

the numerator, any false zeros by the poles of the denominator.

As the general principles of relativistic S -matrix theory emerged, the original proposal of Kramers and Heisenberg more or less disappeared into a much more sophisticated framework (CDD zeros), but Jost's work was the starting point for a number of fruitful developments in scattering theory. In particular, in the early 1950s Jost and Walter Kohn made an initial attack on what is now called the inverse scattering problem: the determination of a potential from the scattering amplitude and the locations of the bound states. Parallel developments, especially the work of Izrail Gelfand and Boris M. Levitan, led eventually to the extensive theory of integrable systems that we know today.

In the mid-1950s, in collaboration with Hans Lehmann, Jost took up the study of analytic properties of relativistic scattering amplitudes. This work led to the well-known Jost-Lehmann-Dyson representation, which gives an incisive and precise description of such amplitudes. At about the same time, Jost undertook a study of axiomatic quantum field theory. He was the first to recognize that the CPT theorem is a very general and simple consequence of the principles of quantum field theory. His deduction of CPT invariance from the locality and spectral properties of quantized fields is extraordinary for its simplicity and depth. Jost's mastery of this subject was displayed in his 1965 book *The General Theory of Quantized Fields* (American Mathematical Society, 1965).

In Zurich in the late 1950s and early 1960s, there gathered around Jost a group of young people working on mathematical physics in general in particular on quantum field theory. A partial list includes Sergio Albeverio, Hazichiro Araki, Gian-Fausto Dell'Antonio, Klaus Hepp, Walter Hanziker, Derek Robinson, David Ruelle and Othmar Steinmann. Their work made the ETH one of the most active centers in the field. Jost's scientific judgment and integrity was a powerful influence. He also played an important role in the founding of *Communications in Mathematical Physics*, the leading journal in the field.

After a serious heart attack in 1972, Jost turned his attention to the history of science. He brought to this field his deep understanding of physics and a broad knowledge of history and philosophy. His articles on subjects such as "Zurich and Einstein; Einstein and Zurich" and



Res Jost

"Boltzmann and Planck: The Crisis of Atomism at the Turn of the Century and How Einstein Overcame It" are jewels.

Jost's achievement and acumen were internationally recognized. He spent six years (1949-55) at the Institute for Advanced Study in Princeton, New Jersey, and several shorter periods at the Niels Bohr Institute in Copenhagen before accepting a professorship at the ETH in Zurich. He returned to Princeton on several occasions, and he was associated with the Institut des Hautes Etudes Scientifiques at Bures-sur-Yvette, France, from its inception. He received the Planck Medal of the German Physical Society in 1984.

With Res Jost's death the international community of theoretical physicists has lost a great personality. Throughout his life, Jost remained a "Berliner," while at the same time establishing lasting friendships with persons from many parts of the world. His surviving wife Hilde and he enjoyed a very close relationship throughout their long marriage and maintained a warm and hospitable home. Jost was a man of exceptional breadth, not only in physics and mathematics but also in music, history and philosophy. His great personal and scientific integrity and modesty set high standards for others to follow. His many friends will miss his wisdom, his wonderful use of language, his pithy sense of humor, his laughter and his deep humanity.

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Jules W. Sunier

Jules W. Sunier died on 11 October 1990 in Albuquerque, New Mexico, at the age of 55, after a courageous struggle against cancer.

Sunier completed both undergraduate and graduate work at the ETH in Zurich, earning his PhD in physics in 1962. He emigrated to the United States in 1964 when he accepted an assistant professorship in the physics department at the University of California, Los Angeles. In 1972 he became a United States citizen and joined Los Alamos National Laboratory.

Sunier had a very productive career in experimental nuclear physics. During his early years at the ETH and UCLA, he studied β and α spectroscopy of proton-rich short-lived nuclides. From 1972 to 1979 Sunier did experimental low-energy nuclear reaction studies at the Los Alamos Van de Graaff facility. During this period of intensive research, when Sunier was primarily studying two-nucleon transfer and heavy-ion reactions, visitors always sought to enlist him as a collaborator, not only because of his experimental expertise but also because of his physics insight. Sunier led the Los Alamos research effort at CERN's Low Energy Antiproton Ring, studying antiproton reactions. He then joined the HELIOS collaboration, a program of research in relativistic heavy-ion collisions at CERN. Sunier considered the research he accomplished in this field in the subsequent ten years to be the most important of his scientific career. In 1984 Sunier became deputy group leader of the medium-energy physics group at LANL. In 1987 he became group leader, a position he held at the time of his death.

Like many Swiss, Sunier was a linguist. He had an excellent command of English, Italian and German, in addition to his native French. Anyone who had the pleasure of skiing with him could not believe he was not born with skis on. He was a loving husband and father and a loyal, dependable friend. He helped wherever he could in his unassuming way. Those of us who were privileged to know Sunier as a colleague and friend will miss this gentleman of the international nuclear physics community.

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