

## MSC Support Service Contracts To Be Restructured, Consolidated

The NASA Manned Spacecraft Center announced plans this week to restructure and consolidate a number of its Support Service contracts, reducing the number of such contracts from 28 to 17.

MSC Associate Director Frank A. Bogart said the plan will cover a five year period, with all consolidations and recompletions to be completed in about 2 years.

Consideration will be given to current contract periods, program impacts and budget cycles, he said; and five support services contracts will be set aside for competition among small businesses.

General Bogart said MSC should realize benefits in terms of better utilization of personnel and reduced overhead through the consolidation and restructuring of support contracts.

Current contracts for photographic sciences, the photographic laboratory operation and the making of precision slides for the Mission Control Center will be consolidated into a single photographic support contract.

Contracts for facility support, public affairs support, and logistical and technical information support will be combined into a single institutional support contract.

A consolidated electronic and computation services contract will replace present contracts for general electronic and instrumentation support; computer programming, operation and maintenance; and hybrid computer maintenance.

Present contracts for Mission Control Center engineering and operational support; Skylab flight crew procedures development, simulator maintenance and operation and communications command and telemetry system support will be consolidated into a new flight support contract.

*(Continued On Page 4)*

## RIF Notices To 175 At MSC; Another 185 Are Reassigned

The NASA Manned Spacecraft Center notified 175 employees last week they will be released as a result of cutbacks in the Civil Service work force at the Center.

At the same time, an additional 185 employees were informed they would be reassigned or placed in jobs at a lower grade. Twenty-three employees who were to be affected by the reduction, plan to resign or retire.

The action came as part of a NASA-wide manpower reduction announced in July.

Of the 198 employees leaving 155 of them have jobs at the Houston Center. The remainder work at MSC field operations at Downey, Calif.; Bethpage, N. Y.;

White Sands, N. M.; and at the Kennedy Space Center, Fla.

MSC Director Robert R. Gilruth said, "Every effort will be made to assist employees who are being separated or reassigned to less attractive jobs through no fault of their own. We feel these people, many of whom worked directly on the moon landing program, have management and

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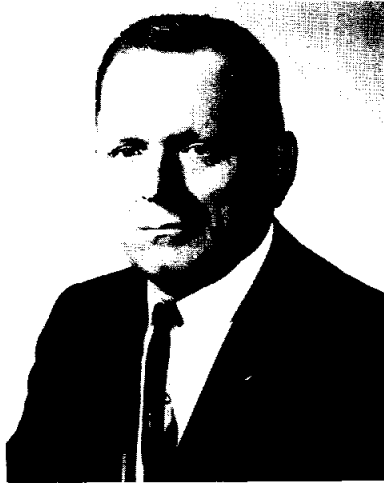
## SMD Chief Joseph Kotanchik Suffers Fatal Heart Attack

Joseph Nicholas Kotanchik, 61, Chief of the Structures and Mechanics Division, Engineering & Development Directorate, NASA-Manned Spacecraft Center, was stricken with a heart attack and died Saturday afternoon, August 22.

Kotanchik, a government employee for 32 years, joined the Manned Spacecraft Center in December 1961, as assistant Chief of the Systems Evaluation and Development Division. This division was responsible for the planning and development of design requirements leading to the construction of the Space Environment Simulation Laboratory, the Vibration and Acoustic Laboratory, the Structures and Materials Laboratory, the 10-Megawatt Arc-Jet Facility and several other major test facilities of the Center.

In 1963, he was named to his current position and was responsible for the operation of these facilities in support of the Apollo program. His organization was responsible for management and technical direction involved in the development of many of the Apollo spacecraft subsystems including the structures, thermal protection, mechanical systems, earth landing systems and others. Kotanchik personally made many contributions toward the solution

of many of the complex technical problems associated with the development of the lightweight spacecraft structures and with the retrofitting of the spacecraft in-



Joseph Kotanchik

teriors with fire resistant materials after the Apollo spacecraft fire in January 1967.

From November 1965 to August 1966, Kotanchik was attached to the Apollo Spacecraft Program Office as Assistant Manager for the Command and Service Modules.

Dr. Robert R. Gilruth, Director of the Manned Spacecraft Center, said "Mr. Kotanchik was highly dedicated and a key member of the management team of the Manned Spacecraft Center and had made many valuable

*(Continued On Page 4)*



**W5FR REQUESTING ASSISTANCE**—Otho Lindsey of the MSC Safety Office demonstrates a mode he used during his recent on-the-scene-participation as a ham radio operator relaying messages from the storm ravaged Corpus Christi area to the outside world.

## MSC Amateur Radio Operator Assists Hurricane Celia Victims

by M. L. Raines

Responding to an urgent appeal for amateur radio operators in the Corpus Christi area after Hurricane Celia, Otho Lindsey of the MSC Safety Office set forth at noon on Tuesday, August 4 with enough food, clothing, and water for 5 days, in addition to his mobile radio equipment.

He arrived at the Corpus Christi Red Cross Headquarters about 5:00 p.m., having been delayed by road blocks, downed power lines, etc. He spent that evening sending and receiving messages, and helping pass out packaged food to people waiting in line. At midnight he went on duty at the Police Station Amateur Message Center where he worked until the following afternoon when he learned of desperate requirements for field radio at Port Aransas.

After an hour's sleep in his automobile in parking lot, a hazardous drive from Corpus Christi, he arrived in Port Aransas by way of the ferry and joined the Red Cross, Salvation Army, and Seventh Day Adventist Teams setting up a message center.

In a short time this group was in operation with two transmitters - one to handle outgoing personal messages and the other communicating with Civil Defense in Corpus Christi for food, medical supplies, baby supplies, bedding, gas masks, bug spray, engineering assistance, etc.

The community was without sewage facilities, lights, and telephones. Curfew was imposed to minimize looting and injury. The remaining time, through Friday, was spent in message handling.

The working day started just before daylight and ended when the operator could no longer stay awake. Meals were served at the operating position by appreciative local people.

Sleeping accommodations were varied: camp cots in the shelter, camp cots out of doors (the noticeable increase in rattle snake and mosquito population discouraged this) and one's automobile.

Lindsey said personal privacy was a little hard to come by. The beach was unusable, so bathing (when an extra quart of water was available) was performed by arising well before daylight and finding a location outside any traffic pattern. Shaving was postponed until after daylight. Lavatory facilities were nil, which perhaps is one reason why, in the Red Cross emergency toiletry kit furnished to all residents, 5 of the 10 items were of a highly aromatic nature.

The attitude of the disaster victims was outstanding. The typical outgoing message read "House destroyed X Business gone X We are all O.K. X Don't worry." There was no trace of self-pity or despair - only rejoicing at being alive, and appreciation for the volunteer workers.

Whenever a truck containing supplies arrived, the volunteer working party always consisted of young, old, long-hairs, short-hairs, residents and visitors; each doing what his physical capabilities permitted.

Lindsey must be commended for his willingness to "get involved" in helping our neighbors with his specialized skills and equipment.

Plan to attend

Picnic Plans Set



AIAA Oct. 19-22

Houston Astrohall

Gordon Hughton MSC Picnic chairman reports pre-picnic plans are on schedule for Saturday, October 10. The picnic will be held at Camp Manison on the edge of Friendswood near the intersection of FM 528 and FM 518.

In addition to the bar-b-que meal, Hughton reports free popcorn, soft drinks, sno-cones and beer will be available all day long. Ticket sales, prices, entertainment and prizes will be announced later.



**SUMMER FACULTY PROGRAM**—A group of visiting university and college professors from throughout the United States observe a demonstration connected with their design of a mobility system for future planetary operation. Sixty-eight professors recently completed a summer program acquainting them with multidisciplinary research and systems engineering programs and allowing them to share in the overall space research efforts here at the Manned Spacecraft Center. The programs were sponsored by the National Aeronautics and Space Administration, the American Society for Engineering Education and cooperating Universities.

Spacecraft Systems Trainers Assist To Flight Controllers

Familiarizing flight controllers and related disciplines at the Manned Spacecraft Center with the inner workings of a spacecraft cockpit has been a full-time profession for the past six years for Ed Middleton and nearly as long for Gordon (Sam) Wenneker.

Middleton, head of the Crew Station Trainer Systems Group of the Mission Simulations and Requirements Branch, started introducing flight controllers to the Gemini cockpit interior and its operation in the fall of 1964, as preparations were being made for the first United States manned space flight in nearly two years.

Wenneker, a senior field engineer with Philco-Ford, joined Middleton in the latter part of 1965 and they've both been at it ever since.

In mid-1966, the training switched to Apollo with the Command Module trainer going into operation at that time followed in July 1967 with the Lunar Module trainer.

The training procedure is to initially familiarize the flight controllers with the spacecraft cockpit and the location of all switches and controls by confronting them with each panel and identifying switch by switch. This is followed by a comprehensive flight phase and system by system training program.

The basic tools used for training include audio narrations accompanied by visuals in the spacecraft windows supplied by slide projection and closed circuit television.

Each training phase or system has a separate patch panel which activates switches, lights, alarms, computer readouts, etc. on the control panels for realism and permitting the flight controller to make the proper switch position setting and take necessary actions as in an actual flight situation. All the while an instructor at the console monitors and verifies that

proper procedures are being followed.

The command module has over 400 individual switches and controls with upward of 700 switch positions and control modes. In the lunar module over 250 individual switches must be mastered with over 350 possible switch positions.

Scripts on the detailed systems of the spacecraft are written and narrated by members of the Mission Simulations and Requirements Branch under the direction of Richard A. Hoover, Chief. George Pettitt heads up the Simulations, Planning and Operations Section of which Middleton's group is a part.

In addition to writing and narrating the scripts on the spacecraft systems, Rex Lutes, Don Siglinger, Dunham Swift, Earle Faupell, Hal Rainey and Chuck Naegeli serve as instructors on the consoles during training exercises. Nearly 5,000 hours have been logged by flight controllers in the trainers in preparation for the Apollo missions.

Between missions, updating the instrument and patch panels of the spacecraft to conform with the actual mission hardware is another duty for Middleton and Wenneker to perform with the assistance of design specialist Anne Flippen and draftsman Rudy Flores. Actual fabrication of the instrument panels is performed on-site in the shops of the Technical Services Division.

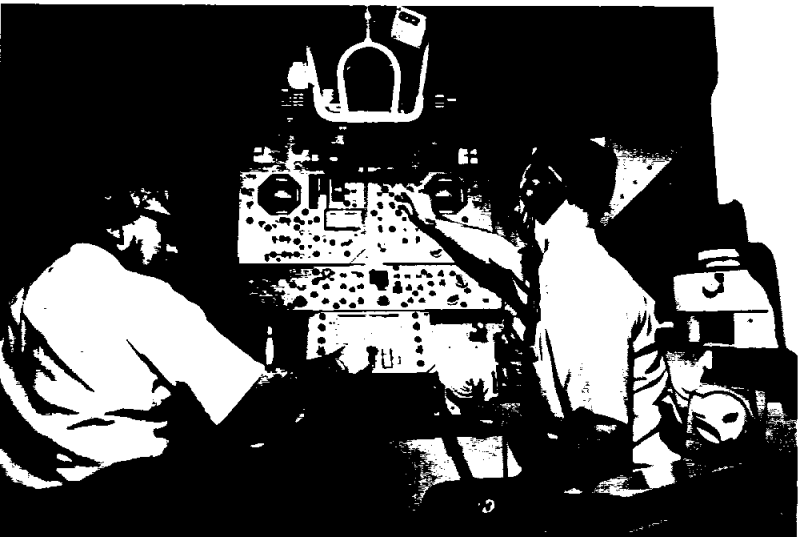
A new training phase will be added in the near future to familiarize flight controllers with the Skylab crew station. Construction of this trainer is now underway by the Technical Services Division and will include the multiple docking adapter (MDA), the workshop control panel and a portion of the airlock.

Flight controllers should be able to start training in the Skylab crew station sometime early next year.

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.



**UPDATING LM PROGRAM** — Gordon (Sam) Wenneker, at LM instructors console, discusses a point with Ed Middleton on one of the LM systems program updates in preparation for training flight controllers for the upcoming Apollo mission.



**PROGRAM CHECKOUT**—Ed Middleton (left) and Hal Rainey run through one of the systems training programs to verify its readiness for flight controller training on the lunar module systems.



**ALL SYSTEMS CHECKOUT**—Ed Middleton, at command module instructor American Society for Engineering Education and cooperating Universities, console, checks out a systems training exercise with two technicians in the crew station trainer. The trainer can accommodate three flight controllers at a time, two in the couches and one in the lower equipment bay. The center couch is removed for easy access.

Service Award



25 years  
Rita Hendrix  
Financial Management Division

Final MSC Slow Pitch Softball Standings

Monday Division		
	Won	Lost
METS	8	1
JLC	8	1
Association	7½	1½
Peanut Shells	5	4
Hoker Mokers	5	4
SMD	4	5
Philco Ford	3½	5½
PPD Hustlers	2	7
Spaxtiks	2	7
Taft Bdcstng	0	9
Tuesday Division		
	Won	Lost
*Raiders	8	1
LEC Nads	8	1
Boeing Bombers	6	3
Ball Busters	6	3
Nut Crackers	5	4
Chug-A-Lugs	4	5
Red Roaches	3	6
GE Aces	3	6
LEC Hse of Dvd	2	7
R&QA	0	9
Wednesday Division		
	Won	Lost
*LEC Judges	8	0
*Packers	7	1
LRD	5	3
Behemoths	4	4
Rats	3	5
Bandits	3	5
New Outlooks	3	5
LEC Misfits	2	6
CAD	1	7
Thursday Division		
	Won	Lost
Animals	7	1
LEC Wild Bnch	7	1
Univac	6	2
BRN	5	3
Old Timers	5	3
LEC All Stars	3	5
Dynalectron	2	6
Charlie Brn	1	7
LEC Bearcats	0	8

\*The LEC Judges won the league championship by fighting their way through the loser bracket to defeat the Packers 10-8 in the league tournament championship game. The Raiders finished third.

Final MSC Fast Pitch Softball Standings

	Won	Lost
STC	9½	2½
Lockheed	9½	2½
JOF Control	8½	3½
Lone Stars	7½	4½
USCG	5	7
MSB	1	11
TRW	1	11

\*STC won the league championship by defeating Lockheed 3-2 in the championship playoff game. The game went extra innings with Bill Hays clouting a solo homerun in the bottom of the 8th inning for victory. Gordon Miller struck out 16 for the winners. Dave Mains pitched well for the losers.

# Roundup Swap-Shop

(Deadline for Swap-Shop classified ad is Thursday of the week preceding Roundup publication date. 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)

### MISCELLANEOUS

Sears Kenmore Deluxe vacuum cleaner with all attachments. Like new. Nabours, 427-2273.  
Sailing Dingy, 9' fiberglass, dacron sails, oars, 1-yr new, \$300. Royal portable typewriter \$25. Schermerhorn, 591-2320 (nights).  
72" Sofa, Tuxedo style dark green print, 1-yr old, \$150. Anne, 877-2608.  
Deer rifle, Remington pump 30-06 with 2 1/4 bearcup scope and extra clip \$100. Anderson, 485-3025.

7 1/2 hp Evinrude outboard motor with separate 4 gal gas tank, \$85. Haines, 941-2495.  
Mediterranean style sofa and matching chair. Good condition. \$90. Davidson, 487-3623.

Tape Recorder, Stereo 4-track. Good condition. Make offer. Call 877-4405 after 4:00 P.M.

Lido 14 sailboats Listings of used Lidos: location, condition, price, fleet activities. Hoover, 877-3366.  
Girl's size 7 red wool winter coat and matching dress. Never worn. Baldwin Acrosonic Piano, excellent condition, \$450. Kenmore Washer and Dryer matched set 5 yr old. Nugent, 488-3136.

Golf clubs, 3 woods, 8 irons, bag, putter, cart, shoes, club covers. Like new. \$140. Avila, 487-2490.  
Two beginners guitars and one carrying case. Double bed headboard, and desk. Lazy-boy chair and footstool. Nugent, 488-3136.

Wicker lounge in "fish" shape, conversation piece, \$20. Law, 944-7596.  
Dining table, 4 chairs, Early American hard rock maple, very good condition, \$48. Lewis, 932-2849.

16' camping trailer, sleeps 6, thermostat oven and heater, electric brakes, \$850. Fitch, 482-3857 after 5 P.M.

## EAA Offering Spanish Classes

EAA Spanish classes to be taught this fall by Professor Emilio Gonzales will begin the week of September 7 and run through November 30.

Classes will meet twice a week, Mondays and Wednesdays for 12 weeks. Spanish 1 will meet from 5 to 6:30 p.m. and intermediate Spanish will meet from 6:30 to 8 p.m.

Fee for each course will be \$25. For answers to questions concerning the classes please call either Rick, Ext. 5310 or, Nancy, Ext. 5016. Those taking Spanish 1 can purchase a text from the club for \$2.

15-hp Michigan Marine senior twin engine, Paragon gear, strtr/gen kaput. 290 lb. White, 932-4472.

"Sam Sneed" golf clubs and bag, 3,5,7,9 irons, 1,3 woods, \$35. Merrell, 932-3046.  
Chrome dinette table, formica top, good condition, \$5.00. Rodman, 932-2897.

LOST: Sport coat, light brown linen material, mfr W. M. Cheng, Hong Kcong. Smith, 471-1984.

Model 99 M, .300 Savage Rifle 4-pwr scope, mounts, lens covers, sling, case, xln cond. Holloway, 941-0262.

Schwinn Sting-Ray boy's bike, chrome fenders, basket, sdn cond. Fitzgerald 488-4467 after 5 P.M.

Baby furniture: Carriage \$10., stroller \$15., mesh net playpen \$10., white crib and mattress \$25., high chair \$10. von Ehrenfried, 591-4163.

Transistorized Relax-A-Cisor, case, 3 belts, instruction booklet, extra batteries. Walker, 944-0647 after 5 P.M.

Ladies Brunswick, 12 lb bowling ball, bag, shoes size 7, like new 15. Boat motor, 1956 super 25 hp electric Mercury, overhauled and lower unit controls. \$75. Lines, 473-1332.

Conn Cornet w/case, same as new, cost \$165, asking \$100. Gabbard, 474-2349.

Want to trade: One old car for one old camping trailer. Ashley, 932-3411.

Minibike, 3 1/2 hp Clinton engine, new tires and clutch, new paint, \$65. Cooper 944-2680.

Cornet, Conn, student model, used 3 mo, perfect, \$75. Herbert 944-3026.

Large antique mirror, 53"x34", \$50. Wool oval rug, 15'x20', nice, \$40. 649-2569.

Aircraft propeller, old wooden, \$100. Two Sears 3-speed bikes, \$5. each. Herter's 30X Spotting Scope with stand, \$15. Hanging Lamp, 5-bulb, \$10. Large dog house, \$5. Aircraft Clock, 8-day, \$10. Spanish style wall mount iron candle holder, \$25. Donnell, 877-1746.

1970, 17-ft tri-hull with 120 hp Chrysler outboard engine, trailer, and accessories, \$3400 value for \$2700. Bland, 932-2042.

For sale, Zenith black and white console television, Early American styling. Brenton, 483-2730.

China, "Wedding Ring" by Syracuse, no longer manufactured, four place settings. Condon, 944-3505.

B flat clarinet, carrying case, good condition, \$100. Erb, 877-1097.

Two used tires, 855-14, Fisk Premier WSW, \$6.00 for both. Kosel, 534-5818.

Sears Lady Kenmore automatic dishwasher, 1969 model, 150° sanitizing cycle, like new \$175. Sears 5000 BTU air conditioner. 1970 model, used less than 5 hrs, 110 v, like new \$80. Williamson, 585-2814.

Two trombones and one clarinet with cases. Gillen 877-1666.

Hammond Organ, excellent cond. less than 1/2 orig. cost HU-82289

German Uher-4000 tape recorder plus accessories, 110 V. ac or NiCd battery \$120, 488-3449

Metal cooler, 52 qt., \$5; custom made trailer hitch for 53 Chev. \$5, 877-4297.

Attractive contemporary walnut dining table, oval, Glenn design, four chairs \$100, 591-2616.

Dolphin Sr. with icebox and trailer \$500, 591-4891.

'67 super Skeeter Bass Boat, every conceivable extra. 35 HP Mercury, electronic troll. \$1100. 643-2166.

CLC Club Social Membership, make offer, 591-2494.

### AUTOS

69 Javelin, auto trans, air, pwr steering, radio, new tires, in warranty. Nabours 427-2273

67 International Travel-All, A/C, OD, Radio, Hunting, fishing, work vehicle, good condition \$225. Lockard, Dickinson 534-4714.

67 Falcon, 6700 miles, excellent condition. Will sell below book to settle estate. Remini, 501-4119.

68 Barracuda, maroon with black interior, fully loaded. Stephenson, 946-4286.

67 Honda, 305 cc Super Hawk, like new, much chrome. Joerns, 591-3330.

69 VW, 2-dr sedan, standard, 10,000 mi., xln condition. Gearhart, 488-3505.

66 Honda, 65cc with helmet. Penn, 488-3286.

66 Chevrolet Impala, SS, 327 eng., automatic, air, power steering, radio, polyglass tires. Peter, 488-4367.

69 Impala, 2 dr, power steering, air, xcond, new tires and battery. Smith, 944-5327.

70 Suzuki 90 cc Honcho, new, 500 mi. Roach, 645-7932 after 6 P.M., and weekends.

68 Chevrolet Bel Air, V-8, factory air, pwr steering, stereo, tape deck, radial tires. \$1295. Brown, 944-3351 after 6 PM.

67 Rambler Rebel, radio, heater, air, new tires, one owner, 19,000 mi. \$1000. Capps, 471-3753.

mechanically, \$395. Stephens, 487-0095.

61 Volkswagen Sedan, very clean and good

### WANTED

Girl's 20" Bike in good condition. Booker, 488-3668.

To join carpool from southwest area to MSC, 8 A.M. to 4:30 P.M. McCarty, 623-4893.

### PETS

Staffordshire Terrier puppies. Show quality. Champion Sire & Dam. \$150. Humes, 482-1653

Scottish Terrier, AKC Reg., champion sire, silver brindle, 10-mo. old, price negotiable. Lofgren, 471-4589.

Free housebroken kittens, black, tortoise shell, ginner, and ginger and white. Manry, 932-2908.

Beagle, 9-mo old registered male. Had all shots, housebroken, \$35. Lewis, 932-2949.

Collie and boarder collie mix, male and female, approx 8 mo. \$20. Howell, 487-1356 after 5 P.M.

Boxer puppies, fawn, male and female, pedigree furnished. Tiedt, 488-2679.

### REAL ESTATE

Pasadena, 3-1, den, carpets, air units, c/heat, fenced, trees, schools, 5/4%, \$94/mo, equity, owner. Holguin, 459-8320.

River front lot on Sabine River, wooded, 50x150, River Oaks Subdivision at Deweyville, Texas, \$2000 Smith, 488-3238.

Studio Apartment, furnished, private yard, carport, bay view, rent \$110/mo. utilities extra. One-bdrm apt., furnished, bayfront, modern, in private home, rent \$115/mo. Bills paid. Hill, 471-4305.

## Mother Nature Commands Respect!



MONUMENT

**DEVASTATION IN PERU** — Nature's tremendous earthquake force which raked Peru in May is evident in these photos taken from NASA's Manned Spacecraft Center Earth Resources Aircraft. The MSC aircraft—the NP3A Lockheed Electra—recently flew four separate missions over the Santa Valley high in the Andes Mountains and over the towns of Casma, Chimbote, Huaraz, and Trujillo. The massive slide which buried the town of Yungay under 50 feet of mud is shown in these photos. The slide started atop the Neveados Huascaran (mountains)—above right photo—and plowed down the valley—center photo. A monument of Christ stands undamaged in the bottom photo, although the massive slide buried the town of Yungay. In the mosaic photo, below, the path of slide can be followed from the mountain top, down the valley and into the town.

## Credit Union Straight Talk

### DIVIDEND TIME DON'T WITHDRAW SHARES NOW

With school time approaching along with late vacations and the accompanying financial demands we realize you may be tempted to dip into your hard earned shares, but be careful - - it can cost you money.

To earn dividends, your shares must remain on deposit throughout the close of business, 31 December. You will not receive dividends on any money withdrawn before that time.

If you need money, don't withdraw - - BORROW! In most cases, a share-pledge loan cost less than the dividend that would otherwise be lost. Besides there is no loss of share-life insurance and the loan is covered too! There is no bother, no red tape. Your loan is automatically paid off the first business day of the new year.

### ATTENTION MADRID TRIPPERS

For all those who have already registered or those who are still planning on registering, we will now fly Braniff from Houston to JFK in New York and then continue from there to Madrid, Spain. Don't forget those shots (ouch) and those passport pictures (ugh).

### JULY FINANCIAL CONDITION M.S.C. FEDERAL CREDIT UNION

Loans	\$2,850,589.13
Cash on Hand	24,410.32
Federal Deposit	2,990.14
Other Assets	11,342.67
<b>ASSETS</b>	<b>\$2,889,332.26</b>
Shares	\$2,749,742.44
Notes Pay.	25,000.00
Reg. Reserve	70,269.83
Contingencies	13,068.22
<b>ACTS. Pay.</b>	<b>12,942.80</b>
Gain for July	18,308.97
<b>LIABILITIES</b>	<b>\$2,889,332.26</b>





**ROCKET CHAMPS AT MSC**—Eighteen national rocket launching champions were named at MSC last week by the National Association of Rocketry. Competing were 188 rocketeers from 30 states. Events included an egg-lofting event, open spot landing, swift rocket gliders, design efficiency, parachute duration, and scale event, with three divisions each. Above, one of the contestants in the swift rocket glider event prepares to launch his rocket. The winner was determined by flight duration.

## Contract Bridge Instruction Offered

A course of instruction will be given in the fundamentals of contract bridge, both rubber and duplicate play. This is a basic course designed for those who have never played bridge, as well as for experienced players who are interested in developing a complete knowledge of modern bidding fundamentals embodying the modern point count bidding structure and universally accepted bidding systems and conventions.

Sessions will begin September 9 at 7:00 p.m., and run each successive Wednesday for 10 weeks. Each session includes the simultaneous play of special pre-arranged hands, which are analyzed by the class after they have been played and spread. All problems of bidding, leads and play are thoroughly discussed.

## MSC Secretaries Invited To Forum

Secretaries interested in associating with or learning about the National Secretaries Association (International), are cordially invited to attend an Area Forum, Saturday, September 12 at the Sheraton Kings Inn, 1301 NASA Road 1.

The forum will be held from 9:30 a.m. to 2:30 p.m. and the registration fee of \$6 will include a luncheon. Reservations may be made until September 10 by calling Joanne Fischer 488-0210, Ext. 31 or after 5 p.m. call NASA Clear Lake Chapter NSA President Yvette Crane at 482-1435.

For further information and registration contact John Herrmann, extension 3448.

## Bay Area Chorus Christmas Concert Rehearsals Begin

The Bay Area Chorus will begin rehearsal for their annual Christmas concert on Sunday, September 13th at 8:00 p.m. at the Harris County Recreation Center in Clear Lake Park on NASA Rd. #1. Rehearsals will be held there weekly each Sunday night from 8:00 until 10:00 p.m.

The concert this year will be held in the NASA auditorium on December 13th. The chorus has presented a Christmas concert for the past few years at NASA. The concerts are well received and enjoyed by capacity audiences. It has become a highlight of the Christmas season in the Bay Area.

This year, the Bay Area Chorus will be under the direction of Milton A. Pullen, director of music at Clear Creek High School. Accompanist will be Barbara Carter of La Porte. A variety of choral selections including arrangements by Bach, Handel and Haydn will be performed. It promises to be another exciting concert.

All NASA personnel and their families are invited to come out and blend their voices with the Bay Area Chorus on September 13th. For further information call 474-3450 or 591-3160.

## Dr. Kraft To Address Group On Space Station Operation

Dr. Christopher C. Kraft Deputy Director, MSC, is scheduled to make a presentation September 9, on Space Station Operation to a group of 450 scientific and technical leaders invited to attend a Space Station Utilization Conference at the NASA Ames Research Center, Moffett Field, Calif.

The invitees are being assembled September 9-11 to participate in the planning of the Earth orbital manned space station, a multidisciplinary research and applications laboratory to be operated in space for 10 years. Launching of the space station is planned for the 1976-1978 period.

In the invitation to the conference, NASA stressed the necessity for immediate participation in the planning process to realize the full potential of the space station.

NASA is inviting to the con-

ference only those who are prepared to become actively involved in the planning effort. Panels will be formed on a disciplinary basis to screen thoroughly all potential space station uses. The recommendations of these panels will provide material for a related study in the summer of 1971.

A fundamental goal of the space station program is to provide in orbit a diversified research and experimental facility affording a wide potential for use by the broadest possible segment of the national and international community. The conference invitees include 60 representatives of foreign universities and industrial firms.

As currently planned, the space station will include a number of laboratories to support a wide variety of scientific and technological investigations. It would perform in space a role similar to that of oceanographic ships at sea or the research station in the Antarctic.

The flight crew and scientific staff of the space station will number about 12 initially, including experimenters chosen without the necessity for the rigorous training now required for astronauts. It will operate with a fully reusable Earth-to-orbit shuttle for the transfer of crew and equipment.

## Kotanchik

(Continued From Page 1)

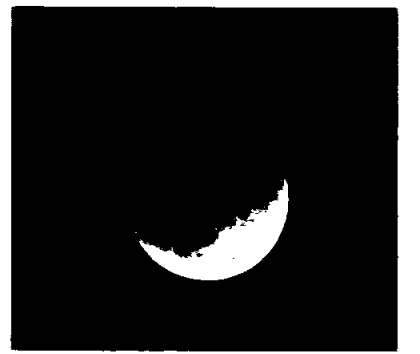
contributions toward its development. He played a very vital and important role in the successful accomplishment of the landing of men on the moon. His loss will be deeply felt by the Center and by his many friends and associates in the technical community."

Kotanchik was graduated from the Massachusetts Institute of Technology in 1938 with a BS degree in Aeronautical Engineering. In October 1938, he joined the Structures Research Division of the Langley Research Center, at Langley Field, Virginia. There he conducted structures and materials research programs and participated in the development of facilities for structures and materials testing.

Under his direction at Langley, much of the development of high temperature experimental research based on quartz-tube-lamp radiant heating and electric-arc heating of gas streams was performed.

Kotanchik received the NASA Exceptional Service Medal in January 1969, for his contributions to the Apollo 8 Lunar Orbiting Mission and in October 1969, he received a second Exceptional Service Medal for his contributions to the Apollo 11 Lunar Landing Mission. He was a member of the American Institute of Aeronautics and Astronautics.

He was born November 17, 1908 in Ranshaw, Pa., and was



**DID YOU SEE IT?**—This photo of an earth eclipse of the moon was taken by Ed Marzano of Flight Control Division. He shot it with a 270 mm lens at 10:30 p.m. August 16 from Ellington AFB.

## EAA Reps Offer Theater Discounts

From August 31, through September 4, MSC EAA representatives will be located in both MSC cafeterias from 11:45 to 12:45 to take orders for Interstate Theater discount passes. The cost of the passes will be two for \$1.50 and will include a Christmas card suitable for giving these passes as Christmas gifts.

The passes may be used from December 1, 1970, until May 31, 1971, and may be exchanged for admission tickets to all but road-show engagements at any Interstate Theater.

If the EAA does not receive enough orders to qualify for the discount passes, a refund will be made by September 15, 1970, to those who have placed orders.

## Contracts

(Continued From Page 1)

Combined contract for program integration and engineering analysis will replace existing support contracts for integration analysis; reliability and quality assurance; spacecraft systems analysis; and technical integration and evaluation.

Consolidation was not considered feasible for the mission trajectory control program contract, clinical support, aircraft maintenance, laboratory support, mission computer support and protective services; and these contracts will remain separate.

Contracts for closed circuit television support, custodial services, motion picture production, rigging and heavy hauling, and central shop support will be set aside for competition among small businesses.

White Sands Test Facility contracts for laboratories and test stand operations, facilities maintenance and installation support, and security guard services will be phased out and replaced with a contract to maintain the New Mexico facility in reduced operational status.

married to the former Mary Habura. They have two children, James, 27 of Arlington, Mass., and Joseph, 23, United States Army, Ft. McPherson, Georgia.

Final rites were conducted Wednesday, in the Ukrainian Catholic Church in Shamokin, Pa.