Meetings

Energy Standards for Low-Energy Accelerators

ON April 29, a small conference was held in Washington. D. C., under the auspices of the Subcommittee on Nuclear Constants (National Research Council) to discuss the problem of energy calibrations for low-energy accelerators. Representatives from ten American, three Canadian, and three European laboratories were present. The discussion centered about the measurement of the energy of Van de Graaff beams; both absolute and relative measurements were treated.

The most extensively investigated calibration point is the $Li^7(p,n)Be^7$ threshold energy. Seven absolute measurements exist, the weighted mean of which is 1881.1 kev. The agreement among the various determinations is quite good. Similar agreement exists at the $F^{19}(p,\alpha\gamma)O^{16}$ resonance at 340.5 kev. At intermediate and higher energies, however, the comparisons among the various measurements are much less satisfactory. In view of these discrepancies, it was decided to recommend the adoption of the $Li^7(p,n)$ threshold energy as the standard reference point for the low-energy scale. Recommended energy values for resonances and other thresholds could then be arrived at by averaging all measurements made relative to the $Li^7(p,n)$ energy.

Since the majority of low-energy accelerators have nonabsolute magnetic beam analyzers, some accurately known resonances or threshold energies are needed in the high field region in order for deuteron and He^+ beam energies to be known with precision. Similarly, the tandem accelerators will require high-energy calibration points. The hope was expressed that some narrow $(p,p'\gamma)$ and $(\alpha,\alpha'\gamma)$ resonances can be measured with accuracy to provide such points.

In order to make available recommended energies for calibration points based on as much data as possible, it is requested that all laboratories cooperate by supplying J. B. Marion (Department of Physics, University of Maryland, College Park, Md.) with their latest values for accurately measured resonance and threshold energies. Whenever possible, the list should include a value for the $Li^7(p,n)$ threshold energy if an absolute measurement was performed, or a statement to the effect that the values are relative to this threshold at 1881.1 kev.

Assessments of all of the data will be made and distributed to as many laboratories as possible on a regular basis. In addition, an annual summary will appear in the Atomic Energy Commission publication, *Nuclear Data Tables*.

A "follow-up" conference is planned within about

two years to examine the improvements in the situation which, it is hoped, will have occurred by that time. A more detailed account of the proceedings of this first conference may be obtained from the chairman of the Subcommittee, D. M. Van Patter (Bartol Research Foundation, Swarthmore, Pa.).

D. M. Van Patter

AAPT Chesapeake Section

JOHNS Hopkins University played host to the spring meeting of the Chesapeake Section of the American Association of Physics Teachers on April 11. The meeting, which took place in the University's Remsen Hall with 41 registrants present, opened with invited papers by two members of the Johns Hopkins faculty: Donald E. Kerr, who spoke on low-energy plasma problems, and Alan M. Thorndike, who discussed strange particle interactions. Following a brief discussion period, Theodore Lashoff of the National Bureau of Standards presented the report of the scholarship awards committee. The annual competitive examination had been scheduled for the following Saturday, April 18 and at the time of the meeting there were about 500 applicants for the test, which is now on the approved list of the NASSP.

The afternoon session was opened with two progress reports on the Physical Science Study Committee's physics course in the Washington, D. C. and Baltimore schools. Rev. A. J. Mullen, OSA (Archbishop Carroll High School) reported on developments since last fall, particularly with regard to student and faculty reactions to the program. Dale Gerster (Bladensburg High School) gave a demonstration of some of the newer laboratory developments for the same course. The meeting continued with the presentation of the following contributed papers: "Photometer, Normal Room Lighting" by Ralph A Regalbuto (Georgetown University), "An Exact Earth Flattening Procedure in Propagation over a Spherical Earth" by Martin Katzin (Electromagnetic Research Corp. and University of Maryland), and "Opening the Season on 'Les Ombres Volantes'" by Richard L. Feldman (Capitol Page School). The last discussion involved certain shadow effects observed often but not exclusively in connection with eclipses of the sun and excited a great deal of interest.

There followed the election of these new officers: president, Howard J. Laster (University of Maryland); secretary-treasurer, Rev. A. J. Mullen, OSA (Archbishop Carroll High School, 4300 Harewood Road, N. E., Washington 17, D. C.); executive committee members, Julius Taylor (Morgan State College) and Dale Gerster (Bladensburg High School). The retiring president, Miss Clare Driscoll (Western High School), was elected as representative to the AAPT Council.

At the conclusion of the meeting there was a conducted tour of the University's Physics Department. Two of the major points of interest were a very new machine, a binocular microscope presently in use in studying strange particle tracks, and an old and now famous one, the original Roland ruling machine.

Anthony J. Mullen, OSA