



J. H. Hartle, Staff Artist for the Digest and an artist-illustrator in the APL Technical Publications Group, died on November 29, 1974, at the age of 50, in the Howard County General Hospital following a heart attack suffered while at work.

A native of Takoma Park, Maryland, Mr. Hartle attended high school in Hagerstown, Maryland, and the Hagerstown Junior College. He served in the U. S. Navy for two years during World War II. Prior to coming to APL from TAAG Designs, Inc. in 1966, Mr. Hartle had been a technical illustrator with the Allegany Ballistics Laboratory, the Westinghouse Astronuclear Laboratory, and the Fairchild Aircraft Corporation.

Mr. Hartle received recognition for his *Digest* illustrations and design, having won an Award of Distinction from the Washington Chapter of the Society of Technical Writers and Publishers in 1971 and a Certificate of Achievement from the Society for Technical Communications at its 19th International Publications Awards program in Boston in 1972.

Mr. Hartle is survived by his wife, Margaret, a son, Steven, who is a Lieutenant in the U.S. Navy, a granddaughter, and five brothers and three sisters.

WITH THE AUTHORS

G. L. Dugger was co-author of a previous Digest article titled "External Burning in Supersonic Streams," which was published in the November-December 1968 issue. Dr. Dugger received the Ph.D. degree in chemical engineering from Case Institute of



Technology in 1953. Prior to joining APL in 1957, he was an instructor at the University of Florida, a research scientist at the NACA Lewis Laboratory, and supervisor of chemical process development at International Minerals and Chemical Corporation. A specialist in advanced airbreathing engine and missile analysis, combustor research and development, heat transfer, and fluid mechanics, Dr. Dugger has supervised advanced ramjet, air-augmented rocket, and scramjet research and development. From 1963 to 1973 he was Supervisor of the Hypersonic Propulsion Group. Since 1973, he has been Assistant Division Supervisor of the Aeronautics Division. Dr. Dugger is a Fellow of the American Institute of Aeronautics and Astronautics and the American Association for the Advancement of Science, and a member of the Combustion Institute. In 1964 he received the Award in Engineering Sciences from the Washington Academy of Sciences

H. L. Olsen was a co-author of "APL Propulsion Research Laboratory," which appeared in the very first issue of the *Digest*, for September-October 1961. Dr. Olsen received the Ph.D. degree in physics from the University of Wisconsin in 1949. After

