

## Apply Now for '72 Doctoral Study Program

Sandia's Doctoral Study Plan is again open to qualified applicants. Under the program, selected candidates remain on roll (at reduced salary) for the length of time required to obtain doctoral degrees. In the four-year history of the program, 42 candidates have been selected and 22 have now completed their studies.

DSP candidates should be MS-level employees of exceptional merit and ability whose personal characteristics, past job performance, and academic history indicate high promise in Sandia work at the doctoral level. Candidates should have a least two years on-roll experience at Sandia prior to January 1972.

The applicant should obtain written nomination from the director of the organization having a position in which there is a need for the advanced degree. Also needed are the letter of acceptance from the university of choice, an approved plan of study and a description of the proposed area of thesis research.

A candidate nominated earlier but not selected is eligible if renominated by his director. Former employees currently working on their doctorates on educational leave of absence from Sandia are also eligible.

Application forms and additional information may be obtained from Don Hosterman (3134), tel. 264-5862. At Livermore Laboratories, contact James Smith (8236), tel. 455-2150. The DSP is more fully described in SCI 4558.

Application should be made as soon as possible to ensure availability of all required documents and information by mid-December 1971.



VICE PRESIDENT Ray Powell (3A) is the newly elected president of the Albuquerque Industrial Development Service. An Albuquerque Tribune editorial said, "No single organization is more important in the maintenance and addition of jobs in Albuquerque. And . . . its president is a key man in the functioning of AIDS."

# LAB NEWS

VOL. 23, NO. 20

OCTOBER 8, 1971

SANDIA LABORATORIES • ALBUQUERQUE NM • LIVERMORE CALIF • TONOPAH NEV



SYSTEMS CHECK is conducted on Strypi rocket which contains Sandia-designed system to jettison Recruit booster rockets after burnout. The two boosters are mounted on tracks, one of which is visible between the two fins on the lower left.

## Sandia, LASL, LLL Conduct Experiments out of Kauai

About 100 Sandians will participate in a series of rocket launches from the Barking Sands launch complex on Kauai in the Hawaiian Islands from mid-October to mid-November.

Twenty rockets carrying scientific experiments will be launched during the operation and two NC-135A aircraft, one assigned to Sandia and the other to Los Alamos Scientific Laboratory (LASL), will be used to gather data.

The experiments will be conducted in the region between 40 and 300 miles above the earth. All, except two Lawrence Livermore Laboratory x-ray astronomy experiments, are designed to give new insight into the ionosphere, a layer which extends from about 40 to 600 miles above the earth. The LLL events are designed to locate celestial x-ray sources, study their emission characteristics and the effects of interstellar absorption.

Sandia scientists plan to determine the fluorescence efficiency of heavy ions under conditions of atmosphere and altitude at which these ions deposit their energy. "Fluorescence energy" is a measure of that fraction of the ion energy converted to light.

Ion source for this Zodiac experiment is a 1 amp, 100 kv sodium accelerator. The ion beam will be injected nearly parallel to the geomagnetic field as the rocket flies between 160 and 200 kilometers in altitude. Most of the light produced by beam interaction with the atmosphere is expected to occur at an altitude of 118 kilometers, where it will then be observed by instruments located in aircraft and on the ground. For proper interpretation of results, the needed data on atmospheric conditions will be gained through use of several small instrument rockets, to be launched during the experiment.

(Continued on Page Six)



PAYLOAD FOR X-RAY ASTRONOMY EXPERIMENT is examined by Ted Krein and Al Young (both 9221). The experiment package, designed by Lawrence Livermore Laboratory, is located in the bottom half of the payload, and the top half (white cone) contains telemetry and attitude control systems. Terrier-Sandhawk rocket will carry payload to an altitude of about 1.5 million feet during the upcoming series of experiments on Kauai.

## Bill Sullivan Awarded British IEE Commemorative Prize

Bill Sullivan, an electrical engineer in Systems Support Division 1532, has been awarded the Karl Heinz Gyr and Heinrich Landis Commemorative Prize for 1971 by the British Institution of Electrical Engineers. This is the first award of the Prize, instituted to commemorate the work of two notable pioneers in the field of electrical measurement.



Bill's award was earned for his outstanding contribution in the field of electrical measurements — a method for measuring very small delays in electrical signals, particularly through a transistor. His paper is entitled "The Propagation Delay Time Bridge."

The President of the IEE has invited Bill to be present at the Inaugural meeting in London on Oct. 14 to receive the Prize. It will be presented by the Rt. Hon. Lord Nelson of Stafford, immediate past president of the group.

Bill has been with the Laboratories for 11 years.

## Paul Larsen Dies; Had Headed Labs

The last head of Sandia while the Labs was still a branch of Los Alamos Scientific Laboratory died last week at his home near Washington, D.C. Paul Larsen will be remembered by Sandia veterans as the leader of "Z Division", which later — in April 1948 — became the Sandia Branch of LASL. Mr. Larsen served as Director of the Branch until Western Electric assumed control in November 1949. First president under WE was George Landry.

After leaving Sandia in 1950 Mr. Larsen served as director of Civilian Mobilization. Most recently he was associated with the U.S. Department of Transportation and was concerned with the high speed ground transportation project. He visited Sandia earlier in the year in connection with that project.

## LAB NEWS

Published every other Friday

### SANDIA LABORATORIES

An Equal Opportunity Employer

ALBUQUERQUE, NEW MEXICO  
LIVERMORE, CALIFORNIA  
TONOPAH, NEVADA

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

In Livermore Area 415 455-2111

John Shunny is Editor &  
Don Graham Ass't. Editor.

Norma Taylor Pitches In &

Bill Laskar is the Photographer.

In Livermore, Matt Connors &  
Lorena Schneider are

Writers, while

George Hosoda is the Photographer.

# Credit Union Reporter

By C. E. Sandy (7453)  
Operations Committee

## Borrow to Save? Mortgage Prepayment

A recent Credit Union Reporter article discussed the "prepayment" option available to mortgage holders. By prepayment, we mean the making of additional payments on the mortgage principal over and above the regular monthly payments. In the article, it was pointed out that your decision to prepay depends on several factors — your mortgage interest rate, the age of your mortgage and the possibility of more profitable investment of your cash elsewhere.

But sometimes other circumstances will dictate prepayment. Consider, for instance, the man who aims to retire before the mortgage is completely paid, yet wishes the house to be free and clear at retirement. Or consider the young-marrieds who want their house paid for before their children reach college age. In these cases, prepayment may be the answer.

Let's use a summary of the loan and amortization schedule shown in the previous article. That was a conventional 30-year \$30,000 loan at an ANNUAL PERCENTAGE RATE of 8 percent:

Annual Percentage Rate	Monthly Payment	Term in Months	Face Amount
8.00%	\$220.13	360	\$30,000
Payment No.	To Interest	To Principal	Balance Due
2-12	\$2190.94	\$230.49	\$29,749.38
2-24	\$4561.08	\$501.91	\$29,477.96

Suppose the homeowner decides to prepay the first two years of principal when he makes his first payment. To do this, he would need an additional \$501.91 to add to his first payment. If he chose to borrow this amount from the Credit Union against his shares (7.2% ANNUAL PERCENTAGE RATE) and to repay the loan in one year, he would make a monthly payment to the Credit Union of \$43.48. Total interest on this loan would be \$19.78.

For a cost of \$19.78, and an increased monthly payment of \$43.48, the homeowner has saved \$4,561.08 and has taken two years off his loan as well. Obviously, this approach can save you money if you can afford the extra monthly payment.

The example used here may seem overstated because the first two years' payments offer the most lucrative return for prepayment. Using the same loan example, suppose the homeowner at the beginning of the 15th year of the mortgage decides to prepay one year, using borrowed money. Here are the results:

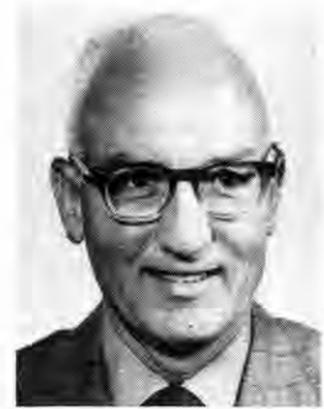
Amount of prepayment (borrowed from Credit Union) - \$703.78

Total interest charge for loan (@ 7.2%) - \$27.74

Monthly payment to Credit Union - \$60.97

Mortgage interest saved - \$1,717.65

Even this far into the mortgage, a significant saving is possible and the term of the loan is reduced by a year. In fact, this



homeowner would have to pay 256 monthly payments (approximately 21-1/3 years) before he reaches the point where as much goes to principal as to interest — and prepayment then may still be an attractive possibility.

## CU Bulletin Board

**Albuquerque Consumer Federation Forms** — The growing national wave of consumerism took expression in Albuquerque when some 200 people gathered recently to form the Albuquerque Consumer Federation. President pro tem Lee Brown, an economics professor at UNM, outlined Federation goals — "consumer information, consumer action, and consumer legislation." Many such groups have formed in other states and have gained needed reforms through legislation and other activities. Brown noted, "For too long 'caveat emptor' (let the buyer beware) has been the motto of the marketplace. This Federation aims to change that motto to 'Let the seller make full disclosure about his wares'." Membership forms for the Federation are available in the LAB NEWS office, Bldg. 802, room 100.

## Your Car A Polluter? Have It Checked For Free

In observance of Cleaner Air Week, the Base is setting up a free automobile clinic this weekend at which an experienced mechanic will check your car to determine the amount of air pollutants it is emitting. Place is the Kirtland East Auto Hobby Shop, about a block or two south of the Bank of New Mexico building. The clinic will be open Saturday, Oct. 9 from 9 to 6 and Sunday, Oct. 10, from 12 to 6.

## Recreation Notes

### FUN & GAMES

People interested in playing basketball are invited to attend an organizational meeting of the Sandia Labs Basketball League at the Coronado Club, 11:45 a.m. next Thursday, Oct. 14. Tentative plans include retention of the two-league (A&B) format with games to be played at Stoneburner Fieldhouse. For more information call Pat Freeman (7434), tel. 4-6017.

## Supervisory Appointment

Ralph Cozine to manager of Test Department 8410, effective Oct. 1.

Ralph joined Sandia/Livermore in June 1959. His assignments were in project engineering and preliminary design organizations until his promotion to supervisor of a project engineering division in May 1966. In August 1970 he transferred to Preliminary Systems Division.

Prior to joining Sandia, Ralph attended Kansas State University where he received a BS degree in mechanical engineering. Previously, in 1952, he was awarded a BS degree in art from the same university. From 1952-56 he served as a pilot in the U.S. Navy.

He is a member of Sigma Tau and Pi Tau Sigma, engineering honorary societies, and the American Society of Mechanical Engineers.

Ralph and his wife Marilyn live in Danville, with their son and two daughters.



## Arts Festival '71 This Weekend

An exciting weekend is in store for Livermore Valley residents as the third annual Festival of the Arts gets underway. The Festival is a community effort to exhibit the various local cultural activities. Sponsored by the Livermore Cultural Arts Council, the Festival will be held at The Barn which is located near the Livermore City Library. Hours are 10 a.m. to 11 p.m. Saturday, Oct. 9 and 10 a.m. to 6 p.m. Sunday, Oct. 10. Admission is free.

In addition to the art show, there will be photographic exhibits, and performances by the Symphony, Cask & Mask, Civic Chorus, and other performers. Dave West (8235-1) is coordinating the "Sunday Happening" entertainment.

A popular attraction last year was the Children's Art Center, and it will be open from 10 a.m. to 5 p.m. each day for children to paint, experiment with clay or wood sculpture, and be entertained by clowns and magicians. Artists-in-action will be on the scene each day, demonstrating techniques of painting, sculpture, leather work, weaving, macrame, and other art forms.

## Sympathy

To Pat Carothers (8275-3) for the death of her father-in-law in Oakland, Aug. 30.

To Dave Dean (8343) for the death of his father in Festus, Mo., Aug. 30.

To Bill Moore (8332) for the death of his father-in-law in LaVerne, Calif., Sept. 19.

## Congratulations

Jim Keller (8353) and Renee Berg married in Idaho Falls, Idaho, Sept. 3.

Hilt DeSelm (8200) and Gail Hayes married in Modesto, Calif., Sept. 15.

Mr. and Mrs. Mel West (8231), a daughter, Sherry Lynn, Sept. 27.

# LIVERMORE NEWS

VOL. 23, NO. 20

LIVERMORE LABORATORIES

OCTOBER 8, 1971

## Earle Paxton Finds Times Are Changing in Java, Bali

"I want the Indonesians to better their lives, yet I hate seeing their old ways of life and culture change," comments Earle Paxton (8232) who is back from a 20,000-mile Pacific trip spent mostly with friends on the islands of Java and Bali in Indonesia.

"The dress of these people, for example, is gradually becoming westernized. The men have always worn sarongs, but they're turning to our way of dress. For years, the women were topless, but with the coming of the tourists and the camera, their naturalness is disappearing. Perhaps only a third, mostly the older women, now dress traditionally.

"More and more automobiles are appearing, replacing the betjaks—a bicycle-powered ricksha," he continues. "The air isn't polluted yet, although I believe it soon will be. They're beginning to get some industry—such as the automobile assembly plants in the capital city of Djakarta."

Earle says modern hotels, stores, and office buildings are being completed in the cities now that inflation is under control.

With a per capita income of \$65 to \$85 a year there is a tremendous amount of poverty. The government is doing a great deal, but because of corruption it is not winning many friends. "Newly developing countries can't seem to keep from exploiting their own," Earle notes. The country, fifth largest in the world in population, is a democracy with many political parties, including that of the military-in-power, and Muslim, Christian, Catholic, and Communist parties.

Earle was impressed with the Indonesians' friendliness and willingness to help. "Particularly as we travelled back into the villages in Bali looking for wood carvings, it was as if our coming had been announced over a public address system because the natives would just flock around us. I'm sure they see other westerners—if only young hippie types from America, Australia, and England who live in a number of communes on the island."



INDONESIAN MUSICAL INSTRUMENT, similar to a xylophone, interests Earle Paxton (8232). The instrument is used by the Javanese and Balinese to play gamelon music in accompaniment to native dances.

Although the national language is Bahasa Indonesian, adopted in 1946, tribal languages are used on the various islands. As an example, Earle mentions Java where there are three Javanese language levels other than that for communicating with one another—one for children, one for inferiors, and a third for superiors.

The Indonesians are larger than Orientals, but smaller than the average American. They have dark skin coloring, an oriental cast to their features, and black, straight hair. There is no color discrimination.

Other stops on Earle's trip included Hong Kong, Bangkok, Singapore, and Sydney, Australia, where he visited former Sandians Mary Ellen and Bob Jacob who now live there with their two children.

## Take Note

Ron's "Runts" team, managed by Ron League (8333), won the 1971 Sandia/Livermore Slo Pitch Softball League. Members of the champion team include Charlie Crawford (8274), Pete Dean (8231), Dick Feil (8181), Randy German (8313), Stan Greenberg (8131), Vic Ham (8272), Gale Hudson (8274), Ray Leri (8231), Ken Marx (8341), Tom Pinkerton (8322), Marlin Pound (8236), George Rafal (8257), Pete Royval (8274), and Mike Sisting (8273). The recent playoff concluded three months of competition among four teams, with about 65 Sandians participating. Highest batting average (.530) honors are shared by Mark Higuera (8275) and Vic Ham. Vic also led the league in home runs.

The Sandia/Livermore Twilight Golf League ended recently after 18 weeks of play by over 100 Sandians at the Las Positas and Springtown Golf Courses. The 20-team league competed in match and medal play each Wednesday evening. Members of the winning team in the blue flight were Walt Dzugan (8212), John Barnhouse (8271), Ken Dolan (8341), and Bill Ryan (8264). Gold flight winners were Doug MacMillan, John Lenz, John Lindman, and Chet Tarne (all 9125).

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**ECP Funds**

# What 'a Little Extra' Means

Sandians will have contributed some \$327,000 this year to the ECP fund by December 1, when the fund's fiscal year ends. This money goes into the operating budgets of the 33 agencies of the Albuquerque United Community Fund and eight other national health and welfare organizations. The money helps provide the staff and facilities of the local agencies and, for the national health agencies, enables important medical research to continue on killer diseases.

There is never enough money to provide for all the needs of the agencies. The UCF budget committee pares requests to the bone. Their concern is to get the most value — in terms of services provided — for the money available.

Part of the ECP fund (1% this year, .5% in '72) is held in reserve for emergencies — such as the \$750 granted to help finance a rubella vaccination program in the city. Some \$1200 was left in the reserve fund, so the ECP committee granted some special requests over the operating budget of some agencies. Pictures on these pages show what just a little extra money means.

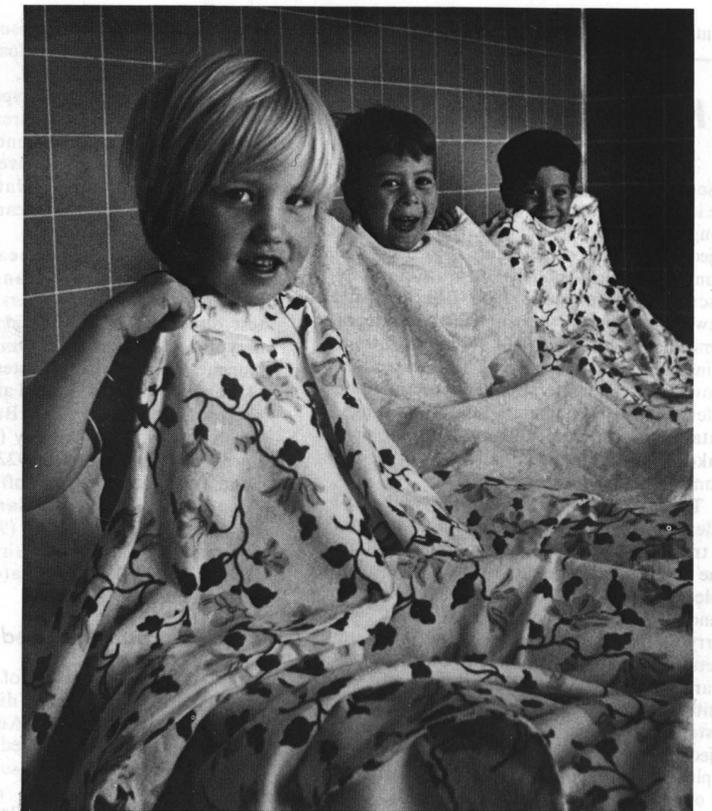
**Photos by  
Bill Laskar**



**"Zome" Structure, Assembled by Kids,  
for Special Education Center**



**Additional Audio Equipment for Albuquerque Hearing and Speech Center**



**Warm Blankets for Christina Kent Day Nursery**



**Special Therapy Equipment for Child Guidance Center**



**Records and Record Player for Christina Kent Day Nursery**



**Tools, Materials, Nuts and Bolts for Martineztown House of Neighborly Service**



**Basketball Rig for the Salvation Army Playground**

## Kauai Experiment

Two LASL experiments involve observation of magnetic and electric fields in the ionosphere from Kauai to a point south of Tonga in the South Pacific. Ultimate objective of these experiments is to select the geomagnetic field model that most correctly describes the magnetic field line in space between Kauai and the point in the southern hemisphere where the field curves downward to intersect the atmosphere. This intersection, known as a conjugate point, is expected to be a few hundred kilometers south of Tonga. Data obtained from the experiments may make it possible eventually to map the geomagnetic field lines.

The LASL experiments will paint 4350 miles of magnetic field line with light in order to trace the path of the line more accurately. The field line runs south from a point 325 miles above and 110 miles north of Kauai. A Sandia Sandhawk-Tomahawk rocket will carry a LASL payload consisting of a barium metal cone bonded to a 50-pound shaped charge of high explosives to the desired altitude where the rocket's attitude control system will point the payload for proper injection of the barium into the field. The explosive will vaporize the barium, blasting a jet of barium particles southward.

The charged particles, driven by the electromagnetic force of the magnetic field line, will spiral around that line, corkscrewing their way upward and southward along the arching line to maximum altitude of nearly 1000 miles at the equator. Some 10 minutes later, the particles will fall along the field line toward the conjugate point south of Tonga, a distance of 4350 miles.

Another LASL experiment involves a high-energy neon plasma injection to continue earlier investigations of interactions with ambient atmosphere and the geomagnetic field.

Sandia is providing the rocket systems, instrumentation, telemetry and launch support for the series. The Navy's Pacific Missile Range Facility will provide radar to track rockets, range safety coordination and recovery operations.

Data will be recorded with a variety of instruments aboard the two NC-135A flying laboratories and from ground stations on Kauai, Maui, Johnston Island, Canton Island, American Samoa and Niue, the principal island of Samoa.

In addition to the scientific experiments, a Sandia-designed system to jettison booster rockets from the Strypi rocket will be tested. Two recruit rockets attached to the fin assembly of the Strypi, which was developed by Sandia, provide an initial two-second thrust. After burnout, the boosters' weight and drag decreases the Strypi's efficiency by



ULTRA-VIOLET PHOTOMETER payload is readied by Jim Reid (9221). The payload will be carried aloft on a Terrier-Tomahawk vehicle.

about 20 percent. By jettisoning the spent boosters, the Strypi's payload and altitude capabilities can be increased.

Participating in the experiments along with Sandia and LASL are the Advanced Research Projects Agency, Lawrence Livermore Laboratory, University of Alaska Geophysical Institute, National Science Foundation, Defense Nuclear Agency, U.S. Navy and Air Force.

Sandia personnel heading up the Laboratories operations and their responsibilities are Al Hutters (9222), Sandia test director at the site; Ed Harley (9225), Strypi rocket launches; Jim Davis (9224), launches of other rocket systems; Ren Moore (9221), instrumentation and airborne attitude control systems; Bill Barton (5624), aeroballistics; Dave McVey (5626), recovery operations; Keith Smith (9226), payload for Sandia experiment; Jim Hoffman (5233) and Glenn Miller (5224), Sandia scientific experiment; Bob Taylor (9222), scientific commander on Sandia aircraft; and Ed Hansen (9223), coordinator for LASL experiments.

### Sandia Director Cited by AIAA

Alan Pope, Director of Aerodynamics (5600) and a regional director of the American Institute of Aeronautics and Astronautics, has been named a Distinguished Lecturer in the professional society. Each year the 30,000-member group names 10 such Lecturers, who are then called upon by local chapters for presentations to the chapter.

As regional director, Alan is concerned with AIAA affairs in New Mexico, Texas, Oklahoma, and Arkansas. He is also on the Board of Directors of the society.



ASSISTANT Secretary of the Army Robert Johnson visited Sandia Labs recently for briefings and discussions with President Hornbeck. It was the official's first visit to the Laboratories.

### Hurry — Only 78 Days to Christmas

Now that's a piece of information you can do without. But we bring it up only because this year LAB NEWS will again sponsor its fabulous Paperback Book and Record Sale, proceeds of which go to some worthy cause (like the poor people down on South Ten). This must be the third or fourth year we've had the sale and we keep seeing the same titles — so we're getting a lot of mileage out of the same books. So round 'em up and bring 'em in again. Paperbacks, records, hard cover books — they all sell. If you need any carrying help call us at ext. 1053 and we'll send somebody. The LAB NEWS office is in Bldg. 802, room 100 (near the elevators).



JENNY BACA (3256) is a "Firette" this week helping the Base Fire Department publicize National Fire Prevention Week. Since last October, 16 fires at Sandia Laboratories resulted in \$1100 damage. The message is clear: fires do occur here — be alert to their hazard.

## Events Calendar

- Oct. 7-10 — "Adaptation and Next," Rodey Season, 8:15 p.m., Keller Hall, UNM.
- Oct. 9 — Football, NM State vs. UNM, Stadium, 7:30 p.m.
- Oct. 9 — N.M. Mountain Club, from Sandia Crest down La Luz and return, meet at Western Skies at 9 a.m.
- Oct. 10 — N.M. Mountain Club, Jemez Springs Indian Trail and ruins, meet at Gulf Mart 8 a.m.
- Oct. 11 — Community Concert Series, Carl Matthes - pianist, 8:15 p.m., Popejoy Hall.
- Oct. 13 — UNM Speakers Program, Jack Nicholson, actor and director, 8 p.m., Popejoy Hall.
- Oct. 16 — N.M. Mountain Club, up the La Luz Trail, meet at Eastdale Center, 8 a.m.
- Oct. 17 — Harvest Dances, Laguna Pueblo.
- Oct. 19 — UNM Speakers Program, David Nes, Middle East expert, 8 p.m., Keller Hall.
- Oct. 20 — Albuquerque Symphony Orchestra, Jeanne Grealish-soloist, 8:15 p.m., Popejoy Hall.
- Oct. 21-24 — N.M. Mountain Club, Canyon De Chelly car camp, call Bill on 296-1418 by Oct. 14.
- Oct. 22-24 — "Plaza Suite," Albuquerque Little Theater, 8 p.m., for reservations, 242-4750.

## Service Awards

### 25 Years

Sam Johnson (4551).

### 20 Years

Earl Sherwood (1323), Eldon Upchurch (1413), George Pasko (1590), Gladys Stumpf (1831), W.W. Olheiser, Jr. (4511), William Treharn (4511), James Courtin (7415), Martha Andrews (4153), Al Mares (4337), Joe Chavira (4623), Mary Goolsby (7542), Wes Hodges (8261), Morris Goebel (9224), Beno Baerwald (4514), Daryl Orth (7132), Tom Chiado (3523), Robert Burton (9132), Ralph Fox (1555), Tomas Apadaca (4614), Matt Connors (8235), Abel Lucero (4614).

### 15 Years

Sam Swysgood (1514), Billy Caskey (1553), John Kinney (1911), William Hahn (4152), M.T. Hodge (4515), W.J. Moulds (4518), Joyce Doyal (8250), Fred Sweet (9134), John Biesterveld (9224), Lois Calkins (9425), Charles Burbank (4311), Charles Smith (4514), Alan Netz (1322), Lynn Ritchie (1724), Richard Chapman (3521), Marguerite Burrell (3133), Ermenegildo Garcia (4136), Bob Hargreaves (8125), John Lovelace (9222), R.L. Ledgerwood (9341), James Tichenor (1316), William Deely (4137), Jose Garcia (5411), Robert Shuman (9344), Helen McKenzie (9311).

### 10 Years

Ramona Daugherty (4154), Bob Graham (8274), Terry Leighley (9312), Albert Rodriguez (4613), Roy Ellison (1313), Esther Coffman (3256), Julian Bartlett (3511), Read Holland (5335), Kay McDonald (5415).

## Take Note

The New Mexico Zoological Society will hold its annual general meeting and election of officers on Oct. 19, 7:30 p.m. in room 100 of the Biology Bldg., UNM. Those interested in the Zoo are urged to attend. For more information call Mina Carnicom (5628), tel. 282-3421.

\* \* \* \*

The Albuquerque Philatelic Society will hold an auction at the First National Bank, 3801 Fourth St., NW, on Oct. 14. About 100 auction lots will be on view at 7:15 p.m., and the auction starts promptly at 7:30. All price ranges and interests are represented, including precancels, foreign sets, stamps from last year's catalogs, and small collections. Peter Kaestner (5623), club president, explains that this is the last club auction until Christmas and it is usually the biggest and best. Additional information may be obtained from Peter, tel. 265-0283.

\* \* \* \*

"Volume Reaction — Hypothesis in the Shock Initiation of Solid Explosives" will be presented at the 5100 Staff Seminar, Oct. 12 by Jim Kennedy (5131). On Oct. 19, Nelson Gillis (5151) will present "Recent Developments in the Theory of Ferroelectricity."

The Seminar meets on Tuesdays at 8:30 a.m. in rm. 201 of bldg. 806.



TURNING 21 is a big deal — right? You can buy a beer, you can, ah, well . . . there *must* be some other benefits. Anyhow, Steve Breeze's colleagues in org. 7541 thought the occasion warranted more than a handshake, and when Steve came in to work on the big day this display awaited him. So happy birthday Stevie-boy.

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• 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.

### MISCELLANEOUS

BICYCLE, 26" boy's, \$15. Langston, 268-6933.  
'70 KAWASAKI 500 Mach III, many extras, \$800. Ortiz, 265-6503 or 255-6201.  
'70 YAM. 125cc MX w/extras, \$375; motorcycle parts, tires, wheels, chamber, frame etc.; beer tapper; model airplane parts. King, 298-2991.  
HOOVER port. washing machine, 1 yr. old, \$110; Magnavox console stereo, \$295; Olds recording trumpet, \$375 new, sell for \$150. Bernard, 282-3279.  
PIANO, antiques upright w/needle-point covered stool to match, \$150. Kepler, 298-5652.  
ZENITH console stereo w/FM/AM and 4-spd. record changer, \$90. Duben, 282-3108.  
EDMUNDS scientific 4 1/4" reflector telescope, 5' alum. tube, 40" wood tripod, equatorial mount, \$47.50 or trade for 20 ga. shotgun. O'Connor, 296-2335.  
S&W .22 cal. combat Masterpiece; Colt Python .357 mag, both new. Svensson, 344-7700.  
GOLF CLUBS: set of 3 matched woods, \$10; Mongrel set of 8 clubs, \$10. DeLollis, 299-5384.  
FEMALE TOY POODLE, 8 wks. old, apricot color, \$50. Harris, 298-8969.

CHILDCRAFT, 1966, \$35; girl's ice skates w/guards, size 3 1/2, \$6.50; guitar, \$9; Barby dolls w/clothes. Robertson, 296-4613.  
ELECTRIC GUITAR & amplifier; Zenith hi-fi record player; Sear's ladies golf shoes, never worn, size 6 1/2 A, \$12; wool reversible rug, 11' x 16', gold-brown tweed, w/pad, \$65. Martinez, 344-2238.  
DISHWASHER, under counter std. size, '70 Modern Maid, harvest gold panels, used 6 mos., \$75. Luxford, 243-1693.  
CAMERA: 2 1/4 x 2 1/4 twin lens Yashica MAT 124 w/Cornet/100 flash unit, \$80 for both. Hobart, 282-5331.  
VIOLINS: one 3/4 size, 4 std. size. Burrell, 299-0233.  
'70 HONDA SL-350, low mileage, 2 helmets, luggage rack, \$750. Harper, 265-3243.  
CAMPING TRAILER, '70 Mobile Scout, 18', completely self-contained, \$2700. Bailey, 3818 La Hacienda Dr. NE, 256-2360.  
VOLKSWAGEN snow tires, used 1 season, \$10 pr; female Schwinn 3-spd., \$15. Hansche, 296-1387.  
STOCK MUFFLER to fit '66-71 VW bug, less than 1 yr. old, undamaged, \$10. Baars, 255-9051.  
RIFLE, 250 Savage, lever action w/Weaver V4.5 scope & case, \$130. Porter, 299-7985.  
PUREBRED AKC reg. Weimaraner puppies, born Sept. 7, good hunting ancestry, champion sire, available in late Oct. Nykanen, 296-1082.  
SAFETY SEAT car seat, \$5; port. potty, 50c; white potty, \$2; baby walker, 50c; Playtex nurser, \$2. Smith, 265-5447.  
INTAKE MANIFOLD for 2-barrel carburetor on Chevy 283 V8 engine, \$7.50. Reed, 299-7425.  
ANTIQUA PIANO, upright, without stool, \$300. Chavez, 298-4250.

15' CAMP TRAILER, sleeps 5, 2 bottles, heater, \$650. McKee, 282-3604.  
KOKONEE SALMON HOOKS, lead weighted No. 4 treble. Johnson, 298-1108.  
CAMERA: Yashica electro 35-GT Gold Mecanica case, tripod, new, \$115; swing-up camper door, 64" x 24", center glass missing, \$18. Bassett, 898-1840.  
TIRES: 8:25 x 14, set of 4, 3 mounted & balanced, low mileage. Brooks, 298-4354.  
STUDIO COUCH & end table, \$35. McIntosh, 296-3471 or 296-7881.  
700 SHARES of stock in Magma Power (geothermal energy), will sell for average of bid and asked, about \$1800. Holland, 255-3526.  
WESTINGHOUSE washing machine & dryer, both for \$40. Robinett, 344-6507.  
SUZUKI, 50cc, 600 miles, equipped w/baskets. Graff, 268-5291.  
TOY POODLE PUPS, deep apricot, platinum & beige, AKC, home raised, sold only to good loving homes. Brannon, 296-6674.  
DISHWASHER, Frigidaire front load, convertible, port. Riney, 299-1457.  
PLAYGROUND EQUIP: swing & glide set, 3-seat rocker, make offer. Moss, 298-2643.  
HIDE-A-BED, green naughahyde sofa, converts to dbl. bed, \$65. Beardsley, 255-5313.  
WINCHESTER M70 30-06, pre-1964 std. wt. w/4X scope, \$115 or trade for .243. Stephenson, 299-3914.  
MINIATURE Dachshund puppies, red males, AKC, \$100; weed 775x 14 tire chains, std., sell or trade for 925x15 chains. Stone, 298-4641.  
DANISH modern couch & chair, \$40; roll-a-way full bed, \$25; picnic table, \$10. Montoya, 344-6222.  
1970 WILSON staff woods, irons,

putter, bag, used 3 times, \$240. Rex, 296-7400.  
RIFLE, Winchester M70 heavy barrel 243; bicycle, 24" boy's; Webcor tape recorder; York lifting weights. Westfahl, 298-5087.

### CARS & TRUCKS

'55 CHEVROLET Belair, AT, PB, PS. Siegrist, 299-3088.  
'65 CHEVROLET Impala 4-dr. sedan, PS, PB, radio, AC, \$495. Garcia, 243-3473.  
'67 PLYMOUTH Sport Fury Convert., extras. Ray, 298-0408.  
'69 OPEL station wagon, 1900 cc engine, radio, AT, AC, 34,000 miles, \$1795. Schmierer, 299-2352.  
'50 CHEVROLET, \$90. Benjamin, 842-5730 or 842-5760.  
'59 FORD wagon, 6-cyl., std., R&H, \$200. Gholson, 299-2663.  
'61 CORVETTE w/'71 engine, 327 cu. in., 425 hp, 2500 miles on engine. Simon, 344-4465.  
'71 VOLVO 1800E, 9000 miles, leather, fuel injection, metallic gold, \$4295 or best offer, will consider trade. Schulze, 299-0152.  
'70 CORVETTE, 350/350, PS, PDB, below 15,000 miles. Clark, 298-8254.  
'69 VW SQUAREBACK, radio, stereo, radial tires, \$1700. Peters, 877-0999.  
'63 OLDSMOBILE 88 station wagon, 8-pass., full power plus air, orig. owner, \$595. Vivian, 299-1785.  
'70 FORD club wagon E110, 123" WB, V8, std. trans., 1600 miles, retail book. Duggin, 256-7603.  
'69 KARMANN GHIA, factory air, new tires. West, 268-2761.  
'70 IMPALA Custom 2-dr. HT, PB, PS, factory air, below 15,000 miles, \$2800. Richards, 256-9740.

### REAL ESTATE

4-BDR. HOME, Indian Ridge subdivision, 1 yr. old, 1 3/4 bath, carpeted, drapes, split level, model home. Walters, 298-8254.  
SANDIA HEIGHTS, lg. lot w/panoramic mountain view, lot no. 166. McBride, 299-4347.

### WANTED

QUILTING FRAME in good condition. Chinn, 296-5172.  
GIRL to share apartment in NE Heights near base. Martinez, 256-9261.  
GOOD HOME for 3/4 German puppies. Aguilar, 898-0897.  
PORTABLE electric heater, fan driven, 1000 watts or more; acetylene welding outfit in good condition. Kjeldgaard, 296-2212.  
USED gem cutting, grinding & polishing equip., used compressed air tank. Roberts, 255-9527 around 6:30.  
HONEYWELL thermostat model 71012A for Moduflow home heating system as installed in many Roberson homes. Reed, 299-7425.

### WORK WANTED

University music major (theory background) for music transcription work, by the hour. Shepherd, 299-1507 after 6.  
WILL babysit evenings or weekends in NW area, vicinity Alvarado & Taft, age 14. Ortega, 344-3776.

### LOST AND FOUND

LOST — Black notebook 3" x 6".  
LOST AND FOUND, Bldg. 832, tel. 264-2757.  
FOUND — Green No. 310 key, Webster key, orange/gold scarf, book — "Designing with Magnesium," 10 oz. Sear's thermos, sunglasses w/grey frames. LOST AND FOUND, Bldg. 832, tel. 264-2757.

# Coronado Club Activities

OCTOBERFEST is the big one at the Club this month. The word brings to mind all those good things like 10 cent beer, Gefuellte Eier, Gemischter salat, schwarzbröt, sauerbraten mit kartoffelpuffer, eisbein mit sauerkraut, apfelstrudel, etc. plus 20 cent wine. The Four Keys will play for dancing from 9 to 1 a.m. Cocktail hour starts at 6 and dinner will be served from 7 to 8:30. Member tickets are \$3.25, guests \$3.75. It should be a Jubel-Trubel-Heiterkeit.

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HAPPY HOURS are going to be special this month. Like tonight ol' Smilin' Jim Noonan is going to feature breaded veal cutlets on the buffet at \$1.25 and that, baby, is a buy these days. The Aristocrats will be on the bandstand.

NEXT FRIDAY, Oct. 15, Graciela Flores, a tremendous entertainer featured many times at the Fiesta in Juarez, will perform at 7 p.m. Sol Chavez and the mighty Duke City Brass will play for dancing and Mexican Food (Rio Grande style) will top the buffet.

GRACIELA will return to the Club for another Happy Hour show on Friday, Oct. 29.

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CORONADO FILM SOCIETY will show "The Shop on Main Street" Thursday, Oct. 21 at 7:30 p.m. This Czech-made film has received much critical acclaim and many awards. It is an extraordinary movie. Membership in the Society costs \$5 and is good for a year — one or more outstanding movies per month. Individual admission (without Society membership) is \$1 for Club members, \$1.50 for guests.

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## LAB NEWS to Resume Service Award Pictures

In the recently completed LAB NEWS survey, many people urged that LAB NEWS start running pictures again of those employees reaching service anniversaries. Seems that everybody (including us) enjoys looking at the new wrinkles old Joe what's-his-name has acquired in the last few years. OK — we'll do it, but on a somewhat different basis from our previous format for this feature. Our present plan is to issue a special four-page supplement to LAB NEWS from time to time (as we get enough service anniversaries to fill the four pages), and this supplement will be devoted solely to service award pictures. Also, we're going to back up a little bit and carry pictures of Sandians observing their tenth anniversary (had been only 15, 20 and 25th anniversaries). Look for the first supplement to appear in one of the November issues of LAB NEWS.



## Oktoberfest

Saturday, October 16

A CONCERT by the American Legion "Dukes of Albuquerque" is scheduled on the patio Sunday afternoon, Oct. 10, at 2:30. The group will play a selection of marches, old favorites and show tunes. Award winning twirlers from West Mesa High School will perform. Refreshments will be available.

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TEENAGERS can do their thing at a bash tomorrow night from 7:30 to 10:30. Something called "Scratch" will be wired into the bandstand and Charlie MacLane of KQEO will emcee the activities. Member parents may pick up tickets for their youngsters at the Club office.

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SANADO women will meet for lunch Oct. 12 and be entertained by a musical review of "Pomises, Pomises" performed by the Saunders 3. Reservations should be made today with Mrs. D.S. Tarbox, 1305 Florida NE.

\* \* \* \*

CORONADO SKI CLUB starts the season with a meeting Tuesday, Oct. 19, at 7 p.m. and a session of conditioning exercises. Come dressed appropriately. "The Secret Race," color documentary of the 1966 championship competition in Portillo, Chile, will be shown. Free refreshments will be served.

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THE FREE FOOTBALL BUS provided by the Club for all home Lobo games will leave the Club at 7 p.m. Oct. 9 and at 1 p.m. on Oct. 23. The bus returns to the Club after the game where Happy Hour prices are in effect for one hour in the main lounge. Members ride free, guests \$1.

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VETERANS DAY will be observed Monday, Oct. 25, and the Club will be closed.

## Earlybirds Signing Up For Spain-Portugal Tour

A number of people have already signed up for the 16-day Coronado Club trip to Portugal and Spain scheduled in October 1972, according to Chet Fornero, Club president.

"There's still plenty of time to plan for the trip," Chet says. "A \$100 deposit will hold space on the chartered 707 jet until July 1, 1972, when the remainder of the \$565 fee is due."

Cities included in the itinerary are Lisbon, Seville, Marbella, Granada, Madrid and Toledo. Sightseeing bus trips, tours of museums and outstanding points of interest are included in the package as well as some meals, tips and entertainment. Hotels booked for the tour are all first class. Three days will be spent at the beautiful Costa Del Sol resort area at Marbella.



GRACIELA FLORES