



HAVE A CIGAR, BIG DADDY, THE TRIPLETS JUST ARRIVED
Mission Control and Recovery personnel relax as splashdown is announced.

Apollo 10 splashes into ocean on target

Precisely eight days and three minutes after their lunar launch on May 16, Apollo 10 crewmen Tom Stafford, John Young, and Eugene Cernan splashed into the waters of the South Pacific, 399 miles east of American Samoa.

Apollo 10, which ventured closer to the moon than man has ever been, received the traditional hero's welcome from those who waited in the pre-dawn hours aboard the USS Princeton for her re-entry.

The mission's valuable cargo of pictorial, electronic and human data, when developed, decoded and debriefed, will hopefully pave the way for an Apollo 11 lunar landing mission now scheduled for launch July 16.

The foundation was laid last Thursday when Commander Stafford and Lunar Module Pilot Cernan dipped within 9.6 miles of the lunar surface to survey the prime target sites being considered for the first landing mission.

Apollo 10 was a perfect launch and right on time, dispelling all fears that Stafford, whose previous two flights have experienced delays, is a jinx.

The space vehicle circled the Earth one-and-a-half times before trans-lunar injection which began the crew's 72-hour coast to the Moon.

Shortly after TLI, the three Gemini veterans made the first

of several "fantastic" television transmissions with the new color equipment designed for space-flight.

The world watched as Stafford separated the command service module from the third stage of Saturn V, turned the ship around and hooked nose-to-nose with the LM.

Then the CSM and LM broke away from the spent third stage and continued smoothly on their trans-lunar course.

As testimony to the amazing accuracy of the mission planning and flight navigation, landing time was predicted six months ago within 35 seconds of actual splashdown, the entire mission operated within minutes of the flight schedule and only two out of several planned mid-course corrections were deemed necessary.

The first of these corrections, on the trans-lunar coast, involved a service propulsion system burn of seven seconds at about 2:30 Monday afternoon.

Increased pre-flight precautions left the Apollo 10 crew in extremely good physical condition, the only complaint being some slightly unsettled stomachs from hydrogen in the drinking water.

Tuesday was a relatively quiet day as Apollo 10 continued on its TLC, offering both scheduled and unscheduled television along the way.

Lunar orbit insertion was accomplished about 12:30 p.m. on Wednesday.

The remainder of the afternoon was spent on lunar photography, systems checks and generally accustoming the mission personnel and crew to intermittent losses of communication.

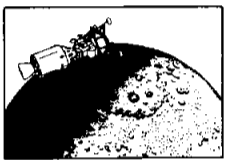
The mission's first obstacle

(cont. on page 4)

ROUNDUP

NASA MANNED SPACECRAFT CENTER

HOUSTON, TEXAS



VOL. 8, NO. 16

MAY 30, 1969

Unofficial countdown to July landing anticipates 'go ahead' from Apollo 10

Everyone is counting. . . 56, 55 . . . if Apollo 10 was as successful under study as it seemed in real time . . . 54, 53 . . . and if Apollo 11 is at least as smooth sailing as was the 10 mission . . . 52, 51 . . . then lunar landing looms 50 days away.

While a definite commitment has not been made concerning the landing of Apollo 11, preparations for the flight of Neil Armstrong, Edwin Aldrin and Michael Collins never skip a beat.

The launch is currently set for July 16 with a landing date of July 20.

So, as Apollo 10 was still gliding toward the moon, the Apollo 11 hardware, three Saturn V stages topped by the spacecraft itself, were being rolled out from the Merritt Island Launch area to Kennedy Space Center's Pad 39A.

Armstrong and Aldrin, slated to be the first on the moon, are practicing the lunar module's critical Descent Orbit Insertion maneuver in simulators at Cape Kennedy. And Collins, commander of the command service module, is drilling on his responsibilities in orbit while the spacecraft is undocked.

Clifford Charlesworth, prime Apollo 11 flight director, and his group of mission control experts have already begun priming their huge computers to keep checks on Apollo 11 movements toward countdown.

These men also supervise simulations in almost every aspect of the planned mission.

The development and study of Apollo 10 data will fill a large part of the coming weeks for those involved in Apollo 11.

"When the Apollo 11 astronauts hear our description and study our photographs, we want them to feel as if they had been there themselves," said Apollo

10 Commander Tom Stafford.

The information gleaned from the "rehearsal" mission will be a large determinant in the Apollo 11 schedule.

Anders nominated to Space Council

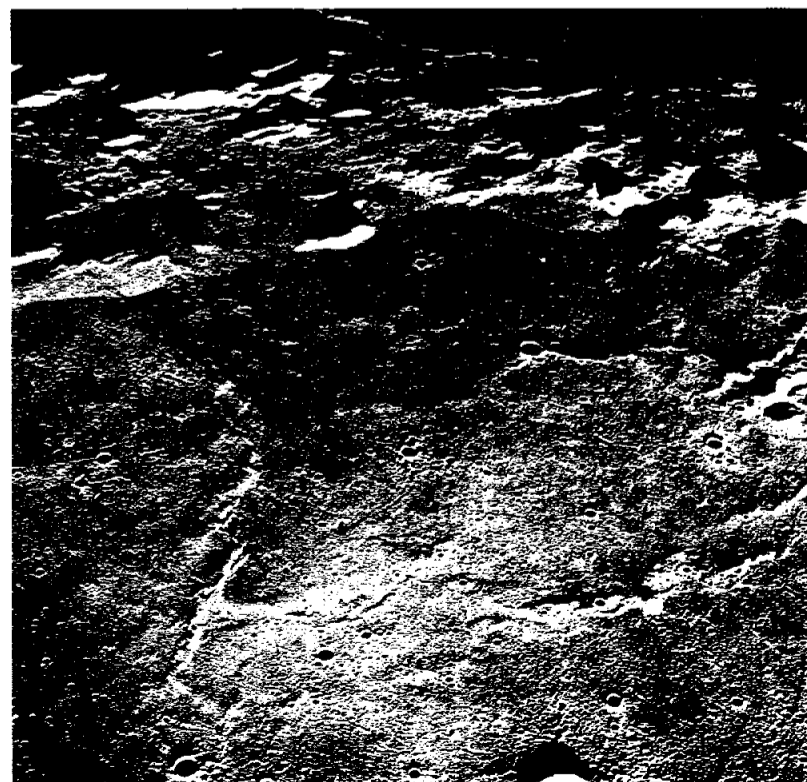
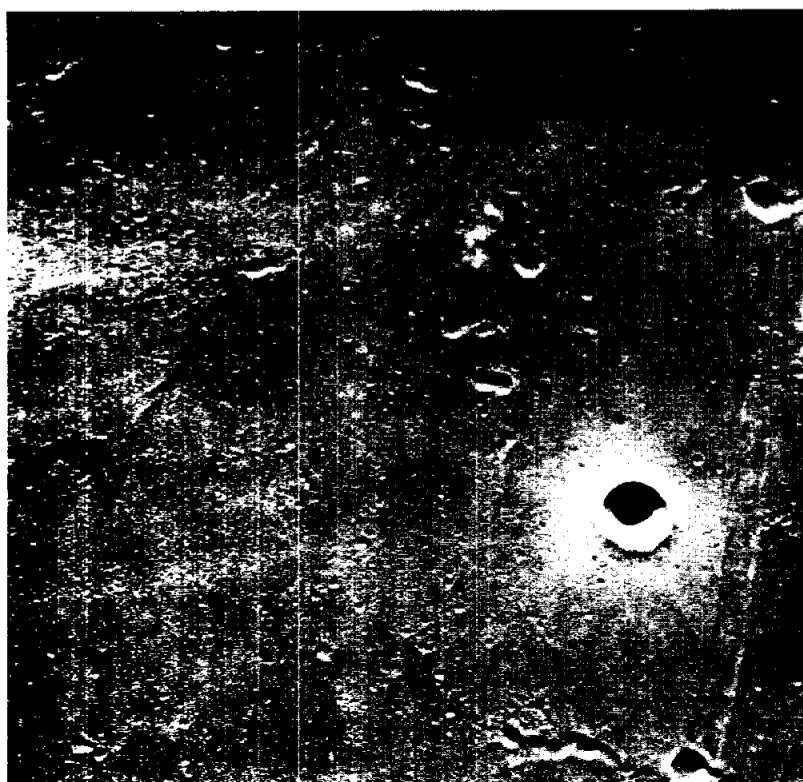
William A. Anders, Apollo 8 crewman and backup command pilot for Apollo 11, has received presidential nomination to the post of Executive Secretary of the National Aeronautics and Space Council.

The announcement came from Vice-president Spiro T. Agnew, chairman of the Council which advises the president on space, and aeronautics plans, policies

and programs.

Pending confirmation of the appointment by the Senate, Anders will take office after the Apollo 11 landing mission in July.

Of Anders, Agnew said, "He brings to the position a unique background. The photographic record he made of man's first visit to the Moon will be studied by scientists for years to come.



PRIME LANDING SITES SELECTED BETWEEN CRATERS AND RILLES

Site # 2, prime target for the first landing, is near Sea of Tranquility. Site # 3, an alternate, is close to Central Bay.

Thank you, Senators

Earlier this year the Senate of the State of Texas passed the following resolution honoring the men and women of MSC who contributed to the successful flight of Apollo 8.

The *Roundup* offers a belated "thank you" to the distinguished Senators on behalf of MSC personnel.

We will strive to be worthy of your praise.

By: Brooks

SENATE RESOLUTION NO. 474

WHEREAS, In December of 1968, man for the first time left the vicinity of earth and journeyed to a distant body in space; after centuries of dreaming of this type of space travel; we have now experienced the first true voyage into deep space; and

WHEREAS, We are intensely proud of the fact that Americans were the first to accomplish this first flight to the moon; in a broader sense, however, this flight was representative of no single nation, but rather of planet world; and

WHEREAS, It is the desire of the Senate to recognize the outstanding achievement of the engineers, scientists, administrators and staff of the Manned Spacecraft Center of the National Aeronautics and Space Administration in the Houston area, whose efforts and labors have made the Apollo 8 mission possible; and

WHEREAS, These dedicated men and women of the Houston Manned Spacecraft Center have guided the work of thousands of University and Contractor personnel throughout the nation to the successful completion of this historic voyage in space; and

WHEREAS, We owe our gratitude to men and women on every level, ranging from Dr. Robert R. Gilruth, the distinguished Director of the Manned Spacecraft Center in Houston, to the skilled technician in the shops who has fabricated a special piece of space gear, the messenger who has delivered the mail, the procurement officer who has placed the many contracts required to support operations of the Center; now, therefore, be it

RESOLVED, That the Senate of the 61st Legislature congratulate this team who made the historic Apollo 8 flight a reality; and express our pride in the fact that the personnel of the Manned Spacecraft Center are Americans; and our particular pride that they are Texans, whether by birth or by adoption.

Brooks


Alkin	Grover	McKool
Bates	Hall	Moore
Bernal	Harrington	Patman
Berry	Harris	Patliff
Blanchard	Hazlewood	Schwartz
Bridges	Herring	Snelson
Christie	Hightower	Strong
Cole	Jordan	Watson
Connally	Kennard	Wilson
Creighton	Mauzy	Word

Barnes, Lt. Governor

Ben Barnes
Lieutenant Governor

I hereby certify that the above Resolution was adopted by the Senate on April 10, 1969.

Harold Gehmabel
Secretary of the Senate



SIX HONORED FOR LENGTH OF SERVICE



Phil Moran
20 years



Burney Leissner
15 years



Betty Defferari
15 years



William Dwyer
15 years



Donald Incerto
15 years



Charles Parker
15 years

Your Job in Focus

It is not too early to start making arrangements for vacation leave.

Early scheduling will insure times that are convenient to both management and employees. Supervisors must see to it that workloads are adequately covered and employees must be sure to take their vacations within a twelve month period so accumulated leave will not be forfeited.

Also, during the next few months, many military reservists will be going on temporary reserve duty.

Those applying for military leave must do so by submitting an SF-71 to their supervisor, along with a copy of their official orders.

Upon completion of military leave, official evidence of duty performance must be submitted to the Payroll Office.

The Fort Worth District of the Corps of Engineers advises that many potential applicants for aid under the 1966 Homeowners Assistance Program have failed to come forward.

This program provides for reducing the losses incurred by military or civilian employees who were forced to sell their homes when the military installations at which they were serving or employed were, subsequent to November 1, 1964, ordered to be closed in whole or in part.

The organization asks that any retired or relocated personnel who feel they may be eligible for these Department of Defense benefits write to Fort Worth District, Corps of Engineers, Attention: SWFRE-M, P. O. Box 17300, Fort Worth, 76102.

Relatives of MSC employees who want to secure employment with a NASA contractor may make application directly and

routinely to the company as long as there is no intercession, directly or indirectly, by family members employed by NASA.

While there is no general prohibition against members of the same family working for NASA and her contractors, there is a legal prohibition against a NASA employee participating personally and substantially in any matter in which he, his spouse or minor child has a financial interest.

Therefore, if an employee has a significant role in the award, administration or monitoring of contracts to the company which employes his spouse or child, he is required to seek a waiver.

Waiver requests should be submitted in accordance with NASA Handbook 1900, 1A, Appendix B.

Employees invited to AFGE installation

The American Federation of Government Employees, Local 2284, will have an installation of officers at their June 9 meeting, 5 p.m. in the building 30 auditorium.

The inductees are: Bob Thrower, president; Joe Pirtle, first vice-president; Phil Stallings, second vice-president; Roy White, third vice-president; Herman Fisher, chief steward; Margie McGregor, secretary; Marion Tillman, treasurer and Albert Jackson, sergeant-at-arms.

The installation will be conducted by National Representative Edward Mallet. All MSC employees are invited to attend.

**LOCK YOUR CAR.
TAKE YOUR KEYS.**

SPACE QUOTES

Dr. George E. Mueller, associate administrator for Manned Space Flight—"... it's an interesting coincidence that this was the 20th launch of the Saturn vehicle, (Apollo 10) the 20th successful launch in a row. It also happens to be the 20th manned flight in space, and also the 20th successful one in a row.

I think that the flight of July, if it goes off well, will represent the coming of age, if you will, of our space program.

It will be the 21st, both of men and vehicles, in space."

* * * * *

Louis Frey, Jr., Florida House of Representatives - "Most Americans think of the space program only when they view a launch or splashdown on television.

This is only a small part of the story.

The work leading up to the final Apollo mission will not only unlock the secrets of the Moon, but has already been of tremendous benefit to man on Earth, as has our entire space program.

A six-legged vehicle proposed for unmanned exploration of the moon was redesigned as a walking chair for crippled children.

A plastic-metallic spray for attaching heart electrodes to

NASA test pilots is used to transmit electrocardiograms of ambulance patients ahead to a hospital receiving room.

Safer designs for highway and runway surfaces have resulted in 15 airports modifying their runways, and many states experimenting on treacherous stretches of highway.

From miniaturization to computer technology, from Teflon to new long-wearing paint—the space program is helping us with new ideas, new technology and new jobs here on earth.

I think it is fitting that we recognize not only the glimmers of our space program, but also the spinoff which affects every American at some point everyday, and promises new benefits in the future."

* * * * *

Tom Wicker, *New York Times*—"Our reaching out into space is akin to our first clutch at a tool, or to the poor fish's straining to be an amphibian, or to the development of the first nervous system.

In its portent, it is of a different order of magnitude than Columbus's discovery. Except for some immediate practical considerations, our reasons for reaching out are inconsequential."

Signature scarves being sold for Ed White Memorial Fund

The sale of Astronaut Signature Scarves for the Ed White Memorial Fund is nearing an end. Sponsors of the fund drive hope to build a NASA area Youth Center in memory of one of the crewmen killed in the 1967 Apollo accident.

The scarves, designed by Houston Artist Jack Arnuny, are 32 inches square, red white

and blue and contain fifty-two astronaut autographs. They are 100% pure silk and sell for \$20.00 each, tax included.

Joske's Nassau Bay Boutique will sell the scarves through tomorrow or they can be obtained by writing to Scarf, P. O. Box 58504, Houston, 77058. Make checks payable to the Ed White Memorial Fund.

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

Professors coming to MSC for summer study programs

MSC will be host this summer to 54 faculty members from colleges and universities of 26 states under two programs co-sponsored by NASA and the American Society for Engineering Education.

The basic objective of the programs is to further the professional knowledge of faculty members in aerospace-related fields.

The third annual Engineering Systems Design Program will introduce faculty members to the discipline of engineering systems design.

Twenty professors chosen for this program will take part in a Phase B Preliminary Design and Project Definition Study of an intermediate sized, unmanned lunar landing spacecraft.

The craft should be capable of softlanding a variety of payloads at any selected site on the visible face of the Moon, operating either in conjunction with separately launched manned spacecraft or independently.

The designers will attempt to develop a minimum cost means of supplementing the Lunar Ex-

ploration Program with a vehicle that is mission-flexible and capable of moderate growth potential.

Thirty-four fellowships will be given for a second effort—the Aeronautical and Space Research Program, now in its fifth year.

Echo II earthbound; destruction imminent

Echo II, familiar to millions throughout the world as a fast-moving star, soon will be seen no more.

The 135-foot-diameter inflatable "balloon", launched by NASA January 25, 1964 as a passive communications satellite, is rapidly being forced down by atmospheric drag and gravitational pull. Its natural demise is now imminent.

Because of Echo's great surface area in relation to its weight as it encounters denser and denser atmosphere, predicting the day it will reach natural destruction is difficult.

Scientists at the Goddard Space Flight Center who managed the Echo project have stud-

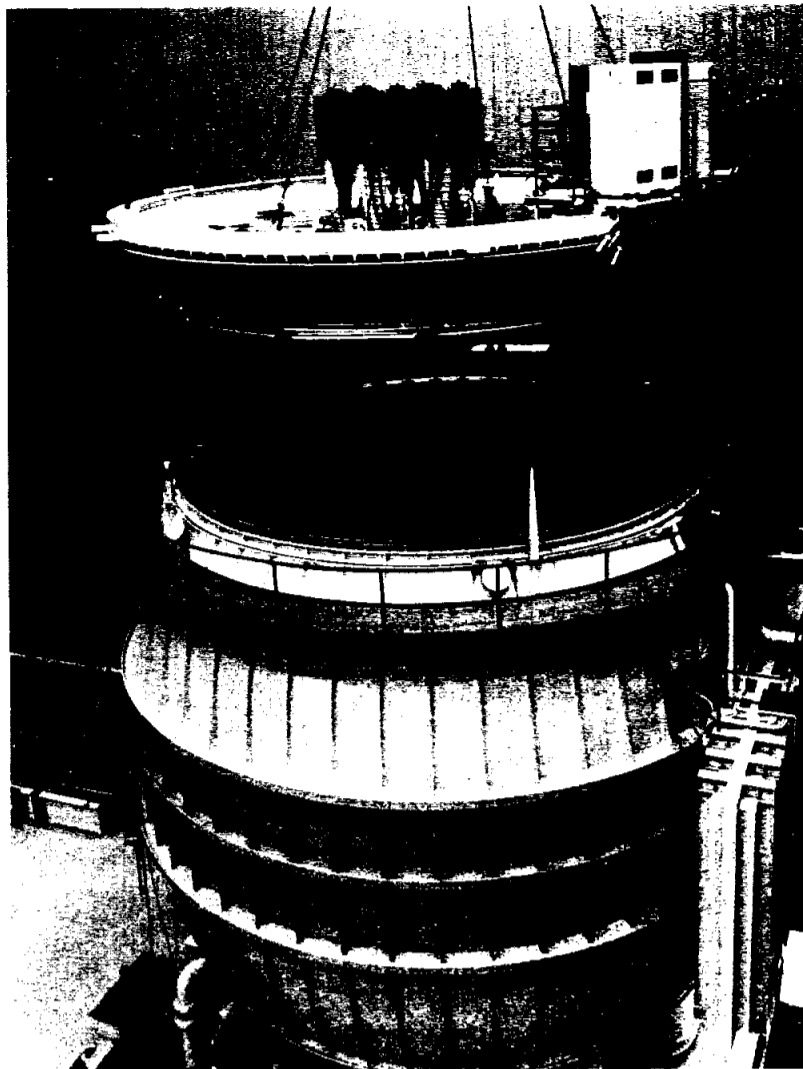
ied the aluminum-coated satellite's behavior since it was launched.

Each of the participants will be assigned, as an individual, to a project which is both important to the Center and within the area of his competence. Each will work closely with an MSC professional who will serve as his personal adviser.

The prime task of the star-like vehicle was to serve as a reflector for "bouncing" radio frequency transmissions from one ground point to another up to international distances.

In addition to its communications function, Echo II has been used extensively by geodetic teams in at least 28 countries. Maps and navigation charts have been brought up to date through the use of optical triangulation between reference points and the satellite.

Echo II is still being used for geodetic purposes even in its final, unpredictable days.



FANCY OVEN CAN DUPLICATE SUN'S HEAT

Boeing recently acquired this 1.5 million dollar, thirty-ton lid which will transform their largest space chamber into a solar simulator. The chamber, which can hold an entire spacecraft, provides a vacuum equal to that of 400 miles above the Earth and can also be adapted for supercold temperatures of minus 320° F.

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 15 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

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.

Seabrook (Miramar) 3-2-2, brick front, central A/H, carpet, fenced, 5 1/4%, sell or rent, M. Culling, 474-2167.

Nassau Bay 4-2-2, fenced, assume 6% loan, X7256.

Shoreacres 5-2-2, 2-story, 2650 sq ft, fireplace, fenced, trees, 1 blk elem school, 6 1/4%, pier/ramp privileges, \$31,000, 1-471-0928.

Dickinson subdivision 90 x 200 heavily wooded corner lot, T. Mancuso, 534-2226 after 6.

West Galveston Island (Spanish Grant) beach house, 3-2, new, air, furnished, 200' from beach, \$175/wk to rent, J. Small, 591-2315.

Galveston efficiency, no lease, \$30/wk, linens, maid service, 7822 Galveston Rd, 946-9958.

Bayou Vista 2-1, boat dock, concreted premises, central A/H, carpet, \$15,500, notes \$108, 7%, balance \$9600, Baker, 935-3912.

Clear Lake City townhouse, owner, 2 bdr, carport, patio, no outside maintenance, \$169/mo, J. Elias, 488-2264.

AUTOS

68 VW sunroof sedan, radio, red, black vinyl interior, \$1550, J. Sutton, 932-3979.

66 Simca GLS 1000, 4-dr, full financing arranged, \$775, consider trade, F. Turner, 733-7667.

62 Corvair 2-dr, buckets, 4-speed, new tires, good second car, D. Duke, 877-1389.

65 Allstate Mo-Ped, motor in good cond, \$50, D. Murphy, 479-1942.

68 VW sedan, D. James, X2291, 747-3522.

62 Corvair 4-dr, automatic, \$210, reworked engine, seals & gaskets, new paint, F. Perkins, 932-4777.

68 VW Karmann Ghia, air, excellent cond, 8,700 mi, \$2,295, will assist financing, H. Tash, 534-3414.

62 Pontiac Catalina, 4-dr sedan, automatic, air, excellent cond, owner, \$550, 483-7557 after 5, 862-4254.

60 Chevy, \$100, R. Reid, 488-3187.

68 Malibu, radio reverb unit, 307 engine, dual exhausts, 3-speed, \$2,150, J. Whitt, 944-4342.

67 VW, air, radio, new tires, extra clean, 28,000 mi, \$1500, L. Waters, 946-1818.

67 Malibu, buckets, console, floor-mounted automatic, air, white w/black interior, \$1700, D. Peterson, 488-4176.

63 Cadillac, 4-dr HT, low mi, new tires, loaded, \$995, Oczkowski, 926-8994.

63 Impala wagon, air, power, automatic, tinted glass, whitewalls, very clean, J. Smith, 479-1898.

67 GT6 Triumph, white, wire wheels, radio, \$2200, excellent cond, Ward, 488-0154 after 5:30.

62 Cadillac HT, good mechanical cond, very good tires, new battery, 471-2526.

66 Mustang HT, V-8, stick, air, radio, special interior, good tires, \$1350, G. Renick, 482-1005.

31 Model A Ford, best offer over \$900 by June 15, decent shape, runs good, 4-dr, J. Hartung, 877-1284.

61 Chevy, 2-dr, 6 cyl, stick, radio, air, \$275, L. Penn, 488-3286.

61 Biscayne, stick, 5000 mi on rebuilt motor, good gas mi, A. McAnelly, 926-7140.

60 Sunbeam Rapier, 2-dr HT, \$125, W. Dyer, 944-5098.

67 Chevelli, white w/black interior, air, buckets, automatic, 38,000 mi, new shocks & brake linings, \$1500 or best offer, D. Peterson, 488-4176.

66 LeMans, 2-dr HT, V-8, automatic, power steering, air, radio, blue vinyl top, \$1200, B. Cour-Palais, X2666, 471-1674.

57 T-bird, HT, black & white, new thruout, power, automatic, chrome wire wheels, \$2725, L. Kaigler, 877-4731.

63 Chevy II, new motor, transistor radio, air, F. Broughton, X6161, 8-4:30.

55 T-bird convertible, white w/black interior, new thruout, stick, chrome wire wheels, power seat, \$1900, L. Kaigler, 877-4731.

HOME FURNISHINGS

3-piece corner sleeper couch set w/table, \$100 or best offer; modern walnut dining table w/leaf, \$40 or best offer, J. Bates, 944-4687.

30" Kenmore gas range, deluxe, automatic, surface grill, 1 1/2 yrs old, \$90, P. Durst, 474-2927.

Karastan rug, 12 x 12, gold, full fringe, pad, \$300; GE Filter-Flo washer, \$30, N. Hutchinson, 488-0385.

Kimball grand piano, completely reworked 2 yrs ago, good finish, \$650, R. Reid, 488-3187.

Amana upright freezer, 18 cu ft, needs refrigerator, \$40, O. Schmidt, League City, 932-4656.

Cocktail table, long & low, solid walnut, \$20, R. High, 591-3254.

Solid cherry twin beds, excellent cond; Hoover upright w/all attachments, works perfectly, 488-5391.

Sofa hide-a-bed, blue-green Naugahyde, like new, \$150, 591-2492.

Extra long colonial sofa, 102", \$30; comfortable leatherette lounge chair, \$20, 488-4005.

79" fold-a-bed sofa w/storage space under seat, blonde fabric, very good cond, \$35, M. Donahoo, Dickinson, 534-3279.

30" Westinghouse stove, excellent cond, \$150, B. Law, 944-7596.

Antique mantle clock, \$35; carved pair ornate gold leafed frame mirrors, \$35; Emerson oscillating fan, excellent cond, \$25, 649-2569.

BOATS

15' Albatross, fiberglass, 64" beam, centerboard, main & jib sails, galvanized trailer, \$1000, P. Maloney, 482-7688.

66 MFG 17' o/b, fiberglass hull, 2-tone blue & white w/canopy, 95 hp, 649-8444.

27' cabin cruiser, custom built, 225 hp, Gray Marine engine, good off-shore boat, J. Mullins, 877-3382.

19' Lamar fiberglass boat, bait wells, water skis, life preservers, 75 hp Evinrude, trailer, \$925, Dickinson, 534-3710.

PETS

Free kittens, born 4-28, N. Schultz, Baytown, 422-5636.

Puppies, male & female, 5 wks old, mother—registered beagle, father—small mixed breed, W. Mallary, X2191, 482-7081.

Free puppies, mixed breed: Collie, Bird Dog & Chow, J. Zill, X4041, 932-4265.

Basset puppies, AKC, tri-colored, 9 wks old, excellent w/children, C. Laird, LaPorte, 471-3475.

German Shorthair Pointers, excellent hunting & show stock, whelped 5-4, R. Reining, 946-6396.

Free puppies, small to medium size, 5 wks old, G. Miller, 932-5973.

MISCELLANEOUS

Latin & English word sets, \$1 ea, L. Bennett, 649-3576 after 5.

Rolleiflex 2.8F/120-220, 80mm Planar, E/R case, penta prism, pistol grip, Rolleikin 2.8, closeup lenses, more accessories, \$550 takes all, M. Callaway, 748-6600 X338.

65 Honda 590, \$140, new cond, engine rebuilt, F. Perkins, 932-4777.

Complete 3-wing Gilbert chemistry lab, great for beginners, new \$111, now \$6, Keener, 488-1193.

Roberts Model 770 4-track stereo recorder, 2 mikes, input-output patch cords, good cond, \$195, E. Walters, 649-2838.

20" bike, convertible w/training wheels, \$12.50; danish-type sectional, like new, brown, \$60, 877-3028.

Set of 8:55 x 14 whitewall tires, 3000 mi, make offer, C. Thompson, 932-3653.

Washing machine, \$50; 4 bar stools, \$15 ea; refrigerator, \$100; tape recorder, \$20, A. Cook, 591-3329.

Used 21" picture tube, aluminized 21FP4, good cond, \$5, J. Zill, X4041, 932-4265.

Stereo set, Knight amplifier, Garrard automatic turn table, 2 speakers w/enclosures, \$50, J. Llewellyn, X2468.

62 under-dash air conditioner, 3-speed blower, coils, compressor came off 62 Ford, \$50, 487-2109 after 5.

Hospital bed, mattress, rails, \$100, A. Talas, 932-4183.

Fleetwood sewing machine, zig-zag, button holes, etc, 1 yr old, \$50, N. Willis, 664-4877.

Ithica shotgun, pump, 12 ga, excellent cond, Lyman variable choke, 30" barrel, deluxe recoil pad, case, \$75, J. McCaulley, 471-3298.

Martin guitar GT-70, 2 pickups, Bigsby-type tailpiece, hardshell case, \$325, Bonafas, 485-2643.

Ham antenna, trapped vertical for 40, 20, 15 & 10 meters, mast, 100' coax included, \$15, Bonafas, 485-2643.

Autumn haze mink stole, \$175; antique brass-covered wood chest, ornate, beautiful, \$100; 7 x 35 binoculars, like new, \$20, 649-2569.

WANTED

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

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.

Good 9 x 9 umbrella to 10 x 8 wall tent, waterproof w/floor & screens; also, 12-14' flat-bottom boat, J. Bullard, 877-4155.

Two steamer size trunks, suitable cond for overseas travel, R. Nugent, 488-3136.

Girl to share large 2 bdr apt for summer in Houston, K. Lumpkin, 524-2732 or X5111.

Small dog house, 488-5391.

Want to farm car pool to UH summer school morning classes, J. Alyea, 591-2784 after 4:30.

Used hide-a-bed w/decent mattress, upholstery in any cond, M. Dixon, League City, 932-5895.

Used girl's bike, 26-28", S. Jacobs, 774-9924.

Headquarters management intern needs place to stay while on assignment to MSC, 6-28 to 8-16, D. Strother, 202-962-2814.



William Knight

Color TV from space entertains and enlightens

The world took a look at itself on live television for the first time as Apollo 10 cameramen recorded the steady shrinking of the multi-colored earth and growth of the grey-brown moon mass.

Serious one moment and hilarious the next, the "Tom, John and Gene show" scored high on entertainment.

An "unofficial" tape recording of the popular "Fly me to the Moon" and "Up, up and away" provided background music for the documentary.

For the benefit of interested geologists, each crewman filmed part of the moon's face and described what he was seeing.

The new color equipment worked with amazing precision, enabling the crew to record the moon's wandering rilles, craters and valleys as well as astronaut antics in the spacecraft.

A feeling of closeness to mission progress was generated by the real-time photography and a better understanding of such phenomenon as weightlessness and disorientation in space was gained from the crew's simple demonstrations.

The idea of sharing the experience of spaceflight was supported wholeheartedly by Apollo 10 personnel and at the end of

the mission Gene Cernan said he hoped they had given the "millions of people of the world more of a part in the history being made this day and age."

Mission planners have announced their intentions to include live color transmissions in the flight schedule of Apollo 11.

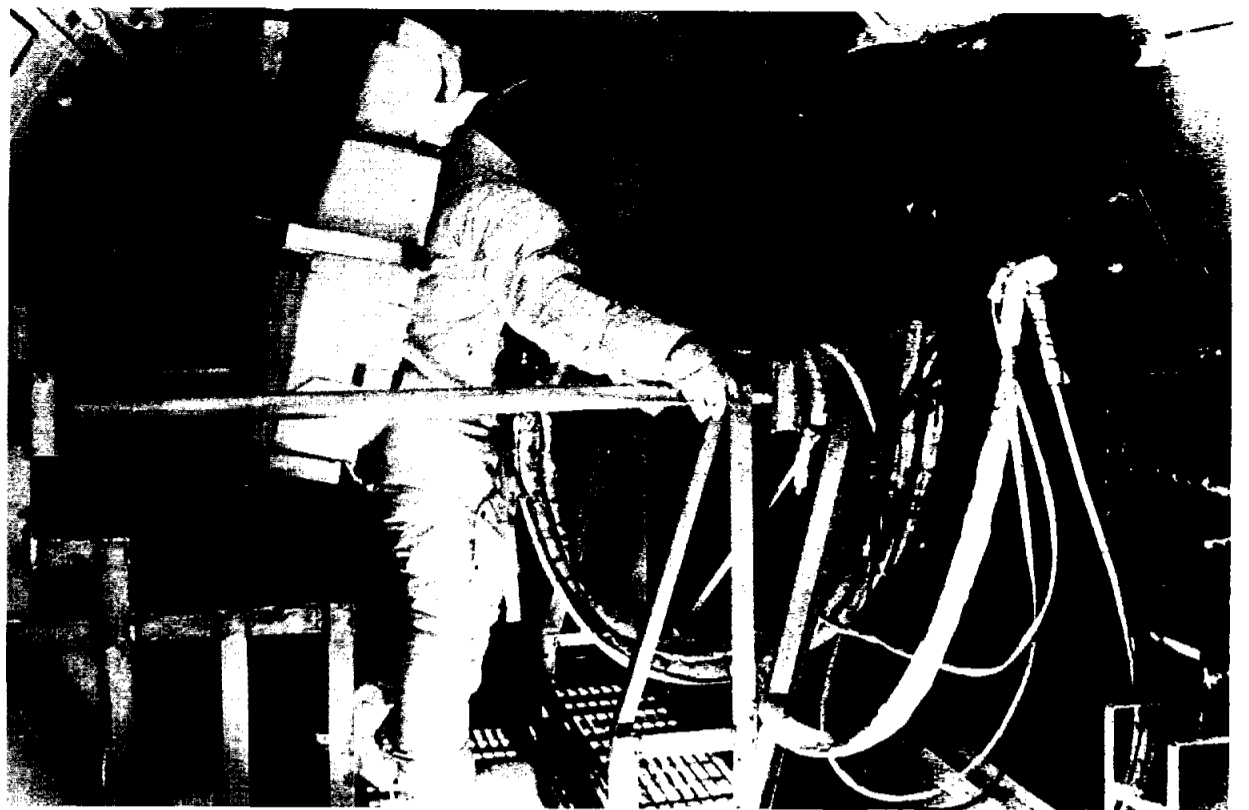
99.9% reliability not good enough

Just how reliable does a launch vehicle have to be?

The Saturn V Moon rocket, which has provided the launch power for Apollo missions 4, 6, 8, 9 and 10, has 5,600,000 parts. If any of these rockets had functioned with a near-perfect 99.9% reliability, 5,6000 parts would have failed.

As it stands, the five Saturn V's used so far have had an almost flawless record. The second launch did have two "anomalies", demonstrating a stability of 99.9999+ %.

If the average automobile, with 13,000 parts, were to have this same reliability, it would have its first defective part in about 100 years. In fact, its life would be determined by rust or wear, and not by mechanical failure.



THIS MAN IS NOT AN ASTRONAUT . . .

He's one of Crew Systems' volunteer test subjects checking out equipment in high altitude chamber.

Crew Systems needs volunteers to test variety of mission hardware

Would you like to see yourself in a spacesuit, complete with a Portable Life Support System?

Ever wonder what a high altitude chamber is like or how it feels to sit in the commander's chair and fly a spacecraft?

Activities such as these are

open to all those who qualify for the Crew Systems Division testing programs.

Due to an increase in these testing programs, MSC needs to enlarge its present group of 25 volunteer test subjects.

Civil Service and contractor

employees working for MSC who are 35 and under and can get supervisory approval are invited to meet the challenge.

And a challenge it is.

Have you noticed the joggers in yellow uniforms streaking down the Center's sidewalks? These are some of the test subjects training to meet physical fitness requirements. Most can run two miles in 15 minutes.

Potential test subjects must be in excellent physical condition—especially those chosen for the high altitude chambers and centrifuge work.

Subjects must also be reliable. "Some important tests have been delayed when the person assigned failed to show up," said Joe Trombley, head of the chamber test project section.

Selectees will test flight hardware now being used in Apollo missions, including Environmental Control Systems, PLSS, spacesuits, simulators and other crew equipment.

Typical test programs involve the actual operation of spacecraft controls inside test capsules at 5.0 pounds per square inch and 100% oxygen; the wearing of operational lunar spacesuits and PLSS while in a vacuum; and simulating mission "g" loads with flight hardware while riding the centrifuge.

In addition to the prestige and valuable experience gained in the program, there are Snoopy Test Subject patches awarded to qualifiers and hazardous duty pay for those involved in centrifuge and high altitude experiments.

Subjects are needed in a variety of sizes. However, about six of the present 25 testers do a majority of the experiments because they are within the size range of most of the astronauts.

Applications and additional information are available from Jack Mays or Joe Trombley at X3155.

Apollo 10 returns to Earth with background for Apollo 11

(cont. from page 1)

was encountered shortly after 10 Thursday morning when Stafford and Cernan entered the LM for the first time and were greeted by a flurry of snowlike fiberglass released from a rent in the CSM hatch. The fibers, which caused some skin and eye irritation for the astronauts, were also clogging a 1/4-inch tunnel vent, delaying the undocking maneuver until the problem was cleared up. Plans are already in the works for a change in insulation before the next flight.

Tension rose again just before the scheduled separation behind the moon when Snoopy shifted about 3°, placing a slight strain on the docking mechanism.

However, when the group reappeared, forty-five minutes later, Charlie Brown was still in his 69-mile circular orbit and Snoopy was flying low.

The LM crew tackled dozens of tracking, photography and observation assignments on its low passes while Young worked to keep communications open between the divided craft and stood ready for any emergency.

While communications, both vocal and high bit rate data, were minimal during the first low pass satisfactory linkage was apparently restored for Snoopy's second dive. However, this is the type of anomaly that will undergo careful study before a go-ahead is given for Apollo 11.

A more dramatic, but reportedly less dangerous, event occurred after the first pass just as Stafford and Cernan prepared to jettison the LM's descent stage.

As the vehicle burst apart—throwing the descent stage into lunar orbit as planned—the LM cabin was seized by a series of violent gyrations which sent the crew's heart rates soaring. Stafford took over when the rolling began and stabilized the craft manually.

The problem has been traced to a control switch, accidentally left in the wrong position. Flight controllers agree that the crew was in no immediate danger during the shake-up.

Eight hours and four revolu-

tions after undocking, Snoopy fired his ascent engines and began to maneuver toward Charlie Brown.

"That rendezvous was the best one we ever had," said Stafford.

Two hours after redocking, with equipment and data transferred to Charlie, the Apollo crew was reunited. Then, the hatch was sealed and the dog who "sure was good to us" blasted into solar orbit.

In their two low sweeps, Stafford and Cernan employed all

but the final 12 minutes of the Apollo 11 touchdown technique.

They conducted tests on the lunar landing radar which performed much sooner (at 65,000 feet) than expected (50,000 feet). They took stereo still photography and high resolution movies and made numerous observations on lunar geology from their unique vantage point.

Computer data gained from the radar tests and various other tracking devices used will help the navigators determine how much the Moon's gravitational field affects flight paths.

The spent LM descent section, left in lunar orbit, passed close to the CSM several times Friday night and Saturday morning, causing some concern among the orbiting trio even though the danger was fractional. Snoopy was last sighted on the 29th orbit.

On the 31st orbit, at 5:25 Saturday morning, a two minute, 42 second trans-earth injection burn sent Apollo 10 homeward after 61.5 hours in lunar rendezvous.

It reached the mid-way point between Earth and Moon at about 4:40 Sunday evening and on Monday, entering at a speed of over 24,769 mph (fastest re-entry ever), Apollo 10 splashed down at 11:53 a.m. CDT.

Golfers schedule tournament June 7

The MSC Golf Association will hold its next tournament at the Longmeadows Country Club on June 7, 1969. All interested golfers are urged to participate.



APOLLO 10 CSM VIEWED FROM LM OVER MOON
Charlie Brown pictured about 175 miles east of Smyth's sea.