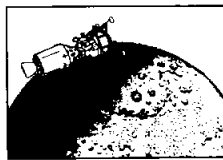


Buy US  
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# ROUNDUP

NASA MANNED SPACECRAFT CENTER

HOUSTON, TEXAS



SPACE people  
invade center  
(see story p. 4)

VOL 8, NO. 14

MAY 2, 1969

## Duff assumes Haney's place as MSC PAO

Brian M. Duff reported this week as MSC Public Affairs Officer. He succeeds Paul Haney, who has resigned. Duff has been Vice President Communications, Urban Coalitions.

Before joining NUC, Duff was director of Special Events in the NASA Headquarters Public Affairs Office. He came to NASA in 1963 after working as correspondent for the Copley Newspaper Chain, reporter for the San Diego *Union* and reporter-editor for the Associated Press in California.

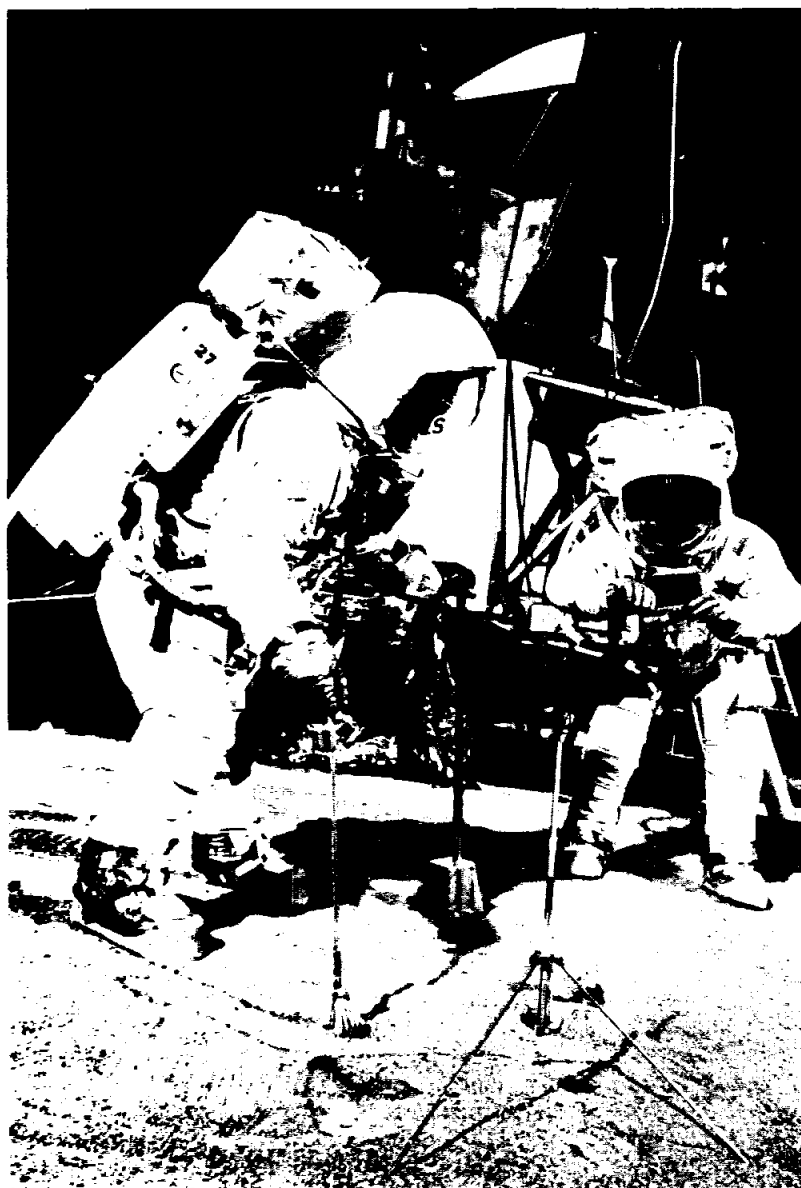


Duff

Haney became MSC PAO in 1963 after joining NASA in 1958 and serving as PAO for the Office of Manned Space Flight. Prior to his government service, Haney was a newsman with the Associated Press, the *Eric. Pa. Times*, the *Memphis. Tenn. Commercial Appeal* and the *Washington Evening Star* where he was City Editor.



Haney



FIRST MOONMEN PRACTICE ROCK COLLECTING—Edwin Aldrin, Jr. and Neil Armstrong, two members of the Apollo XI lunar landing mission, participate in a simulation, deploying and using lunar tools on the "surface" of the moon. The training session, held April 9, is one of several in which they prepare to bring back samples of the moon.

## Apollo X "go ahead" despite difficulties

The May 18 launch date for Apollo X remains undisturbed so far, despite early-week difficulties in the first stage fuel system.

However, checks are continuing on the launch vehicle at the Kennedy Space Center launch complex 39B to determine if any damage occurred when fuel was inadvertently drained from the stage on Sunday.

Inspection of the forward section of the fuel tank includes a series of dye penetrant checks to assure that no cracks are present. Entry into the stage for further inspection is also planned.

Parallel with these checks, the countdown demonstration tests (CDDT) began Tuesday, aiming for a T-O in the wet portion on May 4 and a T-O in the dry portion on May 5.

The CDDT is a full-dress rehearsal for the final count, with cryogenic fueling of the launch vehicle performed during the wet portion and fueling simulated during the dry portion. The flight crew will participate during the dry portion of the CDDT as they would on launch day.

The Apollo X crewmen held a conference Saturday at MSC where they discussed various aspects of their eight-day mission.

This flight will spend approximately 61 hours in lunar orbit—three times longer than Apollo VIII and probably as long as the Apollo XI landing mission.

One of the most important aspects of this flight, in addition to checking systems' operations, is the data to be brought back from the two LM passes close to the Moon's surface.

"There is a possibility of aborting the first landing mission unless we bring back the data to show what we have for altitude tracking on the lunar surface," said Commander Tom Stafford. "From 50,000 feet we will be able to see craters that could get the LM in trouble."

It will be on the second day of lunar orbit that the two vehicles undock. The crew remarked on the difficulty of maneuvering the sections in orbit with a maxi-

mum separation of 350 miles. "I've never really been involved in anything that has required as great an amount of coordination and team work as... to work with two vehicles in a lunar environment," said LM Pilot Gene Cernan. He and Stafford will work together in the LM while CSM Pilot John Young operates the command controls.

Assuming all systems check out stable in Apollo X, the Apollo XI lunar landing will go in July. This vehicle is presently in the KSC Vehicle Assembly Building undergoing preparations for the launch.

The LM water glycol system  
*see Apollo page 2...*

## Veteran X-15 retires in honor to Smithsonian

The No. 1 X-15, America's first major investment in manned aerospace flight technology, is being retired to a berth in the Smithsonian Institute, right next to Wright's Kitty Hawk and the Spirit of St. Louis.

The 10-year-old test vehicle was the part of a series of rocket research planes designed for manned hypersonic flight research. In 199 missions since June, 1959, the X-15 established two unofficial world records—flying an altitude of over 67 miles and 6.7 times the speed of sound.

In addition to exploring the capabilities and limitations of the human pilot in space, the X-15 helped develop vital aeronautical and space flight systems, materials, instrumentation, space suits and flight techniques—making it possible to accelerate the Mercury, Gemini and Apollo programs.

Two of the 12 test pilots for the X-15 were Astronauts Joe Engle and Neil Armstrong (Apollo XI Commander).

Official turnover ceremonies will be staged in Washington late this month.

## Space station envisioned for 1970's; MSC, MSFC to handle project

MSC, along with the Marshall Space Flight Center, will monitor a space station program definition study, scheduled for the mid-1970's.

The 5.8 million dollar parallel study effort was announced Monday with the release by NASA headquarters of the Request for Proposals.

NASA requested proposals from aerospace industry this week for design and planning studies of a space station program for the mid-1970's.

The major effort of the studies will be in developing a 12-man Earth-orbital space station by 1975. The station would be designed to have an operational life of 10 years, subject to re-supply of expendables and rotation of crews with logistics vehicles. This is envisioned as the first step toward a large space base.

The work will include a conceptual design of a 50-man space base made up of specialized modules assembled in low-Earth orbit in the late 1970's and early 1980's. The base would be a centralized facility comparable to a scientific and technical research, development and operations center on Earth.

Scientists and engineers of many disciplines could utilize its unique features, such as weightlessness, vacuum, Earth viewing and unobstructed celestial view-

ing, for a large variety of research and applications activities.

Various concepts of advanced space shuttles will be evaluated to select the most economical means of supplying a large space base. Each of the shuttle concepts would be capable of landing at precise locations.

Proposals are to be submitted to the Office of Manned Space Flight on June 9. From the proposals two firms will be selected to perform 11-month studies under cost-plus-fixed-fee contracts.

### Co-op of Month



COMPUTER COMMANDER—April's Co-op of the Month, Ronnie Lewis, a former *Who's Who*, is being cited for his contributions to advanced spacecraft programs in Operations Analysis. "He has displayed a high degree of understanding of the programs" and, in one case, aided significantly in making a Headquarters program usable and useful to MSC projects.

## Stamp honors Apollo VIII

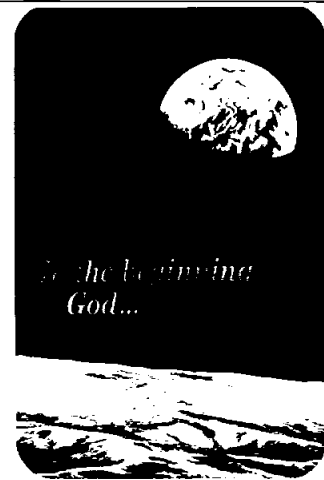
In recognition of the continuing success of the nation's space program, the US Post Office is issuing an Apollo 8 Commemorative Stamp.

The new stamp consists of a color picture of the earth and moon taken from Apollo 8 and the words "In the beginning God...", remembering the Biblical creation story read by crewmen during the flight.

The Apollo 8 crew members, Frank Borman, James

Lovell and William Anders, will be presented with the first Albums of Commemorative Stamps by Postmaster General Winton Blount in dedication ceremonies at the Rice Hotel on May 5.

Collectors desiring cacheted first-day covers should send self-addressed stamped letter-sized envelopes to the MSC Stamp Club, Box 58238, Houston 77058. Prices are \$.35 each or three for \$1. May 5 is the deadline.



SIX CENTS • UNITED STATES

# Never do today what you can put off . . .

What does the money you save mean to you? Will it give you that rig you'd like to escape in, a country home for retirement, an education for the kids or that dream vacation you keep saying you'll take? Or is *saving* what you plan to do tomorrow . . . ? Do you find yourself spending that extra money on things you don't really need just because it's easy to get to?

Consider the Savings Bond. With US Savings Bonds you can put aside a set amount out of your paycheck every two weeks (a good investment for the extra sum coming with pay raises effective July 1). It's easy to arrange an automatic deduction—no willpower involved.

It's also a safe investment—guaranteed by the government—and redeemable with accumulated interest before maturity if you need it for an emergency.

Best of all, holders of Series E or H Bonds have exclusive access to the higher-interest Freedom Shares which mature in just four and a half years. They are only available on a one-for-one basis with the Savings Bonds.

Monday marks the beginning of MSC's 1969 Bond Campaign. Your division representative will contact you with all the information on how to enroll in the Payroll Savings Plan.

Why not invest if you haven't already—invest more if you have and . . .

*Take Stock in America—TODAY.*

## SPACE QUOTES

LEIGH S. PLUMMER, publisher, Gary, Ind. *Herald*, from Congressional Record—“Measured as a mechanical achievement, the flight to the moon contrasts sharply with our way of life 75 or 80 years ago when man moved about the earth's surface on foot, on horseback or in steam-powered trains or boats.

In these few years more has been achieved than in all recorded history before.

And, by the same token, this achievement points the way, in the next 75 to 100 years, to accomplishments which even the most inventive science fiction writers cannot imagine.

Considering that nuclear energy has not yet been harnessed to power spacecraft, the possibility exists that by the time our grandchildren become grandfathers and grandmothers it will be common for man to travel in space not only to the moon but to the planets.

What's it all worth? Why do it? What has been accomplished?

Cynics will say ‘nothing. It is all a waste of money and lives.’ But others will take a more charitable view—the flight of Apollo . . . really is just one more step in man's quest for knowledge, in his never-ending effort to attain the unattainable.

Striving for goals . . . is what separates man from animals . . .”

DR. GEORGE E. MUELLER, associate administrator of Manned Space Flight, to the New York Society of Security Analysts—“What have we bought with our space dollars? We have bought the facilities, the equipment and the knowl-

edge to operate in space for our

National Security.

We have upgraded our planet as well. The stringent requirements of the space program and the availability of NASA educational grants have combined to raise the work skills and the educational levels of hundreds of thousands of workers and scientists.

We have regained our position as the leading technological nation of the world. We have earned a monument in history.”

DR. THOMAS O. PAINE, NASA administrator, before Aerospace Industries Association—“Why spend money on space instead of on poverty programs?”

. . . If you want to distribute more wealth in welfare programs . . . one of the first things (to) . . . consider is how to create additional wealth.

And I would submit that NASA's space exploration programs that are moving science and technology ahead . . . promise to create even more wealth . . . and in the process create new jobs and new opportunities that will not merely alleviate poverty but get at its root.”

## European tour deadline nears

May 30 is the deadline for reservations for the 22-day European tour which has been organized for NASA and NASA-contractor employees.

A total of \$655 from New York or \$790 from Houston includes: jet fare to Europe and return, all lodgings plus breakfast, fares for buses, river boat and steamship (to cross English Channel).

### Shares in America for sale.

only \$37.50

only \$56.25

only \$75

only \$7,500

**Take stock in America**  
Buy U.S. Savings Bonds & Freedom Shares

## Your Job in Focus

Annual leave or how to earn a vacation . . . NASA employees earn annual leave, or time off with pay, on a graduated scale based on length of service.

During the first three years, 13 working days per year, or four hours every two weeks, are earned. Three to 15 years of service earn 20 working days, or six hours every two weeks, and 15 or more years earn 26 days, or eight hours every two weeks.

Annual leave remaining to the individual's credit at the end of the leave year may be accumulated for later use up to a limit of 30 days.

To qualify for annual leave a new employee must work for 90 calendar days without a break in service. Any absence during this 90-day period will be without pay unless it is due to illness for which accrued sick leave is granted.

After an employee has worked for the 90 days his leave credits will be restored retroactively for each payday included in that period. An employee should always request annual leave from his supervisor in advance.

When illness strikes . . .

Thirteen days of sick leave a year, or four hours for each bi-weekly pay period, are earned by all employees regardless of their length of service. Unused sick leave is accumulated and remains to the employee's credit indefinitely. There is no restric-

tion on the amount that may be accumulated.

An employee may be granted leave without pay in an emergency or under exceptional circumstances.

Considering retirement? Employees needing advice or information on Retirement Benefits may call the Placement Section, Personnel Division, X2135.

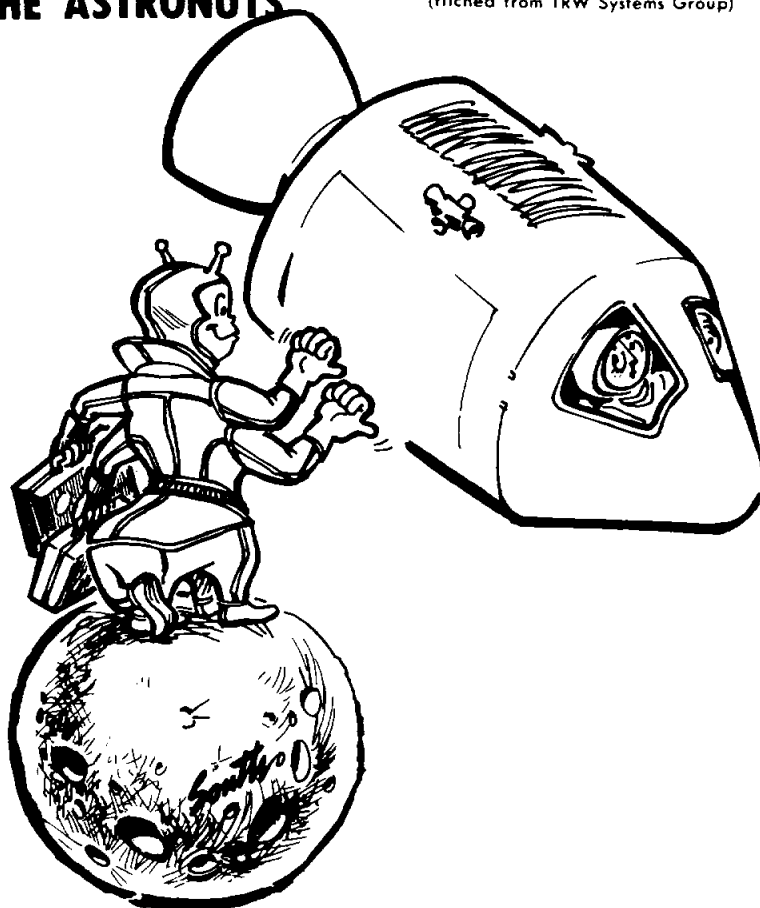
### SUPERIOR ACHIEVEMENT

George Fiedler  
Project engineer

Fred Peters  
Project engineer

## THE ASTRONUTS

(filched from TRW Systems Group)



## Apollo

. . . cont. from page 1

is being serviced and an electrical interface test between the LM and CSM is scheduled.

The first stage of the Apollo XII Saturn V launch vehicle is due to arrive at KSC tomorrow. It will be taken to the VAB for a checkout and mating with the upper stages and spacecraft on its mobile launcher.

The CSM and LM are in altitude chambers in the Manned Spacecraft Operations Building at KSC. The LM ascent and descent stages were mated at the beginning of the week and an abbreviated combined systems test is continuing on the CSM.

The Roundup is an official publication of the National Aeronautics and Space Administration Manned Spacecraft Center, Houston, Texas, and is published every other Friday by the Public Affairs Office for MSC employees.

Director . . . . . Dr. Robert R. Gilruth  
Public Affairs Officer . . . . . Brian M. Duff  
Editor . . . . . Karen J. Lumpkin  
Staff Photographer . . . . . A. "Pat" Patnesky

SIX EARN SERVICE AWARDS



William Barnes  
25 years



Jack Ramsey  
20 years



Ken Oril  
20 years



Robert Nulton  
20 years



Andrew Patterson  
20 years



Hal Vanderwall  
15 years

# Bucknell earns \$990 for cost reduction idea

Albert F. Bucknell of the Technical Services Division is the big money winner in the latest list of Suggestion Awards released by the MSC Awards Committee. Bucknell received \$990 for his suggestion entitled, "Reclamation and Reuse of Freon Solvents"—an estimated cost-reduction of \$67,811 per year.

Another valuable idea—the elimination of an MSC tie line—earned Mary Ellen Smith of RASPO Downey \$800 and should save the government approximately \$29,212.

Among the other awardees, awards and suggestions were: Ruth Elder, \$25, Buyer's Guide to Standard B Clauses of General Provisions; William Stoval, \$25, plate glass windows in doors; John Mathis, \$60, use of long-life indicator bulbs; Peter Smetek, Sr., \$30, focal point for

retirement information; Elmer Hardaway, \$30, headware for visitors; Paul McGarrigle, \$35, performing and/or benefiting organization codes for contractors; Shirley Horn, \$15, NASA stocked chairs instead of rented chairs for MSC switchboard and Marlo Krisberg, \$20, revision of contract attachments.

Others included: Calvin Howard, \$25, contamination control pamphlets; Rex King, \$25, vehicle safety stop; Margaret Lourtie, \$30, processing standard form 120, "Plant Clearances Cases"; Lettie Reed, \$15, changing MSC form 1664 to MSC stock item; Lucy Cruz, \$25, travel seminar; Bob Hendrix, \$25, map of Ellington in MSC phone directory; Clarence Bryant, \$25, calibration and locking of W/G components; Glen Brace, and Karen Gardner, \$15, directing visitors to MSC activities at Ellington; and William Cowart, \$25, small centering head for Wales Stripit.

Also: Joseph DeCorte, \$25, insert states on all MSC forms 772; Robert Oppelt, \$25, improvement of handling ring; Dearon Bailey, Jr., \$30, plate saw shield; Donald Burdin, letter of appreciation, temporary vehicle pass; Campbell Canup, \$35, Apollo fairing change; Santo Vuturo, \$35, preventing the close out of PIRR before repairs accomplished; Richard Grown, \$25, parking sign reserved for cost reduction; Layton Klotz, \$25, reschedule bus stop and Nel Shaw, \$25, revise resident personnel listing.

## Roundup Swap-Shop

(Deadline for Swap-Shop classified ads is the Friday preceding Roundup publication date. Ads received after the deadline will be run in the next following issue. Ads are limited to MSC civil service employees and assigned military personnel. Maximum length is 20 words, including name, office code and home telephone number. Send ads in writing to Roundup Editor, AP3. Ads will not be repeated unless requested.)

**REAL ESTATE**

Sagemont 3-2-2, contemp. paneled den, air, beautiful back yard, \$3500 equity negotiate balance. Herman, 487-2466.  
Nassau Bay 4-2-1, screened porch overlooking fenced yard, trees, 5 1/4 mid-thirties, Shaw 591-2134.  
Newport League City 3-2-2, brick, detached garage, wood floors, paneled den, trade equity for glass boat, pickup, \$23,000, C Scarlett, 932-3778.  
Dickinson 3-2-2, electric A/H, builtins, large den, utility patio, detached garage, large lot, P. Thomas, 534-3679.  
Friendswood 3-2-1, 2 yrs old, builtins, central air, repainted interior, equity, assume 6% GI, S'23 mo, J. Huff, 482-1473.  
Seabrook, Baybrook 4-2-2, 1 1/2 story, near schools, equity \$3500 or offer, balance \$19,000 \$193 mo, 7 1/4% loan, R. Bossen, 474-3430.  
West Galveston Island beach house, gulf view, all electric, 1 block to water, sell or rent, Green 932-3486.  
Baywood, Seabrook 4 bdr, wooded lot, 200 sq ft, pier privileges, \$26,000 equity, assume 6 1/2% loan or finance, Stamps, 474-2374.  
Taylor Lake corner lot, wooded, lake view, 1/2 block to park & docks, R. Waite, 591-4632.  
Pearland, Shady Crest addition, 4-2-2, detached garage, corner brick, 3/4 acre, central A/H, assume 5 1/4% loan, equity, I. Blackburn, 485-3781.  
Seabrook (Miramar) 3-2-2, brick front, central A/H, carpet, fenced, mid-May occupancy, 5 1/4%, sell or rent, M. Culling, 474-2167.  
Clear Lake City 4-2-2, 16019 Buccaneer, \$3850, equity, \$179 mo, owner, 474-2389

**AUTOS**

29 Model A Roadster, restored, needs very little work, Williams, 477-2366.  
64 Volvo 122S clean, good cond, \$1100, B. Drewes, 944-9069.  
69 Chrysler 300, 2-dr HT, beautiful, will sacrifice, B. Drewes, 944-7632.  
61 Ford Galaxie, air, radio, 4-dr, runs but needs repair, \$150 or best bid, 966-2612.  
68 Olds 442, power, air, AM/FM, V-8, new tires, 17,000 mi, \$3000, Herman, 487-2466.  
68 Triumph Spitfire MK-3, convertible, wire wheels, radio, tonneau, radial tires, in warranty, \$1650, J. Cooper, 488-2410.  
66 Mercury Monterey, 4-dr HT, 390 cu in, 2 barrel new paint, power steering, air, \$1250, J. Cloudis, 471-2447.  
65 Lincoln Continental, fully equipped, yellow with black leather seats, \$1750, E. Magnuson, 482-1852.  
66 Mercury Capri, 2-dr HT, white, red interior, air, power, \$1195, E. Magnuson, 482-1852.  
66 Olds Delta 88, 4-dr HT, good cond, 58,000 mi, 1 owner, \$1350, R. Cusick, 877-4122

55 Chevy, 2-dr, new paint, good tires & seats, \$300, T. Brisbin, 474-3703.  
Classic Ford Model A sports sedan, spoked wheels, continental kit, soft top, buckets, 3 on floor, \$700, L. Arnim, 591-4629.  
60 Met Convert, engine/body good, rear end needs work, make offer, W. Shaw, 591-2134.  
66 Galaxie, 4-dr sedan, auto trans, power, air, 42,000 mi, sell at Blue Book or trade, C. Scarlett, 932-3778.  
65 Chevy Station Wagon, air, power, auto trans, tinted glass, radio, white walls, \$1125, D. Kennedy, 944-3276.  
63 Rambler 4-dr sedan, standard, 6-cyl, good second car, \$225, M. Collins, 487-2995.  
65 MGB, will sell motor, new transmission, etc. or will buy intact front end, B. Cox, 944-6077.  
66 Simca GLS, 1000, 4-dr, full financing arranged, \$775, consider trade, F. Turner, 733-7667.  
62 Corvair Monza 2-dr, bucket seats, 4-speed, new tires, good second car, D. Duke, 877-1389.  
65 Allstate Mo-Ped, motor in good cond, \$50, D. Murphy, 479-1942.  
65 Mustang 2-dr HT, V-8, auto trans, radio, new tires, 36,000 mi, \$1100, B. Akin, 643-7915 after 5.  
65 Riviera, heavy-duty suspension, AM/FM, air, 2 new tires, very good cond, \$1800, T. McPherson, 877-1630.  
67 Ford Country Squire Wagon, automatic, power, air, tinted glass, deluxe interior, excellent cond, make offer, 482-1014.  
64 Belaire Wagon, air, good cond, \$850, J. Hamilton, 688-8708.  
62 Chevy II Wagon, good cond, new tires, air, radio, \$395 cash, E. Hicks, 479-1294.

**BOATS**

17' fiberglass tri-hull boat, walk-through windshield, 100 hp Mercury, tach, 18 gal tank, trailer, \$2200, S. Roosa, 877-2867.  
Albatross fiberglass, 15', 64" beam, centerboard, main & jib sails, galvanized trailer, \$1150, P. Maloney, 482-7688.  
3.5 hp Evinrude o/b, less than 10 hours running time, \$155, Green, 877-3316.  
16' Barbour, 64 Johnson, electric start, generator, new teleflex steering, electric bilge pump, refinished, big wheel trailer, all required equipment, J. Bailey, 877-4898.  
64 Gale (STD Evinrude) 40 hp electric start o/b motor, run about 50 hrs, will demonstrate, \$250, J. Hammack, 877-1657.  
Hand trailer for Dolphin, Sunfish, Sailfish type sailboat, free to first person, R. Underwood, 591-3854.  
12' sailing catamaran, home built fiber-

glass over plywood, \$400, B. Poligka, 474-3442.  
Will trade 12' V-bottom fiberglass boat for aluminum boat, L. Hawkins, 932-3845 after 4:30.

**FURNITURE**

Dresser, 2 twin beds, chest, \$60; dressing table, \$12; round marble table, \$25; swivel rocker, \$35; red velvet pillows, O. Logan, 483-7121.  
French Provincial tables, coffee and round tables, \$55 ea; end tables, \$45; Green, 877-3316.  
12" portable B&W TV, excellent cond, new \$98, now \$60, Goodrich, 645-4343.  
23" RCA B&W console TV, 3-yr old, fine cabinet, excellent cond, \$75, H. Hartman, 488-2754.  
42" maple dinnette, mar-proof top, 4 chairs, excellent cond, \$80; chrome dinnette, 30" x 60", \$20, M. Lausten, 482-1004.  
Ebony Wurliitzer piano with bench, very good cond, P. Carlisle, 2219 Bayou Dr, League City, 932-2836.  
Converted upright Gulbransen player piano, good cond, new felts, brass sounding board, J. Gonzales, 932-4068.  
Living room suite, end tables, chairs, Zenith stereo, tools, etc., A. Bucknell, 932-5955.  
Blue-green checked couch & chair, \$75, M. Davis, 932-2431.

**PETS**

Dalmation puppies, 4 male, 5 female, AKC, Ch. sire, Int Ch. Lineage, H. Granger, 471-3405.  
Toy poodles, AKC, black female, available May 6, T. Gallagher, 487-1332.  
Cocker Spaniel puppies, AKC, ready in 3 wks, 1 platinum, 3 black, 644-3907.  
Two riding horses, ideal for children 10-12 yrs old, W. Smith, 658-4957.  
Free kittens, born March 28, N. Schultze, (Baytown) 422-5636.  
Sacrifice adorable AKC toy poodles to good home, 5 mos, trained, shots, make offer, G. Lunney, 482-7869.  
LHASA APSO puppies, 7 wks, AKC father, J. Williams, 487-2314.

**MISCELLANEOUS**

Roberts Model 770 4-track stereo recorder, 2 mikes, input-output patch cords, good cond, E. Walters, 649-2838.  
Westinghouse portable stereo record player, excellent cond, 3 speakers, \$70, L. Moore, 488-5132 after 5.  
Monaural tape recorder, two tapes, \$30, G. Rysavy, 487-3787.  
2-horse tandem, custom made, feed and saddle bin, 4 new white wall tires, sacrifice \$550, L. Hawkins, 453-1346.  
Good white wall Firestone Mud Grip tire & wheel, 695-14 for Ford Ranchero, \$15, R. Senter, 482-7835.  
Pair gold-leaf carved-frame Spanish mirrors, \$40 both; antique mantle clock, \$35; 7 x 35 binoculars, \$20, 649-3576.  
Latin & English word sets, \$1 ea, L. Ben-

nett, 649-3576 after 5.  
Trailer hitch for VW, \$8, J. McCowan, 471-0716.  
Cookbook, hardly used, "Mastering the Art of French Cooking" \$5, R. Marent, 946-7039.  
65 Honda, 150 cc, \$195, C. Nelson, 483-3421.  
Electric toaster, \$3; bathroom scale, \$2; lawn spreader, \$2; table top broiler \$1, 488-4005.  
35 mm Argus camera, projector, screen, all \$40; drop-leaf dinnette, 6 chairs, \$60, J. Garcia, 591-2916.  
Boy's bike, 24", good cond, \$15, J. Vincze, 488-1040.  
Playpen, \$8; babybed, \$15; desk, \$10; auto air conditioner, \$10; B. Westover, 483-4901.  
Tektronix Oscilloscope: solid state audio oscillator, CTR for 5 in scope, 12V/20 A regulated power, RCA RF signal generator, R. Lang, 488-0149.  
Aluminum patio umbrella with center pole, good cond, \$25, McCarver, 453-1004.  
62 3-wheelushman motor scooter, enclosed cab, pickup truck-like body, good cond, \$150, R. Bogt, 488-4069.  
New Swiss Hilton wrist chronometer stop watch, new \$25, now \$15; complete 3-wing Gilbert Chemistry lab, new \$11, now \$6, Keener, 488-1193.  
Games: Clue, Scrabble for Juniors, Spy Detector, others, good-excellent cond, Keener, 488-1193.  
Child's entertainment center: 3 swings, glider, slide, \$12.50, Forsyth, (Dickinson) 534-3113.  
Unfinished picture frames, 8 x 10, 2" mahogany, glass included, \$1.50 ea, or \$7 for all, Keener, 488-1993.  
30" Kenmore gas range, deluxe, automatic, surface grill, 1 1/2 years old, \$190, P. Durst, 474-2927.  
Set of rugged Clarion transceivers, 6 with builtin ear outlets, AC adapter, new antenna, \$20, Keener, 488-1193.  
B-flat clarinet, Grenadilla wood, deluxe, used 6 mos, \$85, P. Durst, 474-2927.  
120 Bass Scandelli accordion & case, good cond, \$100 cash, E. Hicks, 479-1294.  
Man's 26" Schwinn bike, medium weight, good cond, \$20 cash, E. Hicks, 479-1294.  
Remington Targetmaster single shot 22, \$15; Caravelle transmitter, 1 receiver, transmits to any AM, \$8.50, Keener, 488-1193.  
30 ob, 03-A3 hunting/target rifle, Fojeen Vornit stock, Lyman U8 micrometer rev with Redfield romp, 200 rds ammo, \$90, J. Townsend, 591-2545.  
Wards deluxe 3 1/2 hp lawn mower, almost new, was \$75, now \$50, J. Townsend, 591-2545.

**TRANSPORTATION**

Need occasional ride from Garden Villas area to NASA, 8:30 to 5, L. Williams, X3166 or 643-9128.  
Fly with non-profit Skyrovers at LaPorte.

— — NOTICE — —

The Roundup has been asked to remind MSC employees who visit North American Rockwell at Downey, Calif. that visitor parking in North Lot # 2 (Gate 11A) is no longer available.

There are 125 spaces available for visitors in Lot 5 (Gate 19A—Lakewood Blvd.). The Security Guard will assist you.

students welcome, 172-\$6/hr, 182-\$9/hr, J3-\$4.50/hr, \$12.50/mo dues, 488-3872 or 944-5635.

Learn to fly with Aero Club, Cessna 150 \$8/hr wet; C-172 \$9/hr & K-Bonanza \$16/hr, instructor \$5/hr, Ward, 877-3187.

Flying to Va. Beach, Va. about 7-28, return about 8-4. Can take 3, drop off Lake Charles, Meridian, Atlanta, Charlotte, Raleigh or Norfolk, 5c/mi, M. vonEhrenfried, 591-4163.

Will fly persons anywhere on weekends for cost, L. Blankenship, 944-0750 after 5.

**WANTED**

Need 4-bdr home, June, NASA area, owners only, C. Rice, apt 45, #1 Portofino Strip, Houston, X2901.

Man's lightweight bike Green, 877-3316 10-12-15-20 hp outboard, must be bargain, J. Standley, 877-3136.

Need girl to share 2-bdr apt at Villa Monterey, call Mary X5033 or 944-6902 after 5. 5 or 6 hp o/b motor not over 6 yrs old, in good cond, R. Stanton, 932-2982.

Sensibly priced Clear Lake City brick home, 3-2-2, den, fireplace, assumption & low equity desired, 488-0125.

Lionel electric trains made before 1960, C. Naegeli, 932-4174 after 5.

One-ton, 12,000 BTU window unit air conditioner, Sutton, 948-3095.

Small refrigerator and electric stove, G. Wood, 591-2373.  
Two sets bunk beds in good cond, T. Moser, 877-3048.



FENA GUERRA INTERVIEWS SPACE TRAINEE

Twenty-five carefully selected workers will start the program Monday

## Explorer discovers Jupiter, Earth give off same weird radio signals

The same type of sporadic, low-frequency radio signals emitted by the planet Jupiter, which have mystified scientists for years, have been found to radiate from the Earth.

This interesting, if puzzling, information was sent down from NASA's first Radio Astronomy Explorer, RAE, which was launched July 4 of last year.

The satellite (Explorer XXXVIII) orbits 3,640 miles above the Earth with antennas taller than the Empire State Building. These antennas are designed to monitor the type of radio signal (below 10 megahertz) which cannot penetrate the Earth's ionosphere.

"In the radio frequency range below 10 megahertz, the Earth looks very much like Jupiter..." said Dr. Robert Stone, project

scientist for RAE at Goddard where the project is being managed. This suggests that "the same processes that account for the Jovian radio noise may also be active in the Earth's magnetosphere."

Stone pointed to the following similarities between the two sets of signals:

- appear to be sharply beamed or directed in a narrow cone;

- are quite intense and increase in intensity rapidly when observed toward the lower frequencies;

- are impulsive and occur in rapid but sporadic bursts.

"The more we learn about the sporadic radio noise from either Jupiter or the Earth, the better we will be able to understand both planets," said Stone.

In addition to terrestrial radio

signals, Explorer XXXVIII has recorded radio outbursts in the lower frequencies from the Sun.

It is hoped that, among other things, this study will expose the role of the Sun in the Earth's low-frequency radio storms.

### Lunar features cut by waves?

The theory that lunar features may have been cut by ocean waves and meandering rivers has been rekindled by the recent discovery of mass concentrations of dense material, or Mascons, beneath the surface of the Moon.

It is now clear, says Paul M. Muller of NASA's Jet Propulsion Laboratory, that these gravity highs located in depressed lunar basins, show that the Moon's internal strength is holding up extra deposited mass. Only the method of transportation of that mass remains a mystery.

Muller, co-discoverer of the Mascons with William L. Sjogren, also of JPL, reviewed their analysis of radio tracking measurements which indicated velocity changes in NASA's Moon-circling Lunar Orbiter and led to the construction of a gravimetric map of the Moon's near side.

The Mascons, representing local high-gravity areas, correlate one-for-one with lunar ringed seas, which are depressed basins, or with ancient, now obliterated, circular seas.

Muller's remarks were directed to a recent meeting of the American Physical Society. He said that the Mascons might be excess mass deposited by water and supported by the internal strength of a rigid Moon.

### MOST HAVE EXPERIENCE

## SPACE youth come to MSC

Building 319 at Ellington to answer their questions and help them with any problems.

SPACE workers will participate in a planned training program covering a period of about 9 months. This training will include GED preparation (high school equivalency), typing and on-the-job training. Trainees will work 32 hours a week and attend school for eight hours.

Beginning next week MSC will cooperate in a new youth self-help program entitled SPACE (Systematic Planning and Career Enrichment).

Approximately 25 clerical trainees will be placed throughout the Center starting Monday and in September, another 25 are expected. At the successful conclusion of the training MSC intends to hire about 20 of the 50 on a permanent basis.

Most of the SPACE trainees have been selected from the existing JOY Program (Job Opportunities for Youth).

"They have gained experience on other projects and are eligible to work here because they have proven themselves elsewhere", said Barbara Lerdon of Personnel-Employee Development, coordinator of the project.

Miss Fena Guerra from the Houston Job Opportunity Office has been assigned to MSC and will be counselor-teacher for the youths.

### U of H offers summer study

The University of Houston has announced the following three courses to be given at the Clear Lake Graduate Center this summer:

"Selected Topics in Applied Mathematics - Approximation of Functions" (Math Dept.), "Electrodynamics" (Physics Dept.) and "Selected Topics - Atmospheric Thermal Radiation" (College of Engineering).

May 16 is the deadline for interested MSC employees to submit an Application for Training, MSC Form 75 (Nov. 1967 or Jan. 1969 edition) should be sent to the Employee Development and Awards Branch, BP3, along with a statement explaining the relation of the proposed training to the trainee's job assignment and the benefit to the government to be derived from the training.

Registration for these courses will be in the Public Information Office, Building 1, June 4 from 9 a.m. to 12 noon. Classes will begin Thursday, June 5 and end Monday, August 18.

### CSC lauds Brock for book, lectures

Eugene Brock, chief of Computation and Analysis, has been cited by the Civil Service Commission's Dallas Region for his contributions as an author and lecturer in the Automatic Data Processing and Management Science Training Programs.

Brock has been a lecturer for ADP Management Seminars for the past two years and has recently published a training manual "A Primer for Computed Fundamentals."

## SPORTS WRAP-UP

### Nunnery hits a hole in one!

William Nunnery of Administrative Services hit a hole in one on the seventh hole of the Ellington AFB Golf Course last weekend.

### Golf association holds 2nd tourney

The MSC golf association held its second tournament of the year April 19 at the Houston Executive Club with 69 members participating. When all the activity was over, Tom Hickey had registered the low gross score, a three over par 74.

Winners in the championship flight were: Bill Dusenbury, 83 (gross)-15 (handicap), 68 (net); second, Ivan Ertel, 84-15, 69; and tied for third, Hickey, 74-4, 70 and Milt Heflin, 85-15, 70.

Alva Hardy had low net in the first flight with 84-22, 62. Second was Bill Whipkey, 84-16, 68; third Bob Gordon, 88-18, 70

and fourth, Tom Cassias, 93-22, 71.

Second flight winner was Charles Laird with a 98-36, 62. Jerry Shinkle was second with 96-26, 70; Matt Story, third, 101-29, 72 and Don Robbins, fourth, 109-36, 73.

The next tournament will be held at Brock Park May 3.

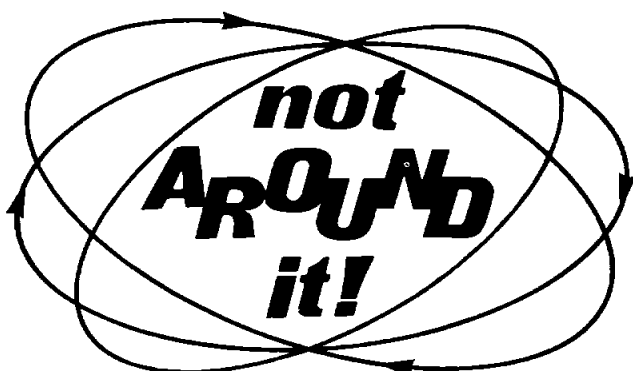
### Marksmen invited to pistol match

MSC marksmen are invited to participate in the Pearland Sportsman's Club's first NRA-accredited pistol match, Sunday, May 11 at 2 p.m.

This will be a 900 match, fired with .22 caliber centerfire and .45 caliber pistols on an NRA short course.

The match will be held at the club range behind the Channel 8 TV tower off FM 528. For more information contact Al Barker, X3981, or Carroll Hopkins, X-4717.

**it's your job  
....get with it**



**COST REDUCTION PROGRAM**