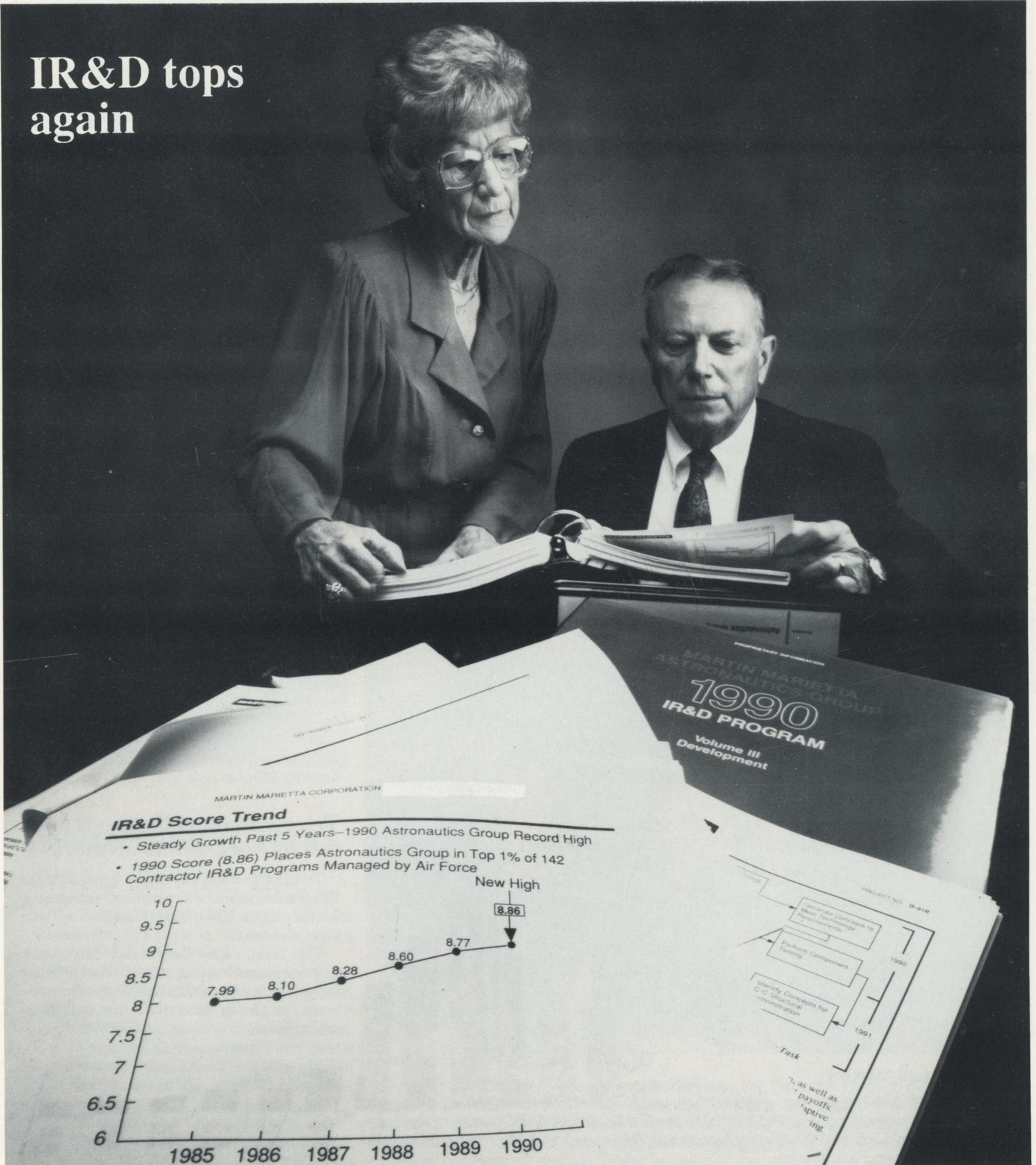


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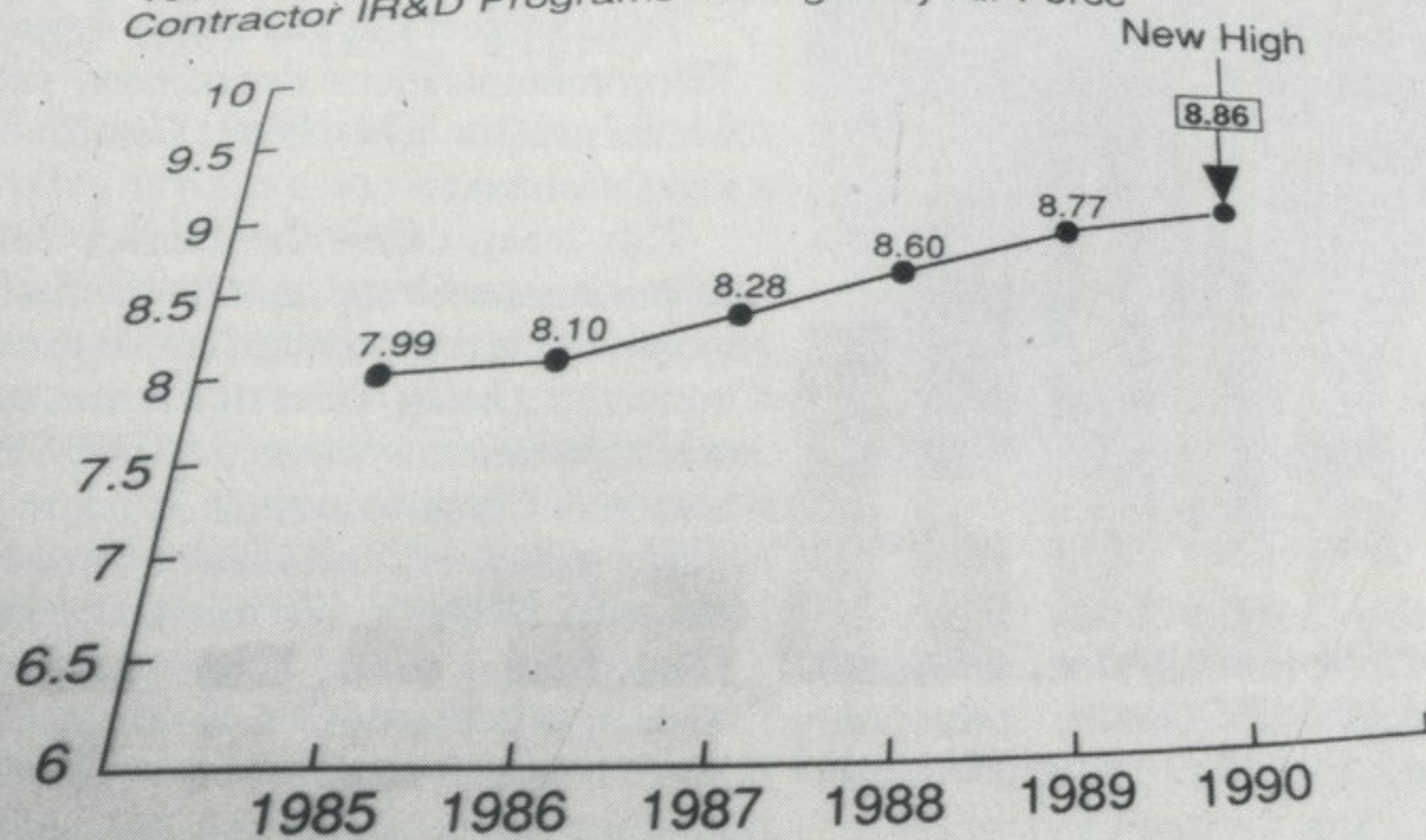
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IR&D tops again

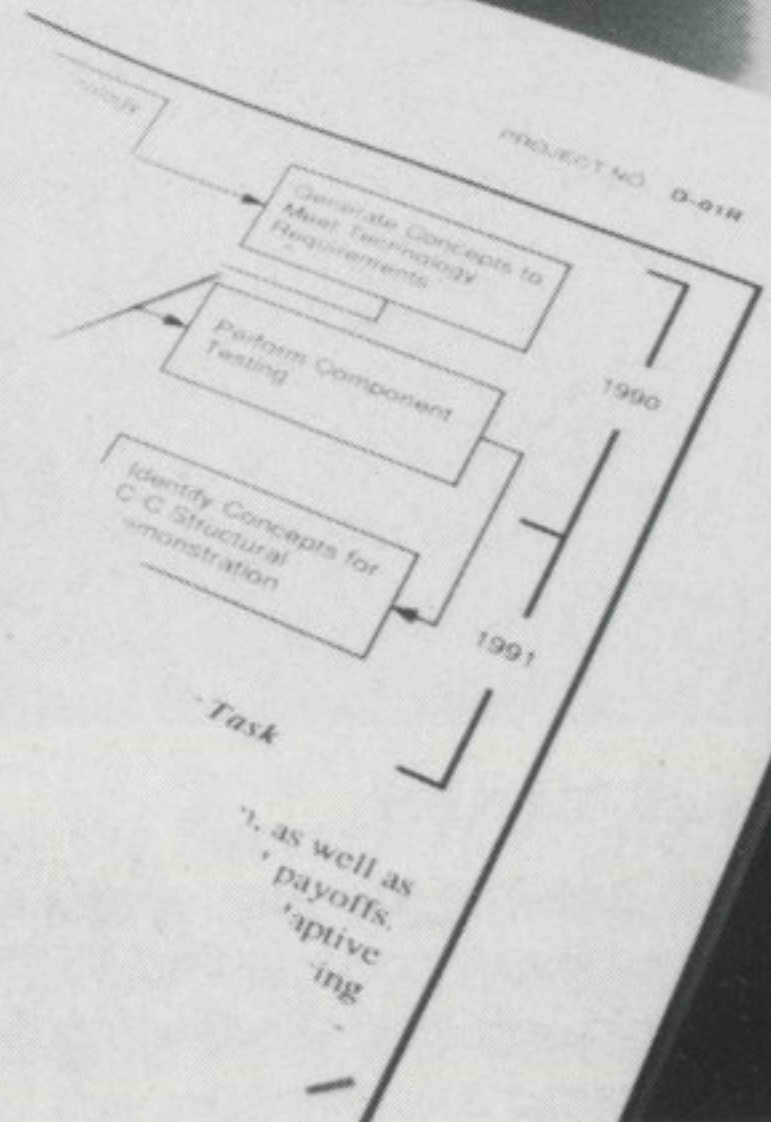


IR&D Score Trend

- Steady Growth Past 5 Years—1990 Astronautics Group Record High
- 1990 Score (8.86) Places Astronautics Group in Top 1% of 142 Contractor IR&D Programs Managed by Air Force



MARTIN MARIETTA
 ASTRONAUTICS GROUP
1990
 IR&D PROGRAM
 Volume III
 Development



Health agencies announce final decision for cleanup at Waterton facility

The U.S. Environmental Protection Agency (EPA) and the Colorado Department of Health (CDH) have announced selection of a final cleanup plan for soil and ground water contamination at the Main Plant.

"We acknowledge our responsibility to the community to conduct our business in a manner that prevents pollution and enhances the environment. This cleanup is a significant part of that responsibility."

—Peter B. Teets

James J. Scherer, EPA regional administrator, and Thomas Looby, deputy director of

CDH's Office of Health and Environmental Protection, said the plan is similar to that proposed by the EPA for public comment in June.

Scherer said the final remedy was selected after public comment was received, and that based on public comment, "we have modified our original proposal to include carbon adsorption as an air emissions control on the treatment system for ground water."

The plan calls for excavation and off-site treatment and disposal of waste, and thermal extraction and stabilization of contaminated soils with replacement of treated soils in the excavation area, which will then be capped. Contaminated ground water will be pumped and treated to remove organic and inorganic contaminants. Treated water will be released to surface water.

"We are committed to this cleanup effort and intend to do the best possible job," said Peter B. Teets, president of the Astronautics Group.

"We acknowledge our responsibility to the community to conduct our business in a manner that prevents pollution and enhances the environment. This cleanup is a significant part of that responsibility." ■

Savings bond minimum now set at \$100

The United States Treasury department recently announced that, effective Oct. 1, the minimum denomination savings bond available will be \$100. Therefore, these bonds will have a purchase price of \$50.

Bond accounts currently receiving \$50 or \$75 bonds will automatically be changed to a \$100 value on Oct. 1.

Employees wanting to purchase bonds with a value greater than \$100 should obtain a bond change card and mail that to payroll at Mail Stop DC2517. Questions can be directed to Ext. 1-5200 or 1-5202.

Security sets annual rebriefings schedule

All Denver employees of the Astronautics Group will receive their annual security awareness rebriefings next month.

These meetings will stress the importance the corporation places on protecting classified and proprietary information and computer technology. They will also address the precautions that employees must take in today's changing world.

Because of the number of briefings scheduled, employees are asked to attend the meetings at scheduled times and locations based on last names and work locations.

Each presentation will take about 25 minutes, and only a limited number of makeup sessions are planned for employees unable to attend at their designated time.

The Government Security department this year is pleased to offer open captioning for hearing impaired employees. This service will be offered at the briefings noted with a "A" symbol on the schedule distributed this week.

For more information, contact a Government Security representative or the Government Security office at Ext. 7-3905. ■

Telecommunications sets up subnetwork administrators

To help meet the increasing demand on the Telecommunications department, subnetwork administrators have been identified to help serve customers.

This team, called the Denver Subnetwork Administrator Group, met for the first time last month and is comprised of employees from Astronautics Group Telecommunications, Internal Information Systems, M-UNIS, and Information & Communications Systems.

The group will specifically work to support the wide range of services connected to the Telecommunications network. Employees wishing to contact this new resource group, or who are interested in learning who their specific administrator is, should call 790-3256. ■



Girl Scouts pull together

Girl Scouts help a fellow scout over an obstacle at the Tomahawk Ranch near Evergreen. Martin Marietta recently contributed \$5,000 to the Girl Scouts Mile Hi Council capital campaign to help build additional camping facilities at Tomahawk Ranch. Thousands of Girl Scouts use the camp each year.

Space Systems company stays busy with NASA projects

The Manned Maneuvering Unit (MMU), the Hubble Space Telescope's Faint Object Spectrograph (FOS), and the Magellan spacecraft have been high-visibility programs for the Space Systems company. An update on each follows.

MMU

Space Systems has received \$349,000 in funding from the National Aeronautics and Space Administration's Johnson Space Center to begin retesting the MMU—the backpack propulsion device used by astronauts to fly untethered from the Space Shuttle on three missions in 1984. Two units, which have been stored at Astronautics Group facilities, will be checked out through December for possible future flights on the space shuttle. The MMU was used by astronauts in repairing the Solar

Maximum Observatory and retrieving two communications satellites.

FOS

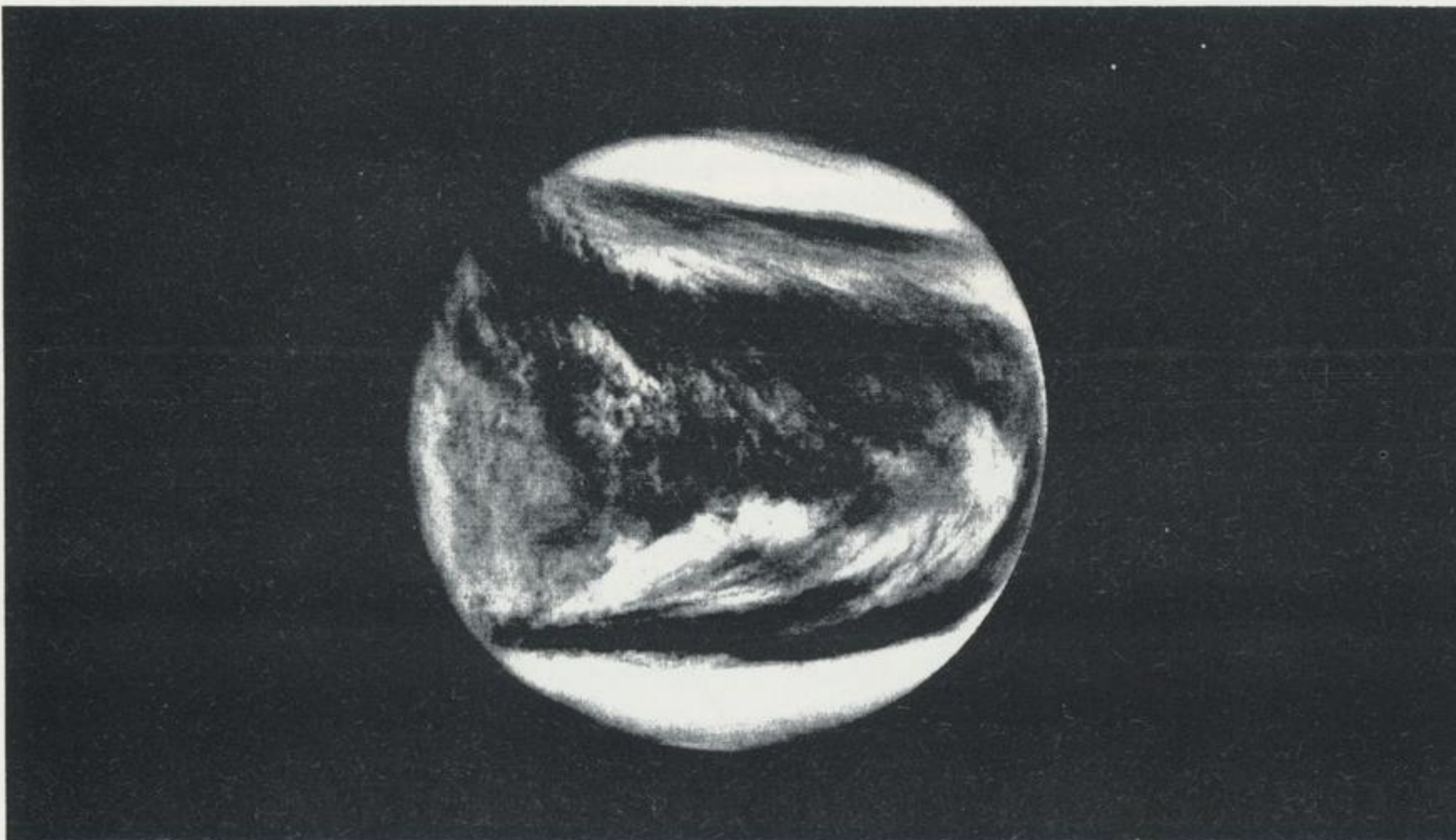
NASA and Space Systems engineers recently completed full testing and checkout of the FOS, built by the company for the Hubble Space Telescope. According to program manager David Barnett, the instrument has been functionally checked out, and calibrations will continue for the next several weeks. Instrument checkout was prolonged because NASA has been using most of the communication time with the spacecraft to determine what caused its mirror problems and to take some photographs with Hubble's two cameras. Although Hubble's focusing difficulty will affect some science objectives of the FOS, the instrument is expected to be one of the workhorses of the

telescope because it will collect ultraviolet light that cannot be seen on Earth. "First light"—the first time the instrument will collect light from a celestial body—is expected to take place next month.

Magellan

Venus mapping began on Sept. 15, with spectacular photos of the planet being returned daily. One of the latest revelations is a pattern of troughs in the Lavinia region of Venus that has an uncanny resemblance to "Gumby," the cartoon character. The "Gumby" lines or pits suggest some igneous or volcanic activity accompanying the faulting. Magellan itself continues to operate well, making 7.5 turns around Venus every day. ■

(The following advertisement appeared last Monday, Sept. 24, in The Denver Post and the Rocky Mountain News. In addition, it ran in the Los Angeles Times, Houston Chronicle, Orlando Sentinel, Washington Post, Huntsville Times, and Space News. It also will run in the next Final Frontier magazine.)



Our Sister's Revealing The Family Secrets.

On August 16th, after a 15-month, 948-million-mile journey, NASA's Magellan spacecraft took its first look at the surface of our sister planet, Venus.

And what we've already learned is remarkable. By using a special imaging radar that can "see" through the thick clouds covering the planet, Magellan has revealed a surface of lava flows and faults geologically similar to places here on Earth.

It's an important step toward unravelling one of the great mysteries of the universe—why two planets, similar in size and location, evolved so radically differently. What caused the Venusian atmosphere to assume its devastating "greenhouse effect," and what can it mean for our own environmental future on Earth? It's time for Venus to tell her story.

MARTIN MARIETTA
6801 ROCKLEDGE DRIVE, BETHESDA, MARYLAND 20817

How "software-smart" are you?

All Astronautics Group employees should be able to pass an audit on the use of software in their work areas. To help test awareness of automatic data processing usage controls, take a minute to answer, and study, the following true/false statements.

- Each company that produces software has one standard license agreement for all of their software. (FALSE. Many companies have several different license agreements for their software.)
 - According to the United States Copyright Law, involvement in the illegal reproduction of software can be subject to civil damages of as much as \$50,000 and criminal penalties. (TRUE.)
 - Because Martin Marietta provides all software required at work, individual employees do not have to read the license agreements. (FALSE. The individual who has been provided the software is the person responsible for maintaining the integrity of that software.)
 - Most software can be copied or shared between employees. (FALSE. Most software is designed for one original and one back-up copy per purchase.)
- Astronautics Group Policy GM-7-D1, Automatic Data Processing Security, states, in part, that Astronautics Group personnel using ADP resources and assets, either company provided or personally owned, while in company facilities or when connected to company computer assets, will be obligated to adhere to applicable regulations.

Employees should take time to read license agreements accompanying software to ensure that they comply with all license agreements.

Great Performances begins 18th season on PBS

From Shakespearean classics to contemporary drama, music, humor, and dance, Great Performances begins its 18th season on Public Broadcasting Service with a remarkably diverse range of artists and exciting projects this fall.

Funded in part by Martin Marietta, this season's Great Performances line-up welcomes back familiar series veterans such as Luciano Pavarotti, Suzanne Farrell, and Jessye Norman while showcasing the talents of established artists such as Spike Lee, David Mamet, and Kevin Kline in an entirely new context.

As always, the series will showcase brilliant young artists such as actor George C. Wolfe, musician Harry Connick Jr., and dancer Michael Moschen.

The Great Performances schedule through the end of December is:

- Oct. 5: Spike & Company: Do It A Cappella
- Oct. 12: Miracle in Rome
- Oct. 19: Mefistofele from the San Francisco Opera
- Oct. 26: Dance in America: Balanchine in America
- Nov. 2: Hamlet
- Nov. 9: Dance in America: Bob Fosse—Steam Heat
- Nov. 16: Sir Norbert Smith: A Life
- Nov. 23: Harry Connick Jr. in Concert
- Nov. 30: The World of Jewish Humor
- Dec. 7: Kathleen Battle and Jessye Norman Sing Spirituals
- Dec. 14: Peter Sellars Directs Mozart
- Dec. 21: Beatrix Potter's The Tailor of Gloucester
- Dec. 28: Show Boat

Please check local listings for times and channels. ■



Spike & Company

Debbie Allen, left, and Spike Lee, right, host "Spike & Company: Do It A Cappella," an all "a cappella" special airing Oct. 5 on Great Performances.

Corporate news

Corporation gets contract to maintain Navy equipment

The Corporation has been awarded a \$9.2-million U.S. Navy contract to maintain and support towed array sonar systems used to detect and track enemy ships and submarines.

The three-year contract covers installation and removal of hydrophone arrays, evaluation of operating procedures, testing, technical assistance, and maintenance of depots for parts and supplies.

Martin Marietta acquires Perry Technologies

The Corporation has acquired Perry Technologies, a developer of underwater systems, from the Perry Group, Inc., a privately held company located in Riviera Beach, Fla. Terms were not disclosed.

Martin M. Koshar, president of Aero & Naval Systems, said, "Acquisition of Perry Technologies offers Martin Marietta an ideal opportunity to continue to expand its position in undersea systems and supports our work in anti-submarine warfare and in unmanned

The contract will be carried out by Aero & Naval Systems field sites in New London, Conn.; Norfolk, Va.; Charleston, S.C.; San Diego, Cal.; and at Pearl Harbor.

Towed arrays are manufactured at Aero & Naval Systems in Glen Burnie, Md. The company is the Navy's largest supplier of towed array sonars for both surface ships and submarines.

underwater vehicles specifically."

The Corporation has developed a Mobile Undersea Systems Test laboratory for demonstrating unmanned underwater vehicle technologies to which Perry Technologies contributed.

Perry Technologies is an international leader in the design, manufacture, and operation of manned and unmanned undersea work systems, including remotely operated vehicles and equipment for undersea reconnaissance, recovery, and maintenance. ■

Chatfield Arboretum invites employees to pick a pumpkin next month

The Chatfield Arboretum is hosting a Pumpkin Festival to celebrate the Fall harvest and raise money at 10 a.m. Oct. 13.

For a donation ranging from 50 cents to 5 dollars, employees and their families can pick a pumpkin from the arboretum's large patch.

The pumpkin size will coincide with the amount of the donation.

In addition to picking pumpkins, there will be a painting contest, puppet shows, ghosts stories, hay rides, and other fun-filled activities.

Picnic tables will be set up for families, and experts will be available to answer questions about gardening, canning, and cooking.

For more information, contact the arboretum at 973-3705.

IR&D scores continue to set records

The 1990 Independent Research and Development (IR&D) program scores are in, and consistent with the Astronautics Group's recent trend, they are the highest ever. The 1990 score from the government's evaluators is 8.86, up from 8.77 last year.

A 10.0 is the highest possible score.

"This is a super effort," Astronautics Group President Peter B. Teets said. "One of the most important things the Astronautics Group does is the IR&D program. The fact that we improve every year proves that our commitment to Total Quality Management and continuous improvement is working. Congratulations to everyone involved."

Under the IR&D program, the Astronautics Group's efforts are evaluated for technical quality and uniqueness.

Over the past six years, the Astronautics Group has steadily climbed from a 7.99 score in 1985 to this year's record.

"This score puts us in the 99th percentile of the 142 industries participating in the Air Force-managed IR&D program," Ronald A. Bena, IR&D program manager, said. "This steady growth over the past five years represents a real team effort."

Bena said this score is significant because it demonstrates to the government the high quality of the Astronautics Group's technical programs. A high score gives the corporation the

ability to negotiate favorably with the government when setting the reimbursable dollar ceiling for the IR&D program, thus resulting in more technology money, Bena said.

The Space Systems company, under the guidance of James W. McAnally, continued to lead the overall company scores with a 9.04. Significant company score improvements were obtained by Space Launch Systems and Strategic Systems. Another important factor leading to the record score was the huge increase in the scores of the unclassified projects from 7.88 to 8.45.

The Astronautics Group's IR&D Technical Plan, or brochure, containing documentation on 93 projects, was distributed to more than 70 government organizations and the group got back 475 evaluations.

The eleven employees contributing heavily to the overall score of 8.86 by receiving a perfect 10 in their role as IR&D principal investigators are: Gerald Johnson, John Coyner, Russ Mellon, Bob Beardsley, Dave Willett, George Hess, Mike Manov, Mike McKinney, Kurt Giesaking, Dave Nichols, and Andy Ebert. Also, nine other principal investigator's projects were major factors in the 1990 score: Peter McInnes, Sid Cook, Bud Gates, Brent Cullimore, Scott Lindell, Troy Tack, Jack Leach, Ed Pierson, and Sam Colburn. ■

SIP

Unit values for the Savings and Investment Plan (SIP) for United Aerospace Workers (UAW) and United Plant Guard Workers of America (UPGWA) represented employees in August 1990 (July 1990 values in parentheses) are:

Fund A	1.1914119077
Indexed Equity	(1.3147770554)
Fund B	1.2436381385
Fixed Income	(1.2355687156)
Fund C	0.7118104754
Company Stock	(0.7839476318)

PSP

Unit values for the Performance Sharing Plan (PSP) for salaried employees in August 1990 (July values in parentheses) are:

Fund A	5.8406936777
Indexed Equity	(6.4345633764)
Fund B	3.6469715359
Fixed Income	(3.6190241442)
Fund C	3.7888198580
Company Stock	(4.1568990723)

On the cover

Ronald A. Bena, Independent Research & Development (IR&D) program manager, right, and Glenda M. McFarlin, IR&D administrator, left, study the 1990 IR&D "brochures" that got a score of 8.86 from government evaluators. This is a record score for the Astronautics Group. Under the IR&D program, the Astronautics Group's efforts are evaluated for technical quality and uniqueness.

Water board seeks water saving tips

The Denver Water Board is seeking ideas for water-saving practices and devices through a program called WaterSave91.

The board hopes to encourage or require these new tips for conserving water through the board's water conservation plan.

Awards will be presented for adopted ideas. Ideas, along with a name, address, and daytime telephone number should be submitted before Oct. 15 to: WaterSave91, 1600 W. 12th Ave., Denver, Colorado, 80254.

Questions can be answered from 8 a.m. to 5 p.m. weekdays via the WaterSave91 Hotline at 628-6346. ■



Employee saves company \$106,767

Chris James, top right, recently was honored by the Success Through Suggestions program for an improvement in the mechanized cost proposal system resulting in a net savings of \$106,767. Other recent honorees are Gene Krueger, top left, and seated, left to right, Pam Pazmino, Sue Stelmack, and Gary Logan. Donald Chasteen, top middle, vice president of Finance and Controller, presented the awards.

Long-term service honored



Employees honored recently for extended service are pictured above. They include, standing, left to right: C.T. 'Buck' Reynolds (40 years) and Harry Bull (50 years). Seated, left to right: Tom Cook (35 years); Al Romano (35 years) and Peter Teets, Astronautics Group president. Not pictured: Tony Romeo (35 years).

Weight management program offered

"Eating for Wellness," a seven-week weight management program that focuses on ways to incorporate healthy habits into busy lifestyles, is being offered to employees.

Valerie Peters, a dietician and nutrition consultant, is the instructor of the lunchtime classes that begin the week of Oct. 15.

Registration forms can be obtained from the recreation information racks. The course fee is \$25, and registration forms are due at the Deer Creek Wellness Center by Oct. 12.

Space Race to benefit local community

The Astronautics Group is sponsoring a 5-kilometer Space Race, running or walking, on April 7, 1991 to benefit homeless families and veterans living in the metro area.

Employee volunteers are needed to help set up and coordinate the event. Interested employees and retirees are encouraged to attend an organizational meeting from 4 to 5 p.m. Oct. 3 at the Deer Creek Facility, second floor, north bridge conference room. ■

Employee services/recreation

Hunter education for second shift employees only—Classes are set for 9 a.m. to 4 p.m. on Saturday, Sept. 29, at the VFW Hall, 3860 S. Jason St., Englewood, and on Sunday, Sept. 30, at the recreation area clubhouse. Students must attend both days. Registration will be taken at the first class. The cost is \$7. Another session will be offered at the same times and locations on Saturday, Oct. 6, and Sunday, Oct. 7.

League Bowlers Needed—Substitute bowlers are needed for the 6 p.m. Tuesday night league at Green Mountain Lanes. To participate, call Betty Leach at Ext. 7-3686.

Waterton Amateur Radio Society—All hams and those interested in learning more about amateur radio are invited to attend the meeting at 5 p.m. Tuesday, Oct. 2, in the hamshack at the recreation area. For more information, call Tony Kehayas at Ext. 7-2013.

End the Smoking Affair—Smoking cessation classes are set for Oct. 8, 11, 15, and 18. The sessions are from 5 to 6:30 p.m. at the Deer Creek Facility's Gemini Room. This American Cancer Society 'FreshStart' program is offered free to all Martin Marietta employees, spouses, dependents, and Air Force personnel. Call Ext. 7-6605 to register, or complete the flyer in the recreation racks or the form in the evening institute catalogue. Another session will be offered in November.

Fathom Dive Club—Members and guests will meet at 6 p.m. for a potluck followed by a meeting and program on Monday, Oct. 8, at Greenwood Point Clubhouse, 5324 S. Broadway Circle, Englewood. For more information, contact Wayne Cox, Ext. 7-6800, or Kristy Allison, Ext. 1-2265.

Hunting and Fishing—The group will meet at 5 p.m. Monday, Oct. 8, in the clubhouse at the recreation area. For more information, contact Mel Smith, Ext. 1-8682.

Red Rock Bowmen—Interested employees and club members will meet at 4:45 p.m. Tuesday, Oct. 9, in the clubhouse at the recreation area. Prospective members are encouraged to attend and join the club. For more information, contact Dave Unruh at Ext. 7-0477 or Mark Lyons at Ext. 7-5722.

Parapsychology Club—The club will meet from 5 to 7 p.m. Thursday, Oct. 11, at the Southpark West I, MIC Room. Mary Hallacy will speak on "Soul Mates." All employees and guests, age 16 and older, are welcome. To reserve a guest badge or obtain more information, call Madeline Fountain at Ext. 1-6867.

Hunter Education Classes—Classes are set for 7 to 9:30 p.m. October 15, 17, 18, and 22 at the VFW Hall, 3860 S. Jason St., Englewood. The range date is from 8 a.m. to 1 p.m. Oct. 20 at the club's shooting range. Students must attend all class sessions. Registration

will be taken at the first class, and a minimum of 10 students is required to continue meetings. The cost is \$7. Employees, family members, and friends are welcome to attend. **Entertainment Discounts**—Employees can obtain discounts for the Ascot Dinner Theatre and Funplex from the company stores at Deer Creek, Waterton, Littleton Systems Center, and Southpark I and III; the Employee Services offices at Deer Creek and Waterton; and from volunteer representatives at the Space Support Building, South Lincoln Facility, Viewpoint I, Greenwood Commons, Littleton Systems Center, and Southpark III. Employees may request an Ascot Club card to save \$4 per ticket or request Funplex coupons that offer one free activity with the purchase of the same activity at full price.

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