strip may soon become available through one of the scientific apparatus companies. This was followed by the showing of several AAPT classroom films by V. E. Eaton of Wesleyan University.

On Monday afternoon AAPT met jointly with the American Physical Society, APS Vice President R. T. Birge of the University of California presiding. A group of very interesting and timely papers on astronomy and astrophysics was given with each speaker summarizing his field and giving the most recent information pertaining to his subject. The topics and speakers were: "Galactic Magnetic Fields" by W. A. Hiltner, Yerkes Observatory; "White Dwarfs and Degenerate Stars" by W. J. Luyten, University of Minnesota; "The Probable Age of the Earth" by T. L. Collins, University of Minnesota; "Radio Astronomy" by F. Graham Smith, Cambridge University.

Following the very interesting informative evening lecture, by Ed Ney, University of Minnesota, in which he summarized the work in cosmic rays to the present date, the societies attended the department of physics open house. The cosmic-ray, thermal diffusion, mass spectroscopy, biophysics, general physics, and x-ray laboratories were open. The Van de Graaff generator room and the 68 Mev proton linear accelerator building were also visited.

Tuesday morning was given over to ten-minute papers with Frank Verbrugge, Carleton College, presiding. Marsh W. White, president of AAPT, acted as moderator for a round-table discussion on methods of accomplishing the function and mission of AAPT. The objectives of the Association as set out in the constitution were read and studied with the viewpoint of finding means to augment them. Suggestions of methods for encouraging physics students, definite programs for the training of physics teachers, research in the teaching of physics, and cooperative efforts to encourage more high school students to study mathematics and physics were among the ideas discussed. Thomas H. Osgood, AAPT *Journal* editor, set forth the aim of the *Journal* as bringing out articles that have one or more of the following six purposes: educational, informative, pedagogical, reportorial, professional, and inspirational. It was suggested that certain people be invited, through the pages of the *Journal,* to explain how they teach particular areas of physics, also that the Association send literature and invited lecturers to institutions to help acquaint more students with physics and with the opportunities in the field of physics.

R. F. Paton, secretary of AAPT, presiding, introduced the symposium report of the Urbana ASEE Symposium on Physics in Engineering Education. The report was presented by J. G. Potter, A and M College of Texas.

Richard Sutton, Haverford College, presented a very informative and lucid demonstration lecture on "Tomorrow's Total Eclipse" at the dinner meeting on Tuesday evening, Marsh W. White presiding. This was followed by a lecture on "Processing Minnesota Taconite", by E. C. Davis, University of Minnesota.

The early risers on Wednesday morning witnessed the launching of the cosmic ray "Skyhook" balloon by General Mills Corporation. The process of filling the balloon and preparing it for ascension was found by many to be very educational. The sunrise was witnessed by all with enthusiastic anticipation for what was to follow in less than one hour. As 5:08 A.M. approached, the moon moved across the face of the sun. From partial eclipse to Baily's beads, to the brilliant diamond-ring effect, and to totality formed a series of events that all who saw it can never forget. The beautiful pearly-gray pastel coloring of the corona with the coronal streamers stretching millions of miles from each side of the sun's equator and the coronal spikes at the sun's poles were clearly visible in the cloudless sky. A prominence was visible to the unaided eye at the 7 o'clock position during totality. The brilliant diamond-ring effect appeared again as the moon moved away from totality.

The association reconvened at nine o'clock for a round-table discussion on "The Preparation of College Physics Teachers", J. W. Buchta of the University of Minnesota as moderator. Participants on the panel were Russell M. Cooper (University of Minnesota), Thomas H. Osgood (Michigan State College), George Pake (Washington University), and Frank Verbrugge (Carleton College). This was followed by a report of the Northwestern University Conference on the Training of Graduate Student Assistants, presented by C. J. Overbeck, Northwestern University, with J. G. Winans, University of Wisconsin, presiding. The requirements and qualities of a good teacher that were stressed were knowledge of subject, enthusiasm for teaching, adequate time and inclination to accomplish the above, lucidity, and creativity. It was emphasized that the training of a teacher should not differ from the training of a research specialist. It was also pointed out that more concern must be placed upon giving guidance to the graduate assistant in his teaching program.

At the executive committee meeting T. H. Osgood was appointed on the U.S.A. National Committee of the International Union of Pure and Applied Physics. Interest was also shown in a plan to encourage conferences between engineers and physicists on the place of physics in engineering education. The association plans to hold the 1955 summer meeting of AAPT in June at Pennsylvania State University in conjunction with ASEE.

Glenn Q. Lefler
Eastern Illinois State College

IRE Nuclear Science Group

The Institute of Radio Engineers Professional Group on Nuclear Science held its First National Annual Meeting on October 6 and 7 at the Sherman Hotel in Chicago. More than two hundred registrants heard nineteen submitted and invited papers during the two-day meeting.

Highlight of the meeting was an address by L. R. Hafstad, director of reactor development for the AEC,

A.P.S.—A.A.P.T.

MEETING AND EXHIBIT

Jan. 27, 28, 29, 1955 New York City

An exhibit of technical books, instruments, and apparatus is being scheduled for the combined winter meeting of the American Physical Society and the American Association of Physics Teachers. The exhibit will be located in the East and Blue rooms of the Hotel McAlpin, 34th Street and Broadway. These rooms are adjacent to the registration desk located on the first mezzanine of the hotel. The exhibits will be open each day of the meeting, January 27, 28, 29, 1955, and everyone attending the meeting is cordially invited to visit the exhibits.

Publishers and manufacturers interested in exhibiting should write to Mr. T. Vorburger, Exhibit Manager, 57 East 55th Street, New York 22, N. Y.

who discussed the present five-year government program of reactor research. He stated that while in the near future atomic energy will not be the exclusive source of energy, nor will it necessarily make energy cheap, the indications are, however, that atomic power will prevent present costs of energy from rising. The experimental boiling water reactor is one example of a reactor which shows good promise for reducing costs, he said.

Alvin Weinberg of Oak Ridge National Laboratory, in discussing the homogeneous reactor experiment, mentioned the possibility that one result of the experiment might be to put electronic engineers out of the reactor business. Reason—the essential simplicity of the homogeneous type reactor. Some features of the Oak Ridge reactor: the core is contained in an 18-inch stainless steel sphere; 1 gram of U-235 is consumed per day at high-power operation (1000 KW); total activity of the reactor at the 1000 KW level is 30 million curies; 10 million curies of activity in the form of fission gases must be removed per day. The big advantage of this type of reactor is that it is temperature compensating. It is thus a slave to power demands. As power is removed from the reactor system, its fuel temperature drops, resulting in increased reactivity, which in turn increases the power level. Such a reactor is very unlikely to blow itself up, in the event of some sort of accident.

Lyle B. Borst from New York University described an economic "little power" reactor. Since it is specifically designed for use in railroad locomotion, it has vital restrictions as to size in that the reactor cannot be more than 10 feet wide, 16 feet high, or 60 feet long. Since approximately four feet of shielding is needed on each side, the actual reactor width could be only two feet.

Robert Vestergaard described Sweden's first reactor. A heavy water moderated, high-power (100 KW), low-temperature reactor, it is housed in an underground building only two kilometers from the center of the city. Plans to build Sweden's second reactor are now underway.

G. C. Laurence from Atomic Energy of Canada, Ltd., stated that the Canadian government has authorized a large-scale program of atomic development. The present Canadian interest is in large central station reactors—not packaged power plants. Dr. Laurence described the NRX and NRU reactors. The new NRU reactor will be of much higher power than NRX and will be moderated and cooled by heavy water. Dr. Laurence emphasized the value of international symposia of this sort because of the many reactor problems which face everyone in this field.

S. J. Goslovich
Glen Ellyn, Illinois

Spectroscopy Seminar

The University of Florida's 3rd annual spectroscopy symposium, dealing with various applications of emis-