Sandra Laboratories Develops First Transparent Ceramic

An AEC patent application has been filed for a new transparent electroceramic which can be used to generate black and white and color images. Gene Haertling (2317) has developed the ceramic.

The new material — the first transparent ferroelectric ceramic — is expected to remove many of the technical problems which have delayed application of ferroelectric ceramics to memory and display devices similar to those used in computer systems.

Ferroelectric ceramics previously used to generate images have been difficult to store information in response to electrical pulses and have only limited application capabilities. For example, ferroelectric materials are used in memory devices of Sandia, Los Alamos Scientific Laboratory, and the Air Force Electronics Laboratory.

Major applications of ferroelectric ceramics require deposition of electrodes on the ceramic surface and positioning the material between crossed polarizers. The desired image effects are produced by applying the correct electric field to the ferroelectric cells between electrodes. These effects remain even after the field is removed, giving the material a true “memory.”

When used as a memory or display device, the ceramic contains many rows of tiny light-sensitive detector cells — rather like the grid of dots which make up a television photograph. Thus, color images, such as numbers and letters, can be made up of many such information cells which are individually “commanded” to transmit a given color.

In black and white displays and in memories, these cells transmit varying intensities of light, thereby appearing as different shades of grey. The image display may be viewed directly, or the intensity pattern may be transmitted to a photographic slide. It becomes an electronic “memory,” when small light-sensitive detectors are attached to each information cell. The image is then converted into an electrical signal — the brighter the light, the stronger the signal — which can be interpreted as a message for computer use.

The ceramic also may be used to vary the intensity of a light beam, much as a crystal is used to amplify-modulate an AM radio signal or to turn on a television camera. The new material (PELT) — made up of lead lanthanum, lead zirconium, and titanium — differs from the earlier material — lead zirconate-lead titanate — in three major aspects:

— Because it is more transparent, it will produce black-white contrasts of as much as 1000 to 1, and a complete range of colours. Contrasts on the earlier, translucent material were limited to about 100-1, and there was difficulty in achieving blue and violet display cells.

— It is more versatile, being a class of three ceramic types which are particularly useful as (a) memories and optical display devices; (b) light modulators which produce a linear response to an applied electric field; and (c) high-sensitivity light modulators which have a quadratic response to an applied field.

— It may be changed from an electro-optically active state to a neutral state by electrical means. Previously this could be done only by raising the material’s temperature above a certain level.

Gene has been division supervisor of the Active Ceramics Materials Division since 1966. He joined Sandia in 1941 and has been doing materials research in applied research organizations since that time. He previously was a co-inventor with Cecil Land (2317) of a ceramic electrical memory device.

The latest invention was described by Gene and Cecil in papers read at the annual meeting and exposition of the American Ceramic Society this past week.

Dean Irvin Named As USAR School Commandant

Dean Irvin (3121) has been named commandant of the 4153rd U.S. Army Reserve School located at Sandia Base.

Dean, a reserve colonel, replaces Col. Leonard Keeling Jr., who is retiring.

The school provides basic, advanced, and general and special staff college courses for Reserve and Guard officers. National security management source for basic to high staff college in military and civilian life are also sponsored, as well as a non-commissioned officer's academy.

Sandra Rocket Series Underway at Kauai

A series of rocket launches is now underway from Barking Sands Launch Facility on Kauai. The series, which will continue through June 11, is part of Sandia’s continuing program of upper atmosphere research.

The tests involve high altitude experiments of Sbanda, Los Alamos Scientific Laboratory and Lawrence Radiation Laboratory.

Three of the rockets, tentatively scheduled to be fired during the early evening hours, will produce luminous clouds which may be observed by residents throughout the island.

The clouds will be formed by the release of barium from the rockets’ nose cones. Initially, clouds will be of a light green color but will change to an orange-red following a sustained ignition caused by ionization of the barium by the sunlight at high altitudes. Sandia is responsible for tracking, telemetry and rocket systems in addition to range support for the launches. Test director at the site is Al Huters, supervisor of Sandia’s Test Operations Division 9222.

May is "Rally Round the Flag Month."

In a few days you’ll receive a pamphlet that tells you why its plain good sense to save regularly through the Sandia Intern Payroll Deduction Plan.

If you’re not saving through this plan now, think about it. It’s one of the surest ways to build up a fund. When you’re saving through the Payroll Savings Plan, your money is set aside before you see your pay check, making this part of your thrift program steady and automatic.

Interest on bonds now, up to five percent, is subject to federal income taxes, but reporting of bond interest may be deferred until bond is cashed or mature.

Thus, tax savings may be realized when bonds are bought, as for retirement purposes. A retirement plan to give you a tax break would work this way:

1. Purchase "E" bonds during working years.
2. Cash the bonds after retirement.
3. Report interest as income on federal tax return.

Income is usually lower after retirement, and with double tax exemption after age 65, taxes on the interest are greatly reduced or eliminated entirely.

Here are a few more reasons why purchase of Savings Bonds through payroll deduction makes good sense:

—There is no safer investment in the world than U.S. Savings Bonds. Savings Bonds are impervious to market fluctuations, and both principal and interest are fully guaranteed. Savings Bonds are replaced free if lost, stolen or destroyed, with no loss of accumulated interest.

—Savings Bonds are a source of ready cash in the event of financial crisis. They can be redeemed without charge for their face price, plus any accumulated interest, anytime after two months from issuance.

—Savings Bonds are an ideal way to save for specific goals — building a new home, a college fund, or retirement. In addition, investing in Savings Bonds is investing in America’s security and economic growth.

Since 1941, Americans in all walks of life have purchased more than $175 billion in E and H Bonds. Since that time, more than $125 billion in savings and accumulated interest have been withdrawn and put back into local economies. Americans still hold some $51 billion in bonds as a reserve against future wants and emergencies.

Eighty-three percent of Sandians now participate. If you aren’t enrolled, think about it. Give yourself a real health a boost and your country’s as well.
Baja Idyll

Sailing Sandians Cross Gulf
Of California in Small Boat

The ocean it is not. The Gulf of California is only about 68 miles across, from the mainland of Mexico to Baja California. But to a trio of Sandians, the Gulf was formidable from the deck of a 22-foot Ventura sailboat.

The Sandians — Roger Eaton (9341), Larry Rollstin (9324), and Bob Croll (9322) — recently spent a week sailing from Bahia Kino across to Bahia San Francisco and back in Roger's boat. Along the way they explored some barren islands, saw a school of whales, a lot of porpoises, about 200 sea lions, and only one other human being.

"We ran into some rain (practically unheard of in this area) and some six-foot waves," Roger says, "so it got rough a few times. Most of the time, though, we had smooth sailing and quiet anchoring.

A lot of planning went into the trip — careful selection of supplies, storing sufficient water, charting the course and anchorage, assembling a first aid kit and rounding up a citizen's band radio.

"We were prepared for everything except the cold water," Roger says. "It was too cold for swimming. And we didn't catch a single fish. Other than that, it was a great trip."

GULF OF CALIFORNIA looks mighty formidable to Larry Rollstin (9324) and Bob Croll (9322) from the deck of a 22-ft. sailboat.

Sympathy

To James Peeler (4155) for the death of his mother in Washington.

To Roger Abbott (7250-P) for the death of his father April 9 in Mindel, N.D.

To Riel Lenner (7581) for the death of his sister on April 9.

To Margie Tinker (4211-L) for the death of his wife in Houston, Texas.

To Dora Dyer (6021) for the death of her mother on April 11 in Nebraska.

To Woodrow Littrell (3584) for the death of his mother-in-law in Albuquerque, April 31.

To Larry Avila (3520) for the death of his mother-in-law in El Paso, April 29.

To Roy Hasebroek (formerly 7623) for the death of his wife in Albuquerque, April 31.

To Harry Kinney (1123) for the death of his father in Albuquerque, April 27.

To Ken Hoke (11761) for the death of his father in West, Texas on April 31.

EIGHTEEN Sandians recently served as judges for the 11th Annual Northwestern New Mexico Regional Science Fair. Looking over a chemistry exhibit on water pollution are (L to r) Ben Seely (5423), Buzz Milton (5333), and Sam Levy (2343).
EARTH DAY AT LIVERMORE—Among Sandians who joined in the national observance of Earth Day were those who chose to show their concern for the environment by spending a day to work. Early in the morning, this group was seen heading east from Livermore on route to the Laboratory.

Take Note

Gary Brummond (8222) and Bob Shuster (8172) have been appointed to the Livermore Beautification Committee in the City Council. The 11-member committee is responsible for beautification efforts in the local area.

Two Sandians were recently elected officers of the Livermore Valley Charter Chapter of the American Business Women's Association — Mary Muser and Nancy Martin (both 8253) will serve as treasurer and recording secretary, respectively, for the upcoming year.

Dick Ballard (8212) shot a low net score of 67 to win the first place trophy in the San Diego Employees Golf Club tournament played at Sandia West Golf Course in Hayward April 11. Tied for second place with scores of 71 were Bill Landi (8139) and Glen Funk (8172). Smokeless powder (8222) was closest to the pin in the hole-in-one event.

Bruce Held of Environmental Health and Medical Services Division 8263 will participate in a day long conference on “The Environment — A Search for the Answers,” on Saturday, May 16. The conference will be held in the Livermore High School Auditorium. Morning discussions will concern environment legislation now under consideration. Participants include U.S. Representative Jerome Waldie, State Senators John Meyers and Nicholas Petris, and California Assemblyman John Knox. Afternoon panels include Bruce who is a member of the State Environmental Study Council; John Maga, executive officer of California’s Air Resources Board; James Kenney and Edward Melhuish from the Bay Area Air Pollution Control District; and Ernest Shurman, a member of the technical committee of the State’s Air Resources Board. The conference is open to the public.

Sympathy

To Ralph Couri (8126) for the death of his father-in-law in Manhattan, Kan., March 20.

To Helen Boyd (8129) for the death of her sister in Mammouth Lake, Calif., March 27.

Congratulations

John Henning (8222-2) and Kathryn Meoletter married in Livermore, March 21. Mr. and Mrs. Cal Peemster (8311), a son, Richard William, March 9.

Death

Ruth Brocketti died suddenly last month at the age of 61. She was a recent Sandian retiree. She had worked at Sandia Laboratories Livermore since February 1964 primarily as a department secretary in advanced systems and technical information organizations.

Survivors include her mother, a nephew, and two half brothers.

Authors


They’re Gone! All those card catalogs in the technical library (behind Catherine Fifield) have been replaced by handy book catalogs arranged by author and permuted subject titles. Monthly additions will supplement the annual reissue of the catalog.

Phonon Frequencies on the Pseudopotential Farm Fitter for Aluminum,” Vol. 187, No. 3, PHYSICAL REVIEW.

W. C. Peterson (8141), “An Experimental Study of Laminar Hypersonic Blunt Cone Wake,” December issue, ASTRONAUTICA ACTA.


Spring is nesting season at the rookery on the Aubudan Canyon Ranch, where on the shores of Polkina Lagoon in Marin County great blue herons and egrets court, mate, and raise their young. Visitors to the ranch may study the birds, hike in the woods, and picnic. The ranch is located on State Route One, three miles north of Stinson Beach, and is identified by a sign and white frame house. The driveway runs past the house to a parking area beyond. In the nearby barn, a display explains and illustrates the natural and human history of the area, as well as the habitats of the big birds.

Tymsick conditions exist here for the breeding of herons and egrets. They build their nests on the tops of redwood trees, where the eggs and nestlings are safe. About a quarter of a mile away are the nesting grounds, the tidal mudflats of the lagoon. Aubudan Ranch is open weekends and holidays from 10 a.m. to 4 p.m., through July 5. A map of the ranch trails is available when registering with the Audubon Society member on duty. The most popular trail leads to Henderson Overlook, which has a good view down into the nests. Tele- scopes are available for close-up looks. In addition, there are the Bert Harwell Trail — a short, nature trail in the Garden Club of American Canyon, and the three-mile Martin Griffin Trail — a loop hike around American Canyon.

No admission is charged at Aubudan Ranch, but donations may be made to purchase additional land and to help fight the dangers threatening the survival of the herons and egrets. There is a possibility that the lagoon will be turned into a small- boat harbor, and there could be further timber cutting in the watershed. There are also some signs of pesticide poisoning in the bird colony, such as nest failures and thin eggshells.

Touring Northern California

Bird-Watchers’ Special

J. Chaffin (2623) and E. P. EerNisse (University of California at San Diego) and L. R. Edwards (5132), “On Uniform Simplification of Linear Differential Equation in a Scale Factor,” JOURNAL OF MATHEMATICAL ANALYSIS AND APPLICATIONS.

D. C. Wallace (5151), “Dependence of Pressure on Beryllium Copper (Superplastic Adhesion Problems),” March issue, PLATING MAGAZINE.


J. A. Borders (8123) and R. F. Northrop (5112), “A Poor Man’s TRIAPAT’ Cathode,” Vol. 80, No. 1, PROCEEDINGS OF THE PHYSICAL SOCIETY.


P. S. Peery, R. E. Jones, J. C. Buhdah (all 5114), and G. W. Cullin (5110), “Ultrafast Rise Time Laser-Induced Stress Waves,” Vol. 16, No. 3, APPLIED PHYSICS LETTERS.


J. H. Ewing (5342), “Early in the morning, this group was seen heading east from Livermore on route to the Laboratory.


J. H. Ewing (5342), “Early in the morning, this group was seen heading east from Livermore on route to the Laboratory.


Randy King Racing Bikes at Speedway

Randy King (2452) races motorcycles. Stile Speedway Park opened April 14. He has competed in the novice class.

Last summer he was on the track just about every Friday night competing in the novice class.

"My bike was really a dog," Randy says. "I was learning the sport. Motorcycle racing is a ball—a kind of excitement that you can't get anywhere else."

Now with a new motorcycle (an American Eagle 296cc stripped to a bone lean 220 lbs. and modified to turn over in less than four minutes), Randy hopes to carry the winner's trophy at Speedway in less than four minutes.

KING OF SPEED — Randy King, that is 2452, is ready for racing season. His new American Eagle racing bike has been stripped to 220 lbs. and the two-stroke single-cylinder engine is modified to give more air and pull 10,000 rpm. In photo at left, Randy wears protective leather suit and steel protective cap on his left boot.

The racing bikes have no brakes. This prevents panic stops and pile ups during a race. Instead, the driver uses motor compression and a kill button to slow his bike.

"But we don't do it to make money," Randy says. "You can make expenses if you are lucky. It's the thrill of those four minutes that count."

In addition to luck, the motorcycle racer needs skill. The track turns continuously to the left so the racer is continually leaning on his left leg. He wears a steel protective cap and bracket over his left boot and uses the left leg for support and balance as he lays into the turn.

The racing bikes have no brakes. This prevents panic stops and pile ups during a race. Instead, the driver uses motor compression and a kill button to slow his bike.

"The race is a scramble," Randy says. "It's all or nothing. The old adrenaline really pumps through your veins."

Other Sandians involved in motorcycle racing at Speedway include James Melton (2454), 36-steward; Joe Albin (2342); announcer; and Fred Gustke (2354) and Bob Holloway (7615); (agmen).

NEW CHAIRMAN of the Wagon Contractors Classification Committee, Frank Shearin (left) from Mound Laboratory, smilingly takes over duties from outgoing chairman Jim Marsh, head of Classification Division 3414. WCCC, which includes all integrated contractors, meets periodically to discuss nuclear weapons classification policies and problems.

Two Sandians were recently elected officers of the new organization The New Mexico Chapter Chicano Manuel Chavez (4515) was elected president and Martin Quintana (4511) was elected treasurer.

A master's thesis painting exhibition by Ken Miller of Technical Art Division 3417 will be on display at the University of New Mexico Art Museum through May 17. The museum is open from 10 a.m. to 5 p.m. Monday through Friday and from noon until 5 p.m. Sundays.

A home firearms safety course, especially for women, will be offered May 18 and 23 from 9-11 a.m. at the Coronado Club. Included will be information on storage of firearms and ammunition, and handling and cleaning of firearms. The course is free and will be taught by Ken Rome (9511) and Larry Horner (7414). Call Larry at 264-2606 to register as the class will be limited to 50 persons.

"Piezoelectric Response of Shock-Loaded Quartz—Ten Years with the Right Model" will be presented to Robert Graham (3122) at the $100 Staff Seminar Tuesday, May 12. Paul Perry (1144) will discuss "Raman Scattering in Solids: Sodium Trihydrogen Sulfate and Semiconducting Cadmium Sulphide" at the meeting May 19.

The $100 Staff Seminar will be on Wednesday evenings at 4:30 p.m. in Room 201 of Bldg. 806.

Sandian's Son Exhibits Heroism in Vietnam

Jim Reed (3222) has double reason to be proud of his son Mike who recently returned from Vietnam. Mike received the Silver Star, the nation's third highest combat decoration, for "gallantry in action" while serving aboard a helicopter of the 1st Aviation Brigade. 

While in Vietnam Mike demonstrated his good turn of mind in the aid of his mother and father—to supply toys, clothes, and money to an orphanage and leper colony.

The Silver Star Medal was presented during ceremonies recently at Randolph Base. According to the citation, Mike was riding on the last of five helicopters which were picking up troops near Vinh Long. When the zone came under intense fire, the first four choppers departed leaving the brave wounded soldiers on the ground. "Cpl. Reed leaped from the last helicopter and with complete disregard for his own safety, ran across the open field to his aid. He carried them one at a time back to the waiting helicopter through intense fire."

The unit Mike belonged to adopted an orphanage and leper colony. After it became apparent that essential supplies — clothing, food, tools, money, and toys — were not available, Mike enlisted the aid of his parents and organized a successful drive among Albuquerque churches to supply the needed items.

Mike is now a student at UNM.

Youth Symphony Plans Benefit Concert May 10

The Albuquerque Youth Symphony will play a concert Sunday, May 10 at 4 p.m. in UNM Popejoy Hall to raise funds for a trip to Chihuahua, Mexico, where they will present concerts June 6 and 7.

The symphony is made up of 83 students from eight Albuquerque public schools and the Albuquerque Academy. The musicians are selected through auditions each year. Rehearsals are held Saturday mornings. During the past three years, the symphony has performed for thousands of school children here and in other New Mexico communities.

Frank Bell (2000) was instrumental in helping to set up the Chihuahua visit and concerts. The symphony is directed by Dale Kempter and is jointly sponsored by the Albuquerque Public Schools and the University of New Mexico.

Adrenaline Beats STP

Holloway (7615), flagmen; and Fred Gustke (7524) and Bob Holloway (7615) were protectiv e caps and bracket over his left boot. He carries them one at a time back to the waiting helicopt er through intense fire.

Other Sandians of the Weapon Contractors Classification Committee, Frank Shearin (left) from Mound Laboratory, smilingly takes over duties from outgoing chairman Jim Marsh, head of Classification Division 3414. WCCC, which includes all integrated contractors, meets periodically to discuss nuclear weapons classification policies and problems.

INDIVIDUAL LOCK BOXES, just like at the post office, are a new wrinkle adopted by Sandia's Security organization. Each security inspector stores his pistol (empty and with chamber open) in his own box when off duty. Bob Crampton (3522) demonstrates the new system, suggested by Walt Troy (3522), eliminates check-in and check-out procedure formerly used.
Service Awards

20 Years

- Frank Gentry
- Burt Daniels
- Bob Hefley
- Paul Mathews
- Avelina DuBois
- Lyle Williams

15 Years

- Andrew Fisk
- Jack Lillard
- Helen Williams

10 Years

- Andrew Green
- Charlie Activity
- Robert Lane
- Robert Allene

Take Note

Players are still needed for Handlon’s softball team, according to Dennis Lewis (453-1), manager. The team will compete in the city softball league, show-pitch division. Any interested baseball players should contact her at 264-3050, or contact Employee Services Division 3123, 264-7775.

Death

Jean Antoine, a staff assistant in Elec-
tron-Explosives Division 2315, died suddenly May 3. She was 43.

She had worked at Handlon’s since July 1965.

Survivors include her husband and three children.

Congratulations

Mr. and Mrs. Herb Flinnich (2228), a daughter, Lynn Michelle, April 3.

Ion Implantation Paper Presented at International Meet

Several papers describing research un-
derway in Crystal Lattice Defects Research Division 8111 were presented at the International Conference on Ion Implantation in Semiconductors—Physics and Technol-
ogy, held May 4-7 at Thousand Oaks, Calif.

The Sandia contributions were: G. W. Arnold, “Preferred Etch-Ing of Ion Bombard-
ed GaAs.” J. A. Burders, “EPR of Sub-
stitutional Group V Implants in Silicon.” H. J. Stein, “Electronically Active Defec-

Another paper, “Ion and Ion Fluence Dependen-
t of Divergence Produced in IL,” was co-authored by Stein, Vooi, Bricel, Borders, and Piauex.

NEW APPOINTEES recently announced by ACE/AIO include Don Johnstone (left) as Special Assistant to the Manager until his retirement May 15; David Anthony as Assistant Manager for Plans and Budgets (replacing Mr. Johnstone); and John Burke (right) as Director of the Operational Safety Division.
Bruce Van Domelen
Elected Executive
Of WINB Group

Bruce Van Domelen (3245), the Governor's Science Advisor, was elected to a one-year term on the executive committee of the Western Interstate Nuclear Board (WINB) during the group's recent meeting in Salt Lake City, vice chairman.

This was WINB's first full-scale meeting and resulted in launching three major investigations on the impact of the nuclear age on the Western states.

The Board is sponsoring an analysis of the effect of nuclear and fuel fissile power plant locations on the environment; a similar study on the management of radioactive wastes; and a third study on the benefit of the use of nuclear explosives in development of natural resources.

Plans also call for an educational demonstration, "This Atomic World," to tour schools in the West.

WINB is financed by a $10,000 a year appropriation from each of the 11 member states and is set up to provide an independent capability to assess nuclear development in these states.

Events Calendar

May 8-10—"Fantasy" and "Dudloman," Old Town Studio, for reservations tel. 242-4602.

May 15—YWCA Mother's Day trip to the Barn Dinner Theater for dinner and maximum performance of "The Thousand and Clowns." For information, tel. 247-8841.

May 16—YWCA Albuquerque Youth Symphony concert, Pueblo Hall, 4 p.m.


May 16-17—11th Annual Rio Grande White Water Races, 1 p.m., from Piyau to Taos-Rio Arriba County line. Spectators near view races from alongside U.S. 46.

May 23-24—Annual rose show, Floriculture building, State Fair Grounds.

From U. of Chicago Squash Court to Sandia Labs:

AEC Histories Now On Sale

Two volumes relating the history of the U.S. Atomic Energy Commission can be purchased at discount prices through Employee Services Division 3123. The books are THE NEW WORLD, 1939-1946—VOL. I, by Richard Hofstadter and Oscar Anderson, and ATOMIC SHIELD, 1947-1952—VOL. II, by Richard Hewlett and Frances D'Isinosaur.

Each book tells the story of the development of atomic energy. The pages convey the excitement of the scientists who discovered the nature of atomic fission; of the first self-maintaining fission reaction in an atomic pile at Urn, Chicago, of the efforts to convince the government of the possibilities of the race to produce a bomb before Nazi Germany produced one; of the delays, the frustrations, the misgivings, the false starts and all the work that led to the ultimate achievement.

ATOMIC SHIELD is the comprehensive history of the development of atomic energy in the United States, from the transfers of the government's atomic energy program to the AEC on Jan. 1, 1947, until mid-1962. The volume discusses the political struggle over the appointment of Chalmers Linn, the Berlin blockade, efforts to build the nation's atomic stockpile, efforts to retain civilian control of atomic energy, negotiations for international control, the first fission detonation on Nov. 1, 1949, the debate over development of the thermonuclear weapon, the impact of the Korean War on atomic energy policy and major research and administrative developments during the period. Bandh Lebenszeit figures prominently in this volume.

The first book contains chapters which will appear in the near future is "Fe 2+-Fe 3+ Spinels with Magnetic and Other Properties of Oxides and Related Compounds." This volume consists partly of updated material from the 1962 edition and partly of new material not previously available on compounds of the lanthanides and actinides.

Sandian Writs Chapters for Landolt-Bornstein Series

The Landolt-Bornstein collection of numerical and physical data is a series of books suitable either for browsing or for textbook use, but the series is a "must" for any library associated with a solid-state research effort.

This important reference source, published in Germany, has come out with a new all-color covering crystal and solid-state physics. Robert Leafer, supervisor of Materials Research Division 5154, has contributed two chapters to Volume 4, which deals with magnetic and other properties of oxides and related compounds. This volume consists partly of updated material from the 1962 edition and partly of new material not previously available on compounds of the lanthanides and actinides.

The first Leafer chapter is "Fe Oxides and Fe-Ne-0 Compounds"; the second chapter which will appear in the near future is "Fe-Al, MnAl, and Fe-Al-Fe". Signets with Substitutions."

Both chapters deal with an introductory discussion followed by data presented in the form of tables and figures.

Clever Hoax, this picture shows what can be done by the completely unprincipled to suggest so-called spring sandstorm in Albuquerque. Note street lights appear to be on, flag seems to be straight out, air has obviously contrived murky appearance, and pedestrian looks like he's protecting his eyes. But Lab News was not taken in—just couldn't happen here.

Crownado Club Activities

Latin Fiesta May 16

The Crownado Club's Latin Fiesta explodes Saturday, May 16, at 8:30 p.m. with one free margarita for everybody. A tremendous Mexican food buffet will be spread from 7 to 8:30 p.m. Viva de O and his mariachi band will provide dinner music until 6 p.m. and the mighty Duke City Brass take over the bandstand for dancing from 9 p.m. to midnight.

Tickets are $3.50 for members ($4 for guests) and should be picked up by Monday, May 11.

Comedy Classic

The movie scheduled for Comedy Classic Night this month was going to be "International House" with W. C. Fields and Rudy Vallee. Now it last month. The film service goofed. So on Thursday, May 14, you'll see "Mississippi" with W. C. Fields as a dirty old man, Bing Crosby as a college boy, and Joan Bennett as a teenager. That's right, "Mississippi" was originally scheduled last month.

Anyway, the evening starts with a happy hour at 7 p.m. and the film starts at 8 p.m. It's free to members.

Soul Session

Soul Sessions continue to draw capacity crowds as the Club has scheduled another one on Saturday, May 23. Same formula: Red Kink and the Real Kings play for dancing from 8:30 to 10 p.m; while happy hour prices are in effect all evening. It's free to members, 50 cents for guests.

Social Hours

Tonight Rex Elder makes the happy music while the southern fried chicken buffet is spread. Special hours start right after work on Friday evenings and special prices are in effect until 9 p.m. The buffet is spread from 6 to 8 p.m. while the band plays for dancing from 8 to 10 p.m. Then, the TGIIF crowd moves to the main lounge for a sing-along with Pat Seidel and piano until midnight. $2 buffet costs $1.25 for adults, $1 for kids.

In the meantime, midweek social hours continue on Tuesday evenings from 5 to 8 p.m.

Teen Go Go

Something called "The Right" will be wired into the bandstand tomorrow night from 7:30 to 10:30 for the membership (non-members). Member parents should pick up tickets ($25 cents for members, 80 cents for guests) tonight.

Bridge

Coronado ladies bridge meets Thursday, May 11, at 1 p.m. Duplicate bridge meets Tuesdays at 7 p.m.

To: Employee Services Division 3123

Public Relations Division 8216

Re: Purchase of AEC Histories

Please order the following for me:

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