



F-111F Aircraft and array of various weapons which the Bomb Interface Simulator (BIS) simulates in training missions.

LAB NEWS

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OCTOBER 17, 1980

SANDIA NATIONAL LABORATORIES • ALBUQUERQUE NEW MEXICO • LIVERMORE CALIFORNIA • TONOPAH NEVADA

Weapon Training

To A Pilot, BIS Looks Like Real Thing

In the late '40s, military pilots trained primarily with dummy nuclear weapons—ballistic shapes weighted with concrete whose function was to fly and fall like the real thing. And that's all. For the man in the cockpit, there was no simulation of the many pre-drop weapon functions.

More than three decades later, both U.S. and NATO pilot training with dummy nuclear weapons is largely unchanged. Now Aircraft Compatibility Division 4323 and Command and Control Division 2335 have come up with a device, the Bomb Interface Simulator (BIS), that provides aircraft cockpit responses indistinguishable from those of an actual nuclear weapon. "For obvious reasons, it's impractical for aircrews to train with the real thing," says Bob Sonnenberg, head of the Aircraft Compatibility group. "Even though the primary use for the BIS is in our aircraft compatibility program, the device can also be employed in the training programs of both the U.S. military and NATO."

The BIS itself is a small, rectangular unit, 5.5 inches long, that can simulate the electrical interface of the B43, B57, B61, and B83 nuclear bombs. "Instead of using a dummy bomb in training, the BIS can be placed in any of the bomb stations on the aircraft," explains Bob. "It can also simulate the aircraft bomb rack by using an interconnect cable which provides the electrical simulation of the bomb rack circuitry."

One simulator accurately duplicates all electrical impulses from the complete

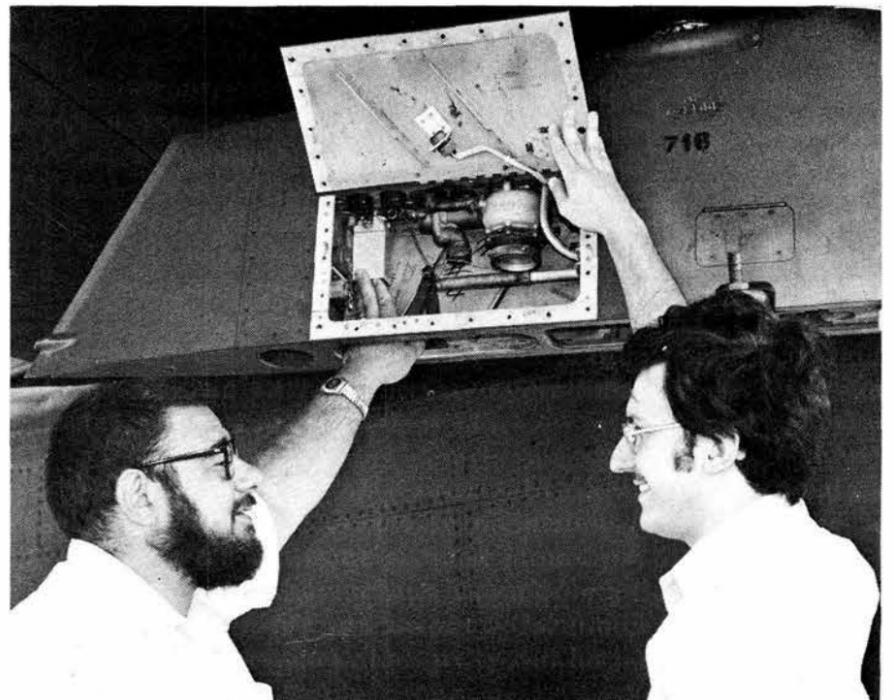
range of the bombs. This presented a significant packaging challenge, as well as a complex electronic design, as Andy Rogulich (also 4323) explained to us: "Among the functions that must be simulated are pullout cables—different for most weapons—and all other bomb interface components. All electrical signals have to be accurately relayed to the Aircraft Monitor and Control, or AMAC controller, which gives the pilot and crew current data on the monitor, safe, and prearm status of the nuclear weapon." Jim Anastasio (2335), the BIS designer, pointed out that "all of this must be accomplished while surviving temperature

extremes and supersonic flight and handling environments."

There's a different AMAC system for every military aircraft that carries a nuclear weapon, and the BIS adapts readily to all of them. The BIS can be repeatedly safed, prearmed, and "released" as often as the aircrew wishes. And money is saved besides by using the simulator—this device, which weighs less than two pounds, can replace a dummy weapon weighing several hundred pounds.

Divisions 4323 and 2335 are developing the BIS under the direction of Bob Peurifoy, Director of Weapons Systems Development 4300.

JIM ANASTASIO (2335, left) attaches the Bomb Interface Simulator while Andy Rogulich (4323) looks on.



Afterthoughts

Plague time--One of our playful colleagues at Sandia Livermore sends us a clipping from Livermore's Valley Times concerning a small problem we've had here in the Land of Enchantment. The story headline reads "Black death plagues New Mexico," and with the clipping he includes this note: "I wonder if you would mind having the cartons of LAB NEWS sprayed with flea powder before shipping them to Livermore. We don't want our employees not reading the News because they're afraid to touch the copies..."

You know, it's newspaper stories like that that give New Mexico a bad name, frightening people away. Come to think of it, that's not a bad idea... Do you suppose the Dept. of Tourism would object to a slight amendment to our license plates--something like "Land of Enchantment & A Little Black Death"?

* * *

Skiing--In case you're unduly burdened by your latest raise, we've got a splendid investment opportunity for you that will nicely absorb all those extra bucks. It's called lift tickets, running \$16 per victim this season at two hills we know of--Taos and Sierra Blanca. The government agency that leases public land to the ski area concessionaire, namely the Forest Service, is constrained to protect the public interest in negotiations with the concessionaire and, among other things, the price of lift tickets is one element in these negotiations. Strangely, though, we've never heard one peep raised about the price of lift tickets from the Forest Service. Of course, the circumstance that the Forest Service gets a percentage of the take may in some way diminish their ardor as they pursue the protection of your interest and mine.

* * *

"The first panacea for a mismanaged nation is inflation of the currency; the second is war. Both bring a temporary prosperity; both bring a permanent ruin. But both are the refuse of political and economic opportunists." Ernest Hemingway *js

Events Calendar

Through Nov. 1 [Fri. and Sat]—"Laura," a murder mystery presented by Tiffany Playhouse, 3211 Central NE, 256-7164.

Through Nov. 1—"Buildings Reborn: New Uses, Old Places," traveling photographic Smithsonian exhibit, Main Library, 5th & Copper NW, 9:30 to 5, free, lower level, Mon.-Sat.

Through Nov. 5—"Fifty Years Ago," American paintings, sculptures, drawings, prints & photographs. Art Museum, UNM.

Oct. 17-18—NM Symphony Orchestra, 8:15 p.m., Popejoy.

Oct. 18—Albuquerque Council Fall Garden Fair, sale of bulbs, houseplants, 9-5, Albuquerque Garden Center, 10201 Lomas NE.

Oct. 17-19—Sandia Peak Ski Patrol Ski Swap, Agriculture Bldg., State Fair Grounds.

Oct. 18-19, 25-26, 30*-31*—"Step on a Crack," a play for children and adults, presented by the Peanut Gallery Playhouse. Sat., 10 & 2; Sun., 12 & 2; *8 p.m., Kimo Theater, 766-7816.

Oct. 19—Albuquerque Youth Symphony, 3 p.m., Popejoy.

Oct. 24—Navajo Rug Auction, elementary school, Crownpoint, NM, 7 p.m.

Oct. 24-Nov. 9—"Filumena," Albuquerque Little Theater, Tues.-Fri., 8 p.m.; Sat., 6 & 9 p.m.; Sun., 2 & 8 p.m., 242-4750.

Oct. 25—Chrysanthemum Society Show, all day, Albuquerque Garden Center.

Oct. 25-26—Antonio Aguilar Mexican Rodeo, Tingley Coliseum, State Fairgrounds, 265-1791.

Oct. 26—Chestnut Brass Company, Fine Arts Music Series, 4 p.m., First United Methodist Church, 4th & Lead SW.

Oct. 29—Pianist Wladimir Kochanski, 8:15 p.m., Popejoy.

Oct. 30—New York City Opera Touring company, "La Traviata," 8:15 p.m., Popejoy.

Oct. 31, Nov. 1-3, 7-10—"The Three Penny Opera," Starlight Dinner Theater, 8 p.m., Stage I, U of A.

Deaths

James Brewer of Test Operations Section 1424-1 at Pantex died Sept. 29 following a short illness. He was 59.

He had worked at Sandia for 26 years.

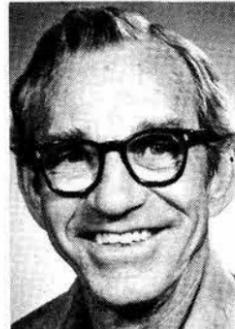
Survivors include his widow and daughter.



Phil Meekins of Toxic, Area I Branch Shops and Fabrication Section 1482-1 died Oct. 2 following a short illness. He was 60.

He had worked at Sandia for 28 years.

Survivors include his widow and daughter.



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THE MAYOR visited Sandia earlier this month to talk about an unlikely subject—sludge. The occasion was the public announcement by Mayor Rusk of a new sludge irradiation plant for Albuquerque, patterned after Sandia's prototype irradiation facility. Here Jack Sivinski, head of Applied Biology & Isotope Utilization Division 4535, describes operation of the facility to Herm Roser (center), DOE/ALO Manager, and Mayor Rusk. The city plant will be built south of the airport.

DATFIT — A Way to Digest Data

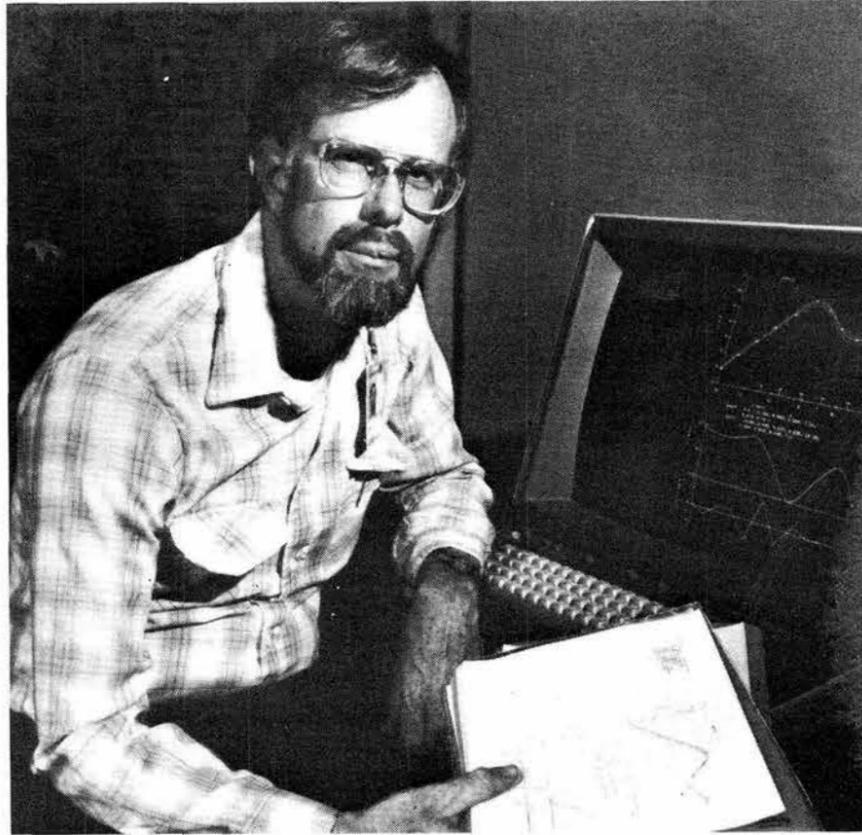
Researchers are always looking for ways to simplify the process of displaying the data they have collected.

Jim Lathrop of Scientific Computing Division 8332 now can offer what is needed—a new, interactive, user-oriented data fitting package, DATFIT, which operates on Sandia Livermore's CDC 6600 using Tektronix 4014 terminals.

The package was designed to give people with data a means of more readily analyzing the data, then to proceed to a next step, e.g., generating an equation to describe the data or estimating derivatives of the data. Fitting a curve to data is another application.

One of Jim's goals was to make DATFIT fairly simple for a person not a programmer. Another aim was flexibility, so he wrote it to be adaptable to other computers. He has already converted the package to run on VAX-11 and has submitted the DATFIT package to colleagues elsewhere who are experimenting with it on a Univac system.

The program accepts data in a wide variety of formats, allows the user to add or delete data, and provides prompts for the inexperienced user. Jim says the system is designed to be "forgiving of the user's errors and to allow a graceful recovery from most errors.



DATFIT program on Tektronix 4014 terminal is displayed by Jim Lathrop (8332).

"I think the coming thing in computers is special purpose packages to allow people to do things without being programmers," Jim says. "They won't have to shuffle cards, and they won't have to wait a long time. Something that once took a day or more, now, with DATFIT, can be done in a few

minutes."

Dona Crawford (also 8332) has been working with Jim on the project and has added more features. Both continue to work on improvements to the DATFIT package.

Supervisory Appointment



GARY DRUMMOND to supervisor of Computer Operations Division 8336, effective Oct. 1.

Joining Sandia Albuquerque in 1952, Gary spent two years at a storage site in Limestone, Maine, before transferring to Livermore in 1959.

In 1965, he was promoted to section supervisor and later transferred to the Computer Operations Section. Since 1978, his responsibilities have covered computer support of ADP plans, procurement studies and budgeting.

Gary holds a BA in humanities from St. Mary's College in Moraga, Calif. Off the job, he serves as vice chairman of the Alameda County Parks, Recreation and Historical Commission and is a member of Livermore's Heritage Preservation Commission and E Clampus Vitus, a group devoted to preservation of California history. The local historical guild has mounted an exhibit based on Gary's book on the Valley's historic architectural styles. The same group recently published his article on early-day Livermore land use.

Gary, his wife Elizabeth and son live in Livermore. They also have three grown daughters and two grandchildren.

LIVERMORE NEWS

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LIVERMORE LABORATORIES

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New Personnel Reps Now On Board



Two recent arrivals in Personnel are Denise Clay and Barry Bolden (both 8212), coordinators for the Equal Employment Opportunity (EEO) Affirmative Action program.

Part of their responsibilities includes preparation of the annual affirmative action plan, which includes an analysis of the work force, labor market and skill availability by sex and ethnic background to better measure the Labs' labor market.

Denise also serves as women's program coordinator. In this capacity she seeks to enhance employment and advancement opportunities for women. To this end she encourages professional careers among women employees and is also ready to counsel women who have questions arising from their employment at Sandia.

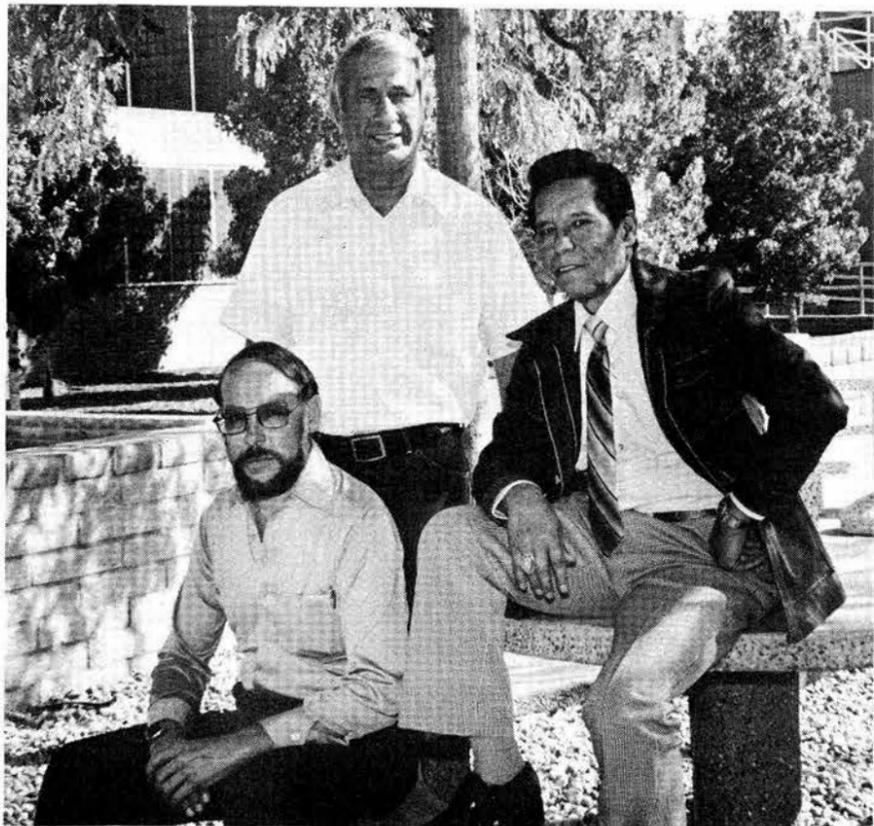
Both Barry and Denise work in outreach programs at schools and with civic organizations and other Bay Area agencies to identify career possibilities in technical and professional fields. In addition, Barry performs vocational rehabilitation and works with veterans.

Both monitor hirings, promotions, transfers and terminations at SNLL to ensure compliance with Sandia's equal opportunity and affirmative action policy, and good personnel practices.

Barry, who arrived here in May, has a bachelor's degree in electrical engineering from San Jose State and a master's in the same field from Oregon State. He worked in engineering for 10 years, spent three years after that in EEO at LLNL, then moved to Qume Corporation in Hayward as a personnel representative. He came to Sandia after two and a half years at Qume. A California native, Barry has lived here in Livermore for the past 11 years.

Denise arrived at Sandia in August after earning her bachelor's and MBA degrees at UC Berkeley. She has been a resident of Berkeley for 10 years and is a native of the Bay Area.

Supervisory Appointments



JOHN GARCIA (1482-1),
JOE COSTALES (3411-2)
and JOE HERNANDEZ
(3154-4)

JOHN GARCIA to supervisor of Toxic, 892 Branch and Mechanical Fabrication Shops Section 1482-1, effective Oct. 1.

John came to work in Sandia's mailroom in 1956. He joined the machinist apprenticeship program in 1960; subsequently, he worked in the numerical control shop for seven years and served as a heavy equipment lead man for one year.

Following graduation from Belen High School, John attended UNM. He is a member of the C-Club's Wolfpack and enjoys boating and hunting. John has four children and lives in SE Albuquerque.

* * *

JOE HERNANDEZ to supervisor of Mail Services Section 3154-4, effective Sept. 16.

Except for two years in Finance, Joe has worked in the mailroom since joining Sandia as a mail clerk in July 1949. He has been a senior clerk in Mail Services for many years. Joe graduated from Western Business School in Albuquerque with a certificate in accounting. He served in the Army during WWII in the European Theater.

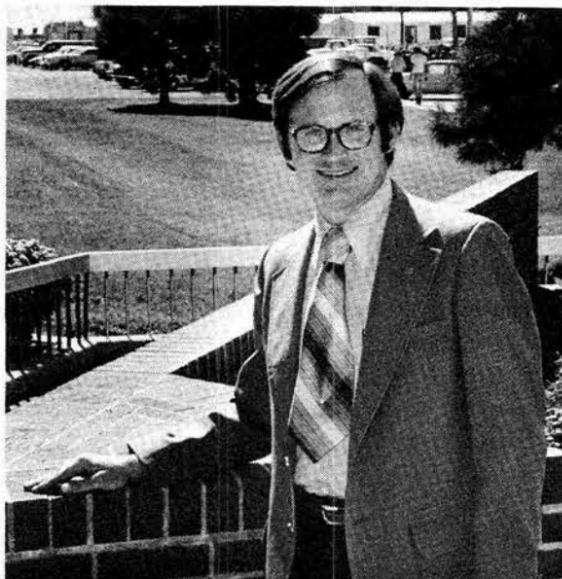
Joe enjoys spectator sports and camping. He and his wife Helen have three children and seven grandchildren. They live in SW Albuquerque.

* * *

JOE COSTALES to supervisor of Property Control Section 3411-2, effective Sept. 16.

Joe joined Sandia as a messenger in mail services in December 1952. Four months later he was drafted into the Army; he served two years, attending radio school and anti-aircraft school. Returning to Sandia, Joe worked in finance, plant accounting, property analysis and, for the past six years, has worked in property management.

For many years Joe spent his spare time coaching Little League teams, but now his favorite activity is camping. He and his wife Flora have four children and four grandchildren. They live in the NE heights.



DILLON McDANIEL to supervisor of High Density Plasma Source Division 4234, effective Oct. 1.

Since coming to the Labs seven years ago, Dillon has been associated with the Pulsed Power Research Division 4252, working on the design of high voltage accelerators. In his new position, his work has shifted from design to accelerator output.

Dillon graduated from the University of Texas at Austin with a BS in physics and math and a PhD in plasma physics. His leisure time activities include photography, camping and fishing. Dillon and his wife Stephanie have six children and live in the NE heights.

Retiree Deaths

July—September 1980

Jack Merillat (56)	July 17
Harold Baecker (76)	July 24
Darl Deapen (73)	July 24
Niveo Fisher (88)	Aug. 6
Elsworth Hubbs (71)	Aug. 7
Wilfred Bullock (75)	Aug. 9
Roy Palmer (74)	Aug. 26
Frank Hovley (83)	Aug. 22
B. E. Van Sickle (67)	Sept. 8
Kay McDonald (63)	Sept. 25
Benito Padilla (59)	Sept. 26

Not 90% But . . .

Harry Weaver, head of Photovoltaics Division 2146, comments on a typographical error in LAB NEWS in a story concerning work in his group:

"By reporting a 90% efficient solar cell in the last LAB NEWS, *New Solar Cell Improves Performance*, we clearly established our credentials for overstatement, a flaw not infrequently found in other solar energy pronouncements. The actual efficiency is 20%. Our first impulse was to ignore the error, assuming that it would quickly become lost in existing solar energy hyperbole. Unfortunately, this situation was not realized. Although modest in comparison to 90%, silicon devices exhibiting 20% sunlight-to-power conversion are, in fact, technologically significant. They represent the most efficient silicon solar cells existing today and, for light that actually enters the silicon, the conversion rate is near the theoretical limit."

Go For Health

Let's Talk About Aging

by Arlene Price, Clinical Psychologist
Medical Department

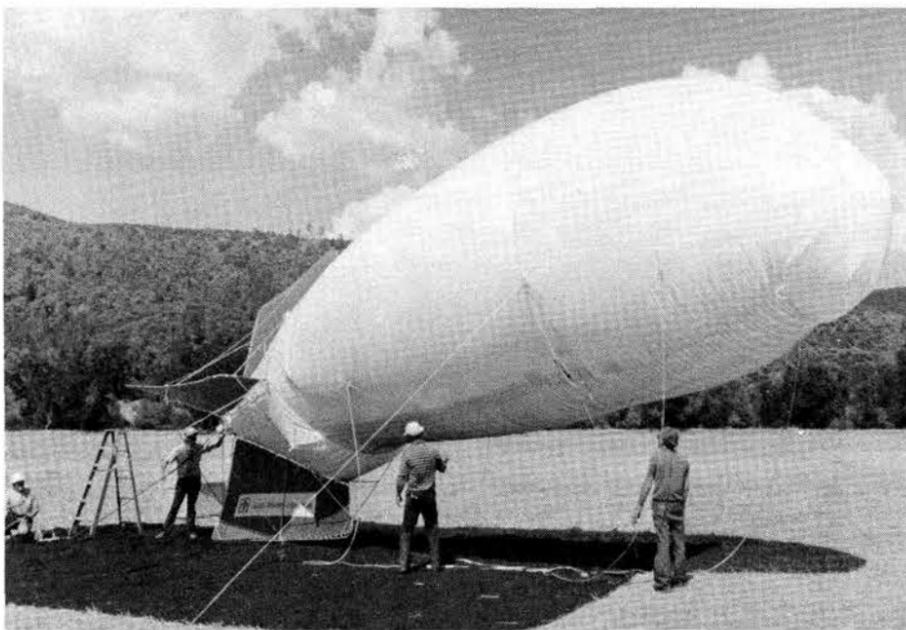


The problems of aging have received increased attention as the number of older people in America continues to grow—some 30 million people, aged 65 and older, are anticipated in this country by the year 2000.

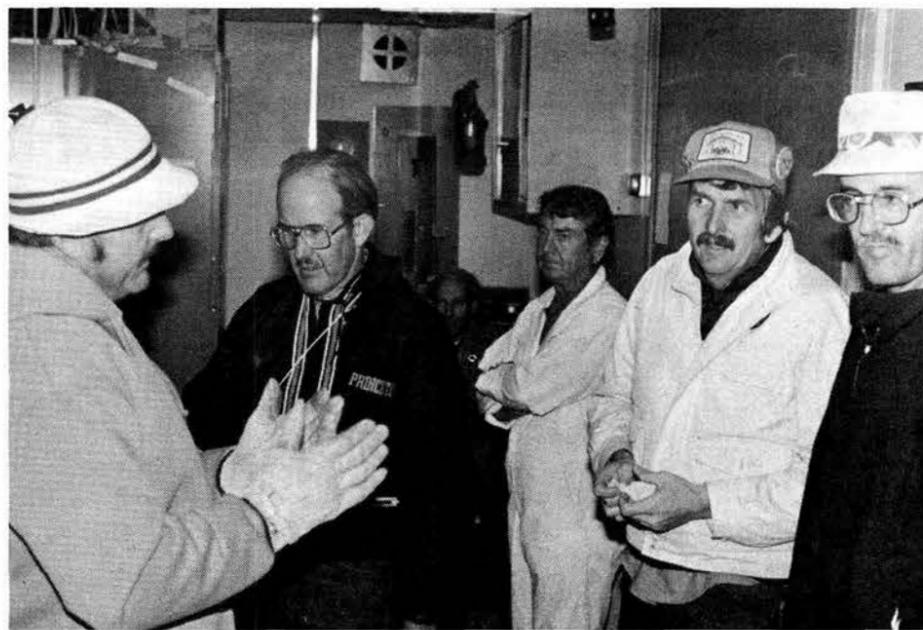
Most of us wonder about how growing older will affect our lives and those of our loved ones. We realize that all areas of our lives can be affected including our family life, health, illness, work, and leisure. To help us learn more about some of these issues, Sandia Medical is sponsoring a series of lectures on aging. Our first guest will be James Goodwin, MD, Chief of Gerontology from the School of Medicine at UNM. Dr. Goodwin will address the question of how aging affects the human cell in a lecture entitled "Biological Perspectives of Aging." The talk will be held on Friday, Oct. 24, in Bldg. 815 (outside the Tech Area), from 12 to 12:30 p.m.



Once the word is out, they may pay you for daydreaming. Recent studies (reported in the *N.Y. Times*) show daydreams can "help solve current problems, prepare you for the future, ward off tension, dispel fear, dissipate anger and lift depression." They can also help build self-esteem and increase your chance for success. Many sports greats, says the article, "spur themselves on to victory by imagining themselves in the act of winning."



HERE the inflation of the tethered balloon used in DOE's Atmospheric Studies in Complex Terrain (ASCOT) is almost completed. Experiments took place in Anderson Creek Valley, about 100 miles north of San Francisco. One hundred scientists from 18 laboratories and companies participated in the project.



LISTENING to Gerry Gay's (4533) discourse, left, are Bob Woods (4533), John Solson (Denver Research Institute), Frank Rivera (1135), Lee Jensen (4533), and Hugh Church (also 4533). All were members of the ASCOT research team which studies how air pollutants travel at night in mountainous terrain.

Balloon Experiment

Night Track of Pollutants Being Traced

Sandia National Laboratories will conduct five scientific experiments in Lake County, California, involving a tethered balloon to study how air pollutants travel at night in mountainous terrain. The experiments, part of DOE's Atmospheric Studies in Complex Terrain (ASCOT) research program, began September 11 and will last three weeks.

About 100 scientists from 18 laboratories and companies will participate in the experiments, funded by DOE's Office of Health and Environmental Research and coordinated by the Atmospheric Sciences Division of LLNL.

Experiments will focus on the dispersal of inert tracer gases released at various points in a selected valley to mimic air pollutants, and on measurements of temperature, humidity, wind speed and wind direction through which the behavior of the tracer gases may be understood. The experiments will take place in Anderson Creek Valley near Middletown, about 100 miles north of San Francisco.

Wind dispersal of air pollutants is relatively well understood over flat lands, but dispersal is more complex and less understood in mountain valleys. Nighttime "drainage" winds, which flow down the hills into the valleys below, are of particular interest to ASCOT scientists. Under these conditions, it is possible for air pollutants to become trapped in the valley, and for the pollutant concentrations to build up to unacceptable levels.

The long-range goal of ASCOT is to devise a method, using computer analysis of field measurements, to estimate the dispersal of pollutants in any mountainous or hilly region. Computer models would then be used to improve air quality assessments primarily in the mountainous West where most new energy resources, such as geothermal energy, coal and oil shale are located.

In the study area, geothermal power development releases small quantities of hydrogen sulfide gas. The nighttime tests will aid in understanding the behavior of

winds that form at dusk to carry pollution from geothermal wells in the hills into the valley where it may be trapped overnight.

The helium-filled balloon, 12 feet in diameter, 40 feet long and equipped with a 50-pound instrument package, will be raised to 1,600 feet above the valley floor and then reeled back down to ground level repeatedly for the nighttime experiments. The instrument package will provide information on the vertical distribution of the tracer gases above the valley floor. Radio telemetry and command and control systems will be used to track balloon altitude and to initiate the experiments.

In addition to providing a vertical profile of tracer concentrations, the balloon will be used to study breakup of the thermal inversion layer after sunrise. As

heat from the sun causes the valley air to rise, smoke will be released to trace the air flow. A camera on board the balloon and others on the ground will photograph the dispersal of the smoke.

Much of the work that Sandia is performing in connection with the experiments derives from the Labs' ability to model and measure the effects of nuclear weapons.

Sandians participating in the experiments are Bob Woods (4533), Sandia Scientific Director; Gerald Gay (4533), Project Coordinator; Hugh Church (4533), meteorologist; Bernie Zak, head of Environmental Research Division 4533; Frank Rivera (1135) administrative coordinator; and Wayne Hancock (3153), photographer.

feed *back*

Q. I agree completely with the waste paper cycling program. I generate a fair amount of computer printout paper but have a hard time recycling it. The problem is that the paper pickup people will not take paper that isn't boxed.

How can I get the right kinds of boxes?

A. Thank you for voicing your concern regarding your recyclable paper. From experience, we find it necessary to stick with boxes for handling.

For your future needs, please call 4-9278 for boxes. They will be fabricated, inexpensively, to your dimensions and delivered to you. This will help you to get rid of your paper and help us in keeping the area free of loose paper.

D. S. Tarbox—3400

To DOE Germantown



AL SWITENDICK, head of Solid State Theory Division 5151, leaves this month on a temporary assignment with the Dept. of Energy that will last for a year. He'll be in DOE's Germantown location in the Basic Energy Sciences office of the Division of Material Sciences and will assist in the evaluation of scientific proposals. Mike Butler (5154) left last month for a similar assignment with DOE.

Congratulations

Mr. and Mrs. Michael Pacheco (3613), a son, Gabriel Michael, Sept. 18.

Mr. and Mrs. Ralph French (5636), a son, William Eli, Sept. 10.

Mr. and Mrs. James King (3618), a daughter, Rachel Ann, Sept. 27.

Sympathy

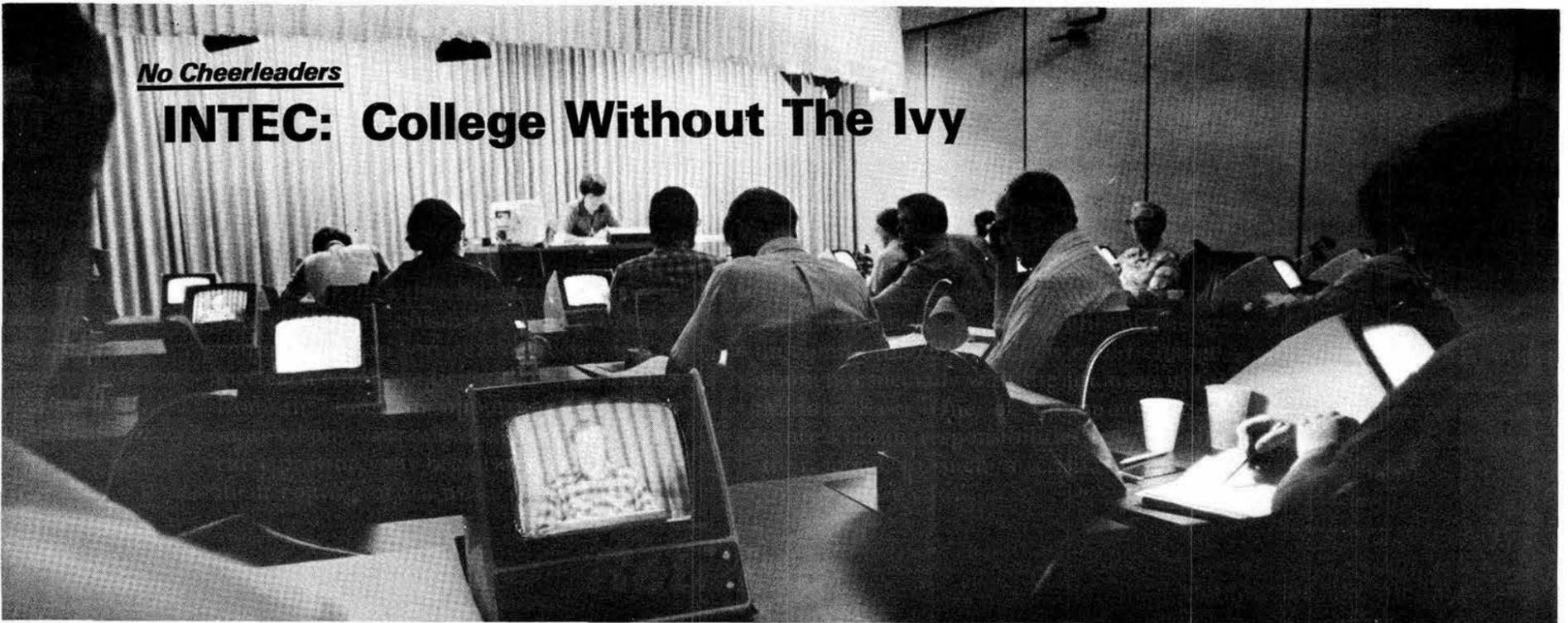
To Ralph Olson (1247) on the death of his father in Albuquerque, Sept. 24.

To Marian Jacot (3431) on the death of her father in Port Chester, N.Y., Sept. 27.

To Dale Young (2655) on the death of his mother in Albuquerque, Oct. 5.

No Cheerleaders

INTEC: College Without The Ivy



In the fall of 1972, just 20 students were enrolled in a new course, *Engineering Mathematics*. From that modest beginning, INTEC (In-Hours Technical Education Courses) has grown into a Labs-wide educational program with 720 students enrolled for this fall's semester.

What's behind INTEC's success? Says Mike Rex, program coordinator of Education and Training Division 3522, "INTEC succeeds in meeting the Labs' technical demands. With INTEC, we expand staff members' technical capabilities and strengthen their analytical skills. In so doing, we improve job performance, stave off obsolescence and, as an added feature, open up broader career opportunities."

John Cantwell (3136), an early administrator of the program, told us some of INTEC's history: "Klaus Bowers initiated the program—he'd come to Sandia from Bell Labs and was the 2000 VP. In the early '70s the impact of microelectronics was just beginning to be felt and he thought it important that technical people upgrade and refresh their skills. Since then, INTEC has been enthusiastically supported by Morgan Sparks and the Small Staff—Gene Reed, especially, as chairman of the Laboratories Education Committee."

INTEC adopted the Bell Labs practice of using their own technical staff as instructors and line managers as course supervisors. The latter are a type of ombudsman—students can approach the course supervisor about any problem they might have with the course or the instructor.



We asked Mike Rex about existing and future courses. "Some of the more popular are *Nuclear Energy Technology*, *Weapon Development and Technology*, and *Fundamentals of Geoscience*—along with the original *Engineering Math*, which is still going strong," said Mike. "Among our newer courses is *Fiber Optic Communication Systems*—it's a new technology and was first offered last year. There's also *Cryptology*, *Radiation Transport Analysis*, and a new one for spring is *Hydrology*—how fluids move within the earth.

"A few courses are self-paced—students proceed on their own schedule. A classroom is open every day during certain hours and tutors are present to help the

students with any questions," explained Mike. "In the Individual Learning Center, opening early in 1981, students will take courses on videotape and have access to tutors. *Introduction to Applied Nuclear Physics Technology*, now available in the traditional format, and *Nondestructive Evaluation* have been specially prepared for the Individual Learning Center and will be ready sometime next year."

Summing up, Mike said, "Most INTEC courses are in the traditional classroom mode. But we're offering a variety of instruction methods in an attempt to reach more technical people—especially those who travel a lot."

Take Note

A DOE/SNL-sponsored meeting of the Photovoltaic Concentrator Technology Development Project will be held at the Coronado Club on Nov. 5 and 6. This project, managed by Sandia, is part of DOE's national photovoltaic program. Developmental status of full-scale arrays, modules, concentrators, cell assemblies and cells will be covered with emphasis on hardware performance, design and analysis, and manufacturing process design. Don Schueler (4719) is meeting chairman, Eldon Boes and Blynn Shafer (both 4719) are speaker chairmen, and Sidney Johnston (4715) is meeting coordinator.

The WIPP Project continues to be controversial and will be the topic for discussion at the American Society of Mechanical Engineers (ASME) meeting to be held on Tuesday, Oct. 28, at 7:30 p.m. The speaker will be Fred Gurney, Technical Assistant to the Deputy Project Manager of WIPP. A condensed review of the technical aspects of the project will be presented. For additional information, call L. E. Romesberg, 4-2187.

"A comedy about Hamlet" is how the flyer describes *Rosencrantz and Guildenstern Are Dead*, a drama by the Classics Theater Company that opens next Thursday, Oct. 23, at UNM's Rodey Theater. The play runs through Sunday with performances at 8 p.m. on the 23rd, 24th and 25th, 2 p.m. on the 26th. John

Gardner (3140) is play director, and Sandians Phil Mead (3151) and Lou Baker (4247) have roles. Call 277-4402 for reserved seats.

If you expect to be traveling during the Nov. 4 general election, you still can vote via the absentee ballot. Benefits in Bldg. 814 has the absentee ballots; the deadline for picking up a ballot is Oct. 21.

The Que Pasa rec center on Base is sponsoring a one-day bus tour to Santa Fe on Oct. 25. The bus will leave the center at 9 a.m. and return around 5:30. Cost of \$6 includes refreshments on the bus. You'll be on your own in the city. Full payment is due by tomorrow, Oct. 18, at the rec center, Bldg. 20155. D. J. Walker, 844-5420, is the contact.

There's an open house next weekend, Oct. 25, at the Very Large Array radio telescope facility west of Magdalena. It runs from 1 to 5 p.m. VLA is a visually spectacular array of 27 radio antennas, each weighing 210 tons and with a collecting dish diameter of 82 feet. The national research center is open for use by radio astronomers from the United States as well as from other countries. To get there, take Hwy. 60 west from Socorro; 25 miles west of Magdalena, turn south on Hwy. 78 to the VLA site.

We've Made Progress In The Way We Get To Work

If you stop a Sandian and ask how he or she gets to work, the chances are that he or she will tell you that it is not as a lone ranger, i.e., by themselves in an automobile, but rather by some other means of commuting—carpooling, busing, riding a bike or motorcycling. That's one of the findings in a commuting survey done at the Labs earlier this year.

Here are the actual percentages on how we get to work:

Drive alone	45%
Carpool	33%
Bus	10%
Bicycle	6%
Motorcycle	4%
Other (walk, run, etc.)	2%

That's progress. In '74, 64% drove in alone. Since then, the number who rideshare or motorcycle or bike has increased from 36% to 55%. A bunch of gas is being saved in the process—an estimated 648,000 gallons per year.

These findings and others are the subject of a recently released report, now available at the Tech Library, *Commuting Practices & Attitudes at Sandia National Laboratories in 1980*.

The survey which was the basis for this report went to a random sample of some 1400 employees. The return was 77%. Here is a mini-summary of other findings:

- our mean one-way commute distance is 9.6 miles
- having a sure, dependable means of commuting is the single most important factor to all commuters
- having flexibility is the main reason employees drive alone
- cost of commuting and parking problems are not major concerns to most respondents
- the drive-aloners tend to significantly underestimate their true cost of commuting
- compatibility with others was more important to carpoolers than to bus riders
- bicyclists are the only group feeling they use commute time constructively through exercise
- bus riders like avoiding the tensions of driving but were concerned about having to stand on overcrowded buses
- and 31% of the drive-aloners reported they were likely to change modes of commuting in the next year; if they follow through, this would mean 850 fewer employees driving alone.

So what? We discussed the results with Don Stone, who runs the Commuter Assistance desk in Benefits.

"For most commuters," Don says, "carpooling is still the best alternative to driving alone. By year end, we expect to have a centralized ridematching system to help employees find potential carpoolers in their areas. As a member of KAFB's

Employee Transportation Committee, we plan to work with other groups on base to make carpools, vanpools, and bus service feasible where there are too few Sandians to do so alone.

"We look for a slow but steady growth of vanpools and, possibly, we'll get some commercial van service. We're hoping to give each employee living 12 or more miles from the Labs an opportunity to learn more about vanpools. Sandia, of course, can't provide vans because of our government contractor status.

"The survey showed that ridership of Sun-Tran buses would increase by a third if buses were available. But we're told that won't happen for another two years.

"Since the survey was taken last spring, we haven't noticed any significant change in commuting habits. This could change, though, especially with the situation in the Middle East. One of Commuter Assistance's major responsibilities is to be able to respond to such a crisis, and we're confident we can."

Retiring



Granville Dourte - 1474



Jose Jojola - 1482



Margaret Lloyd - 2455



Filiberto Archibeque - 3613



Ruth Barth - 3155



John Ingram - 3425



Ruth Farley - 400



Ray Negus - 1481



John Chavez - 3613



The Thrift Shop—A 30-Year Rummage Sale

[Ed. Note: This article is another in the LAB NEWS series on Base facilities that may be used by Sandians.]

The Thrift Shop began nearly 30 years ago as a rummage sale. So says Helen Braden, manager. "The first sale was organized by the Officers' Wives Club to help a local couple pay for their daughter's medical expenses. That sale was so successful that we continued, and the Thrift Shop has since become the main source of revenue for the club's charitable work."

Thrift Shop volunteers accept as donations or take on consignment tools, books, cameras, radios, furniture, sports equipment, and clothing. Because of health restrictions, underclothing and bedding cannot be accepted. Similarly, the Shop cannot accept gasoline-powered devices because of the fire hazard.

Variety is the keynote. A 22-foot aluminum boat was recently sold, and items put up for sale have included a copper still and a set of lineman's tools complete with climbers. Most items are sold as is, but cameras, radios and TVs may be taken home for testing.

When a sale is completed, the owner of the item is mailed a check from which 20% is deducted as a commission.

The Thrift Shop is staffed by volunteers, some of them civilians and some from the military. They may work a few hours a week or full time. Mrs. Braden has been with the shop 17 years.

Because of the Thrift Shop, the Officers' Wives Club was able to donate \$16,000 to worthy causes in each of the last two years. The largest single expenditure, \$5000, goes for scholarships. The Shop also donates clothing and other goods. One family that lost all their personal belongings in a fire was given clothing, dishes and utensils to take care of short-term needs. Vietnamese refugees arriving in Albuquerque were also given clothing.

This facility, open to Sandians and their families, is located on "I" Street just south of the Bank of New Mexico. The telephone number is 265-3902.



THRIFT SHOP, just south of Bank of New Mexico, is a wondrous place for bargain hunter, do-it-yourselfer and collector of old Air Force uniforms. Sandians may buy or sell. Note hours on inset photo.

Fun & Games

Triathlon—Sponsored by the C-Club, the 4th annual Triathlon of Albuquerque, the Jay Benson Memorial, will take place Sunday, May 2, on KAFB. The unique event calls for ten miles by bike, five miles of running and a quarter-mile swim, all back-to-back without interruption. Entry forms are available at LAB NEWS (4-1053); all entrants get a Triathlon cap.

* * *

Running clinic—On Nov. 1, a Saturday, from 8 to 11 a.m., UNM cross-country coach Klaus Weber will present a jogging/running clinic at the Coronado Club. Klaus has an extensive background in sport physiology and sport medicine and is himself a marathoner. His two-hour presentation includes a question/answer

period and will be followed by an hour outside of practical application. Stretching, breathing techniques, temperature and altitude effects, and various training methods will be covered. Cost, \$1, and doughnuts and coffee you get for free.

* * *

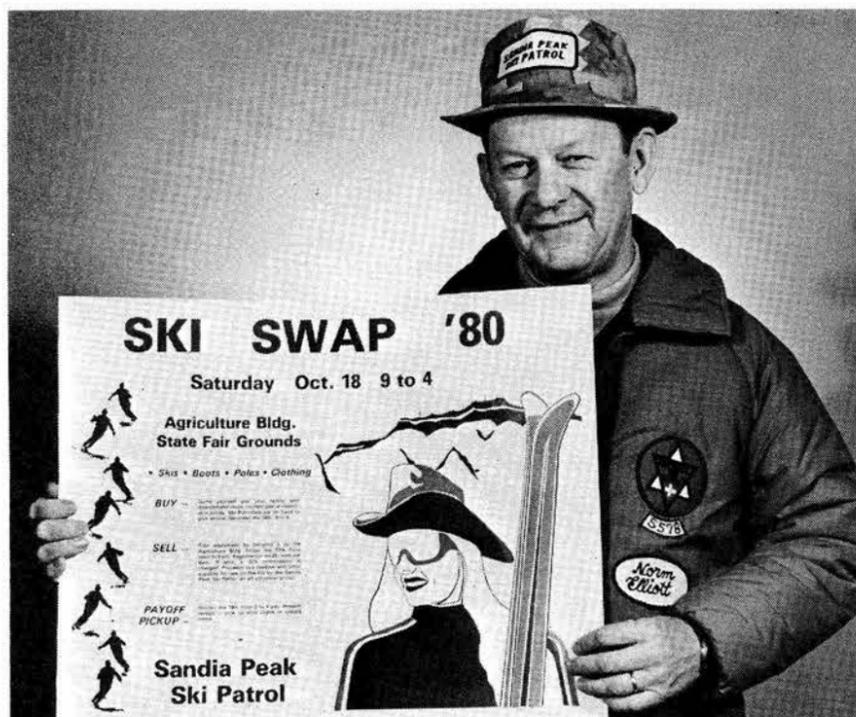
Arts & Crafts—The Center is offering these classes: lapidary, Oct. 22 from 6:30 to 8:30; ceramic pouring, Oct. 21 from 6:15 to 8:15; and basic stained glass, Oct. 22 at 6:15.

* * *

Basketball—An organizational meeting for the coming season is scheduled for Oct. 28, 4:45 p.m., in the Coronado Club. Men's and women's leagues are planned, and topics to be covered at the meeting include players' costs, officials' costs and additions to the women's league. Players of all skill levels are welcome. Ron Van Theemsche, 4-6824, is the contact.

* * *

Backgammon—C-Club rec manager Tom Lenz reports that he's going ahead with a tournament and it's set for Oct. 21 and 22 from 6 to 9 each evening. It's a fun tournament, Tom emphasizes, with no entry fee, and players of all levels of skill are invited. Register before 12 noon on Oct. 21 by calling Tom on 265-6791 or 4-8486. Players should provide their own boards, chips and dice for the Swiss movement style tournament.



NORM ELLIOTT (5627) is again running the Sandia Peak Ski Patrol's Ski Swap, which is set for this weekend. Norm says there'll be 7562 items of ski equipment, *mas o menos*, at the Swap this year, so skiers and would-be skiers—both downhill and cross country—will have much to choose from. The sale is tomorrow, but if you have stuff to sell, get it over to the Fair Grounds no later than 8 tonight (Friday).



Loud disco music does destroy hearing. But even if you can make the kids turn it down, they still aren't safe. Research by the NY League for the Hard of Hearing shows that disco damage isn't much worse than that caused by factory noise, the roar of snowmobiles or the high-pitched whine of food processors and vacuum cleaners.

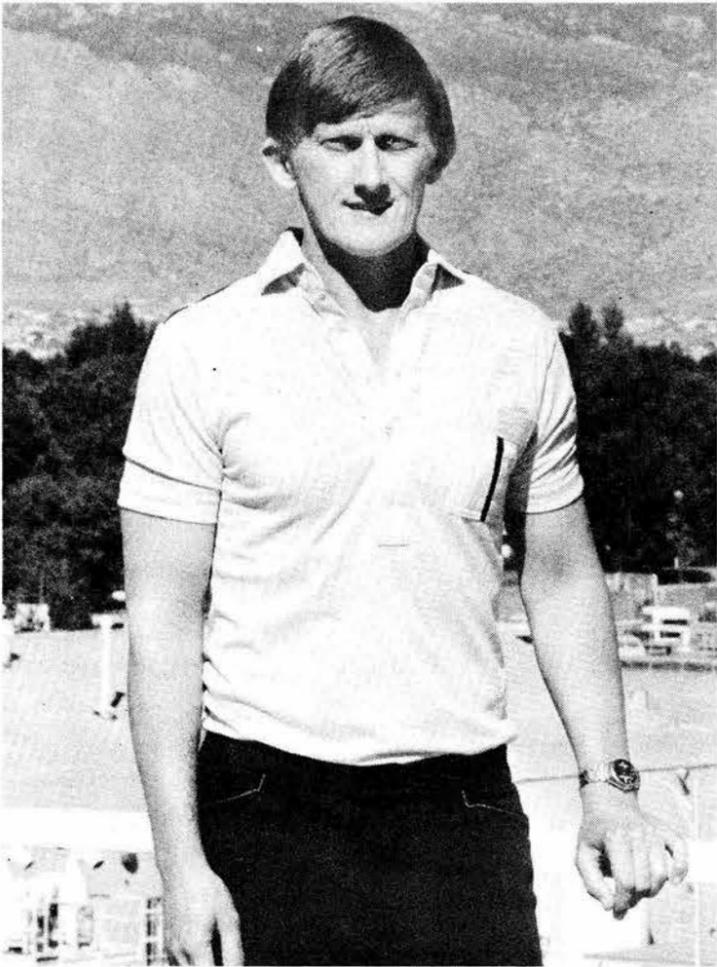
MILEPOSTS
LAB NEWS
OCTOBER 1980



Betty Brake - 5511 30



Charles Allen - 3422 30



Michael O'Bryant - 2458 20



John Foster - 1212 30



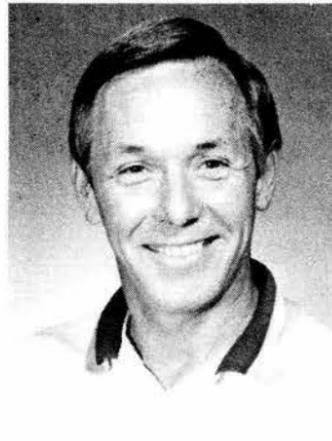
Gerald Cobb - 1556 30



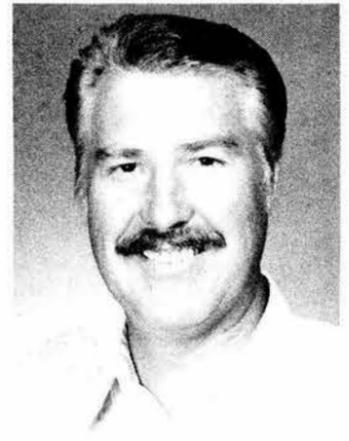
Fred Bentz - 3713 30



Milt Lesicka - 3435 30



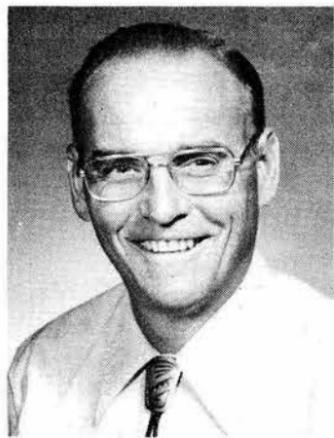
Jim Freeze - 5824 20



Ken Deller - 1243 20



Ray Pino - 1471 15



Ralph Johnson - 5815 15



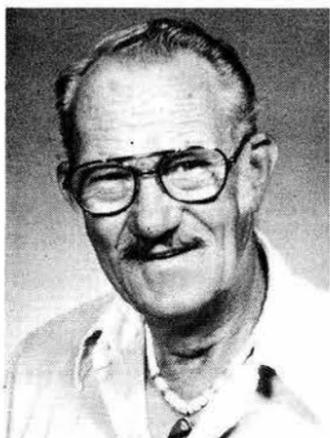
Luciano Archuleta - 3432 30



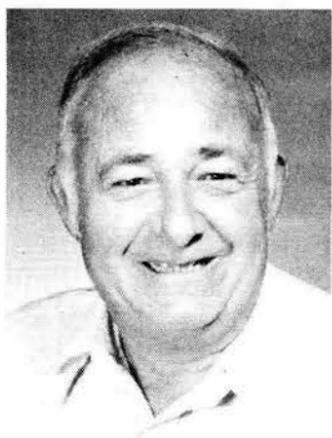
Phil Thacher - 2552 15



Richard Cash - 3432 30



Henry Austin - 3611 30



John Smelser - 1525 30



Art Castillo - 3741 30



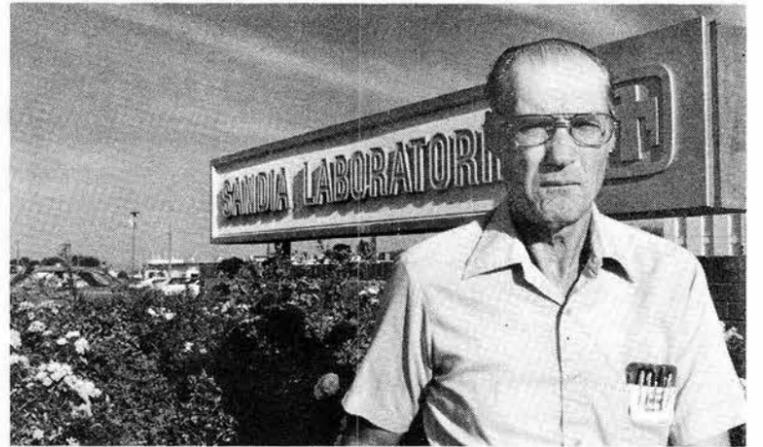
Ember Gunderson - 3441 30



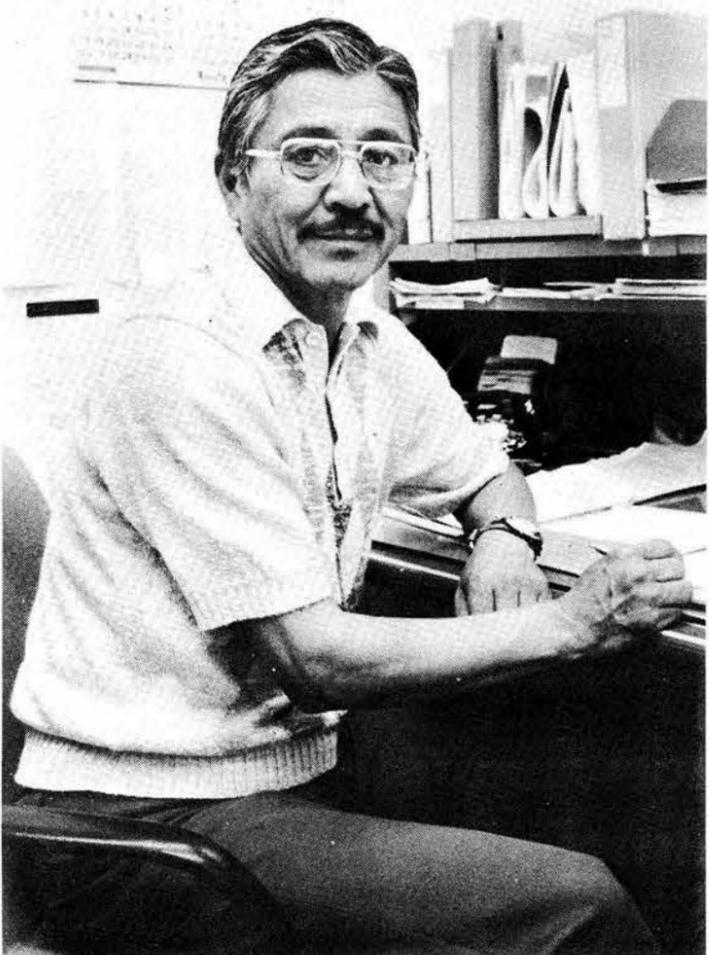
Lee Hollingsworth - 2600 30



Bill Camp 4425 10



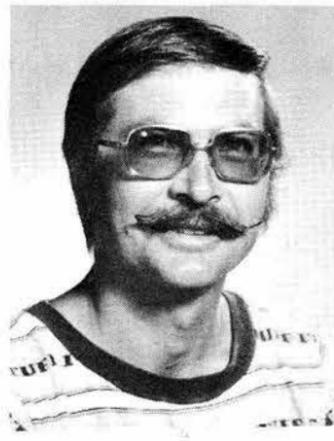
Myron Barnes - 3255 30



Ed Paul - 3741 30



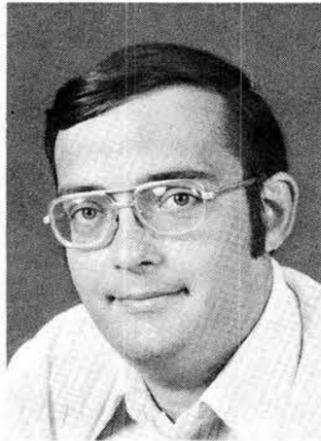
John Tenbrink - 4314 30



Fred Gleicher - 3641 10



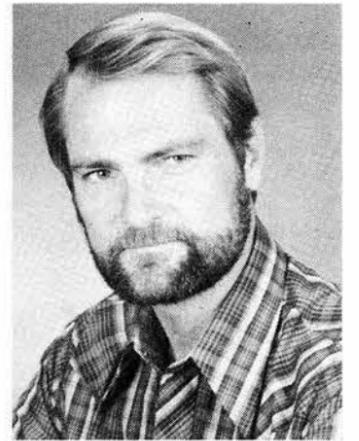
Bob Fleming - 3425 30



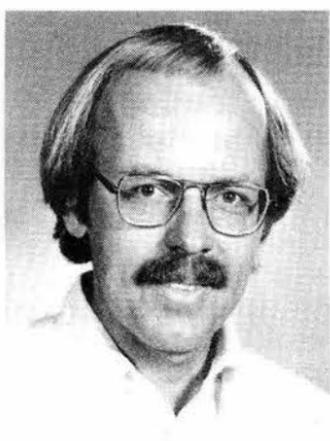
Joseph Iannucci - 8326 10



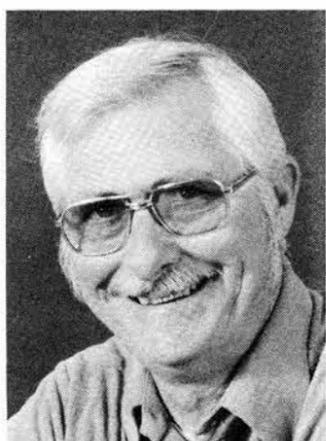
Everett Ard - 1417 30



Cal Feemster - 8315 15



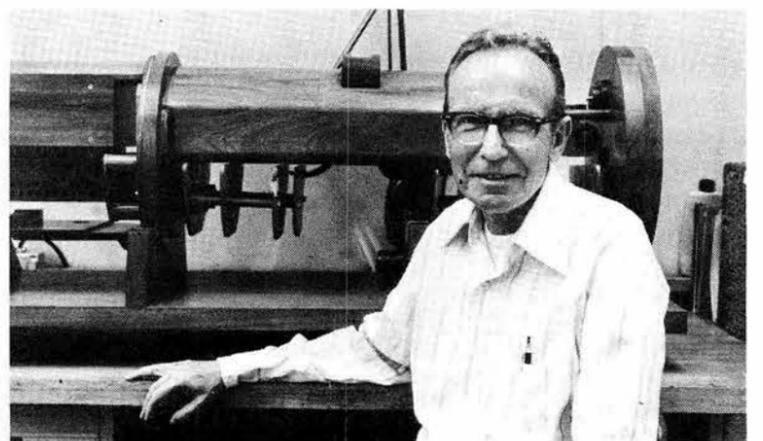
Craig Olson - 4241 10



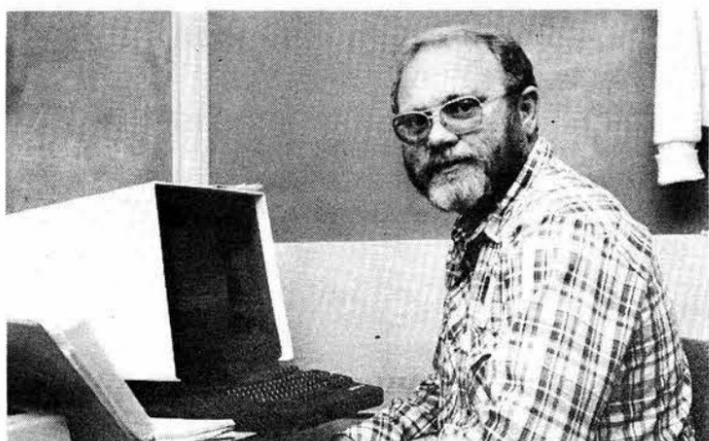
Karl Livingstone - 8412 20



Tom Sanchez - 3641 10



Granville Dourte - 1774 30



Neil Horton - 1241 15



Lillian Funk - 8273 20



Melvin Reynolds - 4542 30



Dale Peckumn - 3611 30

feed **back**

Q. I receive frequent TWX messages involving satellite data. These come to me in triplicate. All I need is one copy, and if I should ever wish more copies, there are reproducing machines in abundance. In the interest of conserving paper, I suggest Sandia make an effort to obtain TWX paper in one-ply, instead of three-ply.

A. Many messages recorded in the Communications Center have multiple SNLA addressees. The Center doesn't know how many copies are needed prior to receipt of message. Because of this, we have selected paper with the number of copies that will allow distribution in a significant number of cases without having

to use an office copier or repeated transmissions. Also, addressees often require multiple copies of incoming messages. Since there is no way the Communication Center can anticipate this, all available copies are sent to the addressee for his use or disposal as he sees fit.

L. E. Hollingsworth—2600

Q. The current self-service parts stores is the best we've had.

Some suggestions:

1. Instead of, or in addition to numbering bin areas, place a sign on the bin with the item name, such as: "Resistors," "Capacitors," "Screws," etc.

2. It would help if parts bins were alternate colors [only two colors would be

needed] where a block of bins in one color would be, say, all of part #440008-XXX, and an adjacent block in an alternate color would have #440010-XXX.

A. Both of your suggestions for the self-service store are good ideas. Your suggestion for color coding has already been implemented in the self-service store-room: blue bins for electronics, orange shelving for maintenance, and tan bins for hardware and stationery.

Regarding the specific item signs, we thought of the supermarket idea and have placed location signs on the south wall and rack numbers on top of each rack. These guides can be seen from almost any place in the store.

J. C. Strassel—3700

JUNK • GOODIES • TRASH • ANTIQUES • KLUNKERS • CREAM PUFFS • HOUSES • HOVELS • LOST • FOUND • WANTED • & THINGS

CLASSIFIED ADVERTISING

Deadline: Friday noon prior to week of publication unless changed by holiday. Mail to: Div. 3162 (M0125).

RULES

1. Limit 20 words.
2. One ad per issue per category.
3. Submit in writing. No phone-ins.
4. Use home telephone numbers.
5. For active and retired Sandians and DOE employees.
6. No commercial ads, please.
7. No more than two insertions of same ad.
8. Include name & organization.
9. Housing listed here for rent or sale is available for occupancy without regard to race, creed, color, or national origin.

MISCELLANEOUS

35 YARDS of used gold shag carpet w/pad. Schroeder, 344-1011.
 WARDROBE boxes & packing boxes; Early American loveseat. Domingues, 821-9061.
 GAS STOVE, Tappan, timer, clock, oven light, \$60; bed frame, reg., \$5. Ritter, 292-6410 after 5.
 INSTAPURE water filter by Water Pik, 3 replacement filter cartridges; attaches to faucet, new, \$30, sell for \$15. Schakade, 292-5126.
 TIRES, superwide traction M&S, 3 12-15LT, 2 10-15LT, raised white letters, dynamically balanced on chrome HD wheels, 8 holes, \$350. Hernandez, 268-5000.
 BASKETBALL unit, backboard, rim & poles, new, never installed, \$40. Ryan, 298-8692.
 FIREPLACE SCREEN, brass border w/black draw curtain; andirons, \$40 or best offer. Work, 293-9508.
 MUSICAL INSTRUMENTS: clarinets, trombone, snare drum & practice pad, drum set. Schafer, 299-6217.
 6' PATIO DOOR, used, w/frame, \$90; open weave patio drape, \$15; walnut decorator traverse rod, 52-90", \$5. McKay, 821-1950.
 FORD overhead loader, \$450; small cookstove, \$125; trailer built to haul antique cars, \$300; camper shell, LWB, as is, \$50. Jolly, 1-684-2430 (Canjilon NM).
 WET SUIT, custom made for young man 66" tall, 32" chest, \$33; close & play record player, \$10. Shenk, 296-6015.
 SNOW TIRES, B78-13 (6.50-13), mounted, balanced, on Vega wheels, \$50 for two. Jones, 255-7924.
 CASE TRACTOR, 3-point hitch, power takeoff, \$750 or best offer. Trujillo, 865-5438.
 COFFEE TABLE, kidney shaped, removable clear glass top, approx. 29"x40" on wood base, \$45. Waite, 867-5953.
 STEREO, AM-FM, 8-track, turntable w/speakers & stand, \$200 or best offer; 2-seater stroller & infant toys. Gross, 821-3761.

BARREL type naug. swivel chairs, shades of green (1), orange (1), \$45 ea. Siegrist, 299-3088.
 BURIAL LOTS, four lots in the original section of Sunset Memorial Park. Baker, 299-4840.
 WINDOWS, double pane, new, half price, \$60; child's horse w/all tack, \$400. Baker, 294-3334.
 SIMCO youth saddle, leather covered stirrups, 13 1/2" seat, \$175. Allen, 869-6680.
 CASSETTE STEREO, under dash Pioneer KP292, \$85; matching speakers also available. Lane, 884-4566.
 TWO COLOR TVs: 19" port., \$145; 25" console, \$185. McConnell, 268-3109.
 USED gold carpet, approx. 100 sq. yds., \$100. Purcell, 296-4986 after 5.
 TIRE CHAINS for 9.50x16.5 or 10.00x16.5 tires; one 10.00x16.5 tire, used. Fisher, 881-8072.
 CLARINET, B-flat, w/case, \$150. Stomp, 298-3824.
 PLANTS, all sizes: plant sale, Oct. 24-25, 3024 Carolina NE. Willey, 881-0071.
 GLASS FIREPLACE enclosure, Sears, used less than 1 yr., \$75; rear axle shafts for 1971 Blazer. Patterson, 299-1062.
 PHOTOGRAPHIC enlarger, old Federal model; developing trays, tank, etc., \$20. Philgreen, 256-1956.
 CAMPER SHELL, 7', insulated, wide rear opening, fits Ford Club Cab w/rear boot, \$145. Christenson, 281-5451.
 TWO 14" 5-lug wheels w/snow tires, \$25 ea. firm. Wowak, 298-9398.
 KENMORE canister vacuum, deluxe model, all attaches.; used green wool carpet. Freshour, 266-1662 after 5.
 STEREO, Sears compact, AM-FM-8-track, play/record, record changer, microphones, 9 1/2" w x 17" h bookshelf speakers, \$100; 8-track 32-slot carousel, \$10. Conley, 296-0695.
 CONSOLE PIANO, Lowery, French Provincial, tuned regularly, \$1250. McIlroy, 8907 Los Arboles Ave. NE, 299-4977.
 SEARS Kenmore port. clothes washer, 6 mos. old, can be permanently installed. Mowry, 242-3605.
 LUGGAGE, ladies' 26" pullman & matching tote, burgundy vinyl, on wheels. Presto combination lock. Easton, 256-7717.
 GIRLS' BIKE, 20", \$35; tricycle, \$15; child's patio chair, \$7. Stephenson, 898-4126 after 6.
 DRAFTING TABLE, desk combination, heavy metal construction, \$75 firm. Jones, 281-3617 after 5.
 KONICA 35mm S-3 camera, w/case & filter, \$105; Sears hand vacuum, \$10; CB trunk mount w/cable, \$5. Schubeck, 294-5666.
 ONE Lobo basketball season ticket '80-'81. Romero, 299-5189.
 GARAGE SALE, Sat. 9-5, Sun. 1-5: tools, typewriter, A78-13 snow tires, golf clubs, Christmas decorations, blankets, household goods, hi-fi parts. Ronan, 7701 Spring Ave. NE, 268-0726.
 TV, 21" Sylvania color table model. Stoeber, 296-3717.
 CAMERA, 35mm Olympus OM-10,

used 2 weeks, orig. warranty card, body \$155, w/1.8 lens, \$205; case \$10. Conley, 296-0695.
 GARAGE SALE, Oct. 18 & 19, 9 a.m.-5 p.m., 4313 Andrew NE: books, camping, fishing, gas welding outfit, household articles, piano, tools, toys. Swanson, 884-8650.
 DISHWASHER, M. Ward Signature, 5-cycle, portable. Warrick, 344-5057 after 5.
 FOUR 15", 6-hole lug pattern wheels, two mounted w/H78-15 snow tires, fit Toyota Land Cruiser & some GM pickups, \$50. Robinett, 344-6507.
 FREE to good home: 2-yr.-old white female Shepherd type dog, spayed, loves children. O'Brien, 268-6995.
 FREE PUPPIES, 6 wks. old, half mini-dachshund, to good home. Kemm, 821-8795.
 WOODBURNING STOVE, Upland 207, solid cast iron, operates in "airtight" or fp mode, logs to 26", fire-brick lined, includes cast iron grate & damper, \$500. Kraynik, 294-1043.
 REFRIGERATOR, 12.5 cu. ft., Gibson, \$65; 2 recliner chairs, \$15 ea.; red/gold sofa, \$45; 2 new recap tires, G78-15, \$15 ea. Barham, 298-7304.
 TERRAZZO TILE, 12"x12" squares, \$1.25/sq. Jacoby, 281-3130.
 COTTONLESS cottonwood trees, all sizes; crab apple; purple leaf plum; honey locust, all homegrown; 1500-gal. water storage tank. Sparks, 898-1252.
 MARANTZ 2220 stereo, 20W/CH, Pioneer PL-12D turntable, Sure M91-ED stylus/cartridge, both \$135; receiver, \$110; turntable, \$35. Roesch, 296-8248.
 GARAGE SALE, Sat., Oct. 18: furniture, antiques, misc. Corner of Rio Grande & Dietz Pl., then follow signs. Crago, 345-2068.
 CRAFTSMAN shop-vac, wet or dry; shop manuals for '72 Chevy pickup; spanner wrench for Chevy 4-wd front hubs. Stevens, 884-7984.
 COUCH, converts to bed, \$90; Danish style chairs, \$10-\$15; Jr. bed, \$20. Kuswa, 821-4883.
 STARTER SET of Franciscan Jamaica stoneware, 4 place settings, new, never used; current cost \$134, sell our cost \$75. Riley, 821-6431.
 TELESCOPE, Jason model 313 w/SLR & equatorial mount, 60mm objective, 910mm focal length, 45X \$200. West, 255-5855.
 COLONIAL ROCKER w/3" solid wood seat, hardwood legs & turnings, fp screen, fits opening 26"x34"; Garrard SL72 auto. turntable; Edmund 3" telescope. Peters, 293-6356.
 BATHROOM SINK, 18 1/2" w x 17d x 9h, pale green w/Eljer chrome fittings, pop-up drain, \$30. Joseph, 299-6989.

TRANSPORTATION

MINI BIKE, Rupp Roadster, 4 1/2 HP, 4-cycle, \$150. Longfellow, 299-7062.
 '80 KAWASAKI 1000 LTD, cruise lock, sissy bar, luggage rack, windjammer IV, unique blue, \$3650. McCampbell, 293-5113.

'76 MAZDA RX4, 5-spd., AM-FM radio, 36,000 miles, \$2500. Brooks, 821-0885.
 '74 YAMAHA MX250, approx. 60 hours use, \$500. Schafer, 299-6217.
 '78 FORD Fairmont wagon, 4-spd., air, \$3900. Fink, 836-3532.
 '56 DE SOTO Firestone, restored, 330 cu. in. hemi engine, orig. owner, \$975. Newton, 884-4953.
 '78 CHEVY VAN, FM-AM-8-track radio, TV connection, wet bar, 4 new tires, \$5400. Candelaria, Belen NM, 864-7542.
 '67 PONTIAC GTO, \$1800. Holcomb, 255-4046 or 255-5694.
 '73 OLDS 88, 70K miles, \$900. Hillman, 821-9043.
 '79 GRANADA 4-dr., 6-cyl., 4-spd. OD, AC, PS, \$4600; '77 Mark Twain boat, 17 1/2', 140 hp Evinrude, trailer, \$4950; '72 Polaris & '73 Rupp snowmobiles, tilt trailer, \$975. Kessler, 865-5519.
 '72 VEGA hatchback, SB tires, rebuilt steel sleeved engine, 20 mpg, 4-spd., \$750 cash. Vigil, 1-832-4550.
 '73 GRAN FURY, 4-dr., air, PS, PB, AM, below book, \$495. Shumway, 865-7160.
 '77 DATSUN 280Z, turbo, 54,000 miles, 5-spd., AC, AM-FM cassette, shade, mags. Johnson, 884-5118.
 '74 VOLVO 142E, 4-spd., AC, new brakes, recent tires, battery. Lane, 884-4566.
 '65 HONDA 305cc, \$400. Marquez, 344-8455.
 '64 CHRYSLER Imperial, 4-dr., PS, PB, AC, \$2500, low mileage, orig. owner. Campbell, 255-4271.
 '79 TOYOTA Corolla deluxe, 2-dr. sedan, AC, AT, radio, \$400 under book, consider trade for small pickup. Patterson, 299-1062.
 '75 HONDA Civic, 39,000 miles. Banach, 292-3127.
 '76 FIAT 131S, 4-dr., new radials, AC, AM-FM stereo tape, 39,000 miles, 4500 on engine, \$2750. Hughes, 255-4832.
 SCHWINN Scrambler boys' bicycle, 2 1/2 yrs. old, \$60 (new about \$160). Kjeldgaard, 268-8835.
 '77 YAMAHA 500 w/windshield. Mowry, 242-3605.
 '74 DATSUN 260Z 2+2, copper, 4-spd., AC, AM-FM radio, \$3200 or best offer. Eichorn, 345-2273 after 6.
 '79 YAMAHA YZ250F motocross bike, pro-port, new tires, \$1300; Moto-X Fox mono-airshock, \$150. Navratil, 292-3987, 293-5527.
 '78 AMC Concord D/L stn. wgn., loaded, below list. Trudell, 294-6669.
 '76 FIAT 4-dr., 5-spd., AM-FM, 42,000 miles, \$2250; '73 Datsun 610 SW, 4-dr., 4-spd., 67,000 miles, \$1650. Lackey, 898-6638.
 '70 MAVERICK, 6-cyl., stick, factory air, steel radials, \$695. Coalson, 298-0061.
 '72 MUSTANG, chrome wire wheels, AC, AM-FM cassette, \$1975. Montoya, 883-9115.
 '71 VOLKSWAGEN fastback, AM-FM stereo, new tires, fuel injection, \$1650. Sparks, 898-1252.
 '78 FORD pickup, Lariat Ranger Super Cab, fully loaded, w/Tiltin Hiltin 9 1/2' camper. Davis, 294-0139.
 '74 PINTO, 2-dr., white, radio, stick shift, SB radials, 48,000 miles, new windshield. Forsythe, 298-4034.

WANTED

SPEEDOMETER for 1970 VW. Arning, 256-9229.
 BOY'S sportcoat or suit, size 10 or 12. Harrigan, 266-4143.
 NOTRE DAME vs. Arizona football tickets. Fitzpatrick, 294-4758.
 PUMP HOUSING, self priming, good condition, muffin fans, any size, good condition. Prior, 296-2930 after 6.
 1967 or 1968 VW BUG chassis & transmission or junker. Smith, 299-8512 after 5.
 GOOD HOME for a lovable male St. Bernard, 22 mos., needs room & kids. Freshour, 266-1662 after 5.
 17-21' TRAVEL TRAILER, self-contained, good condition, age not important. Baker, 294-3334.
 TELESCOPE, prefer 4" or 6" Newtonian with mount & clock drive, will consider others. Dawson, 243-6829.
 FOR 1969 Cougar: LF fender & extension, hood, grill & bumpers. Longfellow, 299-7062.
 12" BANDSAW. Gallegos, 294-0613.
 APT. SIZE FREEZER to rent for 2 weeks, Nov. 1. Foster, 265-0069.
 HOME for old English sheepdog, female, spayed, registered, shots, 4 years, min. 2 acres country, fenced, no highway, family, children, animals. Roberts, 255-9527.

REAL ESTATE FOR SALE

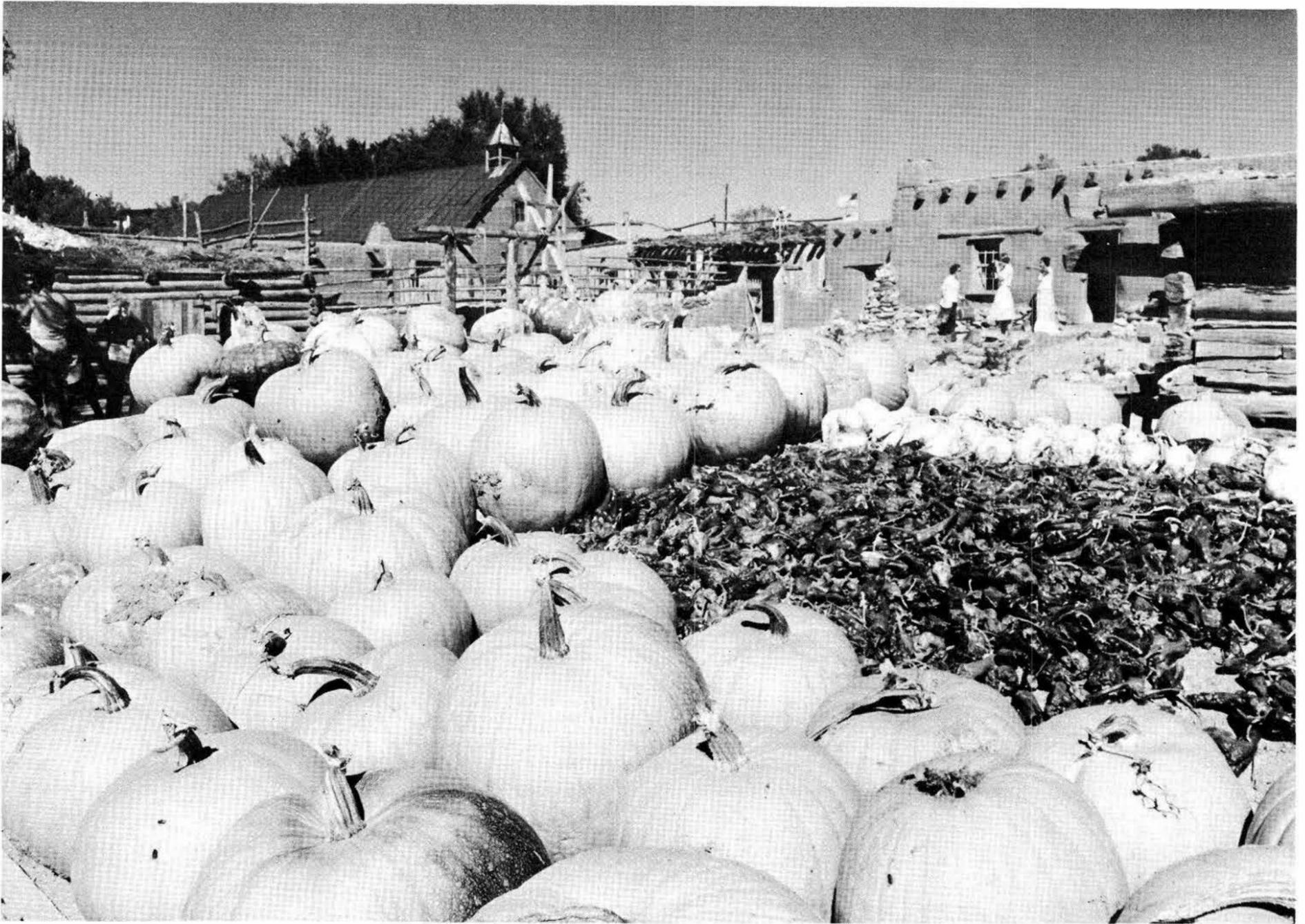
IMPROVED LAND, Placitas NM, 1 acre w/fruit trees, equipped w/mobile home, 3-bdr., including gas, electricity & water, \$12,000. Candelaria, Belen NM, 864-7542.
 HOUSE in Tijeras NM, 3-bdr., 2 baths, FR w/lava rock fireplace, split level, dbl. garage, barn & corral, 1 1/2 acres. Christenson, 821-5451.
 40 ACRES cleared ranchland, mountain views, 27 miles south Hiway 14, \$36,000, terms. Dytzel, 883-8702.

WORK WANTED

DAY CARE, weekdays in private home, ages 1-4 yrs., recreation & nutrition programs, \$35/week. Juan Tabo & Central. Kulju, 299-8182.

SHARE-A-RIDE

WANTED: a fourth person for car pool from Paradise Hills to Tech Area I. Dengler, 898-5064.
 CAR POOL TO UNM from Sandia MWF for 10-10:50 class. Prefer someone in Chemistry 121. Mowry, 242-3605.



WHEN it's pumpkin time, the goblins, elves, witches and kindred folk can't be far behind. They'll all be on hand at the C-Club's Halloween party for kids on

the 30th. LAB NEWSER Gerse Martinez caught this collection at La Cienega south of Santa Fe.



Those of us who through the years have steadfastly maintained our belief in the existence of alligators in the New York sewer system have finally been vindicated. It was recently revealed that in 1935, Teddy May, New York's sewer commissioner, personally descended, flashlight in hand, to investigate. He found alligators about two feet in length, whereupon he started an extermination campaign. By 1937 he was able to announce that the 'gators were gone. Reported sightings in 1948 and 1966 were not confirmed. The Big Apple may rest easy.

Coronado Club Activities

Oktoberfest & Halloween Highlighted

TONIGHT the buffet features King Crab or a 16-oz. T-Bone. Dinner will be served from 6-8 p.m., and the Freddie Chavez Foundation will provide music until 12:30 a.m.

Next Friday, the 24th, it's all you can eat of fried fish, French fries, cole slaw and hush puppies for \$4.50. Gene Corbin will be in the lounge from 5 to 7 and the Bob Banks Trio will play for dancing from 8-12.

THE C-CLUB SKI CLUB will present "Ski Colorado" on the 21st with an up-date on the Purgatory ski scene. Starts at 7.

SATURDAY NIGHT SPECIAL on the 25th is Oktoberfest, featuring bratwurst and sauerbraten in the dining room, light and dark German beer at all locations, and Die Polka Schlingels on the bandstand from 8:30 to 12:30. Reservations by the 18th; members \$8.75, guests \$11.

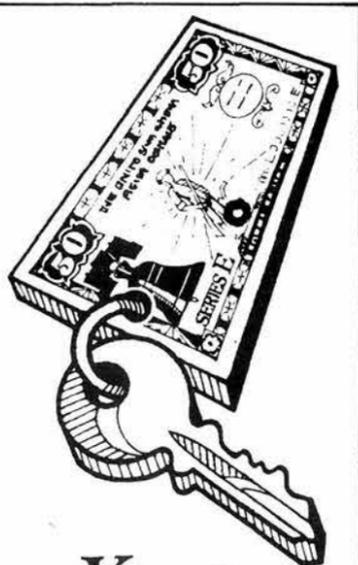
KIDS' HALLOWEEN PARTY on the 30th features the House of Horrors, games and a costume contest and parade. Seventy-five cents buys a youngster a ticket for the House of Horrors, a Coke, popcorn and five games. This party will be fun for the entire family.

A COSTUME CAPER on the 31st takes care of adult Halloween entertainment. Happy Hour from 4:30 p.m. followed by dinner—Red Snapper or NY Strip—at 6 p.m. "Together" will be on the bandstand from 8-midnight. Special prizes will be awarded for outstanding costumes (accommodations for changing and make-up available at the Club).

TRAVEL—Space is now available on two air-sea cruises. Sail out of Miami (Dec. 13-21) on the *Carnivale* and stop at four ports for \$780 (category 4). Or sail out of San Juan (Jan. 3-10) on the *Amerikanis* and stop at seven ports for \$1125 (category 6). The price includes the entire package.

The holiday bus tour (Dec. 28-Jan. 4) to Anaheim is now "go" but some space is still left. This eight-day tour takes in the Rose Bowl Parade, Disneyland, Wild Animal Safari, and the Queen Mary, and throws in the Grand Canyon for good measure. Price is \$315 per person, double occupancy.

Come by the trip table at the Club any Friday after work to pick up trip literature and talk about new trips with Frank or Mary Anne Biggs.



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