

tists from nuclear physics and chemistry, cosmic-ray physics, particle physics, biology and medicine who have interest in the Bevalac.

The organizing committee of the Bevalac Users Association also announces that, commencing in the spring, the LBL Bevalac facility will deliver beams of relativistic heavy ions. The Bevalac uses the SuperHILAC to inject heavy ions (^{12}C to ^{40}Ar) into the Bevatron for acceleration to 0.25–2.5 GeV per nucleon at a repetition rate of 10 pulses per minute.

Information about the Bevalac or the Bevalac Users Association can be obtained by writing to Lee Schroeder, Bldg. 50, Room 149, Lawrence Berkeley Laboratory, Berkeley, Calif. 94720.

Fusion division of AEC announces staff changes

Staff changes have been announced for AEC's Division of Controlled Thermonuclear Research. Sibley C. Burnett, at Los Alamos before joining the CTR Division in November 1972, will be chief of the Tokamak Systems Branch. Kenneth G. Moses and John B. McBride joined the CTR Division in January 1973. Moses formerly worked at Lawrence Livermore Laboratory and McBride at the Naval Research Laboratory.

Bernard J. Eastlund, who joined AEC in 1966, has been transferred from the Research Program to the Confinement Systems Program. He will oversee programs in the Open Systems Branch.

F. Robert Scott and David W. Ignat joined the staff in September. Scott is on a two-year leave from his post as professor of physics at the University of Tennessee and Ignat comes from the Center for Research in Plasma Physics in Lausanne, Switzerland.

Burbidge resigns from UK astronomy position

Margaret Burbidge has announced her resignation as the Director of the Royal Greenwich Observatory, a post to which she had been appointed in September 1971 (PHYSICS TODAY, December 1971, page 63). She will continue as a physics professor at the University of California, San Diego.

Burbidge says that the basic reason for leaving was the "lack of support for my vision of the way in which optical observational astronomy in the UK could be revitalized and [because of] an environment in which I have felt it increasingly frustrating to work." She

goes on to say that no other expatriate British observational astronomers with whom she wished to collaborate were offered worthwhile positions in the UK. "A particular example of the lack of support and antagonism toward expatriate astronomers has been the inability of the Science Research Council [of the UK] to create a situation in which my husband [Geoffrey Burbidge, also at UCSD] and I could work cooperatively toward planning for future observational facilities overseas with the necessary home-based backup."

She continues, "I could have worked very well in an organization whose aim was to concern itself above all with overseas observing facilities, planning for telescopes and their equipment, the development of observing programmes and helping young astronomers to gain experience, but in all this the support I have described earlier was absolutely necessary." She concludes by saying, "Despite all this, I am and shall remain keenly interested in the improvement of optical observational astronomy in the UK. I should be glad to do what I can to help, but this would have to be from my original base in the US."

New standards for light velocity and wavelength

Recommended values for the wavelength of light from two stabilized lasers and for the speed of light were adopted by the Comité International des Poids et Mesures (CIPM) at its October meeting. One of these values may serve in the future as the defining standard for length, one that is expected in practice to be superior to the present Kr^{86} standard.

The recommendations of the Comité Consultatif pour la Définition du Mètre (a committee established by the CIPM) state

► that the value $3\,392\,231.40 \times 10^{-12}$ m be used for the wavelength emitted by a helium-neon laser stabilized to the P(7) line in the ν_3 band of the methane molecule.

► that the value $632\,991.399 \times 10^{-12}$ m be used for the wavelength emitted by a helium-neon laser stabilized to the "i" component of the R(127) line in the 11-5 band of I^{127} .

► that other lines of the iodine molecular spectrum could also be used as length standards, and that since they could be related to the "i" component by difference-frequency measurements, their calculated wavelengths would therefore be of the same accuracy as the "i" component.

► that the value $299\,792\,458 \text{ m sec}^{-1}$ be used for the speed of light. The uncertainty of all the above values is four parts in 10^9 .

The new standard is designed to replace two standards that are currently in wide use. One, adopted in 1960, defines the meter in terms of the orange emission line from Kr^{86} and is used in laboratory measurements. The other standard utilizes a value for the speed of light ($299\,792\,500 \pm 100 \text{ m sec}^{-1}$) obtained in 1957 by K. D. Froome of the National Physical Laboratory, Teddington, UK. This reference has found wide use for most long-distance measurements.

A high degree of reproducibility is the key advantage of the laser reference. Independently constructed devices yield much higher frequency uniformity than can be achieved with the Kr^{86} system. Still to be decided is whether to redefine the meter in terms of one of the stabilized laser transitions or to designate the meter as the distance traveled by electromagnetic waves in a vacuum during a specified fraction of a second.

Information about the new proposed standard can be obtained by writing to K. G. Kessler, Optical Physics Division, NBS, Washington, D.C. 20234.

in brief

The Centre for Interdisciplinary Studies in Chemical Physics at the University of Western Ontario invites applications for up to six Visiting Fellowships in atomic and molecular physics, interaction of high-energy radiation with solids, liquids, gases and living systems, and atomic motions in crystals, thin films and membranes. Write to the Program Coordinator, Centre for Interdisciplinary Studies in Chemical Physics, University of Western Ontario, London, Canada N6A 3K7; final date for applications is 1 February.

Applications for American Vacuum Society scholarships for graduate study in the academic year 1974–75 may be obtained by writing AVS, 335 E. 45th Street, New York, N. Y. 10017. The scholarships, which carry a maximum stipend of \$4000, are awarded for one year but may be renewed. The deadline for receipt of applications is 29 March 1974.

Physics in 1973, an annual summary of new developments prepared by AIP in cooperation with its member societies, is available for \$1.00 prepaid from the Public Information Division, AIP, 335 E. 45th St., New York, N. Y. 10017. Bulk rates available on request.

The National Earthquake Information Service, formerly part of the National Oceanic and Atmospheric Administration, has been shifted to the US Geological Survey. □