



**NUMBER 14/1981**

**MARTIN MARIETTA**  
**news**  
**DENVER AEROSPACE**



# 25th anniversary celebration Saturday

The biggest event of the year to mark the 25th anniversary of Denver Aerospace will be held this Saturday night at McNichols Arena.

All employees have received tickets for themselves and a guest for the gala affair and are cordially invited to attend the evening of celebration and entertainment.

Nearly 300 employees who were hired in Denver or transferred here in 1956 will receive special recognition. They and their guests will have special seating on the main floor of the arena and will be honored for their long-time service.

The doors at McNichols Arena will open at 6:00 pm. Each employee has received two tickets for the buffet dinner to be served from arena concession and auxiliary stands.

Following brief remarks by C. B. Hurtt, Denver Aerospace president, and J. Donald Rauth, chairman of the Martin Marietta Corporation, the Osmond Family will take the stage for an evening of entertainment.

Donnie and Marie, the most famous of the Osmonds, will be featured in the program that begins at 7:45 pm.

Because parking is limited at the arena, special parking passes have been issued and employees are urged to share rides. Only those with these special parking passes will be allowed in the parking lots.

## External tank passes test for second Shuttle

The external tank to be used on the second Space Shuttle mission passed a major test in preparation for the scheduled October 9 launch.

In the test, the external tank was filled with its super-cold propellants—liquid hydrogen and liquid oxygen—and then drained. The test is used to prove the compatibility of all systems, check the thermal qualities of the external tank, and verify software procedures.

An inspection after the test showed no debonding of insulation.

## New power plant to use Denver solar arrays

Construction has begun on a solar photovoltaic power plant at Sky Harbor International Airport near Phoenix that will use 80 solar arrays and a Sun-tracking system designed and built in Denver.

Arizona Public Service Company, U.S. Department of Energy, civic, and Martin Marietta officials attended ground-breaking ceremonies September 15 to initiate construction of the project. Those from Martin Marietta were Cecil Schumacher, project manager; Nicholas J. Ganiaris, program development manager; and James L. Burrigge, chief engineer.

Construction is scheduled to be completed in early 1982. The 225-kilowatt facility will supply electricity to the area's main power grid system.

According to the Schumacher, "The airport is an ideal location to build a solar power plant because of the relatively large areas of land set aside as noise abatement corridors not committed to airport operations."

Solar photovoltaic systems convert sunlight directly into electricity using silicon cells. Each of the Sky Harbor arrays will use 272 cells mounted with Fresnel lenses the sunlight 33 times.

Denver Aerospace will develop the computerized system to track the Sun for maximum efficiency.

The Sky Harbor plant is the second large-scale photovoltaic project for Denver Aerospace. The firm also built the world's largest photovoltaic power plant—a 350 kilowatt system—near Riyadh, Saudi Arabia.

## Employees serve as United Way executives

Three employees — two at Denver and one at Michoud — are serving the United Way as loaned executives in this year's campaign.

Working with the Mile High United Way are Robert G. Garcia, personnel staffing, and Donald J. Jussel, facilities and services.

Leonard W. Forstall, product assurance administration in Michoud, is assisting in the United Way campaign in New Orleans.

The loaned executives assist major firms in employee campaigns and support the general campaign staff.

## Shuttle mission timeline

The preliminary timeline for the second Space Shuttle mission, scheduled for October 9, shows the point at which Martin Marietta hardware will be used.

Mission Elapsed Time	Event
00:00:00	Liftoff
00:02:014	Solid rocket booster separation. The pyrotechnic initiator controls activate explosive devices, including separation of the solid rocket boosters.
00:05:40	Parachute system slows the descent of the solid rocket boosters, provides for ocean landings.
00:07:40	Solid rocket boosters fall in the Atlantic Ocean. Ships pick up the parachutes and tow the rocket boosters to port.
00:08:48	External tank is separated from the orbiter.
04:00:00	Activation of the OSTA-1 (Office of Space and Terrestrial Applications) payload experiments. One of these is FILE, the feature identification and location experiment.
103:00:00	Reaction control system (RCS) nose jet test. The RCS thrusters are used to control the orbiter's attitude throughout the mission.
117:40:00	Deactivation of the OSTA-1 experiments.
124:10:33	Landing. During the mission, the caution and warning system provides the flight crew with audio and visual warnings of system malfunctions.

### On the cover

Designed to convert sunlight directly into electricity, 80 photovoltaic concentrator arrays similar to the one shown on the cover, will be installed at Sky Harbor International Airport in Phoenix. In the photo, Jack Branson, left, and David Watts, adjust the array during tests.

## Corporate officer addresses Denver executive staff

"We do expect to be respected...and the maintenance of a decent, good reputation is the basis for respect...."

Those words, by Roy Calvin, Corporate vice president for public relations were part of a recent address at a meeting of the executive staff of Denver Aerospace.

Speaking on Corporate public relations, Calvin placed special emphasis on the role of credibility in working on behalf of the Corporate interest.

He said, "If we aren't credible, we're not going to be anything...it is, absolutely, the overwhelming influence in every important move, either overt or defensive, that Martin Marietta makes—whether in the name of public relations, or of something else."

Calvin added that "...naked self-interest is not credible. It is a reality of our times and our lives that our ventures, our propositions, our positions must, if they are to succeed, involve more than narrow self-interest. And that 'more' is generally the public interest or the general welfare...."

Describing how Martin Marietta hopes to be recognized, Calvin said, "The management is properly concerned that we are perceived as successful, and honorable, and ordered. I like the idea of a corporation that has cool confidence, and efficiency. In my mind's eye, it connotes an organization that is, first off, cohesive, that knows where it's going, that doesn't become disjointed or panicky by the inevitable bumps in the road."

## Vandenberg employee coaches champions

William Jackson, a design draftsman at Vandenberg operations, has coached the Orcutt Express women's softball team to a national championship.

The team, made up of 16- to 18-year-olds, won the 1981 Women's Amateur Softball Association fast pitch tournament.

Jackson, who is tournament director/general manager of the team, organized the group in 1976.



Larry A. Root took third place with his black and white "LeRoy-Catalina Cat"



"On a Clear Day" by Don L. Lorenz, strategic systems division, was the first place color print in the 1981 NIRA photo contest.



"The Big Chase" is Fred Luhman's third place winner in the color slide division of NIRA's 1981 photo contest.

## Award-winning photos return from competition

Four of the top 12 awards in the 1981 National Industrial Recreation Association photo contest were captured by members of the Photography Club here. The winning entries have just returned from the competition.

Larry A. Root and Don L. Lorenz of strategic systems division took first place awards, and Root and Fred Luhman of space launch systems won third place awards.

Root won first place in the black and white print division for "Yesteryear," and third place in the same division for "LeRoy-Catalina Cat."

Lorenz was first place winner in the color print division for "On a Clear Day."

Luhman's "The Big Chase" took third place in the slide division.

The 1981 contest marked the first entries by local photographers in the NIRA contest.



"Yesteryear" by Larry A. Root, strategic systems division, was the first-place winner in the black and white division.

## SCATHA is in 'good shape' 2½ years after launch

Some two and one-half years after launch, the SCATHA spacecraft is in good shape and still operating on its primary systems. Backup systems have been used only when tested for availability.

SCATHA, a unique experimental electronics satellite built for the U.S. Air Force by Denver Aerospace, was successfully launched into Earth orbit at 4:42 pm (EST) January 30, 1979. The spacecraft was boosted into final orbit February 2, 1979 after being within one degree of the desired attitude before engine firing.

SCATHA is an acronym for Spacecraft Charging at High Altitudes. Orbiting satellites pass through the Earth's magnetic field and attract charged particles trapped there. The electrical charging can cause satellite components to malfunction.

SCATHA experiments are in good condition and have analyzed the magnetic and electrical fields in the spacecraft vicinity; measured the voltage build on spacecraft surfaces; identified the type, quantity, and electrical energy of particles encountered by the spacecraft; and have artificially controlled spacecraft charging.

Approximately 40 percent of the data collected by SCATHA has been processed. The information has been used to prepare an environmental atlas and to provide a model of the effects of spacecraft charging. This information will be used to aid in future spacecraft design so that the effects of spacecraft charging can be controlled.

Although plans call for SCATHA to be put in "mothballs" in January 1982, the craft has sufficient "consumables"—primarily hydrazine for the thrusters to keep it in proper orbit—to function for four or five more years.

## Three employees win 'Name Game' trips

Three employees have won trips as a result of their participation in "The Name Game" employee referral program.

Edward H. Bailey was the winner of the three-day all-expense trip for two to Acapulco. Bailey, a senior logistics engineer in the systems department, became eligible for the drawing when a candidate he referred was hired. He is the second winner of an Acapulco trip.

A third winner will be selected October 5.

Winning trips to Las Vegas were Lee Tipton, a senior engineer in test requirements, and Robert Hess, an engineer in structures and materials. They became eligible for the all-expense trip for two by submitting a qualified referral.

The last drawing for trips to Las Vegas will be held in November.

Final drawing in "The Name Game" program, which ends on December 7, will be for a vacation for two in Tahiti. Employees who have recommended three candidates who were hired will be eligible for the drawing.

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

## Dividend reported for credit union

Red Rocks Federal credit union will post a six percent dividend, compounded quarterly, to member's accounts October 1, 1981.

The credit union will offer All Saver certificates beginning October 1. The certificates yield 70 percent of the interest of Treasury bills with a \$1000 interest exclusion on individual income tax returns and a \$2000 exclusion on joint returns. A minimum investment of \$500 is required with \$100 increments for a one-year maturity. There is a substantial penalty for early withdrawal.

Certificates issued October 1, 2, or 3 may pay a maximum 12.61 percent.

Members will be offered broad benefits through individual retirement accounts (IRA) when they become available January 1, 1982 even for those with company pension plans.

Information may be obtained by calling Ext. 6000.

## Life, medical insurance benefits to be separated

The life and medical insurance benefits of the group insurance plan for salaried employees will be available separately beginning October 1.

Employees no longer will be required to take both benefits in order to have either life or medical coverage.

To cancel either of the benefits, employees should go to the employee benefits office, Eng. 124. For information call Ext. 3009 or 4928.



Employees Paul T. Turner, left photo, and Jack M. Dieckow, right photo, were umpires in the American Softball Association women's class A championships in Leadville. Dieckow officiated in the finals; Turner was selected for tie-breaker games. Both are umpires in the Martin Marietta softball league.



## Recreation area is being improved

Improvements to the recreation area are on schedule with the five-year plan to upgrade athletic and recreation facilities.

Slated for completion next Spring are an additional eating shelter, permanent barbecue pits, two permanent outdoor volleyball courts, additional horseshoe pits, a permanent lawn croquet area, and a permanent outdoor basketball court.

Highlight of the improvements will be completion of a six-foot wide running track with turnouts to 12 workout stations. Workout stations will feature instructions and equipment for exercise.

## Technical paper approval takes time

Employees authoring technical papers for dissemination or publication are reminded to allow up to eight weeks for local clearance and customer approval.

Technical papers serve an important function in communication of the organization's capabilities, technical knowledge and skill of the authors, and corporate interest in future scientific growth.

Abstracts and manuscripts are to be individually cleared before submission to sponsoring organizations for publication and dissemination.

Program and department management approval is necessary with the original and two copies required for local clearance. Seven copies are required for Air Force, Army, or Navy approval; four copies are required for NASA approval.

State Department approval is required for manuscripts to be presented outside the continental United States.

To insure prompt and complete approval, authors should follow the guidelines and procedures for technical papers. Questions on clearance procedures should be directed to Fitzroy Newsum of the public relations department, EXT. 5364.

## Employee is cited for work with school district

Lyle E. Bergquist, instrument research and development, has been cited for his work this summer as a citizen consultant with the Jefferson County R-1 School district.

In a review lead by the district's science department, he was involved in formulating the desired curriculum at the senior high school, level.

Cindy Hrebar, a science resource specialist for the district said, "In determining the desirable curriculum for the 1980s, he offered creative and innovative suggestions based on research, current literature and practical experience of a scientist. His poignant questions caused committee members to extend their perspective, become future-oriented, and search for solutions."

"He has been a valuable resource," she said, "and youngsters will be the benefactors of his collaboration."

## Emergency phone numbers changed

Emergency phone numbers have been changed for all facilities in Denver. The new numbers should be used to report fires, accidents, or medical emergencies. The new numbers are:

Main facility	4911
DSC and West Point	7911
South Lincoln	6+4911
Greenwood Plaza/Commons	1911
Cinderella City	911
Space Support North	8911

### MARTIN MARIETTA NEWS

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