we hear that

Sagan, the David Duncan Professor of astronomy and space sciences, was presented with NASA's Distinguished Public Service Medal for his "communicating to the public the value and significance of space science" and for his contributions to NASA's scientific achievements.

The International Atomic Energy Agency selected **Khor Eng Hee** of Malaysia as chairman of its Board of Governors. **Karel Barabas** of Czechoslovakia and **Reinhard Loosch** from the Federal Republic of Germany were named vice-chairmen.

Former member of the Quantum Theory Project at the University of Florida, **Sam B. Trickey** has been appointed chairman of the department of physics and engineering physics at Texas Tech University.

Paul Burgardt, formerly of West Virginia University, has been appointed to the physics-department faculty at the Colorado School of Mines.

Lawrence M. Slifkin, professor of physics at the University of North Carolina at Chapel Hill, received the 1977 Jesse W. Beams Award for significant and meritorious research in physics. Slifkin, an internationally recognized authority on the physics of atomic motion in solids, received the award for his contributions to the understanding of alloys, ionic substances and diffusion in metals.

obituaries

Renate Wiener Chasman

Renate Wiener Chasman, a Brookhaven National Laboratory physicist for 14 years and well known throughout the world for her contributions in accelerator science, died 17 October at the age of 45.

Wiener was born in Berlin in 1932, but when the Nazi regime came to power her family moved first to Holland and then to Sweden where she spent most of her early youth. She received an MSc from Hebrew University in Jerusalem in 1955 and a PhD in 1959.

CHASMAN

Upon receiving her doctorate, Rena accepted a position at Columbia University as a research associate, working there with Chien-Shiung Wu. She met and married a fellow physicist, Chellis Chasman, and moved with him to Yale University where she worked on nuclear spectroscopy with D. Allan Bromley.

In 1963 the Chasmans moved to Brookhaven where Rena became a member of the Sigma Center, compiling data on neutron cross sections. She became intrigued, however, by the problems presented in the design of particle accelerators and arranged a transfer to the Accelerator Department where she began a brilliant but all-too-brief career as an accelerator theorist.

She was an active member of the group that designed and built the 200-MeV AGS linac injector; not only was she the chief theorist of the group but when the linac was coming into operation, she could be found helping at the controls into the early morning hours.

She turned her attention next to storage rings and specifically to the design of the 400-GeV Isabelle colliding-beam accelerator, working on options that could supplement the main proton–proton colliding-beam system.

Her last days were spent in designing a storage ring to be used in the National Synchrotron Light Source whose construction at Brookhaven has just been approved. The results of her work with the late Ken Green were remarkable; a design emerged that was a vast improvement on similar designs elsewhere in the world.

She was a serious, charming person and was held in deep affection by all her associates. To work with her was a great pleasure; we at Brookhaven shall miss her very much.

JOHN BLEWETT
Brookhaven National Laboratory

Su-shu Huang

Su-shu Huang, professor of physics and astronomy at Northwestern University, died in Peking, China on 15 September. He was 63 years old.

Born in Kiangsu Province, his education at Tsing-Hua University during the national war of liberation reached the level of master's degree in physics. Under the supervision of Subrahmanyan Chandrasekhar, Huang earned his PhD from the University of Chicago in 1949.

He was closely associated with the late Otto Struve while at the University of California, Berkeley from 1951 to 1959 in a fruitful partnership of observational study and theoretical insight of close binary stellar systems. After five years at the Goddard Space Flight Center, he accepted a professorship at Northwestern University in 1964, where he continued very actively in teaching and research until he suffered a fatal heart attack while on a lecture tour of the People's Republic of China.

The leading technical journals carried more than 120 articles from his pen, often written in collaboration with his advanced students who benefitted from his wide experience and penetrating questions. The main thrust of his research was towards deducing physical interpretations from photometric and spectroscopic data from stellar atmospheres and binary systems. He was especially interested in stellar evolution and in conditions for life in planetary systems. Huang was in great demand as a participant at international conferences. He showed a cheerful determination in his last years to put as much energy as possible into carrying out the work that most interested him.

HUANG

WILLIAM BUSCOMBE
Northwestern University

James E. Adams

James E. Adams, Jr, manager of the Imaging Sciences Laboratory at the Webster Research Center of the Xerox

Corporation, died in Rochester, New York on 14 August at the age of 41.

Adams was a native of California and received his BS in engineering physics from the University of California at Berkeley in 1958. From 1959 to 1960 he served in the US Army Corps of Engineers in West Germany. After returning to the United States with his wife Carole he was awarded an MS in physics in 1962 by the California State College at Long Beach, California, and in 1966 he received his PhD in physics from the University of California at Riverside.

He joined Xerox in the same year, and soon became fascinated by liquid crystals. Adams's pioneering work in the liquid-crystal field brought him national and international recognition. His scientific and technical legacy of over 140 publications, including several book chapters, and 43 US patents reflects only partially his contributions to the liquid-crystal field. Adams combined rare experimental ability and broad theoretical knowledge with an uncanny intuition for the discovery and interpretation of new effects. Those who worked with him will forever remember his technical leadership and miss his warm, helpful, humorous and enthusiastic personality, which made him a true friend of all who came in contact with him.

Adams was also a born teacher, gifted with the rare talent of being able to explain complex concepts in physics with crystalline clarity and in simple terms. His students at the University of Rochester, where he was a senior lecturer, lost a brilliant educator.

WERNER E. HAAS
Xerox Corporation
Webster, N.Y.

Arthur R. Laufer

Arthur R. Laufer, civilian head of the Pasadena Branch Office of the Office of Naval Research, died on 10 September.

Laufer was born in New York City in 1917. He received an MS degree in physics from Yale University in 1947 and his PhD at New York University in 1949. While a graduate student, Laufer was a physics instructor at Yale (1940–44), Michigan State University (1944–46) and New York University (1947–49). He was appointed to the department of physics faculty at the University of Missouri upon completion of his doctorate.

In 1953, Laufer joined the Office of Naval Research in Pasadena, California as the physical-science coordinator, and was made chief scientist in 1959 and deputy director in 1966. During his tenure he was active in several disciplines of science related to naval problems including infrared radiation, rocket test instrumentation and quantitative spectroscopy. □