

New species of ape-man proposed	36
Blackbody polarization	37
More bad cholesterol news	37
Another fractional charge	38
Controlling pain electrically	38
Cigarette update issued	39
Rat growth hormone produced bacterially	39
Ulcer inheritance marker found	40
China study grants available	40
Birth aids found harmful	40
Carcinogenic beer?	40
Environmental suit	40

**RESEARCH NOTES**

Biomedicine	41
AAAS	41

**ARTICLES**

The collision apparatus race	42
Radiation: It only takes a little	44

**DEPARTMENTS**

Letters	35
---------	----

**COVER:** Particle physics equipment gets bigger and bigger. On the site suggested by the CERN laboratory the tunnels for the proposed LEP storage rings and colliding beam facility would encircle several communities near Geneva. European physicists have found that building these things deep underground prevents them from interfering with other activities above. (American practice is to build them near the surface on isolated sites.) Perhaps someday the 20-year-old suggestion that a giant international accelerator be built around Greater Berlin as insurance for detente may come true. See p. 42. (Illustration: CERN)

<b>Publisher</b>	E. G. Sherburne Jr.
<b>Editor</b>	Robert J. Trotter
<b>Senior Editor and Physical Sciences</b>	Dietrick E. Thomsen
<b>Behavioral Sciences</b>	Joel Greenberg
<b>Biomedicine</b>	Joan Arehart-Treichel
<b>Earth Sciences</b>	Susan West
<b>Life Sciences</b>	Julie Ann Miller
<b>Policy/Technology</b>	Janet Raloff
<b>Space Sciences</b>	Jonathan Eberhart
<b>Contributing Editors</b>	Lynn Arthur Steen (mathematics) Kendrick Frazier John H. Douglas Michael A. Guillen Judy Klein Dale Appleman
<b>Assistant Editor</b>	Angela Musick
<b>Art Director</b>	Jane M. Livermore
<b>Assistant to the Editor</b>	Books Donald Harless
<b>Business Manager</b>	Advertising Scherago Associates 1515 Broadway New York, N.Y. 10036 Fred W. Diefenbach, Sales Director

Copyright © 1979 by Science Service, Inc., 1719 N St., N.W., Washington, D.C. 20036. Republication of any portion of SCIENCE NEWS without written permission of the publisher is prohibited.

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

**Subscription Department**  
231 West Center Street  
Marion, Ohio 43302

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) TWX 710-822-9433 SCIEN NEWS. ISSN 0036-8423

# LETTERS

**More shroud talk**

Dietrick E. Thomsen's report on the Shroud of Turin (SN: 12/30/78, p. 442) was timely and provocative but one comment made in passing raised my eyebrows. That was his dismissal of the so-called Holy Lance as having "disappeared from history."

Perhaps the lance Thomsen refers to did vanish after the first crusade, but anyone familiar with Trevor Ravenscroft's *The Spear of Destiny* (Wehman, 1973) knows that there is a "Holy Lance" that has a long history and fabulous reputation. According to Ravenscroft (whose book is subtitled "The Occult Power Behind the Spear Which Pierced the Side of Christ"), the Spear of Longinus has a tracable history from at least Theodosius (A.D. 385) all the way down to Adolf Hitler, who was supposedly obsessed by the lance and used its "occult powers" to work his evil ways.

One need not buy Ravenscroft's claims uncritically, of course, but it seems important to examine the Spear of Longinus, which is now in the Hofburg Museum in Vienna, just as carefully as the Shroud of Turin, if any credence is to be given to ancient Christian relics. A valuable study of another aspect of the subject is *The Occult and the Third Reich* by Jean-Michel Angebert (McGraw-Hill, 1971), which explores the Nazi fascination with the Holy Grail, not the Shroud or the Lance but another Christian symbol with rich historical and "occult" connotations.

Neal Wilgus  
Albuquerque, N.M.

*(Apparently not the same lance, though we'll check. If not, then at least one has to be wrong. Oh well, there is enough wood from the True Cross to build an ark and sail to Ararat. The grail is not a Christian symbol, but something from Celtic and Germanic mysticism (therefore very "Aryan"). Letting Richard Wagner define Christianity for you is like letting Alfred Rosenberg define Judaism. —D.E.T.)*

Dietrick Thomsen should be commended for not taking too seriously the half-baked "explanations" offered by certain self-proclaimed rationalists for the mysterious image on the Shroud of Turin. His comment that "approaching a case of this kind with a mindset that rigidly refuses to consider spiritual phenomena defeats the enterprise," will undoubtedly provoke many of your more dogmatic readers, despite its manifest reasonableness. I hope that SCIENCE NEWS will carry similarly open-minded articles on other spooky topics in the future.

Douglas Johnson  
Austin, Tex.

In the article by Dietrick E. Thomsen, "A Shroud of Unknowing," Dr. Muller of LBL is described as thinking that the new method of radiocarbon dating by the use of accelerators will require another year before it is improved enough to date the Shroud of Turin. Although I accept his judgment that his technique involving the use of the LBL 88" cyclotron will not be ready for another year, such is not the case for the version of the technique we have developed employing the University of Rochester's tandem Van de Graaff accelerator. We, in fact, can date the Shroud to an accuracy of  $\pm 150$  years or better using a single thread 8 inches long and are ready to do so whenever a sample is made available to us. I should also add that we would operate quite independently of McCrone Associates and other scientific efforts in the United States involved with the Shroud.

H. E. Gove  
Rochester, N.Y.

The interesting article on the Turin Shroud is spoiled by the final paragraph. Therein, Dietrick Thomsen argues that numinous phenomena, although "beyond the definition of science," should nevertheless be considered as "evidence for the shroud." From a standpoint of logic, this is pure nonsense. How can nonscientific evidence be considered in a scientific investigation?

Worse than just being illogical, the suggestion betrays a certain lack of knowledge about what goes on in the world. For even the casual newspaper reader ought to be aware that numinous phenomena are cheapened and discredited by their very ubiquity. We have had statues that move, paintings that weep, processions in the sky, congealed blood that liquefies once a year, and so on ad nauseam. Each of these stimuli must have been inhabited by a numen, for each has produced a numinous in each of uncounted numbers of observers.

Here in Southern California, we once had thousands of people, including a well-known actress, turning out to pray over a waterstain on a roof because the stain appeared to all the numen fans to outline the likeness of the Virgin Mary. Well, if that deep, spontaneous emotion they all felt constitutes "evidence," then, by Thor, it was the Virgin Mary. And if a supposedly scientific publication wants to go along in the same direction, then I'm ashamed for it.

Warner Clements  
Beverly Hills, Calif.

Address communications to Editor,  
Science News, 1719 N Street, N.W.  
Washington, D.C. 20036  
Please limit letters to 250 words.

SCIENCE SERVICE

Institution for the public understanding of science founded 1921; a nonprofit corporation.

**Board of Trustees** — *President*, Glenn T. Seaborg, University of California, Berkeley, CA; *Vice President*, Gerald F. Tape, Associated Universities, Washington, DC; *Treasurer*, Milton Harris, Washington, DC; *Secretary*, Julius Duscha, Washington Journalism Center, Washington, DC; **Allen V. Astin**, Bethesda, MD; **Joseph W. Berg Jr.**, National Research Council, Washington, DC; **Edward Bliss Jr.**, Newburyport, MA; **Bowen C. Dees**, The Franklin Institute, Philadelphia, PA; **David A. Goslin**, National Research Council, Washington, DC; **Elizabeth Neufeld**, National Institutes of Health, Bethesda, MD; **O. W. Riegel**, Glasgow, VA; **Aaron Rosenthal**, Washington, DC; **Edward W. Scripps II**, Edward W. Scripps Trust, Carson City, NV; **John Troan**, Pittsburgh Press, Pittsburgh, PA; **Deborah P. Wolfe**, Queens College of City University of New York, Flushing, L.I., NY

Director: E. G. Sherburne Jr.; Assistant Director: Dorothy Schriver; Business Manager: Donald R. Harless; Things of Science: Ruby Yoshioka.