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## obituaries

lems, difficulties or crises, it was likely to be Serin who found a resolution. At meetings he rarely spoke first, but when he did his contribution was usually decisive.

His devotion to physics and people was nowhere more evident than in his relations with his students. He knew them well and took a personal interest in their lives as well as in their careers. He was always careful to build up their self-confidence, never rejecting an idea outright, but discussing it carefully, emphasizing the good parts. He worked side-by-side with his students in the laboratory, often far into the night. He taught a wide variety of graduate and undergraduate courses with characteristic thoroughness and dedication. During his last year at Rutgers he conceived and developed an entirely new elementary course for biology students.

Serin had a strong sense of social responsibility. At times of campus protest and unrest he was the center of efforts to remove inequities from the system and build a more responsive structure.

In moving to England Serin fulfilled a hope he had nurtured for many years. He and his wife were beginning to feel comfortable in their new surroundings. He was full of plans for new experiments and optimism for the future. We are grateful that he had the opportunity to start the new life he hoped for. We mourn in the knowledge that his life was cut off when he still had so much to give.

ELIHU ABRAHAMS  
PETER LINDENFELD

Rutgers University  
New Brunswick, New Jersey

## Josef Maria Jauch

Josef M. Jauch died on 30 August in his native Switzerland, a few weeks before his sixtieth birthday.

After his diploma at the famous Eidgenossische Technische Hochschule in Zürich under Pauli's direction, Jauch came to the US to work for his doctorate with E. L. Hill at the University of Minnesota. There he was the first to study dynamical symmetry groups in quantum mechanics, including  $SU_3$ , a subject matter which was fully appreciated only a quarter century later. He received his PhD in 1940 and returned to the ETH.

The following two years he was an assistant to Gregor Wentzel and worked on pair theory. In 1942 he returned to the US and remained for seventeen years, becoming a citizen in 1946. The first three of these years he spent as an assistant professor at Princeton Univer-



sity and continued to work with Pauli, who was at that time at the Institute for Advanced Study. This repeated association had a very strong and lasting influence on him.

After a short stay at Bell Laboratories he joined the University of Iowa (Iowa City) as associate professor and quickly rose to full professor. His translation (jointly with Charlotte Houtermans) of Wentzel's *Quantentheorie der Wellenfelder* and the illuminating Appendix to this English edition stem from that period (1949). In 1953 he had just concluded the first chapter of *Theory of Photons and Electrons* when I joined the Iowa faculty and became the junior co-author. When the book appeared two years later, the comment that Jauch appreciated most was Pauli's remark: "The more I read in it the more I like it."

Partly as a result of his realization of the lack of a satisfactory mathematical understanding of quantum electrodynamics he became more and more interested in the mathematical structure of scattering theory. His first fundamental papers on it appeared in 1958 and he kept a lifelong interest in this subject.

The following year he left the US never to return to it for more than a few months at a time. Many will recall Jauch's penetrating and colorful descriptions of European universities and research laboratories that appeared as reports from the Office of Naval Research in London. With this transition Jauch entered the last period of his life, his professorship at the University of Geneva in Switzerland, which he joined in 1960 as director of its Institute of Theoretical Physics. He soon built a fine school of mathematical physics attracting some excellent students and producing results that quickly became well known: the Geneva school of the axiomatics of quantum mechanics started with the work of Jauch and his student Piron. It is described in Jauch's book *Foundations of Quantum Mechanics* (Addison-Wesley, 1968). Characteristically, he dedicated this work to Pauli.

Jauch was an excellent lecturer and an inspiring teacher. Among his outstanding students are Kenneth M. Watson (University of California, Berkeley), Andrew Lenard (Indiana University), Gerard Emch (University of Rochester), M. Guenin (now Jauch's successor as director at the University of Geneva), and C. Piron (University of Geneva).

His interests by far exceeded his many fine research papers and the books through which he became known. He was deeply concerned with the history of physics and was one of the world's experts on Galileo. His last and most charming book is cast into the form of a Galilean dialogue (*Are Quanta Real?* Indiana Univ. Press, 1973).

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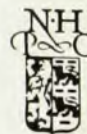
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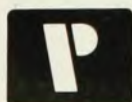
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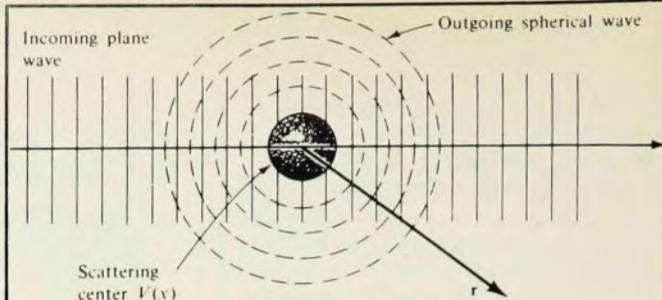
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## obituaries

He was active in organizational matters such as the founding of the European Physical Society, he was a vice-president of the International Union of Pure and Applied Physics, a member of the research council of Switzerland and a consultant to many laboratories. He loved music, was a good violinist and enjoyed playing chamber music; he was a fine photographer, and he liked to sail.

But most of all he strove for intellectual beauty, beauty in science and beauty in mathematics. He was convinced that the "esthetic aspect of a well-expressed physical theory is just as indispensable as its agreement with experience. Only beauty can lead to that 'passionate sympathetic contemplation' of the marvels of the physical world which the ancient Greeks expressed with the orphic word 'theory'." There are few people who think this way in our time and fewer who act accordingly. Josef Jauch's scientific work is a living example of the tenets in which he believed. We shall miss him.

Fritz Rohrlach  
Syracuse University  
Syracuse, New York

## Vaden W. Miles

Vaden W. Miles, emeritus professor of Physics at Wayne State University, died on 24 July at the age of 62.

Miles was born on 25 September 1911 in Lewisville, Texas. He received his bachelor's degree from North Texas State College and his MA and PhD degrees from the University of Michigan. After teaching at the university of Michigan, Boston University, and Indiana University, Miles in 1948 joined the physics department at Wayne State University, where he taught physical science until his retirement in 1969. He was a Carnegie Fellow and Visiting Professor at Harvard University during 1954-55, a recipient of the Distinguished Service Award in Science Education from the National Association for Research in Science Teaching, and had served as president of that organization.

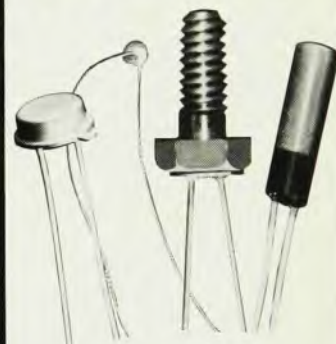
Miles was instrumental in establishing the current physical science sequence of courses at Wayne and had directed the Department of Physical Science. He is perhaps best known as the principal co-author of the widely used textbook *College Physical Science*; after retirement he continued to devote a major part of his efforts to revising this book, the third edition of which was recently released. □

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