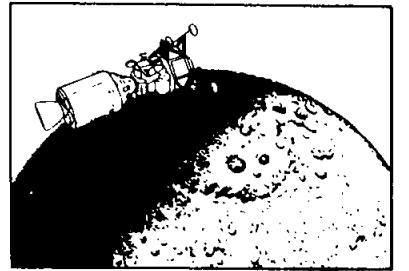


ROUNDUP



NASA LYNDON B. JOHNSON SPACE CENTER

HOUSTON, TEXAS

Vol. 14 No. 8

Friday April 11, 1975



EMPLOYEE OF MONTH — Boyce H. Mayer of the JSC Aircraft Operations Division Flight Schedules Office recently was named Manned Flight Awareness Employee of the Month for February/March for his contributions to ASTP. Mayer, right, receives a certificate from ASTP Technical Director for the U.S., Glynn S. Lunney.

MFA Employee Of The Month To Be Honored During ASTP

Boyce H. Mayer of the JSC Aircraft Operations Division Flight Schedules Office has been named Manned Flight Awareness Employee of the Month for February/March for his contributions to the Apollo-Soyuz Test Project (ASTP).

ASTP Technical Director Glynn S. Lunney has invited Mayer to attend the July 15 ASTP launch at Kennedy Space Center as part of the Manned Flight Awareness activities which include a pre-launch reception, a tour of KSC and viewing the launch from stands near the Vehicle Assembly Building and Pad 39.

In nominating Mayer for the MFA award, JSC Director of Flight Operations Kenneth S. Kleinknecht said, "By virtue of being completely knowledgeable of all aspects regarding requirements and training locations, and varying his own working schedule to cover both early and late flight schedules, Mr. Mayer has been very instrumental

in fulfilling all training aircraft requirements by exceptional performance since the inception of the ASTP program...And he has continuously monitored pilot currency and qualification status and has been instrumental in scheduling of instructor-pilot and aircraft resources to fulfill aircraft training and pilot proficiency requirements."

The MFA Employee of the Month program was established in February by Associate Administrator for Manned Space Flight John F. Yardley to honor federal and aerospace industry employees at JSC, KSC and Marshall Space Flight Center in the five months preceding the ASTP mission.

Each employee selected will be invited to attend the ASTP launch and associated social activities at KSC or may attend the reception and other activities being planned for JSC following the KSC launch.

Freedom Shrine To Stand As Reminder

JSC has received a Freedom Shrine from the Exchange Club of Central Houston. Included in the shrine are 28 historical documents such as the Declaration of Independence and the Gettysburg Address which are exact reproductions of the originals. Making the presentation to Center Director Christopher C. Kraft, Jr. was Bill Parmeter, President of the Central Houston chapter.

"We think it is particularly appropriate to have this Freedom Shrine at JSC because we feel we are part of the history of this nation," Dr. Kraft responded.

An exclusive project of the Exchange Clubs of America, over 4,000 shrines have been placed in schools, libraries, public buildings and institutions throughout the country.

"The Freedom Shrines stand as reminders to all of us that American citizenship imposes duties and responsibilities upon each of us so that we can retain our rights and the privileges of freedom," stated Tom Nevotti, member of the Sharpstown Exchange Club.

Congressman Bill Archer, keynote speaker at the ceremony, added, "All of us need to re-

dedicate ourselves and re-examine our thinking on a continuous basis. It is important that we not only look back, but look forward, and that we continue to do our part in this eternal vigilance concept to see that the proved principles that our founding fathers have left us as a legacy are much alive today and

that they continue to vibrate in the future. Times and conditions change, but principles are as eternal as the stars."

The Exchange Clubs of America are concerned with crime prevention, youth recognition and American patriotism. There are 14 Exchange Clubs in Houston.



FREEDOM SHRINE — Congressman Bill Archer, R-Texas, addresses a group of Center employees during ceremonies in which JSC received a Freedom Shrine from the Exchange Club of Central Houston. Seated in front of the Shrine, a series of 28 historical documents, are (left to right) Bill Parmeter, President of the Central Houston Exchange Club; Dr. Christopher C. Kraft, JSC Director; Tom Nevotti, member of Sharpstown Exchange Club; Astronaut John Young; and Mike Tyson, Immediate Past President of the Central Houston Exchange Club.

Bushuyev Says Failure Won't Affect ASTP

Professor Konstantin D. Bushuyev of the USSR and Dr. Glynn S. Lunney of the USA, Technical Directors for the Apollo Soyuz Test Project, recently discussed the April 5 Soyuz launch failure during one of their regular telephone conferences.

Professor Bushuyev reported that the launch vehicle which failed was one of the earlier versions of the booster used in their national program. He told Dr. Lunney that the ASTP booster is a modernized version with greater payload capability.

"The Professor said the failure is still being analyzed, but he positive-

ly assured us that it will not affect our joint program or the July 15 launch date," Lunney reported.

"He said there is no suspicion about systems that are common in the old and modernized ASTP versions of the booster. He said that there are differences in the two versions and that the ASTP version has been used successfully in previous flights."

"I told him that I wanted more details on the problem, and he agreed to provide that to me by telegram after their analysis is developed further. We also agreed to discuss this subject further when we meet in Moscow next month," Lunney said.

Throughout NASA...

NEW GRAPHICS

NASA is developing a new graphics system to improve visual communications with the public, as well as all intra-agency communications. The new system encompasses publications, stationery, press releases, vehicle identification, etc. By standardizing all NASA graphics at a high level of design excellence, through the use of a graphic standards manual, NASA expects to reduce design costs.

COLLIER TROPHY

Dr. John Clark, Director of NASA's Goddard Space Flight Center and Daniel J. Fink, Vice President of General Electric's Space Division, have been designated as the recipients of the National Aeronautic Association's Robert J. Collier Trophy for their individual accomplishments in making LANDSAT — The Earth Resources Tech-

nology Satellite Program — the outstanding aerospace event of 1974. Awarded annually, the trophy was established in 1912 by Robert J. Collier, publisher and pioneer aviation enthusiast.

ATLIT

A light, twin-engine airplane called ATLIT (Advanced Technology Light Twin), is being flight tested at the Langley Research Center.

The new generation plane is fitted with several devices developed with the aid of NASA's advanced aerodynamic technology to improve the craft's flight characteristics. The most dramatic change in the experimental aircraft is a new airfoil shape built into the plane's wing called the GAW-1. The wing is about 27 percent smaller than the plane's original wing, but is expected to provide more efficient cruising flight and safer operation.

(Continued on Page 4)

ASTP Countdown

— Astronauts Thomas P. Stafford, Donald K. Slayton and Vance D. Brand have continued to conduct ASTP simulations including entry, launch, earth observations, joint activities and orbital operations.

— The crew and other ASTP officials will travel to the U.S.S.R. this weekend and more joint crew training will take place there. Training is scheduled to last three weeks.

— The next joint ASTP simulations are scheduled to begin May 12.



WATER EGRESS — Astronaut Donald K. Slayton attaches his life preserver as he egresses an Apollo Command Module (CM) trainer in a water tank in Building 260 during water egress training at JSC. The crewmen exit through the hatch when the CM is in a stable II (apex down) position. Astronauts Vance D. Brand, left, and Thomas P. Stafford have already egressed the trainer and are seated in a three-man life raft. More photos on page 4.

She Thrives On "Challenging Assignments"

Ivy Fossler might have chosen her career because her father had an engineering background; or perhaps she was influenced by her namesake, Dr. Ivy Parker, chemical engineer and close family friend. Whatever the reason, Ms. Fossler has never regretted pursuing a career as an engineer at JSC — and has made the most of every opportunity to "learn something new."

She says she thrives on challenging assignments, "I enjoy finding a new problem and trying to solve it. I believe you should see what needs to be done and get in there and do it!"

In her twelve years in the Engineering Analysis Division, working on various assignments from lunar lighting to Shuttle separation problems, she has made contributions that far exceed merely "getting the job done." Consequently, when the Space Shuttle Program Office was formed in 1972, she became separation subsystem manager and in 1973 was named head of the Aerodynamic Systems Analysis Section.

She feels that her childhood experiences in Livingston, Texas account significantly for her ability to get along well with others. Although her father was a petroleum engineer, he left this field in order to take a job that would not require

extensive traveling. He decided to operate a grocery store and it was there that Ivy grasped initial insight of the importance of personal relationships. She worked in the store for many years and gained excellent training in personal relations.

"I like people, I like working with them and learning from them. It doesn't bother me to ask people to do things for me or help me understand a problem. Neither does it bother me to explain to people what I'm doing or why I think it's important."

As a manager, she says she is "straight across the board" with employees and wants them to be just as frank with her, "That's the only type of relationship that elicits positive results," she says.

Fossler received both her B.A. and M.A. degrees in mathematics from the University of Houston.

She also concentrated in physics and chemistry. She is a member of the American Business Women's Association and the Society of Women Engineers. She has made numerous speeches throughout the country as a member of the NASA Speaker's Bureau. She also served for three years as Chairman of the Board of Adjustment in Friendswood — an organization concerned with zoning.

She is interested in creative writing, painting and sketching, photography and growing plants.

Ms. Fossler has received the Superior Achievement Award and was nominated for the Federal Women's Award.

Her philosophy? "It's evolving everyday," she says. "Basically, though I feel that one should enjoy life and by all means think positively. If you think 'I can', you will!"



Ivy Fossler

Get With It!

The JSC Table Tennis Club is sponsoring a table tennis tournament May 10 from 10:00 a.m. to 2:00 p.m. at the Gilruth Recreation Center. This tournament will be a round-robin affair structured to afford the lower-ranked players greater opportunities to be competitive. Entries will be closed after the first 20 players sign up. Contact Steve Jacobs, X3561.

Take stock in America.

Join the Payroll Savings Plan.

Goodyear Awarded Contract For LACIE

Goodyear Aerospace Corporation of Akron, Ohio has been awarded a contract for a Special

Purpose Processor (SPP) to augment existing computing capability for the NASA's Large Area Crop Inventory Experiment.

Goodyear was awarded the contract on a firm-fixed-price basis for \$1,388,498. The contract covers the design, fabrication, delivery and installation of the Special Purpose Processor and any associated system software.

Acceptance date for the SPP is December 30, 1975.

The Large Area Crop Inventory Experiment is a three-way project with the U.S. Department of Agriculture, the National Oceanic and Atmospheric Administration and the NASA. The principal goal of the LACIE project is to determine if wheat production forecasts can be improved using satellites in earth orbit. The experiment will start with North American wheat fields. If results from the North American study prove successful, the project will expand to include other wheat-growing areas of the world.

"We're In Business To Lose Business"

The following article is another in a series of articles on EEO Counselors which will appear in the Roundup:

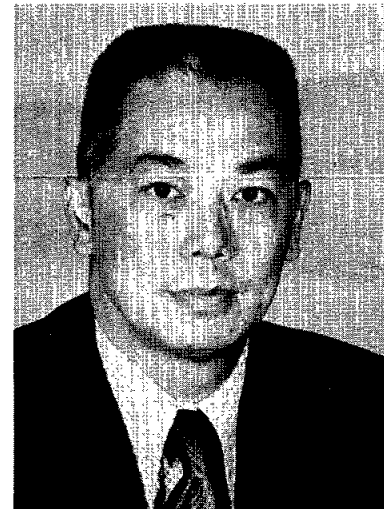
"We're in business to get out of business!" says Bill Der Bing in discussing his experiences as an EEO Counselor. He feels that the coun-

seling program has been effective in solving numerous problems, "It's sometimes beneficial to have a "third person outlook" when a problem arises — someone who can be objective and perhaps point out facts about the situation that might have been overlooked by the people involved," he said.

president of each of these organizations. "To be an effective leader, you must effectively utilize all the talent that is available to you, regardless of sex, race, religion or age," he commented.

The counselors meet on a monthly basis and Der Bing says these meetings are profitable because they often discuss techniques for improving counseling methods and sometimes obtain information about Center functions that assists them in their duties as EEO Counselors.

Der Bing hopes that one day there will be no need for an EEO Counseling Program, "But as long as there is a need, we're here to lend an ear and offer whatever assistance we can to help solve problems," he remarked.



Bill Der Bing

He emphasized that the counselor's responsibility is not to draw conclusions, but to gather facts.

A Protocol Specialist in the Public Affairs Office, Der Bing joined JSC in 1962. He is a native of Norfolk, Virginia and was part of the Space Task Group at Langley, Virginia before moving here. He is a member of the JSC Toastmasters, the University Club, the Chinese Professional Club and the Chinese-American Alliance and has served as

Group Forms 11-Man Carpool

Long before carpooling was "in vogue" at JSC, O. L. Carter of Speedy Maintenance was transporting some of his fellow employees back and forth to work. Today, however, the carpool is at its peak; eleven men ride daily in a van owned and operated by Carter. "So far the arrangement has been very smooth," Carter replied, "All the guys live in the Crosby-Baytown area and are employed with Speedy Maintenance, Klate-Holt and Pan American."

Not only is the arrangement financially beneficial to the employees, but the carpool has contributed significantly to helping solve problems resulting from limited parking spaces near Building 326 where most of the men work. Also, many close friendships have evolved since the carpool began, Carter says.

Center records show that there are currently 1,310 carpools operat-

ing at JSC. These vehicles transport 3,203 employees resulting in about 1,500 fewer automobiles entering the site daily.

According to Rod Puffer, head of JSC Security, the number of motorcycles and bicycles entering the Center has increased also. The highest count has been 193 motorcycles and 70 bicycles.

Listed below are some tips on how to make a carpool operate successfully:

— You have to cooperate to stay together. Most of it is a matter of common courtesy. Learn, and respect, each other's likes and dislikes from the very beginning. The radio, conversation, smoking, and reading are all issues that should be settled at the beginning.

— When sharing the driving duties, rotate weekly or monthly instead of daily. This reduces the

(Continued on Page 4)



GIGANTIC CARPOOL — Pictured above are ten members of the eleven-man carpool in operation at JSC. From left to right, front row are Waddell Frank, Randy Murray and Johnny Richards. Left to right standing are David Earvin, O. L. Carter, Wallace Burns, Riley Nobles, Clarence King, G. W. Guillory and James Eagleton. Not pictured is Hayes Leonard.

Lockheed Wives Plan Charity Event

April 26 has been set as the annual Lockheed Wives' Club Charity Fund Raising Casino Night. Proceeds will be used to purchase a "PH-STAT" instrument for the John Sealy Hospital Department of Pediatrics. Remaining funds will be donated to the Clear Lake Area Crisis Helpline and the Clear Lake Emergency Ambulance Corps. Festivities begin at 8:00 p.m. at the Elks Lodge, 623 FM Road 518 in Kemah.

Tickets are \$2.50 per person and include snacks and a generous supply of "Casino Money." Dress is informal. Call Lillian Anderson for ticket information at 332-3052.



INSTALLATION — Center employee Doris Folkes, (2nd from left) was recently elected corresponding secretary of the Houston Chapter of Federally Employed Women, Inc. (FEW). The 1975-76 officers were installed at Ellington Air Force Base. Left to right are Kathleen Jacobs, VA Hospital, treasurer; Folkes, Sue Bedwell, EAFB, recording secretary, Miriam Carr, EAFB, second vice president; Wilda Dugas, U.S. Customs, first vice president, and Rosalie Laxton, EAFB, President. The next FEW meeting will be held April 17 at the VA Regional Office on Murworth in Houston at 5:30 p.m. The May meeting will be at the Gilruth Center.

ROUNDUP

NASA LYNDON B. JOHNSON SPACE CENTER HOUSTON, TEXAS



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.

Editor: Janet Wrather

Photographer: A. "Pat" Patnesky



COMPLETED PROGRAM — The first Upward Mobility Training Program participants recently received certificates of completion from Dr. Christopher C. Kraft, Center Director. From left to right seated are Tom Richards, Audrey Lemons, Kathryn Harvey, Jean Taylor, and Sandra Smith. Standing, left to right are Brenda Traylor, Margaret Fay Henry, George Gaffney, Peggy Zahler, Bill Scott and Dr. Kraft.

EAA Attractions

TICKET CORNER

Tickets available at the Building 11 Exchange Store. Houston Astros, reserve, \$3.15 (reg. \$3.50), box, \$4 (reg. \$4.50); Sea Arama, yr. round, adults \$3, children \$2 (reg. \$3.75 and \$2.75); Disney Magic Kingdom Cards, free; Lion Country Safari Cards, free; Dean Goss Dinner Theatre, \$16 per couple (reg. \$20); Astroworld \$4.50 (reg. \$6.50 adults, \$5.50 children); ABC Interstate Theatre, \$1.50.

PICNIC

September 27, 1975 has been set as the date for the JSC Picnic. The Picnic Committee is busy planning events and settings to develop the theme "Our Texas."

AWARD

NASA will receive an Achievement Award July 4 at the Amateur Athletic Union's (AAU) Bicentennial Celebration which will take place at 8 p.m. at Hofheinz Pavilion on the University of Houston campus.

JSC employees will have a special seating section reserved and may obtain tickets (\$10 each) by writing to: Suite 411, San Jacinto Building, Houston 77022. (Indicate your desire to sit in the NASA section.)

Awards to other organizations will also be presented. Officials of the Bicentennial Celebration say the proceeds will go to the AAU.

Roundup Swap-Shop

Swap Shop advertising is available to JSC and on-site contractor personnel. Articles or services must be offered as advertised, without regard to race, religion, sex or national origin. Ads should be 20 words or less, including home telephone number. Name and office code must accompany, but need not be included in ad copy. Typed or printed copy must be received (AP3 Attn: Roundup) by Thursday of the week before publication.

MISCELLANEOUS

Accordion, prof model Excelsior, old but gd cndn, 4 treble, 1 bass switches, \$350, 481-0069.
1 solar enlarger w/ lens, carriers, 4X5 and 2 1/4 X 2 1/4 \$50, misc photo equip, 1 drafting table top only \$10, 1 cab speaker, horn type, \$20, 2 bw tvs \$40, one, \$40, one \$15, nds repair, 483-3578 or 333-2648.
Heathkit AR 1500 stereo receiver, 60 watts, RMS-OHM, 100 watts RMS-4 OHMS, \$390, Boyd, 747-3977.
Spring mounted Wonder Horse for age 2-4, ll nw cndn, Donna, 332-6735 aft 5:30.
New lug rack for car top, Donna, 332-6735 aft 5:30.
Smith Corona elec adding machine, ll nw xtra rolls, \$25, 331-3954.
5" Oscilloscope w/o CRT, \$15, Vom \$7, color bar generator, \$65, T.M. Ward, 488-5445.
Frigidair gas dryer, auto, timed cycle, works, \$50, Vibbart, 488-0582.
Royal typewriter w/ case, \$19.95, 488-1042 or x6321.

VEHICLES

73 Caprice Estate sta wgn, 3 seats, auto tailgate, am/fm, lug rack, 24,000 mi, xint cndn, sell or trade, 471-2263 aft 6 pm.
350 Honda, 71 \$375, 643-8421.
73 Chevy Custom 1/2 ton plus raise roof cabover, 27,000 mi, 351 V8, ac, at, \$4125, camper alone \$975, photo in c.u., 332-6056.
Boy's 24" 10-sp'd bike, Raleigh record, xint cndn, nw, \$120, sacrifice \$75, Betty, 471-4579 aft 6.
75 Dodge Dart, Coupe, 6 cyl, auto, trans, air, vinyl roof, 686-1923.

71 Capri 2000, auto, air, vry clean, 22 mpg in town, records available, \$1850, Christensen, 488-5619, aft 5.
71 Dodge, 2-dr Demon, xint cndn, fast, 483-4511 or 334-1925.
72 Buick Electra, 20,000 mi, xint cndn, 483-4511 or 334-1925.
64 VW, 48,000 mi, 75 plates for 12-14 ft alum boat, motor (10 hp or better) and trailer, Corcoran, x5107.
69 1/2 ton pu, pwr, air, auto, \$1300, 483-3469 or 333-2383, Cernan.
74 Olds Custom Cruiser wgn, fully loaded, 9 pass, 1 owner, must sell, \$4450, Davis, x5176.
67 Opel Kadet wgn, lil litre eng, gd cndn, 25-30 mpg, 1 owner, \$450, Guess, 649-5092, or x5703.
73 Mazda RX3 sta wgn, air, am/tape, lug rack, hitch, 20,000 mi, 488-5259.
69 Dodge PU, Adventurer 100, 318 cc V-8, auto, radio, xint cndn, 554-7052.

PROPERTY/RENTALS

Lake Livingston Resort retirement home for rent, 3-2-1, attractively furnished, Cape Royal Area, weekly, monthly, yearly rate, 488-4487.
Want to buy nice beach cottage w/ ocean view, Bolivar side, reasonably priced, Dorothy Kubicek, 488-1037 or 2744.
House for sale, Friendswood, 3-2-2 carpeted, custom drapes, frplc, fnced, 1832 sq ft, \$35,500 will arrange financing, 482-1702.

BOATS

15'8" Lamar boat, live bait well, 72 hp Merc, Dilly tilt trailer, xint cndn \$1,400 firm, Yeater, 5131.
17 1/2 ft Lamar Bowrider boat, 125 hp Evenrude, w pwr tilt, Sportsman trailer w/brakes, xtras, Krpec, 474-2722, x5551.

PETS

AKC long-coat chihuahau pups, \$100 ea, will be 2 mos old April 29, Sullivan, 488-3766.

LOST AND FOUND

Lost during Romanian visit to JSC March 20-21, pr of blc frame bi-focal sun glasses in blc TSO case, Der Bing, 4241.

WANTED

Used galvanized boat trailer for light 15' al boat, 554-7052.
Triumph GT6 w/ gd body and frame, pwr train not needed, Boyd, 941-7697.
Want to form carpool from Meyerland/Beechnut area to JSC, hours flexible, Ann, 333-3420.

LATE ADDITIONS

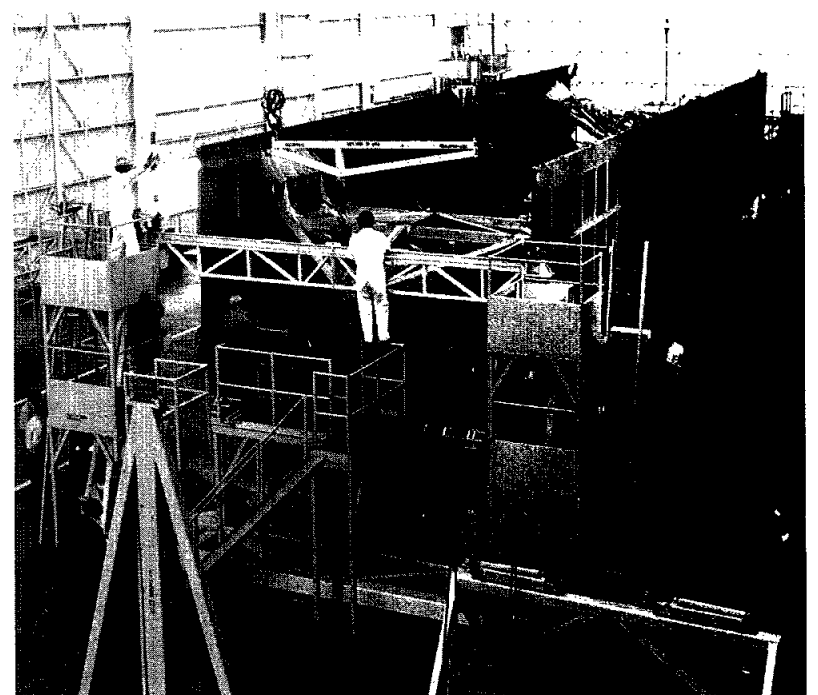
Honda trail 90, front end wrecked, remainder gd shape, \$100, Doherty, 488-0182.
72 Corvette Stingray, prfct cndn, am/fm radio, custom int, pwr str, br, win, 350/auto XMSN, Alexander, X2031, 333-3972.
69 Pontiac GTO, air, radial, WSW, pwr disc brakes, ps, am-fm, bucket seats, clean, \$1000, 333-3060, available June 1.
Credit Union Repos: 74 GMC PU Sierra, 14,000 mi, blc, V8, auto, air, radio, NASA retail, \$3800; 73 VW (Thing) 16,000 mi, yellow, radio, NASA retail \$2500. Bids must be submitted on or before 5:30 April 16, 1975. For appointment to inspect vehicles April 14-16 contact Georgia Bennett, X2066.
Woven king-size bdsprad w/ fringe, light grey and black, reversible, xint cndn, \$40, 334-1274.
Armoire, 74x39x19, 5 drawers, 2 shelves upper, mirror on door, antiqued grey/blue finish, xint cndn, \$250, 334-1274.
King-size mattress, boxsprings and heavy-duty steel frame, \$125, 334-1274.
Pentax Takumar lenses: 35mm, f3.5 in xint shape for \$55; 135mm, f3.5 in gd shape for \$45; 55mm, f2.0 SMCT normal lens in xint shape for \$65, or will trade 35mm and 135mm lens for 28mm f3.5 SMCT lens, Redmond, 5111 or 667-6919 aft 6.
Above ground pool equipment, filter used 1 mo, orig \$165 sell for \$130, 100 lbs tht granular chlorine orig \$56 sell for \$45, pool ladder, \$20, buy all three for \$175, 488-2592 aft 6 or 3371.
Campagnolo Gran Turismo rear derailleur, new, handles up to 36 tooth freewheel, cost \$20, now \$14, Gerard Bike carrier, new, holds 2 bikes, horizontally above car trunk, \$20, Minette, 3981.
For rent, Water Front Cabin at Lake Travis, private dock, gd view, comfortable accommodations, 991-4537.
Wanted: 2 keyboard elec organ w/ rhythm accompaniment, also want camping trailer approx 20 ft, self-contained tandem whs, under \$2000, 488-1514.



GOLDEN EGGS — Finders of the Golden Eggs at the Annual JSC Easter Egg Hunt were Stephanie Wallace (2-3 year-old group), Trent O'Brien (4-5), and Stephanie Lansten (6-7-8).



MOST EGGS — Winners in the "Most Eggs" Division during the Easter Egg Hunt were Aaron Garcia (2-3 year-old group) and Kevin Blant (4-5).



PAYLOAD BAY — The payload bay which forms the mid-fuselage section for the orbiter stage of the Space Shuttle has been completed by General Dynamics' Convair Division, San Diego. Payload bay is an aluminum structure 60 feet long, 17 feet wide and 13 feet high, weighing some 13,500 pounds. It will be trucked to Rockwell International's plant at Palmdale, CA, where it will be mated with other sections of the orbiter.



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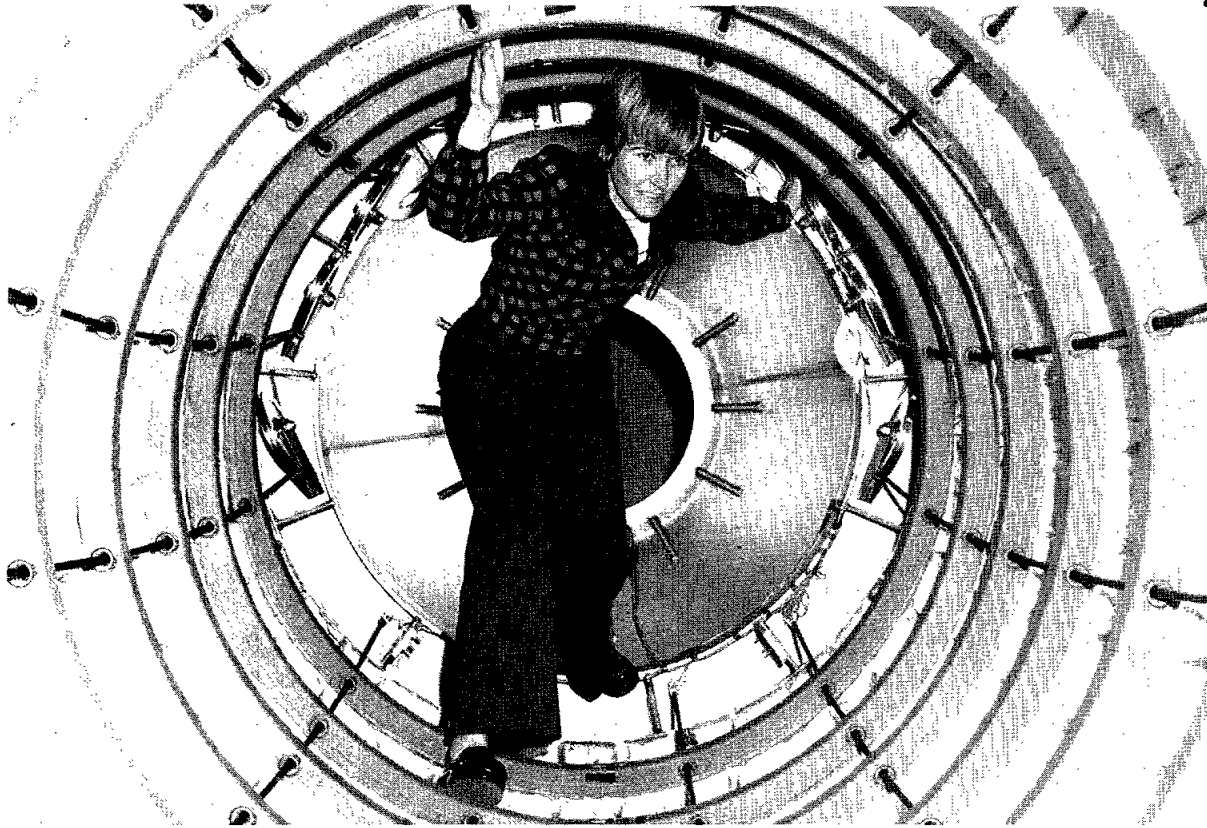
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Early Concept of Spacelab Tunnel Undergoes Testing



TRANSFER TUNNEL — Dr. Mary Helen Johnston, a metallurgical engineering specialist, checks the interior of a prototype Spacelab Crew Transfer Tunnel at the Marshall Space Flight Center. She is one of four women who in December, 1974, spent five days in a laboratory the same size and shape of Spacelab performing experiments and testing items of equipment like those envisioned for space flight in the 1980's. The flexible tunnel is undergoing structural and airtight integrity tests at the Marshall Center.

An early concept of a flexible tunnel designed for Spacelab flights on Space Shuttle missions in the 1980s is being tested at the Marshall Space Flight Center, Huntsville, Alabama.

A tunnel will connect the Space Shuttle Orbiter's airlock with the forward end of the Spacelab to provide a pressurized passageway for crew members and scientists.

Using a pressurized tunnel, personnel can move to and from the orbiting space laboratory without having to don pressurized space suits. The present plan is to use a rigid tunnel with flex sections.

The flexible tunnel, built by Goodyear Rubber Corp. of Akron, Ohio, folds like an accordion to a length of only two feet but extends to a length of up to 14 feet 8 inches. It is four feet in diameter inside.

Steel rings keep the tunnel circular and steel cables extend and compress it as needed.

The airtight "bladder" is made of layers of aluminum foil, Capran film and nylon cloth. The outside is covered by a spongy meteoroid shield and nylon cloth.

When the Orbiter's payload bay doors are open, the transfer tunnel and the Spacelab will be exposed to the space environment, including vacuum, the low temperatures of space in shade, the high heat of the Sun on the sunlit side, and possibly meteoroids.

Engineers in the structures Test Branch of the Marshall Center's Test Laboratory are checking the tunnel for structural strength and airtight integrity and for materials compatibility to provide data for the latest design concept.

The Spacelab is being built in Europe as a payload for Orbiter's cargo bay. It will be used repeatedly as a space laboratory for a variety of experiments.

A modular concept is being followed in development of Spacelab. This permits quick removal of one set of experiment equipment after a mission and installation of another set.

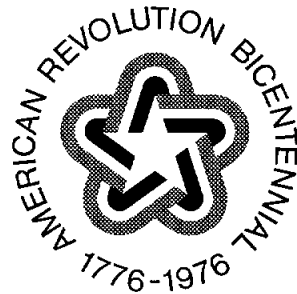
Spacelab and Space Shuttle are being designed with consideration for passengers other than astronauts. Experiments envisioned for Spacelab are in life sciences, material research, Earth resources, medical and other fields.

Marshall has a Concept Verification Testing (CVT) program under way in which concepts for experiments and equipment are tried in a General Purpose Laboratory (GPL) about the same size and shape as the Spacelab.

A number of experiments and sets of equipment have been checked in the ground-based GPL with a view to developing equipment and experiment procedures for Spacelab use.



ASTRONAUT Vance D. Brand ingresses an Apollo Command Module trainer in a water tank during water egress training here. The training session was in preparation for the joint U.S.-USSR Apollo-Soyuz Test Project scheduled for July. Brand is the command pilot of the American ASTP prime crew.



ASTRONAUT Thomas P. Stafford, center background, egresses an Apollo Command Module trainer in a water tank. He exited through the tunnel of the CM trainer which is in a stable II position. Astronaut Vance D. Brand has already egressed the trainer and is sitting in a three-man life raft.

11-Man Carpool *(Continued from page 2)*

chances for misunderstanding and confusion.

- Make a "clean car" policy and stick to it. The car that carries you to and from work should be clean, safe, comfortable, and well-serviced.

- Avoid side trips. One of the easiest traps to get into is doing errands on the way to or from work. Set a regular route and stick to it. This avoids a lot of hassles.

- Don't honk for your passengers. Honking is not good for the neighbors — especially at early hours. Wait a predetermined amount of time for each passenger.

- Establish a chain of communication. This is so adjustments can be made in the daily schedule with minimum delay and inconvenience if illness or mechanical problems occur. The chain of communication

should parallel the morning pick up sequence.

- Expect occasional adjustments. People move and change jobs. Be prepared to find a replacement if a member drops out.

- Drive safely. Speeding, taking chances or just plain negligence should never be tolerated. Make safety your rigid rule.

- Discuss your pooling plans with your insurance agent. Liability coverage is usually adequate, but make sure of it. Many companies offer reduced rates for carpoolers.

Tips reprinted in part from "Pool It News."



Throughout NASA

(Continued from page 1)

GALILEO II

NASA's flying laboratory, "Galileo II," is leaving Ames Research Center for Alaska this week to participate in a month-long field investigation of the Arctic seas.

Increased concern for the ecology of northern waters is prompting scientists from the United States and Canada to cooperate in a series of experiments designed to improve understanding of the Arctic environment.



TWO MEMBERS of the American ASTP prime crew are hoisted in a helicopter rescue net during water egress training at JSC. They are Astronauts Vance D. Brand, left, and Thomas P. Stafford. Earlier, they egressed an Apollo Command Module trainer in a water tank and climbed into a three-man life raft.