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high-temperature, high-luminosity stars.

From 1968 through 1971, Chalabaev was a member of the radiophysics faculty at Tomsk University, Siberia. He joined the Moscow University faculty of physics in 1971 and stayed there until 1975, when he moved to the Astrophysical Institute of Alma-Ata and the Sternberg Astronomical Institute, both in Moscow. There, he worked on his doctoral degree until leaving for France in 1980.

Madore was presented with \$8500 by the AAS to perform research on the use of infrared techniques to calibrate the distance of Cepheid variable stars, which are important in determining the distances to nearby galaxies. Infrared wavelengths, which are less affected by scattering, absorption and other blanketing phenomena as well as cyclic variations in brightness, should provide a simpler method to calibrate the distances to the Cepheids through their period-luminosity relation.

Madore is currently associate professor of astronomy at the University of

Toronto. He was awarded his BS degree by the University of Southern California and his MS and PhD degrees (1974) in astronomy by Toronto. From 1974 to 1978, Madore was a research assistant at Cambridge University. He returned to Toronto in 1978.

in brief

Wayne M. Polyzou, of the MIT Center for theoretical physics, has become assistant professor of physics, and **Steven R. Spangler**, formerly at the National radio Astronomy Observatory, has become assistant professor of astronomy, both at the University of Iowa.

Chia-Wei Woo is the 14th president of San Francisco State University. In addition to his administrative duties, he will continue his research on phase transitions and low-temperature physics. He will also remain an adjunct professor of physics at the University of California at San Diego.

obituaries

Gregory Wannier

Gregory Wannier died suddenly at the age of 71 on 21 October 1983 in Eugene, Oregon, where he was emeritus professor in the physics department of the University of Oregon. He was one of the most profound and original of the pioneers of theoretical condensed-matter physics. Although he was also one of the least recognized through formal honors in relation to his achievement, his work was always highly valued by his colleagues in the field. Among his collaborators, scientific friends and associates were a remarkable number of physicists now well known in very diverse fields: for example, A. N. Holden, Erich Vogt, Elizabeth A. Wood, Charles W. Misner, Elliott Montroll, P. A. Piroué and Conyers Herring, in addition to those mentioned below.

Characteristically, Wannier's contributions involved deep and elegant mathematics as well as unexpected physical insights. The mathematics often survives in the methodology of the field even after the physics has been superseded. For instance, his paper on "Wannier excitons," the main reason his name is remembered, also introduced the immensely fruitful idea of the "Wannier function" and provided the first example of the ubiquitous "effective mass" theory of defect and excitonic states. In the course of this work, he developed his less well-known generalized treatment of the



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Coulomb functions, which was later mined by Thomas Kuhn and John H. Van Vleck, and by Frank Ham, as the basis of the quantum defect: norm-conserving pseudopotential methods of band theory.

Perhaps his most remarkable achievement was overshadowed by its stimulation of an even more remarkable one: the Onsager solution of the two-dimensional Ising model. In 1941, three years prior to Lars Onsager's solution, Wannier, with Hendrik Kramers, pioneered the transfer matrix methods used by Onsager and later workers, locating the critical point and correctly conjecturing its symmetrical, logarithmic nature. In 1949 he gener-