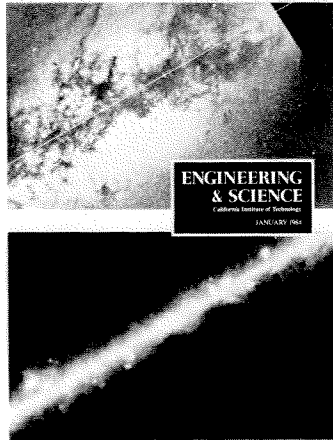


In This Issue



Galactic Center

On the cover — two views of the center of the Milky Way. The top photograph shows the optical telescope version, the central plane of the galactic disk indicated by the diagonal line, with the center of the galaxy at the cross. Concentrations of dust around the galactic center limit the view of optical telescopes; hence the dark lane along the plane.

The bottom image, which corresponds in size and scale to the top one (a field of view of about 48 by 33 degrees), was produced from observations made by the Infrared Astronomical Satellite (IRAS), whose infrared telescope could see through the obscuring gas and dust to provide a complementary view. The largest bulge is the galactic center, and the other knots and blobs along the band are giant clouds of interstellar gas and dust heated by nearby stars.

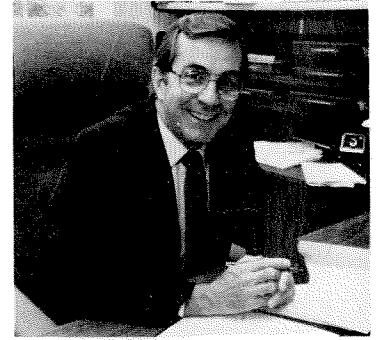
Launched as an international project one year ago (JPL was the U.S. management center) IRAS finished its mission in November. A summary report on its findings begins on page 6.

Utopia Revisited

The idea of utopia has fascinated men from Plato to Orwell — as well as long before and often since. The instigator of the interview that begins on page 12, “The Question of Utopia,” was journalist Mark Davidson, who has been intrigued by R. Buckminster Fuller’s statement, “The moment of realization that it soon must be utopia or oblivion coincides exactly with the discovery that utopia is now possible.” He has talked with a number of people about what utopia means to us today as a part of his research for a book on the scientific prospects for utopia — a sequel to his current book about systems science and philosophy, *Uncommon Sense*.

One of the people Davidson interviewed was Brian Barry, the Edie and Lew Wasserman Professor of Philosophy, who came to Caltech in 1982 from the University of Chicago. His particular areas of specialization are political and social philosophy, the philosophy of law, and ethics. He is responsible at the Institute for an interdisciplinary program in philosophy, including the philosophy of history and the social sciences, issues of ethical concern in public policy, the working of political institutions, and the philosophy of science. He is the author of four books and numerous articles, and has been editor of *Ethics*, an interdisciplinary journal of social, political, and legal philosophy.

Library Technology



When the Friends of the Caltech Libraries held a dinner meeting last fall, it was natural to ask the new head of Caltech’s library system to speak. Glenn L. Brudvig, director of information resources, took over in Millikan Library on July 1, and the FO-CAL members were eager both to meet the man and to hear directly from him what his plans and hopes for the library are. We couldn’t arrange a personal meeting, but “A Look at Technology and the Future of the Caltech Libraries,” which begins on page 15, is adapted from Brudvig’s speech to give the wider circle of *E&S* readers the same information.

Brudvig comes to Caltech from the University of Minnesota, where he was director of the Bio-Medical Library. He was also director of the Institute of Technology Libraries at Minnesota. One of his specialties is the development of automated procedures in library services.

STAFF: *Editor* — Jacquelyn Bonner

Managing Editor — Jane Dietrich

Photographer — Robert Paz

PICTURE CREDITS: Inside front cover, 12, 15-19, 28 — Robert Paz/20 — James McClanahan/25 — Floyd Clark/26 — Don Ivers

Engineering & Science (ISSN 0013-7812) is published five times a year, September, November, January, March, and May, at the California Institute of Technology, 1201 East California Boulevard, Pasadena, California 91125. Annual subscription \$7.50 domestic, \$15.00 foreign, \$20.00 foreign air mail, single copies \$1.50. Second class postage paid at Pasadena, California. All rights reserved. Reproduction of material contained herein forbidden without authorization. ©1984 Alumni Association California Institute of Technology. Published by the California Institute of Technology and the Alumni Association. Telephone: 818-356-4686. Postmaster: Send change of address to Caltech, 1-71, Pasadena, CA 91125.