OBITUARIES

Marcello Conversi

Marcello Conversi, a professor of experimental physics, was unexpectedly carried away by a heart attack on 27 September 1988 in Rome. His death was particularly tragic in view of the fact that just a few days before he had been scheduled to address a large international audience at a conference dedicated to physics in Europe and the US in 1945–60.

In Conversi's death European physics has lost one of its most outstanding exponents. Not only did he contribute enormously to Italian particle physics for over 40 years, both through research and teaching (Luigi Di Lella, Italo Mannelli, Carlo Rubbia and Mario Toller were his students, just to mention a few), he also played a major role in many collaborative experiments at CERN. His discriminating style and his imagination inspired several generations of experimental physicists.

Conversi acquired world fame in 1946 as the junior member of the team of Ettore Pancini, Oreste Piccioni and Conversi, which established that the cosmic ray "mesotron" was not, as had been universally assumed until then, the strongly interacting meson hypothesized by Hideki Yukawa, but, rather, a weakly interacting particle, soon to be named the muon. This discovery was the crowning glory of a long chain of successful experiments by Conversi and Piccioni (1942–45) on the lifetime of the "mesotron." It is fair to say that the discovery—in its day jocularly called the "Pinocchio effect"—constituted the birth of lepton physics; a replica of the orginal equipment is exhibited at the Smithsonian Institution in Washington, DC.

Though he was born in Tivoli on 25 August 1917, Conversi was Roman by training (in the school of Edoardo Amaldi and Gilberto Bernardini), and he worked in Rome until 1948. He started his academic career in Pisa in 1950, but returned to Rome in 1958. In Pisa, he organized an active center of particle physics where he conducted research both on instrumentation and on fundamental problems. There he invented the flash chamber with Adriano Gozzini and researched parity violation in Λ decay, in collaboration with researchers at Columbia University. He also started the first Italian computing facility dedicated to particle physics.

In the 1970s Conversi and his group worked first at the ADONE e^+e^- collider, where they found evidence for

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multihadron production in e^+e^- annihilation, and, subsequently, in large international collaborations at Fermilab and CERN which obtained fundamental results on the decay of "charmed" particles.

In the 1980s Conversi's attention was focused partly on detector developments, a subject always close to his heart, and partly on processes violating baryon number conservation. He was active in the planning of the Gran Sasso Laboratory.

From 1948 on, Marcello Conversi made frequent professional trips to the US. There, as in Europe, many physicists will miss his lively and inspiring company.

Conversi involved himself actively in major educational, scientific and public affairs problems in Italy and beyond. His steadfast and original opinions were always received with respectful attention, coming from one who would not accept ambiguity or confusion.

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Joseph P. Remeika

Our valued friend and colleague, Joseph P. Remeika, died of leukemia on 17 June 1988 at the age of 64. Joe was born in Newark, New Jersey. Forty years ago, after high school and service in the Navy during World War II, he started work at Bell Laboratories as a technical assistant. In 1982 he was among the first group to be awarded the title of Distinguished Member of the Technical Staff. In 1984 he received the International Prize for New Materials, the highest award of the American Physical Society for materials science. During his career Joe was the author or coauthor of more than 300 publications and was listed as an inventor on 25 US patents.

These bare facts do not begin to capture the creativity, enthusiasm, generosity or helpfulness of this outstanding crystal chemist. There is a tendency among physicists to think of the discovery of new materials or the growth of single crystals as forms of art, whereas in reality they result from careful, exhaustive experiments and from a thorough understanding of the periodic table and thermodynamics. Progress in condensed matter physics stems from strong interactions among theory, experiment and materials research. It was in these interactions that Joe was unique. There was a steady stream of theorists and experimentalists coming to his office.

Joe was always exploring the ever-changing frontiers and trying to answer the important questions. He used his broad knowledge of physics and chemistry to find new materials that had the desired properties.

Joe was one of the first to realize the importance of flux growth as a technique for the preparation of refractory materials. It was his ability to rapidly find ways to grow high-quality crystals of new materials and to control their composition that enabled scientists at Bell Labs and throughout the world to make major contributions to many areas of condensed matter physics. His "butterfly wing" crystals of $BaTiO_3$ were used worldwide in studies of switching and domain-wall motion in ferroelectrics.

In the early 1960s Joe undertook a major program to obtain pure oxides of the rare earths, transition metals and lead. He then used these as starting materials to grow high-purity crystals of the various rare earth orthoferrites and garnets by a flux technique he had developed. During the next few years, crystals made by Joe or by others following his teaching became the preferred materials for a wide variety of fundamental magnetic and magneto-optical experiments. Experiments using these crystals formed the basis for magnetic bubble technology and for practical magneto-optical isolators. It was only after these high-purity materials were available that intrinsic ferromagnetic resonance linewidths not dominated by impurity effects could be obtained and understood.