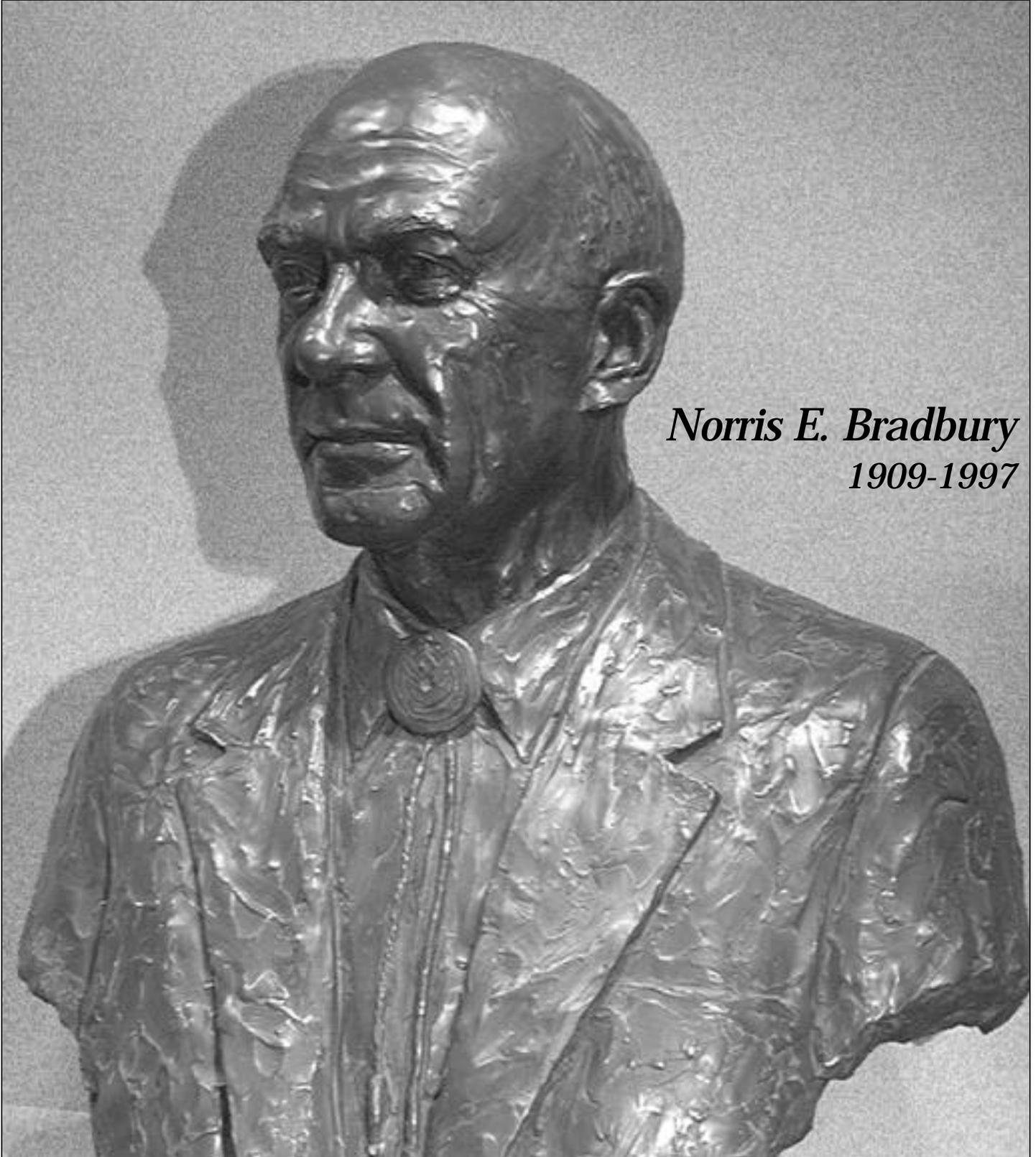


Reflections

Los Alamos National Laboratory

Vol. 2, No. 9 • October 1997



Norris E. Bradbury
1909-1997

About the cover ...

This bust of the late Norris Bradbury was sculpted by renowned Santa Fe artist Glenna Goodacre. It is displayed at the Bradbury Science Museum (photo illustration by Fred Rick and Edwin Vigil).

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Reflections

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editor's journal



Distinguished performance

Each year the Lab recognizes various individuals and teams for "job performance above and beyond that which is normally expected" by presenting them with a Distinguished Performance Award. In this month's Reflections, we feature the 13 individuals, eight small teams and eight large teams who received the award this year (see pages 3 through 7). All the award recipients are to be commended for their efforts, and I heartily offer my congratulations.

Having received a Distinguished Performance Award as part of a small team a few years back, I can honestly say it is a pleasure to be notified by the Lab director that you are a "winner," especially if you did not know you were even nominated. Still, I can't help but wonder each year about the requirement that the performance be "above and beyond that which is normally expected" and that it be an "outstanding and unique contribution."

Don't get me wrong. It's not that I think an award should be given for meeting one's job requirements or even exceeding them somewhat. Or that one should get special recognition just for showing up to work. It's just that deciding what is or is not "above and beyond" and what is an "outstanding and unique contribution" puts a huge responsibility on those who nominate individuals or teams for awards and especially on the committees that select them.

Here's my thinking on this. As humans, we bring a lot of pre-existing biases to the table when we sit down to determine the expectations that we have for the work of others, primarily because most of us routinely put more value on some types of work than on others. For instance, it seems to me that in workplaces such as ours, "mental" work usually is more valued than physical labor; research endeavors are more valued than administrative ones, and high-profile tasks take precedence over those mundane, yet essential, duties that keep the ship running. And often when we set out to acknowledge individuals, we only do so if we truly deem what they have done to be of value or importance to us.

Unfortunately, our recognizing individuals may not necessarily hinge on whether they truly performed their work "above and beyond" what was normally expected or for that matter whether they performed it better than anyone has ever done before.

Take, for example, deciding whether to honor someone who answers the phone and takes messages vs. someone who works on a high-profile project. The odds are pretty good that the individual on the high-profile project will win hands down, whether or not he or she is truly working at a higher-than-expected level. Why shouldn't he or she, you might ask. After all, anyone can answer a phone and take a message, but not everyone can work on an important project, especially a scientific one. And you probably wouldn't get much of an argument from me or many other people at the Lab, including, perhaps, the individual answering the phone. (Of course, whether just anyone really can answer a phone and take a message is subject to debate.)

Yet, sometimes I can't help but think that maybe ... just maybe the person answering the phone, unloading packages, setting up files or operating laboratory equipment who routinely does his or her job conscientiously and carefully, coming in early or staying late to get the job done and always being willing and able to go that extra mile or two also might welcome some Labwide recognition that says you too are a valued part of the team.

So in addition to congratulating this year's Distinguished Performance Award winners, I'm taking this opportunity to say hats off to those individuals throughout the Lab who always perform their tasks in a distinguished manner — no matter what these tasks may be — and who most likely never will be nominated for or receive an award on the job. You are one of life's winners every day you come to work and perform "above and beyond."

From office to Lab to nation to world ... Employees make significant contributions

Question: Who helped countries of the former Soviet Union account for their nuclear material, devised hand-held instruments to detect chemical warfare agents, developed state-of-the-art weapons simulation codes, oversaw the expansion of the Lab's purchase card system, created a super-secure information technology, developed a way to detect fraudulent tax returns and launched an automated way to deal efficiently with Department of Energy directives?

Answer: Your co-workers.

For these accomplishments, and many others, 13 individuals and members of eight small teams and eight large teams were honored as winners of the 1996 Distinguished Performance Awards.

Individual and small-team award winners were cited for major contributions to Lab programmatic efforts or its status in the scientific community. Large teams were honored for performing at levels far above normal job assignments, completing projects with broad impacts and demonstrating innovation and teamwork.

Individuals

Deborah Allison-Trujillo

Deborah Allison-Trujillo helped pioneer the pilot Laboratory position of staff assistant in Hydrodynamic and X-Ray Physics (P-22). In that position, she assumed enough high-level administrative duties to give her group management more time to devote to technical matters.

Allison-Trujillo was able to reduce her group's overhead by taking responsibility for issues such as budget and finance, space allotment, facility management, disciplinary actions, training, computer and physical security, and administrative policies and procedures — just to name a few. She saved her group \$250,000 this past fiscal year alone and developed policies that help her fellow workers operate more efficiently.

She has been selected for the University of California's Professional Skills Assessment program and was the only nontechnical staff person asked to serve on the search team for P-Division deputy division leader.

Julie K. Bremser

Julie K. Bremser, leader of the Materials Characterization Laboratory (MCL) in Ceramic Science and Technology (MST-4), consistently exceeds expectations. Her accomplishments during the past year are a small example.

Bremser's MCL responsibilities include characterizing and measuring the thermophysical properties of ceramic and metal powders for Laboratory and external customers. This year, on top of her normal duties, Bremser developed a high-quality erbia coating for weapons components in just three months, a task others had failed at before her, and took on gas chromatography plasma melting work for Materials Technology: Metallurgy (MST-6).

Her year also entailed expanding the MCL's portfolio to include characterization of high-explosives powders and meeting all programmatic deliverables while her laboratory was under renovation.

Steven J. Greene

Steven J. Greene set aside his nuclear physics research to serve as the Physics (P) Division's environment, safety, and health officer and to become an active leader in DOE's safety programs.

On DOE's Work Smart Standards team, Greene represented the Lab in efforts to revise systems for safe work practices, receiving Vice President Al Gore's National Performance Review Hammer Award in recognition. He also played a key role in developing DOE's standards, performance criteria and measures for ionizing radiation protection of the workforce.

At Los Alamos, Greene was essential to the creation of the Integrated Safety Management (ISM) system. He served on the ISM Steering Committee and continues to support ISM as a member of the group that will identify and implement safe work practices throughout the Laboratory.

Allen Hartford

As team leader for Planning and Assessment in the Science and Technology Base (STB) Program Office, Allen Hartford had a significant positive impact on the Lab's technical programs.

He formulated, and continues to guide, the core competency teams that review and update the capabilities essential to the Laboratory's strength. He also implemented the annual science and technology assessment through which the University of California rates the

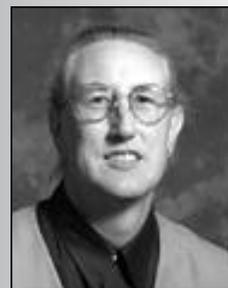
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Deborah Allison-Trujillo



Julie K. Bremser



Steven J. Greene

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Eileen Patterson,
Communication, Arts
and Services (CIC-1)*

Distinguished performers

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Allen Hartford

Lab's scientific and technical performance. The assessment process garnered "far exceeds" ratings during the last assessment cycle, prompting DOE to describe it as the best process of its kind in the national laboratory system.

Hartford also prepared Laboratory position papers, served on the Postdoctoral Committee, acted as senior adviser for the Science and Engineering Advisory Council and oversaw foreign travel.

John M. Haschke



John M. Haschke

John M. Haschke, project leader for weapons research, development, and testing in Weapons Component Technology (NMT-5), has solved problems associated with pit aging and the safe storage of nuclear materials, making important advances in the study of water- and hydrogen-assisted oxidation in plutonium and ground-breaking observations for other plutonium/gas reactions

DOE's standards for the long-term and interim storage of plutonium metals and oxides and plutonium-bearing materials are based directly on Haschke's work.

He also was instrumental in developing equipment and procedures for the cleaning of weapon parts with carbon dioxide, a technique that produces no contaminated waste.

Gloria J. Martinez



Gloria J. Martinez

As group secretary, Gloria J. Martinez was the one steady point in Neutron Science and Technology (P-23) during last year's reorganization of the Physics Division.

As nine groups became five, the extensive staffing changes left Martinez as the only secretary with knowledge of group policies and procedures.

Despite late hours and tremendous stress, she remained focused, dedicated, and professional while handling — almost alone — performance appraisals, a high volume of domestic and foreign travel, personnel issues, classified record holdings, project paperwork and all the other administrative tasks and requests that occupy a busy office.

David L. Melton



David L. Melton

David L. Melton, a technician in Environmental Science and Waste Technology (CST-7), serves the Chemical Science and Technology (CST) Division's containment cleanout project. This project focuses on developing chemical processes for cleaning the test-shot containment vessels at the Dual-Axis Radiographic Hydrotest (DARHT) facility.



Carla "Ruby" O'Rear

When the project's senior engineer left unexpectedly, Melton accepted dramatically new duties to fill the gap.

Even with the design schedule accelerated by six months, Melton delivered equipment specifications, cost estimates, chemical process summaries and proposed facility floor plans on deadline. He balanced the needs of chemists, engineers and facility operators while serving as the project's primary contact with the containment designers in the Dynamic Experimentation (DX) Division.

Carla "Ruby" O'Rear

Carla "Ruby" O'Rear of Procurement (BUS-5), the purchase card program coordinator for the Business Operations (BUS) Division, has guided this alternative procurement system to great success. Because the purchase card enables users to complete small-dollar purchases directly, it eliminates paperwork and frees BUS's buying staff for big-ticket procurements.

During the past year, O'Rear expanded the program Labwide and raised the single-purchase limit to \$2,500 per transaction. The card now averages 3,500 purchases per month. The program saves the Laboratory \$50 per transaction or more than \$2 million annually.

O'Rear runs training sessions to introduce new users to the advantages and responsibilities of the card and the on-line reconciliation program. She is also helping vendors understand the card system and is seeking out Northern New Mexico vendors who can offer discounted pricing.

Darrell L. Peterson

Through his theoretical modeling of z-pinch plasma experiments at Sandia National Laboratories, Darrell L. Peterson of Plasma Physics Applications (XPA) has contributed to the understanding of radiation flow and interaction with materials. Modeling these radiation dynamics accurately is an essential part of the Science-Based Stockpile Stewardship program.

Using a Los Alamos code, Peterson has been able to calculate the z-pinch implosion and accurately predict subsequent radiation generation, thus contributing to subsequent experimental designs and proving the validity of his models. Additionally, his models have provided insight into the processes producing Sandia's now record-level radiation output.

Peterson's work with Sandia is demonstrating that New Mexico's two national laboratories are an unmatched combination of theoretical and experimental capabilities.

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Gary S. Selwyn

Gary S. Selwyn of Plasma Physics (P-24) maintains a level of activity that would be remarkable for a small group of researchers. He has developed two important plasma cleaning technologies — PLASMAX, a 1996 R&D 100 Award winner developed for cleaning silicon wafers, and the Atmospheric-Pressure Plasma Jet, which is appropriate for cleaning and decontamination needs associated with the nuclear weapons program, defense and the private sector.

Both technologies are being commercialized.

As an adjunct UCLA professor, Selwyn has established joint Los Alamos-university research activities that have drawn funding from both DOE and industry. These activities are model collaborations, combining the Laboratory's plasma-surface interactions with the university's surface chemistry and characterization capabilities.

Dipen N. Sinha

Dipen N. Sinha of Electronics and Electrochemistry (MST-11) is filling a critical gap in treaty compliance and military defense technology with hand-held, noninvasive instruments that detect and analyze chemical warfare agents inside sealed containers.

His acoustic resonance spectroscopy technology won a 1995 R&D 100 Award and has been adopted by the Organization for the Prohibition of Chemical Weapons as a verification technique to support the Chemical Weapons Convention (CWC).

A more-recent development, the Swept-Frequency Acoustic Interferometer, eliminates a concern of CWC opponents by completing its chemical-detection mission without compromising proprietary industrial information. A promising medical application is noninvasive monitoring of vital functions for combat casualty care.

R. Clayton Smith

R. Clayton Smith of P-22 was crucial to completion of the Miniature Flow Cytometer (MiniFCM), a tactical device providing early warning of a biological warfare attack.

Smith joined the MiniFCM project to develop the miniaturized electronics. With the onset of serious delays, however, he accepted greater responsibility. He assumed the duties of the departed systems engineer, helped solve optics and fluidics problems and negotiated new delivery dates.

Constantly considering the needs of both the user, a GI who would take the MiniFCM into battle, and the industrial partner, Bio-Rad Microscience, Smith became the only person

conversant in the interdependencies of all the instrument's components. As such, he was the point of contact for all collaborating parties, even assisting Bio-Rad with the production and test systems needed for mass production.

Julie S. Wilson

When Julie S. Wilson became Life Sciences (LS) Division's facility manager, her primary task was to change radiological operations at the Health Research Laboratory (HRL), thereby reducing the number of reportable occurrences. Her long-term goal was to integrate safety into all aspects of work at the HRL.

To accomplish this, Wilson formalized documentation and procedures for handling radiological and hazardous materials, and she initiated both formal and informal communication about safety issues.

The HRL's radiological operations have now gone from an average of four reportable incidents a year to none, and the entire facility has undergone a change in safety culture.



Darrell L. Peterson



Gary S. Selwyn



Dipen N. Sinha



R. Clayton Smith



Julie S. Wilson

Small teams

Supercritical Fluids Team

The accomplishments of the Supercritical Fluids Team in Organic Chemistry (CST-12) include supercritical carbon dioxide enhanced cements, supercritical carbon dioxide degreasing, and DryWash, which will replace dry-cleaning solvents with liquid carbon dioxide.

The team developed DryWash after private companies decided it could not be done. The technology made Popular Science's 1996 list of top 100 advances and received its Readers' Choice Award.

The team's recent assignments include the Nuclear Materials Technology (NMT) Division's supercritical carbon dioxide pit-cleaning project and the effort to improve characterization of plutonium oxide for long-term storage.

Members of the team are Jerry C. Barton, Leisa B. Davenhall, Aaron Martinez, James Rubin, L. Dale Sivils and Craig M.V. Taylor.

Deterministic Transport Team

A principal goal for the Accelerated Strategic Computing Initiative (ASCI) is to assess nuclear weapon performance and safety computationally. This requires state-of-the-art, three-dimensional weapon simulation codes for both hydrodynamics and neutronics calculations.

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Distinguished performers

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The Deterministic Transport Team supplied the code for neutronics calculations and integrated it into an ASCII code for weapon safety studies and other stockpile issues.

This team's work directly supports development of more sophisticated physics models in ASCII codes. Team members are Randal S. Baker of Transport Methods (XTM) and Kenneth R. Koch of Code Integration (XCI).

Automated DOE Directives Team

The Automated DOE Directives Team re-engineered DOE's distribution of official directives, replacing surface mail with a Web application, Explorer, for on-line access through the Internet.

With paper distribution, new directives were often three months in transit and could be out of date. Distribution time for the entire complex is now 10 hours. The Laboratory now saves \$150,000 formerly spent each year to maintain a current hard-copy library and distribution system. The estimated savings complexwide is about \$10 million annually.

Team members are Joseph M. Ortega and Martha D. Waters of Contract Performance Measures (QP-CPM) and James L. McDonald, David R. Montoya, Marilyn S. Pruitt and Julie Rockwood of Advanced Database and Information Technology (CIC-15).

Ejecta Experimental Team

Nuclear weapon researchers suspect that the cloud of microscopic particles (the ejecta) launched from a shocked surface affects a weapon's thermonuclear burn. To test this theory, they must know the time and spatial evolution of the ejecta cloud and the particle-size distributions within it. The Ejecta Experimental team is providing that information.

The team has developed two novel diagnostic techniques, built lasers, designed and implemented an entirely new optical relay system and developed a special computer program for analyzing holographic data.

Team members are Danny S. Sorenson of P-23, Jeff P. Roberts of MST-11, and Randy Flurer, Robert M. Malone, Thomas Tunnell and Darin T. Westley of Bechtel Nevada.

Optical Fiber Quantum Cryptography Project Team

A Physics Division team has created a new, ultra-secure information technology, a quantum cryptography system in which the "keys" used to encrypt communications are transmitted in the form of single photons. Security is guaranteed by the laws of quantum physics, which hold that anyone attempting to eavesdrop will change the wave function, thereby disrupting the signal.

Quantum cryptography was thought to be impossible outside a laboratory, but the team's prototype system is now functioning at a distance of almost 30 miles. The medium of transfer is optical fiber.

Members of the team are Richard J. Hughes, George L. Morgan, Charles "Glen" Peterson and Charles M. Simmons, all of P-23.

X-Division Radiography Team

The Applied Theoretical and Computational Physics (X) Division's Radiography Team developed a computational radiography capability for solving nuclear weapons physics problems on the ASCII Blue Mountain computer.

Team members incorporated new or optimized algorithms into existing production codes and exploited ASCII Blue's massively parallel architecture to deliver a computational efficiency 16,000 times greater than was possible a year ago. A six-month radiographic simulation can now be run in one hour.

Team members are Kenneth J. Adams, R. Arthur Forster, and Gregg W. McKinney of XTM and Charles F. Lebeda of Thermonuclear Applications (XTA).

Thermoacoustics Team

This team took thermoacoustic refrigeration from benchtop to demonstration scale in two years, setting records along the way for power, power density, efficiency and temperature span.

The demonstration device liquefies 100 gallons of natural gas per day. It can readily be scaled up to 500 gallons per day and offers the possibility of a future device producing 10,000 gallons per day. The team has proved that thermoacoustic technology can efficiently and inexpensively recover fuel from sources current technology cannot tap.

The team members are Gregory W. Swift, Christopher N. Espinoza, David L. Gardner, Timothy Pierce, and Roy F. Rockage of Condensed Matter and Thermal Physics (MST-10) and Warren K. Pierce of P Division.

W87 LEP Peer Review Team

When Lawrence Livermore National Laboratory proposed engineering modifications to extend the service life of the stockpiled W87, Los Alamos was asked to validate the changes to that weapon. The task required some of the most difficult calculations ever attempted at the Laboratory, and it needed to be finished in less than two months.

The Los Alamos W87 Life-Extension Peer Review team added necessary physics modules to the Applied Theoretical and Computational Physics (X) Division's weapons codes, benchmarked and validated the code additions against available data, and completed the calculations on time.

Team members are Keith H. Despain, David B. Harris, Fred N. Mortensen, Robert P. Weaver and Bernhard H. Wilde of XTA and Michael L. Gittings of Hydrodynamic Methods XHM.

Large teams

B61-11 Project Team

Working with the full DOE complex and the Air Force, the B61-11 Project Team took on a major challenge for the post-nuclear-testing era: converting an existing system to a new mission and certifying its performance without a final nuclear demonstration.

The job was to modify a small number of B61-7 bombs for earth penetration. Designated B61-11, the modified bomb

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would allow rapid retirement of the oldest stockpile weapon, the B53.

The team worked on an aggressive schedule with delivery needed in just under 18 months. The time frame meant that it had to develop a more rigorous program of certification while concurrently applying it.

Advanced Bioassay Applications Team

The Advanced Bioassay Applications Team developed a thermal ionization mass spectrometry (TIMS) technique that reaches previously unattainable detection limits in tests for plutonium-239 and plutonium-240 in urine samples.

TIMS' increased sensitivity delivers precise dose calculations in weeks. The previously used method could take up to a year. For accidents involving potential uptakes of radionuclides, this speed and accuracy means that workers who might have suffered months of unneeded downtime may return to the job quickly.

For routine monitoring of employees conducting high-risk work, it makes one sample per year sufficient. Two per year had been the norm.

TA-55 Facility Control System Upgrade Team

The Plutonium Facility's viability depends on its facility control system, a network of computer hardware, control equipment and software that maintains the safety envelope.

The TA-55 Facility Control System Upgrade Team had to replace the aging system while minimizing the impact on facility operations. The already huge job became an urgent one when the old system started failing.

Working nights, weekends and holidays, the team finished its work in six months with so little disruption that facility programs continued to reach major milestones.

Team for Establishing Material Protection, Control, and Accountability in the Former Soviet Union

The Soviet Union's dissolution left tons of special nuclear material open to theft and clandestine sale, so the DOE asked Los Alamos to help create a system of material protection, control and accountability in the newly independent countries.

The Lab team of scientists, technicians and interpreters has traveled extensively throughout the former Soviet Union to ensure the safety of its massive nuclear stockpiles. They transferred the necessary instrumentation and expertise to detect and quantify nuclear materials and the computer systems that will track inventories.

In addition, they have developed collaborative relationships with their counterparts.

Performance Assurance Project Team

To support the Laboratory's foremost tactical goal — Safety First! — and the Integrated Safety Management (ISM)

program, the Performance Assurance Project Team developed a practical system to help managers improve environment, safety and health performance.

Central to the new system are Management Safety Walk-Arounds, during which line managers systematically engage employees in ES&H evaluations.

The team members wrote and submitted the new safety policy in a month. In just eight months from the start of their work, the new Walk-Around system was operational, along with its management training program and Web-based electronic data-management tool.

Proton Radiography Team

The Proton Radiography Team has demonstrated that proton radiography will be a key technology for stockpile stewardship. In fact, its breakthrough demonstrations at LANSCE and at Brookhaven have changed how radiography is viewed within the weapons program.

Experiments at LANSCE produced the world's first dynamic proton radiograph of burning high explosives and have demonstrated the technology's potential for multiple, time-resolved images.

The ability to examine propagating shocks in high explosives is critically important to stockpile research and certification. Additionally, the team's work has made proton radiography a contender for the next-generation advanced hydrotest facility.

Nuclear Explosive Radiography Safety Team

The Nuclear Explosive Radiography Safety Team was instrumental in restarting radiographic examination of nuclear weapons at Pantex after safety questions halted the work.

The work stoppage was called in December 1996 because of an untested belief that X-ray absorption by the high explosives might cause a dangerous high voltage buildup. To avoid the suspected danger, workers had been shutting down the X-ray source when the dosimetry meter reached a predetermined level.

The Los Alamos team joined other national laboratories in analyzing the safety parameters of Pantex's radiographic operations, experimentally validating a model showing that the radiographic work was safe.

Tax Fraud Detection Team

In 1993, the Internal Revenue Service (IRS) asked Los Alamos to help combat fraud in electronically filed tax returns, a growing crisis that costs the country hundreds of millions of dollars. Electronic access to and grouping of returns were central issues. Tax examiners had no computer-based tools to help them identify falsified or altered tax returns.

To address these problems, the Tax Fraud Detection Team developed the Electronic Fraud Detection System. Through a variety of artificial intelligence algorithms, the software system selects groups of mutually suspicious returns for review.

Now in use at IRS service centers nationwide, the system already has helped uncover several major tax fraud schemes.

people

Soran selected XCI group leader



Patrick Soran

Patrick Soran recently was selected leader for a new group in the Applied Theoretical and Computational Physics (X) Division, Code Integration (XCI). The group's main focus is on devel-

oping and integrating large-scale simulation codes for Science-based Stockpile Stewardship Program applications.

"We have a strong focus on the Accelerated Strategic Computing Initiative," said Soran. "Right now, we have about 50 scientists. That number will increase to about 60 over the next couple of months." He said the many organizations the group will support include the Computing, Information and Communication (CIC), Theoretical (T) and Engineering Sciences and Applications (ESA) divisions. The group also will work closely with its counterparts at Lawrence Livermore and Sandia national laboratories, Soran said.

Soran received his bachelor's degree in mechanical engineering from the U.S. Merchant Marine Academy in King's Point, N.Y., in 1964. He received his master's and doctoral degrees from Columbia University. He was group leader for Transport Methods (XTM) before this new assignment.

X-Windows earns PRSA award

The Applied Theoretical and Computational Physics (X) Division's quarterly newsletter, X-Windows, has won an award from the Public Relations Society of America's New Mexico chapter.

Pat Mendius of Communication Arts and Services (CIC-1), writer and editor of the newsletter, shared the award with **Pamela Payne**, also of CIC-1, and the X-Windows designer.



Pat Mendius

The newsletter was given a second place in the Internal Newsletter/

Government category of PRSA's 1997 Conquistador Awards competition. The awards were announced this summer by PRSA.

The six-year-old newsletter is distributed within X Division, to other employees around the Lab and to Department of Energy officials, Mendius said.

The 12-page newsletter highlights unclassified work done by X Division personnel. "There is a good deal of research and development going on in X Division," said Mendius. "What we do is feature scientists' unclassified work."

The newsletter also talks about other matters of interest from the

X Division Office, and includes a feature on an X Division employee.

Earlier this year, the Kachina Chapter of the Society of Technical Communicators gave X Windows an Award of Excellence, said Mendius.

Montoya elected director of society

JoAnn Montoya of Materials Technology: Metallurgy (MST-6) has been elected director of the International Metallographic Society.

The four-year term runs through 2001.

Montoya, a technician, is the first Hispanic woman elected director of



JoAnn Montoya

the society, which has 43,000 members worldwide. Members of the society voted Montoya into the director's position last spring.

Montoya has worked at the Lab 17 years. A materials science technician in MST-6, Montoya does metallography and black and white photo darkroom processing.

Metallography is the study of the structures of metals and alloys using microscopy.

Last spring, Montoya also was one of several Lab women employees featured in the "Past, Present and Future" display sponsored by the Women's Diversity Working Group.

HR-1 to sponsor Benefits Fair Nov. 5

Compensation and Benefits (HR-1) is sponsoring a Benefits Fair from 9 a.m. to 4 p.m. Nov. 5 on the second floor of the J. Robert Oppenheimer Study Center.

Information for active University of California Laboratory employees on the new health-care-benefits plan for 1998 will be available at the fair. Members of the Lab's benefits team also will be available to answer questions employees may have on the new health-care plan and other benefits-related questions, said Rosella Atencio-Gerst.

Compensation and Benefits also is giving presentations in Los Alamos, Española, Santa Fe and Albuquerque for UC annuitants, she said.

The first meeting is from 9 to 11 a.m. Nov. 12 at the Northern New Mexico Community College in Española. In the afternoon, the same presentation will be made from

3 to 5 p.m. in the Immaculate Heart of Mary Parish Hall, 3600 Canyon Road, in Los Alamos.

The third presentation is from 9 to 11 a.m. Nov. 13 at the Marriott Hotel, 2102 Louisiana Blvd. N.E., in Albuquerque. The final presentation is from 9 to 11 a.m. Nov. 14 in Sweeney Convention Center, 201 W. Marcy St., in Santa Fe.

The university in July selected Blue Cross/Blue Shield of New Mexico as the new health-care provider for Laboratory employees. The new health-care contract is effective Jan. 1, 1998.

Blue Cross/Blue Shield of New Mexico will offer fully insured health maintenance organization and point-of-service options to Laboratory employees and retirees.

The Lab's present contract for employee health care with Prudential Insurance Co. expires Dec. 31. Prudential will maintain its service objectives through the end of the contract.

July and August service anniversaries

July

35 years

Richard Henderson, ESH-12

30 years

Arvid Lundy, NIS-8

25 years

Allen Schmiedicke, CIC-13

Garry Allen, CST-7

Craile Hammond, CST-8

Thomas Davis Jr., ESA-DE

Robert Anderson, ESH-5

Marvin Tillery, ESH-5

Eralio Trujillo, MST-4

Roger Bartlett, P-22

Peter O'Rourke, T-3

Don Marshall, X-CM

William Krauser, X-TA

20 years

Patty Martinez, BUS-4

Cynthia Gallegos, BUS-5

Alan VanVessem, BUS-7

Ronald Wilkins, CIC-5

Jerry Martinez, CIC-9

Gregg Woodfin, CST-3

James Craig, EES-1

William Armstrong, EES-8

Raymond Steele, ESA-EPE

Arsenio Montaño, ESA-WMM

Tommy Monoya, ESH-10

Lily Reese, ESH-14

Joni Powell, FSS-15

Malcolm Smith, LANSCE-2

Rosalind Newmyer, MST-5

Charlene McHale, NIS-NAC

M. Clark Thompson, P-22

Terrence Goldman, T-5

Hazel Kutac, TSA-9

15 years

Faye Miller, BUS-DO

Karyn Ames, CIC-1

Gloria Sharp, CIC-1

Gary Cort, ESH-14

David Chastain, FSS-6

Beverly James, HR-5

Carl Friedrichs Jr., LANSCE-5

Mike Ulibarri, NIS-4

Thomas Gorman, X-NH

10 years

Stephen Donahue, CIC-12

Carleton Tait, CST-4

Steven Goldstein, CST-9

Dale Dalmas, DX-6

Debra Archuleta, DX-7

James Abbott, ESA-EPE

William Eisele Jr., ESH-12

Stephen McLin, ESH-18

Thomas Granich, FSS-14

Leonardo Trujillo, NMT-4

William Louis III, P-25

Vincent Thomas, X-PA

5 years

Eugene Gavrilov, CIC-ACL

John Reynders, CIC-ACL

Sarah Williams, CST-11

Pamela Mascarenas, CST-26

Michael Inbody, ESA-EPE

Donnette Ehler, ESA-FM-ESH

Byron Denny, ESA-TSE

J. Patrick Garcia, ESA-WE

Gerald George, ESH-1

Eric McNamara, ESH-17

Aden Jackson, ESH-19

Ruben Rangel, ESH-20

Richard Clement, ESH-4

Martin Price, FSS-6

Todd Conklin, HR-TI

Brian Ray, LANSCE-6

Robert Dangler, NIS-3

Christopher Romero, NIS-6

Thomas Burr, NIS-7

Ronald Wieneke, NMT-7

Alison Dorries, TSA-11

Robert Gore, X-NH

August

30 years

Robert Judd, CIC-6

John McAfee, DX-4

Jose Trujillo, DX-7

Matilda Voos, EES-DO

Alan Hack, ESH-5

Walter Carlson, FSS-21

James Stovall, LANSCE-1

Joe Griego, LANSCE-6

Miles Hindman, NIS-3

Timothy Neal, NWT-PO

Lynn Veaser, P-DO

25 years

M. Evelyn Lucero, CIC-10

Alton McNeil, CIC-9

Kenneth Bostick, EES-15

Sumner Barr, EES-8

Ross Garcia Jr., FSS-6

Michael Lynch, LANSCE-5

Hugh Casey, NIS-CISA

Leroy Cope, NIS-4

Gene Taylor, NIS-8

Charlie Stallings, NMT-8

D.C. Wolkerstorfer, NWT-PO

20 years

Kathleen Hiron, CIC-DO

Doreen Montoya, CIC-10

Samuel Gonzales, CIC-9

Alexander Gancarz, CST-DO

Walter Sandoval, CST-12

David Schiferl, CST-6

Gary Garrett, EM-SWO

Edward Lopez, EM-SWO

Richard Martin, ESA-DE

John Hanlon, ESA-MT

John Newmyer, ESA-WE

Michael Jensen, ESH-4

Alfonso Martinez, FSS-9

William Clark, LANSCE-1

Richard Ryder, LANSCE-6

William Hults, MST-STC

Robert Sebring, MST-5

George Eccleston, NIS-7

Deborah Clark, P-25

Harvey Rose, T-13

Milton Shaw, T-14

John Ireland, TSA-DO

Richard Bowers, X-PA

15 years

Earl Salazar, BUS-2

Joan Farnum, CIC-1

Stephen Agnew, CST-4

Paul Littleton, DX-5

Alvin Luginbill, DX-5

Carl Geisik, ESA-TSE

David Trujillo, ESA-WE

Bryan O'Malley, ESH-5

Edward Hoth, FSS-8

Barbara Aamodt, HR-5

Eileen Carter, HR-5

Richard Haffner, LANSCE-2

Kevin Jones, LANSCE-6

Bruce Carlsten, LANSCE-9

Billy Baker, MST-6

R. Roussel-Dupre, NIS-1

Joan Prommel, NIS-7

Catherine Conn, NIS-8

Brenda Grasmick, NIS-8

Dean Preston, X-NH

10 years

Richard Gonzales, BUS-1

Clyde Sanchez, BUS-2

Jacqueline Hurshman, BUS-3

Ronnie Trujillo, BUS-4

George Valdez, BUS-4

Geraldine Edwards, CIC-1

Lee Ankeny, CIC-12

Margarita Duran, CIC-13

Susie Marquez, CIC-9

Judith Machen, CIO

George Busch, CST-1

J.S. Herrera-Ortiz, CST-3

Ernest Aragon Jr., DX-5

Timothy Pollat, DX-5

Danny Gallant, ESA-EPE

Jessica Fernandez, ESA-FM-ESH

Daniel Naranjo, ESA-FM-ESH

Phillip Devargas, ESA-WMM

Dino Farfan, ESA-WMM

Charles Nylander, ESH-18

Perry Hewlett, FSS-12

Mary Lyerly, FSS-15

Joyce Ortega, HR-DO

Diana Gonzales, HR-6

Timothy Pierce, MST-10

Randall Edwards, MST-6

Wilma Garcia, NMT-4

Francisco Bailon, NMT-5

Robert Webster, X-CM

Michael Macinnes, X-TA

5 years

James Loud, AA-2

Claire Harmon, BUS-1

Lorraine Ostrem, BUS-1

T.H. Zhangwilliams, BUS-2

Nancy Vaughn, BUS-3

Michael Krogh, CIC-ACL

Mona Mosier, CIC-14

Brenda Aikin, CIC-4

Judith Mourant, CST-4

Duncan McBranch, CST-6

David Zerkle, CST-6

Lynda Brashar, CST-9

Cynthia Mahan, CST-9

Raymond Flesner, DX-2

Gregory Cunningham, DX-3

Dan Thomas, EES-DO

Daniel Stout, EM-ER

Alan Bond, EM-RLW

Emily Martinez, ESH-DO

Maxine Valdez, ESH-DO

John Taschner, ESH-10

Alice Baumann, ESH-17

Hilary Noskin, ESH-19

Adan Ortega, ESH-3

Robert Plale, ESH-3

Michael Mallett, ESH-4

David Padilla, FSS-6

Michelle Kirsch, LC-BPL

Michael Altherr, LS-3

Paige Pardington, LS-6

Karen Hill, LS-7

Dan Thoma, MST-6

Carolyn Zerkle, NMSM-NCR

Leo Terrill, PA-3

Niels Jensen, T-11

Raymond LaFlamme, T-6

Obituaries

Wade Ellis Dunwoody

Laboratory retiree Wade Ellis Dunwoody died July 31 in Los Alamos. He was 71.

Dunwoody joined the Lab in 1951 as a layout draftsman and retired in 1991 from the Advanced Engineering (MEE-13) Group, now part of the Engineering Sciences and Applications (ESA) Division.

A U.S. Navy veteran, Dunwoody earned his bachelor's degree in mechanical engineering from Kansas State University. When he joined the Lab, he was principally responsible for design, development, testing, installation and maintenance of nuclear reactor components.

He is survived by his wife, Georgia; three daughters, Catherine of Roswell, Emily of Los Alamos and Amy Roybal of Rio Rancho; sons Brian of Arvada, Colo., and David of Ulysses, Kan.; two brothers, Lyle and Neal; sisters Ruth, Wilma and Thelma; eight grandchildren; and other relatives.

Peter Carruthers

Former Theoretical (T) Division leader Peter Carruthers died Aug. 3 in Tucson. He was 61.

Carruthers joined the Laboratory as T Division leader in 1973 and served as the division's leader until 1980. He retired from the Laboratory as a Senior Fellow in 1993. At the time of his death, Carruthers was a physicist at the University of Arizona.

Carruthers earned his bachelor's and master's degrees from Carnegie Tech in Pittsburgh in 1957 and his doctorate in physics from Cornell University in New York in 1961.

He is survived by his wife, Lucy; his mother, Nila Carruthers of Middleton, Ohio; son, Peter of Ithaca, N.Y.; daughters, Debra of Española and Kathryn Daniels of Norfolk, Va.; sister, Sally Hooper of Los Angeles; and other relatives.

Harry Charles Hoyt

Lab retiree Harry Charles Hoyt died July 11 of cancer. He was 73.

Hoyt, who received his doctorate in

physics from the California Institute of Technology in 1953, first came to the Lab in 1953, working in the Weapons Engineering (GMX) Division. Hoyt worked for many years on nuclear weapons design, weapons system analysis and other programs.

In 1956, Hoyt moved over to IBM Calculations (T-5), where he became alternate group leader four years later. Other leadership positions Hoyt held during his career included assistant director for the Weapons Nuclear Engineering (W) Division, assistant director for Weapon Planning, assistant to the director for Policy, associate director for Energy Programs and assistant director for Special Programs.

Hoyt retired from the Lab in July 1976, returning shortly afterward as a consultant. He became a Lab associate in 1990, advising the Lab on management, program development, system analysis and research and development. He fully retired in September 1995.

Hoyt is survived by his wife, Martha; a son, Brian of Houston; a daughter, Andrea Haight of Albuquerque; a sister, Margaret Hagerman of Battlement Mesa, Colo.; and other relatives.

Samuel L. Reading

Samuel L. Reading, 56, died June 27 after a long battle with cancer.

A laser technician in the Trident project in Plasma Physics (P-24), Reading joined the Lab in 1965 and worked in the Rover program at NTS, the laser isotope separation program, and on the Aurora project before joining Trident in 1990.

He is survived by his wife, Luvella "Lou" of White Rock; his mother, Lois Reading; a brother and sister; four step-children, including Liz Trujillo of Materials Management (BUS-4); and six grandchildren.

Robert Spaulding Jr.

Laboratory retiree Robert "Bob" Spaulding Jr., died June 27 in Los Alamos. He was 78.

Spaulding joined the Laboratory in 1946 as a staff member in the Detonator Group, where he remained until his retirement Oct. 30, 1981.

Spaulding earned a bachelor's degree from University of Virginia, and a doctorate in physical chemistry from the University of Wisconsin in 1944.

He is survived by a brother, James, of Arlington, Va., sister-in-law, Sandra Spaulding; and niece, Mary Alice Spaulding of Santa Barbara, Calif.

Scott J. Thomas

Laboratory retiree Scott J. Thomas died July 1 in Asheville, N. C. He was 62.

Thomas retired from the Laboratory in 1994 after 20 years of service. Before joining the Lab, Thomas worked at Lawrence Livermore National Laboratory.

The U.S. Air Force veteran began his scientific career as a technician with the nuclear rocket program at Lawrence Livermore.

Later, he found his niche in laser research, working on projects that helped to develop this technology from its infancy.

Thomas joined the Lab as a staff member in 1974 and worked on numerous laser technology programs. He was responsible for development and implementation of major system components as well as contributing to research in nonlinear optics and laser damage studies.

Thomas is survived by his mother Osa Thomas; wife, Martha; a daughter, Audrey Thomson of Loveland, Colo.; a son, Dan of Los Alamos; sisters, Belle Hawks and Evelyn Ollis of North Carolina; a brother, Jack of North Carolina; and five grandchildren.

William Whaley

Laboratory retiree William Whaley died June 18 in Michigan. He was 65.

Whaley joined the Lab in 1976 as an electrical engineer in the Weapons Engineering (WX-1) Group. In 1981, he became group leader of the Detonations Systems (WX-7).

In 1990, Whaley became program manager for weapons activities in the Dynamic Experimentation (M) Division.

Whaley retired from the Lab in 1993. He earned a bachelor's degree in electrical engineering from University of Texas, El Paso in 1953, and a master's degree in mathematics from Adelphi University in 1958.

Whaley is survived by his wife, Dorothy of Albuquerque; a daughter, Jamy Peavy, and son, Bill Jr., both of Albuquerque; and his mother, Alice Seales, also of Albuquerque.

This month in history

October

1854 — The Light Brigade “charges” into military defeat and poetic legend

1923 — Edwin Hubble identifies the Cepheid variable star

1930 — Ernest O. Lawrence invents the cyclotron

1945 — Norris Bradbury becomes the Lab’s second director

1957 — The Soviet Union launches Sputnik, the first artificial satellite

1963 — The first Vela satellites are launched, carrying sensors designed in part at the Lab to monitor compliance with the Limited Test Ban Treaty

1966 — The Laboratory is designated a national historic landmark

1977 — The Department of Energy officially begins operating

1980 — The Very Large Array radio telescope system is dedicated on the Plain of San Agustin in New Mexico

1981 — Otowi Cafeteria at TA-3 opens

1990 — France, the Soviet Union, Great Britain and the United States sign away control of a partitioned Germany

1992 — The first lab-to-lab contracts are signed between Los Alamos and Arzamas-16 to conduct joint experiments

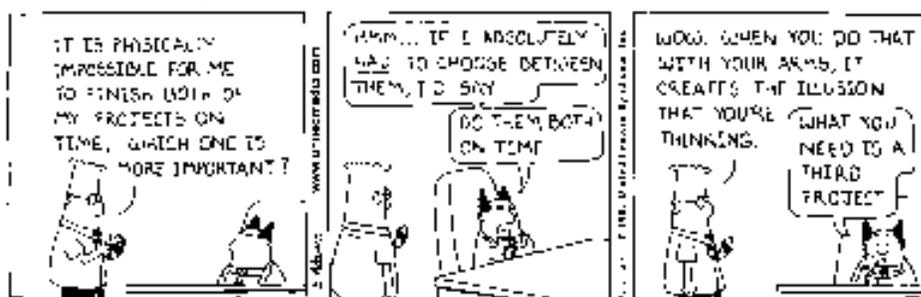
1994 — Aramark takes over operation of the Lab’s cafeterias



The latest Lab news
Check out the
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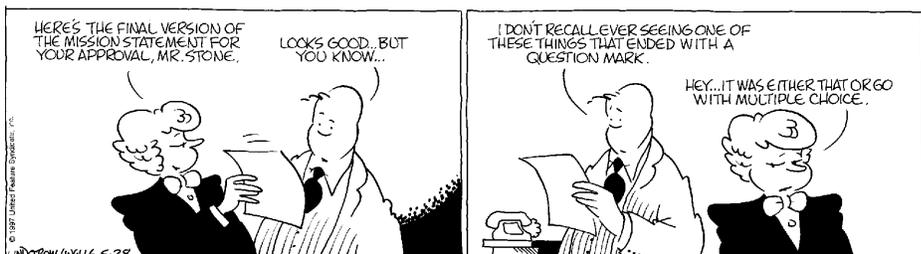
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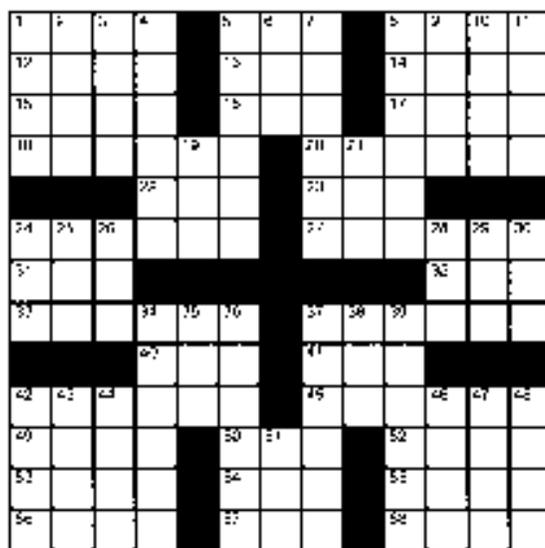


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Crossword puzzle

ACROSS

- 1 Time periods
- 5 "Hee —"
- 8 Caron film
- 12 A — in one's throat
- 13 Eggs
- 14 — St. Laurent
- 15 Inter— (among others)
- 16 Stimp's friend
- 17 "Frasier" co-star
- 18 Memorizes
- 20 Hurls
- 22 — the line
- 23 Large bird
- 24 Fanciful visions
- 27 Maiden
- 31 Hearing organ
- 32 Caviar
- 33 Naval petty officer
- 37 Horrified
- 40 Formerly called
- 41 Ms. West
- 42 Pushes roughly
- 45 Hosiery choice
- 49 Haul
- 50 Type of cross
- 52 "Spin City" co-star
- 53 Moran or Gray



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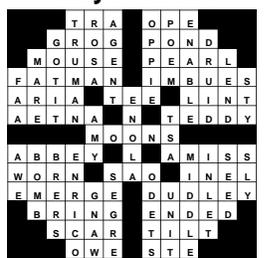
- 54 NFL's Dawson
- 55 Flooring need
- 56 — tense
- 57 N.Y. time
- 58 WWI plane

- 24 Scottish river
- 25 Kurosawa film
- 26 Bitter vetch
- 28 Sp. woman
- 29 Dawn goddess
- 30 Permit

DOWN

- 1 Israeli airline (two words)
- 2 — with an iron fist
- 3 Freshwater fish
- 4 Athens' rival
- 5 "They Shoot —, Don't They?"
- 6 Hail!
- 7 —: Dead or Alive
- 8 Plaster of Paris ingredient
- 9 Burl —
- 10 Richard of "No Mercy"
- 11 Wife of Osiris
- 19 — de plume
- 21 Medical suffix
- 24 Devises in the mind
- 25 Command to a horse
- 26 Settle down comfortably
- 27 Sum
- 28 With "The," chain of clothing stores
- 29 "Thief of —"
- 30 "— on it!"
- 31 60 mins., in Mexico
- 32 Elevator name
- 33 Jest
- 34 W. Coast coll.
- 35 Pieced out
- 36 DDE opponent

July answers



spotlight

Remembering Norris E. Bradbury



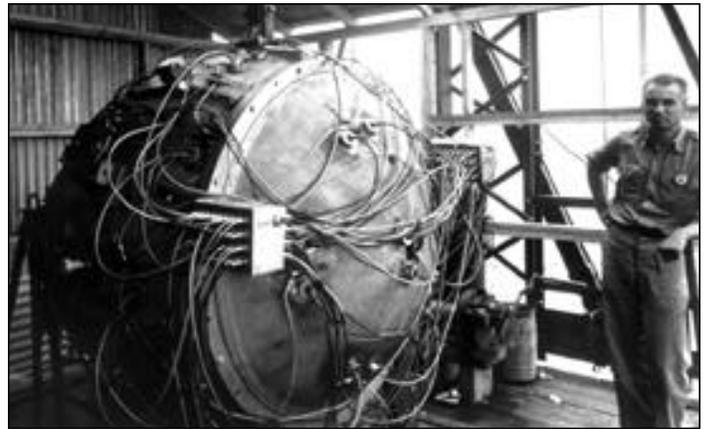
Norris E. Bradbury, the Lab's second director, died at his home in Los Alamos Aug. 20. Shown above, Bradbury escorts his predecessor, J. Robert Oppenheimer, right, through the science museum during a 1964 visit by Oppenheimer.



Bradbury receives the Fermi Award, the Atomic Energy Commission's highest honor, from Glenn Seaborg, then chairman of the AEC, in 1970.



The Laboratory's Science Museum is renamed in honor of Bradbury during a ceremony in 1970 at the museum's previous location.



Bradbury, standing on the tower at Trinity Site next to the world's first atomic bomb, was in charge of assembling the nonnuclear components for the July 1945 Trinity test.



Bradbury is congratulated by Sig Hecker, the fifth director, on the occasion of his 80th birthday in 1989, while Bradbury's wife, Lois, seated, looks on.

Reflections
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