

SANDIA EMPLOYEES increased their participation in the U.S. Savings Bond payroll deduction plan from 45 percent to 90 percent. Observing the success of the Company Bond Drive (goal 90 percent) are Bob Lynes (9413), left, publicity chairman; and Bill Doyle (3243), drive coordinator.

Bond Drive Reaches 90 Percent Participation

With just a handful of cards still out, Sandia Corporation wraps up its U. S. Savings Bond Drive this week having achieved the 90 percent participation goal. Some 3606 additional employees responded to the drive and joined 3664 other employees already participating for a total monthly deduction of \$93,300 for the purchase of Bonds.

Latest tabulation of drive returns shows the overall percentage of participation at 90. Sandia Laboratory responded with 92 percent while Livermore Laboratory participation stands at 79 percent.

A number of departments achieved 100 percent participation. These include: 1510, 1520, 1540, 2110, 2150, 2240, 2420, 2520, 2570, 3110, 3220, 3430, 4350, 5530, 5610, 6010, 6020, 6030, 6040, 7510, 7520, and 7530.

Directorates which achieved the goal of 90 percent participation or better include: 1300, 1400, 1500, 2100, 2200, 2400, 2500, 3100, 3200, 4100, 4200, 4300, 4500, 4600, 5600, 7300, 9200, 9300, and 9400.

Vice Presidencies which achieved the goal of 90 percent participation or better included: 1000, 2000, 4000, 6000, 7000, and 9000.

All organizations (department and above) which achieved 90 percent participation will receive a "bellringer" award for display. The awards will be distributed within a few weeks.

D. R. Morrison (5256), chairman of the Sandia Savings Bond Committee, said "Considering that employee participation was 45 percent when the drive began, our current participation represents an exceptional achievement. Sandians can now certainly be proud. The Bond Committee appreciates the assistance and cooperation of all employees in helping to make the 1966 drive a success."

Laboratories Hire 80 Students in Youth Opportunity Campaign

Eighty students, ages 16 through 21, will work at Sandia Laboratories this summer in clerical, manual, and other job assignments. This summer-hire program is part of President Johnson's Youth Opportunity Campaign (YOC), which is being coordinated by State Employment Services.

This is the second year Sandia has participated in the national program launched last year to provide meaningful work and training opportunities for students. In line with the President's suggestion, one trainee is hired for every 100 employees.

Candidates are interviewed and selections are made on the basis of their qualifications to fill the summer jobs and greatest economic need to continue their education.

The youths will sign in at the close of the school year, with the majority of them arriving the second week in June, and will work until the start of the school year. They will work 40 hours a week and receive \$1.25 an hour.

The 80 YOC summer employees have already been selected from a large number of candidates. At Sandia Laboratory, 22 girls will work as typists and clerks and 48 young men will fill a variety of jobs in plant maintenance, stockrooms, and laboratories. Five boys and five girls will fill comparable jobs at Livermore Laboratory.

Sandia Laboratory's participation in the program has the complete endorsement of the AEC and the full support and cooperation of the Atomic Project and Production Workers, Metal Trades Council, AFL-CIO, and the Office and Professional Employees International Union, Local 251, AFL-CIO, in Albuquerque.

The participants and their Sandia supervisors reported that the program was very successful last year. Both groups were interviewed by representatives of the personnel organization midway in the program and at its completion. Students commented favorably on the experience they had acquired and the supervisors, with few exceptions, lauded the students' performance.

The basic guidelines outlined by President Johnson state that the young people should be between the ages of 16 and 21 and the selection should be based on economic need to complete their schooling. He said that getting these jobs may be the difference between their being able to go back to school, or not going back.

The program, according to the President, will be worthwhile only if it means work-training opportunities over and above those which would be normally offered.

SANDIA CORPORATION

LAB NEWS

PRIME CONTRACTOR TO THE ATOMIC ENERGY COMMISSION / ALBUQUERQUE, NEW MEXICO / LIVERMORE, CALIFORNIA



VOL. 18, NO. 10, MAY 20, 1966

Sandians in the field ..

Early JTF-2 Calibration Flights Start; Full Summer of Activities Scheduled

Twenty-eight Sandians, members of Systems Evaluation Department 9210, were en route or in the field this week as the Joint Task Force-Two flight test program moved into its preliminary stages. Compatibility tests started recently to check flight characteristics of various military aircraft carrying the new 15-foot instrumentation pods designed by Sandia for the tests.

These pods, carried externally on the test aircraft, measure the distance from the aircraft to the ground and transmit signals to high-flying C-130 instrumentation aircraft which provide a means to "fix" the test aircraft's position and determine terrain clearance. Also, a camera in the pod photographs details of the terrain.

The compatibility tests are being followed by a period of controlled flight observations in the test area. Trial and calibration runs will start May 26. Ten types of military aircraft will be used during the tests including the B-52, B-58, F-4 Phantom, RF-4C Phantom II, F-105 Thunderchief, and the A-4 Skyhawk.

The formal "target acquisition" Test 4.1 of the JTF-2 program is scheduled to start June 27. In this program, Air Force, Navy, and Marine Corps pilots will receive a briefing, navigate to the target area, recognize their target, and make a simulated attack while flying at low altitudes to escape radar detection.

As many as 15 flights each day will be made over the test area, and flights are scheduled through September. A few night tests will also be flown. No ordnance will be carried nor will any aerial drops be made.

The test area covers parts of Arkansas, Louisiana, and Oklahoma centering on Mena, Ark. Main portions of the flight testing will be conducted in two nine-mile-wide corridors located in the Ouachita National Forest. Test aircraft also will be flying in two low-level approach corridors

leading to the forested area from England Air Force Base, La., 190 miles to the south.

The three C-130 aircraft will "orbit" at high altitudes above the test area. Using instruments aboard the C-130's, in pods aboard the test aircraft, and in Ground Site Instrumentation Packages, a complete profile of the performance of the pilot and test aircraft can be recorded.

The "targets" will be simulated bridges, radar sites, fuel depots, and airfields. The ground stations, located at target area, will determine light levels in the area and when the test aircraft becomes visible at the target. Some of the test exercises will include defense aspects against low-level aircraft attacks.

Sandians will be stationed at Mena where the operational control center will be located, at the airport at Ft. Smith from which the C-130's will operate, and at the test headquarters, England AFB, where most of the pod loadings will be performed on the test aircraft.

In addition, teams of Sandians will direct pod loadings at the home bases of the B-52 and B-58 aircraft when these bombers participate in the tests.

Purpose of the tests is to gather statistically valid data for evaluation of low-level penetration techniques. The information will also be useful in planning future aircraft needs of the military services.

The mass of data will be analyzed and interpreted by Statistical Research Division 5263.

During the summer, as many as 50 Sandians will be participating in the field operations. J. J. Miller, supervisor of Test Operations and Facilities Division 9214, is the Sandia field test director for JTF-2 operations.

JTF-2, under the command of Maj. Gen. George S. Brown, is an all-service test organization headquartered at Sandia Base. It serves directly under the Joint Chiefs of Staff. Maj. Gen. Winton R. Close will assume command of JTF-2 on June 1.

Sandia Corporation provides technical and scientific assistance to the JTF-2 mission. Support by Sandia includes general systems engineering and analysis in the preparation of test plans; design of instrumentation systems for use in aircraft and ground equipment at ranges and other test sites; procurement, installation, and maintenance of the equipment; on-site monitoring and observation of data; data processing, analysis, and interpretation of data; and assistance in preparation and publishing of reports.

G. P. Steck Discusses JTF-2 at Rome Meet

An explanation of part of Sandia's responsibility in Joint Task Force-Two tests will be presented by G. P. Steck, supervisor of Statistical Research Division 5263, during the NATO-APOR (Advisory Panel on Operational Research) Conference in Rome, Italy, May 23-27.

The subject of his oral presentation will be "Inter-Relationships Between Mathematical Modeling and Instrumentation in the JTF-2 Low Altitude Flight Tests."

This advisory panel meets periodically at the various NATO locations. The subject of this particular conference is "Problems in Design and Analysis of Military Field Experiments." Col. R. A. Shagrin of JTF-2 will be leader of a discussion on field instrumentation.

Participants in the conference represent all members of the North Atlantic Treaty Organization in addition to a few non-member nations.



DISCUSSING JTF-2 operations, J. J. Miller (left), supervisor of Test Operations and Facilities Division 9214, and Lt. Col. G. W. Bujol, JTF-2 Technical Support and Instrumentation Branch, use a three-dimensional terrain map of the test area. The portable display, prepared by Sandia's Graphic Arts Department 3460, also includes models of the military aircraft scheduled to make the test flights.

Commendation for Laboratories

S. P. Schwartz, President of Sandia Corporation, received the following letter from USAF Brigadier General D. L. Crowson, Director of Military Application, U.S. Atomic Energy Commission:

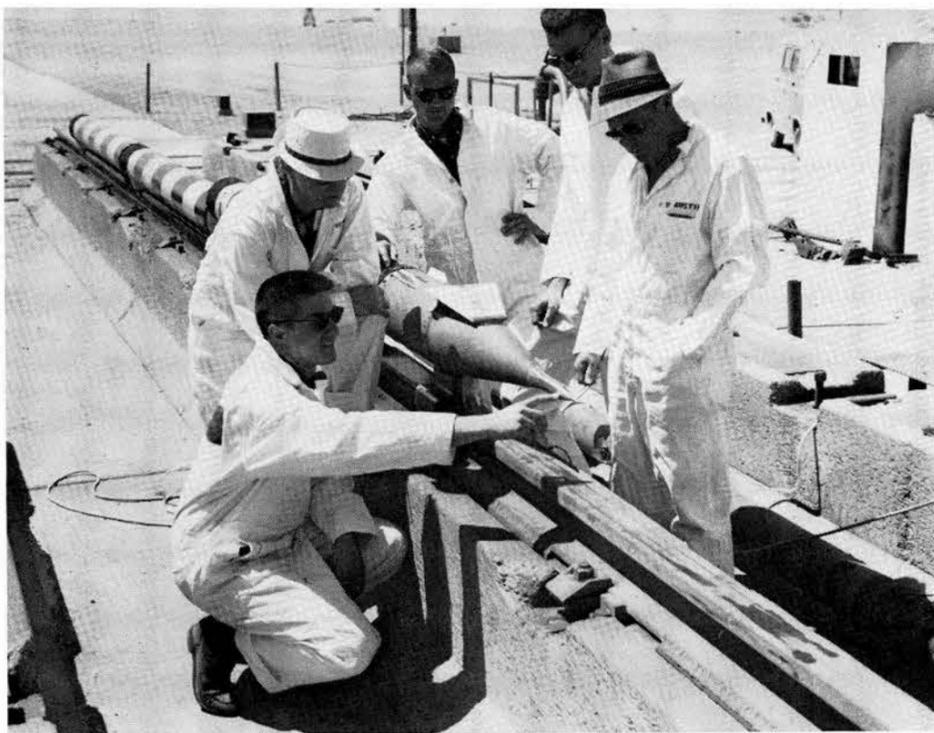
"It is most gratifying to me to endorse to you, on behalf of the Commission, Secretary of Defense McNamara's expression of appreciation for the support, advice, and assistance rendered to the Department of Defense in response to the unfortunate Palomares/B-52 accident.

"The flexible and unstinting efforts of you and your staff have materially assisted the Commission in fully and successfully responding to all requests and tasks resulting from this matter of significant national importance.

"In disseminating the enclosure to your people, please also convey my appreciation for a job well done."

Enclosed with the letter was the following "Appreciation" from Secretary of Defense Robert S. McNamara:

"The recovery of the missing nuclear weapon near Palomares brings to conclusion the critical phase of an extremely difficult and vitally important task. The determination, dedication and professionalism which have characterized this effort are in the highest tradition of the military services. The efforts of the forces concerned, together with the support, advice and assistance of the Atomic Energy Commission and its Laboratories and of the entire country team in Spain, have been instrumental in transforming the tragic accident of January 17th into a clear demonstration of a responsible nation acting in good faith. Please convey to all concerned my congratulations and sincere appreciation."



MACH SIX ROCKET SLED is checked by a team of Sandians at the Naval Ordnance Test Station track. This sled achieved a velocity of 6600 feet per second during its run, May 5. Another Sandia sled, fired during the same operation, achieved Mach 5.7. From left are Don Rigali (9326), Bob Fox (1322), Bill Kampfe (7344), Lou Feltz (9323), and Howard Austin (7226).

Two 'Most Successful' Tests

Mach 6 Velocity Achieved by Sandia-Designed Rocket Sleds

Two of Sandia's most successful rocket sleds were fired recently at the Naval Ordnance Test Station (NOTS) track at China Lake, Calif. The first sled, fired May 4, achieved a velocity of 6300 feet per second or Mach 5.7. The second sled, fired the next day, achieved 6600 feet per second or Mach 6—4500 mph. Both sleds set new speed records for the four-mile-long NOTS track.

More important to Sandia, both sleds represented new designs in the development of supersonic sleds and both carried a "payload"—in this case, a pressure sensing cone-cylinder. The performance of the cone was telemetered successfully on both sled runs, a first-time accomplishment at these velocities at low altitude. The NOTS track is about 2200 feet above sea level.

The sled designs were the joint effort of W. R. Kampfe of Track and Guns Division 7344, L. V. Feltz of Mechanics and Mathematics Division 9323, and D. J. Rigali who is engaged in high speed aerodynamic studies in Division 9326. D. W. Berst of Photometrics Division 7226 contributed the highly successful telemetering and on-board ignition systems.

The first sled was a 20-foot-long two-stage monorail design. It traveled 14,000 feet down the track and telemetered data for 5.1 seconds. After this point, the sled experienced difficulty and left the track.

The sled rode on shoe liners made of "mild" steel which were isolated from the sled structure by a silicone compound. The mild steel was used for its wear characteristics while the silicone compound performed a "cushioning" and heat protection function. The silicone rubber allowed flexibility in the shoe liner and absorbed shocks created by the skipping action of the sled and by irregularities in the rail, prime causes of excessive frictional heat.

The nine-inch-diameter sled was mounted about two inches above the shoes. First stage of the sled was a Terrier rocket which developed 70,000 pounds of thrust and the second stage was a Recruit rocket which provided 35,000 pounds of thrust. Burn-out weight of the sled was 260 pounds.

The second sled, which achieved Mach 6, was a three-stage monorail using a Recruit rocket to power each stage. The on-board ignition system fired the second stage as soon as the first stage acceleration dropped to five Gs and, again at the point where acceleration slowed on the second stage, the third stage rocket was fired. Time elapsed was 4.25 seconds for the 12,000-foot run. This sled also had a nine-inch diameter. It measured 26 feet in length at launch and had a burn-out weight of 230 pounds.

The shoes of the second sled were made of high strength stainless steel and the sled was mounted atop the shoes on a four-inch pylon.

The special stainless steel retains its strength at high temperatures and will melt before it ignites. Other high strength metals burn away before they melt.

The front shoe survived the run and was recovered intact. However, as the sled raced down the track, the sled pulled up from the rear shoe, nosed over, and broke up.

The sled designers are confident that they

have solved a number of difficult technical problems and that future Sandia sleds can attain velocities up to Mach 8.

The pylon design reduces the lift load generated by other sled designs. A sled running low to the rails traps air between the sled and the ground which pushes the sled up. Negative-lift wings on the sled reduce this problem, as does the pylon mount.

The second sled body was constructed of glass phenolic covered titanium which provides high strength-to-weight ratio. This construction proved extremely successful.

Future sleds, which will support the development program of the cone-cylinder, will have a number of other innovations. By reducing the size of the telemetering package and length of the antenna, the sled can be made shorter. This will reduce weight. A new five-inch rocket motor is under development which will reduce drag in future sleds.

Small diameter research sleds without telemetering packages fired by the Air Force at the Holloman track have achieved greater velocities than the larger Sandia sleds. The seven-mile-long Holloman track, now undergoing modification, will be available for future Sandia tests.

According to Mr. Kampfe, Sandia will have the technology to build a Mach 8 sled after a few more tests. When the longer track is available, Mach 8 will be achieved.

PAGE TWO
LAB NEWS
MAY 20, 1966



LEADER DOG "BOB" is the new companion—and necessity—for Berenice Henry (3411). This 19-month-old Labrador retriever-collie cross replaced her familiar collie, "Kelly." The Leader Dog school in Michigan is supported through the Lions Clubs.

Sandia Speakers

R. L. Schneider (2413), "The Organization and Management of a Standards and Calibration Program for a Research and Development Laboratory," National Conference of Standards Laboratories annual meeting, May 8-12, Gaithersburg, Md.

R. A. Sallach (5234), "OXZIR—A Program for Predicting Oxidation Rates of Zirconium During Arbitrary Thermal Environments," 15th Annual AEC Corrosion Symposium, May 23-27, Oak Ridge, Tenn.

R. T. Meyer (5122), C. E. Olson (5633), and R. R. Berlind (9422), "Computer Data Processing for Time Resolved Mass Spectrometry," 14th Annual Conference on Mass Spectrometry and Allied Topics, May 22-27, Dallas.

G. R. Case (5623), "Use of the CDC 3600 for Electrical Circuit Analysis," 17th Annual CO-OP (CDC 3600 Users) Conference, May 5-6, Los Angeles.

E. A. Aronson (5263), "Flight Simulation Model," 17th Military Operations Research Symposium, May 23-25, Monterey, Calif.

Lee Stinnett (2563), "The Minerals Engineer and Value Engineering," Central New Mexico Chapter of the American Institute of Mining and Metallurgical Engineers, May 13, Grants, N. M.

G. R. Dunbar (8149), "Filament Winding," American Society of Mechanical Engineers, Machine Design Symposium, May 9, Chicago.

Sandia Authors

F. J. Conrad and B. T. Kenna (both 1121), "Rapid Spectrophotometric Analysis of Copper in Ferric Chloride Etching Baths," June issue, PLATING; and "Fast Neutron Flux Pattern for a 14 Mev Neutron Generator," Vol. 12, Page 514, 1966, HEALTH PHYSICS JOURNAL.

N. J. DeLollis (1133), "The Use of Adhesives and Sealants in Electronics," December 1965 issue, IEEE TRANSACTIONS ON PARTS MATERIALS AND PACKAGING.

James M. Peek (5121), "The Proton-Hydrogen Atom System at Large Distances. Resonant Charge Transfer and the $1s_{\sigma} - 2p_{\sigma}$ Eigenenergies of H_2^+ ," Vol. 143, page 33, PHYSICAL REVIEW.

G. J. Lockwood (5241), "Production of Alkali Metal, Halogen, and Metal Ions in an RF Source," February issue, REVIEW OF SCIENTIFIC INSTRUMENTS; G. J. Lockwood and G. L. Cano (5241), "Response of CsI(Tl) Crystals to Low Energy Heavy Ions," February issue, IEEE TRANSACTIONS ON NUCLEAR SCIENCE.

G. R. Case and Gail Barton (both 5623), "Electrical Circuit Analysis for AC Steady State Circuits," May issue, CO-OP NEWS.

P. B. Rand (1113) and R. D. Seeley (former Sandian), "Method for Structural Characterization of High Polymeric Networks by an Osmotic Pressure Technique," December 1965 issue, JOURNAL OF APPLIED POLYMER SCIENCES.

G. H. Haertling (1132), "Grain Growth in Densification of Hot Pressed Lead Zirconate-Lead Titanate Ceramics Containing Bismuth," March issue, JOURNAL OF THE AMERICAN CERAMIC SOCIETY.

A. D. Bridegam (2223), "Digitizing—A Phase I Solution to Engineering Automation," May issue, GRAPHIC SCIENCE.

Deaths



Evan L. Storms, retired from Sandia since July 1958, died May 9 after an illness. He was 74.

Mr. Storms worked almost 10 years at Sandia, primarily as a toolkeeper in the Development Shops.

Survivors include his widow, a son, and three grandchildren.

* * *

Joseph L. Thorpe, who retired from Sandia in May 1955, died suddenly on May 6.

Mr. Thorpe joined the Laboratory in September 1950 and worked as a janitor. He lived at 1025 Manzano Ct., N.W.

Mr. Thorpe is survived by two daughters, a sister, a brother, and three grandchildren.

SANDIA CORPORATION LAB NEWS



ALBUQUERQUE, NEW MEXICO • LIVERMORE, CALIFORNIA

Editor: Robert C. Colgan
Sandia Corporation, Albuquerque, New Mexico

Editorial Offices
Sandia Laboratory
Albuquerque, New Mexico
Employee Publications
Bldg. 800
Room 112
Tel: 264-1053

Livermore Laboratory
Livermore, California
Public Information
Bldg. 912

Tel: Hilltop 7-5100, Ext. 2395

Permission to reprint material contained herein for other than governmental use may be obtained from the Editor, Lab News, Sandia Corporation.

LIVERMORE NEWS



"Frequently, I hold front-porch discussion meetings with our neighborhood youngsters."

Citizenship at its finest . . .

Sandian Devotes Time and Effort to Neighborhood Anti-Poverty Program

To be victims of progress or to actively take part in the planning and development of the community, is a question recently faced by Sylvester Grisby (8134) and his neighbors in the Lockwood area of Oakland. The question arose as a result of the rapid changes taking place in that community.

To cope with these dynamic changes, Sylvester and his neighbors have formed the Lockwood Improvement Neighborhood Council (LINC). The Council is a pioneer effort in the community to organize the residents into a group of informed and concerned citizens capable of directing their community's future.

The LINC organization concept is part of the Federal Government's War on Poverty Campaign and is fostered locally by the Oakland City Council of Social Planning. "Lockwood is located in one of the four anti-poverty target areas in the East Bay," Sylvester explains.

As part of this overall effort, Sylvester was recently elected vice chairman of the 73rd Avenue Section of LINC and his wife, Vertis, was elected secretary of the group.

Since the elections, Sylvester and his wife have been very active in planning meetings and activities, counseling youths, and recruiting new members for the organization. "Our objectives are to inform and educate," Sylvester says. "Many of the people in my neighborhood want to be involved in community affairs, but they don't know where to go for information."

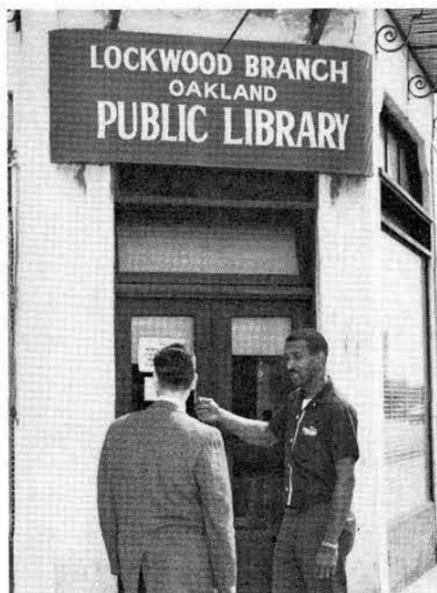
According to the LINC by-laws, the purposes of the organization are to: provide opportunity for the residents of the area to actively participate in shaping their community life; determine important needs and problems of the neighborhood; help residents work together on neighborhood problems; and help residents prepare themselves to take a responsible place in neighborhood life.

Lockwood is a composite commercial, industrial, and residential area of about 3000 people. "We want to do our best to keep our community from becoming a depressed area or ghetto," Sylvester notes, "and the only way we can do this effectively is to become agents of change in our own behalf. It's really a kind of grass-roots democratic movement."

As vice chairman of the neighborhood group, Sylvester's primary duties are to plan and conduct youth activities. To do this he has been holding meetings with young people in the area and talking with parents. "I am very interested in the youth of our community," he says. "About 15 local boys have been meeting with me regularly for the past two months. At these meetings we discuss such things as the need for continuing education in order to qualify for highly skilled jobs in the future, the opportunities available after high school for those kids who can't or don't want to go on to college, and sometimes we just talk about sports. I don't prepare a speech or sermon. We sort of let the conversation drift and discuss things as they come up," he says. "We try to gain the confidence of our local youths."

According to Sylvester, the neighborhood group has planned a two-pronged attack on the high school dropout problem. First, they have asked the local school to let them know when a boy or girl drops out of school, or is a potential dropout. Once notified, a representative of the group contacts the youth and encourages him or her to return to school. The advantages of staying in school are pointed out and an attempt is made to find out why the student has decided to drop out. The second attack is to discuss a dropout's problem with his parents and encourage them to participate in the local Parent and Youth Counseling sessions currently being conducted by the Council for Social Planning. "The biggest problem, of course, is overcoming the 'traditional thinking' of the parents," says Sylvester. "Parents sometimes are not well informed. Many don't know about equal employment opportunities or refuse to believe they exist. For one thing, they don't understand the ground rules. It's a big problem, but one of the most challenging I have ever tackled."

The group has been very successful in its early attempts to generate civic interest in community problems. Meetings have been



"Our group is actively working to expand this one-room library to better serve the community."

Engineers Serve In IEEE Sponsored Tech Paper Contest

A number of Sandians were involved with the recent Student Technical Paper Contest sponsored for colleges and universities in Northern California by the San Francisco and Sacramento Sections of the Institute of Electrical and Electronics Engineers (IEEE).

E. A. (Gene) Aas, supervisor of Project Control Division 8161 and a former chairman of the IEEE East Bay Subsection, is chairman of the San Francisco Section's Education and Student Relations Committee which hosted the contest. He was in charge of planning and coordinating both the contest and the dinner which preceded the judges' announcement of the winners.

The contest is held annually as part of the Committee's responsibility to promote IEEE student branch activities and to provide communication among student branches, the IEEE, and industry.

Participating were representatives of student branches from 13 schools including the University of California at Berkeley and Davis, Stanford University, San Jose State College, University of the Pacific, Sacramento State College, University of Nevada, the Monterey Naval Post Graduate School, University of Santa Clara, and San Francisco State College. Contestants competed for cash awards in graduate and undergraduate divisions.

Herbert R. Johnston, Instrumentation Systems Development Division 8122, was one of the trio of judges for the graduate division. First place award in this category was won by John B. Moore of the University of Santa Clara. He presented a paper entitled "A Convergent Method for Solving Polynomial Equations."

Friend L. Skinner of Post Development Testing Division 8123 served as one of the three judges in the undergraduate division. This category was won by Michael R. Radisich, also of the University of Santa Clara, for his paper, "Depolarization of Nervous Tissue by Means of an Electrostatic Field."

Contestants were judged not only on a written technical paper but on an oral presentation of the material following a dinner held at the San Francisco State College. Written papers were scored on interest, originality, analytic treatment, and mode of written expression. Scoring on the oral presentation was based on speaking technique, style, introduction and conclusion, and discussion.

Carl M. Furnberg and James B. Wright, both of Preliminary Systems Division 8131, were tellers during judging of the contest.

Undergraduate division winner, Michael R. Radisich, went on to compete in the regional student paper contest at Tucson, Ariz., where he again won the first place award—\$300 and a trip to New York City to compete against other regional winners.

Planetarium Shows Offered Weekly at Chabot College

As a community service the recently-opened planetarium at Chabot College is presenting a series of Thursday programs. This month's topic is "The Sun and Aurora Borealis."

Admission is free and reservations are not required. The planetarium is located in Bldg. 1900 on the Chabot campus at 25555 Hesperian Blvd. in Hayward. Doors open at 7:15 p.m., and programs start at 7:30. Children under 12 must be accompanied by an adult.

The planetarium, with a total seating capacity of 84 adults or 100 children, is equipped with a stereophonic sound system. A perforated aluminum arch forms the ceiling and serves as a sky for the projector, which reproduces approximately 2000 of the stars that are visible to the naked eye. Separate projectors produce the five brightest planets—Mercury, Venus, Mars, Jupiter, and Saturn, as well as the sun and the moon. A slide projector provides close-ups of the sun, moon, planets, and galaxies.

Dr. Billy A. Smith, Chabot College astronomy instructor, presents the planetarium programs. Prior to joining the Chabot faculty, Dr. Smith taught at Arizona State University at Tempe and was in charge of their planetarium.



"We've recently launched a clean-up campaign in the neighborhood."



"The group's objectives are to inform and educate. To accomplish these objectives, Vertis (left) and I talk with our neighbors wherever we happen to meet them."



MANAGEMENT PERSONNEL of Atomic Energy Commission contractors and military officers met at Sandia Laboratory recently for a technical briefing, "Design Mission and Operational Outlook of a New Weapon System." From left are E. E. Ecklund, manager of manufacturing, ACF Industries, Inc., South Albuquerque Works; C. R. Poole, chief engineer, Mason and Hanger, Burlington, Iowa; C. L. Carpenter, supervisor of Project Management Division I (1513); C. P. McKay, chief systems engineer, Bendix/Kansas City; and K. R. Haeusler, department superintendent, Y-12, Oak Ridge, Tenn. The meeting was called by W. L. Hancock, assistant manager, AEC/ALO Office of Weapons.

Retiring . . .



Julian Jaramillo, a Sandia employee for more than 15½ years, retired March 31.

Julian worked as a janitor for 11 months after joining the Laboratory in October 1950 and then served as a machine cleaner for about two years. For the past 12 years he has been a machinist's helper.

He intends to devote some time to traveling, including a trip to Mexico City this month with his son. He will also do some fishing and hunting.

Mr. and Mrs. Jaramillo, who live at 1530 Altez, NE, have a son in the Air Force and a married son and daughter living in Albuquerque. They have five grandchildren.

* * *



Joe Honest, a Sandia employee for more than 22½ years, retired April 29.

Joe joined Los Alamos Scientific Laboratory in September 1943. He was shop superintendent there until he transferred to Sandia Laboratory in September 1948 where he worked as a machinist until January 1951.

Joe then worked in various administrative, supervisory, and technical positions in the machine shop with the exception of four years with an engineering group.

Mr. and Mrs. Honest have 320 irrigated acres in the Estancia Valley. They raise corn, beans, and hay on about a third of the land.

* * *



Stanley L. McCammon, a Sandia employee for more than 17½ years and currently a division supervisor on special assignment in Control Department 4210, will retire May 31.

Stan joined the Laboratory as a road department technician in September 1948. In 1951 he was promoted to section supervisor in inspection. From May 1953 to May 1 this year, he was supervisor of Development Inspection Division 4213. The first of this month he started working on a special assignment.

Stan reports that his one-year-old grandson is planning a lot of activities for him after his retirement. However, Stan also plans to bowl in two or three leagues and operate his ham radio.

Mr. and Mrs. McCammon, who live at 6004 Hannett Ave., NE, are planning a trip to Utah and Wyoming for a couple of weeks next month and another journey to Stan's hometown of Cedar Rapids, Iowa, this fall. Stan also plans to see more of his son-in-law, Jim Tichenor (4224), and his daughter.

Sandians on Program Of Governor's Safety Conference May 26-27

A number of Sandians will participate in the Governor's Safety Conference May 26-27 at the Hilton Hotel in Albuquerque. The conference was called by Governor Jack M. Campbell in the interest of accident prevention and safety in New Mexico. The meeting is co-sponsored by the American Society of Safety Engineers and hosted by the Albuquerque Chamber of Commerce. Registration is open to the public and free.

W. W. Allison of Safety Engineering Division 3211 is co-chairman of the conference. Appearing on the program will be M. W. Tippy (3211), who will discuss "Safe Handling of Gasoline—at Work, at Home, Camping, or Boating," and W. C. Elskes, C. J. Lucci, and J. J. Ransom of Plant Maintenance Department 4510, who will present a demonstration of safety hazards possible in everyday electrical appliances and tools. The demonstration, which uses a specially constructed display panel, has been presented at a number of safety meetings at both Sandia and Livermore Laboratories.

New Rate Schedule

Coronado Club Twin Pools to Open May 28 with Patio Party

The Coronado Club twin pools will open the summer swim season Saturday, May 28, with a patio party. The pools open for recreational swimming at 10 a.m. and the party (Social Hour prices) is scheduled from 1 to 3 p.m. Mike Michnovicz will provide the music.

Good news for continuous members of the Club is the new reduced family rate—just \$5 for those who have been members since November 1965. A single adult season ticket is \$2.50 for continuous members.

For those who join the Club for the swimming season, the family rate is \$28 for the season and the individual adult rate is \$8. A season ticket for children under 16 is \$4.

As in past seasons, swimming instruction is a major part of the Coronado Club aquatic program. Swimming instruction (Red Cross standards) will start June 6. Twelve-lesson courses (\$5 per person) will be taught for two-week periods. Registration for these classes—pre-beginners through advanced—is now underway at the Club office.

Manager of the pool this year will be Bill Hayes, a Highland High School coach.

Coach for the Coronado Club Swimming Team will be Jim Fults, a UNM student and swimming instructor at the Heights YMCA. Organizational meeting for parents and youngsters who plan to participate with the Coronado swim team is scheduled Saturday, May 14, at 2 p.m. The team is interested in obtaining swimmers in all age groups.

The annual Coronado Club Invitational Swim Meet will be held Saturday, June 18. The pools will be closed to recreational swimming but spectators for the swim meet are welcome.

Supervisory Appointments



EDWARD D. HERRIERTY from Senior Buyer 4312 to manager of Purchasing Administration & Services Department 4330, effective June 1.

Ed joined Sandia as an auditor in the auditing organization in September 1952. In March 1955 he was promoted to supervisor of a reports and accounting section. He transferred to the Purchasing organization as a section supervisor in September 1956 and was promoted to division supervisor in December 1958.

Before coming to the Laboratory, Ed worked as an auditing supervisor and as chief accountant for the Rural Electrification Administration.

He has taken courses in accounting at the University of New Mexico, Washington University in St. Louis, and Benjamin Franklin University in Washington, D. C.

Ed is a member of the Coronado Club's board of directors. He served in the Army finance corps from 1942-46.



THOMAS B. LANE to manager of Engineering Evaluation Department 8110, effective May 16.

Tom joined Sandia in Albuquerque in 1956, where he worked with the Structural Analysis organization. He

transferred to Livermore Laboratory in 1958 and was promoted to supervisor of Stress Analysis Section 8116-1 the following year. In October 1962 he was promoted to supervisor of Applied Mechanics Division and most recently has been supervisor of Systems Hardening Division 8148.

Tom received his MS degree in mechanical engineering from Georgia Institute of Technology in 1956. Previously he served with the U. S. Navy for three years as Chief Engineering Officer aboard a destroyer. He received his Bachelor's degree in engineering from Vanderbilt University in 1951.

He is a member and past chairman of the Northern California Section of the Society for Experimental Stress Analysis; the American Institute of Aeronautics and Astronautics; and Sigma Xi, Tau Beta Pi, and Pi Tau Sigma, honorary societies.



RALPH D. COZINE to supervisor of Project Engineering Division 8154, effective May 1.

Ralph joined Sandia's Livermore Laboratory in June 1959. His assignments have been primarily in project engineering divisions with the exception of approximately one year when he worked in the Preliminary Design organization.

Prior to joining Sandia, Ralph attended Kansas State University where he received a BS degree in mechanical engineering. He was awarded a BS degree in art from the same university in 1952.

From 1952-56 Ralph served as a pilot in the U. S. Navy.

He is a member of Sigma Tau and Pi Tau Sigma, engineering honorary societies, and the American Society of Mechanical Engineers. For the current year he is Honors Chairman for the Mt. Diablo Subsection of the San Francisco Section of ASME.



ROGER A. BARROODY to manager of Product Engineering Department 8160, effective May 1.

Roger joined Sandia in Albuquerque in June 1951 as a project engineer in the Systems Development organization. He transferred to Livermore in November 1956 as supervisor of a project engineering section. In September 1959 he was promoted to division supervisor of the Environmental Test Division and during Operation Dominic supervised a test project engineering division. Most recently he has been supervisor of Project Engineering Division 8154.

He has a BS degree in mechanical engineering from the University of Wyoming and attended graduate school there in business administration.

During World War II he served three years in the U. S. Navy aboard a destroyer.

Roger is a member of the Machine and Metals Advisory Committee at Chabot College in Hayward, and a member of the American Society of Mechanical Engineers.



MRS. EMMA HOLLINGSWORTH to supervisor of Secretarial Section 3126-3, effective May 1.

Mrs. Hollingsworth joined Sandia as a division secretary in October 1959. She was promoted to department secretary in August 1960 and to secretary for the Director of Physical Research in September 1960.

In January 1963, Mrs. Hollingsworth terminated to join her husband who was on a military assignment in Hawaii. In July 1965 she returned to Sandia as a division secretary and was promoted to operations analyst in Secretarial Services Division 3126.

Mrs. Hollingsworth has taught in business college, junior college, high school and in the military education program in New Mexico, Oklahoma, Texas, Georgia, Hawaii, and Germany.

She received her BS degree in business education from the University of Oklahoma in June 1942 and has done graduate work at the University of New Mexico and Texas Technological College. She is a member of the American Association of University Women.



SWIM SEASON and warm summer breezes are greeted by Judy Scheihagen (3151). The Coronado Club twin pools open Saturday, May 28, with a patio party set for the afternoon.



R. R. Prairie

D. A. Edelman

Sandians Will Teach Quality Control Course

Richard R. Prairie, supervisor of Statistics and Computing Division 2153, and David A. Edelman of the same division will spend two weeks of their vacation this year conducting a workshop, "Design and Analysis of Experiments" at the University of New Mexico, July 11-22.

The course, co-sponsored by the American Society for Quality Control, is intended for quality control personnel, engineers, technicians, research and development personnel, and others in industry who are concerned with the planning, design, and interpretation of the results of industrial experiments.

Emphasis will be placed on the correct use of, rather than the theoretical development of various statistical tools such as regression and the analysis of variance.

Enrollees in the course should have some training in elementary statistical methods.

Fee for the course, which includes text and materials, is \$200. Enrollment cards and additional information are available from the Division of Extension, University of New Mexico.

WE Official, Ex-Sandian Plans to Settle in Albuquerque

Frank L. Dewey, General Attorney for Sandia Corporation during its early days of existence, will retire from Western Electric Company May 31 and plans to settle in Albuquerque.

He was on loan to Sandia from March 1950 to August 1952. Strangely enough he both succeeded and was succeeded by Philip D. Wesson, who also chose to retire here. "When Mr. Wesson was first here in 1949 and early 1950, he didn't think Sandia would need an attorney permanently; however, when I returned to New York, he replaced me at Sandia," Mr. Dewey explained.

Mr. Dewey is presently Assistant Vice President in WE's Legal and Patent Division.

It will be late summer before Mr. and Mrs. Dewey arrive in Albuquerque since they will leave in May on a European trip of several months duration.

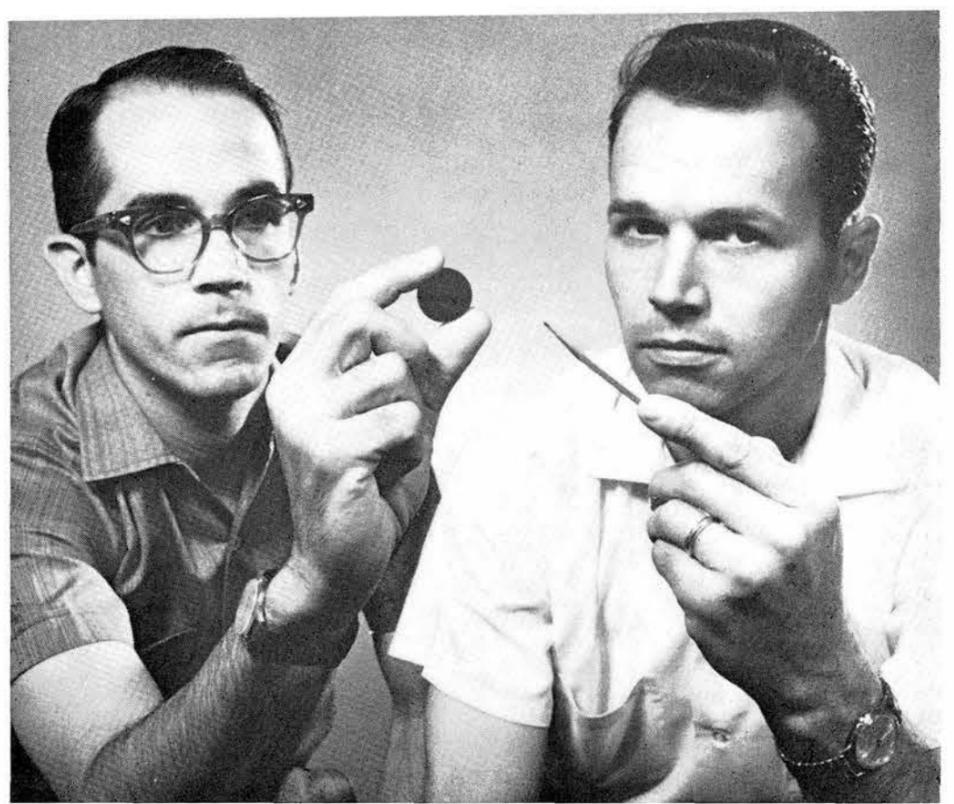
"We have visited Albuquerque several times in recent years, have continued a number of friendships, and thought we would like to live here," Mr. Dewey said. The couple has a daughter attending graduate school at Stanford University.

Sympathy

To Leo Cordova (4616-1) and Sesario Cordova (4575-1) for the death of their mother in Albuquerque, May 8.

To Katy Juric (4151-3) for the death of her father in Abilene, Texas, April 28.

To Audrey Kroesche (3415-3) for the death of her father, Mar. 31, in Albuquerque.



NEW SAPPHIRE GAGE, which can measure shock wave pressures approximately five times more powerful than those measured by similar gages, is displayed by its developers, R. A. Graham, left, and G. W. Ingram (both 5133).

New Sapphire Gage Improves Shock Wave Pressure Measurements

A synthetic sapphire gage which can measure shock wave pressures approximately five times more powerful than those measured by similar gages has been developed by R. A. Graham and G. E. Ingram, both of Dynamic Stress Research Division 5133.

Shock waves, which resemble but are much more intense than the ripples created when a pebble is dropped into a pool of water, are produced by explosions or by impacts of projectiles.

The sapphire gage will be used to measure the pressure of these waves and how various solid materials react when struck by them.

The new gage can measure shock pressures of about 1,500,000 pounds per square inch—pressures which are five times greater than those which could be measured by a quartz gage developed at Sandia several years ago.

The quartz gage, previously unequalled in providing precise measurements of shock wave pressures, is now widely used, particularly in defense industries.

Although sapphire's practical pressure

measuring limit is 1,500,000 pounds per square inch, Sandia scientists found that it can actually withstand shock wave pressures up to 2,900,000 pounds per square inch.

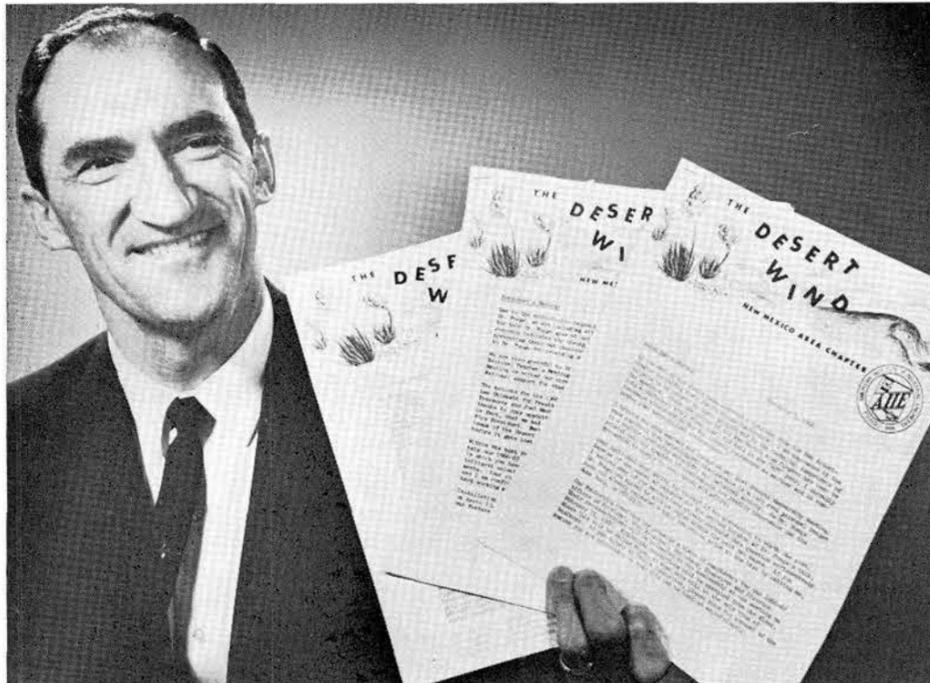
This yield strength—eight times greater than the strongest steel—is the greatest yet observed for any solid subjected to high pressure shock waves.

The gage is relatively simple, consisting of a sapphire disk, one inch in diameter and 1/8-inch thick, sandwiched between two thin aluminum plates.

When struck by a high pressure shock wave, the sapphire compresses, causing a measurable change in an electrical charge between the two plates. The change varies directly with the amount of compression, and the amount of compression varies directly with the intensity of the shock wave pressures.

By subjecting sapphire to impacts from projectiles traveling at known velocities, Sandia scientists learned the exact correlation between pressure and electrical output, thus creating a highly accurate pressure gage.

The gages, which are used only once, cost approximately \$30 each, or about the same as the quartz gages now in use.



WINS AWARD—Q. L. Vandt (2223), editor of "The Desert Wind," newsletter of the New Mexico Area Chapter of the American Institute of Industrial Engineers, displays his award-winning publication. The newsletter was judged best in AIEE Region IX competition with chapter publications in Texas, Oklahoma, Kansas, and Louisiana.

Sandians Provide UNM Photo Display

The out-of-hours photographic work of seven Sandians is currently on display at the gallery of the New Mexico Union, University of New Mexico campus. Twenty-nine prints, both color and black and white, are in the exhibit.

The display was arranged at the request of Del Faddis, program director of the Union. Louis Erne of Industrial Photographics Division 3465 was coordinator.

Although all of the photographers are professionally involved in some aspect of technical photography, the work on exhibit represents photography as an avocation. Photos on display are by Mr. Erne, R. E. Hodges, W. W. Gravning, O. F. Goodwin (all of 3465), M. A. Palmer (5242), T. E. Zudick (3462), and B. K. Laskar (3432).

STA Names R. C. Maydew To Executive Committee

R. C. Maydew, manager of Aero- and Thermodynamics Department 9320, was elected a member of the Executive Committee of the Supersonic Tunnel Association during the 25th semiannual meeting, May 2-3, at NASA, Langley Research Center, Va.

The association is composed of 49 organizations (aircraft companies, universities, and government installations) engaged in experimental aerodynamics research and development. Included are 10 members from Japan, Sweden, France, Holland, Canada, Belgium, and England.



TWO TEAMS, comprised of Sandia security guards, competed in the two-day annual matches, sponsored by the Albuquerque City Police and Kirtland AFB, which included firing at both bull's-eye and silhouette targets. Members of Sandia's highest scoring team, receiving a trophy from W. R. Rosenberg (3240), are (l to r) Lt. M. N. Orrell, Hugo Flores, Luciano Archuleta, V. C. Honeyfield, and Lt. M. J. Lesicka (all 3242).

New State Abbreviations For Use With ZIP Code

The U. S. Post Office has authorized two-letter abbreviations for states for use in connection with the ZIP codes. Use of these abbreviations will become widespread, and we are printing this list so that you may become familiar with them.

Alaska	AK
Alabama	AL
Arizona	AZ
Arkansas	AR
California	CA
Canal Zone	CZ
Colorado	CO
Connecticut	CT
Delaware	DE
District of Columbia	DC
Florida	FL
Georgia	GA
Guam	GU
Hawaii	HI
Idaho	ID
Illinois	IL
Indiana	IN
Iowa	IA
Kansas	KS
Kentucky	KY
Louisiana	LA
Maine	ME
Maryland	MD
Massachusetts	MA
Michigan	MI
Minnesota	MN
Mississippi	MS
Missouri	MO
Montana	MT
Nebraska	NB
Nevada	NV
New Hampshire	NH
New Jersey	NJ
New Mexico	NM
New York	NY
North Carolina	NC
North Dakota	ND
Ohio	OH
Oklahoma	OK
Oregon	OR
Pennsylvania	PA
Puerto Rico	PR
Rhode Island	RI
South Carolina	SC
South Dakota	SD
Tennessee	TN
Texas	TX
Utah	UT
Vermont	VT
Virginia	VA
Virgin Islands	VI
Washington	WA
West Virginia	WV
Wisconsin	WI
Wyoming	WY

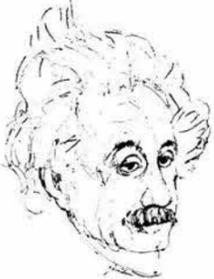
PAGE FIVE

LAB NEWS

MAY 20, 1966

Albert Einstein - - the scientist and the man

By
C. C. Hudson (5590)



The name Einstein probably brings to mind the vision of a sad-eyed old man with a heavily lined face and a halo of unruly white hair, and the impression of a giant of super-human wisdom and

intellect. Much of his public image is the result of an over-zealous press, but by any standard we must recognize this man as unusually creative—a genius in scientific thought, and a pre-eminent, popular figure. His life was surprisingly complex for a person whose major achievements were theoretical. Much of this biographical sketch will attempt to describe how he lived. But the lasting part of Einstein will be his theoretical achievements. Even though the details of these theories are outside the scope of our presentation, we will show what he did in general terms and to some extent describe how he was able to accomplish so much and the traits of character he cultivated which set him apart from his contemporaries.

Albert Einstein was the most versatile and profound scientist since Newton. Of his 31 major scientific papers, at least six were revolutionary and reoriented thought on their subjects. But Einstein was more than a scientist; he was also a philosopher, a humanist, and a political leader. He left more than 400 papers, speeches, and letters in these other fields. Few public figures in any scientific field can match such a record of productivity.

Einstein was born of Jewish parents in Ulm, Bavaria, on March 4, 1879, but within the year the family moved to Munich. Herman Einstein was a merchant who operated an electrical business. He was a gentle and humorous man, not very sincere to the Jewish faith. He loved mechanical things, but he was not trained technically and was somewhat inept. His wife Pauline was more serious with few needs and austere tastes. She dedicated herself to the household. Her distinguishing characteristic was the love of music, and she often played the piano for other amateur musicians who visited the Einsteins.

When Albert was two, a second child, Maja, was born. In 1884, when Albert was five, the family moved to the suburb of Sendling, where his father and uncle established an electrical engineering plant. The uncle played a small but important role in Albert's life by introducing him to mathematics. The Einsteins lived in a fine house with a private garden and were comfortably middle class. Albert, his sister, and many cousins (one of whom was later to become his wife) delighted in picnics and walks among the Bavarian lakes and woodlands.

Quiet Child

Albert was a quiet boy—not sullen, but shy, retiring, and apparently dull. He was so slow in learning to speak that his elders despaired, while other children laughed at his agony. Only his mother had confidence, and even then dreamed that someday he would become a scientist. As a child he had a deeply religious nature and often composed little songs praising God. He deplored his father's unreligious attitude. Later, however, Albert also rejected religious faith and derived for himself a somewhat atheistic concept of religion in which the notion of God was replaced by a carefully studied set of natural laws. This belief satisfied him for the rest of his life and he apparently never missed the comfort of religious association.

On several occasions he was challenged to defend his ideas, especially against Jewish theologians, and this he did with great cleverness and good humor. He became for a while the most famous of all Jews and was always loyal to the culture, if not to the religion.

At the age of six, he entered school where his self-imposed Jewish training set him apart from the predominantly Catholic class. But other distinctions seem

Albert Einstein probably most closely fits the public image of a scientific genius. A versatile and profound scientist, his most famous theories relate to relativity, gravitation, and light.

This is the first of a four-part series about Einstein—As a Man—and His Works.

to have made a more lasting impression on him. Since children of all economic levels were in the same classroom, there was a strong tendency to favor the middle class and rich at the expense of the poor. His heart pitied the underprivileged and resented the authority that deprived them. Also, the training was then largely by rote and was rigid and unimaginative. As a result, the students with a little intellectual curiosity were roughly treated. At a time when Albert was just beginning to learn how to use his mind, such regimentation was particularly distasteful. Throughout his life he carried a strong rejection of subjects such as history that tend to be taught around a framework of memorization.

Takes Violin Lessons

When young Albert started school, he also began violin lessons. Although his mother encouraged him, he was an undistinguished student for several years. Eventually, however, he became an accomplished violinist, and was in demand as a concert artist. He never accepted pay for performances, usually benefits, and would not appear if by doing so he displaced a professional musician. He also became competent on the piano, but would not allow outsiders to listen. Whenever he could, he joined chamber music groups to play his violin. His favorite composer was Bach, although he improvised on the piano in the style of Mozart. The love of music was a strong and lasting influence in Einstein's life.

For three years he attended the Luitpold Gymnasium (high school) in Munich, where the dominant studies were classical—the Greek and Latin languages, history, and art. School remained a kind of servitude for him, and in later life he advocated a strikingly liberal form of education. He had an antipathy for sports. Although sturdily built, he seemed to be sickly and easily became dizzy and tired. One experience at Luitpold brightened his life—for a while. A stimulating teacher, Ruess, tried to make the classical world exciting and beautiful to him.

Einstein, through the influence of Ruess, discovered an interest in literature and art, reading eagerly the works of Goethe, Schiller, and Shakespeare. But when, as a famous professor of physics, he went back to see Ruess, Ruess failed to remember him, to Einstein's great disappointment.

While but a seemingly dull child, young Albert was entertained and coached by



his uncle, who, by making algebra into a game, began exercising the mind that was later to be so creative. He gave Albert the statement of the Pythagorean theory, but withheld the proof. The young boy, who knew nothing of geometry because it was not taught in German schools at that time, struggled over the proof until he finally solved the problem. Then a friend of the family, a medical student, gave Albert a text book of geometry which he consumed, working every problem. At 14, the boy was already master of mathematics, which the secondary school, based on humanistic principles, did not teach. Integral and differential calculus, analytical geometry—he mastered them all.

Moves to Italy

When Albert was 15, the business failed and the family moved to Milan, Italy, leaving him to finish at the Gymnasium. But on a subterfuge, he left school and joined them. Italy was a paradise of color, freedom, and beauty. He was allowed to live half a year without going to school and he reveled in the brilliant culture and art. Unfortunately, the family fortunes failed to improve, and finally Albert was obliged to take steps to prepare himself for a profession. His father wanted him to study engineering to capitalize on his mathematical skill, but the prospect of following so utilitarian a life frightened him. However, at the age of 16 (in 1895) Albert Einstein applied for admission to the Polytechnic Academy at Zurich, Switzerland. He failed the entrance examination so miserably (except for mathematics) that he had to go back to secondary school. After one year he had his certificate and entered the Zurich Academy to study science and engineering.

During his four-year course of study, Einstein was a dedicated, sober, non-nonsense student. Because of his borderline economic situation, his life was poor, simple, and drab. Although the Academy enjoyed a considerable reputation in sciences and mathematics, the lectures did not please Einstein's taste, and he often cut classes. The time so gained was devoted to a feverish study of the great German theoreticians: Kirchoff, Hertz, Helmholtz, and Foppel; but he also read widely in other areas and consumed the works of Darwin, Mach, Kant, Schopenhauer, and especially Hume.

In other words, Albert was now leaping far ahead of the normal education level. In terms of our present day university system, he was to a surprising degree doing both undergraduate and graduate work in physics at the same time. That he could do this at all certainly indicates an intelligence above average, but there were other factors which contributed to his development. First, this mathematical acuity made science easy to comprehend. Then, the European system of university study based mostly on lectures (where attendance was not kept) gave him an exceptional freedom and allowed him to discipline himself. This ability for self-discipline, coupled with an emotionally detached nature, must have been as important at this time as his intellectual power. Finally, he had no money to spend and made friends rather carefully, so all his time could be devoted to studies.

In the fall of 1900, Albert Einstein passed the state examination at Zurich that made him eligible to teach. He was 21 years old. While his early success at mathematics had unquestionably been a great asset, he failed to follow mathematics at the Academy. The subsequent weakness in this subject hampered him, so that later in life he had to hire a mathematician.

Except for one incident, his schooling had been rather uneventful; this incident involved the study of light. He had read about the propagation of light through the ether and wondered if an observer on earth (which was also moving through the ether) could see an effect of the relative motion. This was the idea of the Michelson-Morley experiment which had been done in the United States ten years before. Young Einstein wanted to do the experiment at Zurich, but the school authorities would not allow it. Later, the interpretation of this experiment was to be a major step in his career.

(to be continued)

Take Note

C. J. McGarr, Director of Service Operations 4600, has been appointed a director of the New Mexico chapter of the Administrative Management Society.

The group is comprised of managers, supervisors, and administrators, and was formerly known as the National Office Managers Association.

Mr. McGarr's term of office is one year.

* * *

W. C. Womack (9224) was a panelist on stability and spin-yaw resonance problems in sounding rockets at the annual meeting of the Canadian Astronautics and Space Institute in Ottawa, Canada, early this month. This is the second year Bill has been invited to participate in the program. Last year he presented a paper on the Nitehawk 9 rocket system.

* * *

Jim McCutcheon (1334) was recently elected treasurer of the Albuquerque Section of the Instrument Society of America and John Patrick (7335) was named national delegate. Thomas Rathke (7334) is the outgoing president.

* * *

James N. Day (3321) was installed last month as president of the New Mexico Society of Medical Technologists during its convention in Albuquerque.

* * *

During the recent playoffs of the Sandia T-Bird Bowling League, the Meyer Motor Co. team took the league crown. Members of the team include W. T. Price (2541), W. P. Thomas (2546), H. S. Laycock (2547), R. T. Jankowski (2541), M. J. Madlener (2545), W. G. Vanderlaan (2541), and J. C. Asturias (2547).

* * *

P. L. Mead (3412) is the director and E. E. Ives (5621) has a role in the upcoming production of "Richard II" at Old Town Studio, 1208 Rio Grande Blvd., NW, at 8 p.m. May 26-29 and June 1-5. Reservations may be made by calling 242-4602.

* * *

The 1400 volleyball team, undefeated in league play, downed 7300 in the finals 15-7 and 9-4 to take the championship. Team 7300 had held the Laboratory volleyball crown for five years straight.

Members of the winning team include Eddy Jacobs (1411), Dave Weingarten (1422), Arlin Cooper (1425), Warren Weingarten (1414), Bob Austin (3433), Claude Glass (Stromberg-Carlson), and Ken Payne (1422).

* * *

"Happy Birthday" production at The Showmakers' Theater (Bldg. 204) on Sandia Base is directed by Margaret Wetzel (3428) with Joe Rivera (4135) and Joan Hartmitt (4332) in featured roles. The next performance is at 8 p.m. tonight.

PAGE SIX

LAB NEWS

MAY 20, 1966



WHAT A PLACE to build a nest! Paul Matson (left) and Bob Simpson (both 1115) peek into this bird feather-rabbit fur-tumbleweed nest firmly woven into the metal mesh of a portable ladder standing outside an explosive firing site in Area Y. Although the ladder was wheeled inside the building for almost daily use, a persistent bird laid six eggs and four of the loggerheaded shrike hatched.

Service Awards

20 Years



James Karo
7226



C. R. Pogue
2232



W. E. Treibel
1523

15 Years



R. L. Buckner
1114



G. W. Edwards
3311



C. P. Howard
7332



H. O. Jeske
7211



T. M. Lopez
3415



Frank Lucero
9413



John Martinez
4623



Max McWhirter
7340



R. J. Montoya
3242



R. R. Moore
9221



W. E. Prekker
4121



R. R. Pyetzi
2522



R. A. Rael
2553



W. Rappleya, Jr.
4253



A. W. Reger
7322



H. W. Rogers
2452



J. S. Sanchez
3241



J. H. Scott
5610



N. F. Sinnott
7211



J. E. Tilley
4511



C. M. Valdez
6021

10 Years

May 20-June 2

E. L. Ashland 1524, E. H. Wilson 3131, R. G. Elshrock 3211, Vivian R. Hedman 4152, Dolores E. McKelvey 5240, L. F. Fisher 8116, Lois I. Price 2413, J. B. Ortiz 4614, and Damacio Sandoval 4221.

Events Calendar

- May 20-24—UNM presentation of "Brigadoon."
- May 21-22—Albuquerque Rose Society Rose Show, Floriculture Building, State Fair Grounds.
- May 22—Indian Arts and Crafts Exposition, Jemez Day School, Jemez Pueblo.
- May 26-29 and June 1-5—Shakespeare's "Richard II," Old Town Studio, 1208 Rio Grande NW. For reservations, tel. 242-4602.
- May 28-30—Canyon Lands National Park, Utah. New Mexico Mountain Club, leader Stan Logan, tel. 256-9703.
- May 28-30—YWCA charter bus trip to Mesa Verde National Park, Colo. Non-members welcome. For reservations, tel. 247-8841.
- May 29-June 4—Indian dances at Tesuque pueblo.

W. A. Sherman New Chairman of ASQC

W. A. Sherman (2114) is the newly-elected chairman of the Albuquerque Section of the American Society for Quality Control. He has served the section as treasurer and as chairman of the program committee. He was named to Senior Member rank of the national society in 1964.

J. L. Williams (2562) will be secretary of the organization for the coming year. He has headed the membership and examination committee.

T. D. Harrison (2514) will head the education committee, and A. E. Clamp (2114) will be chairman of the program committee.

The new officers will be introduced at a dinner dance June 3 at the Holiday Inn. Additional information is available from Brooks Bell (2113), publicity chairman.

Guardman of the Year

Robert L. Courtney (1112) was recently named "Guardman of the Year" by Battery B, 3rd Automatic Weapon Bn. (Self Propelled), N. M. National Guard. Officers of the Belen unit selected Bob from a group of 11 who had been named guardsmen of the month, an honor Bob received twice during the year. Honorees are selected on the basis of merit, military courtesy, appearance, and conduct. Bob, who is a corporal in the unit, was awarded a trophy and a \$25 U.S. Savings Bond.

Table Tennis Champs

New table tennis (singles) champion at Sandia is Jim Clark (7322), who was one of more than 400 contestants in the Laboratory-wide tournament. Jim teamed with Charles Simpson (7336) to take the doubles championship. Runner-up in singles was Fred Cericola (7321) and doubles runners-up were Dick Andres (2551) and Werner Kuhn (2562).

The LAB NEWS needs copies of the April 22 issue. If anyone has an extra copy, we would appreciate receiving it. Send to Division 3432.

Congratulations

- Mr. and Mrs. W. Clement (2541), a son, Ryan Randolph, April 30.
- Mr. and Mrs. J. D. McClure (7513), a son, Scott, May 5.
- Mr. and Mrs. Roger Everett (9322), a daughter, Julie Lynn, April 29.

PAGE SEVEN

LAB NEWS

MAY 20, 1966

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

- '62 OLDS Holiday, V8, 2-dr., PB, PS, AT, air, radio, below NADA at \$1450. Donald, 898-1507 after 6.
- TEN WOODED ACRES in Manzanos one mile east of Juan Tomas on maintained road, sell or trade, make offer over \$5000. Ray, 299-6345.
- 3 GLENWOOD LOTS, Hilltop Rd., Unit 1. Walstrom, 877-3847.
- 12'x8' light weight travel trailer awning, complete w/nylon mesh screen enclosure, \$40. Goss, 243-7568.
- SOUTH VALLEY HOME on 2/3 acres, 3-bdr., 1 1/2 baths, 21x23 LR w/fp, hw/floors, AC, w/attached apt., appraised \$23,400. Yaple, 877-3045.
- WOLLENSAK model F-1500 tape recorder, \$65 Preston, 298-3237.
- '59 VW PICKUP w/camper, \$550; power mower, 21" reel, Briggs & Stratton engine, \$40. Gallegos, 268-3024.
- 2-PIECE SECTIONAL w/corner table; flexsteel chair; swivel chair; 2 bedroom chests; 9'x15' rug. Magruder, 255-2078 after 4.
- '55 CHEV. HT V8, automatic, \$295. Coalson, 298-8074.
- SOUSAPHONE, Holton special, four valve, E-flat, Gold Bell, Johnson, 344-9369.
- '65 DODGE Polara, bucket seats, PS, factory air, \$2400; '62 Corvair 700, AT, \$600. Whan, 255-8229.
- '59 RAMBLER station wagon, standard transmission, \$325. Edwards, 877-2799.
- TRANSMITTER k/power supply, modulator, 500 watt final, \$100; HQ 110 receiver, \$125, or trade. Baker, 282-3662.
- 3-BDR. MANKIN, cfa, large patio, landscaped yard. Peterson, 299-3941.
- '56 FORD 4-dr. station wagon, PS, PB, R&H, AT, rebuilt engine, \$200. Lambert, 344-9012.
- CAMPER, 4wd, 1 1/2-ton bus, hubs, sleeps 4, dinette, kitchenette, completely rebuilt, new paint, 7:50x20 tires. Cole, 298-5801.
- 120 BASS Italian Electric accordion, \$80. Young, 344-1985.
- POLAROID 850, electric eye, wink light, flash gun, case, color and b&w, \$60. Dykes, 298-1264.
- 3-BDR., 2 baths, basement, dbl. garage, 2 patios, barbecue, excellent water, 1 acre on pavement, \$29,900. Flowers, 282-3458.

- TWO TWIN SIZE box springs and mattresses; '61 Oldsmobile 2-dr., \$150. Hole, 255-14444.
- 24" BOY'S bicycle, \$15. Hill, 255-6538.
- CHILD'S POOL: 12'x30", metal sides, pump, filter, cleaner, ladder included, \$50. Hunt, 298-8194.
- PIANO, Spinnet, mahogany Story & Clark, \$375. Benson, 255-6004.
- WINDOW TYPE air conditioner, evaporative type, deluxe model, 3 yrs. old. Brouillard, 298-9692.
- L-SHAPED KITCHEN COUNTER TOP, 118"x26", beige w/gold flake, sink cut-out approx. 60" from end, \$20. Trump, 299-5162.
- \$1000 below appraisal. Roberson 3-bdr., 1 1/2 baths, den w/fp, corner lot, near Eastdale, refinanced at \$18,400 or take present 5 1/4% \$14,250 loan w/\$3200. Duvall, 299-8744.
- '57 CHEVROLET 4-dr. sedan, 6-cyl. Hopkins, 268-0885.
- AUTO AIR CONDITIONER, Vornado, \$45. Bleakney, 255-8222.
- REEL MOWER, 18" Kooper Clipper, Briggs & Stratton engine, grass catcher included, \$15. Fite, 255-6943.
- FLUTE, factory overhauled and repadded, cost \$250 new, sell for \$100 cash. Fisher, 265-0626.
- '54 TRIUMPH TR-2, recent overhaul, new clutch, wire wheels, disk brakes, best offer. Dowd, 299-8473.
- WALNUT HI-FI cabinet, shelf console type, \$20; walnut cabinet for Sony 464-D tape recorder, \$5. Rhyne, 299-4813.
- FEDERAL COLD-LITE enlarger and other photographic equipment. Alexander, 268-1513.
- '56 PONTIAC, 2-dr. Paul, 268-5609.
- HAMMARLUND HQ-170C amateur receiver w/matching S-200 speaker. Moore, 298-8909.
- '55 GMC converted panel truck, \$350 or trade for sports car of equal value. Scalf, 298-1409.
- ORGAN, Conn, double keyboard, blond finish, \$650 or best offer. Crosby, 299-1459 after 5.
- FREE KITTENS, black and gray, 6 wks. old, ready to take home. Lynes, 268-0144.
- '55 FORD TRUCK and camper w/custom cabinets, make offer for one or both. Layton, 2881 Campbell Rd. NW.
- BUILDERS LEVEL, case, and tripod. Harling, 243-3314.
- M-1 ZONING, Edith and Candelaria NE, 2-bdr. pre-fab home, \$11,500, terms. Brown, 344-9675.
- KITCHEN DINETTE, 7-piece, walnut formica, \$50; Harmony electric guitar and Gibson amplifier, \$75; 7'x9' wool rug and pad, \$35. Young, 255-9022.
- 3-BDR., 1 1/4 bath, Paulson custom home, hw/floors, cfa, extra large single garage, large landscaped corner lot, near schools and Los Altos, FHA app. \$16,500. Graham, 299-4871.
- '63 MGB roadster, wire wheels, tonneau, Blaupunkt AM-FM, 27,000 miles, \$1725 or best offer Steelman, 256-3734 after 6.
- 5KW gasoline driven generator, 110 volts AC, 60 cycle, low running time on unit. Wilson, 282-3225.
- '48 CHEV. 4-dr., \$100. Orr, 255-6219 after 5.
- 18-GAL. aquarium, complete, \$30; swing set, \$5; picnic set, \$25; breakfast set, \$12; boy's 20" bike, \$12. Paris, 298-2939.

- MATH BOOKS, wide variety among approx. 3 doz. books, heavy in geometry of all types. Tiefs, 299-2763.
- '56 MERCURY, AC. Mauldin, 1101 Kentucky SE, 255-8356.
- SWING SET, \$10 or best offer. Kochmann, 299-5135.
- THREE 7:00x14 tires. Hayes, 298-4682.
- TOOL AND TACKLE BOX, Hiproof, double-cantilever design, covers on 2 of 4 trays, padlock hasp, 18"x13", \$10. Bartlett, 299-4861.
- '58 CHEVROLET station wagon, hydramatic, one owner, low mileage. Montano, 265-1406.
- '66 TRIUMPH SPITFIRE, black, 7700 miles, hard and soft tops. Ashworth, 296-2855.
- 3-BDR., DR. DEN, 1 1/4 bath, carpeted, Pride home, 5 1/4% GI loan available w/small down payment. Steele, 299-9117.
- GENERAL ELECTRIC Kitchenmaid portable dishwasher, \$80. Therikildson, 298-7707.
- FORD PICKUP BUMPER, \$15. Gurule, 898-1574.
- '57 CHEVROLET SEDAN. Hopkins, 268-0885.
- '63 FALCON Sprint Convert., 260 V8, 4-speed trans., new tires, black and white top, \$1200. Koetter, 255-1110 after 5.
- RED ROAN MARE, 7 yrs. old, Western pleasure horse for experienced rider, won 10 ribbons 1965 open classes. Bassett, 898-1840.
- BOSQUE FARMS, 3-bdr., fm. rm., dbl. gar., fp, w/w carpet, dishwasher, built-in range-oven, 1/2 acre, 30 mins. to Base. Gay, 112-6362781.
- '52 CHEVROLET SIX, 4-dr., AT, \$55. Smith, 255-4612.
- ROPER GAS range w/oversize oven, \$75; Hoover upright vacuum cleaner, \$15; Kenmore canister cleaner w/attachments, \$15. Magerkurth, 299-0379.
- SINGLE gray mahogany bed w/bookcase headboard, springs, and mattress, \$20 or best offer. Batchelor, 299-4831.
- '57 PLYMOUTH 4-dr., Belvedere, new motor and AT, \$275. Gorney, 299-8901.
- FOUR 7:50x14 white wall tires, \$3 and \$5 each or \$15 for all four. Hall, 256-7282.
- SEVERAL choice cabin sites on the Rio Blanco River in southern Colorado near Pagosa Springs. Dimberger, 298-5172.
- KIT HOUSE TRAILER, 8x29, 1 bdr., \$1000; 20-power celestial telescope w/cherry case. Sanchez, 344-6375.
- GAS RANGE, w/4 burners, grill, oven, broiler. Bingham, 298-6489.
- HO roadracing set, \$12; HO train and accessories, make offer; bay mare; will deliver to your home. Causey, 299-0089.
- DISHWASHER, GE deluxe Mobile Maid, '63 copper tone, new motor, \$85. Stone, 298-5068.
- ANTIQUES: black walnut Victorian love seat; pecanwood washstand w/mirror. Hiller, 299-7573.
- 20" CHILD'S sidewalk bicycle, convertible boy's or girl's, w/training wheels, needs front tire, \$8. Riggins, 299-7778.
- '65 YAMAHA 80 Trailmaster, new, red, licensed, \$260, \$310 value. Randolph, 299-2057.
- '56 CHEV. station wagon, \$375; Ford factory air conditioner, \$75. Denney, 268-0044.

- MATTRESS and box springs for double bed. Seligman, 298-1993.
- KAY 5-string banjo w/case, \$60. Cashion, 242-3345.
- NW, 3-bdr., 2 baths, corner, walled, sprinklers, near schools; also 3 adjoining lots, sell or trade for 3-bdr. Heights. Holstrom, 344-5216.
- HOSPITAL BED; man's new Bostonian - Brand brown shoes, never worn, size 7. Carpenter, 298-0755.
- POINTER, German Shorthair, excellent field prospect, parents excel on land and water, pick of litter puppy. Tessler, 296-1025.
- RANCH STYLE oak sofa bed, chair w/ottoman, coffee table, step table, large occasional table w/glass top, \$100. Bishop, 299-0649.
- CONVERTIBLE, DeSoto, '49, top is 1 yr. old, \$90. Stixrud, 298-0478.
- '61 MOTORCYCLE, Harley Davidson 74 FLH; window-type air conditioner. Gonzales, 247-2667.
- ROBERSON 3-bdr., 1 1/4 baths, DR, fireplace, carpeting, AC, built-in range, large covered patio, below appraisal, 10909 Elvin NE. Putnam, 299-7142.
- '64 DODGE Custom 880, 2-dr. HT, original owner, 35,000/3-yr. transferable warranty remaining, make offer. Massey, 256-0308.
- G-35 BONANZA, loaded, 300 hrs. factory rebuilt fresh annual, \$12,500, would consider 4-member group \$12,000 valuation. Corwin, 256-0779.
- ROBERSON 3-bdr., den, near schools and shopping, \$16,000, includes appliances and new carpeting. Traeger, 298-0728.
- SELL OR TRADE for equal value, 2 mt. lots 100'x150' each, Manzanos Estates, approx. 25-min. drive from Albuquerque. Camp, 865-7839.
- '63 CHEVROLET (2) Nova, 4-dr., 18,000 miles, AT, R&H, defroster, tinted glass, wsw tires. Edwards, 299-1618.
- SEALY BOX SPRINGS and mattress on frame, regular size, \$50. Gardner, 296-1314 after 5.
- BOY'S BIKE, 24" Schwinn, Free kittens, black, long hair. Shelton, 211 Richmond SE, 268-7089.
- 10 LOTS, 305'x330' Block 91, Section 8 T7N R9E Golden Valley Estate, title insurance avbl., trade, cash, car, pickup. Eaves, 299-7728.
- '62 VOLKSWAGEN station wagon. Suttman, 299-6754.
- '60 VOLKSWAGEN convertible, new top, new paint, 30mpg, \$895. Jenkins, 242-4802.
- CAR TOP luggage carrier, enclosed construction, 3 1/2'x5' ft, \$8 or best offer. Binder, 299-2937.
- FREE, pretty grey and white kittens. Tatum, 877-0997.
- 3-BDR. MOSSMAN, below FHA, fireplace, AC, DR, hw floors, walls, patio, landscaping, NE, \$12,000. Freeman, 299-1481.
- '58 DODGE Fleetside 1/2-ton pickup, new V8, short block, AT, AC new wsw tires. Fellerhoff, 255-8336.
- '57 RANCHERO, Thunderbird V8 engine, Fordomatic, camper cover. Whitfield, 299-4521.
- BOY'S Red Murray bicycle, all chrome trim, \$20; lady's 1/2 diamond, palladium band, appraised \$400, make offer. Barrett, 299-7284 after 5.

- PICKUP CAMPER, 8' cabover model, \$375; 2 pair seat belts, \$4 for both. Shunmy, 265-1620.
- 3-BDR. BRICK, 1 1/2 baths, drapes, carpeted, many extras, NE location, 5 1/4% GI; '62 TR-4, \$1195. Wilson, 298-0049.
- LITTLE RED Karmann Ghia, white top, '60, original owner, never missed servicing by VW book, \$950. Magliuti, 268-7601.
- 3-BDR., 1 1/4 bath, NE HTS., near Eastdale and Matheson Park, below appraisal, \$2000 down, part on contract, will consider lease. Post, 298-0481.
- HY-GAIN TH-4 tri-bander beam, \$50; Mosley V3 tri-bander vertical, \$10; 30 ft. tower, \$15. Rybak, 298-6058.
- TRAVEL TRAILER, '63 DeVille, 15 1/2' ft., sleeps six, not self-contained, surge brakes. Caudle, 298-9120.

WANTED

- PING PONG table. Hayes, 298-4682.
- RIDE from Pennsylvania and Menaul to 802. Atwater, 296-1345.
- CHILD CARE, 2 yrs. old and up, 5-day week, SE Heights, reasonable. Armstrong, 255-8862.
- 16MM SILENT PROJECTOR, fair shape, reasonable price. Rudolph, 298-0941.
- GIRL 16-18 to supervise, chauffeur, three children ages 7-11, weekday afternoons this summer. Eubank and Menaul area. Wagoner, 296-2464.
- 2-WHEEL TRAILER w/hitch, suitable for light hauling. Hole, 255-1444.
- .22 CAL. RIFLE, older model pump preferred, will consider semi-auto. St.Clair, 299-6197.
- CARE for one child in my home, prefer age 2 to 4, \$15/week, fenced yard, play equipment. Moss, 268-4240.
- HOME for beautiful gray and white cat, child's pet. Ellingson, 299-4056.

FOR RENT

- 15' TRAVEL TRAILER, my personal trailer, reserve now for summer vacation, reasonable rates. Colp, 268-8035.
 - 3-BDR., 1 1/4 baths, AC, unfurn., built-in stove, water paid, walled yard, patio, sprinklers, no pets, 8811 Claremont, July 1, \$145/mo. Finley, 299-0739.
 - FURNISHED 2-bdr. apt., AC, automatic washer, vacuum cleaner, no pets, \$404 Trumbull SE, \$93.50/mo., \$25 deposit. Villella, 268-1363.
 - 2-BDR., stove, refrigerator, garage, fenced patio, near UNM, Lost. Trujillo, 247-2830 after 6.
- ### LOST AND FOUND
- LOST—Gold "Cross" pencil w/inscription "Alan P. Gruer," rose tinted safety sunglasses, 4 keys on chain ring, 3-strand pearls, diamond engagement ring, prescription sunglasses w/black plastic rims, house key w/address "1924 Guiteras" on disc, silver Timex watch w/expansion band, brown Dunhill pipe. LOST AND FOUND, tel. 264-2757, Bldg. 610.
 - FOUND—White scarf w/lavender and gray flowers, tie clasp w/10-yr. emblem, silver ring w/pearl, lady's large size tan orlon sweater, pr. lady's tan gloves, large pearl button earring. LOST AND FOUND, tel. 264-2757, Bldg. 610.



THE CHARM of the Orient is reflected by Ada Jane Akin (5630) who invites you to attend the Hong Kong Holiday at the Coronado Club May 28. Menu will feature sweet and sour pork, egg fu yung, and other goodies. Dancing from 9 to 1 with Phil Graham's combo.

Three Sandians Teaching Driver Improvement Courses

Three Sandia employees are instructors for the first four-week driver improvement course offered to the general public by the Greater Albuquerque Chamber of Commerce in cooperation with the New Mexico Traffic Safety Commission.

Serving as volunteer instructors for the defensive driving classes that will end Monday are Elio Cultreri (3211), Walter L. Paxton (4614), and H. W. Clay (4573). Two-hour sessions have been conducted Monday evenings at Rio Rancho Estates Clubhouse.

The same team is conducting another class for Southern Union Gas Company servicemen every Tuesday through May 31.

Along with 27 representatives of state and local police, private industry, and government, the Sandians recently completed a 12-hour instructor training course in driver improvement. The trainees will now serve as instructors in the statewide program offered by the National Safety Council through the state's Traffic Safety Commission. After meeting additional requirements, they will be qualified to train another corps of instructors.

Aimed at the licensed driver, the course consists of defensive driving techniques and procedures used in training professional drivers. It involves eight classroom hours, which may be scheduled to the convenience of a particular group. There is a nominal fee of \$2 per person to cover the cost of student materials provided by the National Safety Council. All instructors are volunteers.

Additional information on the program may be obtained by calling Elio Cultreri, tel. 264-1774.



TECHNICAL ILLUSTRATOR Joe Mickey (3463) displays third-place award he won in the recent 13th annual TIMA exhibition of industrial and technical art.

R. J. Mickey Receives Illustrators' Award

The Technical Illustrators Management Association awarded a third place in the maintenance handbook category to R. J. Mickey (3463-1) during the annual contest in Los Angeles last month.

Last year he received an honorable mention in the illustrated parts category.

An exhibit of 230 of the more than 1000 entries received will continue to be featured at the Museum of Science and Industry through May after which the show will go on tour throughout the country.

Mr. Mickey's entry was selected from his regular work for Technical Art Division.

National Drivers' Test Will be Televised in Color Tuesday Night

A new one-hour drivers' test that promises to be a real evaluation of driving judgment and knowledge will be presented in color next Tuesday at 9 p.m. on KGGM-TV (Ch. 13—Albuquerque) and at 10 p.m. on KPIX-TV (Ch. 5—Livermore).

The 1966 test will cover new driving situations and more questions than the test that was telecast a year ago. Some of the areas being considered for the program include driving on expressways, in urban areas, and in foul weather.

Even if you passed the last test, the coming program will offer new challenges. It aims to improve the defensive driving skills of every driver and will show how to apply these techniques to new and different traffic situations.

Active viewer participation is the key to the program's success. Participants will again have the opportunity to compare test results with a pre-selected sample representing a cross-section of drivers in terms of sex, age, geography, and driving experience.

Produced by CBS in cooperation with the National Safety Council and Shell Oil Company, the program is scheduled a few days before the Memorial Day weekend, the traditional start of the hazardous summer driving season.

The following test form may be used in taking the test. Additional test forms are available at local Shell service stations.

Back Strain Causes Lost Time Injury

An accident which occurred May 10 developed into a lost time injury as an employee's back strain became progressively more painful.

The incident occurred when the employee was loading a swivel chair onto a van. The legs of the chair caught on the bumper of the van and the employee felt a sharp pain in his lower back. It subsided and he continued to work. He did report the incident.

The next day, he reported some pain in the back, checked with Clinical Medicine Department 3330, and received treatment. The pain became progressively worse in the next few days and the employee was referred to a specialist for further treatment. It was recommended that the employee rest at home until he recovered.

At the time of the accident, Sandia Laboratory employees had worked 35 days or 1,225,000 man hours without a disabling injury.

Hong Kong Holiday

Fortune Cookie Say, 'You Are Going to Have Oriental Ball'

Tonight, following Social Hour, the Coronado Club will reverberate with rock n' roll. It's the adult go-go for the strong ones. Survivors of the monthly affair report that it's the best entertainment buy in town. (Admission is free.)

Bud Fisher will play for Social Hour and the seafood buffet will be served. Buffet cost to adults is \$1.25, \$1 for children.

* * *

Highpoint of the Coronado Club's social calendar for the rest of the month is the Hong Kong Holiday event scheduled Saturday, May 28. The oriental buffet will include sweet and sour pork, Chinese barbecued spare ribs, chicken chow mein, and egg fu yung.

The buffet starts at 7 p.m. Phil Graham's musical group starts playing at 9 p.m. for dancing until 1 a.m.

Make reservations by calling the club office, 264-4561. Cost to members is \$3.50, guests \$4.

* * *

Coming up Saturday, June 4, is a "Night in Milwaukee," a hofbrau-style fest featuring sauerbraten, bratwurst, and applestrudel. The Lamplighters will provide the dancing music. Cost to members is \$3, guests \$3.50.

Welcome Newcomers

May 2-13

Albuquerque	
Carmel J. Chavez	4574
Oliver W. Davis	4574
Thomas D. Drago	4574
*Kenneth R. Dunbar	2212
A. N. English	4135
Jonnie Finley	4333
Cecelia Griego	3126
Eloise C. Inberg	3126
John R. Jewell	3415
*Louise M. Meyers	3126
Sandra K. Moore	4333
Cornelia S. Rey	3151
Henry C. Sisneros	4574
Carla Lee Thornton	4333
Minnesota	
Robert A. Gerber, Minneapolis	5141
New York	
Charles T. Ross, Jr., New York City	6000

Social Hour

Next Friday, May 27, the Lamplighters will provide the happy music and the chuck-wagon roast beef and shrimp buffet will be on the menu. Buffet costs are \$1.75 for adults, \$1.50 for children.

Bridge

The monthly master point bridge competition will be held Monday, May 23 at 7 p.m.

PAGE EIGHT

LAB NEWS

MAY 20, 1966

1966 National Drivers' Test ANSWER FORM

(Tuesday, May 24, 9 p.m. Ch. 13, Albuq.; 10 p.m. Ch. 5, Livermore)

Fill in with T or F (True or False); Y or N (Yes or No); A, B, C, or D (multiple choice); or appropriate word.

1 _____	13 _____	25 _____	38 _____
2 _____	14 _____	26 _____	39 _____
3 _____	15 _____	27 _____	40 _____
4 _____	16 _____	28 _____	41 _____
5 _____	17 _____	29 _____	42 _____
6 _____	18 _____	30 _____	43 _____
7 _____	19 _____	31 _____	44 _____
8 _____	20 _____	32 _____	45 _____
9 _____	21 _____	33 _____	46 _____
10 _____	22 _____	34 _____	47 _____
11 _____	23 _____	35 _____	48 _____
12 _____	24 _____	36 _____	49 _____
		37 _____	50 _____

Opinion (no score)

1 _____	4 _____
2 _____	5 _____
3 _____	

TOTAL SCORE _____

Sandia's Safety Scoreboard

Sandia Laboratory:

7 DAYS

245,000 MAN HOURS

WITHOUT A

DISABLING INJURY

Livermore Laboratory:

139 DAYS

721,500 MAN HOURS

WITHOUT A

DISABLING INJURY