



Schlesinger



Doub

# LAB NEWS

VOL. 23, NO. 17

AUGUST 27, 1971

SANDIA LABORATORIES • ALBUQUERQUE NM • LIVERMORE CALIF • TONOPAH NEV

## AEC Has New Chairman and Commissioner

James R. Schlesinger is the new chairman of the Atomic Energy Commission, replacing Glenn Seaborg, who has served as member and chairman of the Commission since March 1961. Schlesinger was sworn into office Aug. 17 along with William O. Doub, also appointed to the Commission.

Schlesinger, 42, most recently was Assistant Director of the Office of Management and Budget with responsibility for budget and management development of national security and international programs. He originally joined the Administration in February 1969 as Assistant Director of the Bureau of Budget.

He served as Director of Strategic Studies at the RAND Corporation before joining the Bureau of the Budget. He has written extensively on the role of systems analysis in relation to political decisionmaking. While at RAND, he served as consultant to the Bureau of the Budget on atomic energy matters and directed a study on the control of nuclear proliferation which RAND had undertaken for the federal government.

Daub, 39, has practiced law in Baltimore since 1957. He was appointed to the President's Air Quality Advisory Board in 1970 for a three year term. He has also been active in other public and civic service activities, including: Chairman, Maryland Public Service Commission; Vice-Chairman, Washington Metropolitan Area Transit Commission; President, Great Lakes Conference of Public Utility Commission; Member, Executive Advisory Committee, Federal Power Commission; and Chairman, Committee on Electrical and Nuclear Energy, National Association of Regulatory Utility Commissioners.

## AEC Observes 25th Anniversary

"The primary mission of the Atomic Energy Commission is to develop and use atomic energy to improve the public welfare, to promote world peace and to assure the common defense and security has been a success," Chairman Glenn Seaborg said in a statement noting the 25th anniversary of the creation of the agency.

President Harry S. Truman signed the Act creating the Commission on Aug. 1, 1946.

"In everyday life there are direct and practical applications and benefits of atomic energy. It has become indispensable to medical research, to cancer research in particular," Dr. Seaborg said. "Its contributions to new techniques and the alleviation of suffering have been immeasurable.

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### New Faces At Sandia

## Klaus Bowers — A Long Way In A Short Time

The attractive, modishly dressed young man across the shiny director's table lit a long black cigar and we half expected a voice intoning something like "Today's young executives are switching to Panatella Stogies . . ." to come from a TV set that wasn't there. But this was Sandia Labs and the young (41) director across the shiny table was Klaus Bowers, managing director of component development (org. 10) and another recent arrival from the Bell Telephone Laboratories.

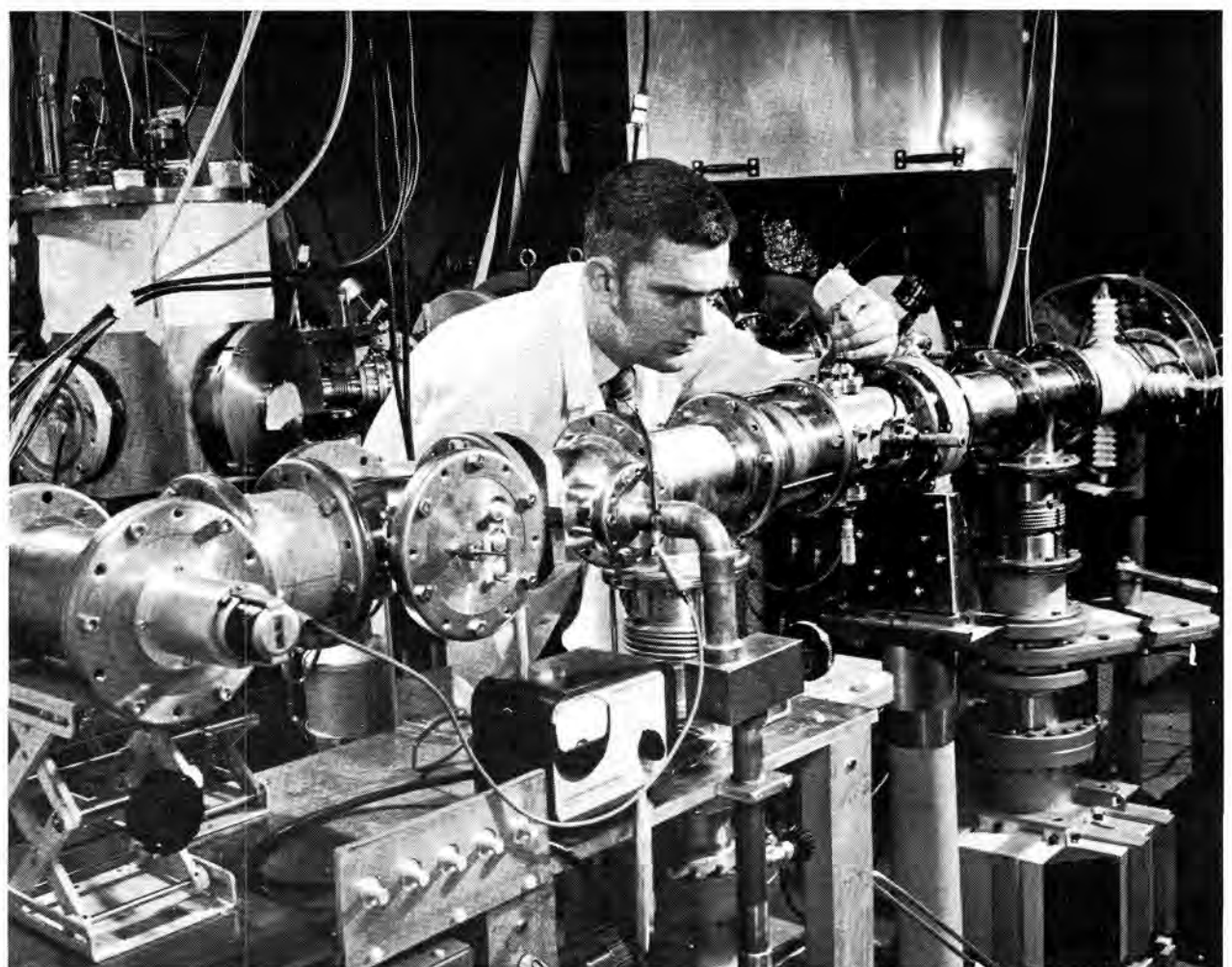
"I used to reserve cigars for big occasions . . . haven't had to though in the last few years, these are imported from the Canary Islands. We were down there and my wife exclaimed about the good smell of the smoke — care for one?" No, thanks anyway.

If one were restricted to a single word to describe Klaus Dieter Bowers, that word

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KLAUS BOWERS



IN THE VAN DE GRAAFF ACCELERATOR facility, Bldg. 803, Jim Borders (5111) adjusts one of the vertical collimators on his ion-scattering apparatus. Using this equipment, he is able to probe the depth distribution of atomic composition in layered materials. In addition to basic research on stopping power, straggling and interfacial diffusion, applied problems of direct application to the RTG (Radioactive Thermoelectric Generator) program are being investigated.

## Warren Search Marks 25 Years With Western Electric

Warren Search, Director of Purchasing and Traffic 4300, marked 25 years with Western Electric Company Aug. 19. He joined WE in 1946 as a buyer's clerk in the Purchasing Division of New York City. He rose rapidly in the company through a number of positions and became a manager in the Purchasing and Transportation Division in 1966. He was later named manager of source inspection and product engineering. Warren assumed his present position at Sandia July 1, 1969.



"I'm an Albuquerque booster," he says, "it's great living here. As a New Yorker I appreciate the friendliness of the people . . . and little things like the stores carrying out your groceries to the car."

Warren also has positive feelings about the job at Sandia. He appreciates the professionalism of the Sandia staff and the quality of engineering (reflected in the requirements of purchasing contracts).

He is a director of the New Mexico Association of Commerce and Industry and a member of the Four Hills Country Club.

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### Death

T.L. Barry, Jr., a technician in Tester Fabrication Division 7133, died Aug. 15 after a long illness. He was 53.

He worked at Sandia Laboratories since February 1951.

Survivors include his widow, two sons, and two grandchildren.



# Credit Union Reporter

By Ralph Hampy (1433)  
Credit Union Education Committee

### Save A Bundle, Maybe: Mortgage Prepayment

Once a month, in a sort of ritual, we write a check to the mortgage company, seal it in the envelope, and make a mental note to the effect ". . . only 22-1/2 years to go . . ." Most mortgage holders have the impression that the critical dimensions of their mortgages are fixed, i.e., interest rate, term of loan, monthly payment, etc. But the fact is that through the use of a device known as "prepayment" a considerable amount of interest can be saved and the term of the loan shortened.

Study the table below. It shows what you actually pay over a period of years toward principal and interest on a 30-year \$30,000 loan.

### COST OF A 30-YEAR, \$30,000 HOME LOAN

ANNUAL INTEREST RATE	TOTAL PRINCIPAL PAID	TOTAL INTEREST PAID	TOTAL AMOUNT PAID
5%	\$30,000	\$27,978	\$57,978
6%	\$30,000	\$34,753	\$64,753
7%	\$30,000	\$41,856	\$71,856
8%	\$30,000	\$49,247	\$79,247
9%	\$30,000	\$56,900	\$86,900

It's clear that the interest bite ranges from severe to painful, especially if you've bought your home in the last few years when rates of 8 and 9 percent were not uncommon.

Next, let's consider the effect on the loan of prepayments. By prepayment, we mean making additional payments on the principal in addition to the regular monthly payments. This table is a typical amortization schedule for a conventional 30-year \$30,000 loan at an annual interest rate of 8 percent. Only the first 25 monthly payments are shown.

INTEREST RATE	MONTHLY PAYMENT	TERM IN MONTHS	FACE AMOUNT
8.00%	\$220.13	360	\$30,000.00
PAYMENT NO.	PAYMENT TO INTEREST	PAYMENT TO PRINCIPAL	BALANCE DUE
1	\$ 200.00	\$ 20.13	\$29,979.87
2	199.87	20.26	29,959.61
3	199.73	20.40	29,939.21
4	199.59	20.54	29,918.67
5	199.46	20.67	29,898.00
6	199.32	20.81	29,877.19
7	199.18	20.95	29,856.24
8	199.04	21.09	29,835.15
9	198.90	21.23	29,813.92
10	198.76	21.37	29,792.55
11	198.62	21.51	29,771.04
12	198.47	21.66	29,749.38
	\$2,390.94	\$250.62	
13	\$ 198.33	\$ 21.80	\$29,727.58
14	198.18	21.95	29,705.63
15	198.04	22.09	29,683.54
16	197.89	22.24	29,661.30
17	197.74	22.39	29,638.91
18	197.59	22.54	29,616.37
19	197.44	22.69	29,593.68
20	197.29	22.84	29,570.84
21	197.14	22.99	29,547.85
22	196.99	23.14	29,524.71
23	196.83	23.30	29,501.41
24	196.68	23.45	29,477.96
	\$2,370.14 -B	\$271.42 -A	
25	\$ 196.52	\$ 23.61	\$29,454.35



In the early years of the loan the amount paid toward principal is discouragingly small while the interest paid is large. But suppose the homeowner makes the first 12 payments in regular monthly fashion and, at the time he makes the 12th payment, he decides to prepay the principal for the next year (payments 13 thru 24). He pays an additional \$271.42 (Box A) which is only slightly greater than his regular monthly payment. In doing so, the homeowner saves a whopping \$2370.14 in interest payments (Box B) and takes a year off the term of the loan as well. During the early years of the loan, principal prepayments can be modest — for one month or several months — and yet result in surprisingly large savings in interest payments.

All home loan mortgages have some stipulation regarding principal prepayment. Prepayment can usually be made without penalty up to a certain amount, generally 10 or 15 percent of the original principal may be paid in a given year. Check your loan papers or call the mortgage company for details on your loan. Even if a penalty is imposed, it usually amounts to only 1 or 2 percent of the amount paid over that allowed.

Whether prepayment is the route for you to follow depends to a large extent on the interest rate of your mortgage. Nowadays there are some 9 percent mortgages in existence, but — believe it or not — there are still some active 4-1/2 percent mortgages. Prepayment is probably desirable for the former but not the latter. If your mortgage is in between, then you must judge if the cash to be applied to a prepayment could be more profitably invested elsewhere.

### CU Bulletin Board

Smokers Get A Few More Lumps — This item from the Newsletter of the Taxpayers Association of New Mexico: "The Commerce Clearing House warns that cigarette smokers undoubtedly have the most to fear with increasing taxes nationwide in the coming year. But sales and gasoline taxes also will be hiked in many areas." There is, of course, one way — perfectly legal — of getting around rising cigarette taxes. . . it's called "quitting."

### Credit Union Statements

As part of its normal audit procedure, the Supervisory Committee recently mailed statements to members with account numbers from 8000 to 8999. If your account number is in this series and you have not received your statement, please notify Karl Waibel (4117), committee chairman.

## LAB NEWS

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### SANDIA LABORATORIES

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## Klaus Bowers — A Long Way in a Short Time

would probably have to be "exuberant". He seems a man whose enthusiasm is quickly kindled, who clearly relishes life and living. The effect is engaging.

His life has been interesting and usually but not always pleasant. He was born in Germany, the youngest of three sons. Klaus' father owned a printing business, was very conservative, and considered Adolf Hitler a passing aberration. That is, until this former officer in the Kaiser's army found himself an inmate in a concentration camp. The time was 1938 and the three boys were promptly sent to England. Then, happily, the father secured his own release just before the outbreak of the war, and he and Mrs. Bowers were able to join their sons in England.

Bombs were falling in London shortly thereafter and the three Bowers brothers were evacuated from the city along with other school children. They ended up in the smallish community of Gloucester, there to continue their education at a school fetchingly named the "Crypt Grammar School."

"You know, we had a great headmaster there. He really pushed us along. I still correspond with him," Klaus recalls.

Oxford followed, to a PhD in physics in 1953. He started teaching at Oxford, seemed to settle in, "but after a few years I began to realize that the research I liked was better in the United States than in Great Britain. So I started looking around." He joined BTL in 1956.

The years that followed were rewarding personally and professionally. Still a bachelor, Klaus maintained an apartment near Greenwich Village in Manhattan, made skiing trips to Europe, beach trips to tropical islands (and met wife-to-be Roswitha on one of the Canary Islands). At Bell Labs he advanced rapidly, was named department head in 1961 of Microwave Integrated Circuits and, in

1964, of Solid State Optical Devices.

About that time he was courting Roswitha whose permanent residence rather inconveniently turned out to be West Berlin. His trips there were frequent enough to arouse the interest of the FBI, as he was involved in classified work. "The two agents who came to see me thought they had a real live one, but I convinced them it was romance, not secrets."

Marriage and citizenship came about the same time, in 1964.

Klaus came to Sandia from the Solid State Devices Laboratory of BTL in Allentown, Pa. He was director of this Lab.

We asked how the Sandia assignment came about.

"Well, we were very happy there in Allentown after New Jersey and one day Jack Morton (a BTL executive) called and said 'How quickly can you get up here?' I knew something was in the wind, and driving up I listed the places in my mind that we'd like to go to and those that I'd balk about. Albuquerque was the number one preference, and when I walked in and saw John Hornbeck I felt pretty good. We've always been drawn to the Southwest."

Roswitha (pronounced Rose-weeta) Bowers is pretty, blonde and cosmopolitan. Her German accent, like her husband's, is muted but perceptible. The Bowers speak English for the most part within their household, though now and then a German phrase comes in handy in the presence of Pamela, age 3, who has very good hearing. Colin, a little over a year old, doesn't really care. We rather anticipated a stern, orderly, Teutonic household but saw only the normal, hectic, American scene. Pamela and Colin betray little awe of parental authority.

The Bowers are long on energetic pursuits. They are anxious to try out New Mexico's ski



THE BOWERS FAMILY — Klaus and Roswitha with children Colin, 1, and Pamela, 3. Bonnie is furry creature being restrained.

areas and are getting in shape for the slopes playing tennis. "How about golf?" we asked. For a Sandia director and a Four-Hills resident to boot, Klaus' reply should easily take this month's Fearless Utterance Award: "Life's too short for golf." • js

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## AEC Marks 25 Years

"There is no question but the AEC has fulfilled its obligation to provide our nation's military forces with the nuclear armaments needed to assure the common defense and security.

"One of the most significant developments in the 25-year history of the Commission," Dr. Seaborg said in his Anniversary statement, "is using the enormous energy in the nucleus of the atom for heat to produce electricity to help meet the rapidly growing needs of all peoples of the world. Nuclear power reactors, which were only laboratory experiments 25 years ago, are today producing nine million kilowatts of economical, clean electrical power in our country.

"In the next quarter century, nuclear power will make up 50 percent of the country's total generating capacity. In a world where power needs increase at an astonishing rate and where fuel resources, uranium included, are dwindling rapidly, the AEC is developing breeder reactors that will actually produce more fuel than they consume. On a longer range basis, we are working on fusion reactors that will burn sea water for fuel. Both concepts combine to assure that power needs will be met for thousands of years to come."



GRADUATING ELECTRONICS APPRENTICES have one last session with instructor LaVerne Dourte (7131), right. L to R are Dave Powers (who completed the 8000 hours of training three months early), Ted Montoya, Jerry Melouche and Jerry Silva.

## Speakers

B.L. Hulme (1722), "Galerkin Methods for Initial Value Problems," SIAM 1971 National Meeting, June 28-30, Seattle.

J.A. Cooper (1426), "Lightning and Ball Lightning—Frontiers for Research," UNM EE Department Colloquium, May 18, Albuquerque.

R.D. Halbegewachs (5422), "Optimal Selection of Nose Cones From Billets of Materials," Summer Computer Simulation Conference, July 19-21, Boston.

Sandia papers presented at the 1971 IEEE Annual Conference on Nuclear and Space Radiation Effects, New England Center for Continuing Education, July 20-23, Durham, N.H., were: C.E. Barnes (5112), "Radiation Effects in Electroluminescent Diodes" and "Neutron Irradiation Effects on Diffused GaAs Laser Diodes"; R.J. Chaffin (5112), "Permanent Neutron Damage in PIN Diode Microwave Switches" and "Permanent Neutron Damage in Step Recovery Diode Frequency Multipliers"; H.H. Sander and B.L. Gregory (both 1933), "Circuit Applications of Transient Annealing"; J.M. McKenzie (1933), "Neutron Energy Dependence of Damage to Semiconductor Devices"; W. Beezhold and C.E. Barnes (both 5112), "Effects of Neutron Irradiation in Ion Implanted Semiconductors"; W.H. Sullivan and R.L. Ewing (both 1532), "A Method for the Routine Measurement of Dielectric Photoconductivity"; W.H. Sullivan and J.H. Weinlein (1934), "A New Propagation Delay Time Bridge for the Study of Displacement Damage Effects in Bipolar Transistors"; B.D. Shafer and R.A. Burghard (both 1934), "Evaluation of Combined Radiation Effects to Transistors"; D.H. Habing and B.D. Shafer (both 1934), "Modeling and Radiation Effects Study of an LSI/MOS Logic System"; J.H. Renken (5231), "Application of Adjoint Transport Solutions to Analysis of Radiation Shields"; H.J. Stein (5111), "Electron and Neutron Irradiation Effects in Epitaxial Silicon-On-Spinel ( $MgO \cdot Al_2O_3$ )"; R.C. Hughes (5514), "Field Dependence of the Yield of X-Ray Excited Carriers in Polymer Films"; D.G. Skogmo (1932), "The Generalized Integrated Circuit"; B.L. Gregory (1933), "Neutron Produced Defects in Junction Field Effect Transistors"; B.L. Gregory and C.W. Gwyn (both 1933), "Designing Neutron Hard Bipolar Transistors"; and F.N. Coppage (1933), "Radiation Induced Conductivity Phenomena in Some Aromatic Polymers."

N.J. DeLollis (5332), "Cleanliness and Surface Treatment," and "Industrial Processing of Adhesives and Bonded Assemblies," Polymers and Materials Conference Series, University of Utah, July 16, Salt Lake City.

H. P. Stephens, R. C. Heckman (both 5322) and A. B. Donaldson (1543), "Construction of a Passive, Energy Flux Calorimeter and Comparison of Experimental Results with a Theoretical Model," and "Design of a Passive, Energy Flux Calorimeter Utilizing a Transient Diffusion Model," Calorimetry Conference, July 12-14, Orono, Maine.

T. A. Duffey (1544), "A Viscoplastic Solution for the High Energy Forming of Rings," International Conference of the Center for High Energy Forming, July 12-16, Vail, Colo.

T. R. Crites (3311), "Backscatter of Normally Incident Intermediate Energy Bremsstrahlung From Semi-Infinite Media of Varying Atomic Number," Health Physics Society Annual Meeting, July 12-16, New York City.

A. Bedford (5163), "On Continuum Theories for Composite Materials," Seminar at Air Force Weapons Lab, KAFB, June 28.

R.T. Meyer (5224), "Research Applications of Time Resolved Mass Spectrometry," Seminar on Mass Spectrometry and Allied Topics, July 21, LASL.

R.J. Baughman (5154), "Synthetic Crystals: What, Why, and How," Albuquerque Gem and Mineral Club, July 26.

C.W. Mendel, Jr. (5235), "Debris-Ambient Ion Coupling"; Mendel and T.P. Wright (both 5235), "Studies Relevant to Debris-Air Coupling," and "Non-Turbulent Debris-Air Coupling," DASA Atmospheric Effects Division, High Altitude Nuclear Effects Symposium, Aug. 10-12, Stanford Research Institute.

L.R. Hill (9111), "Computer Techniques and Application in Shock Physics," American Society of Civil Engineers, July 28, Las Vegas, Nev.

C.D. Longerot (1415) and J.E. Marceau (1824), "A Real Time/Time Share Computer in a Research & Development Environment," 1971 ACM National Conference, Aug. 3-5, Chicago.

T.A. Duffey (1544), "Scaling Laws for Fuel Capsules Subjected to Blast, Impact, and Thermal Loading," 1971 Intersociety Energy Conversion Engineering Conference, Aug. 3-6, Boston.

# LIVERMORE NEWS

VOL. 23, NO. 17

LIVERMORE LABORATORIES

AUGUST 27, 1971



STUDENT DEVELOPMENT AID PROGRAM, established at Sandia/Livermore this year to develop potential candidates from Bay Area schools and colleges for technical staff assistant positions at the Laboratories, provides students the opportunity of working in industry while earning money to help with their education. Each must have completed one year of college in a technical discipline to be eligible for summer employment in the program. Participants and their assignments are (from left) Albert Rawlins, drafting; Guillermo Parajon, tech art; Rickie Reese, instrumentation lab; Raymondo Pereyra, plant engineering; and Salvador Lopez, drafting.

## Death

Jonathan Garst, a technical staff assistant in Physical Properties Acceptance and Evaluation Division 8137, died August 5. He was 21.

He worked at Sandia/Livermore for almost two years.

Survivors include his father and mother, a sister and a brother.



Jonathan Garst



"SECURITY IS" CONTEST — Jim Smith (8236), right, submitted the winning caption for July, "Security is Checking the Scene Before You Bail Out for the Day," and Carlton Scott (8353) won for August, "Security is Covering the Bear Facts Before Exposing the Big Picture."

## Sympathy

To Dewey Farmer (8163) for the death of his father in Checotah, Okla., Aug. 5.

To Tommy Bryant (8311) for the death of his brother Bob (formerly 8264) in Brentwood, Aug. 2.

To Justin Hero (8271) for the death of his brother in Breckenridge, Minn., July 30.

To Lupe Martin (8161) and Vic Dominguez (8235) for the death of their father in Cupertino, Aug. 8.

## Sandians Participate in WESCON/71

Eight of the technical sessions at this year's Western Electric Show and Convention (WESCON) were coordinated by John Balaban (8172). Sponsored annually on the West Coast by the Institute of Electrical and Electronics Engineers and the Western Electronic Manufacturers Association, WESCON was held at the Civic Auditorium in San Francisco, Aug. 24-27. Cecil Land (5153) served as organizer and John Crawford (1410) as chairman of the session on electrooptic memory, image storage and display devices. During this session, two Sandians presented papers: Gene Haertling (1316) on "Electrooptic Ceramic Materials," and Phil Thacher (5153), "Ceramic Electrooptic Properties and Devices."

## Ken Henry and Joe Vieira Receive Advanced Degrees



Henry



Vieira

Two Livermore Sandians, Ken Henry of Materials Division 8311 and Joe Vieira of Experimental Mechanics Division 8122, have been awarded advanced degrees. Course work was completed under the Laboratories Educational Aids Program (EAP).

Ken received a PhD degree in applied science from the University of California at Davis/Livermore. His thesis was "A Technique for Measuring the Pressure, Volume, Enthalpy, and Resistance of Equilibrium Thermodynamic States of Liquid Metals at High Temperatures and Pressures."

After joining Sandia/Albuquerque in 1961, Ken first studied radiation effects. Since transferring to Livermore in 1965, he has been involved in radiation testing at Nevada Test Site and research in high temperature liquid metals in a joint LLL/Sandia materials project.

He has a BS in physics and mathematics from Northeast Missouri State College, Kirksville, Mo.; a BS in electrical engineering from the University of Missouri at Rolla; and an MSEE from the University of New Mexico under Sandia's Technical Development Program.

Joe received a master of science degree in civil engineering and applied mechanics from San Jose State College. His research report was entitled, "Holography of a Vibrating Circulate Plate."

Since coming to Sandia in 1957, he has been responsible for design engineering and stress analysis in one project division and vulnerability, testing, and analysis in another. Most recently, he has been doing work in experimental mechanics. Before joining Sandia, he was a mechanical engineer for Worthington Corporation in Harrison, N.J.

Joe has a BS degree in mechanical engineering from Northeastern University.

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## Take Note

Gordon Bjork, supervisor of Drawing Reproduction Section 8275-2, has been elected to the board of directors of the Golden Gate Chapter of the National Microfilm Society for the upcoming year. He has been a member of the chapter, the largest in the country, for the past three years.

\* \* \* \*

Dick Basinger of Systems Research Division II 8325 presented a paper, "The Coefficients of an Entire Series With Gaps," at a recent meeting of the American Mathematical Society held in Monterey, Calif.

\* \* \* \*

Bob Schaefer (8177) won a fifth place trophy in the recent Pacific Coast Sunfish Championships in which almost 50 sailboats competed. Held annually at Huntington Lake in the High Sierras, the championships are open to Sunfish skippers of the entire West Coast.

## Retiring



Tom (8272) and Eleanor Dadian (8213)

## Sandia Hosts Vocational Students

Award winning students in the industrial arts competition at this year's Alameda County Fair in Pleasanton visited Sandia recently. Their winning projects were on display in Administration Building 911, and the students, their teachers, and various officials from high schools throughout the county visited the Laboratories for lunch and a tour of the model shops and drafting facilities.

Jim Smith of Training and Benefits Division 8236 served as a judge at the Fair's industrial education competition, and he and Bill Jamieson of Public Relations Division 8235 coordinated arrangements for the display and visit to the Laboratories.

Sandia was also represented in the apprentice demonstrations, another feature of the vocational education exhibit at the Fair. Apprentice Tim Marino of Model Shops Division 8271 demonstrated various machining techniques. Barney Goncher (8236) helped plan the demonstrations.

Bill Ormond and Gloria Garcia (both 8217) helped to formulate plans for the Vocational Olympics held at the Fair for the second year. They are Sandia's representatives on the Alameda County Industrial Education Council which sponsored the Olympics. Gloria also acted as a judge in the competitions. • Is



JAY JOST, supervisor of Machine Shop Section 8271-1, shows a sample of lapping and polishing to extreme flatness and finish to touring group of vocational students and teachers.



*Youth Opportunity Trainees  
Summer '71*



YOU'VE heard the expression "my door is always open. . .". Well, we think we've located one guy who doesn't really subscribe to the open door policy. He's got a "Beware of Large Viscious Dog" sign in reserve, just in case.

## Sympathy

To Jack Rich (3250) on the death of his mother-in-law in Albuquerque, July 30.

To Vi Salas (4153) for the death of her father in Albuquerque, July 28.

To Johnnie Johnson (9000) on the death of her husband in Belen, Aug. 1.

To Henry Black (1434) on the death of his mother in Albuquerque, Aug. 8.

To Robert Tarbell (9484) on the death of his wife in Albuquerque, May 26.

To Ed Cave (3111) on the death of his mother in Amarillo, Aug. 14.

To John Anderson (1517) on the death of his father in Florida, Aug. 16.

To Harry Kinney (1517) on the death of his mother in Albuquerque, Aug. 22.

## Promotions

Irene Chavez (4154) to Accounting Clerk  
Marshall Denish (4553) to Service Coordinator  
Celedon Gabaldon (7631) to Reproduction Service Clerk

Archie Gibson (5411) to Computer Facilities Operator  
Charles Herrera (3148) to Document Clerk  
Albert James (8256) to Utility Operator  
Marianne Johnson (8124) to Secretarial Steno  
Duane McCauley (4513) to Sheet Metal Worker  
Esquipula Narvaez (4515) to Janitor  
Betty Parker (5411) to Computer Facilities Operator  
Perry Randall (7122) to Specialty Worker (Plastics)  
Jeffrey Tingley (7542) to Reproduction Service Clerk  
Robert Vasquez (9425) to Math Analyst  
Mary Witek (8340) to Secretary  
Geraldine Wright (7412) to Data Processing Clerk

# Take Note

President Hornbeck, Executive Vice President Robert Kraay and Vice President Charles Campbell will speak at a dinner for retired Sandia Laboratories employees Thursday, Sept. 9.

More than 500 retirees are expected to attend. The event will be held at the Coronado Club starting with a reception at 4:30 p.m.

\* \* \* \*

Joe Hegge (7654) and Hal Baxter (4542) recently completed an eight-day Wood Badge Training Program at Philmont Boy Scout Ranch. The Wood Badge, popularly called "the PhD of Scouting," includes rigorous practical camping training and the writing of a thesis on Scout philosophy.

Instructor for the program was Glenn Fowler, Vice President 9000. This was the seventh Wood Badge training session that he has conducted.

\* \* \* \*

James Boespflug (1331), a major in the Army Reserve, recently graduated from the Command and General Staff College at Ft. Leavenworth, Kans. The program involved instruction on the senior command levels of all support elements, combat arms and special training in mountain and jungle operations as well as employment of nuclear weapons. The school is one of two major war colleges operated by the U.S. Army.

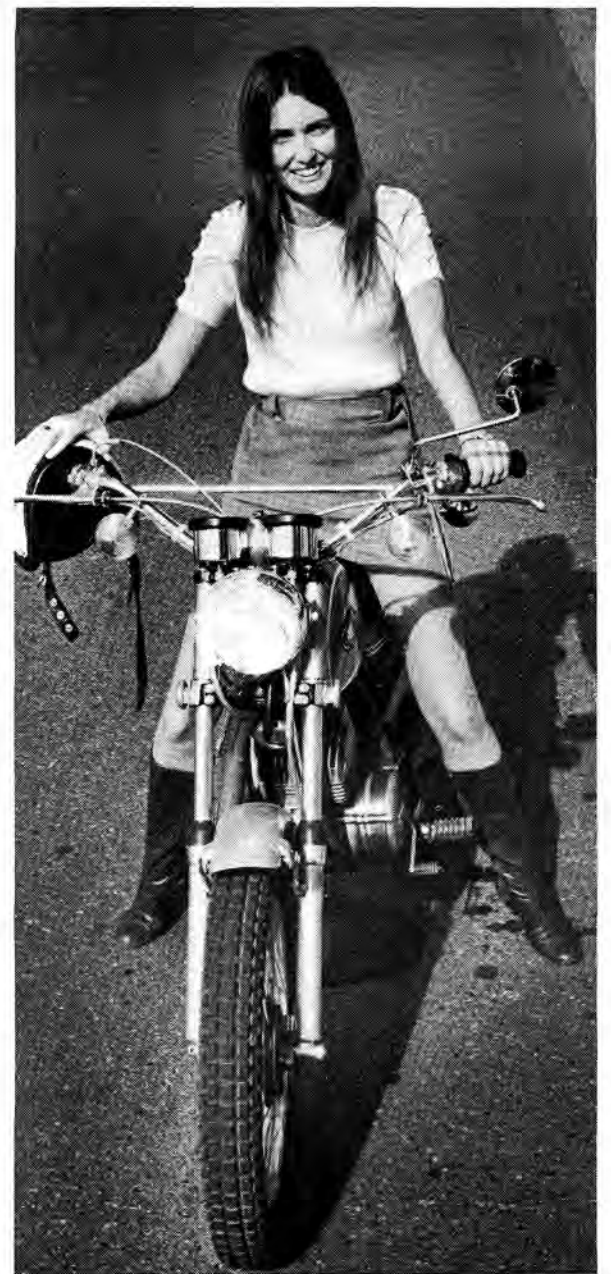
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A physical conditioning program, sponsored by Employee Services Division 3242, starts Sept. 8. The class will meet Mondays, Wednesdays and Fridays at 5:15 p.m. for 11 weeks. The program will be conducted by a qualified instructor at the Base Gym.

Call ext. 2757 for further information or to enroll in the program.

\* \* \* \*

A comprehensive course in the art of the farrier (horseshoeing) will start tomorrow morning at 7 a.m. at the Valley Livestock Auction on South Broadway. It is offered by New Mexico State University Office of Continuing Education and the fee is \$125. The class will meet from 7 a.m. to 5 p.m. on Saturdays for 13 weeks. Registration forms and additional information may be obtained from Ed Wallace, County Agent.



GOT A LIGHT? — a headlight that is. Because if you're a motorcyclist on the Base the Air Force wants you to turn it on — day or night. Deanna Rawlinson (1731) and her Yamaha illustrate the point. In case you're wondering you've got to wear that helmet too.

## Events Calendar

**Aug. 27-29** — "The Wizard of Oz," Civic Light Opera, Popejoy Hall.

**Aug. 27-29** — "A Delicate Balance," Corrales Adobe Theater.

**Aug. 28** — Spanish Fiesta, Isleta Pueblo.

**Aug. 28** — "La Grande-Duchesse de Gerolstein," final season performance, Santa Fe Opera.

**Aug. 31-Sept. 26** — UNM Art Museum sculpture exhibition, "Alexander Archipenko: The American Years."

**Sept. 3** — "Cactus Flower," Albuquerque Little Theatre.



ABOUT 30 MEMBERS of the Purchasing Management Association of New Mexico recently visited Sandia's Exhibit Center and the Sandia Base Atomic Museum. Shown at the museum are (l to r) Jay Hughes (4331), Association president; Dale Thompson, Albuquerque businessman; J. Richard Brown, Editor, Southwest Business, Dallas; and Clark Dodd, Albuquerque City Purchasing Agent.

## Speakers Abroad

F.L. Vook (5110), "Ion Implantation Damage in Silicon"; K.L. Brower (5111), "Inventory of Paramagnetic Defects in Ion Implanted Silicon"; E.P. EerNisse (5112), "Investigation of Ion Implantation Damage with Stress Measurements"; S.T. Picraux (5111), "Anomalous Diffusion of Defects in Ion-Implanted GaAs"; and J.A. Borders (5111), "Infrared Studies of SiC and Si<sub>3</sub>N Formation in Ion Implanted Silicon," Second International Conference on Ion Implantation in Semiconductors, May 24-28, Garmisch-Partenkirchen, Germany.

S.T. Picraux (5111), "Ionization and Thermal Dependences of Ion Implanted Silicon, the Institute of Physics, University of Aarhus, May 18-20, Aarhus, Denmark.

J.A. Borders (5111), "Ion Implantation of Carbon into Silicon and Ion Backscattering Analysis of Surface Layers," Centre de Recherches Nucleaires, May 31, Strasbourg, France, and June 1, Institute fur Angewandte Kernphysik, Karlsruhe, Germany; "Ion Backscattering Analysis of Surface Layers in Solids," Solid State Seminar, June 7, Oxford University, Oxford, England.

F.L. Vook (5110), "Recent Advances in Ion Implantation in Semiconductors," University of Sussex, June 7, Falmer Brighton, Sussex, England; and University of Surrey, June 8, Guildford, Surrey, England; and "Anomalous Diffusion of Defects in Ion Implanted GaAs," June 2, Ludwig Boltzmann Institute, Vienna, Austria.

## Recreation Notes

### FUN & GAMES

The Sandia Labs Slo-Pitch Softball Championship went to the 7600 Team when they won the final game on Aug. 9. The win boosted their season record to 13 and 3, best in the league.

A team trophy was received from the City and individual Sandia Lab trophies were awarded to team members — Yaz Aragon (9331), Dewey Berry (7611), Emery Chavez (7632), Jim Clark (9331), Hovey Corbin (7613), Roque Gallegos (9323), Larry Grube (7615), Larry Jennings (7611), George Kolesar (7614), Kevin Lynch (7651), Dick McAvoy (9323), Dave Renninger (7653), Rand Rozelle (7651), Joe Santana (7651), Art Sharpe (9324), Ken Varga (7651), and team manager Mike O'Bryant (7651).

— Norma

### LRL Director To Resign

Michael May, Director of the Lawrence Radiation Laboratory, Livermore, has announced his decision to resign in September and take a leave of absence from the Laboratory.

He joined the Livermore staff in 1952, and in October 1965 was named Director of the Laboratory. Under his leadership the Laboratory made important contributions in support of the nation's defense effort, as well as major advances in the application of nuclear energy to peaceful purposes. More recently LRL has undertaken a program of environmental research aimed especially at identifying and monitoring the sources and levels of air pollution.

During his leave of absence, Dr. May will be a Visiting Fellow at the Center of International Studies at Princeton University and will also be associated with the physics department of the University.

## Vista New Mexico

### Weather — Ours Is Better

If, like many Sandians, you came to New Mexico from the murk of the big city, you may still have some sense of wonderment over one daily local phenomenon — good weather. Sure it gets hot, it gets cold, it gets windy, but these are usually fleeting deviations from the overall pattern. Rarely do we experience adverse weather for longer than a day or so.

How good is our weather?

For most people, good weather starts with sunshine and clear skies. Let's compare Albuquerque's record with that of an Eastern city familiar to many — Washington D.C. The statistics are from a recent year.

	No. of Days		
	Clear	Partly Cloudy	Cloudy
Albuquerque	166	103	96
Washington	96	117	152

(Clear: 0-.3 cloud cover. Partly Cloudy: .4-.7 cloud cover. Cloudy: .8 plus cover)



### Pat Brannen Invited To Lecture on Biomathematics

Pat Brannen, a mathematician in Planetary Quarantine Systems Studies Division 1741, will participate in the Visiting Scientists Lectureship Program for the 1971-72 academic year. The Society for Industrial and Applied Mathematics (SIAM) organized the program, which is partially sponsored by the National Science Foundation, to promote a deeper understanding of applied mathematics.

SIAM distributes a brochure describing the program and listing panel members and their topics to colleges, universities and industrial facilities. Interested institutions or industrial firms make applications for speakers through the program.

In addition to lecturing, visiting scientists often discuss academic and career questions with students and confer with faculty about curricular problems and program development. They also work with industry people. Pat has prepared several lectures on biomathematical technology for the program.

Pat received a BS degree in education and biology from Texas A&M, and in 1961 was awarded a PhD in mathematics from the University of Texas. He has been with the Laboratories for seven years.

We thus can look for clear or no more than partly cloudy conditions on three out of four days. In fact, according to one computation by the US Weather Bureau, Albuquerque gets 77 percent of the total possible amount of annual sunshine.

We do have days when most of the sky is obscured by clouds. Something like 25 percent of the days in the year above, versus 42 percent for Washington. But our cloudy skies average only about 8-1/2 inches of rain per year, whereas those in Washington produce about five times that amount — some 41 inches per year. So even when our skies are cloudy, the chances are you'll be able to play that tennis or golf game without benefit of a sprinkling.

Note that the 8-1/2-inch rainfall mentioned above is "average." As it turns out, our yearly rainfall is hardly ever average. Last year, for example, it amounted to some 6 inches; in 1968 it was 10.6 inches; in 1941 a soggy 16 inches; in 1917 a dry 3.3 inches. The rainy season here, when about half the rainfall occurs, is the four months of summer, June through September. Afternoon showers, nicely timed to coincide with 5 P.M., help cool off things.

Temperature (coupled with humidity) is critical in any assessment of good weather. Look at these averages:

	January		July	
	Max.	Min.	Max.	Min.
Albuquerque	46°	24°	91°	66°
Washington	44°	30°	87°	69°

So there really isn't a great difference between the two cities, and no one ever accused Washington of having great summer (or winter) weather. However, our average annual humidity is a low 33 percent, which somehow makes both summer and winter extremes more tolerable. Low humidity also is a factor in the considerable drop in temperature with nightfall — on the order of 25 to 30 degrees from the daytime maximum.

All of these statistics add up to what can fairly be called good weather. Meteorologists say that Albuquerque is so favored as a result of its mile-high elevation at a southern latitude (35 degrees North, level with Memphis and Charlotte). Storms heading this way are generally warded off by pressure from warm air masses arising from the vast sun-baked plains.

Now there are a few carping, niggling observers who will allege that our good weather is occasionally visited by wind or even sandstorms. But these matters are all relative and compared, say, to Mount Washington in New Hampshire which once recorded a wind velocity of 231 mph (before the anemometer blew away), our springtime breezes are more properly construed as caress rather than lash. And no fair-minded comparison will overlook the low incidence here of one particularly sinister phenomenon of weather. Statistics show that few waterspouts occur.

• js

### Congratulations

Mr. and Mrs. John La Barre (1753), a son, Sedar Mark Timothy, June 20.

Mr. and Mrs. Gary West (9423), a son, Aug. 6.

Mr. and Mrs. Lewis Suber (9237), a son, Chad Rennick, on July 27.



# Authors

R.J. Baughman and R.A. Lefever (both 5154), "Evaporation of Sodium Chloride Melts," Vol. 8, page 317, JOURNAL OF CRYSTAL GROWTH.

D.E. Merewether (1426), "A Numerical Solution for the Response of a Strip Transmission Line Over a Ground Plane Excited by Ionizing Radiation," August 1971, IEEE TRANSACTIONS ON NUCLEAR SCIENCE.

G.S. Mills (1815) and P.A. Stickler (9472), "A Multi-Channel High Speed Data Acquisition and Processing System," August 1971, IEEE TRANSACTIONS ON RELIABILITY.

J.A. Borders, S.T. Picraux (both 5111) and W. Beezhold (5112), "Formation of SiC in Silicon by Ion Implantation," Vol. 18, No. 11, APPLIED PHYSICS LETTERS.

A.G. Beattie (5153) and G.A. Samara (5130), "Chemical Kinetics of Plastic Deformation," Vol. 42, No. 6, JOURNAL OF APPLIED PHYSICS.

D. Emin (5134), "The Hall Mobility of a Small Polaron in a Square Lattice," Vol. 64, No. 2, ANNALS OF PHYSICS.

A.W. Johnson and D.W. Swain (both 5243), "Doppler and Boltzmann Temperatures of a Cylindrical Nonuniform Plasma," Vol. 11, No. 7, JOURNAL OF QUANTITATIVE SPECTROSCOPY AND RADIATIVE TRANSFER.

M.L. Lieberman (5313) and others, "Crystallization Studies of Nickel-Tellurium Oxide Films," Vol. 118, No. 7, JOURNAL OF THE ELECTROCHEMICAL SOCIETY.

H.T. Weaver (5154), "NMR Studies of  $^1\text{H}$  and  $^3\text{He}$  Contained in Gold Films," Vol. 42, No. 6, JOURNAL OF APPLIED PHYSICS.

M.E. Riley (5234) and A. Dalgarno (Harvard Univ.), "Perturbation Calculations of the Helium Ground State Energy," Vol. 9, No. 5, CHEMICAL PHYSICS LETTERS.

J.W. Poukey, A.J. Toepfer (both 5241) and J.G. Kelly (5223), "Axially Dependent Equilibria for a Relativistic Electron Beam," Vol. 26, No. 26, PHYSICAL REVIEW LETTERS.

C.G. Murphy (9462) and S.S. Alpert (UNM), "Dependence of Refractive Index Temperature Coefficient in the Thermal Expansivity of Liquids," Vol. 39, No. 7, AMERICAN JOURNAL OF PHYSICS.

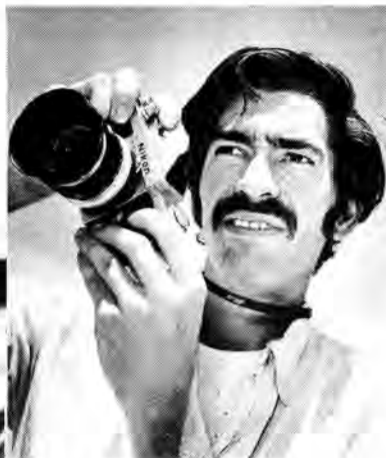
T.A. Duffey (1544), "Approximate Solution of an Impulsively Loaded Long Cylinder Governed by an Elastic-Plastic Material Law," Vol. II, No. 1-2, ACTA MECHANICA.

E.P. EerNisse (5112), "Sensitive Technique for Studying Ion Implantation Damage," Vol. 18, No. 12, APPLIED PHYSICS LETTERS.

R.L. Park (5331) and J.E. Houston (5332), "Appearance Potential Spectroscopy on an Austere Budget," Letter to the Editor, Vol. 26, No. 2, SURFACE SCIENCE.

P.S. Peercy (5152), "Raman Scattering of Ion-Implanted GaAs," Vol. 18, No. 12, APPLIED PHYSICS LETTERS.

D.E. Ramaker (5234) and D.M. Schrader (Marquette Univ.), "Multi-channel Configuration Interaction Theory Applied to the  $(n1^3)1\text{S}$  Autoionizing States of Helium," Vol. 55, No. 1, JOURNAL OF CHEMICAL PHYSICS.



**PHOTOGRAPHER**  
Don Tipping prefers to shoot pretty girls but now and then settles for a photogenic bug.

## Photo Enthusiast

### Don Tipping Does Own Color Processing

What do pictures of a beautiful girl and a mosquito have in common?

Not much, except that the originals are in color, are well executed and are the work of Don Tipping, a staff assistant in Division 5332.

The thing that separates Don from most other amateur photographers who make their own prints is that Don works in color — and that is a horse of a different. . .

"Color processing requires more equipment, more time, more money," Don says. "Precision temperature control is a must and this is why most home darkrooms produce only black and white."

Don built most of his processing equipment himself — heating elements with controls, exposure meters for prints, and various timers. The rest of his equipment is standard but he is experimenting with various combinations of color developing chemicals.

"I've changed the manufacturers' recommendations to come up with formulas that increase film speed and also reduce costs," he says.

Don's favorite subjects, of course, are pretty girls, not bugs.

"But if there are no pretty girls around, what are you going to do?" he asks. • dg

### Bob Durand Named American Legion State Commander

Bob Durand, supervisor of Control Section 7112-1, was recently elected Commander of the New Mexico Department of the American Legion.

"During my year as state commander," Bob says, "I hope to emphasize one project — informing Vietnam veterans of the many benefits to which they are entitled. Some veterans are unaware of these benefits or have forgotten about them, and where there are deadlines involved, they could miss out on things like educational aids, dental care or home mortgage loans."

Bob has served as commander of local Carlisle-Bennett Post 13. He has been at Sandia since February 1948.

### Thermal Conductivity Conference Features Sandia Technical Papers

A number of Sandians will participate in the 11th Annual International Conference on Thermal Conductivity to be held in Albuquerque Sept. 28 - Oct. 1 at Western Skies. The conference is sponsored by Sandia Laboratories, Los Alamos Scientific Laboratory and the University of New Mexico.

Russell Acton (5322) is serving as the Sandia chairman for the event, Paul Wagner for LASL and Arthur Houghton for UNM.

Sandians presenting technical papers during the conference include W.P. Schimmel, Jr. (1222), "A Laplace Transform Method for Predicting Radiation Losses From a Laser Heated Foil" and with A.B. Donaldson (1543), "Radiation Interaction Effect Upon Thermal Conductivity Measurements in an Absorbing-Emitting Gas"; R.W. Mar (8311) and N.D. Stout

(consultant), "Enthalpy and Specific Heats of Various  $\text{MB}_4$  and  $\text{MB}_{12}$  Compounds."

R.C. Heckman (5322), "Finite Pulse Time Corrections for Flash Diffusivity Measurements" and "The Analysis of Pulsed Thermal Diffusivity Measurement."

H.C. Hardee (1543) and D.O. Lee (1543), "A Simple Conduction Model for Skin Burns Resulting from an Incident Heat Flux of Short Duration"; J.A. Kahn (5322), R.C. Heckman (5322), A.B. Donaldson (1543), and A.V. Houghton III (consultant), "Application of a Laser Barrier in Flash Thermal Diffusivity Studies of Insulative Materials (Experiment)," and "Application of a Laser Barrier in Flash Thermal Diffusivity Studies of Insulative Materials (Theory)."

Of the 85 papers to be presented, 20 percent will be by foreign authors.

# Service Awards

Aug. 27-Sept. 9

## 25 Years

Jack Suttman (3155).

## 20 Years

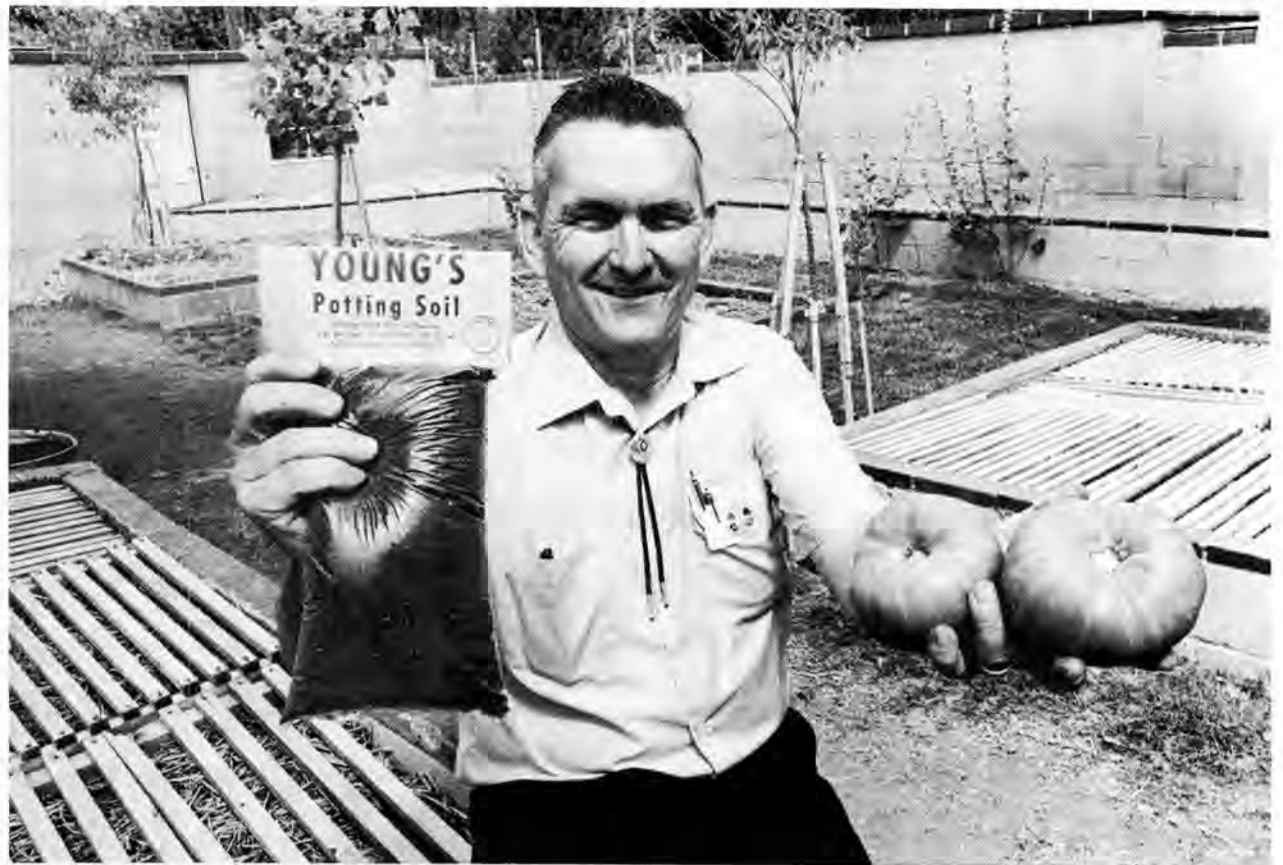
Leonard Nelson (7113), Bill Simpson (4337), Earl Johnson (4551), Harley Moody (9462), Donald McFadden (9132), Bob Kelly (3232), Ralph Miller (4518), Tom Cook, Jr. (8000), Kay Graff (4151), K.R. Dickerson (7142), Herman Romero (5531), Marion Drago (1212), Harley Walker (1641), Fred Villa (1922), G.W. Browning, Jr. (4622), James Grier, Jr. (7112), Ernest Cordova (7142), Delmar Dufty (7142), Eloy Sedillo (4614), Charles Tucker (7612), David Mayhew (9423), Silverio Lujan (4513) and Lawrence Witt (5112).

## 15 Years

Julio Pardo (1331), Charles Stanton (1432), John Garcia (7141), John Kuruzovich (9235), Wynne Grace (1933), Joe Magruder (3341), Lawrence Dyer (9343), Ralph Dalby (7131), John Ingram (7131), Frank Himebrook (1321), Melvin Perkins (1333), Willa Urbanoski (4153), William Lutgen (7652), Miles Leeman (9235), Joseph Shelby (7142), Bryant Hamlet (4113), P. Trujillo (4511), Jack Travis (7411), Marion Young (7422), Gunner Scholer (8153), Edgar Schreiner (1331), A.V. McFarland (9243), Donald Matejka (5624) and Robert Smith (5627).

## 10 Years

Luther Horning (1934), Francis Statzula (3311), Jose Rivera (4154), Joseph Dal Porto (5535), John Barnhouse (8322), James Plimpton (9112), Raymond Krieg (1541), Donald Habing (1934), Gerald Smith (1442), George Arnold (5111), Edgar Boeck (9343), James Dyer (1314), Lloyd Morrow (5415), James Constant (7121), Ted Brueggemann (7122), Joseph Brown (7131), James Jordan (7141), Rachel Hill (9237), Milton Waite (7651), Ernestine Mikles (8275) and Robert Ewing (1532).



"IT WORKS," says Jake Young (7143) about his potting soil, a by-product of his backyard earthworm farm. "It's the world's greatest natural fertilizer," he says, displaying a couple of huge tomatoes grown in the stuff. Jake sells about 150,000 earthworms a week and his new product, the potting soil, is moving well in local markets. He employs a half dozen neighborhood kids to work the farm and plans to expand it to a full-time business in a few years when he retires from Sandia.

## • SHOPPING CENTER • SHOPPING CENTER • SHOPPING CENTER • SHOPPING CENTER • SHOPPING CENTER • 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.

**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

- 4 MICHELIN 7.00x15 commercial radial ply tires, 1-good tread, 3-some tread; 4 Michelin 7.00x15 radial tubes. Farnum, 282-3416.
- SHETLAND PONY, medium height, white, gentle, excellent w/children, \$75. Morrison, 855-6244.
- '71 SUZUKI 185cc, road or dirt. Fletcher, 298-2142.
- 15' LONE STAR fiberglass boat w/ 75hp Evinrude engine & Imperial tilt trailer, \$1150, 1915 Inez Dr. NE. Irving, 299-1969.
- '69 SUZUKI AS-100 motorcycle, geared down for trail, \$185, 1609 Towner NW. Folkens, 1-867-2825.
- PHOTOGRAPHY EQUIP: complete darkroom for B&W film & printing, \$125. Hollowwa, 255-6938.
- ACCORDION, 120 bass, largest type, paid \$500, sell for \$275, almost new. Gallegos, 299-3667.
- PIANO, Wurlitzer spinet, Wurlofin finish, blond, make offer. Espinosa, 299-3301 after 5.
- MAPLE single bed w/springs & mattress; Simmons Hide-A-Bed; small credenza; other furniture items. Lewis, 299-4217.
- 2 CHEV. MAGS (Fenton) on 7" Good-year slicks (7.60x15) & tubes, almost new, all for \$100. Sanchez, 299-5658.
- 6x9 OVAL blue green shag rug; 2 twin mahogany headboard sets; 22" port. 3-spd. fan. Jones, 298-6422.
- MIN. SCHNAUZER PUPS, excellent show or good pets, males paper trained. Kelly, 298-0729.
- 4-80x12 TRLR TIRES w/wheels; 2trlr fenders; 1 pr. waterskis; hvy. duty

- towbar; tape recorder & speaker components; crosscut saw. Sanchez 298-3130. after 5.
- GUITAR, Ventura hollow body elec. w/dual pickups, \$95. Schreiner, 268-4159.
- WINCHESTER Mod. 70, 308, Variable scope 3-9x, \$125. Allen, 296-6985.
- 51" MAGNAVOX console stereo, record player & B&W TV, 3 yrs. old, \$150 cash. White, 242-3519.
- LEFT HAND Spalding golf clubs, 1-3 woods, 3-9 irons, w/bag & cart, \$30. Hughes, 299-1533.
- '70 YAMAHA 175cc Enduro dirt bike, 2800 miles, adult driven, extras, \$475. Kaiser, 296-5215.
- ROYAL TYPEWRITER, All-American port., elite, recently overhauled, lockable case, \$25. Sherwin, 344-1911.
- HONDA 50 mini-trail, '70 model, slightly used. Knight, 299-3783.
- ENGLISH SPRINGER SPANIEL pups, AKC reg. hunter & show quality, liver/white, male/female, available first week Sept. Neumon, 255-2662.
- GUNS: Harpers Ferry 1837 musket; Krag carbine 30/40 deer rifle, \$65; Enfield 30:06 rifle, \$50. Smitha, 299-1096.
- BEDROOM FURNITURE: bleached oak, double bed, dresser w/attached round mirror, bedside table, \$75. Stark, 299-5953.
- DINETTE SET, 4 chairs, \$25. Savitt, 268-0158 after 6.
- 2 ALUM. folding cots w/foam mattresses; Hoover sweeper; brass wood carrier. Wright, 298-2940 after 5:30.
- '67 B.S.A. - 650, Zachewicz, 242-1396 after 5:30.
- LARGE size steamer travel trunk, \$20. Nelson, 255-2364.
- MOVIE CAMERA & projector, 35mm camera; '67 Corvette. Snelling, 268-5895.
- UNIVERSAL TRAILER HITCH, ball included, hookup for lights, will fit any U.S. car, \$10. Freyermuth, 299-2053.
- CAMEL "Oasis" tent trailer, sleeps 6, w/awning & spare tire, \$320. Mason, 299-2836.
- DISHWASHER, undercounter Tappen,

- approx. 5 yrs. old, recently overhauled, \$45 or offer; two student violins, make offer. Copeland, 344-1133.
- BEER TAPPER; Bates 305cc cross-country seat; 238cc Hi-spd. chamber, flat-track, spool wheel, 2-wheel flat-bed trailer, M/C & model airplane goodies. King, 298-2991.
- HOTPOINT elec. 4-burner stove, \$100. Snyder, 296-0908 after 6.
- HAM EQUIPMENT, electronic test equipment plus other goodies. Bierly, 296-6430.
- GE deluxe electric dryer, \$50. Grimes, 299-2548.
- DOUBLE BED, mattress, box spring, frame, \$20. Kelsey, 256-2460.
- '69 YAMAHA 350, low mileage, spare tire, \$550; St. Pius X blazer jacket, girl's size 10-12, worn 3 times, \$20. Cowham, 298-4249 after 5:30.
- RADIO CONTROL, all solid state-digital 5 channel, fully proportional, \$95. Lenz, 298-3872.
- 26" GIRL'S Schwinn bicycle, \$30; castered ping pong table, \$25; 4-piece concrete tree curbing, \$2. Gregory, 268-2022.
- 2-WHEEL UTILITY TRAILER, 4'x5'x9", new tires — 4.80/4.00-8, spare tire, lights, Johnson, 298-4046.
- 24' TRAVEL TRAILER, 1970 Terry, AC, awning, many other extras. Zanetti, 344-0166.
- TWO WHITE 6-yr. size cribs & mattresses. Shampine, 265-6883.
- MOTORCYCLE, '71 Yamaha CT-1C, 175cc Enduro, 850 miles, \$550. Prew, 296-3815.
- KENMORE WASHER, 3 water temps., 2 cycles, \$55. Evans, 268-8419 after 5:30.
- 38 Special revolver, "Ina Tiger", 3" barrel, \$40. Adams, 268-5943.
- 3-MO. OLD STUD COLT, hand raised, halter trained. Clem, 296-5204.
- 23" MAGNAVOX B&W console TV; Sear's port. stereo w/stand; 2-8x 6-8 4-lite exterior door; 2-8x6-8 screen door. Thompson, 296-2235.
- 4 7.35x14 recapped tires, 2000 miles on tread, \$25. Campbell, 268-8445.

- TWO MUSICAL INSTRUMENTS: alto saxophone & trumpet. Hoagland, 282-3825.
- MINIBIKE, recently overhauled, 3hp B&S engine, ceriani type racing fork, bumper racks, \$150. Hart, 299-8832.

### CARS & TRUCKS

- '70 IMPALA, custom 2-dr. HT, PB, PS, factory air, low mileage, 350 engine, below book. Richards, 256-9470 after 5.
- '69 OPEL station wagon, 1900 cc engine, radio, AT, AC, 31,000 miles, \$1950. Schmierer, 299-2352.
- '71 TOYOTA Corolla station wagon, below book. Spence, 255-9621 after 5.
- '52 DODGE pickup, \$175. Lucero, 877-1783.
- CITROEN '57 DS-19, body-glass-motor in good shape, gear box shot, best offer over \$45. Shuster, 268-8491.
- '69 MUSTANG Mach 1, \$1800 or best offer, will consider trade-in, AT, PS. Silva, 344-6714.
- '60 FORD station wagon, \$150. Goodwin, 256-2216.
- '67 INTERNATIONAL Scout, 8-cyl., sporttop, 4-wd, dual tanks, \$1500. Durant, 298-4952.
- '70 VOLKSWAGAN (bug), 4 new tires. Martin, 299-3004.
- '69 FORD 1/2-ton pickup, AT, PB, PS, AC dual factory gas tanks w/camper & boat, camper jacks & dollie plus other extras, \$2990. Scalf, 298-1409.
- '68 CHEVROLET Carryall 4x4, 4-spd., AC, 1/2-ton. Matthews, 1-636-2370 Bosque Farms.
- '53 CHEV. 1/2-ton, 4-spd., new motor, \$535; '66 Chev. 1/2-ton, 6-cyl., 3-spd., \$975. Chavez, 255-1585.
- '70 CHEVY Impala 4-dr., V8, AT, AC, PS. Ter Maat, 299-9151.
- '67 ENGLISH FORD, Cortina GT, \$795, book value \$875, loan value \$500. Anderson, 2212 Glorieta NE, 299-2595.
- '67 PLYMOUTH Barracuda Fastback, Formula S, 4-spd., front disc brakes, sure-grip, \$1350. Hartman, 296-6976 after 6.

- '70 SUBARU VAN, economical, \$1095. Harper, 298-0146 after 5:30.
- '64 VOLKSWAGEN sedan; one 2.50x18 motorcycle tire, \$10. Wilkinson, 299-8327.
- '66 CHEV. pickup, 6-cyl., 3 spd., 250 CID engine, \$800. Zucuskie, 268-3105.
- '67 PLYMOUTH Sport Fury conv., loaded, yellow w/black top, \$1525. Ray, 298-0408.
- '65 CHEVROLET Impala SS, 327 cu. in. V8, AT, AC, PS, tinted glass, new tires, one owner, \$975. Rentzsch, 299-3811.
- '69 MUSTANG Conv., stick, V-8, 21,000 miles, new tires & top, \$1900 or best offer, Smith, 268-6095, 425-A Valverde SE.

### WORK WANTED

TEENAGE girl wants work baby sitting or lt. housework, weekends and evenings, Michele. Guttman, 299-7031.

### REAL ESTATE

RED BRICK 3-bdr., 2 bath, dbl. car garage, lg. kitchen, carpeting, landscaped, excellent financing, good location Sandia. Renker, 296-3048.

### WANTED

- BICYCLE RACK to hook on car bumper, to carry 2 10-spd. bicycles, good condition. Fletcher, 298-2142.
- 10-SPEED MAN's bike, excellent condition only. Arenholz, 298-1724.
- USED electric potters wheel in good condition. Tucker, 296-2618.
- SMALL student desk. Detorie, 299-1868.
- '65 MGB CONVERT., top price for top quality, must pass mechanics examination. Fimple, 296-2925.
- SHOP MANUAL for 1955 Chevrolet pickup truck. Hoagland, 282-3825.

### LOST AND FOUND

LOST — Sunglasses w/black frames, bifocal sunglasses w/gray frames, brown wallet w/credit cards. LOST AND FOUND, tel. 264-2757, Bldg. 832.

# Coronado Club Activities

Last month they hung from the ceiling. They bugaloosed, frugged, stomped and shuffled in the ballroom, in the dining room and on the patio. They splashed in the twin pools. Rod King and the Soul Knights, Freddie Williams and the Screaming Yellow Zonkers, and the Top Three alternated making mad music and then they all got together and the walls vibrated.

Pete Gallegos (1333), Club vice-president, invented it and he named it "Soul Session Extravaganza." There's another one scheduled tomorrow night from 8:30 to 12:30 and you can let it all hang out. Happy hour prices will be in effect and super sandwiches will be available. Members get in free, guests pay 50 cents.

\* \* \* \*

TONIGHT The Top Three will be making Happy Hour music while seafood tops off the buffet menu. Happy Hours start right after work on Fridays and run until 9 p.m. with special prices. The buffet is served from 6 to 8 p.m. and the band plays for dancing from 6 to 9 p.m. Then Yolanda Adent takes over the main lounge with a sing-along until midnight.

Next Friday Sol Chavez and the mighty Duke City Brass will be back on the bandstand and the Club's famous chuckwagon roast beef will be the buffet feature. On Friday, Sept. 10, Frank Chewiwie will make the happy music while Mexican food will be spread for the buffet.

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Lorraine Cano (AEC)

## Soul Session EXTRAVAGANZA & Pool Party Tomorrow

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LABOR DAY WEEKEND will feature a big "Fair Conditioner" western dance on Saturday, Sept. 4, and an end-of-season pool party Monday, Sept. 6.

The western dance will have the big country sound of Elton Travis and the Westernaires. Barbequed ribs and fried chicken will take care of the hungries. Tickets are \$2.75 for members, \$3.50 for guests.

The pool party will take place in the patio area and get started around 11 a.m. when 10-cent beer and a happy hour bar go into operation. The "Mariachi Gala" will entertain from noon until 3 p.m. It will be your last chance of the season to splash in the twin pools.

To qualify for the \$5 family swim ticket next season, you must be a "continuous" member — defined as one who pays dues from the previous September. It's only \$2.50 per month by payroll deduction. All Sandia and AEC employees are eligible.

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THE MAZATLAN PLANE still has 20 vacant seats, according to Chet Fornero (4337), Club president. It is scheduled to take off at 9 a.m. Oct. 5 for eight days at the Playa Mazatlan, one of the finest resort hotels on the Mexican Pacific coast. The package includes the works — transportation, room, breakfast and dinner each day, a special cocktail party and a "Fiesta Night" with extravagant entertainment. The package costs \$198.50, based on double room occupancy (\$211 for singles) and a \$50 deposit should be paid at the Club office right away.

"If we fill the airplane," Chet says, "we will be able to give everybody a \$10 refund."

The Lubbock football bus has been cancelled, Chet reports, due to lack of interest. • dg



HOT PANTS and other fall fashions from Omar's Boutique will be modeled at the Club during lunch hour Thursday, Sept. 9, by Sharon Mackel (5511), above, and Soila Candelaria (1314), Peggy Stevens (5310), Claudia Garlick (5314), and Sylvia Vescovi.

### THE SAFE DRIVER

SOME 19,000 PERSONS ARE KILLED EACH YEAR IN THE U.S. AS THE RESULT OF SINGLE-CAR ACCIDENTS!



THE SAFE DRIVER CONSTANTLY WILL BE ALERT TO AVOID STRAYING FROM HIS HALF OF THE ROAD WHICH COULD RESULT IN RUNNING OFF THE ROAD, OVERTURNING OR COLLIDING WITH A FIXED OBJECT!

PARTICULARLY DURING HIGH-SPEED FREEWAY DRIVING, AVOID "HIGHWAY HYPNOSIS" AND DO NOT DRIVE WHILE OVERLY TIRED, DROWSY OR UNDER THE INFLUENCE OF DRUGS AND/OR ALCOHOL!

