

OF THE WEEK

thymus and immunity linked	52
a forthcoming materials crisis	53
a new 'hotspot theory'	53
protons and organic synthesis	54
birth rates and TV blackouts	54
mariner 10 nears venus	54
mistaken 'glacier' grooves	54

RESEARCH NOTES

technology	58
behavioral sciences	58
earth sciences	59
astronomy	59

ARTICLES

drilling into antarctica	60
--------------------------	----

DEPARTMENTS

letters	51
stars of february	56
new products	56

COVER: Not ice and snow, but rocks and coarse sand cover surface near shore of Lake Vida, Victoria Valley, Antarctica. Drill rig penetrated 1,005 feet beneath the surface at this site of the Dry Valley Drilling Project in December. See p. 60. (Photo: Kendrick Frazier)

Publisher E. G. Sherburne Jr.
Editor Kendrick Frazier
Senior Editor and
Physical Sciences Dietrick E. Thomsen
Senior Editor and
Behavioral Sciences Robert J. Trotter
Biological Sciences Joan Arehart-Treichel
Science and Society John H. Douglas
Space Sciences Jonathan Eberhart
Writer/Copy Editor Lisa J. Shawver
Assistant to the Editor Esther Gilgoff
Production Manager Davida Daemon
Books Margit Friedrich
Circulation Manager Lawrence Cope
Advertising Scherago Associates, Inc.
11 W. 42nd St., New York, N.Y. 10036
Fred W. Dieffenbach
Sales Director

Copyright © 1974 by Science Service, Inc., 1719 N St., N.W., Washington, D.C. 20036. Reproduction of any portion of SCIENCE NEWS is strictly prohibited.

Subscription Department
231 West Center Street
Marion, Ohio 43302

Subscription rate: 1 yr., \$10; 2 yrs., \$18; 3 yrs., \$25. (Add \$2 a year for Canada and Mexico, \$3 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. Established as Science News Letter in mimeograph form March 13, 1922. 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). Cable SCIENSERV.

january 26, 1974

Gamma-ray laser

Please accept my appreciation for the excellent job which John Douglas has done in presenting the case for a gamma-ray laser (SN: 1/5/74, p. 8).

Douglas impressed me with his thoroughness when he was gathering and digesting his material. Now that I have read his final article, I am equally impressed with his writing ability.

In a well-balanced treatment he has done more than present merely the technical pros and cons; he has pinpointed the reasons for American failure to keep up with Soviet research on this possibility.

George C. Baldwin
Professor
Rensselaer Polytechnic Institute
Troy, N.Y.

In your article on the nuclear laser, or "graser" (SN: 1/5/74, p. 8), the valid and compelling point is made that a cooperative effort with Soviet scientists on graser development would probably prevent this potentially destructive device from becoming a deadly addition to the arms race. Unfortunately, the remainder of the article is dominated by the discussion of possible military applications. One hopes that future priorities will not be reflected in this discussion, but rather that the briefly mentioned possibility for hastening the realization of fusion reactors (among other things) will take precedence.

Mark Morris
University of Chicago
Department of Astronomy
and Astrophysics
Chicago, Ill.

Observations of Kohoutek

I am writing in reference to your article "The Comet Fades" (SN: 1/12/74, p. 22).

Being an amateur astronomer, I have tried to carry out an extensive observing program concerning Comet Kohoutek. Using an eight-inch f/7, I have conducted both visual and photographic observations.

Before Kohoutek reached perihelion, it was visible in the pre-dawn skies. On Dec. 2, I spotted it in 7x35 binoculars. It had a tail of about 1/3 degree in length. The magnitude was estimated to be +6.2, making it invisible to the unaided eye.

After it had passed within 13 million miles of the sun on Dec. 28, I first re-

covered the comet on Jan. 4. It appeared very similar to the way it did a month ago. At magnitude +4.3, Kohoutek had a tail of one degree in length. Due to the heavy twilight that prevailed throughout my observing, I probably estimated the comet to be fainter and smaller than it actually was.

On Jan. 7, I saw the comet again, this time through a six-inch f/8 reflector. It was difficult to find even though sky conditions were good. The magnitude of the comet was +5.2. No tail was visible in either the six-inch or binoculars. The coma's diameter was measured to be 20 seconds of arc (± 5 sec).

The following evening, I found that the comet had flared up to naked eye visibility (magnitude +3.8). A tail of about seven degrees was seen with my binoculars.

On Jan. 13, it had again faded from naked-eye range, to about magnitude +4.7. A tail about three degrees long was still visible with binoculars. I think I saw the comet's nucleus through my eight-inch, though I'm not sure. If this was indeed the nucleus of Kohoutek, it appeared to be a stellar "spot" located slightly off center in the head of the comet. It was seen with 200x.

Philip Harrington
President, Fairfield County
Junior Astronomical Society
Rowayton, Conn.

Grizzly report

A note in SCIENCE NEWS stated that a final report on the Yellowstone grizzly, by John and Frank Craighead was available for public distribution (SN: 11/10/73, p. 295). The report referred to was submitted to our office for permission of authorization to publish. We granted permission to proceed with the submission of the manuscript for publication. There were copies distributed for review, and the information is available to the public. However, copies of the report were not made in sufficient quantity to send out to the general public. When the manuscript has been submitted to a scientific journal and published, copies of that publication will be available at that time for the general public.

Thank you for your interest in the Yellowstone grizzly bear.

Robert G. Streeter
Staff Specialist
Division of Wildlife Research
Bureau of Sport Fisheries and Wildlife
U.S. Department of Interior
Washington, D.C.

SCIENCE SERVICE

Institution for the Popularization of Science founded 1921; a nonprofit corporation

Board of Trustees—Nominated by the AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE: **Athelstan Spilhaus**, Woodrow Wilson International Center for Scholars; **Deborah Partridge Wolfe**, Queens College of City University of New York; **Bowen C. Dees**, The Franklin Institute. Nominated by the NATIONAL ACADEMY OF SCIENCES: **Frederick Seitz**, Rockefeller University; **Gerald F. Tape**, Associated Universities; **Allen V. Astin**, National Academy of Sciences. Nominated by the NATIONAL RESEARCH COUNCIL: **Glenn T. Seaborg** (President), University of California, Berkeley; **Gerald Holton**, Harvard University; **Joseph W. Berg Jr.**, National Research Council. Nominated by the JOURNALISTIC PROFESSION: **O. W. Riegel** (Secretary), Washington and Lee University; **Norman Cousins**, "World"; **Julius Duscha**, Washington Journalism Center. Nominated by the E. W. SCRIPPS TRUST: **John Troan**, Pittsburgh Press; **Milton Harris** (Treasurer), Washington, D.C.; **Edward W. Scripps II** (Vice President and Chairman of the Executive Committee), Edward W. Scripps Trust.

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