Association Affairs

Centennial Meeting Plans

Membership drive: Commencing on January 6, invitations have been sent from the office of the administrative secretary to a list of nominees submitted to this office by associate members of the Centennial Membership Committee. As of January 29, over 1,000 of the 16,000 scientists invited to join the AAAS had become new members. Unfortunately, a large number of invitations to members of educational institutions could not be mailed for lack of a specific departmental address on the nomination forms.

Meeting plans: The Centennial Policy Committee, at a meeting on January 24–25, drew up a general outline of the September meeting arrangements. As presently planned, the morning sessions on September 14, 15, and 16 will consist of 5 concurrent technical symposia to commence at 9:30 A.M. and close not later than 12:30 P.M. The mid-day program, as announced previously (*Science*, December 5, 1947, p. 535), will be free of meetings to permit a series of afternoon activities to be determined by the local committee. The evening sessions will include three concurrent symposia of a semipopular nature which will commence at 8:30 P.M.

The topics for the morning sessions have been chosen deliberately in order that the subjects may be integrated about a central theme of interest to various scientific disciplines. The three speakers on each symposium will be limited to 30 minutes for presentation of their papers. In addition to the speakers, one to three discussants will be assigned to each session, each to follow a designated speaker. A maximum of 10 minutes will be devoted to these discussions. In order to permit audience participation, those in attendance may submit written questions for the speakers to answer toward the close of the session. If enough interest is evidenced by the questions, the sessions may run beyond 12:30 P.M., but not beyond 1:00, in order to permit general participation in the afternoon activities.

Titles of the morning symposia tentatively proposed were: "Problems of the Ocean," "World's Natural Resources," "The Upper Atmosphere," "Human Individuality," "Sources of Energy," "Food," "World Health Problems," "Early Man," "Genes and Cytoplasm," "Science Education and Interpretation," "Gerontology," "Waves and Their Uses," "Nucleonics," "Solid States," and "High Polymers." Some of the suggestions for evening lectures were: "Populations," "Weather Control," "Medical Research," "Human Frontiers," "The World of Isotopes," "Giant Machines for Research," "Bird Migration," "Conservation of Soil," "Wood and Its Uses," "Mechanical Brains," "Housing," and "One World of Physics."

It is the consensus of the Policy Committee that the Centennial Meeting should include as speakers individuals who are most actively engaged in expanding the horizons of science.

Section on Astronomy (D)

The Section on Astronomy met on the afternoon of Friday, December 26, on the forenoon of Saturday, December 27, and jointly with Section E (Geology) on the afternoon of Saturday, December 27. The joint meeting was a symposium on "Origin of the Earth."

The papers presented may be grouped as follows: address of the retiring vice-president, miscellaneous papers, meteors and meteorites, and on the origin of the earth. They will be summarized in that order, rather than in order of presentation.

Address of the retiring vice-president. G. Van Biesbroeck reported that his work on the eclipse of May 20, 1947, gave for the Einstein deflection 2".00, a value some 15% larger than the calculated. This is in good agreement with earlier observations, but all observed results are somewhat uncertain.

Miscellaneous papers. C. H. Smiley reported that photometric measures of light reflected from clouds had given, for two eclipses, good results for times of contacts. Astronomers can obtain these times even if a cloud covers the sun.

C. C. Wylie commented on the hysteria produced by unexplained reports of strange objects in the sky. Meteor workers have usually been able to obtain, at little expense, the facts back of these reports. A nation-wide and year-round "Patrol," organized by meteor workers to investigate such reports, was therefore recommended.

It was proposed by D. H. Menzel and W. W. Salisbury that cosmic rays are produced by solar radiation of very long wave length (200–2,000,000 miles), which accelerates interplanetary ions.

O. C. Collins recommended that a navigator obtain a "fix" by observing two stars at the same altitude, or at the same azimuth.

That the calcium lines in RS Canum Venaticorum appear to come from huge prominences restricted to a small area on the large star was reported in a paper presented by W. A. Hiltner.

W. P. Bidelman reported that the spectrum of Rho Cassiopeiae has changed remarkably and is now similar to that of a very luminous K-type star.

G. Kuiper's paper dealt with infrared observations of the planets and, in particular, the finding of carbon dioxide in the atmosphere of Mars.

Meteors and meteorites. P. M. Millman discussed observations of the spectra of the Giacobinid meteors. These spectra show important differences from those of the Perseids, which can be attributed to the lower velocity of the Giacobinids.

C. C. Wylie reported that the orbits of three meteors from which meteorites have been recovered are of the asteroid type. These, and similar orbits for other detonating meteors, suggest that meteorites are fragments from the hypothetical planet whose disruption produced the asteroids.

Carl A. Bauer stated that the extreme differences found for the age of meteorites had caused astronomers to doubt their common origin in this hypothetical planet. But, he pointed out, cosmic radiation produces "extra" helium, especially in the smaller meteorites, and this has led scientists to believe them older than they really are.

Harrison S. Brown showed that, if the elements in meteorites represent equilibrium distributions, the meteorites presumably had their origin in a planet similar to the earth, or to Mars. Dr. Brown constructed a model of this ancient planet.

On the origin of the earth. In this symposium, Kirtley F. Mather stated that presumably the astronomer should have the task of developing a theory to account for the origin of the earth, but the geologist should give the specifications for a newborn earth that would evolve into the earth as it is today. He then sketched the stratiform structure of the earth's interior. James B. Macelwane described the seismological methods of arriving at the structure of the earth's interior, giving the results rather fully. Harrison S. Brown, in the paper previously mentioned, discussed the structure of the earth's interior and, by correcting for pressure differences, showed that Mars must be strikingly similar. W. J. Luyten's paper (read by title in his absence) outlined the Nebular Hypothesis of Laplace, the Planetesimal Hypothesis of Chamberlin and Moulton, and, more briefly, certain more modern theories. There are seemingly fatal objections to all of these. J. Allen Hynek's paper (read by D. B. McLaughlin) outlined the Wiezsacker theory, which predicts the spacing of the planets according to Bode's law. D. ter Haar showed that for the formation of the earth from gaseous material, the temperature must have been between 400°K and 1,000°K; but the molten earth might have attained much higher temperatures from energy released during condensation. A newly-developed theory by which the planets developed in a large cloud of interstellar gas and dust, as it collapsed to form the sun, was outlined by Fred L. Whipple. The planets began as condensations in a smaller cloud of the assembly and spiraled inward.

Presiding officers and attendance. For the Friday afternoon and Saturday forenoon sessions of Section D, D. B. McLaughlin, chairman of the Section, presided. F. R. Moulton presided over the Saturday afternoon joint session with Section E, the symposium on "Origin of the Earth."

The attendance at the Friday afternoon and Saturday forenoon sessions was the seating capacity of the room, or about 40. The attendance at the Saturday afternoon joint session was estimated as 150, about 100 seated and some 50 standing, with scores having been turned away.

In conclusion, it should be mentioned that the AAAS $1,000 prize awarded at each meeting for "a notable contribution to science" was presented to Harrison S. Brown for the paper "Elements in Meteorites and the Earth's Origin" (see *Science*, January 9, p. 36). (C. C. WYLIE, *Secretary.*)