

August 14, 1987 Number 16



Employees gather to celebrate rollout of the refurbished Titan II at an outside ceremony at Martin Marietta.

Martin Marietta unveils first refurbished Titan II

Martin Marietta Astronautics Group rolled out its first Titan II space launch vehicle, a refurbished missile hailed by Air Force Secretary Edward C. Aldridge Jr. as a key to the restoration of the nation's space launch capability.

"Today marks another crucial step in achieving assured access to space for our national security payloads," Aldridge said during a ceremony at Waterton on August 3. "We are counting on the Titan boosters to help us achieve a renewed capability in our space launch programs as soon as possible."

Aldridge, the principal speaker at the rollout ceremony, was joined by other senior Air Force officials and state and local officials. Thomas G. Pownall, chairman and chief executive officer, and Caleb B. Hurtt, corporate executive vice president, joined the visiting dignitaries on the platform adjacent to the Titan II.

"We're counting on the Titan boosters to help us achieve a renewed capability in our space launch programs as soon as possible," Aldridge said. "Today marks another milestone, using an existing asset—the Titan II ICBM; and modifying it as a small space booster is another example of the Department of Defense getting the most out of the defense systems for the taxpayers' dollar. The Titan II as an ICBM was a critical element of our deterrence of nuclear war, and with your help at Martin Marietta, it now becomes a workhorse as a space launch vehicle," he said.

"I believe that the Titan II will continue to have a key role in the future and predict we will go beyond the 13 vehicles we now have a contract for, because the missions the Titan II can perform are numerous and important," Aldridge said.

Martin Marietta is under contract to the U.S. Air Force, Space Division, to refurbish

deactivated Titan II intercontinental ballistic missiles for use as space launch vehicles. The contract with Space Launch Systems calls for conversion of eight Titan IIs, with an option for five more. The contract runs through September 1995.

The Titan II ICBM, from which the launch vehicle was remodeled, was originally produced more than 25 years ago and was returned to Denver in March 1986. The new, low-cost Titan II launch vehicle will be shipped this month to Vandenberg Air Force Base, Calif., for the launch of a military satellite as early as April 1988.

"Martin Marietta Astronautics Group and their Titans will play a key role in making sure the United States remains a number one space power. All of you can take great pride in the Titan II and in all the boosters which will be assembled here," Aldridge said.



Company signs first commercial launch-pad agreement with AF

Martin Marietta Corporation signed an agreement Aug. 3 with the U.S. Air Force to use Launch Complex 40 at Cape Canaveral Air Force Station, Fla., for Commercial Titan launches beginning in 1989. Secretary of the Air Force Edward C. Aldridge Jr., standing, far right, congratulates Richard Brackeen, president, Commercial Titan Systems, seated, far right. Participating in the signing are Col. Victor W. Whitehead, assistant for Expendable Launch Vehicles, Headquarters, Space Division, seated; Caleb B. Hurtt, Corporate executive vice president, far left; and Thomas G. Pownall, Martin Marietta Corporation chairman and chief executive officer.

INTELSAT signs launch contract for two commercial Titan launches

Martin Marietta Commercial Titan Systems has signed its first contract with the International Telecommunications Satellite Organization (INTELSAT) for the launch in 1989 and 1990 of two INTELSAT VI communications satellites aboard Martin Marietta's Commercial Titan launch vehicles. The two-part delivery contract is valued at approximately \$220 million, plus escalation costs.

"The signing of this contract marks a milestone in the nation's commitment to remain competitive in the worldwide launch vehicle market," said Richard E. Brackeen, president of Martin Marietta Commercial Titan Systems.

"The government's commitment to support the commercial expendable launch vehicle initiative has been a key factor in allowing us to provide the Titan—which we have built for more than 20 years for the Air Force and the National Aeronautics and Space Administration—to the commercial satellite community," Mr. Brackeen said.

The Commercial Titan is a version of the Titan III, which has recorded 130 successes in 135 operational launches for a 96.3% success rate.

The contract, signed on August 10, is the first for launch of a commercial communications satellite under license from the U.S. Department of Transportation's Office of Commercial Space Transportation.

Martin Marietta will build two Titans in Denver for launching the satellites and will

launch them from Air Force Launch Complex 40 at Cape Canaveral Air Force Station, Fla., under an agreement signed August 3.

Martin Marietta currently has seven other reservations for the launch of satellites on Commercial Titan, but the INTELSAT agreement is the first definitive contract to be signed. Among those who have deposited \$100,000 to reserve spots on Titan are Federal Express Corp., Ford Aerospace, and Hughes Communications, Inc. Hughes has announced it will use the Titan to launch the Japan Communication Satellite Company's JCSAT-2 during 1989. ■

Commercial Titan opens new office

Martin Marietta Commercial Titan Systems has announced the appointment of Diana H. Josephson, who has held senior corporate and federal government positions involving the commercialization of space, as director of a new Commercial Titan Washington office.

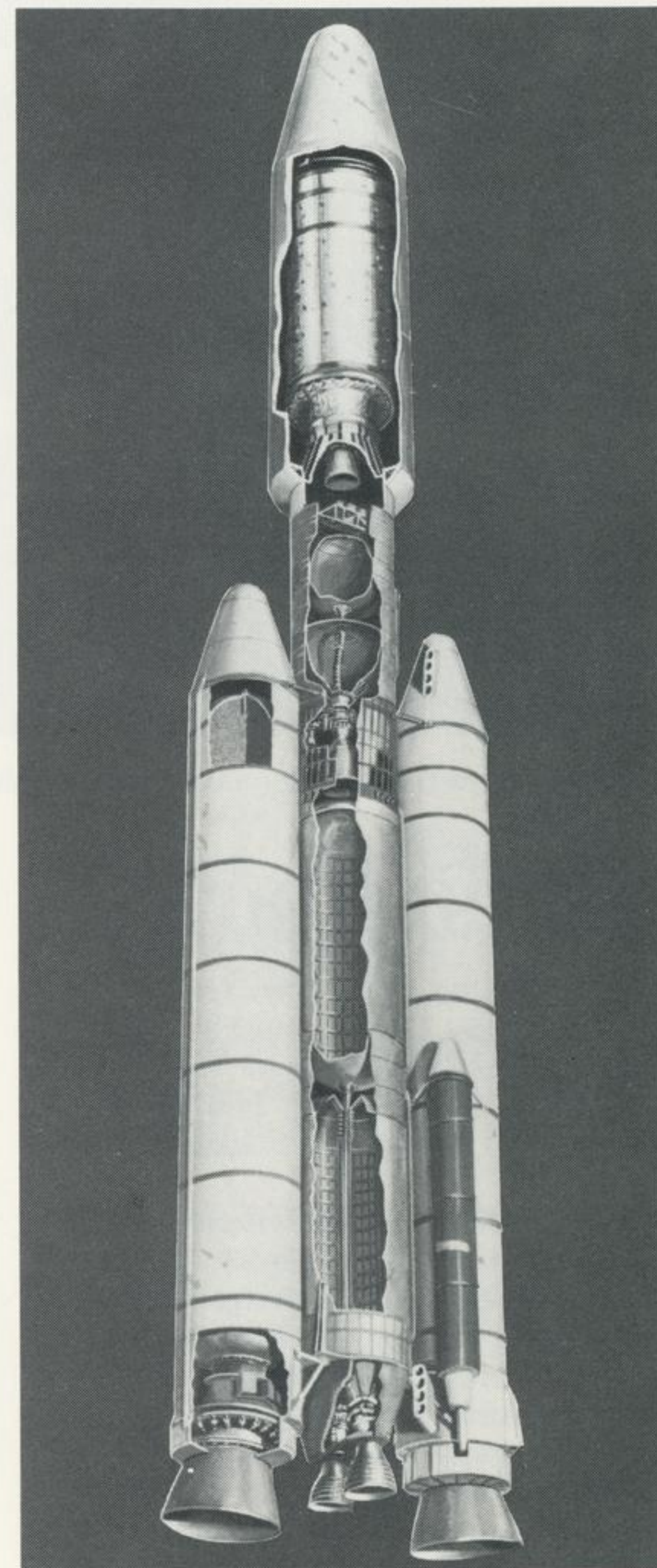
Josephson will report directly to Commercial Titan Systems President Richard E. Brackeen, who said, "I view this appointment as an important step in our program to commercialize the Titan launch vehicle. Diana Josephson brings directly relevant commercial experience to our new company." ■

Brackeen named committee head

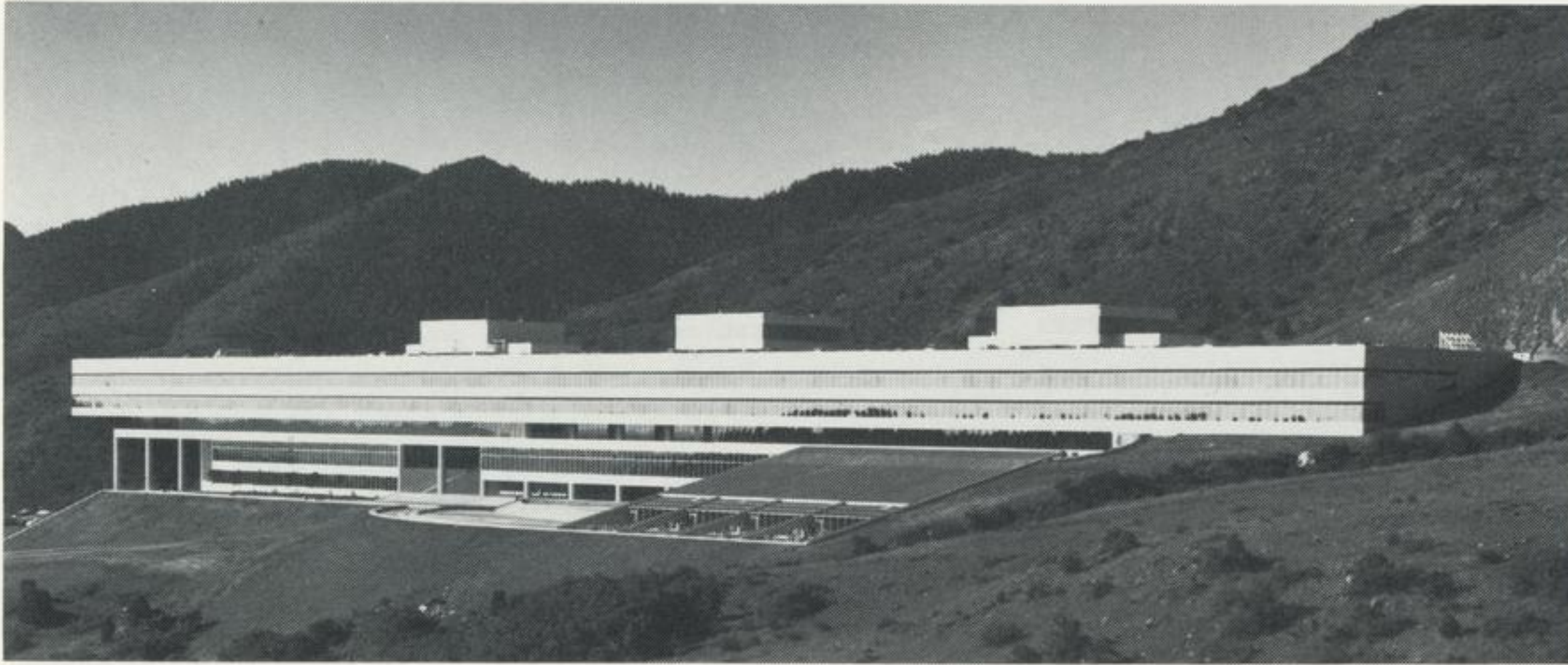
Secretary of Transportation Elizabeth Dole has named Commercial Titan Systems President Richard E. Brackeen as chairman of the Department's Commercial Space Transportation Advisory Committee.

In making the announcement, Dole said, "Mr. Brackeen has a long impressive career in the aerospace industry and has played a central role in establishing the Commercial Titan program for Martin Marietta. This experience makes him an excellent choice to head the advisory committee as we work to eliminate remaining government barriers to the development of commercial launch operations."

The advisory committee works with the Department to provide information, advice and recommendations on matters relating to all aspects of commercial space transportation. The members represent the launch vehicle, satellite, financial and insurance industries. ■



This artist's concept of the Titan III commercial launch vehicle shows a single INTELSAT VI communications satellite in the payload fairing. An onboard propulsion system moves the INTELSAT VI into its geostationary orbit.



Martin Marietta has purchased the Manville Corporate Headquarters property located in Deer Creek Canyon, about nine miles from the Waterton facility.

Martin Marietta to purchase Manville World Headquarters and property

Martin Marietta will purchase the Manville World Headquarters property in Deer Creek Canyon and plans to begin occupying the facility in October.

Sale of the property was approved August 7 by the Manville board of directors. Martin Marietta's board had previously approved the purchase.

Martin Marietta Astronautics Group will use the facility to house two of its operating companies (Strategic Systems and Commercial Titan Systems) and administrative functions of the group.

"The acquisition of the Manville headquarters building and adjacent property is an important move for us," said Peter B. Teets, President of the Astronautics Group. "Its

proximity to our facilities in Littleton and our main laboratory and manufacturing complex at Waterton makes it especially desirable."

"This move, and others related to it, means that we will be able to bring our entire Titan engineering and manufacturing team together in our Waterton facilities, making for a much more efficient operation," he added.

Martin Marietta will vacate some existing leased and owned space during the consolidation, including the Terrace Towers Facility, which Manville will occupy. Manville will begin moving employees to Terrace Towers in October.

The new Deer Creek facility will house more than 3,000 Martin Marietta employees.

Volunteers needed to help student projects

Enthusiastic employees with business savvy are needed to support Junior Achievement (JA) programs this fall.

The JA High School program offers students the opportunity to learn about running a business, developing leadership skills and selling a product or service.

Employees serve as advisers to a JA company for a 15-week semester, beginning in mid-October. The company meets once a week from 6:30-8:30 p.m.

Employees with a strong business background are also sought as consultants for Project Business. This program supplements a social studies class of 8th- or 9th-grade students by having the employee visit the classroom one hour a week for ten weeks, starting in late September.

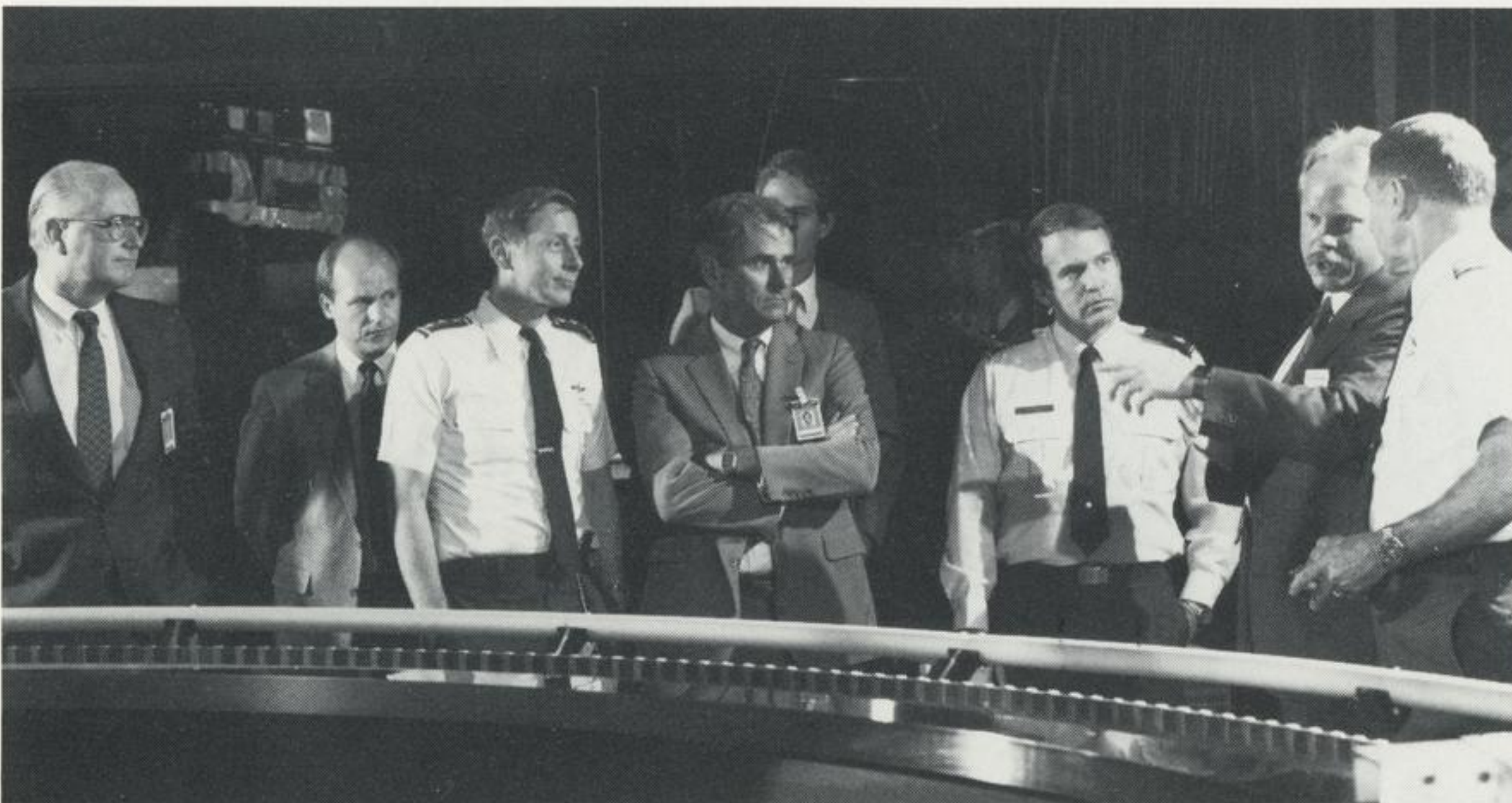
Interested employees should contact Lori Sharp, Ext. 7-6605, or 7-6750, before August 28. ■

Society names Moore manager of the year

Charles D. (Doc) Moore, System Safety manager, has been named 1986 manager of the year by the System Safety Society. The society is an international organization made up of more than 1,500 foreign and U.S. safety managers, analysts, and engineers.

The award is given annually to a member of the society who has made significant contributions to the system safety profession through development or implementation of effective management for a major system effort.

The award states: "Moore's wide range of contributions to the system safety profession...and his leadership in the planning and development of the system safety effort for the Peacekeeper Operational System...contributed immeasurably to the safety and successful launch of the Peacekeeper." ■



Gen. Abrahamson tours facility, rededicates R2P2 lab

Lieutenant General James A. Abrahamson, director of the Strategic Defense Initiative Organization in the Department of Defense, visited the Astronautics Group recently for program reviews. Gen. Abrahamson requested that the Rapid Retargeting Lab return to its original title of Rapid Retargeting/Precision Pointing Lab (R2P2). Shown here at the R2P2 simulator are, left to right, Peter B. Teets, president, Astronautics Group; Jerry Lindstrom, manager of business development for SDI; Gen. Abrahamson; Caleb B. Hurtt, corporate executive vice president; Gary Payton, executive assistant to Gen. Abrahamson and former NASA astronaut; Paul Shattuck, R2P2 program manager; and Joe Engel, consultant for SDIO and retired NASA astronaut.

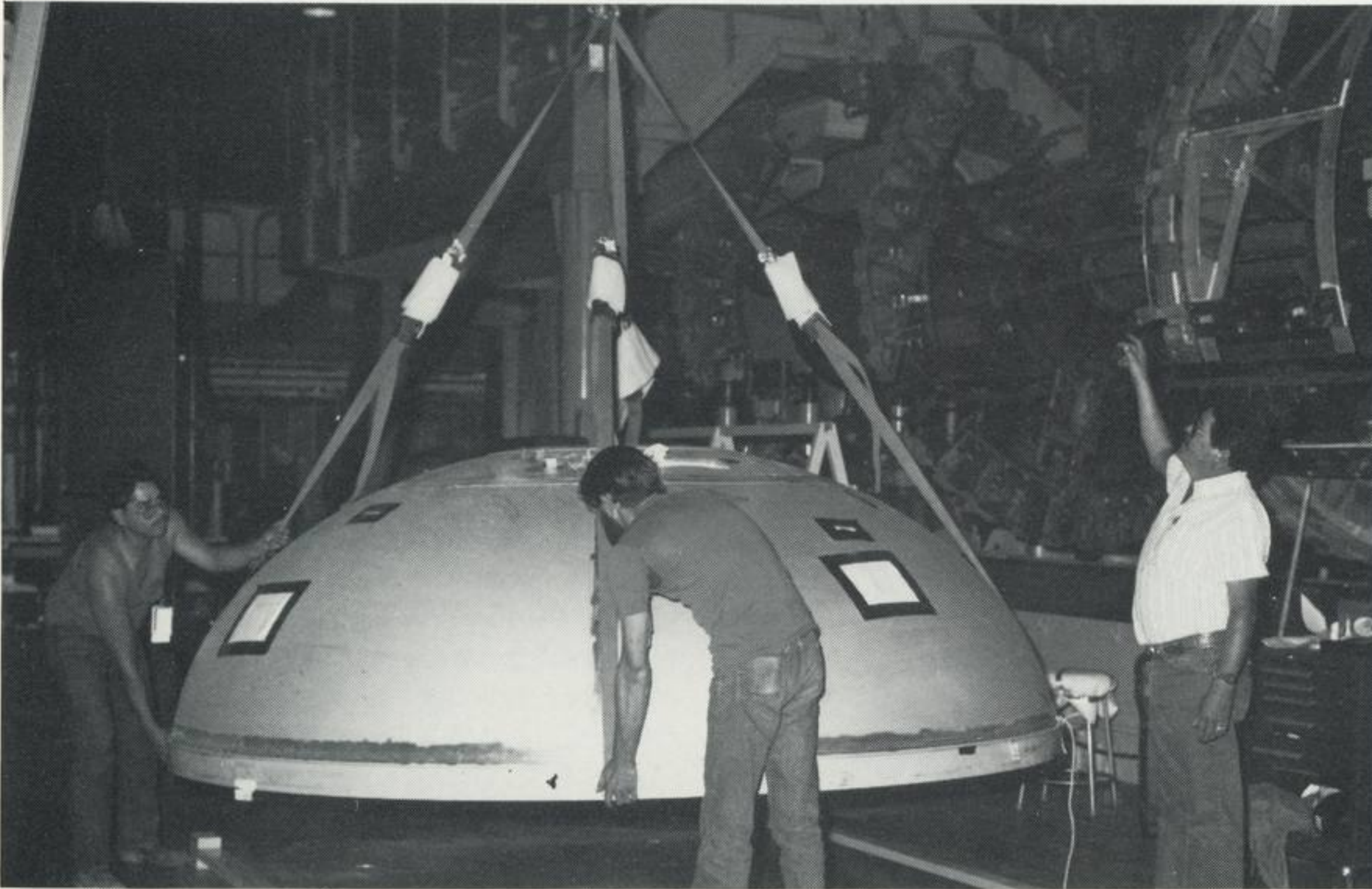
Credit union offers mortgage program

The Red Rocks Federal Credit Union is offering a full-service first mortgage program for purchasing a new home or refinancing a present home.

The credit union purchased a first mortgage finance company through the Credit Union Service Organization. The new company is Members Mortgage.

Members Mortgage will serve the members of the credit union and handle nonmember mortgage loans. Competitive rates and personalized credit union service will be offered by Members Mortgage, reports Susan Webb, credit union loan officer.

For more information, call 797-2900.



Ruben Vigil, Titan second-shift rigging supervisor, far right, signals for the overhead crane as Leroy Tapia, left, and Bob Young adjust lifting straps on a Titan IV Stage I forward fuel dome.

Titan tradition lives on with Titan IV

(Editor's note: This article by George Lawrence, manager, Titan programs manufacturing, is the fifth in a series of articles following a Titan IV through production.)

There are more than 7,000 piece parts in a Titan launch vehicle, and most of them are fabricated or assembled in Denver.

Many of these parts are large, bulky items requiring special handling techniques and heavy-duty lifting cranes to move the parts through the assembly process.

Bob Garcia and his crew of rigging specialists have been responsible for moving all Titan hardware—and almost all deliverable hardware at Waterton—for many years. These employees hold a number of specialized skill certifications, including crane operation, rigging, handling and heavy equipment operation.

Every movement of Titan hardware has a detailed move document. Each time a piece part or missile is moved, the rigging team walks mentally through their move before touching the hardware. Supervisors define positions for employees and what actions to an-

ticipate, much like a football coach going over a play book.

When the move starts, all eyes are on the move supervisor. Every person takes an assigned position. Crane operators climb the ladders to the crane cabs, 30 feet off the floor, and all activity is directed by the supervisor.

Through a series of hand signals to the crane operators and voice direction to the remainder of the team, objects as large as 12,000-pound missiles are lifted, turned and moved along the Titan assembly line and lowered with a feather touch onto rotation tools or movement dollies.

Not only are these specialists knowledgeable in lifting heavy objects, they coordinate and implement all moves on the road throughout the Astronautics Group or through Denver on the way to Stapleton or Buckley Air Force Base airports.

Although their efforts often go unnoticed, the rigging personnel's responsibility and the role they play in the Titan program are vitally important. ■

United Way contributions at work

Have you ever considered the number of high school students who need help with classwork to avoid failing certain classes?

Last year, Brenda Muniz was in danger of flunking out of Abraham Lincoln High School. The ninth grader tested at only a seventh-grade level and was failing miserably in several classes.

Now, just 14 months later, achievement tests place the 15-year-old Muniz at the 10th grade level. Instead of dropping out of high school, she has high hopes of not only graduating but continuing on to college.

Muniz credits her success to a new, innovative northwest Denver after-school tutorial program, the first of its type in this area. The program aims to reduce the local school dropout rate by helping disadvantaged Denver youth like Muniz improve their math and English skills.

Initial funding for the program was provided through a \$12,000 United Way grant.

If you'd like to help students or to learn more about the wide variety of volunteer services offered in the community, call the United Way Volunteer Center at 433-6060. ■

Shuttle support contract ends

The closeout of the Mission Integration Support Contract (MISC) this summer marked the end of a decade of Martin Marietta involvement as the prime Space Transportation System space shuttle integration contractor for the Air Force Space Division.

Initiated in 1977 as the Payload Integration Contract (PIC), MISC provided technical support for all phases of shuttle payload integration and operations for more than 45 primary and secondary Department of Defense payloads and upper stages, reports Dean Newman, MISC program manager.

Technical support included integration engineering, crew and support personnel training, mission operations, payload support equipment, communications, site support, safety, and security. In addition, MISC provided operational mission support for three shuttle missions.

MISC employed as many as 245 people, providing integration management and technical support for the Air Force in Denver and onsite at El Segundo and Sunnyvale, Calif.; Houston, Texas; and Cape Canaveral, Fla. The cumulative integration effort under PIC and MISC represents approximately \$186 million over the 10-year period.

"The company's heritage in STS operations has been significantly enhanced by the experience and expertise gained through the MISC program," Newman said. Al Vivona was deputy program manager, and Ray Bennington was manager of mission operations. ■

United Way receives Martin Marietta gift

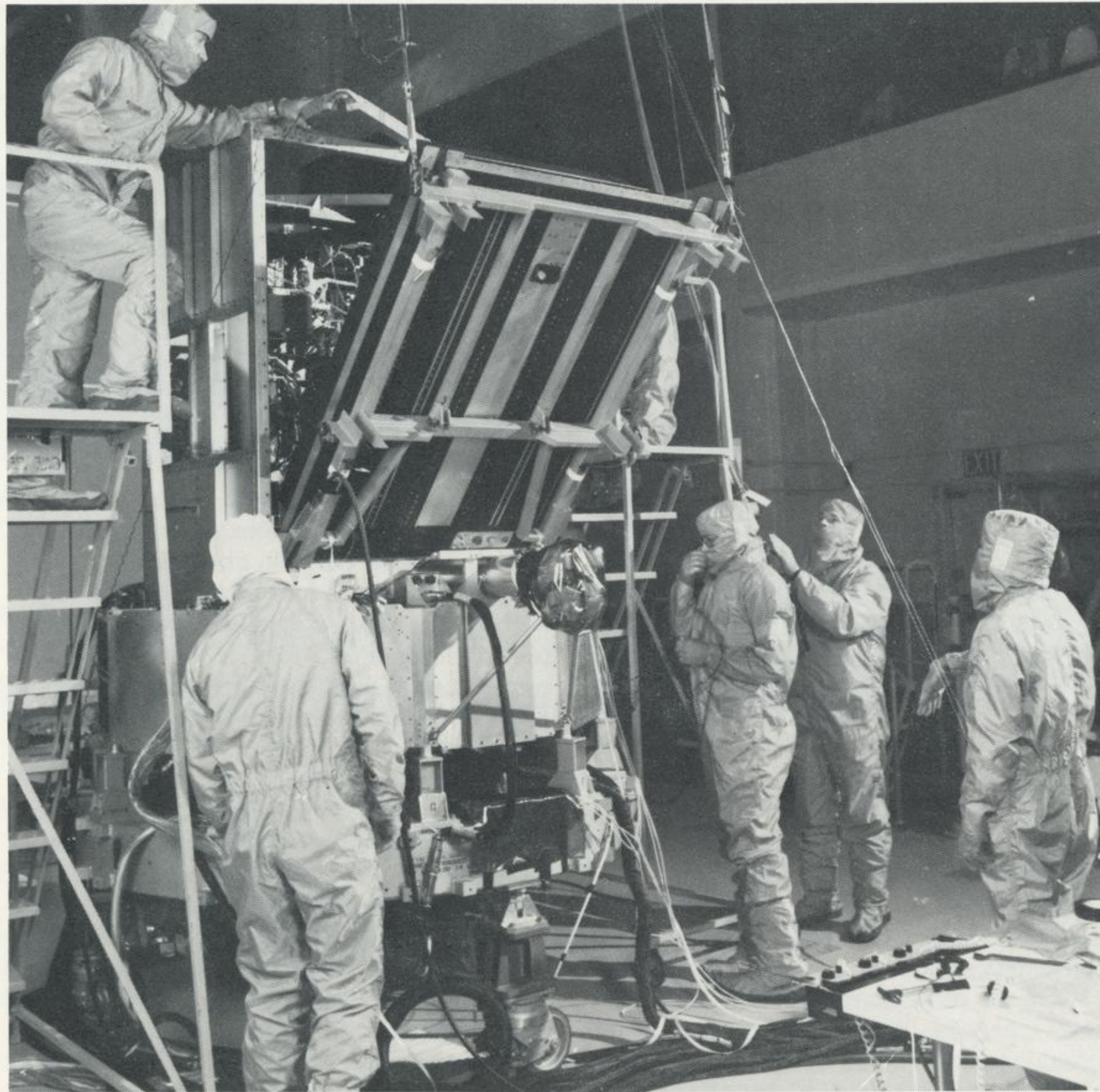
An \$8,000 grant from Martin Marietta Corporate Contributions is now in the hands of the United Way of the Central Coast in California and will help to support more than 60 of the area's civic charitable organizations.

"Our company has always been proud to participate in the communities where our employees live and work," said Felix J. Scheffler, director of Vandenberg Operations, Calif., after presenting the check.

Martin Marietta has been a strong supporter of the United Way and has contributed to area organizations for 27 years, Scheffler added.

The corporate gift is Martin Marietta's initial contribution for 1987. Employees working at Vandenberg Air Force Base and employees throughout the Astronautics Group will take part in fundraising efforts during the annual campaign scheduled to begin in early September. ■

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Synthetic aperture radar tested in Magellan

Employees recently installed electronics for the synthetic aperture radar, built by Hughes Aircraft Company, into the forward equipment module of the Magellan spacecraft. This phase of testing, called early radar integration, includes mechanical, electrical, commanding and radio frequencies compatibility checks. Under contract to the Jet Propulsion Laboratory, Martin Marietta is responsible for developing, assembling and testing the spacecraft, which will map the surface of Venus.



Employees commended for contributing ideas

Ronald B. Murphy, second from the left, and Natalie A. Ortberg were acknowledged recently by the Success Through Suggestions program for their cost-avoidance suggestions. Murphy recommended a method to manage surplus hardware. Ortberg suggested that the Small ICBM program approve automation of the telemetry processing system database. Shown with Murphy and Ortberg are, left to right, Gerald Mason, Charles E. Warren Sr., and John R. Adamoli, vice president, Small ICBM.

Planning degrees now offered

Under Martin Marietta's leadership, 21 local industrial and educational organizations have developed a seven-course curriculum for program/project planning. Metropolitan State College will offer the courses, using materials and instructors from the sponsoring organizations.

Of the more than 300 Astronautics Group planners, none have degrees in planning, said Santo B. Bertuzzi, director of Plans and Programs. "Courses and degree specialization in planning have not been offered by institutions of higher learning—a situation that is about to change," he added.

The first course in this series will begin Aug. 25 at the Auraria Campus. It will be taught by Paul Hunter, Astronautics Group, and Charles Messer, Adolph Coors Company. The preliminary course, Fundamentals of Systems Planning, will introduce students to the wide range of activities performed by professional program planners.

Although the courses were initiated to prepare people to become planners, anyone who needs the information may enroll. If the course material is job-related, costs for tuition, books and fees can be reimbursed by Martin Marietta. Contact the Education office for details.



Peacekeeper transportation and handling hardware completed

Ceora Scharrer, a transportation and hardware planner with Strategic Systems, stands next to a pneumatic control cart, the last piece of Peacekeeper transportation and handling equipment. The cart completes the transportation and handling portion of the Peacekeeper contract with the Air Force.

Employee Services/Recreation

Mile High L5 Space Society—The group will hold a picnic barbeque and star party at 6 p.m. on Friday, August 14, in the recreation area. After dark, members of the Denver Astronomical Society will offer a view of space with telescopes. The \$3 cost per person (children are half price) includes hamburgers, hotdogs and beverages. Paper plates, utensils and condiments will be provided. Bring one item per family (salad, side dish or dessert). RSVP to Jeff Zerr, 790-3857.

Skyline Hunting & Fishing Club—The club will hold hunter education classes from 7-9:30 p.m. August 18-24 on weeknights in the second floor vending/lunchroom at DSC I and 8 a.m. to 1 p.m. on Saturday at the Skyline Hunting Club Range. The cost is \$7. For information, call Dick Benson, 985-3728 (home). Employees do not need to preregister. There must be a minimum of ten students at the first class to continue the classes; students must attend all five classes.

CWA—The Career Women's Association is sponsoring a videotaped series entitled "Investment in Excellence." The series, based on Lou Tice's self-motivational lectures for the Pacific Institute, features Barbara Weightman as facilitator. The remaining two meetings will be held from 5-8 p.m. on Aug. 20 and Sept. 3 in the Presentation Room of the Space Support Building. Call a CWA booster or Eileen Tucker, 798-8286 (home), for more information.

Mixed Bowling Leagues—The next meeting will be at 5 p.m. on Tuesday, August 18, in the Brown Bag Room located on the second floor at DSC I. Leagues will bowl at Green Mountain Bowl, Kipling and Mississippi, at 6:00 p.m. on Tuesdays. League play starts on Tuesday, September 1. Leagues will consist of five-person teams. The meeting's agenda includes discussing changes in league rules, meeting new bowlers and filling out team rosters. Call Joanne Moore, Ext. 7-9718 or 935-8577 (home).

NAPA Auto Parts—The stores offer a discount to Martin Marietta employees with the preferred customer discount card available from the Employee Services office and from volunteer Recreation representatives.

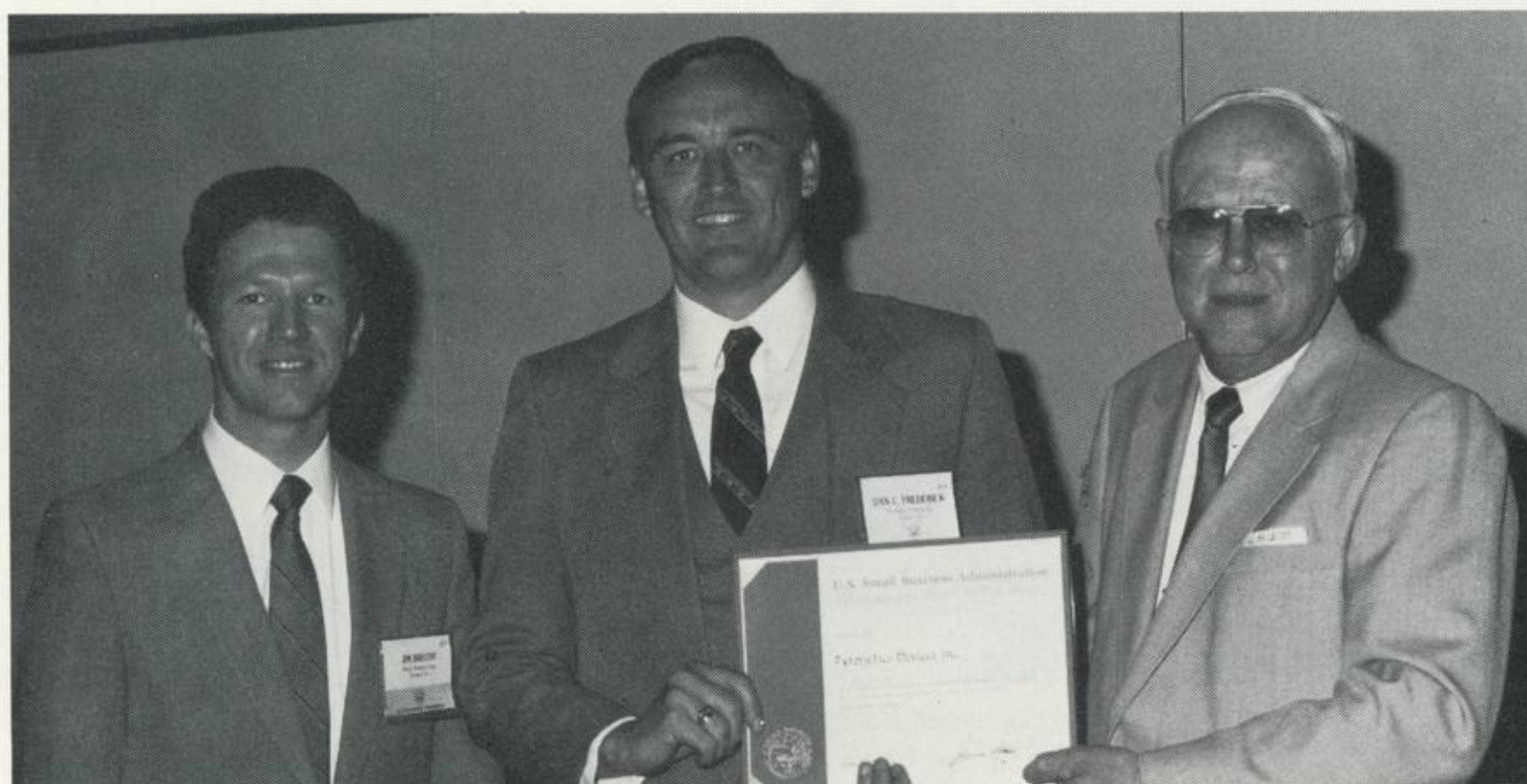
Ada Users Group—The Martin Marietta Ada Users Group will hold an organizational meeting at 5 p.m. on Wednesday, Sept. 2, in Conference Room 133, Software Center of Excellence, Littleton Systems Center. All Ada enthusiasts are invited to attend. For more information, call Sushma Bockhorst, Ext 1-6513.

Singles Together—The August meeting will be at 5:00 p.m. Thursday, August 20, in the clubhouse near SouthPark. Humorist and motivational speaker, Don Kagy, will address the group. His topic is 'No Second Chance at a First Impression.' Refreshments are provided. Single employees and guests are welcome. For information, contact Theresa Ford, Ext. 1-5883.

Door Prizes Unclaimed—There are several door prizes that have not been picked up from the Martin Marietta Partner Best Ball Golf Tournament on May 16th. The following winners need to stop by Recreation, Eng. Bldg. Room 124, or call 7-6605: D. Kolves, C. Nuss, S. Caruso, G. Hudson, D. R. Lewis, G. Bloom, G. T. Marsh, M. Ivone, R. Hattz, J. Latfoldes, S. Duty, A. Sellke, D. Bourcier, A. Taylor, J. Newcomb, T. Moore, W. Eberly, M. Zitek, R. Sandstrom, A. Park, J. Sutherland, G. Unrein, R. Galbraith, C. Flowers, F. Lecker, S. Koons, F. Pamini, H. Crofford, J. Peterson, F. Blassingame, C. Wilcoxson, B. Middleton, J. Robb, D. Harris.

Golf—Results of the Martin Marietta Open Golf Tournament held at the Raccoon Creek Golf Course on August 1 are as follows: Men's Low Gross, John Pauly; Men's Low Peoria, Randy Sprague; Men's Low Handicap, John Mitchell; Men's Low Gross Senior, Norm Wright; Men's Low Peoria Senior, Ken Shupe; Men's Low Handicap Senior, Joe Cerny; Ladies' Low Gross, Katherine Leigh; Ladies' Low Peoria, Barbara Bowman; Ladies' High Gross, Arlene Scales; Men's Long Drive, Greg Secora; Senior's Long Drive, Noel Rogers; Ladies' Long Drive, Barbara Bowman; Men's Closest to Pin, Bob Zenk; Senior's Closest to Pin, Joe Cerny.

Scratch Bowling League (150 or Above)—The league will play at Bowlero Lanes, 5480 W. Alameda, at 9 p.m. on Tuesdays. League games of four-person teams will begin in September. If interested, call Recreation, Ext. 7-6605 or 7-6750.



Small Business Award goes to Pyronetics

J.A. Brecht, manager of Materiel Support Services, left, joins Dan C. Frederick, Pyronetics Devices, Inc., center, and Howard Chase, Region VIII administrator, U.S. Small Business Administration, at the recent SBA 20th Annual Conference in Washington, D.C. Pyronetics Devices, Inc., nominated as Martin Marietta Astronautics Group's "Small Business of the Year," was given the SBA's "Administrators Award for Excellence" for outstanding small businesses.

FEAT saves fuel and cleans air

On Aug. 18-21 employees will have an opportunity to have their cars tested at Waterton, free of charge, to determine the fuel efficiency ratio.

The Fuel Efficiency Automobile Test (FEAT) system uses carbon monoxide and carbon dioxide detectors to determine the gasoline efficiency of a car as it drives through an infrared light beam.

The free test will calculate the amount of fuel savings that would result if a car were properly tuned. The tests take 60 seconds each, and will take place from 6 - 8:30 a.m. on August 19, 20 and 21, and from 3 - 4:30 p.m. on August 18, 19 and 20. Look for a van that houses the computer air monitoring system in the new parking lot across from the Technical Support Building. Results will be immediately available.