

## Rapid growth impels SOC

*Market explosion warrants larger, permanent base*

By KELLEY J. CYR -

The potential for "explosive growth" in the communication satellite market may provide the driving force for a new Space Operating Center concept according to Gordon Woodcock of the Boeing Aerospace Company.

Mr. Woodcock was at the center recently to describe Boeing's proposal for a 12-month study to analyze the SOC concept.

**'The strategy for space technology depends on the market to be supported.'**

Comparing the potential for space-based communications to the historical growth of motorcar registrations and domestic airline traffic, Mr. Woodcock concluded that communications payloads may grow at a rate of 30 to 60% for the next two or three decades.

In contrast to conventional forecasts that assume a 10% growth rate, the explosive growth forecast reaches traffic levels that differ by orders of magnitude from the usual projections.

Mr. Woodcock pointed out that, "the appropriate strategy for space operations technology development depends on the market to be supported." The Boeing study will look at what space operating capabilities are needed if explosive growth occurs and how that growth will affect the SOC facility requirements and definitions, he said. "You've got to understand how the programatics drive the design," Mr. Woodcock said.

The SOC concept to be studied by Boeing is a modular structure to be launched and assembled by the Space Shuttle. Rockwell has also been awarded a contract for a study to evaluate the interaction of the Shuttle with the SOC, which will run for 12 months concurrently with the Boeing study.

At higher growth rates, an Orbital Transfer Vehicle and a permanent space-base for constructing larger and more sophisticated spacecraft are warranted, according to Mr. Woodcock. The Shuttle and Inertial Upper Stage Transportation Systems are most economical at low traffic levels.

Without the Space Operating Center, the potential for explosive growth may become a "lost opportunity," Mr. Woodcock said.

Mr. Cyr is a co-op at JSC currently studying economics at Northeastern University in Boston.

Watch for "The Higher We Fly," John Denver's TV special shot partially at JSC, to air on ABC Sunday June 15, 7 to 8 p.m. EDT.



## Hands On

Astronauts Dick Truly and Joe Engle, STS-1 backup crew, give one last inspection to experimental rotational hand-controller, part of the RMS, before its delivery to the Cape last month.

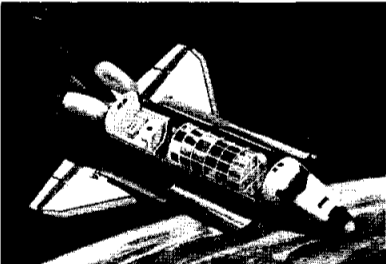
## Experiment may explain origin of elements

A metal square with seven collectors spread among four trays will soon orbit the Earth for a one year period, capturing particles from the interstellar wind. Science for the experiment, one of many that will be onboard the Long Duration Exposure Facility, is the work of Astronaut Don Lind, working with collaborator Johannes Geiss of the University of Bern in Switzerland.

Ernie Weeks as Project Manager, oversaw production of the device in the Experiment Systems Division.

"The experiment will tell us if elements created in other stars are created in the same way as in our sun," Dr. Lind said. The experi-

ment will give "unique and valuable information" as to the dynamics of interstellar particles



when they come in contact with solar winds from our sun, and it will add much data to theories regarding the creation of elements in other galaxies.

"We have only studied the solar wind from our own sun," Dr.

## Flight test extensions slip operational status

NASA has extended the date for completion of the first four Space Shuttle orbital flight tests to April 1982. The extension of the flight test program has made it necessary to reschedule the first operational flight of the Columbia, STS-5, from March 1982 to September 1982.

The first operational flight will launch the Tracking and Data Relay Satellite-A (TDRS-A) into a geosynchronous orbit according to the Space Transportation System operations manifest currently being revised.

Changes in the operations manifest have been coordinated with the Department of Defense, a major user of the Space Shuttle.

During the transition to full Space Shuttle operations, NASA will employ the Delta 3910 and the updated Delta 3920 launch vehicles. In addition to NASA, other organizations expected to use these launch vehicles include Telesat of Canada, Indonesia, and Hughes Aircraft.

To provide timely launches and to accommodate 3900-series Deltas for these and other Delta users, modification of Launch Complex 17-B at the Kennedy

Space Center is being considered.

March 1981 is now the most probable time for first launch of the Space Shuttle (STS-1). The completion of the Thermal Protection System and its mechanical integrity remain the prime technical concern of the Shuttle development program.

## Engine retest schedule

Retesting of the Space Shuttle Columbia's main engines, announced early this month, will consist of a single, 520-second, static firing for each engine.

The test stands at the National Space Technology Laboratories, Bay St. Louis, Mississippi, will be used for the tests. Engine 2007 has been mounted in test stand A-2 and at Roundup press time was scheduled for static firing in late May.

Engine 2006, to be mounted on stand A-1, will be tested in mid-June and Engine 2005 is to be tested on stand A-2 in late June.

NASA has scheduled reacceptance tests for the main engines because of modifications made to the engines since the original acceptance tests were conducted in April and July 1979.

## Nuclear waste can go into space

Boeing has been awarded a contract by Marshall Center to study and analyze systems concepts for the possible disposal of nuclear wastes in space.

The space disposal option could augment terrestrial disposal by removing from the Earth the long-lived radionuclides for which isolation over many tens of thousands of years must be assured.

Studies of space nuclear waste disposal concepts will include payload protection, identifying space destinations, options for type of space transport and launch sites, and payload retrieval techniques.

The Boeing study is to be completed by December 1980.



## Space Age in the Countryside

Tracking radar system on top of Scott Peak in Arizona will provide space position and

altitude information on the Shuttle directly to White Sands, the Cape, and Mission Control

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# Winners

## Women's Week attendees learn to set goals, try harder, compete

"Losers are looking for pleasing experiences; winners are looking for pleasing results," was the maxim Venita Van Caspel used to sum up her keynote speech at the Federal Women's Program luncheon two weeks ago. She got a standing ovation.

"Winning" was the theme of many sessions, and with topics such as "How to do a Job Interview," and "Turning on Your Own Key," most of the women and men who attended the program walked away as potential winners.

Competition and its end result, winning, was the topic of Dale Hill's talk Thursday, May 15. Dr. Hill is a psychotherapist in Houston.

"Is the competitive person neurotic?" she posed the question to the crowd.

### Be dominant, aggressive

"Competition is unhealthy if it's not in the right place at the right time," Dr. Hill said. "Exaggerated competition—competing all the time—is neurotic.

"But exaggeration the other direction—no competing at all—is not any better."

Dr. Hill defined competition as a human instinct: "You see something, you want it—you see that promotion, you want it. It can be painful—you can hurt a relation-

ship with a friend. And it can be pleasant—you can win."

A person's aggression and dominance correlate with his or her ability to compete, Dr. Hill said, because "someone is going to win."

"You need those two qualities, aggression and dominance, before you can have an effective competition experience," she said. "And you have to have cooperation"; i.e., a tennis partner who can play or a boss who agrees the promotion is there.

### Learn how to lose

Dr. Hill sees the growth of women's athletics starting at a grade school level as a positive sign for women in the future.

"We can learn some of the rules about competing now," she said. "Right now many women don't know how to win, so we don't know how to lose. We personalize the losing, which makes it hard to go out and try to win again."

Ms. Van Caspel, who is an author, rancher, stockbroker, company President, and is known as the nation's first lady of financial planning, was an example of a winner at work in her keynote address which was much like a pep talk.

Organizing your time, establishing goals, and knowing what to



### A luncheon question

do to accomplish those goals make up Venita Van Caspel's formula for success.

Winning is simple, she said.

"One reason there are not more winners in the world is there are not enough people trying," Ms. Van Caspel said.

She looked out over the luncheon crowd, mostly women, and said, "I see gathered here all the potential to make up as competent a senior staff as NASA has today."

This reporter wonders, Why did that line draw a laugh, and when will that line no longer be remarkable.

Phone 483-3351

## Hurricane season returns

The hurricane season for the upper Texas coast begins June 1 and extends through November 30. The last major hurricane to affect our area was Carla in 1961 which caused a great deal of local damage. However, last summer's flooding graphically reflected the Bay Area's vulnerability to severe weather.

When JSC became operational, advance planning and emergency procedures were set up to meet future hurricane threats. This has been expanded somewhat to include other types of severe weather conditions. Included in these plans are provisions to close the center to permit readiness and to release all non-essential personnel.

During duty hours, hurricane threat information and other extremely severe weather information will be available by recorded message at x3351 and on the on-site closed-circuit television system. Any decisions to close the

center will be relayed through normal supervisory channels as well as on the telephone recording system.

During non-duty hours, employees should call 483-3351 rather than the Security Dispatcher for advisory information on the operational status of the center. Recorded messages will be updated as required.

In the event of the center being closed due to severe weather conditions, all non-essential personnel are to leave the center. A ride-out crew will begin facility protection while security personnel will check and secure all buildings.

Employees should unplug electrical appliances and office equipment, secure important documents, and close blinds and doors.

Employees are expected to return to work at the beginning of the next workday unless advised to the contrary through the news media or the recorded messages.

## Golfer shots up to par

Playing from the back tees, and factoring in a wind not usually found at Wortham golf course, the championship and first flights of the JSC Golf Association played their third competitive tournament on May 10.

This course (the old Houston

Executive Country Club) has a layout that most JSCGA members appreciate. Those really enjoying it were our winners from the championship flight, **Jim Sanders** (net 69), **Gil Bonse** (71) and **Bill Shropshire** (72); and the first flight, **Larry Hall** (69), **Reuben Taylor** (69), and **Tom Chambers** (72).

Tomorrow, May 31, the first and second flights play at the Lake Houston Golf Club.

## JSC's oldest carpool wax philosophic, save gas

"Carpooling is the only way to go." That's what five JSC scientist/engineers say and they should know. They've been riding together since early 1971.

Bob Cohen, Al Feiveson, Steve Jacobs, Mel Kapell, and Bob Patterson all commute to JSC from Southwest Houston (35 miles) but each drives only once a week.

"Our philosophy," says Mr. Feiveson, "is that we can take advantage of all that Houston has to offer, but still work at JSC. If we lived in the NASA area and went into town even twice a week, we'd do more driving than we do now."

They leave promptly at 7:35 and 7:45 from two pickup points in



Kapell, Jacobs, Feiveson, Patterson, & Cohen going home

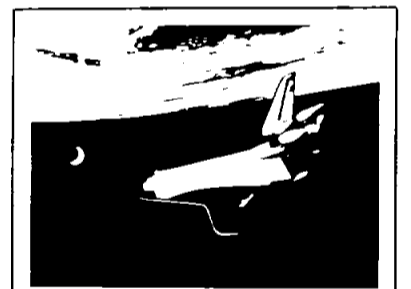
Houston, and embark promptly at 5 from their exclusive reserved parking space near Building 17.

According to Mr. Patterson, "We're all compatible because no one smokes and we are not com-

pulsive talkers. Once only eight words were spoken on the entire trip in."

Mr. Jacobs pointed out that his carpoolers have been together longer than some of their marriages, likening carpooling to a microcosm of life.

Mr. Kapell remarked that his fellow carpoolers often read or sleep and that many times his car looks like a hearse carrying four bodies. Mr. Cohen was asleep, as usual, and could not be reached for comment; however, he was acknowledged by the others as the champion sleeper, known to be completely out within 6.2 seconds of entering the car.



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Editor..... Kay Ebeling

## Cookin' in the cafeteria

### Week of June 2 - 6

**Monday:** French Onion Soup; Beef Chop Suey; Polish Sausage w/German Potato Salad; Breaded Veal Cutlet (Special); Okra & Tomatoes; Green Peas. Standard Daily Items: Roast Beef; Baked Ham; Fried Chicken; Fried Fish; Chopped Sirloin. Selection of Salads, Sandwiches and Pies.

**Tuesday:** Split Pea Soup; Shrimp Creole; Salisbury Steak; Fried Chicken (Special); Mixed Vegetables; Beets; Whipped Potatoes.

**Wednesday:** Clam Chowder; Fried Catfish w/Hush Puppies; Braised Beef Rib; BBQ Plate; Weiners & Beans; Shrimp Salad; Stuffed Bell Pepper (Special); Corn O'Brian; Rice; Italian Green Beans.

**Thursday:** Chicken Noodle Soup; Beef Stroganoff; Turkey & Dressing; BBQ Smoked Link (Special); Lima Beans; Buttered Squash; Spanish Rice.

**Friday:** Seafood Gumbo; Broiled Turbot; Liver w/Onions; Seafood Platter; Fried Shrimp; Meat Sauce & Spaghetti (Special); Green Beans; Buttered Broccoli; Whipped Potatoes.

### Week of June 9 - 13

**Monday:** Beef & Barley Soup; Beef Chop Suey; Breaded Veal Cutlet w/Cream Gravy; Grilled Ham Steak; Weiners w/Baked Beans (Special); Whipped Potatoes, Brussels Sprouts; Buttered Rice. Standard Daily Items: Roast Beef; Baked Ham; Fried Chicken; Fried Fish; Chopped Sirloin. Selection of Salads, Sandwiches and Pies.

**Tuesday:** Celery Soup; Fried Shrimp; Turkey a la King; Pork Chop w/Applesauce; Chinese Pepper Steak (Special); Au Gratin Potatoes; Breaded Squash; Buttered Spinach.

**Wednesday:** Clam Chowder; Fried Catfish w/Hush Puppies; Braised Beef Ribs; Mexican Dinner (Special); Spanish Rice; Ranch Beans; Buttered Peas.

**Thursday:** Green Split Pea Soup; Corned Beef w/Cabbage & New Potatoes; Chicken & Dumplings; Tamales w/Chili; Hamburger Steak w/Onion Gravy (Special); Navy Beans; Buttered Cabbage; Green Beans.

**Friday:** Seafood Gumbo; Deviled Crabs; Broiled Halibut; Liver & Onions; BBQ Link (Special); Buttered Corn; Green Beans; New Potatoes.

## Experiment

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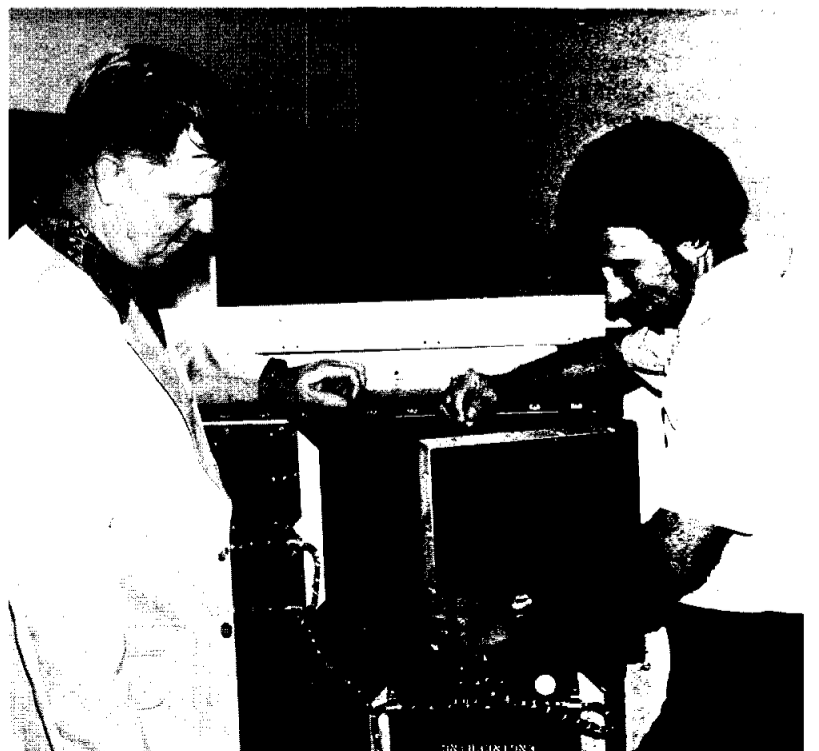
However, its main purpose will be to solve long duration mysteries about nucleosynthesis, the creation of elements, throughout the universe.

"Stars in different stages of evolution make different contributions to the interstellar wind around them," Dr. Lind said. "The interstellar wind coming from a particular star will carry information on the processes of nucleosynthesis currently at work in that star."

"The experiment will tell us if elements created in other stars are created in the same way as in our sun."

"History is the story of the defiance of the unknown and of what happens when man tries to extend his reach."

—Norman Cousins



Lind & Weeks inspect LDEF experiment hardware



## Munching through the Cosmos

At Sandwich Seminars held each Wednesday at noon in the Bldg. 31 conference room, employees discuss topics ranging from Space Shuttle hardware to the origins of the Universe.

## Play it all out at the Rec Center

Registration is being taken in the following Leisure Time Classes at the Gilruth Recreation Facility:

**Beginning Tennis:** Learn the fundamentals of tennis. Class meets Tuesdays and Thursdays, 6:30-7:30 p.m. starting June 17. Cost is \$20 for the eight-week course.

**Aerobic Dance:** Part dance, part exercise, all fun. This class meets on Monday and Wednesday morning for six weeks beginning July 21. Cost is \$24 for this 9:30 a.m. to 10:30 a.m. class.

**Photogenesis:** An exciting course that will cover the basics as well as some advanced photography techniques. Class begins July 10 and meets from 6 to 8 p.m. Cost: \$25 per person.

**SCUBA Class:** The Rec Center is offering a seven-week basic SCUBA Class beginning June 16. The course, taught by the JSC SCUBA Club, will include lectures on Wednesdays from 7 to 9 p.m. and indoor pool time on Tuesdays from 8 to 10 p.m. Students who successfully complete the course will be certified by NAUI. Cost for the course is \$72, which includes text book, pool fee, and use of tanks. Cost also includes a weekend dive at Canyon Lake. Students must furnish mask, fins, snorkel, and vest; and enrollment is limited to 20 students.

**OTHER NEWS OTHER NEWS**  
Gilruth Center announces a **Summer Basketball League** to keep the players fit. League meets on Wednesday nights and is

limited to the first eight teams to sign up. Cost is \$90 for EAA teams and \$140 for non-EAA teams. League play begins on June 11.

**Tennis players needed:** In its battle to retain supremacy playing with U of H Clear Lake, Gilruth Center is now recruiting tennis players to represent JSC in both single and double competition at the U of H course. If you're interested, call Carl McCollum at x3594.

**Softball Tournaments:** May 30 is the last day to register your team for the JSC Men's Softball Tourney to be held June 6, 7, and 8 at the Rec Center. Cost is \$60 for team entry fee. A Mixed Tourney is planned for July 11, 12, and 13. Cost is also \$60.

## Bulletin Board

### Five km Fun Run For Eeyore & Exes

The Bay Area Texas Exes, along with Texas Commerce Bank and United Savings, are sponsoring the Bay Area Eeyore's 5km Fun Run on Saturday, June 14 at 8:30 a.m. at Gilruth Recreation Center. The \$6 per person charge includes entry fee, t-shirts, and free refreshments. Awards will be given to the first three male and female finishers. Applications are being distributed to local YMCAs, recreation centers, and sporting goods stores. Entries must be postmarked no later than Wednesday, June 11, 1980.

### Bike Club Blazing Trails in Clear Lake

JSC Bicycle Club meets Monday, June 2 at 5 p.m. in Bldg. 350 to complete plans for a ride to the San Jacinto Monument on June 8 and a ride through the Sam Houston National Forest on June

21. Color slides of the proposed forest route will be shown. Bicycle literature of all types is being collected by the club officers and is available to interested persons. This material includes biking magazines with articles on repair, touring, and bike path politics. For further information contact Brian Morris, EP6, X5293.

### Need Help Around the House?

Nearly everyone at some time needs the help of a homemaker, a mature person who is trained in child care, nutrition, and home management. The Family Service Center is offering a Homemaker Service, available Monday through Friday from 8 to 5. Fees are based on a sliding scale and are charged on the family's ability to pay. This is a service flexible enough to meet the needs of many different kinds of emergency situations. Call 524-3881 for further information.

### Is your badge tattered & torn?

Many JSC employees are wearing badges that are in dire need of replacement. The plastic coverings are torn or separating, or are otherwise defaced to the point that it is difficult for an observer to verify the identity of the bearer.

All employees are requested to check their badge and, if it needs to be replaced, take it to the Visitor Reception Center at Building 100 at the Main Entrance to JSC.

The Badging Office is open from 8 a.m. to 5 p.m. Monday through Friday, excluding holidays. However, to avoid peak periods, have your badge replaced between 10 a.m. and 3 p.m., Tuesday through Friday.

### NARFE Dinner Meeting Set for June 6

The Houston-NASA Area Chapter 1321 of THE NATIONAL ASSOCIATION OF RETIRED FEDERAL EMPLOYEES will meet Friday, June 6, at 6 p.m. for a covered-dish dinner. Program chairman Paul Vavra will present a group from The Family Service Center in a skit dealing with a multigeneration family. The chapter meets each month at the Clear Lake Park Building, NASA Rd. #1, and VISITORS ARE WELCOME. Retired Federal Employees, spouses, survivors of

annuitants, AND ACTIVE FEDERAL EMPLOYEES are eligible for membership in NARFE. Join your nearest chapter. For more information call A. B. Olsen at 334-3270 or Paul Vavra at 334-2978.

### UFO Event Open to Public

The 11th annual UFO symposium sponsored by the Mutual UFO Network (MUFON) will be held from 9 a.m. until 10:30 p.m. Saturday, June 7, at the Clear Lake High School. Scientists, researchers, and investigators such as nuclear physicist Stanton

T. Friedman, Leo Sprinkle, James E. Oberg, and a host of others will share the results of their work with the interested public. Electronic and optical tracking and detection equipment will be demonstrated and slides and movies will be shown. MUFON is a non-profit educational organization. Contact John Schuessler at x2600 for further information.

### Lockheed Employees Break Blood Donor Records

Employees of Lockheed Engineering and Management Services Company, Inc. continue to set new blood donor records in a cooperative program with St. Luke's Episcopal Hospital and JSC. A special group of employees belong to the "Gallon Club," meaning they have contributed at least eight pints. More than 110 volunteers have attained membership in this elite group. Each member receives an attractive pin and has his or her name engraved on a plaque displayed in the foyer of a Company Office building.

## Roundup Swap Shop

Ads must be under 20 words total per person, double spaced, and typed or printed. Deadline for submitting or cancelling ads is 5 p.m. the first Wednesday after publication. Send ads to AP3 Roundup, or deliver them to the Newsroom, Building 2 annex. No phone-in ads will be taken. Swap Shop is open to JSC federal and on-site contractor employees for non-commercial personal ads.

### Property & Rentals

Roommate wanted for nice home in Friendswood, 15 minutes from JSC. \$225 per month plus share utilities. Neil Rosenthal 482-1151.

Sale: Camper lot, Texas Campgrounds, Galveston, all utilities available, access to swimming pool and beach. 482-7042 after 5.

Sale: Country Club lot at Lago Vista Estates on Lake Travis near Austin, class A resort, golf, tennis, marina, etc. Sacrifice. Steve X3561.

Tenant: Male or female to share 3-2-2 in Seabrook w/1 other, W/D, \$215 + deposit. 474-2319 eves.

Pretty 3-2-2 with liv rm, din rm, fam rm, fenced yd, cov patio, bbq, clean, avail now, \$475 mo. X3671.

Rent: New condo, 2 br, 2 b, fp, drapes, carpet, all appliances, El Dorado Trace, \$400/mo + deposit. 486-9615.

Lease: Kirkmont, 3-2-2, fenced yard, \$475 month + deposit. 482-3969.

Sale: 2160 sq ft, 3-2-2 in Sageglen, fenced and landscaped, fireplace, low assumption, priced way below market. Debbie 484-1514.

Sale: Nice 3-2-2 rental property with tenant. Owner needs cash. Priced below market to sell. VA assumption, Debbie 484-1514.

Lease: Small 4 bedroom home w/fireplace, \$475 mo. Camino South Clear Lake City, Occupancy by July 15th. Amann 333-2359.

Lease: Baywind II condo, 1 br, fireplace, w/d connections, poolside, tennis, exercise room. Briley X6128 or 488-7901 after 5.

Lease: CLC, Baywind II condo, lg 2-2-2, fp, w/d, wet bar, balcony, lots

windows, open view, ice maker, tennis, pool, etc. \$415, X4105 or 643-8944 eve.

Beach house on Gulf. \$25 day or \$150 week. Special weekend rates. Horton X5266 or 334-2360.

Acreage on NASA One, one to ten acres. From owner, Horton, 334-2360.

Lease: 3-2-2 house available July 1 in Middlebrook, 1850 sq ft. \$550/mo, 1 yr lease. 488-2913.

Rent: Lake Livingston, Cape Royale 3-bdrm waterfront cottage by marina, Tennis, pool, golf, boat ramp, by week. 488-3746.

Lease: Heritage Park, 3-2-2, new, fireplace, dining room, microwave, walk-in closets, fenced, \$475 month, no pets. 334-5392 or 474-4202.

Rent: Lake Livingston, Cape Royale, compl furn home, 3-2-1, fishing, hunting, tennis, golf, etc. Reserve early. wk/mo/yr rates. 488-4487.

Sale: Pecan Forest, 4-2-2 traditional, new loan or assume non-escalating loan, fireplace, walk-in closets, open living area, custom drapes. 554-2934.

Galveston, West End, 2 bdrm, By-the-Sea condo, furn. \$210/wk off, \$300/wk in season. Clements 474-2622.

Wanted: Housing or bedroom accommodations for summer ASEE faculty fellows. Mid-June through August. Nancy Robertson X4724.

Lease: Pearland 3000 sq ft, open span, metal/masonry, good location. 482-6512 after 5.

Wanted: Female to share a 3-bdrm house w/same. 6 mi. from NASA. 482-2079 after 4:30 or wknd.

### Cars & Trucks

77 MGB, 23,000 miles, AM/FM tape deck, air conditioned convertible. Sue 334-5967.

73 Oldsmobile, low miles, original paint, doesn't run. 337-3973 after 6.

78 Chevy Monza s/w (compact SZ), 28,000, auto, a/c, p/b, p/s, AM/FM, yel w/blk int, \$3995. 337-2165.

3/4 T Ford P/U with 12-ft Funtime cabover, many extras in exc. cond. \$2195. Two towbars, \$60 each. X4857 or 334-3359.

78 Camaro LT, Maroon, one owner, power brakes, steering, a/c, auto, good cond. Bargain at \$4500. Peacock X2208 or 486-0159.

70 Ford window van w/seats. Will consider trade for Datsun, etc. Manny x7484 or 945-3094 after 6.

77 Chevy Malibu. AM/FM, 8-track, cruise control, all power, a/c, runs great, \$850 and take over monthly payments. Irma X5871.

76 Cordoba, power, a/c, AM/FM, uses regular gas, \$1995. Grafe x2961 or 783-1694.

78 Thunderbird, ps/pb, air, auto trans, cruise control, low mileage, exc cond, \$4900. 488-4915.

78 Pontiac Firebird for sale or trade for sailboat. V8, Power & air, good cond, Ray, 2676.

Roundup deadline is the first Wednesday after publication.

### Miscellaneous

U-Haul type trailer in X cond, new tires, perfect for moving, sell at other end. Sid x3212 or 485-8648.

75 20-hp Mercury motor, good cond, \$475. Long wheel base topper for truck, \$50. 473-1332.

Homemade utility trailer, 6x4x2 ft. Heavy duty springs with extra long tongue for easy tracking and backing, \$100. 333-5797 after 5.

Buckles, paperweights, and plaques, Shuttle and Spacelab buckles now available. McCollum x5031 or 488-2913.

6-foot pool table w/folding legs, + 4 cue sticks, rack. Needs cover and balls. 334-2339.

Central a/c condenser fan motor, 1/3-hp, 2-speed, GE energy saver, p/n 3029, 1/2-inch shaft, used 2 hours. \$65. 474-4535.

Uniroyal Rallye 240 tire. Low mileage but cut. Rocha X4393.

Radial arm saw, 8 inch DeWalt, like new. \$85. Leverich x2313 or 488-1186.

New bridal set, never used, \$600 new. Best offer above \$250. White gold, 1/3 carat pear shape diamond with two diamond chips. 488-5010.

67 Wheelcamper, sleeps 6, exc cond. 946-6301.

AKC dalmatian puppies, 8 weeks, wormed, champion sired, crown-jewel line. Phone 482-6895 from 9 a.m. - 4:30 p.m., Tom Dorough.

### Stereos & Cameras

AM/FM stereo/8-track/cassette/turntable, JC Penney model 1770, less than 2 yrs old, \$90. Kennedy X2991 or 488-5332.

Complete Pioneer stereo system, exc cond. W. Meek 334-3092 after 6.

Kenwood KA-8100 75 w/ch intg stereo amp. prfct, \$250. Yamaha CT-400 FM/AM stereo tuner prfct. \$135. Both units in warranty. 488-3966.

### Carpools

Want to join/form carpool from Nassua Bay/CLC/Clear Lake Forest to Hermann Hospital. Depart local area 6:45-7 a.m., non-smoker. 333-2395.

Have pickup-like to share rides from Central Pasadena area. 7:30-4 shift. F. Southard x4269.

### Musical Instruments

\$300 Alvarez 12-string guitar and case. top cond. \$150. Patti 333-4291 or 480-1076 after 5.

### Wanted

Used 16-ft aluminum extension ladder. Adams x3121 or 337-3973.

### Boats & Planes

Sailboat, 14' Sr Dolphin, includes trailer and boat cover, \$825, exc cond. Earl Rubenstein X3116 or 334-2354.

### Household

New dryer, still in carton, White-Westinghouse, electric, gold color, \$175. x4061 or 487-8221.

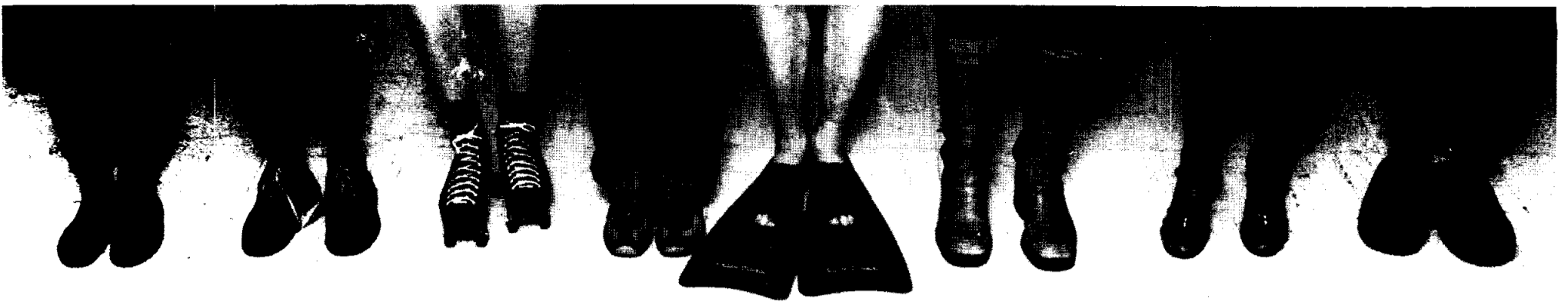
Black and white couch, 72" long and love seat 54" long, clean and in good cond, also sofa bed. Angel X7204 or 944-8028 after 5.

### Personals

Kappa Sigmas contact Bob Lacy x4459 or Grady Henderson x2831.

### Cycles

Girl's 20 inch bicycle, \$15. Beckham 481-2733.



They wear all different kinds of shoes at the Rec Center

## 'New approach' to recreation produces results for everyone

Recently the Rec Center has gone from a weed-encroached near-forgotten corner of the NASA lot to a center of activity with a crammed parking lot nearly any time of day. Many new projects have gotten underway since the staff "changed its philosophy and its approach to recreation programming," says Carl McCollum, who has run the Rec Center since last September.

There's more sports, more classes, more variety, and more ideas to come.

"I like to compare the Recreation Center to a sampler box of candy," Mr. McCollum says. "There's a wide choice of assorted chocolates, and the Rec Center gives you a chance to sample, devour, or reject any of the activities."

"The Rec Center hopes to offer something to everybody."

In "Organized Sports" there's volleyball, basketball, softball — "This year we have 78 softball

teams ready to begin playing," Mr. McCollum says.

And running is becoming an organized sport at the Rec Center. "Last December we decided to offer a race a month for our patrons," Mr. McCollum says. "That program has steadily increased—for April we had 700 people turn out for the 9th NASA Intercenter Run."

Leisure Time Classes have recently taken on new priority, as "the primary purpose of the Rec Center is human development," Mr. McCollum says.

A cursory glance at any *Roundup* will give a sample of new courses always forming and old courses being offered again. "We've had tremendous success in this area," Mr. McCollum says.

Classes run the gamut from aerobic dance and auto mechanics to Scuba, karate, and photography, and "look for a noon-time exercise class for the near future," Mr. McCollum says.

The future is very much on his mind with projects such as a dinner theater, talent shows, and a series of feature length films in the works. And Mr. McCollum gets credit for expediting the "Anything Goes" competition that started at the Rec Center and culminated at this year's EAA picnic.

Anything goes at Anything Goes, and the competition will probably become one of NASA employee's most popular diversions.

"A new area we are just now exploring is Community Programs through the Rec Center," Mr. McCollum says. "Area schools competed in our April run, and we are starting an annual sports competition against UHCLC with seven events."

"We have a perpetual trophy to be kept on display by the winner of each event."

Mr. McCollum describes his staff as "imaginative and inventive."

"Our objectives are six-fold," he says. "We want to incorporate new trends and interest, provide a change of pace from the day's work, stimulate maximum participation, contribute to the personal health of participants, improve the social well-being of individuals in the community, and then tied to all these words is the word 'quality.'"

"Our long and short range goals are to improve the *quality* of the Rec Center program."



## Phase I construction underway

The Exchange Council announces that Phase I of its long range plan of enlarging and improving the Robert R. Gilruth Recreation Facility and grounds is in progress with a construction contract to be awarded in late June to considerably expand the size of the existing main facility.

The expansion will enlarge the present locker and restroom facilities, triple the size of the present exercise room, increase the number of meeting rooms, expand the dance floor, improve the central kitchen, correct lighting and floor problems in the gym, and provide for an elevator to second floor meeting rooms for use by the Center's handicapped employees as well as the Exchange's Custodial staff.

The construction effort is expected to take approximately 10 months.

Included in the Council's Phase I plan is the construction of a 40 by 48 foot picnic pavilion and new facilities for the Radio and Scuba Clubs.

Two new tennis courts were completed early this year. Future plans call for replacing the three courts that were built in 1973. The construction of a planned mile long jogging track has been put on the back burner until work on the main building has been completed.

A poll of Center employees as to their wants and desires was made by the EAA for the Exchange Council some time ago and was used by the Council in establishing its priorities within the funds available for capital improvements to the Gilruth Facility complex.

Landscaping continues with the planting of more pecan trees, a program that was started four years ago. Restroom facilities in the picnic and ballfield areas are also planned and will be commenced also as nonappropriated funds become available.

As use of the picnic grounds increases, the Council envisions a seven day per week operation with its staff being called upon to cater an ever increasing number of organization picnics. Chili cook-offs are increasing also with the staff providing necessary appropriate support.

"This is as it should be," said Wally Grimes, the Exchange Operations Manager, "that is what the facility is there for, for center employees and their families to use."

Mr. Grimes, along with Council Chair Les Sullivan and EAA President Cliff Robinson, propose to keep center employees aware of facility progress over the next 8 to 12 months both through center announcements and through the *Roundup*.