ROUNDUP

NASA MANNED SPACECRAFT CENTER HOUSTON, TEXAS

VOL. 7, NO. 25 SEPTEMBER 27, 1968

Weekend Open House Marks NASA Decade

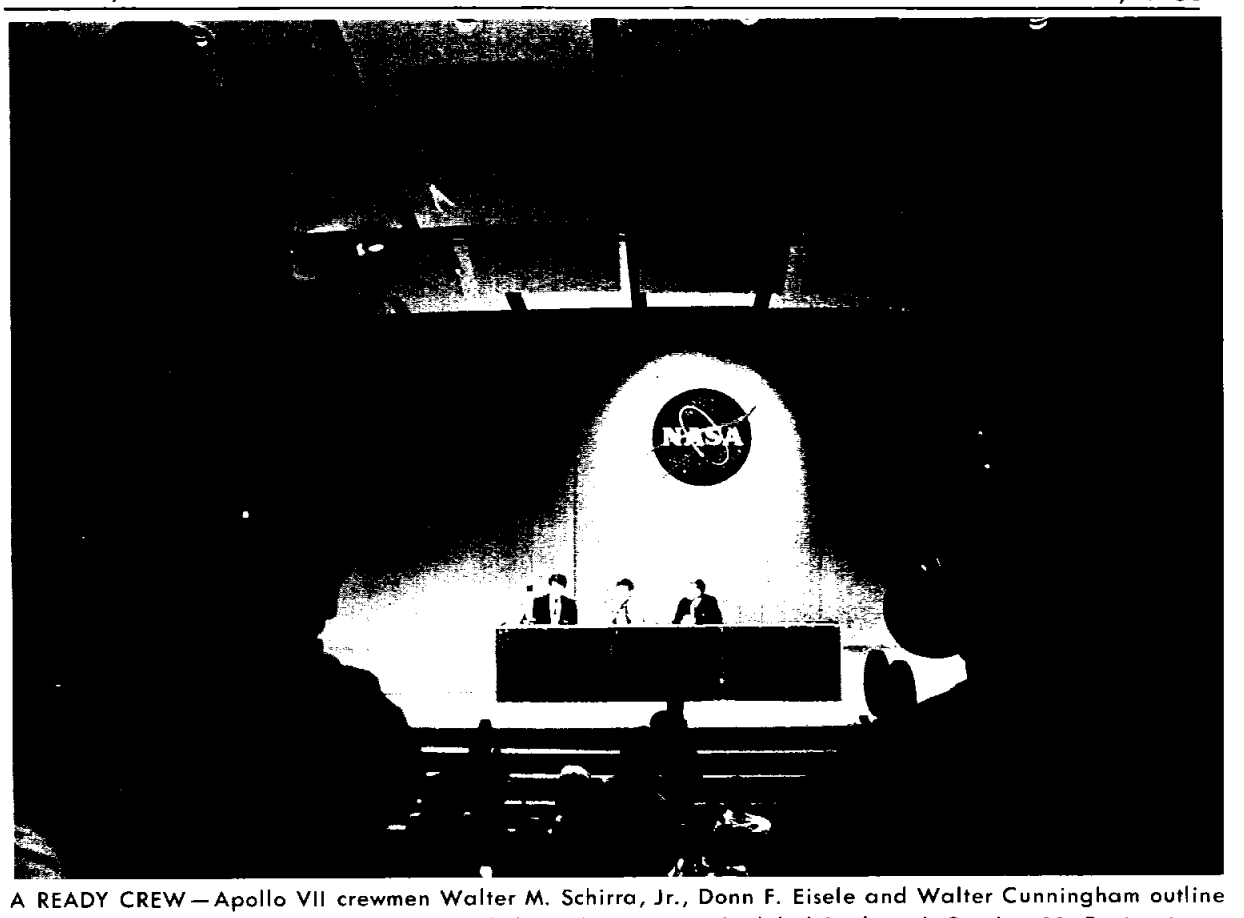
A two-day celebration of the tenth anniversary of the National Aeronautics and Space Administration is planned at MSC September 28-29 with an open-house program for employees and their families and for invited community leaders.

In his invitation to local government and business leaders, congressmen and educators, MSC Director Robert R. Gilruth said, "Over the past ten years, NASA has successfully accomplished many programs including Projects Mercury and Gemini. We are presently engaged in the Apollo Program to land men on the lunar surface. Out of these programs have come new technology and facilities. We welcome this opportunity to show you some of these new developments."

NASA's first official day as an agency was on October 1, 1958. The new agency was created under the National Aeronautics and Space Act of 1958 which President Dwight D. Eisenhower signed into law July 29, 1958. The facilities and employees of the National Advisory Committee for Aeronautics (NACA) created in 1915 became the nucleus of NASA.

Tomorrow's open-house program will be for employees and invited guests, and Sunday's program will be for the general public. The schedule is as follows:

Saturday	
9 am to 12:30 pm; 3 pm to 5:30 pm	MSC Auditorium exhibits and films for employees and families
9 am to 2 pm	Facilities walk-throughs
1 pm to 2:30 pm	Auditorium program for branch chiefs and invited guests
2:30 pm to 4 pm	Bus tour for invited guests
Sunday	
Noon to 5 pm	Expanded MSC Sunday Visitor Program with many additional facilities open in addition to exhibits and film showings.



A READY CREW—Apollo VII crewmen Walter M. Schirra, Jr., Donn F. Eisele and Walter Cunningham outline for newsmen the mission sequence they will fly in the mission scheduled for launch October 11. During interviews following the Auditorium press conference, Schirra announced that he would retire from the astronaut corps after the mission but would stay in the space program.

AAP Workshop Airlock to Marshall

The National Aeronautics and Space Administration has reassigned management responsibility for the Saturn I Workshop airlock module and the modified lunar module ascent stage for the Apollo Telescope Mount to the Marshall Space Flight Center in Huntsville, Alabama.

NASA's Manned Spacecraft Center formerly managed these Apollo Applications Program activities.

The realignment was undertaken to establish a satisfactory balance between Apollo Applications and Apollo programs and places AAP design integration responsibilities under a single NASA Center.

The management responsibilities encompass systems engineering and include the development test and integration efforts required to assure the compatibility, as an integrated system, of flight hardware elements and ground support equipment.

The 16-foot airlock module will be mounted on a Saturn IB launch vehicle to provide a 65-inch diameter airlock tunnel for astronauts to maneuver between their Apollo spacecraft and the principal working and living area of the workshop inside the converted hydrogen tank of the rocket's second stage.

The Apollo spacecraft lunar module ascent stage is being modified as a control station for the Apollo Telescope Mount, a large telescope involving a complex set of instruments for solar astronomy.

LuWow Committee Needs Volunteers

Planning for the October 19 MSC annual picnic—er, excuse—"LuWow" is gathering steam, but as in all projects of this sort, more volunteers are needed.

For example, Steve Grega at 5348 needs about eight more girls to help collect lunch tickets for about an hour-and-a-half period. And six seaworthy boats are needed for hauling the LuWow Queen, King and court up the creek to Galveston County Park. Skippers should call Ed Stelly at 3378 to volunteer for this duty.

Nominations for the queen-king bit should be sent to Jerry Haptonstall/BG931 before October 11, accompanied by snapshots of nominees.

On the Dotted Line

SIGNS PLEDGE—MSC Deputy Director George S. Trimble signs his 1969 MSC United Fund Drive pledge card to get the month-long drive started. Trimble is MSC United Fund Drive chairman, and Joe Bennet, right, is cochairman. The Center's goal for the drive is $70,000. In past UF drives, MSC has met or exceeded goals.

OCTOBER 11 LAUNCH—

Schirra Says Apollo VII 'Just About Ready to Fly'

"We are just about ready to fly this mission."

That is the way Apollo VII commander Walter M. Schirra, Jr. summarized readiness of the crew and the space vehicle to newsmen at a September 20 press conference in the MSC auditorium. Apollo VII is scheduled for launch October 11.

Schirra, command module pilot, Donn F. Eisele and lunar module pilot Walter Cunningham outlined their training and spacecraft testing activities in the buildup for the first manned Apollo mission.

"I think we've enjoyed working together," said Schirra. "We've had a goal that is a rather hard one to achieve, particularly one that we have to follow on when we lost three of our compatriots, and we don't want any mistakes that might cause something like that to happen again.

"We have not been the 'kid-around' types that we might have been in the past; we're much more serious about it, because this is a much more complicated machine and there are many, many more people involved in it. So the moments of levity have not been as often found, so we have to create our own levity by punning. I think you will find that you will see a good performance out of this total crew and we have tried very hard to make this machine work just the way it should."

The Apollo VII spacecraft and Saturn IB launch vehicle last week successfully completed a Countdown Demonstration Test. The Flight Readiness Test was scheduled for Wednesday, Thursday and Friday this week. The Apollo VII crew took part in both tests.

Apollo VII will lift off on its shakedown flight on or after October 11 in a thorough wringout of the third generation of manned spacecraft. The mission will be launched from NASA Kennedy Space Center Launch Complex 34.

Spacecraft systems will undergo intensive testing—even overstressing—in this first-of-a-kind mission. Apollo VII is purely a test flight of a new spacecraft; the operational buildup toward the lunar landing and conduct of complex scientific experiments will come in later missions.

Among the main Apollo VII mission objectives are the combined operation of the Saturn IV launch vehicle, the Apollo command and service modules and the Manned Space Flight Network during a manned orbital mission. The Saturn IB and the Apollo spacecraft have been test flown in suborbital and orbital unmanned missions as a forerunner to the first manned flight.

Up to 10 Days

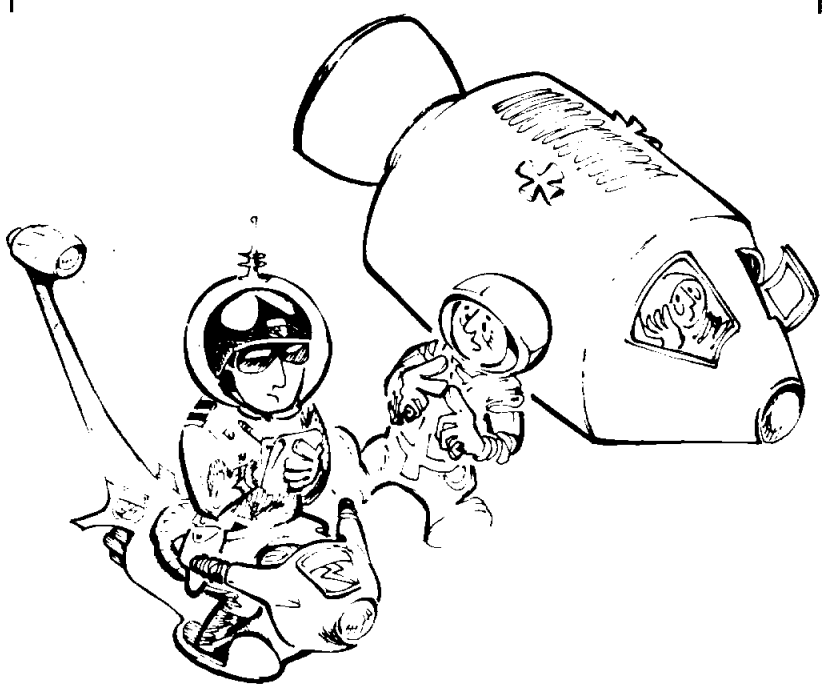
Apollo VII is nominally planned to be open-ended to 10 days duration, but a full 10-day mission is not essential to a successful mission from a technical standpoint. The mission sequences is designed to gather the more important data early in the flight—much in the same way the flight profile of a new aircraft is planned. Instrumentation aboard Apollo VII is aimed toward isolating spacecraft systems problems so that they can be analyzed and fixed before the next manned flight.

Much valuable operational experience was gained from the earlier Mercury program and the 12 Gemini missions, especially in development of techniques

(Continued on page 4)

THE ASTRONUTS

(filched from TRW Systems Group)



Director's Letter Notes Fire Prevention Week

President Lyndon Johnson has proclaimed the week of October 6-12 as Fire Prevention Week.

In a letter to all MSC employees, MSC Director Robert R. Gilruth said, "We are entering a critical period of activity at MSC. The upcoming Apollo missions place even greater emphasis on our need for increased vigilance.

"For all of us who support this activity, it is especially important that none of us jeopardize the success of these missions by contributing to potential hazard or fire conditions that could reduce our effectiveness.

"Fire safety is a year-round job that must receive year-round attention. This brief week should serve as a reminder for each of us to review our own personal fire prevention programs as applied to our jobs, to our fellow employees, and to our homes. Survey your own habits, work area, and especially your home for fire hazards that you can correct."

15 Years Service

Ralph E. Tippit
NASA Regional Audit Office—MSC

Bay Chorus Seeks Tenors, Basses

Tenors and basses who can read music and can carry a tune without the aid of a bucket have been urged to try out for the 80-voice Bay Area Chorus which rehearses each Sunday at 8 pm in the Clear Lake City Recreation Center.

Directed by Dr. Wayne Bedford, Rice University music department chairman, the Bay Area Chorus is made up of volunteer singers from all MSC-area communitees and presents three major concerts each year. The Chorus will not audition this fall but does seek new experienced choral singers, especially tenors and basses.

Herb Tiedemann at 4289 and Vicki Jones at 3511 have additional information on the Chorus.

Space Studies Need Worldwide Ties

WASHINGTON, D.C.—The U. S. space agency's international programs run the full gamut from A to Z—Aden to Zambia.

Emphasis on international cooperation in the peaceful exploration of space has spanned the 10 years' work of the National Aeronautics and Space Administration.

To date, the U. S. space agency has worked with more than 80 countries around the world. This cooperation has ranged from personnel exchanges to cooperative satellite launches.

Increasing numbers of foreign scientists and technicians have been trained at NASA installations throughout the United States.

International agreements often call for the training of a crew of 12 or more foreign nationals to qualify them for preparing, launching, tracking and analyzing data.

And the cooperation is not a one-way street. Tracking stations spotted around the globe play a vital role in checking the course and activities of many American satellites. NASA now has tracking and data acquisition agreements with 21 countries, as well as the European Space Research Organization.

In many of the projects foreign nations receive the benefit of technical training. NASA acquires research data which helps understand the earth's environment.

Great Books Set Donated to Tech Library

The MSC Technical Library recently added to its shelves a 54-volume set of the *Great Books* series. The set was donated by Mrs. J. W. Busacker of Houston in memory of her husband, developer of the proximity fuse.

Great Books bring together an anthology of western culture as described by writers from the first recorded written word to the present. Included in the series is the Syntopicon which permits a reader to trace any point of view or concept through its entire development in western intellectual history.

Great Books are available on a regular circulation basis to MSC and contractor employees.

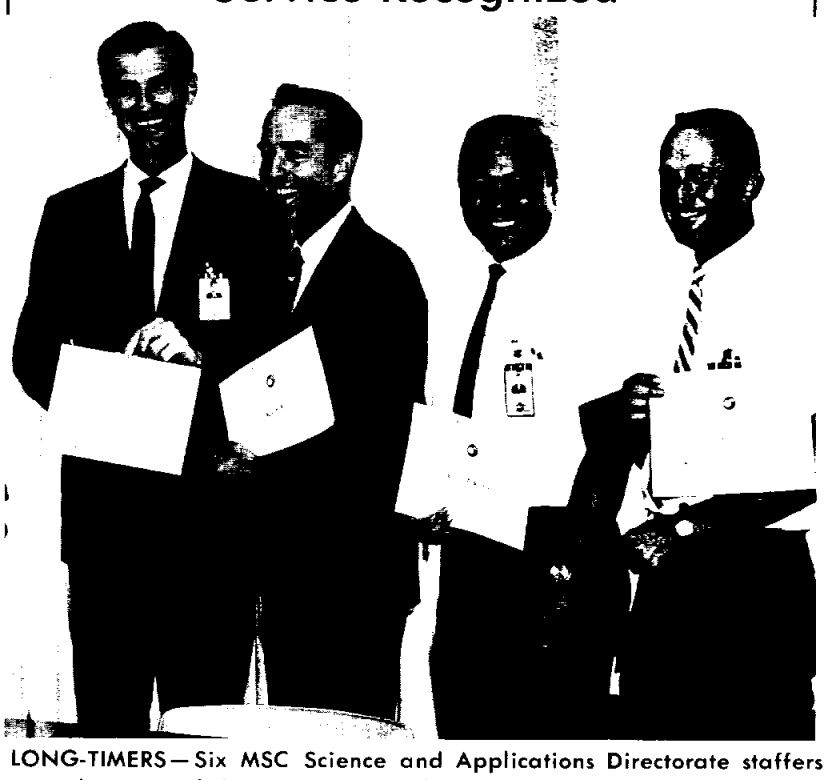
Exchange Offers Card Imprinting

MSC employees need no longer fumble for a scrap of paper on which to jot their name and telephone number for someone they meet on a trip. The MSC Exchange Store now offers personalized business cards, replete with the NASA logotype in red and blue, at a cost of $5 for 250 cards. Employee names and addresses are imprinted in black at the lower edge of the card.

Card orders are held until six have been accumulated before being forwarded to the printer. "Ganging" card imprints allows the low price for the cards.

Orders may be placed at the MSC Exchange Store in the Bldg 3 Cafeteria or by calling 4814.

Service Recognized



LONG-TIMERS—Six MSC Science and Applications Directorate staffers recently received their service awards. Left to right are Robert Thoben, 20 years; Ray Irwin, 15 years; R. Dean Bratton, 15 years, and Leon Ballinger, 15 years. Not in photo: Richard Moke and John Harris.

SHAPE UP-

REDUCE COSTS!

AWARDS AND COST REDUCTION PROGRAM

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 . . . . . Paul Haney
Editor . . . . . Terry White
Staff Photographer . . . . . A. "Pat" Patnesky

Rocketdyne Injector Selected for LM Ascent

The National Aeronautics and Space Administration has selected the Rocketdyne injector for use in the ascent engine of the Apollo lunar module.

The ascent engine was designed and developed by Bell Aerosystems Co., Buffalo, N. Y., under a subcontract with the Grumman Aircraft Engineering Corp., Bethpage, N. Y., prime contractor for the Apollo lunar module.

Both Bell and Rocketdyne, a division of North American Rockwell Corp., at Canoga Park, Calif., have been conducting intensive injector development programs since August 1967 after the original Bell injector experienced developmental difficulties.

Rocketdyne will manufacture the injector, assemble the engine and provide associated field support, documentation and testing under a subcontract with Grumman. Value of the subcontract is estimated to be about $10 million.

Bell, also under a subcontract with Grumman, will continue to provide associated engine hardware for assembly with the injector by Rocketdyne.

The injector delivers both fuel and oxidizer into the combustion chamber of the engine. Proper injector design is necessary to insure smooth and reliable ignition and stable combustion in the 3,500-pound thrust ascent engine that will lift the two astronauts in the lunar module off the lunar surface to the orbiting Apollo command module for return to earth.

Danish Gym Team Performs Locally

The Danish Gym Team tomorrow will present a program of gymnastics, vaulting, tumbling and folk dancing at the San Jacinto Junior College gym at 8 pm.

En route to the 1968 Olympics in Mexico City, the Danish Gym Team is directed by Erik Flensted-Jensen and is made up of 30 boys and girls who spend a year on the team as unsalaried amateur gymnasts.

Tickets at $2 for adults and $1 for students can be bought from Jim Skipper in Bldg 29 and Max Krchnak in Bldg 12.

Roundup Swap-Shop

(Deadline for Swap-Shop classified ads is the Friday preceding *Round up* 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.)

WANTED

Want to join or start carpool from Baytown, 8:30-5:00 Norman R. Schulz, ext. 2901.

Copy of December 1965 special issue of "Proceedings of the IEEE" for use in office. Jim Bates, 3816 (no home phone).

Old model airplane engines, engine parts, or old model airplane kits. Engines need not work. James Moore, 528-2101.

Responsible young lady for some evening babysitting, KP in exchange for room and board. Private room, bath, separate entrance, TV, Nassau Bay. Schweickart, 591-2439.

Pair girl's white marching band shoes, size 7W or 7½W. F. Southard, GR3-3063.

Rider for 4-man car pool Meyerland-Westbury area. Drive 1 day week. 8:30-5. S. Jacobs, PR 4-9924 after 6:00.

Girl to share apartment with same in NASA area. Phyllis Swinford, 477-3290 after 6.

Six tickets to UT vs. OU football game, Oct. 12. T. L. Moser, 877-3048.

Looking for ride from Gulfgate to Bldg. 15, 8:30 to 5, Dianne Smith, 644-6356.

Childs table and chairs set. Must be sturdy S. Sellers, 477-3305.

Want to buy a child-size table & chairs. Ronald Blilie, 944-3847.

Used shotgun, prefer 20-ga. Automatic. J. Gurley, Dickinson 534-3800.

FOR SALE—MISCELLANEOUS

20-foot cabin sloop, keel, dacron main, jib, fiberglas over cypress hull mahogany decking, $995. Chuck Sirmans, 932-5479 after 5.

Saluki (Persian Greyhound) male puppies $200 or best offer. Gunter R. Sabionski, GR 1-1914 after 6.

Drum set for sale. Must sell, in good shape. Will sacrifice. Terry Watson, 946-4703.

Curtis-Mathes TV/stereo/AM-FM radio combination. Oil walnut cabinet, modern styling. Dick Moser, 591-2856.

Hi-Fi amplifier 10-watt Eico $20 or trade for AM tuner. W. C. Huber, 877-1276.

Schwinn bicycle, new 10-speed Varsity Sport model. $55. Floyd Eaton, HU 2-7047.

.22-cal. rifle, Remington Model 66, all nylon, 4-power Weaver scope. $50. Floyd Eaton, HU 2-7047.

HemisFair Bonus Book with two gate admissions. $9. Tommie Sue Holder, 424-7782.

Bruno Ventura guitar, case, 2 pickups, vibrato, brown w/gold plating, amp, Kalamazoo reverb 12, tremulo. Cost $300, sell $250. Jim Dorsey, 944-5349.

Telescope, 4¼" reflector, equatorial mounting, pedestal, eyepieces 45x to 270x, 3" setting circles. Cost $85, sell $60. Jakey D. Wood, 877-4705.

HemisFair Bonus Books: 2 books for $5.75 each—regular $9.85 value. Dale Nussman, 946-0359.

Trade J. C. Higgins double-barrel 12-guage shotgun, one year old, good shape, for 20-guage pump. Rob Garrett, 946-9587.

Fly with Skyrovers, at LaPorte. 1 J-3 @ $4.50/hr.; 2 Skyhawks @ $6/hr.; 1 Skylane @ $9/hr. — wet. Instruction, $12.50/mo dues. Rusnak, 483-4815.

Two 12" speaker enclosures, like new walnut veneer. 16" deep, 23¼" high, 17¾" wide, insulated. $50 both. Rick Nobles, 944-4153.

New Deville guitar with two pickups. Slightly used Gibson amplifier with two pickups, both $100. Ralph Schmidt, 946-1494.

Lawn edger, Ward's electric, used two summers, $7.50. Ice skates, man's 10, used twice, new condition, $9. Moser, 877-3048.

30" Dixie gas range $30. Ross Ferland, 877-1888.

Two Acoustic Research 2-QX speakers, two years old, excellent condition. Mahogany finish in good condition. $120 for both. Craig Hendrickson, 944-8692.

Pair combination water skis pro ski jacket, ski belt. Excellent condition. $25. Al Smith, 485-3047.

Student's Model Bb clarinet. Recently corked. Excellent condition. $55. Ed Campagna, 591-2974.

1967 Honda S-90, maroon with chrome fenders, less than 2,000 miles. $275. Mary Sylvia, GR 3-5967.

Rent . . 3-1-1, screened-in covered patio, heat, air, range. Available immediately. Freeway Manor. C. A. Biggs, 487-2978 after 6.

Hammond organ, L-100, 1½ yrs. old. Like new, two manuals, octave footpedals, all stopbars, bench, $900. Joe Hehn, MI 9-3717.

Electric bass guitar (Truetone) and amplifier. $45, D. Bentley, 591-2718.

Hard top (red) for 63-67 Corvette convertible. $150. D. Bentley, 591-2718.

Eighteen-month old black female Shepherd-Labrador, likes kids, affectionate, gentle, seldom barks, apt. raised. $50. Good violin, $150. David Sklar, 932-5348.

Wedding ring set: white gold, solitaire engagement ring, two diamonds in wedding band. Size 6½. $200. Millie Dolive, MI 3-7825.

Stenotype machine, with stand, instruction books I thru V, cleaning kit. $75. L. Mason, 944-7278.

Self-propelled 24-inch reel-type lawnmower with grass catcher, $15. A. Doyle, 591-2941.

15' Snipe class sailboat 24' wooden mast, light-air sails, trailer. Brenda Berleth, HU 2-1677 after 6.

.30 cal. M-1 carbine, 4 15-round clips, 1 30-round, 150 rounds, $75. Colt .45-cal. pistol, 5 clips, 250 rounds, $90. Stock blanks, $25. Foss, 944-6015.

Honda 305 Super Hawk, rack, backrest, windshield, saddlebags, helmet, less than 1000 miles. Cost: $830. Sell $650. Paul Coan, 486-5425.

One month old G.E. color TV. Almost never used, still under warranty. $165. Allen Thies, 7311 (no home phone).

Car top luggage rack for VW. Used twice, in good condition, $20. S. Gaudiano, RE 4-2711.

Metal desk, $20. 12-foot jon boat, $70. 5-hp Clinton outboard used once, $100. Wards upright freezer, $150. Spencer, 944-0139.

Beige sectional, gold chair, 2 endtables, dining table, 4 chairs, gold upholstery; $225. Rex L. DeShazo, GR 3-4876.

Auburn human hair wig. Good condition, cost $150, sell $50 or offer. S. Sellers, 477-3305.

HemisFair Bonus Book for two adults, MSC price $9, sell for $5. Jean Hagar, 944-8984.

Silver-fox bedroom suite. Bookcase headboard, double dresser and mirror. $35 cash. Iris Gilbert, MI 5-5062.

J-33 Polaroid Camera, built-in flash, leather case. $15 cash. Iris Gilbert, MI 5-5062.

Chrome dinette set (table, 2 leaves, 4 chairs. $25. R. W. Collins, 944-8647.

Beige traditional sofa, like new, $150. Nylon carpet & heavy pad, $50. New decorator vase 29" high $7. Jack Cohen, HU 8-3171.

Elegant bridal gown. Stood up at the altar and never worn. Floor length with long train. Size 7. Marilyn, 944-6993.

17' Crosby boat, 110-hp Mercury, trailer, 2 bronze props, stainless skitow, 15-gal fiberglass tank, 12-gal metal tank. $1300. Osgood, 946-3404.

Camp building 8' x 20', screened porch 7' x 20', $750 or best offer. Osgood, 946-3404.

1966 Suzuki, 250cc, X-6 Hustler, six speeds. Top condition, less than 5,000 miles. Two helmets, tools, manuals. $400. Al Spivey—HU 8-0369.

Dishwasher—Full-size Hotpoint on casters, used as portable or builtin. Older but in perfect condition—$85. Al Spivey—HU 8-0369.

Can Opener—General Electric Model HC-11, new, never used. Retails for $11.75. Will sell for $8. Al Spivey—HU 8-0369.

FOR SALE/RENT—REAL ESTATE

Private room, bath, in Nassau Bay for responsible young lady, in exchange for some night-time babysitting, evening KP. Schweickart, 591-2439.

Brick front, 3 bedroom 1½ baths, carpeted, exposed-beam ceilings, garage, wooded, fenced. $12,950. R. Dewing, Dickinson 534-3051.

Rent 3-bedroom, 1½ bath brick in Alvin. Carpets, paneled den. Available late September. Car pool available. L. Gonzales, 946-8185.

Rent 2-bedroom home, tiled bath, beautiful kitchen, built in stove, oven. Central heat. $75. Off Old Galveston Road, South Houston. L. Gonzales, 946-8185.

Rent 2-bedroom townhouse in Clear Lake City, 1½ bath, patio, carport. Appliances, no utilities, couple. October 12. Carol Hooper, 488-1072.

Contemporary 3-bedroom, 1½ bath, paneled den, kitchen, fenced, 20 min. MSC, convenient shopping, airport, 4½% loan. Thompson, 946-7768.

101-acre black-land farm near Taylor, Texas; some improvements; government payments help meet expenses. $250/acre. Lander, 591-4522.

3-2-2 brick in Sun Valley, GE builtins, air/heat, 1800 sq. ft., $3,200 equity, $16,200 balance 6¼% conv, $154/mo. Spencer, 944-0139.

Friendswood—one-half acre lot in Imperial Gardens. Paved streets and all utilities. $4,250. Harold Doiron, 944-6993.

FOR SALE—AUTOS

54 Pontiac Tempest Custom 4-door sedan, 326 V-8, automatic, air, new brakes, shocks, 2 new tires, original owner, $1,250. Covington, 487-3066.

68 Impala 9-passenger station wagon, 11,000 miles, full power, air conditioned, AM-FM stereo, like new. Rusty Schweickart, 591-2439.

62 Fiat 1200 convertible $485. W. C. Huber, 877-1276.

1957 Chevy, 2-dr. hardtop, mint condition. $2,000 invested—will sacrifice for $950. Z. V. Jones, 944-1321.

63 Buick Le Sabre, 4-dr. hardtop, power, air, radio, excellent tires. Blue exterior, interior. $1,146. Forsyth, Dickinson 534-3113.

1968 Chevrolet station wagon Impala, blue, all extras. Jim Irwin, 591-2640.

68 Impala sports sedan, 7,000 miles, 327 engine, turbohydramatic, full power, air, AM/FM. Paul Weitz, 591-3071.

1961 Jeep, 1-ton cabover. FWD, PTO, Warn hubs, 5 new mudgrip tires. 6-cyl engine overhauled. $395. Shoots, 474-3695 after 5.

66 Corvette, blue convertible; 327 cu. in.; 350 hp; 4 speed; positraction; AM/FM; $3,000. Charles Lander, 591-4522.

60 Chevrolet Biscayne, 4-door, radio-heater, standard transmission $200 cash. Iris Gilbert, MI 5-5062.

1968 Corvette convertible—blue-white top, air, auto-trans, positraction, AM-FM, Firestone radial tires—8,000 miles. Jere Cabb, 591-3516.

Co-op of Month

QUICK GRASPER—University of Cincinnati aerospace engineering major Stanton Glantz is assigned to the Mission Planning and Analysis Division Orbital Mission Analysis Branch during his work cycle where he has been involved in formulating Apollo D and E alternate mission plans. His supervisor and coworkers have been "amazed at his quick grasp" of rendezvous planning technical details and at his planning logic.

UT Exes Screen Grid Game Films

"Hook-'em-Horns" fans who can't make it to all University of Texas football games will be able to see the games on film on the Wednesday after each game. The Clear Lake Texas Exes Club will screen game movies at 5:10 pm in Bldg 4 Room 378 the Wednesday following each game.

Films of games played against UT adversaries will be shown on the following dates: Texas Tech, October 2; Oklahoma State, October 9; Oklahoma University, October 16; Arkansas, October 23; Rice, October 30; SMU, November 6; Baylor, November 13, TCU, November 20; and Texas A&M, December 4.

Bridge Club Starts Beginner Classes

The MSC Duplicate Bridge Club next month will begin the third in a series of 10-week beginner's classes in rubber bridge. The registration fee for the course will be $10 and will cover approximately 25 hours of instruction in hand evaluation, bidding, and declarer's and defender's play of the hand.

Employees interested in registering for the class should call Jim Raney at 4015 or 488-0324.

Roundup Adopts New Ad Policy

Space limitations in the *Roundup's* FY-69 four-page format have forced a revision in the policy for accepting and printing free classified ads.

Beginning with this issue, ads will be accepted only from MSC federal employees and assigned military people. The *Roundup* regrets having to eliminate ads submitted by contractor employees, but since most aerospace firms publish house organs that print employee ads, a medium remains open for contractor employees.

Also with an aim toward reducing space occupied by the Swap-Shop, ads henceforth will be limited to a maximum of 20 words, including name, office code, and *home* telephone number. Submitted ads running longer will be edited to this length. Abbreviations and numbers will be counted as one word each.

Anonymous ads go into the round file.

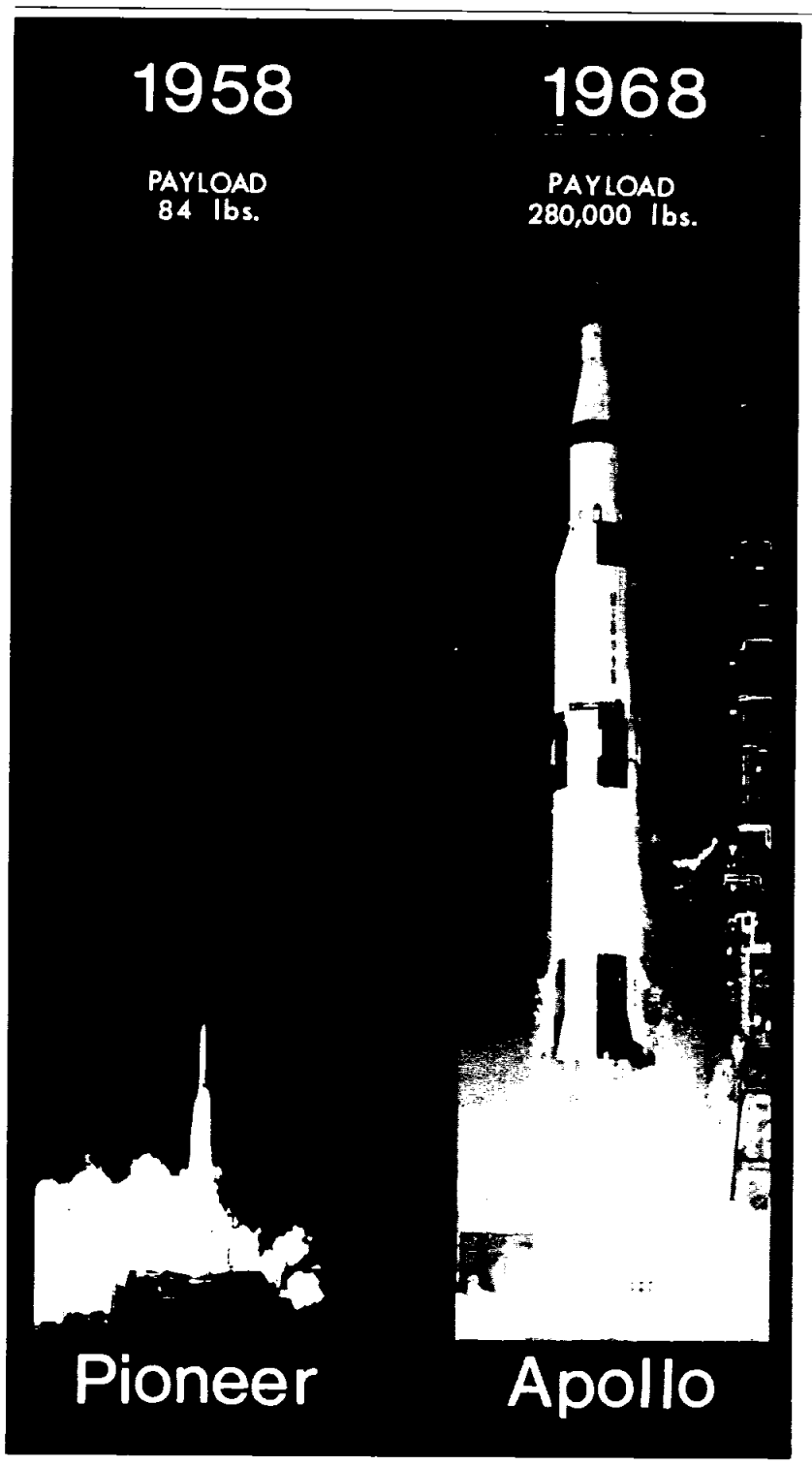
Total 80 Years in Government Service

SERVICE AWARDS—MSC Director of Flight Operations Christopher C. Kraft, Jr., second from left, presents service awards to flight operations employees at a directorate staff meeting. Left to right are Max Smith, FSD, 20 years; Kraft; LaRue Burbank, FSD; Gordon Ferguson, FCD; John Stonesifer, LRD; and Donald Morris, LRD, each with 15 years service.

AAP Telescope Design Reviewed

More than 500 space scientists and engineers this week took part in a design review of the Apollo Applications Program Apollo Telescope Mount at the NASA Marshall Space Flight Center. AAP Director Harold Luskin of NASA Headquarters and AAP managers from MSC, MSFC and Kennedy Space Center attended.

AAP people from MSC at the review included AAPO manager Robert F. Thompson, James McElmurry, Harold Gartrell, and Reginald Machell.



Ten Apprentices End Training, Get Diplomas

Ten aerospace apprentices Tuesday will receive their diplomas in ceremonies at the NASA Manned Spacecraft Center as they end a four-year work-and-learn program begun in August 1964.

The group will receive journeyman certificates from MSC and from the Department of Labor at the 3 pm graduation in the Mission Control Center auditorium. The apprentices have completed 6800 hours of on-the-job training in MSC Technical Services Division shops and 1152 hours of related classroom instruction at the University of Houston and San Jacinto Junior College.

Receiving certificates are spacecraft metalsmiths Garland B. Moreland and Jesse T. Adkins; experimental machinist Clarence J. Fischer; electronic instrument makers Max Barnett, Donald M. Jordan, William H. Sigafoose and Marvin F. Williams; and wood and plastics modelmakers Percy H. Alison, Campbell P. Canup and Lawrence Hayman.

The certificates will be presented by MSC Deputy Director George S. Trimble, and Fred W. Erhard, regional director of the Department of Labor Bureau of Apprenticeship and Training, will deliver the commencement address. Special assistant to the MSC Director Paul E. Purser will preside at the ceremonies. Purser is chairman of the Technical Institute Board of Governors.

Lunar Module Readied For Chamber Testing

Lunar Module Test Article 8 (LTA-8) this week was being readied for a series of manned vacuum chamber tests at MSC beginning in mid-October.

The tests will subject the LM to a simulated space environment to verify the vehicle for lunar landing missions. A similar series of manned tests at MSC May 27-June 1, 1968 helped clear the way for manned earth orbital flights with the Apollo lunar module.

Grumman Aircraft Engineering Corporation consulting pilots Gerald Gibbons and Glennon Kingsley will be prime crewmen for the test scheduled for completion in early November. Astronaut James Irwin will serve as backup crewman. Irwin and Gibbons were prime crewmen for the previous series of LTA-8 chamber tests.

A total of five mannings is planned in two test phases in the Space Environment Simulation Laboratory Chamber B. Dry runs were made this week, and are scheduled to continue next week to check out test procedures.

LTA-8 has been modified since its previous vacuum chamber test to incorporate the latest type of thermal insulation and surface coating. The vehicle is constructed of the same basic materials and contains most of the same equipment, displays and systems as LMs to be used for manned landings on the moon. LTA-8 is not equipped with active propulsion systems since rocket engines cannot be fired in the vacuum chamber.

20-Year Man

Rudolph G. Gerdin
MSC White Sands Test Facility

Balloon Carries Ray-Detecting MSC Package

A 1500-pound experiment package designed to detect cosmic rays in the upper atmosphere Sunday was successfully launched from the National Center for Atmospheric Research at Palestine, Texas.

The science package, a joint effort of MSC and Prof. Peter Fowler of the University of Bristol, England was scheduled for recovery last Tuesday night somewhere in New Mexico.

MSC project manager is Don Hagge of the Space Physics Division Radiation and Fields Branch.

The experiment, acronymed CREPE, (Cosmic Ray Emulsion Plastic Experiment) is designed to detect and measure cosmic ray nuclei and determine their age.

Schirra Says Apollo VII 'About Ready to Fly'

(Continued from page 1)

for space rendezvous and gaining knowledge of how men and spacecraft perform in long-duration missions.

Although Apollo essentially takes up where Gemini left off, Apollo VII cannot be considered an extension of Gemini—sort of a "Gemini XIII"—but is a third-generation spacecraft with twice the complexity of Gemini and with the capability of operating at lunar distance.

Apollo VII is the first of several manned flights aimed toward qualifying the Apollo spacecraft for the half-million-mile round-trip to the moon. Unmanned developmental test flights have already qualified individual components and systems for manned flight, and all-up command and service module and lunar module earth-orbital missions have given the spacecraft as thorough a wring-out as can be given without a crew.

Step Toward Moon

Apollo VII will be followed by earth orbital missions in which the Saturn V will place in orbit all three modules for combined manned operations, command module-Lunar module rendezvous and docking practice, and docked burns with the service propulsion system. One such intermediate mission will include a high-apogee earth orbit to about 4000 miles to aid in checking the communications equipment and navigational techniques for lunar missions.

Following the series of build-up flights, some of which may be repeated if need be, a Saturn V will launch an Apollo spacecraft and crew into a mission that is what Apollo is all about—landing Americans on the moon and returning them safely to earth within this decade.

The spacecraft flown on Apollo VII is the product of extensive redesign and changes during the last year and a half. For example, the former two-piece crew hatch has been replaced with a single-piece unified hatch; extensive materials substitution has reduced flammability inside the command module, and systems redundancy has been increased to eliminate any single-point failure that could be a flight safety hazard.

Apollo VII is the culmination of thorough structural and systems testing on the ground and several unmanned missions in space. The buildup to Apollo VII can be likened to the test program of a new airplane in which the structure is overstressed to see how much punishment it can take before the test pilot first puts the aircraft through taxi tests and finally makes a low-and-slow flight around the pattern.

Shakedown

While a spacecraft is flown unmanned in its first several development flights, the real shake-down comes when a crew is strapped into the couches and the spacecraft and crew are wrung out in the actual launch and entry stresses of a mission. An airplane, on the other hand, is flown manned the first time off the ground.

Apollo VII will be inserted into a 120 by 150 nm orbit by the S-IVB second stage. The first two revolutions will be spent primarily in spacecraft systems checkout.

Near the end of the second revolution, the spacecraft will be separated from the S-IVB stage and the crew will perform a simulated transposition and docking maneuver using the deployed spacecraft/LM adapter as a target.

Rendezvous

During the next several revolutions, extensive operational checkouts will be made of the environmental control system, guidance and navigation system and the service propulsion system. One of the mission's secondary objectives, rendezvous with the S-IVB stage, is used as a means for exercising the guidance and navigation and service propulsion system.

Following the simulated docking, the service module reaction control system will be fired in a retrograde maneuver to set up conditions for rendezvous with the S-IVB with a two-impulse transfer ellipse at approximately 30 hours after liftoff.

Apollo VII will station keep with the S-IVB for a brief period before finally separating with another service module RCS posigrade maneuver.

Crew activities, systems performance and ground support facilities will be evaluated during the next nine days of flight. The only maneuvers during this period will be five burns of the service propulsion system to evaluate the SPS and spacecraft guidance modes.

The SPS deorbit burn at 10 days 21 hours after liftoff will be controlled by the command module guidance and navigation system. The crew will manually control spacecraft entry after separation from the service module, using the guidance system as a reference.

Splashdown is scheduled to take place in the West Atlantic about 200 nm south-southwest of Bermuda at the end of the 164th revolution. The spacecraft and crew will be recovered by the carrier USS *Essex*.

Fourth Saturn V Barged to Cape

NASA's barge *Orion* departed New Orleans Monday for Kennedy Space Center, Florida, carrying the fourth Saturn V flight booster (S-IC-4). The booster, built at the NASA-Michoud Assembly Facility, is scheduled to arrive in Florida today.

At the launch site, it will undergo prelaunch checkout and ultimate mating with other stages which have already been delivered. Apollo/Saturn 504 is to be flown by James A. McDivitt, David R. Scott and Russell L. Schweickart during a mission that calls for earth-orbital checkout of the lunar module.

The only remaining unit of the launch vehicle yet to be delivered is the instrument unit. It is scheduled to be flown from Huntsville to KSC Monday.

Philatelists Meet

The MSC Stamp Club meets regularly on the second and fourth Monday of each month at 5 pm in Bldg 13 room 108 for buy, sell and swap sessions.

For additional information on club activities, call Ed Olling at 2594 or Alan Doyle at 7278.