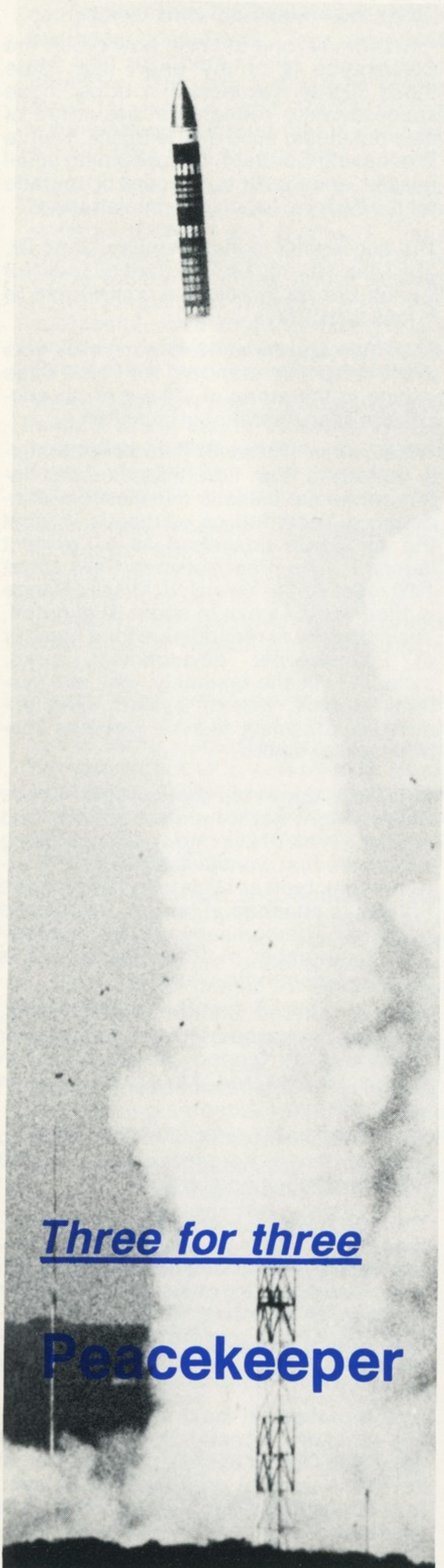
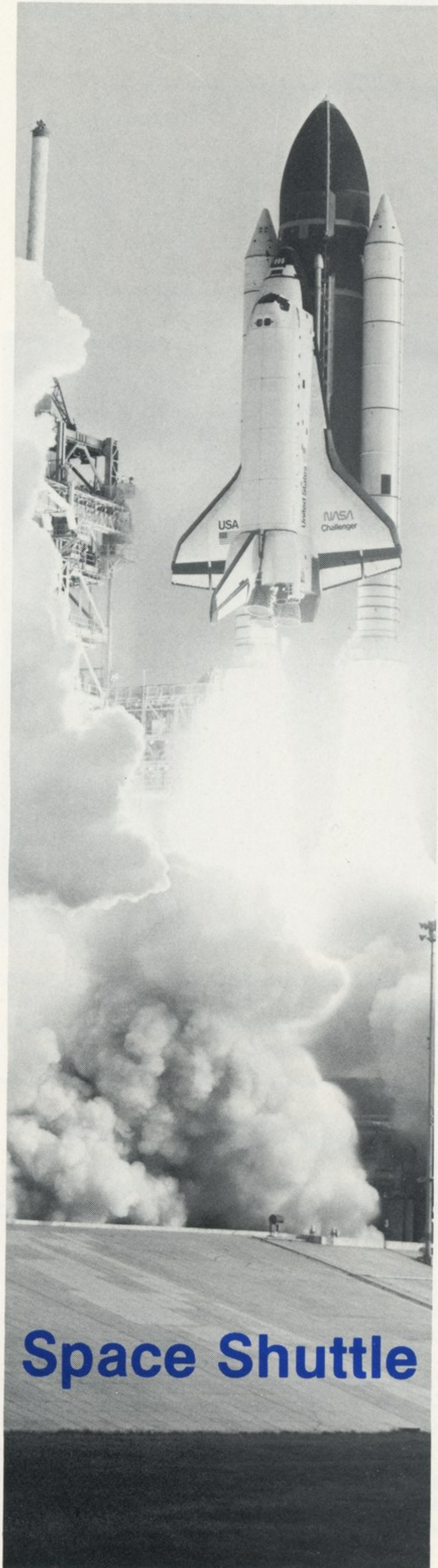


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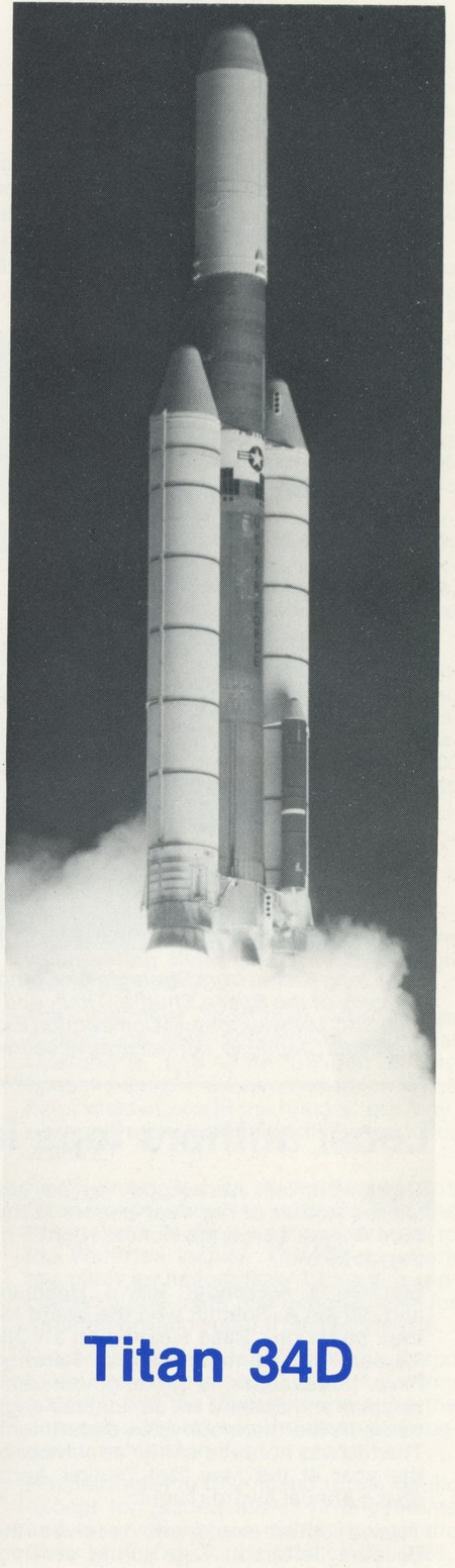


Three for three

Peacekeeper



Space Shuttle



Titan 34D

Going for 21 after three-for-three in successful launches —Augustine

On the Cover

Peacekeeper's test flight came first, followed shortly by the seventh mission of Space Shuttle and the Titan 34D in a Friday-to-Monday triple header. (The Titan 34D launch shown is an earlier flight for the newest member of the Titan family of launch vehicles.)



Capt John Nailen from Strategic Air Command (SAC) headquarters discusses company displays of the Space Shuttle, Titan, and Peacekeeper at Vandenberg Operations' annual SAC Missile Combat Competition Exposition. Also pictured are Paula Phillips, left, and Lydia Stephens, administrative secretaries at Vandenberg.

Local authors tops in corporation

Three Denver Aerospace employees shared Author of the Year honors at the 22nd Annual Corporate Honors Night, Friday, June 24.

Stephen G. Alexander, Roy J. Heyman, and Durwin A. Schmitt won the award for their paper on "Base Heating on a VOIR Aerobraking Configuration in Rarefied Flow." Alexander is an engineer, and Heyman and Schmitt are senior staff engineers in the thermophysics department. The trio was honored earlier as authors of the year at the May 21st Denver Aerospace Annual Awards Night.

Twelve other employees received the coveted Jefferson Cup during ceremonies

at the Capital Hilton in Washington, D.C., for their superior contributions to the Corporation.

Those recognized were.

Denver—Arthur E. Homewood, Tommy J. Perry, William P. Pratt, Terrill L. Roberts, Raymond F. Schwindt, Robert H. Snodgrass, John H. Vowells, and Gerald A. Zionie.

Michoud—Jon A. Dutton and Louis S. Favata.

Canaveral—Thomas H. Munro.

Vandenberg—Richard B. Hooley.

Three major, successful, launch operations may well set the cornerstone for the most active operations year in the recent history of Denver Aerospace.

The forecast of major hardware operations could reach 21 during 1983, compared with six or less during 1981 and 1982.

Norman R. Augustine, Denver Aerospace president, called the launch operations of Peacekeeper, Space Shuttle Challenger, and the Titan 34D during a 65-hour period beginning June 17 and ending June 20 "truly remarkable and spectacular."

"I want everyone to know how proud the Corporation is of the effort that made those flights successful. I hope those successes are reflected in the award of new business, such as the Space Shuttle Processing Contract, the upcoming small missile, and the air traffic control upgrade for the Federal Aviation Administration."

The successful launch Monday, June 20, of a Titan 34D marked the third successful launch Denver Aerospace contributed to in less than 3 days.

The Titan launch at 12:45 p.m. MDT was the first from Vandenberg Air Force Base adding to the string of 120 out of 123 successful Titan operational launches.

Friday, June 17, the Air Force successfully launched the first Peacekeeper intercontinental ballistic missile from Vandenberg. It carried no warheads in what the Air Force described as a "perfect launch." The Peacekeeper flew about 4000 miles to the Kwajalein Missile Range in the Pacific Ocean in about 30 minutes. The company is responsible for a number of Peacekeeper development tasks, including missile assembly, test, and system support; launch system development; and assists the Air Force in conducting test flights.

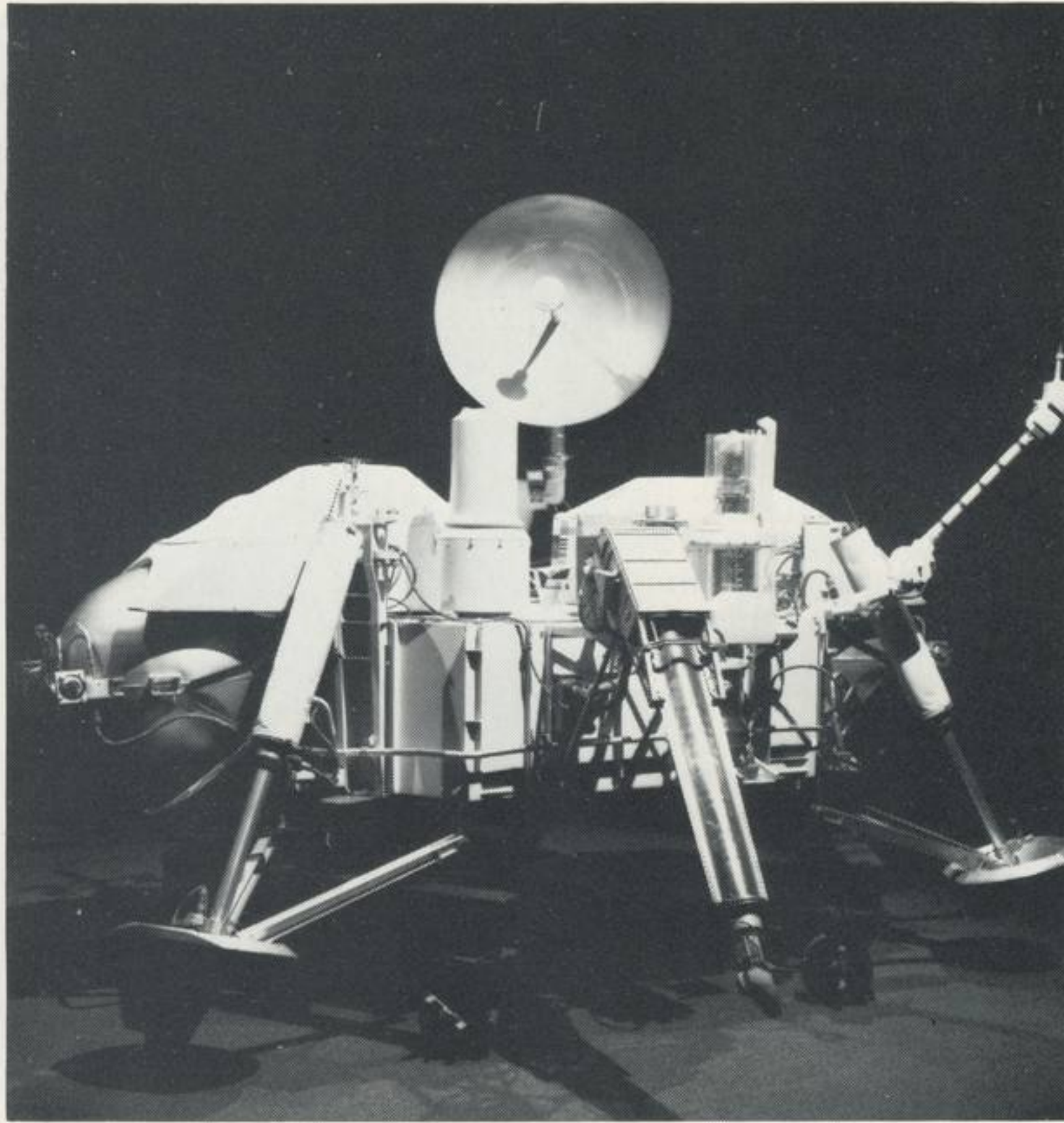
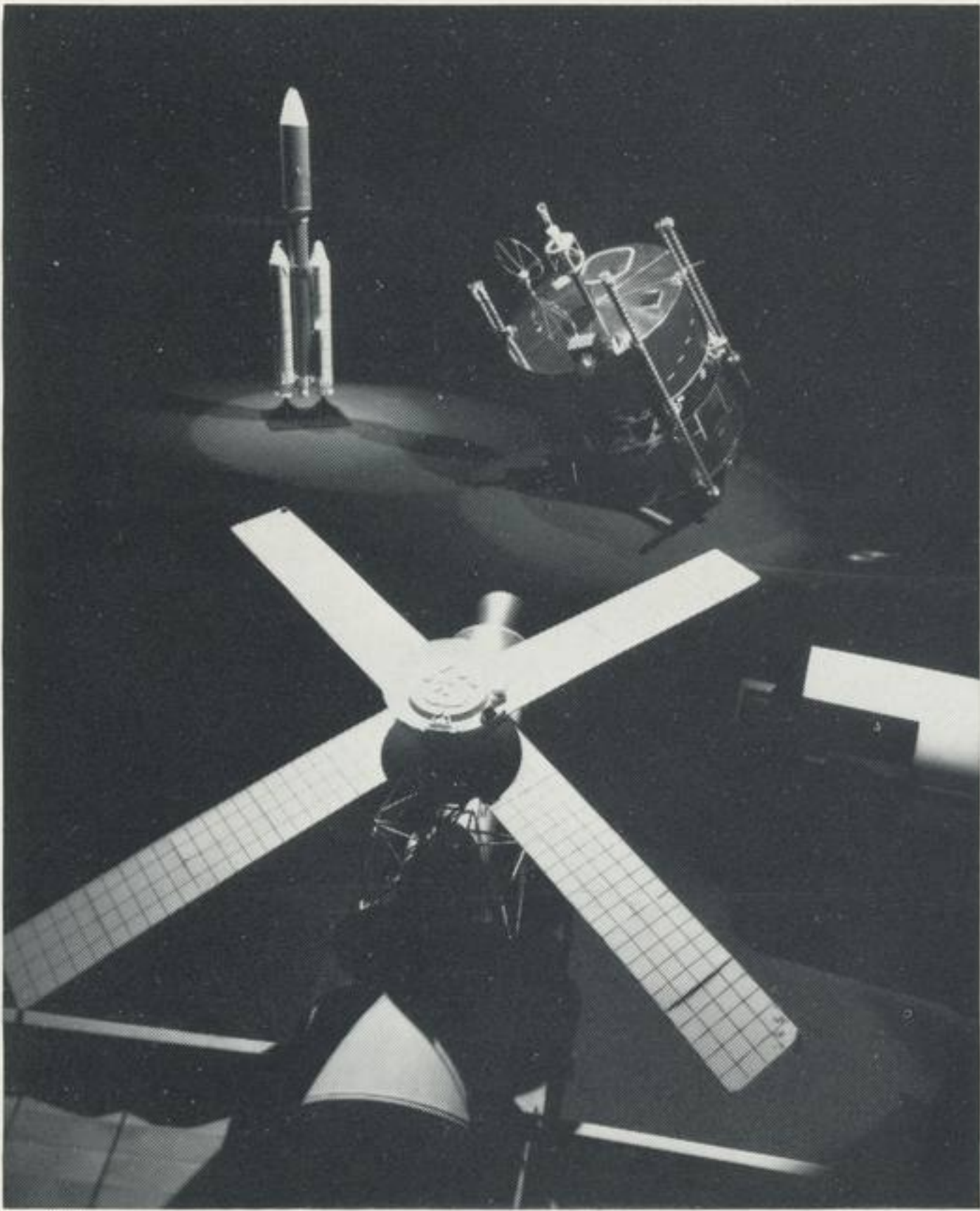
Saturday, June 18, the seventh Space Shuttle flight set a number of firsts and carried a crew of five into space, including America's first woman astronaut. The external tank built at Michoud, to which the Shuttle is attached at launch, performed perfectly. The company is also responsible for a number of other Space Shuttle flight and electronic systems.

Weather altered Shuttle landing plans, diverting the spacecraft from its first-ever touchdown at Kennedy Space Center in Florida to Edwards Air Force Base in California.

The three successful launches point to three of Denver Aerospace's current and future major business areas.

The company is a member of an aerospace team bidding on a contract to process future Space Shuttle flights. Titan launch vehicles are being considered for commercial launches, in line with President Reagan's recent pronouncement encouraging commercialization of satellite launches.

Coupled with that major business thrust, the company recently signed an agreement with Orbital Systems Corporation to develop a transfer orbit stage to be used to propel satellites into geosynchronous orbits and into transfer orbits for interplanetary missions.



Stage lighted exhibits in "The Gallery" include, left, Titan 34D, SCATHA, and Skylab; and, right, the Viking Mars lander. Employees may visit the museum during lunch periods.

Aerospace accomplishments featured in 'The Gallery'

"The Gallery," new home for exhibits highlighting more than 25 years of Martin Marietta Aerospace accomplishments, showcases the company's range of products, experience, and capabilities for customers, important visitors, and employees.

The exhibit hall has been needed for a long time because classified work closes so many areas of the main plant to visitors, according to Arthur E. Koski, in charge of special projects and exhibits for the public relations department.

Corporation registers shares to eliminate Allied holding

The Corporation has filed a registration statement with the Securities and Exchange Commission for a proposed offering of 4.65 million shares of its common stock.

Martin Marietta will use net proceeds from the sale of those shares to acquire a comparable number of the outstanding shares of its common stock currently held by Allied Corporation. Neither Martin Marietta's outstanding shares nor its total capitalization will be significantly changed after that purchase, to be completed during October 1983, or after the earlier announced purchase of 1.8 million shares to be completed during August 1983. Both purchases will be made under the terms of a stock purchase agreement negotiated last fall between Martin Marietta and Allied. The completed transactions will eliminate Allied's holdings in Martin Marietta outstanding shares.

Martin Marietta will segregate the net proceeds of the sale covered in this registration from other corporate funds and may invest the proceeds in short-term marketable securities.

Koski said the logical museum location was in the general-purpose laboratory's (GPL) old centrifuge facility. The facility has not been used for more than 10 years. The entrance is at the northeast corner of the structure.

Exhibits include full-sized models of the Viking Lander, spacecraft charging at high altitude (SCATHA) satellite, manned maneuvering unit, and the teleoperator retrieval system, as well as scale versions of the Space Shuttle, Titan, and the transfer orbit stage.

"The Gallery" also serves as a standing tribute to the mission successes of Denver Aerospace employees. It will be a

Proposal due July 22 for integration role

A system that will integrate a communication system with a missile system will be presented July 22.

M. M. "Joe" Bretting, who is managing the effort here, said the work would provide a terminal between the Air Force's newest survivable communication satellite (MILSTAR) and missile weapon systems like Peacekeeper and Minuteman.

The contract award is expected August 31 from the Air Force System Command's Ballistic Missile Organization.

Denver Aerospace is teamed on the proposal with the Harris Corporation, which is building a similar terminal for the Navy; and BDM Corporation, which works on nuclear hardening.

Working with Bretting on the proposal are Wayne Kolymago, integration; Larry L. Tew, systems engineering; and William R. Adams who is coordinating the work with the Harris Corp.

living museum in that it is being augmented as appropriate with new models, dioramas, graphics, movies, slide/tape, and video cassette productions as related to current projects.

Renovation of the old centrifuge area for "The Gallery" was undertaken by facilities and services, with design support from Corporate public relations and the Denver Aerospace graphics department.

"'The Gallery' serves multiple purposes because, for one thing, it affords our marketeers and management people an opportunity to show us off to our customers and potential customers," said Koski.

"For another, it helps put our operations into a better perspective for those customers. Pulling it together for them, so to speak," he said. "It also gives our employees a chance to see, in one location, the many and varied projects we've accomplished over the years. It'll give them a better overview of our business, too."

He described "The Gallery" as an ongoing, active showplace, because "there are still many things we're planning to add in the immediate future. And, of course, we'll be putting in new material as our aerospace activities grow."

Appointments in "The Gallery" include a 30-seat capacity auditorium, complete with 16- and 35-mm projectors, screen, and a viewgraph system for special group presentations.

Beginning next week, summer hours for "The Gallery" will be from 11:45 a.m. to 1:15 p.m., Monday, Wednesday, and Thursday. A public relations representative will be on hand to give brief explanations and to answer questions. A schedule for the other 9 months of the year will be announced later.

Those interested in using "The Gallery" at other times during the summer can contact public relations, ext 7-5364.

PISCES multiprocessor aims at improved Shuttle launches

Denver Aerospace is in the midst of a \$1.3 million development contract for a new multiprocessor computer to enhance checkout, control, and monitor subsystems (CCMS) for Space Shuttle launches from Florida's Kennedy Space Center and Vandenberg Air Force Base, CA.

The improved system, dubbed PISCES by NASA, will augment the efficiency of Shuttle checkouts and launches through its speed, memory, and maintenance capabilities as well as its compactness, according to Satish K. Anand, senior group engineer and the project's leader.

"This new system will enable us to process data three times faster than the system we're now using," Anand said. "PISCES also increases our memory capability from about 64,000 words to about two million. It also gives us a redundant—that is, repetitive function—computer system without having to back up equipment."

Anand said the basic PISCES system is downward compatible with the existing system's software and hardware and that additional capabilities "will vastly improve CCMS capabilities for future Space Shuttle launches."

He described the new system as a multiprocess design that can accommodate up to eight independent, tightly coupled processors with interprocessor communications through an interprocessor and a main memory. The processor can function as a central processing unit, a macroinstruction processor for NASA's current input/output bus, or it can be an input/output processor for handling high-speed discs and tapes.



Technician Margie Elkins checks out circuitry on the new PISCES multiprocessor developed for the checkout, control, and monitoring subsystem (CCMS) for the Space Shuttle.

The company began developing four PISCES test units about 11 months ago. The prototype was delivered to Kennedy Space Center during April. The second unit is scheduled for a September delivery, and the third and fourth units are expected to be delivered during the second quarter of 1984.

The company is working with NASA to determine specifics on about 100 instructions to be added to PISCES to further augment its capabilities.

In addition to Anand, the project team includes staff engineers James D. Harbison, Daryl K. Kawaoka, and Richard Broyles; senior engineers Paul A. Messenger and Wayne G. Nimon, in charge of packaging; and staff engineer James T. Lantzy, in charge of fabrication.

Employee graduates receive diplomas

Company-sponsored college study has resulted in college diplomas for six employees.

Albert T. Guthals, facilities engineering, received an associate of applied science degree from Red Rocks Community College.

Mary Lou Jordan, business operations, earned a bachelor of arts degree in industrial and organizational communications from Metropolitan State College.

William R. Howard, quality engineering, earned a bachelor of science degree in technical management under Regis College's RECEP TWO program.

Timothy S. McLaren, manufacturing engineering, received a master of arts degree in physics from Ball State University.

Rosemary M. Pistole, electronics, received a master of science degree in mechanical engineering from the University of Colorado. She also became a registered professional engineer in Colorado.



Highest honors, the Maj Arthur L. Moxon award, for academic achievement in economics at the U.S. Air Force Academy went to Cadet Richard Fullerton, right. Fullerton received the award, sponsored by Denver Aerospace, from Richard G. Adamson, vice president for business management. Fullerton also was top cadet in the class of 1983.

Tethered satellite has design review

Representatives from Denver Aerospace, NASA, and the Italian Council for National Research last week critiqued all satellite subsystems in the tethered satellite design at Aeritalia in Turin, Italy.

Denver Aerospace is the prime NASA subcontractor for the tethered satellite system, responsible for systems integration, development of the orbiter-mounted hardware and tether control system, and launch and mission operations. Aeritalia is responsible for providing the satellite for the first demonstration flight scheduled for April 1987.

President Reagan's interest in the program was expressed in a letter to Italian President Amintore Fanfani. "The planned joint development of a Tethered Satellite System for flight with the Space Shuttle presents a unique and highly visible opportunity to demonstrate our close cooperation in Space. It is with pleasure and a sense of adventure that I invite Italy to nominate Italian (astronaut) candidates to begin preparing with us for flight in this mutually beneficial enterprise," the President wrote.

Denver Aerospace members at the Italian meeting were: Donald S. Crouch, project manager; Thomas D. Megna, systems engineering; Vincent H. Corbett, flight data; Carl S. Bodley, orbital dynamics; Bruce W. Lockhart, guidance and controls; Anthony J. Fria, manufacturing; and Kenneth J. Coughlin, program development.

Contract is awarded for solar study

A \$44,692 contract for solar thermal applications studies has been awarded to Denver Aerospace by the Department of Energy.

The contract is for the design and analysis of a solar central receiver that uses translucent ceramic receiver tubes packed with special material for improved heat transfer to gaseous working fluids.

The new receiver should perform better and cost less than comparable solar thermal equipment now available.

Employee named top student

Outstanding student-at-large at Metropolitan State College is James R. Donahue, II, senior financial specialist.

Donahue, a computer management sciences major, maintained a 4.0 grade point average while attending night classes and will be included in the 1983 edition of *Who's Who of American Colleges and Universities*.

Donahue is developing microcomputer-based financial applications software for the Peacekeeper cost management group.

Florida JA program sets national record

In its first year of operation, Junior Achievement (JA) of Brevard County has been a great success, setting national records for number of students, educators, and volunteers participating in a first-year JA program.

Martin Marietta is a key contributor to its success, sponsoring two high school companies and providing two project business consultants. Two employees are also members of the JA's board of directors. This was a first-time involvement for most of the Martin Marietta volunteers who agreed that it was a personally rewarding experience.

Alan D. Kotyk and Michael D. Gallogly, checkout, control, and monitoring subsystems (CCMS), and Cynthia L. Faust, external tank operations, served as advisers for the Learning About Business (LAB) company in Titusville. LAB was a successful, diversified company manufacturing desk pen sets, Space Shuttle plaques, and hurricane emergency kits.

The JA company paid a dividend to stockholders at the end of 15 weeks. Gallogly noted that students quickly realized that strong leadership was required for success.

Harvey Clifton, Wallace R. Perkins, Debra A. Weaver, and Mark E. Vogel, all of Canaveral operations, advised the HALO Industries company in Merrit Island. The company manufactured and marketed auto trouble lights and also paid a dividend.

Shortly after formation, HALO Industries initiated a research and development effort to study production of high-intensity halogen lights at a competitive market price. The design was completed, and students are preparing to form a JA company next term to manufacture and market the product.

Kenneth R. Shipe and Donald T. Beck served as volunteer project business consultants teaching a high school class on private enterprise once a week for 12 weeks. Shipe taught in Titusville, and Beck taught in Cocoa Beach.

Robert D. Rhodus, director of Canaveral operations, and Beck serve on the JA board. Rhodus has been instrumental in establishing aerospace industry support of the fledgling Brevard County program.



Volleyball, a "par course," and softball keep employees active at the company's recreation facilities.

Employee chairs advisory group

Cleve L. Claxton, manager of manufacturing engineering, was elected chairman of the Manufacturing Technical Advisory Group of the Aerospace Industries Association for 1983-1984. Claxton succeeded to the one-year chairmanship after serving as secretary and vice chairman.

Claxton, with Martin Marietta since 1956, served as chief of tooling for the external tank at Michoud before assuming his current position during 1978. He holds a bachelor of science degree in mechanical engineering from Kansas State University and is a registered professional engineer in Colorado.

The advisory group sets national aerospace standards for equipment procurement used by all U.S. aerospace companies.

Recreation facilities build employee health

"Our employees are among the most health and fitness minded in industry today," said Leroy Hollins, recreation. "More than 29,000 people have taken advantage of company-sponsored activities and special events this year. Four thousand people are active in our organized sports programs, with 1900 playing in league softball alone!"

The recreation facilities are used by employees, their families, and various outside organizations. Company sponsorship of activities is granted when 20 or more employees request sanction for an activity.

The company supports employee athletics and recreation by constantly adding to and improving its recreation facilities.

Available for individual and team use are an archery range, four softball fields, a rifle and pistol range, jogging trails, and a quarter-mile "par course" with workout stations designed to exercise every muscle.

Also popular are volleyball and basketball courts, a fitness room with Nautilus weight and exercise machines, and club meeting rooms. Rest rooms and showers are provided.

This year, more than 10,000 employees are scheduled to use the two covered picnic pavilions, barbecue pits, picnic tables, and children's playground for club and family gatherings.

The recreation department provides activity coordination, publication of events, equipment maintenance, and facility reservations. For information, visit the recreation office, Engineering 124E, from 10:00 a.m. to 12:30 p.m. and from 1:00 p.m. to 3:30 p.m., or call ext 6750.

Volunteer naturalists serve at nearby park

Three Denver Aerospace employees are volunteering their time as Roxborough State Park guides.

The volunteer naturalists are James Allison and Paul Scheffer of Technical Operations, and John Sanden of the Space Launch Systems division. The naturalists interpret the history, geology, ecology, and aesthetics of the park for visitors.

Roxborough Park is at the base of the Front Range, about five miles south of the South Platte River, in a setting identical to the Waterton facility. The 776-acre park has many archaeological sites and is registered at the state and national level for its landmark and cultural characteristics.

Paleo-Indian relics, such as stone-flaked tools and arrowheads, found at Roxborough and the Waterton site show the commonality between the areas and suggest a rich history for the property.

Roxborough Park is closed to the public except for guided tours. Arrangements and reservations are made through the Colorado Parks Chatfield Office, 797-3986.

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

June 30, 1983

Vandenberg employees receive AIAA award

Byron H. Fowler and Harlan L. Gurney, Space Transportation System (STS) ground support systems employees at Vandenberg Operations, received the American Institute of Aeronautics and Astronautics (AIAA) special event award recently at the 1983 national meeting held in Long Beach CA.

They earned the award for staging the sport aircraft air show, exhibition, and dinner held May 8 and 9, 1982, at Vandenberg Air Force Base. The events were sponsored by the Vandenberg section of AIAA in cooperation with seven chapters of the Experimental Aircraft Association and the Vandenberg Air Force Base Aero Club.

Fowler, a group engineer for the STS project, chaired the event for the second consecutive year. Gurney, chief of the ground support systems acceptance management, was 1981-82 chairman of the Vandenberg AIAA section.

Lunchtime videos are well received

"Superb! Fantastic! Encore!"

"A very refreshing way to spend a lunch hour."

"A great morale builder."

Those handwritten comments on educational services' "Brown-bag Video Digest" were typical employee responses to the new series of videotaped lectures.

Dr. Wayne Dyer's *The Sky's the Limit* filled screening rooms at the engineering building, Greenwood Plaza, and general purpose laboratory (GPL) during June. July's program, *I Understand, You Understand*, an indepth look at transactional analysis by Joe Batten, is expected to be equally popular.

"We are excited about employee response to our first video program," said Dorothea Gibson, educational services, "and we're working on some surprise additions to make the experience even more positive. Watch the bulletin boards and recreation racks for schedules and details."



Raymond M. Anderson, right, receives the American Society for Quality Control distinguished service award from William O. Winchell, administrative application division chairman for the society. Anderson, a project quality engineer for Peacekeeper, received the award for outstanding service as Region 13 counselor.



Frederick Hudoff, right, program director for the Space Transportation System ground support system at Vandenberg Operations, participated in joint ceremonies for Air Force acceptance of the Space Shuttle solid rocket booster refurbishment and sub-assembly facility at South Vandenberg. Joining Hudoff for the ribbon cutting were, from left, Col Walter Yager, commander, SATAF; Brig Gen Donald Henderson, commander, SAMTO; Brig Gen Homer Johnstone, division engineer, South Pacific Division, U.S. Army Corps of Engineers; Glen Ingram, project manager Morris & Knudsen (SRSF Contractor); and Col Steven West, western area engineer, U.S. Army Corps of Engineers.

Mobile blood unit visits DSC July 14

The blood donation goal is 180 pints when the Belle Bonfils mobile blood unit visits Denver Systems Center (DSC) July 14.

Appointments are now being scheduled from 9:00 a.m. to noon and 1:00 to 2:45 p.m. Schedule coordinators, their departments, and phone extensions are:

Elizabeth Mussato	dept 6393	ext 7890
Mary Ellen Nolan	dept 6395	ext 7893
Mary Ellen Nolan	dept 6396	ext 7893
Carolyn Byers	dept 047X	ext 7397
Sue Harris	dept 622X	ext 7811
Jean Rodick	dept 623X	ext 7825
Donna Corder	dept 624X	ext 7832
June Coulter	dept 625X	ext 7838
Jeanette Wearden	dept 627X	ext 7100

or call Lori Sharp, donor coordinator, at ext 6605.

21 receive awards for 30, 35 years service

Service awards for 30 and 35 years with the company were awarded to twenty-one employees at an honors luncheon hosted by Denver Aerospace president Norman R. Augustine on June 16.

Recognized for 35 years of service were Eliot Payson, Louise McFadden, Ernest Schumacher, James Sterhardt, and Norman Chadbourne.

Thirty-year honorees were Glen J. Dickman, Donald S. Crouch, John D. Zimmerman, Kermit Boothroyd, Martin Costello, H. Allen Davis, Norman Sitter, James Nelson, Reynaldo Rodriguez, Ellwood Richardson, Len Taigman, Russell Spangler, John Ruttle, Frederick Dawson, Phillip Riley, and James Griechen.

Recreation

Archery—The Red Rocks Bowmen conducted their second 1983 tournament on June 18. Top shooters of the day were Richard McNutt, Ronald Halcomb, Scott Schultz, and Duane Vandeventer. Next tournament is July 23. For information, call Aubrey Pharo, ext 7-3286.

Alpine—A beginner backpacking trip to Abyss Lake and Mt. Evans is scheduled July 8-10. For information, call David Caswell, ext 7-3513. The July 11th membership meeting will feature slides of rafting, hiking, and camping, and is open to all. See the recreation racks for details.

Football—Tickets for the Denver Broncos-Seattle Seahawks preseason game August 5th may be ordered through recreation. Orders must be received by July 15. See the recreation racks for forms.

Titan Flyers offers a 10-week, private pilot ground school beginning July 11. Cost is \$85. Registration forms are available through recreation, or call Greg Burtner, ext 2672, for details.

Golf—The Martin Marietta Open for Air Force, Data Systems, and company employees only is set for August 6th at Riverdale Golf Course. Cost is \$20. Registration deadline is July 20. See the recreation racks for details.