

Douglas MacPherson Van Patter

Douglas MacPherson Van Patter, a well-known nuclear physicist, died in Springfield, Pennsylvania, on 25 March of kidney failure.

Born on 4 July 1923 in Montreal, Canada, Doug graduated from Queen's College in Kingston, Ontario, in 1945 with a BS in engineering physics. He then went on to MIT, where he received his PhD in nuclear physics in 1950 under the guidance of William W. Buechner. After several years as a postdoc at MIT, Doug joined the nuclear physics group at the Bartol Research Foundation in Swarthmore, Pennsylvania. He remained with Bartol until his retirement in 1985.

From his arrival at Bartol through the early 1960s, Doug was very active in using the Bartol-Oak Ridge National Laboratory 5 MV Van de Graaff accelerator. He used the facility to determine Q -values, to study the properties of nuclear states through the n,n',γ process, and to observe particles in nuclear reactions with a double-focusing magnetic spectrometer. From the magnetic spectrometer measurements, Doug and his collaborators were able to determine the level schemes, branching ratios, and spin assignments of many medium-weight nuclei.

In the mid-1960s, Doug's efforts moved to the recently installed University of Pennsylvania tandem Van de Graaff accelerator on which he had a dedicated beam line for the study of nuclei through (p,p',γ) reactions. Doug was very adept at stripping raw spectra and manipulating data. In the early days of experimental nuclear physics, such skills were essential given that the advent of the computer and development of the appropriate software were still years away.

In the early 1970s, Doug shifted focus again—this time, to measuring the nuclear lifetimes using the Doppler shift attenuation method. Here, too, he used the University of Pennsylvania tandem for his experiments.

In 1977, Bartol moved from Swarthmore to the University of Delaware in Newark, where a joint graduate program was established with the university's department of physics and astronomy. At that time, Doug, Charlie Swann, and others developed an in-air particle-induced x-ray emission system for determining the elemental composition of various materials. Doug was involved in using the system to

study oyster shells, geological materials, and archaeological artifacts.

Through the years, Doug trained a number of postdocs and graduate students, all of whom learned a great deal from him and many of whom were successful in moving on to fruitful academic careers.

Doug and his wife Annabel were avid bridge players. After his retirement, he taught bridge in local high schools.

His contributions to the knowledge of the properties of nuclear states will last for decades. Future generations of nuclear physicists will benefit from his efforts.

**STUART PITTEL
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Katherine Ella Mounce Weimer

Katherine Ella Mounce Weimer, who had a long and productive career at the Princeton Plasma Physics Laboratory (PPPL), died in Princeton, New Jersey, on 23 April, only three weeks after she had been diagnosed with pancreatic cancer.

Born on 15 April 1919 in Rutherford, New Jersey, Katherine received a scholarship to Purdue University, where she earned a BSc in chemistry in 1939. Continuing her education at Ohio State University, she switched from chemistry to physics, and earned a PhD in 1943 under Marion Llewellyn Pool. As with almost all plasma physicists of her day, she completed her work in a different field: Her thesis was entitled "Artificial Radioactivity of Barium and Lanthanum."

In 1957, after taking care of her three daughters through their early years, she joined the theory group at PPPL. She was the first woman appointed to the research staff and subsequently made many key contributions to important research advancements at PPPL. She worked with many members of the theory group, interacting most closely with us on fundamental research in equilibrium and magnetohydrodynamic stability of toroidal magnetic confinement devices, including both stellarators and tokamaks. Results from her efforts were central to the design and interpretation of most of the experiments at PPPL over the years, which included innovative devices such as



KATHERINE ELLA MOUNCE WEIMER

the Model C Stellarator, the Adiabatic Toroidal Compressor (ATC), and the Poloidal Divertor Experiment (PDX).

Throughout the cold war, despite the tensions of the time, the fusion program was highly international. Katherine's fluency in French and Russian proved to be a particularly valuable asset at PPPL. She used this talent, together with her exceptional organizational ability and memory, to facilitate many research efforts. She contributed extensively to the organization of both national and international conferences associated with fusion research and plasma theory, and also played a vital role in establishing an outstanding scientific reference library at PPPL.

Over the years, Katherine was a valuable source of guidance and advice to many graduate students from the department of astrophysical sciences at Princeton and to postdoctoral fellows. She retired from Princeton University in 1984 after 29 years at PPPL.

All of us—at PPPL and throughout the fusion energy sciences program—have been most fortunate to have had her as a valued colleague and true friend. She pursued many community interests outside of science. She was an accomplished pianist, and music remained a central part of her life. Concerned with ecological issues, she was a member of the Barnegat Light Historical Society and an active leader in the Central New Jersey Orchid Society. She was also a Girl Scout leader and an avid swimmer.

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