

## DOCUMENTS OF THE GENERAL FACULTY

**REPORT OF THE MEMORIAL RESOLUTION COMMITTEE FOR  
ROBERT NARVAEZ LITTLE, JR.**

The special committee of the General Faculty to prepare a memorial resolution Robert Narvaez Little, Jr., Professor, physics, has filed with the Secretary of the General Faculty the following report.

John R. Durbin, Secretary  
The General Faculty

**IN MEMORIAM  
ROBERT NARVAEZ LITTLE, JR.**

Robert N. Little, Jr., professor of physics and science education at the University of Texas at Austin and internationally renowned leader in physics education, died in Austin on May 21, 1986, at the age of 73.

For the latter half of his life, Bob Little's primary interest and efforts were dedicated to increasing the use and understanding of science in two special ways: precollege physical science, and physics development in Central and South America.

In the late 1950s, concerned that precollege science instruction was not effective in motivating young people to an interest in science, he began a project that was to dominate the remainder of his life. Together with Tom Slater from the Texas Education Agency, Jack Montague of the University of Texas Science Education Center, and Max Bolen of the University of Texas at El Paso, he worked to develop a new instructional format for the teaching of middle school science in Texas. Anticipating current trends based on the psychological insights of Piaget by using discovery methods with a strong emphasis on observation of phenomena, they prepared materials for a course that replaced composite introductory science taught at this level. Not content merely to write a course description and prepare several classroom exercises, Little worked to effectively transfer it to the schools. He began by taking time from his busy schedule at the university to teach it at a nearby school; he organized, sponsored, and participated in numerous teacher workshops; he introduced into the university curriculum a course, based on similar methods, which would introduce future teachers to the physical sciences in the same phenomenological intuitive way; he forcefully and effectively carried his message to the national level at colloquiums and meetings. Although there is no quantitative estimate of Little's impact at the national level, today 90 percent of the students in Texas take this ninth grade physical science course.

At the same time he was working to develop this new instructional format, Little worked hard to support other efforts to promote quality science instruction. He played a leadership role in the development of the Texas section of the American Association of Physics Teachers, serving as chairman from 1958 to 1960. The special significance of his contributions to physics education in Texas was recognized in 1978 when he was selected by the Texas Section of the AAPT as the first recipient of its award for Outstanding Contributions to Physics in Higher Education in Texas. He also supported the National AAPT. He chaired the International Physics Teacher Editorial Board, and he served as the 33<sup>rd</sup> president (1970-71) of the AAPT. It was at the 1969 Denver joint meeting of the American Physical Society and American Association of Physics Teachers, where he was attending as president-elect and had organized a special session on "Physics Before the Senior Level," that he suffered his first heart attack.

His interest in promoting the quality of the physics instruction and research in Central and South America stemmed from his Texas origins (he was born in Houston on March 11, 1913) and his ability to speak Spanish. He felt that UT Austin was uniquely placed to be able to assist in the development of science in the Central and South American countries, and that an indigenous strength in physics would be an essential prerequisite to that development. He was able to support these beliefs effectively with specific actions. In

the early 1960s he was a member of a mission to evaluate multinational physics projects of the Organization of American States. His close involvement with physicists and physics teachers in Central and South America and the Caribbean continued to grow throughout his lifetime. Most summers for his last 20 years were spent working with fellow physicists and physics teachers in workshops in this region. He was a founding member of the Sociedad Centroamericano y del Caribe de Fisica and the prime mover behind the recent establishment of the Congreso Inter-Americano de Enseñanza de la Fisica, which held its first conference in Mexico in 1987. Through his goodwill, numerous students from Central and South America have traveled to Austin to pursue graduate-level studies in physics and then returned home to teach and do research in physics and to strengthen the ties of friendship in our hemisphere. When Bob Little began his involvement with the Organization of American States' mission to evaluate physics projects, it was "found that no one had a physics background in the Central American universities; all the physics teachers had degrees in engineering, mathematics, or pharmacy." Twenty-five years later the dramatic improvement that has occurred is due in large measure to the efforts of our colleague.

Bob Little was an experimental nuclear physicist. His first research involved studies of fast neutron scattering from heavy elements. This work, started as part of his PhD dissertation and completed in 1943 at Rice University, provided the basis of all his latter scientific interests. He returned to these studies at Texas after a brief period as an assistant professor at the University of Oregon and as a research scientist working during the war on airborne fire control systems. In the late '40s and early '50s, he performed some of the early measurements of polarized neutron from D-D reactions. Later his interests turned to reactor physics, particularly design of lightweight reactors for portable and airborne systems. This work was carried out through consulting arrangements with a number of laboratories including Los Alamos, Sandia, Bendix, Texas Nuclear, and Kaman Nuclear. In 1953 he joined General Dynamics in Fort Worth, serving as chief of nuclear physics until 1955 when he returned to UT Austin as professor of physics. From 1953-1973 he served as the University of Texas representative on the Council of Oak Ridge Associated Universities.

Robert N. Little was an active teacher and tireless colleague until his untimely death. We never saw him idle; he introduced a new upper-division physical science course into the curriculum during the spring semester of 1986. He constantly reminded us of the importance of making science accessible and then he showed us how it could be done. The void left by his passing will not be filled. It cannot be; the best we can do is work around it.

This memorial resolution was prepared by a special committee consisting of Professors Austin M. Gleeson (chair), the University of Texas at Austin, Jorge Antillón, Universidad del Valla, Guatemala, and Robert Beck Clark, Texas A&M University.

Distributed to the Dean of the College of Natural Sciences, the Executive Vice President and Provost, and the President on December 7, 1999. Copies are available on request from the Office of the General Faculty, FAC 22, F9500. This resolution is posted under "Memorials" at: <http://www.utexas.edu/faculty/council/>