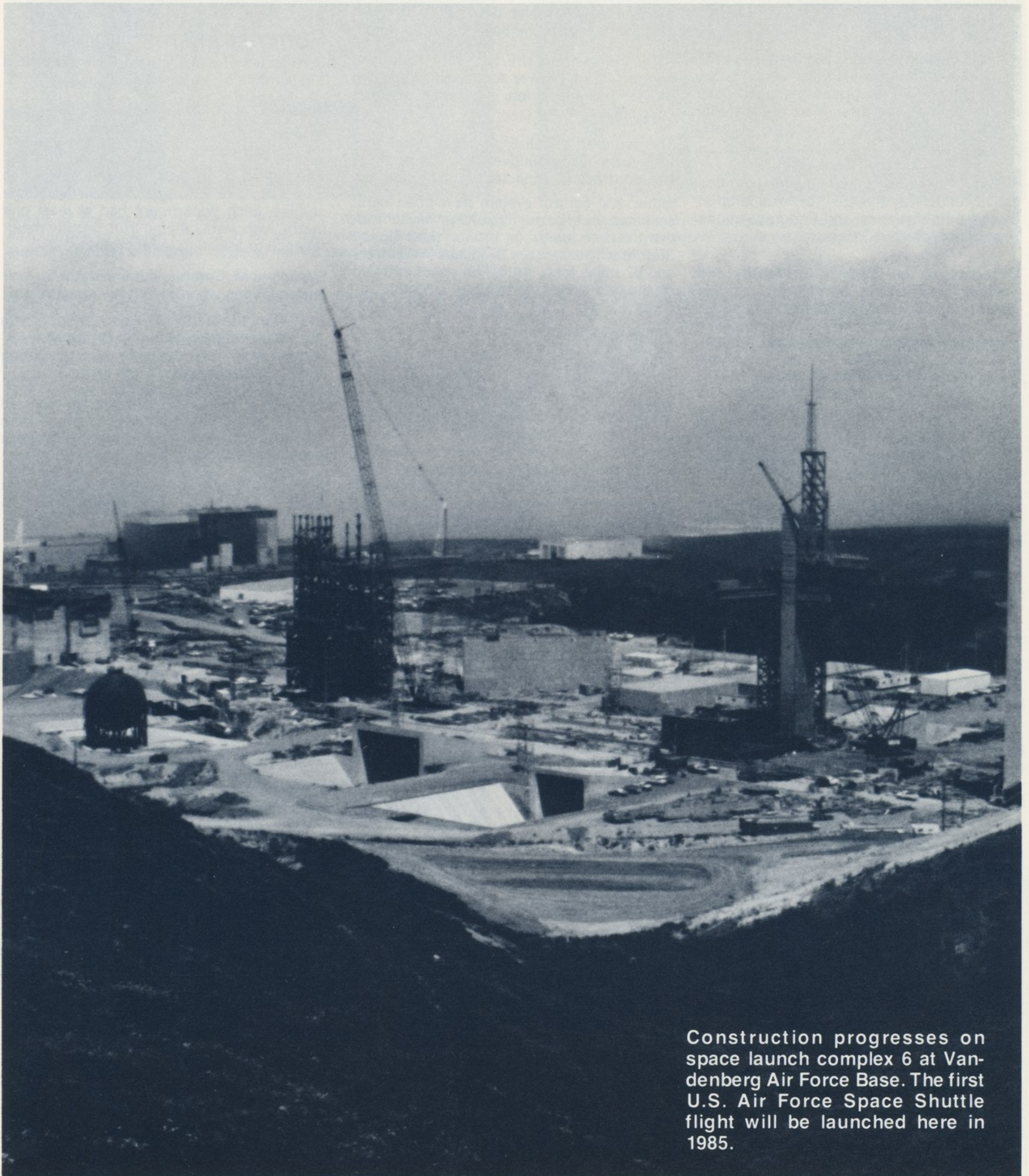


MARTIN MARIETTA

# news

DENVER AEROSPACE

NUMBER 17/1982



Construction progresses on space launch complex 6 at Vandenberg Air Force Base. The first U.S. Air Force Space Shuttle flight will be launched here in 1985.

# NASA program gets space station study contract

Denver Aerospace is one of eight companies awarded space station study contracts by NASA headquarters.

The study will be managed here by Sherman R. Schrock, who was also the proposal manager. The 30-member team, working at Greenwood Commons, is part of the NASA programs organization.

"This is a significant win because it puts us in the space station competition," said Charles D. Brown, NASA programs manager. "We will have six months to prepare our material and then participate in two months of briefings and reviews."

The study is part of a space station planning activity underway at NASA, for consideration by the Administration and Congress as the next major initiative in space.

Objective of the study is to identify and analyze the scientific, commercial, national security, and space operational missions that could be most efficiently conducted by a Shuttle-tended, permanent orbiting facility.

Value of the firm fixed-price contract is \$787,000.

"Winning this contract is the first of what we hope is a series of new business awards," Brown said. "We have several opportunities on which we are awaiting word."

A proposal on the upper atmosphere research satellite (UARS) was submitted July

28, the same day as the one on space station. Another proposal—for tethered satellite—is nearing completion of the source evaluation process.

The UARS proposal is for support to NASA's Goddard Space Center in defining the spacecraft. NASA is considering re-using either a Landsat spacecraft or the Solar Maximum satellite to reduce the costs for the mission.

After completing the two-year proposed support effort, Denver Aerospace expects to bid for the spacecraft integration and test contract.

The tethered satellite proposal culminates four years of competitive work. The award of the contract is expected soon. Using the tether and control system developed here, satellites could be put into and retrieved from orbit either lower or higher than Space Shuttle's. The tether is .07 inches in diameter and 62 miles long. An Italian spacecraft will be the first to use the tethered system.

Venus radar mapper is a scaled down version of the Venus orbiting imaging radar spacecraft proposed earlier. When the VOIR program, which was won by Denver Aerospace, was curtailed, the company began work with the Jet Propulsion Laboratory to reduce costs by simplifying the spacecraft and its mission. The successful effort has been reviewed by NASA, and a decision to proceed or not is expected soon. Venus radar mapper would produce a topographical map of Venus, using radar to penetrate the planet's cloud cover.

Work is continuing on the teleoperator maneuvering system to be used with Space Shuttle. The TMS is an automated spacecraft that would move payloads great distances from Shuttle. It is a reusable vehicle that also could be used to retrieve spacecraft or perform maintenance on them. It could be left in orbit between Shuttle flights.

## Summer interns cited

Certificates of achievement were presented 116 summer interns at a luncheon August 13.

James W. McAnally, head of technical operations, spoke at the event, commenting on the successful completion of the program.

The interns have been working here since June, and are leaving to return to college studies. Each department had at least one intern, with work ranging from ground maintenance to assisting in laboratories.

Roseanne M. Summa, administrator for college relations, coordinated the program.

"We want the students to learn about Martin Marietta and become familiar with the working environment while we are providing them summer income," she said.

More than 1000 applications were received for the program. Ten of those accepted were through the Colorado Alliance of Business summer jobs program.

Four of the interns have been offered jobs here when they complete studies in December.



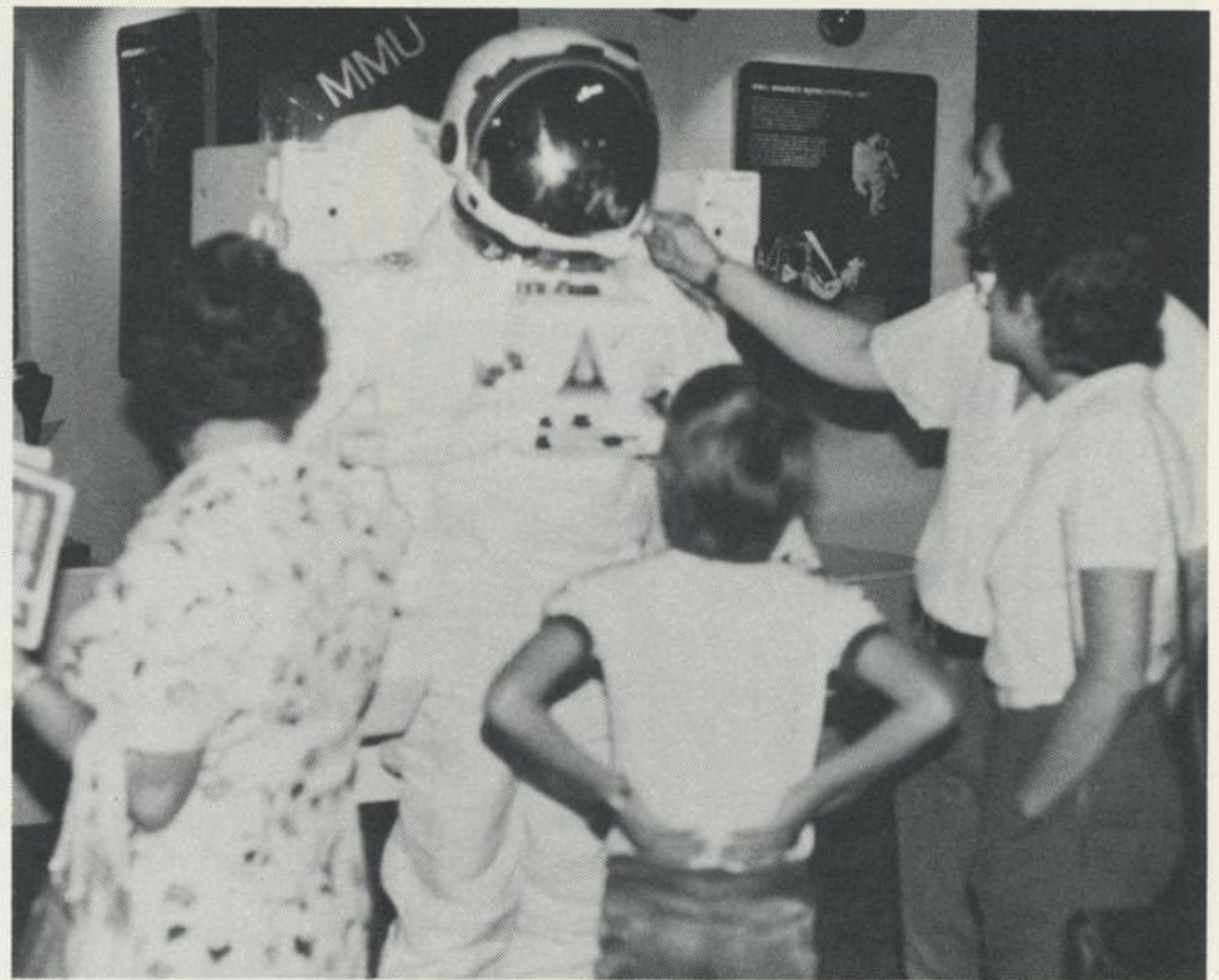
Following a dinner in the executive dining room given in their honor, 40 and 45 years service award winners gathered for this photograph with their wives and H.F. Keyser, vice president and general manager of the strategic systems division. From the left are William H. Dowe, 45 years, and his wife, Jeanne; Ernest J. Koltay, 45 years, and his wife, Sarah; Milton H. Sniegowski, 45 years, and his wife, Patricia; R.V. Charles, 45 years, and his wife, Violet; Raymond T. Crew, 45 years, and his wife, Betty; Keyser; M.J. Lecker, 40 years, and his wife, Dorothy; and W.E. Chenworth, 45 years, and his wife, Betty.



Honored at a luncheon for 30 and 35 year employees hosted by President Norman R. Augustine were, standing left to right, Fred R. Bennett, Jr., 30 years; John D. Goodlette, 30 years; R.C. Ensor, 30 years; J.G. Worman, 35 years (retired); Lewis J. Moyer, 30 years; Augustine; William T. Gansert, 30 years; and Vincent J. Moravek, 30 years. Seated, left to right are William V. Foley, 35 years, M.Z. Neely, 30 years; Betty B. Hilton, 30 years; Ray Rhodes, 30 years; Mike J. Gordon, 30 years; and Kyle J. Kemp, 30 years. Not present were 30-year honorees Ted Zen, B.J. Becker, Daphne Gillison, and B.L. Bogema.



Many of the visitors to Martin Marietta's UNISPACE exhibition succumbed to the temptation to lift the astronaut's sunshade. The exhibit included a full-scale model of the manned maneuvering unit.



Viking lander and an exhibition of photographs from the surface of Mars attracted an international audience at UNISPACE in Vienna earlier this month.

## MMU featured at UNISPACE '82 exhibit in Vienna

UNISPACE '82, the Second United Nations Conference on the Exploration and Peaceful Uses of Outer Space, was attended by more than 100,000 people during two weeks of the exhibition in Vienna, Austria, August 9-21.

Martin Marietta's major exhibit items, full-scale models of the Viking Mars lander and the manned maneuvering unit, were key attractions in the U.S. exhibit, which included participation by 12 U.S. aerospace firms and NASA.

Frank L. Williams, advanced programs direc-

tor at the Michoud division, presented a paper on "Space Shuttle external tank applications in space" in sessions organized by non-governmental organizations. Models on various applications of the external tank were also a part of the Martin Marietta exhibit.

On Tuesday evening, August 10, the United States delegation, headed by James M. Beggs, NASA Administrator, hosted a gala presentation on the U.S. space program for the 1200 official delegates to the conference from all over the world.

Master of ceremonies for the evening was author James Michener who spoke on "The Impact of Space on Mankind." STS-4 astronaut Henry Hartsfield narrated the official film of the STS-4 mission, and astronauts Dr. Anna Fisher and Dr. William Fisher delivered a joint presentation on "The Challenge of the Future: To Work in Space."

The program closed with a filmed message from President Reagan, and the evening ended with a buffet in the U.S. exhibit area.

## MX closely spaced basing organization in place

Organization for the closely space basing project directed by H. Edwin Sparhawk is now in place.

"Between now and the system design review in April 1983, we will operate as a unit to conduct the system design trade studies for our project," says Sparhawk.

The organization is a part of strategic systems division headed by H.F. Keyser, vice president and general manager. Sparhawk reports to Stanley F. Albrecht, director of systems integration and test.

Closely spaced basing initially puts 100 MX missiles in 100 superhardened concrete silos that are 1800 to 2,000 feet apart. This forces attacking weapons to arrive in close proximity to each other. The effects of one enemy weapon detonation will disable or destroy weapons will follow, limiting the size and pace of an attack, and promoting MX's survival and counter-strike potential. After 1988, 900 additional silos may be built to enhance system survivability through concealment.

"I think we have a super team of about 200 now," says Sparhawk. "Many of our people have been together for up to six years; and other good people have come from as-

sembly, test, and systems support and other locations. If we get all the work we are bidding, we could easily go to five or six times that number by the end of next year. The excellence of the study and analysis we do in the system definition phase will determine how much work we get."

In October, the Ballistic Missile Organization of the Air Force will decide how much work currently under study will be awarded Denver Aerospace for full scale engineering development.

"We have a high level of quality control support and early production planning," said Sparhawk.

"We have a great opportunity to perform in outstanding fashion for our client, the U.S. Government."

Key people in the new organization are William Richter, systems engineering; Ronald Drobnik, mechanical engineering and design integration; Arthur Rosener, shock isolation system; Loman Park, transportation and handling equipment and operational vehicles; Walter Powell, test planning; Cecil Schumaker, electrical engineering; and H.E. Toney, production operations.

## Performance sharing plan unit values set for July

Unit values for the Performance Sharing Plan reported as of July 31, 1982 were:

Fund A (Indexed Equity):	1.3948897785
Fund B (Fixed Income):	1.5438914389
Fund C (Martin Marietta Stock Fund):	1.0009864747

### MARTIN MARIETTA NEWS

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DENVER AEROSPACE  
P. O. Box 179—Denver, CO 80201

August 27, 1982

## Education assistance helps employees earn university degrees

Robert A. Thomas, space and electronics systems, earned a doctor of philosophy in civil engineering from the University of Colorado; and six other employees recently earned college degrees through the company educational assistance program.

Also earning a degree from the University of Colorado was A. Burton Allerton, mechanics, with a master's degree in civil and environmental engineering.

Cary D. Pao, space launch systems, earned a master's degree in business management from Pepperdine University, Malibu, California.

Regis College graduates were David S. Clark, electronics, who earned a bachelor's degree in business and Stanley A. Norton, strategic systems, with a bachelor's degree in technical management.

Pamela A. Coffey, strategic systems, received a bachelor's degree in accounting from Metropolitan State College.

Nancy V. Jones, space and electronic systems, received an associate degree in word processing from Arapahoe Community College.

Eligible employees are encouraged to participate in degree-granting college studies applicable to their work.

For information about the educational assistance program, courses offered at area colleges, and tuition eligibility requirements, consult the Martin Marietta education services catalog, or call Dorothea E. Gibson or Bette L. Wooster, education services, Ext. 4258.

## Central City Opera aided by grant

A Denver Aerospace check for \$25,000 was presented to E. Atwell Gillman, chairman of the board of the Central City Opera Association August 14 by John H. Boyd Jr., director of public relations.

The gift will help underwrite the estimated cost of \$300,000 for one opera production in Denver, to highlight the 50th anniversary of the Opera Association as a major area cultural organization.

The association was founded in 1932 to preserve the historic Central City Opera House and promote music in the Denver metropolitan area. It initiated two years of opera productions in Denver in 1976. Success of these performances confirmed audience interest in opera in Denver.

The board of directors has announced plans for production of two major operas in 1983 and 1984 and three in 1985, in addition to continuing the festival season in Central City during the summer.



*Michoud creative illustrator Larry Songy, left, shows his delight as Space Shuttle Astronaut Richard O. Covey pins a Silver Snoopy award to his tie. Twenty-four Michoud employees received the award for their part in manufacture of the external tank.*

*The Silver Snoopy award, created by the astronauts during the Apollo program when they adopted Charles Schultz's cartoon character as their mascot, goes to government and industry personnel who have made a valuable contribution to manned space flight.*

## Summer employee simulates nerve process

Summer intern and employee daughter Shari Yablonski turned on a computer to nerve processes at the University of Colorado at Boulder last spring.

Using computer simulation of a nerve cell network to model the physical processes of learning and memory, Shari embedded two memory traces in the same nerve network to determine if she could repeat a certain firing pattern by selective retrieval.

The success of this experiment resulted in her presentation of the results to eight visiting Soviet neuroscientists.

Shari will continue this work as she earns her bachelor's degree in chemical engineering this year, and will go on to seek a master's degree in biopsychology. This summer, Shari worked as an intern in the chemistry area of the quality lab. Her father, James R. Yablonski, also works in quality and safety.



*The Pacific Conservatory of Performing Arts Theatre at Allan Hancock College has received a \$3000 Martin Marietta Corporation grant to assist in its current production effort. The check was presented by John P. Murphy, left, Vandenberg operations director, to George Howard, center, the college vice president, and Donovan Marley, PCPA production director. The presentation was made on the set of "School for Scandal," an 18th century comedy, one of the theatre's summer productions.*

## Employees honored for MX test work

Twenty employees were honored recently for "very special and significant contributions" to the strategic division MX system test project at Vandenberg Air Force Base.

Awards of excellence were presented by H.F. Keyser, vice president and general manager of the division, and by J.R. Adamoli, director of the project.

Those honored:

Program support: S.M. Councilman, V.F. Diaz, and N.P. Totman.

Test engineering: E.J. Cooper, J.H. Stahlhut, E.F. McGehee, N.F. Walker, and S.L. Wilkinson.

Quality assurance: R.L. Barry, R.D. Horton, and S.D. Phelan.

Test support: R.L. Arnold, G.E. Bryant, and F.E. Clymer.

Test operations: F.A. Abeyta, J.C. Axtell, F.L. Holmes, C.L. Rogers, and J.F. West.

Project support: B.J. Maddox.

## Traffic congestion possible at concert

Employee ticket holders for the Denver Symphony Pops concert featuring Marilyn McCoo September 12 at 8:00 p.m. are advised to arrive at McNichols Arena no earlier than 6:00 p.m.

Traffic congestion before 6:00 is likely, as fans will then be leaving Mile High Stadium after the Denver Bronco-San Diego Charger home game.

Arena doors open at 6:45 p.m. Concession stands will be open. All seats are general admission.

Parking costs \$2.00 per car. Those with physical disabilities may park in the east lot, lower level, and take the elevator to the main floor where special areas are designated for wheel chairs.