

MIRROR SYSTEM shown in the photograph above reflects a constant beam of light through a tube in the wall of Bldg. 880 into the optical development laboratory of 7224-1. Large mirror rests on the ground and tracks the sun. Second mirror, being positioned by Bob Hughes, beams the light through the tube where Dan Fenstermacher is checking alignment with the optical bench inside.

Sandia Lab Safety Record Not Yet Officially Terminated; Accident Under Investigation

Sandia Laboratory's all-time nationwide AEC safety record has not been definitely terminated, according to A. B. Metzger, manager of Safety Engineering Department 3210. Recently the large safety signboards in the Tech Area had announced that the record had ended when an employee struck his knee.

"Following an electrical storm, a Sandia electrician had climbed a pole to repair damage, and as he was descending, he bruised his knee when he struck it against a strain insulator," Mr. Metzger said. "We are happy to learn that he is back on the job."

Because the injury occurred at a remote location, complete investigation of the case is requiring a longer time than usual. It now appears that the American Safety Association standards may not require this injury to be included statistically.

The final decision on this case may require a certain amount of time. The results will be posted on the boards as soon as that decision has been reached.

"We are all anxious to surmount our safety achievement to surpass the national record," Mr. Metzger said. "Certainly each of us should, indeed, be proud of the

part he or she played in the accomplishments to date.

"You have demonstrated what can be done by working together," he said. "This should urge us on to further efforts in the hope that our outstanding record has not been terminated."

At the time of the accident in question, Sandia Laboratory employees had worked 14,936,169 consecutive employee-hours or 417 days without a disabling injury occurring. This figure not only is an all-time national AEC record, but it places Sandia Laboratory among the leaders in safety throughout the nation.

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Sunlight 'Passes Thru Wall' In Solar Cell Test Study

Knocking a hole in the side of a building is not the usual way to solve a scientific problem at Sandia Laboratory. However, for Bob Hughes and men of the Optical Development Section 7224-1 it seemed perfectly logical.

The problem was to provide a controllable beam of sunlight to test solar cells. A beam was needed which could be varied in intensity.

Division 7232, of the Instrumentation Projects Department, is investigating operating characteristics of the cells as a source of power. Request for the test facility came from this division.

Inside the optical lab in the northwest corner of Bldg. 880 an optical "bench" with the necessary instrumentation was already in use on other projects. All that was needed was the sunlight.

Project engineer Bob Hughes

spent a couple of weeks working on a design of a special mirror system. It called for a tube to be installed in the wall of the optical lab which could be opened at both ends. Through this tube would be beamed the reflected sunlight from two mirrors.

One small 18-inch mirror sits on the ground outside the building and tracks the sun. A clock drive mechanism allowing for the rotation of the earth performs this function. This mirror reflects the light to a second 18-inch mirror which is positioned to beam the light through the tube.

Inside, on one end of the optical bench, is a third mirror which beams the light down the bench. As long as the sun shines in a clear sky, the beam of light re-

(Continued on page three)



BOB HUGHES takes a light reading along the cone of sunlight reflected into the optical development lab through a hole in the side of Bldg. 880. By moving the test stand with the solar cell along the optical bench various intensities of light can be achieved.

Two Classes in Basic English Offered at Noon

Two noon classes in Basic English will be offered Sandia Laboratory employees beginning Sept. 19. Technical and Trades Training Division 3132 has announced.

Both classes are designed as a college-level refresher course in fundamental English. W. F. Carstens (3423) will instruct one class in Bldg. 892 while Jim Fife (3431) will conduct the other in Bldg. 836. Both classes will meet during the noon hour on Mondays, Wednesdays and Fridays for 16 weeks.

Enrollments will be accepted through Sept. 19. Out-of-Hours enrollment cards are available in the booklet now in the booklet racks or from Division 3132, Bldg. 813.

Seven More Machinist Apprentices Finish Training, Become Journeymen

Seven machinist apprentices were honored last week upon becoming journeymen after two and one half years training. The ceremony, held in the Development Shops, was for the second class of apprentices to complete the training program which began in March 1958.

The men, William J. Costales, Victor E. Dailey, John M. Farnner, William L. Gibson, Richard W. Hill, Walter E. Myers and Richard F. Turnbough, were presented certificates by Lawrence J. Bowen (4254), chairman of the Joint Apprenticeship Committee.

Participating in the program were R. J. Hansen, Director of Development Shops; Walter Hall, manager of Mechanical Department 4250; C. H. DeSelm, Personnel Director 3100; and C. W. Campbell, Vice President, Administration 4000.

Mr. Hall presented the graduates with journeymen identification cards and Mr. Hansen presented copies of Machinery's Handbook.

Introduced during the ceremony were W. R. Parker (4254), supervisor of apprentices, and K. R. Dickerson (3132), administrator of apprentices.

Some 26 Sandians are currently enrolled in the apprenticeship program in both machinist trades and electronic technician areas. Sandia's program is approved by the Federal Bureau of Apprenticeships and the New Mexico Apprenticeship Council.

Members of Sandia's Joint Apprenticeship Committee are Mr. Bowen, chairman; Archie J. Fisher (4252), William F. Peay (4252), A. C. Taylor (4254), Wilbur J. Miller (3132), Homer R. Messenger (2724), Charles E. Jenkins (2723) and Dave A. Watt (4233).



GRADUATION OF seven machinist apprentices to journeymen was marked last week with a ceremony in the Development Shops. The men received certificates from Lawrence J. Bowen (4254), chairman of the Joint Apprenticeship Committee, third from

right. From left are Richard F. Turnbough, Walter E. Myers, William J. Costales, John M. Farnner, Victor E. Dailey, Mr. Bowen, Richard W. Hill, and William L. Gibson. R. J. Hansen (4200) presented the men with a copy of Machinery's Handbook.

AEC Announces Low Bidder for 892 Modification

Bradbury and Stamm, Albuquerque, is apparent low bidder for modifications to Bldg. 892 at Sandia Laboratory, the AEC has announced.

The projects on which bids were opened Sept. 2, cover modifications to approximately 9,000 square feet to provide classroom space for Weaponry Training Department 2310.

Staff of Physical Sciences Research Department Authors Scientific Papers

Scientific papers by a group of members of Physical Sciences Research Department 5150 have been accepted for publication.

"Drift Mobility in Neutron-Irradiated N-type Germanium" by W. H. Closser is appearing in the September issue of *Journal of Applied Physics*.

"Comment on Dynamical Theory of Electrodeposition" by Crawford McCallum will be in the October issue of *Journal of Chem-*

ical Physics. He presented another technical paper "Monte Carlo Calculations of Electron Backscattering," during a meeting of the American Physical Society in Montreal, Canada, this summer. "Separation of Magnetic Drying and Ohmic Heating," by J. R. Banister appeared in the July-August issue of *The Physics of Fluids*.

"Transient Electrical Properties of N-type Germanium after a Neutron Pulse" was published in the August issue of *Journal of Applied Physics*.

The same publication printed "Grain Boundary and Lattice Diffusion in Polycrystalline Bodies" by H. S. Levine in a spring issue.

"High Speed Auto-Data System for Blast Studies" by R. D. Jones has appeared in *IRE Transactions on Military Electronics*. Mr. Jones presented the paper this summer before the Milicon Conference.

Several of the technical articles were presented before the New Mexico Academy of Science in Socorro last April prior to publication.

ASME To Meet Tuesday, Sept. 20

The New Mexico Section of the American Society of Mechanical Engineers will meet Tuesday, Sept. 20, at 7:30 p.m. at the East Central Branch of the Albuquerque National Bank.

Speaker will be J. R. Chadwick of the Chadwick-Helmuth Co., Monrovia, Calif. His talk will deal with visual analysis of vibration tests using synchronized stroboscopic illumination to display tests automatically and continuously in slow motion.

Fashion Show Is Featured at Buffet By Coronado Club

A fashion show will be featured at the Coronado Club's monthly buffet dinner-dance on Sept. 24 starting at 6 p.m.

The buffet lines will be open until 8, entertainment will start at 8:30, and dancing to the music of Lloyd Pond's band will be from 9 to 1.

Reservations should be made now at the Club office. Cost is \$2.60 for members, \$3.60 for guests.

Free recorded music dances will be held next Friday night, Sept. 23, and again on Sept. 30, from 7:30 to 9:30 p.m. These are preceded by live music at Social Hours and the \$1.75 Friday night buffets.

Leigh Sprague will play for the Saturday night dance on Sept. 17 from 9 to 1. Admission fee is 50 cents for members, \$1 for guests.

"Saddle Tramp" is the movie for this month's Family Night on Sunday, Sept. 25. Cokes and popcorn are served, and it's all free.

Congratulations

Born to:

Mr. and Mrs. J. N. Edgeington (1321) a son, Mark Lane, on Sept. 28.

Mr. and Mrs. H. I. Libby (7253) a daughter, Susan Renee, on Aug. 16.

Mr. and Mrs. Alan L. Winkeljohn (4422) a son, Jeffrey Alan, on Sept. 3.

Mr. and Mrs. James A. Lipham (2716) a son, James A. Jr., on Aug. 11.

Mr. and Mrs. Bruce Honey (8121-2) a son, Randall Bruce, on Aug. 24.

Mr. and Mrs. Jack Whalen a daughter, Sheila Doreen, on Aug. 19. Lenore is on leave from 8212-4.

Mr. and Mrs. Ronald R. Zottnick (3111-1) a son, Kerry Trent, on Aug. 26.

Mr. and Mrs. Raymond W. Clark (3111-3) a daughter, Melody Ann, on Aug. 19.

Mr. and Mrs. C. J. Fisk (3453) a daughter on Sept. 3.

Mr. and Mrs. T. A. Allen (4231-3) a daughter, Tina Celeste, on Aug. 26.

Sympathy

To Frank Speakman (4624) for the death of his father Aug. 22 in Albuquerque.

To W. H. Jackson (4151-3) for the death of his father Sept. 8 in Albuquerque.

To Norma (4431) and Oscar Goodwin (3462-1) for the death of her father Sept. 9 in Mattoon, Ill.

Hypersonic Wind Tunnel Tech Information Sent To Swedish Institute

A group of technical memoranda describing development work on Sandia's hypersonic wind tunnel have been sent to the Aeronautical Research Institute of Sweden.

The request came after some of the memos were presented at a meeting in Dallas, Tex., of the Supersonic Tunnel Association last April. It is part of a technical information exchange among members of the association.

Titles of the memos, authored by personnel of Experimental Aerodynamics Division 7132, are as follows:

Description and Operating Procedure for the Sandia Five-Inch Hypersonic Wind Tunnel (HWT) Pressure Control System."

"Five-Inch HWT Heater Electrical Control System"

"Extension of 18-Inch HWT Mach Number Capabilities"

"Five-Inch HWT Electrical Control System"

"Definition of Test Section of HWT"

"Design of Balance Section for HWT"

"Pressurer Drop in Line Connecting Vacuum Tanks"

200 Attend First Annual Livermore Employee Picnic

About 200 people attended the first annual Livermore Laboratory employee picnic Aug. 27 at the Pleasanton Fairgrounds. "Good weather and excellent cooperation helped make the picnic a success," said Mel Terrell (8114-4), chairman of the event.

Fred Darugh (8152-2) acted as master of ceremonies, conducting the games, races and drawings. Contests ranged from tossing water-filled balloons to drinking soda pop from baby bottles. Twenty prizes were awarded to winning participants.

Others instrumental in the picnic's success "on location" were A. L. "Bud" Pearson (8222-2), Ralph Freeman (8122-2), Harold Faulkner (8114-4), Cliff Erickson (8114-1), Alyce Loveless (8114-3), Robert Bray (8114-4) and Ray Gillette (8114-1).

Congratulations

Wedding vows were exchanged by Hal Norris (8121-2) and Lenny K. Ely on Aug. 27 at the First Methodist Church in Beaverton, Ore. Hal has worked at Livermore Laboratory since June 1959.

Youthful Student-Guest from Columbia Finds Us Friendly

If a year from now Frank Hudson (5151) and his family can chatter away in Spanish, it will be no surprise. A teen-ager from Columbia is spending the year with them.

Clara Inez Castro Ortiz—known more informally as Clara Castro—arrived the end of July and recently enrolled as a senior in Pius X high school.

She came to this country as part of a State Department program for high school students.

The petite 17-year-old is from Bogota and has already studied English several years. "The only trouble," Frank explains, "is that she studied correct English and is having difficulty understanding the American idioms."

Although Bogota is at a 9,000 ft. elevation and is surrounded by mountains, those mountains are always green. Clara can hardly wait to see her first snow and even now the unusual pinkish glow to the Sandias fascinates her.

Her main impression—Americans are friendlier than she expected.

R. Norris Rose Back From Service In U.S. Air Force

R. Norris Rose has returned to Sandia Laboratory after three years' service in the Air Force.



He was personnel and training officer and was stationed most of the time at Biggs Air Force Base in El Paso.

He is now in Personnel Development Division 3121.

Investment Club Movie Set for Noon Hour Showing Sept. 22

Sandia employees who are members of investment clubs are invited to see a movie prepared by the National Association of Investment Clubs on Thursday, Sept. 22, during the noon hour in Bldg. 815.

Title of the movie is "Using the NAIC Stock Selection Guide." Persons interested in attending should contact Lee Stinnett (2563-1), ext. 23135, who arranged for showing the film. Secretaries of the investment clubs are particularly urged to call Lee to give him the number of persons attending from their groups.



AROUND THE WORLD on one suitcase is the aim of Betty Juckelund, engineer in the Test Design Section (8121-1) at Livermore Laboratory. She plans to rejoin Sandia upon her return.

Traveler to Carry Only One Suitcase On Four Month Globe Circling Trip

Around the world in 120 days by plane, train, bus and car is not a sequel to a Jules Verne epic, but is the travel itinerary of Betty Juckelund, a mechanical engineer in Division 8121 at Livermore Laboratory.

She embarked on her earth-circling venture recently headed for Hawaii, her first stop on a trip which will take her to 25 or 30 countries in four months.

In Manila, she plans to join her former roommate at college, a Fulbright Scholar who will make the trip with her. Because air travel will limit the amount of baggage she can have, Betty plans to live out of a single suitcase during her entire trip.

Suitcase Contents

Included in the suitcase are one or two "dress up" outfits and three casual ensembles, almost all of the "drip dry" type. In addition, Betty packed 36 rolls of color film to record her Odyssey.

"I wouldn't recommend that others follow suit," said Betty, talking about her wardrobe, "since I won't know until I get

back if it worked out okay." As a precaution she said she might buy a winter coat in Hong Kong since the climate will vary considerably on her trip.

To Get New Car

While in Italy she will pick up a new car which she will use in touring the continent. She plans to ship the car to San Francisco when she returns.

A 1959 graduate of Oregon State College, one of 15 women to receive an engineering degree in the school's history, Betty has been at Sandia since July 1959.



Bonnie Emery (8231)

Employees May Register To Vote in Bldg. 829 During Noon Hours

Sandia Laboratory employees who plan to vote in the Nov. 8 presidential election, but who have not registered yet, must do so by Oct. 10.

Services and Benefits Division in Bldg. 829 will register employees during the noon hour until the deadline.

You are not eligible to vote if you haven't voted in at least one of the last two general elections, and must re-register.

Applications to change registration certificates are also available from Division 3122. This would include change of address, name, or party affiliation.

Football Standings

Team	Won	Lost
1300	2	0
4200	2	0
3400	1	1
4400	1	1
7200	0	2
7300	0	2

Take A Memo, Please

A SURE GOOD WAY to avoid accidents is to put off until tomorrow the things you should never do in the first place.



OFFICIAL OPENING of Livermore Laboratory's putting green for employee noon-hour recreation took place this summer with vacationing Charlie Campbell (4000) on hand for ceremonies. The Sandia

Laboratory vice president was instrumental in the development of the area while he was Director of Staff Services at Livermore. Watching him as he handily sinks one is Lou Fisher (8116-2).

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Candidate With Most Popular Votes Could Be Loser in November's General Election

Beyond the tumult of their convention struggles for nomination, candidates John F. Kennedy and Richard M. Nixon press into the headwinds of their presidential campaigns. One will carry a majority from among more than 60 million popular votes. But his opponent could claim the nation's highest office.

How? By winning the vote of the electoral college, a unique body whose decisions are influenced entirely by the U.S. voter, who more often than not knows little, if anything, of the college's origins and purpose.

Unlike the 28 governors, 34 senators and 437 representatives who will be elected by direct vote of the people in November, the final and official choice of president and vice president remains the responsibility of the electoral college. Founded in the Constitution 180 years ago as an elite representative assembly, the electoral college is made up of members from each state equalling the number of representatives and senators from that state, a total of 537.

Here is how the electoral college works:

Two lists of electors are chosen in each state, one Democrat and one Republican, at the state conventions or during the primary elections.

The electors of the party receiving the highest popular vote in the general election in November are given the responsibility of selecting the president. They meet on the first Monday after the second Wednesday in December of an election year, usually in the state capital, and record their ballots. By long-standing custom, their votes go to their party standard-bearer. Certified copies of the electoral votes are mailed to the president of the Senate, and the Senate and House convene as one body to count the votes on Jan. 6.

In the event of a tie, the House of Representatives, each state being allotted one vote, determines the president. If no candidate polls an absolute majority, the House chooses from among the three leading men. Once the general returns are in from each state in November, the electoral votes can safely be predicted and the new president announced, even though the formal computation is not made until January.

In a closely contested election, a candidate who captures the popular majority in any state by a narrow margin wins that state's complete electoral slate. Thus, on a nationwide scope, it is altogether possible that the citizen's choice in November could be defeated through a deficiency of electoral strength.

For example, political analysts estimate that a shift of only 30,000 popular votes in three key states during the 1948 election would have given Thomas E. Dewey the victory over Harry S. Truman.

The following developments, or a parallel situation, are conceivable in the forthcoming national election.

One candidate could carry a total of only fourteen states and become our next president. In a

series of closely contested returns by slim margins in each state, assume that he carried New York, Pennsylvania, California, Illinois, Ohio, Michigan, New Jersey, Indiana, Virginia, Wisconsin, Minnesota, Tennessee, Kentucky and Iowa. His score in the electoral college is 276 ballots, a winning majority of seven.

Although his rival may have carried a decisive majority of the people's votes and carried 36 states, he would receive only 261 electoral votes, eight short of the absolute majority.

Historically, the major candidate has twice been defeated.

In the disputed election of 1876, Democratic candidate Samuel J. Tilden defeated Rutherford B. Hayes by more than a quarter-million popular votes. But Tilden lost the election. Conflicting sets of electoral votes were filed by three Southern states. No constitutional authority existed to appoint an official arbiter or to prohibit rival electoral returns. The House was predominantly Democrat, the Senate, Repub-

lican. Two days before the inauguration, an electoral commission appointed by Congress finally named Hayes president, awarding him all of the 21 contested electoral votes for a meager margin of 185 to 184.

Again in 1888 Democrat Grover Cleveland won over Benjamin Harrison by almost 100,000 popular votes, but Harrison carried the electoral college and the country, 233 to 168.

Since an entire electoral delegation from any state goes to the majority candidate, each voter's choice is vital. And, since majorities of a few thousand votes will determine pivotal electoral slates, each citizen would do well to study the issues and their authors and make an informed, responsible decision in November.

In the meantime it is possible that the most popular campaigner in November, missing the electoral majority, could become no more than a very young elder statesman.

H. R. Vaughn Makes the 'Ultimate' Hunting Trip—Big Kill in Yukon

This may seem early for hunting stories but Harold R. Vaughn (7131) just returned from the ultimate in hunting trips.

The hunt took place 150 miles northwest of Whitehorse in the Yukon Territory and the entourage included Hal, his cousin, two guides, a horse wrangler, a camp cook and 17 horses.

The hunters drove about 7500 miles round trip to reach the site of the hunt—the Ruby Range. During their three weeks in the woods they moved their base camp six times, traveling the 60-mile length of Aishihik Lake.

Main objective of the trip was

to hunt the pure white Dall sheep, which are found only in Alaska and the Yukon. Both hunters shot rams, Hal's being an unusually good specimen with the horns having a 41 in. curl and 14 in. base circumference.

They shot two mountain caribou, an animal similar to the elk in size. One had extremely rare double-shovel antler formation and the other had antlers measuring 51 in. beam and 42 in. spread.

Both men downed grizzly bears (Hal's was an old bear about seven ft. from nose to tail) and two wolverines and a moose completed the kill.

John Lambie Will Retire Sept. 30

John Lambie will retire Sept. 30 after working in Sandia's self service stock-rooms (organization 4611) for nearly eight years.



Mr. Lambie came to the United States from his native Scotland in 1922. "After 12 years in Chicago I'd had enough of cold weather and started out for Prescott, Ariz. I liked Albuquerque and it was several years before I finally reached Prescott on vacation," he explained.

After retirement he plans to remain in Albuquerque at 2845 Quincy NE where his cactus and rose gardens will keep him busy. Mr. Lambie is also a heavy reader and enjoys woodworking.

Later on Mr. Lambie plans to do some traveling—but in this country; he went back to Europe 10 years ago.

Welcome Newcomers

Aug. 29-Sept. 9

Albuquerque	
* Yolanda Adent	3126
* Phyllis P. Ciminski	3126
Louise H. Dow	3126
Marjorie M. Roberts	2632
Nina M. Stone	3126
Phyllis R. Swartz	3126
Idaho	
Warren A. Robertson, Idaho Falls	4224
Illinois	
Dean J. Kuehl, Mendota	1610
New York	
* William D. Burnett, Upton	3311
Clinton D. Tuthill, Painted Post	4224
Virginia	
Jerry Counts, Blacksburg	7182
West Virginia	
John P. Cline, Charleston	2422
* Denotes rehired	
Returned from Leave	
Ada Jane Akin	7160
Wallis L. Daily	3126
Emmalyn Massey	3461



UNITED CRUSADE volunteers at Livermore Laboratory make final preparations for the in-plant drive which began Sept. 12. From left, seated, are Ray Brin (8110) executive solicitor; Dick Cook (8116-4) chairman; Roy "Smokey" Maxwell (8225) vice chairman. Standing: Ken Purchase (8213-2) treasurer, Marvin Hunt (8213), auditor.

Bay Area Crusade Launched; Livermore Lab Goal \$12,900

The 1960 United Bay Area Crusade is in full swing at Livermore Laboratory after a kickoff meeting Sept. 12 for the in-plant drive. The goal for Sandia at Livermore is \$12,000.

All employees, except those on vacation or otherwise absent, are being solicited to sign pledge cards. Those missing during the campaign will be contacted upon their return. The results of the drive will be available for the next issue of the Lab News.

"We're pleased with the cooperation we've had from officers and volunteer solicitors," said chairman Dick Cook (8116-4). "We hope to be equally pleased with the results of the crusade."

Solicitors for the Laboratory drive are: Dept. 8110: H. R. Johnson (8115-1), R. W. Weaver (8115-2), R. L. Halley, Jr. (8116-1), R. J. Schick (8116-3), K. A. Cooper (8114-1), D. V. Knetzer (8116-2), R. E. Demo (8114-2),

J. W. Biebesheimer (8114-1), F. L. Baum (8114-4).

Dept. 8120: G. F. Darmohray (8121-1), J. A. Perry (8121-2), I. S. French, Jr. (8121-3), R. L. Hymer (8122-1), W. R. Wall (8122-1), E. E. Skidgel (8122-2), F. R. Dalrymple (8122-3), H. G. Short (8123-1), R. W. Stammer (8123-2), E. J. Kerns (8123-3), W. B. Pafford (8124).

Dept. 8140: Richard A. Hall (8141-1), L. A. Peterson (8141-2), M. H. Nelson (8132-1), George E. Sage (8143-2). Dept. 8150: D. R. Christensen (8152-1), G. K. Van Gundy (8152-2), L. R. Alton (8153-2), J. R. Wimborough (8153-1).

Dept. 8160: E. A. O'Brien (8161-3), J. C. Grape (8161-2), J. W. Gumm (8162-2), R. V. Richards (8163-2), J. T. Carrell (8164-1)

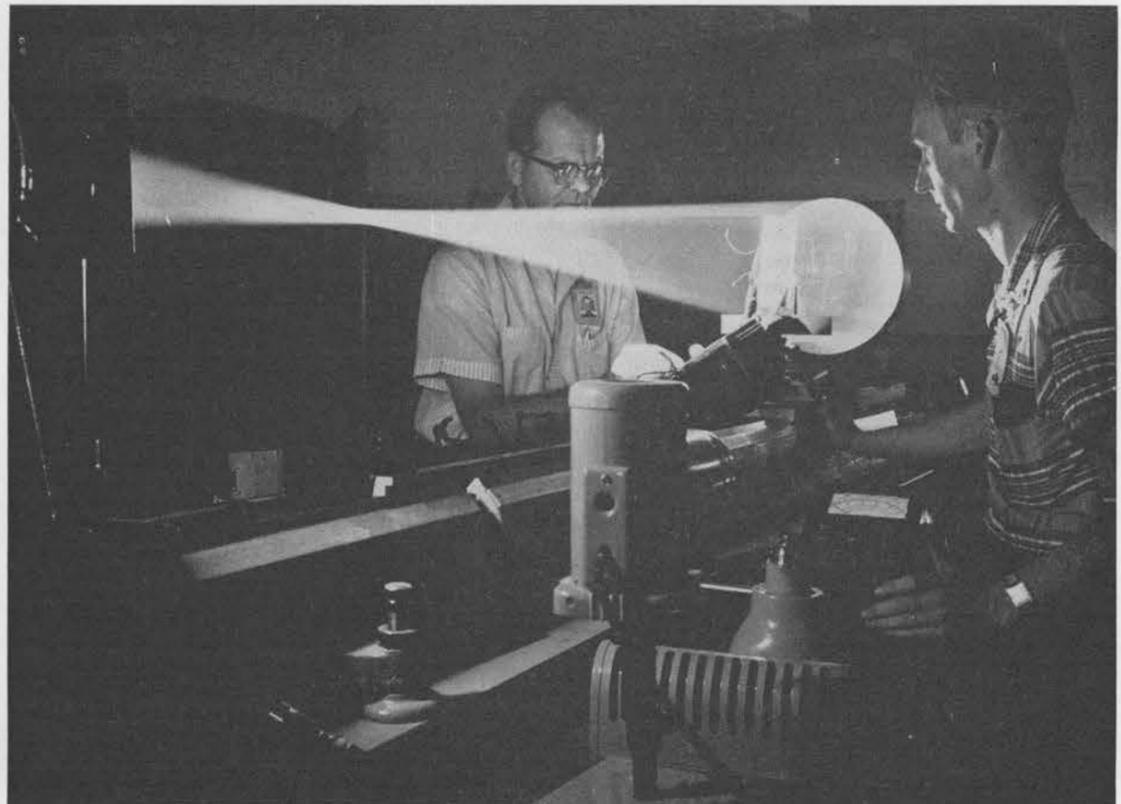
Dept. 8210: C. C. Smith (8211-1), Elizabeth Walker (8212-5), J. E. Bonetti (8212-2), H. V. McNabney (8212-4), Patricia Cooper (8212-3), A. Gregory (8213-1), Bette Hardy (8212-3), Judith Bryant (8212-3), J. F. Acker (8212-3), B. J. Dolstra (8212-3).

Dept. 8220: J. W. Smith (8221-1), J. M. Austin (8222-1), S. P. Timmings (8222-1), J. N. Barnhouse (8223-4), R. W. Jackson (8223-1), H. L. Stratmann (8224-1), R. D. Bryant (8225-1), Celso Vazquez (8225-1).

Dept. 8230: Joyce Doyal (8212-3), G. E. Geary (8232-4), R. A. Leri (8233-2), J. J. Grady, Jr. (8234-1), T. K. O'Kelley (8234-1), J. R. Nickerson (8232-3), Mary Sparger (8231-1), Estra Hill (8212-3), J. A. Portolese (8232-4).

Earns Guard Trophy

National Guard First Lt. Joe L. Sanchez (3462) was a mighty proud Sandian recently at the completion of two weeks encampment at Ft. Bliss. His unit, B Battery of the Third Gun Battalion at Belen, was presented the Eisenhower Trophy for being the outstanding unit in New Mexico in proficiency of training. Other Sandians who are members of the unit are Second Lt. Orelia Montoya (1125), CWO Tom Garcia (2721) and First Sgt. Tony Galdon (4516).



CONE OF LIGHT inside the optical development lab is shown in this photograph. Bright rectangle near the mirror is a solar cell undergoing test with the instruments of the optical bench. At left is Dan Fenstermacher who is taking a reading while Bob Hughes, right, checks position of the cell.

Continued from Page One . . .

Solar Cell Experimentation

mains constant.

Light Converges

At the end of the optical bench is a 12-inch parabolic quartz mirror which concentrates the light beam into a cone similar to the way a magnifying glass produces a cone of light. By positioning the solar cell undergoing testing along the cone of light, various intensities can be achieved. Rotating the surface of the cell can also vary the intensity. At the very smallest point on the cone of light, the focal point, temperature intense enough to ignite wood can be generated.

Purpose of any solar cell is to transform the energy of sunlight into another form, usually electrical energy.

By measuring the amount of electricity produced by varying intensities of light, the operating characteristics of the cell can be plotted.

The mounts, tracking drive and stands for the mirror system were fabricated in Sandia's Development Shops. The two outside mirrors were purchased from a commercial source while the parabolic quartz mirror on the optical bench is a spare from one of Sandia's tracking telescopes.

Livermore to Vote on Zone 7 Flood Control Issue Sept. 27

The zone 7 water and flood control bond issues come up before Livermore voters Sept. 27. The \$5,700,000 proposal offers a plan, in conjunction with the state-financed South Bay aqueduct program, to provide future water needs and flood control for the Livermore Valley.

Zone 7, an area of the Alameda County Flood Control and Water Conservation District, includes Livermore, Pleasanton, Dublin, Sunol, Altamont and Mountain-

house. The zone was formed with an elected seven-member board of directors in 1957 to solve flood and water procurement problems.

The tax rate for the first year would be 35 cents per \$100 assessed valuation. On an assessed valuation of about \$3,400 for the typical home in the zone, taxes would amount to about \$1.00 a month for the average homeowner.

The proposed construction will tie into the California South Bay Aqueduct, which will bring abundant water from the northern part of the state to the drier southern sections. By the spring of 1962 the aqueduct will have reached the Patterson Pass Reservoir. At this time zone 7 would tie into the aqueduct.

Patent Assigned AEC in Name of Howard Sander

A patent on a "zero-time" indicator has been assigned to the AEC in the name of Howard H. Sander (5150).

A distant microbarograph recording system ordinarily determines the travel time of shock waves resulting from nuclear detonations.

An operator places a mark on a graphical trace at the time of detonation by closing a switch when he counts down to zero on a watch at the scheduled shot time or when he sees the flash of the detonation. Human error may account for a second or more difference in establishing the "zero time" by this system.

The recently-patented indicator, the size of a small portable radio, utilizes an extremely powerful electro-magnetic transient which accompanies the above-ground detonation of an atomic device. An antenna receives the "zero time" nuclear detonation transient which is rectified, shaped and fed into a suitable recorder, establishing the "zero-time" mark.

A suitable pressure transducer senses the arrival of the nuclear shock wave and generates an electrical signal responsive to this wave. After being amplified, the shock wave pulse is also fed into the recorder.

By means of continuous timing marks on the recorder it is possible to determine with great accuracy the "travel time" of shock waves by the time difference between the "zero-time" transient and the pressure or shock-wave pulse.

Square Dance Classes Set

Several square dance classes will be starting during the month of September at various locations throughout Albuquerque. The classes will be instructed by members of the Central New Mexico Square Dance Callers Association. Ken Hostetler (2752-2) will be one of the instructors. For schedule of classes or additional information, call Ken at AL 6-3803, after five.

Supervisory Appointment

ROBERT D. BECKER to supervisor of Branch Shop Section 4252-2, Mechanical Department.



Bob has worked in Sandia's machine shops since they were first set up in 1947 and has been assigned to

most of the different sections in the organization.

Before coming to Sandia Laboratory he was employed for two years as an auto mechanic for a local garage. He has also worked as a welder for Rio Grande Steel Construction Company and in steel construction and machinery work for Schwartzman Packing.

During World War II Bob was a machinist's mate for three years with the U. S. Coast Guard.

He is a graduate of Albuquerque High School and has taken numerous accredited welding trade school courses there.

E. M. Shonka Speaks On Cost Accumulation To Accountants Ass'n.

Eldon M. Shonka, manager of Sandia's Auditing Department 4120, addressed the local chapter of the National Association of Accountants recently on the sub-



ject, "Cost Accumulation under Armed Services Procurement Regulations."

Mr. Shonka has been at Sandia since April 1959. His service with Western Electric for the previous 31 years included assignments in financial, accounting and methods work. His last two positions were Assistant Superintendent, Headquarters Auditing, and Supervisor, Cash and Securities Division, Treasury Department, New York headquarters.

During the meeting NAA officers and directors for the coming year were introduced. Included were Robert Duke (4122), vice president, and Robert S. Cox (4113), member of the Board of Directors.

Secretarial Accounting Courses to Be Offered This Fall at UNM

An evening non-credit course in Secretarial Accounting will be held every Monday starting Oct. 3 under the sponsorship of the University of New Mexico in cooperation with the Albuquerque branch of the National Secretaries Association.

The 12-week course will cover basic principles of accounting including classification of accounts, interpretation of accounting data and of financial records as related to top-level secretarial work. The course is open to all secretaries and other interested persons.

Instruction will be by Perry T. Mori, C.P.A. and UNM Associate Professor of Business Administration. Cost of the course is \$15 (no assistance is available under Sandia's Educational Aids Program).

Further information may be obtained from Joanne Boyd (4600), local president of the National Secretaries Association, ext. 28135.

ASQC Holds Meeting

First meeting of the season for the Albuquerque Chapter of the American Society for Quality Control was held recently at the Kirtland Officers Club.

Speaker for the dinner meeting was Dr. Irving Burr, Purdue University, who discussed "Steps Toward More Effective Customer Feed Back."



QUARTERLY MEETING of the State Advisory Committee on Scientific Engineering and Specialized Personnel was held at Sandia Laboratory last week. The group advises local selective service boards on deferment and Ready Reserve cases as to whether the applicant has critical skill and is also involved in a critical defense-supporting industry or is in a research activity affecting national

defense. Standing are (from left) H. T. Bean, manager of Telecomputing Corporation, Holloman Division, Holloman AFB; and C. H. DeSelm, Personnel Director 3100. Seated are Dr. Jerry Meyer, Highlands University; A. D. Pepmueller (3121), secretary of the committee, Max R. Salazar, committee chairman; Dr. William H. Crew, Los Alamos Scientific Laboratory; and David Gregg, White Sands.

Gets Bigger and Bigger . . .

Producing Sandia Phone Book Big Task; Automation Cuts Time

"Try getting along without one" is a willing testimonial from any employee who has lost his Corporation telephone book.

This three-times-a-year publication keeps getting more useful at the same time that its accuracy increases.

The telephone directory is the responsibility of Reports Section 3423-4, with a substantial helping hand given by Electric Accounting Machine Section 4423-2.

In previous years assembling the information in proper order and integrating changes required between 800 and 900 manhours with each re-typed page presenting additional chance for error.

Information on Cards

The information is now handled on IBM key punch cards from which a tab run is prepared that is spliced onto master forms and reproduced by lithograph process without additional handling or typing.

The July 1960 issue required 75 manhours of key punch time. Combined with work by Tom Heaphy's Reports Section, the total was less than 300 manhours. "Credit for the time reduction rightfully goes to the EAM people," Mr. Heaphy said.

"The next step toward increased speed and economy would be utilizing the IBM 705," he explained. Personnel information is being programmed for IBM 705 processing, and data for the telephone directory could easily be a by-product.

Work is already underway for the next Corporation telephone book with Lucile Marcrum (3423-4) as coordinator between the many organizations.

Secretaries Important

An important part in maintaining the accuracy of the listings is played by Corporation department secretaries. Tab runs sent to them must be checked for additions and corrections in telephone listings of their organizations under the functional, organization, and alphabetical name sections.

Organizations are urged to take advantage of the functional section for providing a handy reference to services of Corporation-wide interest (such as motor pool, typewriter repair, conference rooms, etc.).

The Department Manager determines which employees will be listed in the alphabetical section based upon their need to use the telephone in their work.

Changes indicated on the tab runs are made by members of A. S. Buchanan's EAM Section. The correct key punch cards remain unchanged.

About 8000 copies were printed of the current telephone book including 1700 sent to AEC and DOD agencies, integrated contractors, Western Electric installations and the few authorized external organization users.

No job is so important and no service is so urgent that we cannot take time to perform our work safely.

Louis J. Ellis Retires from Sandia

Retiring on Sept. 8 was Louis J. Ellis, who worked in Component Evaluation Division 5524. He had been at Sandia for 11 and one half years.

Before coming to Sandia, he worked for the Santa Fe Railroad for 29 years. Mr. Ellis could almost be considered a native of Albuquerque because he has lived here since 1904.

His hobby is silversmithing which he's been interested in for 30 years. He is quite skillful in his work, and has taught Indian silversmithing.

Mr. Ellis wants to do some traveling in his new-found leisure time, and at present is including Hawaii among the places he hopes to see.

He and his wife live at 445 Aliso NE.



ONE DROP won't do the job. This situation is dangerous. Moral is to report promptly any use of any fire extinguisher at Sandia Laboratory to Plant Inspection Division 4542, ext. 29263. This is essential so that the extinguisher can be replaced with a serviceable one with the least possible delay. Also report immediately any fire, regardless of size. Illustrating the point above is Sam Johnson (4542) who directs Sandia's fire prevention activities.

SANDIA SERVICE AWARDS

10 Year Pins



Charles R. Farmer
3242
Sept. 7, 1950



Robert L. Byrd
3242
Sept. 11, 1950



Johnny J. Atencio
4221
Sept. 18, 1950



Gordon P. Barnett
7311
Sept. 18, 1950



Charles R. Clark
1442
Sept. 18, 1950



Bernard O. Ellis, Sr.
3242
Sept. 18, 1950



Antonio T. Trujillo
4511
Sept. 28, 1950



Marshall N. Servis
4514
Sept. 18, 1950



Robert P. Stromberg
1322
Sept. 18, 1950



Donald E. Wanner
1122
Sept. 18, 1950



Gabriel Chavez
4631
Sept. 19, 1950



Hugo Flores
3242
Sept. 19, 1950



James J. Grady, Jr.
8234
Sept. 19, 1950



Marion J. Phelps
7214
Sept. 19, 1950



Benjamin G. Salazar
4624
Sept. 19, 1950



Irwin Troyky
8231
Sept. 19, 1950



Waylon B. Ferguson
4315
Sept. 20, 1950



Max M. Gasta
1313
Sept. 20, 1950



Robert T. Pegue
4231
Sept. 20, 1950



Chester Eaves
3242
Sept. 21, 1950



Rex L. Eaves
3242
Sept. 21, 1950



Harold M. Meidal
4232
Sept. 21, 1950



Alfred Montoya
4573
Sept. 21, 1950



Joseph Szymanski
2421
Sept. 21, 1950



Epimeno G. Ortiz
4514
Sept. 22, 1950



Joseph M. Seiler
4623
Sept. 22, 1950



Milton J. Lesicka
4581
Sept. 25, 1950



Julian P. Sanchez
2632
Sept. 25, 1950



Robert M. Bleakney
2533
Sept. 26, 1950



Walter L. Dauphinee
2533
Sept. 26, 1950



Elwell M. Hodges
7534
Sept. 26, 1950



Samuel Lopez
4621
Sept. 26, 1950



Robert G. Lozano
2721
Sept. 26, 1950



Mark A. Martegane
3242
Sept. 26, 1950



Benjamin Martinez
4631
Sept. 26, 1950



Edgar Cary
4513
Sept. 28, 1950



Luis T. Garcia
4214
Sept. 28, 1950



B. S. Jaramillo
2643
Sept. 28, 1950



T. C. Siegrist
4254
Sept. 28, 1950

Five Year Pins Sept. 17-30

Howard W. Benischek 4343, Harvey W. Tappan 4411, Burton S. Hill, Jr. 7117, Anna D. Jaramillo 4233, Roy A. Blockinger 8161, Marion L. Jones 3462, Basil L. Cafferty 7521, Richard R. Michaels 4614, Lawrence G. Verzi 2642, C. Trujillo, Jr. 3452.

SHOPPING CENTER

CLASSIFIED ADVERTISING

Deadline: Friday noon prior to week of publication unless changed by holiday.

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 Corporation and AEC employees only
6. No commercial ads, please
7. Include name and organization.

FOR SALE

SWING SET, 2 swings and glider, used only two months, \$19. Coleman, 6000 Alta Monte NE, AL 5-7480.
'51 PLYMOUTH 4-dr. sedan, transportation, \$75; 16 cu. ft. deluxe Coldspot freezer, 1958 model, \$200. Reynolds, 1722 Hoffman Dr. NE, AX 9-0709.
OIL PAINTING, 2 ft. x 3 ft. with wide gilt frame, Scottish landscape scene, \$50. Pardee, AL 5-1998.
LAMBRETTA MOTOR scooter, needs repairs, \$35; trade cameras for guns; 1949 Ford front end, complete; doll case. Villella, AX 9-7915.
AUTOMATIC WASHER, Kenmore Sude Saver, \$40; '55 Cadillac 62. Schafer, 3421 Calle del Sol NE, AL 6-2662 after 4:30 p.m.
PATIO SWING, seats four, \$60 value for \$15. Henry, 1828 Florida NE, AL 6-2467.
CHILD'S ROCKING horse, plastic, \$7; child's 3-speed phonograph, \$7; miniature French pool, \$200. Pape, AL 5-6702.
CHEVROLET 1/2 TON pickup truck, 6 cyl., \$650. Thompson, AX 9-3416.
TRICYCLE for small child, 12 inch wheel. Worden, AL 6-9594.
DIRT TRAILER (no springs), \$15. Bradshaw, 3505 Inca NE, AX 8-2753.
'49 PONTIAC convertible, \$150 or best offer. Kent, 1914 Virginia St. NE, AX 9-4129.
35mm SLIDE projector, Kodaslide Highlux III, 300 watt blower, \$25; 7x35 binoculars, Bushnell lens, extra wide angle, \$50; Winchester 72A .22 repeating rifle, \$32. Bressan, AM 8-5367.
PORTABLE TYPEWRITER, Underwood, elite type, \$30. DeSelm, AL 5-2634.
BABY EQUIPMENT, Cosco play and feed table, \$10; aluminum frame bath-inette, \$10; Teeter-totter shoo-fly, \$5. Gregory, AM 8-2022 after 4 p.m.
KITCHEN DINETTE, chrome, grey formica topped table, four green-grey plastic covered chairs, \$30. Roth, CH 3-0522.
3 BDR and den, 2 baths, garage, electric range, disposal, drapes, air conditioner, etc. \$14,250 FHA, \$750 down. Eagan, 614 Quincy SE, AM 8-0196.
'57 BEACON trailer, 8' x 40', \$350 down and \$54.25 monthly. Cummings, Sun Valley Trailer Park, CH 2-1061 after 5 p.m.
BOYS BICYCLE, 26", Schwinn with balloon tires and coaster brake, \$7.50. Kelly, DI 4-3317.
'53 DESOTO V-8, 4-dr., R&H, w/w tires, \$395; 21 cu. ft. deep freeze, \$275; Stauffer reducing machine, \$185. Meekins, AL 6-3928 after 5 p.m.
2 CLARINETS with cases, \$80 each or both for \$150. Archibeque, DI 4-4580 after 5 p.m.

ELECTRIC FAN; books; Zenith radio-phonograph combination; Hercules 3-speed bicycle, boys; motor and parts. Geibel, AX 9-0275 after 5:30 p.m.
20" BICYCLES, two, \$12 and \$15; Maytag wringer-type washer, \$35. Finley, AL 6-2796.
SECTIONAL, 3 piece, foam rubber; maple bedroom suite; kneehole desk, dinette set; two day beds; misc. furniture. Libby, 1714 Hermosa NE, AM 8-2025.
YOUTH BED, blond, with mattress and side guards, \$25. Nordeen, 312 Dartmouth Dr. SE, AL 5-3377.
BEDROOM SUITE, 3 piece, including mattress and springs; white baked enamel dining room suite with six chairs. Thomas, AL 6-2371.
'51 FORD, R&H, automatic transmission, good engine and body, \$225 or best offer. Newman, AX 8-2323.
SPRINGFIELD 1903-A3 .30-06 issue, 4 groove barrel, \$35. Womelsdoff, AX 9-6269.
'46 FORD COUPE, '57 Chevy engine with '57 Chevy 4-speed truck hydromatic, dependable transportation. Campbell, AX 9-4830.
WEDDING GOWN, full length Chantilly lace, size 10, fingertip veil, will sacrifice. Boice, 2610 Gen. Arnold NE, AX 9-3260 after 5 p.m.
35' TRAILER, one bedroom Spartan, air conditioned, make offer on down payment. Mercer, CH 2-8094.
WASHER, automatic Kenmore, \$35. Cole, 236 Conchas NE.
DRILL PRESS, \$75; skill saw, \$20; production table for drill press, \$20. Pliner, 6210 Bellamah NE, AL 6-1907.
CLARINET, B flat, Bundy, \$75. Parsons, AM 8-6680.
HUB CAPS, wire wheel, Nash-American, Rambler or Statesman, 6 each, cost \$90, sell for \$29. Doleshal, BU 2-3237.
GE WASHER, automatic, \$60; Kenmore washer, automatic, \$25. McCarthy, 10705 Irene NE, AX 9-2862.
LARGE 2 BDR house, 4 1/2% FHA, no qualifying, \$10,600 total, low down payment. Must see to appreciate. West, AX 9-8788.
'51 FORD custom 2-dr., sedan. Shaffer, AM 8-1123.
'53 HUDSON Hornet, good rubber, fair mechanical, \$120. Henry, 6807 Kiowa, AL 6-9567.
'58 FORD Fairlane 500, power brakes and steering, large motor, \$1300; '31 Model A pickup. Pritchard, AM 8-6430.
DOUBLE BED, \$20; table and chairs, \$20; other household items, owner moving. Oberst, 9216 Arvada NE, AX 9-6644.
SORREL GELDING, 3 years old, quarter type, sell or trade for mare. Harker, Box 390, Escabosa Star Rt., Tijeras, N. M.
REMINGTON 552, .22 auto. rifle with case, \$40; Ruger .22 Bearcat pistol, \$40; Crossman air pistol, \$7. Parks, AM 8-0875.
'55 CHEVROLET six, 4-dr., heater, new hydraulic system and brakes, \$750. Talley, DI 4-4818 after 5 p.m.
21" TV, Emerson console model 767, mahogany veneer cabinet, \$75. Stark, 1334 Marron Circle NE.
PIANO, WURLITZER, baby grand, \$500 or trade for spinet type piano. Batsel, AX 9-4091.
ROCKING HORSE, spring suspended, \$5; small book case, \$3; laundry cart, \$2. Sedgwick, 3421 Parsifal NE, AX 9-0711.
ACE in Albuquerque Ranch Estates, choice location, \$1650 with \$250 down and \$25 per month. Jones, AL 6-9078.

NEXT DEADLINE FOR SHOPPING CENTER ADS Friday Noon, Sept. 23

TRAILER, steel construction with tarp and steel hitch, good rubber. Wolfe, 2800 Altez NE, AX 9-5308.
POWER KRAFT 6 1/2" handsaw with extension cord, Montgomery Ward. Messenger, 1515 5th St. NW, DI 4-2626 after 6 p.m.
ALUMINUM CAMPER, 16 ft., 1948 Mobile Sportsman, sleeps five, butane, 110 lights, heater, spare, leveling jacks, \$498. Toft, 3124 Dakota NE, AL 6-4013.
'53 PONTIAC, 4-dr., R&H, new hydro-matic transmission, \$295. Shelden, AX 9-1186 or AX 8-1990.
EQUITY in three bedroom house near base. Church, 415 Arno SE, CH 2-7426.
'52 DODGE, 4-dr., tires like new, best offer around \$300. Vandi, AL 5-0685.
OLDS TRUMPET, music and rack, \$50. Reese, AL 5-4288.
'47 PLYMOUTH coupe. Harroun, AX 9-9048.
GAS RANGE, full size, deluxe model, Caloric, \$100. Meyer, AX 8-2752.
DINETTE SET, chrome, pedestal-type table, yellow formica, chairs of yellow duran plastic, \$29.50. Cooper, AX 9-4260.
SECTIONAL, 2 pc.; chair with ottoman; formica topped dinette table, four chairs; desk with chair. Hamilton, AX 9-6680.
STANDARD TYPEWRITER, Smith-Corona, latest features, Pica type, table, cover, \$55 or trade for good AM-FM tuner. Sherwin, AL 5-8866.
STUDIO COUCH, sleeps two, \$5; new aluminum Venetian blinds, assorted sizes, make offer; lawnmower, \$8. Seknan, AX 8-0373, 9913 Chapala Dr. NE.
PICK-UP, '48 Chevrolet, 1/2 ton, \$225; rototiller, 6 hp power drive, \$60. Struss, AX 9-6430.
CAMPING TRAILER, 15 ft. Shasta, sleeps family of six or four adults, good tires, two gas bottles. Stixrud, 4605 Palo Duro, DI 4-7873.
RADIO-PHONO Hi Fi, blond console; gray tweed bed davenport; gray tweed Queen Anne chair; gray plastic posture chair, misc. All very reasonable. Qualle, AM 8-2827.
'55 PONTIAC V-8, 4-dr. station wagon, 9 pass., straight transmission, \$725. Renfro, AX 9-7146.
SCOOTER, Cushman Eagle. Peterson, 1904 Moon NE, AX 9-6473.
CRAFTSMAN 8" table saw on wooden stand with 3/4 hp motor, \$65. Hansen, 2829 Adams NE, AM 8-8440.
VACUUM CLEANER, 1957 model Westinghouse, make offer. Chadwick, AX 8-1298.
PORTABLE ORGAN, Magnus, \$75. Sharp, AX 8-2702.
MAYTAG WASHER and State gas range, both for \$60. Salazar, 2912 Altez NE, AX 9-3360.
1/2 TON PICK-UP, 1950 GMC carryall, side and rear curtains, heater, excellent for hunters and fishermen, \$200. Cannon, AX 9-4994 after 5 p.m.
'60 CHEVROLET Bel Air, 2-dr. sedan, 6 cyl. powerglide, R&H, turquoise and white, 5,000 miles. Sell or trade for older car or pick-up. Workman, 1217 June NE.

FM-AM TUNER with AFC, \$25; AM tuner, Heathkit model BCIA, \$20; stereo amplifier Eico HF-81, \$65. Cafferty, AL 6-4090.
ACCORDION, 120 bass Scandelli with carrying case, music, \$100. Anderson, AL 6-4728.
'55 FORD, 6 cyl. station wagon, R&H; 26" lightweight boy's bicycle, \$18; cot size bed with innerspring mattress, \$15; heavy cot size mattress, \$10. Asbury, AM 8-3542.
PICK-UP, 1/2 ton 1948 Ford, 4 speed. Gardner, DI 4-2547.
TROMBONE for student with case, stand and books, reasonable. Brown, AX 9-1689.
HOUSE TRAILER, 35 ft. aluminum. Fidel, 4704 Hannett NE, AL 6-1646.
30-30 MARLIN lever action rifle, \$50. Stewart, ext. 25139.
HIDE-A-BED, Siebold, AX 9-6091 evenings and Saturdays.
DEEP FREEZER, upright, 17 cu. ft. National deluxe, \$290. Grull, DI 4-5996.
GAS RANGE, double oven, \$25; refrigerator Kelvinator, \$65; rollaway bed, \$15. McKenzie, AM 8-9651.
'60 FORD convertible, large V-8 with Cruisomatic transmission, sharp red. Will trade or sell for cash, reasonable. Atkinson, AX 9-3250.
U.S. STAMPS, cancelled, also 1958 and 1959 mint blocks and plate blocks. Hicks, 321 Manzano NE, AM 8-5640.
HARLEY DAVIDSON 165, 1956 model. Gonzales, CH 2-4012 after 6 p.m.
RUG, 9' x 12', wool hook, beige tones, \$20. Dyckes, AX 9-7280.
PICK-UP, 1952 Chevrolet, 4-forward speeds, \$350; electric organ Consonato, originally cost \$2500, will sell for \$1000. Dixon, 1408 Marcella St. NE, AX 9-6886.
DRAPES, two pair for picture window, contemporary pattern. Montana, AX 9-8048.
REVOLVER, .45 cal. S&W. Kochmann, AX 9-5133.
'49 DE SOTO, 4-dr. sedan, R&H, automatic transmission, good tires, \$100. Blythe, AX 9-0729 after 5 p.m.
TAP SHOES for little girl, size 11, patent leather Capezio's, \$5. Hall, AL 5-9740.
'60 ZUNDAPP, 250cc, 700 miles, price when new \$625, selling price \$500 or best offer. Will consider terms. Petrini, AX 8-0433.
CHIHUAHUAS, cute, registered. Cericola, DI 4-4243.
21" TV, Magnavox, on casters, \$75. Harris, AX 9-6664.
WOODEN TABLE, ranch style, with separate benches, table top 44" x 34", ideal for dinette or patio, \$22. Hart, AX 9-8832.
TRAILER, 2 wheel 16" wheels, \$55. Waddles, CH 7-9976.
35mm CAMERA, Argus C-3 with flash attachment and carrying case; Mersman steptable. Irwin, AL 5-8180.
FLUTE, make offer; Boy Scout uniform, size 12. Nissen, AL 5-5657.
WEDDING BAND and diamond (10 diamonds in all), size 8, valued at \$225, will take less. Taylor, 2400 Mesilla NE, AX 8-0989.
STEEL GUITAR, Magnatone, electric, with one speaker amplifier. Carmichael, 2912 Aliso NE, AL 6-9371.
BOOK OF KNOWLEDGE, 10 volume set; twin size bed frame and headboard; electric toaster; skill saw. Trumble, AM 8-7477.

AUTOMATIC WASHER, \$35. Padilla, AX 9-0460.
DACHSHUND puppies, registered. Bates, AX 9-1108.
'54 JEEP stationwagon, R&H, OD. Romero, 1416 Aztec NW.
'50 PONTIAC 2-dr., \$150 or trade for motor scooter; steel garage door, roll-up hardware, \$20. Chase, 134 Mesilla NE, AM 8-6814.

WANTED

DOG CLIPPERS and shears, electric. Kochmann, AX 9-5133.
TWO NEW MEMBERS with cars to join car pool, Bel-Air vicinity. Wolfe, AM 8-0428.
BOYS BIKE, good used 26" size, Schwinn make. Fletcher, AM 5-0217.
RIDE FROM Phoenix and Kentucky to Bldg. 800 and return. Uribarri, AL 6-1270.
RIDE DAILY from Zuni and San Mateo SE to Pecosville Bldg. (832). Jean Jeffs, AM 8-3266.
ALTERNATE RIDE to and from St. Joseph's College for one 11:15 class Monday and Wednesday. Romero, DI 4-0302.
CAR POOL arrangement with party in Carlisle Plaza area. Please contact, Norris Rose, 3307 Sierra NE.
GIRLS BICYCLE, 20". Westman, AL 5-6048.
RIDER in vicinity of Girard and Constitution to share driving to Gate 1. Krohling, AM 8-8126.
HOME FOR all black, part Siamese 6-month-old kitten. Nielsen, AL 5-2045.
PRE-SCHOOL age child to care for in my home. Coffee, AX 9-5461.
ELECTRO-VOICE speaker, SP15B or SP12B. Hasterman, Sandia ext. 39182.
RIDE WANTED for woman who works second shift from 5:14 Punta Alta NW. Hernandez, CH 7-8416.

FOR RENT

FURNISHED APT., near bus, utilities paid, \$35 a month. Archuleta, CH 7-8605.
3 BDR. HOUSE near base, will rent to sell. Church, 415 Arno SE, CH 2-7426.
2 BDR. HOME, \$85, close to schools, shopping, bus. Available immediately. Thompson, AX 9-3416.
SMALL 2 BDR house, garage, water paid, \$65. Write J. C. Farmer, Star Rt. 2, Box 289, Los Lunas, N. M.

LOST AND FOUND

LOST: gold lapel watch. Lost and Found, Ext. 26149.
FOUND: earpiece from glasses; green Sheaffer's pen. Lost and Found, Ext. 26149.

FOR SALE AT LIVERMORE

'58 PLYMOUTH, Silver Streak, 6 cyl., 4-door sedan, heater, standard shift, original tires, original owner, 30,000 miles, \$1295. Moore, Ext. 2291.
'57 GOLIATH, 5-pass. sedan, heater, radio to install, \$450. Ward, HI 7-5720.
3 BDR. HOUSE, 2 baths, double car garage, fireplace, fenced yard, G.I. loan, will sell or lease; portable home air cooler, \$30. Tooker, HI 7-3383.
TRAILER HOUSE, '57 Liberty Customline, 50' long x 8' wide. Craner, HI 7-6164.
WANTED AT LIVERMORE
BICYCLE, girl's adult size, light weight. Peterson, HI 7-2289.



SOFTBALL SEASON at Sandia Laboratory ended officially last month when team members met at the Coronado Club for dinner and presentation of trophies. Among 36 individual trophies presented to members of winning teams 4100-4300 and 3100-4200-4500 was the one presented above to Jim Covert (4333) by W. G. Funk (3120), left. Travelling trophy for tournament champs went to the 1200-I team.

The Calendar

Sept. 16 - 30

Sept. 20
 American Society of Mechanical Engineers
 Albuquerque National Bank
 Place: East Central Branch,
 Technical Meeting: 7:30 p.m.
 Speaker: James Chadwick, Co-owner,
 Chadwick-Helmuth Co., Calif.
 Topic: "Unique type of instrumentation for
 vibration studies using a stroboscopic camera
 synchronized with the frequency of shake
 table for slow motion effects"
 For further information contact
 Don Williams, Jr. (7313), ext. 26239

Sept. 25
 Society for Nondestructive Testing
 Place: Los Alamos Picnic Grounds
 Time: 1-5 p.m.
 Annual Los Alamos Chapter Picnic
 For further information contact
 W. Phillips (LASL), ext. 799

Sept. 26
 National Society of Professional Engineers
 Place: American Legion Hall,
 1201 Mountain Road NE
 6:30 social hour, 7:30 dinner
 Speaker: J. Caldwell Wilson, president,
 N.M. Society of Professional Engineers
 Topic: "Professionalism"
 Reservations requested before Sept. 22.
 Call Walter Scott (7184), ext. 28253.

Amateur Radio Caravan Club of New Mexico
 Radio Call (29.6 mc) each
 Wednesday, 6:30 p.m.
 Business meeting, 7 p.m.,
 4th Wednesday each month

Sandia Base Radio Club
 Regular meetings,
 second Tuesday each month
 Special meetings, when announced, are
 held on fourth Tuesday of each month

This information compiled by the Council
 of Technical and Scientific Societies

Promotions

Mary Ann Melo (3126) to Secretarial Steno
 M. Elaine Holloway (3126) to Secretarial Steno
 Orinda R. Medina (3423) to Typist
 Ruth D. Way (3126) to Typist
 Bobby D. Kindsvater (3452) to Record Clerk
 Gerasdon Martinez (4333) to Messenger
 Clovis V. Ritchie (2644) to Record Clerk
 F. M. Brewster (3466) to Production Release
 Clerk

Sally M. Donovan (7132) to Calculating Machine
 Operator
 Eugene A. Trumble (7243) to Auxiliary Equip-
 ment Operator
 Lawrence F. Dyer (7311) to Schedule Clerk
 Mary E. Flanagan (7243) to Auxiliary Equip-
 ment Operator

A. Darlene Kraft (7210) to Secretary
 Judith A. Roach (8212) to Typist Clerk
 Dorothy M. Fones (8114) to Record Clerk
 Lois J. Knudson (8212) to Steno. Clerk
 Cecil D. Crawley (8222) to Boiler Plant Operator
 Sandra L. Barrella (3126) to Typist Clerk
 Mary E. Petrini (3126) to Report Clerk
 Marilyn J. Harden (3126) to Receptionist
 Dorothy F. Gray (3126) to Secretarial Steno.
 Helen M. Spriggs (3126) to Secretarial Steno.
 Jo Ann G. Romero (3126) to Secretarial Steno.
 Miriam M. Myers (3126) to Secretarial Typist
 Elsie J. Curkendall (3126) to Steno. Clerk
 Marjorie I. Michaud (3126) to Typist
 J. D. Williamson (3421) to Library Asst.
 Francis L. Najor (4135) to Investigator
 Oliver A. Fick (8223) to Technician
 M. D. Rutherford (3153) to Record Clerk
 Patricia A. Cole (8212) to Typist
 Ruth E. Dunker (8232) to Camera Operator
 Elina B. Rucker (2752) to Laboratory Assistant
 James R. Schaeffer (7212) to Staff Assistant
 Bessie Torres (4362) to Steno. Clerk
 Hazel Anita Poteet (4362) to Purchase Service
 Clerk
 Margaret V. Taylor (4250) to Secretary

Supervisory Lateral Transfers
 T. H. Moyer from 2713-5 to 2713-4
 J. G. Wimpling from 2713-4 to 2713-5
 T. O. Meyer from 2544-1 to 2561-2
 G. W. Krause from 2532-1 to 2544-1
 M. J. Snyder from special assignment in 4620
 to 4135

P. H. Dailey from 2631 to 2643
 H. C. Redding from 4152 to 4151
 R. W. Foster from 4123 to 4122
 J. E. Anderson from 4151 to 2631
 W. C. Colborne from 4122 to 4152
 K. W. Seaver from 4135 to 4123
 D. R. Weldon, Jr. from 2643 to 3222
 A. D. Pepmuller from 3121 to 8233
 H. M. Willis from 2642 to 3121
 R. G. Fleming from 4231-1 to 4231-2
 B. M. Langford from 4231-2 to 4231-1
 J. Puhara from 4411-5 to 4413-2
 K. H. Lloyd from 4413-2 to 4411-6
 F. A. Leckman from 4424 to 2642

Retarded Children Association Drive Is Included in ECP

The Albuquerque Association for Retarded Children is holding its annual September fund raising drive with a goal of \$10,000. If this total is reached, the group will be eligible for a federal grant from the U.S. Children's Bureau. The additional funds would be used to expand the Study Center for Retarded Children.

Since the Association is one of the 32 local agencies included in ECP, Sandia employees who are members of the Plan have already contributed to the drive.

The Association received \$1488.35 from the Sandia Employees Contribution Plan from December 1959 through August 1960. It is estimated that the group will receive \$1900 from Sandia employees by the end of November, which is its share of the total \$122,000 pledged during the ECP campaign last year.

Presently, the Association is operating on a \$7000 yearly budget. In order to qualify for a minimum of \$5000 in federal funds, the Association must match the grant two to one, or at least \$10,000 for 1961.

Chester L. Janus Dies September 5

Funeral services were held last Thursday for Chester L. Janus, 47, who died Sept. 5 after a brief illness.



Mr. Janus was supervisor of Tool and Gage Section 2723-2, Secondary Standards Division, and had been with Sandia Corporation nearly six years.

Survivors include his widow, four children, and two brothers living in Chicago.

New Program Beginning to Help Supervisors With Security Needs

A program to assist supervisors in planning division and section security meetings has been undertaken by Security Standards and Development Department 3260.

Security Education Section 3231-2 is presently scheduling meetings in each department to discuss the pertinent security problems faced by each organization, and to develop a better attitude toward security.

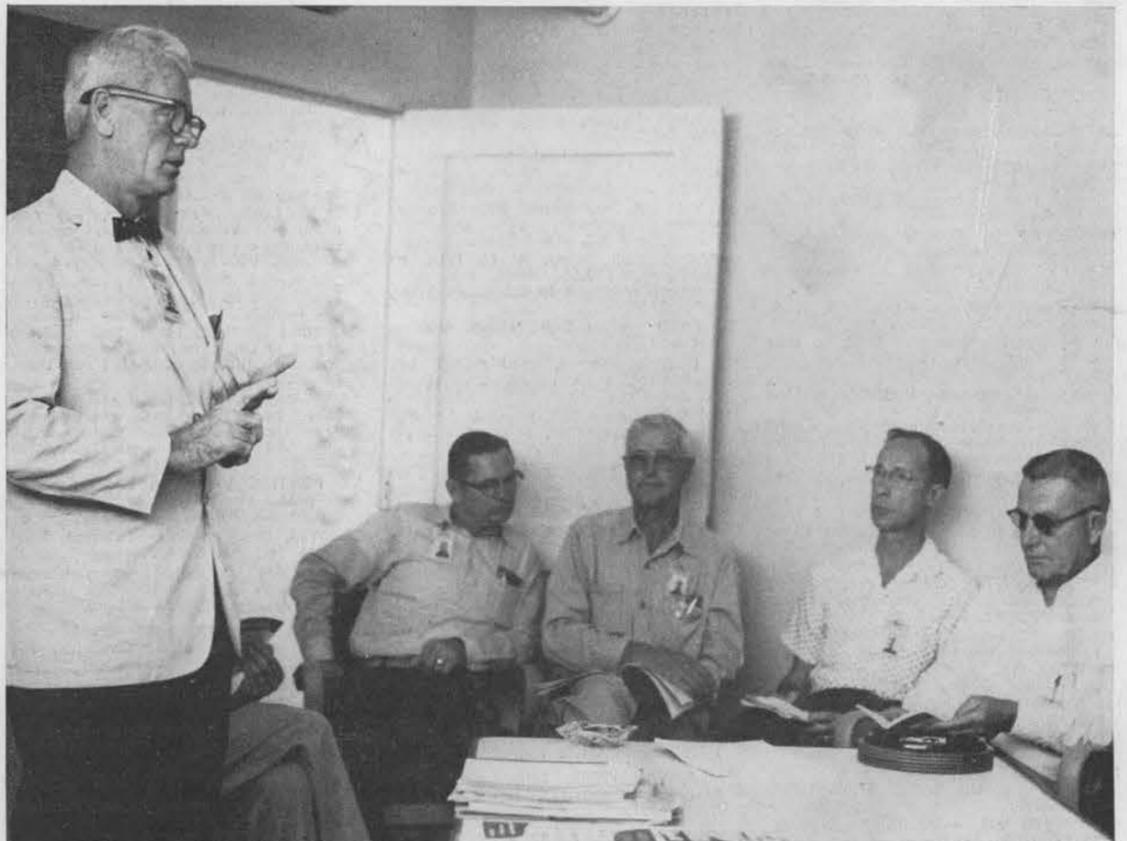
After the problems peculiar to each organization have been presented, solutions are offered by the Security Education team. Then, a lecture tailored to fit the needs of each supervisor is prepared for presentation to his own group.

"Since security meetings conducted by immediate supervisors in all organizations are required at least twice a year, we hope that this program will provide more meaningful lectures," F. R. Moon, manager of Department 3230, says. "Instead of vague references to security, a supervisor will be able to present solutions to security problems faced by his group."

The Security Education team is composed of Ed Long, Al Amato, Norman Scott and Spencer Schwartz, with specialists from

Classification, Plant Security, and other organizations as the situation requires.

In addition, supervisors are provided with special material for motivation toward better security awareness. Items of current interest on the Cold War, data on espionage and subversion, and topics of U.S. and Russian foreign policy are prepared for inclusion in the supervisor's lecture to his group.



SUPERVISORS FROM Department 4620 are among those attending meetings to discuss security problems which their organizations have. Ed Long, Security Education and Physical Inspection Section 3231-2, is shown above presenting a possible solution to one of the many security questions.



IT MATCHES! Recently when the changeover to the new red-striped folders to contain classified documents went into effect, Ed Hirt marked the occasion by wearing this red-striped shirt to match. The attention-getter was particularly appropriate since Ed's section, Micro Reproduction Section (3464-3), handles classified documents.

Travel Reimbursement Tax Refund Passed

Any Sandia employee who paid Federal Income Tax on amounts received prior to Oct. 1, 1955 from the Corporation as reimbursement of moving and travel expenses in connection with moving to Albuquerque to accept employment may be able to collect a refund.

Bill HR 10087, which became law this week after signature by President Eisenhower, includes a provision offered by Sen. Clinton P. Anderson to the effect that taxes paid on such reimbursements may be subject to refund. The Tax Suit Committee is preparing some information and instructions for employees to assist them in the preparation and submission of claims to the Bureau of Internal Revenue.

Employees who are not members of the Tax Suit Committee, but who would like to receive the information and instructions can do so by giving name and address to Gene C. Newlin (6011), chairman of the Tax Suit Committee.

Florian Rickert to Retire September 30

Florian Rickert, a Sandia Corporation employee for six and one half years, will retire Sept. 30. He has worked in Tool and Gage Section 2723-2 his entire time at Sandia.



A photography fan, Mr. Rickert wants to do some traveling and build up a good collection of color slides. A trip back to his home state of Pennsylvania is first planned, but he says there's a lot to see in the West, too. He's also going to devote some time to fishing.

Mr. Rickert and his wife live at 3922 Smith SE. They have two children, one in Albuquerque and one in Lincoln, Neb., and two grandchildren.

Sandia's Safety Record

News About
 Sandia Laboratory's
 Safety Record
 On Page One.

Livermore
 Laboratory
 HAS WORKED
 3,703,000 MAN HOURS
 OR 1670 DAYS
 WITHOUT A
 DISABLING INJURY