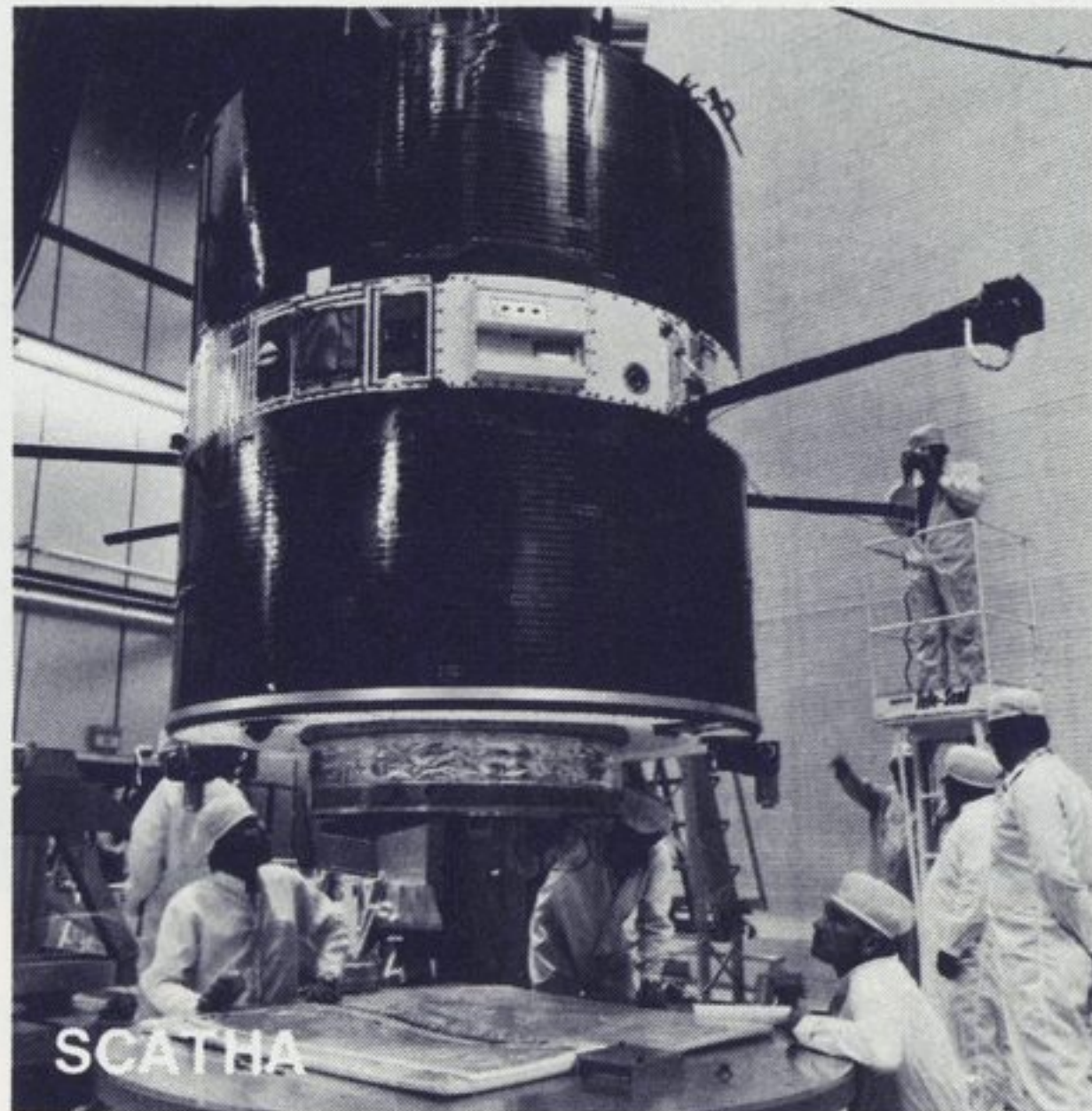


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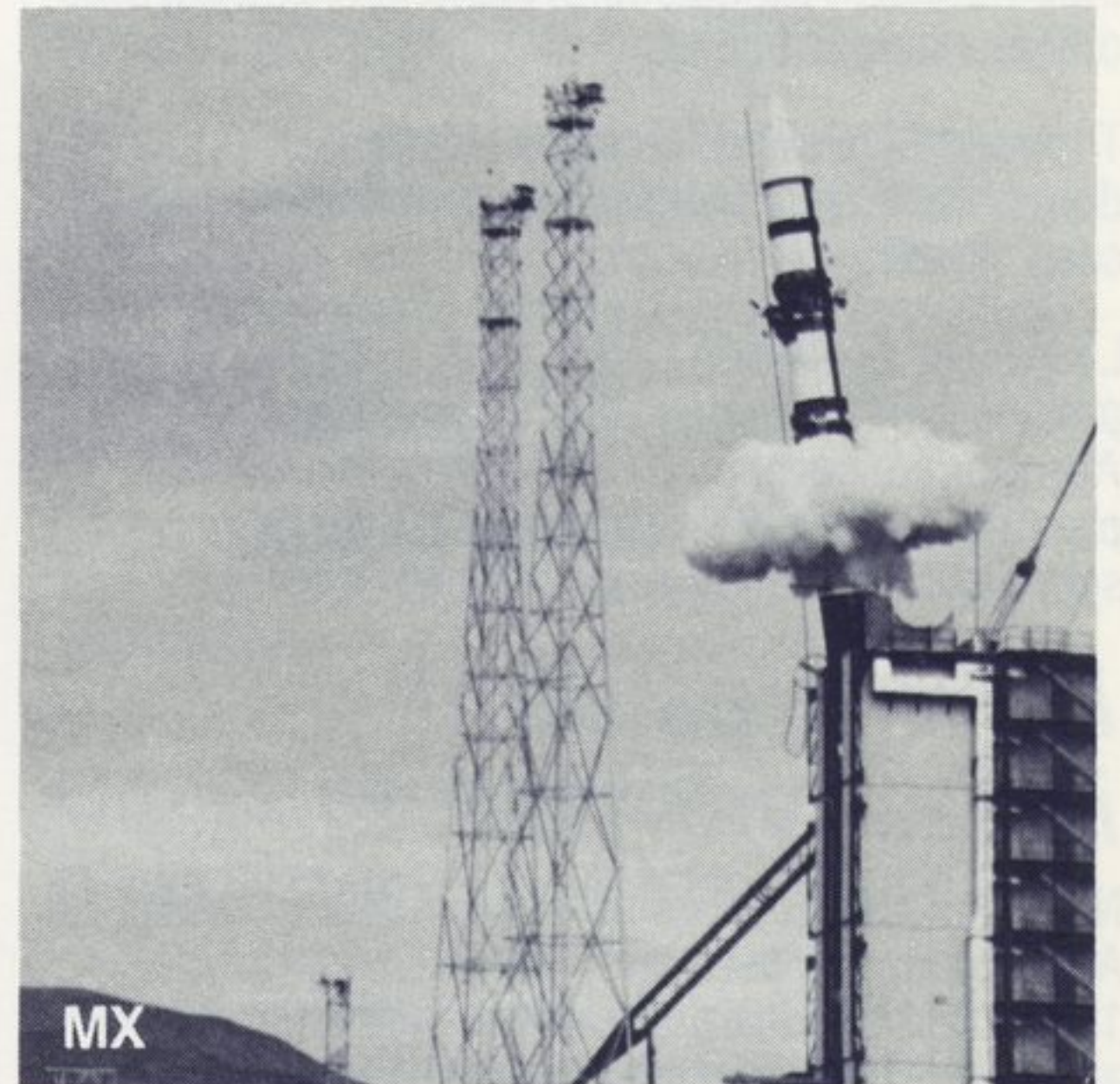
## The Hurtt years



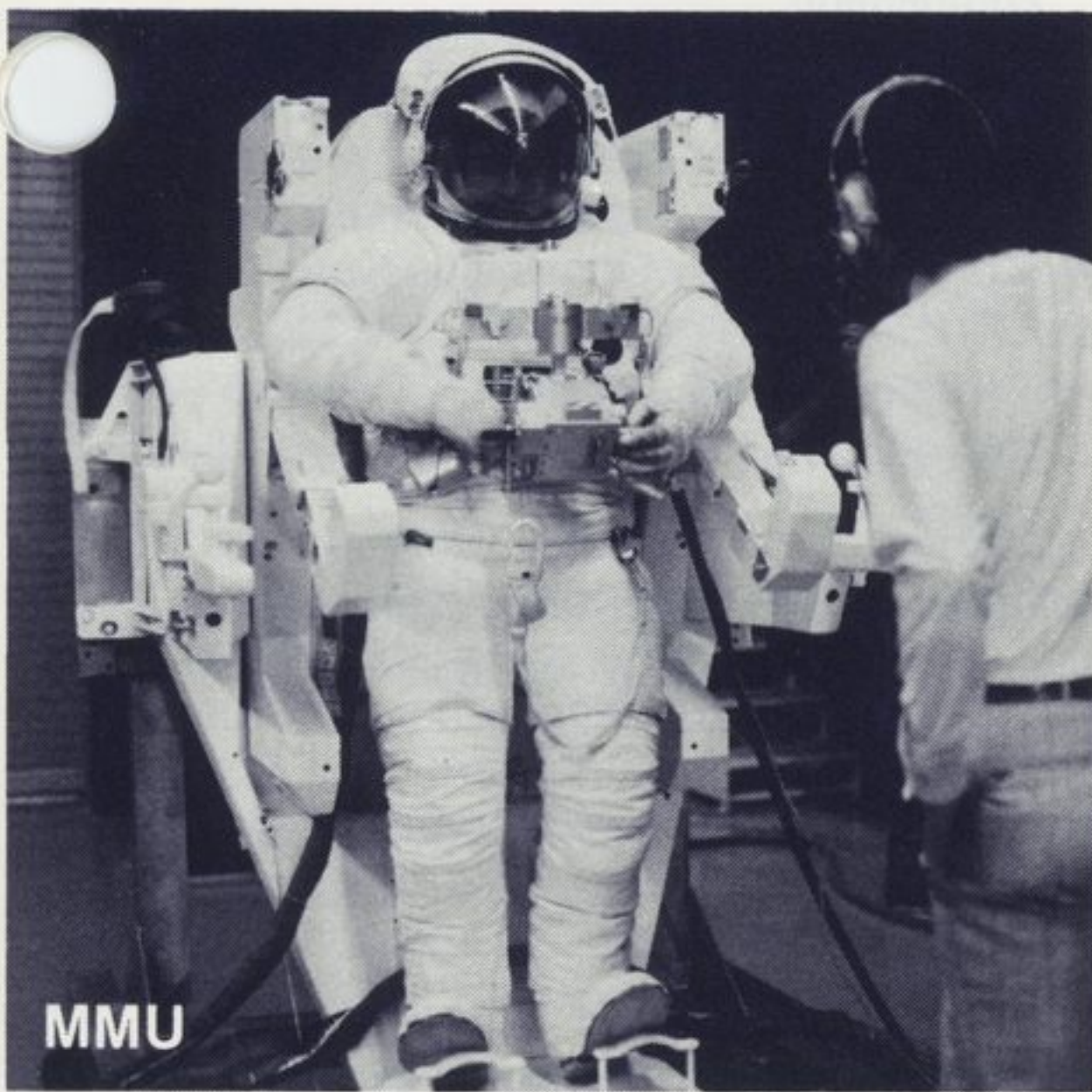
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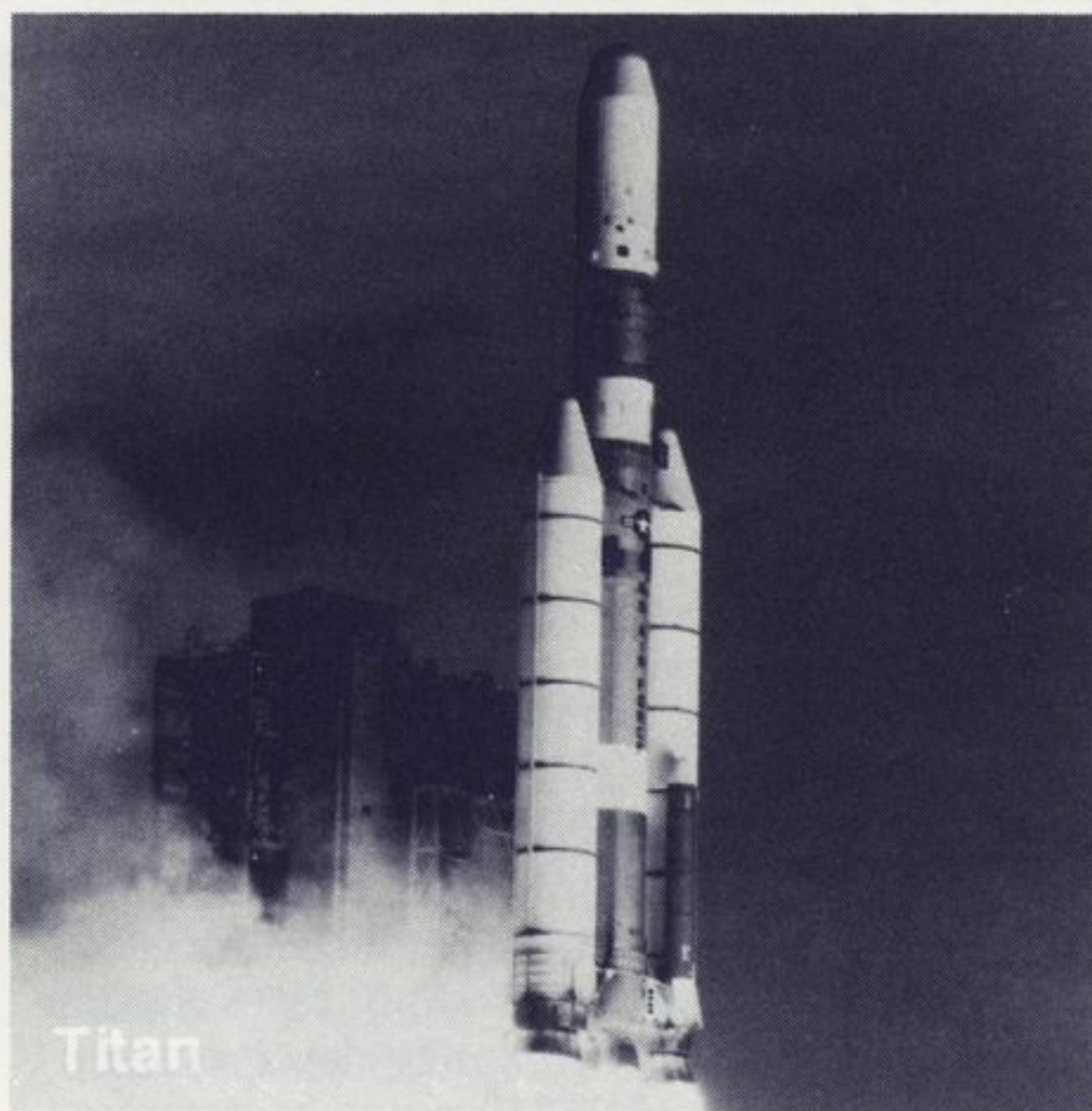
SCATHA



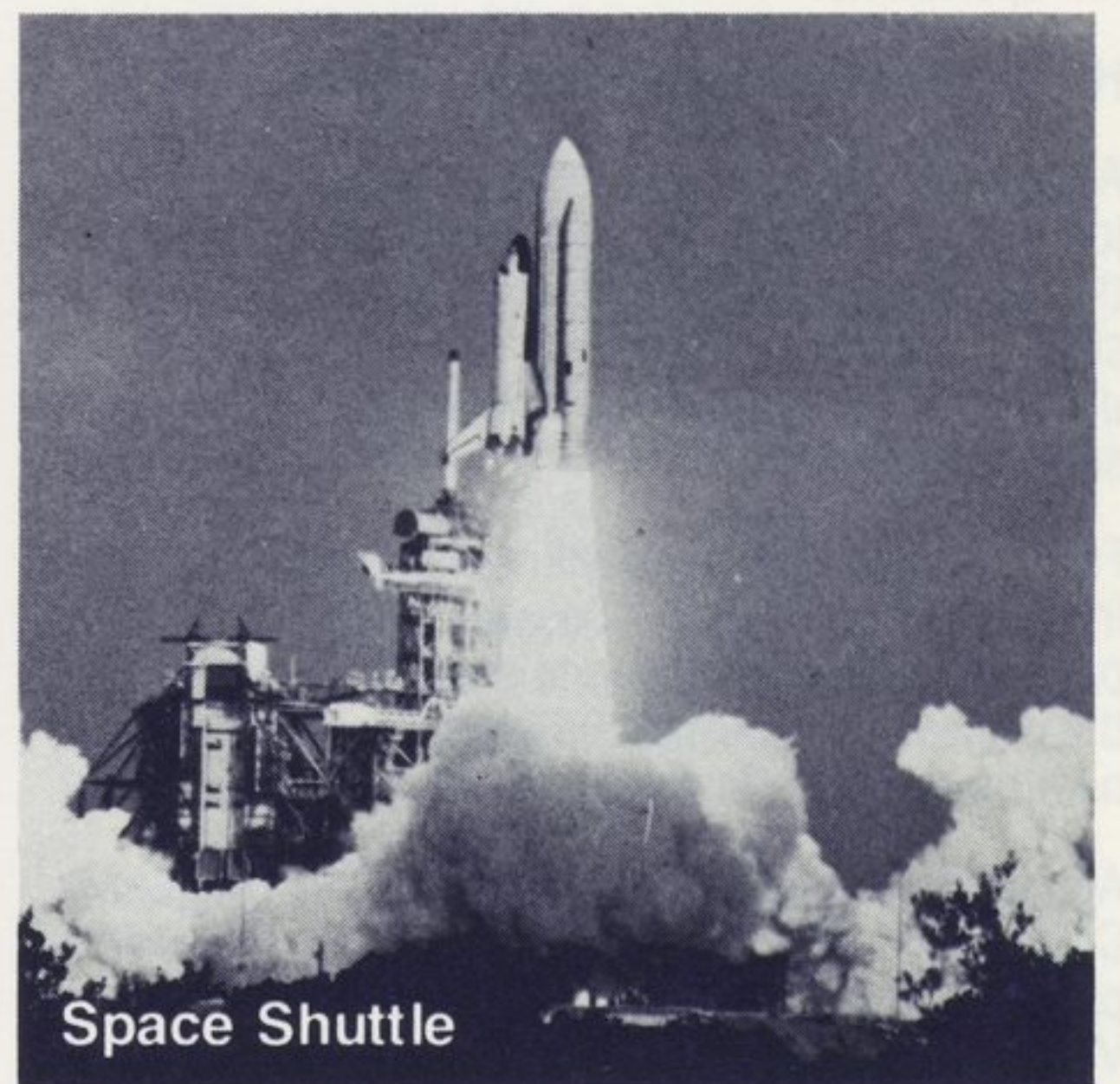
MX



MMU



Titan



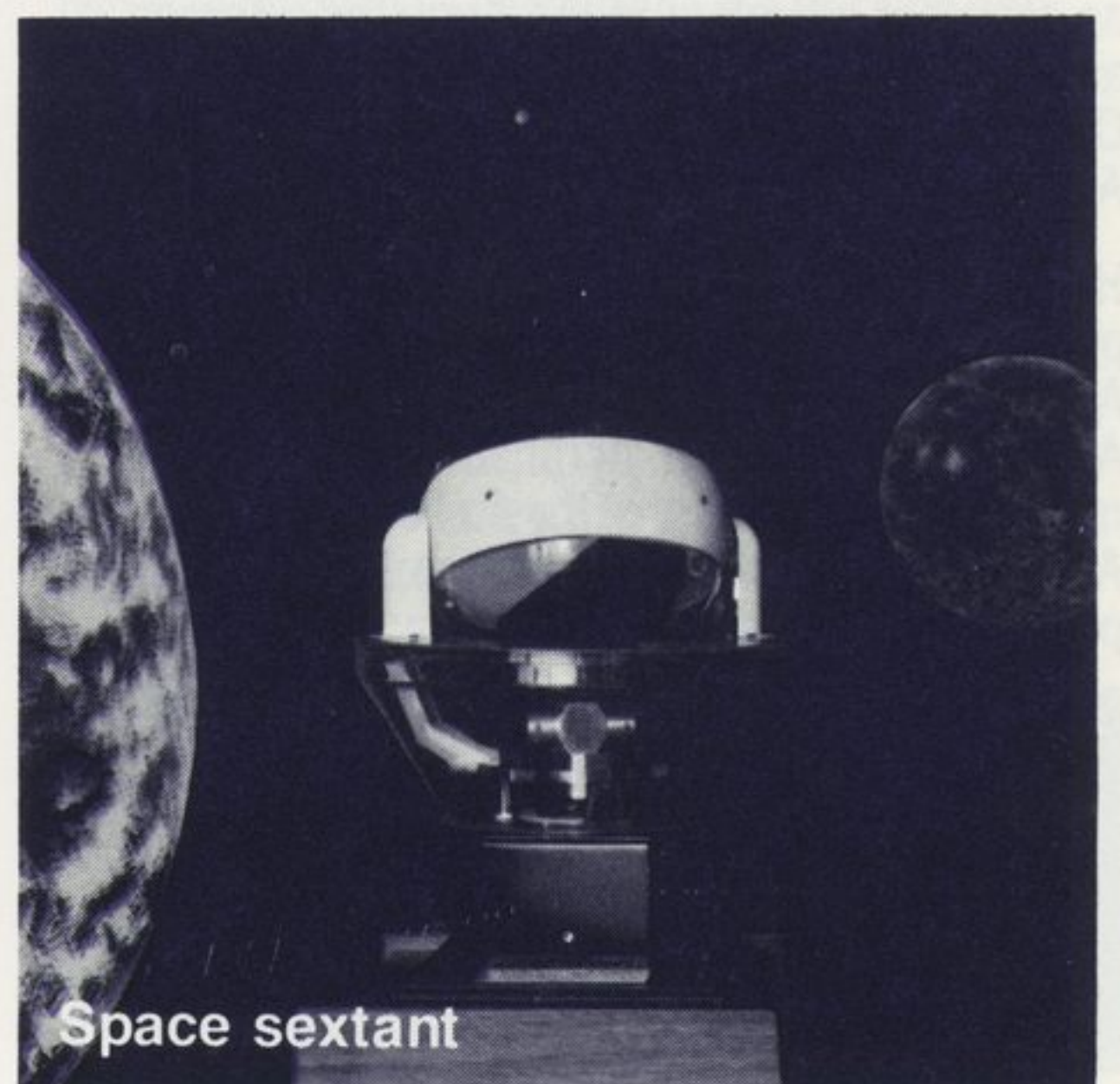
Space Shuttle



CCMS



Solar energy



Space sextant



# Hurtt named Aerospace president; Augustine succeeds him here

C.B. Hurtt, who has led Denver Aerospace since 1976, has been named president of Martin Marietta Aerospace. He will be succeeded at Denver by Norman R. Augustine, who has been vice president for operations of the Aerospace company at Bethesda headquarters.

These appointments came in a series of executive reassignments following an announcement by J. Donald Rauth, Martin Marietta Corporation's chairman and chief executive officer, that he was relinquishing his chief executive officer responsibilities.

Thomas G. Pownall, Martin Marietta's president, has been named chief executive to succeed Rauth.

Laurence J. Adams, who was a senior vice president of the Corporation and president of the Aerospace company, becomes senior vice president and chief operating officer, with responsibility for all the operational elements.

## New president is Denver native

Norman R. Augustine, new president of Denver Aerospace, has been with Martin Marietta since 1977, first as vice president of technical operations for Aerospace and later as vice president for operations.

He is a native of Denver, born in 1933.

Augustine attended Princeton University, majoring in aeronautical engineering and received the bachelor of science and the master of science degrees. He was on the Princeton faculty as a member of the James Forrestal Research Center.

From 1958 to 1965, Augustine was an engineering executive with the Douglas Aircraft Company. He left that position to serve five years on the Defense Department Research and Engineering staff at Washington.

Augustine was associated with LTV Aerospace Corporation from 1970 to 1973 and became vice president for advanced programs for that firm's Vought Missiles and Space Company before returning to Washington in 1973—serving first as assistant secretary of the Army for research and development and, from May 1975 through December 1976, as under secretary of the Army.

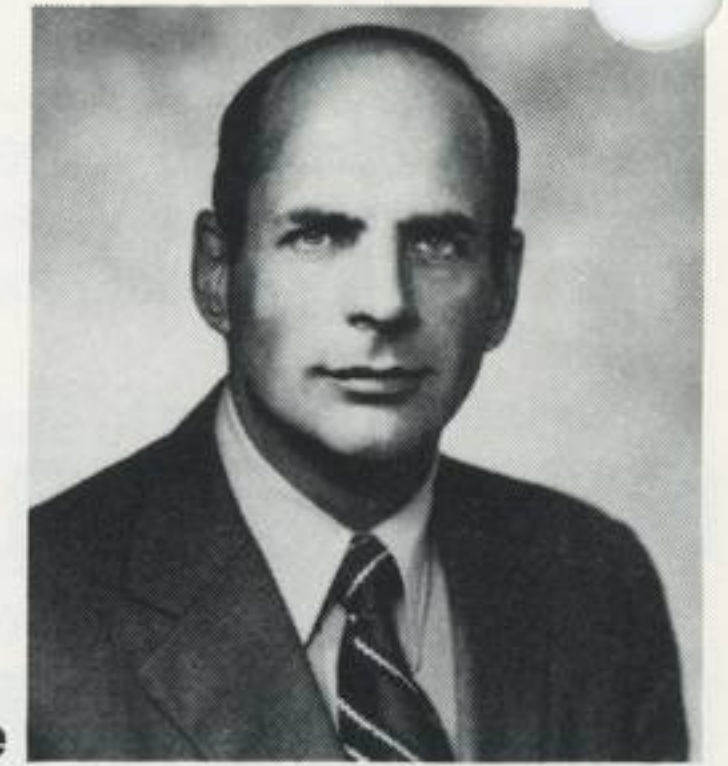
He is chairman of the Defense Science Board; president of the Association of the United States Army; vice president for public policy of the American Institute of Aeronautics and Astronautics; and a member of the Air Force Scientific Advisory Board, and the American Defense Preparedness Association.

### On the cover

The photographs on the cover depict some of the highlights of the Denver Aerospace business under the leadership of C. B. Hurtt.



C. B. Hurtt



Norman R. Augustine

## Denver grows under Hurtt leadership

*The growth of Denver Aerospace since 1976 under the leadership of C.B. Hurtt, can be traced in many ways. We believe one of the best may be through the words of Hurtt himself. The following is a series of excerpts from his comments as they have appeared through the years in Martin Marietta News.*

### June 1976

"I'm optimistic, I'm confident, I'm excited."

C.B. Hurtt went on, "We have halted the downward thrust and have turned that elusive corner. Under Larry Adams' leadership the foundation has been laid for growth. I intend to see that we use that foundation wisely."

(Laurence J. Adams was leaving to become Martin Marietta Aerospace president. Hurtt will succeed Adams again—this time becoming president of the Aerospace company as Adams becomes the chief operating officer for the Martin Marietta Corporation.)

## Martin Marietta is top research contractor

The Martin Marietta Corporation has succeeded the Boeing Company at the top of the Defense Department 500 list of research, development, test and evaluation (RDT&E) prime contractors for fiscal 1981.

A report in the Federal Contracts Register, a copyrighted publication of The Bureau of National Affairs, Inc., a Washington-based firm, said Martin Marietta received \$844.2 million in 1981 as compared with the \$518.9 million in awards when it was third on the 500 list a year earlier. Boeing now ranks second and Rockwell International third.

According to the list published in the Register, Denver Aerospace received contracts valued at \$490,084,000; Orlando, \$353,744,000; and Baltimore, \$423,000.

The Register also reported that Martin Marietta was 12th overall in the list of Defense Department prime contractors.

"No change in direction is necessary for... growth," Hurtt stressed. "We have the right direction. We must hold steady on the course mapped...."

"Opportunities exist for business in our prime expertise....," he said. "I am confident we can win the contracts."

"We have learned some important lessons in the past few years. There is no doubt in my mind that we better understand the needs of our potential customers, we are making better and more competitive proposals, and we know our competition."

"These are the elements of success and know how to use them. We know how to win!"

### December 1976

"After five months on the job, the most frequent question remains: 'What are the division's goals?'"

"My answer is simpler than the execution: 'Our goal is not only to get business, but to do business....'"

"By all standards, 1976 must be viewed as a very successful year. The division exceeded expectations in orders, sales, and profits. The hardware performance was incredible."

- The Vikings landed on Mars
- Tenth consecutive year of Titan flights without a Martin Marietta caused failure
- Delivery and checkout of CCMS
- Milestones met on external tank
- Orders backlog reached \$400 million

"We did lose the bid on the Interim Upper Stage and it took tremendous perseverance to control our program and overhead costs."

### December 1977

"This year, 1977, was the year in which we turned the corner," C.B. Hurtt said.

"This year we have acquired new business with many customers and in diverse product lines to give us a balanced operation in the division," he said.

**Continued on page 3**



## Denver grows

Continued from page 2

"During 1977 we once again achieved 100 percent mission success. This is an environment where there are many opportunities to fail. I sense that more and more our success record is what our customers want to buy."

- 100 percent success of Titan, including back-to-back launch of two Voyager spacecraft
- Viking project people honored by NASA
- First complete external tank delivered
- Central Valley deliveries ahead of schedule
- CCMS hardware met all technical milestones

"MX is one new program I believe is essential for us and for the nation," Hurtt said. "We plan to have a major role in the development and future production of this weapon system. We have assigned many good people to this program, not only because we want the contract, but also because we believe our country needs the best weapon system at the lowest possible life-cycle cost."

### December 1978

The most significant accomplishment for the Denver Division in 1978, according to C.B. Hurtt, was the development of a broad business base producing solid, long-term growth for the division.

But Hurtt added that 1978 "was a year that was fantastic by almost every measure. Financially, we exceeded all our forecasts. We have increased our sales every year since 1975 at about a 15 percent rate compounded."

"We value our reputation for mission success."

Hurtt defines mission success as meeting the commitments of the contract and delivering a product, both hardware and software, that functions properly.

"If it is a rocket that is to fly, it flies; if it is a spacecraft that is to orbit, it orbits; or if it is to land on Mars, it lands," Hurtt said. "It is this kind of across-the-board performance, highlighted by technical performance, that makes the division tick and brings success."

*Business highlights in 1978 included winning the MX assembly, test and system support contract; and the delivery of the SCATHA spacecraft five days ahead of schedule.*

### December 1979

"At this time last year, I said I was looking forward to an outstanding year in 1979," said C.B. Hurtt. . . .

"I have not been disappointed," he said.

Key to the division's success, Hurtt believes, is the division's unique way of doing business.

"I know of no other firm that puts as much emphasis as we do on mission success, integrity, and the open discussion of problems among ourselves and with our customers," said Hurtt.



Congressman Robert J. Lagomarsino of California's 19th district, center, operates a word processing system under the direction of Vicki Stahlhut, lead word processing supervisor for ground support system contracts while Kenneth E. Zitek, director for GSS vehicle launch systems looks on. The congressman was visiting Vandenberg operation's new modular facilities.

"We have developed a company culture, a company environment in which our people understand this emphasis and in which we have eliminated any fear people may have had to admit problems," he said. "Problems cannot be solved if they are hidden. If we don't solve problems, we cannot assure our good customers that our products will perform exactly as they are meant to perform."

Hurtt outlined the major elements of the division's business culture as:

- An uncompromising commitment to mission success;
- Candor and responsiveness to our customers;
- Support to our subcontractors; and
- An unwillingness to accept hardware, make a delivery, or recommend a launch or mission operation until all anomalies have been satisfactorily closed out.

"All predictions for 1979 have been surpassed for orders, sales, profits, and return on investment."

"I need not comment separately on each of our product areas," said Hurtt. "One statement covers them all: we are doing well."

*In 1979, the first Titan 34D was completed. Also, major contracts were won to provide heliostats for the nation's first solar power plant in Barstow, California and for a photovoltaic power plant in Saudi Arabia.*

### December 1980

"We are ending 1980 having achieved the best year ever in the nearly 25-year history of Denver Aerospace. We are performing well. We have completed another year with 100 percent mission success. Our sales, our orders, and our backlog are at historic highs.

"In the past 12 months some 3000 men and women have joined our ranks and . . . we reorganized Denver Aerospace into four divisions to provide yet sharper focus on meeting our commitments to our many customers and to continue as a strong, aggressive force in the market place.

## Fire, snake hazards high

Dry weather and warm weather have combined to create two hazards at the main plant—fire and rattlesnakes.

Brush and grass fires can be prevented by disposing of matches and cigarettes, cigars, and pipe ashes in proper containers—not throwing them in grassy areas. Vehicles with catalytic converters should be parked only in parking lots away from dry grass.

To avoid rattlesnakes, employees should walk only in parking lots and on sidewalks, keeping a watch for rattlesnakes that might be sunning themselves on the warmer asphalt and concrete.

"To keep pace with our business growth, more than \$36 million was allocated for improved facilities and equipment in 1980.

"This, of course, becomes our challenge for the '80s: to maintain our tremendous team effort; to continue to achieve 100 percent mission success in all areas; and, to win those significant new programs that are so important to a long-term, stable future."

*Significant business achievements were the delivery of the first Titan 34D and the award of a \$87.2 million contract for MX launcher development. Solar energy systems became a separate product area and added three new contracts.*

### December 1981

"Three achievements in 1981 stick out most in my mind," said C.B. Hurtt.

"First, is the 100 percent mission success carried out across the entire Denver Aerospace operation.

"Second, is our financial performance in which, during the year, we bettered all of our important financial commitments for the year.

"And third, is our ability to successfully integrate the thousands of new employees into our system and our culture.

"I want to express my personal and professional appreciation to each of our 16,000 employees for the dedication, hard work, and excellence that made 1981 a record-setting year," Hurtt said.

*Two successful Space Shuttle missions were the highlight of the year with Denver Aerospace produced elements performing well. They included the external tanks; the checkout, control, and monitor subsystem (CCMS); the solid rocket booster recovery system; reaction control tanks; caution and warning system; and the pyrotechnic initiators.*

*Two solar thermal power plants were completed—one in Spain, the other in California—and the photovoltaic plant was completed in Saudi Arabia.*



## Disability, insurance benefits are improved

Major improvements in employee benefits for non-exempt salaried employees went into effect April 1. Disability and life insurance benefits are now equal to those of exempt salaried employees.

Salary continuation benefits for disability now equal full salary for the disability up to six months or for length of service, whichever is less. Formerly, full salary payments were issued for five days, followed by payments of 60 percent of base pay.

A doctor's statement indicating diagnosis and dates of disability must accompany the employee change notice filed by the employee's department that initiates medical leave. A disability claim form is no longer required to begin disability payments.

Life insurance benefits have been improved with maximum coverage now based on the employee's salary. Previous maximum was \$12,500.

Notification of benefits changes was mailed to all non-exempt employees, with a card enclosed for each non-exempt employee to fill out, indicating preference of maintaining the \$12,500 insurance limit or accepting the improved benefits schedule. Cards should be returned as quickly as possible to the employee benefits office.

Employees who have not received cards in the mail should contact the employee benefits office, Ext. 3309 or 5680.

### Recreation

**Golf**—Partner Best Ball tournament play will be held May 15 at Lake Arbor Golf Course, with a shotgun start at 7:00 am. Participation is limited to 144 registrants, Denver Aerospace, Data Systems, and Air Force personnel only; entry deadline is May 3. A fee of \$16 per player, which includes greens fees, electric cart, lunch, and door prize drawing is due with registration. Low gross scorer, male and female will represent the company in the second annual Denver Corporate Games, June 5.

**Fitness and fashion**—Reservations are due in the recreation office April 26 for *Feeling Well and Looking Good*, a program of fashion, fitness, and nutrition to be held April 29 from 6:00 to 9:30 pm at the Rodeway Inn. Speakers are Toby Lesser, Fashion Forum; Kathy King, registered dietician, and Sue Bach, Swedish Medical Center. Cost is \$3.50. Attendance by employees' immediate family is welcomed.

## U.S. Savings Bond drive begins May 10

The annual U.S. Savings Bond drive will be held May 10 through June 11, with a goal of 90 percent participation.

"Increased interest rates makes Savings Bonds an attractive investment," said Leroy Hollins, coordinator for the campaign. Bonds held to maturity (94 months) earn nine percent interest; those redeemed after 60 months earn 8.5 percent; those held for 12 months earn 6 percent.

Employee participation in the Savings Bond drive has exceeded 90 percent except during the last two campaigns. With improved interest rates offered, the 1982 goal is to meet or exceed the 90 percent mark.

Department coordinators, management campaign leaders, and Treasury Department representatives will meet May 10 at 8:30 am in the engineering presentation room to kick off the campaign.

## Slidell, Columbine lead in scholarship winners

With the awarding of the 1982-83 Martin Marietta Foundation scholarships, Slidell High School and Columbine High School became first and second in producing scholarship winners in the nation.

Since 1976, the Louisiana school's students have earned eight Martin Marietta scholarships while Columbine in Colorado has graduated seven winners.

This year, each school had two winners, Carl Eugene Dautenhahn and Timothy Nicholas Kooney from Slidell High School, and Michele Ann Mlady and Ronald Gordon Sprengler from Columbine High School.

Two schools in Orlando, Florida, also have seven winners.

### MARTIN MARIETTA NEWS

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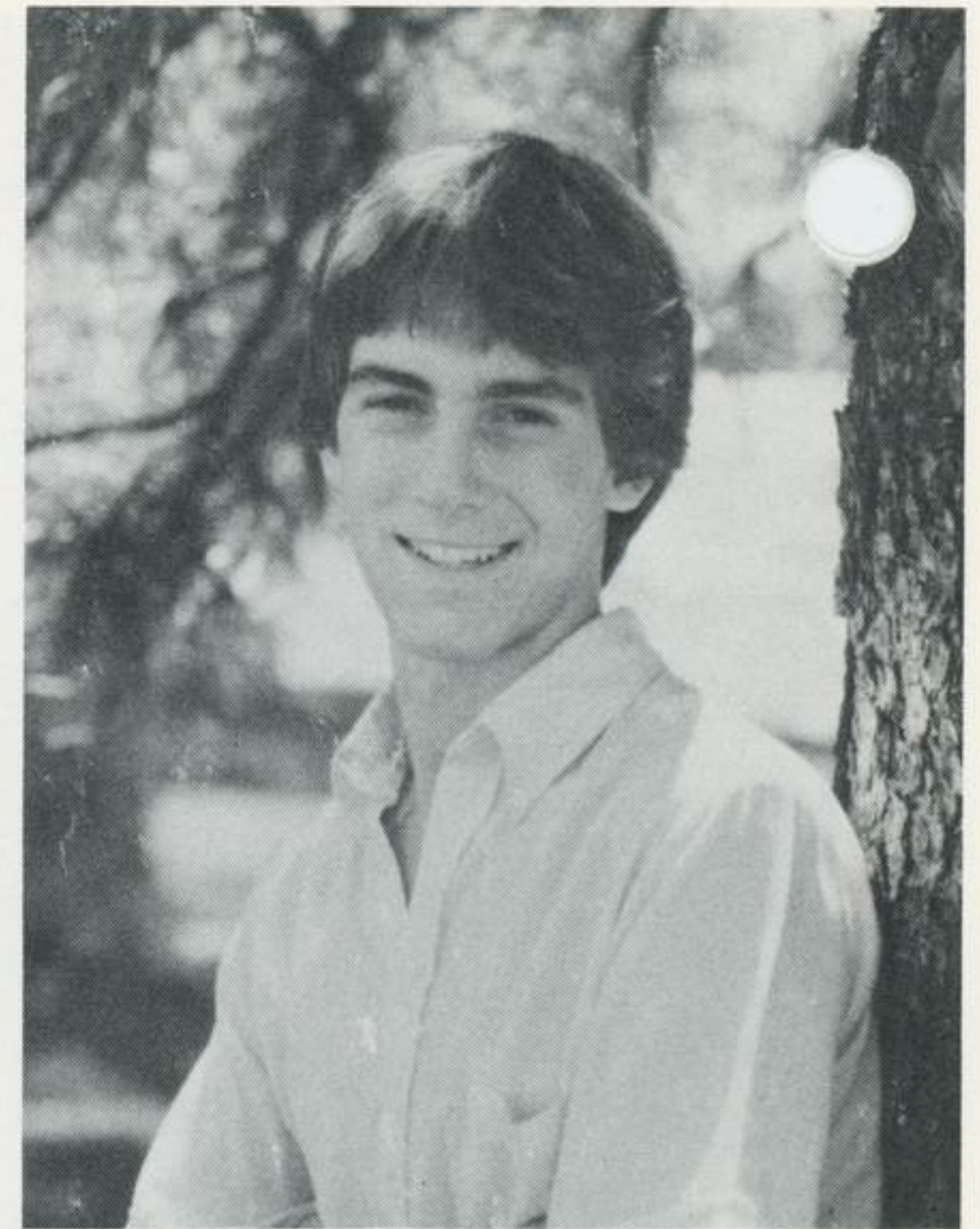
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DENVER AEROSPACE

P.O. Box 179—Denver, CO 80201

April 23, 1982



Ronald Gordon Sprengler

## Local student added to scholarship roster

Ronald Gordon Sprengler, the son of Mr. and Mrs. Donald F. Sprengler, has been added to the list of Martin Marietta Foundation scholarship winners.

He will graduate in June from Columbine High School and plans to attend Colorado State University to major in environmental engineering.

Sprengler has participated in various vocal music groups, is interested in backpacking, mountain climbing, and bicycling and is currently restoring a classic car.

His father is an electrical engineer.

## Construction to alter parking, traffic flow

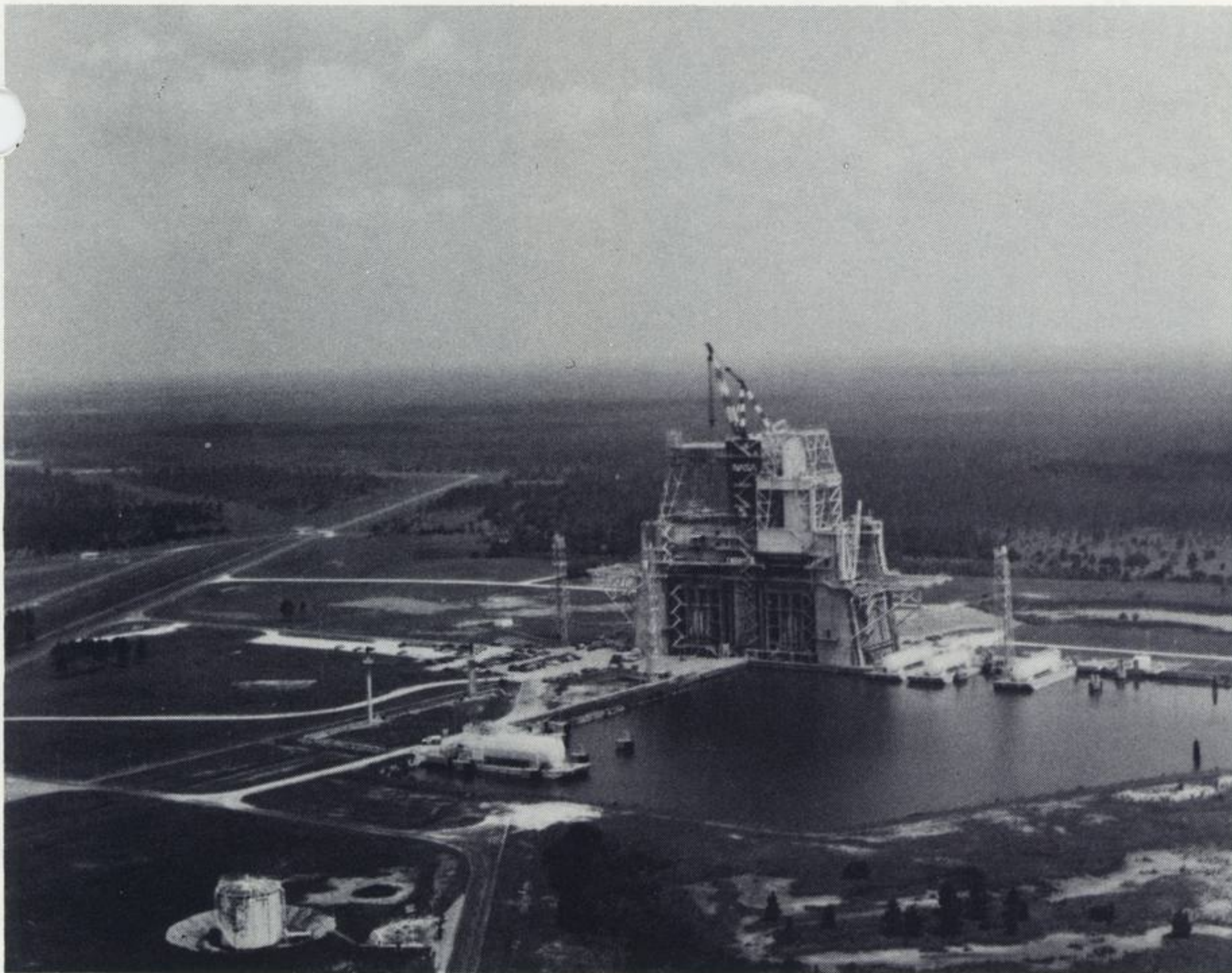
Major construction in three areas at the main plant is either under way or will be about May 1.

The work will include building a high bay facility between SSB south and SSB north; the addition between the administration and the engineering building; and the extension of the cafeteria in the engineering building.

With the construction comes a change in parking and in traffic flow. At the SSB, parking lots in front of the SSB will be closed to accommodate construction equipment. Employees are urged to use the upper parking lot. A walkway will be constructed for pedestrian access between the two existing buildings. There is to be no parking on the roadway near SSB to permit free flow of construction traffic.

Because of the construction and construction traffic behind the engineering building and near the factory, no private vehicle traffic or parking will be permitted in the area. Barriers will be erected to direct traffic and parking away from the area.





The main propulsion test article external tank is visible in a test stand at NASA's National Space Technology Laboratories in Bay St. Louis, Mississippi. It is used in tests of Space Shuttle orbiter main engines.

## Tests successful on external tank at NSTL

An external tank that will be used in August when the three main engines of the orbiter Challenger will be test fired, has successfully completed tests at NASA's National Space Technology Laboratories (NSTL) in southern Mississippi.

Tests on the tank, called the main propulsion test article (MPTA), had five objectives. The first was to evaluate procedures for chilldown and loading of liquid oxygen without use of the antigyser line. Procedures for restarting propellant flow after stopping were also evaluated

as were vent valve cycling and vented tank systems for replenishment control. Also tested was liquid oxygen replenishment control at nominal and minimum ullage volume. Four liquid level sensors and a capacitance probe were tested and verified.

The liquid oxygen tank was filled twice with oxidizer during the March tests.

The MPTA has been used before in tests of the main engines of Columbia. In August, Challenger's three main engines will be fired for more than 300 seconds at 109 percent of their rated thrust. The MPTA feeds propellants to the main engines during the static firing tests.

## Quality Circle head conducts AMA seminars

Representatives from 234 companies in the U.S. and Mexico have attended American Management Association seminars conducted by Harold L. Gariety, Quality Circle program administrator at Denver Aerospace.

Gariety is scheduled to preside at additional workshops in Canada and Brazil as well as a repeat in Mexico.

He has lectured on the improvement in quality and productivity by implementing quality circles.

Martin Marietta Corporation has 150 quality circles operating, with up to 100 more planned for future organization.



## MX canister completes second test in Nevada

A test to evaluate the MX canister launching system and its associated component hardware was conducted at the Nevada Test Site April 2. Major objectives of the test were met.

This is the second test of the system.

The test measured the velocity and acceleration of the missile at exit, the performance of the hot gas generator, and evaluation of associated launch equipment.

Three more tests are planned. Two will be primarily for component development, and the third will be an integrated test to include a ground test missile first stage and the continued evaluation of the stage four umbilical retract plug and receptacle.

The first phase of the canister assembly launch test program (CALTP) will be completed in September.

## Crews chosen for next three shuttles

Astronauts for the fourth, fifth, and sixth flights of Space Shuttle have been announced by NASA.

Crewmen for the fourth flight are Thomas K. Mattingly, commander, and Henry H. Hartsfield, pilot. STS-4 is planned to launch in late June on a seven-day mission. It will be the last orbital flight designed to verify Shuttle systems.

STS-5 will be a five-day mission in November to deploy commercial communications satellites. It will be the first flight to employ mission specialist astronauts. Mission commander is Vance D. Brand. Robert P. Overmyer is the pilot. Mission specialists are Dr. Joseph P. Allen and Dr. William B. Lenoir. This also will be the first landing at KSC.

The fourth and fifth missions will use the spacecraft Columbia.

STS-6, the first flight of the Shuttle orbiter Challenger, is planned for January 1983. A two-day mission to deploy NASA's tracking and data relay satellite, it will provide more comprehensive voice and data coverage between the ground and orbiting Space Shuttle. The crew is Paul J. Weitz, commander; Karol J. Bobko, pilot; Donald H. Peterson and Dr. Story Musgrave, mission specialists.

A United Way Achievement Award was presented employees at the Houston operations for their increased participation in the 1981 campaign. The award was presented by Kenneth Hoover, left, associate campaign director for the Houston area. Accepting on behalf of employees was Richard Rokosz, Houston operations office manager. Employees working on the Shuttle engineering acquisition support contract and on the mission integration support contract increased their participation by 53 percent.



## Proposals submitted for advanced missile systems

Two significant proposals were submitted in mid-April to the Advanced Strategic Missile Systems Directorate. One deals with the deep basing MX long-term basing option and the other is an advanced strategic missile system technology definition study.

Both are competitive and are planned for dual awards.

A team headed by Ralph Dergance submitted the advanced ICBM system proposal April 12. The contract would be a 14-month advanced development study to examine conceptual designs, performance, system operations, survivability, and endurance issues for an advanced ICBM system.

The deep basing system support proposal was submitted April 19. The effort was led by Kurt Bassett. The contract award is expected in August for a two phase—system definition and system validation—study lasting 12 months each.

The phase I study will involve developing requirements, preliminary designs, and performing concept-trade studies for the missile transporter erector launcher, physical security system, and underground facility power, environmental control, and life support system.

Phase II will involve conducting a validating program for the subsystems, and preparing for full-scale engineering development if the deep-basing concept is ultimately selected for MX basing.

## Employees judge science fairs

Four groups of Denver Aerospace employees in Florida served as judges in the 1982 regional science and engineering fairs sponsored by the Brevard County Schools. The employees judged the senior and junior divisions in the physical and biological categories.

Winners will compete in the Florida State, Space Congress, and International science fairs.

Martin Marietta also participated in a special awards program recognizing student achievement and giving students an opportunity to learn more about industry. Junior and senior winners in the earth and space science, physics, math and computers, and the engineering categories received certificates and a Space Shuttle model.

Employees participating in the judging were Thomas Wirth, J. Edward Carpenter, James Rudolph, Clive Arlington, Robert Atkins, Hugh George, Clement DiLoreto, and Steven Tucker of external tank operations; C. William Case, Donald Fleming, Thomas Duncan Jr., David Fann, Jeffrey McLaughlin, Phillip Pendelton, Richard Rogers, Dewey Strickland, Jill White, and Morris Worland of Canaveral operations; Robert Ewart and Kenyon Eflin of the parachute systems group; and Donald Shigley of the checkout, control, and monitoring subsystems group.



Aaron Gillette, left, whose experiment will go in space aboard an upcoming Space Shuttle, was introduced at the Martin Marietta Management Club meeting in Florida recently by NASA's associate administrator for the Space Transportation System, Maj. Gen. James A. Abrahamson. Gillette, a high school senior, is a participant in NASA's Getaway Special program.

## Contract is awarded for MX basing study

The Air Force has awarded \$10 million to Denver Aerospace to study basing alternatives for the MX missile.

Under the contract, to be managed by Robert B. Demoret, a study will be made of Air Force suggestions for basing as well as evaluate suggestions arrived at here. Work on the contract began this month and will continue until June 30, 1983.

Basing considerations will include environmental and public impact as well as the operability and survivability of the system.

Approximately 50 employees will be assigned to the contract.



Science fair judges Donald Shigley, C. William Case, and J. Edward Carpenter listen to a student's explanation of his exhibit during the special award judging.

## NASA executive is club speaker

Maj. Gen. James A. Abrahamson, NASA's associate administrator for the Space Transportation System, recently spoke to the Martin Marietta Management Club in Florida.

He spoke on the future of the Space Transportation System and on NASA's Getaway Special program. The Getaway Special program offers high school and college students the opportunity to fly their experiments aboard Space Shuttle.

The general introduced Aaron Gillette, a high school senior whose experiment is being sponsored by Orlando Aerospace. The student related how he became involved with the program and his excitement at having his experiment accepted for flight. His experiment, which deals with the disassociation of sponges in zero gravity, should be flown sometime during 1983.

## Nebraska professor speaks at seminar

A forum to provide new thoughts on human performance management was kicked-off recently when Dr. Fred Luthans, regent's professor of management at the University of Nebraska, spoke to executives and managers Denver Aerospace.

"We feel a need to stay at the leading edge, the state of the art, and on top of the disciplines with which we work," William S. Curra, director of human resources said. "Inviting Dr. Luthans to kick-off this series of programs for our management team is one step in recognizing that we are a community of scholars."

Dr. Luthan's specialty is human behavior in organizations. The effects of various management and supervisory practices on behavior and employee performance are topics of his research. He conducts studies in business and other organizations with the aid of a grant from the Office of Naval Research. He has written more than 15 text books used on more than 200 campuses and is an editor with McGraw Hill Publishing Company in addition to his teaching at the University of Nebraska.

The program here featured discussions on performance management, designing organizations of the future, and allied components of effective human resources management.

Dr. Luthan's talk was the first in a series of programs, to be called colloquia, featuring significant issues for executive and technical management.

Future colloquia will cover a wide range of management and engineering subjects. The next one in late July will be on large space structures.