward.

3. The Cosmic Search bank account has been slowly eroding by the routine bank service charge route. It was decided to withdraw the \$153 and install it in the Dreese petty cash fund. At the present time, the Dreese fund is the only petty cash fund for the Observatory. As it is rejuvenated from time to time by infusion from the main Observatory fund, all expenditures from that fund must be documented by counter receipt and purpose for the expenditure.

4. There will be no working session on 4 July. Instead, a work day for the purpose of cleaning out the garage and parking lot area east of the garage will be held 27 June.

#### STATUS REPORTS:

Dreese Lab: Bolinger reports the PDP 11/44 is now up and running. If the card reader can be made to run, this would eliminate the need for all IBM 1130's. There is now a need for two or more DEC RK07 discpaks. Used ones cost about \$150 and we would need at least two. We can purchase these if we have not obtained them in other ways when the time comes.

The circuit boards should be done in about two weeks. Construction can then continue toward completion of the 11/23 system. Eight serial ports have been activated on the 11/23. This brings the total to 12. Currently, 5 of these are in use.

Otterbein: Summer break has brought a series of changed operations. Two new volunteers have come forward and we are trying to work them into the program.

#### SUMMER PROJECTS:

1. Discussion of the Day Camp plans was carried out. There are over 20 participants signed up. There is enthusiastic support for the program and Dixon has agreed to present a one hour session on the Search for ETI.

2. The time table for moving the 11/23 into the focus room was discussed. Though it is desirable to be able to test the system in Dreese Lab, it is also important to get as much on the air as possible as soon as possible. The next two work sessions will

concentrate on getting the focus room squared away for the move. It looks like the best method for transporting the equipment will be a rental truck with a hydraulic lift gate.

3. Two work sessions are planned. 27 June and 18 July well be devoted to concerted efforts to clean up the garage, focus room and shop staging area. A short business meeting well preceed the session on 18 July.

4. Barnhart is devoting the summer to the preparation of proposals for support of the Radio Observatory. A number of funding agencies will be explored.

ADJOURNMENT: Next meeting; 18 July 1987 at Big Ear, 10 am. Agenda: Short business meeting followed by a work camp attack on the focus room.

### **HORN CART DRIVE REMOUNTED**

At the last work party Tom and Andrea Fee welded the baseplate for the horn cart drive motor to the mounting peer. After reconnecting the electrical service and drive cable, the system well be ready for testing and operation.

Many thanks to this talented team.

### **MAIL LIST MAINTENANCE**

With the beginning of Volume III your NAAPOnews editor has decided to impose the "lack of asterisk" rule. As a final reminder, look at your mailing label. If it contains a row of asterisks (either horizontally or vertically), you will continue to receive NAAPOnews THROUGH VOLUME III.

If your label does not contain an appropriate display of asterisks, you will have to specifically let us know you would like to keep in touch with the work at BIG EAR and either give us a brilliant hard-luck story or send a small contribution to cover the cost of mailing. All reasonable stories will be honored with a renewed subscription. Lack of response will result in cessation of mailing starting with Vol. III, No. 3.

[A response form was included in the hardcopy but is omitted in this electronic version.]

## **NAAPO UNDERGOES EVOLUTIONARY CHANGE**

Four years ago the threat of total destruction of the 110-meter radio telescope led to the formation of the North American AstroPhysical Observatory. NAAPO was a non-profit organization whose purpose was to be ". . . a research and educational institution to operate and maintain the radio telescope."

Among the original purposes of NAAPO was to provide an entity to receive support for the program of the observatory. A secondary goal was to obtain commitment from colleges and universities to take on some tasks involved in the observatory program.

With commitments from several colleges and universities to provide student and faculty support to the operation of the Radio Observatory, part of the mission of NAAPO has begun to be realized. A further move to reduce the ad hoc operation of NAAPO has been to move the treasury from a local bank to an agency account at Otterbein College. In this way, the educational and research activities of the consortium will be combined with the fiscal management. Grants and gifts will now be sought under a consortium with direct ties to institutions of higher education.

Discussions are beginning in order to clarify the relationship of members of the original NAAPO organization and the week to week operation of the Radio Observatory. At present, the business is being carried out as usual at the biweekly working sessions.

Contributions and invoices should henceforth be directed to:

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Designed by Jerry Ehman

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