



NAAPO (North American AstroPhysical Observatory)

**"NAAPO News"
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CONSORTIUM GETS ITS WINGS

It was a black winter in 1983-84 when announcement was made that Ohio Wesleyan University had sold the land under Big Ear. Almost immediately thereafter announcement was made that the telescope would have to be torn down to make room for a portion of nine holes of expanded golf course for the Delaware Country Club. Many alternatives were considered, massaged and sifted.

Could three acres of steel, concrete and wire be moved? Is the instrument really too large to be used as a fairway hazard? Was it true that a \$500,000 land deal had really included an \$18 million structure?

Among the early ideas was one recognizing the fact that the whole unfortunate deal would not have materialized had there been an institutional commitment to the research and educational potential this instrument possesses. Thus was born the North American AstroPhysical Observatory -- an institution chartered with the commitment to research and education abrogated by both Ohio State University and Ohio Wesleyan University.

Initial favorable response by a number of colleges and universities was

forthcoming. Unfortunately, considerable uncertainty about any future at all for the radio telescope made planning and operation of the educational aspect of the consortium unwise. Then, in December 1985, negotiation of a lease arrangement was effected which extends over the next ten years with a possibility of renewal beyond that time.

This renewed state of relative stability has prompted the activation of the consortium of colleges and universities for the purpose of operating the radio telescope and providing undergraduate and graduate students the opportunity to engage in meaningful research with a large aperture radio telescope. The observatory is again providing students opportunities generally unavailable at large national observatories.

ELECTRONIC MAIL AVAILABLE TO CONSORTIUM MEMBERS

Bob Dixon invites any consortium member to make use of the electronic mail system he has set up at OSU. He makes the use as trouble free as possible and it is a good way to keep track of what is currently happening at the radio observatory. You are also able to get rapid feedback from those who can most readily answer your questions.

To make arrangements and clear your password contact Bob directly at OSU. The only hardware you need is a terminal and a modem. Telephone toll charges may make you search out other means of getting in touch, but this is a good chance to get the feel of the network.

Bob Dixon (614) 292-4843
406C Baker Systems Engineering
Columbus, Ohio 43210

NAAPO GETS A FINANCIAL BOOST

(John Kraus issued the following news release on 21 April.)

The North American AstroPhysical Observatory has recently received gifts which will aid programs of a consortium of institutions using the 110-meter Big Ear radio telescope at Delaware, Ohio. Donors include Malcolm Jones of Tisbury, Mass. (\$5000), Lester Noteman of Bronxville, New York (\$500), George Sinclair of Toronto, Canada (\$500) and Dr. H. J. Lewis of Zanesville, Ohio (\$4000). In addition, Dr. Lewis has offered his 300 acre tract in Morgan County for radio astronomy research and is donating the income from farming and a producing gas well to the observatory.

The North American AstroPhysical Observatory was formed by a group of business persons led by George Foster of Columbus, Ohio, and incorporated in 1984 as a non-profit scientific-educational organization to 'maintain and operate the radio telescope for the purpose of conducting research, promoting knowledge and furthering education.'

Otterbein College is the consortium operations office with Dr. Philip E. Barnhart, chairman of physics and astronomy, as the director. He plans a meeting of representatives of consortium institutions for July. Institutions interested in the consortium include, in addition to Otterbein, Oberlin College, Ohio University, University of Cincinnati, University of Notre Dame, and Youngstown State University.

The 110-meter telescope is one of the world's largest and is credited with discovering the most distant known objects in the universe 15 billion light years away. Recent upgrading with more sensitive receivers and a moveable feed system for extended tracking make the big telescope more powerful than ever. New surveys for giant molecular clouds, distant quasars and extraterrestrial intelligent signals are planned, offering research and workshop opportunities for both graduate and undergraduate students at consortium institutions who could not otherwise obtain hands-on experience at a leading research facility.

MINI-RADIO OBSERVATORY

A request from Joe Snider at Oberlin for suggestions for instructions to build a simple set-up for monitoring the sun for noise storms is leading to a project at Otterbein. The campus hams are working up some equipment lists and devising techniques to get on the air with a minimum of cost and effort. We will be reporting on this project in future newsletters.

If you have suggestions or requirements you would like to see met in this project let us know.

ATTENTION

IF YOU KNOW ANY COLLEAGUES AT OTHER INSTITUTIONS WHO WOULD POSSIBLY HAVE AN INTEREST IN OUR OPPORTUNITY PLEASE SEND US THE NAME AND ADDRESS AND TELL THEM ABOUT US.

NAAPO -- DEPT. OF PHYSICS/ASTRONOMY
OTTERBEIN COLLEGE
WESTERVILLE, OHIO 43081

CURRENT ON-SITE BIG EAR STAFF

Note. The phone numbers have been deleted.

**John D. Kraus
Robert Dixon
James Bolinger
Walter Mitchell
Gene Mikesell
Phil Barnhart**

CONSORTIUM ORIENTATION MEETING

JULY 11 - 12, 1985

There will be a Consortium Orientation meeting at the radio observatory Friday and Saturday July 11 - 12, 1986. This will be an opportunity for those representatives of member institutions and anyone interested in the possibility of joining to meet the on-site staff, explore some history and most of all begin the process of building the future of the Big Ear program.

We will hear presentations designed to inform about the history and accomplishments of the radio observatory to date, the instrumental capability for future work and a description of the organization of the consortium. It will be a good time to bring your questions as to what NAAPO has to offer you, what you have to offer NAAPO and how best to utilize the unique features of this institution for the benefit of your good students.

To make a reservation send the following information to the NAAPO coordinator's office. We will let you know as quickly as possible the accommodations provided for you. **Note. The reservation form has been deleted.**

NATIONAL ACADEMY PANEL STRESSES SMALL SCALE RESEARCH

The April 1986 National Academy of Sciences News Report carries mention of the recommendations of a Research Council committee concerning the growing tendency for government funding toward large-scale projects at national laboratories. In part, the article by Ron Cowen states;

' . . . Although large facilities, such as particle accelerators, are vital to breaking new ground in physics and other sciences, small research groups "make an exceptionally strong contribution to educating new physicists," the committee noted in a recent eight-volume report on the status of physics in the United States. More than 70% of doctorates in physics are awarded to students from small research groups.'

' . . . It recommended that even at a large facility, funds should be provided for small projects and individual investigations when possible.'

This certainly confirms the view held by Jesse Greenstein that construction of the large national observatories would jeopardize the support of 'small astronomy'. Greenstein has argued for years that we must not lose sight of the small, dedicated research project. It seems evident that discoveries are often made with instruments that have been exclusively used by the discoverer. Very few significant discoveries have been made at national observatories. (See Martin Harwit, *Cosmic Discovery*, Chapt. 1.)

**BIG EAR AND NAAPO SUBSCRIBE TO THIS CONCEPT
WHOLEHEARTEDLY!!!!**

COORDINATOR'S CORNER - - - - -

This is the first of a series which we hope will extend well into the future. We recognize a unique opportunity for undergraduate involvement in research and a real need for involvement in a vital research institution.

This issue of NAAPO-NEWS is going to those of you who have expressed interest in the welfare of the radio observatory, those we have invited to consider joining the consortium, and those who have said they would like to become involved with the program. It is our intention to keep our various constituencies informed of the progress of research, problems and their solutions in connection with operation of a large radio telescope on a limited financial foundation.

We welcome your comments, questions and support. Address them to me or to any of the on-site personnel listed in the directory elsewhere in this newsletter.

Phil Barnhart

Dept. Physics/Astr.

Otterbein College

Westerville, OHIO 43081

(614) 898 - 1516

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Designed by Jerry Ehman

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