Matthew Sands, Founding Deputy Director of SLAC, Dies

By Burton Richter, SLAC director emeritus

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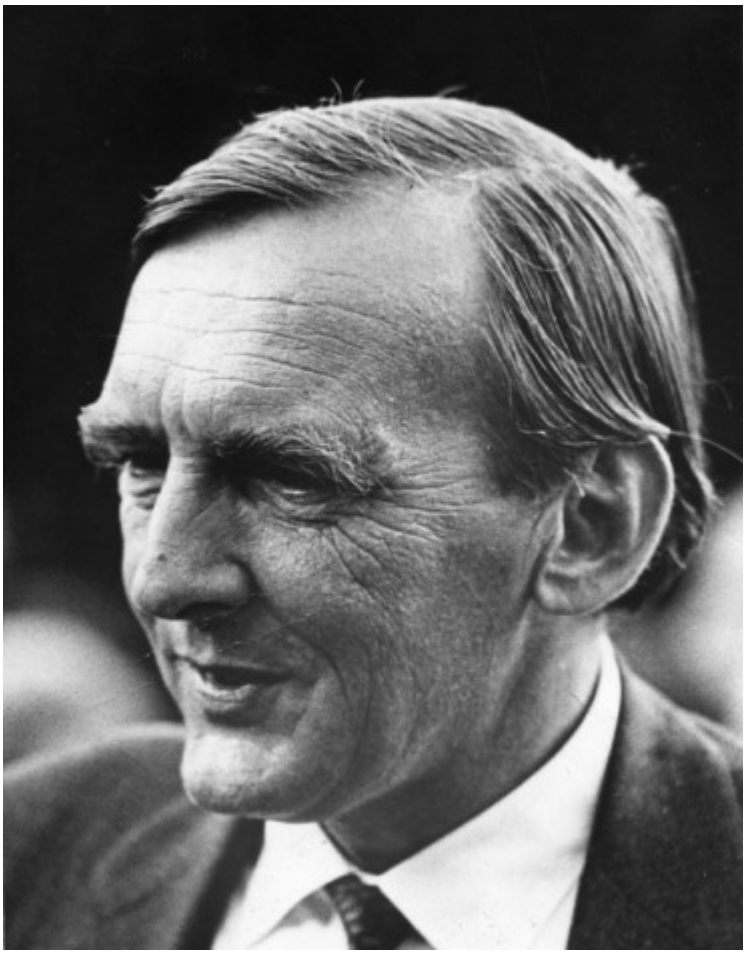

Matthew (Matt) Sands, the founding deputy director of SLAC, died peacefully at his home in Santa Cruz, California, on Sept. 13. He was 94 years old.

Matt received his master's degree in physics from Rice University in 1941 and was immediately swept into World War II technical work, first at the Naval Research Laboratory in Washington, D.C., and, from 1943 to 1945, at Los Alamos, where the atomic bomb was being developed. Matt's work focused on electronics, and his group built the circuits needed for the work of all the other groups at Los Alamos. After the war, the book on electronics he wrote with his colleague William Elmore, *Electronics: Experimental Techniques,* became a kind of bible of recipes for advanced circuits. He was also one of the founders of what became the Federation of Atomic Scientists, which lobbied hard for control of nuclear weapons.

After the war ended, Matt went to the Massachusetts Institute of Technology (MIT) for his PhD, working with professor Bruno Rossi on cosmic rays. After his PhD was completed, he was asked to help commission a 300-million-electronvolt synchrotron, which had been completed but did not work. In about one year he had it going.

In 1950, Matt moved to the California Institute of Technology (Caltech) in Pasadena, where they were about to start on a 1.5-billion-electronvolt synchrotron. The project was successfully completed on schedule and on budget, and Matt was involved in both its operation and its experimental program.

In 1963, W.K.H. (Pief) Panofsky, SLAC's founding director, recruited Matt to be deputy director of the laboratory. This was the same year that I joined the SLAC faculty to lead the colliding-beam effort. Matt's experience with projects, from smaller accelerators to the giant Los Alamos lab, made him an attractive candidate and an effective deputy. While I was not part of the formal leadership of our laboratory then, I knew Matt from faculty meetings and from technical meetings. He had no patience for statements about programs that could not be logically justified.

My own interactions with Matt were important to me and to the lab. While the Stanford experts knew all about linear accelerators, Matt and I were the only ones with experience with circular machines. Matt had found the problems that kept the MIT synchrotron from working initially. As a graduate student, I was one of the people who had to keep the MIT synchrotron running. I went on at MIT to make a contribution to the design of the 6-billion-electronvolt Cambridge Electron Accelerator, and then came to Stanford to be one of the people to build and demonstrate the first circular colliding beam machine. Matt had gone on to Caltech to play an important role in building their 1.5-billion-electronvolt synchrotron. It was natural that we came together at SLAC for a more technical collaboration than might have been expected between a young faculty person and the deputy director of a new and large lab, the first $100 million science project.

In 1969, the SLAC linear accelerator was running and making important contributions to science. The colliding beam facility that I had been promoting, now called SPEAR, had finally been approved, with much help from the deputy director. The new University of California campus at Santa Cruz was getting started, and Matt was offered the position of professor and vice chancellor for science. The opportunity to help guide the development of the science program at a new university was irresistible and Matt left us. We kept in contact over the years. He was an important part of SLAC's development and played an important role in the broader Washington, D.C., policy scene, from the future of science research to the future of nuclear weapons.

For the past two years, I kept saying to myself that I ought to go to Santa Cruz to see Matt. I regret that I did not, but still remember with appreciation our interactions and his role in the development of SLAC and as one of my mentors.

The founding leaders of SLAC were Pief Panofsky; Matt; Joe Ballam, as associate director for research; and Dick Neal as associate director for accelerators. With Matt's passing, the last of the founding leaders is gone.

Tags

SLAC People