

Enterprise makes stopover at JSC

Thousands attend awards ceremony and Open House

Nearly a quarter of a million area residents turned out over the weekend to view the *Enterprise*, according to Air Police at the Ellington Air Force Base.

When *Enterprise*, America's newest spacecraft put into the Marshall Space Flight Center (MSFC), Huntsville, Alabama, on March 13, it officially brought to an end the very successful approach and landing test (ALT) project.

Donald K. Slayton, who headed up the more than 600-member NASA/industry and Department of Defense (DOD) team which worked on ALT, said "completion of ALT now allows us to begin orbital flight testing with a high level of confidence, both in the spacecraft and the personnel who will conduct the orbital flight test (OFT) program." It was a NASA-wide effort, a program which utilized a wide variety of talents from JSC, the Kennedy Space Center (KSC) and the Dryden Flight Research Center (DFRC) as well as industry and DOD, Slayton said.

At an award ceremony at Houston, Slayton, who is now manager of OFT for the Space Shuttle Program Office at JSC, told his team leaders, "I wish to thank each member of the ALT team for their exceptional performance." For his leadership in ALT, Slayton was presented the NASA Outstanding Leadership Medal while 15 other key NASA personnel, including astronaut crew and 747 members, were presented NASA Exceptional Service Medals for their role in ALT: nine JSC employees, five employees from DFRC, and one from KSC.

Christopher C. Kraft, JSC Director, presented the awards before an enthusiastic crowd of 25,600 people plane-side after the 747/*Enterprise* landed at the Ellington Air Force Base, north of JSC, on a refueling stop en route from DFRC in California to MSFC.

The award to Slayton credited him for organizing and molding "a diverse group of NASA, DOD, and contractor personnel into a dynamic test team that successfully planned and carried out the ALT program." His outstanding leadership was a major factor in the success of the ALT flights," the award read.

Astronauts Haise (who could not attend the ceremony), Fullerton, Engle and Truly received their awards for their role as members of the ALT Orbiter crew. Other recipients at JSC were Thomas U. McElmurry, who was commended for the

operational planning, organization, and day-to-day management of ALT; Carl B. Peterson, whose award was for his management of the 747 carrier aircraft modification program; John W. Kiker, who

conceived the idea of utilizing the 747 as the carrier of the Orbiter; Louis E. Guidry, aircraft engineer, who was a key member of the 747 carrier aircraft during the entire ALT program; and Donald R. Puddy, Flight

Director, who demonstrated exceptional ability in preparing and directing the ALT flight control team at JSC.

Those at DFRC who received the exceptional service medal included 747 crew members Fitzhugh L. Fulton, Jr.; Thomas C. McMurtry; Flight Engineer Victor W. Horton; and William H. Andrews, the Shuttle Carrier Aircraft Test Team Manager. John G. McTigue of DFRC was awarded the Exceptional Service Medal for his outstanding leadership in planning and directing the overall DFRC support of the ALT Program.

Paul C. Donnelly of KSC, who managed the ground operations for ALT, was commended for his outstanding leadership to the entire ground operations engineering test team which included NASA representatives from KSC, JSC, DFRC and industry.

The Highway Patrol officially estimated another 5000 cars parked on Texas Highway 3 waiting for the 747/*Enterprise* arrival, and people from all over the JSC site watched as the 747 made its sweep over Bldg. 2 and around the Center.

There was a total of 13 flights in ALT, beginning with the taxi-tests of the mated 747/orbiter combination in February and concluding with the fifth and final "free flight" on October 12, 1977. After the initial taxi-tests, there were five unmanned "inert" captive flights during which the 747 carried the Orbiter *Enterprise* with its systems inactive to assess the vehicle's combined structural integrity as well as determine its aerodynamic performance at various speeds and altitudes.

The five captive unmanned flights were followed by three manned captive flights during which time astronaut crews performed numerous system and performance tests while the Orbiter remained attached to the top of the 747 carrier aircraft.

The first free flight with astronauts Haise and Fullerton at the controls of the 75-ton Orbiter *Enterprise* was successfully flown on August 12, 1977. The Orbiter was released from the 747 at an altitude of 24,100 and Haise and Fullerton piloted the spacecraft to a successful landing at Edwards Air Force Base dry lake runway five minutes and 21 seconds later. A second flight, with Astronauts Engle and Truly at the controls of *Enterprise* took place on September 13. This was a five and a half minute flight

(Continued on page 4)



Slayton



Haise



Engle



Fullerton



Truly



Fulton



McMurtry



Guidry



Horton



McElmurry



Donnelly



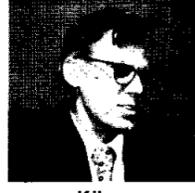
Puddy



Andrews



McTigue

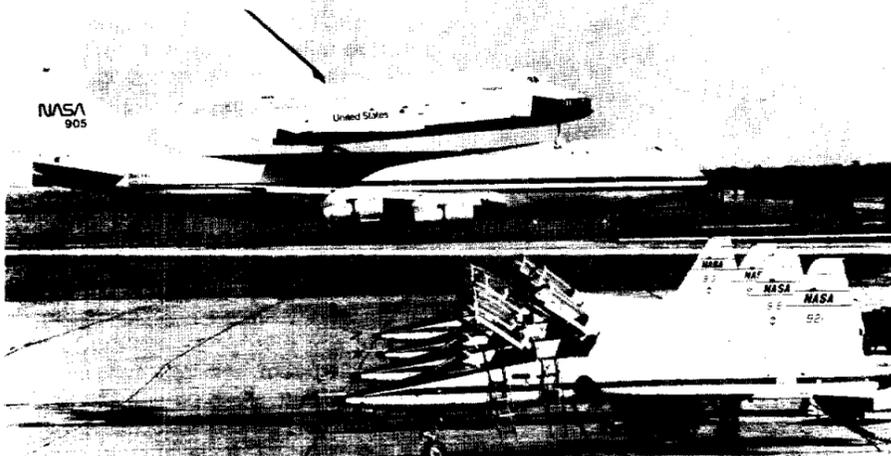


Kiker

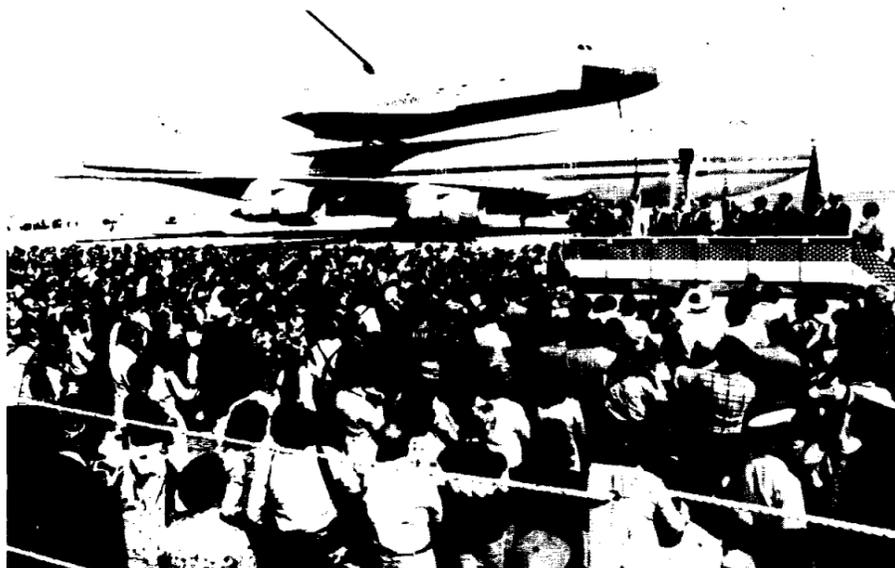


Peterson

ALT AWARD RECIPIENTS - These men were officially recognized in the ceremony last Friday.



Enterprise/747 shown with T-38's



A RECORD CROWD - This photograph shows just a fraction of those who were on hand to view the Ellington landing.

AIAA/MDAC aid minority college

The American Institute of Aeronautics and Astronautics (AIAA), Houston section, and the McDonnell Douglas Corporation here have been very actively involved in the aerospace industry's minority recruitment program.

McDonnell Douglas has been working with Prairie View A&M to promote participation in and development of various aerospace-related fields. The college was encouraged to organize a charter for an AIAA student branch.

James C. McLane, Chief, Space Environment Test Division, and Regional Director of AIAA (covering a four-state area that includes Houston) says that at the February AIAA Board Meeting in Washington D.C. the charter was voted on and granted along with two others — one at Tufts College and one at the Aero-

nautic Polytech Academy in Valparaisa, Chile (the Chilean Air Force Academy).

Prairie View A&M will be tied to the Houston AIAA section (JSC area) due to geographical location of the college. Tuesday, Mar. 14, McLane and Chuck Jacobsen of McDonnell Douglas will go there for a membership drive meeting, during which a status briefing will be given along with information concerning the "getaway special" payload which McDonnell Douglas has co-sponsored and made the down payment on so that Prairie View students might have the opportunity to develop it.

This makes the second primarily minority institution to be actively recruited by the Houston AIAA. Thomas B. Murtagh, JSC, is Student Activities Chairman for the section.

Jeanine Weber is named Co-op student for March

Jeanine Weber is an engineering student trainee employed in the Aircraft Operations Division. She is a junior Aeronautical Engineering student at Purdue University, and has been a student trainee at JSC since January, 1976. Her current tour extends through May of 1978.

Weber's current assignments include developing data and pilot procedures to allow the pilots to simulate Orbiter performance characteristics using the T-38A aircraft. She is also responsible for proposing a flight test plan for demonstration of these procedures.

Weber is also assigned responsibility for study of the mathematical model of the dynamics of the Shuttle Training Aircraft (STA). This is a continuing project from her previous tour at JSC, during which she developed significant improvements in the model aerodynamics.

This model is a key part of a computer simulation used in studies of the STA and associated systems.

These tasks require understanding of aircraft flight characteristics and the ability to perform detailed engineering analyses. Weber's supervisor, C. R. Haines, says she has demonstrated a capacity to perform such tasks with minimal supervision. She is a licensed pilot, and her flying experience contributes significantly to her understanding of aircraft engineering.

"Weber is highly motivated," says Haines, "and has demonstrated a capability to perform effectively in individual assignments or in group efforts. She is a valuable asset to the Aircraft Operations Division and a strong endorsement of the JSC co-op program."



PROJECT DIPLOMA AT JSC HAS NEW RECIPIENTS — Homer Scott (left) and Chester Jenkins (right) received their high school diplomas on Feb. 2 in a graduation ceremony at Pasadena High School. Diplomas were presented by State Representative James Clark. Homer and Chester have been participants in JSC's Project Diploma class since its initiation in February 1975. Eight other JSC employees have also successfully received their high school diplomas through this program. Stan Goldstein, Chief, Employee Development Branch, is shown with the two recipients.

Special Announcements

ACM Meeting

The March meeting of the Association of Computing Machinery (ACM) featuring speaker Gordon Stout has been changed to Mar. 23 at the Kings Inn, NASA Rd. 1, in the "Royal A" room. The social hour begins at 5 p.m., and the talk by Stout will start at 6 p.m.

Stout is the Senior Burroughs Account Manager in the Standard Products Division. He is responsible for all Federal marketing of the Burroughs Scientific Processor (BSP), which will be the subject of his talk.

This new scientific processor (announced May 27, 1977) is designed to perform extremely high-speed numerical computations in applications such as structural analysis, meteorology, natural resource exploration, nuclear research, and econometric modeling. The new system employs a high-level-language-driven, parallel processor architecture. This enables it to solve vector and array-oriented problems at speeds many times faster than conventional scientific computers. The scientific processor is a further extension of Burroughs total systems approach which provides exceptional arithmetic computational power in addition to fully featured software, communication network handling, and a complete range of peripherals.

AIAA MINISYMPOSIUM AND BANQUET

The Houston section, AIAA, will hold its third annual minisymposium and banquet on Tuesday, March 21 at the Gilruth Center. James A. Chamberlin of McDonnell Douglas, who is serving as this year's General Chairman, has announced that three concurrent sessions will be held between 1 p.m. and 6 p.m., and a total of 45 papers will be presented on a variety of subjects by JSC and contractor personnel.

Registration will occur at the Gilruth Center between noon and 1 p.m. There will be a \$1 registration fee (students free), and each attendee will receive a copy of the proceedings containing all paper abstracts.

All are welcome. You do not need to be an AIAA member to attend.

For those wishing to remain for the banquet, there will be a social hour from 6:15 to 7:15 p.m. followed by a roast beef dinner at 7:15. This year's banquet speaker is Michael Collins, Apollo 11 Command Module Pilot, and currently Director of the National Air and Space Museum in Washington, D.C. Collins will discuss the Air and Space Museum in his talk.

Cost to attend the banquet will be \$6 for AIAA members and \$7 for non-members, while students will receive a \$2 discount. Reservations should be made by calling Doris Folkes at X-4546. Cancellations are required.

PHOTOGRAPHIC COMPETITION

The National Industrial Recreation Association

DIVISIONS	CLASSES
Color Slides	Scenics
Color Prints	Nature
Black and White Prints	Human Interest Open

FEE: \$1.00 per person allows two entries in that division (Maximum allowed per division, per person)

ELIGIBILITY: JSC Employee or dependent who is not a full-time photographer (Derives over 50% of income from photography.)

ENTRY DEADLINE: 12 Noon, Wednesday, April 12, 1978

Contact Tim Kincaid, Mail Code AW, X-3594 for entry forms and more detailed information.

CLASSES

AUTO MECHANICS - Intermediate: Four 2-hr. lectures; two 3-hr. \$33.50/person, Thurs. nights starting March 30. Sign-up deadline March 23.

GROUP TENNIS - (4-8 people): Eight 1-hr. sessions; \$30.00 per persons. Tues. and Thurs. nights. Beginners, 7:30-8:30 p.m.; Intermediate, 8:30-9:30 p.m. Starts April 4. Sign-up deadline March 28.

OIL PAINTING - 6-2hr. sessions, \$37.50/person plus materials, meets Thursday nights March 16, 23, 30, April 13, 20, 27. 6-8 p.m. Sign-up deadline March 14.

MICROWAVE COOKERY - Do you own one of those expensive microwave ovens but don't really know how to use it? Here's the class for you. Four 2 1/2-hr. demonstration and tasting classes, covering basic microwave techniques for cooking appetizers, candy, desserts, eggs, fish, main dishes, meat, pies, quick breads, sauces, soup and vegetables. By the time the class is finished you will have a recipe booklet containing over 40 recipes and lots of ideas. Jane Bauer and Jeanneta Davis of Jane and Jeanneta's Microwave Cookery will be the instructors for the class. The cost is \$33.50/person, Tues. nights 7-9:30 p.m., starting April 11. Sign-up deadline is April 6.

Paintings

The paintings on display during February in the Bldg. 11 Cafeteria are originals and were done within a 6-week session of beginning oil painting classes.

The classes are sponsored by the Gilruth Recreation Center and held on Thursday nights, 6-8 p.m. The students may be from JSC or contractors or dependents of same.

The instructor is Lois Miller, a NASA employee. For further information concerning these classes, contact either Ted MacDonald, X-4921 or Tim Kincaid, X-3594.

Many thanks go to Roy Aldridge and each person involved in obtaining permission for such a display and the use of the building. Very special thanks to Bill Stave of the Recreation Center for hanging the paintings.

The next class starts Mar. 16, 6-8 p.m., room 209 at the Rec. Center. Payment and registration must be completed by March 15. Call early because this will be a full class.

COMING EVENTS

Watch for: Nostalgia Dance, Music of the 50's, Soul Dance!

What's cookin' in the JSC cafeteria

WEEK OF MARCH 20 - 24

MONDAY: French Onion Soup; Weiners & Baked Beans; Round Steak w/hash browns; Meatballs & Spaghetti (Special) Okra & Tomatoes, Carrots. Standard Daily Items: Roast Beef, Baked Ham; Fried Chicken; Fried Fish; Chopped Sirloin; Selection of Salads, Sandwiches, and Pies.

TUESDAY: Beef & Barley; Shrimp Creole; Beef Stew; Fried Chicken (Special); Mixed Vegetables, Stewed Tomatoes, Buttered Rice.

WEDNESDAY: Seafood Gumbo; Fried Perch; New England Dinner; BBQ Plate; 8-oz. T-Bone Steak; Shrimp Salad; Swiss Steak (Special); Italian Green Beans, Beets, Lima Beans.

THURSDAY: Cream of Chicken Soup; Turkey & Dressing; Enchiladas w/chili; Weiners & Macaroni; Stuffed Bell Pepper (Special); Zucchini Squash, Green Beans.

FRIDAY: Seafood Gumbo; Broiled Flounder; 1/2 Chicken w/peach half; Fried Shrimp; Shrimp Salad; Salisbury Steak (Special); Mixed Vegetables, Cabbage, Breaded Okra.

WEEK OF MARCH 27 - 31

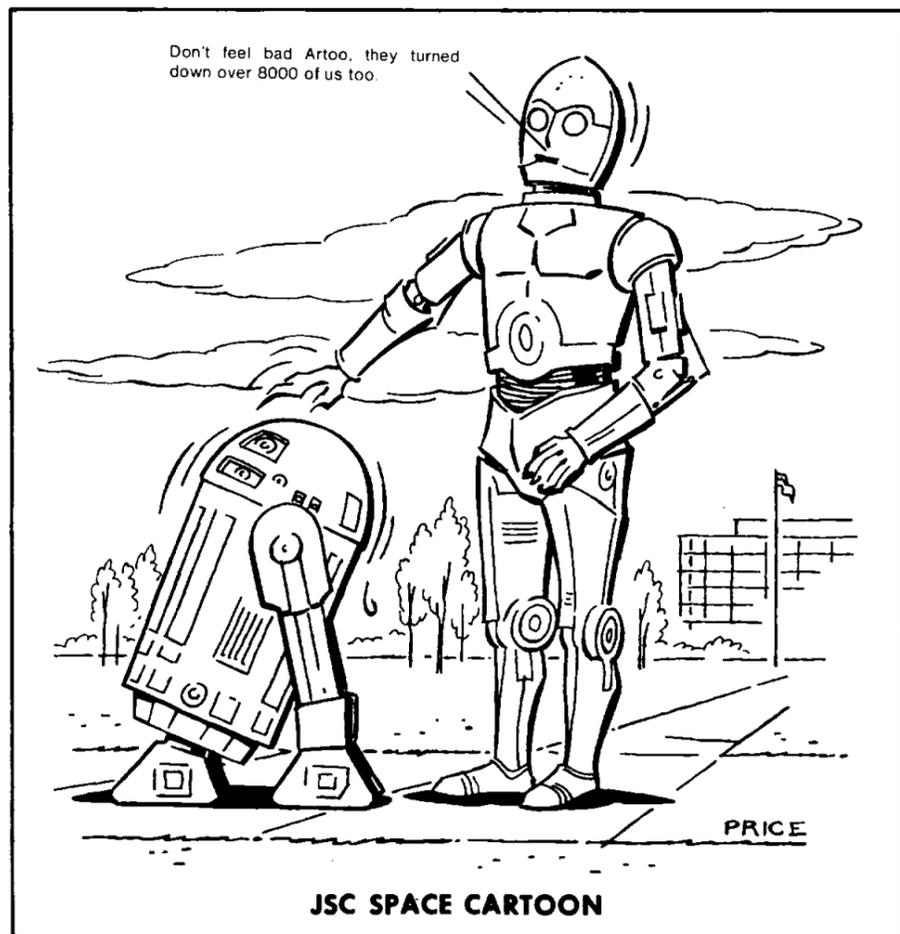
MONDAY: Chicken & Rice Soup; Texas Hots w/beans; BBQ Ham Steak; Veal Parmesan; Beef & Macaroni (Special); Spinach, Carrots, Au Gratin Potato. Standard Daily Items: Roast Beef, Baked Ham; Fried Chicken; Fried Fish; Chopped Sirloin; Selection of Salads, Sandwiches, and Pies.

TUESDAY: Tomato Soup; Baked Chicken; BBQ Spare Ribs; Mexican Dinner (Special); Broccoli, Spanish Rice, Ranch Beans.

WEDNESDAY: Seafood Gumbo; Liver w/onions; BBQ Ham Steak; Shrimp Salad; Baked Meatloaf (Special); BBQ Plate; Brussel Sprouts, Green Beans, Whipped Potatoes.

THURSDAY: Beef & Barley Soup; Chicken & Dumplings; Corned Beef w/cabbage; Smothered Steak (Special); Cauliflower, Cabbage, Parsley Potato.

FRIDAY: Seafood Gumbo; Pork Chop; Creole Baked Cod; Ham Steak; Seafood Platter; Salmon & Tuna Croquette (Special); Green Beans, Beets.



JSC SPACE CARTOON

ROUNDUP

Editor: Beverly Eakman
Photographer: A. "Pat" Patnesky

The **Roundup** is an official publication of the National Aeronautics and Space Administration Lyndon B. Johnson Space Center, Houston, Texas, and is published every other Friday by the Public Affairs Office for JSC employees.

College funds may be obtained through JSC Scholarship Program

A college scholarship fund has been established by the NASA Exchange-JSC to provide financial assistance for children of JSC civil service employees to attend college. This year, two scholarships will be awarded on the basis of scholastic achievement, financial need, and school or community involvement. The scholarship winners may pursue any course of study, leading to a recognized degree at any accredited college in the country.

Up to \$3000 will be provided in the amount of \$300 per academic semester, or \$200 per academic quarter, or as the committee shall determine. The amount, however, will not exceed \$800 in any one year.

The Scholarship Program is open to students who will be graduated from a public, private, or parochial high school in 1978 or to students who are currently enrolled in college and in good academic standing. An applicant must have a high school grade average of 3.5 on a 5.0 scale or 2.5 on a 4.0 scale. Applicants must be unmarried dependents of NASA civil service personnel who have been employed at JSC or its field activities for at least two years as of January 1, 1978. Unmarried dependents of NASA personnel who during the year previous to the application year were medically retired or deceased and who otherwise would have met these qualifications are eligible for consideration.

Application forms and agreements for the scholarship are available in Bldg. 1,

Room 878. Please contact Dawn Hoyle, extension 2358, for the forms or for additional information.

High school students will be expected to furnish a transcript of their high school grades and a record of their scores on the Scholastic Aptitude Test (SAT) or the American College Test (ACT) with their applications, or as soon thereafter as they become available, but no later than March 31.

College students will be expected to furnish their most recent transcript of college grades with the application as well as a transcript of high school grades and a record of SAT or ACT scores.

To be considered for this year's Program, completed forms must be returned no later than March 31 to: AH/Harvey L. Hartman, Chairman, Scholarship Committee.

The scholarship winners will be notified by mail no later than April 28, 1978.

THANK YOU

The *Roundup* editor would like to thank you for the tremendous response to a call for space-related JSC Cartoon material. It looks like we will be up to our elbows in humor, but keep 'em coming. They say that laughter is the best medicine, and, remember, the more unique your idea, the better the chances for selection.

EAA Attractions

RESTAURANT & THEATER CLUB

The Restaurant and Theater Club has come out with a new plan and price. Memberships are now for six months from the date of purchase instead of 12 months. The cost is \$10.50 instead of \$22.50. The club offers two-for-the-price-of-one dinners/admissions to most dinner theaters in Houston; some good restaurants, Alley Theater, the Houston Symphony, Theater Under the Stars, and other theaters plus travel packages. EAA reps will have new envelopes about Apr. 1.

SIX FLAGS OVER TEXAS

Six Flags Over Texas tickets are now available at the Bldg. 11 Exchange Store for \$6.75. The regular price is \$8.50. Also, the HGAIRC is sponsoring a weekend excursion to Six Flags Apr. 8 & 9 for all JSC employees. Deadline for reservations is Mar. 22. Call Tim Kincaid, X-3594 for further information after 2 p.m.

DISNEYLAND & DISNEYWORLD

Magic Kingdom cards for Disneyland and Disneyworld are also available free in the Exchange Store. The cards are good for ride ticket discounts at the parks and lodging discounts at some motel chains.

DEFENSIVE DRIVING

Last call! Today is the last day to sign up for the defensive driving course without a penalty. Today it's still \$12. After today, the cost goes up to \$14. Classes will be Mar. 27 & 29 and Mar. 28 & 30 at the Gilruth Recreation Center, 6 to 10 p.m. Send the registration blank from the flyer with your check to Frances Barbee, SF3.

DEAN GOSS DINNER THEATER

Dean Goss Dinner Theater tickets are no longer sold at the Bldg. 11 Exchange Store. Get the tickets from Jim McBride, Bldg. 4, Rm. 130. Couples are \$16; singles \$8. Tickets are good any night except Saturday.

PICNIC HAS THEME

"Close Encounters of the Fun Kind" is the theme selected for the 1978 EAA Picnic. The picnic committee is trying to get that old feeling back into the picnic by planning games and contests — all for fun — that everyone can participate in. Remember May 6 at Camp Manison. Adults, \$3; children, \$2.50.

HOUSTON AERO HOCKEY

Remember the upcoming home games with Birmingham Mar. 17, Finnish National Mar. 19 (exhibition game), Quebec Mar. 25, Winnipeg Mar. 28, and Edmonton Mar. 30.

ISN'T IT ABOUT
TIME!



that you reported your
cost reduction results to
BH-4 on JSC form 1150,
cost reduction office?

Roundup Swap Shop

CARS & TRUCKS

- 68 6-cyl straight shift Ford Pickup. Red, A/C, radio. \$995. X-6421 or 946-4458.
- 70 Mercedes 250. Outstanding cond, loaded. \$3,500. Sampsel, 334-1278.
- 74 El Camino Classic. Auto, A/C, pwr, AM-FM 8-track, 350-2 V8, five HR70-15B steel belt radials, swivel bucket seats, console shift, tilt wheel, cruise control, 34K mi. \$3,100. Koons, X-3841 or 333-3616.
- 71 Fiat Spyder. AM-FM stereo, dark blue, 5-speed, from dry climate, xint cond, clean. \$1,500. 486-0442 after 5:30 or wknds.
- 70 Grand Prix. New tires, AM-FM 8-track. \$700. 474-3861 after 4.
- 67 VW bug body. All glass headlights, bumpers in good shape. \$90. Ullrich, X-3325 or 487-0307.
- 69 Camaro. Std trans, 307 V8, upholstery perfect, new front glass, new paint, mags, dual exld, new shocks, air shocks on rear, good tires, new clutch, carb, overhaul. \$1,150. Smith, X-4468 or 488-3238 after 5.
- 68 Olds Toronado. Good cond. \$500 or best offer. Taylor, X-4637 or 488-3591.
- 63 Mercedes 220SE. A/C, 2-dr HT, AM-FM, xint cond. 477-0707, 472-5563, or 473-5386.
- 75 Peugeot 504 diesel sedan. A/C, tape, AM-FM, low mi. Must sell. 472-5563, 477-0707, or 473-5386.
- 71 Ford Pinto. Good cond. \$700. 486-1446.
- 69 Ford F-100 Pickup. LWB, A/C, 302 V8, H/D springs, Sears radials, e-speed. \$995. Gatlin, 332-3287.
- 65 Mustang. V8 engine just overhauled, HT, 4 on floor, headers, 4 bbl. Holly Garb, oversize wide reat tires. \$1,200. McMurrey, X-4241 or 534-3625 after 5.
- 76 Ford truck. F-150, Custom - 360 V8 engine, pwr steer & brakes, stand trans, twin gas tanks. Shows. 334-2003.
- 71 Buick LeSabre. Custom, 4-dr, loaded, pwr seats & windows, xint cond, very low mi. \$1,600. 333-2509.

STEREOS & CAMERAS

- Polaroid camera, 103 w/ flash attachment, instruction bk, etc. Xint cond. Will take \$35. 941-5179 after 6.
- Vivitar 85mm-205mm f3.8 auto zoom lens f/ Minolta SLR cameras, w/ case. \$85. Minolta AL 35mm f2 rangefinder camera. \$25. Sunpack 7D elec flash w/ battery recharger & AC pwr cord. \$15. Bettner, X-7474 or 482-3725.

PROPERTY & RENTALS

- Sale: Cozy 3-2-2 on quiet cul-de-sac. Immaculate cond, neat yard, custom window treatments, 4-1/2 yrs old. Mid 40's. 488-6012.
- Sale: 12, 25, or 75 acres; 4-hr drive. \$600/acre. Property uses: current income, investment, homesite, limited rec. Burton, 481-0780 after 5.
- Lease: Middlebrook II, 4-2-2. Drapes, landscaped, fireplace, wet bar, patio. Avail June 5. \$475/mo. 488-4487.
- Lease: New Baywind 2-br condo. Icemaker refrig, 1-1/2 bath, 2 assign parking, W&D connections, no pets. Avail Apr. 1. \$325/mo. 334-3265.
- Rent: Lakeside vacation retreat at Cape Royale on Lake Livingston. Tennis, fishing, boat launch, golf. 488-3746.
- Rent: Lake Livingston, Cape Royale, compli furn home, 3-2-1. Fishing, hunting, tennis, golf, etc. Reserve early. Wk/mo/yr rates. 488-4487.
- Rent: Galveston West End. 2 BR by-the-sea condo apt. full furn. \$180/wk off-season; \$260/wk in-season. Clements, 474-2622.
- Rent: New Galveston Island Jamaica Beach cottage. \$175/wk or \$30/day for weekends. 334-1640 after 6 p.m.
- Sale: Beautifully wooded homesite at Columbia Lakes. Big lot on cul-de-sac. Year-round living w/ compli rec facilities. \$11,500. Heyer, 488-2691 after 6.

BOATS & PLANES

- Fabulglas Trihull 17', Evirude 115 HP trailer. Fully equipped, fish, ski, xint cond. \$2,950. 626-4290.
- Wellcraft 165 boat. Fish or ski. Mercury motor, tilt trailer, 85 HP, extras. 944-5624.
- Sportcraft Trihull, 18' w/ trailer & Merc 125. Three props, battery, gas tank, new tach & steer assembly. Must sell. 946-9240 after 6.
- Fiberglass 14' modified V-hull w/ 40 HP 1974 Evinrude O.B. engine. Lil Dude galvanized trailer. \$900. Ogden, 337-3494.
- Tartan 26' sailboat. Full race & cruise equipped. \$16,500. Arnold, X-5263 or 488-2272.
- American Eaglet powered sailplane. Wing kit, tail feather kit, landing gear kit, plus new covered trailer. \$1,200. Carver, X-2941 or 334-1619.

MUSICAL INSTRUMENTS

- Acoustic guitars. Yamaha FG 160 and Garcia No 2. \$125 ea. 488-2652.

CYCLES

- 75 MX 100 Yamaha dirt bike. Rebuilt engine. \$350. Brzezinski, 944-3560.
- 77 Suzuki motor cycle. Fairing, paddle bags, cover, 400 CC, 4-cyl, king/queen seat, other xtras, 800 mi. \$1,050. 486-0890.
- Honda SL 100. Good cond. \$250. Gordon, X-3375 or 481-3787.
- 74 Suzuki 250 GT street bike. Xint cond, low mi. Must sell. Murdock, 481-1469.

HOUSEHOLD ARTICLES

- Remodelling! Built-in Whirlpool 4-burner gas cook-top (has burner-w/ a brain). \$25. Also built-in Whirlpool Mark 24 double oven, elec. \$75. Sampsel, 334-1278.
- Antique chandelier, \$100. Tall carved chair, \$250. Turn-of-the-century Spanish library table w/ bench, \$450. All mint cond. 488-5564.
- 19" Heathkit color TV Maple Console. \$175. Xint cond. 946-4013.
- Antique light gold oak washstand & 3-cushion Early Am. sofa. Xint buys. 488-4487.
- Wards largest gas dryer. 2 yrs. old, xint cond. \$100. Strimple, X-3411 or 331-5790.
- French Prov dining table w/ leaf, 4 chairs, matching lighted china cab, \$600. Early Am. dresser, double bed w/ bookcase headboard, mattress, box springs, \$250. French Prov living rm furn, too. 334-1619 or 334-1764.
- Port dishwasher, Sears Kenmore Copper-tone, good cond. \$75. Also Sears hi-efficiency window unit air cond; 115 volts, 14,500 BTU, very good cond. \$150. 486-0890.
- Chest of drawers, 52" long, 23" wide. \$25. 333-4669.
- Sears 19" color TV, xint cond. \$150. Also 2 GE port dishwashers. Make offer. Poindexter, 474-2203.
- Used carpeting. Good cond, several colors. First \$150 buys all w/ pad. Approx. 100 yds. 941-5179 after 6.
- Desk, \$50. Old antique table cut down to coffee table, refinished, \$75. Small washstand, antique, refinished, \$50. Wicker lamp antique table, \$125. 488-5564.

PETS

- Boxer. Young male, AKC reg., champion sired. \$250. Bailey, 337-2855.
- Irish Setter pups. AKC reg., 6 wks old, males & females. \$50. 331-6690.
- Beagle. One yr old, free to loving country home. Also 2 half-Beagle pups. 645-5074.

WANTED

- Will pay up to \$125 f/ good 10" table saw. Brton, X-2568 or 481-0780.
- Want used set of golf clubs inc. bag, reasonable. Bullock, 488-1042.
- Pole lamp wanted in good cond. 474-2081.
- Mature woman wants to share home or apt w/ same. 488-4986 after 4.
- Want used drill press, 6" joiner, metal lathe, band saw. Muhly, X-3841 or 471-3762.
- Firefighters needed! Men and women adult residents of CLC needed to join CLC Volunteer Fire Dept. Rewarding community service. You will be trained and equipped. Call 488-0023 any time.
- Need new members f/ Bacliff Bass Club. Singles-couples welcome. Meetings, tournaments, prizes. Parker, X-4241 or Mobley, X-4428.
- Need rides for carpool from W Loop, SW Fwy. Bellaire area, 8-4:30. McLaughlin, X-5536 or 661-2974.

LOST & FOUND

- Lost: One carousel of slides from Rm. 160 Bldg. 2. Did someone borrow some education slides? Please return to J. Poindexter, X-2938, w/ or w/out carousel. No questions asked.

MISCELLANEOUS

- Set of Arnold Palmer golf clubs, good cond. \$60. 482-7016 after 6.
- Three head professional tennis rackets strung, 4 5/8 light slightly used. Moolchan, X-3606 or 862-7984.
- Sears dehumidifier, 12-pint capacity, \$40. 486-0890.
- Fedders 4-ton air cond unit. Needs compressor. Cheap. 334-1267.
- Pecan wood cut into 16 to 20 inch blocks. Xint f/ barbecuing or heating. Make offer. Will deliver. York, X-3921 or 734-0506.
- Lawn edger/trimmer, 4-cycle Briggs & Stratton engine. \$25. Sampsel, 334-1278.
- Bathtub sliding door enclosure; will fit opening 57 1/2" wide. 334-1486.
- Amateur radio. Clegg FM-DX, 2M, 50 watts, Drake TR4C - AC, DC. Sigafoose, 554-6242.
- Trailer hitch f/ Datsun B210. Sommer, X-3196 or 643-7104 after 5.
- Burroughs adding machine, 12-key, elec, will take \$35. 941-5179 after 6.
- Gerbill cage, metal, 2 levels w. exercise wheel. 471-3303.
- Mint stamps, 100 assorted 13¢ (inc Indian Head Cent) sold at face value, \$13. Sugano, X-3856 or 482-5393.

Musical composition by computer is latest thing

You have probably heard it said that everything "is going computer" these days, meaning everything from cartoons to cash registers.

But the latest idea is music by computer, and the JSC Computer Hobbyist Club is announcing what will undoubtedly be an exceptionally interesting two-part presentation by Gunter R. Sabionski entitled "State-of-the-Art Design of a Music Synthesizer Using a Digital Computer and Special Dedicated Hardware."

The concept of music by computer is apparently not totally new. Stanford University, for example, has several doctor's theses in the field of computer music composition utilizing large-scale computers such as the 370/168, but not using microprocessors. The price tag of the large-scale computer put the concept way beyond the reach of the layman, but now that microprocessors are on the scene, says Sabionski, the idea becomes considerably more feasible.

Sabionski isn't merely interested in the reproduction of sound; ultimately, he says, it will be possible to compose original music from scratch or to take a piece from, say, Bach, and use different instruments or even presently nonexistent instruments to come up with a totally new sound. This ability to recreate an already known musical selection is a form of composition, too, says Sabionski.

Last year, Sabionski presented a simulation of a single-voice instrument, which amazed and enthused everyone present. Now, as a hobbyist, he is into the

mathematics involved in harmonic contents, a subject too complicated for most audiences.

However, his free time last year was almost exclusively devoted to extensive research on inexpensive reproduction of sound using a digital computer for generation and control. Although his computer has a clock cycle time of only 400 nanoseconds, Sabionski determined it too slow to perform all the processes in software so that special dedicated hardware had to be designed also. This will be the main thrust of his March 20 presentation at the Gilruth Recreation Center, Room 209. It will cover the theory of sound and possible software/hardware implementation schemes. On April 15, same time and place, Sabionski will give a live demonstration of the capabilities of his system. Everyone is invited to attend both presentations.

Sabionski started working at JSC in 1966 and has been involved with computers since his undergraduate days. He has been noted for his interest in the many capabilities of computers in various fields.

The result of his research at this time is a multivoice synthesizer with digital control of an infinite variety of instruments and envelopes as well as control of amplitude, note, octave, length of note, tremolo, master timing, and other pertinent parameters. He has also developed a comprehensive music editor software package, which can be used to input, change, and play musical compositions.



Gunter Sabionski

Spaceland Toastmaster Sullivan wins contest

The Spaceland Toastmasters Club will be represented at the Area Speech Contest on April 7 Toastmaster Ann Sullivan in Alvin at the Mexican Village Restaurant. Sullivan took first place in the Spaceland's Club Contest with her speech concerning the decline of education, entitled "The Problem With Learning." Sullivan is a charter member and is presently the Directorate Secretary in Space and Life Sciences at JSC. The second and third place honors went to Toastmasters Gene Cook and Sharon Babb.

The Spaceland Club is celebrating its second birthday at the March 22 meeting to be held at Mr. Gatti's. Guests may attend by making reservations with Toastmaster Rudy Williams, X-2254.

The club was established as a training device to help JSC employees gain confidence in making presentations and originated with the Federal Women's program. However, current membership is about equal in numbers of men and women. Persons wishing to visit a regular bimonthly meeting held at noon at the Bonanza Restaurant are urged to contact Toastmaster Gene Cook, X-5893.

President Carter commends two JSC employees in letter

President Carter recently announced a program in which he would personally recognize Federal employees whose contributions under the Incentive Awards Program produced first-year benefits of \$5,000 or more.

Well, remember those suggestion awards mentioned in the Jan. 20, 1978, issue of *Roundup* that brought extra cash to employees' Christmas stockings? Two of those suggestions earned their initiators more than money. Among those submitted by NASA for this presidential recognition were Harry L. Hawkins for his

Stopover . . .

(Continued from page 1)

after which spacecraft commander Engle said the Orbiter performed superbly. Pilot Truly said *Enterprise* was an excellent handling machine.

Three more flights of the Orbiter from its carrier aircraft followed and the flight test program and ended with the fifth and final flight on October 12. With Haise and Fullerton at the controls, the Orbiter made a landing on the hard surface runway of Edwards.

A series of "ferry flights" followed. These tests, which were completed in mid-November, assessed the aerodynamic characteristics of the combined 747/Orbiter vehicle in the "ferry mode". The ferry mode will be used during operational Shuttle flights where the Orbiter is transported cross-country from its manufacturing site to launch sites and subsequent landing sites back to launch sites, either at Kennedy Space Center, Florida, or the U.S. Air Force (USAF) launch site at Vandenberg, California.

The ALT program officially ended with the delivery of *Enterprise* to MSFC where it will now undergo a series of ground vibration tests preparatory to the initial OFT now scheduled for the spring of 1979. The first orbital vehicle will be Orbiter 102, now being assembled at the Rockwell International facility at Palmdale, California.



GAMMAGE ATTENDS LANDING - Congressman Gammage (left) is shown here with Dr. Kraft, dwarfed by the immensity of the 747/Orbiter combination. Gammage said he thought the landing and the turnout were "just spectacular."

JSC Sports Section

RUNNING EVENTS

April will be a busy month for JSC Runners. Three separate events are already on the calendar. Let's all get out and run and get the JSC participation level up to where it should be. Call X-3594 after 2 p.m. if you have questions on any of the following races.

Fifth NASA Intercenter Postal Running Competition

Lewis Research Center is sponsoring the 1978 Spring Edition of this popular NASA-wide event. At least ten NASA Centers are expected to take part. Center will be scored for participation levels as well as speed, so everyone's contribution is needed.

Date: April 3, 4, 5

Place: Clear Lake High School Track (No cleats)

Time: 2mi. at 5:30 p.m. each day, 4 mi. at 6:00 each day.

Pre-registration is required. Deadline is March 31. The cost is \$1.00 per person per event (Children 9 yrs. and under are free if participating with their parents). Make checks payable to Gilruth Recreation Facility; Mail to Code AW; also include age, birth date, office phone, mail code, or address and employer.

Participation is open to all Center employees, Civil Service and Contractors. Spouses and dependents are excluded from the Intercenter Competition but are encouraged to enter for a JSC Competition to follow the same format.

Age Categories are: men, 29 yrs. and under; 30-34 yrs.; 35-39 yrs.; 40-44 yrs.; 45-49 yrs.; and 50 yrs. and over. For women, the age categories are 29 yrs. and under and 30 yrs. and over.

JSC-BARC Roadrace

The Bay Area Run Club is sponsoring a race at the Gilruth Recreation Facility on Saturday, April 8 at 9:00 a.m. A 15-km event sanctioned by the Gulf Association

of the A.A.U. will head the bill that day. A.A.U. registration is required. Contact Charles Glancy, A.A.U. Registration Chairman, 18226 Carriage Lane, Houston, Texas 77058, for A.A.U. registration forms. A.A.U. registration is not required for the other events that day, a 5-km, the Fun Run, and a 1-mile Novice Run. Entry fee is \$2.50 due by Thursday, April 6. Your NASA contact for entry forms and further information is Richard Barton, X-5181, Mail Code EX43.

HGAIRC FUN RUN

The Houston-Galveston Area Industrial Recreation Council (HGAIRC) is a non-profit service organization dedicated to the advancement of employee recreation in the business, industry, and government communities of the Houston-Galveston Area. Membership consists of companies or their employee clubs. This Fun Run is one of the many events offered through HGAIRC or their larger parent organization, NIRA, National Industrial Recreation Association. JSC is an HGAIRC member and as such all JSC (Civil Service) employees are eligible to participate. Some contractors may also be eligible: Lockheed, Singer, G.E., MDAC and Hamilton Standard are HGAIRC members, too. Contact your company recreation association to see if you are an eligible participant. JSC Runners will compete on Sat., April 15 at the Clear Lake High School Track at 10:00 a.m. It is a 2-mile Predict-your-own-time event. Categories are: (a) under 18 yrs., (b) 18-49 yrs., (c) 50 yrs. and over, and (d) family.

There are trophies to top finishers in each age group, participation awards to everyone, and a company award for the best company score. Refreshments are served. Entry fees are \$1.50 per person, or \$3.00 per family. Family entrants may use their time for both the individual and family categories.

Contact Tim Kincaid, X-3594, Mail code AW, for further information or to enter your family.



LETTERS PRESENTED — Center Director Christopher Kraft is shown presenting the letters of commendation to Harry L. Hawkins, middle, and to Charles J. Bauer, Jr., right.