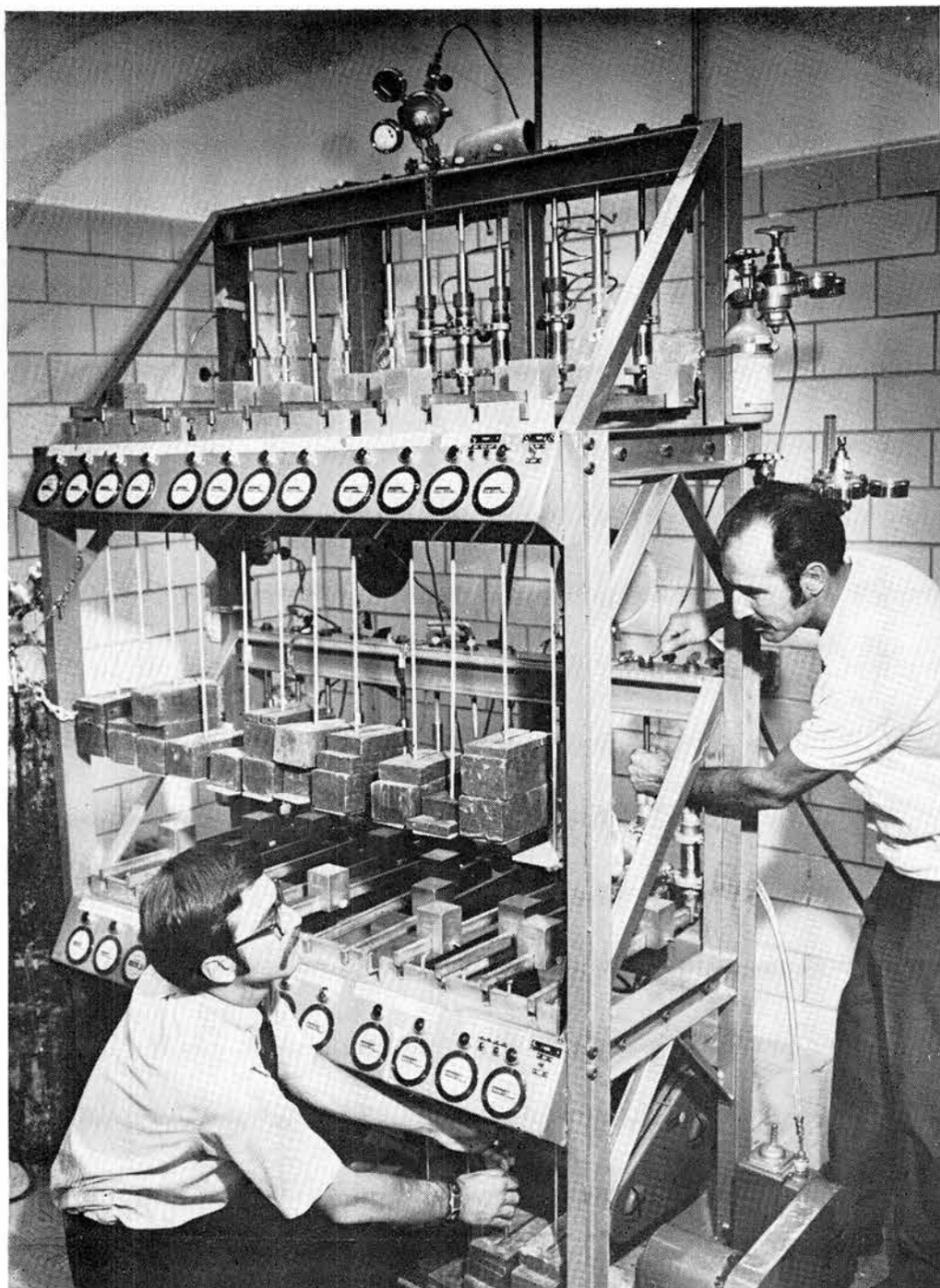


SANDIA LAB NEWS



VOL. 21, NO. 18, AUGUST 29, 1969



TORTURE RACK—Sandia version of the ancient rack is this stress corrosion rig used by Physical Metallurgy I Division 5531. One of four such devices in use at the Labs, the rig is used to determine the susceptibility of various alloys to stress corrosion cracking. Twenty-four specimens can be tested simultaneously, each in a different environment (nitrogen, oxygen, CO₂, water, salt air, or other gases normally found in an atmosphere). The specimen is attached to one end of a 20 to 1 ratio lever and weights exerting forces up to 2000 pounds are suspended from the other end. When the stress, along with the corrosive action of a given environment, causes the alloy to crack, a timer automatically shuts off, giving the researchers the exact time-to-failure with time being a function of stress plus environment. Nick Magnani (5331), left, is project leader. Assisting in the study is Herman Romero (5535). The study is intended to show the limitations of such metals as uranium alloys so that the information can be used by designers.

Under Short Time Schedule

Physical Electronics Lab Saves Time, Money on Tooling Development

In the Sandia scheme of things, the Development Shops 4200 organization maintains the skills, technology, equipment and processes to produce prototypes of some of the most sophisticated hardware designed.

Recently, Electromechanical Division 2324 turned to the Physical Electronics Section 4221-2 to assemble prototypes of an inertial switch, including development of the tooling and fixtures required for the assembly work.

The Physical Electronics Section, under supervisor Robert Altherr, took the job as a challenge under a short time schedule and with the idea of developing within the Section the techniques required for establishing manufacturing processes.

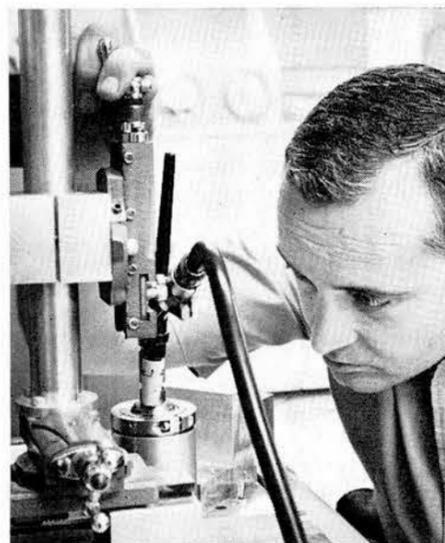
Function of the switch, according to design engineer John Von Dreele (2324), is to sense a threshold acceleration and a given velocity change, then close a number of electrical contacts and latch the closure in place. It is a complex design requiring fluid metering, a cylinder and sliding piston, spring assembly, precision electrical contacts and a latching mechanism.

Working closely with Division 2324 people who provided guidelines based upon their experience of building similar units, E. R. Wood of the Physical Electronics Section determined that 12 separate stages would be required for assembly of the parts of the switch. Each step of the assembly required precision alignment, exact procedures, tests for accuracy, and clean-bench conditions.

He designed four basic fixtures with attachments and a number of special tools which would function for the total assembly process. Working from product drawings and some basic design parameters Wood had established, Ted Siegrist and Bill Guernsey (both 4252) developed and fabricated the tooling and fixtures. From the time that the job was placed until the first assembled unit was developed only three months elapsed.

Welding support for the project was provided by Joe Dal Porto (5531) who developed the welding processes. Glenn Guist (7651) was responsible for drafting support.

(Continued on Page Two)



GEORGE EDGERLY (4221-2) performs final TIG (tungsten inert gas) welding on the assembled switch. Physical Electronics Lab performed tooling and fixture development for the switch in three months' time.

Sandians to Present Technical Papers at Physical Society Meet

A number of Sandians will be presenting technical papers at the summer meeting of the American Physical Society to be held Sept. 2-5 in Honolulu.

Included are: E. H. Beckner (5240), "Plasma Focus: Recent Advances"; D. R. Smith, A. J. Toepfer (both 5242), and Beckner, "Streak Photography of the Collapse Phase of the Plasma Focus"; J. R. Freeman (5261) and F. O. Lane (5242), "Two Dimensional Hydromagnetic Calculations of Plasma Interaction with an Axially Symmetric Magnetic Field."

R. T. Johnson (5132), "Semiconductor-Neutron Detectors Utilizing Radioactive Decay"; Marvin Moss (1224) and M. M. Karnowsky (5435), "Annealing Kinetics of Metastable Al-Mn Alloy"; F. K. Truby (5232), "Electron Attachment in Br₂ Vapor at 296° K."

S. L. Thompson (5231), "A Solid-Liquid Plasma Equation of State"; Frank Biggs (5231), "The Concept of Entropy in Data Analysis"; T. P. Wright (5231), "Effect of a Classical Kinetic Energy Correction on Degree of Ionization"; A. R. Sattler (9114), "High Angular Resolution Channeling in Quartz"; and R. L. Fox (9343), "Effect of the Collision Model on Theoretical Electron Transport Coefficients."

Bob Hedberg to Discuss Underwater Operations At Secretaries Meet

Members of Albuquerque Chapter of National Secretaries Assn. (International) will hear Bob Hedberg (7223) speak on "Deep Star Recovery" and see a movie on the same subject during a dinner meeting Sept. 9 at the Coronado Club.

During 13 years at Sandia, Bob has worked in stress analysis and dynamics, at the Area III sled track, and is currently assigned to the Mobile and Remote Ranges Division of Field Test.

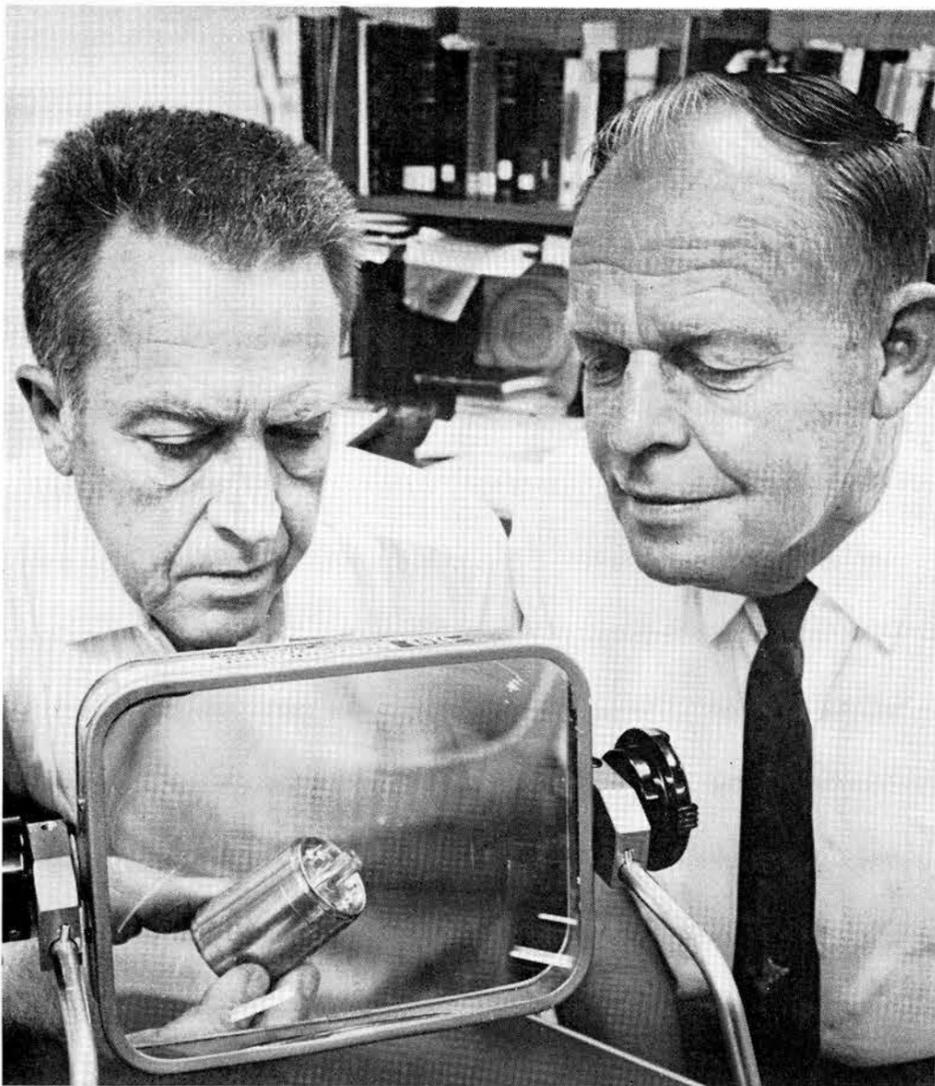
Social hour will begin at 5 p.m. with dinner served at 7 p.m. in the El Dorado room, according to chapter president Helen Walsh (5400).



KEYNOTE SPEAKER for the recent Human Rights Seminar was Arthur Fletcher (left photo, third from left), assistant secretary of labor for wage and labor standards, who also addressed Sandia's large staff at a luncheon. He outlined the Administration's program for improving economic standards for minority and economically deprived Americans. He is shown talking with President John Hornbeck and Bob Garcia (3260). At right, is



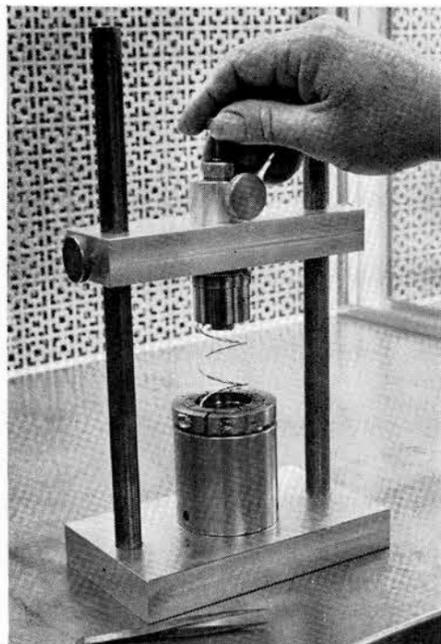
one of the Human Rights Seminar workshops with Ken Sutton (3250), George Madsen, general personnel manager of Mountain Bell, and Ernie Peterson (3220) discussing some of the aspects of the recently-enacted Human Rights legislation of New Mexico. Some 150 business and industry representatives, labor leaders, and government executives attended the two-day seminar at Western Skies Motor Hotel.



ASSEMBLED INERTIAL SWITCH is inspected by Larry Estabrook (2324), left, and E. R. Wood (4221-2). The device represents three months' work by the Development Shops to design and fabricate tooling and fixtures for assembly of the switch.

Continued from Page One

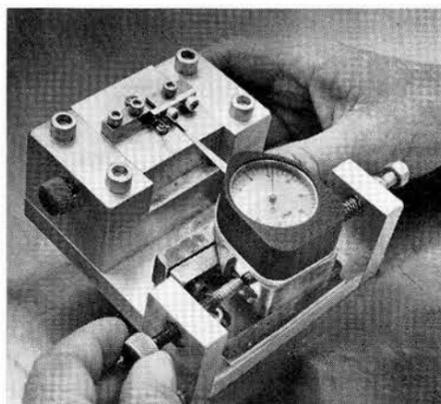
Physical Electronics Lab



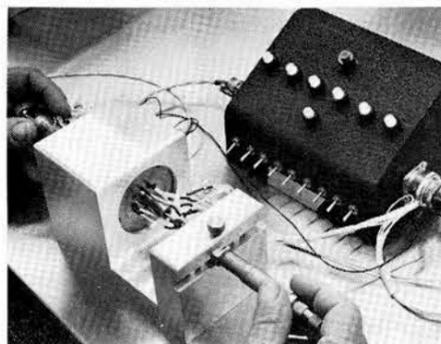
SUB-ASSEMBLIES of the inertial switch are precisely aligned with this fixture prior to final assembly.

"Work of the Development Shops allowed us to meet our commitments for the switch," John Von Dreele said. "We are well pleased."

In addition to supporting early commitments, the work being performed in the Development Shops allows the inertial switch project to be conducted in a manner to reduce costs this fiscal year. Development of the tooling, fixtures and procedures will result in additional savings in time and money when the manufacturing is turned over to an outside supplier.



TENSION on electrical contacts of the inertial switch is accurately adjusted by using this fixture and gauge.



ELECTRICAL CONTACTS of switch can be activated by this special tool for testing. The tool also measures the exact travel distance of the internal piston. After this test, the switch is filled with silicon oil and sealed.

SANDIA LAB NEWS

Published Every Other Friday



SANDIA LABORATORIES
— An Equal Opportunity Employer —
ALBUQUERQUE, NEW MEXICO
LIVERMORE, CALIFORNIA

Editorial Offices in Albuquerque, N. M.
Area 505 264-1053
ZIP 87115

In Livermore Area 415 447-2387

John Shunny is Editor, Don Graham Ass't. Editor
Cherry Lou Burns & Don Wolfe are Staff Writers
Matt Connors & Lorena Schneider
are Staff Writers in Livermore
Bill Laskar is Photographer
Norma Taylor/ All The Rest



Courtship Leads to Happy Marriage And Post-Retirement Career

When Ted Siegrist (4252-3) courted—at long distance—the woman who was to become his wife, he found the formula for success by asking her to criticize some wood carvings he had made.

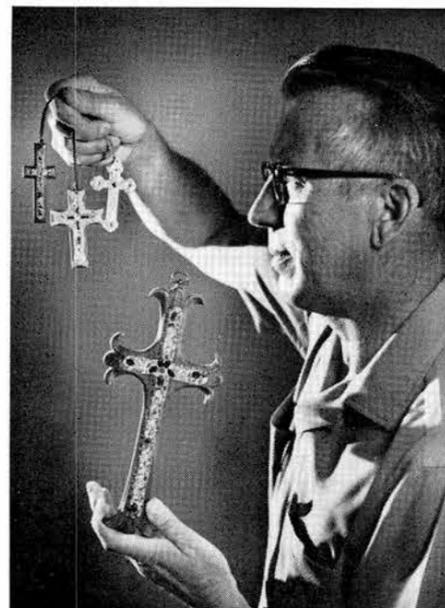
Shortly after Ted met Helen her family moved to another state. Searching for a way to maintain contact, he sent her a carving (a craft he took up just to have something to send) to critique. Helen, who had an interest in art, did so and thus paved the way for a long, happy marriage as well as a career for Ted when he retires in a few years.

"I'd never done any carving before and this was just the incentive I needed to get started," he said.

Ted, who had his first exhibit at the recent Arts and Crafts Fair, plans to continue his carving on a commercial basis when he retires. He carves furniture, novelty pieces, and religious ornaments, and matches antique carving.

Recently Ted has been combining stained glass and wood in the form of crosses. This phase of his work, like most of his other, began when he wanted to do something special for his wife who was in the hospital. "I always try to do something unique for Helen when she is ill or on special occasions."

Helen also has kept up her interest in arts and crafts. She shared a booth with Ted at the Fair, exhibiting some of her unusual dolls. She peels apples and then lets them cure for about six months until the texture begins to resemble human skin. She molds the apples while they dry to



HOBBY OF LOVE—Wood carving paved the way to matrimony for Ted Siegrist (4252-2) and both have kept him occupied for the past 30 years. Ted and his wife, Helen, both exhibited objects d'art at the recent Arts and Crafts Fair.

resemble faces. Her apple head dolls won first place at the 1966 and 1967 New Mexico State Fairs.

Emphysema—Will It Become Yet Another Household Word?

By S. P. Bliss
Medical Director, 3300

"Doc, what's all this I keep hearing about emphysema nowadays? You never used to hear about it 15 or 20 years ago. Have you people invented a new disease or something?"

The patient who asked me that question had a point; for while it isn't true that doctors have recently invented emphysema, it is true that the condition is much more prevalent now than it was, say, 20 years ago. And, from the way cigarette smoking continues to increase in our population, emphysema promises to be even more common in the future than it is now.

In order to understand just what emphysema is, we must keep in mind the primary function of the lungs to get oxygen into the blood and to get gaseous waste products, especially carbon dioxide, out of the blood.

To accomplish this the lungs act like a big bellows. When we inhale, the bellows expands and air (containing oxygen) rushes from the back of the throat down the lung tubes, called bronchi, all the way down to the many small air sacs where it comes into contact with the minute blood vessels of the lung. It is at this level that the vital exchange occurs. Oxygen enters the blood vessels and carbon dioxide leaves them. At this point exhalation begins, the bellows collapse and the gaseous contents rush back up and out of the lungs.

Enter emphysema and the bellows action is lost. The lungs become so stiff and distended through chronic irritation or chronic infection that their normal pliability is gone. The collapsing of the bellows that is normal exhalation becomes very difficult, if not impossible. As a result, carbon dioxide and other waste gases that should be exhaled accumulate in the lungs and back up in the blood.

Furthermore, though the lungs are relatively fixed in the open bellows position, inhaling also becomes difficult because getting air in involves the opening of a previously closed bellows. A bellows fixed in the open position really can't open much more and so people with emphysema have trouble getting oxygen into their lungs.

Another factor often complicating the loss of elasticity of the lungs is spasm of the walls of the bronchi leading down to the air sacs. Naturally, a narrowed tube allows less air to pass through than an open one.

Ultimately, as these conditions continue, normal breathing which should be automatic, easy and unrestricted is replaced by wheezing and chronic cough, at first dry but eventually producing phlegm, especially in the mornings. Shortness of breath is

present, mild at first, but eventually progressing to the point where the slightest exertion, such as putting on one's shoes, will leave the patient blue and literally gasping for air. Soon breathing itself becomes hard work and exhausting, and finally the patient becomes a pulmonary cripple for whom breathing is a desperate, painful struggle for air. Eventually he goes on to die of suffocation.

What's the cause of this truly horrible disease? Chronic bronchitis is an important cause and may be a combination of chronic irritation as well as chronic infection. Recent studies have cast very strong suspicion on smoking as one of the chief factors in the causation of emphysema — and statistics indicate that as smoking increases throughout our population so does the frequency of emphysema.

That's why one is beginning to see the condition among women whereas previously it was found almost exclusively in men. It takes 20 years or so of smoking to cause the damage. As we begin to have an increasing number of women with much smoking behind them, we are learning that emphysema does not favor one sex over the other.

What can be done about emphysema? To begin with, one point must be made clear: the condition is not reversible. One can never return to a normal lung but one can keep the condition from progressing by avoiding the chronic irritants, especially smoking, and by treating vigorously all lung infections with antibiotics and various measures of sputum drainage. There are also drugs available to relieve spasm of the lung tubes. Finally, there are breathing exercises the patient can do to help increase the efficiency of whatever bellows action is left.

That doesn't sound like much one can do but it's all the doctors have to offer nowadays. That's why so much emphasis must be placed on prevention. In this case an ounce of prevention, such as stopping smoking, is worth than a pound of cure because there is no cure.

Special Engineering Group Planning 25th Anniversary Of Trinity Event Reunion

Former members of the Special Engineering Detachment (SED) assigned to Los Alamos Scientific Laboratory during WWII are planning a possible reunion on July 16, 1970, the 25th anniversary of the Trinity event. Anyone who served with the group, or who has current addresses of former members, is urged to contact Louis Jacot (6011), tel. 264-8777.



VICE PRESIDENT TOM COOK, (8000), reviews the events of the past year with employees at Sandia Laboratories Livermore. The most significant trend has been toward the expansion of Livermore's base of capabilities in applied research and technological fields.

Significant Events at Livermore Discussed at Employee Meeting

"Probably the most significant single thing that's happened at Sandia Livermore during the last year," said Vice President Tom Cook (8000), "is that we have expanded the base of our capabilities into fields of applied research which have potentially broad applications. A good deal of our research will be in fields that are relevant to, but not necessarily limited to, use and application in the military business. We at Sandia intend to develop capabilities that will allow us to contribute in a broader way to the advancement of science and technology. It is our hope that these contributions will have applications both inside and outside the nuclear weapons fields."

Emphasis on the broader spectrum of technical activities was one of a number of points discussed by Mr. Cook at a recent meeting with all employees. The meeting started with a discussion of the total Sandia Laboratories program which was used as a base for more detailed discussion of the activities at Sandia Laboratories Livermore. The meeting was held to review his first year at Livermore and to discuss future plans for the Laboratory.

"Expanding our technical capabilities," continued Mr. Cook, "is consistent with the intent of the reorganization which took place last July. President Hornbeck — in a message to all employees — said that one purpose of the reorganization was to 'strengthen our resources to deal with the output of the AEC's two nuclear labs (LASL and LRL) by broadening the technical organization at Livermore. The new directorate at Livermore will give emphasis to a broader spectrum of technical activities.'

"Our research and development efforts are increasing quite substantially. Our research activities are up 50 percent over what they were last year. Exploratory development activities almost doubled.

"There was about a 12 percent gain in the total technical staff member population. That's where most of our growth has been. The technical staff with PhD degrees increased from 16 to 41 from July 1968 to July 1969. Primarily, these added people are working in exploratory development and in various aspects of technical depth, i.e., specialty groups and research useful to our activities. To continue the expansion of this work in a meaningful way is quite a challenge to all of us."

Mr. Cook discussed the number and percent of minority employees on roll at Livermore Laboratories. "As of the end of June 1969, 8.4 percent of our employees were minority employees," he said. "We will continue to increase our efforts to be sure that all people know of and have an opportunity to apply for and work at Sandia in the jobs that we have."

Referring to the number of mobile offices now at the Laboratory, Mr. Cook noted that space is a critical matter in terms of our long-term development. A year ago we had nine trailers in use, now we have 25, and about 22 more will be needed before our planned new laboratory building could possibly be completed. Completion of the underground computer facility in late 1969 and occupancy early in 1970 will relieve matters some. Further use of mobile offices can be expected, thus making more laboratory space available in existing buildings.

Sympathy

To Vince Peterson (8222) for the death of his mother in Trenton, N.J., July 31.

To Jim Smith (8214) for the death of his mother-in-law in Toronto, Canada, July 17.

To Don Spencer (8233) for the death of his mother-in-law in South Dakota, July 30.

Retiring



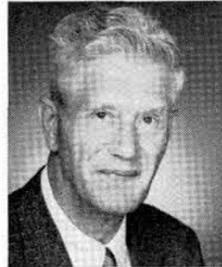
Gilbert Oliver, a carpenter in General Maintenance Section 8222-3, will retire today. He has worked in the plant maintenance organization the entire time since joining Sandia Laboratories Livermore in July 1968.

Mr. and Mrs. Oliver will continue to live in French Camp, a small town between Tracy and Stockton.

Formerly an industrial arts teacher in Louisiana, and subsequently a building contractor after coming to California in 1928, Gilbert says he is returning to building contractor work as a member of a partnership in home construction.

In addition, starting Sept. 1, he will be serving as president and director of a recently incorporated organization known as the American Rehabilitation Committee and Job Placement Bureau, with headquarters in Stockton. "Involved is the raising of operating funds and the establishment of a training program in industrial arts, upholstery, electrical wiring, and electronics for adults and high school boys and girls from low income homes," says Gilbert.

"This is getting me back into youth work again," he added. "For 20 years my wife and I and some associates operated a ranch for homeless boys in Amador County with the assistance of the California Youth Authority and probation departments of some 20 counties. However, in 1962, the buildings were destroyed by a forest fire. Eventually, I plan to return to the ranch and build a home there."



Hellmuth Woitke, a mechanical inspector in Inspection Section 8226-2, retires from Sandia today.

He was employed at Sandia Laboratories Livermore in May 1962 and has worked in the inspection organization the entire time.

Following retirement, Hellmuth will be returning permanently to Sebastopol, Calif., where his wife and two children have been living since the family left Los Angeles in 1961. "We enjoy the Sebastopol area and have a home with about an acre of land. There are no jobs in my line of work in that part of the country, so while working at Sandia, I've been renting a room in Livermore during the week and commuting home weekends," he said.

Otherwise Hellmuth's plans are indefinite. "I'm taking early retirement on the advice of my doctor. Several years ago I had a heart attack and the doctor suggested I retire then, but I decided to hold out until I was age 62—and I've made it.

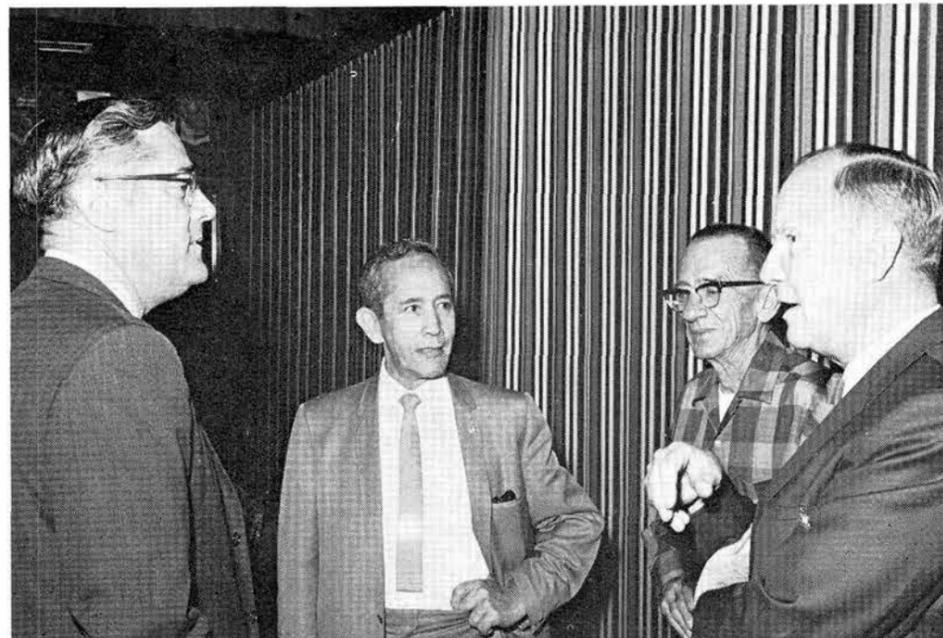
"Mostly I'll be taking it easy, but I'll keep busy. My daughters who are age 14 and 15 are involved in 4-H activities and have a number of animals. For a while, at least, tending and caring for the animals, and probably building some new shelters, will take up a good part of my time," he added.

LIVERMORE NEWS

VOL. 21, NO. 18

SANDIA LAB NEWS

AUGUST 29, 1969



NEW LEAP contribution plan is being discussed by (l to r) Leo Gutierrez (8100); Al Arellano, business manager, Sheet Metal Workers International Association, Local 216; Ted Robinson (8223); and Hilt DeSelm (8200). Details of the plan were announced at a recent meeting of an employee committee.



ENTHUSIASTIC about the new LEAP contribution plan are (l to r) Walt Young (8223), Carl Schoenfelder (8311), Bob Johnsen (8161), and Sylvester Grisby (8122). LEAP emphasizes meeting needs of local agencies plus adding eight national agencies as participants in the plan.

New Contribution Plan Adds Eight Agencies Plus United Bay Members

The newly-developed contribution program at Sandia Laboratories Livermore has been named the Livermore Employees' Assistance Plan (LEAP). The name was announced at a recent luncheon meeting which officially introduced the program.

For the first time employees have the opportunity of contributing to a plan which includes eight local and national health and welfare agencies that are not members of the United Bay Area Crusade (UBAC). This year a gift will, in fact, serve as a "once for all" contribution. Previously, contributions made through the annual Sandia fund drive were for UBAC alone.

Members of the committee present included Chairman Bob Norvill (8233), Joe Ambrulevich (8234), Francis Cunningham (8234), Sylvester Grisby (8122), Bob Johnsen (8161), Ted Robinson (8223), Lorena Schneider (8216), Carl Schoenfelder (8161), Carl Wackerly (8161), Dick Watkins (8323), Alec Willis (8335), and Walt Young (8223).

Representing management at the meeting were Tom Cook (8000), Leo Gutierrez (8100), Hilt DeSelm (8200) and Jim King (8300). Leo, acting as chairman of the meeting, thanked the committee for their work in developing the plan. He also explained the plan to the union officials present and the guest speaker from UBAC, Dr. Arthur Emmes.

Union officials present were Bill Stadnisky, senior business representative of International Association of Machinists and Aerospace Workers, District 115; Ed Logue, business agent of IAMAW, Local

284; and Al Arellano, business manager, Sheet Metal Workers Association, Local 216.

Specific details of the plan and non-UBAC agencies selected will be described in following editions of the LAB NEWS.

Non-Electronic Component Development Subject of Sept. 11 Colloquium Meet

"Non-Electronic Problems in the Electronic Component Development Organization," will be discussed by Richard Claassen, director of Electronic Component Development 2600, at the Sandia Laboratories Livermore Colloquium Sept. 11.

In addition to the predictable class of problems in electronics, Organization 2600 also works on problems in other fields such as physics, chemistry and mechanical engineering. For several examples, a brief background will be given of the programmatic needs creating a particular investigation. The scientific or technology challenge will then be described emphasizing approaches which seem to hold promise for significant contributions.

Mr. Claassen received his doctorate from the University of Minnesota in 1950 and joined Sandia in 1951. He is a member and past chairman of the Rocky Mountain Science Council, a member of the Solid State Sciences Panel of the National Research Council, and consultant to one of the Air Force Scientific Advisory Boards.

Tickets will be required for admission. G. E. Brandvold (8170) is host.



KEN KERNS is enjoying retirement. Left, he toots his boat up the Columbia River, a trip of some 500 miles. At right, he works as a wrangler for trail rides into Arizona's Superstition Mountains. He



has wrangled on other trail rides in the San Juan Wilderness of Colorado and Pecos Wilderness in New Mexico.

Retiree Ken Kerns

'Seeing the Country' by Horse, Boat

"It's been great," Ken Kerns says, "the greatest time of my life."

Ken retired from Sandia Laboratories last December after 12 years as an administrative assistant in Field Test organizations. For the past nine months he's been doing the things that most of us dream about.

Ken loves to travel and spends his days active in the great outdoors. He's had much of this during his first months of retirement and is planning more.

To begin with, he spent last Christmas skiing at Snowmass in Aspen with his wife, daughter, son-in-law and granddaughter. They spent a week on the slopes.

In February, Ken and Bill Parker (7270)

trailer'd Ken's 16-foot motorboat down to Kino Bay, Mexico, where they tried the fishing but wound up on Tiburon Island in the Sea of Cortez.

"This place is as big as the state of Rhode Island," Ken says, "but we didn't see a soul for three days." They spent the time exploring the desert-like island which resembles much of Arizona—hills, rocks and cactus. Then they joined Ben Evans (7350), Bill Hickerson (7634) and Wally Boyes (3454) for more fishing with San Carlos Bay as a base and exploring the coastline down to Guaymas.

After returning to Albuquerque, Ken and his wife Virginia went skiing again at Aspen. "There is a good possibility that

I'll be working there next winter," Ken says.

After the skiing, Ken took off on two trail rides in the Superstition Mountains of Arizona. He was a wrangler for a six-day ride sponsored by the American Forestry Association and a seven-day pack trip sponsored by the American Wilderness Society. For the first one, he worked for free but turned "professional" for the second one.

For these trail rides, Ken takes care of the horses, worries about the pack animals (loading and unloading, etc.), breaks and sets up the campsites, and generally puts in a full day of hard work.

"For some crazy reason, I like it," Ken says. "This is my idea of having fun and by horseback is a great way to see the country."

Another way is by boat. In early May, Ken and Virginia traveled to California to visit their daughter's family and while there, Ken bought a new 20-foot boat outfitted with galley and living quarters.

In this boat Ken traveled 500 miles up the Columbia River to Pasco, Wash., where the Snake River joins the Columbia. It is an area of lakes and dams and again, as Ken says, "great country." On five occasions their boat navigated locks at the dams where the boat was lifted as high as 100 feet to the next level of the river.

After this trip, Ken signed on as a wrangler for a 10-day trail ride through the Pecos Wilderness near Cowles, N. M., and for two trail rides through the San Juan Wilderness of Colorado. These trips were high in the Rocky Mountains along the Continental Divide from the narrow gauge railroad to Wolf Creek Pass.

The trail rides were interspersed with a Fourth of July weekend on his boat on Lake Powell exploring the canyons created by the Glen Canyon dam.

Next week, Ken will be off for two more trail rides in the Pecos Wilderness. Then after a week on the Lake of the Ozarks in October, he plans to rest awhile before ski season.

Next fall he plans to take his boat from the Hudson River through Lake Champlain to the St. Lawrence River and then back into the Erie Canal—then maybe down the Mississippi. Another year, and he might try the boat in the Puget Sound area of Washington and in the inland waterway to Alaska.

"Retirement can be the greatest time for living," Ken says. "Decide what it is that you want to do and then do it. You really have no excuse not to."

Retiring

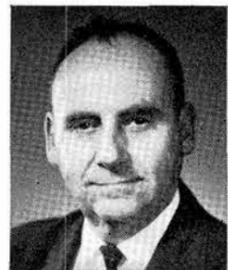


Marion Brown, a dispatcher in Property Control Vehicle and Taxi Dispatch Section 4573-1, is retiring from Sandia today.

He was employed by Sandia in December 1950 as a chauffeur. He has been in his present job for about 15 years. Before joining the Laboratories, Marion was self-employed in Albuquerque.

Mr. and Mrs. Brown will continue to reside at 1216 Vassar Dr. NE. Their immediate plans include a trip to Colorado and then travel in the east.

Marion is taking early retirement "to have some time of my own. If I don't retire now, I'll never have time enough to do all the things I want to do," he says. In addition to traveling, Marion enjoys fishing and gardening.



Gilbert Dance, supervisor of Administrative Section 3521-2 of Security Operations Division, retired Aug. 22 with almost 22 years at Sandia. He joined the company in October 1947 and worked for two years as a dispatcher in the AEC motor pool. He was promoted to supervisor in 1950 and has been with the Security organization the entire time.

Mr. and Mrs. Dance will continue to live in Albuquerque at 1124 Silver Ave., SE. They have three children, all in junior high school.

Mr. Dance is taking a disability retirement and has no immediate retirement plans until he begins to feel better. He is involved in church activities and hopes eventually to be able to do some fishing.



Sandia Vietnam Veterans Cited for Heroism; Awarded Distinguished Flying Cross

SANDIANS who were honored with presentation of the Distinguished Flying Cross at recent ceremonies of the New Mexico Air National Guard included, from left, Dave Quinlan (9239), Ken Sarason (1651) and Dave Henry (9227). Col. Bob Sands (right), assistant adjutant general, congratulates the men. Also honored with additional Oak Leaf Clusters was Ira Holt (9324) who earned his first DFC and Air Medal during the Korean Conflict. The DFC, pictured at left, is awarded for heroism or extraordinary achievement in aerial combat.



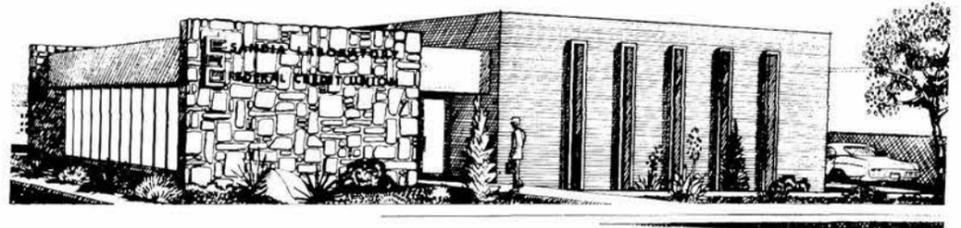
Events Calendar

- Aug. 29-Sept. 1—257th annual Santa Fe Fiesta.
- Aug. 29-Sept. 1—Navajo Tribal Fair, Window Rock.
- Aug. 29-31—Albuquerque Civic Light Opera Assn. production of "Peter Pan," UNM Popejoy Hall.
- Aug. 29-31—Old Town Studio's production of "Garlic and Sapphires," 1208 Rio Grande NW.
- Aug. 30-Sept. 1—Backpack into La Plata Basin. N.M. Mountain Club, leader Bob Kyrilach, tel. 296-1725.
- Sept. 2—Acoma Pueblo feast day and corn dance.
- Sept. 6-7—Hike to Cerro Pedernal, near Coyote. N.M. Mountain Club, leader Ethyl Ringer, tel. 256-2038.
- Sept. 11-21—New Mexico State Fair, Albuquerque.
- Sept. 12-14—YWCA chartered bus trip to Canyon de Chelly, includes jeep trip into the canyon. For information, tel. 247-8841.

Take Note

Larry Smith (5235) took the low gross honors at the recent Sandia Employees Golf Association Fred Given Memorial Tournament. Larry shot a 74. Low net honors went to Paul Blaylock (9132) for his net 67.

Tournament co-chairmen were Burt Edwards (9223) and Preston Herrington (9211). The tourney was played Aug. 16 at Arroyo del Oso.



ARCHITECT'S DRAWING of new Credit Union building has received initial approval by the building committee, headed by Alan Pope (9300). New building will have twice the space of the existing structure. It will be located immediately adjacent to the present building on the west side. Exterior is brown brick and native sandstone.

Service Awards

20 Years



Sarah Copeland
1612



Robert Dill
7530



Carl Gregory
4612



Carter Howard
9411



Jesse Rehberg
9217



Tess Reis
3256



Antonio Salazar
4575

15 Years



Manuel Apodaca
3462



Amadeo Aragon
4575



Donald Argyle
7212



Robert Corey
4613



Muriel Denison
2620



Dale Haskins
1516



M. J. Madlener
2354



Merlin Manteufel
3511



Frank Neilson
5260



David Schafcr
7372



Ted Stetz
9124



John Stott
7652

Young Peoples' Concerts Unique Musical Series

One of the country's most unique series of Young Peoples' Concerts will be offered in Albuquerque this season, combining symphonic selections and professional theater musicals.

The concerts, presented by the Albuquerque Symphony Orchestra with guest conductors, are especially programmed for young audiences. They are scheduled for Dec. 13, Feb. 28, March 21, and May 9.

In addition, "Fiesta Mexicana," singers, dancers and musicians from Old Mexico, will be presented Oct. 15; "The Hallelujah Train," a musical journey across America, is scheduled for Nov. 22; and the Albuquerque Civic Light Opera version of "The Unsinkable Molly Brown" will be given Dec. 27. All programs are at UNM Popejoy Hall at 2 p.m. on Saturdays with the exception of Fiesta Mexicana (4:30 p.m. on Wednesday, Oct. 15).

Tickets for the series are \$12 for students, \$12 for an adult accompanying a child, \$20 for adult alone, and \$10 each for chaperoned groups of 10 or more children. Tickets will not be sold this year through the Albuquerque Public Schools.

The series is sponsored by the Albuquerque Symphony Women's Association and tickets may be obtained from Popejoy Hall or from one of the following Sandia wives: Mrs. Richard Claassen, Mrs. Maynard Cowan, Mrs. Richard Kavet, Mrs. Duane Wallace, Mrs. Thomas Lane, or Mrs. Rex Gardner. Mrs. Claassen, John Hornbeck (1) and Robert Henderson (2000) are all members of the symphony's board of directors.

Donations to the Albuquerque Symphony Orchestra can be earmarked for tickets for the Young Peoples' Concerts to be given to children who could otherwise not afford to attend the musical series.

Sympathy

To A. N. (Tony) Chaves (7512) for the death of his father-in-law in Santa Fe, Aug. 19.

To Joseph Suknot (7652) for the death of his father-in-law in Iowa, Aug. 24.

10 Years

Aug. 29-Sept. 11

Walter Murfin 1715, Larry Miller 2326, Peter Thoma 5437, Raymond Faltings 8171, Kenneth Adams 5231, Alvin Brazda 7231, Gertrude Hall 3256, Edward Gallegos 4142, Frank Garcia 4574, Joseph Trem 8322, Vivian Lenz 8223, James Martin 8245, Jack Colquitt 9426, and Biruta Balanda 8232.

Sandian Plays Captain Hook In Peter Pan Production

Tonight is the final evening performance of the Albuquerque Civic Light Opera Association's production of "Peter Pan" starring Phil Mead (3412) as the terrible Captain Hook.

Tonight's performance will begin at 8:15 p.m. in Popejoy Concert Hall. There are two more matinee performances, however. Performances are scheduled for 2:15 p.m. on Saturday and Sunday.

Tickets for the show, directed by Robin Hubert, are \$4, \$3.50, and \$3 for adults with students admitted at half price. For reservations call the box office at 277-3121.

Promotions

Eloy Barela (4231) to Layout Technician (Elec. Fabrication)
 Agnes Chavez (4362) to Steno Clerk
 Francis Cunningham (8234) to Staff Ass't Administrative
 Paul Gallegos (3415) to Mail Clerk (Carrier)
 Barbara Garcia (3421) to Typist (Translating)
 Arnold Jenkins (4336) to Staff Member Administrative
 Evelyn Johnson (8135) to Secretarial Typist
 Kathleen Kimbrell (8121) to Secretarial Typist
 Paul Metoyer (3415) to Mail Clerk (Motor Carrier)
 Ray Pino (7632) to Repro. Service Clerk (Film Bank)
 Martin Quintana (3415) to Mail Clerk (Carrier)
 John Sanchez (3428) to Messenger (Archives)
 Hugh Taylor (3454) to Staff Assistant Administrative
 Robert Thomas (4623) to Service Clerk (Receiving)
 Lena Valerio (3256) to Secretarial Steno
 Carol Verity (8231) to Typist (Compositor)
 Jerry Wackerly (8234) to Staff Associate Administrative
 Frankie Weldon (7632) to Reproduction Service Clerk (Microfilming)
 Thaddeus Werner (3423) to Staff Assistant Administrative
 Nestor Zamora (7632) to Microfilming Equipment Operator
 Kenneth Miller (3463) to Staff Member Administrative
 H. M. Checchio (4231) to Coil Maker
 Joe Laval (3433) to Staff Member Administrative
 Juan Pacheco (4517) to Helper
 Louis Sanchez (4233) to Technician
 Gilbert Valencia (9411) to Messenger
 Edward Sanchez (9411) to Data Processing Clerk
 Linda Armijo (8212) to Secretarial Steno
 Louie Armijo (4233) to Technician (Electronics Fabrication)
 Eve Baughman (100) to Secretary
 Lewis Blackman (4222) to Technician (Plastics)
 Cathleen Casper (3256) to Steno Clerk
 Helene Chavez (3256) to Steno Clerk
 Ernest Cordova (4252) to Machinist (Special Materials)
 Vincent Cordova (4574) to Janitor (Clean and Polish)
 William Edwards (4221) to Technician (Physical Electronics)
 Suzanne Frandsen (8122) to Secretarial Steno
 Paul Gabaldon (4221) to Technician (Physical Electronics)
 Martin Gonzales (4222) to Technician (Plastics)
 George Hiett (4221) to Technician (Physical Electronics)
 Mercedes Ipiotis (3256) to Steno Clerk
 Rosie Jennings (4333) to Record Clerk
 Linda Klattenhoff (3256) to Steno Clerk
 Margaret Lucas (3255) to Staff Assistant Administrative
 Doris MacMillan (8335) to Secretarial Steno
 Patricia McGinnis (3256) to Secretarial Steno
 Dora Montoya (3256) to Steno Clerk
 Connie Myers (3521) to Steno Clerk
 Eulita North (4233) to Assembler (Transducers)
 Helen Payne (3256) to Steno Clerk
 Helen Pipher (7412) to Data Operations Clerk
 Linda Rien (8322) to Secretarial Typist
 Jose Salazar (4222) to Technician (Plastics)
 Annabelle Sanchez (3256) to Steno Clerk
 Emiliano Sanchez (9411) to Messenger (Computing)
 John Sanchez (9411) to Messenger (Computing)
 Meliquiades Sanchez (7635) to Property Clerk
 Yvonne Sandoval (4364) to Steno Clerk
 Jose Sena (4222) to Technician (Plastics)
 Collette Thomas (3256) to Secretarial Steno
 Lucille Vigil (3256) to Steno Clerk
 Magdelene Vigil (3256) to Steno Clerk
 Martin Vigil (7615) to Staff Assistant Drafting
 Sheridan Ward (3256) to Steno Clerk
 Gilbert Weaver (4573) to Technician (Motor Pool Equip.)

SHOPPING CENTER

CLASSIFIED ADVERTISING
 Deadline: Friday noon prior to week of publication unless changed by holiday.
 A maximum of 125 ads will be accepted for each issue.

RULES
 1. Limit: 20 words
 2. One ad per issue per person
 3. Must be submitted in writing
 4. Use home telephone numbers
 5. For Sandia Laboratories and AEC employees only
 6. No commercial ads, please
 7. Include name and organization
 8. Housing listed here for rent or sale is available for occupancy without regard to race, creed, color, or national origin.

FOR SALE

MISCELLANEOUS

HARLEY DAVIDSON 74 chopper, \$900; utility trailer, 5'x8' bed, \$60. Shock, 877-3728.
 SADDLES: 1 Hereford brand, hand-tooled w/padded seat, adult size, Western roping style w/bridle, nylon rope & breast plate, \$125; trick & fancy riding professional, \$125. Cook, 265-5027.
 AKC TOY POODLE, silver male, excellent pedigree, 6 wks. old. Olson, 298-3795.
 2 MAUSOLEUM VAULTS, below market value, save \$245. Fifeild, 265-2286 after 6.
 26" 3-sp. Huffy bike, \$25; football shoes, 1 pr. low cut, \$4, 1 pr. high top, \$4. Houghton, 299-3386.
 FOUR 6-00x16 6-ply tires & tubes; 12"x14" heavy duty wall tent, w/stove, \$50. Redic, 268-8444.
 GE MOBILE dishwasher. Salazar, 255-1301 after 5.
 BEAGLE PUPPY, 8 mos., male, AKC champion sired field background. Buckner 296-1251.
 COMPLETE TRAILER RIG: 30' Airstream International Sovereign, International Travelall, many extras, shown by appointment. Sherman, 256-2306.
 BABY CRIB w/o mattress; baby walker; stroller; small table-desk; nylon crib-playpen. Parson, 299-1621.
 9-PIECE solid lined oak dining room set, 4 upholstered & 2 captain chairs, drop-leaf table extends to 8' w/leaves, \$75. Montoya, 265-9642.
 HO gauge freight train layout, unfinished, mounted on 3/2"x7" table w/folding legs, XFMR, cars, 2 engines, track & bldgs., \$40. Hawn, 299-7835.

YAMAHA, '69, 100cc twin, elec. start, auto-lube, 2 helmets, 1 bubble, 2400 miles. Barber, 298-4808.
 8-WK.-OLD female bassett pup white w/brown and black patches, AKC, \$25. Barton, 268-7271.
 DACHSHUND, female, 1 yr. old, very good w/children. Corll, 255-1186.
 PIANO, spinet, Acrosonic, Baldwin, mahogany, w/fabric covered stool, selling to settle estate, make offer. Hueter 242-1620.
 SWIMMING POOL, 3' deep, 12' dia., used 1 season, \$30. Bishop, 268-5334.
 DICTAPHONE, record & play back, complete, \$250. Moss, 298-2643.
 TWO TICKETS to State Fair for night of Sept. 13, excellent box seats. Church, 282-3853.
 APPROX. 100 cu. ft. lawn clippings, 2 and 3 yrs. old, come haul it away free. Caffey, 5115 Royene Ave. NE.
 3-PIECE antique bedroom suite. Huston 842-9049 after 7.
 SELMER-BUNDY student B-flat clarinet, sturdy velvet-lined case, music stand, \$65. Wacke, 268-8579.
 19" SILVERTONE slim-line portable television w/new picture tube, \$69.50. Kutzley, 217 Cardenas Dr. NE, 255-3572.
 TELEVISION, B&W, 10" Capehart w/antenna & portable stand, \$10 or best offer. O'Bryant, 268-9049.
 TABLE SAW, 8" TA w/accessories; 21" TV, B&W, RCA blond console; Storkline maple baby bed mattress; 21" reel power mower. Watson, 268-1517.
 DELUXE towing mirrors for sedan, \$16; CB radio & antenna, \$75. Hall, 299-0009.
 UNIVERSAL full-size electric range, \$40. Smith, 298-7365.
 BELT SANDER, Skil 4 1/2"x26" belt, heavy duty. Gutscher, 255-3736.
 SILVERTONE amplifier, twin twelve, 2 12" speakers, 100 watts, \$100 or best offer. Wichelns, 255-4896.
 FOMERANIAN PUPS, AKC excellent temperament, \$75. Westman, 255-6048.
 16" FIBERGLASS runabout w/50hp Evinrude; cover for L/W pickup; 110-lb. barbell set; '58 Mark IV automobile, AC. Hock, 256-0276.
 FREE KITTENS, 6 wks. old, black & white. Wymer, 299-0717.
 GENUINE ranch oak, twin bookcase beds & lg. matching 8-dwr. dresser, \$100. Grimes, 265-6234.
 BICYCLE, Boy's Schwinn 2-sp. Stingray, \$40. Durant, 298-4952.

TWIN BEDS w/mattresses & box springs, Jenny Lind 4-corner posts, \$20 the pair. Smith, 264-2668, 916 Cardenas SE.
 3/4 SIZE VIOLIN, bow, case, stand, used 2 years, \$50. Neel, 299-9309.
 20' TANDEM 1968 Terry vacation trailer, self-contained, \$2895. Mrs. Robert Lynes, 268-0144.
 OLDS TRUMPET, case & music stand. Anderson, 299-5727.
 WEDGEWOOD CHINA, Edme pattern, complete service for 8, including serving pieces, \$50. Kubiak, 265-6525.
 PORTABLE sewing machine, Kenmore zig-zag, auto., \$30. Melvin, 298-6402.
 CARPENTER TOOLS, included saber & skill saw. Eaves, 299-7728.
 '67 YAMAHA 250 cc. Eden, 296-7360.
 SEARS guitar amp., 6 speaker, 150 watt, solid state, 2 channels, 4 inputs, reverb switch, used for both bass guitar & lead together or separately, \$160. Sullivan, 299-4836.
 PIANO, Yamaha, studio console, model P-2, walnut, \$595. Inberg, 299-5151.
 CORNET w/case, \$50. Murray, 344-5289.
 UMBRELLA TENT, 10x13'; 2 rattan bar stools; 2 30" holloway beds; 2 olive lamps; 8-place setting Rogers silverplate. Mick, 299-5814.
 GE REFRIG., \$25; stroller, \$10; studio couch, \$15; lg. machinist vise, \$20. Husa, 298-3335.
 SELL OR TRADE for big game rifle: Fox dbl. barrel 20 ga. shotgun, beautiful engraving. Stewart, 265-0860.
 FIVE soap box derby type wheels, \$10. Smith, 299-6873.
 BICYCLE, girl's 20" Schwinn w/Stingray seat & bars, new tires, \$22. Robertson, 296-4613.
 KLIPSCH HORN, 4-way speaker system w/crossover network, McIntosh 30 watt amplifier. Griscorn, 299-3755, evenings.
 SEARS electronic fence charger, mod. 436.7773, cost \$40 new, sell for \$25. Mecklenburg, 344-6793.
 PIANO; studio couch; ice chest; crib mattress; small judo suit; single bed, maple; TR-2, 3 service manual; junk TVs. Johnson, 298-7356.
 GOLD NYLON living room chair, \$25; Boy Scout pack frame & pack sack, \$5. Peterson, 256-7514.
 POLAROID 900 electric-eye land camera w/wink light, top grain cowhide case. Lloyd, 298-2437.
 HEAVY DUTY CAMPER JACKS. Newton, 255-2074.
 NMMI uniforms, size 36; gold color divan & chair; portable coal oil heater; 1/2" hardware cloth, 48"x100". Fitzmorris, 256-2785.
 2 HEADBOARDS for twin beds, extra wood legs, white upholstered, \$5 each. Barton, 255-5491.

12 GA. SHOTGUN, Western-Field M/550, variable choke, \$50; female Labrador, 2 yrs., all shots, good w/children, free. Benson 268-9727.
 SWING SET, \$20; high chair, \$2; misc. items. Johnson, 268-4410.
 FREEZER, 20 cu. ft., upright, \$150. Johnson, 256-0129.
 NIKKOREX 35 mm camera, 43-86 mm f3.5 zoom lens, built-in cross coupled light meter, case, \$105. Knox, 255-3145.
 '64 WESTINGHOUSE 19" portable TV w/stand, \$25; play pen; feeding table. Konnick, 296-3906.
 YAMAHA 250 YDS-3, value \$265, want to trade for smaller, lighter bike about 125cc. Bruce Hansche, 247-2589.
 PROJECTOR, 35 mm slides, Bell & Howell type 754, auto., remote control unit, 5 trays, \$37.50. Grear, 282-3166.

CARS & TRUCKS

'63 CHEVY Impala 4-dr. HT, factory air, extras. Moyer, 298-1778.
 '52 NASH, air, radio, new transmission, tires, \$150. White, 296-3842.
 '63 MONZA club coupe, \$200, loan value \$295, needs brakes & minor tune-up. Hanna, 256-2733.
 '64 RAMBLER Classic 700 station wagon, V8, AT, PS, R&H, AC (book \$1000). Gibbs, 282-3639.
 '62 FORD pickup, 1/2-ton, V8, R&H, L/W bed, \$685. Rohrer, 255-9924.
 '57 CHEVROLET station wagon, V8, AT, AC, PS, \$400. Platt, 255-1973;
 '67 VW camper deluxe, pop-top, split front seats. Aeschliman, 298-7846.
 '68 VW squareback, fuel injection, low mileage, radio, w.w., undercoat, under warranty, \$1995. Ives 282-3851.
 '62 F-100 1/2-ton pickup, 3-speed, new paint job. Hulgan, 255-0220.
 '61 CHEV. Impala convertible, PB, PS, AT, chrome wheels. Denney, 268-0004.
 '65 KARMANN-GHIA, R&H, std., low mileage, \$1250; or '59 Chev. Biscayne, 2-dr., 6-cyl., std. \$250. Sisson, 296-3883.
 '61 FALCON, \$100. '63 XL, 427 cu. in., two 4-bbl. carburetors, 4-speed, mag. wheels, \$995. Rarrick, 3428 Parsifal NE.
 DUNEBUGGY, '65 VW engine, fibreglas body. Kingsley, 299-1226.
 '68 OLDSMOBILE 4-dr. Holiday sedan, Dynamic 88, R&H, AC, tan w/white top, \$950 or best offer or trade for L-bed pickup or medium camping trailer. Barnett, 268-2963.

'67 OPEL Kadette Rallye, new rubber, R&H, \$100 under book. Strome, 1409 Georgia NE, 268-2689.

REAL ESTATE

MOUNTAIN PROPERTY, 2-bdr. house & lot. Jaramillo, 877-9104.
 HOLIDAY PARK, 3-bdr., den w/fp, 1 1/4 bath, dbl. garage, \$4700 down, assume 5/4% loan, pymts \$149/mo. Tassia, 299-6096.
 7-ROOM HOUSE, 1 1/4 bath, carpet throughout, 3 acres land. Bosque Farms, will consider trade. Minor. (1) 636-2194.
 2-BDR. HOUSE, corner lot, could be re-zoned for duplex, 5321 Mountain Rd. NE. Fisher, 256-0626 or 265-7935.
 CUSTOM 3-bdr. & den on one acre in Bosque Park, all improvements, \$29,500. Everett, 636-2544.
 LG. CITY LOTS in Volcano Cliffs: one ready to build on w/all utilities & paved streets, \$2895; two without utilities, \$1495, terms considered. Schwiner, 282-5207.

WANTED

CHILD CARE in my home, big home & yard, children must be potty-trained. Hammons, 296-1142.
 BABY SITTING at my home, by hour, day or week. Ortiz, 600 Tomasita NE, 298-0167.
 ELECTRIC GENERATOR, 2000 to 3000 watts; swap 15' Grumman top-line aluminum canoe, motor mount, sail, for smaller canoe or generator. Tiefs, 299-2763.
 SMALL furnished house one to two years. Westman, 255-6048.
 300-600 EGG INCUBATOR, electric. Trodden, 268-2273.
 BICYCLE built for 2, reasonably priced. Garcia, 268-5323.
 GROVES Prestige Hunter or Spitfire, weight 40 to 45 lbs. Konnick, 296-3906.

FOR RENT

3-BDR., attached garage, AC, walled yard, clean, good neighborhood, \$140. Kist 255-0101.
 EAST HIGHWAY 66 frontage outside city, suitable any business, storage, etc., including small frame bldg., \$20/mo. Chavez, 298-5091.

LOST AND FOUND

LOST—Charm bracelet w/approx. 10 charms, Rx sunglasses, pocket calendar. LOST AND FOUND, tel. 264-2757, Bldg. 610.
 FOUND—Polaroid sunglasses, 5-yr. tie tac, pkg. disposable diapers. LOST AND FOUND, tel. 264-2757, Bldg. 610.

Coronado Club Activities

'Back-to-School' Ball Set Sept. 6

Another three days and summer ends. The Coronado Club twin pools close for the season at the end of activities Labor Day. The kids go back to school next week. "What better excuse for a ball?" asks Club manager Jim Noonan who rarely needs an excuse.

So the "Back-to-School Ball" is scheduled Saturday Sept. 6, with a social hour, big burgundy of beef dinner, and dancing to Sol Chavez and the mighty Duke City Brass. The fun starts with cocktails at 6:30, dinner at 7:30 and dancing at 9 p.m. Reservations (deadline next Friday) are required. The tab is \$3 for members, \$3.50 for guests.

Social Hours

Tonight, Frank Chewiwie will make the happy music while the Mexican food buffet is spread. Social hours get under way right after work and gain momentum as the evening progresses. Special prices are in effect from 5 until 8 p.m. The buffet line is open from 6 until 8 p.m. and the band plays from 6 to 9 p.m. Pat Reich and piano entertain in the main lounge from 9 until midnight. The buffet tonight costs \$1.25 for adults, \$1 for kids.

On Friday, Sept. 5, Phil Graham will play for dancing while the seafood buffet is the menu feature.

Gappy Mestas and the orchestra are booked for social hour Friday, Sept. 12, and the Club's famous chuckwagon roast beef is scheduled for the buffet.

Swim Tickets - 1970

To qualify for the "continuous member" rate (\$5 per family) for 1970 swimming, Club membership should start in September.

Stock Market Seminar

Representatives of E. F. Hutton & Co., will conduct a seminar on stock market investing beginning Tuesday, Sept. 2, at 8 p.m. Free to Club members and Sandia employees, the forum will meet on Tuesdays for four weeks.

Club Holiday

With the exception of the twin pools and snack bar, Club facilities will be closed Labor Day, Sept. 1.

Football Bus

The Coronado Club will again provide free bus service to the Lobo games. The first one—Lobos vs. University of Texas at El Paso on Saturday, Sept. 27—will leave at 7 p.m. from the Club. This beats worrying about parking at the stadium. After the game, the bus will return to the Club where social hour prices will be in effect in the main lounge.



SWIM SEASON ENDS at the close of the Coronado Club twin pools on Labor Day, Sept. 1. Jan Babicky (9412) reminds you that to qualify for the "continuous member" rate (\$5 per family) for 1970 swimming, club membership should start in September.

Sanado Sherry Luncheon Meeting Set Sept. 9

The Sanado Woman's Club will meet Tuesday, Sept. 9, at 1:15 at the Coronado Club for the group's monthly sherry luncheon. Guest speaker will be Mary Gordon, TWA travel advisor, who will discuss women and jet age travel. For reservations, call Mrs. V. K. Smith, tel. 268-2141.

Speakers

R. K. Traeger and R. D. Hermansen (both 5536), "Mechanics and Properties of Structural Foams," Gordon Research Conference, Aug. 21, New Hampton, N.H.

N. J. Magnani (5531), "Thermodynamics of Formation of $\text{Th}_2\text{Fe}_{17}$, $\text{Th}_2\text{Co}_{17}$, $\text{Th}_2\text{Ni}_{17}$, ThCo_5 , ThCu_4 and ThNi_2 from Electromotive Force Measurements," 1969 Nuclear Metallurgy Symposium of Reprocessing of Nuclear Fuels, Aug. 27, Iowa State University.

R. A. Sallach (5224), "Initial Reaction Rates of Oxygen and Nitrogen with Zirconium," American Chemical Society Meeting, Sept. 12, New York City.

L. S. Nelson and H. S. Levine (both 5224), "Kinetic Studies at Temperatures up to about 4000°K Using the Falling Specimen Technique," International Conference on Heterogeneous Kinetics at Elevated Temperatures, Sept. 8-10, Philadelphia.

E. D. Jones (5114), "High Power Pulse Lasers," Gordon Research Conference on Laser Interaction with Matter, Aug. 25-29, Issaquah, Wash.

Conservation Film Set

"Protect our water!" says Mij the otter. That's part of the advertisement for "Ring of Bright Water," a new film which will open at a local theater the second week of September. The film is being promoted by wilderness and conservation groups nationally for the wildlife, natural beauty, and animal care values depicted in the movie.

PAGE SIX
SANDIA LAB NEWS
AUGUST 29, 1969



GIL CANO (5235) displays some of the wood sculpture that he has carved in the past five years. He is holding a walnut wall plaque inlaid with cathedral glass which took first prize at the New Mexico State Fair last year. In addition, Gil makes furniture, lamps, and other house decorations.

It Beats Aspirin

Physicist Gil Cano Finds Wood Carving Is Great Way to Relax

Gil Cano, a research physicist in Atomic Particle Physics Division 5235, relaxes from the tensions of nuclear research and underground experiments in Nevada by pounding and chopping hunks of wood into pieces.

The pieces, however, are handsome.

Gil carves strong figures with spiritual faces that stand as sculpture or others that are bas-relief wall hangings. In addition, he makes furniture, lamps and shelves that are more like art than utilitarian items.

In style, Gil's work resembles the sculpture of Patrocino Barela, famous Taos woodcarver whom Gil knew and respected. It was this association which, in a way, started him on his own woodcarving.

Gil's wife Dolores, who is a native of Taos, wanted one of Patrocino's carvings. "Frankly," Gil says, "we couldn't afford to buy one so I bought wood carving tools instead."

That was about five years ago. Since then Gil has produced a number of major pieces—two of which took a first and second prize at the New Mexico State Fair.

Gil says he is still experimenting—trying different woods and tools for different effects. He isn't interested in selling his work, preferring to use it as decoration in his new home or to give to friends and relatives as gifts.

He spends from 5 to 40 hours producing one of the carvings. The difficulty is finding time to work. He is currently president of the Albuquerque Breakfast Civitan Club which takes a lot of off-hours time. For the past four years, Gil has been an officer in the organization.

Still, Gil finds time to make desks and tables, carve headboards, hang a heavy

carved fireplace mantel and produce the wood sculpture.

"It's relaxing," Gil says, "you can concentrate on carving and not think about anything else. Or, you can sort of work automatically and think about anything. I've had some insights this way which solved problems at work."

Doggie Agency Needs Help

The Animal Humane Association of New Mexico, which recently moved into new quarters at 615 Virginia SE, needs help in the form of donated time, money, building materials, or labor in order to maintain the high level of service to pets and pet owners.

Dorothy Matlack (3412), one of a number of Sandians active in the effort to make a dog's life better, says that any kind of help will be welcomed. There is a particular need for volunteers to operate the office.

The association assists injured animals, operates an adoption agency and a lost and found service, helps in the annual rabies clinic, and investigates cruelty complaints.

Other Sandians active in the organization include Kay Walter (9217), Joe Hickey (4516), Willella Golden (9411), Ed Harley (9255), Virgil Harris (9133), and Emily Class (3413). Also members are Mrs. John Hornbeck and Mrs. Robert Henderson.

Anyone desiring to give assistance can call the association office at 255-5523, or contact Dorothy at ext. 4-2136.

Authors

J. L. Halbleib (5223) and M. R. Scott (5222), "Theoretical Neutron Production from Hydrogen Isotope Reactions," August issue, NUCLEAR SCIENCE AND ENGINEERING; Halbleib and Scott, L. F. Shampine and G. W. Wing (both University of New Mexico), "Invariant Imbedding and the Calculation of Eigenvalues for Sturm-Liouville Systems," Vol. 4, pages 10-23, COMPUTING.

W. S. Saric (9343) and K. J. Touryan (9340), "Incompressible Magnetohydrodynamic Entrance Flow in a Plane Channel," Vol. 12, No. 7, PHYSICS OF FLUIDS.

C. W. Harrison, E. A. Aronson (both 2625), and D. C. Chang (University of Colorado), "Tubular Monopole of Arbitrary Dimensions: the Radiation Field"; Harrison and Aronson, "On Radar Pulse Scattering from Ionized Media," both September issue, IEEE TRANSACTIONS ON ANTENNAS AND PROPAGATION.

L. C. Bartel (5132), "Low Temperature Thermodynamic Effects of the 'Spin'-Lattice Coupling in Solid Ortho-Hydrogen," July issue, IL NUOVO CIMENTO.

J. E. Boers and Dermond Kelleher (both 5245), "Exact Solution of Poisson's Equation for Space-Charge-Limited Flow in a Relativistic Planar Diode," Vol. 40, No. 6, JOURNAL OF APPLIED PHYSICS.

J. B. Gerardo and M. A. Gusinow (both

5243), "Studies of the Early Afterglow in Helium and Argon Plasmas," Vol. 40, No. 6, JOURNAL OF APPLIED PHYSICS.

Walter Herrmann (5160), "Constitutive Equation for the Dynamic Compaction of Ductile Porous Materials," Vol. 40, No. 6, JOURNAL OF APPLIED PHYSICS.

R. A. Hill (9342) and J. R. Banister (9150), "A Study of an Expanding Hydrogen Plasma with a Rapid Scan Spectrometer," August issue, JOURNAL OF QUANTITATIVE SPECTROSCOPY AND RADIATIVE TRANSFER.

M. L. Lieberman (5315), "Optical Properties of Bismuth-Tellurium Oxide Films," Vol. 40, No. 6, JOURNAL OF APPLIED PHYSICS.

M. K. Parsons (5153), and F. L. English (2633), "Correlation of Electroacoustic Properties with Resistivity Inhomogeneities in CdS Signal Crystals," Vol. 40, No. 6, JOURNAL OF APPLIED PHYSICS.

H. H. Wicke and J. M. Worrell (both 1721), "On the Hausdorff Open Continuous Images of Hausdorff Paracompact p-Spaces," July issue, PROCEEDINGS OF THE AMERICAN MATHEMATICAL SOCIETY.

J. M. Peek (5232), "Discrete Vibrational States Due Only to Long Range Forces," Vol. 50, No. 9, JOURNAL OF CHEMICAL PHYSICS.

Sandia Safety Signals



It could be yours.

Not this sign. The dead end. On any street, at any time. Unless you drive defensively. Unless you expect the unexpected whenever, wherever you drive. Unless you...

Watch out for the other guy.

Published to save lives in cooperation with The Advertising Council and The National Safety Council.