Measuring ultrashort, exceptionally weak laser pulses: 'TADPOLE' gives FROG a leg up

Highly sensitive 'son of FROG' technique measures short pulses in zeptojoule energy range

By Nancy Garcia
California Reporter

Rick Trebino and his fellow researchers have leaped from their quick light-measuring method FROG to a "son of FROG" method a billion times more sensitive that they call TADPOLE.

TADPOLE can catch flickering wisps of light that last only one millionth of a millionth of a second (a picosecond) and that are so weak that each pulse averages less than a single photon.

"It's about as ephemeral an event as you can imagine," says John Sweetser, a postdoctoral employee in Rick's lab at the Combustion Research Facility at Sandia/California.

Rick and other members of Diagnostics and Reacting Flow Dept. 8351 got a leg up on FROG after learning about spectral interferometry, a somewhat obscure way to measure the differences between light pulses, developed by a French research team a few years ago. John's thesis adviser, Professor Ian Walmsley of the University of Rochester, suggested applying this approach to FROG during discussions with Rick at a scientific meeting.

"Many researchers are now using FROG to measure their pulses, but a number of people have been pestering us at conferences to develop a technique about 100 times more sensitive than FROG," adds David Fittinghoff, another postdoctoral employee in Rick's lab.

The project was tackled in May by Jason Bowie, a physics graduate student from the University of California at Berkeley, who worked with Rick's group for the summer. Since large pulses can be measured by FROG (which stands for Frequency-Resolved Optical Gating), it made sense to call the measurement of small pulses TADPOLE (for Temporal Analysis by Dispersing a Pair of Light E-fields).

"This catchy acronym not only accurately reflects the physics of the technique, but it also helps people to remember the idea," Bowie says.

FROG provided a breakthrough in light measurement by combining approaches from three fields as disparate as astronomy and music to detect the strength and wave patterns of the briefest events people can create, ultrashort pulses of laser light. Since these pulses are thousands of times shorter than can be measured by any electronic devices, FROG uses the ultrashort pulse itself as a measuring tool.

Measures colors of light 'slices'

A FROG assembly measures the colors of temporal "slices" of the ultrashort laser pulse. First, FROG divides the pulse to create two replicas of the pulse and uses a maze of mirrors to cause one replica to arrive at a nonlinear medium before, during, or after the other replica. The nonlinear medium reacts to the replicas by producing a "slice" of the pulse when the two replicas actually have some overlap in time. FROG then measures the colors or spectrum of each "slice." How this spectrum changes with the time delay between the pulses reveals the intensity and color (or frequency) of the

(Continued on page 3)

Sandia National Laboratories

Sandia LabNews

Vol. 48, No. 2 January 19, 1996

SEEN AN H-BOMB ANYWHERE? — The damaged casing of Palomares "bomb number four," on display at the National Atomic Museum along with the casing from bomb number one, brings back memories for Labs retiree Randy Maydew, who played a key role in helping find the sunken B28 hydrogen bomb after the January 1966 midair collision of an Air Force tanker and B-52 bomber. Those familiar with the so-called "Palomares incident," the most severe accident involving US nuclear weapons to date, don't know whether the damage to number four was caused during the air collision or by its impact with the sea floor. Wednesday was the 30th anniversary of the historic accident. See story on page 4.

Labs approves more than 120 Voluntary Separation Incentive Program requests

The first round of notification letters went out last week to scores of Sandia employees informing them that their Voluntary Separation Incentive Program (VSIP) requests had been approved. As of *Lab News* press time this Wednesday (Jan. 17), the VSIP requests of more than 120 Sandians had been accepted.

Meanwhile, hundreds of other employees waited for news regarding their applications for the incentive. Altogether, 533 Sandians submitted VSIP requests to the Human Resources organizations in New Mexico and California by the Jan. 4 deadline. Some employees took advantage of the one-week grace period and rescinded their applications before Jan. 11.

"VSIP applications from impacted employees alone may resolve about two-thirds of the . . . impacts."

The following chart shows the final number of VSIP requests that remained after the rescission deadline:

	NM	CA	Total
Impacted	221	46	267
Nonimpacted	201	32	233
TOTAL	422	78	500

As the chart shows, 267 of the 500 final requests were from employees identified as members of impacted peer groups — meaning Sandia intends to reduce the numbers of people working in those job functions. Through its three-step Workforce Realignment Plan, the Labs has identified a total of 327 impacted positions that no longer meet current or anticipated work requirements. The VSIP is an incentive program that includes a minimum payment of $15,000 to employees who agree to leave Sandia. (See the Oct. 27 and Dec. 15

(Continued on page 6)

This & That

More peeves – Here are more pet peeves submitted by Sandians. Most are condensed or excerpted. Exact words and quotes are shown in quote marks.

• People who leave garbled phone numbers and names on voicemail, making it nearly impossible to return a message. "Also, if you have an 'urgent' message, give a heads up on what the urgency is."

• People who send you anonymous criticism. "If you care enough to offer opinions or advice, have the guts to send your name with them!"

• Buzzwords. A recent (un)favorite is "optics" for "appearances." Example: "It might be a good decision but the optics are bad."

• The signs in some Sandia men's rest rooms reminding us to "Please Flush." ". . . apparently, most of my fellow bathroom users are not blessed with indoor plumbing at home, so they need a sign to remind them to use the handles near the porcelain conveniences."

I have more for future issues, and I'm still accepting new ones.

* * *

Top techies – We begin publishing photos of Sandia's new Distinguished Members of Technical Staff (DMTS) in this issue. Because this is a "two-year crop" of 81 folks and space is limited, we're publishing about half of the DMTS photos and citations in this issue and the rest in the Feb. 2 issue. Since some cash accompanies the DMTS awards, I hear my friend and new DMTS Jerry Smith (1564, in next issue) may use some bucks to replace several pairs of his 1970s pure polyester golf pants. Those classics are getting much too valuable to wear, he says.

* * *

Get in your two cents' worth – Your opinions count, but only if you voice them, or in this case, put them in writing. All employees will get a chance next week to complete the new "Sandians' Perspectives" survey (also known as the "Stanek survey"). Several major improvements have been made at the Labs as a result of the previous surveys in 1991 and 1993. Read about the new survey on page six.

* * *

What's upper management up to? – Bruce Hawkinson (12620) has some new communication duties now that Radio Sandia is no longer broadcasting. Among these duties will be regular reports about issues the Sandia Quality Leadership Council (SQLC) discusses. These days, Sandia management wants employees to know what it's doing – well, in most cases, anyway. You can access Bruce's SQLC meeting reports (issued about every two weeks) in two ways: (1) on the Internal Web Hot News page, in the special employee news and announcements section, and (2) on Sandia Line, where SQLC reports are part of the "Route 66" information highway, updated several times a week. Why Route 66? Because one of the ways to reach the reports and news items is by punching 66 anytime you're checking your voicemail. Another way is to dial 284-INFO.

* * *

Five hundred happy feet – Thanks to many generous Sandians and to a $1,000 contribution from Lockheed Martin, the Labs' Shoes for Kids campaign provided new shoes to about 250 needy Albuquerque youngsters in December. The nearly $6,250 in contributions (a record) bought shoes for kids at six different Albuquerque-area elementary schools. Sandians have been contributing to this great program for more than three decades.

– Larry Perrine (845-8511, MS 0129, lgperri@sandia.gov)

Sandia-led task force proves high value of low-residue soldering

A government-industry task force organized and managed by Sandia has confirmed that low-residue soldering processes are saving the electronics industry time and money while reducing pollution.

Texas Instruments reports that since it received permission to use low-residue soldering for work done under more than 60 military contracts, it has reduced its materials processing costs for printed circuit boards by 96 percent. Texas Instruments was one of nine companies and military organizations that collaborated with DOE in the task force evaluation.

Conventional processes for soldering printed wiring boards use an activated rosin-based flux prior to soldering to remove oxidation. Oxidation also is prevented by doing the soldering in a sealed nitrogen chamber. The rosin-based flux leaves a tacky residue that previously was removed with ozone-depleting chlorofluorocarbon (CFC) solvents. It has been estimated that solvents used to clean electronic equipment accounted for 24 percent of the consumption of CFCs in the United States.

Low-residue processes eliminate the need for these CFC cleaning solvents by using a mild organic acid as the fluxing agent. These organic agents, such as the common food additive adipic acid, leave little residue and require no cleaning.

When the Low-Residue Soldering Task Force was organized in 1993, low-residue processes were being used for commercial applications, but the Department of Defense required that use of the low-residue processes to manufacture military equipment be negotiated on a contract-by-contract basis. The task force was charged with evaluating these processes for general use in manufacturing military electronic components.

Sandia researcher Ron Iman (6613) chaired the task force, which comprised 17 core members and a team of more than 100 people from 17 companies, three military services, and 12 laboratories and technical centers.

Sandia has been collaborating with industry in researching environmentally friendly soldering processes for several years. Ron says the task force built upon this research and research by other organizations in evaluating the low-residue processes.

Sandia LabNews

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LOCKHEED MARTIN

Sandia News Briefs

Sandia-developed 'active seat' offers relief for wheelchair users

Sandia-developed technology forms the core of the "Generic Total Contact Seat," a new assistive device designed to prevent pressure ulcers in wheelchair users (*Lab News*, Oct. 13, 1995). The treatment of pressure ulcers costs an estimated $5 billion a year and causes untold human suffering. The seat, unveiled to the public last week, will be produced and marketed by Numotech, a California company specializing in advanced health care products. The Generic Total Contact Seat incorporates microactuators, microprocessors, and an on-board advanced power supply to sequentially inflate and deflate different sections of a wheelchair seat cushion. This "active" seat has been shown in clinical settings to cure existing pressure ulcers without surgery and to prevent new ones from forming. In addition to its wheelchair applications, the technology may find use in the trucking and airline industries to help with fatigue and back or leg problems. The work on the active seat was done through a cooperative effort among Sandia, the University of New Mexico, and Laguna Industries. The effort was part of a DOE-funded program, the New Mexico Technology Deployment Project.

Dave Braudaway named to chair IEEE Awards Board

Dave Braudaway of Primary Electrical Standards Dept. 1542 has been named Chairman of the Institute of Electrical and Electronics Engineers (IEEE) Awards Board for 1996. The board reviews the selections of the major medals committees and field awards committees in IEEE, coordinates honors and awards ceremonies, and reviews and recommends awards policy. Dave has also been recognized by the Instrument Society of America (ISA) for his part in production of the ANSI/ISA-SP82.01, Safety Standard for Electrical and Electronic Test, Measuring, Controlling, and Related Equipment. The standard is identical to international standard (IEC 1010-1) but adds the exceptions necessary for North American practice. The exceptions were prepared by the US and Canada to produce one of the first North American Free Trade Agreement (NAFTA) standards.

Send potential Sandia News Briefs to Lab News, *Dept. 12622, MS 0413, fax 844-0645.*

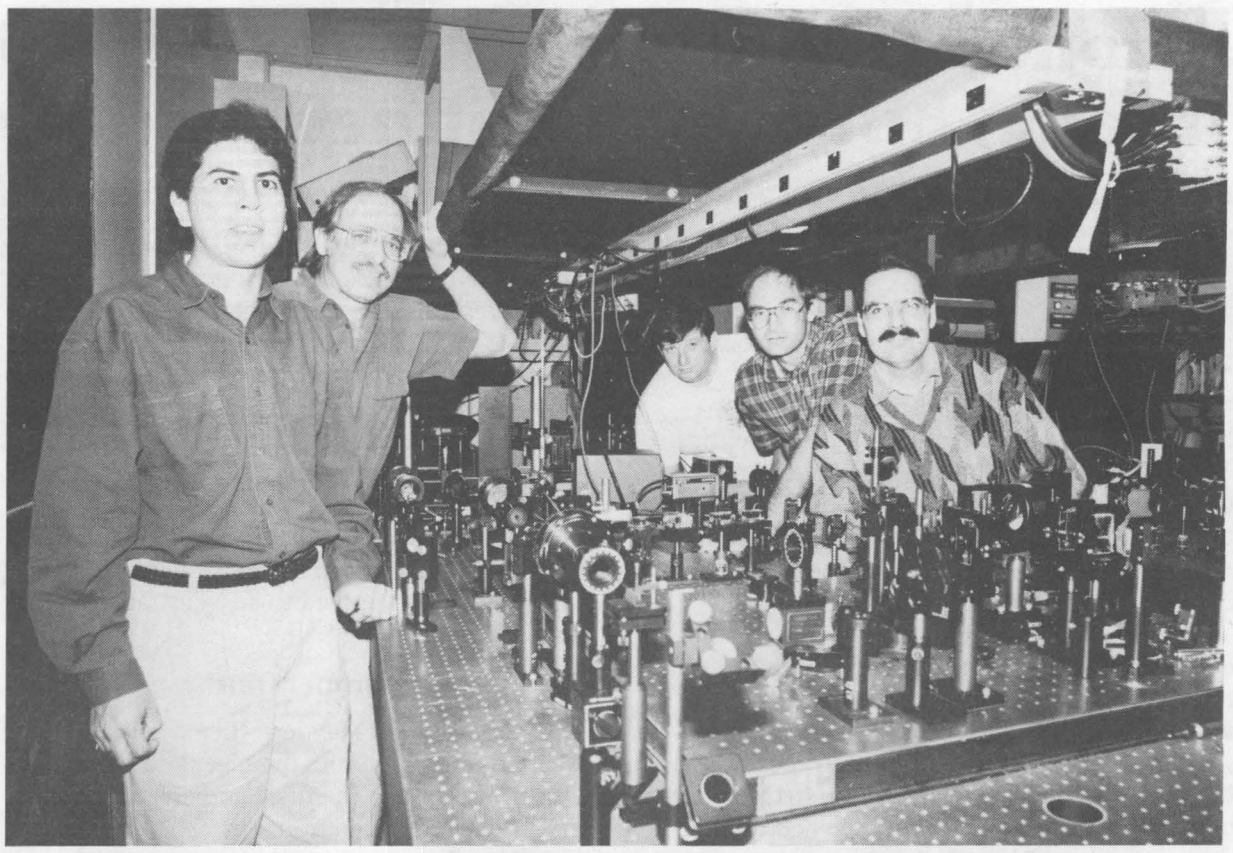
Light pulses

(Continued from page 1)

initial pulse. Before Rick developed FROG with Ken DeLong of Dept. 8351 and Daniel Kane of Los Alamos National Laboratory, methods for characterizing an ultrashort laser pulse were incomplete or more involved.

FROG borrows its experimental methods from optics, its concept from acoustics, and its mathematical underpinnings from the approach used to deblur pictures from the Hubble telescope. "The realization that all three of these diverse fields would work together was quite a coup for Rick," David says. "Who would have imagined that making a musical score of a light pulse would be the key to measuring it? Or that astronomical imaging mathematics would also play an important role?"

Spectral interferometry is simple and highly sensitive because it relies just on measuring the interference spectrum produced by two pulses entering a spectrometer at slightly different times. Spectral interferometry by itself, however, only measures the difference between two pulses and cannot characterize a pulse. To actually use it to measure a weak pulse requires a more powerful reference pulse. TADPOLE involves combining a FROG measurement of the reference pulse and a spectral interferometry measurement of the difference between the reference and the unknown pulses. That comparison completely characterizes the unknown pulse. It also enhances FROG's sensitivity roughly a billion times.



THE LIGHT FANTASTIC — Measurements of the most ephemeral flickers of light imaginable were made possible through work conducted on some of this equipment by, left to right, Jason Bowie, Rick Trebino, Rich Jennings (contractor technician), John Sweetser, and David Fittinghoff.

Only a few zeptojoules

TADPOLE was able to measure an unknown pulse that was just 160 zeptojoules. (Zepto is prefix meaning 10^{-21}. A single photon, a packet of light, has an energy of 200 zeptojoules, or 200 x 10^{-21} joule). "Most people don't know what a zeptojoule is," John says. "We had to look it up. We initially wanted to measure pulses that were 1,000 times weaker than possible with FROG, but these pulses overwhelmed our detector, so we started attenuating them. In the end, we found we could attenuate by a factor of a billion."

This result was recently presented as a postdeadline paper at the Optical Society of America annual meeting, and an article about TADPOLE has been requested by *Optics and Photonics News*.

TADPOLE is useful to researchers who need to modify laser pulses to specifically excite parts of a molecule to drive chemical synthesis, or who want to efficiently transmit electronic communications thousands of miles through fiber optic bundles, or who predict behavior of semiconductors and other advanced materials by studying their response to laser light.

"Ultrashort pulses are the fastest events mankind has ever created," Rick says. "They're less than one-millionth of one-millionth of a second long. In chemistry and engineering there are many really fast events. It turns out it's really important to measure ultrashort pulses for many applications."

In one application, TADPOLE has helped a laboratory-directed research and development project in which Rick and David are developing a noninvasive and potentially quicker way to characterize optical fibers that transmit polarized light for telecommunications and other applications. Rather than study a fiber cross-section, the pair is scattering light off the surface.

Most of the work, which is subject to a continuation patent application on the FROG process, has been funded by the DOE's Office of Basic Energy Sciences. Rick primarily credits the success to combining ideas from diverse scientific disciplines.

"I have a lot of interests," he explains. "It pays off, usually. Creativity has been defined as the bringing together of two disparate things. That's how we've been able to solve these problems.

"The more we learn about accomplishments in other fields the more impressed we are with their potential impact elsewhere," he adds.

Sandia CaliforniaNews

LEAP campaign collects $159,500

Nearly 800 Sandia/California employees responded to the 1995 LEAP (Livermore Employees Assistance Plan) campaign by pledging $159,500 to 33 selected charitable organizations throughout the Bay Area and Central Valley as well as the United Way, Tri-Valley Community Fund, and Combined Health Appeals.

The campaign among employees has been conducted every year since 1969 and has totaled more than $2.4 million during its 26-year history.

For the past five years a Holiday Spirit gifts drive has been added, in which employees can select the name of a family or individual provided by a local human service agency and purchase specific gifts for them. This year 447 gift cards were picked up, resulting in 761 wrapped packages for families in need. The value of those gifts was more than $10,000. In addition, employees brought in 2,200 pounds of groceries to distribute through the Family Crisis Center in Livermore and Love Thy Neighbor agency in Manteca.

LEAP chair Jane Ann Lamph (12120) was pleased with the results, congratulating employees "on their caring and commitment to these agencies, especially during a time when the need for funds is even greater." She notes, "The average contribution is more than $205 per employee participant; this is up 7 percent from last year's average donation."

Area agencies selected by the LEAP Committee for funding in 1996 include: American Indian Center, Anthropos Foundation, All Seasons Riding Academy for the Handicapped, Awakening, Black Adoption Placement & Research Center, Boy Scouts of Mt. Diablo and SF Bay Area Councils, Buenas Vidas Youth Children's Emergency Council of Dublin, Family Crisis Center, Friendship Center, Guide Dogs for the Blind, Hope Hospice, Horizons Family Counseling, Jobs for Tomorrow, Kaleidoscope Center, and Livermore Association for Guiding & Teaching Students.

Others include Love Thy Neighbor, M-2 Sponsors, Nursery School Scholarship Fund, Parental Stress Service, Project Heritage, School Age Mothers, St. Mary's Interfaith Dining Room, Student Education Loan Fund, Tri-Cities Children's Center, Twin Valley Learning Center, Valley Humane Society, Valley Support Services, Widow/Widowers' Network, 33 Combined Health Appeal agencies, Tri-Valley Community Fund, and three United Way Agencies (Bay Area, San Joaquin County, Stanislaus County). The funds are distributed on a monthly or quarterly basis to the agencies as the employee pledges are collected.

Correction

In a photo accompanying a story about a prototype Phonics Desk in the Jan. 5 *Lab News*, the person pictured in the middle of the photo was misidentified. He is software developer Kurt Berger of Advanced Electronics Manufacturing Technologies Dept. 8250.

Palomares 'bomb number four' — it crashed, it fell, it sank, but (whew!) it never blew up

Retiree recalls Labs' role in mitigating the most severe US nuclear weapons accident to date

By John German

Lab News Staff

The saga began 30 years ago this week, at 10:22 a.m. on Jan. 17, 1966.

An Air Force KC-135 tanker and a B-52 bomber collided during an in-flight refueling operation 30,500 feet above the Mediterranean coast of Spain. The collision killed all four tanker crew members and three of the seven bomber crew members. Four of the bomber's crew parachuted to safety.

What captured the world's attention that day were the nukes. Aboard the bomber were four B28 thermonuclear weapons, three of which fell with the wreckage and were located soon after the crash near the small coastal town of Palomares. But one of the hydrogen bombs, "bomb number four," seemed to have disappeared, and US officials had little information about where it might have fallen — or whose hands it might fall into.

Within hours the Defense Department began to investigate the accident and attempt to recover the weapons. It set up a recovery operation code named "Broken Arrow," the official designation for any operation involving a missing or damaged US nuclear weapon.

And it began to recruit the help of people who knew something about B28s. One of the first outfits it turned to was Sandia, which had designed not only the nuclear ordnance system for the B28 but the parachute system as well — a capability that proved to be a key factor in locating the missing bomb.

Pinpointing number four

Retiree Randy Maydew, then a Sandia weapons aerodynamics manager and parachute expert, was one of the first Sandians to become involved in the operation.

"Alan Pope [ret.], my supervisor . . . answered an urgent telephone call from Jack Howard, the Assistant to the Secretary of Defense, on Saturday, January 22, 1966," writes Randy in a National Atomic Museum booklet about the incident. "Jack asked Alan if he had seen the James Bond movie *Thunderball*, a popular film concerning a missing nuclear bomb. When Alan said he had seen it, Jack replied, 'Good. We need your aerodynamics help in locating a B28 thermonuclear bomb that has been missing since [the collision on] January 17.' "

Randy quickly organized a team to make trajectory calculations over the weekend on Sandia's IBM 7090 computer. (See "Other Sandians played various roles in the Palomares recovery effort" below.) Based on those calculations, weather data from the time of the crash, and the assumption that number four's parachute system might have deployed, at least partially, Randy's team was able to advise the Air Force that the missing bomb was probably swept out to sea by high winds. But where, who could tell?

US officials had little information about where the bomb might have fallen — or whose hands it might fall into.

Randy was both intrigued and apprehensive about the assignment, he recalls, apprehensive because "the military officers in charge of the recovery expected us to pinpoint exactly where the bomb had landed at sea. Precisely spotting the point where the H-bomb went into the ocean was impossible because there were too many uncertainties. We did not know exactly where the accident had occurred, what were the magnitude and direction of the winds, or which, if any, of the B28's parachutes had opened."

A forked stick

During the next several days, as the Air Force gathered better information about the crash and weather conditions, the Sandia team honed its estimates of number four's splashdown point, transmitting them by secret telegraph to Gen. Delmar Wilson's 16th Air Force staff on the scene in Palomares. But the communications proved slow and cumbersome. Gen. Wilson asked Randy to come to Spain.

"With a single day's notice, I left for Spain on January 28," writes Randy. "As I departed, my friend Bob Peurifoy [longtime Sandian and retired weapons vice president] facetiously presented me with a forked stick, like those used by water witches to find underground water."

Almost overnight Palomares, normally a quiet farming and fishing village, had been transformed into headquarters for a major military operation. Hundreds of military personnel had moved in. A tent city, nicknamed "Camp Wilson," sprang up near the beach. The Spanish Guardia Civil patrolled the town. Hundreds of journalists and visitors gathered. Hotels were at capacity.

Randy and other members of the on-scene analysis team began reconstructing the accident using the recollections of the surviving crewmen and eyewitnesses, knowledge of the weapon's ballistics shape, the location of the downed wreckage, and the prevailing air and

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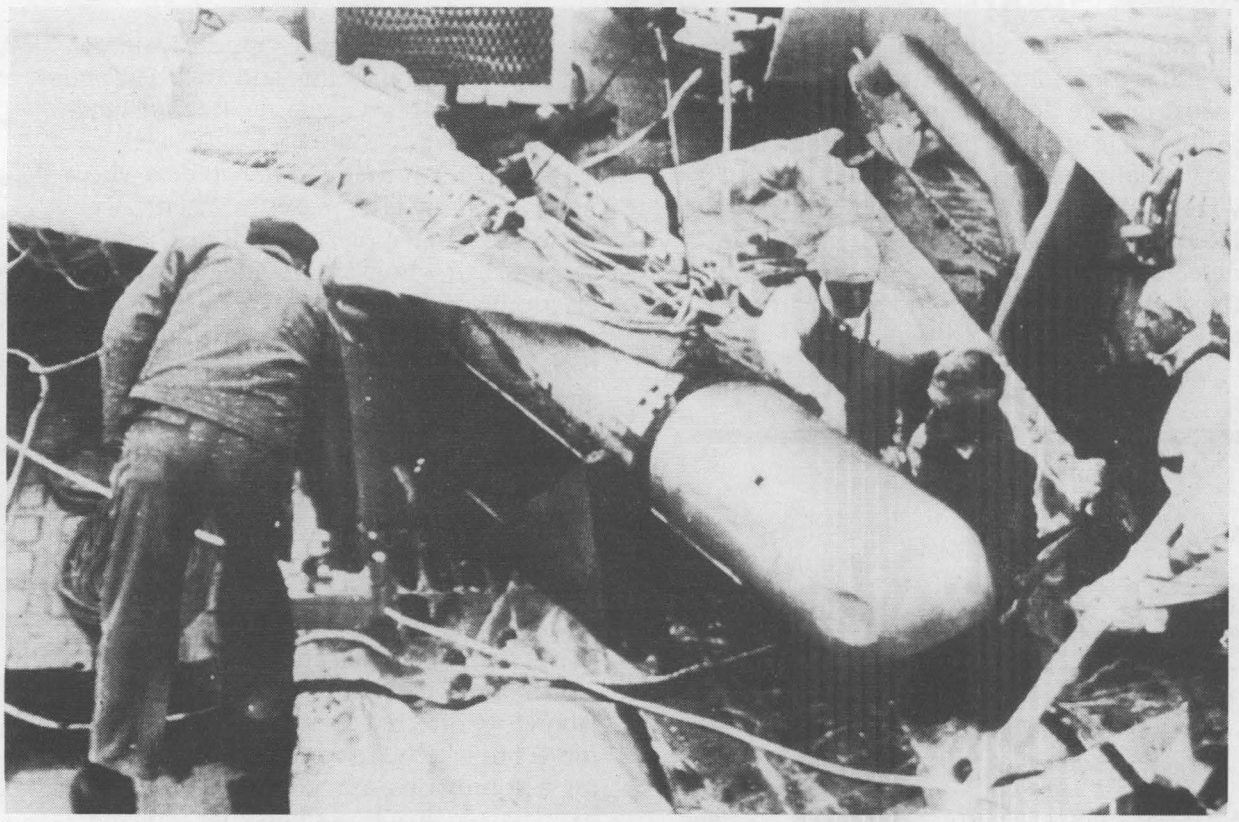


BOMB NUMBER FOUR was hoisted onto the Navy ship *Petrel*'s deck on April 7, 1966, 80 days after the accident. Then-Sandian Stuart Asselin was on-board at the time.

Other Sandians played various roles in the Palomares recovery effort

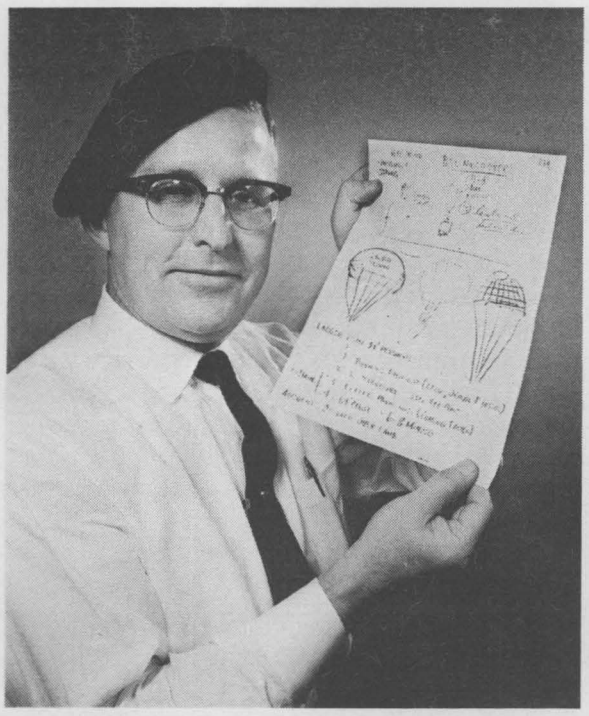
Several other Sandians and Atomic Energy Commission (AEC) personnel not mentioned in Randy Maydew's account were involved in various phases of the Palomares recovery operation. The following then-Sandians were included in an April 22, 1966, *Lab News* article covering the incident.

Stuart Asselin, the AEC's David Hart, and representatives of Los Alamos Scientific Laboratory were among members of a rapid-response nuclear safety team that left Albuquerque for Spain hours after the accident.

Floyd Forsythe (ret.), Sam McAlees (ret.), and William Pepper (ret.) headed Randy's first Sandia-based team that provided initial trajectory calculations to on-scene Air Force personnel. Bill Barton (ret.) and Ira Holt (ret.) performed initial ballistics studies. Bill Barton also replaced Randy in Palomares in early February 1966; Paul Schneider replaced David Hart.

W.R. Hoagland (ret.) named a group of Sandia and Air Force personnel, including Randy, to travel to Spain to perform on-scene ballistics studies. Louis Feltz (now in 5941) created the maps on which the Sandia team plotted trajectory calculations, a challenge, he says, because, "In Palomares they use Madrid, not Greenwich, as the time center of the universe." Bob Reed (ret.) played a role in verifying that Simo Orts' eyewitness account was plausible.

Bill Caudle (ret.), Sam Moore (dec.), Gordo Miller (ret.), and others conducted drop tests at White Sands Missile Range to determine the size and shape of craters caused by impact of certain weapon components, photographs of which aided in ground search operations.



RANDY MAYDEW, posing for *Lab News* cameraman Bill Laskar (ret.) in 1966, displays sketches used by Spanish fisherman Francisco Simo Orts to describe the parachutes he saw from his boat. Randy's black beret was high fashion in Palomares during the bomb recovery operation.

(Continued from preceding page)

water currents at the time of the accident.

"Using reverse trajectory calculations from the impact points of the three B28s and the B-52 engines, we determined that the collision had occurred in the sky at a point two miles west of the coastline," he says.

Even with the best available data, however, the team could only reduce its estimated impact area to about 14 square miles. "This is far too large for an efficient sea search," he says, "and we became discouraged."

Fisherman saw the splashdown

That's when Francisco Simo Orts, a local fisherman, entered the scene. On the day of the accident, Orts had been fishing five miles offshore. He claimed to have seen two parachutes fall into the sea near his boat. The first small parachute he described as carrying "half a man with the insides trailing," which splashed down about 25 yards toward the shore from his boat. The second, larger parachute carried a "stout man," who Orts thought was dead, and took six to eight minutes to float down; it landed about 75 yards seaward from his boat.

"I sketched on a pad the sixteen-foot ribbon parachute and the sixty-four-foot solid canopy for Orts' examination," writes Randy. "He then drew sketches of the parachutes he saw, and these convinced us he had seen the number 4 bomb hit the sea with its sixty-four-foot parachute attached. The 'half man' with entrails dangling obviously was the deployment bag of the sixty-four-foot chute, with packing lines dangling, suspended by the sixteen-foot parachute."

Orts, a skilled navigator, guided a Navy ship to where he thought the bomb had splashed down. The location agreed with the latest trajectory calculations. By Feb. 5, the Navy had defined an "Alpha 1" search area with a radius of one nautical mile. Thirty eight US ships, plus a few suspect Russian "fishing trawlers," joined in the search.

By Feb. 15, three Navy submersibles had begun diving for the sunken bomb. On March 15, the two-man crew of the *Alvin* spotted number four less than a mile from Orts' sighting. It lay on a steep slope at a depth of 2,250 feet, and initial attempts to bring the bomb to the surface resulted in its sliding farther down the slope.

Randy, who was back in Albuquerque, was asked to verify that the wreckage shown in an underwater photo was indeed the missing bomb.

On April 7, 80 days after the accident, number four was lifted, damaged but intact, onto the deck of the Navy rescue ship *Petrel*.

Most severe accident to date

The Palomares incident remains today the most severe accident in US nuclear weapons history, says Randy. Recovering bomb number four alone cost more than $50 million. About 4,000 Air Force, Navy, and Army personnel and civilians participated in the recovery.

Ironically the accident taught the US and Sandia a lot about nuclear safety.

Although the high-velocity ground impacts of two of the Palomares bombs resulted in the detonation of high explosives and the contamination of hundreds of acres of farmland with plutonium dust, Sandia's weapons experts were reassured in the fact that neither the collision nor the ground impacts caused a nuclear detonation. Still, as a result of the accident, improvements were made to the safety of US weapons, including the continued development of insensitive high explosives.

Following the incident, the Spanish government also requested that all US flights over Spain by aircraft carrying nuclear weapons cease immediately. The bomb-laden flights were part of a US plan, operation "Chrome Dome," to keep nuclear weapons aloft at all times; in case of a nuclear attack against the US, Strategic Air Command (SAC) bombers were ready to dispense their deadly cargo over Russian targets within minutes.

In June 1966, President Lyndon Johnson ordered a reduction in the airborne alert status of Chrome Dome to four bombers per day.

For his involvement, Randy received personal commendations from Secretary of Defense Robert McNamara, SAC Commander Gen. John Ryan, and Gen. Wilson.

"Palomares is the most exciting thing that ever happened to me in my 43-year professional life," says Randy. "I was so thrilled when I first saw the [underwater] photo of bomb number four — that was pretty exciting."

* * *

Randy Maydew flew 30 missions as a B-29 navigator from Saipan to Japan during World War II. After receiving BS and MS degrees in Aeronautical Engineering from the University of Colorado, he served three years with the National Advisory Committee for Aeronautics (now NASA) and 39 years with Sandia.

At Sandia, he managed teams responsible for the aerodynamic design of nuclear weapons, parachutes, and rockets. In his retirement, he is pursuing a writing avocation while serving as a trustee of the National Atomic Museum Foundation. He recently published a 3,000-word article in Air Classics *magazine about the history of the B-29.*

The National Atomic Museum booklet by Randy, titled "Recovering the Lost H-Bomb at Palomares, Spain," contains much more technical and anecdotal information about the Palomares incident and is available at the museum store. Randy also is preparing for publication an 85,000-word book with the same title.

THE FISHERMAN, Francisco Simo Orts, helped the Navy locate the sunken bomb.

Feedback

Q: I was shown this communication recently. Is it true? — I had a chat with a member of Sandia Security yesterday. Teen gangs which have made new members rob, steal, and vandalize vehicles in Albuquerque, as a form of initiation, have begun hitting the base. They get on base by taking the bus! Recently, three Sandia Security officers and three USAF Security Police caught six such hooligans who were breaking into cars and stealing radios. This occurred "directly" across Wyoming from the old commissary (north of 800). There have been other incidents. The officer advised that everyone be alert. Pay attention to who you see in the parking lot. Pay attention to who might follow you into the building. Lock your cars. If you see anyone attempting to break into a vehicle, call Security — do not attempt to stop them! If you see anybody or any activity that you are unsure about, call Security — do not attempt to stop them! Remember, many of these gang members carry weapons. Security would rather respond to a false alarm than tag a dead hero.

A: The attached e-mail message came to our attention some time ago and was investigated. We found little basis for the story. In fact, it was a case where a little information got blown considerably bigger. What actually happened was a security police officer told his neighbor, a Sandian, some information concerning an incident that he had only heard about and in which he had no personal involvement. About 18 months ago, two teenage boys, who worked in an Air Force part-time after-school program, were caught stealing a radio from a vehicle and also breaking into another vehicle. A Sandia employee was involved as a witness. The Air Force Security Police apprehended the two boys, and it is unknown to us what happened to them. To the best of our knowledge, the two boys were not participating in any "gang activity." They did ride the bus to work, the boys were not armed, and we have not had any other such incidents reported. We in Security do not feel that "gangs" are coming onto the base as a part of their initiation or to rob, steal, or vandalize vehicles. Although we are concerned about the misinformation regarding this incident, Security does endorse some of the safety tips that are contained in this message. Everyone should always be on the alert when they are in a parking lot. Individuals should lock their doors when they are in their vehicle and lock their doors when they leave their vehicle. Suspicious activities should be reported to Security immediately.

Frank Gallegos, Director 7400

Sandians' Perspective '96 due at mail stops next week

Third survey since 1991 to gauge prevailing employee opinions

Next week Sandia's management would like you to fill in a bunch of little bubbles with a number two pencil. The good news is you won't have to study, and the results could be a better workplace and a more fulfilling Sandia career.

Starting Monday, Labs employees will have their third chance since 1991 to air their general opinions about their workplaces, their management, and Sandia's culture by completing "Sandians' Perspective '96" questionnaires (also known as the "Stanek survey"). And it's a sure bet that the biennial snapshot of employee opinion will result in some significant changes in the way Sandia does business, says Harriet Morgan (3000), the survey's administrator.

"We hope employees will see this year's survey as an opportunity to improve their work lives."

Following the first Sandians' Perspective survey in late 1991, she says, dissatisfaction with Sandia's performance review process resulted in adoption of a new way of measuring job performance at the Labs. Two years later, after the 1993 survey, a crop of new recognition programs was created to reward employees for their good work. And these are just a few of the major changes resulting from previous surveys.

"Employees still may not be satisfied with some of the programs that have resulted from the previous surveys," she says, "but it's clear from the first two surveys that the data are a catalyst for changing many of the problems identified by employees.

"We hope employees will see this year's survey as an opportunity to improve their work lives," she adds.

Takes less than 30 minutes

Sandians' Perspective '96 questionnaires should arrive at employees' mail stops early next week. Unlike in previous years when most, but not all, employees were asked to participate, every Sandia employee should receive a 1996 questionnaire.

Employees may notice that the questionnaire has been updated, says Harriet, with new sections and questions meant to probe employees' thoughts regarding new or evolving workplace issues, such as diversity, customer focus, and cost-consciousness. Most of the new issues were identified in employee focus groups or during interviews with Labs Director C. Paul Robinson and other members of top management.

But the questionnaire essentially covers the same territory as the '91 and '93 surveys so that Sandia can track the evolution of opinions in various categories — from leadership and job satisfaction to performance reviews and benefits. There's also a section where employees may make open-ended comments; those comments will be organized by subject and returned to Sandia along with the quantified fill-in-the-bubbles-type data.

Harriet says completing the questionnaire should require less than 30 minutes.

As always, participation is anonymous and confidential. The survey is conducted by International Survey Research Corporation (ISR), a private business research company located in Chicago. Employees are asked to mail their completed questionnaires directly to ISR, using the self-addressed envelope provided, by Friday, Feb. 16.

ISR then will compile and analyze the results and report back to Sandia's top management in April. (Look for *Lab News* coverage then.) Data will be reported both on a Labs-wide scale and at the division and center levels. To ensure anonymity, no results will be reported for centers where fewer than 20 employees respond.

Sandia's Strategic Human Resources Planning Team, a group made up of director representatives from each division, will then analyze the data, identify root causes, and prioritize needed changes. The data will also be used to compare Sandia to other high-performing companies and R&D institutions.

"The survey is Sandia's primary vehicle for gathering [employees'] concerns."

"The information we gather is important to us because it helps us understand the concerns of employees and lets us direct our resources toward addressing those concerns," says Human Resources VP Charlie Emery (3000). "The survey is Sandia's primary vehicle for gathering those concerns."

Timing may improve response rate

Harriet concedes that recent events — such as workforce realignment and budget uncertainties — have created a lot of insecurity at

(Continued on page 9)

VSIP requests

(Continued from page 5)

issues of the *Lab News* for details about realignment and the incentive.)

Numbers favorable so far

Based on the preliminary numbers of VSIP requests, Human Resources Director Don Blanton (3500) says he is hopeful that no layoffs will be necessary. "It's still too early to tell for sure, but it appears that the VSIP applications received from impacted employees alone may resolve about two-thirds of the total number of impacts," he says.

He says only about 220 of the 267 VSIP requests received from impacted employees are likely to be granted because in some cases more VSIP requests were received from a particular peer group than the number of VSIPs available for that group. In such cases, the applicants with the most years of service relative to the other applicants in the group will receive the available VSIPs. In other cases, the impacts may be resolved through internal transfers.

So far all the VSIPs approved have gone to employees in impacted peer groups. By press time, members of 74 impacted groups had been informed that their groups' impacts were resolved; some 108 impacted peer groups remained.

Once all the VSIP requests from impacted employees have been processed, Don expects that Sandia will still need to resolve approximately 100 impacted positions. To accomplish that, HR will begin to examine the job descriptions of the 233 nonimpacted employees who submitted VSIP requests to determine whether some of their jobs can be filled by impacted employees.

"There are a number of potential matches between impacted employees who didn't submit an application and nonimpacted VSIP applicants whose jobs might be filled by impacted employees," says Don. A nonimpacted employee will be granted VSIP benefits only if his or her departure from Sandia will reduce the size of an impacted group by one.

Employees whose VSIPs are granted will be notified immediately by way of an approval letter from Human Resources. They also will receive a packet that details procedures for leaving Sandia.

Vice presidents of employees receiving VSIPs must provide final approval and determine a termination date for each employee based on work requirements. In most cases, employees receiving VSIP benefits will be required to leave Sandia by no later than April 15. Employees may opt to leave Sandia earlier than April 15, of course, or vice presidents may establish an earlier (or later) date depending on business needs.

In addition, once a group's impacts are resolved, its members will be notified by its manager immediately.

Still some job openings

Karen Gillings, Manager of Staffing Dept. 3535, reiterates that the goal of workforce realignment is not to get rid of 327 people, but to eliminate 327 jobs that no longer meet Sandia's staffing needs through a combination of internal transfers, retraining, and the incentive. "The emphasis is, and has been all along, to get the right people doing the right work," she says. "Zero involuntary separations is the goal."

The Human Resources group has begun serving as a "broker" between managers with job openings and impacted employees who may be able to fill such jobs. More than 200 employees already have attended small-group briefings at which HR specialists provide lists of job requisitions. Impacted employees may call 844-8687 to schedule themselves for a briefing.

Although the initial VSIP numbers look encouraging, says Don, some "involuntary actions," or layoffs, might be necessary if the impacted groups can't be reduced to the desired numbers. Layoff notices will be issued in early-to-mid February to employees designated as "surplus." Surplussed employees who aren't able to find alternative work at Sandia within 60 days must leave Sandia by no later than April 15.

An outplacement service also will be provided to help surplussed employees find new jobs outside the Laboratories. (Watch the *Lab News* for details.)

"Offering the VSIP certainly has reduced the number of layoff notices that might have been necessary without it," he says. "While it's still too early to tell, we are hopeful that the combination of VSIPs being granted, along with internal transfers, will mitigate the need for involuntary actions."

For more information about realignment or the VSIP, call the Employee Development Center at Sandia/New Mexico at 844-3030, 844-1156, or 844-3650. At Sandia/California, call Beverly Kelley at 294-2251 or Holly Stryker at 294-2126.

The *Lab News* will continue to cover realignment-related developments as they occur.

— John German

New Distinguished Members of Technical Staff

81 Sandians achieve highest technical level

An appointment to the level of "Distinguished Member of the Technical Staff" — it is among the highest of accolades a member of Sandia's technical staff can earn. Now, in recognition of their work and their contributions to the success of Sandia's mission over a sustained period, 81 Sandians have been added to the DMTS ranks.

It has been two years since new DMTSs were named. According to Dave Robertson of Human Resources Staffing Dept. 3535, no DMTSs were named last year because there were not enough available slots to justify gearing up the nomination and selection process. By Labs policy, the total number of current DMTSs is limited to approximately 10 percent of the current MTS staff population in each Sandia division. Dave says appointment of new DMTSs had to be deferred until enough vacancies opened through retirements and other departures.

Sandia President and Labs Director C. Paul Robinson says the DMTS appointees represent the best of the best.

"I am always excited to participate in the DMTS selection process," says Paul. "Reviewing the backgrounds and the accomplishments of the DMTS candidates is both inspiring and humbling. The heart of a world-class laboratory is world-class people: there are no better examples than Sandia's Distinguished Members of Technical Staff.

"DMTSs are the top experts in their technical fields, but even more remarkable is that these people are using their knowledge to start new initiatives and programs — they are truly the pioneers who set the new directions for Sandia."

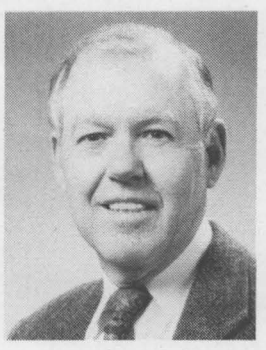
The DMTS program recognizes employees based on several criteria including technical excellence, professional accomplishments, and support of Sandia's corporate values. All non-supervisory Senior Members of Technical Staff with five or more years of Sandia experience are eligible.

All new Distinguished Members of the Technical Staff receive an inscribed plaque (citations appear on these pages with each photo), a pin, and a $4,000 award.

The photos and citations appearing on pages 7, 8, and 9 represent about half the new Distinguished Members of the Technical Staff. The *Lab News* will publish the photos and citations for the other new DMTSs in the Feb. 2 issue.

Beverly Sturgis
2411

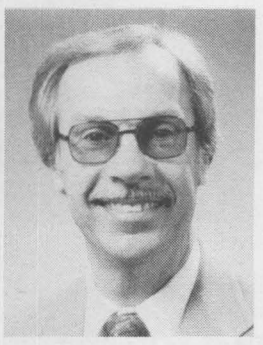
For outstanding contributions in the design, analysis, and evaluation of dynamical systems and for the development of modeling and simulation software as aids in dynamical analysis.



Norman Blocker
5706

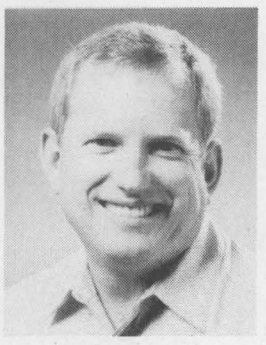
For exceptional contributions to the development, operational support, and laser calibration of satellite sensors for nuclear test ban treaty verification.

James Bruneske
7915

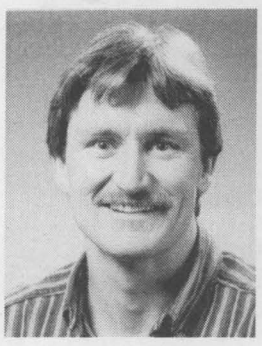


For sustained outstanding performance in facilities structural engineering, team leadership, and project management and for embodiment of Sandia's corporate values in integrity, teamwork, leadership, quality, and respect for the individual.

Rick Spielman
9573



For accomplishments as a world-renowned pulsed plasma physicist, which has made him the best choice to lead the conversion of PBFA 2 into a z-pinch radiation source, which is critical to DOE's Weapon Physics and Stockpile Stewardship programs.



Dean Mitchell
5914

For sustained outstanding performance in developing advanced nuclear spectra analysis methods and associated measurement systems to support programs of vital interest to US security.

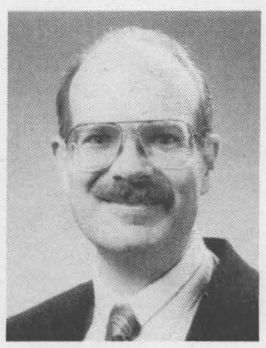
Donna Eaton
4816

For continued contributions in the advancement of Information Science and outstanding leadership and inspiration to colleagues in the development of new information technologies.

Debra Spencer
5861

In recognition of her contributions to Sandia and the nation in the fields of statistical methods, data engineering, physical security technologies, and in the creation of Sandia's criminal justice program.

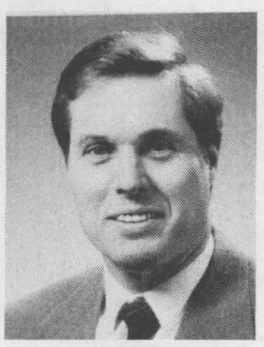
Bill Hensley
2344



In recognition of a rare combination of talents — strong communication skills, hardware and software expertise, initiative, responsiveness, creativity, and the ability to work well with people — which have helped make Sandia a world leader in fine-resolution, airborne synthetic aperture radar.

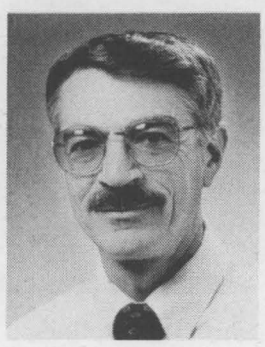
Charles Johnson
5749

For outstanding technical accomplishments in the engineering design, development, and application of telemetry systems for weapons testing and of monitoring systems for international safeguards and nuclear nonproliferation.



Paul Gourley
1112

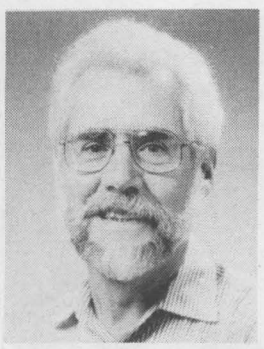
For outstanding contributions to the understanding and application of artificially structured semiconductor materials through the use of laser-based spectroscopies and microscopies.



Philip Federico
5941

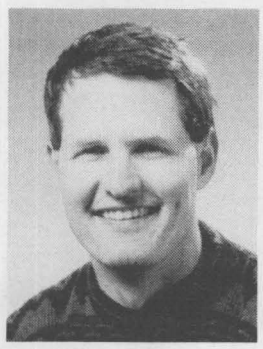
For sustained performance in the oversight and conduct of all-source analyses focused on understanding the effectiveness of and mitigation of nuclear and directed-energy weapons.

Douglas Loescher
12332



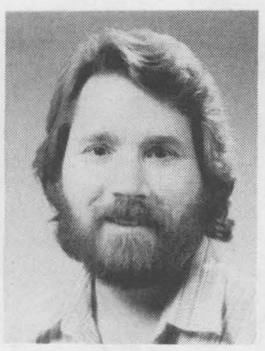
For exceptional contributions in the evaluation and independent assessment of the electrical systems in nuclear explosives, and in the development of electronic components and hybrid microelectronic processes.

Rush Robinett III
2416



For demonstrated and sustained excellence in the areas of dynamics, stability, controls, and systems analyses for aerospace flight systems and robotics while embodying Sandia corporate values.

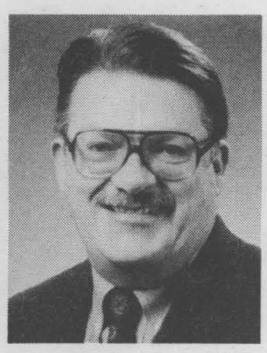
Michael Desjarlais
9541



In recognition of outstanding contributions to the theory of applied magnetic field ion diodes for the nation's inertial confinement fusion program.

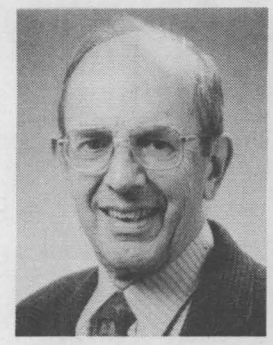
Frederick Yost
1831

For outstanding and original contributions to the materials science of electronic packaging and for efforts to understand, model, and secure optimal electronic reliability.



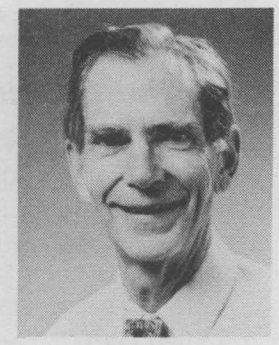
Grant Lockwood
9311

In recognition of outstanding contributions in the areas of electron and atomic physics, photonics, radiation diagnostics, and site remediation research.



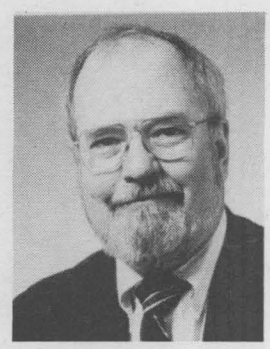
William Chambers
6751

For increasing staff productivity through innovative application of computational tools to electron microanalysis and computer networking technologies.



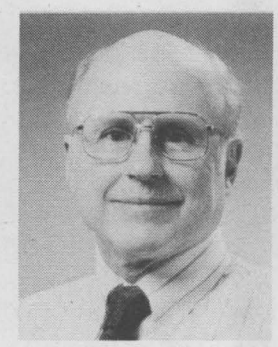
Sharla Bertram
6747

In recognition of continued outstanding contributions to the safe geologic disposal of high-level and transuranic radioactive wastes.



Richard Adams
4545

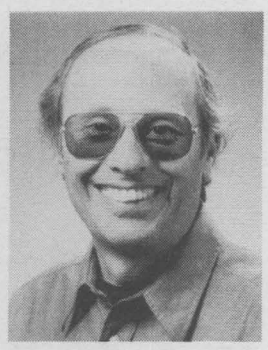
For leadership of the Independent Assessment Project and for 25 years in the leadership of nuclear weapon component design, development, and production liaison.



Robert Anderson
1812

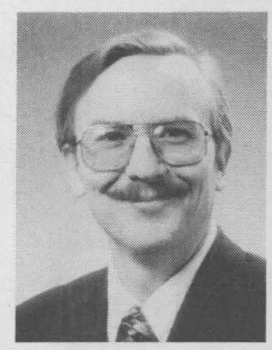
For seminal contributions to the understanding of high voltage breakdown phenomena and the creative application of this understanding to important problems in neutron generator design and performance characterizations.

Spencer Nelson
4617



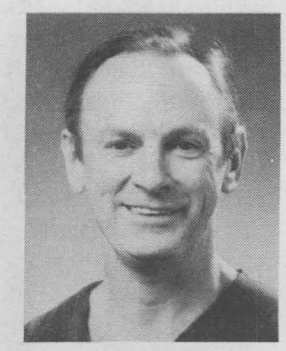
For sustained quality systems work in understanding and meeting customer network requirements, improving computer network designs and implementation, analyzing and improving network operations, and demonstrating continuous technical excellence in distributed computing and data networking.

John Rowe
9409

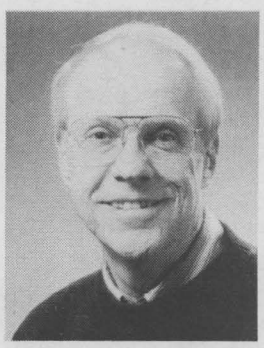


For sustained technical excellence in the analysis, design, development, and delivery of quality engineered ground systems for Sandia satellite payloads; for creating state-of-the-art software practices that benefited software developers within the Center and throughout the labs; for being a paragon for advanced software systems developers at Sandia.

John Shelnutt
6211

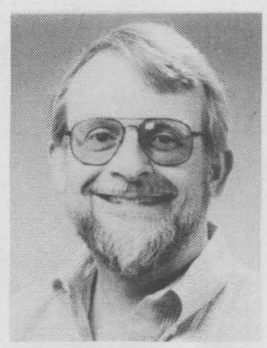


In recognition of exceptional initiative, teamwork, national leadership, and creative contributions in computer-aided molecular design, Raman spectroscopy and theory, molecular structure of metalloporphyrins, and catalysis, and a sustained high level of internationally recognized scientific publication in these research areas.



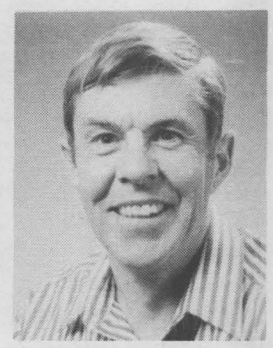
Paul Thompson
5912

For sustained outstanding contributions to the field of signal processing for synthetic aperture radars and other remote sensing systems in support of significant national programs.



Timothy Trucano
9231

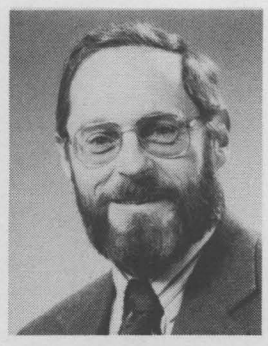
For outstanding research in the field of shock physics, for support of Sandia's missions, and for mentorship of new Sandians. His knowledge, productivity, integrity, and high standards of quality are an inspiration.



Michael Butler
1315

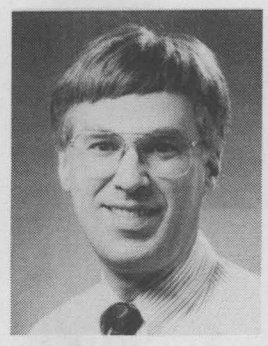
For sustained technical excellence, innovation, and contributions to the field of sensor science, including basic research, prototype development, customer interfacing, society leadership, and mentoring of developing researchers.

Barry Spletzer
9611



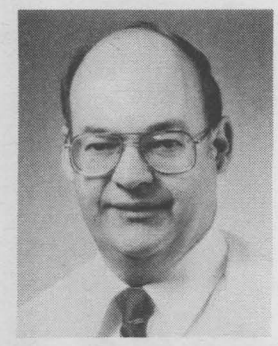
In recognition of his technical creativity, competence, and sustained exemplary performance. His broad technical expertise combined with flexibility have enabled him to make significant contributions in a wide range of technical disciplines.

William Drotning
9671

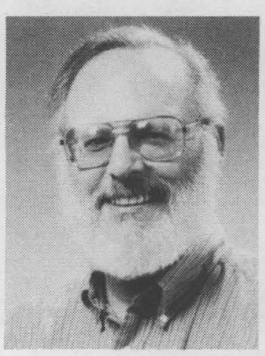


For distinguished technical contributions to Sandia programs through development and application of advanced sensor and real-time computer technologies to the fields of sensor-based intelligent robotics systems and thermophysics.

John Hohimer
11500

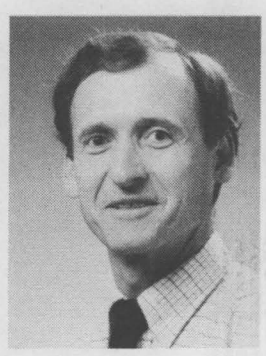


For leadership in establishing Sandia capabilities for fabrication and characterization of diode laser devices; his imaginative contributions in lasers and spectroscopy have brought increasing recognition to Sandia's photonics program.



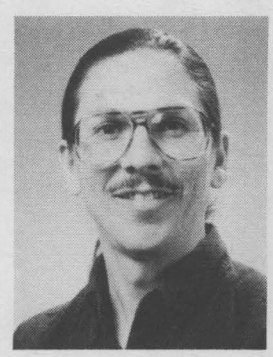
Thomas Mancini
6216

In recognition of outstanding, sustained contributions to, and serving as a national and international resource for, the development of solar concentrators and solar thermal electric systems.



Edward Thomas
12323

For exceptional contributions to the development of new chemostatistical methods and their implementation in nationally important areas such as the noninvasive measurement of blood chemicals.

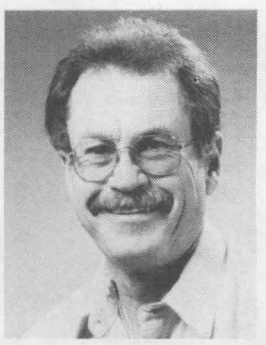


T. D. Raymond
1128

For continued excellence in the field of solid-state laser research, for exceptional capability in team-oriented programs, and for promoting and inspiring the efforts of co-workers.

Vernon Willan
2167

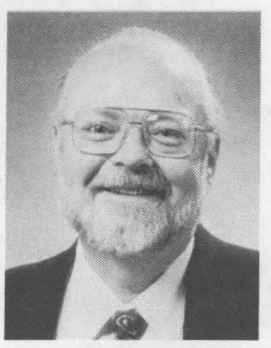
In recognition of outstanding technical and programmatic contributions to multidisciplinary use-control activities and Sandia weapon system engineering projects, and for dedication to providing exceptional quality.



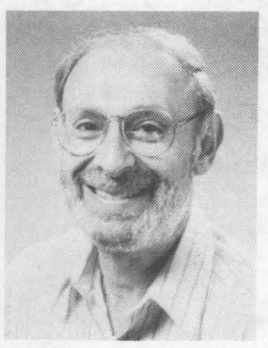
Jerry Love
2336

For continued engineering excellence and pioneering efforts in weapon subsystem development and biomedical technology.

Lawrence Choate
2151



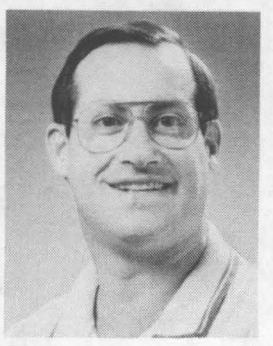
For sustained excellence in support of nuclear weapons development, particularly in the areas of radiation effects, analysis, and evaluation; in the development, management, and operation of radiation simulation facilities; and for contributions to stockpile stewardship.



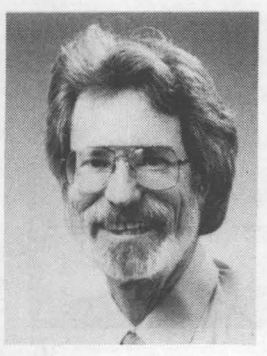
Morton Lieberman
2418

For repeated outstanding technical and project managerial leadership of emerging areas of opportunity for Sandia.

Elmer Klavetter
7585



In recognition of outstanding technical contributions in the areas of unsaturated-zone hydrology, instrumentation development for jet fuel thermal stability, development of coal hydropyrolysis processes, and development of radwaste separations processes.



Thomas Barger
5931

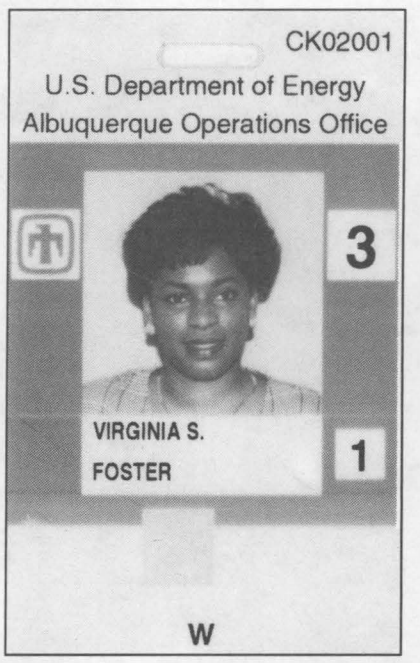
For successful integration of the disciplines of electrical engineering and computer science leading to unique technical insights into nationally important security and safety assessment issues.

New DOE/Sandia standard badge intended to simplify intersite visits

Changeover at Sandia/New Mexico runs from March through June

Something close to the heart of every Sandian is about to change: Between March and the end of June, everyone at Sandia/New Mexico will be issued a newly designed standard DOE badge that will allow quicker and easier access to all sites within the DOE complex.

The practical advantage of the change, says Melanie Florez (7437), is that the new badges will allow DOE clearance holders access to areas "inside the fence" within the DOE complex without the process of lead-time notification, paperwork, special additional badges, and other sometimes complicated steps now required on intersite visits.



The change will make such visits as simple as intersite visits now are for employees from Sandia, Los Alamos, Lawrence Livermore, Pantex, AlliedSignal, and DOE. Those visits are made easier by reciprocal badge agreements. Introduction of the standard DOE badge will eliminate the need for such agreements.

"The new badges will make all DOE-site visits that simple," says Melanie.

The new badges will all be dark green, with the holder's photo and name in the center, a small Sandia logo to the upper left of the photo, clearance level ("3" for a Q, "2" for an L, and "1" for uncleared) indicated in a small box to the upper right of the photo, and employee type (blank for federal employee, "1" for contract employee) in a smaller box beneath the clearance level.

The current Sandia badges — light green for Q-level clearances, peach-colored for L-level clearances, and red for uncleared employees — will no longer be issued.

Fewer special access codes

Special access codes will remain in a white area at the bottom of the badge, but Melanie says the number of designators has been reduced from 14 to six. Those being retained are A for all areas (small staff); G for Bldg. 809; M for mail carriers; N for Central Computing Facility; W for nuclear weapons data; and Y for Bldg. 808.

"This is not just an arbitrary change for change's sake," says Melanie. "The new standard badge is mandated by DOE Order 5632.1C and Secretary Hazel O'Leary."

In New Mexico the changeover begins in March and will be completed by the end of June. During that time, everyone will be scheduled for a visit to the new badge office in Bldg. 800, says Bob Baca (7437).

"During those four months, we'll be rebadging about 12,000 people," he says. "It's a good thing we were able to enlarge and rearrange the badge office before undertaking a project of this size."

Because of some access differences in California, including a more extensive automated system, says Ed Diemer (8812), the changeover there is tentatively scheduled for the second quarter of FY97, although planners hope it can be accomplished sooner.

Ed says the California site badge office, in Bldg. 911, is scheduled for renovation and the badge office will be moved to temporary quarters between Bldg. 912 and the Combustion Research Facility, and may still be there when the changeover begins.

Because of differences between the two sites, he says, planning has been under way for about a year and a half. "The project has involved seven teams," he says, "three common to both sites and two each that are site-specific to California and New Mexico. It has been a much more complicated process than it might appear on the surface."

About 6,000 Sandians had heard briefings on the changeover through the end of the year. New Mexico Sandians interested in scheduling an organizational briefing on the new standard badge before the changeover process begins should call Ann Marie Griego (7402) at 845-9207; California Sandians should contact Gayle Allen (8811) at 294-3238.

As an additional reminder, a Security Brief with a chart showing new badges will be sent to Sandia managers next month.

Questions about the badge changeover from Sandia/New Mexico should be directed to Melanie at 844-3668; questions from Sandia/ California, to Cathy Fernandes (8811) at 294-3071.

Survey

(Continued from page 6)

Sandia that may influence some employees' responses to the survey. But she points out that the two previous surveys were conducted during uncertain times at Sandia as well. The 1991 survey occurred shortly after the Cold War's end and at a time of significant cultural upheaval at Sandia. The 1993 survey came when Sandia was at a juncture between two management and operating contractors, AT&T and Martin Marietta, for the first time in its 50-year history.

And the timing of this year's survey may boost the response rate if many employees use the questionnaire as a mechanism for expressing their thoughts, positive or negative, she says. In previous surveys, roughly 49 percent of employees returned completed questionnaires. That's average for an 8,000-person survey, she says, but Sandia could do better. (Lawrence Livermore got a 68 percent response rate on one recent survey.)

She hopes each employee will "take a few quiet minutes at work" to think about his or her workplace and to answer the survey questions "as thoughtfully and as candidly as possible."

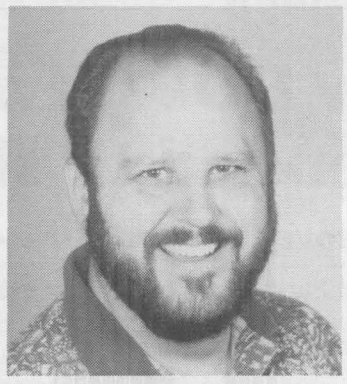
"There is no substitute for the data that is compiled from your shared opinions," said Paul Robinson in a recent letter to employees urging them to participate. "This is your opportunity to help us sort out what works and what does not work. You have my personal commitment that we will digest and use the views you provide."

For more information, contact Harriet at 845-8204 or Phyllis Owens (3526) at 245-9307.

— John German

Mileposts

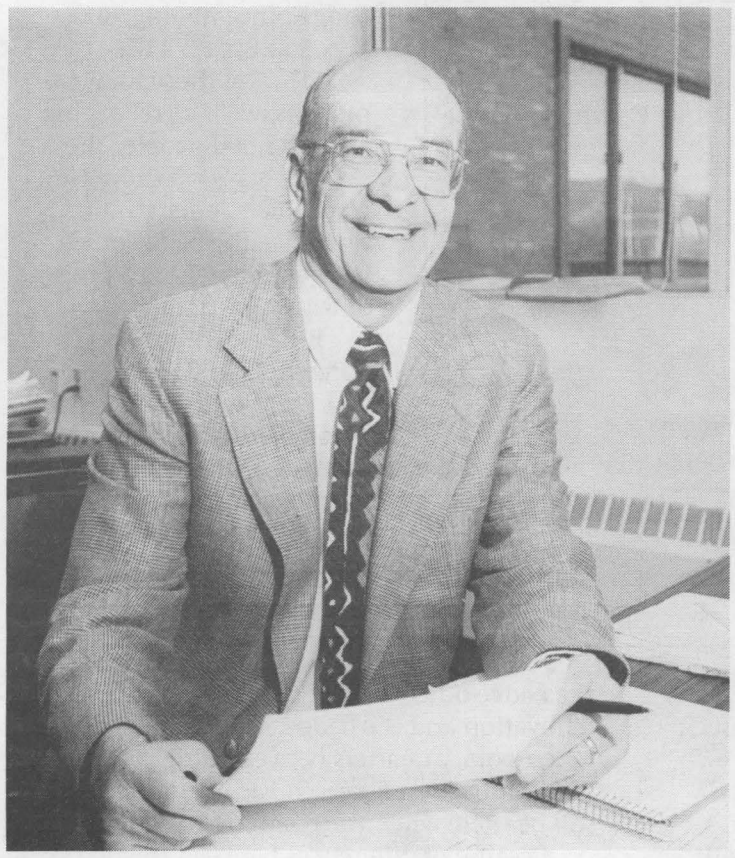
January 1996



James Berry 15yrs
8930

James Provo 35
14482

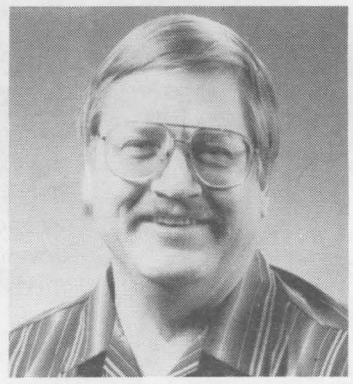
Esther Welp 15
7437



Richard Craner 35
7447

Lance Gordon 20
4412

Carolyn Olona 15
3333



Bert Tate 20
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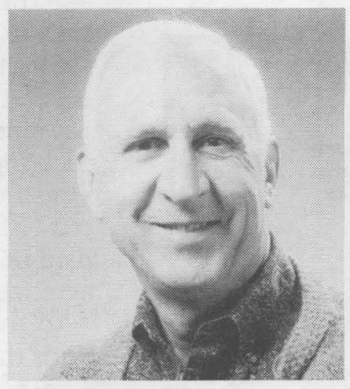
Fred Trussell 15
12334



James Muir 30
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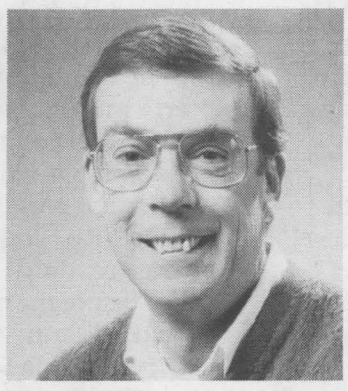
Joann Herrera 15
4412

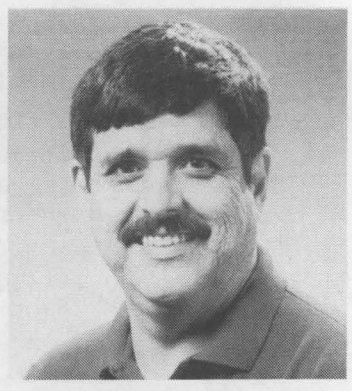
Jeanne Bando 20
1823



Frank Wyant 15
6403

Pamela Seigal 20
1333

Suzanne Weissman 15
6000



Paul Brannan 20
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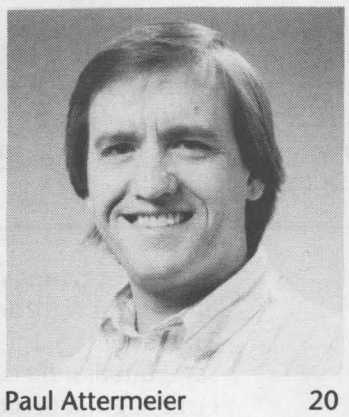
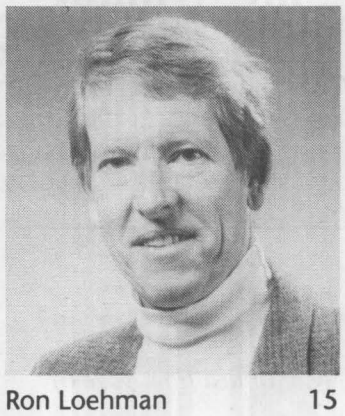
Teresa Jordan-Culler 15
9115



Paul Attermeier 20
9427



Ron Loehman 15
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Norman Brown 30
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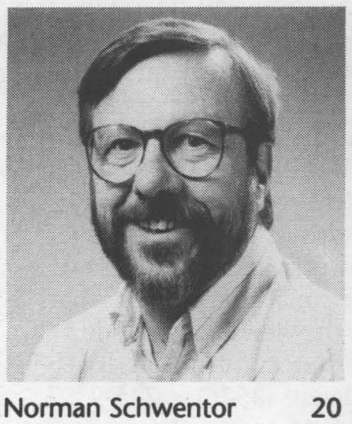

Norman Schwentor 20
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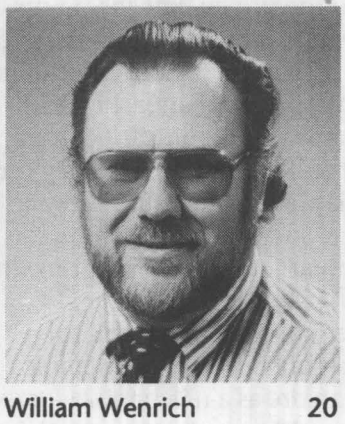
Linda Benavides 15
9601



William Wenrich 20
4421

Sandia Classified Ads

DEADLINE: Friday noon before week of publication unless changed by holiday. MAIL to Dept. 12622, MS 0413, or FAX to 844-0645. You may also send ads by e-mail to Nancy Campanozzi (nrcampa@sandia.gov). Questions? Call Nancy on 844-7522.

Due to space constraints, ads will be printed on a first-come, first-served basis.

Ad Rules

1. Limit 18 words, including last name and home phone (We will edit longer ads).
2. Include organization and full name with the ad submission.
3. No phone-ins.
4. Use 8½-by 11-inch paper.
5. Type or print ad; use accepted abbreviations.
6. One ad per issue.
7. We will not run the same ad more than twice.
8. No "for rent" ads except for employees on temporary assignment.
9. No commercial ads.
10. For active and retired Sandians and DOE employees.
11. Housing listed for sale is available without regard to race, creed, color, or national origin.
12. "Work Wanted" ads limited to student-aged children of employees.

MISCELLANEOUS

CAMPER SHELL, Winnebago, fishing-hut type, 8 ft., $200; Hoola-Coupe walker, $5; child car seat, $15. Bentz, 857-0748.

POWER WASHER MACHINE, Coleman model 1200 Powermate, similar to coin-operated washer, brand new, paid $300, asking $200. Carroll, 298-2827.

AMERICAN ESKIMO PUPPY, female, approximately 6 months, AKC bloodline, all papers, breeding quality, $100. Goodson, 286-1267.

HP LASERJET PRINTERS, "classic," serial and/or parallel input ports, $35-$95 ea. (depending on cartridge toner quantity). Schkade, 292-5126.

GUINEA PIGS, price negotiable; cage & accessories, $40 OBO. Poulter, 291-0607.

AMIGA 3000 COMPUTER, 6MB, 650MB HD, Mac emulator, audio digitizer, music library, Amiga & Mac software, $500. Mora, 281-7137.

DALMATION/LAB CROSS, friendly family dog, 10 months, male, some training, country-raised, likes kids/dogs. Conner, 281-9370.

RUGS: Karastan, 8.8 x 12, corals/navy/white, $500; Oriental green runner, 12-ft., $500; computer desk, $45. Jennings, 878-0828.

EXERCISE BIKE, flywheel type w/electronic display and instructions, $45. Spears, 266-9782.

COMPOUND BOW, complete ensemble, Camo bow, arrows, sights, quiver, releases, arm guard, carrying case, $125. Jackson, 293-0262.

HARD DRIVE, 170MB, Kingston DataPak PCMCIA Type III, purchased in November, $300. Wright, 839-7088.

WOMAN'S SHEEPSKIN JACKET, petite size, new, $450 OBO. Babcock, 299-3121, leave message & phone number.

CAMPER SHELL for full-size pickup; roll-away bed; 2 rabbits, w/hutch. Clements, 828-2741.

BRASS HEADBOARD & FRAME, queen-size, excellent condition, $200. Jones, 235-3648.

COMPUTER, 486/33, 16MB RAM, 200MB drive, 2 parallel, 2 serial, 14.4 modem, 14-in. SVGA, $800 OBO. Bonaparte, 296-4916.

RETRACTABLE IRONING BOARD, hangs on back of door, new condition, $10. Vigil, 271-1328.

MEXICAN CHANDELIER, wrought iron, w/8 hand-blown, amber glass globes, 30-in. diameter, $90. Boast, 821-2930.

ELECTRIC DRYER, Kenmore, $55. Payne, 291-0124.

NOSE BRA, Wolf, good quality, for '86-'89 Honda Accord, used little, $25; new OEM front-brake pads for same, $25. Turner, 281-4264.

FORMAL DINING ROOM TABLE, three leaves, six chairs, matching china cabinet, $750. Raether, 298-7156.

TWO GARAGE DOORS, swing-out, 7' x 8', plus hardware, $25; brass day bed, $65; recliner rocker, blue, $100. Kovarik, 897-2188.

CRIB 'N' BED, Childcraft, honey oak, $350; Graco portable crib, $45; crib bedding; Kenmore washer/dryer, $250. Pregent, 281-1414.

ENTERTAINMENT CENTER, oak, fits 27-in. TV, stereo, VCR, w/drawers, 58"L x 18"W x 54"H, good condition, $250. Yourick, 822-8148.

FOUR FLUORESCENT LIGHT FIXTURES, 4 ft., two-tube, $8 ea.; kitchen range, $10; portable dishwasher, $20. Denish, 256-1559.

ENTERTAINMENT UNITS, VCR/stereo/TV, 3-piece cabinet matched set, oak finish, glass doors, on rollers, excellent condition, $350. Seyfer, 292-0179.

STATIONARY BIKE, Tunturi, $100. Huning, 889-3044.

FIRMFLEX BODY WORKOUT, $75; rowing machine, by Bodytech, $75. Herther, 298-4823.

CANON MODEL 155A SPEEDLIGHT, for parts, other nonworking Canon flash units may be usable. Rodacy, 293-2668.

SHELF UNITS from Chev. van, 42" x 47" x 12" & 72" x 46" x 12", lots of bins, shelves & drawers, factory-made, custom-fit. Mozley, 299-4204 or 265-2625.

TREADMILL, Vitamaster 350; 1/2-hp, motorized, pulse & speed monitor, plus incline, $200. Cordova, 299-5052.

ROLLEI MAGIC CAMERA 120, roll film, excellent condition, leather case, $200. Stamm, 255-2640.

TREADMILL, Sears Lifestyler, 8-mph, excellent condition, $300. Burchett, 281-0708.

BABY GRAND PIANO, antique Schramm, made of rosewood, needs refinishing, asking $2,500 OBO. Steel, 298-3815.

SIXTEEN LANDSCAPING LOGS, 8 ft., plus several shorter ones, $13. Burch, 857-0654.

WOODBURNING STOVE, large, black cast-iron, w/marble top, great condition, lots of heat, $300. Tapia, 857-0475.

DALMATIONS, AKC-registered, good homes only, parents on-site, $250; antique tables, chairs & china hutch; skis, windsurfers, & golf clubs. Fitzgerald, 265-7955.

AMMO, 30-06, military FMJ, Belgium '58, in 50 RD bandoliers, $18 per bandolier. West, 292-2271.

STETSON HAT, black felt, Ruidoso-style, brand new, never worn, size 7, paid $140, asking $90. French, 271-0458.

SKI BAGS, heavy-duty, single, $22, double $30, lightweight single, $14; Dynastar 195 cm. GS skis, Tyrolia 280 bindings, $47. Horton, 883-7504.

ANTIQUE DRESSER, 6 drawers, w/wing mirrors, $75; oak roll-top desk, $200; student desk, pine, $20. Wilde, 281-7027.

FREEZER, Kenmore, 19.6 cu. ft., upright, frostless, white, good condition, $200. Weinbrecht, 281-7989.

COMPUTER, Amiga A500, 4MB RAM, 80MB HD, Epson LQ500 printer, lots of software, color monitor, more, $350. Goodwin, 294-6702.

CIVIL WAR BOOKS: Sandburg's *Lincoln*, 6 volumes, $95; Freeman's *Lee*, 4 volumes, $135; *Grant*, *Sherman*, *Jackson*, B&L. Dupree, 294-1835.

GENESIS, w/4 games, 4-player adapter, 2 three-button controllers, six-button controller, arcade stick, $150. Gossage, 294-7100.

ELECTRONIC ORGAN, Conn model 430, style 2, type 3, w/bench, $50. Roberts, 255-9527.

SKI BINDINGS, Marker M29, brand new, never used, $50; Oxford New Schofield KJV Bible, new wrapping, $20. Moyer, 828-9214.

BABY ITEMS: car seat, crib, changer, high chair, clothes & toys; all great condition, all $400. Maestas, 299-6514, leave message.

BOY'S SKI/SNOWSUIT, w/jacket, windsuit, trench coat, pants, good clothes, size 7; toys. Mayer, 299-8524.

SOLOFLEX, w/leg extension, perfect condition, must sell, $500. Smith, 259-6275.

COLOR TV, 5-in., AM/FM radio, $125; hide-a-bed, w/tables, $100; super-single waterbed mattress, $10. Simpson, 298-4749.

LOFT BED, oak-finish, w/2-drawer dresser, attached desk, excellent condition. Keener, 294-1919.

SOLOFLEX, like new, $900 OBO; Dell 386SX system, complete w/VGA color minitor, $800 OBO. Everett, 296-8786.

DRESSER, w/mirror, American Furniture piece, manufactured by Lexington, excellent condition, light oak, $600. Banks, 291-1794.

ELECTRIC RANGE, Whirlpool, micro-shelf, yellow, excellent condition, very clean, $125. Chorley, 296-1454.

ANTIQUE OAK TABLE, w/4 oak chairs, $400; 2 Heil Air Motion speakers, 15" x 25," $50 ea.; camel umbrella tent, 8' x 8,' $30. Olbin, 275-2681.

DINETTE, House of Kent, 41-in., w/leaf, 4 swivel/arm chairs, excellent condition, paid $1,200, asking $475. Caskey, 298-6428

MAN'S JACKETS: suede, lined 100% wool, sizes 38 & 44, paid $300 & $200, asking $60 & $75. Locher, 256-3406.

ALUMINUM WINDOWS, single-hung, double pane, 2 ea. approx. 44" x 60" RO, 2 ea. approx. 36" x 60" RO, best offer. Zirzow, 281-9896.

SOFA, 2-piece sectional, 7' & 7-1/2', earth tones, great condition, $1,500 new, asking $325 OBO. Holloway, 294-5815.

SKIS, Rossignol, $100; K2, $80; ping-pong table, $30; Papasan, $40; Bundy clarinet, $120. Limon, 892-6285.

MACINTOSH COMPUTER, Powerbook 100, (4/40) portable, like new, w/MS Word, $650; Genesis bookshelf speakers, $50/pair. Hietala, 867-9577.

MARCY HOME GYM, w/butterfly attachment, excellent condition, $400. Ward, 296-2207.

MAPLE DROPLEAF TABLE, w/2 chairs, $100; Schwinn Airdyne cycle, $400; CD ROM, $10; IDE card, $10. Brewer, 293-8791.

PIRELLI P6 TIRES, 195/60/R15, fits Saab 900S, less than 1K miles, $100. Sjaardema, 299-8042.

EXECUTIVE OFFICE CHAIR, swivel recliner w/casters, by La-Z-Boy, new models list for $1,000, asking $150 OBO. Forster, 293-7231.

SNOW TIRES, 185/75R-14, used one season, excellent condition, will sell at half price, $50/pair. Maenchen, 856-6559.

TELEPHOTO AUXILIARY LENS SET, wide angle, never used, original packaging, K187 Nikon L35AF, $40. Wagner, 823-9323.

CRIB (turned wood), Posturepedic mattress, $90; port-a-crib, $30; sheets, child gates, child swingset seat, safety side rail. Furnish, 344-6074.

ANTIQUE BELT-BUCKLE SET, silver, western-style, excellent condition, $250. Elrod, 293-6213.

SKI BOOTS, like new, excellent quality, woman's size 6-1/2 Technica; man's size 11 Salomon; $35 ea. Dunivan, 296-3937.

WOMAN'S LEATHER BOOTS, black, 9M, w/fringe, excellent condition, paid $120, asking $50; used leather purses, $5-$10. Greear, 839-4255.

SOFA, 90-in., 4 loose-back cushions, cream, rust, floral print, traditional, good condition, $225. McLellan, 299-0266.

DINING ROOM SET, table w/leaf, hutch, 6 chairs, $300. Weber, 897-2989.

KITCHEN TABLE, w/4 chairs, $45; steel desk, 30" x 55", $45. Burgett, 275-0229.

CLOTHES DRYER, Speed Queen, electric, white, great condition, $125 OBO; Sears exercycle, $25. Miller, 323-2610.

STEREO EQUIPMENT, receiver, CD player, graphic equalizer, cassette player, $20 ea.; speakers, $50; electric chainsaw, $20. Henderson, 858-1321.

PIANO, Yamaha M1 console, walnut, flawless, Japanese-made version, $2,600. Olsen, 294-2333.

FOUR DINING ROOM CHAIRS, oak, padded, $100; 2 wood/slate top living room tables, $30 ea. Mills, 823-4484.

TRANSPORTATION

'69 CHEV. PICKUP TRUCK, finished shell camper, good mechanical & physical condition, $2,500 OBO. Jackson, 293-0262.

'91 EAGLE PREMIER ES, extra clean inside/out, white, blue interior, $5,975. Woody, 892-2251.

'94 MAZDA MX-3, 7,800 miles, white, like new, AC, AM/FM cassette, 5-spd., 36-mpg, 26 months warranty remains, $11,000 firm. Robbins, 292-7355.

'95 JEEP GRAND CHEROKEE, Laredo, 4-dr., 4x4, 4L, 6-cyl., 4W-ABS, fully loaded, AT, PW, PL, PS, running boards, 22K miles, $23,750. Heise, 275-0099.

'84 CHRYSLER, 5th Avenue, 4-dr., burgundy interior, white exterior needs paint, small repairs, blue book $1,500. Jaramillo, 294-1779.

'94 DODGE DAKOTA, King Cab, V6, burgundy, camper shell, AT, fully loaded, 15K miles, $15,500. Mar, 345-4747.

'84 VW VANAGON GL, seats 7, excellent condition throughout, runs like new, all records, $3,200. Banwart, 823-1701.

'89 FORD PROBE LX, excellent condition, $4,500. Furaus, 856-9799.

DATSUN 280Z, 2+2 (four seater), brand new tires, mag wheels, runs great, needs paint/upholstery, great for teen/basic transportation, $2,500. Stefoin, 296-2791.

'88 HONDA CIVIC, 4-dr., 5-spd., AC, tint, rear window defogger, excellent condition, $4,850. Garcia, 343-8207, after 8 p.m.

'87 DODGE RAIDER, 4-cyl., 2-dr., 5-spd., AC, 4WD, 106K miles, good condition, under book, $4,100 OBO. Welk, 266-4552.

'89 CHEV. TRUCK, 4x4, loaded, V8-5.7L, Silverado & Z71 options, new Brahma camper shell, perfect condition, 85K miles, $10,900 OBO. Dwyer, 271-0741.

'89 DODGE GRAND CARAVAN, AC, stereo cassette, cruise control, 155K miles, $3,500. Prior, 281-5532.

'94 HONDA ACCORD LX, 4-dr., 5-spd., champagne, factory warranty, loaded, $15,900. Browning, 822-8840.

'65 MUSTANG, AT, 6-cyl., new front end, car-show quality, $5,000 OBO. Claycomb, 822-3787.

'92 CHEV. VAN, 20 American Road Conversion, V8, PW, PL, rear air, color TV, excellent condition, 30K miles, $13,950. Prekker, 892-4107.

'91 GMC SIERRA SLE, C-1500, Sportside, V6, 5-spd., AC, PW, PB, cruise control, $11,000 OBO. Zamora, 294-3737.

'93 HONDA ACCORD EX, all power, ABS, AM/FM cassette, alloy wheels, original owner, 48K miles, $14,900 OBO. Daniel, 821-2935.

'88 CAVALIER, 4-dr., white, AT, AC, 4-cyl., 98K miles, good condition, $2,850. Trellue, 292-7369.

'91 SABLE GS, low mileage, all power, AM/FM cassette, alarm, airbag, tint, cruise, original owner, $8,200. Lonsberry, 837-9345.

'89 HONDA CVC LX, 4-dr., 5-spd., gray, 100K+ miles, original owner, good condition, NADA $5,275, asking $4,700. Kane, 291-8576.

'86 FORD MUSTANG, 5.0-liter V8, 5-spd. manual transmission, AC, PS, 87K miles, good condition, $3,400. Hutchins, 296-6014.

'85 CADILLAC SEVILLE, "Gold Edition," FWD, good to excellent condition, everything works, under blue book, $4,200. Lyons, 281-9283.

'87 FORD BRONCO II, Eddie Bauer, only 68K miles, 4WD, AT, AC, new tires/battery, sunroof, excellent condition, $5,875. Hutchins, 856-3361.

'94 NISSAN PICKUP, red, standard, 21,700 miles, $8,000. Sanchez, 898-9598.

'92 JEEP CHEROKEE LAREDO, white, 4-dr., 6-cyl., 53K miles, excellent condition, $15,500. Calvin, 858-0553.

'91 HONDA PRELUDE Si, 5-spd., loaded, must see to appreciate, 71K miles, new timing belt/alternator. Doughty, 296-4142.

'83 DODGE MAXIVAN, mucho miles, needs engine work but runs, good rubber, new front end, $1,500. Rice, 881-2139.

'83 FORD RANGER, 4-spd., 4-cyl., short bed, runs great, $2,200. Chason, 286-2034.

'87 HONDA CRX Si, 5-spd., black, sunroof, bra, tinted, 2nd owner, accident-free, runs/look great, 110K miles, $4,175. O'Donnell, 293-9234.

'85 TOYOTA TERCEL, good condition, great runner, $975. Kinney, 237-0469.

'85 CAMARO Z28, 5.0L, tuned port injection, 63K miles, excellent condition, $4,400. Ward, 296-2207.

'91 NISSAN 300ZX, twin turbo, pearl white, loaded, mint condition, extended warranty, 35.5K miles, $24,000. Meyer, 856-9649, ask for Sandy.

RECREATIONAL

'93 MOTORHOME, Dutchmen Class A, 32 ft., 454 Chev. chassis, 8K miles, excellent condition. Drebing, 293-3335.

BICYCLES, 2 Univegas, Gran Tourismo, 23-in.; Arrowpace, 19-in., custom setups, extras galore, baby seat. Bailey, 281-4383.

'85 KAWASAKI 454 LTD, excellent condition, lots of chrome, new battery, $2,000 firm. Jaramillo, 864-9202.

'92 CHEV. CAMPER VAN, cruise, AC, stove, fridge, sink, sleeps 2, low mileage, new tires, $18,950. Allen, 291-8960.

TIMESHARE, ski Wolf Creek, 1 week beginning 2/16, luxurious Fairfield Pagosa condo, sleeps 6, $500 OBO. Williams, 323-7107.

GOLF CLUBS, System 5 (Ping clones), 3-SW, never been hit, $220. Stauder, 898-0597.

WOMAN'S GOLF CLUBS, Wilson, used only 3 times, w/balls, tees, glove & books, $225 OBO. Abeyta, 864-3670.

GOLF SMITH CLUBS, PW-2 iron, Lynx metal woods, woman's golf bag, pull cart, $250. Delgado, 344-2971, call in a.m.

'93 ATV, Polaris 350, 4x2, A. T. Elect-Start, liquid cool, oil injection, $3,000. Ward, 255-5780.

SKIS, 200cm, Rossignol-GS Quantum 969 w/Look 3D, Z7 bindings, excellent condition, $150. Johnson, 271-8669.

LUXURY TIMESHARE, 1 mile from Disneyworld Orlando, Westgate Vacation Villas, red week (22), sleeps 8, desirable for space banking. Devonshire, 821-7863.

BIKE, 20-in. Schwinn, 5-spd., girl's, $50; general girl's bike, 20-in., $50; couch, $20. Rector, 286-1217.

'93 MOTORHOME, Cobra Seven Seas, Class C, less than 12K miles, loaded. Westfall, 884-8701.

REAL ESTATE

3-BDR. HOME, contemporary adobe, 2,450 sq. ft., along river in west Los Lunas, brick floors, lots of windows. Gravning, 865-5581.

3-BDR. HOME, Indian School/Tramway, 1,520 sq. ft., 1-3/4 baths, updated throughout, deck w/new jacuzzi, formal living/dining, $129,900. Orth, 275-0876.

2-BDR. TOWNHOUSE, near Candelaria & Tramway, corner lot w/yard, 1-car garage, 1,150 sq. ft., $93,000. Tucker, 292-8954.

WANTED

HOME OR TOWNHOME, NE Heights, to rent, take over 2/24/96, 2-3 bdr., 2 baths. Garner, 271-4671.

GARAGE DOOR OPENER TRANSMITTER, old style, frequency "A," 9 code (?). Hansche, 281-5623.

ADDITIONAL HOUSES TO CLEAN, reasonable rates, references upon request. Kaufmann, 292-9249, ask for Andrea.

SCREEN, large portable projector/slide screen. Stanton, 323-0811.

NORDICTRACK, new condition, models Sequoia, Pro, or Achiever, $350 upper limit. Waggoner, 293-4755.

CANOE, interested in all types, especially those built for versatility such as the Mad River Revelation. Heffelfinger, 281-1733.

HOUSEMATE, female or male, 3-bdr. house, separate baths, washer/dryer, fireplace, 2-car garage, $275/mo. 1/2 utilities. Ewen, 836-3563.

LAPTOP IBM, compatible, 486DX2, 4+MB RAM, 500+MB HD, manuals, legal installation, Windows 3.1, DOS 6.2, MSWorks. Leisher, 281-5258.

OUTDOOR BIKE RACK, for school, big enough to lock multiple bikes, will pick up. Reno, 296-6290.

HOUSING, Sandia is seeking summer rental property for employees (professors, graduate & undergraduate students), who will be arriving in May or June and leaving in August or early Sept. Townsend, 284-3221.

LOST & FOUND

FOUND: Watch, in Bldg. 892 women's restroom. Harrison, 845-0575.

LOST: Money clup w/initials. Gurule, 292-4736.

LOST: Woman's black leather gloves, left in women's restroom in Bldg. 802, very sentimental. Chavez, 844-2738.

SHARE-A-RIDE

CARPOOL, interested in starting or joining, from the Bosque Farms area, w/individuals on compressed work week. Henfling, 869-4119.

Triple Option Plan ID cards distributed

Employees and retirees who enrolled in the Triple Option Plan (TOP) should have received their ID cards by today. If you have not received your ID card, contact Prudential Member Services at 1-800-845-6986 (New Mexico) and 1-800-552-4545 (California). If you have an appointment with a doctor before you receive your ID card, ask the physician or facility to call the appropriate Prudential Member Services number to verify your eligibility in the plan.

Employees are reminded that Sandia does not keep track of Primary Care Physicians (PCPs). If you wish to change your PCP or verify your PCP of record, contact Prudential Member Services at the appropriate number listed above. If you need to enroll a new dependent or disenroll a dependent, call Aaron Halfacre at 845-9702 within 31 days of the event.

Note: The number for Value Behavioral Health (VBH) printed on your TOP ID card is incorrect. The number on the ID cards reads 1-800-522-1886. **The *correct* number for VBH is 1-800-522-1865.** In addition, the prescription drug prices on the ID card wallet insert were reversed. The prices **should read** $5 for generic drugs and $15 for brand name drugs. These numbers are correctly stated on the refrigerator magnet and in the member handbook.

Retirees only: Transition period set for Medicare Primary participants

For Medicare Primary participants who do not have Part B:

A transition period from Jan. 1, 1996, through July 31, 1996, will be allowed for retiree participants to obtain Part A&B Medicare coverage. The Medicare Open Enrollment for enrolling in Part B is held from January through March 1996. Benefits are reimbursable by Medicare beginning in July 1996. During this transition period, Prudential will coordinate benefits as though participants had Medicare coverage. As of Aug. 1, 1996, if participants do not have Parts A&B, coverage under the TOP will be terminated for these participants (and their eligible dependents) until Parts A&B benefits are payable from Medicare.

Copayments in the PCP option:

Retirees are reminded that copayments paid in the Primary Care Physician option of the TOP are coordinated with Medicare. After the Medicare deductible has been satisfied, copayments will be reimbursed to the participant. If your Primary Care Physician option allows copayments for the service, you will be reimbursed after the Medicare deductible has been satisfied. If your physician does not accept Medicare assignment, the physician may require payment in full at the time of service. The physician will file the claim with Medicare. Once you receive your Medicare reimbursement, file your claim to Prudential for the remainder of your reimbursement.

TOP talk with Prudential:

A Prudential representative will be available to address retirees' questions and assist with using the TOP from 11 a.m. to 1 p.m. at the Coronado Club on Jan. 19 and 26, Feb. 2 and 16, and March 1, 15, and 29.

Coronado Club

Jan. 19 — Kids' bingo; buffet from 5-8 p.m.; cartoons and movies; bingo from 7-9 p.m.; free hot dog and soft drink for all kids playing bingo. Cost of a bingo packet is $2.50

Jan. 21 — Sunday brunch buffet, 10 a.m.-2 p.m. $6.95 adult members; $1 for children 3 to 12; free for children 3 and under. Music for buffet by Bob Weiler, 1-4 p.m.

Jan. 25 — Thursday bingo night. Card sales and buffet start at 5 p.m., early birds' bingo at 6:45 p.m.

Jan. 26 — Parents Night Out dinner/dance. $5.95 all-you-can-eat buffet, 6-9 p.m. Music by Crossfire, 7-11 p.m.

Jan. 28 — Super Bowl party. Buffet, noon-5 p.m.; bingo, 1-4 p.m.; Super Bowl XXX showtime (on the C-Club's big screen) starts at 4 p.m.

Feb. 1 — Thursday bingo night. Card sales and buffet start at 5 p.m., early birds' bingo at 6:45 p.m.

Feb. 2 — Western night dinner/dance. $6.95 all-you-can-eat buffet, 6-9 p.m. Music by Isleta Poorboys, 7-11 p.m.

Feb. 4 — Sunday brunch buffet, 10 a.m.-2 p.m. $6.95 adult members; $1 for children 3 to 12; free for children 3 and under. Music for buffet by So Rare, 1-4 p.m.

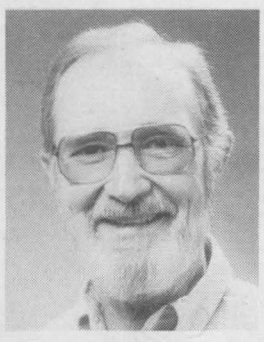
Congratulations

To Laurie (3524) and Chris (7812) Flores, a daughter, Jessica Rose, Dec. 11.

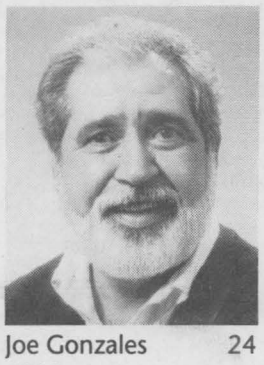
To Debi and Tommy (9415) Cabe, a daughter, Sarah Adele, Dec. 17.

Recent Retirees

Marcelia Samuelson 46
12111



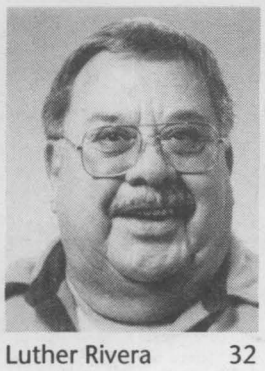
Kenneth Hueter 35
5711



Joe Gonzales 24
4913

Ruth Brooks 43
3525

Betty Street 11
4621



Luther Rivera 32
10204

Employee death

Helen Hunter of Commercial Technology Procurement Dept. 10244 died Jan. 1 after a long illness.

She was 58 years old.

Helen was an administrative staff associate and had been at Sandia since 1983.

She is survived by her son, Jeffrey McDonald.

Sympathy

To Karen (Hill) Pound (4022) on the death of her mother, Rita Sine, in Rochester, N.Y., Dec. 7.

Favorite Old Photo

This photograph shows the mail sorting room in Black Creek, Wisconsin, in 1920. My father, second from left, hired on as a rural mail carrier after returning from service in the First World War. I remember the old Model A Ford he used in the summertime and also the last horse he used to pull his sleigh when making winter deliveries through snow conditions. The small community's mail came into town at the train depot, next to the post office. Dad is shown with the postmaster and three other rural mail carriers.

— Bruce Wickesberg (2674)