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Cover: Lights on to guide it through the abyssal darkness, Alvin searches the sea floor near the East Pacific Rise for ... well, see p. 28. (Photo: Emory Kristoff and Alvin Chandler/National Geographic Society)

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Editorial and Business Offices
1719 N Street, N.W.
Washington, D.C. 20036

Subscription Department
231 West Center Street
Marion, Ohio 43302

To subscribe call: (1) 800 — 247-2160

Subscription rate: 1 yr., \$15.50; 2 yrs., \$27.00; 3 yrs., \$37.50 (Add \$3 a year for Canada and Mexico, \$4 for all other countries.) Change of address: Four to six weeks' notice is required. Please state exactly how magazine is to be addressed. Include zip code.

Printed in U.S.A. Second class postage paid at Washington, D.C. Title registered as trademark U.S. and Canadian Patent Offices.

Published every Saturday by SCIENCE SERVICE, Inc. 1719 N St., N.W., Washington, D.C. 20036. (202-785-2255)
ISSN 0036-8423

LETTERS

Unstable proton

Thank you for sending me the December 15 issue of SCIENCE NEWS. In response to your request for comments on the proton decay search article (p. 405) two come to mind: The Irvine-Michigan-Brookhaven water detector mass is 10,000 tons, not 2,000. The University of Minnesota group is proposing its own experiment, independently of Cline and Rubbia.

F. Reines
Irvine, Calif.

Your story provides an understandable description of both the motivations for this line of research and the status of most of the current efforts. For your future information, however, I would point out that the University of Minnesota is not involved in the Utah experiment. Rather, we have a different type of proton decay detector under construction for installation in the Soudan Mine in a remote corner of north-eastern Minnesota.

The concept of the Minnesota detector uses indigenous materials, namely iron ore, to obtain several advantages over the water detectors. The principal distinctions are a smaller required volume due to the high density of the material, a better sensitivity to certain decay modes, particularly those of the neutron, and the possibility for building the detector in a modular fashion. The U.S. Department of Energy has already granted approximately \$50,000 to test this concept and construction of the first 30-ton module is currently in progress. We expect to install this module in the Soudan Mine in early Spring.

Marvin L. Marshak
School of Physics and Astronomy
University of Minnesota
Minneapolis, Minn.

I got a charge in my gut (sic) after reading your article on proton decay.

If a proton decays to an electron and a positron, say, what I'd like to know is: where does the charge go?

J. Schufman
Aberdeen Proving Ground

(The example should have read positron and neutral pi meson, but there are a lot of other possibilities too, which is what makes a decaying proton laboratory an exciting prospect for physicists. Conservation of charge is the last inviolate law. Eventually the universe will contain nothing but electrons, positrons and neutrinos in their various varieties. Sic transit gloria. —Ed.)

Erroneous elephants

I don't know where Dietrick E. Thomsen heard the international elephant joke (SN: 9/29/79, p. 217) but when I first heard it from a Columbia University embryologist in the late 1930s, the German entrant wrote *An Introduction to the Study of the Elephant* in 20 volumes. It was the Russian who, never even bothering to go out to study the elephant, dashed off a fiery pamphlet while drinking vodka in a cafe. He entitled it: "The Elephant — Does it Exist?"

There may be controversy as to the nature of quasars, but I hope we will not have one on the elephant joke. True, this is a time of great flux and upheaval in science, but let's try to keep this classic joke, with which scientists have traditionally regaled their students, reasonably correct.

Joseph Bernstein
Elmhurst, N.Y.

(Thanks for the reminder. I seem to have conflated two entries subconsciously in order to make a point. But it is a joke in which you can invent new lines: *Elephantine Court Etiquette [Spain]*, *L'Amour aux coups de tonnerre [France]*, *Rezepte für Elephantenschnitzel [Vienna]*.... —D.E.T.)

Controlling caries

I was very pleased to see your article "Protecting Those Pearly Whites" (SN: 12/8/79, p. 394) on the latest research in the prevention of caries and periodontal disease. I was surprised, however, that so little mention was made of the fact that there *already exists* an extremely effective, inexpensive, readily available "medicine" for the prevention of the vast majority of dental disease — tincture of good quality soft toothbrush and unwaxed dental floss. Rx: Use conscientiously once a day to clean the mouth. Combining this simple regimen with systemic and topical fluoride and reduction of sugar intake can prevent dental disease and even cure some incipient problems.

If the ongoing search for "simpler" methods of preventing dental caries and periodontal disease is in part due to a lack of public awareness of the proper methods for maintaining good oral hygiene or an unwillingness to invest the few minutes a day necessary for a clean mouth, then lets make these points very clear.

Glen H. Loev
Chapel Hill, N.C.

(The adequacy of brushing and flossing of teeth is controversial among dental researchers. The staff of the Dental Research Institute at the Forsyth Dental Center says that "most children and adults are unable to achieve a degree of oral cleanliness that is high enough to assure effective control of dental caries." However, they do conclude that frequent skilled professional cleaning of teeth can control caries. —Ed.)

Address communications to Editor,
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