obituaries

(1939–41), Secretary (1957–59), and Associate Editor (1928–57) and served as a member of the AIP Governing Board (1942–48), and Advisory Committee for PHYSICS TODAY (1948–50).

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Josef Ausländer

Josef S. Ausländer, professor emeritus at the University of Karlsruhe, died in that city on 16 June 1978 at the age of 67.

Born in the province of Bukowina (at that time part of the Austro-Hungarian empire, later taken over by Romania, now part of the USSR), he was educated in Vienna, Berlin (until 1933), and Zurich, where he received his PhD with Paul Scherrer in 1938, in spectroscopy. At that time he belonged to a close-knit group including, among others, Valentine Bargmann, Nicholas Kemmer, Marcel Schein, and Victor Weisskopf. In 1938 Ausländer returned to Czernowitz (then Romania) for military service. He was prevented by the war from taking up an assistantship he had been offered at Princeton.

As a Jew he could not expect an academic career in monarchic Romania, and as a "nonproletarian" he faced the same adversity after Czernowitz was "liberated" by the USSR in 1940. Thus, he ended up teaching physics at a Yiddish high school in that city and finally, doing forced labor, when the city was reoccupied in 1941 by Romanian and German troops.

He moved to Bucharest in 1944 and after 1945 he taught at the University and at the Polytechnic Institute there; from 1949 to 1962 he also headed the Cosmic Ray Laboratory of the Institute for Atomic Physics in the same city. He was able to emigrate to the West only in 1965, and after a brief interlude at CERN, he joined the Institute for Experimental Nuclear Physics of the University of Karlsruhe, from which he retired in 1977.

Ausländer was responsible, directly or indirectly, for several generations of nuclear physicists in Romania. His scientific interests were widespread, ranging from atomic spectroscopy and chemical physics, through radioactivity and its applications, to elementary particle physics and detection methods. He had an unusual ability for extracting information from scant data.

He successfully used nuclear emulsions to measure the extremely low vapor pressure of thorium. In his words: "it was like hunting on a moonless night in a region notoriously devoid of birds." The methods his group developed for estimating and eliminating psychotechnical

factors in visual particle detection were sensitive enough to detect physiological changes in the observers. During the last decade of his life Ausländer was preoccupied with fundamental problems of estimation in statistics and their relation to detection techniques in elementary particle physics.

It is hard to imagine how much physics would have gained had Ausländer been able to work under more auspicious conditions.

Ausländer's human qualities were unusual. For those who have had the good fortune to be closely associated with him he was always a warm, loyal friend, and a source of profound humane wisdom.

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Lawrence Berkeley Laboratory
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RICHARD M. WEINER
University of Marburg

Ralph S. Halford

Ralph S. Halford, who retired last year after more than 30 years as professor, dean and vice president of Columbia University, died on 7 December. He was 64 years old.

HALFORD

Halford was born in Vallejo, California, 21 April 1914. He earned the BS degree in chemistry in 1935 and the PhD in 1938, both at the University of California at Berkeley. He lectured in chemistry for two years at Berkeley before becoming a National Research Fellow at Harvard University, where he later became an instructor, then a lecturer.

A physical chemist, Halford was former associate editor of the Journal of Chemical Physics. He was a trustee of the Associated Universities, Inc., and served on advisory committees of the Office of Ordinance Research and the Brookhaven