

Los Alamos
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NewsLetter

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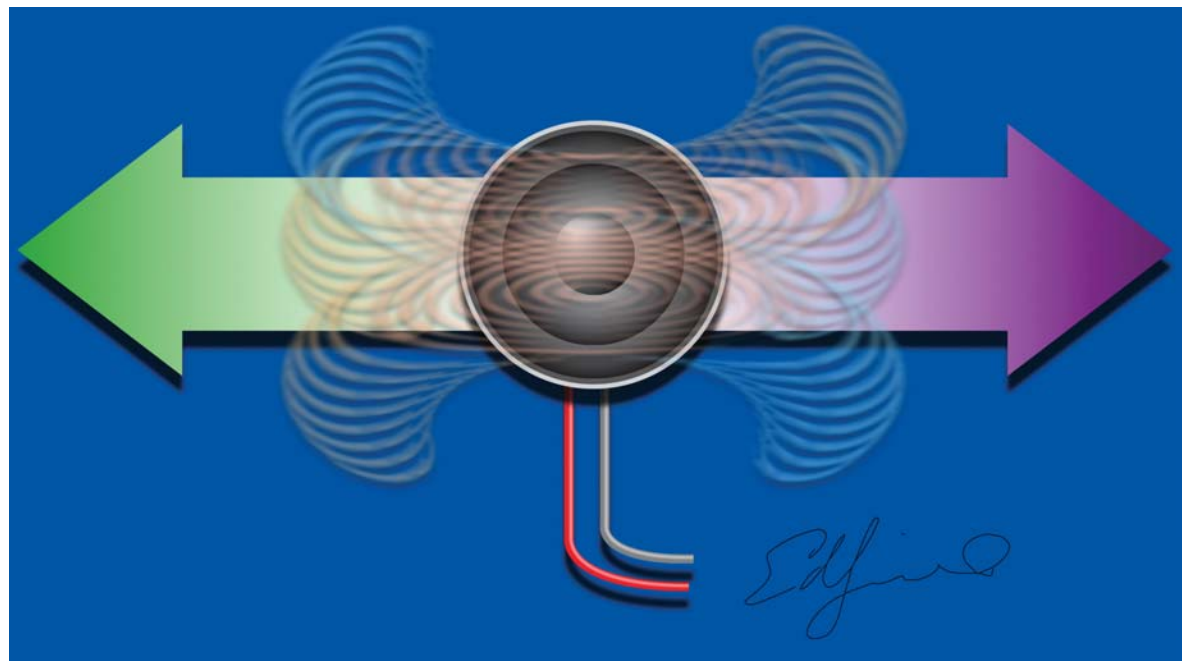
The power of sound: Thermoacoustic mixture separation process moves from science to application

by Todd Hanson

Laboratory acoustic scientists are somewhat astonished that until recently no one had ever discovered that if you put a mixture of two gases in a tube and send a sound wave — a pure tone, not a cacophony — through the mixture, it partially separates with one end of the tube being enriched with one kind of gas and the opposite end is enriched with the other. The discovery came here at Los Alamos by accident and now research into the physics of this phenomenon is turning the discovery into more than just simply a scientific curiosity. Called thermoacoustic mixture separation, the phenomenon is turning out to have a number of potential practical applications, the depth and breath of which are only now beginning to be explored.

Nature has always been doing thermoacoustic mixture separation in a simple form. For ordinary sound in air, however, the effect is too weak and the re-mixing processes (e.g., the little breezes wafting around your office) too strong that you have never noticed anything as extreme as the oxygen moving to one end of your office and the nitrogen to the other end. It was only due to a design geometry and sound intensity that enhanced the separation process, and suppressed re-mixing, that allowed Los Alamos researcher Philip Spoor to detect the small anomaly in an acoustics experiment that led to the discovery of the phenomenon (see sidebar below).

One of the places where this phenomenon may have the most practical applications is in mixture separation in industry. Mixture separation is an enormous business that includes such areas as petroleum refining (i.e., separating crude



oil into its various components) and air separation to produce oxygen, nitrogen and argon. Although the thermoacoustic mixture separation is relative inefficient compared to the current distillation methods widely used in industries, it might find a critical use in either niche applications, where the simplicity and reliability of the separation process might be more important than energy efficiency, or in difficult separations — such as the separation of isotopes and isomers — where separations are notoriously inefficient even with the best existing technology.

One area where Los Alamos researchers are considering applying thermoacoustic separation is in the separation of hydrogen isotopes. Here reliability, tritium inventory and cleanliness are the most important issues. Another area under consideration is the enrichment of uranium isotopes where the energy efficiency of thermoacoustic

separation seems equal to that of gaseous diffusion. Thermoacoustics might also enable small-scale purification of krypton and xenon radioisotopes at locations close where they are produced and used. Finally, it also may be possible in the future to develop small-scale thermoacoustic separation devices for producing stable isotopes for biological and medical use.

To further investigate the thermoacoustic mixture separation process and determine whether any unexpected difficulties might arise in a practical separation system, Los Alamos researchers have built a thermoacoustic separator to test the process on neon isotopes.

The Department of Energy's Office of Science, through the Division of Materials Science in the Office of Basic Energy Sciences, has supported this research, as well as much of the research leading to the discovery of thermoacoustic mixture separation.

Agreeing to disagree — collaboration and independence in science

by Todd Hanson

The accidental discovery of thermoacoustic mixture separation is a tale of how cordial collaboration and bull-headed independence often manage to advance science in interesting and unexpected ways.

Los Alamos postdoctoral researcher Phil Spoor began his research with staff member Greg Swift in the Condensed Matter and Thermal Physics group by pursuing the question of whether two structurally coupled, free-running thermoacoustic engines would mode lock and develop a simultaneous "rhythm,"

something like the way two metronomes synchronize themselves on a wobbly shelf.

At one point in the course of the mode-locking experiments, Spoor filled the thermoacoustic engine with a helium-xenon mixture instead of the pure helium he'd been using. The change was part of the protocol and the experiment continued to work, but not as well as expected. There was a tiny change in the engine's operation — an anomaly almost too small to detect.

Swift thought that this anomaly simply was due to some uninteresting experimental uncertainties and strongly suggested that Spoor get on with the more

important mode-lock work.

Undeterred by his mentor's urging, Spoor put the mode-lock question on the back burner and persisted with his own investigation of the anomaly. He suspected that the anomaly might be caused by the sound wave having somehow partially unmixed the helium and xenon, forcing the gases into different parts of the engine. After considerable work, his suspicion was proven correct and the fortuitous turn in the mode-lock research eventually led to the discovery of thermoacoustic mixture separation process described in the accompanying article above.

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Los Alamos National Laboratory NewsLetter

The *Los Alamos NewsLetter*, the Laboratory bi-weekly publication for employees and retirees, is published by the Public Affairs Office in the Communications and External Relations (CER) Division. The staff is located in the IT Corp. Building at 135 B Central Park Square and can be reached by e-mail at newsbulletin@lanl.gov, by fax at 5-5552, by regular Lab mail at Mail Stop C177 or by calling the individual telephone numbers listed below.

Editor:
Jacqueline Paris-Chitanvis, 5-7779

Associate editor:
Judy Goldie, 5-0297

Managing editor:
Denise Bjarke, 7-3565

Graphic designer:
Edwin Vigil, 5-9205

Contributing photographers:
John Bass, 5-9204
Phil Noll, 7-4970
LeRoy N. Sanchez, 5-5009

Contributing writers:
Michael Carlson, 5-9178
Todd Hanson, 5-2085
Kathryn Ostic, 5-8040
Kevin Roark, 5-9202
Steve Sandoval, 5-9206
Fran Talley, 7-5225
Shelley Thompson, 5-7778

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Los Alamos enhances global security by ensuring safety and confidence in the U.S. nuclear stockpile, developing technologies to reduce threats from weapons of mass destruction and improving the environmental and nuclear materials legacy of the Cold War. Los Alamos' capabilities assist the nation in addressing energy, environment, infrastructure and biological security problems.



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FROM THE TOP



Thoughts from the NNSA administrator

Editor's note: Linton F. Brooks, the acting administrator of the National Nuclear Security Administration, recently shared his thoughts on who he is, how he views his new position and what he brings to the job with the NNSA staff. His remarks are provided below:



Linton F. Brooks

Introduction

I'm Linton Brooks, and as of July 9, I am the acting Administrator of NNSA. I thought I should introduce myself, tell you who I am, how I see my job and how I'll be approaching it. I also want to give you a chance to ask questions. Before I start, I need to make three points:

- First, I am honored — and a bit stunned — by the chance to lead an important organization of such dedicated people.

- Second, I think John Gordon is a tough act to follow. He is the reason I came to NNSA, and I expect to continue much of what he was doing. In particular I'm committed to the reengineering process and to the initiatives on diversity that John started.

- Third, I don't know how long I'll be in this job, but it will almost certainly be through early spring. That's a long time in Washington, far too long to let an organization drift. Given that, I don't expect to defer things "waiting for the permanent replacement." I'm what we've got, and I plan to act as though I was going to be here forever.

Who am I?

For 43 years I've been involved in national security in the military, in government and at an FFRDC supporting the Navy. The first 20 years were mostly operational: destroyers and nuclear submarines. I've been in Washington since 1979. I've served on the Navy Staff, OSD, State, ACDA and NSC. Most jobs had strategy, policy, arms control, or nuclear in their titles. I negotiated START I and START II (which is why I get to call myself "ambassador"). I was assistant director of ACDA at end of first Bush Administration

During the Clinton years I was a vice president at Center for Naval Analyses, doing policy and strategy work for Navy. I've also served on various study panels including some for DOE labs. Finally, since last October, I've been the deputy administrator for Nuclear Nonproliferation.

No one is defined only by his or her work. I'm also a married man who values family, an avid theater buff and an avid reader. I'm interested in lots of things. I like people a lot (I'm also not as good at remembering names as I should be). I'm not terribly formal — if you are wearing a suit coat in my office, it's because you're cold.

Finally, I have a bit of a reputation as a workaholic. It's not entirely unfair, but I don't think of it as particularly admirable. I don't expect others to work horrendous hours, and I'm not particularly impressed when they do so on a routine basis.

How I see my job

Any front office has to do four things:

1. Provide overall strategic vision and direction.
2. Make sure people are taken care of.
3. Deal with external stakeholders.
4. Make the trains run on time.

Let me say a little about each. By strategic vision I do not mean formal documents. They have their place, but they aren't central. Instead I mean continuous efforts to ensure we all have the same understanding of where we are going, what we are trying to do and how we will approach our task. This implies a good deal of two-way communication. You will find that I value sharing information a lot. I see establishing and communicating a consistent direction for the organization as my most important task and one that I must do personally.

If strategic vision is the most important task of a front office, taking care of people is a very close second. Taking care of people means giving them the tools and the training and the resources to do the job. It means treating them fairly and helping them advance. But above all, in my view, taking care of people means treating them with respect.

I am appalled that the people who were called public servants in my youth are now called bureaucrats. I think it is unfortunate and wrong when politicians campaign against "Washington" as though the career government was some kind of alien life form.

Both the management literature and my own experience teaches me that having meaningful work to do and being respected for doing it are the two most important elements in job satisfaction. We had both of those under General Gordon, and we're going to have them under me. I have a reputation as being relatively easy going, and not much makes me grumpy. But I will not tolerate people in NNSA not being treated with respect by their NNSA colleagues, their DOE colleagues, their interagency colleagues or anyone else.

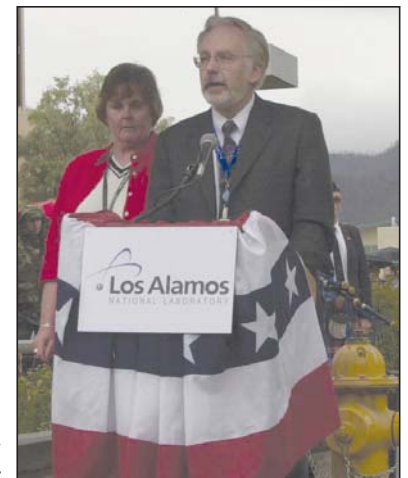
The third function of a front office is keeping touch with external stakeholders. This is pretty straightforward in concept, though hard in practice. I'm fortunate that I have worked with almost all of the senior officials of this administration in the past as well as with many of the senior folks at the labs. I'm also fortunate that I have such strong colleagues within NNSA to help me in this area.

Finally, a front office needs to make the trains run on time. When I say, "make the trains run on time," I don't just mean tickler systems and checking up on when papers are due.

That's important and I want us to be good at it, but Steve Matts and Bill Barker handle it for me. What a front office needs to do is remove the bureaucratic obstacles that keep people from carrying out the mission. That's one of the goals of reengineering and one I plan to push.

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Laboratory work force remembers 9-11



Laboratory personnel gathered last week for the Laboratory's Sept. 11 commemorative event in front of the Administration Building at Technical Area 3. John Immele, right photo, deputy director for national security, speaking for Laboratory Director John Browne who was in Washington, D.C., made the opening remarks. Next to Immele is Linn Tytler, deputy office director for Public Affairs. Protection Technology Los Alamos provided a rifle salute, top photo, and played "Taps," which was followed by a 30-second moment of silence. Don Machen, left photo, of Los Alamos played the traditional Scottish piobaireachd "His Father's Lament for Donald MacKenzie" to conclude the commemorative event. Machen is a pipe major in the Albuquerque and Four Corners Pipes and Drums. Photos by LeRoy N. Sanchez

Thoughts . . .

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The approaches I bring to the job

I burdened you with my biography because — like everyone in this room — what I've done in the past is part of who I am. I don't have any preconceptions about specific issues (outside of NN), but I've been leading people and running organizations for most of my life. I have formed some pretty strong opinions about how to deal with people and issues. It seems only fair to tell you about them in advance.

First and most important, from every job I've ever had, I've learned that people are what matter. I've already talked about that a bit, but nothing I say is as good as what John Gordon wrote in the diversity statement:

We are "... committed to the goals of fairness, equity, and respect for people [and] committed to a work environment that is free from discrimination and harassment and supportive of all employees."

John meant that and so do I.

From decades in the military, I've learned to value the chain of command. But you need to understand what I mean by that:

- Direction only comes via the formal chain of command. If anyone other than the front office and my direct reports ever gets direction or tasking from me, I've screwed up.

- But information can flow in many directions. I don't think it violates the chain of command if I ask I direct information question of an expert rather than of his boss. I don't think it violates the chain of command if I send information of broad interest to people simultaneously, rather than passing it down through multiple intermediates. I don't think it violates the chain of command if I gather people from different levels in the organization to brainstorm about issues.

I've learned another thing in my time in the military, and that is to value loyalty.

Once again, you need to understand what I mean. Loyalty works both up and down. Loyalty up means I argue as strongly as possible with my boss before a decision is made, but after it is made I carry it out with equal enthusiasm whether the call went my way or not. Loyalty down means I support and protect my subordinates and don't try to dodge responsibility by blaming them when things go wrong. You'll see both kinds of loyalty from me, and I'll expect to see both kinds from you.

Closely related to loyalty is the willingness to tell the boss unpleasant news and to listen to unpleasant news yourself. I value candor a lot, and I don't shoot messengers. A submarine I rode briefly once ran aground because the navigator had made it clear to his subordinates that he didn't want his decisions questioned. So when he laid down a track that went right through a submerged mounted, they didn't question it. People who bring you bad news are not your enemies. I don't shoot messengers.

From my time in START, I've learned the importance of keeping clear what problem you are solving while dealing with myriad details. If we don't constantly focus on where we want to go, we won't be able to distinguish the important from the mundane. A wise colleague of mine often says that the commonest form of stupidity is forgetting what you are trying to do. We all have to try not to fall into that trap.

From eight years at an FFRDC — an organization with the same legal status as the national labs — I've learned that when those organizations are treated like partners rather than beltway bandits everyone benefits. I don't mean to minimize the importance of federal oversight, but you'll find I have a strong bias in favor of making extensive and effective use of the historic special relationship between the labs and the government.

From many years in the interagency

process, I've learned the value of collegiality and sharing information. Sooner or later, attempts to cut others out will backfire. You will find that I expect us to get high marks in "plays nicely with others."

Spending the eight years before I came here in an organization that is full of creative PhDs has made me really value new ideas. Most good ideas come from non-managers, and I want to make sure we tap into those ideas.

Years in the bureaucracy have convinced me that Dilbert really is a documentary but we can all live with it. We have to work to make things better, but bureaucracy is always going to be frustrating. I'll try not to let it get to me and I hope you'll do the same.

Finally, and most importantly, my time here these past few months has given me an immense respect for the people and programs of NNSA. That's why I'm so honored to have the chance to lead this organization.

Summing up

So that's who I am, how I see the job and the predispositions I bring to it. But there is one more important thing about me, which I suspect most of you share. I want to make a difference, to really make a contribution to America's security. Put bluntly, I didn't sign up for a significant pay cut and a longer commute in order to be irrelevant.

I'm happy about this job because I know that it will involve working with very good people doing very important work. Not everybody gets the chance to make a difference. We do. Not everybody gets the chance to make the country and the world safer. We do. Not everybody gets the chance to work with exciting technology and to adapt that technology to an important mission. We do.

I'm proud to be a part of this organization, thrilled at the opportunities before us and eager to get started.

Workers proud to be associated with Lab

Checkpoint survey gauges employee attitudes about workplace issues

by Shelley Thompson



University of California Laboratory employees who responded to this year's Checkpoint Survey are generally proud to be associated with the Laboratory, are satisfied with their work and feel safe in their workplace.

And though results are up from the 2001 survey, only 34 percent of the employee respondents believe Lab managers will act on problems identified in the survey.

These are some of the results from the 2002 Checkpoint Survey. Workforce Data and Analysis (HR-WDA), which distributes the survey and analyzes the results, submitted survey results to Laboratory managers. Division-level results are available for employees in the division offices.

Group leaders have received results from the survey specific to their groups. Managers are encouraged to share the results of the survey with employees.

"The survey, conducted since 1994, allows employees the opportunity to give feedback to their managers and provides Lab leaders with data on how employees

feel about the Lab," said Heidi Hahn of HR-WDA. The survey results can be found at <http://hrweb.lanl.gov/wda/checkpoint/> online.

Forty-four percent of the 7,915 surveys sent out to UC Lab employees in June were completed and returned to HR-WDA. In 2001, 1999 and 1998 the response rate was slightly higher at 46 percent. The survey was not conducted in 2000.

UC Laboratory employees had three weeks to complete the survey, which contained 50 questions about career development, communication, diversity, job satisfaction, management, pay, productivity, performance management, safety and security. Employees could respond by checking agree, tend to agree, neutral, tend to disagree, disagree and don't know.

Overall, safety and security received the highest marks from employee respondents. Eighty-eight percent said corrective action is taken when unsafe conditions are brought to management's attention; 72 percent feel safe reporting potential security incidents that they are directly involved in; and 91 percent of employee respondents said their group management ensures a safe work environment and use of safe work practices. Ninety-seven percent of respondents feel they are personally responsible and accountable

for performing their work securely.

In the area of job satisfaction, 86 percent of employee respondents are proud to be associated with the Laboratory and 81 percent said their work gives them a sense of personal accomplishment, up 4 percent from 2001. And 80 percent of employee respondents said they would recommend the Laboratory as a good place to work, up 9 percent from 2001.

Fifty percent of employee respondents feel morale in their group is high, up 8 percent from 2001 and up 6 percent from 1999.

In the area of communication, only 47 percent of employee respondents said that existing channels for employee communication with upper management are adequate, up slightly from last year. But 62 percent of employee respondents said group management communicates decisions to employees. Forty-four percent of employee respondents said their division management communicates decisions to employees, up slightly from last year.

Sixty-eight percent of employee respondents feel safe stating their opinion in their group, up 2 percent from 2001, but down 2 percent from 1999. And 29 percent, up 3 percent from 2001, feel that

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Trails' management on Lab property under review

by Fran Talley

The Laboratory is working with the Department of Energy's Los Alamos Site Operations Office and the National Nuclear Security Administration to develop a management strategy for trails located on Laboratory property.

"Following the Cerro Grande Fire in May 2000 and the events of Sept. 11, 2001, DOE recognized a need to re-evaluate the issue of public and worker traffic along trails within Lab boundaries," said Dan Pava of Ecology (RRES-ECO).

He said RRES-ECO is preparing a draft environmental assessment on management of about 20 trails on Department of Energy-owned land. An assessment is required under the National Environmental Policy Act, or NEPA, before an evaluation of an appropriate management strategy can be determined. The draft environmental assessment will consider operational needs, cultural and natural resource issues, as well as safety and security requirements.

"There are many trails here, some of which pre-date the Laboratory," Pava said. "Several of these

trails — or segments of them — are the remnants of historic wagon roads or aboriginal footpaths and may be eligible for listing in the National Register of Historic Places."

According to Pava, workers and the general public have used some of the trails for hiking for more than 50 years. Some of the trails within the Laboratory are maintained in a limited fashion while many others have become subject to unchecked erosion or other hazards to the environment and users.

After the fire, the Laboratory initiated an aggressive tree-thinning project to reduce ladder fuels to protect the Lab and the community from future wildland fires. A number of areas of environmental concern were marked so that they would not be damaged inadvertently by the mechanized tree thinning.

"Some people may be upset by the restricted trail use in certain areas and by some trails being marked off to prohibit their use," Pava said. "In some cases [trail users] have cut down existing Cerro Grande Project tree-thinning flagging that restricted or rerouted trail access. What we hope people will understand is that, in some cases, sensitive areas with trails running through them have been marked off because they are being damaged by trail use."

"These areas can be damaged easily and unknowingly just by people walking on them," said John Isaacson, also of RRES-ECO. "We have a moral and

legal responsibility to safeguard these areas." (See related Newsbulletin article from Aug. 7 at www.lanl.gov/orgs/pa/newsbulletin/2002/08/07/text01.shtml online.)

"We have to plan well," Pava said. "Stewardship of Laboratory land is of major importance to us all. The Lab is committed to striking a balance to protect environmentally sensitive sites. Ecological, cultural, safety, security and operational issues must be considered," he said.

"Although some trails may be closed or access restricted to the public in the future, DOE and the Lab are committed to partnering with employees and the public to minimize the impact of trail-use restrictions and/or closures," Pava said. Key stakeholders participating in the process include San Ildefonso and other pueblos, Bandelier National Monument and Los Alamos County.

The draft environmental assessment is expected to be complete by early 2003. There will be public meetings during the development of the environmental assessment.

For more information, contact Pava at 7-7360 or write to dpava@lanl.gov by electronic mail.



Hamilton Trail was one of the early hiking trails built by students of the Los Alamos Ranch School. The popular site is on Lab property and is one of many under review as part of the Department of Energy's environmental assessment. Photos by Phil Noll of Ecology (RRES-ECO)

Lab issues request for proposal for child-care services

by Steve Sandoval

The Laboratory has issued a request for proposal for a child-care center for its work force to be operated by an independent vendor.

The center will augment existing child-care services now available in Los Alamos and the region. The new child-care facility is planned to open in August 2003. Those answering to the request for proposals have approximately a month to respond.

Laboratory senior managers have been briefed about the facility, which would accommodate up to 50 children of Laboratory workers and Department of Energy personnel. The Lab also has notified area elected officials and key community leaders about its plan to issue the request for proposals.

"This is the right thing to do. It's a statement to our employees that we care about this issue," Laboratory Director John Browne said. "It is important to the institution and our quality of work life efforts that we establish a child-care center for Lab workers."

"Both DOE National Nuclear Security Administration Site Director Ralph Erickson and I understand and appreciate the hard work that the Laboratory has performed to address the issue," said Dennis Martinez, deputy director of the Office of Los Alamos Site Operations. "We fully support Dr. Browne in this initiative, and we are hopeful that implementation of the child-care initiative will effectively fill the existing gap between employee needs and available service."

"We especially appreciate John's efforts to balance the needs of Laboratory employees and the community in support of our joint goal to recruit and retain an effective work force."

According to the request for proposal, 23 of the 50 slots in the new child-care facility would be slotted for children younger than 2 years old. Twenty slots would be for children between ages 2 and 6, and seven slots could be for "drop-in" or transitional child care. The facility



will be operated as a pilot for five years at which time it will be evaluated and its future operational status determined.

Rates charged for child-care service would be consistent with the rate structure of existing child-care providers in the community, and the Lab child-care facility would operate under the standards of the National Association for the Education of Young Children, a nationwide professional organization for early childhood educators. In addition, salaries paid to child-care staff at the facility would be consistent with salaries paid to staff at existing child-care facilities in Los Alamos. Staff at the Lab's child-care facility would not be University of California Lab employees, but rather, would be employees of the vendor.

Helga Christopherson, Human Resources (HR) Division leader, said the decision to create a child-care facility to be operated for the Laboratory sends a strong message about the Laboratory's commitment to the welfare of its current and future workers. The facility also is a key component of the Laboratory's recruitment and retention strategy and critical to successful work-force planning.

Christopherson said in establishing the center, the Laboratory took into consideration the concerns of the local community. Therefore, the center will be limited in size and will target a greater proportion of infant/toddlers and drop-in/transition-care child-care, services that are currently underserved.

The Lab also is committed to assisting local providers recruit and train child-care staff in response to staffing shortages in the area.

The Laboratory for years has been considering the best way to address child-care needs. Initial efforts by Lab workers advocating some form of child-care services for Lab personnel date to the 1970s. Several surveys of Laboratory employees, as well as electronic mail messages from employees, have indicated a strong desire and support for Lab-sponsored child-care services.

Workers proud ...

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division management seeks their opinion on important issues impacting their jobs.

Sixty-two percent of employee respondents think the Laboratory keeps

employees informed about matters affecting them, and 65 percent are satisfied with their involvement in decisions that affect their work. Both figures are greater than 2001 survey results.

In the area of career development, 62 percent of employee respondents said their group is interested in their professional development. And 58 percent of employee respondents, up 4 percent from 2001, said they are not frequently worried about their skills becoming obsolete.

In general, Laboratory employees responded favorably about diversity issues in the workplace. Up slightly from 2001 and 1999, 85 percent of employee respondents said their work environment is accepting of ethnic/cultural differences, and 65 percent said employees are treated with respect, regardless of their position. Also, 84 percent of employee respondents said their work environment is accepting of gender differences, up slightly from last year.

Sixty-nine percent of employee respondents said their group management recognizes the value of diverse perspectives and backgrounds, up 3 percent from 2001. And 62 percent of the respondents said their division provides management opportunities independent of ethnic, cultural and gender differences, up 3 percent from last year.

In the area of management, 59 percent of employee respondents said their group management generally understands the problems they face on the job. Sixty-three percent of employee respondents said there is sufficient contact between group management and employees in their group. Thirty-five percent said there is sufficient contact between division management and employees in their division.

Eighty-two percent of employee respondents said their supervisor is competent in the technical aspects of the job.

Fifty-two percent of employee respondents said that compared with other people performing similar work, they think they are fairly paid. Fifty-nine percent understand how their pay is determined, up 5 percent from last year. And 60 percent are satisfied overall with their compensation, including benefits. The responses in this area are similar to 1999 and last year.

Fifty-three percent of employee respondents think health-care benefits at the Lab are as good or better than those in outside companies or organizations.

Forty-eight percent of employee respondents believe the goals by which their performance is evaluated are specific and measurable. The figure is up slightly from last year but is 12 percent less than in 1999.

Eighty-five percent of employee respondents say they have a clear understanding of their job responsibilities and 58 percent, up 4 percent from 2001, said their supervisors provide regular feedback on their performance.

In the area of productivity, 56 percent of employee respondents, up 10 percent since 2001 and 3 percent since 1999, think productivity has increased in their group during the past year. Thirty-seven percent of employee respondents said inadequate Laboratory infrastructure and facilities do not hinder their productivity, while 60 percent of the survey respondents said the Laboratory encourages and supports innovation and creativity.

For more information about the survey, see the June 20 Daily Newsbulletin.

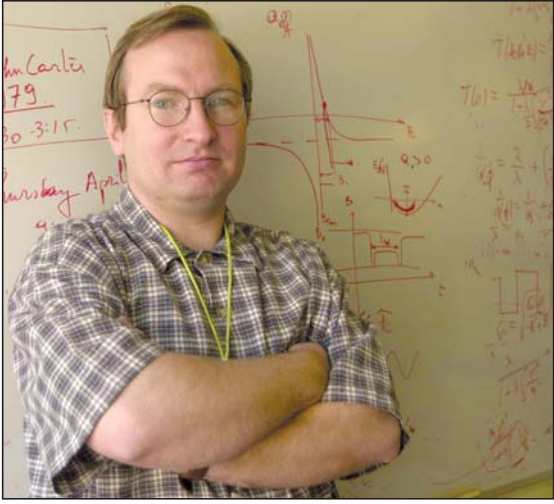


FOR YOUR BENEFIT

Change your mailing address Online

Addresses for Benefits Office mailings are taken from the employee files on the Labwide system. Each year many employees do not receive open enrollment notices or biannual account summaries because their mailing addresses are incorrect. If you have a cryptocard, you can confirm and make changes to your own address information online. You can do this by accessing the Web site at <http://eiprod.lanl.gov>. From this page, click on "Personnel Information." At the next screen, you will enter the cryptocard passcode, and then you will enter your name or Z number to open your record. When your record appears on the screen, you can confirm your address. If you make changes, remember to click on "save" before logging off.

It is extremely important that mailing addresses are current. If you do not have access to the online system, ask your group office administrator to update the record for you.



Eddy Timmermans

Timmermans named recipient of Postdoctoral Publication Prize in Theoretical Physics

Oppenheimer Postdoctoral Fellow Eddy Timmermans of Atomic and Optical Theory (T-4) has been named a recipient of the Laboratory's Postdoctoral Publication Prize in Theoretical Physics.

Timmermans is being recognized with the biennial prize for his publication of "Degenerate Fermion Gas Heating by Hole Creation," which appeared in a 2001 edition of Physical Review Letters.

"His work and this paper have had a major impact within the general field of physics," said Postdoc Coordinator Mary Anne With of Science and Technology Base Programs (STB) Office.

Laboratory Associate Leon Heller presented Timmermans with a \$500 cash prize and a certificate at a colloquium earlier this month, where Timmermans presented his published research, which is reflected in his article. Heller created the prize in 1976 and has funded it since its inception.

Timmermans also is a recent recipient of the Postdoctoral Distinguished Performance Award, which was presented to him in April.

From Belgium, Timmermans received his doctoral degree in physics from Rice University in Houston. After he completes his postdoctoral work at the Lab, he hopes to become a technical staff member here.

Timmermans was nominated for the postdoc award by his mentor, Peter Milonni of the Theoretical Division (T-DO) Office.

Tenbrink new CCN-5 leader

Stephen Tenbrink is the newly appointed group leader of Network Engineering (CCN-5). Tenbrink has been the acting group leader since November 2000.

"I'm pleased to be selected for this position and hope I can do as good a job as Chris Kemper, the previous group leader, who is now the deputy leader for the Computing, Communications and Networking (CCN) Division. The group members are very special people who are experts in all aspects of network technology, and I'm proud to have such highly skilled and dedicated personnel in the group," said Tenbrink.

Tenbrink joined the Laboratory in 1980 as a technical staff member to develop high-speed supercomputer networks. He helped to develop network interfaces for such computers as the CDC 6600 in the early 1980s that eventually led to the Lab-developed high-performance parallel-interface (HIPPI) standard and the integration of HIPPI technology into the Lab's production networks.

Tenbrink also was the Laboratory technical lead in the early 1980s for the national gigabit testbed called CASA, which was a collaborative program among the Lab, San Diego Supercomputer Center, California Institute of Technology and the NASA Jet Propulsion Laboratory.

Tenbrink served as team leader and deputy group leader of CCN-5 from 1985-1996. He also received the Lab's Distinguished Performance Award for contributing to the Blue Mountain Accelerated Strategic Computing Initiative computer deployment in 1999.



Stephen Tenbrink

Tenbrink received his bachelor of science degree in electrical engineering from the University of Denver and his master's degree in electrical engineering from the University of California at Los Angeles.

Trujillo named OEO chief of staff



J. Patrick Trujillo

J. Patrick Trujillo is the new chief of staff for the Office of Equal Opportunity.

Trujillo joined the Lab in 1987 after holding positions with the state of New Mexico, including that as an aide to the then-Gov. Toney Anaya.

At the Lab, Trujillo most recently was the chief of staff for the

Nuclear Materials Technology (NMT) Division. Previously Trujillo had been chief of staff for the Human Resources (HR) Division and group leader of Employee Relations (formerly HR-1). Also he headed up the team that developed the Mediation Center, which is now in the Ombuds Program Office.

Trujillo said, "I am delighted to join the OEO team and work on very important issues that impact the Laboratory and its employees. I believe [the Laboratory] is a good place to work and that there are opportunities and challenges that we need to address to make it better for all employees. Without a doubt, equal opportunity means just that — giving all qualified persons the opportunity to excel in their positions or move ahead in their careers without any obstacles. I strongly believe in an open-door policy and all employees are invited to visit with me to discuss any of their concerns."

Trujillo has a bachelor's degree in Political Science from the University of New Mexico and a master's degree in Organizational Management from the University of Phoenix.

Lab-produced video receives 2002 Silver Screen Award

The Laboratory and the Department of Energy recently received the 2002 Silver Screen Award for the training video "Beryllium Worker Safety." The award was given at the 35th annual U.S. International Film and Video Festival.

The video also received International Film and Video Festival Certificates for Creative Excellence in direction, editing and writing/concept. The competition is one of

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NEWS FROM UC

Atkinson receives lifetime contribution award

The American Psychological Association recently presented University of California President Richard Atkinson with the organization's 2002 Award for Outstanding Lifetime Contribution to Psychology.

The citation presented to Atkinson in part reads, "... the American Psychological Association is honored to recognize your outstanding lifetime contributions to psychology as a scientist, scholar, national policy maker, educational leader and visionary administrative architect who has strengthened international scientific and educational enterprises."

Atkinson has served as president of the UC system since 1995. Before that, he served as chancellor of UC San Diego for 15 years and as director of the National Science Foundation. He was a longtime member of the faculty at Stanford University and served for three years on the UC Los Angeles faculty.

Atkinson's research in psychology has dealt with problems of memory and cognition. His theory of human memory has been influential in shaping research in the field. It has helped in clarifying the relationship between brain structures and psychological phenomena, in explaining the effects of drugs on memory and in formulating techniques that optimize the learning process.

Based in Washington, D.C., the American Psychological Association is a scientific and professional organization that represents psychology in the United States. With more than 155,000 members, APA is the largest association of psychologists worldwide.

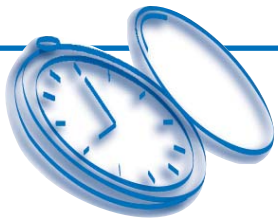


Richard Atkinson

In Memoriam

Donald Prather

Donald Prather of the Chief Information Officer's Program Office (CIO-PO) died Aug. 15 of injuries sustained earlier that week in an automobile accident outside Las Vegas, Nev. He was 53. Prather came to the Lab in 1984. He worked in Internal Evaluation Office (IEO), the Laboratory Assessment Office (LAO-DO), Security, and Audits and Assessments before joining CIO-PO in October 2001. Prather also was a long-time instructor at the University of New Mexico, Los Alamos Branch and was a U.S. Air Force veteran of Vietnam. A memorial service was held the end of August.



August service anniversaries



This month in history ... September

35 years

Robert Krakowski, D-3
Walter Matuska, X-5
Howard Menlove, NIS-5
Martin Milder, LANSCE-2

30 years

Isabell Archuleta, NMT-11
James Cohen, T-4
Bruce Erdal, RRES-SA
Robert Hollen, ESA-AET
Mikkel Johnson, P-25
Alan Perelson, T-10
C.E. Ragan, X-5
Robert Romero, NMT-11
Galen Straub, T-DO
John Straw, NMT-DO
Leonard Trujillo, DX-8

25 years

Rudy Abeyta, DX-1
Kemp Beebe, IM-1
Christina Bernardin, CCN-2
Stephen Bolivar, RRES-R
Margaret Cox, PS-13
Mary Darling, S-8
Richard Ebelacker, BUS-6
Michael Fazio, NIS-10
Pearl Lucero, X-3
Doris Megariz, HR-D-WP
Rose Montoya, ESA-WSE
Kelley Oyenque, D-2
John Parker, NMT-15
William Parkinson, ESA-AET
Floyd Rodriguez, NMT-5
Donald Shirk, ADWP
Willard Wadt, QIO

20 years

Larry Avens, NIS-NP
John Balog, MST-6

William Blumenthal, MST-8
Vicki Durnal, IBD
Richard Eddleman, C-FM
Lawrence Hull, DX-3
Robert Janssen, X-4
Robert Mier, C-FM
Mary Martinez, FWO-SEM
Robert Montoya, ESA-WMM
Michael Palmer, NMT-10
Roy Rockage, MST-10
Richard Ronquillo, NMT-16
Joseph Valdez, ESA-AET
Leonard Valerio, CCN-4
Harvey Wasserman, CCS-3

15 years

Donna Carter, BUS-2
Tebols Casados, STB-RL
Patrick Garrity, DIR
Barbara Hemberger, C-ADI
Mary Ann Hill, MST-6
Daniel Holden, NIS-1
Melissa Lewis, NMT-6
Kelley McLenithan, X-4
Hugh Smith, HSR-2
Paula Sundby, AA-4
J. Patrick Trujillo, OEO
Fatima Woody, D-5
Frederick Wysocki, P-22

10 years

Linda Anderman, CER-31
Shirley Atencio, S-4
David Aubrey, CCN-12
Barbara Carmichael, S-4
Keeley Costigan, EES-8
Maryana Eames, HR-TD
Mary Erwin, BUS-DO
Terry Fogle, HSR-5
David Horrell, NMT-10
Chad Kieffer, IM-1

Eileen Patterson, IM-1
Thomas Prettyman, NIS-1
Melody Rodarte, BUS-1
Benno Schoenborn, B-2
Blair Stephenson, HR-WDA
James Tingey, ESA-TSE
William Turney, RRES-WQH
Gary Whitney, HSR-5

5 years

Robert Atcher, B-3
Ula Binion, HSR-DO
Christopher Bradley, EES-11
William Challacombe, T-12
Zukun Chen, ESA-DE
Barbara Chaves, ADA
James Charles, FWO-SEM
William Daughton, X-1
Walter Gilmore, D-11
Michael Greenbank, NMT-3
Richard Gutierrez, P-FM
Elinor Gwynn, HR-SR
Bonnie Hall, CCS-1
Hans Herrmann, P-24
John Kelley, LANSCE-1
Alexander Kent, CCN-5
Sheldon Larson, DX-2
Deborah Lee, D-7
Lisa Lopez, X-DO
Gilbert Mackey, D-4
Jason Mossman, CCN-2
Robert Owczarek, RRES-AT
Luis Rocha, CCS-3
Alexander Romero, AA-2
Kevin Sanbonmatsu, T-10
Tessie Sanchez, PS-DO
John Stearns, ESA-AET
Douglas Tasker, DX-3
Laurie Triplett, EES-8
Priscilla Valdez, NMT-3
Ivan Wachler, AA-2
Robert Weiss, ESA-AET

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the world's leading events devoted to the selection and recognition of outstanding business, television, documentary, industrial and informational productions with entries received from 33 other countries this year, according to Rob Nicholas of Industrial Hygiene and Safety (HRS-5), which produced and developed the video for DOE.

"DOE and the Laboratory developed the video because of their concern for worker health and safety and their desire to make more information available to workers and their families," said Barbara Hargis of the Health, Safety, and Radiation Protection Division (HSR) Office.

The 30-minute video provides essential health and safety information for DOE beryllium workers. "Technical information is integrated with the personal perspectives of current and former beryllium workers who are showcased in the video and set the important tone for this training," said Nicholas.

The video was produced with contributions from current beryllium workers, former workers living with chronic beryllium disease, industrial hygienists, managers, occupational medical staff, scientists, risk communicators, private industry, numerous DOE sites and DOE headquarters.

"The video helps set a standard that everyone working with beryllium should attain," said Kathryn Creek of Materials Technology and Metallurgy (MST-6).

"Beryllium Worker Safety" also won a 2002 second place Telly Award out of 11,000 entries. This award recognizes outstanding non-network and cable TV commercial, film and video productions, as well as non-network TV programming, said Nicholas.

The video also received four 2002 Aegis Awards in the categories of Training, Director, Editor and Graphics. The Aegis Awards are one of the video industry's premier competitions for peer recognition of outstanding video production and non-network TV commercials, Nicholas said.

Present and former Laboratory, DOE and public sector employees involved in the production of the video are the producer, director and writer Nicholas of HSR-5; field video production by Fred Baker of Imaging Services (IM-4), Kendall Hollis of MST-6 and Randy Sandoval of HSR-5; on-camera interviews with Steve Abeln, Fred Algarra and Creek of MST-6 and former Lab employee William Van Buskirk; on-camera demonstrations by Brian Bartram of MST-6, Richard Castro of Weapon Component Technology (NMT-5), Pat Cruz of Occupational Medicine (HSR-2), Paul Daly and Melissa Drake of Desktop Computing (CCN-2), Laurel Valentine of HSR-5, Stephanie Jacquez of Materials Technology Operational Support (MST-OPS), Raul Brunner and Rick Lauer of Weapons Materials and Manufacturing (ESA-WMM), and Geraldine Lucero and Leroy Sanchez of Johnson Controls Northern New Mexico.

Technical advisers were Kim Ellis of MST-OPS, Babetta Marrone of Langham Resource (B-2) and Dr. Hugh Smith of HSR-2; training adviser was Helena Whyte of HSR-5; and project manager was Hargis.

1666 — Great Fire of London; more than 13,000 houses were destroyed though it is believed that only six lives were lost.

1766 — John Dalton, developer of the atomic theory, is born at Eaglesfield, near Cockerham, England, on Sept. 6

1783 — Treaty of Paris, ending the Revolutionary War between Britain and the United States, is signed.

1814 — Frances Scott Key is inspired to write the "Star Spangled Banner" after seeing the American flag still flying over Fort McHenry, MD.

1846 — German astronomer Johann Galle discovers the planet Neptune.

1882 — Labor Day, believed to be first observed Sept. 5. In 1894, President Grover Cleveland signed into law an act making the first Monday in September a legal holiday for federal employees.

1901 — Ernst Weber, microwave pioneer, born Sept. 6. Weber, an influential scientist in the field of microwave communications, developed devices for the precise control of microwave, which proved useful in early radar testing.

1914 — Babe Ruth hits his first pro homer while playing for Providence in the International League.

1942 — Japanese bomb U.S. mainland. A Japanese floatplane drops incendiary bombs on an Oregon state forest — the first and only attack on the U.S. mainland in World War II.

1943 — The Los Alamos Little Theatre is founded.

1950 — Truth or Consequences TV show premiered (after 10 years on the radio) with a contest to have a town named for the show, and Hot Springs, N.M., took the show's producers up on their offer.

1988 — Lab scientists are the first to discover the formation of diamonds in a high-explosive detonation.

1994 — Marc Andreessen, founder of Mosaic Communications Corp., introduced a new Web browser program called Mosaic Netscape, to be released in October 1994. The company and product names were later changed to Netscape.

2001 — Attack on America. At 8:45 a.m. Sept. 11, an American Airlines Boeing 767 loaded with 20,000 gallons of jet fuel crashes into the north tower of the World Trade Center in New York City instantly killing hundreds of people and trapping hundreds more. Then 18 minutes after the first plane hit, a second Boeing 767 — United Airlines Flight 175 — sliced into the south tower. American Airlines Flight 77 slammed into the west side of the Pentagon military headquarters at 9:45 a.m. United Flight 93 sped toward the ground at upwards of 500 miles per hour, crashing in a rural field in western Pennsylvania at 10:10 a.m. Its intended target is not known, but theories include the White House, the U.S. Capitol, the Camp David presidential retreat in Maryland or one of several nuclear power plants along the eastern seaboard.



Intel team wins 2002 Hazmat Challenge

by Kevin Roark



Members of the New Mexico National Guard team work to mitigate a leak in the valve/pipe tree at the 2002 New Mexico Hazmat Challenge at Technical Area 49. In this scenario, the team is responding to a pipe leak from an industrial accident.



Using a sealed glove box, Robert Trujillo of Sandia National Laboratories analyzes an envelope that contained a powder substance at the New Mexico Hazmat Challenge. The scenario involved a letter with a suspect substance found inside a building. Trujillo is conducting a bio-threat-alert test. The glove box, which the Lab built and owns, can be used to test for a number of unknown substances.



Here, members of one of the 12 teams competing prepare to enter a confined space to respond to a simulated emergency. Photos by LeRoy N. Sanchez

A hazardous materials (Hazmat) response team from Intel's Rio Rancho fabrication facility won both the technical and overall competitions at the 2002 New Mexico State Hazmat Challenge held at the Laboratory last month.

A team from the Hobbs Fire Department placed second in the technical competition while the team from Sandia National Laboratories placed third. A Hazmat team from the National Aeronautics and Space Administration (NASA White Sands) placed second overall, while a team from the New Mexico State Police — Explosive Ordnance Disposal (NMSP-EOD) placed third. The NMSP-EOD team won the overall sportsmanship award.

The competition included 12 teams this year, twice as many as the last Hazmat Challenge. Teams from around the state participated, including the Farmington Fire Department, Sandia National Laboratories, Intel Corp., NASA White Sands, Hobbs Fire Department, a combined Hobbs and Española Fire Department team, Santa Fe City Fire Department (two teams), a combined Los Alamos National Laboratory and Española Fire Department team, Gallup Fire Department, New Mexico State Police EOD and the New Mexico National Guard 64th Civil Support Team. In addition, members of the Federal Emergency Management Agency Region VI provided technical assistance and equipment and served as prop attendants and event evaluators.

This marks the sixth year the Laboratory has hosted the New Mexico State Hazmat Challenge. Given the events of Sept. 11, 2001, this year's theme was "Prepared for Homeland Defense." Challenge activities were designed around a combination of "standard" Hazmat response issues, sabotage and terrorist acts, and included a number of conditions intended to cause responders to carefully evaluate their working environment for the presence of evidence and/or secondary explosive devices.

The following technical scenarios were presented to each participating team:

- vertical confined space entry and rescue;
- process piping failure;
- general-purpose railcar (chlorine) in combination with a "Safe Secure Railcar";
- pickup truck with one-ton chlorine-cylinder simulated intentional release;
- overturned tanker truck carrying pesticides – simulated intentional act;
- hazard classification of unknown materials;
- tube-trailer release with flammable/toxic contents – intentional act; and
- biological threat scenario – possible "anthrax" letters.

A number of "surprise" elements were included in the interest of elevating awareness on the part of the responding teams. One of the goals was to encourage teams to be observant of unusual conditions, materials or equipment within a response event. As a result, teams were graded, in part, on their ability to discern the presence of an improvised explosive device, booby traps, radiological or biological materials, etc.

The final main event of the Challenge was an obstacle course in which teams performed in both technical and nontechnical events and scenarios.

The first of the three days was scheduled for incoming teams to practice and become familiar with the props within the training facility. Hazmat Challenge organizers also arranged for equipment vendors to be present during the training day. Several vendors provided scenario-specific training, as well as assistance in evaluating teams. The Laboratory, which took overall first in last year's challenge, was presented with a permanent plaque, and Intel, this year's overall winner, was presented with a traveling trophy.

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