



Albert Clogston

New VP To Head 5000 Organization

Albert Clogston, now Director of Physical Research at Bell Telephone Laboratories, will replace Solomon Buchsbaum as head of Organization 5000 on May 15. Mr. Buchsbaum will return to BTL where he will be Executive Director, Research, Communication Principles Division.

Since joining Bell Labs in 1946, Mr. Clogston has been concerned with physical research. He was initially engaged in research on the physics of electron tubes. Later, he turned to solid state physics principally in the fields of magnetism and superconductivity. In 1963, he became Assistant Metallurgical Director, assuming his current post in August 1965.

A native of Boston, Mr. Clogston received his SB and PhD degrees in physics from MIT in 1938 and 1941. The author of 34 technical articles, he also has been granted 14 patents. Mr. Clogston is a Fellow of the American Physical Society and the American Association for the Advancement of Science.

Bob Hepplewhite Will Head Savings Bond Campaign



Bob Hepplewhite, manager of COIN Procurement Task Group Department 9240, has been named chairman of Sandia's Savings Bonds campaign, slated to begin May 10. He reports that some three-quarters of Sandians already are buying Bonds through payroll deduction, but that he hopes to convince those not buying of the merits of Bonds.

"We recognize that other investments may offer higher interest rates from time to time," Bob states, "but that's not the whole story for a wise investor. Look at some of the distinct tax advantages to be realized with Bonds if you are in your forties or fifties and want to plan sensibly for retirement. And don't underestimate the convenience of payroll deduction — most of us need this sort of systematic method to insure that we actually do save."

Bob indicates that literature discussing the financial aspects of Bonds will be distributed to each employee at the start of the campaign.

Do Not Open

New Dosimetry System Announced

Starting on April 30, a new type of film badge will be distributed to persons working in certain areas of Sandia Laboratories Albuquerque and to all who work at Tonopah Test Range. As in the past, the dosimetry badges record exposure to x-rays, gamma rays, and beta rays.

"The new radiation dosimetry system gives a more precise exposure reading, and the badges will be issued every three months instead of monthly," according to George Tucker, supervisor of Instrumentation, Dosimetry and NTS Projects Division 3313.

Dan Thompson (3313), who is in charge of the project, explains that the new badges use thermoluminescent (lithium fluoride) detectors only one-eighth of an inch square instead of the present film strips. "To protect these sensitive detectors, handling must be reduced to a minimum," he says. "As a result, an important change in procedure is that the entire holder should be returned intact at the proper time interval." Previously, employees were asked to remove the film strip and retain the holder for the new film.

In practice, the number on the badge is keyed to the social security number of the person using it. To determine radiation dosage, the holder is opened with a special key, and the inside card (which holds the detectors and an identification number) is heated to 230°C. The radiation dose, a function of the degree of luminescence, is then recorded on a paper tape. When the tape is placed in a computer, the luminescence is converted to dosage in REM's (Roentgen Equivalent Man) and later matched with the employee's social security number.

Advantages of the new system are the ability of the lithium fluoride chips to determine radiation dosage to a higher degree of accuracy than was possible through use of photographic film; longer badge life because of sensitivity to the range of temperatures encountered in everyday wearing; and the reusable feature of the thermoluminescent chips (film could only be used once). In

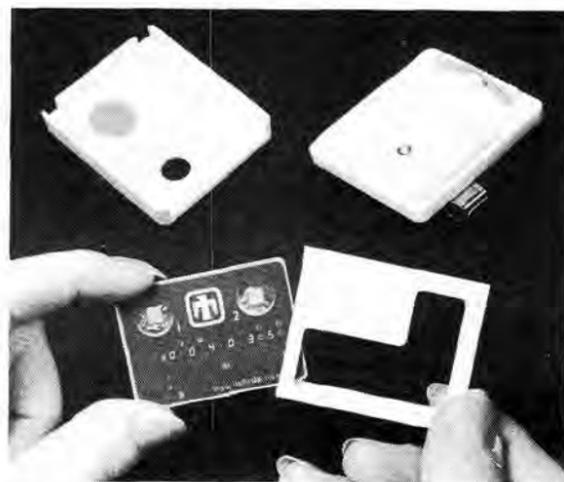


DAN THOMPSON (3313) displays one of the new radiation detector badges. The wearer's name goes on the removable card. Distribution begins April 30.

addition to the chips, the badges have tiny openings, some backed with an aluminum filter to simulate the density of two centimeters of human tissue. This feature allows penetrating as well as non-penetrating (or skin exposure) radiation readings.

"Although the initial cost is higher," Dan says, "in the long run the system will prove cheaper. We will be looking at 4500 badges a quarter instead of 2500 monthly (half of the badges are used by visitors on a one-time basis), and the system is more computer compatible." George Connors (4416) worked with members of 3313 in programming the system.

"One important thing to remember," Dan adds, "—don't try to open the badge—return the thing intact. It's salt water-proof, but not screwdriver-proof."



TO CURB your curiosity, this is what the inside of the new badges look like. Don't try to open yours!



A FATHER'S ARMS feel pretty good after two nights by yourself on a cold mountainside. Pat Sanchez (9411) looks a little bedraggled himself as he holds young Pat. Many Sandians helped in the search. More pictures on page 6.



Credit Union Reporter

By Red Turner
Associate Mgr., Credit Union

Of Bookkeeping and Budgets

Where does your money go? You should be able to account for ninety or more percent of each dollar of monthly income. Yet many people, who may be the very model of method and intelligence in their jobs, have a blind spot when it comes to control over their own finances — they don't know where the money goes.

Some simple bookkeeping provides the answer. By recording expenses as they occur, you learn where the money goes, and the data you collect can then be the basis for a more systematic handling of your finances — in short, the basis for a budget. Use a loose leaf binder to record the expenses. Have separate sections for utilities (gas, electric, water, phone, etc.); for medical, dental and drug bills (useful at income tax time too); for expenses related to your residence, over and above your monthly payment or rental, e.g. cost of paint, shrubbery, etc.; for expenses related to your automobile; and for other significant expenses.

When you have this data, you'll know your fixed monthly costs and can estimate how much flexible or discretionary income remains. Remember, every budget should include regular savings, and for most of us the painless way to save is through payroll deduction with the Credit Union — if you don't get it you can't spend it!

* * * *

Buying a Camper?

It's camping time and perhaps you're thinking about dropping the tent routine and going into something a little more elaborate such as a camper. Whether you have a pickup truck type camper or trailer type camper in mind, bear in mind that used campers often make good buys. Because the fact is that very few are actually worn out and many are sold or traded in because the owner wants a larger model or different type.

Here are some things to look for in a used unit:

(1) Outward appearance - if a trailer leans to one side, a weak or broken spring could be the cause or it could be simply an under inflated tire or soft ground under the wheel. When viewing the unit make sure it is parked on a firm and level surface. Check the skin for gaps, tears, and popped rivets.

(2) Interior - ragged and dirty cushions are a sign of neglect that may mean other more important mechanical things have been neglected too. Discoloration where walls join the ceiling indicates leakage. Minor leaks are not too significant, but if the wall panel is extensively stained it may mean that the studs may have started rotting. In that case repairs are neither easy nor cheap.

(3) Undercarriage - frayed wires, bent plumbing and dented holding tanks can be repaired, but these conditions reveal hard usage, and the frame should be carefully examined for bends and cracks.

(4) Plumbing and electrical - fixtures and plumbing in a camper are more easily damaged from abuse and freezing than are those in a home. Insist upon a demonstration of electrical equipment, toilet, shower and stove.

The Credit Union has some data on camper prices and value, so check with us before taking the plunge.

* * * *

CU Bulletin Board

FHA Title I Property Improvement loans up to \$5000 for a maximum term of five years are now available. This type of loan is for improvements such as the addition or remodeling of a room, the addition of a garage or patio, landscaping, installation of a sprinkler system, and for similar major improvements.

* * * *

Retired employees may continue membership in the Credit Union; this applies as well to retirees who have elected to defer payment of their retirement income until a later date.

* * * *

As a part of its normal audit procedure, the Supervisory Committee of the Sandia Laboratory Credit Union recently mailed statements to all retired members, and members with account numbers from 5000 to 5999 and from 10,000 to 10,999. If you are retired or if your account number is in one of these series and you have not received your statement, please notify Karl Waibel (4117), Committee Chairman.

Promotions

Quirino Carrillo (4251) to Grinder
Ernest Ramirez (4511) to Fireman
P. Trujillo (4511) to Fireman
J.C. Vandermolen (8310) to Secretary
Jacqueline Williams (8232) to Library Clerk
Margaret York (8200) to Secretary

Metal Combustion Research Joint Interest of Russian & Sandian

A Sandia scientist played host and exchanged information with a Soviet expert on solid rocket fuel technology during a meeting in Albuquerque last weekend.

Dr. Yuriy V. Frolov of the Institute of Chemical Physics, USSR Academy of Sciences, Moscow, had expressed a desire to meet with Lloyd Nelson, supervisor of Material Sciences Research Division I 5224, because both men are working in the field of metal combustion and high temperature phenomena. Because of security restrictions at Sandia, the joint discussions were held at the University of New Mexico, where Dr. Frolov also gave an informal lecture and participated in a seminar at the Department of Geology and Institute of Meteoritics. Dr. Klaus Keil, who heads the Institute, has been working with Lloyd in studies of oxide droplets.

The Russian visitor has been an exchange fellow for the past several months at Princeton University's Department of Aerospace and Mechanical Sciences. The agreement on exchange of scientists is between the U.S. National Academy of Sciences and the Academy of Sciences of the USSR.

Supervisory Appointment



MIKE GUSINOW to supervisor, Chemical Physics Division 5115, effective April 1.

Mike joined the Laboratories in August 1967 as a staff member assigned to plasma physics division. Since then he has continued to work in the research directorate, primarily in the field of gaseous electronics.

Mike earned BS and MS degrees at the University of Arizona and received his PhD — all in electrical engineering — in June 1966 from the University of Illinois. Immediately before coming to Sandia he accepted a one-year post-doctoral appointment at the Joint Institute for Laboratory Astro Physics at Boulder, Colo. He is a member of the American Physical Society.

He and his wife Joan have one child, and reside at 12320 Eastridge Dr. N.E.

Speakers

M.L. Lieberman (5313), "The Chemistry of Sulfur in Rayon Based Carbon Fibers"; H.A. Mackay (5315), "Property and Structure Variation of CVD Pyrolytic Carbon-Felt Composites in Relation to Heat Treatment"; K.B. Wischmann (5511) and G.W. Brassell (5312), "Suborder Transitions in an Amine and Triol Cured Urethane"; R.L. Schwoebel (5330), "An Ultrahigh Vacuum Microbalance and a Study of the Reduction of Nickel Oxide Single Crystals," 1971 meeting of the American Chemical Society, March 28-April 2, Los Angeles.

W.E. Wilson (2633) and B.L. Gregory (2653), "Neutron Induced Degradation and Failure in High Power LSA Diode Oscillators"; J.R. Adams (2633) and H.L. Floyd (2652), "Evaluation of the Mechanical Integrity of Beam Lead Devices and Bonds Using Thermomechanical Stress Waves," 1971 IEEE Reliability Physics Symposium, March 31-April 2, Las Vegas, Nev.

LAB NEWS

Published every other Friday

SANDIA LABORATORIES

An Equal Opportunity Employer

ALBUQUERQUE, NEW MEXICO
LIVERMORE, CALIFORNIA
TONOPAH, NEVADA

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Touring Northern California

Here is the schedule of events planned for May for the East Bay Regional Park District.

On May 1, Coyote Hills Regional Park is sponsoring tours of the Stanford Research Institute Bio Sonar Laboratory at 12 noon, 1, 2, 3 and 4 p.m. (park at the picnic area) and Indian shellmound tours at 1, 2, 3 and 4 p.m. (park near the entrance sign and follow signs to Mound ALA-328).

Every Wednesday evening in May at 7 p.m., a marine ecology program is scheduled in the "Old Wharf Classroom" in the Exhibit Laboratory at Alameda Beach Regional Park. The room resembles the hold of an old sailing ship and contains a life-size diorama of Bay life.

Each Sunday in May, from 1:30 to 4 p.m., Sunol Valley Regional Park will feature the Carnival of Animals, followed by a wildflower exploration with a naturalist of the hills and meadows of the park. Meet at the Old Green Barn.

On Sunday afternoons a wildlife program will also be held at Temescal Regional Park from 4 to 5:30 p.m.: May 2, snakes; May 9, bugs and creepy crawlers; May 16, birds; and May 23, plants. Meet at the Kiwanis Hut.

Sunday afternoon, May 30, Tilden Regional Park will offer a Memorial Day program in the nature study area. At 1 and 3 p.m., the nature puppet show will be presented, followed by snake talks at 1:35 and 3:35.

On May 29, Sunol Valley Regional Park will have a "star party." Meet at dusk near the telescope pier in Las Encinas Meadow to learn about heavenly bodies.

New Zealand and Fiji Are South Pacific Trip Highlights

"Realizing I was 'down under,' on the opposite side of the world where the climate is the reverse of ours," was the first thing that impressed Pat Hinrichsen (8232) on a recent South Pacific tour. She and her husband Virgil (LRL) covered over 40,000 miles on nine different airlines and visited six countries during their month-long trip.

"My favorite place was New Zealand—the people seem to be enjoying life," says Pat. "The country reminded me of the United States in the thirties and forties.

"A drive through Northern New Zealand to the Waitomo Caves gave us a good opportunity to see the countryside — lots of sheep, hedge rows instead of fences, and many kinds of trees and types of scenery. The glowworm grotto in the caves is spectacular, especially at night, when the millions of tiny lights from the glowworms cast a reflection in the underground Waitomo River.

"At nearby Rotorua, the natives performed their traditional dances. Many of the young Maoris, especially the girls, are eager to get away. They want to escape the tribal influence and marrying within the culture. Most look to Australia which is to them much like the United States has been to many Europeans. The Rotorua area is also famous for thermal geysers and hot springs. The local beauty shop offers hot mud packs from the springs and the Maoris use the packs for cooking and heating.

"Flying near Milford Sound, one of 13

LIVERMORE NEWS

VOL. 23, NO. 8 SANDIA LABORATORIES APRIL 23, 1971



WITH WISE OWL AWARD in hand, Ben Turpin (8271) describes to Hilt DeSelm (8200) and Scotty Romine (8263) how a steel chip (from a spiral similar to the one Scotty is holding) struck the frame of his safety glasses instead of his eye. Ben is Livermore's seventh member of the Wise Owl Club.

Safety Glasses Save Eye Of Machinist Ben Turpin

"For judgment and foresight in the conscientious use of the eye protection. . . ." That's how the Wise Owl award reads that was presented to Ben Turpin (8271) by Hilt DeSelm, Director of Staff Services at Livermore (8200). Ben is the seventh member of the Wise Owl Club in Livermore.

Last December, Ben — a model and instrument maker — was turning a stainless steel forging on a lathe. A chip flew off and struck the nose piece of his safety glasses with such force that it imbedded itself in the plastic frame.

Sponsored by the National Society for the Prevention of Blindness, the Wise Owl Club's exclusive membership is made up of persons who have escaped eye injury or blindness because they were wearing safety glasses.

Congratulations

Mr. and Mrs. Bill Jordan (8256-1), a son, William, Jr., March 14.

Mr. and Mrs. Terry Mattson (8333), a son, Ryan Douglas, March 17.

Sympathy

To Bill Funk (8230) for the death of his mother in Denver, Colo., April 6.

To John Miller (8264) for the death of his father in Minneapolis, Minn., March 18.

To Hanloy Quock (8321) for the death of his brother in Moraga, Calif., March 18.

fjords in South New Zealand, we passed soaring peaks, heavily wooded and with icefalls hanging from sheer cliffs. Everything is on a gigantic scale. Occasionally we saw seals and penguins.

"Leaving Milford Sound for Queenstown, we visited a typical New Zealand sheep station, or 'high country run,' reachable by boat and a climb into the mountains. Although not on an island, the station's 53 square miles were practically bounded by water and rose to about 6500 feet.

"All of New Zealand seems clean and unspoiled, but in talks with the people we found this wasn't entirely true. At Lake Te Anau, for instance, one of their largest lakes, there was much concern over the effects of a proposed industrial plant which would lower its level. Fortunately, they are beginning to think about the environment before the problem becomes critical. Surprisingly, they already have some pollution from light industry and automobiles.

"Fiji is impressive, too," continues Pat. Many Australian and Canadian companies are beginning to build large hotels there, but the land cannot be purchased by outsiders only rented on a 99-year lease basis.

"I especially enjoyed the Fijian handicrafts and their spectacular dress. They are handsome and pleasant people, many of the men six and a half feet tall, very dark, with Indian features."

The trip also included stops in Australia, Samoa, Tahiti and Hawaii.

Vista New Mexico

by Charles Becknell,
Director of Afro-American Studies, UNM
The Black Cowboy In The Old West

"History is a fable agreed upon" says one observer, and in the Southwest the fable is that all those cowboys so much a part of the folklore of the area were white and generally looked like John Wayne. But the fact is that cowboys came in various colors, and the black man was a practitioner of the cowboy arts from the start. After the Civil War, it is estimated that more than 5000 black cowboys worked in the state of Texas alone. They punched cattle along trails into and out of Texas, including the Goodnight-Loving Trail that ran through parts of New Mexico.

Many of the first black cowboys were slaves brought west by their owners. Others came as free men. On southern plantations blacks were conditioned for a certain kind of work, but on the ranches in the Southwest they had to learn a new trade - rounding up cattle and breaking horses. From most reports they learned their trade well.

The black cowboy was no different from the white cowboy. They shot up saloons, robbed banks and trains, and fought the Indians. They too thundered across the plains of Texas, New Mexico and Arizona, but the history of the Southwest has for the most part remained silent in areas where the black cowboy made his mark.

One of the most colorful of them (no pun intended), was Nat Love. Nat was born in Tennessee in 1855. His father died when Nat was 12 years of age and Nat, as head of the household, earned money for the family by breaking horses for 10 cents apiece.

At the age of 15 Nat left home, went to Texas, and worked on a ranch in the Panhandle where he became an all-around cowboy.

After living in Texas for a few years Nat went to Arizona, where he learned quickly that the only law in Arizona was the law of the gun and that a man's survival depended a great deal on how fast and how straight he could shoot. He practiced often and became an excellent shot with both rifle and his forty-five.

After an outfit that Nat worked for delivered a herd of cattle to Deadwood in Dakota, the townspeople arranged a contest with prize money to go to the cowboy who could rope and tie a mustang in the shortest time.

Nat entered the contest and tied his horse in nine minutes. The second place winner took 12 minutes. After the roping contest, a shooting contest was arranged. Each cowboy was to take 26 shots, 12 with a pistol and 14 with a rifle. Nat placed 24 shots in the bullseye. As a result, Nat was given the prize money and a new name—"Deadwood Dick."

Nat Love states that he knew Buffalo Bill Cody, Kit Carson and the James Brothers. While in New Mexico, Nat met and developed a close personal friendship with Billy the Kid.

New Mexico's best known black cowboy is George McJunkin. George worked on a ranch near Folsom, N.M., in the 1920's.

George McJunkin exemplifies the old line cowboy who tried to preserve a certain way of life. He was still riding the range even when the car had replaced the horse, and farm machinery was beginning to take the Wild West.

While rounding up stray cattle one day, George noticed some bones protruding from a

bank in a gully. He became curious and began to dig the bones out of the ground. While digging he noticed a strange arrowhead. George collected arrowheads and was something of an authority on the subject. He had never seen one before like the one he found in Dead Horse Gulch.

He took the arrowhead with him and told his story to a scientist.

After investigation, the bones were determined to be over 10,000 years old and were identified as the remains of an Ice Age bison. It was further concluded that this was one of the most important archaeological discoveries in North America. A modern black cowboy by the name of George McJunkin had found the remains of an Ice Age hunting party.

Although neither Nat Love or George McJunkin is portrayed on television shows or described in American history texts, both contributed to the West and to American tradition.



Nat Love, Black Cowboy of the 1800's

Retiring



MARTIN GROTHE
(4150)



CLAUDINE SPROUL
(3428)



MARY GUAJARDO
(7631)



CHARLES WHITMER
(4515)



GEORGE POWER
(9133)



HOWARD TURNER
(2342)



ELIZABETH GARY
(3310)



OFFICERS of the newly-organized Sandia Recreation Council are (from left) Pat Anderson (7225), secretary; Bob James (9428), president; Bob Austin (3112), publicity; and Pres Herrington (9226), vice president.

Recreation Council Organized for Sandia Sports

A new organization has been formed to handle the Sandia Laboratories recreation programs. Replacing the former directorate representative system, the Sandia Recreation Council has individual members responsible for specific sports.

The Council was formed as a result of recommendations from the Interim Recreation Committee, appointed by Employee Services Division 3122, to study Sandia's recreation program. Arlin Cooper (2627) headed the committee.

Bob James (1514) is president of the new council. Pres Herrington (9226) is vice president and Dick Vivian (1611) is secretary.

Members and responsibilities of the council are as follows:

Activity	Representatives	Org.	Phone Ext.
Basketball	Pat Freeman	7434	6017
Bowling	Bob James	9428	6241
Bridge	John Nakayama	1514	6360
Football	Eric Jones	8114	8752
Golf (men)	Pres Herrington	9226	1379
Golf (women)	Pat Anderson	7225	1054
Horseshoes	Leo Bressan	7363	7933
Rifle/Pistol	Dick Vivian	1611	4355
Softball	Duwayne Branscombe	2451	5403
Table Tennis	Daryl Gutscher	1213	7137
Tennis	Tex Windham	7521	9165
Volleyball	Bob Austin	3112	2101

Representatives serve for one year. Questions concerning specific sports should be directed to the responsible representative. Anyone wishing to organize a sport not listed should call Charlie O'Keefe (3123), ext. 2855.

* * * *

The Sandia Labs Tennis Club's Spring Tournament for singles and doubles will be held May 8-9 (singles) and 15-16 (doubles). Deadline for entries is noon, April 26. All Sandia employees are eligible. For further information, call Tex Windham (4-9165) or Fayne Shead (4-1356).

* * * *

In the season opener of the Sandia Golf Assn., held April 9 on UNM's South Course, Paul Blaylock (9132) had a low net 67 in the high handicap section, while in the low handicap section Werner Kuhn (7433) had a low net 71 and Richard Blose (7654) had a low gross 82. Next tournament is the Spring Classic, April 24, at Los Altos.

Take Note

A Sandia scientist was a recent participant in the Black Executive Exchange Program sponsored by the National Urban League, the American Chemical Society, and Howard University's Department of Chemistry.

Katheryn Lawson (5522) talked about "X-ray Fluorescence" before undergraduate and graduate students at Howard University. After showing the Sandia film "Spinoff," she held a discussion period with the students. "Student participation was good," she reports.

The program combines the traditional classroom approach with weekly lectures by black chemists and scientists from industrial corporations and research centers. Each visiting scientist lectures on the techniques and tools of his particular area of research.

Katheryn was the first woman to participate in the science seminar program which is new this year.

* * * *

Luther Robertson (3134) has written two manuals for use in two-year, post-secondary basic engineering technology courses.

Entitled "Electromechanisms/Devices" and "Mechanisms/Linkages," the texts are available through Delmar Publishers, Albany, N.Y., and the Technical Education Research Center of Cambridge, Mass.

Luther's manuals are among 16 "action oriented" textbooks designed to include laboratory and problem assignments, plus instructors' data, suitable for use in a two-semester program.



WOW! what a crazy bubble-blowing machine! Scientific Glass Shop was a favorite stop for visiting students during Science Youth Days. They also visited the Exhibit Center, the Rolamite Laboratory, and saw the Annular Core Pulsed Reactor and Hermes II in Area V.



UNUSUAL APPLICATIONS of rolamite technology caught the attention of these two students, among the 200 senior science students from high schools in Albuquerque and nearby communities.



"MR. SANCHEZ I PRESUME?" is what the searcher who found Pat is alleged to have said.

The four-year old looks pretty good considering what transpired in previous 48 hours.

The Best Kind of Search —A Successful One



ROLLIN RUSSELL (7523) is head of Albuquerque Citizens Radio Association, a key unit in wilderness searches. Radio communication enables search to be coordinated, helps prevent searchers themselves from becoming lost.

ED STOUT (7252) talks to plane overhead. Besides plane, helicopters, horses, trail bikes and about 1500 people joined in search.



PAT SANCHEZ (9411), second from right, talks to a group of searchers (many from Sandia) before young Pat was found. Easter outing in Manzanos

took serious turn when two boys wandered off. One was found in a few hours, but Pat Jr. spent two nights in woods before searchers found him.

Math Computation Meet Held Here May 6-7

A mathematical computation symposium, designed to provide an exchange of information about resources and needs in this field at Sandia, will be held May 6 and 7 in the bldg. 815 auditorium.

During the four sessions, 29 technical papers will be presented by Sandians from both Albuquerque and Livermore. The program is designed to show the trend of current Sandia research in numerical computation to describe available resources, and to pinpoint problems being encountered by the user organizations.

Keynote speaker (at 8:50 a.m. May 6) will be R.W. Hamming of Bell Telephone Laboratories and a visiting professor at the University of California at Irvine. His talk on "The Frequency Approach to Numerical Analysis" will include an analysis of errors in function evaluation from the point of view of communications and sampling theory.

The conference will cover diverse subjects, and individuals can check the program for topics of particular interest. Copies of the program are available from the symposium committee co-chairmen Ron Detry (9422), Bernie Hulme (1722) and Bob Huddleston (8321).

Take Note

Retiring or leaving Sandia? Then you may be interested in a position with the Albuquerque Association for Retarded Children. The executive director of the Association, Harry Gramann, called LAB NEWS to report the organization's need for a Sheltered Workshop Director. Salary is open and the job starts July 1. Contact Mr. Gramann at the Association office, 3616 Central SE, Albuquerque, 87108, if interested.

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Are you having second thoughts about spraying poisons in your garden? Then become a member of the take-some-ladybugs-to-lunch bunch. The Albuquerque Council of Garden Clubs is sponsoring a Ladybug Sale in June and is now taking orders. One cup of live ladybugs (about 4500) is \$2. Call 299-1973 or 265-0283 for more information.

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The Rio Grande Kennel Club will hold a sanctioned match Sunday, May 2, at the racetrack concourse of the New Mexico state fairgrounds. The match will include conformation and obedience classes. Entry fee is \$1 per dog per event, and is open to anyone with a purebred dog. Details are available from Bill Jacklin (7326), tel. 298-3046.

* * * *

Milton Clauser (5114) will discuss "Laser-Produced Plasma" at the 5100 staff seminar Tuesday, April 27. On May 4 Doug Drumheller (5163) will present "The Frequency-Filtering Behavior of Composite Materials."

The seminar meets at 8:30 on Tuesday mornings in rm. 201, Bldg. 806.

Service Awards

25 Years

C.E. Katzenberger 9415.

20 Years

Tomas Hernandez 4512, Bennie Padilla 4513, Harry Gelwicks 4514, Fred Brown 4623, Ivan Levalley 7512, Jack Tischhauser 9420, Ralph Mabrose 4553, David McCoy 4131, Michael Zownir 4252, Paul Kind 4614, George Power 9133, Doris Miller 9200, Richard Bassett 2313, Marcel Weinreich 3424, Lloyd Melick 2622, Artie Redlinger 4211, James O'Neal 7451, Harold Bigley 3520.

15 Years

Perfecto Romero 4613, Harry Guest 7372, James Mauldin 7415, Eugene Cook 9125, John Hiller 2334, Edward Gonzales 4512, Adan Trujillo 4137, Marlin Frettem 9211, Vincent Nelson 5538, Darrell Dykes 7524, W.J. Rogers 9211, Keith McCoy 9214.

10 Years

Orval Jones 5130, Roy Rentzsch 9225, Jim Rogers 8321, Helen Maurer 4363, Betty Sterling 3256, William Stokes 7522, Martelle Reid 8231, Paul Phipps 9214, and Thelma Foster 9100.

Variable Annuity Unit Value

April 1971	1.631
March 1971	1.615
Average 1970	1.417

• SHOPPING CENTER •

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

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

FOR SALE - MISCELLANEOUS

- CROSS COUNTRY/indoor type running shoes, canvas & rubber, size 9 1/2, almost new, 4 miles, \$2. Martin, 282-3794.
- TYPEWRITER, Royal, \$15; 2'x3' drafting table, \$7; 3 1/2" vise, \$5. Kelsey, 256-2460.
- 4 SHARES AT&T stock, market value 3/31 \$48-3/8, will sell for 47. Gerst, 268-6811 or 265-9333.
- UTILITY TRAILER, 4'x8' bed, 5' sides, \$50; factory-built 15 1/2' camping trailer chassis w/hydraulic brakes, \$75. Shock, 877-3728.
- '71 MOBILE Traveler travel trailer, 16', gas-elec. refrig., toilet, heater, equalizer hitch, mirrors & jacks. McCollum, 298-8352.
- NAVAJO RUGS: Savage rifle, 30-06; diamond ring, 1.1 emerald cut. Zaluga, 344-1564.
- GE REFRIG., 12 cu. ft., \$40. Berg, 266-2058.
- HONDA 450cc w/scrambler exhaust, '70 model, \$800. Murphy, 296-4089.
- DOG HOUSE, big enough for 2 large dogs, best offer. Leeman, 299-9149 after 6.
- 3 WALNUT end tables; baby car bed; trailer hitch; trailer tire; elec. broiler-master, 2 Chinese figurines 15" high. Bliss, 296-3752.
- 35MM Voughtlander ultramatic SLR f/2.8 interchangeable lens, auto. or manual, w/leather case & manual, cost \$300, sell for \$120. Browning, 299-6384.
- FRIGIDAIRE refrig., 9 cu. ft., white exterior, \$50. Morrison, 855-6244.
- RIO GRANDE FLYING CLUB has membership opening. McGinnis, 898-3170.

- UPRIGHT FREEZER, 18 cu. ft. Amana. Hole, 255-1444.
- LIVING ROOM & DEN furniture: sofas, lamps, pictures, area rug; baby crib, \$10; baby toilet, \$3; hand lawn mower, \$10. Stirbis, 299-5363.
- MODEL 430 Case diesel tractor, front-end loader & rear-end bucket-blade, \$2350. Flowers, 282-3458.
- '65 SEAR'S tent camper w/add-on room, \$275; almost new Magic Chef gas range, \$75. Shurtleff, 255-6635.
- 6" REFLECTING TELESCOPE, clock drive, direct reading setting circles, 3 oculars 40X, 100X, 200X, \$175. Wischmann, 298-7386.
- TENNIS RACKET, Wilson "Jack Kramer" tournament model, wooden w/fiberglass face, speed flex, 4 1/2 size grip, multi-filament nylon stringing, \$10. Keeling, 255-4539.
- 7-YEAR OLD gas dryer, \$50; range hood, \$15; Sear's luggage carrier, \$10. Armstrong, 294-0174.
- GE FROST-FREE refrig.; Fedders 7000 BTU air conditioner; RCA B&W TV. Elliott, 296-3181.
- ELECTRIC grass clippers, scissors type, \$15. Smith, 299-6873.
- '69 SUZUKI 500 Titan, 8000 miles, rebuilt engine by Motorsport, 5-spd. trans., \$565 or make offer. Benson, 268-9727.
- GARAGE SALE: furniture, etc., everything must go, April 24 & 25, 10 a.m. - 4 p.m. 1216 Valencia NE. Fincke.
- GIRL'S 20" Schwinn bicycle, \$20 or make offer. Clark, 299-4819.
- ONE-THIRD SHARE in K-Model Bonanza, 600 hrs. on chrome major, MK 12, MK 5, ADF, EGT. Reed, 299-7425.
- GE WASHER-DRYER, good working order, needs minor repair, matched pair, \$70. Rainhart, 299-2887.
- SOLID REDWOOD picnic table, 8' long x 3' wide. Bierly, 255-9017.
- PLATINUM wedding & engagement ring set w/diamonds, appraised at \$1000, sell for \$500. Martinez, 268-6297 after 5:30.
- CRAFTSMAN power reel mower, \$35; sewing machine cabinet, formica

- topped, \$25. Rayner, 299-7429.
- TRAILERING ACCESSORIES: Kelsey-Hayes elec. brake controller, Vapor-Cool radiator cooler, pr. of rectangular auto. side mirrors; room-size evap. cooler. Reynolds, 256-3670.
- LAWN MOWER, Craftsman push type, 16" seven blade w/grass catcher, used 4 times, \$30; Great Books, make offer. Prew, 299-3815.
- BEAGLE PUPPY, male, champion sired, AKC reg. Buckner, 898-4390.
- TENT TRAILER, 12' long, 10' x 12' floor area when set up, \$250. Schamaun, 298-5192.
- POODLE, mixed puppies. Dye, 299-6348.
- MUNTZ 4-track tape player, \$20; baby stroller, \$10. Doggett, 299-7957.
- TENT, 9 1/2' x 11 1/2', floor, zipper front, \$25. Youtz, 299-1697.
- TO GOOD HOME: Bassett Hound, tri-colored, reg. 5-yr.-old; kittens, mother reg. Siamese. Bartlett, 299-4861.
- PAIR of VW to Chevrolet wheel adaptors, fits '67 & older VW, \$10. Martinez, 268-6297.
- COCKER SPANIEL puppies, AKC reg., \$50. Downey, 298-2489.
- 1000 SHARES Computer Consultants Inc., stock. Worrell, 299-0381.
- TOY POODLE, female, 8 wks. old, silver color, AKC reg., excellent pedigree, \$95. Olson, 298-3795.
- CRUISING SAILBOAT, roomy, stable, rugged, fiberglass over wood, complete w/sails, motor, trailer, about \$1850. Frye, 255-8364.

FOR SALE - CARS AND TRUCKS

- '61 FORD F-100 short wide w/camper shell & removable beds, 6-cyl., 3-spd., 2 spares, \$700 or best offer. Scranton, 299-4902.
- '69 VW Squareback station wagon, AT, disc brakes, 6500 miles left on warranty, \$150 below book at \$1850. Roberts, 298-9163.
- '63 VW Karmann Ghia, \$700. Nordstrom, 296-0619.
- '69 DODGE Monaco, 2-dr. HT, AC, PS, PDB, auto-pilot, tilt-steering,

- elec. windows, vinyl top. Clark, 296-2117.
- '59 CHEVROLET 4-dr. sedan, new paint & upholstery, rebuilt 6-cyl. engine, std. trans. McGarr, 242-2205.
- '67 TRIUMPH GT-6, AM-FM radio, 4-8 track stereo tape, new Michelins, wire wheels, white, best offer, Shewnack, 299-4067.
- '59 RAMBLER American station wagon, runs, good body, \$75. Cilke, 296-3665.
- '69 FORD Econoline Custom 200 Motorhome, V8, AT, AC, refrig., range w/oven, water & sink, toilet, many extras. Warden, 255-0557.
- '69 VW Fastback, AC, AT, AM-FM radio, front disc brakes, low mileage, complete service record, \$1795. Kingsbury, 265-3265.
- '65 FORD station wagon, V8, AT, \$750; '69 Yamaha 175cc Enduro, carriers, many extras, \$425. Guidice, 268-4197.
- '67 DATSUN Roadster, Mod. 1600. Silva, 298-8039.
- '63 TOYOTA Land Cruiser, 4-wd, P.T.O. winch, \$1200 or swap for van. Hansche, 296-1387.
- '60 COMET station wagon, \$350. Abbott, 298-2039.
- '69 CHEVY II Nova, 4-cyl., 2-dr., 11,000 miles, economical, \$1500. Tufts, 255-9663.
- '64 SCOUT, 4-wd, HT, locking hubs, dual tanks, radio, all gear OD, positraction, micro brake lock, \$1095 or reasonable offer. Snyder, 268-0679.
- '65 KARMANN GHIA, new motor, new brakes, \$900. Hiltunen, 6500 Cochiti Rd. SE.
- '64 MERCURY 9-pass. wagon, AT, PS, PB, AC, equalizer hitch, towing mirrors, Singleton, 299-1613.
- '63 INTERNATIONAL pickup, crew cab, V8 engine, 4-wd, 4-spd. trans., positraction, \$1100. Elliott, 299-2782.

REAL ESTATE

- HOLIDAY PARK 4-bdr., den, tri-level, landscaped, carpeted, custom drapes, cash to 5 3/4% loan, \$178/mo. Lee, 298-7702.
- 4-BDR., 4 bath, lg. den, brick split level, 5 3/4% interest, 12512 Loyola NE, DeZeeuw, 296-1003.

- MOUNTAIN PROPERTY: 100' x 120' level lot in Ruidoso, mountain view, golf course, airport, access year 'round, \$3250. White, 296-9767 after 5.
- 3-BDR., 1 3/4 baths, fully landscaped, carpeted, built-ins, draperies, \$18,300, 6%, \$104 payments, pitched roof. 512 Hillview Ct. NE. Abeyta, 296-0461.
- MTN. HOME SITE w/view, 2 1/2 acres off N. Hiway 10. Harris, 268-3816.

WANTED

- CONCRETE MIXER in good running condition. Martin, 282-3794.
- SHOP MANUALS for '63 Ford Fairlane & '67 Rambler American. Kollman, 265-2626.
- HEAVY-DUTY utility trailer, prefer pickup bed. Souder, 282-3121.
- DEEP-SEA fishing rod, reel, tackle. Ristine, 298-8387.
- TRADE puppy for one or two parakeets. Stark, 243-3110.
- APARTMENT, mobile home, or small house to rent month of May for 2 people. Erickson, 298-4416.
- CARE for small child in my home, walled back yard, hot lunch, North Eubank. Bush, 299-0281.
- RENT OR BUY: 3-bdr. home in Mitchell/Hoover/Eldorado school district. Walters, 296-5803.
- WISH TO RENT truck cabover camper for 2 wks. in Aug., destination Colorado. Shunny, 265-1620.
- VW squareback in good condition; lease 4-bdr. house in valley, beginning fall or winter. MacCallum, 242-4602.

LOST AND FOUND

- LOST—Book "Seed Faith," by Oral Roberts, leather key case w/keys, plastic bag w/mittens. LOST AND FOUND, tel. 264-2757, Bldg. 832.
- FOUND—Pearl earring, pink earring, lt. brown earring for pierced ears, black chiffon scarf, lt. brown leather key holder w/keys. LOST AND FOUND, tel. 264-2757, Bldg. 832.

Death

William Clark, a staff assistant in Instrumentation Fielding Division 11 9124, died April 3 after an illness. He was 59.

He had worked at Sandia Laboratories since June 1952.

Survivors include his widow, two daughters and a son.



Sympathy

To Ray Smelich (9415) for the death of his father-in-law March 15 in Pueblo, Colo.

To Hilton Souther (9413) for the death of his father March 10 in Macon, Ga.

To Hubert Gilbert (7523) for the death of his mother-in-law April 2 in Dublin, Texas.

REMINDER

Daylight Saving Time will be in effect from 2 a.m. Sunday, April 25, until the last Sunday in October. Turn your clock ahead one hour.

Soul Session Tomorrow

TOMORROW NIGHT, Freddie Williams and the Screaming Yellow Zonkers will be back on the psychedelic bandstand playing the April Soul Session. Happy hour prices will be in effect from 8:30 until 12:30 and super sandwiches will be available. Soul Sessions are free to members, guest fee is 50 cents.

* * * *

NEXT FRIDAY, the Country Express has been booked for Happy Hour to provide a little sagebrush shuffle music for country and western fans. Smiling Jim Noonan, Club manager, will spread a Mexican food buffet which, at \$1.25 for adults and \$1 for kids, you can't beat anywhere.

On Friday, May 7, Sol Chavez and the mighty Duke City Brass, will make the Happy Hour music while Italian food will be the buffet feature. A barrel of Chianti ought to keep the troops happy at 20 cents a glass.

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BIKINI SWIM SUITS and other assorted summer fashions from Omar's Boutique will be modeled during the noon hour at the Coronado Club on Tuesday, May 4, by a beautiful bevy of Sandia's own. Models include Judy Roberts (2312), Claudia Garlick (5314), Peggy Stevens (5310), Archie Perlman (4331) and Soila Candelaria (2314). Smiling Jim Noonan keeps smiling.

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REGISTRATION for summer swim classes is scheduled at the Club from 9 to 1 p.m. on Saturday, May 1. Parents must register in person for their children. Classes will be conducted for pre-beginners through advanced swimmers. Fee is \$5 per person for 12 40-minute sessions. The twin pools will be open on Saturday, May 29, at 11 a.m. That afternoon will feature entertainment and 10-cent beer.

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Microwave Symposium Underway Today

A symposium on microwave solid state power generation will be held at the Coronado Club April 28. Sponsored by Sandia Laboratories, the Institute of Electrical and Electronics Engineers and the Group Chapter on Electron Devices, the all-day meeting features four talks by national authorities and a panel discussion on device applications.

Chairman of the discussion is Bill Wilson (2633) who is also program coordinator. Speakers and their subjects include Norman Gri, "RF Power Transistors"; Keith Kennedy, "Gunn and Impatt Devices"; Kern Chang, "TRAPATT Devices"; and Lester Eastman, "LSA Devices."

For additional information on luncheon reservations call Bill Wilson on ext. 1065.



Karen Bennett (AEC)

TONIGHT a five-piece show band with a swinging girl singer will be on the bandstand at the Coronado Club from 6 to 10 p.m. The group, called "The Splendors," is currently on tour and recently played Las Vegas and Ft. Sumner.

In honor of the occasion, happy hour prices will be in effect from 5 to 10 p.m. and the Club's famous chuckwagon roast beef buffet will be spread from 6 to 8:30 p.m. Yolanda Adent will be in the main lounge entertaining with a sing-along from 9 until midnight. The buffet costs \$1.75 for adults, \$1.50 for kids.

* * * *

CORONADO ladies bridge meets Thursday, May 6, at 1 p.m. Duplicate bridge meets at 7 p.m. on Tuesdays.

SOILA CANDELARIA (2314), at right, will be one of the models during a noon hour fashion show at the Coronado Club Tuesday, May 4. Summer fashions, including swim suits, will be shown.

Club Announces Las Vegas Trip

Three days and two nights in Las Vegas is the latest travel package offered by the Coronado Club. Dates for the trip are July 23-25 and the price is \$99 per person. The package includes jet transportation, deluxe accommodations at the Castaways Hotel, welcoming cocktail party on arrival, dinner and show at the Sands Hotel, two breakfasts at the Castaways, and dinner and show at the Castaways. Also included are gratuities, transportation to and from the airport in Las Vegas, and baggage handling.

According to Chet Fornero (4337), Club travel director, the deal was made through a travel agency and only 40 persons are required to make the package feasible. Club members and guests are eligible for this one, Chet says, since it is not an exclusive Coronado Club trip. Flight to Las Vegas will be on a regularly scheduled airline.

The \$99 price is based on double room occupancy. Singles fee is an additional \$15. A deposit of \$25 should be paid at the Club office right away, Chet says, with the remainder due by June 15.

