

NATIONAL IGNITION FACILITY & PHOTON SCIENCE



MANAGEMENT

Dr. George Miller is the tenth Director of Lawrence Livermore National Laboratory, a position he assumed in March 2006 after a long and distinguished career in national security work at the Laboratory

Throughout his tenure, Dr. Miller has tackled a variety of management and scientific challenges in the interest of national security. For example, under Dr. Miller's leadership as Associate Director for the National Ignition Facility, a new management team was assembled in 1999 with a new project execution plan that put it on track for completion in 2009. Through Dr. Miller's stewardship, this \$3.5 billion laser continues to meet all of its milestones on time and cost.

Prior to his position at NIF, Dr. Miller provided the leadership to integrate LLNL's national security programs into a cohe-

Departments of Energy and Defense, and the U.S. Congress. In 1989, Dr. Miller provided scientific counsel to Secretary of Energy Admiral James D. Watkins while on a temporary assignment to the Department of Energy as Special Scientific Advisor on Weapons Activities. He provides advice to the Commander of the United States Strategic Command through his membership on the USSTRATCOM Strategic Advisory Group and as Chairman of its Science and Technology Panel.

Dr. Miller holds memberships in the American Physical Society and Sigma Pi Sigma - National Physics Honor Society. He has received awards and honors from the National Science Foundation Graduate Fellowship, Gulf-General Atomics Fellowship, and Sigma Pi Sigma.

Dr. Miller received his bachelor's degree (1967), master's



George H. Miller
Director, LLNL



Edward I. Moses
Principal Associate Director,
NIF & Photon Science



Ralph W. Patterson
Program Director,
NIF Projects

sive effort to meet U.S. national security objectives of maintaining the U.S. nuclear deterrent without nuclear testing, advance national nonproliferation and arms control goals through the development and application of effective scientific and technical solutions, and support DOD programs.

From 1985 until 1996, Dr. Miller led the Laboratory's nuclear weapons program as a major participant in the development of the Stockpile Stewardship and Management Plan to ensure the safety, security and performance of the nation's nuclear deterrent in the absence of testing. Dr. Miller applied his expertise as a weapons design physicist to assist in the development of the scientific capabilities necessary to maintain the nuclear deterrent without nuclear testing. He developed his scientific management skills as the project leader for the B77 nuclear weapon development and the W84 ground-launched cruise missile.

Dr. Miller has represented the Laboratory's national security programs to a wide variety of decision makers in the federal government, including members of the Executive Branch,

degree (1969), and PhD (1972) all in Physics from the College of William and Mary, Williamsburg, Virginia. Dr. Miller and his wife have two grown children and live in Livermore, California.

Dr. Edward I. Moses is internationally recognized in laser and optical sciences. He began his career in 1977 with the Hughes Aircraft Company as a Scientist and Program Manager. He first joined the Laboratory in 1980 as a Section Leader, working his way up to Deputy Associate Director for Lasers before taking a five-year break in 1990 as the Executive Vice President of Advanced Technology Applications, Inc. Dr. Moses returned to the Lab in 1995 as Assistant Deputy Associate Director for Program Development in the Physics and Advanced Technologies directorate. Among other activities, in this role he led a team that developed a new method of radiation therapy of cancer.

In 1998, he joined the National Ignition Facility and in 2000 he became the NIF Principal Deputy Associate Director and NIF

Project Manager. Currently he is the Principal Associate Director for NIF and Photon Science. The NIF is the largest laser facility in the world. Experiments on NIF will access high-energy-density physics and fusion regimes with direct applications to stockpile stewardship and secondary applications for energy research, science, and astrophysics. The project is a collaboration between government, industry, academia, and a multitude of partners throughout the nation and the world. As the PAD for NIF, Dr. Moses leads a directorate that is responsible for completing construction and activation of the NIF and transforming it into a national user facility. This directorate is also responsible for the development of advanced diagnostics and laser technologies for national security, competitiveness, and energy needs. Dr. Moses also leads the National Ignition Campaign to achieve fusion ignition, fulfilling NIF's role as a vital and integral part of the overall Stockpile Stewardship Program.

Dr. Moses has numerous publications, invited talks and presentations, and seven patents in laser technology and computational physics. He has received numerous honors, including the National Nuclear Security Administration Defense Programs Award of Excellence for Significant Contribution to the Stockpile Stewardship Program and the Memorial D.S. Rozhdestvensky Medal for Outstanding Contributions to Lasers and Optical Sciences, an R&D 100 award and recognition for achievements in project management and construction safety. He is a member of the American Nuclear Society, the Institute of Electrical and Electronics Engineers, the International Society for Optical Engineering, and Fusion Power Associates. He received a BS

in 1972 and PhD in 1977, both in Electrical Engineering, from Cornell University.

Ralph Patterson was appointed acting Project Manager for NIF in June, 2005. He is responsible for ensuring that the NIF Project is completed while achieving all schedule, budget, and performance goals.

Mr. Patterson received his B.S. in Nuclear Engineering from Purdue University in 1976 and an M.S. in Systems Management from Florida Institute of Technology in 1978. He served in the US Army Corps of Engineers from 1976 to 1980, including assignments in the Army High Energy Laser Laboratory and as Project Manager for the Laser Target Designator system development and production. He joined Martin Marietta in 1980 and served on assignment to LLNL as Director of Atomic Vapor Laser Isotope Separation Programs until 1990. During this period, he served as group leader, section leader, and finally Associate Program Leader for Laser Technology in the Laser Isotope Separation Program.

In 1990, Mr. Patterson left Martin Marietta and became Executive Vice President of Advanced Technology Applications, Inc. In 1993, he joined LLNL as Deputy Associate Director of the Physics and Space Technology Directorate, where he also served as Program Manager for the PEREGRINE system. He moved to NIF in 2000 and served as Deputy NIF Project Manager and Chief Operations Officer for the NIF Directorate. Mr. Patterson has received awards from Martin Marietta, the Federal Laboratory Consortium, and the R&D 100 magazine, and holds patents in laser technology and computational physics.