

OF THE WEEK

Old bones: Ancient ape fossils	196
"Dump" may yield new neutrino	196
Alternative breast cancer therapy	197
Fossil find in Antarctica	197
Viking 2: To be or not to be	197
Claims to longevity disputed	198
Water, water everywhere — on other worlds?	198
Third hepatitis type found	198
Nitrogen oxides present a growing problem	199
Pollution is hazardous to the lungs	199

RESEARCH NOTES

Science & Society	200
Biomedicine	201
Space Sciences	201

ARTICLES

Thermionics: More energy, less waste	202
The (mathematical) games people play	204

DEPARTMENTS

Letters	195
Books	207

COVER: A 15,000-ampere thermionic emitter glows in tests at 1,750°F. Although thermionic energy conversion is not new, it remains largely unknown. The simple technology—it has no moving parts—converts heat to electricity directly, and is particularly well-suited for high-temperature applications. See story p. 202. (Photo by Rasor Associates Inc.)

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

Copyright © 1978 by Science Service, Inc., 1719 N St., N.W., Washington, D.C. 20036. Reproduction 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., \$12.50; 2 yrs., \$22; 3 yrs., \$30. (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. 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

Autism

I felt progress was taking a step backwards when I read the article on autism (SN: 12/3/77, p. 374). I haven't read a good "blame the mother" piece in several years. However, it was a step up for parents from Bruno Bettelheim.

We have a 15-year-old son who was diagnosed very early as being a classical case of infantile autism. He has a perfectly normal fraternal twin brother with a great sense of humor, an IQ of 132 and the average number of adolescent problems and joys. How fortunate for us! He has made it possible for us to keep our self-esteem (in the face of Bettelheim and friends) while we coped with one of the most difficult problems that can happen to a family. We feel sympathy for families that don't have our built-in ego protection.

While my pregnancy was complicated, in contrast to Mr. Ward's research it was also one of the happiest years of our marriage. It was free from any great worries, including financial. We don't think we're deluding ourselves when we feel pride in our cope-ability and our independence. Mr. Ward seems to be talking about an entirely different group of parents than those I have come in contact with. My observations show an exceptional type of parent who refuses to be crushed by a load that would break the average person. Maybe he is one of those professionals who use autism as a wastebasket word, to include all young children who show withdrawal symptoms. I would also venture a guess that the "normal" mothers in Mr. Ward's control group would have had less positive memories if they had lived with seven years of autism between the memory and the reality.

Our situation raises a very specific question for me. Isn't it possible that the environment (before and after birth) was healthy for a normal infant, but an infant who had an abnormality couldn't thrive in that healthy environment because of an inability to get what he needed out of it? It makes as much sense to me as any other question I've heard raised.

Mary Caul
Aurora, Colo.

The sting

I was glad to see your article "Somebody Save the Honeybees" (SN: 12/10/77, p. 392). Unintelligent use of insecticides has posed a major threat to honeybees. A relatively recent development in microencapsulated parathion has, to date, proved the greatest threat to honeybees. This type of insecticide preparation has a time-release effect. In addition to this, the microcapsules are about the same size as pol-

len grains posing the danger of being collected by field bees, stored in the hive along with pollen, and, therefore, continually poisoning the colony over a prolonged period of time.

A comment is also warranted to your opening sentence about picnickers calling honeybees pests. The generally misinformed public continues to blame the relatively non-aggressive honeybee and the beekeeper for attacks by stinging non-honeybee *Hymenoptera* such as yellow jackets, hornet, wasps, bumblebee, etc. It disturbed me to find you perpetuating this false allegation.

Robert Berthold, Jr.
Doylestown, Pa.

The end of the (ghost) ride

My sincere thanks to Joseph Puret, Robert E. McDaniel and others, who perceive my objective. I would like to put the issue to rest, lest SCIENCE NEWS becomes a waste land of letters about light ghosts (SN: 12/10/77, p. 390; 1/14/78, p. 19; 2/11/78, p. 83; 3/11/78, p. 158).

Many years ago, as a very young teenager, I asked a gentleman, who was also attending ceremonies at Palomar Observatory, this question: "Tonight we will observe a celestial object in the east receding from us at almost the speed of light. We will also observe an object in the west receding from us at almost the speed of light. What do the observers on the object in the east see when they look at the object in the west, for their velocities, relative to each other, are almost twice that of the speed of light?"

"Young man," he replied (in part), "The scientific community must have tools to discern the universe. Theories are just that: theories... tools. Tools are often replaced by more efficient tools when there is need."

So, with regards to Timothy Mann, Stanley Drake and "that" gentleman at Palomar, I continue to ask the question: What do the observers on the celestial object in the east see when they look at the celestial object in the west, a black hole?

Oh, by the way, the gentleman's name at Palomar was Albert Einstein.

Ronald B. Gitchell
Meeker, Colo.

Pie in the sky

In a recent issue (SN: 1/14/78, p. 22) the statistics on average weights of Americans provided an unmentioned but sobering insight that might help spur the less disciplined in their struggle to hold weight down. Both men and women in the oldest age group, 65-74, show a distinct drop in average weight.

It seems likely that this drop may be caused by the fact that by age 64 many of the more obese have passed on to that great big chocolate sundae in the sky.

Thom Phillips
Macon, Ga.

SCIENCE SERVICE

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

Board of Trustees — Nominated by the AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE: **Deborah P. Wolfe**, Queens College of City University of New York; **Bowen C. Dees**, The Franklin Institute; **Athelstan Spilhaus**, National Oceanic and Atmospheric Administration. Nominated by the NATIONAL ACADEMY OF SCIENCES: **Gerald F. Tape** (Vice President), Associated Universities; **Allen V. Astin**, Bethesda, Md.; **Glenn T. Seaborg** (President), University of California, Berkeley. Nominated by the NATIONAL RESEARCH COUNCIL: **Gerald Holton**, Harvard University; **Joseph W. Berg Jr.**, National Research Council; **Aaron Rosenthal**, Washington, D.C. Nominated by the JOURNALISTIC PROFESSION: **Edward Bliss Jr.**, Newburyport, Mass.; **Julius Duscha**, Washington Journalism Center; **O. W. Riegel** (Secretary), Glasgow, Va. Nominated by E. W. SCRIPPS TRUST: **Milton Harris** (Treasurer), Washington, D.C.; **Edward Scripps II** (Vice President and Chairman of the Executive Committee); Edward W. Scripps Trust; **John Troan**, Pittsburgh Press.

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