MARTIN MARIETTA
news
DENVER AEROSPACE

25th ANNIVERSARY

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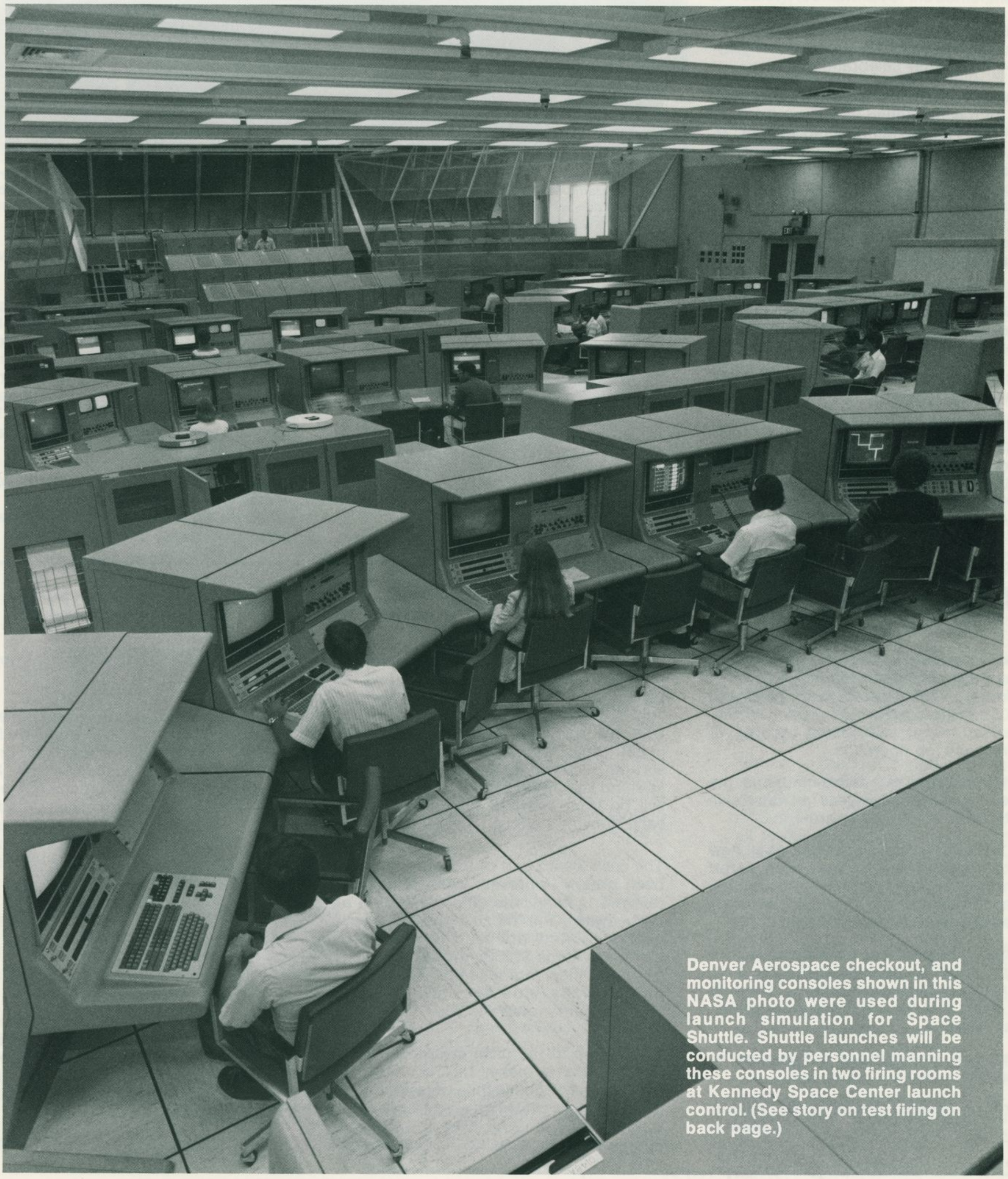

Denver Aerospace checkout, and monitoring consoles shown in this NASA photo were used during launch simulation for Space Shuttle. Shuttle launches will be conducted by personnel manning these consoles in two firing rooms at Kennedy Space Center launch control. (See story on test firing on back page.)

Denver Aerospace honored by Littleton Chamber of Commerce

Martin Marietta was cited for "25 years of service to the community" at the Littleton Chamber of Commerce monthly luncheon February 25. Accepting the plaque honoring the firm was C. B. Hurtt, Denver Aerospace president, speaker at the event.

The luncheon marked the beginning of the community's involvement in the yearlong anniversay celebration.

Reviewing the past 25 years, Hurtt said, "A lot has happened in the quarter century since Martin Marietta moved into Littleton — then a town of about 6000 or so people. For one thing, Littleton has grown to nearly 30,000 people. The quiet rural community of 25 years ago have a property valuation of about $8 million. Today, Littleton's assessed property value has surpassed $123 million.

"But, somehow," said Hurtt, "Littleton has managed to preserve that small town quality of life that helped attract Martin Marietta to locate here."

Like Littleton, Denver Aerospace has grown, too, Hurtt pointed out.

"When we first set up shop in the area, we had about 50 to 60 people. Today, we have more than 7600 employees here and another 5500 at facilities across the nation," Hurtt said. "In 25 years, our local payroll, purchases, and taxes have totalled well over two billion dollars.

Denver Aerospace President C. B. Hurtt, standing, was the speaker as the Littleton Chamber of Commerce honored Martin Marietta's 25th anniversary in the area. Seated at the head table are G.G. Peterson, chamber executive director; Harold Patton, chamber president; and Houston Waring, editor emeritus, 'Littleton Independent.' Waring broke the story that Martin Marietta was moving to the area 25 years ago.

"And, we're still growing," he said. "Twenty-five years ago, we had one product — the Titan I. Contrast that with today. At this moment, we are working on more than 450 contracts in a wide range of areas. We're hiring people at the rate of 250 per month and expect to continue hiring them at that rate for some time."

Hurtt reviewed the development of the Titan launch vehicle, the role of Denver Aerospace in the nation's space programs, and the work being done in the four divisions.

"The future holds great promise for Martin Marietta through the work under way in its four divisions," he said.

Concluding his talk, Hurtt said, "I hope I have given in a small way an enjoyable, heady view of an exciting past, present, and future. My remarks may have seemed a bit pretentious standing here in Littleton with only a quarter century of aerospace history as background. But, it has been an exciting quarter century, and we're looking forward to the next.

"It boggles the mind to try to think w... sort of events will be described to the Littleton Chamber 25 years from now,in 2006."

'The Name Game' offers trips for employee referral

The employee referral program's "The Name Game" began Monday, March 2, offering a variety of vacation trips as well as cash awards for successful recommendations of candidates for Denver Aerospace job openings.

With more than 400 active contracts, the need for skilled employees in critical skill categories continues to grow.

In 1980, more than 50 percent of all new professional employees were hired through employee referrals, proving that top people can be recruited by their friends and counterparts here.

"This is the best way we know to secure highly qualified people," said C.B. Hurtt, Denver Aerospace president. "There is no doubt that the employee referral program works."

"I urge all employess to get involved in 'The Name Game,' " Hurtt said.

For each qualified referral — one called in for interview — an employee receives a "The Name Game" coffee mug, whether the person recommended is hired or not.

The referral also qualifies the employee for a drawing for a weekend-for-two in Las Vegas. Drawings will be held May 11, July 6, September 8, and November 9, with two trips awarded in each drawing. In Las Vegas, winners will stay at the Desert Inn. The trip includes round-trip air fare and Las Vegas extras. Each drawing will be from referrals submitted during each drawing period.

The cash award part of the program has been greatly improved. When a person referred is hired, the employee earns a cash award. For those hired in salary grade 43 and above, the referring employee earns $2000. For salary grade 41, for critical non-exempt salary and hourly skills, and for new college graduates, the reward is $300.

In addition to the cash award, the successful referral makes the recommending employee eligible for a drawing for an Acapulco trip. Drawings will be held June 8, August 10, and October 5, with one winner in each drawing. The Acapulco vacation includes round-trip air fare for two, three nights at a seaside resort hotel, and a yacht trip.

Employees who successfully recommend three candidates for openings before December 7 will be eligible for a grand prize drawing of a Tahiti vacation for two. For every successful recommendation over three, the employee receives an additional entry in the grand prize drawing. For example, if five of an employee's candidates are hired, the employee will have three chances in the drawing.

In Tahiti, the vacationers wil spend three days in Papeete and three days in Moorea. The Tahiti trip winner will not have to use vacation time, but will be granted paid leave.

A "The Name Game" package is being mailed to each employee. Included is ... brochure outlining the program, three ... ferral applications, and a booklet explaining employee benefits for use with potential candidates.

Referral applications should be sent to personnel staffing for processing.

Future systems group lives up to its name; looks 20 years ahead

When the future systems organization was formed in 1980, its purpose was to "posture Denver Aerospace to be able to acquire major new business opportunities."

The future to some organizations might mean next year, but to the one headed by Howard K. Schue, it means five to 20 years in the future.

Opportunities are being sought for business similar to that now being done, but, as Douglas D. Hart, marketing manager for the group said, "We are not limited to the kinds of customers or the kinds of products we can pursue. We can go look for new business about wherever we want to look."

However, Hart said, the search is conducted within the bounds of realism. "We are starting with customers we understand."

C. William Spieth, who is heading the technical activity for future systems, pointed out that the organization is using as much of the technological capability of Denver Aerospace as possible. "That is part of our challenge," he said. "We must make certain we are using our full resources wisely."

Spieth said the group also is interested in expanding the technology base, helping to determine what technologies will be needed in the future.

Independent research and development, new business acquisition, and market analysis funds are being used by future systems in developing business. The goal is to pursue business opportunities that will become worth about $100 million a year in orders for each new opportunity.

Among specific areas in which work is being done are directed energy devices, alternative energy other than solar, advanced military space flight, and some new technologies.

"We have made progress," Schue said. "We are proposing on at least three opportunities and we are confident of success.

"When we acquire new business, we will turn it over to the operating elements of Denver Aerospace," Schue said. "We do not intend to manage the new programs. Our sole purpose is to put the firm in a position to get the business."

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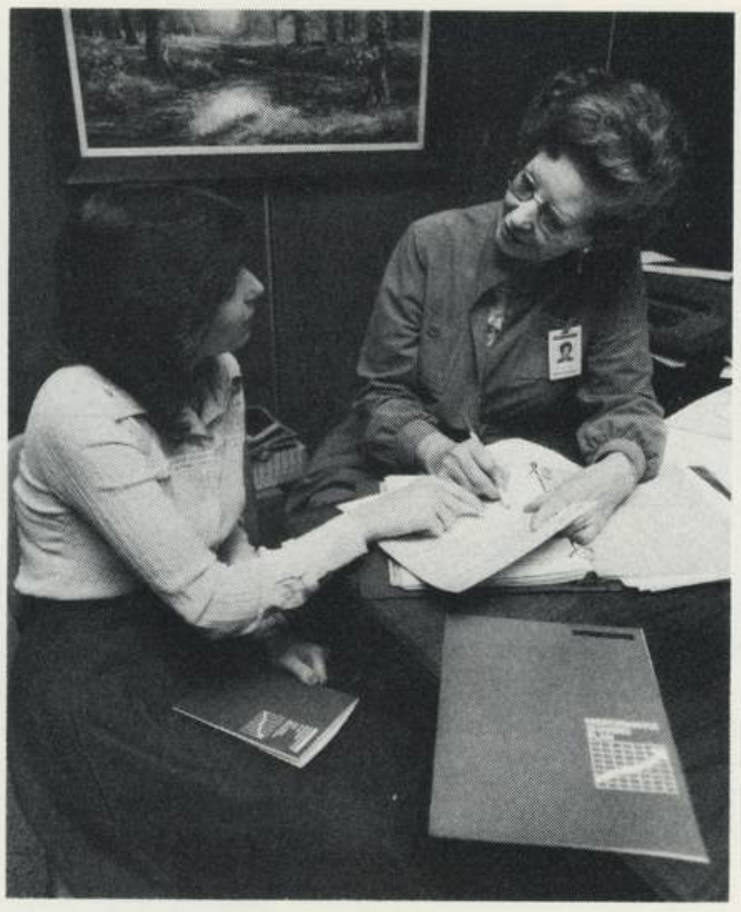


Discussing the recent Performance Sharing Plan distribution report are Mary Floyd, left, and Ilene Gorman, right, of personnel. Questions on the Plan may be directed to Ms Gorman.

Performance Sharing Plan contribution match is 67%

The 1980 Martin Marietta Corporation distribution to the Performance Sharing Plan will match 67 percent of employees' 1980 contributions. The distribution again exceeded the 50.5 percent average match for which it was designed. The distribution was based on 18.2 percent return on shareholders' equity.

"Because this is the first time the Corporation match has been less than 100 percent of your contribution," said J. Donald Rauth, Martin Marietta chairman, "it is perhaps timely to recall the basic important considerations that figured in the design of the Performance Sharing Plan."

In his letter to participants, Rauth pointed out these considerations:

"The Plan was not devised in the expectation that it would produce a 100 percent match every year, but that, over the long term of actual experience, it would average out at about 50.5 percent — a level that inarguably is, we think, very attractive. Thus far, the Plan has, clearly, exceeded our expectations.

"There is also a 'floor' — the guarantee that the Corporation's matching contributions will not be less than 25 percent in any given year."

In 1981, the match wil be 50.5 percent of employee contributions if the return on shareholders' equity is exactly 18.2 percent. A higher return wil mean a higher match; a return of 21.5 percent will bring a 100 percent match.

More than 90 percent of eligible employees at Denver Aerospace participate in the Performance Sharing Plan.

Technical papers important; clearance policy is emphasized

Technical papers written by Denver Aerospace employees are important in communicating the organization's capabilities and in the professional growth of the authors.

To insure timely and proper handling of the papers, authors are reminded that certain procedures and guidelines should be followed. Among the key elements of the procedures:

- Dissemination of technical information at conferences, seminars, symposiums, or in publications must be cleared locally and, in most cases, by the customer. Abstracts and manuscripts must be individually cleared.
- Abstracts and manuscripts should not be submitted to publications or sponsoring organizations before local or customer approval is obtained.
- All information requested on the publications clearance form must be furnished.
- Program and department management approval is necessary before the paper can be processed for clearance.
- The original paper and two copies are required for local clearance; seven copies are required for Air Force, Army, or Navy approval; four copies are required for NASA approval.
- Allow sufficient time for clearances — up to eight weeks in some cases.
- Requests to expedite clearances by telephone calls or special correspondence to customers will not be honored.
- State Department approval is required for manuscripts to be presented outside the continental United States.

Questions on clearance procedures may be directed to the public relations department, ext. 5364.

Work to begin on added DSC parking

Construction on an elevated parking structure at the Denver systems center is scheduled to begin soon.

Space for more than 300 cars will be provided by adding a second deck over about half the existing parking area south of the DSC.

Work on the structure will be completed in May.

Checklist for hotel safety

A safety checklist for employees staying in hotels on either business or personal trips has been prepared by the personnel safety department. Following the suggestions may help prevent injury in the event of fire. Clip the checklist and carry it with you on your trips.

• Don't panic. Panic and smoke are more lethal than flames. Walk — don't run.

• Know fire exit locations. Check the floor plan so you can reach exits in the dark or through heavy smoke. Don't use the elevator in the event of fire.

• Keep room key handy. Leave the key on the bedside table along with a small flashlight. If an emergency occurs take your key with you; your room may be the safest place if exits are blocked.

• At the first sign of smoke, leave the building. Since smoke rises, don't hesitate to crawl to the exit.

• Feel the doorknob. If it is hot, don't open the door. If it is cool, open the door a little. If the hallway isn't too smoky, go to the fire exit.

• If you go into a stairwell, close the door behind you. Stairwells frequently fill with smoke because doors are left open. If the stairwell is too smoky to go down, go up the stairs. Your chances may be better for rooftop evacuation.

• When you smell smoke, call the fire department not the hotel desk. The fire department will send firemen; the desk may send a security guard. Give the fire department your room number.

• If you stay in your room, open the door if outside air is free of smoke. Don't break the window; you may want to close it to keep smoke from coming in.

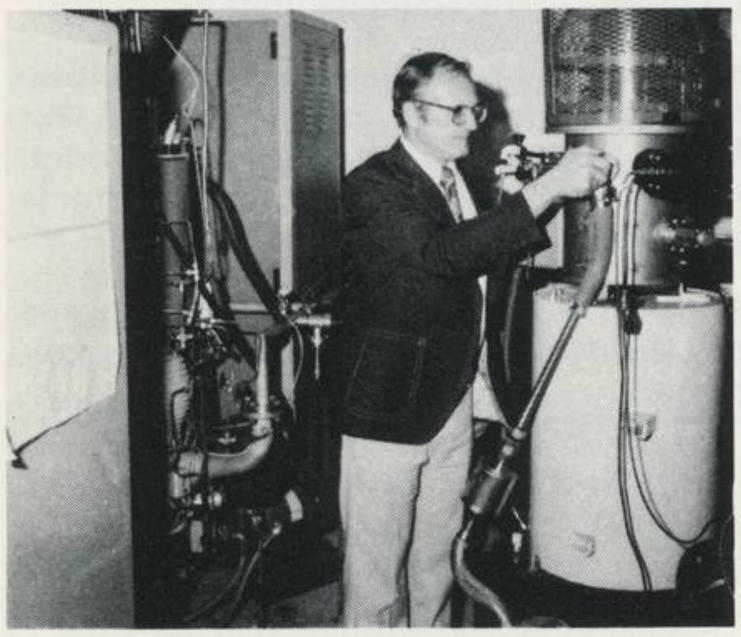
• Fill the bathtub with water. Wet towels and sheets and stuff them around the hallway door. If the bathroom vent has an electric fan, turn it on — if not, block it and all vents with wet towels or sheets.

• If the door and walls are hot, bail water on them. Keep everything wet. Swing a wet towel around the room to clear smoke. Put a wet cloth over your nose and mouth.

• Before taking a room, you may want to:

- remember fire fighting equipment and ladders are limited in the heights they can reach;

- inquire about the hotel's detection systems, alarms, sprinkler systems, and other fire safety equipment.



Equipment used in developing a new technology disclosure is inspected by Joseph A. Muscari, who received an award for the disclosure.

New technology awards given three employees

Three employees have received cash awards for new technology disclosures submitted as a result of NASA contract work. Those recognized by the new technology evaluation committee were:

Joseph A. Muscari, technical operations: commonality of vacuum untraviolet absorption by collected condensed material from typical space materials.

H. Michael Thomas, technical operations: compensated imaging sensor.

John P. Gille, technical operations: extension of method of characteristics for transient flow analysis to model nonlinear flow elements.

Credit union boosts CD interest rates

The Red Rocks Federal Credit Union is now paying 12 percent on small saver certificates of deposit, regardless of term of the certificate. The rate is the current legal maximum.

Certificates are available for six months, one year, one and one-half years, and for two years. Credit union members with $500 in a shares account may purchase their first certificate for $500 and subsequent certificates in amounts as low as $100.

Interest rates are subject to change weekly based on money market rates.

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First recipients are named for IR&D awards

Wallace S. Paulson, chairman of the independent research and development structures and materials panel, has been chosen as the outstanding IR&D panel chairman and 11 principal investigators have been recognized for their performance on IR&D programs. They are the first to be honored in the recently instituted IR&D recognition program.

Those to be honored March 12 were chosen on the basis of government IR&D scores, evaluation comments, and on the value of the work to Denver Aerospace. The programs monitored by Paulson's panel received the highest average score in the evaluations.

Principal investigators who will receive awards are Aubrey J. Butts, future planetary mission studies; John V. Coyner, large space systems analysis; Matthew S. Imamura, photovoltaic systems development; James J. Kehoe Jr., satellite surveillance countermeasures; James W. Lowrie, advanced spacecraft automation; John G. McCoy, advanced instrument technology; Thomas A. Milligan, advanced spacecraft antenna technology; Norman A. Osborne, advanced control system technology;

William E. Pipes, propulsion concepts for large space systems and orbital transfer vehicles; Robert B. Rice, control of large flexible structures; and Frank P. Witte, multi-sensor integration architecture.

Selection of employees for the new awards was made by Robert J. Polutchko, vice president for technical operations; James L. Burridge, chief engineer; and Ronald A. Bena, IR&D program manager.

Awards given for NASA Tech Briefs

Two employees have received cash awards and certificates of recognition for publication of a new technology disclosure as a NASA Tech Brief.

Honored were Dennis E. Herrick, space and electronics systems division; and Leo J. Rothermal, strategic systems division.

Hired, transferred in 1956?

Special recognition during the Denver Aerospace 25th anniversary year is being planned for employees who have worked in Denver for the full 25 years.

To assure that all are honored, those who were hired in 1956 or those who were transferred by the company in 1956 or before are asked to complete the coupon and return it to Leroy Hollins, Mail No. 1321, as soon as possible.

Name _____ Dept _____ Badge# _____ Mail # _____ Ext _____

Home Address _____ Home Telephone _____ Date Hired/Transferred _____

A NASA Group Achievement award recently was presented three employees for outstanding work on the development, flight testing, and preliminary data analysis of the Feature Identification and Location Experiment (FILE). Receiving the award were, left to right, H. Michael Thomas, Roger T. Schappell, and James W. Lowrie. J.W. McAnally, right, director of electronics, presented the certificates. FILE was successfully flown on a research aircraft in 1980. It is the first in a series of four automated remote sensing experiments sponsored by NASA's Langley Research Center. FILE is scheduled to be flown on Space Shuttle this year.

Inventors earn awards for work

Cash awards have been presented seven employees for their inventions.

Those recognized by the product development board were:

Fred R. Schwartzberg, space and electronics systems: coreless hoop structure for electrostatic membrane antenna.

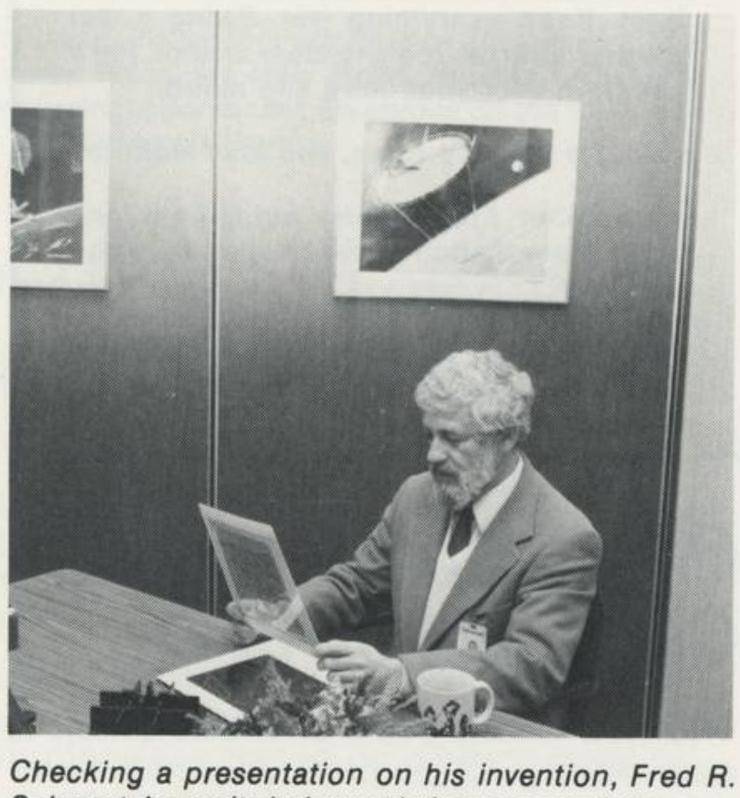
Neil J. Butterfield, space electronics systems: bolt cutter.

Ward D. Rummel and **Thomas L. Tedrow**, technical operations: x-ray opaque penetrant.

John R. Lager, strategic systems: Lager integral spring approach (LISA).

Philip R. Horkin, technical operations: a practical circuit for wideband AC coupling.

Lyle E. Bergquist, technical operations: helium leak checking of cryogenic pumped vacuum chambers.



Checking a presentation on his invention, Fred R. Schwartzberg sits below artist's concept of the coreless hoop structure for electrostatic membrane antenna.

Employees who attended Denver Nuggets basketball games in February as guests of Denver Aerospace saw this advertisement in the Nuggets official souvenir program. The games were the first in a series of special events planned to mark the 25th anniversary.

Participation planned in safety conference

The Fifth International Safety Conference to be held July 26 to July 31 in Denver's Brown Palace Hotel will feature papers written by Denver Aerospace employees. Employees also will conduct workshops.

George B. Mumma, director of MX system safety, is chairman of the conference.

Employees scheduled on the program include:

Rollin E. Johnson, a paper entitled, "System Safety Checklist for System Design."

David G. Standish, a paper on, "System Safety during Facility Acquisition."

John G. Griggs III (Vandenberg) will be co-chairman of the software safety workshop and present a paper, "Method of Software Safety Analysis."

A.M. Lex Ray, a paper entitled, "Space Operations Simulator/Reducing Human Error."

Randall L. Williams (El Segundo) will be co-chairman of the product safety application and certification workshop.

Dave R. Nutile (San Bernardino) will be chairman of the special topics workshop.

Keynote speaker at the conference will be Maj. Gen. Gerald K. Hendricks, U.S. Air Force Space Division vice commander. He will speak on military space systems and system safety.

Another 24 Denver Aerospace employees are assisting with conference preparations.

Recreation

New clubs — The recreation office will assist in the formation of new clubs if sufficient interest is shown in their activities. Among the suggested new clubs are climbing, flying, diving, sailing, motorcycle, computer, fencing, square dancing, Dixieland jazz, and music. Employees interested should fill out a club interest form available in the information racks and return it to the recreation office.

Theater — Group seating has been reserved for employees at the Denver Center Theater Company's production of the musical, "How to Succeed in Business without Really Trying." Tickets for the 8 pm performance Saturday, April 11 are $6.75 per person — a 25 percent discount. Reservations should be made through the recreation office by March 27.

Basketball playoffs — Winter basketball league playoff tournaments will be held March 7 and 8 at Saint Mary's junior high school in Littleton. The top four teams in the competitive league and the open league will compete. Winners will advance to the state tournament March 20 through March 22.

Tennis — The tennis club's spring tournament will begin in May. Entry deadline is April 22. The double elimination tournament is open to all levels of players in men's and women's singles, men's and women's doubles, and mixed doubles.

Softball — An organizational meeting for men's, women's, and co-ed softball leagues will be held at 4 pm, Thursday, April 2 in the sixth floor SSB presentation room. Information is available from the recreation office, ext. 6750, or from Commissioner Paul Shattuck, ext. 4207.

Umpires — Employees interested in being umpires in the softball leagues should contact the recreation office. A training clinic will be held, with a time and place to be announced.

Space Shuttle engines successfully test fired

The dress rehersal for the Space Shuttle's first launch was culminated February 20 with a successful 20-second firing of the orbiter's three main engines. This was the first test firing on the launch pad at Kennedy Space Center.

The 580,000 gallons of liquid propellants were loaded into the external tank beginning five hours before the test. Loading was completed in about three hours and a NASA/Martin Marietta team inspected the tank for signs of frost or ice buildup. No major ice formation was detected.

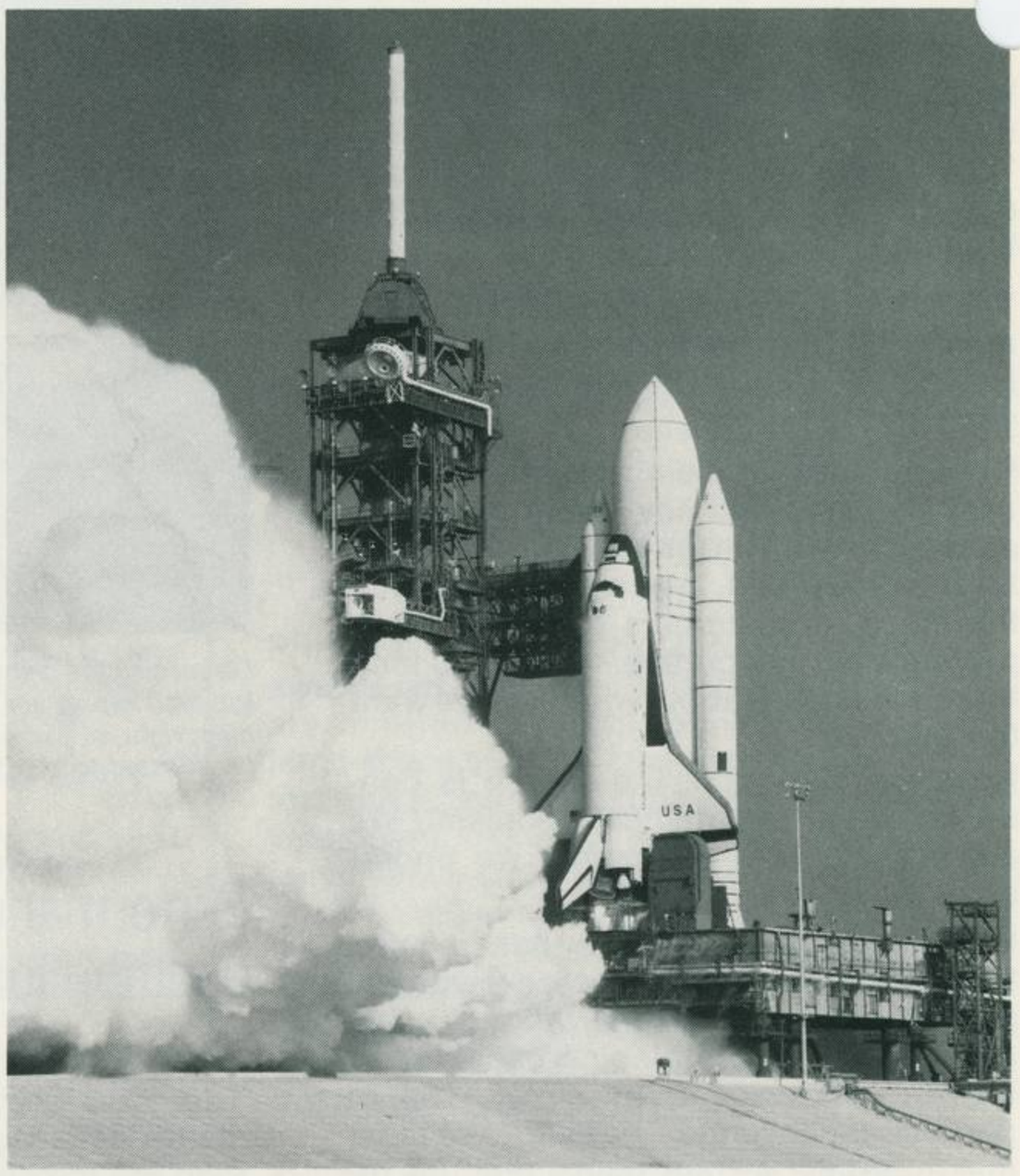
Preliminary post-firing analysis did not show any additional debonding of the external tank's thermal protection system. A small area of super light ablator came unglued from the hydrogen tank surface during a propellant loading test in January

Additional and more detailed inspections of the thermal protection system are planned.

Conditions and timelines for the firing duplicated as closely as practical those planned for the first Space Shuttle launch.

The first Shuttle flight crew, John Young and Robert Crippen, viewed the firing from 3000 feet overhead in a jet aircraft. Fifteen other astronauts watched the firing from the KSC launch control center.

The 20-second flight readiness firing was part of an overall mission verification test. At this time, a series of four other coordinated tests and simulations are scheduled to follow the test firing. These tests include a return-to-launch-site abort simulation at the KSC Shuttle landing facility; an abort once around landing simulation at White Sands Missile Range in New Mexico; a 56-hour mission duration simulation at Johnson Space Center of the mission flight phase from solid rocket booster ignition to routine landing at the end of the flight; and an end of mission landing exercise at the Dryden Flight Research Center in California.



Flames shoot from the nozzle of the Space Shuttle's three main engines during the successful 20-second static firing that capped a formal rehearsal for the maiden flight of Columbia.

Michoud credit union continues its growth

Membership in the Michoud division employees' credit union exceeds 1000 and loans of more than $220,000 have been made to more than 200 members.

The increased demand for loans in the last months of 1980 and in January and February this year has forced the credit union to limit loans for an indefinite period. The board of directors points out that an increase in membership and increased savings by members will permit additional loans to be made.

The annual meeting of the credit union will be held in June. Members of the board will be elected at the meeting.

Gold medallion awards given at Vandenberg

Thirty-three emplyees were honored at the Vandenberg operations gold medallion awards banquet held to recognize individual employee excellence during 1980. The certificates and medallions were presented by O.L. Jones, Vandenberg operations director, and Frederick H. Hudoff, ground support systems director.

Vandenberg operations employees honored for program administration and performance were Lawrence F. Bishop, Eugene Marchbanks, M.S. Walen, Ray F. Johnson, Walter E. Lewis, Donald B. Wilson, Elinor E. Durso, Ulis W. Hopson, Eugene M. Sarich, Norman L. Shaw, Charles H. Small, Melville J. Wheeler, Lewis D. Jennings, Thomas Botello, John J. Graham, Jimmy D. Harrison, Aurelio S. Lopez, Gary G. Morrow, and Ralph J. Pinassi.

The GSS awards recognized employees for their contributions toward project planning, administration, design, and software development in 1980. Those honored were Sharon M. Alldredge, Robert N. James, Daniel W. Greene, Stewart F. Mee, Bernard F. Krueger, Thomas W. McDorman, Frederick M. Frey, Raymond G. Colby, Frank M. Hlavarty, Charles G. Leonard, Jacqueline T. Hudgins, William M. Gleason, Dennis A. Hause, and James N. Miles.

In addition to these medallions, C.E. Carnahan, space launch systems division vice president, honored four employe for their decisive, professional, and su cessful actions in applying CPR techniques to a fellow employee who was suffering a heart attack. Those honored were Melville J. Wheeler, Charles H. Small, Thomas Botello, and Ulis W. Hopson.

Space Shuttle flight to create interest in nation, world

The first Space Shuttle flight will create a renewed interest in space exploration and focus the attention of the nation and the world on its mission.

With that attention will come requests for comments from Martin Marietta personnel on the company's role in the Space Shuttle project.

All such requests, because of contractual restraints on the public release or dissemination of information, should be referred to the public relations department in Michoud, ext. 3788, or in Denver, ext. 5364.