

letters

self-energy produces a universal (the same for all kinds of particles) renormalization of the gravitational mass. This universality of the renormalization factor is a consequence of the fact that the source of the field (energy momentum tensor) is conserved. It would appear that the interesting gravitational theories are those that have conserved quantities as their sources; besides the Einstein theory, vector-tensor theories, with baryon or lepton currents as sources, are a possibility.

HANS C. OHANIAN
Rensselaer Polytechnic Institute
Troy, New York

The "Thomson"

Before discarding old issues of PHYSICS TODAY, I usually check through them for any articles that I may have missed or that I may want to read again. "The Septuagenarian Electron" by Sir George Thomson (May, 1967, page 55) was one I recently reread with interest. Sir George recounts that the word "electron" was coined by Johnstone Stoney to designate the charge of the electron. Later in the article, Sir George laments that there is "no single word for Stoney's unit charge as a purely electrical quantity." I think it would be fitting that the unit charge of the electron be designated the "Thomson" in honor of J. J. Thomson.

ALFORD L. WARD
Harry Diamond Laboratories
Washington, D.C.

Loose-leaf journals

In his talk, at the New York Meeting, on the Communication Revolution in Physics, H. W. Koch mentioned the idea of producing journals on specialized topics such as superconductivity by pulling relevant articles from various existing journals as they are being produced. A more radical-sounding proposal is the production of individualized journals consisting of only those articles selected by each subscriber on the basis of abstracts distributed in advance. The reason I refer to this proposal as radical sounding is the fact that it is already in effect, although in a somewhat inefficient form.

Specifically, my suggestion is that the AIP should produce loose-leaf journals consisting of reprints of *Physical Review* articles, for example, which are at present already printed on a limited scale. Complete sets of all reprints comprising a particular journal would be intended mainly for libraries, while individual subscribers would receive, before the production of the reprints, order blanks on which to indicate

which reprints they desired to receive. Providing abstracts with serial numbers and using hand-punched computer cards as order blanks would facilitate the handling of orders and help determine the number of reprints of each paper to be produced.

Under the present system, the "subscriber" to the individualized *Physical Reviews* experiences a cost per reprint equal to the cost of a reprint request post card plus the time required to fill it out. The author or his research contract bears the heavier cost of printing and distribution.

In addition to providing a more cost-effective way of handling the bulk of reprint requests, this proposal would make it possible for AIP society members to afford the money and shelf space for more sections of the *Physical Review* and other journals. This in turn should make the physics literature more effective as a means of disseminating information.

PETER D. DE CICCIO
Cambridge, Massachusetts

Solar-sea power

Clarence Zener does not speak for me when he contends "That most people in the world would probably welcome a somewhat warmer ocean outside the tropics." The implication is that the climate in the temperature zones would be warmer and I, frankly, abhor hot weather. Other environmental changes may occur that can't be so flippantly dismissed. I doubt that climatologists are prepared to issue the last word on the subject. There have been too many theories offered explaining the ice ages. The latest I've heard attributes ice ages to fluctuations in the output of the sun. I think Zener would do well to be more thorough and circumspect in his justification of floating solar power stations.

CONRAD KOPALA
Washington, D.C.

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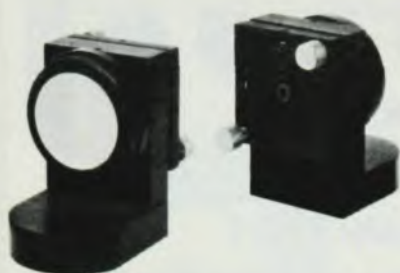
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EDWARD HOEDEMAEKER

Physics Group A
Lawrence Berkeley Laboratory
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Zero charge for Earth?

In a letter in the November issue (page 11) R. Burman puts the negative surface charge of the Earth at around 10^{15} esu. This is erroneous, and it also is not the most interesting problem related to the electric charge of the Earth. Burman obviously arrives at his number by multiplying the average surface charge of the solid Earth in fair-weather regions of 1 nanocoulomb per square meter by the total surface of the Earth. The generally accepted fact is, of course, that this negative surface charge in fair-weather areas is nearly or totally cancelled by the positive charge in many of the disturbed weather areas, especially under thunderstorms, so that the total charge of the solid Earth is zero. The interesting question is, however, whether or not Earth with its atmosphere carries a net charge and what it might be—a question we cannot answer by measurements from within.

HANS DOLEZALEK

International Commission on
Atmospheric Electricity
Alexandria, Va.

Hugh Dryden papers

Over the past 22 months the Milton S. Eisenhower Library of the Johns Hopkins University has been collecting and collating the papers of the late Hugh L. Dryden (1898–1965), who was the aerodynamicist in the National Bureau of Standards, 1919–1947, director of the old National Advisory Committee for Aeronautics (NACA), 1947–58, and deputy director of NASA, 1958–65.

His papers have been located at Johns Hopkins at the request of Mrs Dryden because Hugh Dryden was a Hopkins graduate. He received his PhD in mathematics and physics from Hopkins in 1919 when he was 20 years old.

The *Basic Collection* of the Dryden Papers is now complete. An archival system is now ready to receive all other letters, memoranda, notes, reports, photographs and other forms of docu-

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