physics inspired everyone around him, but so did his optimism and positive outlook on life. His office door was always open, and he was always ready to help his colleagues in their work. His judgment and advice were always helpful. Ken was widely respected and admired. He will be sorely missed.

Daniel Z. Freedman
Robert L. Jaffe
Francis E. Low
Massachusetts Institute of Technology
Cambridge, Massachusetts
Marshall Baker
University of Washington
Seattle, Washington

Jose Roberto Manzano

Jose Roberto Manzano

Jose Roberto Manzano, an Argentine pioneer in space physics, died of a heart attack on 26 September 1999 in Tucumán, Argentina.

Roberto, as he was known to his family and closest friends, was born in Tucumán on 11 February 1928. He earned his *licenciado en fisica* (a degree equivalent to midway between a US bachelor's and master's degree) at the National University of Tucumán (UNT) in 1954 and at the University of Buenos Aires in 1955. (To start a PhD at Buenos Aires, he needed a *licenciado* from the same university.)

Roberto's scientific career began in 1954 as an investigator at Argentina's National Commission of Atomic Energy. It was during his tenure at the commission that he initiated the study of cosmic radiation in Argentina.

In 1961, he became an assistant professor at UNT, where he founded and managed the university's Cosmic Radiation Laboratory in collaboration with Orestes Santochi. He designed, built, and installed instruments to measure cosmic radiation, thereby initiating the modern study of cosmic rays in Argentina.

In 1963, he earned his *doctor en ciencias fisicas* (equivalent to a PhD) from the University of Buenos Aires with a dissertation entitled "Spatial Asymmetry in Cosmic Radiation Modulation Mechanisms during Forbush Decreases."

In 1963, Roberto moved to the University of Minnesota to study cosmic rays and space physics with instruments carried on rockets and balloons. But a year later, he returned to Argentina to become a professor at UNT. Between 1970 and his death, he directed UNT's Ionospheric Laboratory. Most of the investigators currently working at the laboratory obtained their doctorates under his guidance, which he also extended to a large number of undergraduate students who gained their first research experiences in his lab. He also helped to create UNT's school of atmospheric physics, and was its first academic director from 1997 until his death.

Roberto's major contribution was in understanding the behavior of the ionospheric F region and magnetic storms and substorms. Just before his death, he investigated the coupling mechanisms between different atmospheric regions.

In 1980, Roberto became a principal investigator at Argentina's National Council of Research (CONICET), and in 1994 he was promoted to the position of superior investigator. He also served as the director of the physics department, as UNT's dean of research, and on several UNT and CONICET councils. Roberto also acted as an adviser to the National University of Córdoba, the National Education Ministry, the National Commission of Space Research, the International Institute for Environmental Earth and Marine Science, and the International Center for Earth and Environmental and Marine Science and Technologies. In addition, he played an active role in the creation of the Latin American Association of Space Geophysics (ALAGE).

Roberto was always ready to listen to his students and his collaborators, and to talk about any topic—even our personal problems. He will be missed by those who experienced his warm personality and inquiring spirit.

Olga Pintado
National University of Tucumán
Tucumán, Argentina ■