

not members of AIP Member Societies. The names listed in the AIP *Directory* are obtained from responses to queries sent to academic and nonacademic institutions and departments. The APS directory, on the other hand, is an APS membership directory, and it includes many individuals who are not employed as physicists and astronomers. Each of the other eight Member Societies has a corresponding membership directory.

In past years, AIP has distributed around 1500 or 2000 copies of the *Directory*, an increasingly costly publication. The decision by APS to provide its members with free copies of the 1984-85 *Directory* enabled AIP to print many more copies at reduced unit costs. Additional savings were achieved by sending the *Directory* out with an APS *Bulletin* cover, which entitled APS to take advantage of the *Bulletin's* second-class mailing permit.

The 1984-1985 edition of the *Directory* has been substantially reorganized for more convenient use. The first part consists of an alphabetical list of all physics and astronomy staff members—some 30 000 persons at responding institutions—with their addresses and telephone numbers. Part II is an alphabetical listing of academic institutions and their staffs. Part III is an alphabetical listing of nonacademic research and development institutions. The fourth section arranges the academic institutions by state, and the fifth categorizes the non academic institutions as government laboratories, Federally funded research and development centers, and not-for-profit and industrial labs.

In cases where individuals or institutions were omitted from the 1984-85 *Directory*, persons are urged to fill out the forms found at the end of the *Directory* and return it to the Education Division, American Institute of Physics, 335 East 45th Street, New York, NY 10017.

AIP made every effort to provide a comprehensive listing of physics and astronomy staff members, but there inevitably were some oversights, and some institutions did not respond to requests for information—in certain cases as a matter of policy.

Vanden Bout is new director of National Radio Observatory

Paul Vanden Bout, former chairman of the astronomy department at the University of Texas, took office on 1 January as the new director of the National Radio Astronomy Observatory, which is headquartered in Charlottesville, Va. Vanden Bout, who also was director of the millimeter-wave radio telescope at the University of Texas

McDonald Observatory, will have responsibility for overall administrative management of the National Radio Astronomy Observatory. Among other things, he will be responsible for planning the Very Long Baseline Array.

The National Radio Astronomy Observatory's facilities include radio telescopes at Green Bank, W. Va., a millimeter-wave radio telescope at Kitt Peak, Ariz., and the Very Large Array, which is near Socorro, N.M. The National Radio Astronomy Observatory is managed under contract for NSF by Associated Universities Incorporated.

Vanden Bout received his PhD in physics in 1966 at the University of California, Berkeley, where he did research on hyperfine structure and nuclear magnetic moments. He became interested in x-ray astronomy and interstellar spectroscopy at the Lawrence Radiation Laboratory and at the Columbia University Radiation Laboratory. In his research, Vanden Bout has made use of the National Radio Astronomy Observatory in investigations of the chemical and physical environments of molecular clouds in our galaxy and their associated regions of star formation.

Education

Pine honored as nation's outstanding college teacher

Charles Pine, professor of physics at the Newark College of Arts and Sciences of Rutgers University and chairman of the Mathematics Advisory Committee to the New Jersey Basic Skills Council, has been named the nation's outstanding college teacher of 1984 by the Council for Advancement and Support of Education. The award, which consists of \$5000, was first made in 1980 and is supported by the Carnegie Foundation for the Advancement of Teaching. Pine received the award on 18 October in a ceremony at the Smithsonian Institution, where he delivered a public lecture describing his philosophy of education and the results of work he has done with colleagues on the implications of standardized test results.

In analyzing basic skills and SAT answers, Pine says it was found that what ostensibly are deficiencies in basic skills can be reduced, in fact, to an "underlying problem with sequential thinking." Because students apparently "are not learning how to reason," Pine believes that "kids need to learn how to reason algebraically in elementary school." The main thing, Pine thinks, is for children to think of equations concretely and to develop the ability to manipulate them without being bound to any particular sequence

of steps.

As for his general philosophy of education, Pine believes that the "teacher should have the expectation that all students should learn." He has a special aversion to curve grading, because he feels that the goal should be for every student to get an A, and he favors cumulative testing—tests that draw on all the material covered in a course to date.

—WS

Blume takes over as Deputy Director at Brookhaven

Martin Blume succeeded Warren Winsche as Deputy Director of Brookhaven National Laboratory. Blume, who previously was Brookhaven's Associate Director for Low Energy Physics and Chemistry, will continue to have primary responsibility for the lab's work in the basic energy sciences. In addition, he will work closely with the Director, Nicholas Samios, in the general administration of the laboratory.

Seymour Baron has taken office at Brookhaven as Associate Director for Applied Programs. Baron, who previously was senior corporate vice-president of Burns and Roe Inc, will have responsibility for the research programs in the High Flux Beam Reactor Division, departments of applied science and nuclear energy, applied programs in other departments, and the lab's technology transfer efforts.

Duggal Award in cosmic-ray physics is established

A new award in cosmic-ray physics has been established to inspire young scientists in the field and commemorate the work of Shakti P. Duggal, who worked for 22 years at the Bartol Research Foundation and died in 1982 at the age of 50. The Duggal Award consists of \$1000 and a plaque and will be given biennially to an outstanding young cosmic-ray physicist. The recipient can be from any place in the world, but must be less than 36 years old at the end of the year preceding the award. The first Duggal Award will be presented at the 19th International Cosmic Ray Conference, which will be held in La Jolla, California, 10-20 August 1985. Persons wishing to make nominations should send copies of the nominee's vita and publication list with a supporting letter and, if possible, one or two of the candidate's more significant publications to: Duggal Award Committee, Bartol Research Foundation of the Franklin Institute, University of Delaware, Newark, Delaware 19716.