

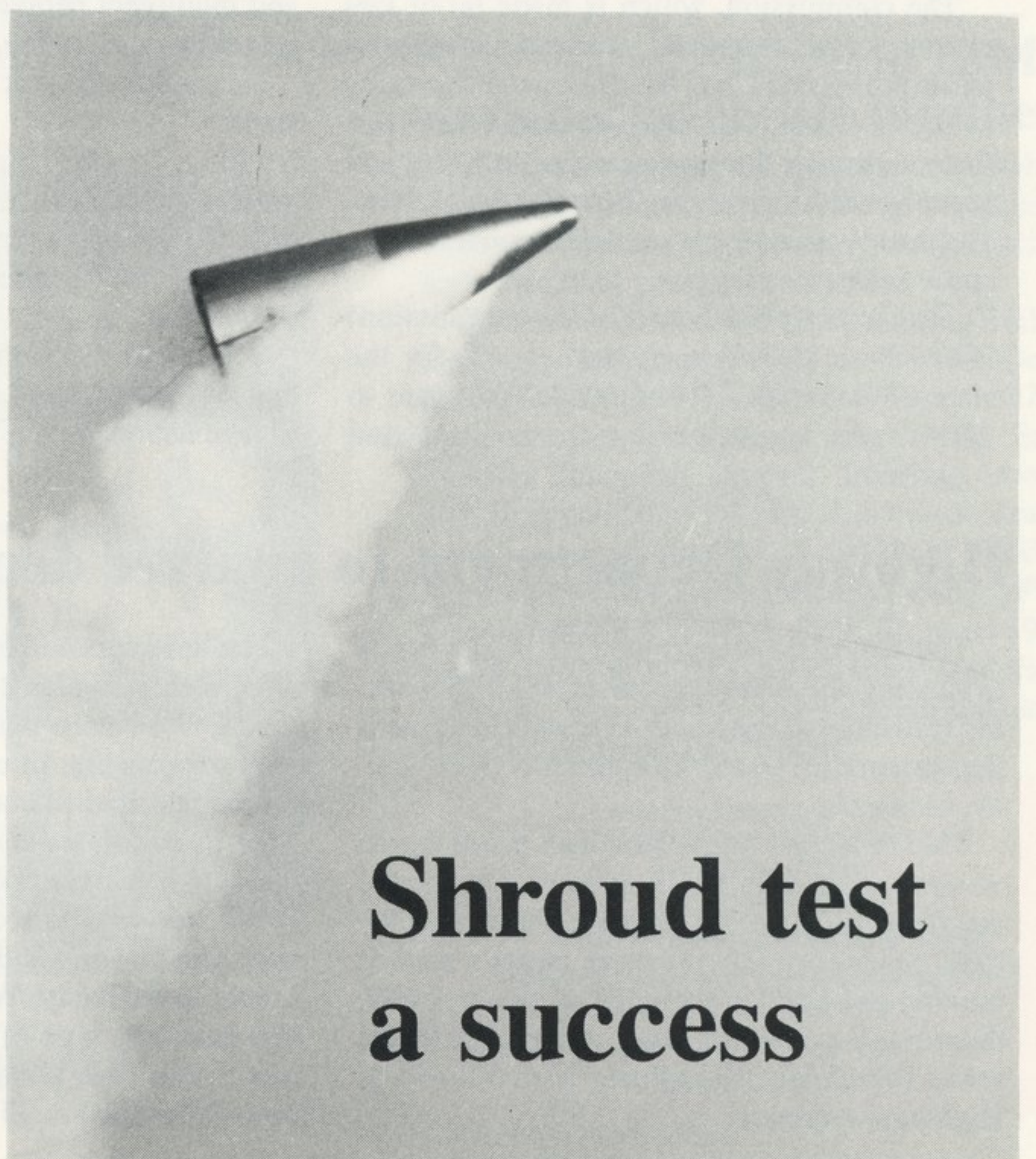
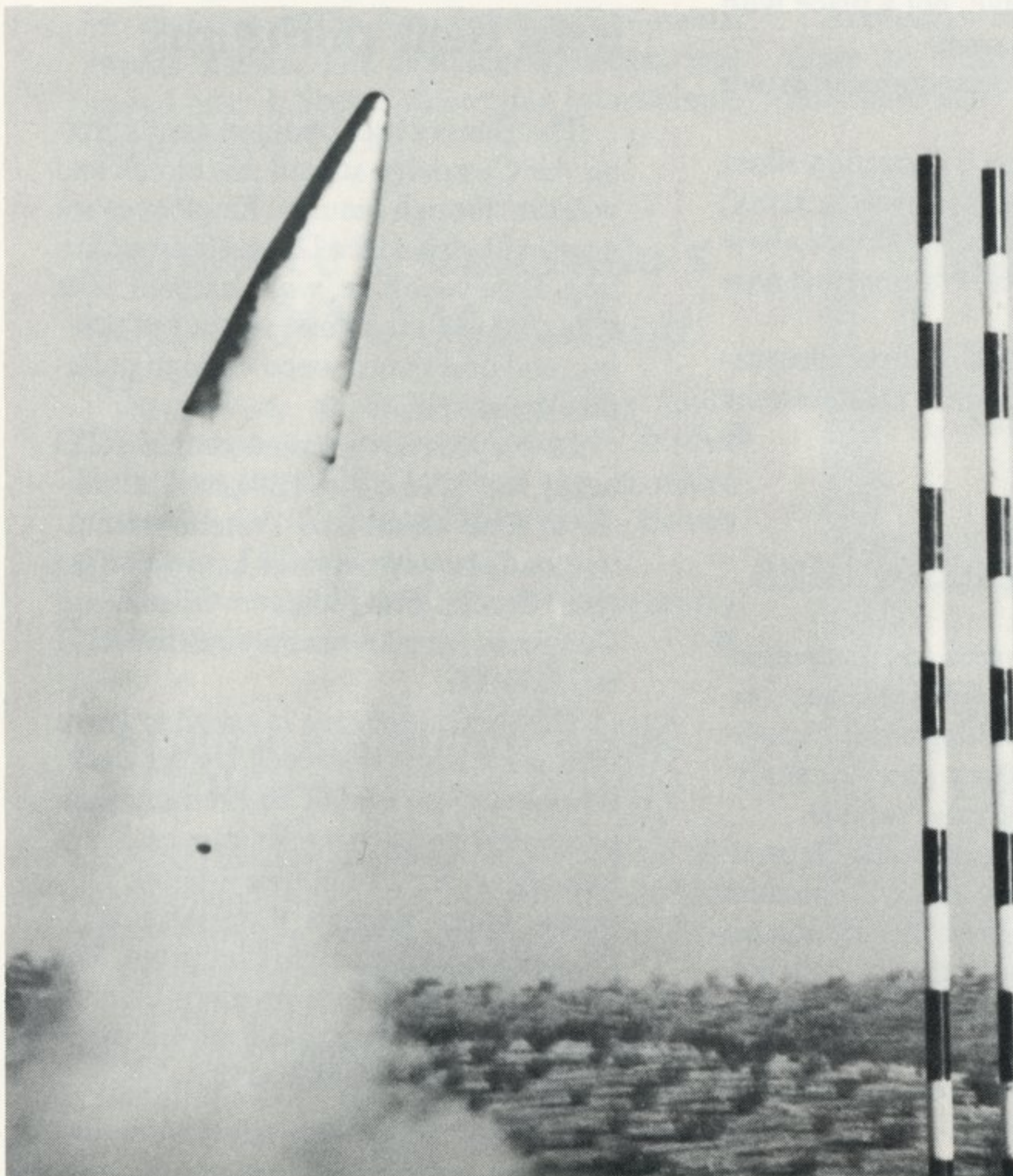
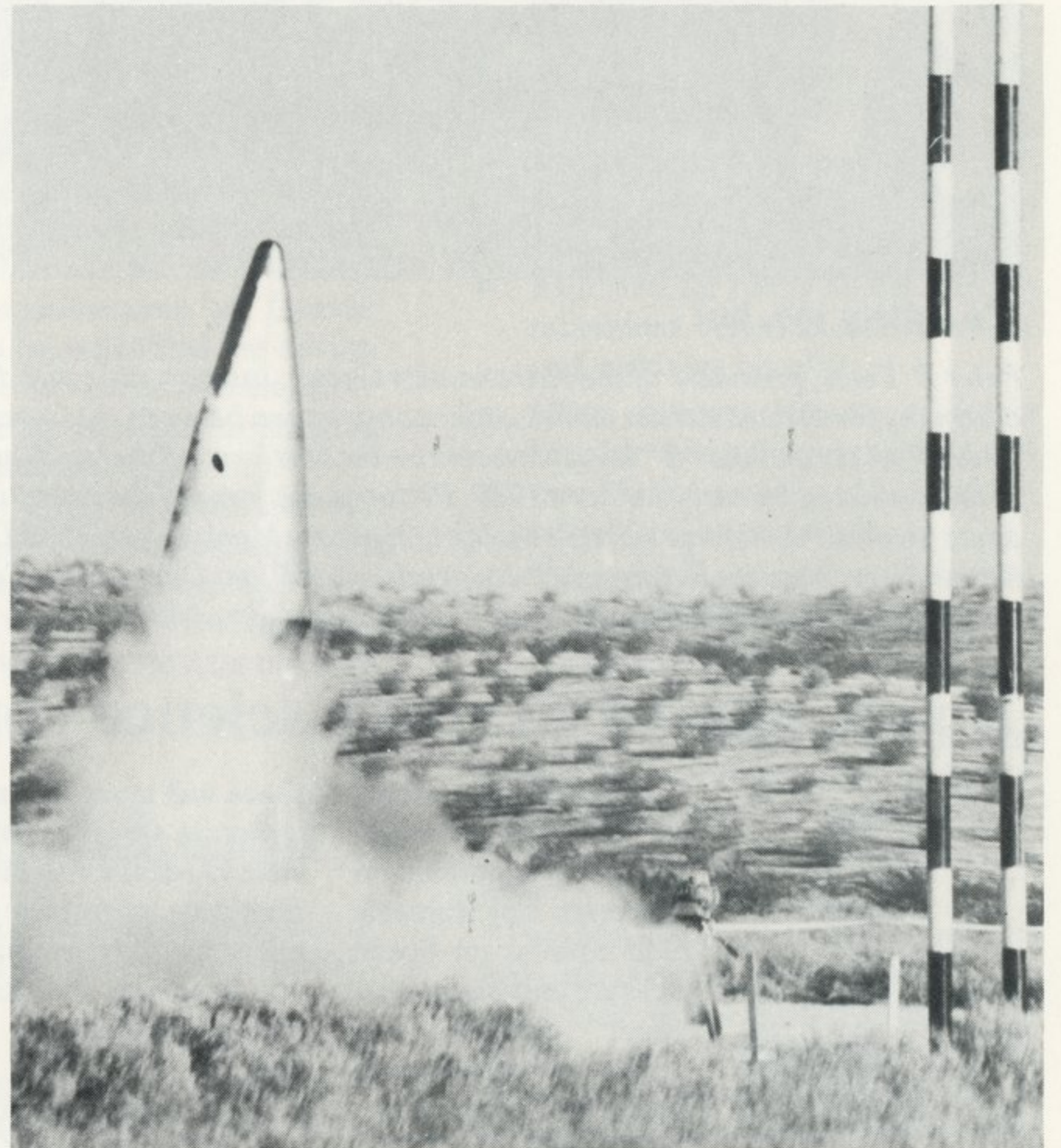
MARTIN MARIETTA

news

ASTRONAUTICS GROUP

November 18, 1988

Number 24



**Shroud test
a success**



It's a dirty job, but . . .

Peter B. Teets, president of the Astronautics Group, tosses a little dirt during a ground breaking ceremony for the pedestrian tunnel under construction between the lower parking lots of the Deer Creek Facility and the "B" level elevators on the south end of the building. The tunnel is scheduled to be completed by early January 1989. Pictured are some of the executives, engineers, and managers involved with the project. From left to right are Mark Meyer, Mike Lee, Dave Blanco, Patrick Nelms, Teets, Stanley F. Albrecht, vice president of Plant Operations, Cory Jackson, project construction manager, Jill Skaggs, John Roehling, and Eric Nelson.

Roane named to space science commission



Roane

Arnold Roane, director of Administration, has been appointed to Governor Roy Romer's Commission on Space Science and Industry, a panel designed to attract and retain more space and science organizations in Colorado.

The commission, which is made up of key operators from industrial, academic, and legislative professions, has been assigned two tasks by the governor. The first is to assess the major factors shaping the space science industry and space-related industry in the state, and the second is to evaluate the potential for growth in the space science industries.

"The underlying theme (of the commission) is economic development and growth for the state of Colorado," Roane said. "We want to attract more industry and more governmental

space and space science work."

Roane said the commission will study the state to see if it has the proper foundation to attract new, high-tech organizations. The commission will be examining the state for a sound tax structure, incentives for industries, academic infrastructure, and cultural activities, he said.

"We're going to find initiatives to bring that type of industry to Colorado," he said. "We want to sell Colorado as a good place for bright and intelligent people to live, not a place with just skiing and rodeo," he said.

Roane said the task will be undertaken in two steps.

"First, we are going to get information about what's going on in the space science industry; then we will make recommendations as to how the state should posture itself to attract that type of business."

The commission will make its recommendations to Romer, and he will make the decisions to take action, Roane said. ■

Titan 34D logs final Vandenberg launch

The last Titan 34D planned for launch from Vandenberg Air Force Base, California, roared to a successful mission on Nov. 6.

The launch vehicle lifted off at 11:03 a.m. MST, carrying a classified military payload.

"This launch was a tremendous success, culminating 22 years of Titan III launches from Vandenberg," said Gareth D. Flora, president of Space Launch Systems. "This was the 94th successful launch compared with only three failures. It had a picture perfect countdown. I'm really proud of the team members who worked on this program."

The 34D, a version of the Titan III, was first launched from Vandenberg in June 1983. All in all, seven of the launch vehicles have been launched from Vandenberg. Two remain to be launched from Cape Canaveral, Fla.

The Titan III series began service in 1964, and from both coasts it has delivered more than 200 payloads into Earth orbits or on missions to the sun and planets, including the Viking spacecraft to Mars and the Voyager deep-space probes.

The launch pad from which the 34D was launched will be modified to accommodate Titan IVs, the Air Force's newest Titan launch vehicle. The pad's initial operational capability will be in the early 1990s, an Air Force spokesman said.

"As always, mission success will be our primary goal as we prepare to continue this proud tradition with the new, more powerful Titan IV series of launch vehicles," Flora said. ■

Better Air Campaign: help beat pollution

The Denver metropolitan area's Better Air Campaign started this month and will run through January. Employees are urged to help reduce Denver's air pollution. Ride your bike, walk, carpool, take a bus, or use the phone instead of driving, and don't burn wood on high pollution days.

Employees are reminded that RTD buses No. 76 and No. 105 provide service to Deer Creek and Waterton facilities, and No. 105 services Littleton Systems Center. For routes to Greenwood Commons, employees may call the RTD at 778-6000.

This year, everyone is asked to leave their car at home one weekday per week. Employees interested in forming car-pools may contact the Employee Services office, Ext. 7-6605 or 7-6750. This office works through Ride Arrangers, the city carpool matching program. Vehicles containing two or more passengers receive preferential roof-top parking at the Deer Creek Facility.

Highway Department to analyze deer reflectors

The Colorado Department of Highways is evaluating the effectiveness of wildlife warning reflectors along South Wadsworth to see if the system can reduce the number of deer-vehicle accidents.

The reflectors were installed about seven weeks ago on a four-mile stretch of road near the Waterton plant. By reflecting light from vehicle headlights, the reflectors create a wall of moving red light at the edge of the highway, discouraging animals from moving onto the road, said Dave Woodham, Department of Highways engineer.

The reflectors will be covered and uncovered in biweekly cycles to provide accurate research, Woodham said. The highway department expects that three to four years of study will be required to obtain a valid sample.

To formulate valid conclusions, the Department of Highways needs accurate information for all deer-vehicle accidents on this section of road. The location and time of the accident are critical to the study, Woodham said. Motorists who have any type of an accident involving a deer in this area are asked to relay details to: Dave Woodham at 757-9506. ■

TQM topic of Van Dewerker speech

In an aerospace management leadership speech to more than 300 civilians and military personnel assigned to Wright Patterson Air Force Base, Ohio, Nick Van Dewerker, director of Product Assurance, asked Department of Defense personnel to thoroughly understand defense contractors' design concepts, management concepts, and productivity enhancement programs before choosing a contractor.

During the speech, Van Dewerker discussed the need for training in Total Quality Management (TQM) techniques and talked about Martin Marietta's adherence to the DOD's TQM program, a productivity enhancement plan developed through government and professional organizations. The program is mandatory for all new DOD programs.

Van Dewerker cited several Martin Marietta programs that incorporate TQM concepts designed to improve productivity and enhance quality, including Reliability and Maintainability 2000, Product Excellence, and the Annual Performance Improvement Program (APIP). He said he used the speech to call attention to Martin Marietta's extensive use of productivity programs.

"Our Annual Performance Improvement Program for example, has the same concept as

the government's continuous improvement approach," he said.

"I asked the DOD to provide its buyers the training necessary to recognize that many contractors do have excellent TQM programs, and that we are making extensive use of product enhancement and cost saving programs.

"Martin Marietta understands TQM, and we want the DOD to understand that," he said.

Van Dewerker's speech stressed that during a proposal review, the DOD assessment team must have a thorough knowledge of TQM concepts and the proper training required to ensure that bidders are reflecting TQM in their proposals.

"In the future, as was the case for the Advanced Launch System program, we, as contractors, must have and exhibit a thorough understanding of TQM, and the DOD needs to have the training and management of TQM to know whether we're giving them solid TQM support," he said.

"I challenged them to have a thorough understanding of TQM concepts before choosing the apparent lowest cost bidder," he said. "I want our customers to get the best product value."



Great Performances

Rudolph Valentino stars with Vilma Banky in the 1925 silent classic, "The Eagle," airing on Great Performances, Friday, Nov. 25, at 9 p.m. on Public Broadcasting Services Channel 6. Great Performances is a series of 26 film and stage classics sponsored by Martin Marietta Corporation. The programs will air until May 5, 1989.

Marty nec fund initiated

A scholarship fund has been set up in the name of Walter A. Marty nec, a former manager of Personnel Administration at Denver Aerospace who died earlier this year.

The scholarship would benefit Marty nec's alma mater, the College of Aeronautics in Flushing, New York. The corporation would match any current employees' donations by a ratio of two to one in line with the educational gift matching program. Retired employees' gifts will not be matched.

Marty nec joined Martin Marietta Corporation in 1939. He transferred to Denver in 1962 as manager of the Engineering Administration department.

Employees donations to the scholarship fund should be made payable to: Walter A. Marty nec Fund, College of Aeronautics, and sent to College of Aeronautics, La Guardia Airport, Flushing, New York, 11317, attention Joseph Scalini, Dean of Admissions.

Students to be taxed on tuition reimbursement

Due to new tax laws, employees who received college tuition reimbursement from the company in 1988 will have to pay a retroactive tax for the money they received.

Undergraduate students will be taxed for any reimbursement amount over \$5,250, and graduate students will be taxed on the entire amount. Taxes will include federal, state, and FICA (Social Security).

In 1989, both undergraduates and graduates will be taxed for the entire amount of reimbursement. ■

Holidays



Thanksgiving
November 24-25



Winter
December 26-30



New Year's Day
January 2, 1989

Equipment must meet FCC rules

Employees with improperly labeled radio frequency radiating equipment may be in violation of Federal Communication Commission (FCC) rules, according to David A. Clinger man, radio frequency manager at the Astronautics Group.

Wireless microphones, telephones, computer interfaces, and video components that do not bear a label stating "This device complies with Part 15 of the FCC rules" must operate under the following conditions:

1. The device must not cause harmful interference to other equipment.
2. The device must have the ability to accept interference that may cause it to operate undesirably.
3. Any device emitting energy on frequencies above 70 MHz, regardless of power level, must be licensed.

For more information, contact Dave Clinger man, Ext. 1-2549. ■

On the cover

The Small Intercontinental Ballistic Missile (Small ICBM) program conducted a successful test of the shroud separation system Oct. 20. Called the Shroud Flyoff Test, the demonstration proved that the shroud could separate and move clear of the postboost vehicle. The shroud flew approximately 250 feet high and 412 feet downrange. Conducted at Air Force facilities in California's Mojave Desert, the flyoff was one of the major tests to qualify the missile for its first test flight scheduled for next year. ■

30 years of service



Employees honored for 30 years of service are, from left to right, Lyle Wellnitz, Ronald Hakanson, Joseph Heidel, John Raddatz, Frankie King, Vitali Slucky, Amalio Marrufo, Phil Lucero, Gerald Marshall, and Richard Soss.



Employees honored for 30 years of service are, from left to right, J. J. McDonald, Robert Johns, Douglas Zook, George Mumma, Phil Martinez, James Hine, Morris Mittleman, Charles Emley, Dutch Vonderlage, Donald Greatorex, John Rodriguez, and Owen Childs.

Satellite servicing conference held

Nearly 100 people from the National Aeronautics and Space Administration (NASA), the Air Force, the Strategic Defense Initiative Organization (SDIO), and industry participated in the 18th Satellite Services System Working Group meeting held last month at Waterton.

Chaired by NASA's Johnson Space Center, the working group travels to various sites to discuss current developments in the field of servicing satellites in space.

"NASA and the military are becoming increasingly concerned with the ability to repair, maintain and refuel satellites in space," said Tom Tracey, manager of satellite services for Space Systems.

Tracey said the group is concerned with issues ranging from designing satellites to actual manned and unmanned servicing operations in space.

"NASA's Hubble Space Telescope was designed from the start to be serviced in space," Tracy said. "Other space observatories as well as the Space Station will be built for servicing. In addition, SDIO is interested in the concept."

Martin Marietta has been a leader in the

field with the pioneering work of the Manned Maneuvering Unit (MMU). Built for NASA by Space Systems, the MMU was used by astronauts in 1984 to repair one satellite and retrieve two others. Current and future work includes research into the resupply of satellite fuels in orbit and NASA's Flight Telerobotic Servicer, a space robot that will help astronauts assemble the Space Station and service satellites.

In addition, Tracey said, NASA and the Department of Defense have begun work on a new program for a satellite servicing system. The system, which would include an orbital maneuvering vehicle and robotics, would be a "generic" servicing system for various types of satellites in orbit. Tracey said a request for proposals is expected in mid-1989 for Phase B requirements studies.

Martin Marietta presenters at the conference were Ralph Eberhardt, Jr., whose topic was "Consumable Resupply Concepts and Issues;" John Yorchak, whose topic was "Standardized User Interface Concepts for Satellite Servicing Systems;" and Tom Depkovich, whose topic was "Advanced Telerobotic Concepts."

Operation Santa Claus seeks Christmas help

For thirty years, Operation Santa Claus, a non-profit organization of Martin Marietta employees, has helped bring Christmas cheer to needy families in the Denver metropolitan area.

Again this year, Operation Santa Claus volunteers are asking employees for tax-deductible donations to help bring food, clothing, and toys to 200 families, including 700 children, during the Christmas season. Last year the operation contributed more than \$30,000. It is the largest single continuing volunteer program of its kind in the region.

Approximately 200 volunteers will be needed on Dec. 20 to wrap presents and deliver parcels to the families.

Operation Santa Claus also accepts recyclable paper to help raise money. Newspapers can be thrown into bins located at Waterton, and white paper can be put into bins located in every Astronautics Group building. Operation Santa Claus volunteers ask that you do not put any colored paper or trash in the paper receptacles because it lowers the return by more than 50 percent.

Monetary donations and volunteer queries can be sent to one of the following representatives:

Inverness, Room 116

Mike Wood Phone 790-3057

Debbie O'Hara Phone 790-3008

Greenwood Commons, Room 6020

Dan Amerman Ext. 7-1828

Tamara Evans Ext. 7-1828

Deer Creek, "R" Level

Nadine Holder Ext. 7-8121

Jim Schaefer Ext. 1-6043

Deer Creek, 3rd Floor

Sharilyn Oxley Ext. 7-6749

SouthPark West I, Room 104

Pat Slovikoski Ext. 1-1952

LSC, Room 206C

Lou Zang Ext. 7-0489

Waterton

Space Support North

Norma Emerson Ext. 1-8089

Space Support Building

Bev Finger Ext. 7-5691

SSB Trailer Modules

Linda Boster Ext. 7-5511

Engineering Building, Room 201

Joy Archibald Ext. 7-5088

Barbara Lynn Ext. 7-9514

Administration Building, Room M-37

Andy Kancir Ext. 7-4821

Research and Development Lab, Room 402

Gloria Kennedy Ext. 7-8168

Technical Support Building, 3rd floor

Frank Silva Ext. 1-2091

Design to Produce Facility

Elaine Tamres Ext. 1-7403

Electronics Manufacturing Facility

Tina Englehard Ext. 7-4315

Weber joins cabinet to evaluate schools

Martin Marietta is helping sponsor "Schools and Business: Partners for Progress," a unique effort to improve management and efficiency in four Colorado school districts.

Richard E. Weber, vice president of Personnel, is a member of a steering committee that will take an inside look at Boulder Valley, Cherry Creek, Denver, and Douglas County school districts. The committee, made up of professionals representing 14 businesses and district superintendents, will provide expertise to improve the business side of education.

The primary areas of emphasis include strategic planning, administrative organization, financial management, and personnel administration. Results of the studies are expected to be issued in March.

The idea of businesses taking an in-depth look at school administrative operations was conceived by the Public Education Coalition, a non-profit organization that has undertaken a number of projects to increase private-sector involvement in the Denver-area schools.

"A corporate chief executive officer and a school superintendent have a lot in common," said Susan Zimmerman, executive director of

the coalition. "They both operate multi-million dollar businesses, have hundreds of employees, many branch offices (schools), and customers who expect the best. We envision a lot of shared insight through this project and are excited for the boost it will bring to our public education system."

Zimmerman said the program has been well-received by the private sector.

"The response to this project exceeded our greatest expectations," she said. "The business community has jumped in with enthusiasm and commitment to ensure that our public schools provide the best education possible to our children."

Dick Koepp, superintendent of Denver Public Schools, said he welcomed the advice from the business executives and sees the effort as a chance to share business philosophies to improve the school districts' efficiency.

"This cooperative effort demonstrates the hope and importance of public education in Colorado," Koepp said. "It's an opportunity to enhance and support the business side of public education which provides the tools for our kids to learn." ■

Augustine addresses Rotary Foundation

Although Norman R. Augustine, chairman and chief executive officer of Martin Marietta Corporation, has left the West, he has kept ties with his native city of Denver by staying involved with the community.

Augustine was in town on Nov. 15 and was presented with the Denver Rotary Club Foundation's golden eagle sculpture in appreciation for speaking at the foundation's 10th annual awards dinner. The first annual award was named after J. Stuart Moore, the foundation's past executive director.

Rotary Club is an international community service organization of business and professional leaders.

Earlier this year, Augustine spoke to In-Roads Denver, a program that identifies minority high school students capable of pursuing engineering, science, and math degrees, and assists them through college.

Augustine will return in December to address the Colorado Alliance of Business' annual luncheon. ■

Employee is Colorado's best in NYC Marathon

Doug Haas, an employee with the Small ICBM program, was the top Colorado finisher in the New York City Marathon, Nov. 6, with a time of 2 hours, 42 minutes, 19 seconds. He was 214th out of 27,000 runners.

The 26-mile, 385-yard race was won with a time of 2:08:20. ■

Corporation donates \$8K to California United Way

Martin Marietta Corporation donated \$8,000 to the United Way of the Central Coast to kick off the company's employee fund raising drive at Vandenberg Air Force Base, Calif.

Martin Marietta has contributed to the United Way campaign at Vandenberg for 28 years. The United Way distributes the money to civic and charitable organizations. ■

Social Security offering free earnings estimates

The Social Security Administration has established a new system to provide workers with a statement of their Social Security earnings history.

Upon request, the free statement will provide:

- A summary of Social Security earnings from 1937-1950.
- A yearly breakdown of Social Security earnings from 1951-present, and the estimated amount of FICA (Social Security) taxes paid on those earnings.
- Estimates for future Social Security retirement benefits, and disability and survivors benefits.
- More realistic estimates of future benefits using the worker's anticipated future earnings and recent un-posted real wage growth.
- The number of credits the worker needs to be insured for each type of benefit and the credits currently on record.

To obtain a "Request for Earnings and Benefit Estimate Statement," SSA form 7004, call 1-800-937-2000 or write to: Consumer Information Center, Department 55, Pueblo, Colo., 81009.

People who complete the new request form are asked to provide information about their recent earnings (which are not yet on record), their expected future earnings, and the age at which they plan to retire. This information is used to calculate the benefit estimates.

Now Wang, Mac, and IBM work cooperatively together

Information processing centers are available throughout the Astronautics Group's facilities to convert documents between Wang, Macintosh, and IBM personal computers.

Centers are located at the Engineering Building, room 114, Ext. 7-6258 or 7-5947; Deer Creek, on the "A" level, Ext. 1-4969 or 1-4970; Space Support Building, room 408, Ext. 7-3987; Technical Support Building, room 307, Ext. 1-9150 or 1-9149; Greenwood Commons, room 6050, Ext. 7-1312 or 7-1004; SouthPark West I, room 95B, Ext. 1-6069; SPW I, room 1080 Ext. 1-1023; SPW III, room 395, Ext. 1-1062 or 1-2518; Electronics Manufacturing II, Ext. 7-4864; and Littleton Systems Center, 2nd floor, Ext. 1-5046.

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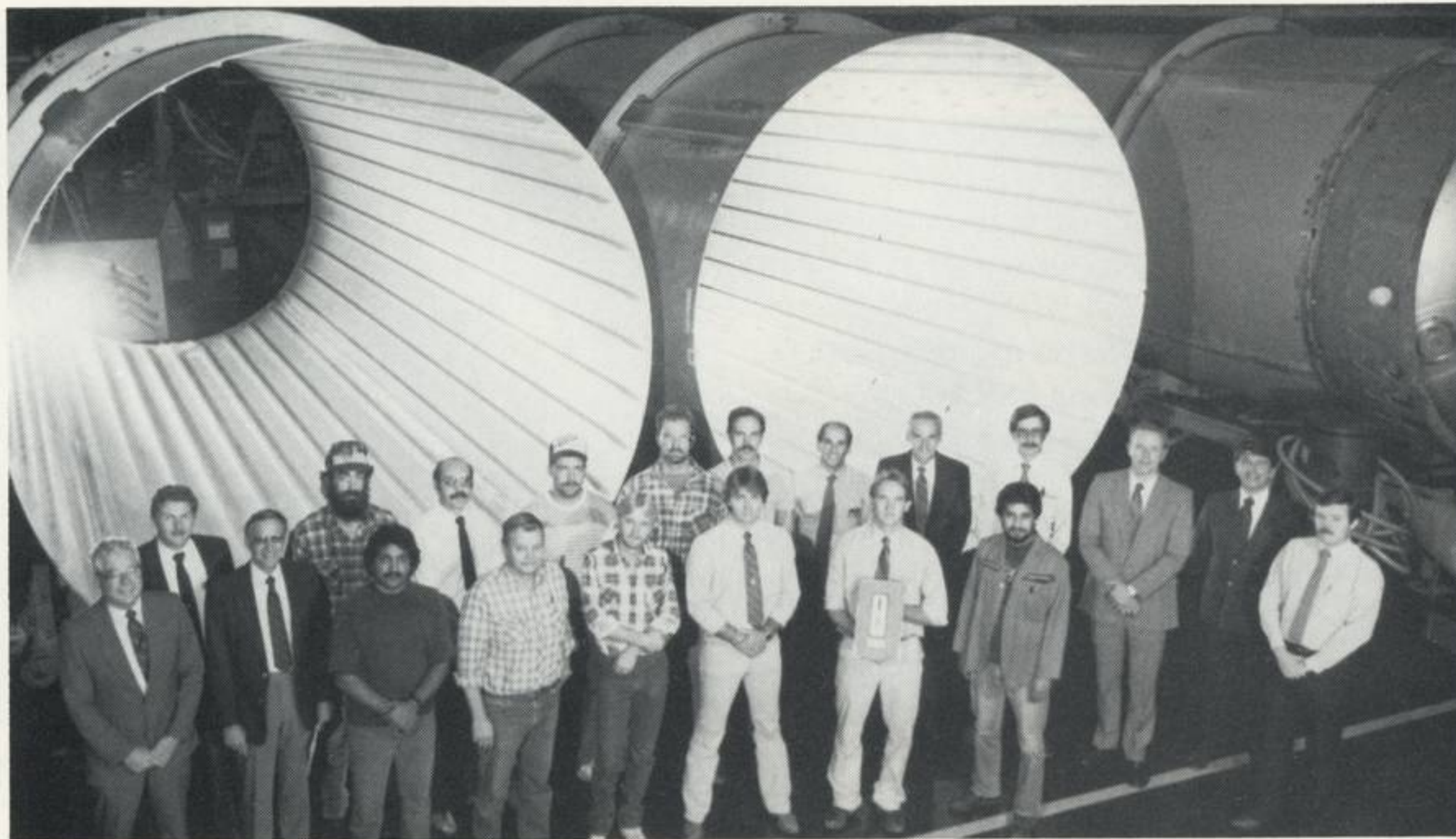
ASTRONAUTICS GROUP
P.O. BOX 179—Denver, CO

November 18, 1988

Let your
fingers
do the
driving.

Next time, use the phone
instead of your car. It means less hassle for you.
And Better Air for all of us.

BetterAir



PET of the month

Space Launch Systems' Productivity Enhancement Team (PET) on the second floor of the factory for the month of September was the Tube Shop. From left to right are: front row, Bernie Jacobs, Gene Sobke, Zeke Minhas, Stan Goston, Roger Stoakes, Mark Segobiano, John Heslop, and Ed Pacheco; back row, Dan Kloberdanz, Dan Stark, Vern Hobbs, Chris Schubauer, Mike Stark, Dan Caughran, Jack Huck, Clyde Chapman, Joe Marcus, Kenn DeBont, and Ron Conner. The PET of the month is chosen from teams of second floor factory workers who receive the highest ratings in their job performance.

Holiday jewelry sale begins November 29

The Employees Services/Recreation office will host a pre-Christmas jewelry sale for employees. The sale will include top-quality merchandise provided by the Executive Jewelry Buyers Club.

More than \$250,000 in gold chains, diamond rings, and emerald, ruby, and sapphire jewelry, including a 14-karat gold space shuttle pendant, will be offered at wholesale prices (about half off retail).

Sale hours will be from 10 a.m.-6 p.m. as follows:

- | | |
|------------|--|
| Nov. 29-30 | Deer Creek cafeteria |
| Dec. 1-2 | Littleton Systems Center cafeteria |
| Dec. 5-6 | Engineering Building, executive dining room II |
| Dec. 7-8 | Space Support Building cafeteria. |

A gemologist will be on hand to answer questions. Visa, MasterCard, cash, and personal checks will be accepted at the sale.

Employee Services/Recreation

Fitness Center—The center is located in the Deer Creek Facility, "A" level, east of the south elevator and is available to all employees. The center is open Monday-Friday, 5:30 a.m.-9 a.m. and 10 a.m.-8 p.m. (closed 9-10 a.m. for cleaning), and on Saturday, 7 a.m.-6 p.m. To improve cardiovascular fitness, there are biocycles, treadmills, and rowing machines. Stairmasters will be added soon. Paramount weight machines, free weights, saunas, and a jacuzzi also are available. On Monday through Friday afternoons, 30-minute individual exercise program consultations are available with Mary Schneider, exercise physiologist. These sessions may be scheduled by calling the Employee Services and Recreation office, Ext. 7-6605 or 7-6750.

Fitness Classes—Registration forms are in the Employee Services/Recreation information racks for three-week introductory fitness classes starting the week of Nov. 28. The classes include four levels of aerobics, fat burners, body shapers, and stretch/flex sessions. Classes will be held at the Deer Creek fitness center. Fees are \$12 for classes that meet Monday, Wednesday, and Friday, and \$8 for classes that meet Tuesday and Thursday. Registration deadline is Nov. 21. In December, flyers will be available for six-week class sessions starting in January.

Racquetball Court—The court is located on the "B" level at Deer Creek, south end of the building. To reach the court, exit the building on the A level, south of the fitness center. Walk south across the brick patio to the silver

tower. Enter the tower and go downstairs to the court. Reservations are taken by the Employee Services/Recreation office, Ext. 7-6605 or 7-6750.

Denver Symphony Discount—Coupons offering two tickets for the price of one to any Denver Symphony Orchestra classical or pops concert are available from the Employee Services/Recreation office at Deer Creek, the Waterton branch office in the ORB building, Room 200 (open Monday and Friday, noon-4 p.m.), and from the volunteer recreation representatives at the Space Support Building, Littleton Systems Center, South Lincoln, and Greenwood Commons facilities. To find the representative closest to you, call Ext. 7-6750.

The Waterton Bulletin Board System—Is back on line. All employees are welcome to log on. The BBS has 70 megabytes of public domain software including word processors, spreadsheets, data base managers, games, utilities, graphic programs, communication programs, and source code for Pascal, C, assembler, and other languages. Set your communications package to 1200 or 2400 baud, no parity, one stop bit and call Ext. 7-7353. The board is available 24 hours per day, seven days a week. Call Ken Beaudrie, Ext. 7-7584 for assistance.

Barber/Styling Shop Hours—Convenient, professional, low-cost hair cuts are available to all employees and Air Force personnel at the following locations: Deer Creek Facility,

"A" level, by south elevators, 6:30 a.m.-3 p.m., Monday and Friday and until 5 p.m. on Tuesday, Wednesday, and Thursday), Ext. 7-9157; Waterton, Engineering Building basement, 6:30 a.m.-3 p.m., Monday-Friday, Ext. 7-3029; and Littleton Systems Center, west and south of cashier, 6:30 a.m.-3 p.m., Tuesday-Thursday, Ext. 7-0560.

Titan Toastmasters—The group meets at 6 p.m. Mondays at Mission Trujillo Restaurant, 181 Ridge Road (Broadway and Ridge Road). Contact Mark Willey, Ext. 1-6183, for details.

LSC Toastmasters—Improve communication skills and gain self-confidence—attend Toastmasters Club meetings at 4:30 p.m. Wednesdays, in room 209G of Littleton Systems Center. For more information, contact Jim Harrer, Ext. 7-4588, or Alex Hubert, Ext. 7-6527.

The Satellite Ski Club—Has made ASA SkiAmericards (the gold card) available to all Martin Marietta employees at a discount. The cards can be purchased for \$18 for the head of a household, and \$9 for each additional family member. Ski club members receive a further discount. The cards provide reduced-price lift tickets and discounts on lodging in Colorado and throughout the nation. Orders can be placed by filling out the forms that will be in the Employee Services/Recreation racks after Nov. 30. For additional information call Steve Packard, Ext. 7-3830.