

MARTIN MARIETTA

news

DENVER AEROSPACE

NUMBER 11/1982

Shuttle
moves to
launch pad



Corporate gifts aid community organizations

Nearly \$300,000 has been allocated by the Corporation to aid organizations in communities where Denver Aerospace employees live.

The greatest financial assistance is for United Way organizations in the communities. In Denver, Mile High United Way receives \$71,500. The United Way of Greater New Orleans is receiving \$15,000. Gifts of \$5,000 each are set for the Brevard County, Lompoc Valley United Way, and the Central Coast United Way.

The next largest grant—\$50,000—will go to the University of Denver to assist in implementing a four-year degree program in engineering.

Funds aid hospitals

Porter Memorial Hospital in Denver, \$15,000 to help finance expansion and relocation of its coronary care unit;

A \$5,000 microsurgery camera will be purchased by Lutheran Medical center in Denver;

Pendelton Memorial Hospital, east New Orleans, \$2,000 to update cardiac studies equipment to improve diagnosis and care;

In California, the Lompoc District Hospital, \$5,000 for a mobile image intensifier—x-ray equipment;

Wuestoff Memorial Hospital, Rockledge Florida, \$5,880 for a patient lift-transfer system and a 24-hour ambulatory EEG monitor;

The Suburban Community Training and Service Center in Denver, \$7,000 to purchase a bus to transport its handicapped clients; and

The Blood Center for Southeast Louisiana, \$1,000 to purchase equipment to increase service to donors.

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A Collier Trophy replica is presented C.B. Hurtt, left, president of Martin Marietta Aerospace by Maj. Gen. Clifton F. von Kann (retired), president of the National Aeronautics Association. Martin Marietta was awarded the trophy, the industry's highest honor for achievement in aeronautics and astronautics, for its role in the development of the Space Shuttle. The trophy, now on display at Aerospace headquarters, will be exhibited later at Denver, Michoud, Cape Canaveral, and Vandenberg operations.

Quick action results in Titan on-time launch at Vandenberg

An intense 18-hour, trans-continental effort by a team from the space launch systems division, assured the on-time (and money saving) launch of a Titan IIID earlier this month.

On May 11, just hours before lift-off of a Titan from Vandenberg Air Force Base, a faulty actuator (steering device) was discovered in a second Titan in the factory in Denver.

The dilemma was to determine the cause of the problem or delay the west coast flight.

The challenge was to fly the failed actuator, and its product integrity engineer Mitz Nakai to the supplier in Buffalo, N.Y. to conduct the failure analysis.

The problem was complicated by Nakai being in Utah that night.

Working against time, technicians removed the actuator, while a company plane flew to

Salt Lake City for Nakai. Returning briefly to Denver, the plane picked up mission success engineer O.O. Stancato and the actuator, and flew through the night to Buffalo.

After midnight on launch day analysis began at MOOG, Inc. in Buffalo. At 8:00 am, with the go-no-go decision 90 minutes away, it was determined that the problem involved only the one actuator.

A call was made immediately to Vandenberg with the news. The uninterrupted countdown continued, and the flight had an on-time launch because of the efforts of a number of Martin Marietta employees in Denver and at Vandenberg.

In addition to Nakai, those involved included: Ralph Westerman, Larry R. Lombard, Donald E. Winfrey, Francis E. Berns, Edward A. Clas, J.N. Schmid, Eugene H. Herrera, Glenn Cleveland, T.R. Papas and Chris W. Sellers.

On the cover

A worker in the vehicle assembly building silhouetted against the morning light, watches as STS-4 begins its slow journey to launch pad 39A. The launch of the fourth orbital mission for Columbia and the final developmental flight for the orbiter-external tank-solid rocket booster combination that makes up the Space Shuttle vehicle is scheduled for no sooner than June 27. Prime objectives of the flight will be to obtain thermal data on the orbiter and to land in a crosswind. The eight-day fourth mission will be flown at an altitude of 165 nautical miles. Priorities of the flight could be accomplished in a condensed four-day mission if a contingency developed.

Shutterbugs win national honors

Six employee amateur photographers have won honors in the 1982 photo competition of the National Services and Recreation Association (NESRA).

Sharon R. Hunter, word processing, won first place in the slides division and scenic slides class for "City in the Sky."

Dennis M. Clark, graphic services, took first place in the human interest black and white print class and fourth place in the same division for "Hard Times."

Other class award winners were James Burke, Data Systems, third place for his scenic slide, "Spray;" Michael O'Reilly, model shop, third place for a black and white print, "Futures Past;" Lawrence A. Root, logistics, second place for color prints with "Hound;" and David Lukaszewski, advance control system technology, for "Kaleidograph" in the open class.

More than 350 employees from 44 NESRA member organizations submitted 827 entries. Winning photos were exhibited at the 41st annual NESRA conference in Orlando May 13-16.

Executive addresses business leaders

Peter B. Teets, vice president for business development, addressed the graduates of the 54th Harvard Advance Management Class at their reunion in Colorado Springs May 28.

The three-day meeting was attended by the nearly 50 corporate executives from the U.S. and abroad who successfully completed the intense 13-week course in 1968.

Teets spoke to the group on the use of space program technology in private industry in a speech entitled "The Exploitation of Space—A Look to the Future."

As a Sloan Fellow, Teets received his master's degree in management from Massachusetts Institute of Technology in 1978.

Inter-canyon fire department says 'thanks'

The Martin Marietta Fire Brigade has been praised and thanked for assisting the Inter-Canyon Fire Department in fighting the forest fire on Plymouth Mountain.

"The members of the . . . Brigade were really a welcome sight to our nearly exhausted fire fighters," said Fire Chief Robert W. Schneider in a letter to Tom M. Crawford, director of security.

"At the time they arrived, all water, food, and equipment had to be handcarried from the nearest road, one quarter of a mile away over rugged terrain," Schneider said. "Those 20 fresh and enthusiastic people gave us hope and brought us enough time to lay over 1100 feet of hose to finally extinguish the hot spots.

"Your people were great, their help most willing, enthusiastic, and timely," Schneider continued. "Our most appreciative thanks to the Martin Marietta Aerospace Fire Brigade and the gracious corporation by whom they are employed."



Photovoltaic solar arrays have begun generating electricity at the Sky Harbor International Airport near Phoenix, Arizona.

Solar plant dedicated at Sky Harbor, produces electricity for utility grid

The goal of one day producing economical electricity directly from the sun moved a step closer to reality May 21 when the Arizona Public Service Co. dedicated the world's largest utility grid-connected solar cell power plant at the Phoenix Sky Harbor International Airport. The 225-kilowatt photovoltaic system was designed, fabricated, and installed by the Denver Aerospace solar energy systems group.

The plant was set into operation with the twist of a knob.

Approximately 22,000 solar cells, each mounted behind a light-concentrating Fresnel lens, produce the power directly from sunlight, eliminating most of the equipment found in conventional power plants. The cells and lenses are mounted on 80 arrays that automatically track the sun.

The solar-electrical equipment for the Sky Harbor project is based on a design developed by Denver Aerospace for a similar system installed in Saudi Arabia. Construction of the Arizona plant began in January 1982 and was completed in March.

The plant in Saudi Arabia is on line generating 350 kilowatts of electricity for 1800 residents in three villages near the capital city of Riyadh.

Corporate games set for tomorrow

Employees are encouraged to be spectators at the Denver Corporate Games Saturday, June 5. Nearly 70 employees will be competing in the games.

First event in the day-long athletic competition will be the 10 kilometer race at Washington Park. Start is set for 7:30 am.

Other track events, featuring shorter runs and relays, will be held at Metro State College beginning at 9:45 am.

Other events, their locations, and times:

Racquetball, 9:00 am, Denver Athletic Club; tennis 8:00 am to 2:00 pm, Metro State College, Denver Athletic Club, and George Washington High School; bowling 8:30 am, Denver Athletic Club; swimming, noon, Metro State College; and golf, 10:45 am, Wellshire Golf Course.

Family Day schedule set

Here is the schedule for the annual Family Day at Lakeside Amusement Park, Saturday, June 19:

Gates open at 11:30 am. Parking is free. Enter park from Sheridan Boulevard.

Rides, except for speed boats and sky slide, are free from noon until 6:00 pm.

1:00 - 4:00: El Jebel Clowns
1:00 - 4:00: Free miniature golf
1:00 - 1:40 and 2:00 - 2:40: "Rare Moment," song and dance group in Central Park
1:30 - 1:45: Treasure hunt, 5, 6, 7 year olds at pony track
2:00 - 2:15: Treasure hunt, 8, 9, 10 year olds at pony track
2:30 - 3:00 and 3:30 - 4:00: Puppet show at Twin Pavillion
3:15 - 4:30: Denver Concert Bank in Central Park

Denver plant protection will assist with traffic and maintain a first aid station and a lost and found at the maintenance shop north of the main entrance.

Employee named AAS man of the month

Joseph C. Spencer, recently elected to the board of directors of the American Astronautical Society, has been named that organization's man of the month.

Spencer, director of program development at Michoud, was honored for his contributions to the Rocky Mountain section of AAS. He was chairman of the section in 1980 and 1981.

He is also a member of the American Society of Mechanical Engineers and the Sunset Energy Council. Goal of the council is exploration of solar powered satellites.

Martin Marietta declares regular quarterly dividend

Directors have authorized a quarterly cash dividend of 48 cents per share (\$1.92 annualized) on the common stock of Martin Marietta Corporation, payable June 30 to shareholders of record at the close of business on June 7.

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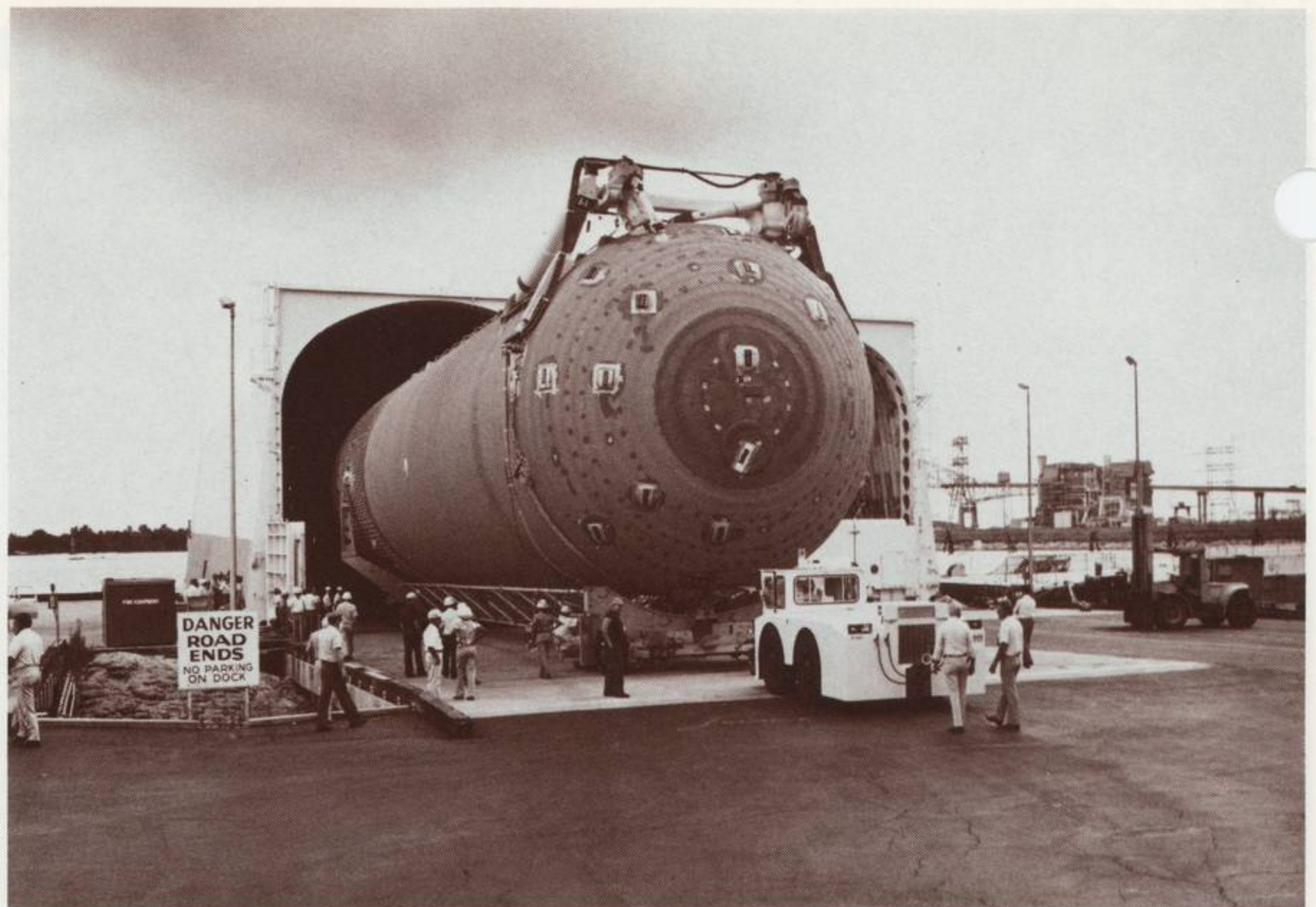
Call Ext. 5364 with information or suggestions for articles, or call one of the following coordinators.

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Vandenberg Operations: William Leary 2202

DENVER AEROSPACE

P.O. Box 179—Denver, CO 80201

June 4, 1982



The external tank for the fifth Space Shuttle mission began its four-day voyage to Kennedy Space Center May 27 as it was loaded on the barge Orion. The fifth Shuttle flight is scheduled for November 11.

Corporate gifts aid community organizations

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Education to benefit

The Colorado Minority Engineering Association, \$5,000 to develop educational programs in engineering and science for minorities;

Two programs at the University of Northern Colorado—the Frontiers of Science Institute, \$1,870 for high school juniors with high interest and aptitude in science, and Leaders of Tomorrow, \$1,700 to develop the potential of gifted students;

Junior Achievement programs in Denver and Michoud, \$3,000 and \$1,000 respectively;

A \$2,000 sponsorship of four students from Brevard County, Florida high schools in a non-partisan program to stimulate interest in the governmental process through a visit to Washington, D.C.;

The Louisiana Engineering Advancement Program for Minorities, \$500 to stimulate high school students' interest in engineering

Three private colleges will be aided by a \$1,000 gift to the Louisiana Independent College Fund—Centenary College of Louisiana, Louisiana College and Out Lady Of Holy Cross College; and

Culture and the arts aided

The Denver Museum of Natural History, \$25,000 to restore the Treetop exhibit featuring a diorama depicting the Littleton area;

A \$5,000 gift to underwrite development of exhibits for the Denver Children's Museum;

The Colorado Gallery of the Arts at Arapahoe Community College, \$2,500 for varied exhibit and educational programming;

The New Orleans Symphony Orchestra, \$5,000 toward renovation of the historic Orpheum Theater, permanent home of the orchestra;

The Delta Festival Ballet, \$1,000 to help in Louisiana tours and lecture-demonstration program for school children;

The Pacific Conservatory of Performing Arts Theaterfest at Allan Hancock College, \$3,000 to assist in its theatrical productions;

The Santa Maria Symphony Society, Inc., \$5,000 to the orchestra, and support the Junior Symphony;

Development of 350 acres as the Chatfield Arboretum, near the main plant will be aided by a \$25,000 gift to the Denver Botanic Gardens;

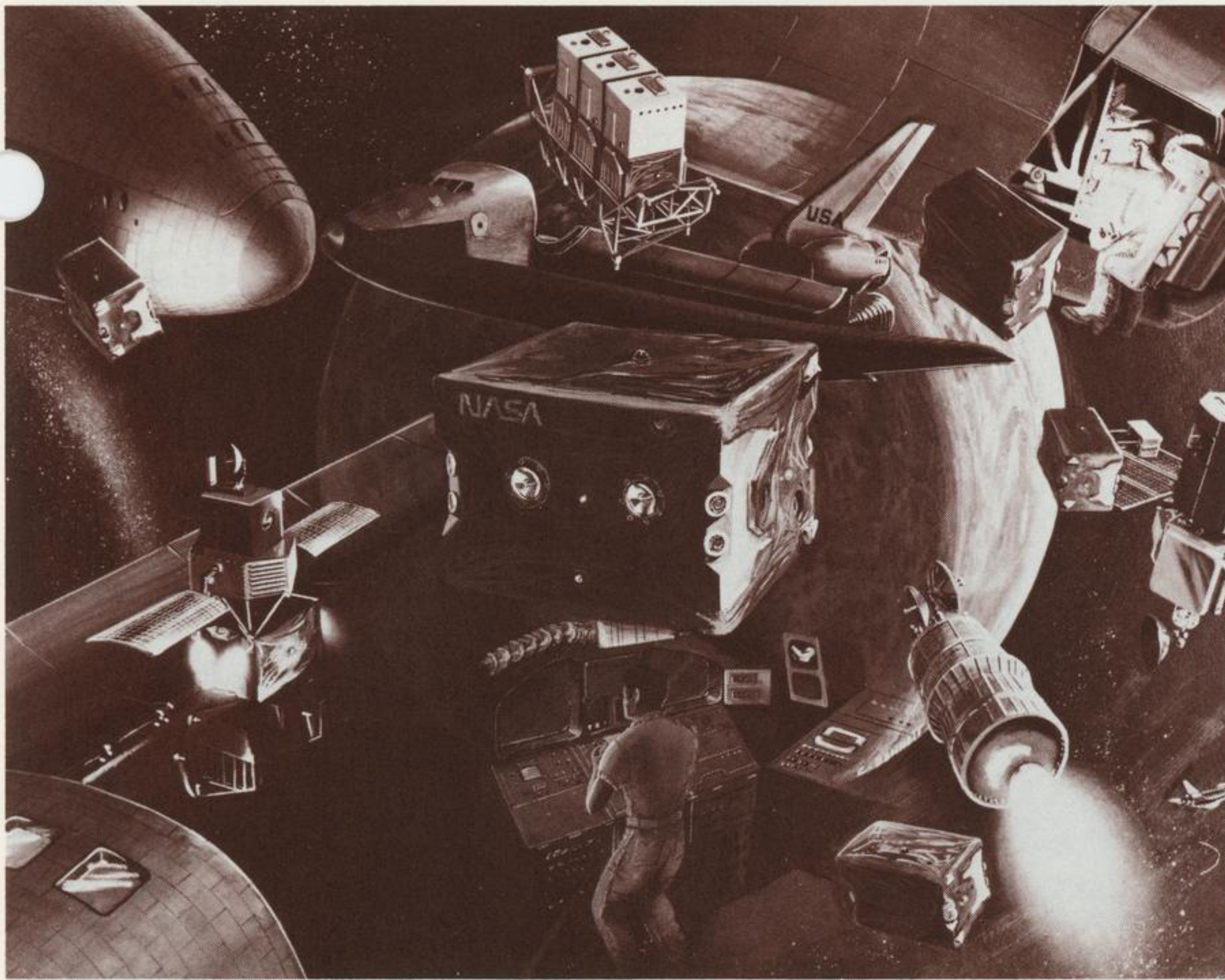
The Littleton Center for Cultural Arts Foundation, Inc., \$10,000 towards the conversion of the old town hall into a cultural arts center; and

The Public Affairs Research Council of Louisiana, Inc. \$3,000 for research programs that provide information on governmental issues to Louisiana citizens.

Michoud employee honored by JA

Ralph Ferbosses, associate financial analyst at Michoud, has been named one of the three "outstanding returning advisers" in the New Orleans Junior Achievement program.

This is his second year as a JA adviser. He was cited for his enthusiasm, good management practices, and conscientiousness.



The small payload maneuvering system illustration by Charles O. Bennett won the top award in Society of Technical Communication Competitions.

Artists, writers earn local, nation awards

Seven Denver employees have been cited by Society of Technical Communication judges both local and national competitions.

At the 29th International Communications Conference held in Boston, a paper by George E. Hoerter and Timothy B. Brenner on "Teamwork... The Key to Managing Proposal Production," was selected as the outstanding paper presented.

At that same conference, Charles O. Bennett was given an Award of Achievement for his small payload maneuvering system illustration.

Bennett also received the Award of Dis-

tingtion for the same painting from the Society's Rocky Mountain Chapter.

Others honored by the local chapter were:

John G. Tielman for his pen and ink drawing of the manned maneuvering unit propulsion system;

Arthur E. Koski, writer; Brenner, designer; and Hoerter, editor; for the Space Shuttle brochure; and

William Mitchell, designer; and Glen D. Burgener, writer-editor; for the Keys to Security brochure.

Employee named to magazine's board

Leroy Hollins, head of the recreation office, has been named to the editorial advisory board of *Corporate Fitness & Recreation*, a new publication in the field of employee healthcare and recreational services.

Advisory board chairman is William B. DeCarlo, manager of recreation and fitness for the Xerox Recreation Association.

As a member of the board, Hollins will be asked to review articles before publication, suggest articles, and to write brief editorials.

The magazine, published by Brentwood Publishing Corp., will be distributed to 12,000 leaders in corporate fitness, recreation, and employee services.

Recreation

Chess—The annual Chess Club championships will be held July 5 through September 27. Registration is due June 30. Employees and their families may participate. Call James Mulberry, Ext. 9649, for information.

Radio—The Waterton Amateur Radio Society field day is planned for June 26 and 27. Amateur CW and phone operators are needed to broadcast from four stations for 48 hours. For information call Harold Beaver, Ext. 6051, or Jack Crabtree, Ext. 6855.

Golf—Women golfers interested in joining the Ladies Golf League for the second half of the season may do so by calling Anna Dixon, Ext. 4954.

Raft Trip—Reservations, with full payment, for the July 24 family white-water raft trip through Brown Canyon are due June 15 in the recreation office. Cost is \$55.

Recreation area rules reviewed

"During the summer months our recreation area gets as much use as many city and mountain parks," says Leroy Hollins, head of the recreation office. "It's important that individuals and groups using the area show consideration for others."

He recommends:

Reserve facilities and equipment at the recreation office 10 days before planned use.

Drive carefully in the area, yielding to pedestrians. Speed limit is 15 mph. Vehicles must stay on pavement.

Campfires, littering, and use of firearms is prohibited. Use picnic area barbeque pits for cooking.

Don't climb in the foothills. Rattlesnakes sun themselves on the warm rocks.

Call Ext. 4646 to get paramedic help. There is a telephone in the office in the main building in the recreation area.

Logistics engineers meet

Col. William Dewey, deputy chief of staff for logistics at the U.S. Air Force Academy, will be the speaker at the summer meeting of the Denver Chapter of the Society of Logistics Engineers. The meeting will be held June 16 at the Rodeway Inn, I-25 and Belleview.

Employees interested in logistics are invited to attend. Tickets and information for the 5:30 pm dinner meeting may be obtained from Bill R. Ratledge, Ext. 7198.

Watch out for deer —and softball players

Motorists are urged to watch out for two sure signs of warm weather as they drive on and near company property—deer and softball players.

Deer wandering around company property add to the beauty of the area, but are a hazard. They ignore auto traffic.

Softball players, on the other hand, don't ignore traffic, but have a difficult time turning left off the highway into the recreation area. With nearly 100 softball teams using the diamonds, drivers need to be cautious.

Construction continues on building additions

Construction work and cafeteria remodeling will cause some inconvenience for employees at the main plant this summer.

"We apologize," said Robert H. Snodgrass, director of facilities and services, "but these projects are of paramount importance for us to continue and to expand our operations and our business."

Food service will be reduced at all main plant cafeterias as work on the engineering building kitchen and cafeteria continues. The kitchen is being expanded and new equipment added. The lower level cafeteria is being enlarged. The upper level cafeteria is being renovated.

Changes in food service will be posted on the portable bulletin boards to alert employees.

Direct traffic between the administration and engineering buildings has been cut off by construction. Employees may use the lobby entrances of these two buildings.

To help traffic, a new temporary walkway has been built along the north side of the fence east of the engineering building and a new stairway and door installed.

Work on the addition between the two buildings is scheduled to be finished in January 1983.

Excavation and foundation work for the SSB highbay/airlock is well under way with construction barriers and fences erected. Changes in the barriers may be needed when utility lines are connected and work on the building entrances begins.



Excavation for addition to the administration and engineering buildings has eliminated direct access between the two buildings. Work on the addition is on schedule, with completion scheduled for January 1983.

Workshop features NASA executives

Top NASA officials were key speakers at a quality assurance productivity improvement workshop hosted by the product assurance department at the Michoud division.

Featured were Maj. Gen. James A. Abrahamson, NASA associate administrator for Space Transportation Systems; Dr. Richard Sapp, director of the program assurance division in the office of the chief engineer at NASA headquarters; and Robert Lindstrom, manager of the Shuttle programs office at NASA's Marshall Space Flight Center.

Arthur L. Welch, Michoud division director of product assurance, was also a key speaker

and was co-chairman of the workshop with Sapp.

Purpose of the workshop was to share ideas and experiences concerning ways to improve contract incentives and motivation, documentation and information systems, and material review boards.

In addition to participants from NASA and Martin Marietta, representatives were present from United States Boosters, Inc., Rocketdyne, The Boeing Company, Thiokol Corporation, General Dynamics, McDonnell Douglas, and the Defense Logistics Agency.

National award given to Michoud division

The top aerospace film in 1981 was produced at the Michoud division.

The Aviation/Space Writers Association honored the film "Space Shuttle External Tank Production," and cited David E. Peri at the annual awards banquet in Ft. Lauderdale in May for writing, producing, and directing it.

Each year the association honors the best magazine, newspaper, and TV stories, and industrial films that examine and explain aviation and space issues and events.

Other winners this year were Time Magazine, The National Geographic, and the ABC and NBC television networks.

Employee athletes score in triathlon

Employee entrants in the Washington Park recreation center triathlon won the men's corporate division competition and took second place in the women's division.

Twenty-five teams competed in the event which combined a 800-meter swim, 15½-mile bicycle race, and a six-mile run.

Ronald E. Johns, Michael H. Manov, and Jeffrey Findle finished first in the men's corporate division with a time of 1:20:57. Laurie A. Fester, Peggy A. Miller, and Cynthia K. Pickering took second in the women's corporate division in 1:39:16.

Terry A. Heggy and Mary Lou Jordan took part in the individual competition with Heggy placing sixth in his age group.

May blood unit tops 1981 giving

Employees donated 139 pints of blood to the Belle Bonfils Mobile unit during its visit in late May—24 more pints than were given in May 1981.

The donations assured credit for employees, retired employees, and family members at the blood center.

Employees can still donate blood at the Belle Bonfils Blood Center, 4200 East Ninth Ave., or at 7500 West Mississippi from 10:00 am to 6:00 pm Monday through Friday.