

Ideas That Change the World 60 years

1943 - 2003

Highlights of the Laboratory's Anniversary Celebration



Celebration Kickoff

Pete Nanos, then Interim Director, kicked off the anniversary celebrations with an address to the Laboratory. He reflected on national service as the sustaining role of the Laboratory since 1942. He termed the Laboratory's scientific achievements as the "gold standard for the country" and lauded the partnership and contributions of the University of California. In July 2003, the Board of Regents of the University of California confirmed Nanos as the seventh director of the Los Alamos National Laboratory.

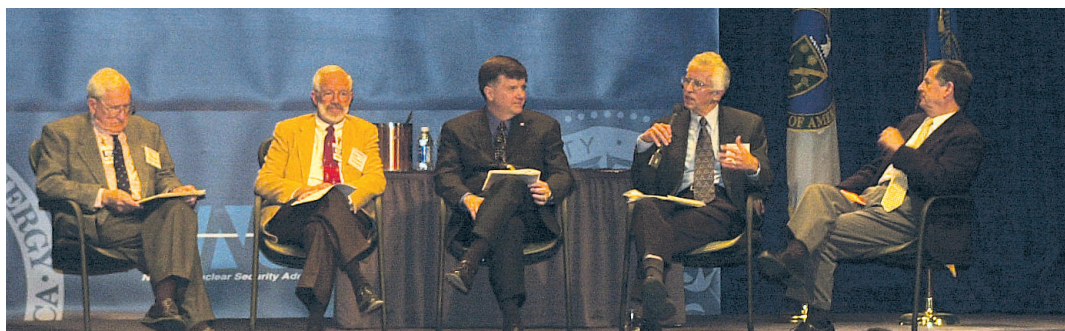
"As our country continues to deal with security threats at home and abroad, the work that is being done at this national lab is more important today than at any other time."

—Richard C. Atkinson,
University of California President

Historians mark the beginning of Los Alamos National Laboratory with two dates—the initial meeting of J. Robert Oppenheimer's Scientific Committee in Los Alamos on March 6, 1943, and the signing of the first operating contract between the federal government and the University of California on April 20, 1943. The 60th anniversary of the Laboratory was commemorated with numerous activities, starting in April and concluding in September.

Planned by a task force of volunteers, the anniversary activities celebrated the Laboratory's historic contributions and accomplishments; appreciated people, communities, and institutions as enablers of the Laboratory; and anticipated future directions and challenges. The winning entry in a Laboratory-wide slogan contest provided the 60th anniversary theme, "Ideas That Change the World."

Celebrate, appreciate, and anticipate—these words sum up the mood of the Laboratory during the celebrations. We recapture that mood in these pages.



(Left to right) Harold Agnew, John Hopkins, Pete Nanos, Sig Hecker, and John Browne.

Former Directors Discussed the Lab's Scientific Accomplishments

Participating in a Director's forum were Harold Agnew (1970–79), Sig Hecker (1986–1997), and John Browne (1997–2003). John Hopkins represented Don Kerr (1979–1985). Director Pete Nanos moderated the forum, which was complemented by the

evening program "Three Decades of Directorship at Los Alamos," hosted by the Los Alamos Historical Society. During this program of public tribute, Harold Agnew received the University of California Presidential Medal for a lifetime of outstanding leadership and commitment.

Written and designed by Dennis J. Erickson and Andrea M. Gaskey

2002 Los Alamos Medals Awarded to Louis Rosen and George Cowan

Instituted by former Director John Browne, the medals recognize extraordinary scientific achievement. Rosen was cited for vision, leadership, and sustained contributions to nuclear science and application. Cowan was recognized for pioneering work in radiochemical techniques and for scientific leadership in the Laboratory and the community.



Pit Manufacturing Milestone Announced

University of California President Richard Atkinson and NNSA Administrator Linton Brooks converse following the pit manufacture news conference. Director Pete Nanos joined U.S. Senator Pete Domenici, Ambassador Brooks, and President Atkinson in announcing the Los Alamos manufacture of the first nuclear weapons pit in 14 years that meets U.S. stockpile design and quality specifications. Some 700 Laboratory employees and contractors were praised for their efforts that began in 1996.



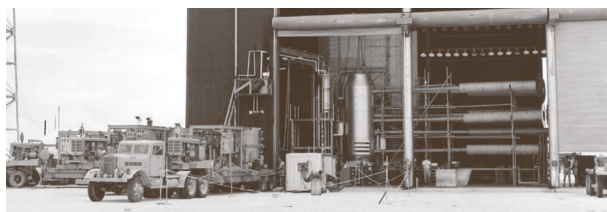
Monte Carlo Conference Marked the 50th Anniversary of the Metropolis Algorithm

Marshall Rosenbluth gave the keynote address at a June conference held in Los Alamos to commemorate the 50th anniversary of the publication of this famous and widely applied algorithm. The article, authored by Nick Metropolis, Arianna

Rosenbluth, Marshall Rosenbluth, Mici Teller, and Edward Teller, provided the basis for the Monte Carlo method to become a powerful means to study the properties of physical systems. The *Journal of Computing and Information Science in Engineering* recently categorized the Metropolis algorithm as one of the top ten of the twentieth century.

A Lifetime of Turbulence

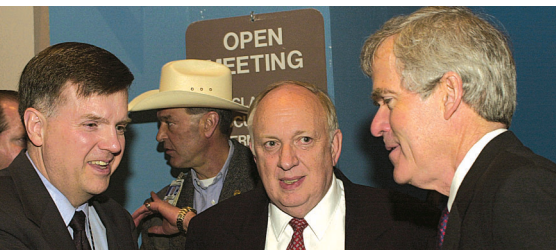
Frank Harlow delivered the inaugural Heritage Lecture on the occasion of 50 years as a Los Alamos theorist. In a talk entitled "A Lifetime of Turbulence," Harlow reflected on five decades of work in dealing with the complexity of turbulence and its application through models. A renowned physicist and beloved mentor, Harlow is credited by many colleagues with giving birth to the science of computer fluid dynamics.



Origins of Early H-Bomb Discussed at Special Classified Forum

Conrad Longmire, Richard Garwin, and Harris Mayer returned to Los Alamos to discuss their research and work, based on Edward Teller's theoretical design, that led directly to the first hydrogen bomb tested in the Los Alamos Mike event in late 1952.





Lab and U.C. Say, "Thank You," on Anniversary Recognition Day

On April 22, Director Pete Nanos, University of California President Richard Atkinson, and U.C. Regents Chair John Moores expressed appreciation for 60 years of sustained support and partnership to numerous distinguished guests representing federal, state, tribal, and local governments and agencies; sister labora-

tories; and academia. NNSA Administrator Linton Brooks, Sen. Jeff Bingaman (D-NM), Rep. Tom Udall (D-NM), and New Mexico Gov. Bill Richardson commented on the Laboratory's six decades of scientific achievement and continued importance. Special recognitions were extended to neighboring counties, cities, and pueblos. In addition, Nanos and Brooks reaffirmed the 1994 accord agreements with the governors of Santa Clara, San Ildefonso, Jemez, and Cochiti Pueblos.



"The nation looks forward to your future leadership."

—Linton Brooks, Administrator,
National Nuclear Security Administration

"Our people make the difference. Individual excellence is absolutely critical..."

—Pete Nanos, Director,
Los Alamos National Laboratory

Family Festival Celebrated the Contribution and Commitment of Extended Lab Workforce and Families

Thousands of Laboratory employees and their families were hosted at a July Saturday event at Sullivan Field in Los Alamos. The festival began with greetings from Director Nanos and a proclamation from U.C. President Richard Atkinson. Later, participants enjoyed the games, food, and entertainment activities for kids. Special U.C. funds enabled the event.



Appreciation Extended to Neighboring Communities

Several community events reflected the Laboratory's appreciation for the support and partnership of neighbors. These events included Community Days in Santa Fe, Chamber Fest in Los Alamos, the Eight Northern Indian Pueblos (ENIP) Arts and Craft Show at San Juan Pueblo, and Spirit Day in Española. Lab presence included participation by Laboratory leaders and an information booth, which in turn featured a special display highlighting the diverse and skilled people of the Laboratory. The Lab director, for example, participated in the dedication of a new ENIP Visitors Center at San Juan Pueblo as the permanent home for the Arts and Crafts Show.



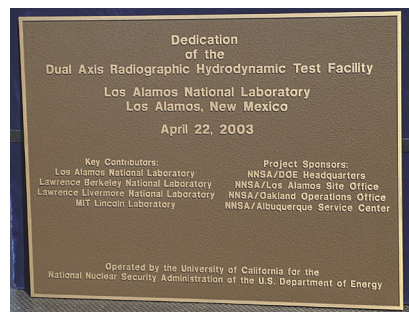
Sen. Pete Domenici Cut Ribbon at NISC Dedication

During the Anniversary Recognition Day, Sen. Pete Domenici (R-NM), with the assistance of Associate Director Don Cobb, cut the ceremonial ribbon to dedicate the Nonproliferation and International Security Center. This impressive facility, immediately adjacent to the Nicholas C. Metropolis Center for

Modeling and Simulation, will house 400 employees. Sen. Domenici used the NISC dedication to deliver his "tough love" message, recommending DOE restructure the Lab's operating contract and open it to bid when the current U.C. contract expires in September 2005.

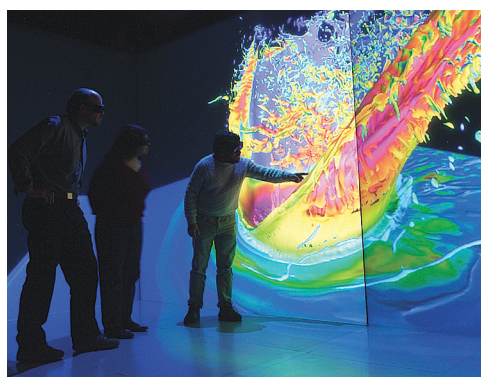
Plaque Commemorates Completion of DARHT Facility

NNSA Administrator Linton Brooks was the senior DOE official participating at the dedication of the recently completed Dual-Axis Radiographic Hydrodynamic Test (DARHT) Facility. The state-of-the-art high-explosive firing site equipped with two intense flash-x-ray machines will be the stockpile stewardship program's primary experimental facility for the coming decade.



Plutonium Futures Conference Anticipated Challenges

Held in Albuquerque as the third of a series, this conference provided an international forum for research on physical and chemical properties, environmental interactions of plutonium and other actinide elements, and materials management issues. A medal symbolizing the conference, the Lab's 60th anniversary, and the July 16, 1945, Trinity test was presented to each conference participant.



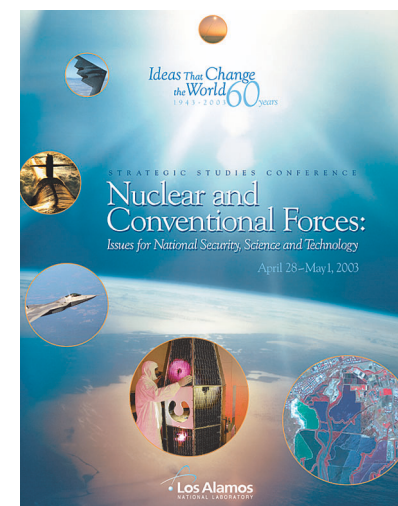
Science Day Focused on Prediction

Featuring special talks, panel discussions, and topical sessions, the day-long event spanned institutional direction, societal contribution, and scientific accomplishment in research fields such as superconductivity, nanotechnology, sensors, biology, and actinide chemistry. Lab presenters included Deputy Director Bill Press, senior scientists, and recipients of the Distinguished Postdoctoral Research Award. Director Nanos also announced recipients of the newly created Fellows' Prize for Outstanding Leadership in Science and Engineering.



Issue Forums Stimulated Discussion and Surfaced Perspectives

Scientific and technical issues were discussed in different forums. An internal Laboratory forum with restricted attendance focused on "Nuclear Weapons Testing" from both policy and technical perspectives. Other forums were specifically designed for public participation. Among them were "Water, Drought, and New Mexico" and "Risk: What Does It Mean to You?," held in Santa Fe, and "Nuclear Power in the 21st Century," held in Los Alamos.



Conference Focused on Nuclear and Conventional Forces

As a featured 60th anniversary event, the week-long conference "Nuclear and Conventional Forces: Issues for National Security Science and Technology" convened national and international experts who addressed emerging defense requirements given the new realities of the international security environment. The conference, part of the Los Alamos Strategic Studies program, was also used to educate the next generation of Lab leaders.

Photos: LeRoy Sanchez, Ed Vigil, Kristen Honig, Richard Robinson, and Mick Greenbank