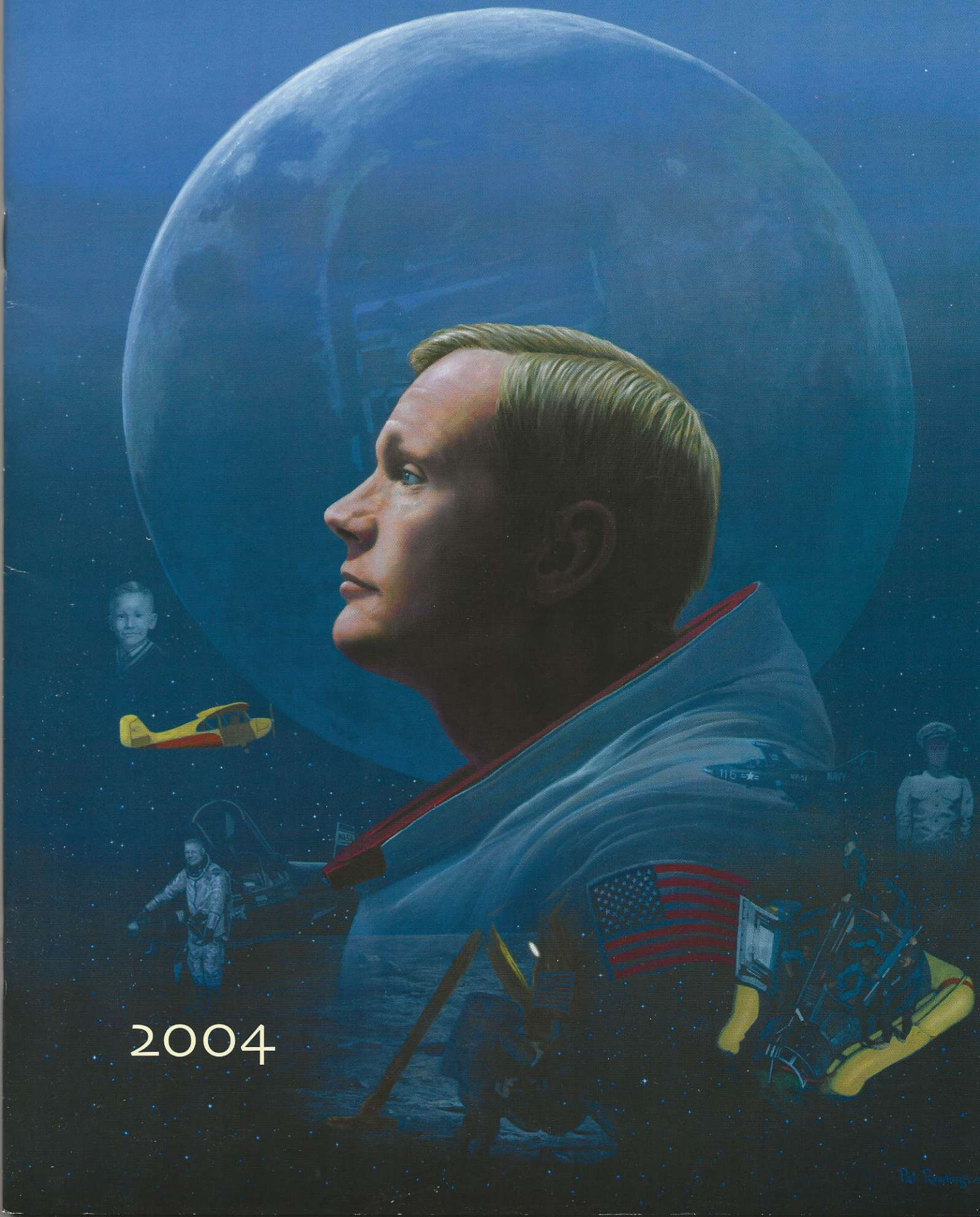
ROTARY NATIONAL AWARD FOR SPACE ACHIEVEMENT



2004


As we continue our journey,
thank you for taking the first step
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NATIONAL SPACE TROPHY RECIPIENT

Neil A. Armstrong at Apollo 11, 30th Anniversary at KSC

The Board of Advisors of the Rotary National Award for Space Achievement (RNASA) Foundation elected Neil Armstrong as the 2004 winner of the National Space Trophy, "For his most significant contributions to the U.S. Space Program as the first explorer to land a manned spacecraft on the Moon and the first human to step on the surface of the Moon. Mr. Armstrong is the world symbol for manned space flight exploration and engineering excellence."

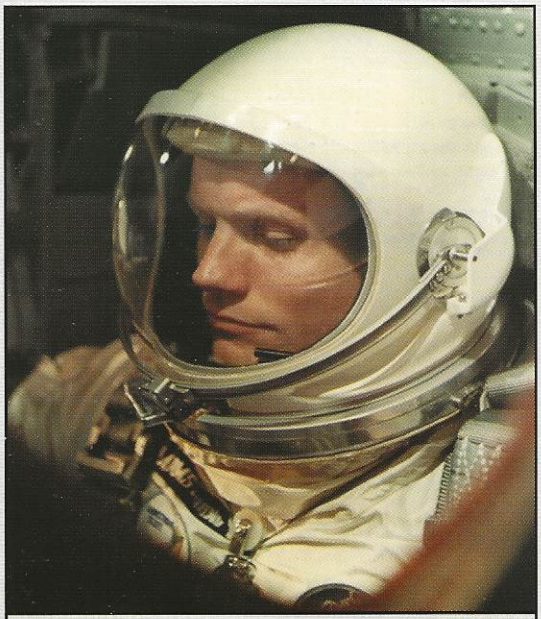
Neil Alden Armstrong was born August 5, 1930, on his grandparent's farm in Wapakoneta, Ohio. He took flying lessons in an Aeronca Champion and received his pilot license on his 16th birthday, before he had his driver's license.

Armstrong's education was interrupted in 1949 when he was called to active duty. He entered pilot training at Pensacola Naval Air Station in Florida. In 1950, he went to Korea where he flew 78 combat missions in an F9F-2 Panther from the carrier *USS Essex*.

During one run over North Korea, Armstrong's fighter was severely damaged. He made it back to a South Korean base, but was forced to eject. For his service in Korea, Armstrong received the Air Medal and two Gold Stars.

Armstrong resumed his studies and graduated from Purdue with a degree in aeronautical engineering in 1955. He earned a masters' in aerospace engineering from the University of Southern California in 1970.

Armstrong joined the National Advisory Committee for Aeronautics (NACA) at the Lewis Laboratory (now Glenn Research Center) in Cleveland in 1955. He transferred to the NACA High Speed Flight Station (now Dryden) at Edwards AFB, California in 1958 to be a test pilot. In 1960, Armstrong received his first taste of spaceflight at the controls of the X-15 rocket plane. He made seven flights, reaching speeds over Mach 5 and altitudes of over 200,000 feet.



Armstrong on Gemini 8

NASA Astronaut

Armstrong became an astronaut in 1962. He served as backup crew for Gemini 5, and then was chosen to command Gemini 8.

On March 16, 1966, Armstrong and Dave Scott conducted the first successful docking in space. But shortly afterwards, the joined spacecraft began spinning out of control. Armstrong disengaged the Gemini from the Agena, but the tumbling worsened. It was later determined that a Gemini thruster had failed on. Armstrong regained control by using thrusters intended for re-entry.

Thanks to Armstrong, disaster was avoided. Though the flight had to be cut short, the primary objective had been met, and the crew splashed down safely in the Pacific.

Armstrong's successful performance on Gemini 8 led to his selection as commander of Apollo 11. His mission was to fulfill President Kennedy's goal of putting men on the moon and returning them safely to Earth. Armstrong, Mike Collins, and Buzz Aldrin launched on their historic journey on July 16, 1969.

Leaving Collins in lunar orbit, Armstrong and Aldrin approached the surface of the moon. Armstrong saw a football-stadium-sized crater out his window. "A generally undesirable landing area for the first one," he told NASA's Oral History project. "We could have tried to land there, and we might have gotten away with it," he said. But, "There were some attractive areas far more level, far less occupied by boulders and things, a half mile ahead." He found a good spot just before running out of fuel. At 2:18 p.m. Houston time on July 20, 1969, Armstrong reported, "Houston, Tranquility Base here - the *Eagle* has landed."

Continued on page 4

NATIONAL SPACE TROPHY RECIPIENT CONT.

Armstrong after historic spacewalk

Continued from page 3

He later said, "I was absolutely dumbfounded when I shut the rocket engine off and the particles that were going radially from the bottom of the engine fell ... and instantaneously disappeared."

Armstrong took that first "one small step for man, one giant leap for mankind" at 9:56 p.m. Aldrin soon joined him. In the debriefing, Armstrong reported that he was very comfortable in the lunar gravity. "It was, in fact, in our view preferable both to weightlessness and to the Earth's gravity."

They set up the flag, accepted congratulations from President Nixon, deployed experiments, and unveiled a plaque which read, "Here men from the planet Earth first set foot on the moon July, 1969, A.D. We came in peace for all mankind."

The Eagle lifted off on July 21. Aldrin reported seeing the flag knocked over by the exhaust. They docked with *Columbia*, transferring 47.7 pounds of precious lunar samples. They splashed down in the Pacific on July 24, earning the praise of a nation.

Reflecting on their success, Armstrong said, "When you have hundreds of thousands of people all doing their job a little better than they have to, you get an improvement in performance. And that's the only reason we could have pulled this whole thing off."

Armstrong resigned from NASA in 1971 after serving as Deputy Associate Administrator for Aeronautics at NASA Headquarters.

Professor and Businessman

Armstrong became a Professor at the University of Cincinnati in 1971. "I most enjoyed the class interaction with the students," he told RNASA. "I taught in the areas of aeronautical engineering and rigid body mechanics."

Armstrong left teaching in 1979. From 1980 to 1982, he was Chairman of Cardwell International, Ltd. He was then Chairman of Computing Technologies for Aviation, Inc. and in 1989, became Chairman of AIL Systems, Inc. which later merged with EDO Corporation. "We had great teams of able and highly motivated people," he said when asked about his work there. "The challenge was to choose most carefully how we invested our intellectual, financial and operational resources to make our team as effective and productive as possible."

Armstrong retired from EDO in 2002.

Armstrong takes photo of the Eagle

Armstrong's experience was tapped as a member of the National Commission on Space in 1985, and in 1986, as Vice Chairman of the President's Commission of the Space Shuttle *Challenger* Accident.

Armstrong has two grown sons. He currently resides with his wife Carol in Cincinnati, Ohio where he is active in the National Academy of Engineering and continues to fly.

Of the future, he told RNASA, "I am delighted that the President has proposed that we energize our program with a return to the moon and subsequent exploration of Mars. Funding and implementation of the proposal will require that the Congress is persuaded that the public supports the initiative. With that support, the future can be very exciting."

The RNASA Foundation agrees, and offers its sincere gratitude and recognition of the man who continues to inspire us all to follow in his giant footsteps.

EDO Corporation Congratulates

Neil A. Armstrong

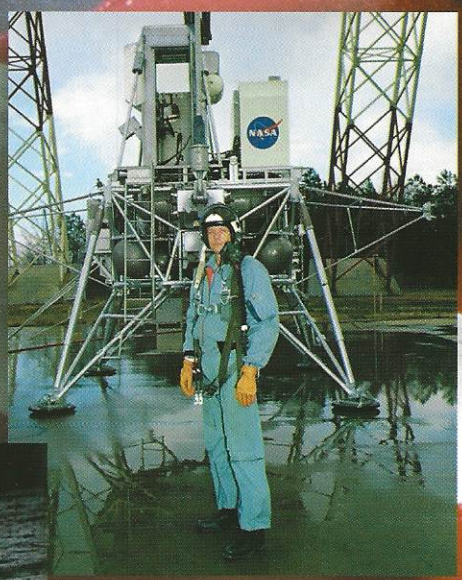
recipient of the

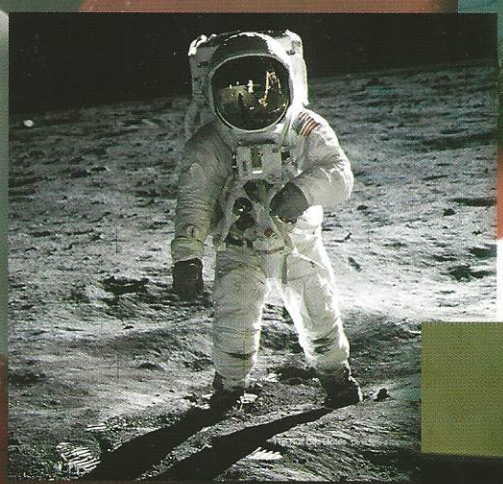
2004

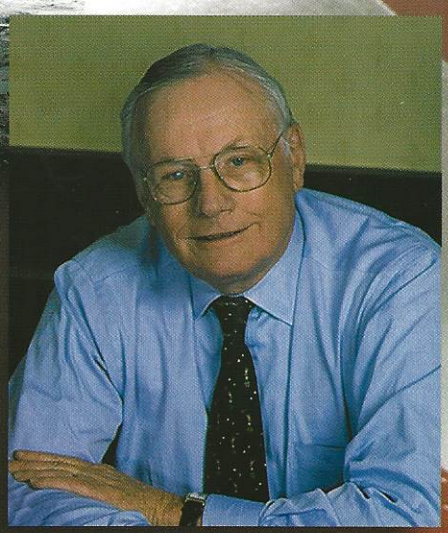
National

Space

Trophy







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MASTER OF CEREMONIES

The RNASA Foundation is pleased to welcome back Miles O'Brien as Master of Ceremonies. O'Brien is news anchor for CNN/U.S. and is the network's space correspondent. Based in CNN's world headquarters in Atlanta, O'Brien co-anchors the weekday newscast *Live From* with Kyra Phillips. He is the former anchor for *CNN Saturday Morning* and *CNN Sunday Morning* as well the former primetime co-anchor of *CNN Headline News*.

As the space correspondent for the CNN News Group, O'Brien contributes regular reports to *Next@CNN*, a one-hour weekly magazine-format program covering science, technology, space, aviation and environmental current events.

O'Brien led CNN's coverage of the Columbia Space Shuttle tragedy, offering viewers uniquely insightful context based on his years of professional experience with NASA and space exploration. On the night of the disaster after broadcasting live for 15 hours straight, O'Brien traveled from Atlanta to Houston, where he continued his in-depth reporting from JSC.

Miles O'Brien's self portrait taken on NASA's KC-135

O'Brien covers all aspects of manned spaceflight and unmanned scientific missions. He covered John Glenn's return to space in 1998, and led CNN's coverage of the demise of NASA's Mars Climate Orbiter and Polar Lander in 1999 and the recent successful landings of the Mars Exploration Rovers "Spirit" and "Opportunity."

In the fall of 2000, he provided a series of live and taped reports from Russia and Kazakhstan coinciding with the launch of the first crew to live aboard the International Space Station. His one-hour documentary, "Terminal Count: What it Takes to Make the Space Shuttle Fly" aired in May 2001.

An instrument-rated pilot and part owner of a Cirrus SR-22 airplane, O'Brien also reports extensively on civil aviation issues, covering the crash investigations of US Air 427, TWA 800, Egyptair 990 American 587 and the fatal accidents of John F. Kennedy, Jr., Payne Stewart, and Sen. Paul Wellstone.

After the Sept. 11, 2001 attacks, O'Brien used his flight experience to provide simulated walk-through coverage of the hijacked flights as well as other reports about combat aviation. In 2003, O'Brien anchored much of the network's reporting on the war in Iraq.

O'Brien's communication skills have been recognized with numerous awards, including the 2002 RNASA Space Communicator Award. His team received a National Headliner Award for their investigative coverage of the 9-11 attacks. He received a News and Documentary Emmy Award for CNN's coverage of the 1996 Centennial Olympic Park bombing in Atlanta, and an Overseas Press Club Award for a 1994 documentary on post-Cold War technology conversion. He won local Emmy Awards for reports on a chlorine gas leak in Florida in 1985, and one in 1989 for reports that exposed a youth gang crisis in Boston.

Previously, O'Brien was anchor and correspondent for CNN's Science Unit, producing stories for CNN's daily programming and writing and hosting the weekly broadcast *CNN Science & Technology Week*. Before joining CNN in 1992, O'Brien was a general assignment reporter and anchor at TV stations in Boston, Tampa, Albany, N.Y., and St. Joseph, Mo. After graduating with a history degree from Georgetown, he began his career in 1982 at WRC-TV in D.C.

vision achievement

Congratulations to Neil Armstrong, recipient of the 2004 National Space Trophy

As the first explorer to land on the moon and the first human to walk on the lunar surface, Neil Armstrong helped the United States achieve one of our country's most ambitious goals...and proved himself a courageous guide for humankind's quest to reach the stars.

Especially today, as America renews its commitment to extend our presence in space, his courage and leadership continue to inspire us and will live on for generations.

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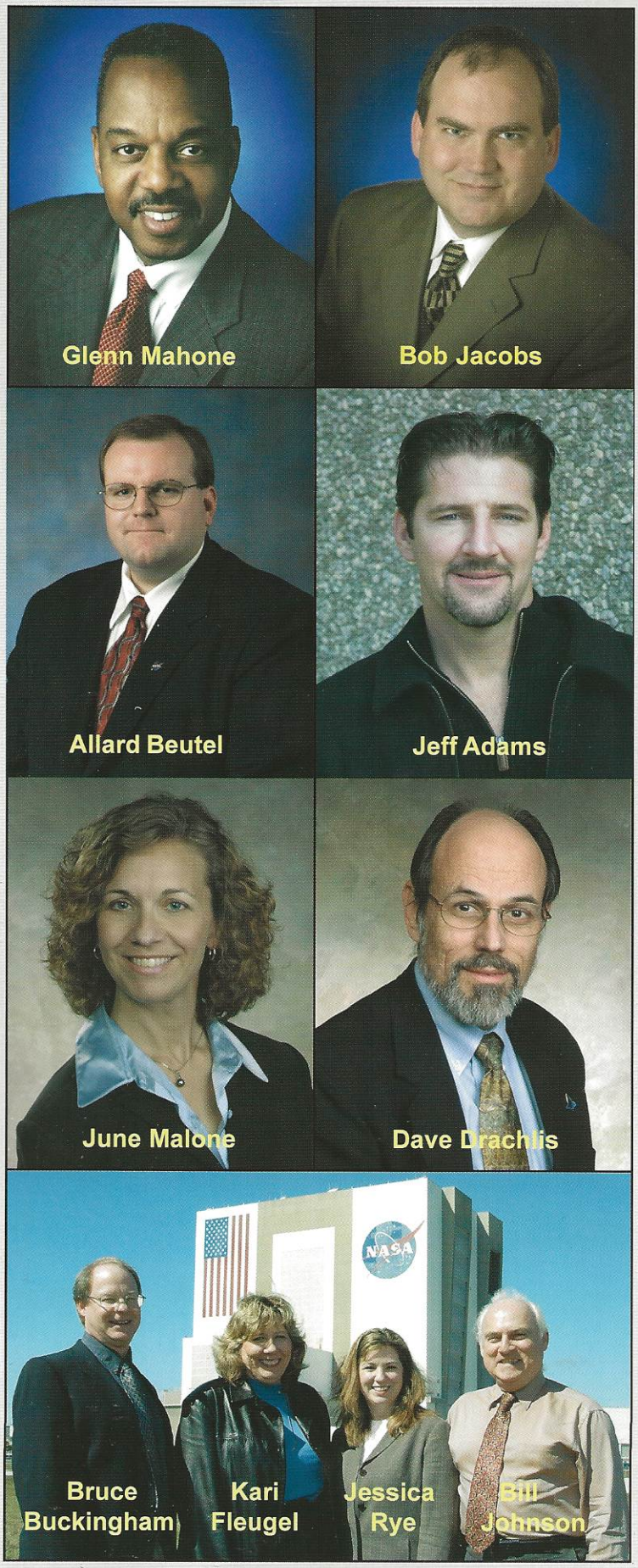
SPACE COMMUNICATOR AWARD RECIPIENTS



On February 1, 2003, as the nation's attention and grief focused on the human space flight program, a united team of NASA public affairs officials and contractor public relations professionals assembled rapidly to provide the first words and faces to the world in response to the loss of Columbia and her crew. In an unprecedented spirit of cooperation, the NASA-Contractor Communications Team quickly surmounted organizational boundaries and differences between locations, government agencies and corporate entities to create a communications workforce that was open, responsive and effective in providing the most current and authoritative information to the public.

Within minutes after the accident, the NASA-Contractor Communications Team was hit with the first wave of a media onslaught. Within a day, media ranks at the Johnson and Kennedy Space Centers swelled to more than 2,500 accredited media representatives from around the world. The team served as the frontline of the Human Space Flight program, skillfully and honestly balancing the demands of the media and the public's right to know while preserving the reputation and integrity of the space program.

Of the many challenges facing the team, one of the most difficult was in quickly and patiently educating many of the on-scene reporters regarding the highly technical nature of the Space Shuttle program. These efforts played a significant role in ensuring the integrity of the media coverage, and thus the integrity and credibility of the program, by promoting accurate accounts of the information known. The openness and responsiveness of the NASA and industry leadership went a long way in reinforcing NASA's reputation as an agency open to finding the root cause of the accident, no matter what it may be.

Under the constant glare of the cameras and commentators across the country for weeks, the NASA-Contractor team conducted itself professionally at all times, demonstrating clearly the dedication and commitment within the human space flight program. Without exception, the members of the NASA-Contractor team put individual needs aside for the benefit of the team.

Behind the cameras, the atmosphere of cooperation was unprecedented as NASA and contractor communicators worked hand-in-hand to research and respond to queries. Contractor team

Continued on page 10

You have excelled – as an explorer, as a business leader, as a positive light in our nation and as an effective voice for space science and enterprise.
We have all benefited from your contributions.

THANK YOU

NEIL A. ARMSTRONG

Winner of the **2004** National Space Trophy

Congratulations to all STELLAR AWARD winners
for significant personal contributions and outstanding achievements.

20 TWENTIETH ANNIVERSARY

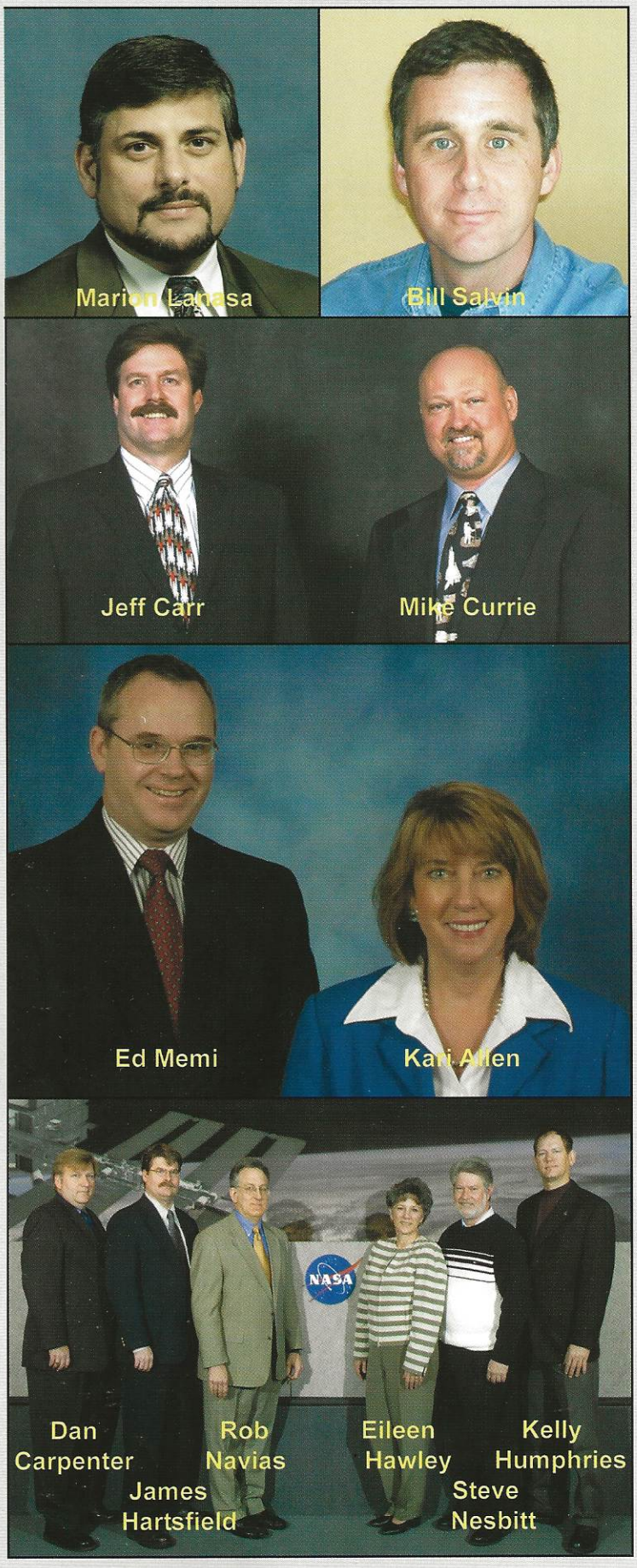
THE SPACE FOUNDATION IS PROUD TO HONOR YOU. SEE YOU AT THE

NATIONAL SPACE SYMPOSIUM

MARCH 29 - APRIL 1 · 2004 THE BROADMOOR · COLORADO SPRINGS

SPACE FOUNDATION

SPACE COMMUNICATOR AWARD RECIPIENTS



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members crossed corporate boundaries to develop coordinated messages that were supportive of the NASA mission. NASA Public Affairs Officers coordinated information across locations to keep program officials at the Johnson Space Center abreast of emerging issues and trends. Across the team, communications professionals provided counsel and support to management and program officials to ensure that the entire human space flight program delivered consistent, coordinated and supportive messages to its many stakeholders.

In summary, this team proved itself capable of meeting the most extreme challenges with courage, fortitude, dedication and compassion. Each individual's efforts presented a human face to the public that represented the Agency long after the cameras left. For this demonstration of integrity, excellence in performance, and commitment to the importance of human space flight, this team is being recognized with the Rotary National Award for Space Achievement Space Communicator Award.

NASA/Contractor Communications Team Members

Allard Beutel, NASA HQ
Bob Jacobs, NASA HQ
Glenn Mahone, NASA HQ
Dan Carpenter, JSC
James Hartsfield, JSC
Eileen Hawley, JSC
Kyle Herring, JSC
Kelly Humphries, JSC
Rob Navias, JSC
Steve Nesbitt, JSC
Bruce Buckingham, KSC
Bill Johnson, KSC
Dave Drachlis, MSFC
June Malone, MSFC

Jeff Carr, USA, Houston
Mike Curie, USA, Houston
Kari Fluegel, USA, Florida
Jessica Rye, USA, Florida
Kari Allen, Boeing, Houston
Ed Memi, Boeing, Houston
Jeff Adams, Lockheed-Martin, Maryland
Marion Lanasa, Lockheed-Martin, Michoud
Bill Salvin, Signal Bridge Communications, Illinois


OMEGA & MOON.
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NATIONAL SPACE TROPHY PRESENTER

Dr. Christopher C. Kraft, Jr.

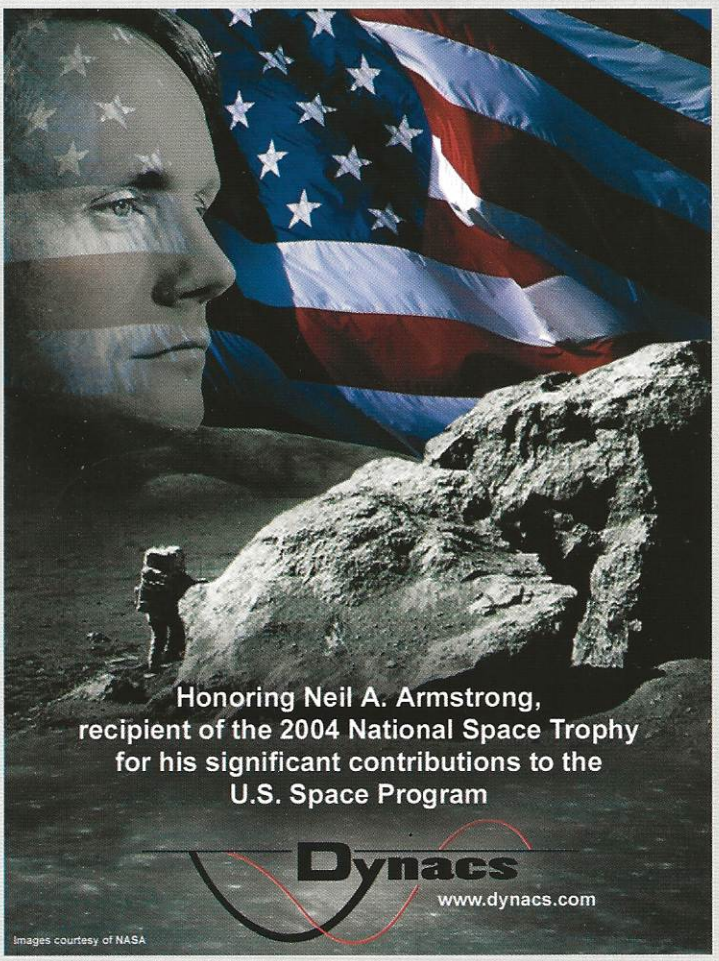
The RNASA Foundation is honored to have Dr. Christopher C. Kraft, Jr., the recipient of the National Space Trophy in 1999, present the trophy to Mr. Armstrong this year. Kraft is a visionary who played an integral role in all aspects of manned flight operations that led to Mr. Armstrong's successful mission to the moon.

Kraft graduated from Virginia Polytechnic Institute with a B.S. in aeronautical engineering in 1944, and joined the National Advisory Committee for Aeronautics (NACA), NASA's predecessor, at Langley Field in Virginia the next year. He spent fourteen years testing military aircraft and earned valuable experience as a troubleshooter of tedious design problems and a reputation for solving bureaucratic conflicts among the various contractors and military agencies.

After Sputnik in 1958, Kraft became one of the 36 original members of the Space Task Group developing Project Mercury. He created the engineering and operations organization that designed the first flight trajectories and mission plans and developed and implemented standards for space flight operational control. He oversaw the design, development and implementation of the Mission Control Center in Houston.

As the Flight Director for the Mercury Program and the first seven flights of Gemini, Kraft led the development of flight mission rules and operations procedures that were major elements in ensuring the safety of human spaceflight. He was the Director of Flight Operations through Apollo 12.

Kraft was appointed Deputy Director of the Manned Spacecraft Center (now Johnson Space Center) in December 1969. He became Director two years later and played a vital role in the success of the final Apollo missions and in the development and first four flight tests of the Space Shuttle. He remained Director of JSC until his retirement in August 1982.



Since his retirement, Kraft has been an aerospace consultant and served on the Board of Directors of a number of Houston companies. He has also served as director-at-large of the Houston Chamber of Commerce, and as a member of the Board of Visitors at Virginia Polytechnic Institute and State University.

His book, *FLIGHT: My Life In Mission Control*, was published in hardback in March 2001 by E.P. Dutton. A New York Times bestseller, it was released in large print edition in September 2001 by the Gale Group, and in paperback by Penguin Putnam in February 2002.

He has received many honors and awards, including: an Honorary Doctorate from the Indiana Institute of Technology, St. Louis University, and Villanova University; a NASA Outstanding Leadership Medal from the President of the United States in 1963, the Louis W. Hill Space Transportation Award from the AIAA; the National Order of the Legion of Honor of France; several NASA Distinguished Service Medals; and the distinguished service medal of the National Advisory Committee of Aeronautics (NACA).

Kraft lives in the Clear Lake area with his wife, the former Elizabeth Anne Turnbull. They have two grown children; son Gordon of San Francisco, California, and daughter Kristi Anne of Lake Jackson, Texas, and five grandchildren.

SPACE COMMUNICATOR AWARD PRESENTER

Elliot G. Pulham at 2003 RNASA Banquet

Last year's honoree, Elliot Pulham, returns to present this year's Space Communicator award. Pulham is President and CEO of the non-profit Space Foundation, headquartered in Colorado Springs, Colorado.

Pulham has continued to "stir the pot" of space advocacy since receiving the Space Communicator Award in 2003. As chief executive of the Space Foundation he led the creation of *Strategic Space*, an important new symposium in support of America's strategic space forces in Omaha, Nebraska, the home of United States Strategic Command.

He opened the Foundation's new Washington, D.C. operation and was instrumental in the formation of the National Space and Satellite Alliance – a D.C.-based space advocacy coalition comprising the National Space Society, Satellite Industry Association, Space Foundation and Washington Space Business Roundtable.

Under Pulham's leadership, the Space Foundation was named to support the newly created Space Power Caucus, a bi-partisan Congressional caucus; NASA chose the Space Foundation to develop the selection criteria for Educator Astronauts; and the Centennial of Flight Commission asked the Foundation to host official Centennial of Flight activities that attracted 300 teachers and more than 3,000 students. Tapped by the U.S. State Department, Pulham delivered a special presentation to the United Nations Committee on the Peaceful Uses of Outer Space at its 2003 meeting in Vienna.

Pulham joined the Board of Advisors of the RNASA Foundation after receiving the Space Communicator Award in 2003. He is also a member of the Board of Directors of the Challenger Learning Center of Colorado Springs. Of particular note, he has been an active board member of the Columbia Shuttle Memorial Trust, the organization recognized by NASA to raise funds to support the families of the STS-107 crew.

The Space Foundation is a NASA Educational Resource Center, managing the Space Technology Hall of Fame. Under Pulham's direction, the Foundation has trained more than 30,000 teachers through graduate courses and conferences. The Foundation also cosponsors *Space at the Crossroads*, a highly focused one-day space industry "snapshot" conference for Congressional, administration and agency staff, managers, and aerospace and defense contractors.

The Space Foundation's signature event is the *National Space Symposium*, a premier space industry conference whose attendance has grown from 400 to 5,000 under Pulham's leadership. This year marks the 20th anniversary of this world-renowned symposium, scheduled for March 29-April 1 at the Broadmoor Hotel in Colorado Springs.

Prior to joining the Space Foundation in 1998, Pulham was Senior Manager of public relations, employee communication and advertising for all space programs for The Boeing Company. For his work orchestrating an industry campaign to build public support to save the space station from cancellation, he earned the Silver Anvil Award from the Public Relations Society of America, the profession's highest honor.

When he's not out promoting space, Pulham may be found skiing, motorcycling, hiking or camping in the Colorado Rockies with his wife, Cynthia, and son, Will.

PRESENTER OF THE STELLAR AWARDS

Sandra H. Magnus, Ph.D.
at 2003 RNASA banquet

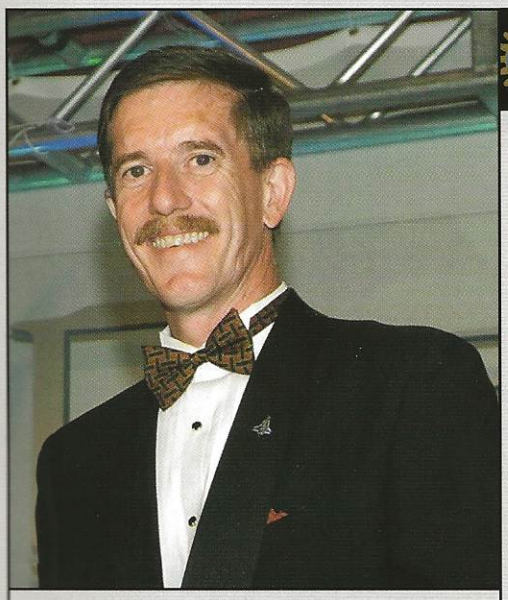
The RNASA Foundation is delighted to have Astronaut Sandra Magnus return to share in presenting this year's Stellar Awards. Dr. Magnus was selected as an astronaut in 1996, and assigned to the Astronaut Office Payloads/Habitability Branch. Her duties involved working with ESA, NASDA and Brazil on science freezers, glove boxes and other facility type payloads. In May 1998, Dr. Magnus was assigned as a "Russian Crusader" which involved traveling to Russia in support of hardware testing and operational products development. In August 2000, she served as a CAPCOM for the International Space Station.

Dr. Magnus completed her first space flight on the STS-112 flight of Atlantis in October 2002. This International Space Station assembly mission delivered and installed the S1 (starboard) Truss structure. Dr. Magnus operated the station's robotic arm during three space walks required to outfit and activate the new component. The crew transferred cargo between the shuttle and the station and boosted the station's orbit. Dr. Magnus logged 10 days, 19 hours, and 58 minutes in space.

Dr. Magnus previously worked for McDonnell Douglas Aircraft Company as a stealth engineer on the effectiveness of RADAR signature reduction techniques. She also worked on the propulsion system of the Navy's A-12 Attack Aircraft program. From 1991 to 1996, Magnus completed her thesis work supported by NASA Lewis Research Center through a Graduate Student Fellowship. Her work involved investigations on materials for "Scandate" thermionic cathodes. Dr. Magnus received a degree in physics in 1986, and a masters' in electrical engineering in 1990 from the University of Missouri-Rolla. She got her Ph.D. in 1996 from the School of Material Science & Engineering at the Georgia Institute of Technology.

Originally from Belleville, Illinois, she enjoys soccer, reading, travel, and water activities.

PRESENTER OF THE STELLAR AWARDS



James F. Reilly II, Ph.D.
at 2003 RNASA banquet

Astronaut James Reilly II, Ph.D. returns this year to once again share in presenting the Stellar Awards. Dr. Reilly was selected as an astronaut in 1995, and first assigned to work technical issues for the Astronaut Office Computer Support Branch. In January 1988, he flew as a Mission Specialist on STS-89, the eighth Shuttle-Mir docking mission that delivered Andy Thomas to *Mir* and returned David Wolf. The crew transferred more than 9,000 pounds of scientific equipment, hardware, and water from Endeavour to *Mir*.

After his STS-89 flight, Dr. Reilly became the Astronaut Office lead on Shuttle training. In July 2001, he flew on STS-104/Flight 7A, an assembly mission for the International Space Station. He performed three spacewalks to install the joint airlock, and has logged over 517 hours in space. He is currently assigned to the crew of STS-117, which will deliver the S3 and S4 (starboard) solar arrays to the space station.

Dr. Reilly earned his a B.S. in 1977, his M.S. in 1987, and his Ph.D. in 1995 all in geosciences from the University of Texas-Dallas. In 1977-78, Dr. Reilly served as a research scientist on an expedition to Marie Byrd Land, West Antarctica for which he received an Antarctic Service Medal. In 1979, he worked as a geologist with Santa Fe Minerals Inc. in Dallas. From 1980 to 1995, Dr. Reilly worked as an oil and gas exploration geologist for Enserch Exploration Inc. in Dallas, rising to the position of Chief Geologist of the Offshore Region. An Officer in the Navy Reserve, he was involved in the application of new imaging technology, and spent about 22 days in deep submergence vehicles operated by Harbor Branch Oceanographic Institution and the US Navy.

Born in Mountain Home Air Force Base, Idaho, Dr. Reilly considers Mesquite, Texas, to be his hometown. He enjoys flying, skiing, photography, running, soccer, hunting and fishing.

2004 ROTARY NATIONAL AWA
EIGHTEENTH ANNUAL AW

Thursday

6:00
RECEPTION
Victoria Stone, pianist

7:00
WELCOME
Floyd V. Bennett, Chairman, RNASA Foundation

PRESENTATION OF THE COLORS
Clear Lake High School Army JROTC Color Guard

NATIONAL ANTHEM
Shari Wilkins, soloist

INVOCATION
Dr. Jack Haberer, Senior Pastor, Clear Lake Presbyterian Church

DINNER

8:15
OPENING VIDEO

MASTER OF CEREMONIES
Miles O'Brien, CNN TV News

PRESENTATION OF SPACE COMMUNICATOR AWARD
Elliot Pulham, Executive Director, Space Foundation

PRESENTATION OF STELLAR AWARDS
Dr. Sandra H. Magnus, Astronaut
Dr. James F. Reilly, Astronaut

PRESENTATION OF NATIONAL SPACE TROPHY
Dr. Christopher C. Kraft, Jr.

PRESENTATION OF THE OMEGA WATCH
Lt. Gen. Thomas Stafford (Ret.), with Roy McCharen and Sarah Schleider, Omega

RECOGNITION OF SPONSORS AND CLOSING

The Space Mural, A Cosmic View (master study - horizontal section) by Robert McCall

EARLY CAREER STELLAR NOMINEES

Capt. Joseph L. Bader of the USAF 1st Space Control Squadron - Visionary leadership of the 50th Space Wing's effort to create the USAF's revolutionary Multi-Mission Space Operations Center.

Elizabeth Bauer of NASA Johnson Space Center - Outstanding leadership in managing the engineering development of the ISS Human Research Facility.

Capt. David J. Bawcom of the USAF 4th Space Operations Squadron - Outstanding leadership instrumental to the launch, checkout, and operational activation of Milstar Flight-6, and the execution of the Milstar mission, which is critical to the success of Operation IRAQI FREEDOM.

Brian P. Boyce of The Boeing Company - Technical expertise in the field of propulsion development, including contributions to successful completion of engine development and the first flight of the RS-68 engine.

Ketan S. Chhipwadia of NASA Johnson Space Center - Exceptional contributions in developing waste collection systems technology and demonstrated leadership for Space Shuttle and ISS crew escape equipment.

Jake Delap of United Space Alliance - Significant contributions to Shuttle Robotic Arm training for astronauts and flight controllers, including lighting training and facility development.

Capt. Gregory P. Ellingson, Jr. of the USAF Space and Missile Systems Center - Outstanding leadership as the MILSATCOM Launch Operations Manager, orchestrating the successful integration and launch of the Defense Satellite Communications System on the Delta IV EELV.

Guadalupe Gonzales of The Boeing Company - Tireless and distinguished service in support of thermal analyses for the Columbia Accident Investigation and Return to Flight activities.

Thomas Keeping of Science Applications International Corporation - Extraordinary technical contributions to the identification and mitigation of risks associated with the Floating Potential Measurement Unit project, which is designed to prevent electrical shock conditions due to plasma interactions near the ISS.

Stephen Kinsler of Lockheed Martin Space Systems - Application of automated spacecraft health and status data gathering, condensing, and formatting techniques to provide a real-time graphical Situational Awareness projection system for room-wide viewing by a critical Mission Operations engineering team.

Capt. Ila L. Kolb of the USAF Space and Missile Systems Center - Exceptional contributions to the development of enabling space technologies including radiation hardened electronics, focal plane arrays, cryocoolers, and flexible spacecraft design ensuring the cutting edge is available for future USAF satellites.

Gavin F. Mendeck of NASA Johnson Space Center - Superior performance, initiative and innovation, particularly in developing tools and analyzing entry overflight risks to the public in support of NASA's Return to Flight effort.

Robyn F. Ringuette of The Boeing Company - Key contributions to activation and preparation for the first flight of the Delta IV vehicle, powered by the first stage RS-68 engine.

Natalia Robarge of TechTrans International - Outstanding leadership for the development and implementation of operational concepts and training programs for Mission Control Center interpreters to assure international mission safety and success.

Maral O. Sagherian of The Boeing Company - Exemplary performance and significant contributions to the ISS Program in the development, test, delivery, and on-orbit operation of the Electric Power System.

Chad M. Schepel of The Boeing Company - Personal commitment and dedication to ensuring high product quality, reliability and maintainability for the Space Shuttle Main Engine Nozzle.

Thomas M. Simon of NASA Johnson Space Center - Exemplary technical expertise, leadership, and dedication for the advancement of the Science, Crew, Operations, and Utilities Testbed project, and for his support of the Columbia Accident Investigation.

Capt. Scott A. Worden of the USAF Space and Missile Systems Center - Exceptional level of professional responsibility, technical expertise, and leadership as Communications Infrastructure Manager for the testing, qualification, and mission readiness for the Space Based Infrared Systems Mission Control Facilities.


THE VOYAGE MUST CONTINUE.
To be human is to explore. To push the envelope with the best available technology, achieving unexpected breakthroughs. Opening trade routes. Overcoming gravity. Propelling science to one discovery after another. Now modern explorers await the ships that will take them farther. Space Shuttles, re-certified for flight, and more advanced spacecraft for voyages to the planets and beyond. To these goals, near and far term, we dedicate ourselves.
LOCKHEED MARTIN
We never forget who we're working for™

MIDDLE CAREER STELLAR NOMINEES

Bruce D. Bertea of The Boeing Company - Exceptional dedication, professionalism and leadership in the area of materials and processes to sustain the flight safety of the Space Shuttle Main Engine.

Camille M. Chidester of The Boeing Company - For exemplary long-term support to the Delta II launch vehicle program contributing to a 100% flight success rate of the Rocketdyne RS-27 engine system.

Scott E. Claflin of The Boeing Company - Outstanding leadership and engineering work in developing and demonstrating leading edge technologies to advance the state-of-the-art in both hybrid and liquid rocket engine propulsion systems.

Stephan J. Ebert of The Boeing Company - Technical expertise and leadership of the first flight success of the Delta IV powered by the RS-68 booster engine, and for leading the RS-68 Turbopump Design and Development team and the first flight mission assurance effort.

Vernie Erwin of The Boeing Company - Outstanding technical and management leadership of Payload rack hardware and software development, environmental control systems, and real time flight operations for the ISS program.

Cynthia A. Evans, Ph.D. of Lockheed Martin Space Operations - Exceptional level of technical expertise and leadership in analyzing the STS-107 Photo/TV imagery that provided key findings for the Columbia Accident Investigation Board.

Pasquale Girolamo of Lockheed Martin Space Systems - Development of a spacecraft level random vibration test that provides significantly improved workmanship screening over standard acoustics testing, by eliminating high risk moves into and out of an acoustics test chamber, saving time and reducing cost.

SMSgt Rick D. Green of the USAF 1st Space Control Squadron - Vital leadership during Operations NOBLE EAGLE, ENDURING FREEDOM, and IRAQI FREEDOM, while expanding 1st Space Control Squadron enlisted space operations and helping maintain the world's most accurate satellite catalog.

Benjamin M. Greenfield, Jr. of the United States Air Force - Leadership in the development and implementation of techniques for incorporating non-traditional intelligence collectors into an interoperable architecture, and enabling space-based collection systems to be integral contributors in network-centric warfare.

Charles J. Hardison of The Boeing Company - Exceptional leadership and dedication to technical excellence in the processing of the ISS Outboard Truss Elements.

Brian G. Harnedy of Hamilton Sundstrand Corporation - Dedicated service and leadership in the production, manufacturing and upgrades of EMU Life Support System hardware.

Paul S. Hill of NASA Johnson Space Center - Exceptional level of initiative, commitment and technical expertise while leading the Early Sighting Assessment Team in analyzing and characterizing STS-107 pre-breakup debris and impact areas for the search and recovery effort, and for leading the early development of the on-orbit inspection and repair of the orbiter Thermal Protection System.

Steven G. Hoffmann of The Boeing Company - Exceptional leadership and dedication to technical excellence in the processing of the International Space Station Inboard Trusses.

Richard A. Holcomb of the United States Air Force - Key leadership and team-building during the integration, test, and transition activities of the first new Low Earth Orbit Signals Intelligence system in over ten years.

Renee Hugger of Science Applications International Corporation - Key contributions to the Flight Equipment Department, to the Software Assurance Team, and to implementation of the software certification process for Government Furnished Equipment as part of the Safety, Reliability and Quality Assurance contract at NASA JSC.

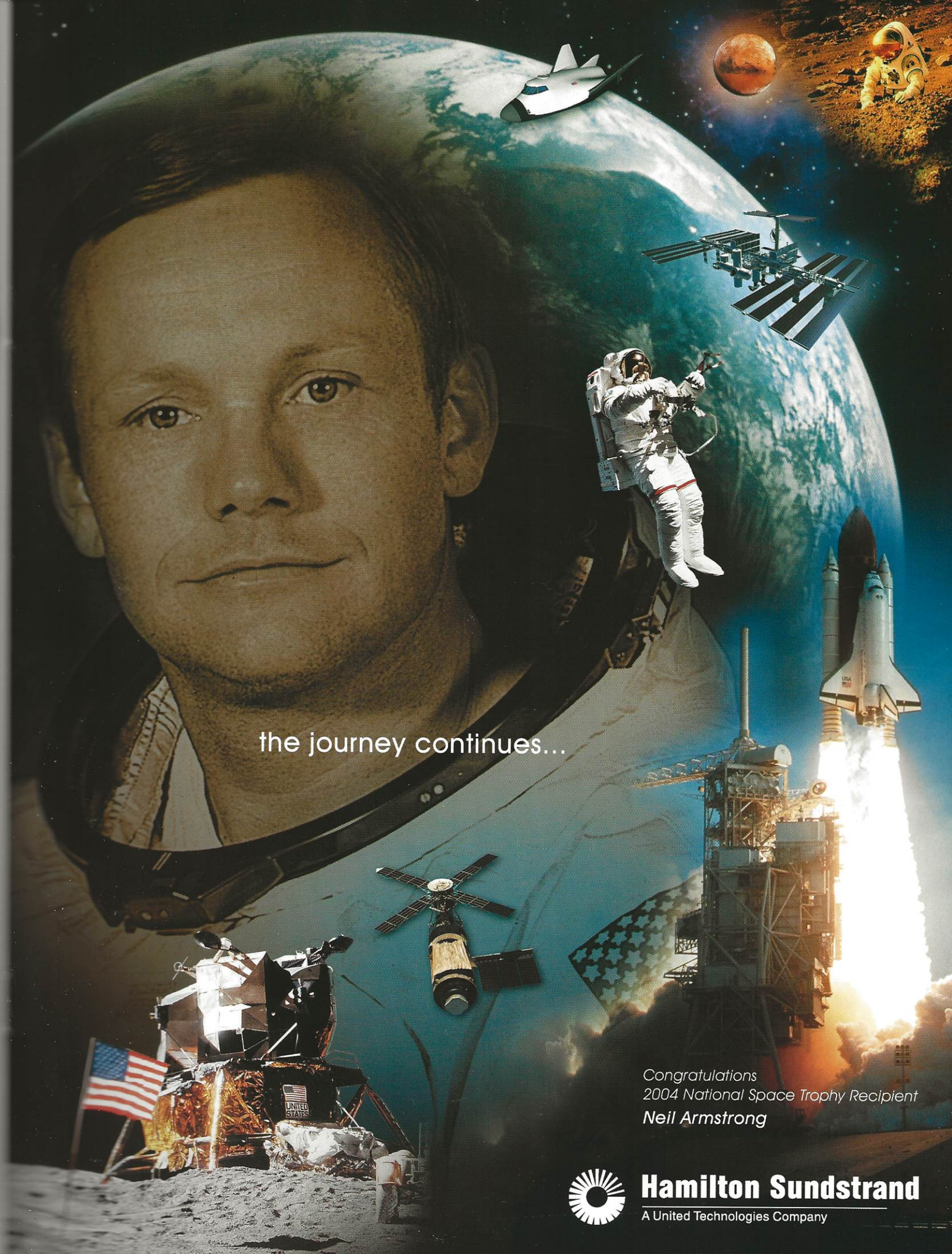
John C. Karas of Lockheed Martin Space Systems - Exceptional leadership and management contributions to the design and development of the new Atlas V family of Lockheed Martin space launch vehicles, in addition to a new launch complex, vehicle processing facility and launch operations control center to meet both government and commercial launch service requirements.

Harry A. Karasopoulos, Ph.D. of the USAF Research Laboratory - Providing space science and technology expertise for Air Force Space Command programs, and for superior program organizational and analysis support.

James C. Lyke of the USAF Research Laboratory - Advancements in microelectronics packaging that enable the construction of space systems that are dramatically smaller, lighter, and less power hungry than the current state-of-the-art.

Kurt M. Miller of Lockheed Martins Space Operations - Exemplary technical leadership, dedication and commitment in the processing, testing, certifying, and delivery of the Schwinn Resistive Exercise Device flight hardware for the ISS.

Continued on page 22



Congratulations
2004 National Space Trophy Recipient
Neil Armstrong

Hamilton Sundstrand
A United Technologies Company

MIDDLE CAREER STELLAR NOMINEES CONTINUED

Continued from page 20

Sean K. Murray of Hamilton Sundstrand Corporation - Instrumental participation in the early design of critical components for the EMU Life Support System, and continuing contributions to enhance the existing design.

Louis H. Nguyen of NASA Johnson Space Center - Outstanding leadership and demonstrated technical expertise in the verification of the International Space Station integrated Guidance, Navigation, and Control system performance and integrated control strategies for ISS operations.

Carlos Ortiz of The Boeing Company - Major impacts on the resolution of Space Shuttle Booster Separation Motor foreign object debris issues, and contributions to the Columbia Accident Investigation.

Nancy J. Patrick of NASA Johnson Space Center - Outstanding leadership in managing and integrating the EVA requirements to ensure the safe and successful assembly of the ISS, and indispensable management of the development of EVA tools and techniques to inspect and repair the Space Shuttle TPS in support of NASA's return to flight.

Maj. Stephen R. Pratt of the USAF Space and Missile Systems Center - Unparalleled ability to see key issues, focus necessary energy, and complete the most difficult technical and programmatic tasks, and for superb technical expertise and leadership of the Space Tracking and Surveillance System's ground segment development.

Lionel P. Ribeiro of Hamilton Sundstrand Corporation - Innovative management approach to the improvement of communication and learning systems to increase the quality of space hardware and reduce the probability of process escapes.

Lt. Col. Alec M. Robinson of the United States Air Force - Effective leadership in securing funding for the Air Force Space Program in order to develop and deploy transformational communications and intelligence, surveillance and reconnaissance system.

Martin Rodriguez, Jr. of The Boeing Company - Exceptional contributions to the definition and technical execution of significant TPS Inspection, Repair and Hardening designs that improve the Orbiter's resistance to impact damage.

Charles Sager of Science Applications International Corporation - Consistently high quality support on all EVA Mobility Unit activities, professional excellence, and commitment to safety and reliability.

Stephen M. Shannon of The Boeing Company - Exceptional leadership and dedication to technical excellence in the processing of the ISS Node 2.

Scott M. Smith, Ph.D. of NASA Johnson Space Center - Scientific excellence in advancing the understanding and application of nutrition in space, and translating that knowledge to life on Earth through education outreach with elementary, secondary and university students.

Patricia J. Stratton of United Space Alliance - Instrumental management and organizational contributions to Space Shuttle operations, and for her many contributions to the success of human space flight.

Richard A. Swaim of The Boeing Company - Exemplary contributions to the continuing development of excellent quality avionics and software for human space flight programs.

Leslie Theard of Lockheed Martin Space Operations - Exemplary technical leadership, dedication and commitment in the processing, testing, certifying, and delivery of equipment for the Crew Health Care System flight hardware for the ISS, including the Schwinn Resistive Exercise Device.

Maj. Derrick O. Vincent of the USAF 30th Space Wing - Instrumental instructional skills and leadership in the successful transition of the NATO/SKYNET program from Onizuka AFB, CA to Schriever AFB, CO and contributions to numerous successful space launches.

Joseph T. Vogel of The Boeing Company - Exceptional contributions to the definition and technical execution of significant TPS Inspection, Repair and Hardening designs that improve the Orbiter's resistance to impact damage.

William R. Webster of the United States Air Force - Ensuring mission success in LEO space operations, through leadership of the technical review and closure of multiple satellite anomaly conditions, including Star Tracker, COMM2 Bit Error Rate, and Remote Interface Unit-6 Electrostatic Discharge.

Jerome P. Wittenauer of Lockheed Martin Space Systems - Performing independent risk analysis of NASA space instruments and leading the cryogenic cooler failure investigation of the High Resolution Dynamics Limb Sounder, which will study the chemistry of the upper atmosphere on the Aura Spacecraft mission.

Gary S. Williamson of NASA Glenn Research Center - Successful leadership and outstanding management of two critical Shuttle component wind tunnel tests of the external tank LH2 and LOX cable tray hardware, under extreme program schedule constraints, which led to the development of air loading solutions which are integral to NASA's Return to Flight.

ROTARY NATIONAL AWARD FOR SPACE ACHIEVEMENT FOUNDATION

RNASA Foundation Committee Members: back row: Gary Johnson, Bill Taylor, Sheila Self, Laura Hale, Jack Lister, Tim Kropp (Treasurer); Front row: John Wilkins, Duane Ross, Floyd Bennett (President), Frank Perez, Bob Wren. Not pictured: Marianne Dyson, Bill Geissler, Rodolfo Gonzalez (Secretary), Kim Kierstead, Bill Vantine, Jennifer Wagenknecht, Jean Walker, Pamela Workings.

Just as the crystal of the National Space Trophy captures the light within, so do the actions of humans exploring space capture and inspire others to strive for great achievements. The Rotary National Award for Space Achievement (RNASA) Foundation was established in 1985 by the Space Center Rotary Club to organize and coordinate an annual awards event to recognize outstanding achievements in space and create greater public awareness of the benefits of space exploration.

People who have made notable contributions in the field of space exploration are nominated by individuals and by government, industry, and professional organizations. The RNASA Foundation's prestigious Board of Advisors (page 30) then vote to choose the winner. The confidential votes are tabulated by an independent accounting firm. The winner is presented with the National Space Trophy (page 30) at the annual RNASA banquet celebration.

The presentation of Stellar Awards has become an increasingly important part of the annual RNASA banquet events. Nominations for Stellar Awards for individual and team achievements are solicited from NASA, the military, and industry leaders in human and unmanned spaceflight programs. In order to ensure recognition of individuals at all stages of their careers, nominations are solicited for four categories: Early-career (to age 33), Mid-career (age 34-50), Late-career (over age 50), and Teams. Nominations (pages 18-27) are reviewed by a distinguished panel whose decisions are based on which accomplishments hold the greatest promise for furthering future successes in space. Top ranked nominees are announced at the banquet.

The Foundation also selects individuals or groups for special awards such as this year's Space Communicator Award (pages 8-10). The Space Communicator Award is given to a professional communicator who has made an important contribution to the public's understanding of and appreciation for the accomplishments of the American space program. This category includes journalists, government public affairs professionals, industry public relations professionals, broadcasters, publishers, and public figures. This year marks the first time the award has been presented to a team of professional communicators.

The nonprofit RNASA Foundation is supported by sales of banquet tickets and program book advertisements. Proceeds from this year's event will be donated to aerospace education. The Foundation is grateful for the enthusiasm and support it has received from the aerospace industry, educational organizations, NASA, and the Department of Defense. This support assures the continued recognition of outstanding achievements by United States' citizens in the area of space exploration.

LATE CAREER STELLAR NOMINEES

Robert E. Biggs of The Boeing Company - Outstanding achievements in the design, development and continued safe flight of the Space Shuttle Main Engines.

William J. Burke, Ph.D. of the USAF Research Laboratory - Original and sustained contributions to understanding space environments and their effects on space system operations.

Charles H. Davis of The Boeing Company - Outstanding technical contribution to the Space Shuttle program, including Mechanical Systems and Ground Support Equipment.

Gary A. Davis of The Boeing Company - Significant technical contributions to improve structural integrity of liquid rocket booster engines used in human and unmanned spaceflight.

Royce G. Forman of NASA Johnson Space Center - For sustained significant contributions in fracture mechanics methodology related to human spaceflight.

Arthur A. Giannetti, Jr. of the USAF Research Laboratory - Nationally recognized expertise in the high altitude balloon arena, with outstanding contributions that will have a long and lasting effect on our nation's defense.

John Higgins, Ph.D. of the USAF Research Laboratory - Leadership in the development of the world's first composite grid stiffened payload fairing with high strength composites for 100% greater payload capacity, 20% lower cost, and 90% faster fabrication over aluminum fairings.

Larue J. Jones of United Space Alliance - Superb leadership and thorough planning for the Shuttle Avionics Integration Laboratory at NASA JSC, including coordinating the implementation and testing of Space Shuttle upgrades in SAIL, which will provide a safer and more reliable Shuttle for future space flights.

Gregory R. Loken of Hamilton Sundstrand Corporation - Outstanding technical expertise, demonstrated leadership and engineering excellence on the Space Shuttle auxiliary power system.

Robert E. Mann of Lockheed Martin Space Systems - Outstanding technical and leadership contributions to the nation's development of space transportation and advanced satellite systems, ensuring Mission Success of hardware and software for Lockheed Martin Special Programs.

Donald S. McAlister of The Boeing Company - Lifetime achievement in the design, development, fabrication, launch support and outstanding program management of large scale liquid rocket propulsion systems program

Joseph C. Mills, Ph.D. of The Boeing Company - Significant achievements in leadership roles over nine years with the ISS Program, including major contributions to development and delivery of every major element and system of ISS.

Dwight G. Mitchell of Hamilton Sundstrand Corporation - Twelve years of exceptional service as the program manager and team-building leader for the development, manufacturing, and on-orbit support of the ISS Major Constituent Analyzer.

Steve Newman, Ph.D. of NASA HQ Office of Safety and Mission Assurance - Significant achievement, vision, and demonstrated leadership in the areas of Safety and Mission Assurance, Independent Assessment, Systems Engineering, and Knowledge Management in support of NASA HQ Code Q's mission to assure the safety and enhance the success of all NASA activities.

Maj. Gen. Paul D. Nielsen of the USAF Research Laboratory - Unmatched technical and leadership depth for contributions to many cutting edge technology developments in space, enhancing war fighting capabilities and improving national defense.

Edward W. O'Connor of Hamilton Sundstrand Corporation - Outstanding contributions to advancing space life support over 39 years with the human spaceflight program.

Reynaldo Rivas of The Boeing Company - Instrumental participation in the recovery of the STS-107 Space Shuttle Columbia OPS data recorder and successful retrieval of subsystem instrumentation data, which was key to the Columbia Accident Investigation and identification of the potential cause.

George O. Roberts of The Boeing Company - Outstanding dedication, professionalism, and technical excellence in Space Shuttle Main Engine turbomachinery critical component structural analysis and development, certification, and integration of the Alternate Turbopumps into the Shuttle.

Bernard J. Rosenbaum of NASA Johnson Space Center - In recognition of his exemplary technical expertise, leadership, and dedication in the development and flight of all major spacecraft at the Johnson Space Center, and making significant contributions to the public and private sector outside of NASA.

Douglas A. Snowdon of Hamilton Sundstrand Corporation - Notable achievements in the development of a catalytic water processor, enabling practical water recycling on the ISS.

Chester A. Vaughan of The Boeing Company - Over 40 years of outstanding technical leadership contributions to human space flight, including the Space Shuttle and ISS.

David W. Whittle of NASA Johnson Space Center - Exceptional leadership as Chairman of the Mishap Investigation Team for the STS-107 Columbia Accident Investigation.

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Lockheed Martin Advanced Space Transportation (Denver)
Lockheed Martin Space Operations (Houston)
Muniz Engineering
Oceaneering Space Systems
Omega
Science Application International Corporation (SAIC)
The Space Foundation
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Titan Corporation
United Space Alliance
University of Houston Clear Lake

Thanks to Stellar Evaluators

Aaron Cohen
Dr. Christopher C. Kraft, Jr.
Glynn Lunney

Special Thanks

Hyatt Regency Houston
MRI Technologies
NASA Johnson Space Center

Credits

Program Book Text & Design by Marianne Dyson
Cover Art by Pat Rawlings
Printing by Minuteman Press - Bay Area
Audio/Visual Production by Space City Films
Photos from NASA unless otherwise noted

NASA/JPL/Cornell photo: Meridiani Planum as seen by the Mars Exploration Rover *Opportunity* on January 25, 2004.

STELLAR TEAM NOMINEES

60GHz Microwave Millimeter Integrated Circuit Power Amplifier Development Team of Lockheed Martin Space Systems - Development of processes and producibility techniques for 0.1 micron gate lengths in 60GHz power amplification applications, enabling low power high data rate communications in space.

Columbia Accident Investigation Ballistic Impact Team of NASA Glenn Research Center - Vital participation in the experimental and analytical assessment of external tank foam impact damage to Orbiter leading edge panel in support of the Columbia Accident Investigation.

Columbia Reconstruction Three Dimensional Scanning Team of The Boeing Company - Combining three-dimensional scanning techniques and reverse engineering to provide a virtual reconstruction of the left wing from recovered STS-107 Orbiter debris.

Countermeasure Hands-On Program of the United States Air Force Research Laboratory - Exceptional service in the design and production of two payloads for flight testing countermeasures, in direct support of ballistic missile defense, as the culmination of work over a distinguished eleven-year history.

Eastern Launch and Test Range Evolved Expendable Launch Vehicle Integration Team of the United States Air Force - Successful integration of a myriad of competing requirements in a severely resource-limited environment, leading to successful inaugural flights of the new Delta IV and Atlas V Evolved Expendable Launch Vehicles.

Hamilton Sundstrand Space Shuttle Site Support Team - Ingenious and dedicated efforts to analyze and replace a leaking valve in the hydraulic cooling system of OV-105, resulting in a lifting of the launch constraint prior to the successful launch of STS-111.

Hubble Space Telescope Servicing Team of Lockheed Martin Technical Operations - Excellent servicing of the Hubble Space Telescope for a decade, making the Hubble a world asset in astronomy discoveries.

Integrated Powerhead Demonstrator Test Team of NASA Stennis Space Center - Safe and successful execution of the Integrated Powerhead Demonstrator oxidizer turbopump and the IPD fuel turbopump test projects as part of the NASA's Next Generation Launch Technology program.

ISS Solar Array Wing Deployment Test Team of The Boeing Company - Successful planning and execution of a ground-based instrumented deployment test to characterize Solar Array Wing panel stiction and extend acceptable wing storage life, saving significant program cost and avoiding extensive hardware risk.

Launch Mishap Investigation Team of the United States Air Force - Outstanding achievement in developing a Launch Mishap Investigation Guide to clarify investigative responsibilities and ensure the prompt and effective conduct of mishap investigations.

Lockheed Martin Space Radiation Analysis - Outstanding support at all hours of the day and night to monitor and minimize the radiation exposure of our astronauts in space.

Lockheed Martin STS-107 Accident Investigation and Return-To-Flight Team - Tremendous commitment and flexibility in providing crucial and timely support to STS-107 vehicle recovery efforts, accident investigation, and subsequent Return-to-Flight tasks.

Multiplexer De-multiplexer Application Test Environment Software Support Team of Honeywell - Numerous contributions to the ISS Software Verification Facility which have increased the efficiency and reliability of the flight software stage testing platform, while eliminating numerous problems that have been plaguing the facility for years.

Multi-Purpose Logistics Module Programmable Thermostat Development Team of NASA Marshall Space Flight Center - Exceptional dedication and technical excellence in the development, design, and production of the Multi-Purpose Logistics Module programmable thermostats and data recorder.

NASA Information Systems Network Team of NASA Johnson Space Center - Developing and maintaining the Information Technology infrastructure that enables information flow in support of the ISS, permitting effective and efficient critical communication and data flow between NASA, our NASA teams in Russia, and our Russian colleagues.

Navy Nuclear Benchmarking Team of NASA Headquarters - Immense efficiencies gained through a Joint effort between NASA and the Navy to identify safety and mission assurance practices and to share lessons learned from the Navy's nuclear submarine and NASA's human space flight program.

Orbital Space Plane Operations Concept Team of NASA Kennedy Space Center - Exceptional vision and leadership in developing the Operations Concepts for NASA's next spaceflight system, the Orbital Space Plane.

Preliminary Analysis of Revolutionary In-space Engineering Concepts Team of NASA Marshall Space Flight Center - Exceptional dedication and technical excellence in developing analytical tools for predicting the performance of revolutionary in-space transportation systems.

Problem Reporting, Corrective Action and Product Assurance Team of The Boeing Company - Outstanding Shuttle Orbiter Vehicle Engineering program support, including Corrective Action Request, Fault Tree and Probabilistic Risk Assessment analysis, Government Industry Data Exchange evaluations, Configuration Management hardware research and historical document indexing and archiving.

STELLAR TEAM NOMINEES CONTINUED

Process Based Mission Assurance Team of NASA Headquarters - Architectural design, content development, and production of the Process Based Mission Assurance – Knowledge Management System, a web-based systems engineering approach to safety and mission assurance.

Process Control Focus Group of NASA Johnson Space Center - Outstanding digital reconstruction support to the STS-107 reconstruction effort at KSC, by providing helpful visualization and assistance to the Columbia Accident Investigation.

RS-84 Rocket Engine Preliminary Design Review Team of The Boeing Company - Excellence in creating a reliability-based design for a highly reusable rocket engine, the RS-84, which merges state-of-the-art components and process technologies in a risk-balanced solution that has been lauded as a quantum leap in the science of propulsion.

Secure Mobile Network Architectures Team of NASA Glenn Research Center - Outstanding contributions in the design, development, and execution of Secure Mobile Network Architectures that validated the utilization of commercial technologies and protocols for revolutionary air and space-based communications system.

Shuttle Probabilistic Risk Assessment Team of NASA Johnson Space Center - Leadership of the planning, development, and coordination of an integrated, comprehensive risk model of the Space Shuttle, which will provide the Space Shuttle Program with a risk-informed decision-making tool to support the life of the Shuttle.

Space Foundation Education and Work Force Development Team of the Space Foundation - Two decades of space-inspired educational excellence, including the engagement and training of more than 20,000 teachers bringing space into their classrooms, the creation of guidelines under which future NASA Educator Astronauts will be selected for space flight, the creation of the world's first space-specialist Masters Degree programs for teachers, and countless other contributions toward inspiring the next generation of space explorers.

Space Shuttle Program Supplier Symposium Team of United Space Alliance - Outstanding accomplishment in organizing and presenting the Space Shuttle Program Supplier Symposium in both 2002 and 2003.

STS-107 Aerothermodynamics Investigation Team of NASA Johnson Space Center - Extremely technically complex and highly innovative reconstruction of STS-107, requiring the combined efforts of many talented and capable people across the nation, providing a critical contribution to the findings and recommendations of the Columbia Accident Investigation Board.

United States Air Force 1st Space Control Squadron - Serving as the hub of U.S. Air Force space operations by providing continuous precision orbital information to space programs around the world, providing mission expertise that improves U.S. combat effectiveness, promoting enhanced human space flight safety, and producing the world's most accurate satellite catalog.

United States Air Force 50th Operations Support Squadron - Outstanding achievement in the development and implementation of space training and current space tactics for over 73 satellites in operational orbits.

United States Air Force 595th Space Group - Superior achievement in space tactics development, operational testing, training and education which advanced space technologies, capabilities and awareness.

United States Air Force Research Lab Integrated Structural Systems Team - Development and transition of advanced light-weight composites into launch vehicle and spacecraft systems for improved strength at 40% mass savings using rapid, low-cost fabrication methods.

United States Air Force Space Command Space Superiority Team - Significant contributions to the defense of our nation by ensuring United States access to space capabilities through the development of Space Superiority concepts and improved Space Surveillance.

United States Air Force Space Command STS-107 Analysis Team - Production of a historically significant scientific analysis of military sensor information with national-level consequences for the Columbia Accident Investigation, the future of the United States human space flight program, and the improvement of Air Force space control and analysis capabilities.

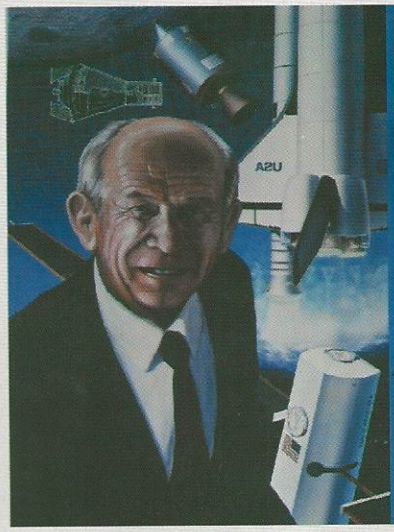
United States Air Force Space Operations School - Outstanding achievement in the development and execution of advanced space education and training for the USAF and Department of Defense.

United States Air Force Space Superiority Division - Development and implementation of an innovative approach to securing funding for the Air Force space program, enabling transformation of the nation's communications, intelligence, surveillance and reconnaissance systems.

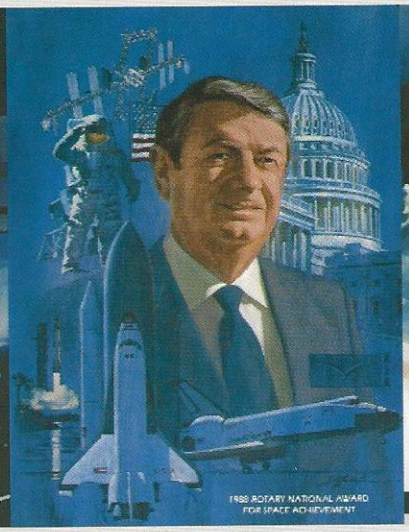
USAF 14th Air Force Single Integrated Space Picture Operational Champion Team - Successful initiation of the planning, exercising and designing needed to fulfill a long-held vision of a comprehensive situational awareness capability as a critical component of space command and control.

Vehicle Integrated Performance & Consumables Re-supply Team of The Boeing Company - Analysis and recommendations to support continued safe ISS operations and productive science.

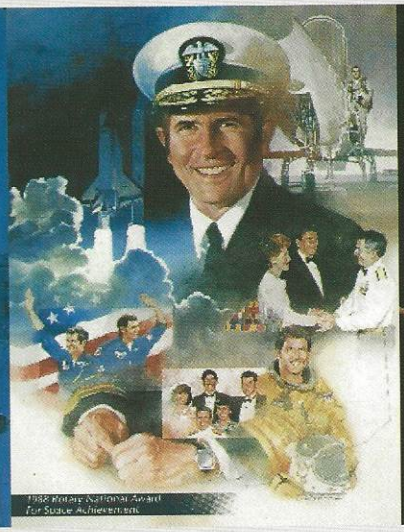
PREVIOUS NATIONAL SPACE TROPHY WINNERS



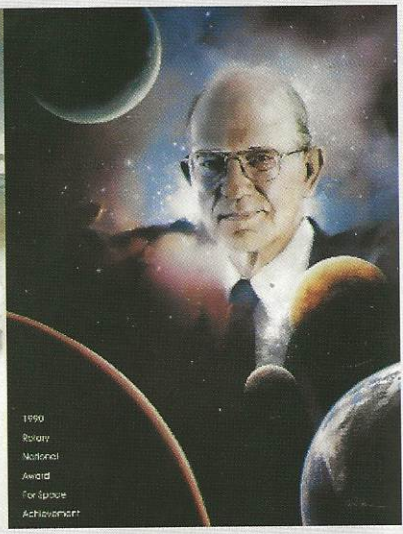
1987 Dr. Maxime Faget



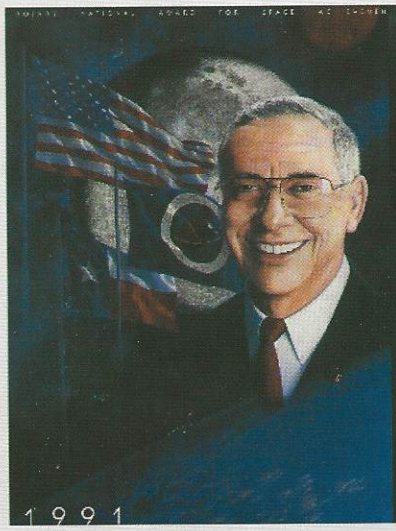
1988 Hon. Don Fuqua



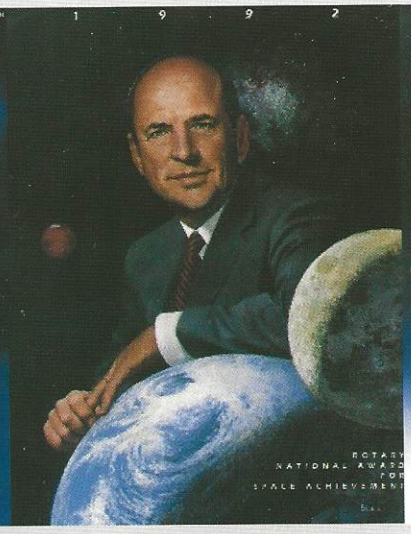
1989 V.Adm. Richard Truly



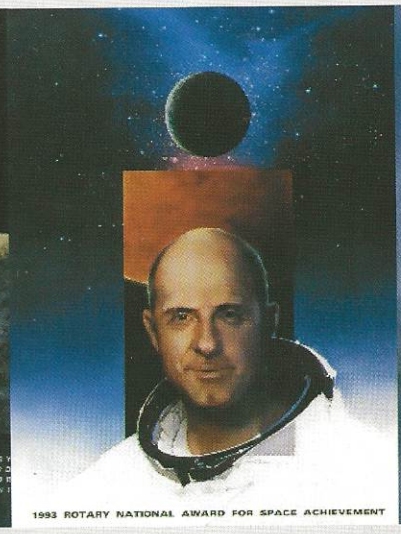
1990 Dr. Lew Allen



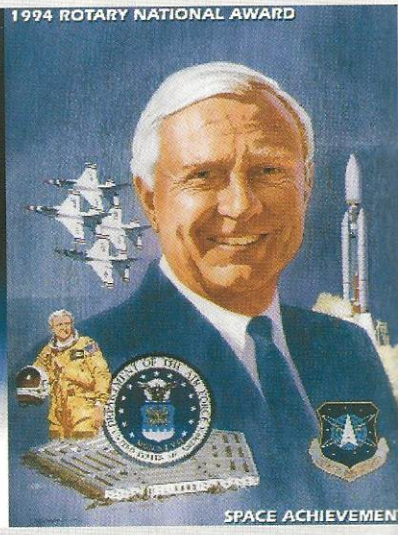
1991 Aaron Cohen



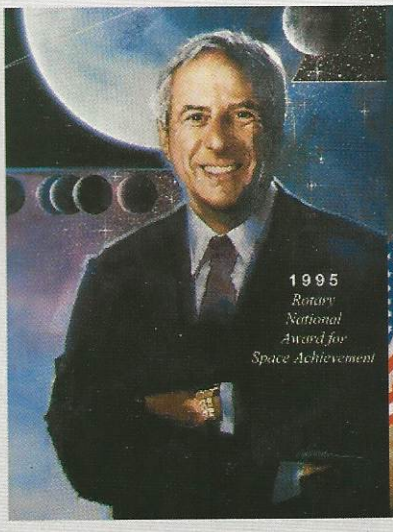
1992 Norman Augustine



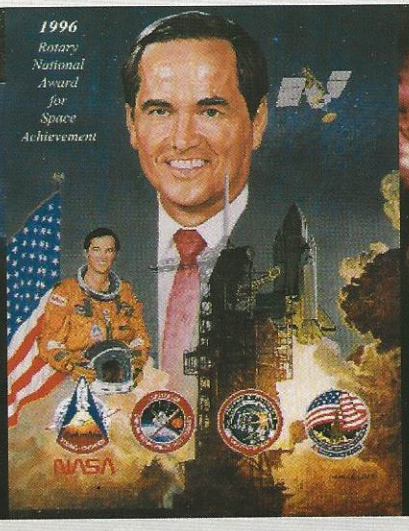
1993 Lt. Gen. Thomas Stafford



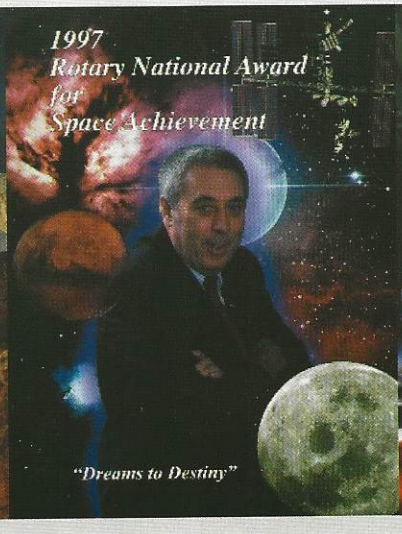
1994 E.C. "Pete" Aldridge



1995 Dan Goldin



1996 Robert L. Crippen



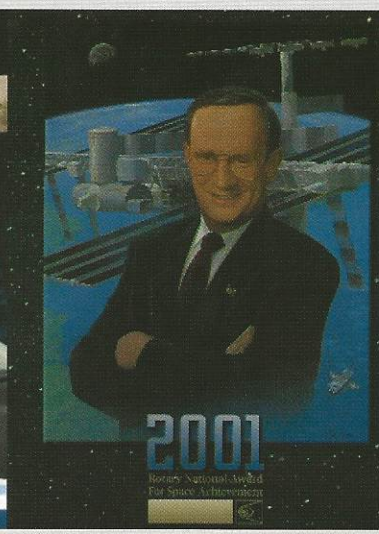
1997 George W.S.Abbey

1998 Pres. George H.W. Bush

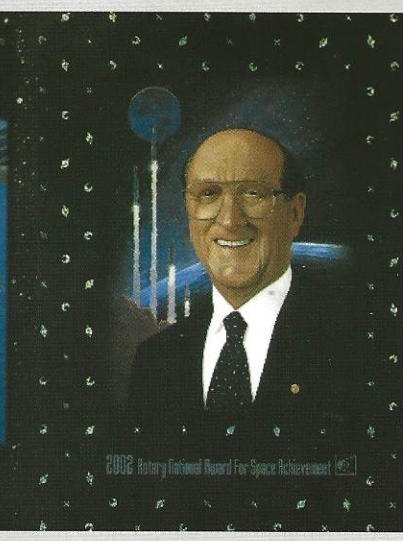
PREVIOUS NATIONAL SPACE TROPHY WINNERS

1999 Dr. Christopher C. Kraft, Jr.

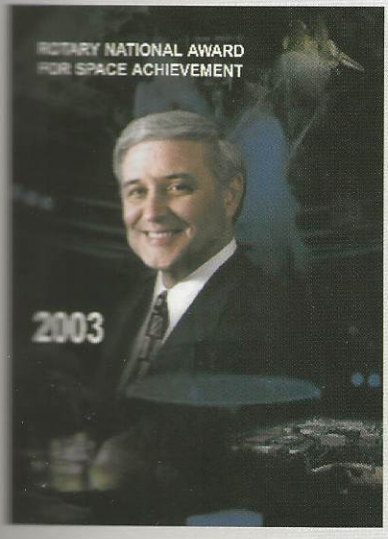
2000 Capt. John W. Young



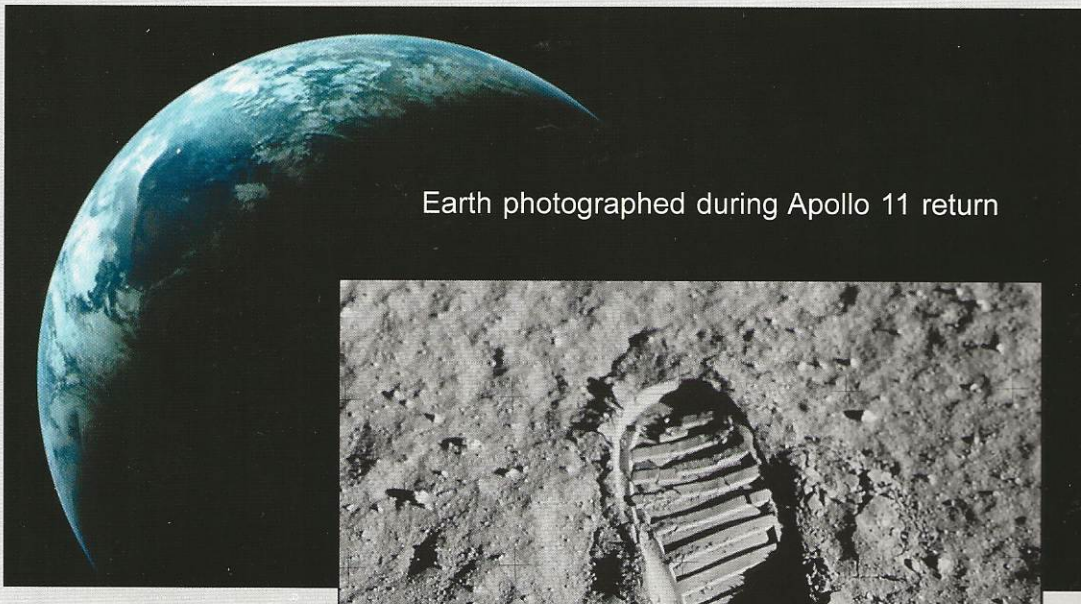
2001 Tommy Holloway



2002 Dr. George E. Mueller



2003 Roy S. Estess



Earth photographed during Apollo 11 return

About the 2004 Artist, Pat Rawlings

Renowned space artist Pat Rawlings created the original art that graces the cover of this year's program book. Employed by SAIC, Rawlings painted the portrait for the first National Space Trophy winner in 1987, again in 1991, and for every winner since 2001. Rawlings makes scenes as accurate as possible by consulting with numerous space experts, using hand-built and computer models, topographical maps, and space and family photos. "Space art," says the artist, "provides me with an excuse to talk to some of the most interesting people in the country, build miniature models of space ships, and then sit in my studio painting or working on the computer for hours while listening to movie soundtracks and classical music." This year's painting will be on display at Space Center Houston for the next year.

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The National Space Trophy, a seven-foot, 500-pound lead crystal sculpture designed by Steuben Glass of New York, is on permanent display, along with portraits of the trophy recipients, at Space Center Houston.


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