tomorrow for Children's Party

Santa due on site

NASA MANNED SPACECRAFT CENTER

HOUSTON, TEXAS



December 3, 1971

Planetarium **Begins Christmas** Feature, Dec. 3rd

Vol. 11 No. 2

Gilruth now in Russia for docking discussions

representatives, headed by MSC Director Dr. Robert R. Gilruth, are meeting this week with Soviet counterparts in Moscow for the continuation of technical discussions on the compatibility of rendezvous and docking of manned

In addition to Dr. Gilruth, fourteen of the participants are from MSC, and the remainder are from NASA Headquarters. MSC participants are Dr. Christopher C. Kraft, Jr., MSC Deputy Director; Glynn S. Lunney, Chief, Flight Director's Office; Caldwell C. Johnson, Chief, Spacecraft Design Division; Robert E. Smylie, Chief, Crew Systems Division; and Edgar C. Lineberry, Chief, Orbital Mission Analysis Branch.

Also from MSC are Clarke Covington of the Spacecraft Design

A group of nineteen NASA Division; Donald C. Cheatham, Assistant Chief for Engineering and Development, Guidance and Control Division; Reinhold H. Dietz, Telemetry and Communications Division: Charles E. Manry, Guidance and Control Division; Donald C. Wade, Structures and Mechanics Division; J. C. Iones, Chief, Concept Design Group, Spacecraft Design Division; and Robert D. White, Structures and Mechanics Division.

> This meeting is the third between the two countries on the subject of mutual rendezvous and docking concepts. In October 1970, five NASA representatives went to the USSR for preliminary talks, and a Soviet delegation vis ited MSC this year in June.

The current session is scheduled to last through December 7.



APOLLO 16 crew patch, released this week, is dominated by an eagle perched atop a red, white, and blue shield superimposed on a moon scene, surrounded by a blue circle of 16 stars with crewmen's names completing the bottom arc of the circle. A gold symbol of flight outlined in blue is across the face of the shield. Apollo 16 is scheduled to fly in March 1972.

Bought your Dance tickets yet?



Monday, December 6 is the last day to buy tickets for the MSC Christmas Dance at the Shamrock - Hilton on Saturday December 11. Barbara Matelski (left) and Pat Elliott, poster designers extraordinaire pose with two of the attractive signs which have been dotting the MSC landscape, reminding us that the dance is coming.



NEW- AND OLD-TIMERS—Four newly-named deputy flight directors, seated in the front row, are (l. to r.) Charles R. Lewis, Donald R. Puddy, Neil B. Hutchinson, and Philip Shaffer. Standing at right is Eugene F. Kranz, Chief of the Flight Control Division. In the back row are Flight Directors (l. to r.) Milton Windler, Gerald Griffin, M. P.

Four deputy flight directors named; Scheduled to begin Skylab training

extended missions flown in the Skylab Program, the Flight Operations Directorate has named present flight directors.

The new deputy flight directors are Neil Hutchinson, Charles Lewis, Donald Puddy, and Philip Shaffer, currently members of the Flight Control Division. They will continue in their present organizational positions and assume additional responsibilities as deputy flight directors.

Hutchinson, assistant chief of the CSM Systems Branch, was born in Portland, Oregon, and received his bachelor's degree in math and physics from the Willamette University in Salem, Ore-

Lewis, born in Lawton, Oklahoma, is assistant chief of the Flight Control Operations Branch. He holds a bachelor's degree in electrical engineering from New Mexico State University.

Puddy, originally from Ponco City, Oklahoma, has a bachelor's degree in mechanical engineering from the University of Oklahoma. He is currently assistant chief of the LM Systems Branch.

Shaffer, assistant chief of the Flight Dynamics Branch, was born in Beaver, Oklahoma. He has a bachelor's degree in math from Panhandle State College in Goodwell, Oklahoma.

Eugene Kranz, Flight Control Division Chief and an Apollo flight director, said, "In order to bring these four men up to speed as quickly as possible, our plan is to use two of them on each of

To provide needed support for the remaining Apollo flights and to assign them specific responsibilities for Skylab."

Shaffer and Puddy will have four deputy flight directors and flight director responsibilities on assigned additional duties to the the Apollo 16 flight in March. Hutchinson and Lewis will be assigned similar duties for the Apollo 17 mission.

> The Skylab Program objectives are to extend the duration of manned space flight to carry out a broad range of experiments. Of particular importance are those experiments aimed at medical research, earth survey and solar astronomy, and selected scientific and manufacturing experiments.

> Skylab is scheduled for flight in 1973. The launch of an unmanned workshop will be followed by three separate manned launches of three-man crews using Apollo spacecraft.

> After docking with the previously launched workshop, the crews will live in the Skylab for up to 28 days on the first visit and up to 56 days on each of the other two visits.

> Flight directors in the Apollo program are Kranz, M. P. (Pete) Frank, Gerald Griffin, Glynn Lunney, and Milton Windler.

> Lunney has been relieved of active flight director tasks for the present, in order to further concentrate on his activities with the U.S.-USSR compatible rendezvous and docking systems of manned spacecraft.

> Windler will assume a new assignment representing the Flight Control Division in the areas of Skylab Earth Resources Experiments Package (EREP) mission planning and preparation.

The flight directors for Apollo 16 and 17 will be Kranz, Griffin, and Frank. Pete Frank will be lead flight director for 16; Gerry Griffin, for 17.

NASA Seeks ideas for technology use

NASA has recently requested proposals for using space-related technology in solving domestic problems in the public sector.

The suggestions are to be ones which would use NASA-developed technology in four specific public sector areas: air pollution, water pollution, solid waste management, and clinical medicine.

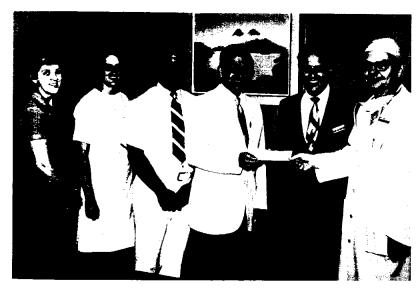
Three NASA field centers, including MSC, are designated to receive proposals, to be reviewed by a team of experts in each of the four technology areas.

Suggestions concerning air pollution should be sent to Dr. Glen Goodwin, Ames Research Center. Moffett Field, California 94035. Those ideas on technology application to the problems of water pollution and solid waste management, should be addressed to John Samos, Langley Research Center, Hampton, Virginia 23365.

Dr. S. R. Pool of the Medical Research and Operations Directorate here is receiving proposals on technology application in the field of clinical medicine.

Responses should be submitted by the close of business on December 15.

After the review teams have completed their work, one or (See AGENCY page 2)



GIFT OF LIFE-The MSC Blood Deposit Program Committee voted to donate excess credits of 100 units of blood (\$1,000) to the Shriners' Hospital for Crippled Children, Burns Institute, Galveston Unit, and a second 100 units to the Kidney Foundation of Houston. Pictured at the Shriners' Hospi tal presentation are (I. to r.) Joette Stewart, Service Technology; Barbara Freeman, MSC; Bill Dill, Dynalectron; Lester Wynn, Chairman of the MSC Blood Deposit Program, MSC; S. Jeffrey Pascal, Institute Administrator; and Dr. Duane L. Larson, Chief of Staff, Shriners' Burns Institute.

NASA techniques aid in construction of large Municipal Airport Complex

Kansas City is building a \$200 NASA," Project Leader John M. million dollar international airport using a NASA-developed management system.

The Missouri airport construction is managed by the KCI Management Information Center, which closely resembles NASA's facility at Kennedy Space Center, used in the Apollo Program.

The center is on the eighth floor of City Hall.

"We obtained the idea of a fully-equipped briefing room from

Chorus to present **Holiday Program**

The 118-voice Bay Area Chorus will provide music of the holiday season at its annual free Christmas Concert, Sunday, December 12, beginning at 8:30 p.m. in the MSC Building 1 Auditorium.

Selections will include familiar Christmas songs, sung without accompaniment, and Bach's "Magnificat," with organ and orchestral accompaniment.

Choral Director is Milton Pullen; Barbara Carter will play piano and organ.

Evans of Midwest Research Institute said.

"The key idea when we want to exchange information and ideas is to bring the airport to City Hall, rather than vice versa," he stated. Midwest Research Institute is management consultant for the project.

The center is used for meetings of the KCI management team and for briefings of Kansas City's mayor, city manager, and the city council. It cost \$16,000.

Every two weeks a video tape progress report on airport construction is presented. This is followed by a computer printout of the latest airport financial status and cash flow requirement.

Airport progress is shown by the movement of markers along a bar chart that stretches around two walls of the information center.

Midwest Research Institute offers the center as proof that a politically-oriented organization such as a large city government can adopt NASA mission-oriented techniques to reach their own goals successfully and at reasonable costs.



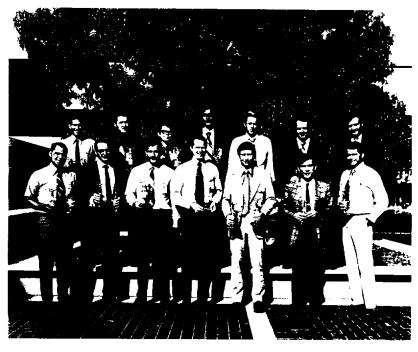
STRONG MAN-Football and wrestling great Bronco Nagurski (left), named to an All-American team as fullback and tackle in the same year at the University of Minnesota, appears to be holding up the ceiling of the Skylab trainer. Nagurski played professional football for the Chicago Bears and in 1942 won the world's heavyweight wrestling championship. Lou Richard (right), Flight Crew Integration Division, explains features of the trainer to (l. to r.) Nagurski, Peter Birkholz, Paul Boesch, former professional wrestler and now a Houston promoter who telecasts local wrestling; and John Har-

MSC's 1971 football season ends

The '71 Flag Football Championship was won by the "M" Squad, 20 to 14, over the Road runners on a 30-yard pass from Harry Kolkhorst to Mel Rother in the last play of the game.

The regular league ended in a tie with the "M" Squad and Roadrunners as co-champions. Other teams were TANG, Tigers, Coast Guard, 2103rd Comm, and the Medics.

The "M" Squad also won the first annual all-star game by a score of 12 to 0. All-star team members were Martin Alexander, Bob Becker, Lloyd Fleming, Sam Fowler, Terry Folwer, Alva Hardy, Nate Hardy, Bill Jackson, Harry Kolkhorst, Nick Lance, Jim Long, Lee Norbraten, Burl Minter, Mike Papoi, Dick Parten, Gary Renick, Mel Rother, Bob Thedford, Milt Thompson, Gid Weber, and Tim White.



SQUAD-In the front row (I. to r.) are Paul Cantin, Harry Kolkhorst Bill Reeves, Lee Norbraten, Melvin Rother, Gary Coen, and Alan Wylie. In the back row (I. to r.) are champions Jack Knight, John McNeely, Nick Foust, Nick Lance, Bill Stoval, Gary Renick, and Joe Mechelay. Not pictured are Martin Alexander, Bob Arndt, Joe Wells, Hal Taylor, Bill Peters, and Pete



ROAD RUNNERS—Front row champs are (I. to r.) Jon Axford, Tim White, Ken Aiken, Dave Worley, Dick Herget, Paul Folwell, Phil Scheps, and Bill Jackson. In the back row are Bob Barnes, Mike Smith, Mark Voss, Bert Davila, C. W. George, Don Moses, Nat Hardee, Ron Huffman, and Norm World Hardee, Paul Hardee, Ron Huffman, and Norm World Hardee, Ron Huffman, and Norm World Hardee, Ron Huffman, Robbert Huffman, All Milke Hardee, Ron Huffman, Robbert Huf ley. Absent at picture-taking time were Alva Hardee, Richard Juday, Milt Trichel, Jim Axeley, Terry Neal, Larry McWhorter, and Dick Shafer.

Scientists hope new discoveries about Meteorites may lead to origin of life

Researchers at the Ames Research Center in California have discovered additional life-related molecules-amino acids and pyrimidines—believed to be of extraterrestrial origin in meteorites.

The finds appear to strengthen recent evidence suggesting that there may be a basic pattern for the chemical evolution process, possibly leading to the origin of life.

The team of scientists at Ames now has found six amino acids of apparent extraterrestrial origin in a third meteorite, the Orgueil. Previously, researchers had found identical sets of 18 different amino acids in each of two other meteorites, the Murchison and the Mur-

These are similar but not identical to amino acids found in living cells. Amino acids are among the principal constituents of such cells.

The scientists also announced the finding of eight types of pyrimidine molecules in all three meteorites. All eight of these pyrimidines are similar to the "life" pyrimidine molecule which is one of the principal building block molecules of the DNA genetic code chain, the blueprint molecule for virtually all living organisms.

All three meteorites are believed by scientists to come from the asteroid belt and to date from the time of the solar system's formation, about 4.5 billion years ago.

In addition to strengthening the idea of a pattern for chemical evolution leading to the origin of life, the theory accepted by most scientists, the discoveries further strengthen the possibility of chemical evolution leading to life in other parts of the solar system.

Employees Show Their Generosity

Over 94 percent of MSC's employees opened their hearts and checkbooks to contribute \$125 .-717.19 during the 1971-72 Combined Federal Campaign.

The Center reached 109 percent of its monetary goal.

Forty MSC offices or divisions had 100 percent participation. Four organizations reached over 200 percent of their monetary goals.

A hearty thank you goes to all those who contributed their time and money to the effort.

Agency asks ways to use technology

(Continued From Page 1) more projects in each of the four subject areas may be selected for negotiations and award of a contract in an amount not to exceed \$75,000.

If an organization or individual includes proprietary material in a project outline, such material should be plainly marked to insure proper NASA handling.

Only technical suggestions or proposals identified with NASArelated research and development will be considered.

ZERO-IN ON SAFETY DURING THE HOLIDAYS

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.

Editorial Staff: Sydni Shollenberger, A. "Pat" Patnesky

Roundup Swap-Shop

(Deading for Swap-Shop classified ads is Thursday of the week preceding Roundup publication date. Ads are limited to MSC civi service employees and assigned military personnel. Maximum length is 20 words, including name, office code and home telephone number. Send ads, typed or legibly written, to Roundup Editor. AP3)

The next ROUNDUP will be published on December 17. That will be the last issue for 1971. Ads which you wish printed before the end of this year must be submitted by the close of business on Thursday, December 9. The first issue of 1972 will be published on January 7.

MISCELLANEOUS

Ladies Western riding boots, size 81/2. hardly worn, \$10. Huss, 482-7896

garden tractor w/all attachments \$75. 30 HP Mercury boat motor, \$75 or trade either for 4 HP rototiller in good cndn. Cooper, 482-1009.

Pistol, 22 Ruger Mark I target automatic, micro-click adjustable sites, very good endn \$50. Also have Leupold 2X long eye relief scope winfounts, for use on any hand gun, xIn, \$30. Pruett, 483-4401.

Ruger M-77 bolt action 243 caliber rifle, \$135, with Redfield 2x7 scope. \$170. Will consider trading for Ruger or Sako rifle of larger caliber. Krpec, 474-2722

Beginning skiers, why rent? Newly refinished wooden skis winew Lund bindings. \$15. Also chrome finish poles, \$8, cost \$16. Allgeier, 333-4627.

Plastic boat ladder, boat fire extinguisher, \$3 each. Allgeier, 333-4627.

Sonar D-10 (0-60 ft) depth finder, in orig. carton, \$100. White, 932-4472. -2cyl 15-hp Michigan Marine Senior Twin

inboard engine, \$100. White, 932-4472. Two blackwall tires, 825x14, 4-ply nylon, mounted on wheels, fits 1962-69 Impala,

BelAir, Chevrolet, good cndn. Lee, 877-4297 Student typewriter, Underwood manual, \$35. Hake, 932-4693. Airplane, Cessna 180, 375 SMOH, chrome

cylinders. Full gyro panel, remote compass, rotating beacon. Two MK 12/360, Narco ATG xponder, ADF 31A, glide slope. New paint. interior, battery, Oversize tires, \$8500. Giuli.

Two trailer wheels, 8-inch with tires, hubs and new bearings for 1-inch axle, \$30.

Lafayette VTVM, extra millavolt and resistance scales w.6" meter, xin cndn, \$18.

Tour of Airport Control Center set

The Houston Chapter of the Institute of Electronics and Electrical Engineers (IEEE) is offering a tour of the FAA air route traffic control center at Houston's Intercontinental Airport.

Members, families, and guests are invited to take this interesting tour which begins at 8:00 p.m. on Tuesday, December 14. All must provide their own transportation to the airport.

For more information, call Dave O'Herren, extension 4570.

SAMPE to hear ocean expert speak

Tuesday, December 7 is the date, the Sheraton Kings Inn is the place for the next Society of Aerospace Material and Process Engineers (SAMPE) dinner meet-

Larry Megow, project manager for the United States' first guided missile during World War II, will address the group on the subject "Man Rated Deep Ocean Simulators." He has recently completed work on a 700,000 pound ocean simulator in which as many as eight men at a time can work.

For reservations, call Jack Naimer, x4336, or Lubert Leger, x5539.

VEHICLES

69 Opel Kadette fastback, like new, 31 mpg. \$1050 or best offer. Must sell but value is \$1150-1200. Allgeier, 333-4627. Mobile home, 12'x65', fully furnished 2 BR, LR, bath, kitchen, den, fully carpeted drapes, central air & heat, equity, assume \$122/mo. note. Flanagan, 932-3155.

66 VW very clean, radio, good tires, runs and looks good, \$775. Holzaepfel, 483-4401. Bicycle, men's 3-speed Schwinn, 26-in. wheel, 22-in. frame, \$45. Lake, 333-2334.

66 Cadillac Fleetwood sedan, climate control A/C & htg. power brakes, steering, seats, windows; AM/FM stereo radio, front & rear speakers, other extras. Pirtle, 474

69 VW, clean, 30,000 miles, air, radio new tires. Wholesale, \$1150. Parker, 877-3058. 66 VW bug, sunroof, radio leatherette, new clutch, brakes shocks, xin shape,

\$950. Giuli, 474-4390. Go-Kart, 7 hp West Bend two-cycle eng. xIn cndn, \$124. Matties, 944-3586

Go-Kart, 3 hp, xln cndn, \$79. Bike, boys 5-speed, \$35. Vincze, 877-2237

Two 20" boys bikes, \$15 each. Miller, 483-

63 Corvair Monza, auto factory air, clean new tires & brakes, \$325. Smith, 333-4761. 71 Wheel Camper tent trailer, Great Plains Model #225, sleeps 8, ice box, stove, double

dinette, sink and cabinets xln cndn. Collins, 481-2995 after 5 p.m. 68 VW sedan, new tires, xIn ondn, \$900

Ankney, 932-6448 after 6 p.m. new paint 69 Wards motorcycle 250cc, \$250. Ankney, 932-6448 after 6 p.m.

59 Devco van, 6-cyl flathead Continental engine, good hunting & fishing truck, stove. sink, running water, refrigerator, beds, table, \$500. Will negotiate. Lynch, 523-4194.

69 Dune buggy, like new, mileage 1200, chrome wheels, carpeting, AM/FM radio, metallic orange, \$1100. Ward, 523-4194 68 Torino, GT convertible, 302, air. automatic, AM/FM, stereo tape deck, bucket electronic transmission, xln cndn, \$1795. Malone, 877-2339.

66 Dodge Charger "383". xin body and interior, needs engine work. \$600 or best offer, Must sell, being transferred, Mahurin, 944-7656 after 5 p.m.

65 VW sedan, mechanically good, new brakes, clean, one owner. Olivares, 946-1050

after 5 p.m. HOUSEHOLD ARTICLES RCA TV, like new, Colonial, B/W, 21

console, '63 model, stored since '66. Matties, Spanish dining room set, hand carved large w/2 leaves, 6 chairs /gold velvet cushions, 6 mo. old, never used. Original

price, \$750; selling price, \$500. Christensen

488-5619.

Avocado baby crib w/mattress and matching dressing table, very good andn, \$25. Christensen, 488-5619.

Nylon red/gold Early American braided oval rug, 9 x 12. Three matching 1.5 x 2.5

door rugs, like new, All \$40. Nitsch, 333-2954 Baby crib and mattress, white finish w/ decal, good endn. \$20. Lamoreux, 488-4459.

Sewing machine, Penncrest straight stitch

30 Years Service





MSC Associate Director Frank A. Bogart recently presented 30-year service awards to Paul M. Sturtevant (top picture) of the Logistics Division and to Ludy T. Benjamin, Photographic Technology Division.

zig-zag, built-in button holer, portable carrying case plus new sewing (\$140 new cost), Giuli, 474-4390,

Refrigerator, Westinghouse about 18 cu. ft. with bottom freezer, \$65. Smith, 333-4761.

SOUND EQUIPMENT

61 Magnavox home entertainment center, B/W TV, AM-FM radio, record player, all in good working order, \$200. Huss, 482-7896. HAM goodies: Heath HX-10 SSB transmitter, xln, \$95, B&W TR switch, \$15, HRA-

10 100KC calibrator, \$7. Lindsey, 488-0517 Mobile ham antenna, \$10; Heath Mobile Rack, new, \$12. Lindsey, 488-0517.

Unused, mint Heath HW-100 transceiver, \$195: HP-23 supply. \$40: HP-13 supply, \$55, mobile rack, \$12. Lindsey, 488-0517. Heathkit 240-watt combo amplifier w/2 speaker boxes containing 6 horns and ers, includes covers, \$345, 645-2093. CAMERAS

KOWA 1.8 lens SLR 35mm camera, behind lens meter, w/case, telephoto lens. Needs minor repair, \$40. Nitsch, 333-2954. MUSICAL INSTRUMENTS

Clarinet, Reynolds, model #CL57 wood wicase and stand, like new, best offer Lynch, 473-2756.

Kimball Artist Console piano, like new Compare at \$1100, asking only \$700, McMur-

rey, 534-3625 after 4:30 p.m. Cornet, Old's, xln cndn, with case and music stand, \$95. Fuller, 488-3985. BOATS

DC-14 catamaran sailboat, fiberglass, sloop rig, MSA 140, complete with Sears tilt trailer, \$750 sell or trade, Minar, 877-3028. Sailboat. Gulf Coast 22, has all fiberglass hull, cabin w/head sleeps four, has running lights and oversize winches, ready to sail \$2995. Erickson, 488-1901.

Snipe sailboat and trailer, xln cndn, was asking \$850, will take \$675. Holzaepfel, 483

20-foot plywood boat and trailer, fiber glass bottom, xln cndn, lots of room, \$800 consider trade for smaller boat and trailer. Holzaepfel, 483-4401.

Sailboat, Columbia 26 MK II, 6 hn outboard, Henry, 333-3934.

Hydroplane, 8-foot wood and fibreglass with 912 hp Evinrude and spare propeller Boat used only 4 times, motor exceptionally clean, \$495, 877-4178,

Southcoast sailboat, 21-foot, with working sails and 5 hp OBM, Hill, 483-5954. REAL ESTATE & RENTALS

80' x 200' beautifully wooded lot. Dickinson, all utilities, \$4500. Plauche, 474-2660. PETS

Exotic blue "domino" Afghan hound, male, 18 month, a wonderful pet. Tanner, 482-1328. Free! Grey tiger kittens, part Persian 474-4635.

AKC miniature Schnauzer, male, 7 months shots, ears cropped, \$100. McAvoy, 488-4083 after 5 p.m. weekdays

Poodles, 3 black AKC miniatures, 8-weeks old, 2 male, 1 female, \$35 each. Palmer,

WANTED

Used refrigerator, stove, and chest of drawers. Holzaepfel, 483-4401.

Mossberg Rifle-Will the person who purchased the rifle please call. I've found the sight. Roy Alford, 333-2834.

Man's bicycle, must be in good endn. Bednarcyk, 483-4588. Interested in car pool from Seabrook to

Bldg. 16, hours 8:00 to 4:30. Georgia Evertte,

Cyclamate sweeteners, clean out your cabinets, bring in, will pick up. Samouce,

Roommate to share 3-2-2 home in Scarsdale addition. Share costs, \$100 per month: Yarbrough, 483-2337

Used upright piano. Fitzgerald, 488-4467

dent above the left rear wheel of my orange Karmann Ghia on the morning of November 24 in the No. 2 parking lot across from Building 1, please contact me. Kliment

NEXT TUESDAY, December 7, is a voting day at the Manned Spacecraft Center. At that time, all of us will have an opportunity to elect representatives to the tenth General Assembly of the MSC Employees Activities Association. No one should have to be reminded of the right and duty to vote in any election. But sometimes, we do forget. To make sure your vote is counted, return your ballot to your election supervisor by 4:00 p.m. on Tuesday.



AWARD WINNERS — Seated (I. to r.) are Victor R. Bond, Raymond H. Bradley, Alice R. Barker, Mary E. Duoto, William H. Keathley, and Louis W. McFadin, Standing are Ralph J. Marak, James H. Barnett, Jr.; Stewart, William C. Huber, Royce Forman, Dr. Sam L. Pool, Jack Funk, Gary W. Johnson, Richard J. Sauter, Jerome A. Bell, Michael F. Heidt, Arnold J. Loyd, Richard E. Thompson, and Jack Kinzler, Chairman, MSC Suggestion Committee. Missing from the picture are Robert K. Allgeier, Matthew J. Radnofsky, Floyd L. Harrison, and Andrew E. Potter.

Suggestors, Inventors win \$ \$ awards

Twenty-three MSC suggestors carried by the shuttle booster in and inventors were honored at ceremonies in late November.

The largest monetary awards went to Jack Funk and Victor R. Bond of the Mission Planning and Analysis Division. With George W. Cherry of NASA Headquarters and Allan Klumpp, Massachusetts Institute of Technology, Funk and Bond developed the guidance equations used for lunar module descent from orbit to landing. The four divided a \$1600 award.

Carrington H. Stewart, Telemetry and Communications Systems Division, and Raymond H. Bradley, Space Shuttle Project Engineering Office, each received \$200 checks for their inventions.

Stewart designed a frequency to amplitude converter which solves formant frequency detection problems in speech processing systems and which may be used wherever frequency to amplitude conversion is required.

Bradley developed the design of an unmanned stage for the shuttle which would be attached to and place of the orbiter. The main objective of this stage would be to increase payload capability.

Other inventions and suggestions included a platinum resistance thermometer circuit (Louis W. McFadin), an explosion-proof battery case (William H. Keathley), a combination syringe which permits air-free blood samples (Dr. Sam L. Pool), a form for computing leave for part-time employees (Alice R. Barker), an illuminated elevator telephone (Jerome A. Bell-no relation to Alexander G.), and an ergometer, an exercise device for use during space flights (Richard J. Sauter, Gerald W. Crum).

Lions to sell trees

The Bav Area Lions Club will hold their second annual nonprofit Christmas tree sale this weekend. Scotch pines and Douglas firs will be sold at cost.

The tree lot is near the Holiday Inn on NASA Road 1.

Nineteen win prizes in cartoon contest

The MSC Safety Office recently announced the winners of its Fire Safety Cartoon Contest. The Office will use several of the winning cartoons as fire safety posters during 1972.

The first prize, a 10-pound dry chemical fire extinguisher, went to George Witbeck of Philco-

Four second prizes—a ride in the Lunar Module Training Simulator-were awarded to Arthur H. Hinners and Phyllis Morton of Crew Systems Division, Chuck Howard of the Science Mission Support Division, and M. A. Drucker, General Electric.

Snoopy Pin third prizes were presented to Anne Brenton, William J. Crea, James Eyler, Stephen Glenn, Robert Keith, Joe Lay, Roy Parker, E. L. Pavelka, Jr., David Peterson, Don Phillipps, John Piwonka, Alfred Readiger, W. J. Rippstein, and Bill Stoval.

The Safety Office received a total of 242 entries. A threemember panel of judges comprised of John C. French, William M. Bland, and John H. Johansen selected the winners.



ASTRONAUT Richard Gordon sents the first prize to Fire Safety Cartoon Contest winner George Wit-

YOUR CHANCE TO PERFORM IMPORTANT CIVIC DUTY

More Texans now being called for jury duty

Because of recent changes to Division of Harris County Courts, Texas statutes regarding jury selection, greater numbers of citizens are being summoned for jury duty.

Proof at this Center is found in the number of checks received by Anne Brenton, MSC's Collection Agent, from employees who have served on jury duty.

In the first 19 days of November, Anne had received 61 checks. That compares with 49 in all of April, the largest number previously sent to her in any one month this year.

Judge George E. Miller of the 113th Civil District Court for Harris County was Presiding Judge of Harris County Civil Courts during November when this reporter was called to jury duty for the first time.

In an interview following a "day in court," Judge Miller explained some of the statutory changes brought about by the last session of the Texas Legislature, the ways in which citizens may be affected, the basic procedures for selecting jurors, and his thoughts on the importance of jury service.

The state law requires that each county use as a minimum list of potential jurors, its voter registration list. Other lists may be added, but experience has shown the additions merely create a problem because of name duplication.

Harris County uses a voter registration list only. For use in jury selection, the list is prepared each year during the first week in August. This year there are 636,354 registered voters in the county of which some 240,000 will be called for jury duty-some more than once in a year's time.

The 1971-72 voters list includes for the first time 18-, 19-, and 20year-old voters. Under the present state law, jurors must have attained the age of 21, so the 40,147 under 21-year-olds, some of whom will be called for jury duty, must disqualify themselves from serving on juries. They may do this by filling in and sending to the court a form which accompanies the jury summons sent by Harris County.

Ray Hardy, District Clerk, Civil

Tonight, Saturday last times to see "Charlie Brown"

Tonight or tomorrow evening will be your last opportunity to see lovable characters from the "Peanuts" comic strip brought to life at the Clear Creek Country Theatre in its production of "You're a Good Man, Charlie Brown." The play has been running since mid-November.

Take the entire family to see a performance of this delightful play. For reservations, call 932-3714.

said during a phone conversation last week that beginning in December, juries will be selected for both civil and criminal courts in six-month blocks. Hopefully, Hardy said, this new procedure, which replaces monthly selections, will create fewer instances of individuals' being called for duty more than once or twice in a year.

A computer has replaced the jury wheel as the method of selection. In the old system, there was a card for every voter, and a judge had to hand-draw each card. The selections then went to clerks who typed the summons, exemption or disqualification certificates, and mailing envelopes.

Now, computer make a random selection of potential jurors and then type the summons, certificates, and envelopes at the same time in a process that has brought about both time and cost savings.

Under the old statutes, approximately 300 potential jurors reported for duty every Monday morning to either the Civil or Criminal Courts building. These citizens served for an entire week whether or not they were ever selected for either a panel or jury.

Also under the old laws, there were many persons exempt from serving on juries. The list was long and included ministers, attorneys and their spouses, physicians, pharmacists, dentists, veterinarians, chiropractors, school teachers, morticians, optometrists, among the many categories.

Under the new laws, there are only two groups of people who are exempt—persons over 65 years of age and women with legal custody of a child or children under 10 years of age. Individuals in both categories may serve on juries but are under no obligation to do so.

The new statutes, in disallowing the old exemptions, insure that each jury is chosen from a true cross section of the county's residents. No name is ever blocked from the list.

Instead of 300 people being called to serve for a full week (or longer if actually placed on a jury), implementation of the new statutes sees approximately 400 to 450 potential jurors reporting to the Civil and Criminal courts on each Monday morning, and 300 on both Tuesday and Wednesday mornings. If a person has not been empaneled by the end of the day, the judge may excuse him from further service. So it is now possible to serve for only one day.

A panel consists of 26 jurors. From the 26, the two opposing attorneys in a case may each peremptorily challenge six jurors without cause. The lawyers may also challenge for cause (a juror's stated prejudice in a particular case, for example). Finally, of course, the jury will consist of 12 people.

person is not chosen from the panel to serve on a jury, he is excused from further duty at that

Persons may be disqualified for jury duty if they are under 21 or presently under indictment or have been convicted of a felony for which they have never received a full pardon. Further, to qualify for duty, individuals must be citizens of the county and state. qualified to vote, of sound mind and good moral character, and able to read and write. Service as a juror for six days during the preceding six months in the District Court or three months in the County Court may allow persons to disqualify themselves.

The presiding judge may also excuse a potential juror for any reasonable cause. Because of the shorter periods of time served under the new statutes, "the court shall not excuse any juror for economic reasons unless all parties of record are present and approve such excuse."

Judge Miller had some strong feelings on the right and duty of citizens to serve when summoned. He believes that jury service--in addition to voting—is the highest civic duty most people have an opportunity to perform.

"The only reason for a judge or courthouse," he said, "is that two people can't reach an agreement or that someone has a griev-

"As a result," he continued, sooner or later everyone has contact with the courts in some form of litigation."

Every citizen has the right to a jury trial, the jury composed of a cross section of fellow citizens.

Center calls for Proposals in an EVA/IVA Study

Ten aerospace-associated firms have been invited by the Manned Spacecraft Center to submit proposals to study space walking requirements as they might pertain to the Space Shuttle.

The proposal calls for the contractor to investigate emergency, contingency and normal Extra Vehicular and Intra Vehicular Activities (EVA/IVA)—synonyms for traverses by astronauts while outside Earth's atmosphere.

MSC told contractors that EVA's and IVA's probably will be necessary to support Shuttle operations. The contractors also are asked to study protective equipment needed to perform EVA/IVA tasks.

Proposals are to be submitted by December 6, and the study will be concluded approximately 10 months after contract award.

Under the new statutes, if a By serving on a jury—or simply by going through the selection process even if not picked for the final jury—a person has the opportunity to see in action the fairness of the jury system.

> Judge Miller explained that the jury is the supreme authority for deciding the facts of a case. The judge and courts apply the law. and subsequent appeals are based upon alleged misapplication of the law, not upon the facts as decided by the original jury.

> When you are summoned for iury service, there are certain things which you, as an MSC employee, must do.

> You must fill out a Standard Form 71, indicating your request for "court leave," and have the form signed by your supervisor. The SF 71 plus a copy of the jury summons and a work receipt. which the court will give you at the time you are excused, should accompany your time and attendance card when it goes to Payroll.

When you receive a check from the court (Harris County pays jurors \$5 a day), you endorse it to the "U.S. Treasury Department" and send it to MSC Collection Agent, Anne Brenton, Code BR7.

The next time a jury summons comes to you, don't think of the service as a chore. Rather, think of a time hence when you may wish your story told in court to fair and impartial jurors, not begruding of their time spent in deciding the facts of your case.



New members join **Exchange Council**

MSC Director Robert R. Gilruth recently appointed James F. DeMuth, William R. Kelly, and Riley D. McCafferty as members of the NASA Exchange Council-

Jim DeMuth, of the Engineering and Development Directorate Staff Officer, hails originally from Minneapolis, Minnesota. Prior to joining NASA in September 1962, he worked as a civilian for the Air Force Accounting and Finance Office. Jim is married, and his wife's name is Billie.

Bill Kelly, Assistant Director for Procurement, was born in Atlanta, Georgia, and has degrees from Georgia Tech and Xavier University. He joined NASA in 1962. Bill and his wife Carolyn have three children, Martha, Stacey, and Linda.

Riley McCafferty, Deputy Chief, Flight Crew Integration Division, comes from St. Louis, where he attended Washington University. He joined the Space Task Group in 1961 and, until March of this year, worked at MSC's Cape Operations, Kennedy Space Center.



WOW! WHAT A SHOT-Bailey R. Chaney, Labor Relations Officer at MSC, recently had a golfer's dream-come-true—a hole-in-one, his very first. The shot came on the 161-yard 16th hole at Golfcrest Country Club where he was in a foursome including Dr. Christopher Kraft, John Zarcaro, and William Easter. The frosting on the cake is that, as a paying member of a club, Bailey has won an expense-paid two-week trip to Europe, Hawaii, or the Caribbean. He hasn't decided on a destination. The small golf cart (lower left) was a gift from Bailey's office associates to honor