



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

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**NAAPO Coordinator - Philip E. Barnhart,  
Department of Physics/Astronomy  
Editorial Intern - Michele Davis, Otterbein  
College, Westerville, Ohio 43081**

### **PARTS RESPONSE MOSTLY LOCAL**

So far the response to our appeal for components for our construction projects has been from local friends of NAAPO. We have filled about 1/3 of the needs for the projects outlined in the last NAAPONews. This is very handy for getting the construction under way, but seems to deprive the outlying precincts an opportunity to get in their contribution. We are still open for donations.

Much of what we do in this organization is experimental. As a result, one of the most desirable aspects of our process, and therefore one of the most important elements offered by the consortium members, is feedback. If you decide not to take on a proffered task for any reason we would like to know. This will help us in the future to know how best to elicit help when it is needed. Besides, it gets lonely here in the office when I don't hear from several of you at once.

## More equipment comes to NAAPO

Word has come hot off the electronic mail that NAAPO has just received 6 CRT terminals, one hardcopy terminal and a brand new DEC card reader.

The card reader could be attached to the 11/44, providing a controller is acquired.

The terminals are available in case any of the Consortium members are interested in gaining access to our electronic mail system. All that is required is a modem and a willingness to pay the long distance toll charges. Typical application for me (on a local call) is 15 - 20 minutes at 300 BAUD and my typical slow typing rate. Evening phone rates are low, so calling after hours would be an advantage.

Anyone who is interested in this opportunity, get in touch with me at the NAAPO office (614) 898 1516 or Bob Dixon at OSU (614) 292 4843. We will be happy to set you up.

## COORDINATOR'S CORNER

What is NAAPOnews for? Originally, we felt compelled to communicate our message to those interested in our progress toward a working consortium. We are still in this phase, though the matters covered are getting a bit more pointed and task oriented. We still have the need to communicate.

Communication costs! As a result I have to ask "What constitutes effective communication?" Occasional, direct feedback lets me know some people read this stuff. Long, dull silence indicates many possible things to me. Like the actor that feeds on his audience, I find the task of performing in a vacuum very difficult.

Some months ago we tried a self addressed return envelope as a gimmick to achieve some sort of feedback. This resulted in a couple notes, one reply by electronic mail and one phone call asking where the newsletter was going.

Postage costs can eat a newsletter alive. We are unable to avail ourselves of bulk mailing rates till we exceed 200 pieces. The break even point is about 140 pieces, (somewhat higher when you count 60 pieces as waste.) I don't plan to get that large.

There are two alternatives I'm exploring, neither of which I particularly like.

Option 1: Reduce the newsletter mailing to only those directly involved in the consortium operation. This would cut the mailing list in half and deprive a number of friends and valuable associates off from the action.

Option 2: Ask that any readers who have not contributed to NAAPO financially, in material or labor or by affiliation consider doing so to protect their right to continue receiving the NAAPOnews for another volume. We would consider any donation in good faith and include such donor on the mailing list.

If you have further options to suggest, or any ideas on the subject, get in touch with me as soon as possible and we will run it up the flagpole and see who salutes.

Phil B.

### **WANTED:**

Students interested in BASIC programing to work on instrumentation applications for Big Ear. Familiarity with IBM or Tektronix hardware is a plus, but we are all in this to learn so why not learn together.

Check with the NAAPO office for further information. [(614) 898 - 1516]

### **NAAPO NEEDS**

Keep your eyes peeled. We need, in addition to the components listed in the last NAAPOnews any of the following:

1. A DEC tape deck
2. A handful (or less) of SMA (small coax) connectors.
3. A printer or plotter that will operate out of an IBM PCjr. We have hope that one or two will become available soon but will be happy to take on all we can get.

## 1001 Uses for NAAPO Interns

314. Plug a low noise amplifier into their ear and point them at the Clarke orbit. You won't receive anything, but they look good on the roof of the library.

78. Peel the epoxy paint from their hands and use the chips for coasters under your laboratory coffee cups.

## SUBMIT LETTERS, COMMENTS OR QUESTIONS TO:

DR. PHILIP E. BARNHART, NAAPO COORDINATOR

Dept. of Physics/Astronomy

Otterbein College

Westerville, Ohio 43081

(614) 898-1516

## WORKING SESSION

OCT 4, 1986

## BIG EAR

In attendance: Dixon, Barnhart, Mitchell, Bolinger, Guthrie, Huck, Abel, Mook

Reports: Considerable progress has occurred on the 11/23 project. Dixon reports his weekends have yielded great progress in program development. He now has a much smarter terminal at home which will make weekend programming go faster. Programs to initialize the observations and perform the data acquisition are nearly complete. There essentially remains only the "discovery" program to work out. It is conceptually complete, but needs to be written in the form to get the 11/23 to do it.

Bolinger and Huck report that the 100kHz 50-channel receiver appears to be working in all channels. The synchronous detector has been connected into the system and seems to be working. Construction of the synthesizer interface is presently held up waiting for parts. Mook cleaned out some bins in his Rapi-Serve R and D lab. NAAPO now has some of the parts on the want list. Guthrie promised to scrounge his parts drawer early this week. The decision was made to go ahead on purchase of the remaining parts needed in about ten days. This will get the material here by the time the circuit boards are ready. An anonymous donor of circuit board technology surfaced at the meeting and an attempt to have them fabricated within two weeks of submission of the schematics was proposed.

The situation at Big Ear is stable. Work by ESL seems to be going on. The crane is prominently sitting in the center of the ground plane at the side of the feed horns and there still seems to be holes in the surface. The pedestrian gate is now installed with a high barbed wire top. The WWV antenna is falling again. It is necessary to get polypropylene rope installed immediately.

It was decided to attempt to salvage as many "complete" sets of Cosmic Search as possible from the falling shed at the Observatory. Barnhart, Huck and Dixon pried their way into the sagging shed and loaded as many different issues as possible onto the Barnhartmobile. These are now being stored at Otterbein to keep as much rain off as possible.

Barnhart is going to try to arrange a NAAPO work day at Big Ear to clean up the electronics shop, get the Speedomax ink system working and a few other tasks needing attention. Further news of this event will appear in NAAPOnews shortly.

Mook reports Paul Horowitz still is interested in sending the hardware for "Suitcase SETI" to the NAAPO group. This means we will have a lot of stuff to examine and look over. It is highly unlikely that we will be able to utilize the hardware as-is because it is not suited to our search mode, nor easily adaptable to our philosophy of searching. We may be able to work it into a "discovery" phase of the Big Ear SETI program. Starting in January NAAPO may have access to the Mooklab for experimenting and testing.

Barnhart is beginning to implement a parallel observing capability at Big Ear, involving microprocessors as data acquisition and storage devices. It will be necessary to have some programming done for this and we need to obtain a few more pieces of hardware. Things are looking up in this direction with the donation of two IBM PCjr's to the Observatory.

General announcements included the impending field trip of approximately 150 astronomy students from OSU this Wednesday evening. Mitchell and Barnhart will ride herd on them while they are at the radio telescope.

Dixon announced there may be a little more in the NASA account than he had believed last meeting. Also, he announced three recent donations to the RADOBS

account in the Development Fund at OSU. This is non-overhead money that the EE vultures can not get their claws into.

Barnhart announced a speaking engagement at the AAPT Regional Meeting at Muskingum College Saturday, Oct 11. He will speak on the subject of NAAPO.

The meeting adjourned at 12:06.

NEXT WORKING SESSION: 10 am Sat. Oct 18 at Big Ear.

### **SECURITY SYSTEM PROBLEMS OVER?**

On-site consultation with a Teanguard technician seems to assure Jim Bolinger that the problems with false alarms are near an end. Repositioning of the sensor and redirecting of some of the wires should cure the flood of alarms generated at the radobs.

The alarm center was beginning to ignore alarms that were coming so fast. They also have agreed to pick up the toll charges since they accept responsibility for the way in which the sensors were installed.

### **COORDINATOR LEADS WIFE INTO SOCIAL WHIRL**

The high point of the NAAPO social season was the Grand Opening celebration of the Mitsubishi American, Inc. corporate offices in Westerville. Phil and Esther Barnhart thoroughly represented NAAPO at this gala event. Highlight of the evening, following a delightful sushi bar, was a series of up-beat speeches by a group of Japanese executives practicing their English. A lavish candlelight banquet rounded out the evening and the coordinator.

The coordinator's wife wore a Shottenstein modified Paris gown while he wore a dribble of chocolate eclair on his tie.

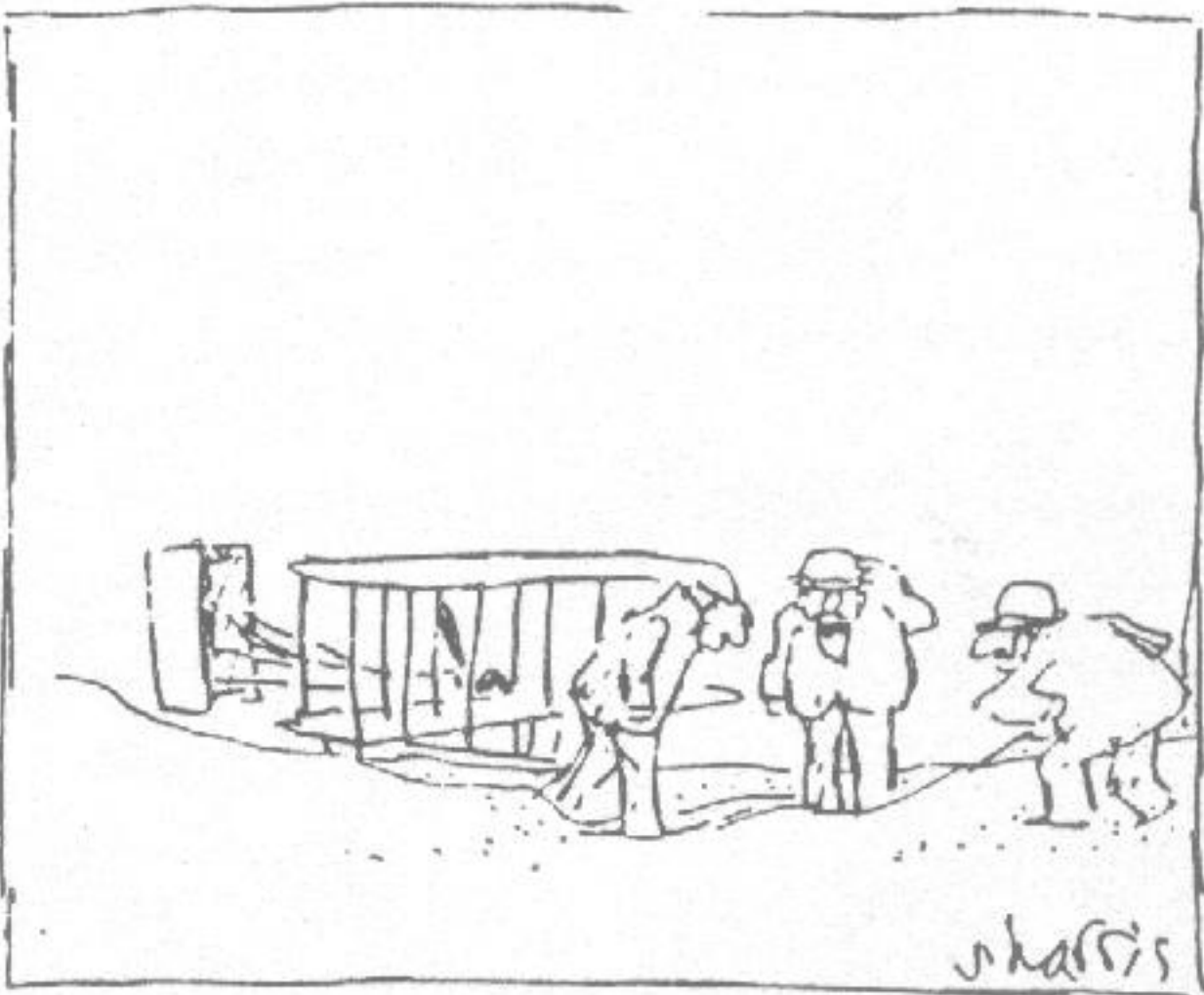
N. B.: I would like to thank John Kraus for transfer of the invitation to this event. We seldom have such opportunities to engage our basic urges to overeat.

**Another N.B.**

**If you are associated with a business that disposes of electronics parts or instruments, CONTACT:**

**NAAPO - - (614) 898 1516**

**For Your Amusement**



IMMEDIATELY AFTER ORVILLE WRIGHT'S HISTORIC  
12-SECOND FLIGHT, HIS LUGGAGE COULD NOT  
BE LOCATED.



GREAT MOMENTS IN SHOPPING  
LOUIS PASTEUR BUYING HIS FIRST  
QUART OF PASTEURIZED MILK

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