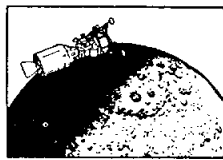




Newsman examine samples of wiring and insulation being explained by Apollo 13 Review Board Chairman Edgar M. Cortright (seated at right). The Board's findings, after nearly two months of review and some 100 separate tests throughout the country, were presented to Administrator Paine this past Monday. "All indications are", the report states, "that an electrically initiated fire in oxygen tank no. 2 in the service module (SM) was the cause of the accident."

ROUNDUP

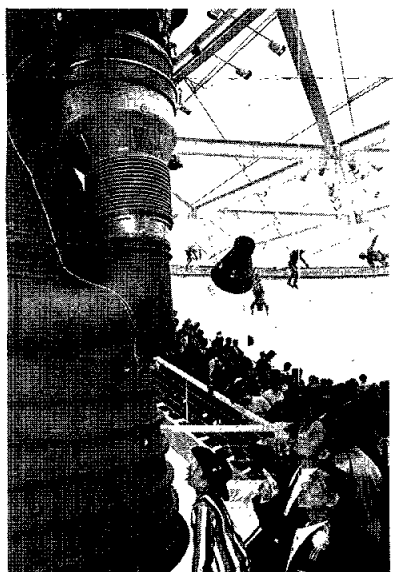
NASA MANNED SPACECRAFT CENTER HOUSTON, TEXAS



VOL. 9 NO 17

June 19, 1970

★Space Exhibit at Expo still a "crowd-pleaser"

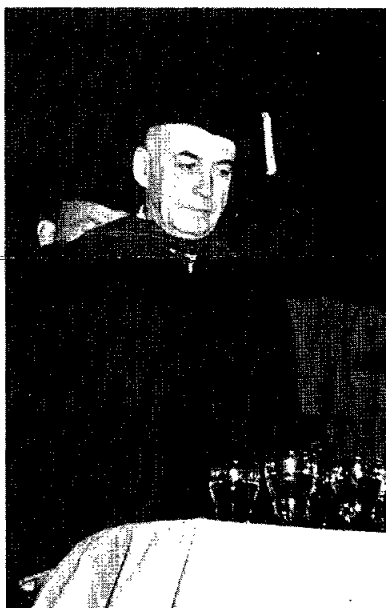


Crowds flow into the exhibit area, where such hardware as an F-1 engine from the Saturn V launch vehicle are displayed.

"As you have probably heard, the crowds are immense and the U. S. Pavilion always has a waiting line around the side and down the street under the monorail.

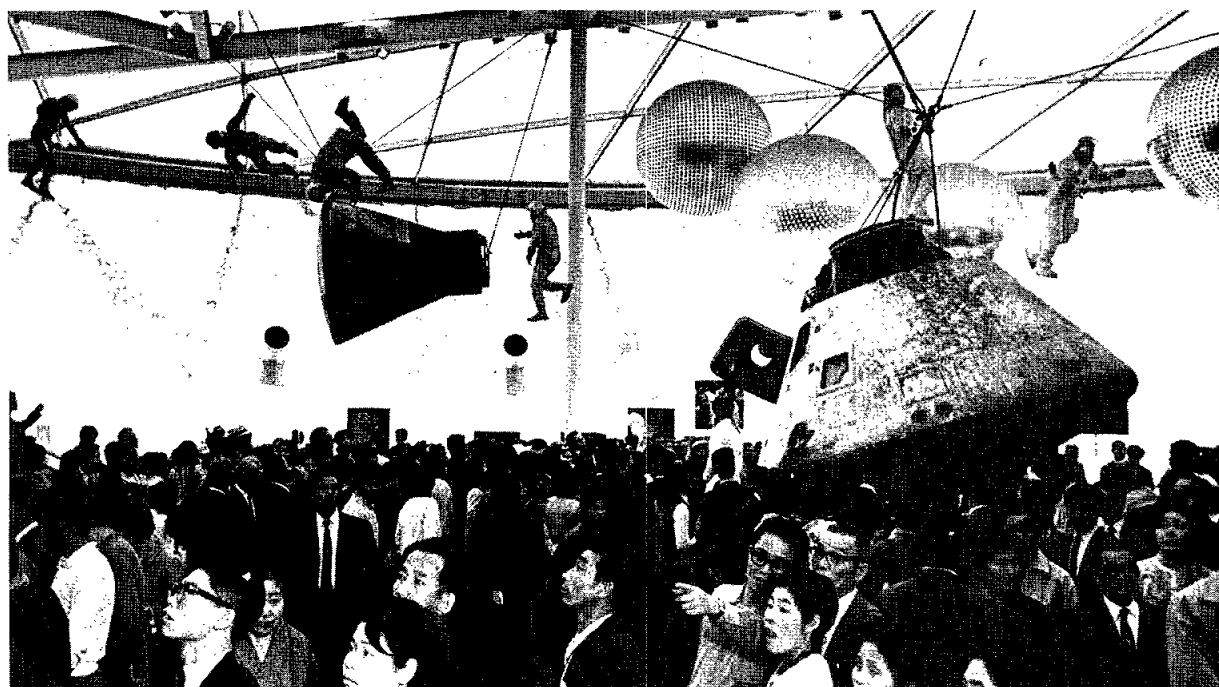
"There is no question, of course, but that the Space Exhibit is the most popular of all. It is a great job, and you all can be enormously proud of it." Thus reads the note from the USIA Project Officer for the Space Pavilion at Expo '70 to Charles A. Biggs, of the MSC Public Affairs Office, who coordinated the United States' Space exhibit for NASA.

The moon rock on display, in particular continues to draw huge crowds.



GILRUTH RECEIVES HONORARY DEGREE

Three weeks ago the commencement address at New Mexico State University was delivered by MSC Director Robert R. Gilruth. He is shown here accepting the honorary Doctor of Laws degree which the University presented to him.



Satellites, spacecraft modules, and space-suited manikins are suspended "weightlessly" under the translucent dome of the U.S. Pavilion at Expo. The crowds of visitors shown here testify to the popularity of the Space Exhibit.

★NASA receives CMHS Award

The Congressional Medal of Honor Society of the United States honored NASA recently for "making America first in space."

Dr. Thomas O. Paine, NASA Administrator, accepted a plaque in behalf of NASA and kindred organizations which have played a

part in "placing America first in the space program."

The presentation was made by Dr. Eli Whitely, president of CMHS, which is made up of recipients of the nation's highest award for valor, the Medal of Honor.

Thibodaux recipient of J. A. Wyld Award

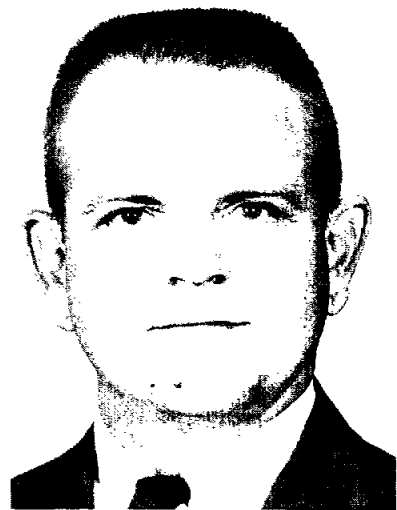
The James A. Wyld Propulsion Award is given by the AIAA for outstanding achievement in the development or application of rocket propulsion systems.

Mr. Joseph G. Thibodaux, Jr., Chief of the Propulsion and Power Division at MSC, has been selected as one of the co-recipients of the Award for this year. He shares the Wyld Award with Hans G. Paul, of the Marshall Space Flight Center.

The Award recognizes Thibodaux for "outstanding leadership in research and development of Apollo spacecraft propulsion", leadership based upon his expertise in solid propellant rockets and pyrotechnic devices.

While at the NACA/NASA Langley Research Center, Thibodaux's work led directly to the development of the Scout solid-propellant rocket vehicle.

His development of a spherical solid propellant rocket was the basis for the Mercury and Gemini retro-rockets and for many hypersonic-speed rockets used in



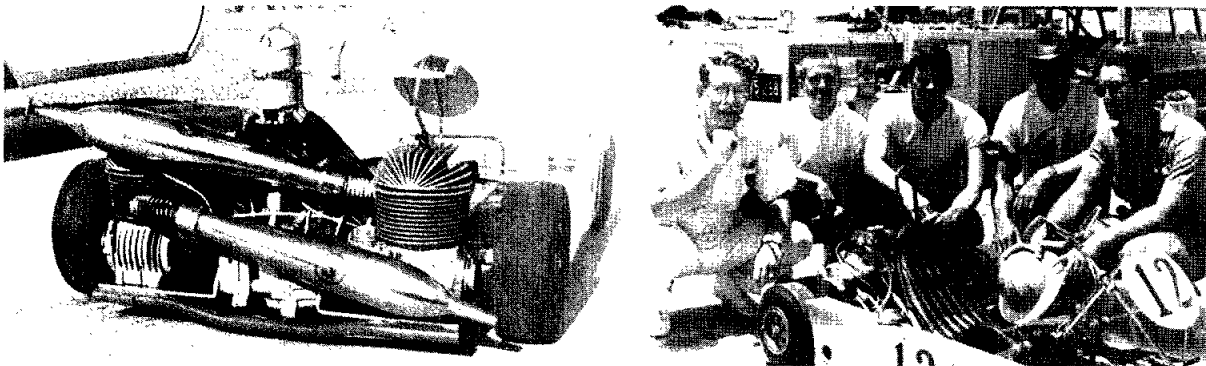
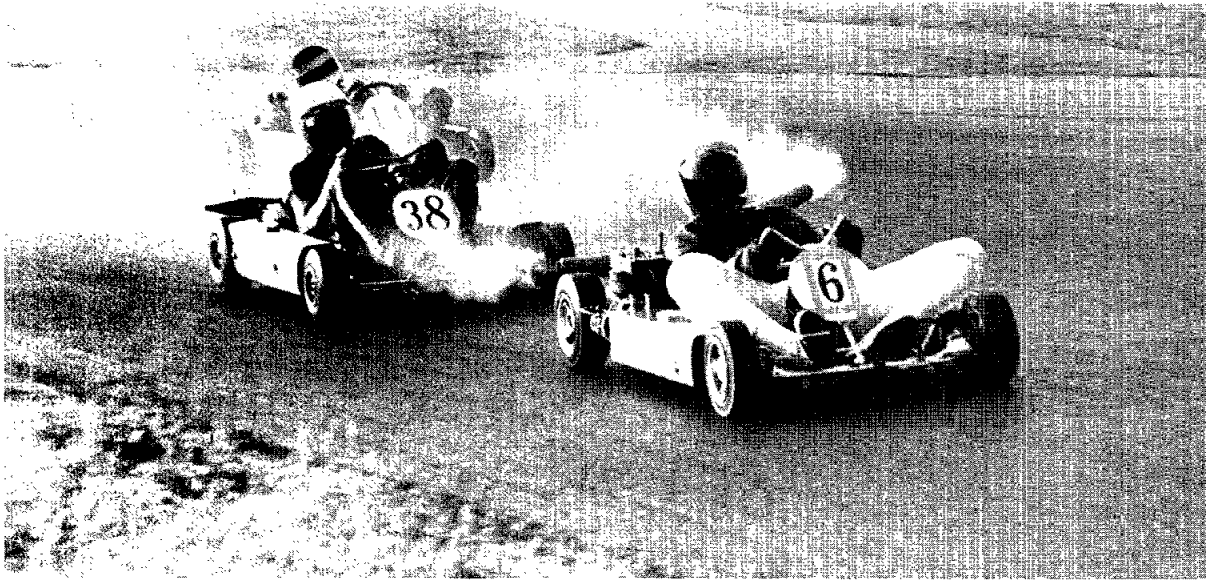
Joseph G. Thibodaux, Jr.

research flights from Wallops Island. This concept has also been the basis of proposals by solid propellant manufacturers for advanced anti-ICBM and space flight applications.

Thibodaux's recent contributions to space flight include direction of the development of an advanced fuel cell and an advanced cryogenic system for use in the Skylab program.



WHO NEEDS A ROAD MAP? Houston's bayous, freeways, parks, and ship channel stand out sharply in photos taken as part of the NASA Earth Resources Survey Program operated by MSC's Science and Applications Directorate. Similar photos have been made of Denver, San Francisco, Tucson, and 22 other cities in the U.S. and Puerto Rico. Taken from a height of about 10 miles, these photos will have a dual purpose: they provide data for census correlation studies for the U.S. Geological Survey; they are also part of a program conducted with the Departments of Agriculture, Interior, and Navy. This program is designed to test new remote sensing techniques which will ultimately be used to evaluate the live TV transmissions from the Earth Resources Technology Satellite (ERTS), scheduled for launch in 1972-73.



In the large photo you see Jim in car #38, the team's "C"-car, a 16 cu. in. kart which Jim proudly calls "a real racing machine." A rear view of the "B"-modified is shown at left. Photo insert at lower right shows the team members (from left): "Papa" Akkerman, Nelson Lingle, Jim Akkerman, Jim Lindsay, and Lonnie Jenkins.

Those men in their racing machines

Talk about a bus-man's holiday! Jim Akkerman works five days a week in the Propulsion and Power Division. After work and on weekends what does he do? He figures out better propulsion and power systems for racing karts.

A new-comer to karting can buy his own vehicle ready-made for \$600 to \$2,000, depending on which class he intends to run. Jim decided to buy the necessary materials and equipment and build his own karts. The cost, he says, is about the same. Most of the components for the karts are available by mail-order. Then Jim does whatever mods are necessary right in his own garage workshop.

"Surprisingly enough", Jim says, "there really aren't many guys who actually enjoy working on machinery."

An interest in machinery, a graduate degree in Mechanical Engineering, and the work he does at MSC have no doubt all contributed to making Jim a notable on the track. In addition to doing the actual driving, he builds and modifies his karts and engines, and evaluates the effects of various modifications on the karts' performance.

For example, Jim's tests have revealed that, contrary to previous belief, a knees-together, almost upright sitting position is more advantageous than the popular prone position for driving since increased visibility and control

more than compensate for the slightly increased wind resistance.

Akkerman races as part of a team: Nelson Lingle and Lonnie Jenkins, also from PPD, Jim Lindsay, and "Papa" Akkerman work together on keeping the cars in shape and entering them in races. Their skill as mechanics and drivers is obvious: the team's "C" car holds the track record at several sport car tracks used for kart racing, and will be entered in the July 4 National Karting Championship at Indianapolis. "It's got a good chance of winning. It's a real racing machine", Jim says with pride.

Their "B" car has won the last 5 races in which it has been entered.

Jim is already last year's National IKF Enduro Champion in "B" stock and "B" limited competition, and 1968 National Champion in Open-heavy competition. Nelson Lingle took the '68 National Championship in Open-light in another of the team's cars.

Of course, any one of the five men who constitute the team can drive any car. All they have to be willing to do is to get the kart into shape and transport it to the track. Sometimes, therefore, the team members are in direct competition with one another on the track. Apparently there's no bad feeling on the part of the loser, though. In fact, one reason why

he likes racing, Jim says, is because of the people. The "also-rans" don't become embittered—they just become more determined. Enthusiasts trade racing information with one another, and even make their machine tools and know-how available to the other racers. Jim's articles for *Modern Karting* magazine go into painstaking detail to describe innovations in car and engine design. He hopes to encourage others to incorporate his ideas into their own machines. One of his recent developments has been an oil-bath type automatic clutch which both accommodates the wide speed range of the track and dissipates the considerable heat which would ordinarily be built up.

Why race karts? Jim likes it primarily because it is just as competitive as racing the full-size autos, but a lot less expensive, and much more safe. In most cases, an error in driving a kart costs only time; in a big car on the same track, that error might cost the driver his car. In addition, although the fastest kart may not run more than 120 to 130 miles per hour on the straight, it can turn a better lap time than the typical sport or "stock" car (even though they may hit 160 mph on the straight) because its ability to swing a larger radius through the turns means that it can negotiate the turns faster than the larger cars.

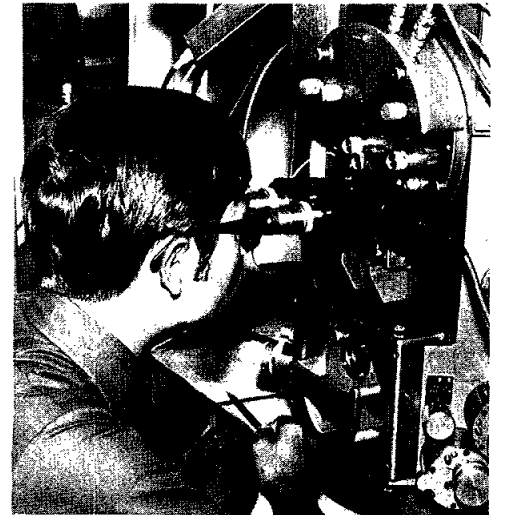
"In the final analysis though," according to Jim, "the attraction of kart racing comes back to the thrill of having successfully competed. All you need is time, patience, diligence, and an understanding wife."

Summer Interns arrive at MSC

by J. Sonneman



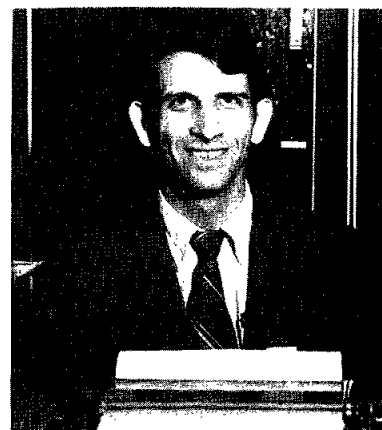
The author, Joe Sonneman (above), is a Summer Intern with the Employee Development Branch. He has just earned his Masters degree in Government at the Claremont Graduate School and will continue there on his work towards a PhD in Government Finance. The photographs were taken by Carl Simmons, an Intern with the Photographic Technology Laboratory.



David Smith is working with Dr. Arch Reed, a visiting scientist doing Post-Doctoral research, at MSC's electron microprobe. Using this research equipment they are able to study ultra-basic rocks of the olivine-orthopyroxene-clinopyroxene-spinel system from the Mid-Atlantic Trench, from meteors, and from the Moon. David has received a BA in Geology (of course!) from Vanderbilt University (Tennessee) and is working for the Lunar and Earth Science Division.

For the eighth consecutive year, the Manned Spacecraft Center is employing selected college graduates in its Aerospace Summer Intern Program. Conducted by the Employee Development Branch of the Personnel Division, the Program acquaints the Interns with aerospace-related activities which will be helpful to them in their future academic work and careers.

Fourteen graduates of colleges and universities across the country, from the University of Florida to the University of Michigan to the Claremont California Graduate School, have arrived at MSC to participate in the Summer Intern Program. They're an exceptionally well-educated group: nine hold Bachelor degrees, five have earned their Masters. All of the Interns will be returning to graduate schools in September to continue their studies. While half of the group have majored in science or engineering, from Physiology to Aerospace Engineering, five of the Interns have studied management-related subjects, from Economics to Public Administration, and two have worked in more artistic fields: Architectural Design and Photography.




Tommy Criswell earned his Masters degree in Physics at North Texas State University — yet he's working as a Summer Intern for the Preventive Medicine Division. He's putting his considerable background in mathematics into practice by translating medical data into computer programs. Here shown at the console of a Varian 620, Tommy is helping the Division analyze records on the blood content of the Apollo astronauts.

During their stay at MSC the Summer Interns attend weekly seminars conducted by senior MSC officials on various aspects of Center operations. Seminars range over topics from Spacecraft Design to Recovery Operations and from Development of Non-flammable and Non-metallic Materials to Management Control of Program Contractors.

The Interns will also have the opportunity to participate in the more specialized Aerospace Engineering and Science Seminars. These seminars, actually a part of the Summer Faculty Institute, will be presented by guest speakers from universities, NASA, and research organizations on subjects as disparate as "Underwater Engineering" and "Habitability on Long Duration Space Missions."

Management-minded Interns may listen to a series of case studies given by the Personnel Division of MSC and all the Interns may also attend University of Houston short courses in Biomedical Engineering, Advanced Aerospace Structures, Finite Element Analysis, and Digital Simulation.

It sounds as though the Interns will be studying as much during the summer months as they do during the normal academic year! Actually, though, the majority of an Intern's time will be spent at an appropriate work assignment under the direction of senior MSC engineers, scientists, or staff members. The Aerospace Summer Interns will be putting their talents and training to work throughout MSC—anywhere from Mission Planning and Analysis to Financial Management.

ROUNDUP		
NASA MANNED SPACECRAFT CENTER		HOUSTON, TEXAS
Editor	Sally LaMere	
Staff Photographer	A. "Pat" Patnesky	

Your Job in Focus

Cost of living adjustment in retirement annuities

The Civil Service Retirement Law provides for an automatic increase in retirement annuities whenever the nationwide cost of living, as measured by the Con-up by at least 3% over the base summer Price Index (CPI), goes month used for the previous annuity increase and stays up by at least 3% for three consecutive months.

Based on information released by the Bureau of Labor Statistics, it appears that there will be an increase in retirement annuities this summer. The base month for the last retirement annuity increase was August 1969. By March 1970, the CPI had risen to a 3.5 increase over the base month. In April, the CPI increased another .5 of one percent. If the CPI stays at this level or increased in May, a cost of living annuity increase will be effective August 1, 1970.

The amount of the annuity increase will be based on the highest point reached by the CPI in the March, April, and May 1970 period. Under the retirement law an additional 1% is added to the percentage increases in the CPI. Since the CPI has risen 4% over the base month through April 1970, it appears that a cost of living increase will be at least 5%. The data from the CPI will not be available until the last week in June. At that time, the Civil Service Commission will officially announce the exact amount of the cost of living annuity increase.

If this cost of living annuity increase is processed as anticipated, it will apply to all people who retire on or before July 31, 1970. Employees who are considering retirement and would like further information on this subject should contact the Personnel Office, extension 2135.



AT LAST! You can play chess with someone besides your brother-in-law! Perhaps find someone who'll challenge your gamesmanship—or maybe someone who even YOU can conquer. MSC Chess Club offers opportunities for players at all skill levels.

MSC Chess Club is young & growing

by Richard King

Have you just begun playing chess? Or have you felt for some time that learning the game would complete your education? Perhaps you are an International Grandmaster? In any case, the MSC Chess Club wants YOU!

If you think of the Chess Club as a bunch of dottering old men playing king's rook, knight, and bishop accepted, just come out to one of the Club's meetings and see how wrong you are! Since last year, when the Club was organized, membership has almost quadrupled. Players now include three former Texas Champions and an Expert, as well as beginners and intermediates.

As a further "plus", financial wizard Ken Pierce, the Club Sec-



retary, has kept membership fees to an incredibly low \$5 per year.

Meetings are held on Thursday evenings at 7:30, Bldg. 336, EAFB, (call Ken Pierce, x4704, or Richard King, 488-0210 for more information).

This year's first Club Championship was held in May. Billy Patteson and Bob Chalker tied for First Place. Later in the year a "mini-tournament" was held for novice players. It made such a hit that a tournament for all players will be held in July. The novice tournaments are primarily intended to sharpen the skills of newer players for the Space City Open Tournament to be held at the King's Inn in August. Winners at all skill levels at this Tournament

will receive trophies and cash prizes.

The Club also offers a 6-team Chess League. Ideally, each team has five players, ranging in strength from beginner to Expert, so don't be intimidated by the list of advanced players which the club boasts. We want our Chess Club to be the best—and the best clubs have players on all skill levels. All the rules of the game can be learned in less than one hour, and club members are glad to teach non-players.

Our best players will also analyze your moves and tell you how to improve your play.

We occasionally send a "That's a No-No" game to club members. "What is a 'That's a No-No' game?", you ask yourself. It's a game analyzed by one of our members, in which he has intentionally given bad advice at some point in the game. If you think you have found the error, you may challenge the "expert" for a mere dollar bill. If you're right, he pays you two dollars!

In addition to the above exciting events, the MSC Chess Club is presently sponsoring such titillating activities as the Chess Ladder and the US Chess Federation-rated "Mini-tournaments."

Yes, things have changed at the Chess Club. All interested chessplayers, regardless of strength, are invited to drop by to play and/or register any Thursday evening. You're sure to feel welcome.

The interest paid by the Credit Union, and how it is computed, are subjects of direct concern to some borrowing members and to our savers, whose dividends it affects.

There are two annual percentage rates, 12% and 9% (which equate with 1% and 3/4% of the unpaid balance each month). The 1% is charged on personal loans and compares very favorably with the 2 1/2% collected by small loan companies and the 1 1/2% service charge of most retail outlets with time payments. The 3/4% is charged on share pledge loans. It competes with a bank's so-called 4 1/2% rate, but has the added advantage of loan life insurance at no extra cost.

Interest is neither added to nor subtracted from the amount of the loan. As a result, an early pay-off involves no penalty (a Credit Union plus) nor any refund. The interest is deducted as each payment is made, with the remainder going to reduce the outstanding loan balance. The charge is based on the exact number of days since the last previous payment. Thus it is possible for interest, as shown on a statement, to go up while the loan balance is coming down. It all depends on the number of days between payments.

Finally, one last reminder: interest paid the Credit Union is 100% deductible for income tax purposes, while store service charges are not. In this, as in most respects you get a better deal from your Credit Union, located in building 11. CHECK IT OUT!

FIESTA IN MADRID

Reservations are still being accepted for the 9-day tour in Spain. Let the C.U. help you arrange a savings plan for financing. Complete tour itinerary and reservation information are available at your C.U. office.

BE PREPARED

Yes, all sorts of unexpected things happen . . . and often they require quick cash when you can least afford it. That's why it's a good idea to establish yourself as a Credit Union member. All it takes is \$5.25. Don't forget that you can make a loan up to \$1,200 on your signature alone. Inquire at the Credit Union now for details.

Roundup Swap-Shop

(Deadline for the next Swap-Shop classified section is Thursday, June 25. 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)

WANTED

Ride from NASA area to U of H for 8:40 am or 12n class, x2189, Pettitt.
Beginner's violin, x5371, Estler.
Ride from Broadway to Bldg 2, 8:30-5, through August 31, will pay, 479-5100, after 6 pm.
Join ride group from Memorial City/Town and Country area, x5421, West, or 468-5102.
Need ride from Sharpstown, 8 or 8:30 to 5 shift, will pay, x4141, Mike, or 774-5949.
Aluminum canoe, x7341, Hayes, or 591-3471.
Join car pool, Rice University area, have '67 Chevelle, 522-5601.

MISCELLANEOUS

Carpenter, purple 14'x15', \$25; beige 10'x15' and 10'x12' \$25, 591-4669.
Frigidaire built-in dishwasher, definitely operational, \$25, x3242, Bullock, or 488-1042.
Miniature 8' "Hydro-plane" race boat, canary yellow w/black racing trim, \$65, 488-1326.
6 hp outboard motor, used one season, excellent condition, \$148, 474-3358.
23,000 BTU window unit air conditioner, \$95; attic fan, \$30; 10,000 BTU central heater, \$55; x2497, Richard, or 944-3311.
15-hp Michigan Marine Senior Twin engine, Paragon gear, strtr/gen kaput, 290 lbs, 932-4472
Wrought iron patio furniture: sectional couch and arm chair with vinyl cushions, + miscellaneous pieces, \$35, HU8-4005.
19' keel cabin sail boat, make offer, 482-7869.
Child's playhouse, \$40; baby playpen, \$5, x2161, Brasseaux, or 877-1719.
Camping trailer, new Montgomery Ward vacationer with mattresses, \$425, 534-3802 (Dickinson).

Excellent Underwood typewriter, \$45; large 15'x20' oval wood hooked rug, \$40; hand crocheted bed spread, \$50; 649-2567.
Membership in Clear Lake Country Club, \$150 (includes transfer fee) 474-2457.
20' fiberglass Deck Boat, catamaran hull, excellent condition, \$1270, x5421, Bone, or 471-3528.

Large antique wardrobe, \$38; boy/girl 18" bike, \$7; 18" tricycle, \$3, HU8-1040.
Free: swing, slide and tetertoter set; you take it down and haul it off, 932-2897.
Windshield for motorcycle, like new, large type, Beck A-700, \$10, 932-2897.
Almost new outdoor gas barbecue with electric rotisserie and stand, cost \$125, now \$75, 944-2680.
Nikon S-2 35mm camera and case, f1.4 lens, excellent condition, \$90, x5551, McCreary, or 946-5285.
One-third interest in very good 3-bike motorcycle trailer, 488-3159.
1970 Kawasaki Trailboss, 100cc, 10 speed, excellent condition, \$370, 932-5236.
Lamar 13' outboard motorboat, with motor, trailer, accessories, \$275, 944-2497 after 5 pm.
Lady Kenmore deluxe washer, 16 lbs, 10 cycles, almost new; also Coldspot air conditioner, 16,500 BTU, 220v, used 3 months, 488-2184.
Electric Spanish guitar, top quality, excellent tone, \$75, x4959, Harley.

REAL ESTATE

Rent: 4-2 1/2-2 home in Nassau Bay from mid-June to mid-July, 391-4163.
4-2-2, living, dining, shop, built-ins, fireplace, wooded lot, 534-5735 (Dickinson)
Lease: 3-2-2 Fairmont Park, brick colonial, 2 yrs old, near school, \$185/mo, private pool privileges available, 1st and last mo. rent required, available July 1, x5226, Muhly, or GR 1-3762.
Lease: 3-2-2 1/2 brick, Swan Lagoon, carpet, drapes, built-ins, fenced, trees, available July 1, \$220/mo with lease, 591-3885.
4-2-2 Glen Cove, central a/h, carpets, drapes, built-ins, 16 mo. old, 6 3/4% FHA, \$158/month, low equity, x3375, Ardoin, or 877-4960.
4-2-2 El Lago, 6%, assume carpets, drapes, fireplace, large secluded back yard, 877-2165.
Sea Isle beach lot, 65x120, low equity, x5561, Lilly or 944-2136.

PETS

AKC Labrador pups, 6 weeks old, males, \$50, x7292, Childs, or 534-5820.
AKC German Shepherd puppies, male and female, cash or terms, x2337, Brock, or 932-4006.
Collie dogs: 1 male (2 yr), 1 female (4 yr), \$125 each, or will lease, 488-4120.
AKC German Shepherd pups, 7 weeks old, bred for temperament and intelligence, wormed, shots, \$100 and up, x5898, Engel, or 482-7830.
Puppies, mother AKC German shorthaired pointer, 5 weeks old, wormed, shots, \$10, x5171, Kriden, or 488-4014.

AUTOMOBILES

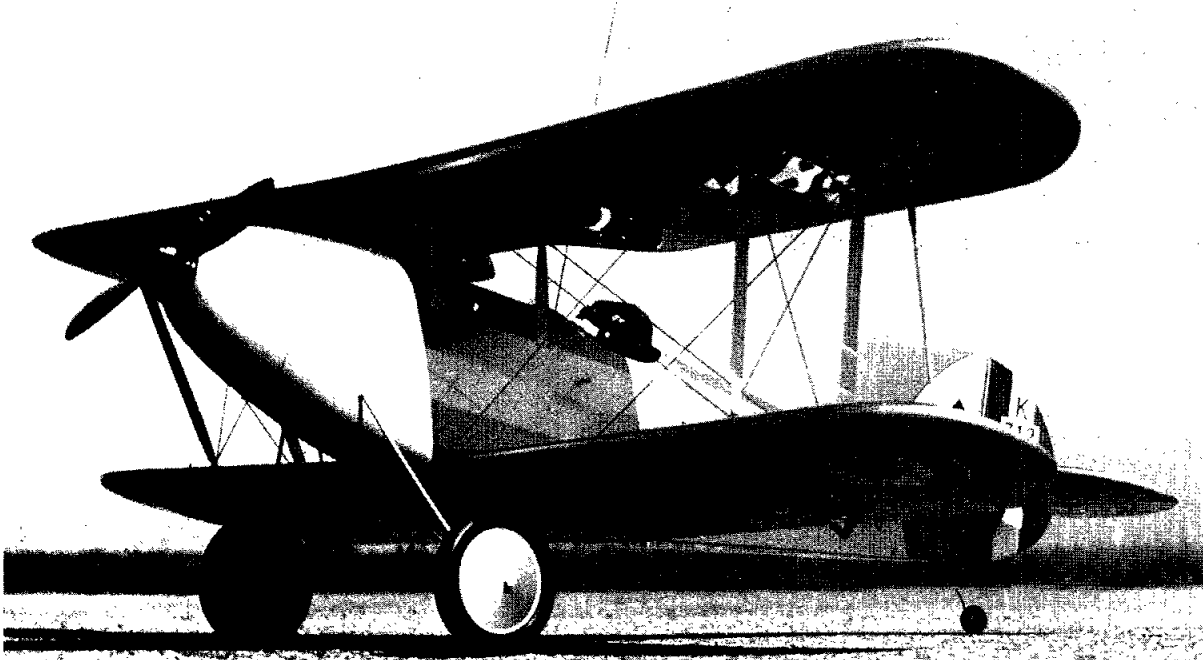
64 Tempest Le Mans convertible, a/c, motor has 17k miles, good tires, \$700, 488-0189.
Motorcycles: Honda CB450, \$495 or \$1.10 per cube; BSA 441cc, \$650; Suzuki 120 cc, \$150, 944-0267.
65 TR-4A blue convertible, IRS, radials, wire wheels, rebuilt engine, \$1150, x5888, Miller or 534-5735, Dickinson.
65 red Mustang, V8, power, air, good condition, one owner, \$600, 482-3909.
64 Buick LaSalle convertible, one owner, new top, recent overhaul, excellent condition, \$845, 944-3933.
67 VW, air, radio, heater, white, excellent condition, \$1100, x7766, Hall, or R18-4331.
69 Ford Falcon, good condition, 22 miles per gallon, \$1400, x4386, Tomlinson, or 932-5929.
67 Impala, 4-dr sedan, fully loaded, factory air, 327 cu. in. engine, 35k miles, top shape, \$1695, x4957, Stafford.
'62 Chrysler "300", 4-dr hdtp, 383 engine, power, air, radio, \$200, x2192, Levy, or 645-1001 after 6pm.
69 VW sedan, air, automatic stick-shift, \$1875, 932-4084 or 932-2734.
66 Valiant 100, automatic, good running condition, \$650, x3741, Allen.
69 Honda CB-350, \$585, x3026, Campbell, or 488-3635.



Ivy Fossler nominated for Woman's Award

Ivy H. Fossler was NASA's nominee for this year's Federal Woman's Award. To be eligible, a woman must demonstrate "outstanding ability and achievement in an executive, professional, scientific, or technical position."

Mrs. Fossler, an Aerospace Engineer in Fluid and Flight Mechanics, is senior engineer in the Applied Flight Dynamics Section of E & D. She is shown here receiving congratulations on her nomination from Maxime A. Faget, Director of Engineering and Development.



Looks like the fighters used by the British in the 1930's, doesn't it? Actually it's not a scale model of anything — it's the "dream machine" of Tim Brown, his own conception of what a biplane should look like, even though there never was a plane built like this one. Recognize the pilot?

Look - up in the sky - it's the RC model planes!

by T. Brown

Now that longer days and warmer weather have arrived, members of the MSC Radio Control Club are getting their model aircraft ready for the up-coming season of flying. New additions to the fleet, carefully constructed during the long winter's nights, will be unveiled and put to the supreme test: that first nerve-racking flight.

The Antenna Test Range west of Bldg. 14 has served as the club's "airport" for several years. Most flying is done on Saturdays and Sundays, of course, but occasionally members will go out after 5 pm for a little practice. Visitors and spectators are always

welcome, but autos are not allowed past the Bldg. 14 parking lot and children are not permitted to climb on the Test Range fixtures.

Meetings are held monthly at the members' homes. These meetings usually consist of a short business session followed by a program of movies, slides, and lectures. Members bring equipment and airplanes to the meetings and this, of course, stimulates "bull sessions" which go far into the night! No attempt to advertise these meetings is made since interested newcomers can get information from members at the flying field.

Today the radio control hobby is not limited to those with extensive electronics and model-building experience or those with large bankrolls. For about \$75, one can get a ready-to-fly plastic airplane with control of the rudder for steering. These rugged models can withstand considerable abuse and survive many "hard landings" at the hands of an inexperienced pilot. Of course, many fine model kits are available for those who prefer to build their own. In any case, members of the MSC/RCC are always ready to assist new members get their equipment installed and into the air!

Flight Control golfers brave buffets of Nature



STROKE PLAY SCORE CARD

NAME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	TOTAL
A. Baker	4	5	4	3	4	5	4	3	4	5	4	3	4	5	4	3	4	5	44
B. Steel	4	5	4	3	4	5	4	3	4	5	4	3	4	5	4	3	4	5	44
C. Denny	4	5	4	3	4	5	4	3	4	5	4	3	4	5	4	3	4	5	44
M. Kennedy	4	5	4	3	4	5	4	3	4	5	4	3	4	5	4	3	4	5	44
C. Christensen	4	5	4	3	4	5	4	3	4	5	4	3	4	5	4	3	4	5	44
E. Tompkins	4	5	4	3	4	5	4	3	4	5	4	3	4	5	4	3	4	5	44
F. Marzani	4	5	4	3	4	5	4	3	4	5	4	3	4	5	4	3	4	5	44
G. Johnson	4	5	4	3	4	5	4	3	4	5	4	3	4	5	4	3	4	5	44
H. Kasper	4	5	4	3	4	5	4	3	4	5	4	3	4	5	4	3	4	5	44
I. Lumber	4	5	4	3	4	5	4	3	4	5	4	3	4	5	4	3	4	5	44
J. Armstrong	4	5	4	3	4	5	4	3	4	5	4	3	4	5	4	3	4	5	44
K. Dalton	4	5	4	3	4	5	4	3	4	5	4	3	4	5	4	3	4	5	44
L. Martin	4	5	4	3	4	5	4	3	4	5	4	3	4	5	4	3	4	5	44
M. Hancock	4	5	4	3	4	5	4	3	4	5	4	3	4	5	4	3	4	5	44

Victim of the elements—(upper right), the first day of the scheduled Flight Control Division Golf Tournament took its toll on umbrellas as well as golfers. By-stander Bob Gordon's portable shelter shows the results of the wind and rain which caused postponement of the tournament until the following weekend.

And here's the winner of the tournament: **Charley B. Parker.**
—photo by E. Marzano

Lunar Landscape photos available from GPO

Photographs providing nearly complete coverage of the lunar surface are presented in a new NASA publication entitled "The Moon as Viewed by Lunar Orbiter."

In addition to conventional photographs, the book also contains four full-page stereoscopic pictures. Using spectacles provided with the book to look at these pictures, the reader can see into lunar craters and valleys. These pictures show Aristarchus, Schrotter's Valley, Rimae Parry and the Tobias Mayer Dome.

Index maps indicate the area shown in each view.

The 152-page book, NASA SP-200, may be purchased for \$7.75 from the Superintendent of Documents, U.S. Government Printing Office, Washington, D. C. 20402.

4th qtr. Exceptional Co-Ops



J. N. Leech **T. E. Brisbin** **G. L. Brooks, Jr.**

James N. Leech
Purdue Univ.
Flight Crew Ops

Nate has been selected as an outstanding member of the Co-Op program on the basis for his three work periods at MSC. His contributions to developmental work on Apollo 8, 11, and 13 Flight Data Files, support in the MCC Flight Director Staff Support Room, and flight data file configuration control first brought him recognition. More recently, his work with a lunar color chart, the Skylab flight data file, and Skylab star charts have made him an asset to the Division.

Garold L. Brooks, Jr.
Texas A.&I.
Flight Ops.

Garold's ability for electronics work prompted his supervisors to assign him to the 1/10th scale shuttlecraft program. He is part of both

the instrumentation system and the electronic subassembly teams, and recently served on the vehicle checkout team prior to initial tests. In all of these undertakings his ability has drawn praise from his associates, and has enabled his supervisor to entrust him with increasingly responsible assignments.

Terrance E. Brisbin
U.T. El Paso
E.&D.

Terry has distinguished himself within the Crew Systems Division ever since 1968, when he began his first work cycle at MSC.

His assignments have included design projects and test projects. He has served as a volunteer altitude chamber subject. The success of a recent test involving an emergency rescue mode for lunar astronauts has been credited in large measure to Terry's knowledgeable efforts as test subject.

ANNOUNCEMENTS

EAA offers savings

Memberships are available in a local Health Club through the MSC Employee Activity Association at a significantly reduction in price. Further information will be available in the next issue of the Beacon, or may be obtained by calling Ron Hayes x2231.

Golf Tournament

The MSC Golf Association Tournament originally scheduled for May 16 has been rescheduled for June 27. Play will begin at 11 am at the Apascosita Country Club.

Headquarters job opening

Applications are being accepted at NASA Headquarters for the following position: Writer-Editor, GS9-11. Applicants for this position should have the ability and interest to write speeches. No specific training in writing is required. NASA employees should send their application to DHP/Miss Newton. If this position is subsequently advertised under the Merit Promotion Program, NASA employees must apply under the vacancy announcement by submitting an SF-171 or calling Miss Newton on (202) 962-2149.

THE ASTRONUTS

courtesy of TRW's gordon a. south



Somebody didn't pick up his toys!