

# SCIENCE NEWS®

The Weekly Newsmagazine of Science

A Science Service Publication  
Volume 138, No. 5, August 4, 1990

E. G. Sherburne Jr.	Publisher
Patrick Young	Editor
Laurie Jackson	Managing Editor
Janice Rickerich	Production/Design Director
Bruce Bower	Behavioral Sciences
Ivan Amato	Chemistry/ Materials Science
Richard Monastersky	Earth Sciences
Janet Raloff	Environment/Policy
Ron Cowen	General Science
Kathy A. Fackelmann, Rick Weiss	Life Sciences/ Biomedicine
Ivars Peterson	Mathematics/Physics
Jonathan Eberhart	Space Sciences
Jennifer L. Miller	Editorial Assistant
William Stolzenburg, Peter L. Weiss	Science Writer Interns
Wendy Smith	Books/Resource Manager
Donald R. Harless	Advertising/Business Manager

SCIENCE NEWS (ISSN 0036-8423) is published weekly on Saturday, except the last week in December, for \$34.50 for 1 year or \$58.00 for 2 years (foreign postage \$6.00 additional per year) by Science Service, Inc., 1719 N Street, N.W., Washington, D.C. 20036. Second-class postage paid at Washington, D.C., and additional mailing office. **POSTMASTER:** Send address changes to SCIENCE NEWS, 231 West Center Street, Marion, OH 43305. Change of address: Four to six weeks' notice is required—old and new addresses, including zip codes, must be provided.

Copyright © 1990 by Science Service, Inc. Title registered as trademark U.S. and Canadian Patent Offices. Printed in U.S.A.

Editorial and Business Offices:  
1719 N St., N.W., Washington, D.C. 20036  
(202-785-2255)

Republication of any portion of SCIENCE NEWS without written permission of the publisher is prohibited.

Subscription Department:  
231 West Center St., Marion, OH 43305  
For new subscriptions only, call 1-800-247-2160.

## Letters

### Plato said so

To support the claim that "Pythagoreans and other ancient Greeks were not merely head-in-the-sky theoreticians," but rather conducted extensive empirical investigations, mechanical engineer Andrew Dimarogonas turns to the writings of the Roman scholar Boethius, who lived 1,000 years after Pythagoras died ("First lab" attributed to Greeks," SN: 5/12/90, p.295).

The evidence from Boethius, he says, should help to "get Greek culture out from the grips of Plato."

But Dimarogonas didn't have to go so far to get significant support, for Plato himself characterized Pythagoras' followers as devoting their time to extended, minutely detailed empirical observation, particularly in the field of acoustics (*Republic*).

Plato, however, was critical of such an approach, arguing that its results will never be fully intelligible if it ignores mathematical-conceptual analysis. Thus Plato's own em-

## This Week

- 68 Human Gene Therapy Wins Crucial Victory
- 68 Common origin cited for American Indians
- 69 Colon cancer: Clues to fiber's benefits
- 69 Kidnapped plankton shares its defenses
- 69 Five-year hunt locates Saturn's 18th moon
- 70 Butterfly biosensors offer habitat hints
- 70 A-bomb babies: Mental blows, social woes
- 70 Sky eyes spy mosquitoes
- 71 Embryonic growth: Cues and miscues
- 71 Heat spikes: Fusers chill, rocketeers cheer

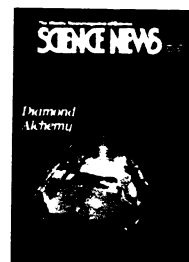
## Research Notes

- 77 Behavior
- 77 Biology
- 79 Biomedicine
- 79 Materials Science

## Articles

- 72 Diamond Fever

Cover: For more than 30 years, tiny synthetic diamonds formed under super-high pressures have served as the basis of an abrasive-material industry. Lower-pressure techniques called chemical vapor deposition (CVD), used for making diamond coatings, may usher the once-rare crystal into the category of everyday resource. The carat-sized synthetic diamond shown here rests on a bed of diamond grit, made from methane gas using a CVD process. The grit serves as a starting material for a high-pressure step that produces gem-size diamonds. This large diamond was made from an especially pure form of methane. It conducts heat better and withstands more laser energy than natural diamond. (Photo: GE Research and Development)



- 75 Of Pregnancy and Pounds

## Departments

- 66 Books
- 67 Letters

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

**Board of Trustees**—*Chairman*, Glenn T. Seaborg; *Vice Chairman*, Gerald F. Tape; *Treasurer*, Willis Harlow Shapley; Joseph W. Berg Jr.; Robert W. Fri; David A. Goslin; J. David Hann; Milton Harris; Leon M. Lederman; Shirley M. Malcom; Elena O. Nightingale; Ben Patrusky; H. Guyford Stever; Deborah P. Wolfe.  
**Honorary Trustees**—Edward Bliss Jr.; Bowen C. Dees; O. W. Riegel; John Troan.

President: E. G. Sherburne Jr.; Business Manager: Donald R. Harless.

phasis on theoretical mathematics as underpinnings for scientific knowledge.

*Jonathan Shear*

*Assistant Professor of Philosophy  
Virginia Commonwealth University  
Richmond, Va.*

### Many wonders

I read with great interest your article about the theoretical possibility of creating an artificial environment in which the speed of light in vacuum could be increased ("Secret of the vacuum: Speedier light," SN: 5/12/90, p.303).

This reminded me of a science fiction story I wrote in 1981. The premise was that the total mass of the universe determines the speed of light. A supercomputer was created which operated at many times the speed of light by "isolating it from universal inertia." In rejecting the story, one editor wrote: "There are far too many wonders in here."

The reason I enjoy SCIENCE NEWS so much is the many wonders you bring me each week.

*Richard Snedeker  
Pittston, Pa.*

### Galactic musings

James R. Graham and his colleagues speculate that merging galaxies and the forming of their cores into binary black holes may be a triggering device of quasars ("Unveiling a Galaxy's Power Source," SN: 5/12/90, p.292). If so, wouldn't this help explain quasars' apparent abundance in deep-space/deep-time? Was their high incidence in the early universe due to nothing more peculiar than the more congested state of matter at that time, which would result in more frequent galactic collisions?

Could much of the missing dark matter of our universe consist of galaxies that have swallowed each other?

*Stephen Bankhead  
Watsonville, Calif.*

### CORRECTION

*The Tibetan mountain range shown on the July 14 cover rises 2,500 meters above the valley floor, not 2,500 kilometers as stated in the caption on page 19.*

AUGUST 4, 1990

67