

LAMPF Aims for 1972; Users' Group Organizes

Construction and organization of the Los Alamos Meson Physics Facility have passed the half-way mark with a strong possibility that the 1972 completion date will be met. Buildings are rising, equipment is being installed and a users' group has been formed.

The facility is designed to produce a beam of 800-MeV protons with an average current of 1 milliamperere (PHYSICS TODAY, December, 1966, page 21; June, 1968, page 61). Far more intense than existing proton beams in this energy range, the Los Alamos beam will produce pi and mu mesons in enormous quantities.

First proposed to Congress in 1964, LAMPF still is expected to cost \$55 million. Through the end of the fiscal year \$33 million had been appropriated and released. President Johnson's budget for the fiscal year beginning 1 July included \$5 million for LAMPF; Los Alamos officials hope the Nixon administration will raise this to the \$15.3 million they feel necessary to stay on schedule and to keep within the budget.

The equipment test laboratory is complete; the injector and 201.25-MHz building is nearing completion, and the laboratory-office building is taking shape. Tank construction for the drift-tube portion has begun and contracts have been let for copper forging for the rest of the accelerator.

Harry Palevsky of Brookhaven is the first chairman of the users' group executive committee; he will be succeeded next year by David A. Lind of the University of Colorado. Other executive committee members include Roy Haddock of the University of California at Los Angeles, Harvey Willard of Case Western Reserve and Arthur Poskanzer of the Lawrence Radiation Lab. Lewis Agnew of Los Alamos will act as liaison officer.

Palevsky said one of the group's initial functions will be to organize its efforts toward design of experimental facilities and start study programs by specialized groups. Taking on these jobs would free Los Alamos staff to concentrate on building the machine and developing the experimental area.

"I foresee that in the beginning there will be a lot of important questions that the Users' Group can answer for prospective users and we can be of extreme help to Los Alamos. The more we do in the beginning, the more the LASL administration will be willing to listen to our gripes and comments when the machine is running," he said.

LAMPF will be in an open area not subject to the security restrictions in force at Los Alamos, and will be operated like a national laboratory.

Louis Rosen, head of the Medium Energy Physics Division at Los Alamos



LOOKING WEST along beam-channel tunnel toward injector building. Equipment test laboratory is at top of picture; construction of a lab-office building has begun in the cleared area.

RESONANCES

President Nixon's April budget revisions hurt NASA and AEC but left the National Science Foundation untouched. In the revision of the Johnson budget (PHYSICS TODAY, March, page 65), the Atomic Energy Commission lost \$79 million, partly through antiballistic-missile modification. The space agency lost a net \$45 million, including some space-physics funds, despite increases for manned-flight programs.

APS and AAPT advisory votes favor staying in Chicago. American Physical Society members approved by 8559-6405 a resolution that the council not reverse its decision to hold the 1970 annual meeting there. A preliminary count of American Association of Physics Teachers ballots showed a majority for Chicago. Luis W. Alvarez, APS president, told PHYSICS TODAY it was important that the total APS vote had supported the council decision, that the area within a day's drive of Chicago had voted 1427-867 to meet there and that no region had vetoed Chicago.

and LAMPF director, said scientific merit would decide what experiments would be performed. The users' group will advise the LAMPF director of the experimental program to be undertaken and the relative priorities to be assigned specific experiments.

In testimony before the Joint Committee on Atomic Energy, Rosen proposed that 50% of machine time be dedicated to non-LASL users: This remains the policy.

Canadian Council Weighs Role on Batavia Machine

The Canadian government, which for the moment has turned away from going it alone in "big science," may be asked next month to join the US in building the 200-GeV accelerator at Batavia, Ill. The Canadian contribution would total \$20 million, nearly 10% of the total \$250 million cost.

The plan results from a year-long

study by five Canadian physicists led by E. P. Hincks of Carleton University, Ottawa. It is now before the National Research Council of Canada, which meets next in June. If approved there, the plan must go through the Treasury Board for permission to spend the money. At that point the Science Council of Canada may be asked for advice.

Enough time remains for all these steps. The Hincks group recom-

mended that Canada invest \$4 million a year for five years, to start in April 1970. At the same time support for users' groups would rise to \$2 million a year by 1974.

A US welcome for Canadian participation is assured. In appendices to the Hincks report Robert R. Wilson, NAL director, and Norman F. Ramsey, president of Universities Research Association, expressed general approval.

Canadian funds for the laboratory would be administered by a Canadian Universities Research Association. A

joint high-energy physics committee, responsible to the boards of both associations, would set laboratory policy.

As further inducement to the Ottawa government, the Canadian physicists point out that most of the money could be held and spent in Canada for contractors and supplies.

While the major decision hangs in the balance, the National Research Council has appropriated \$46 000 to keep two Canadian physicists at Batavia and support design of experimental programs for Canadian groups.

AAPT Sponsors New Book on Demonstration Experiments

Harry F. Meiners and staff, under the aegis of the American Association of Physics Teachers, have compiled the best demonstration techniques and equipment of the past 30 years for a two-volume book, *Physics Demonstration Experiments*. Edited by Meiners, a professor at Rensselaer Polytechnic Institute, both volumes are scheduled to be published in early winter by Ronald Press. The project, initiated in 1961, is supported by three National Science Foundation grants. All royalties go to AAPT.

The 1938 AAPT demonstration book is now obsolete; the new collection emphasizes the concepts of contemporary physics. Volume one deals with

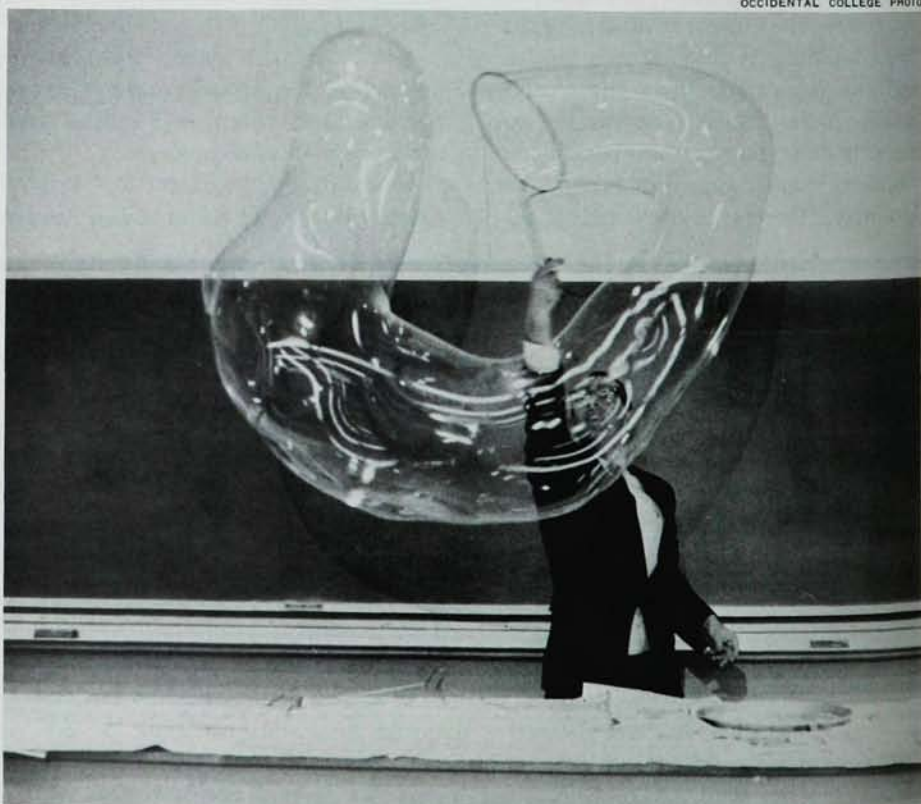
mechanics and wave motion. Volume two treats electricity and magnetism, heat, optics and atomic and nuclear physics. Most entries include a description of the apparatus, its uses, a diagram and construction notes. Solicited articles on the role and purpose of lecture demonstrations and uses of audio-visual techniques are also included.

Project codirector is Robert Resnick, also a professor at RPI, which served as coordinating center. Now on leave, Meiners is serving as chief scientist for the NSF science-liaison staff, US Agency for International Development in India.

The long-range project involved col-

lection and appraisal of material and final preparation of the manuscript. More than 80% of the demonstrations originated from visits to various institutions by Meiners and a draftsman, who traveled over 60 000 miles. In an effort to be conclusive, Meiners, mostly at his own expense, traveled abroad to select more significant experiments. More than 1000 photographs and detailed drawings are in each volume.

All collected material was examined by Meiners, his technical staff and the advisory committee, consisting of George D. Freier, University of Minnesota; John G. King, MIT; Melba Phillips, University of Chicago; Howard A. Robinson, Adelphi Uni-



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CHLADNI FIGURES AND SOAP BUBBLES. Typical illustrations show types of demonstrations discussed in revised book to be published early next winter for American Association of Physics Teachers.