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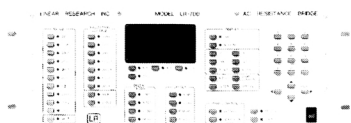
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Ernst will be missed by his family, his physics department colleagues, by the Peoria community and by the students whose lives he enriched through his teaching.

CONLEY STUTZ
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Chris Ernie Earl Kuyatt

Chris Ernie Earl Kuyatt, an inspiring scientist and manager at the National Institute of Standards and Technology (NIST), died in Washington, DC, on 12 September 1998 following a brief illness.

Born on 30 November 1930 in Grand Island, Nebraska, Kuyatt earned BS, MS and PhD degrees in physics from the University of Nebraska in 1952, 1953 and 1960, respectively.

In 1960, he joined NIST's forerunner, the National Bureau of Standards, as a physicist in the electron physics section. There, he worked with J. Arol Simpson, who was developing an electron monochromator-analyzer. Not long after, at Westinghouse Electric Corp, George Schulz observed a resonant decrease in the elastic scattering of 19.3 eV electrons in helium. Kuyatt became intrigued by this new discovery, and he and Simpson modified their electron monochromator-analyzer by adding a gas scattering cell. They soon found sharp resonances in the transmitted current. At the same time, similar resonances were seen in photoabsorption spectra taken at the NBS synchrotron by Keith Codling and Robert Madden. Ugo Fano, who was then at NBS, explained these resonances as being due to the creation of multielectron autoionizing states. Soon observed later in many other gases, such resonances became a fertile and exciting area of research.

Kuyatt and Simpson continued their collaboration to improve electron monochromators and analyzers. Later, Kuyatt also focused on the optical properties of electron lenses. Kuyatt and Simpson's 1967 paper in the *Review of Scientific Instruments* on the principles of monochromator design was a landmark in the development of these systems. Kuyatt further described his design philosophy for monochromators and analyzers in a set of unpublished lecture notes that were circulated widely and used by many scientists as the basis for their own designs.

As the discipline of surface science emerged in the 1960s, Kuyatt began to study and develop specialized elec-

tron optical systems for such applications as measuring energy distributions of field-emitted and photoemitted electrons and delivering polarized electrons produced in the gallium arsenide source. These electron-optical systems, with their combination of high energy resolution and transmission, made possible a host of key observations of new phenomena on clean, adsorbate-covered and magnetic surfaces.

Beginning in the late 1960s, Kuyatt turned his attention to scientific management and rose through a series of managerial positions at NIST. He served as acting chief of the electron physics section (1969-70), chief of the electron and optical physics section (1970-73), chief of the surface and electron physics section (1973-78), chief of the radiation physics division (1978-79) and director of NIST's Center for Radiation Research (1979-91).

As radiation research director, Kuyatt led NIST's efforts in the areas of atomic, nuclear and accelerator physics, optical radiometry, ionizing radiation and dosimetry. Most recently, his interests were directed toward science policy and international cooperation. He worked with the NIST visiting committee on advanced technology and participated in negotiations to develop internationally accepted guidelines for evaluating and expressing uncertainties in physical measurements.

Kuyatt was a wonderful person to have as a colleague. Excited by scientific questions that arose in papers or discussions, he probed relentlessly to identify the key phenomena or issues. His infectious enthusiasm for science was equaled by his love of music. He was a member of the Rockville Concert Band from 1960—first as clarinet player and later as a concert master and associate director. In his early years, Chris, who stood about 2 meters tall, must have been an impressive figure leading the University of Nebraska's marching band in his 0.5-meter-tall drum major's hat!

He will be sorely missed by his many colleagues at NIST and throughout the world.

ROBERT J. CELOTTA
J. WILLIAM GADZUK
CEDRIC J. POWELL

National Institute of Standards
and Technology
Gaithersburg, Maryland

Samuel Bradley Burson

Samuel Bradley Burson, a retired physicist at the Nuclear Regulatory Commission, died of a stroke on 24