



MARSHALL STAR

Serving the Marshall Space Flight Center Community

Aug. 12, 2004

Axel Roth fondly remembers his time at Marshall

By Lynnette Madison

On July 2, Marshall Center Associate Director Axel Roth closed the door to his ninth-floor office atop Bldg. 4200, ending a 45-year NASA career.

It was quite a ride: A career that spanned work on the Mercury-Redstone rockets that boosted America's first astronauts into orbit; Apollo moon missions that helped America win the space race; Skylab, America's first crewed orbiting space station; and, ultimately, the International Space Station, the world's largest orbiting science laboratory.

On Thursday, Roth's associates – present and past — will come together to honor him with a retirement reception.

For him – and them – the memories will spill forth. They already have. He's a NASA legacy, the son of Ludwig Roth, a member of

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Marshall Center file photo

Axel Roth, right, with Bill Johnson in foreground, in the Payload Operation Control Center at the Marshall Center during the December 1990 Astro-1 Mission.

DART prepares for October launch

By Amie L. Cotton

The Demonstration for Autonomous Rendezvous Technology (DART) flight demonstrator, a spacecraft developed to prove technologies to locate and maneuver near an orbiting satellite, arrived at Vandenberg Air Force Base, Calif., last month in preparation for an October launch.

Future applications of technologies developed by the DART project will benefit the nation in future space-vehicle systems development requiring in-space assembly, services or other autonomous rendezvous operations.

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Photo by Emmett Given, Marshall Center

Senior Executive Service members receive certificates

Marshall Center team members, from left, Steve Pearson, John Chapman, David Martin and Gene Goldman receive Senior Executive Service certificates during a recent special ceremony. David King, right, Marshall Center director, presented the awards.

Axel Roth

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the original German rocket team led by the Marshall Center's first director, Wernher von Braun.

Before Roth headed home in early July to his wife Gloria, and his 11 grandchildren, he shared some of his experiences, including an appearance before employees at a Marshall Association "Lunch-n-learn" a few months ago.

Some of his recollections:

"I began as a co-op student in the test labs for the old Army Ballistic Missile Agency ... back when even the pencil sharpeners had 'CONFIDENTIAL' stamped on them. In those old days, we put drawings – mechanical design and drafting — together by hand."



Roth, 1954 Huntsville High School graduation

His NASA career began in 1960, five days after the Marshall Space Flight Center officially was activated. "For years I wasn't considered a charter member because I came over to NASA on July 5," he chuckles as he tells his story. "But I outlasted them all. So now I am a charter member."

From 1960 until 1971, Roth was a structures engineer, and later a systems engineer, in the Apollo/Saturn program. He remembers the "grizzled" technicians who "were great teachers," who opened the eyes and minds of the young engineers to the reality of how things work. "I thought I was a pretty good structures engineer – not great," says Roth. "So, I began to look for ways to move to other things. You've got to be honest with yourself and work to overcome your weaknesses." From 1971 until 1974, he worked with systems engineering and operations activities for the Skylab program. In 1974, he was assigned to Marshall's Spacelab Program Office. And, in 1981, he became



Roth, in foreground, and David King, Marshall Center director, prepare to be dunked during Marshall's 2003 picnic.

Payload Operations Director for the Spacelab-2 Mission. He was named manager of the Operations Office in the Space Station Projects Office in 1985, and was appointed manager of the Habitability Module Office in 1987. In 1989, he was named chief engineer of the Spacelab Payload Integration for the Payload Projects Office. Then, in 1991, he was selected as deputy manager of the Space Station Project Office.

Recalls Roth: "We used to 'play' what-if games. We'd try to figure out what type of bad thing might happen. One of those things was, 'What if Skylab's meteoroid shield — designed to shade its workshop — didn't deploy.'

"Of course, the shield deployed. In fact, it deployed so fast it ripped off and took one of the craft's solar panels with it. Then

we had to deal with Skylab's thermal issues. But NASA is great at that. We put together a plan, trained the crew and fixed it within two weeks." Roth admits his "heart belongs to the Spacelab and the Space Station programs. We accomplished so much wonderful science and engineering." He recalls the challenge NASA faced building the Space Shuttle's Orbiter and Spacelab simultaneously. "The Orbiter and Spacelab had to fit together to make it work. So, we had a meeting in Downey, Calif., — with representatives from NASA, the European Space Agency and Shuttle prime contractors — to work it out. At the same time one of the airlines had a strike, so our lead took up our plane tickets and told us he'd help us work out our flights," Roth



Roth enjoys spending time with his 11 grandchildren.

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DART

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Designed and developed for NASA by Orbital Sciences Corporation, Dulles, Va., the DART spacecraft will be launched on a Pegasus launch vehicle.

At about 40,000 feet over the Pacific Ocean, the Pegasus will be released from Orbital's Stargazer L-1011 aircraft, fire its rocket motors and boost DART into a polar orbit approximately 472 miles by 479 miles.

Once in orbit, DART will rendezvous with a target satellite, the Multiple Paths, Beyond-Line-of-Site Communications (MUBLCOM) satellite, also built by Orbital Sciences. DART will then perform several close proximity operations, such as moving toward and away from the satellite using navigation data provided by onboard sensors.

Launched in May 1999, the MUBLCOM satellite was used by the Department of Defense as an experimental communications satellite. The entire 24-hour mission will be accomplished without human intervention and is unscripted. The DART flight computer will determine its own path to accomplish its mission objectives.

"Successful completion of all major system tests gives us the confidence the DART spacecraft will complete its mission objectives and is ready to move to the field site to begin integration with the launch vehicle," said Jim Snoddy, DART project manager at NASA's Marshall Center. "This milestone moves us one step closer to demonstrating the key technologies that will enable future space transportation systems," he added.

The writer, an ASRI employee, supports the Media Relations Department.

Axel Roth

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says, chuckling again. "Then he told us that he wasn't giving us our tickets back until we finished. It didn't take us long after that."

In 1994, Roth was appointed deputy director of Program



Roth and his wife, Gloria, in 2003.

Leadership symposium for current and future leaders

Civil servants must register by Aug. 18 for the Marshall Center's leadership symposium, which is aimed at developing strong leaders who have the knowledge and skills to positively impact society.

Organizers hope the Aug. 24 event at the Von Braun Center will involve Marshall team members at all grade levels. It is intended for current and future leaders.

"Leadership is not reserved for management only; it should occur at all levels and among all people within an organization," said Marshall Center Director David King, executive chairman of the symposium.

Vanessa Suggs, one of the event's coordinator, said civil servants are asked to register by Aug. 18, while contractors and people from the community will be given a bit longer.

Suggs said almost 400 civil servants have registered for the symposium entitled "Leading in a time of Change." Those planning to attend the conference may register at <http://mi.msfc.nasa.gov/Leadership/index.html>. The Web site includes information about speakers, an agenda, map and other symposium information.

The event is presented by the Marshall Center with participation from its partners and the local community.

Parking for the event at the Von Braun Center will be \$4. Marshall team members are encouraged to carpool.

Development for Marshall. He became its director in 1995. By the late 1990's, he returned to the Flight Projects Office as its acting manager. He was named director of the Flight Projects Directorate in 1999.

In January 2001, Roth became associate director of the Marshall Center.

Roth says he will hold dear the memories of his work here and the people he met – from von Braun to the novice Europeans just beginning a space program during his Skylab years; from the renowned scientists who have flown experiments on the International Space Station, to the folks who have been kind enough to wish him well in his retirement.

"The past 45 years have been an exciting time, and I've had a great run," he says, looking back. Now I can see we had a vision. In fact, in the '60s, I would have bet that we'd be on Mars by now. But other things required our nation's resources. Today, it is imperative that we continue with that vision – that we continue to explore. And, to tell the truth, I'm sorry that I'm not gonna be around at NASA for that."

The writer, an ASRI employee, supports the Media Relations Department.

Procurement Office recognizes peers during picnic

The Procurement Office recognized six team members for their accomplishments during its Summer Picnic and Awards Ceremony held on July 29 at the NASA picnic area. The awards covered efforts including safety, team building, customer support, and “dangerous display of initiative.” The winners were Janice Burrough, Amy Campbell, Bill Dehollinger, Bernardine Jackson, Vann Jones and Howard Nelson. Each were given a choice of \$200 or eight hours off.



Lynn Southgate shows off her red, white and blue as she walks through the lunch line at the picnic.



Barry Kaigler calls out bingo numbers during the Procurement Office awards day.

Photos by David Higginbotham, Marshall Center



Stephen Beale, Procurement Office director, tries to catch a water balloon.



Procurement Office team members enjoy their meal.



Walt Melton, on left, tries to take the volleyball from Ellen Stafford of Eagle Systems.

Announcements

Women's Equality Day awards program set for Aug. 26

Outstanding women achievers and their supervisors will be recognized in an Aug. 26 ceremony and also receive a Director's Commendation Certificate. The event, open to all civil service employees and sponsored by the Marshall Center's Federal Women's Program, is being held to commemorate Women's Equality Day. See "Inside Marshall" for details or call Billie Swinford at 544-0087.

Business Systems open house is Aug. 25 in Bldg. 4200

The Marshall Center's Business Systems open house is set for 9 a.m. to 4 p.m. on Aug. 25 in Bldg. 4200, Room G-13A. Several technical and functional experts will be available to offer assistance and answer procurement issues related to SAP Core Financial, SAP Business Warehouse and WebTADS. For more information, call Scott Black at 544-4839.

Mandatory motorcycle safety training is Aug. 25 - 26

A safety training course for motorcyclists who drive on Redstone Arsenal is scheduled from 8 a.m. until 2:30 p.m. on Aug. 25 and 26 at 15100 Highway 20 West in Madison. Rocket Harley-Davidson of Huntsville will provide the training that is open to civil servants. Civil servants should register through SHE. Contract employees may also arrange training by calling Ralph Harris at 256-341-9424.

Toastmasters meet Tuesday

The Lunar Nooner Chapter of Toastmasters meets each Tuesday at 11:30 a.m. in the cafeteria of Bldg. 4610.

Nominations being taken for NASA leadership programs

Nominations are being accepted for NASA leadership and development programs, Brookings Institution, and the OPM programs of the Management Development Centers. Team members interested in being considered for these programs should contact their administrative officers. For more information, call Vanessa Suggs at 544-7527.

Shuttle Buddies meets Aug. 23

The Shuttle Buddies will meet at 9 a.m. Aug. 23 at Mullins Restaurant on Andrew Jackson Way in Huntsville. For more information, call Deemer Self at 881-7757.

Combined Federal Campaign to hold silent auction

The 2004 Tennessee Valley Combined Federal Campaign is gearing up for this year's campaign by holding a silent auction in October. Team members are asked to support the campaign by donating or collecting items for the auction. All donors will receive official acknowledgement for any items or services they provide. For more information, call Maria Clark at 313-7620 or 876-9143.

Management Operations Office retirees to meet on Aug. 26

The Management Operations Office retirees will meet for brunch at 10 a.m. on Aug. 26 at the Cracker Barrel Restaurant in Madison. For more information, call 539-0042.

NASA official Jennings to speak at Marshall luncheon

James Jennings, NASA associate deputy administrator for Institutions and Management, will speak at 11:30 a.m., Aug. 18 at the Marshall Association luncheon at the Redstone Arsenal Officers' and Civilians' Club. Jennings will discuss NASA's culture change and One NASA. Winners of the Marshall Association's 2004 College Scholarships will also be announced. Cost is \$10 and may be paid at the door.

Marshall leadership symposium set for Aug. 24

The Marshall Center will host a daylong leadership symposium at the Von Braun Center in Huntsville on Aug. 24. The event will focus on developing strong leaders who have the knowledge and skills to positively impact their society. For registration information, go to <http://mi.msfc.nasa.gov/Leadership/index.html>

Pre-season meeting of MARS Coed Volleyball Club is Aug. 19

The MARS Coed Volleyball Club will hold its pre-season organizational meeting at noon on Aug. 19, in the east wing meeting room of the Exchange Health Club. Players interested in participating should attend. Call Dennis Gallagher at 961-7687 for more information.

Traffic and parking reminders while at the Marshall Center

Redstone Arsenal and Marshall Center officials remind team members and visitors to obey all the Center's traffic and parking rules. Parking at the Center is permitted only in designated spaces which are identified by a painted space, a bumper block, curb markings, or signs authorizing parking. Parking is prohibited in all other spaces.

Classified Ads

Miscellaneous

- ★ American CZ452 .22 rifle w/Weaver 4-16x42 target dot scope, Burris rings, with boxes, \$550. 931-993-7768
- ★ Child Craft baby bed, includes frame, mattress, & safety mattress, \$275. 256-828-2864
- ★ Doghouse, molded igloo for large dog, \$25. 353-3229
- ★ Diamond Dust Delta, MVVS, .40 rear exhaust w/ pipe, JR digital servos, receiver, battery, \$250. 971-0571
- ★ Dog grooming table, 18" wide, 30" long, 33" high, with long arm, \$15. 882-2369/Krabsbach
- ★ Nokia-N-Game w/6 games, \$100. 658-5855
- ★ Twin Cherry poster bed, \$250; twin mattress/box spring, \$60. 890-2128
- ★ Drum sticks, practice pad, beginning drummer's video, \$25. 890-0755
- ★ Sears Lifestyler Exercise bike w/programmable console and handlebar operation. 534-1275
- ★ Horse-drawn stagecoach for use in parades, etc., located in Huntsville, can be transported, make offer. 651-3802
- ★ Racing wheels, 17"x7.5" oz. 5-lug chrome, set of 4, \$75. 379-4677
- ★ Engine, 350 cu. in., 4-bolt main, ready to install, 30K miles, \$1,000. 256-498-3194
- ★ 1995 Kubota B7100HST, 4WD w/60" belly mower, \$4,700. 890-0554/nights/weekends
- ★ Little Tykes work bench w/tools, \$20; Hot Wheels garage, \$10. 325-6000
- ★ Sears Cardio Fit Plus exerciser. \$70. 922-9311
- ★ Maple twin bed w/mattress w/box springs, \$100. 656-1918 after 5 p.m.
- ★ Schwinn premium two child bicycle trailer, collapsible/portable, \$100. 828-8630
- ★ Craftsman table saw, cast steel extensions, \$125; Craftsman mower, 22", 6HP, \$35. 885-3767
- ★ Large leather chair, burgundy, \$600. 534-2705 after 5 p.m.
- ★ Student writing desk, \$15; jeans: Levi's 30w, Tommy, size 20; Reeboks; \$5. 830-1820
- ★ Mizuno titanium driver, 9 degree, Pro-Gold stiff shaft, \$45. 851-7406
- ★ Dishwasher, \$30; microwave, \$40; drop-in range, \$50; you pick up. 837-9813
- ★ Sears Kenmore microwave oven, large size 1.6 cu. ft., \$40; Jackson vine, \$8 each. 881-6040
- ★ Buck stove fireplace insert w/internal air recirculation blower system, \$175. 325-2919
- ★ Oak bunk bed w/desk and shelves, drawers on each end, \$600. 883-9396 after 5 p.m.
- ★ Rickenbacker 350V63 12 string electric guitar, Fireglo, triple-chrome "toaster" pickups w/case, papers, \$1,800. 303-3702/Decatur
- ★ Treadmill, Image 10.8QL w/hand weights, 1-10mph, 0-12 incline, 15 programs, space-saver, heart monitor, \$400. 468-6016
- ★ Inlaid wood cocktail/coffee table, \$100. 883-2237

- ★ Child's bed, blue metal frame w/mattress, \$60; Naugahyde recliner, green, \$30. 881-8674
- ★ King Cobra SS350 L/H driver w/regular graphite shaft, 10.5 degree loft, \$100. 256-777-8229
- ★ Audiobahn 12" subs, 750watts, \$350; Halo angel eyes headlights for 94-97 Honda Accord, \$150. 830-6594
- ★ Living room furniture: end tables, couch, loveseat, chair, \$275; glass table, \$50. 256-230-1154/Athens
- ★ Daybed, ivory w/heart motif and mattress, \$90. 852-2219
- ★ Queen sleeper sofa, medium blue plush cloth, barely visible plaid detail, sturdy, \$225. 859-3029
- ★ GE microwave, 1550W, white, turntable, \$25. 765-532-4218
- ★ Pearl snare drum set, \$200. 882-6449
- ★ Land Pride rotary cutter (RC-48), 4', 3-point hitch w/manual, \$800. 653-1401
- ★ Old Town canoe, 17', \$350; antique 5-leg drop leaf table, \$100. 883-1874
- ★ KitchenAid over/under refrigerator/freezer, 22 cu. ft., \$145. 256-883-4276
- ★ Sewing cabinet, \$20; Sears Lifestyler exercise equipment, \$100; Power Rider, \$40. 256-722-8570
- ★ Two propane tanks for gas grill, \$20 for set. 890-0755
- ★ Canon S450 printer w/ink, \$37; refill ink bottles, \$9 each. 489-0136
- ★ All wood, round oak breakfast table with 4 chairs. \$125. 683-5380.

Vehicles

- ★ 1957 Airstream Overlander 26' travel trailer, interior recently refurbished, \$5,000. 256-714-6609/Dan
- ★ 2002 Mercedes C230 Sport Coupe, 49.5K miles, still under warranty, \$18,500. 256-551-0276
- ★ 1998 Chrysler Town & Country LX, 5-door, rack, hitch, new tires, 96K miles, \$7,500. 882-6675
- ★ 2003 GMC Sonoma extended cab, 12K miles, under warranty, loaded, garaged, \$17,395. 837-1774
- ★ 1996 Cadillac sedan Deville, 75K miles, new tires, brakes, etc., \$9,000. 230-3190
- ★ 1997 Ford F150 extended cab, 5-speed, V6, 93K miles, air, CD, all-power, \$7,300. 652-6788
- ★ 2001 Toyota Corolla S, black, auto, a/c, all-power, 98K miles, 39mpg highway, \$6,500. 256-426-2516
- ★ 2001 Ford F-150 XLT, 4-dr. Super-Crew, 4.6L/V8, white, bedliner, tow pkg., 69.7K miles, \$15,000. 256-426-2224
- ★ 2002 Dodge Intrepid SE, dark blue, V6, 35K miles, \$11,000. 256-509-2936
- ★ 1966 Mustang, fully restored, Sprint 200 engine, candy apple red, \$8,600. 837-2267
- ★ 1967 C10 Chevy truck, short-bed, rebuilt 350, 4-barrel w/flowmaster dual exhaust, \$4,400. 256-325-3696 after 6 p.m.
- ★ 2001 Jeep Cherokee, white, one-owner, 45K miles, garage kept, new tires, 70K miles/5 yr. warranty, \$15,000. 256-797-5206
- ★ 1999 Pontiac TransAm, navy blue metallic, charcoal leather, 5.7L/V8, auto, T-tops, loaded, 70K miles, \$16,500, 256-353-9020

- ★ 1986 Nissan D-21 long-bed pickup truck, automatic, one-owner, 146K miles, \$1,500. 852-5900
- ★ 2001 Cadillac Sedan DeVille, white diamond, 56K miles, loaded, new tires, one-owner, \$18,000. 536-8692
- ★ 1973 Volkswagen Super Beetle, 88K miles, tan, \$2,500. 828-3128
- ★ 1964 Ford Custom cab pickup, short wheel base, \$1,900. 256-931-2868/Arab
- ★ 1975 Ford F100 truck, blue, long bed, power brakes, engine problems, \$700. pager/535-8870
- ★ 1982 Mustang coupe, 66K miles, blue, local car, original papers, \$2,700. 837-0996
- ★ 1988 Chevy G20, 350/V8, full-size conversion van, 115K miles, \$1,500. 534-7691
- ★ 1995 Fleetwood Storm bus model motorhome, V8, 43K miles, generator, air/heat, extras, \$30,000. 256-766-3243
- ★ 1994 Nissan KingCab pickup, a/c, power steering, sprayed on bedliner, \$3,500. 772-7845
- ★ 2000 Toyota 4Runner, 62K miles, power windows/doors, am/fm/cassette/cd, \$13,500. 509-4925
- ★ 1998 Jeep Wrangler SE, 4 cyl., 5-speed, 87K miles, \$8,200. 426-8887
- ★ 1999 Toyota Camry, white, all-power, 102K miles, CD/tape, \$7,500. 828-4385
- ★ 1999 Isuzu Rodeo LS, 4-door, 56K miles, V6, AT/AC, pw/pl, CD changer, new tires, \$9,500. 828-5550
- ★ 2000/2001 Honda XR250R dirt bikes, \$3,500 for both. 256-550-1165

Wanted

- ★ To buy a Bow Flex in good condition. 256-593-6457/Steve
- ★ Upright piano in working condition for beginner. 464-3639
- ★ Dove hunt location, willing to pay fee for opening weekend hunt. 256-325-8958
- ★ Jeep C Dana 300 transfer case or parts jeep. 497-3518
- ★ Scratched CDs, DVDs, Playstation 1 & 2, XBOX and Dreamcast games. 256-851-7283 after 6 p.m.
- ★ Experienced hardwood floor installer to assist homeowner w/renovation. 509-7907
- ★ Roommate, 20 miles from Redstone: 3-bedroom, 2 bath house to share with approved male or female. 256-653-3613
- ★ Used saddle for 8-yr. old mare, prefer pleasure saddle, will accept team roping or otherwise. 256-426-3870

Free

- ★ Kittens, female, black w/white markings; male, white w/black spots. 348-1774
- ★ Full-size Coke machine, think it needs compressor, you load/you haul. 461-9735
- ★ Indoor/Outdoor yellow tabby cat, male, litter box trained, neutered. 971-1414
- ★ Kittens, 8 wks. old. 828-3181

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