

34th Annual

Physics show

at the Joint Meeting of the
American Physical Society
and the American
Association of Physics Teachers

Atlanta Marriott Downtown Hotel

Atlanta, Georgia

January 27-30, 1986

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obituaries

Charles J. Brasefield

Charles J. Brasefield, former chairman of the physics department of Southern Illinois University in Carbondale, died on 18 May 1984, at age 79. He was born in Easton, Pennsylvania, and earned his doctorate in physics in 1927 at Princeton University.

A National Research Fellow at the University of Chicago from 1927-1929, Brasefield continued as a research physicist at the University of Michigan until 1931, when he joined the Yale University faculty. From 1936 to 1940 he was head of the physics department at the US Coast Guard Academy. He then pursued his interest in meteorology by a year's study at Caltech, after which he joined the meteorological branch of the Signal Corps Laboratory as a physicist.

Brasefield's research was chiefly in atmospheric physics. At the Signal Corps Laboratory he made measurements of temperature, humidity and wind velocity at high altitudes to determine their value as an aid in predicting weather nearer the surface of the Earth. After earlier measurements at 30 km, instrumentation was developed for use on rockets to obtain data at altitudes of 30-80 km.

Later, at Southern Illinois, Brasefield enlisted the aid of students to send up weather balloons for measuring electric potential to ground under different weather conditions.

Brasefield returned to teaching in 1954, when he became chairman of the physics department at Southern Illinois. His primary concern during his ten years in that position was to add laboratory space, equipment and staff to prepare the department to offer a PhD degree. Because of the shortage of physicists during that period, recruit-

BRASEFIELD



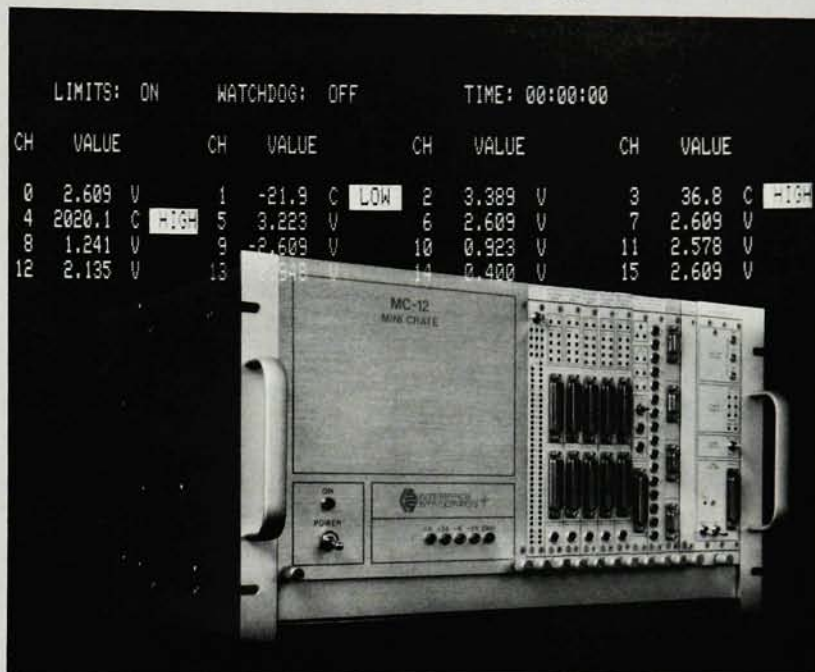
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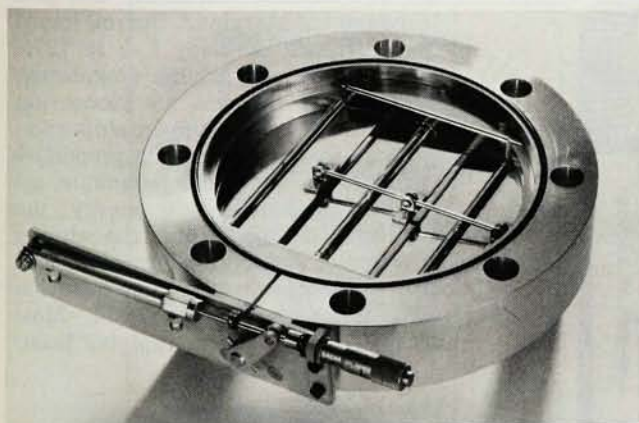
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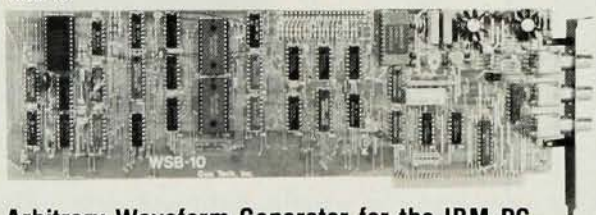
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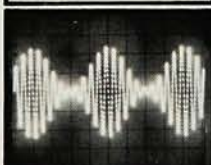
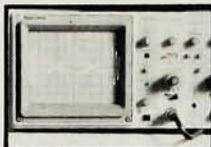


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ing and holding well-qualified staff members was a frustrating task. Besides his contribution to formal education in physics at Southern Illinois, Brasefield's positive influence extended not only to students and colleagues in the department but to many others in a rapidly expanding university community. He retired from the university in 1964.

MARTIN J. ARVIN

Southern Illinois University, Carbondale

GEORGE R. ARNOLD

Southern Illinois University, Edwardsville

Charles Frederick Burrell

Fred Burrell, a staff physicist in the magnetic fusion energy group at the Lawrence Berkeley Laboratory, died 16 January 1985, at the age of 42.

Burrell received his PhD in physics from the University of Maryland in 1974. For his doctoral project, done under the supervision of H.-J. Kunze, Burrell used resonant scattering of a tunable dye laser beam to observe the interaction of microwave radiation with a helium plasma. He then extended this work to use resonant absorption and excitation transfer to measure the collision-rate coefficients between He I excited states in a plasma.

After working at the Ruhr Universität in Bochum, Germany, and the University of Maryland, Burrell joined the Lawrence Berkeley Lab in 1975. His specialty was plasma diagnostics; most noteworthy was his pioneering work in the use of Doppler-shift spectroscopy for diagnosing the properties of neutral beams. This technique, capable of measuring the energy, the angular distribution and the aiming direction of powerful beams of neutral atoms, is now in routine use in fusion laboratories around the world. Most recently he worked on applying laser-

BURRELL

