

FAMILY DAY, Oct. 22, at Sandia Laboratory drew more than 17,000 visitors (children under six were not counted). Employees proudly displayed their work areas and then took families to see special displays and demonstrations. For more Family Day pictures see pages four and five.

SANDIA LAB NEWS



VOL. 18, NO. 22, NOVEMBER 4, 1966

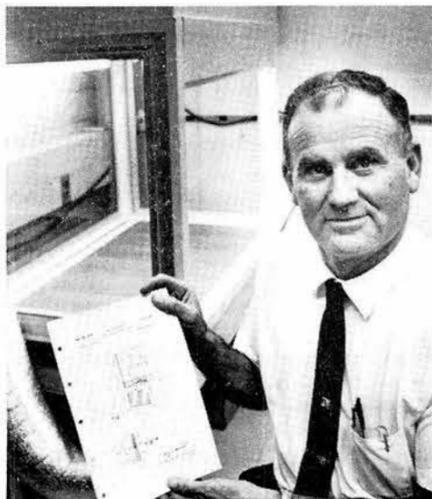
SANDIA LABORATORIES

ALBUQUERQUE, NEW MEXICO
LIVERMORE, CALIFORNIA

OPERATED BY SANDIA CORPORATION FOR
THE U. S. ATOMIC ENERGY COMMISSION



MOCKUP OF VELA SATELLITE IV twin scheduled to be launched in February serves as a backdrop for an artist's conception of how the sophisticated watchdog will appear in orbit. Holding the illustration is R. E. Spalding, supervisor of Satellite Systems Division II 9234 and a member of an AEC/DOD team responsible for planning and management of the Vela satellite program.



PATENT FOR a laminar flow air hood apparatus is displayed by inventor W. J. Whitfield (2572) by one of the commercially-available work benches using his theory.

After Operating Three Years

Vela Satellites Still Setting New Records

One of the most successful space programs ever undertaken by the United States started with an Atlas-Agena space booster lifting two experimental Vela nuclear detection satellites into a 60,000 nautical mile, near-circular orbit. That was on Oct. 16, 1963.

Today the two spacecraft with Sandia-designed logic systems and Los Alamos Scientific Laboratory sensors are the oldest continuously operating U. S. spacecraft still providing useful data.

Since then there have been two additional research and development launches resulting in six nuclear detection satellites in orbit. These satellites have demonstrated a successful research and development program and, as a secondary bonus, they

provide an effective capability to detect nuclear explosions in space.

Originally an offspring of the 1958-1960 Geneva nuclear test ban negotiations between the USSR, United Kingdom, and the U.S., the Vela satellites have grown in sophistication, size, and scope so that they can now participate in nuclear detection missions from the surface of the earth to deep space.

Sometimes referred to as space watchdogs, the Vela launch-I spacecraft combined with those of launches II and III have provided 156 months of useful mission capability, accumulating over three-quarters of a billion hours of component operating time.

The spacecraft have gathered some 40

billion bits of data during more than 30,000 hours of actual data collection time. This effort involved 30,000 contacts by the Air Force Satellite Control Facility in Sunnyvale, Calif., and required the facility to send 250,000 Vela commands.

This remarkable record of scientific and engineering achievement is due in large part to the efforts of LASL and Sandia; LASL for the design of sensor systems and Sandia for the logic systems which record the signals and convert them to electronic intelligence.

Electromagnetic pulse detectors, optical detectors, and associated electronic systems are designed to observe fireball light and radio pulses emitted from nuclear bursts. If nuclear tests are observed by the satellites, the information is relayed to satellite controllers at Air Force Satellite Control Facility ground stations around the world.

The Vela program began in 1959 when the Advanced Research Projects Agency (ARPA), which is responsible for all U. S. research and development activity on nuclear test detection requested the Air Force Systems Command, then the Air Research and Development Command, to undertake a study of factors involved in the design, establishment, and operation of a worldwide satellite system to detect high altitude nuclear explosions.

The study was based on recommendations from an ad hoc group which reported to the President's Scientific Advisory Committee. The panel recommended various space-based techniques and systems for detecting nuclear detonations occurring beyond what is generally considered the earth's atmosphere.

Vela satellite program ultimately evolved. Overall responsibility was assumed by the Department of Defense under the direction of ARPA with the support of the Atomic Energy Commission. The AEC undertook laboratory development and funding of nuclear detection instruments while DOD, through ARPA and the Air Force, agreed to develop the spacecraft to carry the nuclear detectors.

Subsequently, the Air Force Space Systems Division assumed detailed management and implementation of the program and later selected TRW Systems as the spacecraft contractor to design and build the Vela spacecraft and integrate the AEC payload.

Satellite portion of the Vela program is
(Continued on Page Two)

Patent Issued for Whitfield Clean Bench

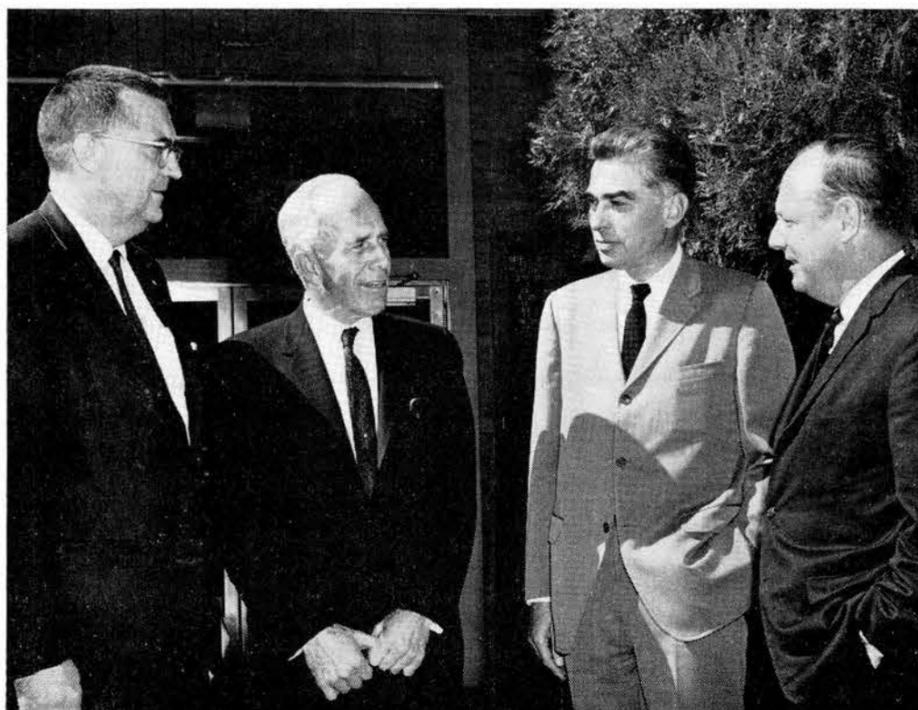
A second patent covering special features of laminar flow clean areas has been issued to the Atomic Energy Commission in the name of Willis J. Whitfield (2572).

The latest patent is for a laminar flow air hood apparatus which uses a continuously moving mass of clean air (that has passed through fine or submicron filters) to keep a work area substantially free of airborne particulate matter. Such a vented work station or air hood assembly gives the worker access to toxic fluids or solids without danger from fumes, and also permits assembly of complex mechanisms without contamination from airborne particulate matter.

Sandia's interest in clean rooms was an outgrowth of the laboratories' responsibility in nuclear ordnance engineering and the need for a method to control contamination in the assembly of weapon components, especially miniaturized parts.

Mr. Whitfield's inventions have made possible a work area with 1000-100,000 fold reduction in airborne contamination over that possible in conventional industrial clean rooms. The laminar flow concept has been adopted by the General Services Administration as the basis for a Federal Standard on clean rooms and work stations for other government agencies.

The laminar flow air hood covered by the new patent is manufactured commercially by four companies and is used extensively by other government facilities and many private companies.



VISITING SANDIA LABORATORY last week were Robert E. Hollingsworth (left), General Manager of the AEC, and Wilfrid E. Johnson (second from left), AEC Commissioner. They talked with John A. Hornbeck, Sandia Corporation President, and L. P. Gise (right), Manager of AEC Albuquerque Operations Office. The visit was part of an orientation trip to various AEC installations.

Support Your Choice

Tuesday, November 8, is election day.

Despite the fact that this is an "off-year" nationally, brisk New Mexico contests have generated more interest than usual.

Nonetheless, there appears to be too much apathy, boredom, and indifference to the issues and candidate qualifications.

It is tragic that while Americans are dying in Vietnam to seek to achieve free elections for that nation, some Americans are turning their backs on this same privilege and freedom.

It is vital that we vote. It is vital that we support the party and men of our choice—if not with time and effort, then at least with money and interest.

Help protect our country and our political system.

Vote!



We Must Long Remember

Joe T. Montoya (4623) is one of 2948 on-roll Sandians who are veterans of military service. On Nov. 11, Veterans Day, the country pauses to honor its veterans. This year the event is made more poignant with the 350,000 Americans in Vietnam.

The first Veterans Day was celebrated Nov. 11, 1918, and it was called Armistice Day. The world was going to be safe for democracy. In 1954, the name was changed to honor the more than 21 million men who had borne arms for the United States during World War I, World War II, and the Korean conflict.

Fifty-three Sandians served in the Armed Forces during WW I or before September 1940. During WW II, 1214 Sandians were in the service. During the Korean conflict and up to the present, 1655 Sandia employees saw service in the military forces. In addition, 26 Sandia women employees are veterans.

Joe hasn't thought about his Army experience for a long time now. You try to forget nightmares.

Still, he remembers that it was cold in Germany in November in 1944. After 22 years, he still remembers that he and two buddies had been cut off from their unit during an attack on Gereonsweiler. While trying to return to their lines, the three Americans met a superior enemy force. They attacked, took the enemy by surprise, and captured 21 prisoners. After rejoining their company and delivering the prisoners, they spearheaded another attack and captured 27 more prisoners.

For this action, Joe was awarded the Silver Star. He also earned the Bronze Star, the Croix de Guerre, and several other medals during his four years in the Army.

Joe is seriously concerned about the Americans in Vietnam and the misunderstanding the enemy has about Americans.

You see, Joe didn't want to be a soldier. He figures the men in Vietnam don't want to be soldiers either. Americans really don't want to fight. Our history shows that we are reluctant to take up arms.

But make no mistake about it, Joe says, an American is the most determined soldier in the history of the world. When all other courses of action fail, he will fight and he will fight until he wins.

Then he buries his dead, rebuilds the devastation, helps his enemy start life anew. With this accomplished, he returns home and becomes a civilian again.

Our enemies may think that we treasure peace too much to fight. But we know that we won't stand idly by while freedom is being destroyed.

Ask Joe Montoya or any of the two thousand nine hundred and forty eight Sandians who are among those we honor on Veterans Day.



S. P. SCHWARTZ receives the Atomic Energy Commission's citation for outstanding service to the atomic energy program from Gerald F. Tape, right, AEC Commissioner. The award was presented during ceremonies Oct. 27 at AEC headquarters in Germantown, Md.

Materials Science Seminars will Discuss the New and the Diverse

Focusing attention on new and diverse materials to meet specific engineering needs in Sandia's weapons and space programs is the purpose of a colloquium series sponsored by the Materials and Process Development organization (1100).

Three experts on composite materials will present seminars at the Laboratory Theater (Bldg. 815) on Monday and Tuesday.

The central theme of this particular series of seminars reflects the increased emphasis on custom-designing materials to meet engineering needs.

This two-day meeting on composite materials will be devoted to describing diverse combinations of materials and structures and demonstrations on how their intrinsic, heterogeneous properties can be used at Sandia.

Speakers and their topics will be Prof. A. G. H. Dietz, Mechanical Engineering Department, Massachusetts Institute of Technology; Prof. M. F. Ashby, Division of Engineering and Applied Physics, Harvard University; and Dr. Willard H. Sutton, General Electric Company, Space Sciences Laboratory.

Monday's session will be introduced by C. F. Bild, director of Materials and Process Development, at 9 a.m. Speaking on "Fiber-Plastic Composite," Prof. Dietz will then examine some elementary aspects of combined action of matrix and

reinforcement, and properties of the principal fibers and plastics employed. Included will be a discussion of combining high-strength fibers and plastics to provide composites possessing exceptionally high strength-to-weight ratios as well as other properties unobtainable by the constituent acting alone.

At 2 p.m. Monday afternoon, Prof. Ashby will speak on "Dispersion Hardening of Metals." Room temperature strength of metal crystals containing a dispersion of fine hard equiaxed particles, which characteristically show a high initial flow stress and rapid work hardening, will be discussed. Prof. Ashby will then use simple dislocation models to describe the stress required to initiate plastic flow and the work hardening in alloys.

On Tuesday at 9 a.m., Dr. Sutton will speak on "Fiber Composite Materials." His talk concerns recent developments in new fibers and in new metal-fiber composite materials which are leading to dramatic improvements in structural components where high strength, high stiffness, and low density over wide temperature ranges are prime requirements.

Laboratory employees may make arrangements for conferences with the speakers by calling either Charles Stein (1131), at 264-3475, or J. G. Eberhart (1123) at 264-5458.

Continued from Page One . . .

Vela Satellites

under the technical auspices of a combined AEC/DOD team which is responsible for the planning and management of the program. This group is chaired by the Vela Satellite Program Office Director, Col. Stephen H. Sherrill, Jr., and includes R. E. Spalding, supervisor of Satellite Systems Division II, 9234, who recently replaced W. C. Myre, manager of Advanced Systems Development Department I, 5610, as a member of the group; J. H. Coon, LASL; and Col. R. C. Brouns, USAF, ARPA.

Improved Vela spacecraft are scheduled for launch IV, in February 1967. These spacecraft, which will be continuously earth oriented and downward looking, will carry more sophisticated optical and electromagnetic pulse detectors capable of detecting nuclear explosions deep into the earth's atmosphere while retaining the space nuclear detection capabilities out to great distances.

As in the past, background radiation measurement sensors will also be carried, many of which are of new and improved design. They will provide rapid and complete environmental data to many interested users. These systems broaden the role and capabilities of the Vela satellites in the performance of the nuclear test detection mission.

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Operated for the United States Atomic Energy Commission by Sandia Corporation

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Mobile Classroom Project Receives Design Assistance from 2 Sandians

Sandians Clark Calder (8254) and H. D. (Whitey) Sorensen (8127) have combined their technical talents in a project involving the design, specifications, and layout of two mobile classrooms for Livermore school students.

The additional classroom space and facilities were needed for a special education program being federally funded under Title I of the Elementary and Secondary Act of 1965 to provide students with remedial help in communication skills.

This project was one of the first undertaken by the Technical Panel for Community Service. The Panel was formed early this year by G. W. Anderson (8140) to assist the Valley Memorial Hospital. Members are Livermore Valley volunteers from science, engineering, mathematics, and other technical fields who have offered to contribute their professional skills to community service.

Initially, G. R. (Gib) Marguth (8127), a member of the Livermore City Council and a former trustee of the Livermore Elementary School District, requested the Panel's service in the modification of two mobile-home-type vehicles for use as classrooms.

In response to the request, Clark Calder, a mechanical engineer in Sandia's Plant Engineering Design Division, and Whitey Sorensen, a staff associate in Telemetry and Instrumentation Systems Division, worked as a team for a period of six weeks. Installation of electronic equipment, utility systems, and equipment in a limited space is a normal requirement peculiar to instrumentation trailers operated by Sandia; and this requirement was directly applicable to the school district's need for a functional installation of similar equipment in the mobile classrooms.

"The coordination involved in providing a power supply, electrical services, heating, air conditioning, storage space, and audio-visual equipment in a vehicle which must be arranged primarily for adequate stu-

dent work space was a challenging problem," Clark and Whitey both agree.

These classrooms on wheels are now circulating among the seven schools within the district which have been designated as program centers.

The overall program in Livermore is two-fold: first, to provide intensive improvement in communication skills of fifth through eighth grade children from broken, small income or welfare homes, and from families with a language barrier that hinders learning in a regular classroom; second, to provide teachers with in-service education and experience in communication skills and their relationship to the educationally deprived.

Some of the program's specific aims are:

- to provide stimuli through various educational activities to motivate these students toward higher aspirations;
- to guide these students and their parents to change negative or indifferent attitudes toward school and formal education;
- to reach parents at the same time by involving them as much as possible in the program;
- to foster awareness in the community of the necessity of assisting and providing goodwill support for the program.

According to Bruce W. Jamieson, director of special programs for the Livermore Unified School District, each mobile classroom accommodates six students, one teacher, and one volunteer teacher aide. Each is self-contained in terms of equipment and materials, including those needed specifically for the program such as diagnostic tests, books and workbooks for individualized instruction, filmstrip sets, etc.

Both mobile classrooms are commercial units 8 feet wide, 26 feet long, and 10½ feet high.

Livermore Notes

C. H. DeSelm (8200) was chairman of the Machine Design Division Session at the 16th Annual Society of Mechanical Engineers (ASME) Joint Professional Division Conference in San Francisco, Oct. 27. The conference was co-sponsored by the San Francisco and Santa Clara Valley Sections of ASME. J. D. Gilson (8153), speaker at the session, discussed "Computer Aided Design."

Mt. Diablo Subsection of ASME will hold its November meeting on the 10th at Castlewood Country Club. Guest speaker will be Douglas Dupen from Stanford Linear Accelerator Center (SLAC) at Stanford University. The program will include a discussion of the physics and engineering of the linear accelerator.

Welcome Newcomers

Oct. 7-20

California	
Lawrence A. Borello, Hayward	8252
Barbara J. Combs, Livermore	8234
Returned from Leave	
Theodore S. Gold	8131



FOLDING TABLES, specially designed to combine flexibility in space arrangement and storage in transit, are checked by the Sandians.



SANDIANS Clark Calder (8254), left, and H. D. (Whitey) Sorensen (8127) inspect the exterior of one of the mobile-home-type vehicles modified for use as mobile classrooms in conjunction with a program which provides remedial help in communication skills for students in the Livermore School District.

LIVERMORE NEWS



"SAVE ME A DANCE, SANTA!" whispers Carolyn Kersey (8215) to Livermore Laboratory's Santa Claus, Jim Henderson (8211). The Annual Employees' Christmas Dance is set for Dec. 9 at Castlewood Country Club in Pleasanton.

Annual Christmas Dance Set for December Ninth At Castlewood Country Club

Tickets go on sale Monday, Nov. 7, for the 1966 Christmas Dance slated for Dec. 9. Again this year, the annual holiday party will be held at Castlewood Country Club in Pleasanton and is open to Sandia and LRL employees and their guests.

Both the Garden and Florentine Rooms at Castlewood have been reserved, and dancing will begin at 9 p.m. to the music of Maury Wolohan and his orchestra. At 1 a.m., following the dance, breakfast will be served. Several valuable door prizes will also be given to lucky ticket holders during the evening.

Tickets are \$4 in advance (\$4.50 at the door) per person and can be obtained from Barbara Netherton, Bldg. 911, Personnel; Helen Bond, Bldg. 912, Rm. 139; Dorothy Wiemken, Bldg. 912, Rm. 117; Vivian Lenz, Bldg. 913, Rm. 114; Pat Tarp, Bldg. 914, Rm. 138; and Jean Stuart, Bldg. 916, Rm. 105.

Two Sandians Earn Awards from MORS

H. A. Krieger (5510) and Eugene A. Aronson (5263) were two of the three speakers who tied for the first place prize award at the 17th Symposium of the Military Operations Research Society (MORS).

Mr. Krieger presented a technical paper, "The Effectiveness of Tactical Atomic Demolition Munitions (ADM) Vehicle Barrier," and Mr. Aronson's presentation was entitled "Flight Simulation Model."

Primary basis for the award was the contribution that operations research is making to specification of military requirements, measurement of operational capability, and modification of weapon systems to insure that capability meets requirements.

The symposium was held at the U. S. Naval Postgraduate School, Monterey, Calif., May 23-25, and the winners were announced at the 18th MORS symposium held at the U.S. Army's John F. Kennedy Center for Special Warfare, Ft. Bragg, N.C., Oct. 19-21. MORS is sponsored by the Office of Naval Research, Washington, D.C.

Norman K. Walker of Walker Associates, Rockville, Md., was the other first place winner.

Congratulations

Mr. and Mrs. Darrell Christensen (8116), a daughter, Lori Ann, Oct. 18.

Mr. and Mrs. Franklin Kay (8147), a daughter, Julia Ann, Oct. 11.

Dr. Richard Bellman Colloquium Speaker

Dr. Richard Bellman, professor of mathematics, engineering, and medicine at the University of Southern California, will talk on "Invariant Imbedding in Mathematical Physics" at the Livermore Laboratory Colloquium on Nov. 9. In Dr. Bellman's words, he will discuss "how to use the largest computers with the least math."

Professor Bellman received his PhD from Princeton University in 1946. Since that time, he has been assistant professor of mathematics at Princeton University, associate professor of mathematics at Stanford University, visiting professor of engineering at UCLA, and a mathematician at the RAND Corporation. He is also the author of 435 published research papers, 20 books, seven monographs, and is the editor of two journals and two series of books.

Tickets are required for admission. Further information about the colloquium will be posted on bulletin boards the week of Nov. 7.

Don T. DuBose Teaches Apprenticeship Course At Contra Costa College

Don T. DuBose (8223-5) is busy during his nonworking hours teaching an "Introduction to Apprenticeship" course at Contra Costa College in San Pablo, Calif.

The purpose of the course, according to Don, "is to explain to apprentices the fundamentals of apprenticeship programs." Of particular interest in the teaching assignment is a request from the college that he recommend changes to the existing State-approved text which is currently being used for instructional purposes.

Don received an AA degree from Contra Costa College in 1957—specializing in machine shop technology. Since joining Sandia at Livermore Laboratory in November 1962, he has completed Sandia-sponsored courses in Automatically Programmed Tools, Network Analysis—PERT/CPM, and True Position Dimensioning.

Sympathy

To Cathy Banks (8213) for the death of her mother in Pocatello, Idaho, Oct. 18.

To Jake Ludington (8253) for the death of his mother-in-law in Los Angeles, Oct. 1.

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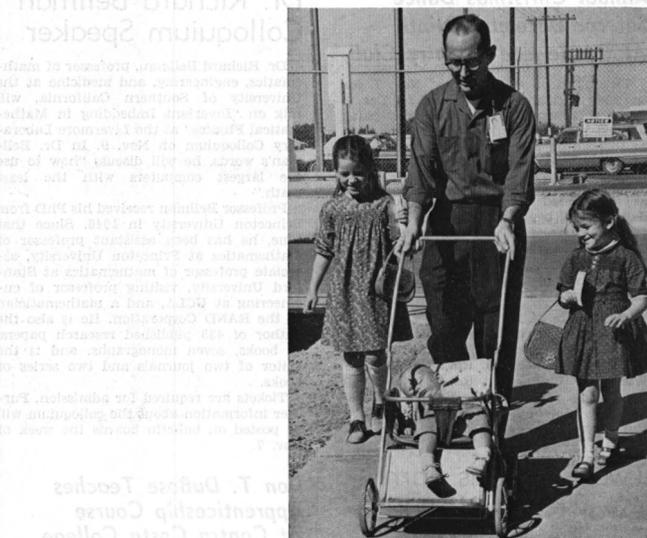
INSIDE CLEAN ROOM facility adjacent to Bldg. 892, young Douglas Weidner is fascinated by look at micro-organisms. Mrs. Kenneth Weidner lifts him to eyepiece level.



IT WAS A FINE DAY. The temperature was a mild 68 degrees and thin clouds hung over the Tech Areas during Family Day, Oct. 22. This is a view of visitors strolling on 9th street. More than 17,000 persons participated in Family Day. It was the second such event in the history of the Laboratory. The first Family Day was held April 18, 1959.

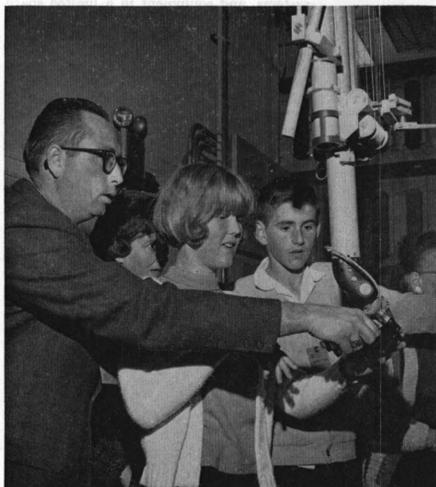


MARGARET PLATT pins a Family Day identification tag on Raphael Pena, a retired Sandia employee. Retired employees visiting Sandia during Family Day were welcomed at a hospitality center in Bldg. 832 provided by Employee Benefits Division 3122.



JIM MOGFORD (5231) proudly shows his youngsters through Sandia Laboratory. His young son, Lane, has seen enough for now.

FAMILY DAY 1966



MASTER SLAVE MANIPULATORS at the SERF reactor proved a challenge for the Glenn Haycock family. More than 3000 visitors toured the Area V reactor facilities.



PLOTTER BOARD of Sandia's analog computer and Ken Bixler (9411), right, show visitors how computers solve problems. The graph reflects trajectory of rocket launch, orbit, and reentry.



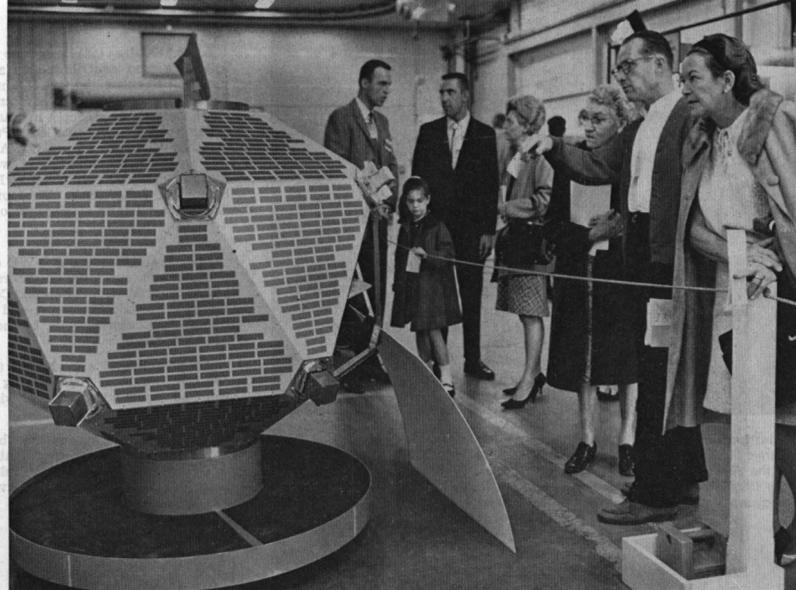
CROWDS flocked to the Development Shops in Bldg. 840. A group of youngsters watch the automatic Omnimil work from a programmed tape.



LITTLE BOBBY BENNETTS waits while his father Jim gets badge checked at the entrance to Tech Area I.



TIRED VISITORS paused during Family Day tours in the hospitality room in Bldg. 839. The cafeteria served refreshments throughout the day, provided a pleasant break between visits to technical facilities and displays.



VELA SATELLITE was one of the highlights of the display in Bldg. 892. A steady stream of visitors continued throughout the day.



AS SMOKE CLEARED, family of Floyd Forsythe received graphic demonstration of laminar-flow principle of Sandia's clean rooms. The exhibit was in the Sphere of Science which drew more than 3800 visitors.



PLANNING ASME SYMPOSIUM on the role of the computer in engineering applications are (l to r) E. L. Emerson (2223), general chairman; D. K. Buchanan (7331), administrative chairman; and J. H. LeRoy (2223), program chairman. The annual event which is co-sponsored by the University of New Mexico is expected to attract 250 attendees to UNM's Student Union Building on Nov. 18-19.

ASME and UNM Plan Symposium On Role of Computer in Engineering

Computers and the engineer is the basic theme of the annual symposium co-sponsored by the New Mexico Section, American Society of Mechanical Engineers and the University of New Mexico on Nov. 18 and 19.

Approximately 250 engineers and scientists from New Mexico and the surrounding states are expected to attend the two-day event at the UNM Student Union Building. Sessions will be devoted to the role of the computer in engineering applications and exploration of the impact of new computer techniques and developments.

Charles E. Runyan (4220), chairman of the New Mexico Section, ASME, will open the technical sessions at 8:30 a.m. on Nov. 18 with introductory remarks. W. C. Scrivner, director of Computing (9400) will be chairman of the afternoon sessions the first day. Dr. Iben Browning, a former Sandia employee and now with Thomas Bede

Foundation, Los Altos, Calif., will speak on "Computer Design from the Human Point of View" at the banquet that evening at Holiday Inn Motel.

Registration forms for the symposium may be obtained from R. E. Stinebaugh (1523), 13401 Chico Rd., NE. Registration fees for all symposium functions are \$14 for ASME members and \$16 for non-members. An additional \$2 processing fee will be charged for those registering after Nov. 15.

E. L. Emerson (2223) is general chairman of the symposium. Other Sandians serving as committee chairmen are J. H. LeRoy (2223), program; L. H. Stradford (1525) and R. D. Grover (5631), publicity; D. K. Buchanan (7331), administrative; W. A. Sebrill (1542), finance; V. E. Blake, Jr. (9310), facilities; R. E. Stinebaugh (1523), registration and reservations; and R. E. Cranfill (2565), printing.

Sandia Authors

H. E. Hansen (9311), "Aerospace Nuclear Safety," Fall issue, NUCLEAR SAFETY.

J. W. Guthrie and A. A. Repetti (both 1413), "A Photographic Plate Holder and Spectrum Line-Height Mask for Mattauch Type Mass Spectrographs," October issue, REVIEW OF SCIENTIFIC INSTRUMENTS.

J. B. Gerardo and R. A. Hill (both 5122), "A Test of the Theory of Stark-Broadening of H_{β} ," mid-September issue, PHYSICAL REVIEW LETTERS.

R. A. Graham and O. E. Jones (both 5133), and J. R. Holland (9332), "Physical Behavior of Germanium under Shock Wave Compression," September issue, JOURNAL OF PHYSICS AND CHEMISTRY OF SOLIDS.

D. M. Mattox (1123), "The Influence of Oxygen on the Adherence of Gold Films to Oxide Substrates," August issue, JOURNAL OF APPLIED PHYSICS.

Albert Narath (5150), "Nuclear Spin-Lattice Relaxation of ^{51}Cr in the Ordered Magnetic Insulator CrCl_3 ," August issue, PHYSICAL REVIEW LETTERS.

R. E. Nettleton (5155), "Switching Resonance in Crystallites of Barium Titanate," September issue, JOURNAL OF THE PHYSICAL SOCIETY OF JAPAN.

Richard W. Holland (5142), "Numerical Studies of Elastic Disc Contour Modes Lacking Axial Symmetry," October issue, JOURNAL OF THE ACOUSTICAL SOCIETY OF AMERICA; "The Equivalent Circuit of an N-Electrode Piezoelectric Bar," July issue, PROCEEDINGS OF THE IEEE.

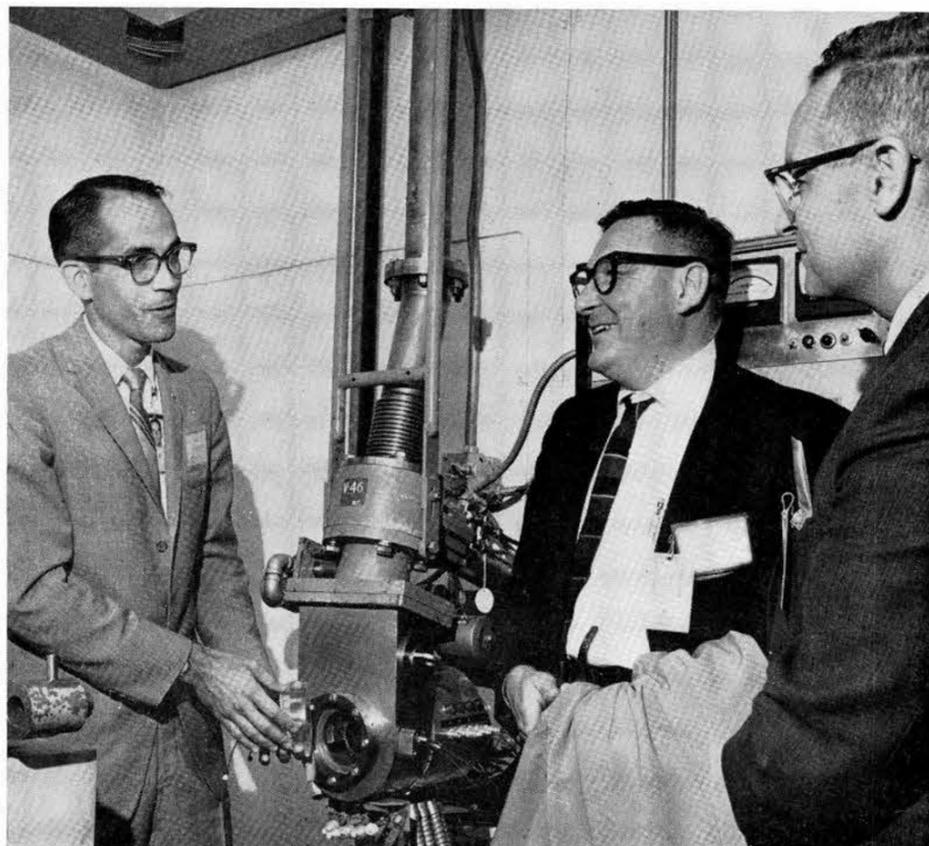
A. C. Wilken (2423), Richard Braasch (5612), and R. C. Barker of Yale University (Sandia consultant), "History and Signal States in Multipath Cores," September issue, IEEE PROFESSIONAL GROUP ON MAGNETICS.

Marvin Moss (5154), "Scattering of Phonons by Dislocations," October issue, JOURNAL OF APPLIED PHYSICS.

J. M. Worrell, Jr. and H. H. Wicke (both 5261), "Restrictions of Uniformly Monotonically Complete Open Continuous Mappings. Preliminary Report," June issue, NOTICES OF THE AMERICAN MATHEMATICAL SOCIETY.

K. H. Zimmermann (2134), "Balance Transmission Lines," October issue, NEW MEXICO PROFESSIONAL ENGINEER.

R. S. DeZur (8144), "Point-Determining Homomorphisms on Multiplicative Semi-Groups of Continuous Functions," August issue, PACIFIC JOURNAL OF MATHEMATICS.



PLACEMENT of an instrumented quartz "target" in Sandia's helium gun is explained by R. A. Graham of Dynamic Stress Research Division 5133 to visitors who attended an orientation conference of the Associated Rocky Mountain Universities. Prof. Byron Wilson (right) teaches chemistry at Brigham Young University and Prof. H. M. Belkin (center) is with the chemical engineering department at New Mexico State University.

Supervisory Appointments



J. G. HAWLEY to supervisor of Telemetry Development Division 7211, effective Nov. 1.

Gordon joined Sandia in April 1955. He worked with a data reduction group for about six months before he transferred to Salton Sea Test Base where he worked on instrumentation and general range operations. In June 1961 he returned to the Laboratory to work with a range development division. During 1961-62 he participated in the Dominic test series in the Pacific. Early in 1963 he transferred to the Electro-Optics Division. Gordon was a staff member in the Physical Science Laboratory at New Mexico State University for approximately four years before coming to Sandia.

He received his BS degree in physics from Eastern New Mexico University in August 1950 and took some graduate courses in physics while at NMSU. From January 1945 to November 1946 he served with the U. S. Navy in the Pacific.



STANLEY D. SPRAY to supervisor of Division I 5621 of Advanced Systems Development Department II, effective Oct. 16.

Stan joined the Laboratory in July 1954 and worked with an arming and fuzing group. In December 1954 he entered the Army and served as a radar repair crew chief at Ft. Meade. He returned to the arming and fuzing group at the Laboratory in February 1957. In 1959 he transferred to a weapon project group where he worked with component and systems design. He returned to arming and fuzing in 1962 and then transferred to nuclear weapons safety. Since 1963 he has been concerned with advanced weapons design.

Stan received a BS degree in electrical engineering from the University of Arizona in June 1954. He is a member of Pi Mu Epsilon, Tau Beta Pi, and Sigma Pi Sigma.

Events Calendar

- Nov. 4-5—UNM Homecoming Activities.
- Nov. 5-6—Rio Puerco rock climbing weekend. N. M. Mountain Club, leader Jack Kutz, tel. 255-9781.
- Nov. 11—Veterans Day parade and observance at VA Hospital.
- Nov. 12—Lava beds southeast of Grants. N. M. Mountain Club, leader Marjorie Lenth, tel. 256-0282.
- Nov. 12—Pianist Van Cliburn, Civic Auditorium, 8:30 p.m.
- Nov. 17-18—Holiday Idea Show, sponsored by Council of Albuquerque Garden Clubs. Civic Auditorium, 11 a.m. to 9 p.m.
- Through 1966—Display of primitive hunting weapons, UNM Anthropology Museum.
- Through 1966—Spanish Colonial Folk Art, Museum of International Folk Art, Santa Fe.



ARNOLD G. SCHUKNECHT to supervisor of Systems Programming and Computer Operations Division 8145, Design Analysis Department, effective Oct. 16.

Arnold joined Sandia at Albuquerque in 1952 and worked two years as an employment interviewer. For the next two years he was assigned to employee services and then to employee benefits. Arnold transferred to Livermore Laboratory in September 1957, as a technical department service representative, and in March 1959, was promoted to supervisor of Accounting, Budget, and Tabulating Section. He transferred to wage and salary administration in January 1965 and most recently has been a project leader in management systems and programming.

He received his BA degree in industrial psychology from the University of South Dakota in 1951 and his Master's degree in personnel services from the University of Colorado in 1952.

Congratulations

Mr. and Mrs. D. L. Krenz (9331), a son, Hunter, Oct. 12.

Mr. and Mrs. R. D. Moyer (2412), a son, Mark William.

Take Note

William B. Minser (4253-3) has been elected president of the Metal Trades Council. He will serve through the end of 1966, filling the unexpired term of former president Walter E. Myers (4211-1) who has been promoted to a new job outside the bargaining unit.

Mr. Minser has held MTC positions of steward, chief steward, and safety committee member.

Eight representatives from NASA in Huntsville, Ala., were at Sandia Laboratory Oct. 19 and 20 for briefings by C. J. McGarr (4600) on the Management Inventory Control System and by J. W. Hughes (4381) on the Computer Purchasing System.

A. R. Sattler (5211) is one of several scientists who contributed to a technical paper presented at the International Atomic Energy Agency Conference on Nuclear Data, held recently in Paris, France. The paper was entitled "Pulsed Fast Neutron Research at the Los Alamos Van de Graaff Accelerator," and was a summary of research conducted at Los Alamos Scientific Laboratory. The presentation was made by John C. Hopkins of LASL.

The seventh annual CQ-WE contest for licensed amateur radio operators employed by or retired from Sandia Corporation, Western Electric Company, and Bell Telephone Laboratories will be held during January 1967.

All participants are eligible to compete for the individual high-scoring trophy as well as contribute toward winning the Traveling Works Trophy.

Additional information may be obtained from one of the host coordinators: Larry J. Greenwood, Dept. 1121-4, Teletype Corporation, 5555 West Touhy Ave., Skokie, Ill. 60076.

Service Awards

20 Years



M. A. Deaton, Jr.
4541



E. S. Moore
2213



H. E. Waldorf
7244

15 Years



B. R. Armijo
2222



Mary Davis
2232



R. W. Dyer
3242



D. H. Emrick
7522



H. G. Gallegos
3463



G. W. Hinman
4632



J. W. Hughes
4381



J. F. Jones
8156



T. N. King
3242



Lillian Kraus
3428



F. L. Leyba, Jr.
4234



E. C. Moser
2554



Tircio Ortega
4622



Mary Pasko
2112



H. M. Potet
5542



B. L. Schmedeman
7336



J. D. Shreve, Jr.
5234



J. M. Stuckey
7522



C. C. Tolbert
9322



Daniel Vallejos
4573



L. C. Watkins, Jr.
2453



W. L. Wood
7214



C. F. Zickert
2434

Sandia Speakers

R. I. Butler (7342), "Methods of Latching Impacting Bodies," Second ASME Mechanisms Conference, Oct. 12-14, West Lafayette, Ind.

T. A. Williamson (2411), "Instrumentation of a Stilbene Scintillation Detector," 13th Nuclear Science Symposium, Oct. 19-21, Boston.

C. A. Trauth, Jr. (2571) and R. E. Woolsey (5256), "Solutions of Certain Intractable Integer Linear Programming Problems," 30th national meeting, Operations Research Society of America, Oct. 17-19, Durham, N.C.

G. E. Seay (5130), "Shock Waves in Ferroelectrics and Quartz," 1966 IEEE Ultrasonics Symposium, Oct. 12-15, Cleveland.

T. J. Tucker (5133), "Spark Initiation Requirements of a Secondary Explosive (PETN)," meeting on Prevention of and Protection against Accidental Explosions of Munitions, Fuels and Other Hazardous Mixtures, sponsored by New York Academy of Sciences, Oct. 10-12, New York City.

D. A. Northrop (5154), "Vaporization of Lead Zirconate Titanate Materials," Basic Science Division of the American Ceramic Society, Oct. 9-11, University Park, Pa.

C. J. Fisk (9424), "Automated Circuit Card Etching Layout," Northeast Electronics Research and Engineering Meeting, Nov. 2-4, Boston.

C. J. McGarr (4600), "Management Information Flow," Administrative Management Society, Oct. 18, Albuquerque.

M. J. Forrestal (1541), "Response of a Half-Space to Transient Loads," 1966 Engineering Mechanics Specialty Conference, Oct. 12-14, Washington, D.C.

Robert Creveling (1421), "Fast Trigger Tubes for Switching Megawatts in Nano-

seconds," International Electron Devices Meeting, Oct. 27, Washington, D.C.

L. C. Jeffers (7244), "Neutron Effects on Semiconductor Strain Gages," Western Region Strain Gage Committee Meeting, Oct. 3, Sacramento, Calif.

A. J. Chabai (5623), "Dimensional Analysis and Modeling," Symposium on Nuclear Craters and Ejecta, Oct. 20, San Bernardino, Calif.

L. J. Vortman (5232), "Scaling of Craters from Surface Nuclear Explosions," Symposium on Nuclear Craters and Ejecta, Oct. 20, San Bernardino, Calif.

M. L. Merritt (5232), "Underground Cratering Tests," Symposium on Nuclear Craters and Ejecta, Oct. 20, San Bernardino, Calif.

L. E. Null (2565), "Microwelding," local chapter, ASTM, Oct. 21, Albuquerque.

D. M. Mattox (1123), "Film Deposition by Exploding Wires," American Vacuum Society meeting, Oct. 26-28, San Francisco.

P. J. Chen (1116), "Singular Surfaces and the Second Order Dynamical Condition," Department of Aeronautics and Engineering Mechanics Colloquium, Oct. 20, University of Minnesota; "On the Attenuation of Acceleration Waves of Arbitrary Form in Isotropic Finite Linear Viscoelastic Materials," Fourth Technical Meeting of the Society of Engineering Science, Inc., Oct. 31-Nov. 2, Raleigh, N. C.;

"On the Direct Formulation of the Constitutive Relation of Infinitesimal Linear Viscoelastic Materials," Department of Aerospace Engineering, Nov. 4, University of Texas.

Death



Biliardo Sedillo of Labor Support and Maintenance Division 4575 died Oct. 23 following an accident. He was struck by an automobile on a highway near Belen. He was 47.

He had been employed at Sandia since October 1948. Survivors include his widow and a son.

10 Years

Doris H. Kokkes 2112, L. A. Faw 2223, Maude A. Werner 2232, H. I. McLaren 2551, H. D. Hayden 3465, D. L. Chavez 4614, C. S. Sonner 9213, J. W. McDowell 2543.

Margaret V. Potts 3126, Arthur Starz 4224, F. A. Gunn 4614, R. D. McKee 5141, C. B. Kinabrew 7244, A. E. Maes 7521, Elizabeth Bockwalter 2234, J. M. Miller 3242, T. E. Henderson 4252.

D. L. Gorsline 7267, R. C. Fry 2234, J. L. Getz 2444, A. Trujillo, Jr. 1422, V. E. Prutsman 3242, R. F. Knight 4224, H. I. Libby 7212, R. R. French 9231, A. C. Strasburg 2134.

A. J. Fuller 3151, J. L. Baxter 3242, W. E. Putnam 7322, C. E. Dalton 1515, F. H. Dausses 3132, Lloyd Faucett, Jr. 5613, E. A. O'Brien 8161, R. T. McVeety 9323, G. K. Costick, 9412, and J. L. Gumbly 4512.

SHOPPING CENTER

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

RULES

1. Limit: 20 words
2. One ad per issue per person
3. Must be submitted in writing
4. Use home telephone numbers
5. For Sandia Corporation 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

- '59 TRIUMPH, \$225, motor overhauled 1 yr. ago, brakes relined 3 mos. ago, TR-10 station wagon, Ray, 298-0408.
- GE 2-door refrigerator-freezer w/revolving shelves, approx. 17 cu. ft., \$50; fly tying desk, \$10. Arthur, 299-1802.
- REVERE 8mm camera w/3 lens, turret and lenses, \$30; DeVry 16mm projector, less amplifier, \$15. Martin, 255-8030.
- 26" BIKE, \$12; tricycle, \$5; new tire chains, 7-50-14, 6-70-15, \$7.50; Universal hair dryer, \$5. Labrier, 298-2835.
- WOODEN WORK BENCH, 28"W 72"L 29"H w/sliding drawers, \$25. Dickerson, 299-3449.
- PRESSURE CANNER; butane bottle; Westinghouse vacuum; 2 cots; lantern; portable sewing machine; odds and ends. Moore, 255-4082.
- ROPING SADDLE, 15", rawhide tree, 3/4 rigged, \$40; 936 Western Meadows Court NW, Bassett, 898-1840.
- ELECTRIC GUITAR, hollow body, Stella, \$20. Eden, 10312 McKnight NE, 299-7421 after 3.
- 21" TV w/stand. Van Delinder, 255-9324 after 6 or weekends.
- LAND STATUS MAPS, book covering entire state, \$25. Green, 299-0094.
- 8mm MOVIE CAMERA, Kodak, zoom lens, light meter, outdoor filter, \$30. Reynolds, 299-7832.
- '62 CHEVY trailer hitch, \$5; steel casement window, 4x3, 2 crankouts, 53"x50", glazed, \$15; 2 porch lights; mail box, \$1 each. Roberts, 255-9527.
- LOWREY ORGAN, mahogany, Holiday model, 2 yrs. old, cast \$1200, sell for \$800 or best offer. Kerstetter, 268-7405.
- SKIS, well used but serviceable, Holzner Strahlhorn of Bavaria, laminated, 215 cm (7'2"), unmounted binding parts, \$10. Church, 299-2175.
- AKC registered German Shepherd puppies, champion bloodlines, will hold until Christmas. Riley, 256-9722.
- '62 T-BIRD convertible, PS, PB, PW, air, make offer, will consider trade for family-type car. Wagner, 299-5100.
- SELMER Bundy clarinet, \$80. Harlow, 299-1495.
- 1/2 ACRE, C-1 property, 14 blocks from Central on 8th NW; single garage door complete w/hardware; gas heater; dinette table w/2 matching chairs. Amador, 242-7728.
- TWO GIRLS' bicycles, new tires and tubes, \$10 and \$15. Hamilton, 299-6680.
- 26" COLUMBIA BICYCLE, \$20 or best offer. Vath, 299-1448.

APARTMENT-SIZE refrigerator, left hand door, \$35; sofa-bed, green upholstery, \$20. Koletar, 255-4751.

6-YEAR CRIB. Sorley, 299-0172.

USED SOLAR ENLARGER and photographic equipment. Harger, 298-0204.

SOUTH VALLEY, 2-story, 4-bdr., 2 full baths, new carpeting, drapes, guest apt. Gonzales, 247-8437.

'62 FORD Falcon deluxe club wagon (station bus). Suchland, 1100 Altez NE, 298-2502.

36" KENMORE gas range w/electric rotisserie and grill, easy clean top, \$80. Bowen, 268-1864.

HOMEMADE CARPORT, 20'x10', redwood and plywood, \$25. McClendon, 255-9236 after 5:30.

'58 CESSNA 175, 1040 HRTT, 305 hrs. since chrome major, Mk4 ADF full panel beacon nav. & landing lights, wheel pants, \$6500. Ortiz, 877-3025.

'58 CHEV. station wagon, \$350. Pino, 299-6544.

'53 PLYMOUTH, 2-door, one owner, runs well, \$150. Colgan, 243-4882.

SMITH & WESSON .38 special revolver, \$55; want old hunting knives of any kind. Smitha, 299-1096.

FENDER precision bass guitar, case, cord; Fender piny-back bassman amplifier w/cover. Cordova, 268-4864 after 5.

'63 JEEP WAGONEER, 4-wd, air, hubs, PB, limited-slip differential, other extras, below book value. Stevens, 299-6086.

CROSS REFERENCE DIRECTORY; masking machine; Bink's spray gun; Tuffy compressor, 1/3 hp. flexible paints renews plastic, leather. Gloss, 256-1444.

TRAILER, 2-wheel, 36" h 54" w 84" L, plywood frame, canvas button-down cover. Bernyk, 9313 Marron Cir., NE, 296-2109.

THREE DOZ. duck decoys at \$15. Geibel, 299-0275 after 7.

MAHOGANY bedroom suite: bed, mattress, box-springs, dresser, chest, 2 night tables w/lamps, \$125. Luckey, 299-8757.

MODEL TRAIN, HO gauge, track mounted on hoistable 4x9' trainboard, in operating condition, \$40. Pardee, 255-1998.

21" SILVERTONE TV, \$20 or best offer. Kroth, 265-6254.

SEARS' 12 cu. ft. refrigerator w/top freezer compartment & bottom vegetable bin, \$40. Bruce, 299-2542.

'57 FORD Ranchwagon, runs but needs tuneup, 6-cyl., \$150. Hitchcock, 1042 Marcella NE, 299-2581.

MESH DRESS FORM, \$15. Wallace, 243-6296.

18 CU. FT. upright Amana freezer. Harshe, 268-1892.

'57 FORD, 312 high compression engine, Hurst shift, Borg Warner transmission, headers, make offer. Anderson, 299-4518.

PORTABLE Royal typewriter, \$50; dbl. bed w/bookcase headboard, \$20. Shelton, 211 Richmond SE, 268-7089.

FREEZER, 1 yr. old, 16 cu. ft., bronze, original price \$370, sell for \$200. Wallace, 877-4428 after 6.

RIFLE, combination over & under, 410-22, \$35. Perca, 265-0861 after 5.

GOLDEN BOOK encyclopedia, 16 volumes, \$8. Marsh, 243-2767.

1/4 HP motor, \$3; AM-FM tuner, amplifier, turntable, speaker, \$25. Drake, 296-3548.

LIGHT FIXTURES, 1 black & gold tôle pull-down, ceiling hung, \$4; 1 beige modern pull-down, wall hung, \$4. Stromberg, 255-6131.

'64 MAGNAVOX stereophonic set w/10-yr. warranty, \$80 or trade for portable dishwasher; '60 Thunderbird convertible, overhauled trans. w/warranty, reground valves, \$550. Benedict, 247-3572.

BRAUN electronic flash w/instruction booklet, needs new wet cell battery, \$5. Frauenglass, 345-0119.

GIRL'S 20" bicycle, \$15; racing go-cart, Mac w/clutch, electric starter, \$175; violin, \$60. Adams, 268-5943.

CONN ORGAN, 2 61-note manuals, 25-note pedal; separate 50-watt Leslie tone cabinet; \$1500. Bircher, 268-0726.

USED CONSTRUCTION MATERIAL: 6' sliding glass door, glazed window, rain gutter, front door and screen door, light fixtures, etc.; crib; bunk beds. Judd, 255-0167.

UTILITY TRAILER, 5' x 7', 2-wheel, oak frame, camp rack and tarp. Good fireplace wood hauler. \$60. Rueb, 299-4805.

LARGE RESIDENCE with kennels on 2 acres at Cedar Crest. Fifteen minutes from Sandia Base on Highway North 10. Barth, 345-0172.

'66 MALIBU Chevy 2-door hardtop, V-8, AT, PB, PS, AC, \$2390. Jarrell, 636-2834.

REFRIGERATOR, \$30; TV console, 3 years old, \$50; Hoover upright vacuum, \$15; Remington portable typewriter, \$25. Martin, 298-6384.

10 GAL. AQUARIUM with fish, new motor, filter, tubing, and valve, includes reflector, stand, and water heater, \$30. Wilson, 296-3058.

PLACITAS on N.M. 44, 1600 sq. ft., fireplace, carpeting, draperies, 3/4 fenced acres irrigated by Las Huertas Creek, \$19,500, terms. Thacker, 112-867-2427.

LOWREY ELECTRIC organ, 2 keyboard, pedals, Heritane mahogany, with bench, \$625. Bauhs, 287-3497.

ELECTRIC TRAINS, American Flyer, switch track, semaphore, crane, log car, etc., mounted on plywood. Make offer. Ligouri, 256-3613.

'64 FORD V-8, 2-door, must sell. Also Dodge power wagon, 4-wheel drive. La Point, 268-2290.

125 ACRES mountain land, spring, pine, oak, juniper trees, surrounded by forest three sides, an hour from Albuquerque. McKinley, 268-4779.

'58 FORD 2-dr. sedan, standard transmission, radio, \$110. Ernst, 344-8694.

'60 IMPALA convertible, auto. trans., R.H., \$795. Landarzo, 256-9638 or 265-4717.

SPEAKER ENCLOSURES: 2 Electro-Voice KD9A Marquis, oiled walnut, for 12" or separate three-way systems, \$125. Spaugh, 265-5050.

'52 CHEVROLET 4-dr., R.H., auto. trans. (recently rebuilt), \$150. Shelton, 211 Richmond Dr. SE, 268-7089.

SMALL CHILD'S clothes; girl's winter coat, snow-suit, and dresses. Toddler boy's clothes. 1966 X-L Suzuki. Bowen, 255-8195.

BENCH VISE, 4" jaws, 6" opening. Hole, 255-1444.

'56 BUICK Century, \$200; 1959 Plymouth 9-pass. wagon, \$200. Henry, 256-9567.

POODLES: one white and one black, miniatures, males with AKC registration, reasonable to good homes with fenced yard. Merrell, 299-0348.

HEAD SKIS, Standards, 7 1/2". Cubco bindings, \$48 with bindings, \$40 without; need size 10 boots. Shummy, 265-1620.

'62 CHEVY Impala 2-dr. hardtop, white w/red interior, power, \$1025, \$200 below book. Brown, 344-9675.

SOUSAPHONE E-flat base, 4-valve, special Holton Gold Bell w/case. Johnson, 344-9369.

'60 FORD V-8, 3-sp. trans., pick-up truck, extra tire. Havo, 298-3855.

HI-FI combination equipment and speaker cabinet, modern design. Webb, 298-8139.

WHEELS, 13" 5-lug; 2nd and 3rd seats for Ford club wagon; '59 Ford frame bumper hitch. Cleveland, 298-0218.

3-BDR., carpet, drapes, AC, 10' x 13' storage bldg., walled. Take over payments, \$78, terms on equity. Glanzer, 508 Texas SE, 256-1302.

WHIRLPOOL portable dishwasher, needs minor repair, \$25. Bishop, 299-0649 after 5.

OLDS trombone and case, used three years, \$60. MacLennan, 268-9520 after 5:30 and weekends.

'60 JEEP 4wd, station wagon, recent complete overhaul, new clutch, points, plugs and battery, \$950. Hill, 282-5983 after 5.

'63 IMPALA 4-dr. sedan, PS, PB, air, Powerglide, 327 engine, new premium-grade w/w tires, \$1525. Wilkins, 268-5971.

'61 TRIUMPH T20SL Scrambler or trail bike, 300 miles on rebuilt engine, new brakes, new wiring, new paint. Campbell, 1114 Princeton NE, 256-3214.

WHITE, AKC registered male poodle, \$50; AKC registered miniature poodle puppies, \$50. Bucher, 255-8028.

'57 RENAULT, 150 miles on rebuilt engine, new clutch, original paint and upholstery, seat belts, 4-dr., \$275. Mitcham, 299-8425.

5 HP West Bend 2-cycle Go-Kart engine, \$25 or best offer. Passmore, 299-5172.

'60 CHRYSLER 4-dr., fully equipped, new brakes, tires, shocks, and muffler, \$735. Goodrich, 242-7721.

GIBSON TRACTOR, 10hp, 3-speed, \$150. Netz, 282-3607.

BOW (Grove), 41-16 overdraw, broadhead cutout, hunting and target bow, \$50; 12 aluminum arrows, best quality, \$20. Swain, 265-0098.

STEEL CASEMENT WINDOW, opening size 59" x 42"; 4500 cfm single speed evaporative cooler; interior door w/hardware, all \$35. Martin, 256-6785.

EXHAUST FAN (Nu-Tone) w/aluminum hood, wall thimble and outside deflector, \$25. Luxford, 243-5153 after 6.

DESK, suitable for student, dark wood w/pigeon holes, \$5. Young, 4614 Burton SE, 256-9158.

24" BOYS' bicycle, \$8. Prentice, 299-4595.

MAGNAVOX contemporary mahogany console stereo w/AM-FM tuner w/AFM control, \$150; new Winchester model 70,308 w/Weaver K-4 scope, \$100. Freshman, 268-5061.

'64 CAMPING TRAILER, Fireball, sleeps 6, self-contained, \$1400. Toft, 298-5678.

'58 FORD ranchwagon 2-dr., 6-cyl., stick, R.H., original owner, \$



SKI FASHIONS will be modeled by (from left) Doreen Hedger, Paul Souder (7251), and Annie Stirbis during a meeting of the Coronado Ski Club Nov. 15 at 7:30 p.m. Fashions will be furnished by Olympic Sport Shop.

Teenagers Go-Go Nov. 12

Activity Groups Busy at Coronado Club During Next Two Weeks

Special events for the Ski Club, Sanado Club, and bridge groups fill the Coronado Club calendar for the next two weeks. The Sanado Club will have an outstanding luncheon speaker, the Ski Club has scheduled a fashion show, and a bridge tournament is coming up.

In the meantime, regularly scheduled activities will continue, but with a holiday Friday, Nov. 11, for Veterans Day. The Club will also be closed Nov. 24 for Thanksgiving Day.

Teenage Go-Go

On Saturday, Nov. 12, teenagers will go to the Club during the monthly bash. The Castaways will provide the sonic booms and Don Lincoln of KQEO radio will be master of ceremonies. Dancing and calisthenics will start at 7:30 p.m., and end at 10:30. Admission is two bits each.

Ski Club

Ski fashions will be modeled by a group of Ski Club members at a meeting Tuesday, Nov. 15. Also scheduled is a talk by the manager of the Angel Fire Ski Area, and a ski movie will be shown. Social hour starts at 7:30 p.m.

Szabo Food Service, Inc. Awarded Contract for Coronado Club Operation

New concessionaire for operation of the Coronado Club and restaurants is Szabo Food Service, Inc., a national food management organization headquartered in Lyons, Ill. The new contract became effective Oct. 31.

No changes in Club employees are contemplated, Tom Adams, newly-arrived Szabo executive manager, has announced. Hugh Mellon will remain as Club manager.

Tom comes to the Coronado Club from the management of the Inland Steel executive dining areas in the company's downtown office building in Chicago. He has been with the Szabo firm eight and a half years holding food management positions in the Chicago area.

The Szabo firm conducts operations in 38 states. It holds several restaurant operation contracts with Western Electric Company and other industrial organizations, hospitals, schools, and institutions.

Sanado Club

Madame Anna Chennault, wife of the late Gen. Claire Chennault who organized and led the Flying Tigers, will be featured speaker during the Sanado Club's sherry luncheon Nov. 8. Mme. Chennault is a noted lecturer and author.

Luncheon menu will feature oriental foods. The event starts at 1:30 p.m. at the Coronado Club. For reservations, call Mildred Bylander, tel. 344-7994.

Bridge

The Duplicate Bridge group will meet Monday, Nov. 7, for regular play at 7 p.m. Competition play for the Open Pair Championship is scheduled the following Monday, Nov. 14. Dinner at 6 p.m. precedes the tournament. Call Barbara Gossett, tel. 298-0750, for reservations.

ACF Bridge meets at 7 p.m., Wednesday, Nov. 16.

Ladies Bridge meets at 1:15 p.m. Thursday, Nov. 17.

IMOG Machine Tool Subgroup Names Pat Quigley Chairman

E. P. (Pat) Quigley, supervisor of Manufacturing Process Development Division 2565, was recently elected chairman of the Machine Tool Subgroup of the Interagency Mechanical Operations Group (IMOG). He succeeds K. W. Sommerfeld, superintendent of the Assembly Division at the Oak Ridge Y-12 Plant.

Composed of members representing each AEC weapon design and production agency, the subgroup meets three times a year to consider the latest developments in machine tool application and other common interests associated with weapon production.

Pat has been actively associated with the Machine Tool Subgroup since its inception six years ago. Other Sandia members of the subgroup are D. W. Ballard (2564), W. Hall (4250), and J. F. Bryson (8223). R. S. Wilson (2220) and R. A. Baroody (8160) are the Sandia representatives to the IMOG Steering Committee.

Welcome Newcomers

Sept. 23 - Oct. 28

Albuquerque	
Juan J. Armijo, Jr.	3415
Evelyn L. Avery	3126
Johnny H. Biffle	1542
Peggy L. Black	3154
Maria Borg	3154
Dorothy A. Cowboy	3151
Thomas W. Dehaan	3415
Lynne O. Dehghanmanesh	5623
Hazlet J. Edmonds	4211
*M. Lucille Farmer	3126
*Lucille J. Few	3126
H. Annette Frenzel	3126
Celedon A. Gabaldon	4574
*Glorianne M. Garcia	3126
Archie R. Gibson	3415
Julianita L. Gonzales	3154
Shirley D. Gonzales	3154
Betty J. Gronewald	2554
Henry E. Guttman	2152
Frank Hensley	7226
Leonard L. Hunt	2213
Lynda E. Jennett	5214
Glenda Sue Kelly	3126
Alice M. Lynn	3133
Alfonso N. Martinez	4632
Nelle-Louise Moser	3151
George Nuanez	4574
Terry L. Otero	3415
*Carolyn M. Patrick	3421
Janey M. Phillely	2213
Frankie J. Potts	4574
Charles W. Reno	2213
*M. Helen Richardson	4372
Richard R. Romero	4574
William W. Rowe	4632
Stephen Russo	2213
John W. Sanchez	4574
Walter W. Simpson	1512
Caroline A. Spatz	3126
Donald T. Stuart	4632
California	
Jeffrey M. Mueller, Vacaville	1424
Colorado	
James E. Morenz, Pueblo	1123
Florida	
Larry W. Ebinger, Tampa	7246
Illinois	
Keith L. Brower, Urbana	5211
Richard F. Davis, Jr., Evanston	5212
Gary D. Peterson, Chicago	5232
Gary R. Reif, Chicago	1323
Charles F. Joerg, Chicago	9333
Kansas	
Kenneth J. Baker, Kansas City	2131
Lyle W. Kruse, Kansas City	5222
Maryland	
Lee W. Davison, Baltimore	5261
F. Max Morris, Aberdeen	5224
James R. Thomas, Sandy Spring	5151
Nevada	
*Robert M. James, Las Vegas	3133
New York	
Richard P. Kromer, Auburn	5213
Ohio	
Loren R. Bishop, Columbus	1514
Tennessee	
Wilhelm B. Gauster, Oak Ridge	5214
Texas	
Kenneth G. Bell, Amarillo	7343
Carl L. Julian, Fort Bliss	5133
Ray P. Reed, Austin	1115

*Denotes rehire.



JAMES CALLER (1432) displays his invention which is a mechanical method of terminating a coaxial cable. It provides a seal that enables the connection to function with high voltages at high altitudes.

Coaxial Cable Device Invented by J. M. Caller Awarded U.S. Patent

A U.S. patent for a Coaxial Cable Terminating Means has been issued to the Atomic Energy Commission in the name of James M. Caller (1432).

The invention, which is a simplified mechanical method of fastening and sealing a coaxial cable within an electrical connector, has found widespread use in Sandia systems and in aerospace applications.

The device includes a metal grounding sleeve which is crimped and soldered to the metal braid of the coaxial cable. Also used is a rubber grommet and a threaded encap, which, when tightened, provides an airtight seal around the cable jacket. The device was designed primarily to assure proper functioning of miniature coaxial cable connectors carrying high voltages at high altitudes, although it is applicable to many other coaxial cable uses.

Mr. Caller invented the device during his development work in Electronic Components Division. He has another coaxial connector invention patented about three years ago. He has been at Sandia 14 years.

The new patent—No. 3,275,737—was issued Sept. 27.

PAGE EIGHT

NOVEMBER 4, 1966

SANDIA LAB NEWS

Sandia's Safety Scoreboard

Sandia Laboratory:

17 DAYS
245,000 MAN HOURS
WITHOUT A
DISABLING INJURY

Livermore Laboratory:

29 DAYS
155,725 MAN HOURS
WITHOUT A
DISABLING INJURY



WITH SCIENTIFIC EXPERIMENTS and some 30 Sandians aboard, an NC-135A jet aircraft took off yesterday from Kirtland AFB on a solar eclipse expedition. The plane will fly at an altitude of 33,500 feet over the South Atlantic near the Brazilian coast to measure a variety of solar phenomena during the Nov. 12 total solar eclipse. Another group of Laboratory personnel will launch rockets with Los Alamos Scientific Laboratory payloads from Rio Grande, Brazil.