This Week in Science

Editorial

1553 William D. Carey

Perspective

1555 Why Recycle Plutonium?: D. Albright and H. Feiveson

Letters


News & Comment

1563 How Safe Savannah River Reactors?
1564 OTA: Property Right, Donor Consent Factors Cloud “Gifts” of Human Tissue
1565 Shake-up Announced for Soviet Academy
1566 NIMH Finds a Case of “Serious Misconduct”
1567 CERN Panel Backs New Accelerator
   A $2.5-Billion Acid Rain Plan
1568 Company Offers to Buy NASA a Rocket
   U.S., Soviets Renew an Exchange
   Tax Relief Sought for Oil Industry
1569 NAE Elects New Members

Research News

1571 A Superconductivity Happening
1572 Progress on Fermat’s Famous Math Problem
1574 Brain Damage by AIDS Under Active Study  ■  Candidate AIDS Vaccine

Articles

1600 Uncertainties in Building a Strategic Defense: C. A. Zraket
1607 Water-Quality Trends in the Nation’s Rivers: R. A. Smith, R. B. Alexander, M. G. Wolman

Research Articles


SCIENCE is published weekly on Friday, except the last week in December, and with an extra issue in February by the American Association for the Advancement of Science, 1333 H Street, NW, Washington, DC 20005. Second-class postage (publication No. 4844400) paid at Washington, DC, and at an additional entry. Now combined with The Scientific Monthly® Copyright © 1987 by the American Association for the Advancement of Science. The title SCI-ENCE is a registered trademark of the AAAS. Domestic individual membership and subscription (51 issues): $65. Domestic institutional subscription (51 issues): $98. Foreign postage extra: Canada $32, other (surface mail) $27, air-surface via Amsterdam $65. First class, airmail, school-year, and student rates on request. Single copies $2.50 ($3 by mail); back issues $4 ($4.50 by mail); Biotechnology issue, $5.50 ($6 by mail); classroom rates on request; Guide to Biotechno-logy Products and Instruments $16 ($17 by mail). Change of address: allow 6 weeks, giving old and new addresses and seven-digit account number. Authorization to photocopy material for internal or personal use under circumstances not falling within the fair use provisions of the Copyright Act is granted by AAAS to libraries and other users registered with the Copyright Clearance Center (CCC) Transactional Reporting Service, provided that the base fee of $1 per copy plus $0.10 per page is paid directly to CCC, 21 Congress Street, Salem, Massachusetts 01970. The identification code for Science is 0036-8075/87 $1 + .10. Postmaster: Send Form 3579 to Science, 1333 H Street, NW, Washington, DC 20005. Science is indexed in the Reader’s Guide to Periodical Literature and in several specialized indexes.

The American Association for the Advancement of Science was founded in 1848 and incorporated in 1874. Its objects are to further the work of scientists, to facilitate cooperation among them, to foster scientific freedom and responsibility, to improve the effectiveness of science in the promotion of human welfare, and to increase public understanding and appreci-ation of the importance and promise of the methods of science in human progress.
Cover: Phreatic explosion occurred on 29 December 1982 at Yugama Crater Lake, Kusatsu-Shirane volcano, Japan. The variation of polythionates in the lake water is a good indicator for predicting impending eruption of the volcano. See page 1633. [Masayuki Shimoya, Tsumakoi High School, Gunma, Japan]

Reports


1631 Solar Irradiance Change and Special Longitudes Due to r-Modes: C. L. Wolff and J. R. Hickey

1633 Correlation of Volcanic Activity with Sulfur Oxygenanion Speciation in a Crater Lake: B. Takano


1638 Human Lipoprotein Lipase Complementary DNA Sequence: K. L. Wion, T. G. Kirchgesner, A. J. Lusis, M. C. Schotz, R. M. Lawn

1641 Ubiquitin Is a Component of Paired Helical Filaments in Alzheimer's Disease: H. Mori, J. Kondo, Y. Ibara

1644 Regional Changes in Calcium Underlying Contraction of Single Smooth Muscle Cells: D. A. Williams, P. L. Becker, F. S. Fay


1651 Polypeptide Sequences Essential for RNA Recognition by an Enzyme: L. Regan, J. Bowie, P. Schimmel

1654 Electrical Responses of Eggs to Acrosomal Protein Similar to Those Induced by Sperm: M. Gould and J. L. Stephano


Book Reviews

1681 Cosmic Debris, reviewed by U. B. Marvin • The Hippocampus, L. Nadel • Fire Ants and Leaf-Cutting Ants, N. F. Carlin • Prehistory in the Pacific Islands, R. L. Kirk • Books Received

Products & Materials

1687 Graphics Software • Washer for Western Blot Testing • Software Calculator • Radioisotope Detector • Custom-Built Coldrooms • Water Purification System • Eigenvalue Software • Media Preparation System • Literature

Author Index for Volume 235 is found on pages i–x
Information for Contributors is found on pages xi–xii