

# An unwavering commitment to human space flight

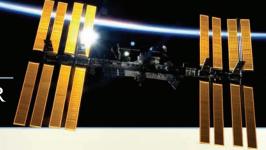


ATK congratulates all Stellar Award nominees, winners, and William H. Gerstenmaier, recipient of the 2010 National Space Trophy for excellence in the advancement of America's space goals.



# William H. Gerstenmaier

# 2010 NATIONAL SPACE TROPHY WINNER





William H. Gerstenmaier (NASA Photo)

The Rotary National Award for Space Achievement (RNASA) Foundation is pleased to honor NASA Associate Administrator for Space Operations, William (Bill) H. Gerstenmaier with the 2010 National Space Trophy. He was nominated by distinguished four of members the RNASA Board of Advisors: Director of NASA Langlev Research Center Virginia, in Lesa B. Roe; former

NASA Administrator Mike Griffin; Johnson Space Center Director Mike Coats; and Apollo 17 Astronaut and former U.S. Senator Harrison Schmitt. They cited him for "his unwavering commitment and remarkable contributions to human space flight and providing outstanding leadership and direction to the exploration of space through his contributions to the Space Shuttle and International Space Station (ISS) programs."

William H. Gerstenmaier is the Associate Administrator for Space Operations at NASA Headquarters in Washington, DC. In this position, he is responsible for oversight of all NASA's Space Shuttle, ISS, space launch services programs, the astronaut crew health program, and the communication systems network.

### Spaceflight was Special

Gerstenmaier was born in Akron, Ohio in September 1954. His father, Howard (1917-82), worked for Firestone Tire and Rubber Company as a technician. His mother, Evelyn (1917-96), was an accountant. "When I was about 3 years old, I remember being taken outside to see Sputnik fly over our house. All of our neighbors were outside also. This impressed on me that spaceflight was special."

Growing up, Gerstenmaier had a strong curiosity and love of science and mathematics. "I really liked to understand how things worked and was continually taking things apart. I also had a chemistry set and loved to experiment."

Though the young Gerstenmaier didn't aspire toward any particular career, he knew he'd rather "do things and not just talk about things." The future aerospace engineer built

a Gemini model and followed the space program very closely.

graduated He from Akron East High School in 1973 and enrolled in the U.S. Naval Academy in Annapolis, Maryland, hoping to become a test pilot. With a glut of pilots returning from Vietnam, he didn't think he'd get a chance to fly. So, in 1975, he transferred to Purdue in West Lafavette, Indiana, to study aeronautics and astronautics. He graduated



A rocket for Christmas (Photo courtesy Gerstenmaier)

with a BS in aeronautical engineering in 1977 and went to work for NASA at the Lewis (now Glenn) Research Center in Cleveland, Ohio.

Research suited the young engineer. "I like comparing analysis with results from physical tests," he told



Gerstenmaier examines a model in the wind tunnel at Lewis Research Center in Cleveland while Mo Raita looks on. (NASA Photo, 1978)

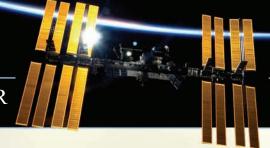
RNASA. He was involved with the wind tunnel tests used to develop the calibration curves for the air data probes used during entry on the Space Shuttle.

While at Lewis, Gerstenmaier continued his education and earned a master's degree in mechanical engineering from the University of Toledo in 1981.

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# William H. Gerstenmaier

# 2010 NATIONAL SPACE TROPHY WINNER



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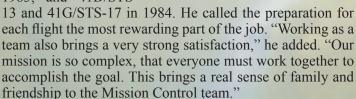
### **Propulsion Officer**

Gerstenmaier moved to Houston in July 1980 to work at the Johnson Space Center. "I really liked the research test experience at Lewis, but I thought I would go to Houston for a couple of years and see what space operations were like," he said. "I planned on staying 2-3 years and then returning to research. I got hooked and ending up staying 25 years!"

Gerstenmaier worked in Mission Control as a Space Shuttle Propulsion Engineer (Prop), responsible for monitoring and evaluating propellants and other consumables

required for maneuvers. "The preparation required was enormous," he told RNASA. "You had to multi-task and make the right decision in a very short amount of time. My experience with real hardware and hands-on experience from Lewis was a tremendous benefit."

He worked as Prop for STS-4 and STS-5 in 1982, STS-6 through STS-9 in 1983, and 41D/STS-



A fan of the outdoors, Gerstenmaier met his wife, Marsha Ann Johnson, while jogging in Clear Lake. The daughter of Betty and Raynard Johnson of Sugarland, Marsha was born in Olean, New York and moved to Houston when she was 13. She has a degree in civil engineering technology from the University of Houston and worked on space suits for Hamilton Standard (now Hamilton Sunstrand) when they met. They were married in 1982. They have two daughters, Katie and Lora, both engineers like their parents. Katie graduated from Texas A&M with a BS in Industrial Engineering and now works for Astra Zenica in Dallas. Daughter Lora graduated with a BS in Mechanical Engineering from UT in Austin and now works for Accenture in Houston.

"I left console to become the head of the Deployable Payloads Section," Gerstenmaier explained. "We worked on the Intelsat repair mission, Hubble, and Spartan payloads."

### Challenger/Columbia

On January 28, 1986, Gerstenmaier was in the weightless environmental test facility with future astronaut (class of 1987) Mike Foale, watching the launch of STS 51-L on TV. "We immediately knew something was grossly wrong," Gerstenmaier said. "The loss was devastating. Professionally, I saw our system fail, and personally, I saw friends on the crew perish. It drove home how demanding and dangerous our business really is. I vowed internally to never allow another Challenger disaster to occur."

Beginning in 1988, Gerstenmaier headed the Orbital

Maneuvering Vehicle (OMV) Operations Office. Subsequently, he led the Space Shuttle/Space Station Freedom Assembly Operations Office and served as chief, Projects and Facilities Branch, Flight Design and Dynamics Division.

"I got to the point in my career where my technical skills were getting weak," he said in an interview with the Purdue Engineering Department in 2002. So he took advantage of a NASA fellowship and completed the course work for a PhD in dynamics and control in 1992-93.

Gerstenmaier then returned to NASA and served as Shuttle/Mir Program operations manager from 1995

to 1997. During this time, he acted as the primary liaison to the Russian Space Agency for operational issues and negotiated all protocols used in support of operations. From January through September 1996, he was stationed in Russia to support astronaut Shannon Lucid while she was on Mir. His work on the Phase 1 Mir program was recognized in 1997 with a RNASA Stellar Award in the Mid-Career category.

In 1998, Gerstenmaier became manager of Space Shuttle Program Integration, where he had responsibility for the overall management, integration, and operations. In December 2000, he was named deputy manager of the ISS Program. He became ISS program manager in 2002.

Gerstenmaier was at home in Houston on Saturday, February 1, 2003 when the Space Shuttle Columbia broke apart over Texas. "I was in charge of the International Space Station at the time. I immediately went to the Space Station Control Center and called all of the international partners and informed them of the disaster. We had a Progress supply vehicle about ready to launch, and we needed to review the cargo onboard to see if we should delay the launch to fly additional supplies to ISS." They determined the manifest was fine, and the Progress launched on schedule.



Bill inspects the shuttle after STS-124 (NASA, 6-14-08)

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The

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Congratulations to
William H. Gerstenmaier
2010 National Space Trophy recipient,
from the employees of
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We also congratulate the
Stellar Award nominees and winners
for their contributions to the
American success in space.

# SPACE

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# Miles O'Brien

# 2010 RNASA BANQUET EMCEE





Miles O'Brien (NASA)

The RNASA Foundation is pleased to welcome back Miles O'Brien as Master of Ceremonies for this year's banquet. O'Brien is the owner of a private production company that creates, produces and distributes original content across all media platforms. Based in New York, O'Brien has 27 years of broadcasting experience with a passion for aviation, space, and technology.

O'Brien was born in Detroit, Michigan in 1959 and grew up in Grosse Pointe Farms. He has a history degree from Georgetown and began his broadcasting career in 1982 at WRC-TV in D.C. He was a general assignment reporter and anchor at TV stations in Boston, Tampa, Albany, N.Y., and St. Joseph, Mo. O'Brien joined CNN in 1992 as 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."

While with CNN in Atlanta and New York, O'Brien served as CNN's science, space, aviation technology, and environment correspondent. He anchored a myriad of news and talk programs, including Science and Technology Week, CNN Saturday and Sunday Morning, Talkback Live, Headline News Primetime, CNN Live From, and CNN American Morning. O'Brien's live reports from the Gulf Coast in the aftermath of Hurricane Katrina in 2005 helped to earn CNN a Peabody award. He left CNN in December 2008.

O'Brien has covered all aspects of human and unmanned spaceflight for the past seventeen years. He reported on the repair missions to the Hubble Space Telescope, the shuttle dockings at Mir, the launch of the first space station crew from Kazakhstan, John Glenn's return to space in 1998, several robotic landings on Mars, and the private sector endeavors such as the winning of the Ansari

X-Prize. He created a documentary, "Terminal Count: What it Takes to Make the Space Shuttle Fly" in 2001, and continued coverage of the successful Mars Exploration Rovers, Spirit and Opportunity, that began their travels in 2003.

When the Space Shuttle Columbia and its crew were lost in 2003, O'Brien came to Johnson Space Center and prepared in-depth reports on the aftermath and subsequent investigation and return to flight in 2005. Unknown to viewers at the time, the loss of Columbia represented the sudden end of a long-held dream for O'Brien. Only days before (and after years of negotiations) CNN and NASA had reached an agreement that would have made O'Brien the first journalist to fly on the Space Shuttle and to visit the International Space Station.

A third-generation pilot with an instrument rating, O'Brien grew up flying Cessnas and Pipers rented by his father. He has owned a Cirrus SR-22 for the past five years.

Not surprisingly, O'Brien has reported extensively on civil aviation issues and crash investigations, including those of US Air 427, TWA 800, Egyptair 990, American 587, and the accidents that took the lives of John F. Kennedy, Jr. Payne Stewart, and Senator Paul Wellstone. In the wake of the 2001 terrorist attacks, O'Brien used his flight experience to provide simulated walk-through coverage of the hijacked flights. He also anchored much of CNN's coverage of the war in Iraq and Afghanistan, explaining the intricacies of military aviation techniques and strategy.

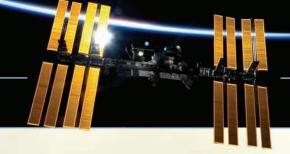
O'Brien is married to the lovely artist Sandy, and they live in New York with their two teenagers and two dogs.



Miles has some fun with the audience at the 2009 RNASA banquet (NASA)

# **Annise Parker**

### WELCOME





Annise Parker (City of Houston)

The RNASA Foundation is pleased to have the Honorable Annise D. Parker, Mayor of Houston, welcome our guests this evening.

Born in 1956, Parker is a second generation native Houstonian. She has lived in Houston her entire life except for two years with her family at the U. S. Army base in Mannheim, Germany when she was a teenager.

Parker attended Rice University in Houston, graduating in 1978 with a bachelor of arts degree in anthropology and sociology. In the private sector, Parker spent 20 years working in the oil and gas industry, including 18 years with Mosbacher Energy Company. She also co-owned a retail bookstore for 10 years and a bookkeeping and income tax company for 15 years.

Parker was sworn in to her first term as mayor of Houston on January 4, 2010. She is Houston's 61st mayor, one of only two women to hold the city's highest elected office. As the city's chief executive officer, she is responsible for all aspects of the general management of the city and for seeing that all laws and ordinances are enforced. Houston is the fourth-largest city in the United States.

Prior to her election as mayor, Parker served for six years as Houston city controller. She served as an at-large member of Houston City Council from 1997 to 2003. She is the only person in Houston history to hold the offices of council member, controller, and mayor.

Parker and her life partner, Kathy Hubbard, have been together since 1990. They have two children.



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# Charles F. Bolden Jr.

## 2010 KEYNOTE SPEAKER





Charles Bolden Jr. (NASA)

The RNASA Foundation is honored to have NASA Administrator Charlie Bolden Jr., provide the keynote address for the 2010 banquet. Bolden, a retired Major General in the USMC and former astronaut. leads the NASA team and manages its resources to advance the agency's missions and goals. Bolden was born Aug. 19, 1946, in Columbia, S.C. He graduated from C. A. Johnson High School in 1964 and

received an appointment to the U.S. Naval Academy. Bolden earned a BS in electrical science in 1968 and was commissioned as a 2nd lieutenant in the Marine Corps. He became a naval aviator in 1970. Bolden flew more than 100 combat missions in Vietnam, Laos, and Cambodia, while stationed in Namphong, Thailand, from 1972-73.

Upon his return to the U.S., Bolden continued service with the Marine Corps and worked on a master's in systems management which he earned from the University of Southern California in 1977. He was then assigned to the Naval Test Pilot School at Patuxent River, MD., and completed his training in 1979. He tested a variety of ground attack aircraft at the Naval Air Test Center's Systems Engineering and Strike Aircraft Test Directorates.

In 1980, Bolden was selected as an astronaut. He served as the Astronaut Office safety officer; technical assistant to the director of Flight Crew Operations; special assistant to the director of the Johnson Space Center (JSC); chief of the Safety Division at JSC (overseeing safety efforts for the return to flight after the Challenger accident); lead astronaut for vehicle test and checkout at Kennedy Space Center (KSC); and assistant deputy administrator at NASA Headquarters.

Bolden first flew as pilot of STS-61C (Jan. 12–18, 1986) that deployed the SATCOM KU satellite. He also piloted STS-31 (April 24–29, 1990) that delivered the Hubble Space Telescope to orbit. Both flights landed at Edwards AFB in CA. He commanded a crew of 7 on STS-45 (March 24–April 2, 1992), NASA's Mission to Planet Earth Spacelab flight. His final mission was as commander of STS-60 (Feb. 3–11, 1994), the first joint U.S.-Russian shuttle mission

which featured Cosmonaut Sergei Krikalev as a member of his crew. Both of those flights landed at KSC. After logging 680 hours in space, Bolden left NASA in 1994 to return to active duty with the Marine Corps.

Bolden served as the deputy commandant of midshipmen at the U.S. Naval Academy. In 1997, he was the deputy commanding general of the 1st Marine Expeditionary Force in the Pacific. In 1998, he was commanding general of the 1st Marine Expeditionary Force Forward in support of Operation Desert Thunder in Kuwait. Bolden was promoted to his final rank of major general in July 1998 and named deputy commander of U.S. Forces in Japan. From 2000-02, he served as the commanding general of the 3rd Marine Aircraft Wing at Marine Corps Air Station Miramar in San Diego, CA. He retired from the Marine Corps in 2003.

Bolden was employed as the chief executive officer of Jack and Panther LLC, a privately held military and aerospace consulting firm, when he was nominated to be the 12th Administrator of NASA by President Barack Obama in May, 2009. Bolden was confirmed by the U.S. Senate and took office in July 2009.

Bolden's many military decorations include the Defense Superior Service Medal and the Distinguished Flying Cross. He was inducted into the U.S. Astronaut Hall of Fame in May 2006.

Bolden is married to the former Alexis (Jackie) Walker of Columbia, S.C. Their son, Anthony Che, is a lieutenant colonel in the Marine Corps and is married to the former Penelope McDougal of Sydney, Australia. Their daughter Kelly Michelle, is a medical doctor now serving a fellowship in plastic surgery.



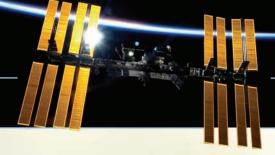
**Bolden and Gerstenmaier tour the Soyuz launch pad in Kazakhstan** (*NASA*, *9-29-09*)

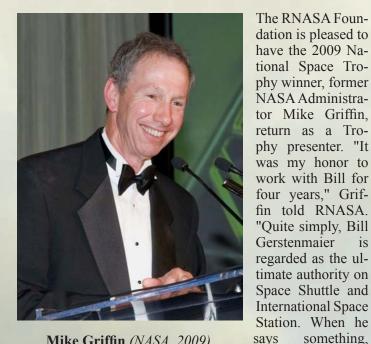


▼ Northrop Grumman believes in recognizing achievements. Congratulations on your accomplishments and may the future be your showcase for what's yet to come.

# Mike Griffin

# NATIONAL SPACE TROPHY PRESENTER





Mike Griffin (NASA, 2009)

what he says is true."

Griffin was born in 1949 in Aberdeen, Maryland. He graduated from Aberdeen High School in 1967 and attended Johns Hopkins University (JHU) where he obtained his BA in physics in 1971. His first job was with Link Division of Singer Corporation. In 1974, he joined Computer Science Corporation to work in Mission Operations at NASA Goddard in Maryland.

Griffin completed a master's in aerospace science from Catholic University in 1974, and his PhD in aerospace engineering from the University of Maryland in 1977. He later earned master's degrees in electrical engineering from the University of Southern California, applied physics from Johns Hopkins, civil engineering from George Washington University, and business administration from Loyola College of Maryland.

In 1977, Griffin joined the Jet Propulsion Laboratory in California to work on Mars rover and sample return programs. In late 1979, he returned to JHU where he worked on hypersonics, the Hubble Space Telescope, the Air Force Polar BEAR satellite, the Shuttle Astro-1 payload, and on missile defense for the Strategic Defense Initiative Organization (SDIO). He also taught aerospace engineering at the University of Maryland from 1980-86.

He joined American Rocket Co., in California in 1986 and worked on commercial low-cost launch vehicle development. In 1987, he went to work for the SDIO.

Griffin taught aerospace engineering at George Washington University in DC and co-authored, with James French, the textbook, Space Vehicle Design (American Institute of Aeronautics and Astronautics, 1991, 2nd ed., 2004).

Griffin was NASA Associate Administrator for Exploration from 1991-93. He was co-director of the Access to Space Study, team leader for the space station redesign, and led NASA efforts to analyze the Mars Observer failure. In 1993, Griffin was named NASA's chief engineer, responsible for review of all NASA programs, including the Hubble repair.

Griffin served as general manager of Space Industries in Houston from 1994-95. He then joined Orbital Sciences in Virginia as Space Systems Group manager, responsible for all space systems development programs including the X-34 reusable launch vehicle and the ORBCOMM and ORBVIEW satellite constellations. He later became chief executive officer of Magellan Systems, Inc., a division of Orbital Sciences.

In 2002, Griffin became president and COO of In-Q-Tel working on advanced technologies for CIA applications. He then returned to JHU as Space Department head. He initiated ISO9001 quality management certification efforts and oversaw the preparation, launch, and early operations of the MESSENGER spacecraft that launched to Mercury in 2004.

He was selected as NASA Administrator by President Bush in 2005. Griffin developed the plan for completion of the International Space Station following the loss of Space Shuttle Columbia and directed the return to flight. He also initiated the first procurement of commercial cargo and crew service in the agency's history. He left NASA in January 2009, and became a professor at the University of Alabama in Huntsville.

Griffin is a Registered Professional Engineer in Maryland and California, a member of the National Academy of Engineering and the International Academy of Astronautics, an honorary fellow of AIAA (2006), a fellow of the American Astronautical Society (2002), and a senior member of the Institute of Electrical and Electronic Engineers.

In addition to the 2009 National Space Trophy, Griffin is the recipient of many honors, including the Defense Department's highest award conferred on a non-government employee, Distinguished Public Service Medal (1986); the AIAA Space Systems Medal (1988), the Significant Technical Accomplishment Award (Delta 183 Mission Team) from the American Defense Preparedness Association (1989); the NASA Exceptional Achievement Medal (1994); the Goddard Astronautics Award (2007); selection by Time Magazine as one of the 100 Most Influential People of 2008, and the 2009 Goddard Trophy.

Griffin is married to the former Rebecca (Becky) Lee Hann whom he met in Houston in the early 90s. Dr. Griffin also has three children from a previous marriage. Besides flying and golf, Griffin enjoys amateur radio, skiing, and scuba diving.

something,

that

people listen, and

know

they

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For his enormous contributions to

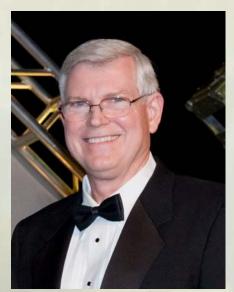
America's Space Program and, in particular,
to the success of the International Space
Station, Boeing is proud to congratulate
William H. Gerstenmaier on receiving
the 2010 National Space Trophy.



# Michael Coats

# NATIONAL SPACE TROPHY PRESENTER





Michael Coats (NASA, 2009)

RNASA Advisor and Johnson Space Center (JSC) Director Michael L. Coats called Gerstenmaier's impact on the space community "unparalleled" when nominating him for the National Space Trophy. "He has literally guided an international group of individuals in many countries in furthering human space flight and assuring a continued presence in space.'

JSC is home to

the Astronaut Corps, the Mission Control Center, and the Space Shuttle, International Space Station, and Constellation programs. As JSC director, Coats manages a workforce of about 3,200 civil servants and 12,000 contractors.

Born in Sacramento, CA in 1946, Coats considers Riverside, CA his hometown. He received a BS from the U.S. Naval Academy in 1968 and became a Naval Aviator in 1969.

Coats was assigned to Attack Squadron 192 in 1970 aboard the USS Kitty Hawk. By September 1972, he'd flown 315 combat missions in Southeast Asia. From 1972-73, he served as a flight instructor with the A-7E Readiness Training Squadron at Naval Air Station, Lemoore, CA. He then attended the U.S. Naval Test Pilot School at Patuxent River, MD until 1974. Coats was project officer and test pilot for the A-7 and A-4 at the Strike Aircraft Test Directorate.

He returned to the U.S. Naval Test Pilot School as an instructor in 1976. He earned a master's in administration of science and technology from George Washington University in 1977. Starting in June 1977, he attended the U.S. Naval Postgraduate School at Monterey, CA, earning a master's in aeronautical engineering in 1979. He had logged more than 5,000 hours in 28 different types of aircraft, and more than 400 carrier landings when he was selected as an astronaut in 1978.

A veteran of three space flights, Coats first flew in 1984 as pilot of STS 41-D, the maiden flight of Discovery. The flight included a solar wing experiment, three satellite deployments, an electrophoresis experiment, and an IMAX movie, as well as some "Icebusting" using the robotic arm.

He next flew as commander of STS-29 that de-

ployed a Tracking and Data Relay Satellite and created more IMAX movies in March 1989. This flight and his previous one landed at Edwards Air Force Base in CA. Afterwards, Coats served as acting chief of the Astronaut Office.

His third flight was as commander of STS-39, an unclassified DoD mission in April 1991 that deployed, operated, and retrieved the SPAS-II spacecraft as well conducting round-the-clock experiments. Following its landing at Kennedy Space Center, Coats had logged more than 463 hours in space.

In 1991, Coats retired from the U.S. Navy and NASA to become vice president of Avionics and Communications Operations for Loral Space Information Systems. From 1996-98, he was vice president of Civil Space Programs for Lockheed Martin Missiles and Space in Sunnyvale, CA. From 1998-2005, he was vice president of Advanced Space Transportation for Lockheed Martin Space Systems Company in Denver, CO. Coats returned to NASA in November 2005 as the 10th director of JSC.

Coats has been recognized with numerous awards including election as a Fellow of the American Institute of Aeronautics and Astronautics in 2008; induction into the Astronaut Hall of Fame in 2007; and the FAI Gold Space Medal in 2006.

Coats and his wife, the former Diane Eileen Carson of Oklahoma City, have a daughter and a son, and identical twin granddaughters.



Coats presents a jacket to Griffin at last year's banquet (NASA, 2009)



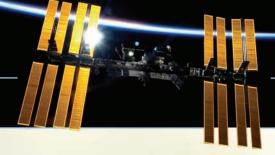
The first and only watch worn on the moon





# Michael J. Foreman

## 2010 STELLAR AWARD PRESENTER





Michael Foreman (NASA)

The **RNASA** Foundation welcomes Michael J. Foreman, Captain, USN (Ret.) present Stellar Awards this year. A veteran of five spacewalks, Foreman flew on STS-123 in March 2008 and STS-129 this past November.

Foreman was born in Columbus on March 29, 1957, but considers Wadsworth. Ohio his home town. He received a BS degree in aerospace engineering from the U.S. Naval

Academy in 1979.

Foreman became a Naval Aviator in January 1981, assigned to Patrol Squadron Twenty-Three at Naval Air Station (NAS) Brunswick, Maine. He made deployments to Rota, Spain; Lajes, Azores; Bermuda and Panama. Following this tour, he attended the U.S. Naval Postgraduate School in Monterey, CA where he earned a MS degree with distinction in aeronautical engineering in 1986. Foreman conducted his thesis research at NASA Ames in Mountainview, CA.

After graduating, Foreman was assigned as the assistant air operations officer in USS CORAL SEA (CV-43) in Norfolk, VA. He flew as an E-2 pilot with VAW-120 and VAW-127. He moved to NAS Patuxent River, MD upon selection to the Naval Test Pilot School (USNTPS) in 1989. He graduated in June 1990 and was assigned to the Force Warfare Aircraft Test Directorate. In 1991, he was reassigned as an instructor and the operations officer at USNTPS and instructed in the F-18, P-3, T-2, T-38, U-21, U-6 and X-26 glider.

In 1993, Foreman was assigned to the Naval Air Systems Command in Crystal City, VA, first as the deputy, and then as the class desk (chief engineer) officer for the T-45 Goshawk Aircraft Program. He then returned to NAS Patuxent River, this time as the military director for the Research and Engineering Group of the Naval Air Warfare Center Aircraft Division. He was also assigned as the Navy liaison to NASA's Advanced Orbiter Cockpit Project (AOCP) at the Johnson Space Center (JSC).

Foreman was the technical lead for the AOCP team when he was selected as an astronaut in June 1998. He worked in the Astronaut Space Station Branch and became deputy of the Space Shuttle Branch while serving as a liaison between JSC and the Kennedy Space Center.

On March 11, 2008, he launched on his first flight as a mission specialist on the STS-123 Endeavour crew. The night launch began the 25th station assembly mission that delivered the Japanese Kibo module, the Canadian Dextre robotic arm, and took Garrett Reisman to replace Léopold Eyharts on the station. Foreman performed three spacewalks (one with Richard Linnehan, and two with Bob Behnken) that included installation of Kibo and Dextre, replacing a power control module, testing a tile repair kit, and mounting the MISSE 6 experiment. STS-123 landed on March 26, 2008.

Foreman's second flight was STS-129 on Atlantis November 16-27, 2009. This 31st shuttle flight to the station delivered two Express Logistics Carriers, 30,000 pounds of parts, and was the last shuttle flight to return a station astronaut (Nicole Stott). Foreman did two spacewalks (one each with Robert Satcher and Randolph Bresnik) that included installation of antennas and brackets on the Unity node, Columbus module, and truss. STS-129 landed Thanksgiving weekend at KSC.

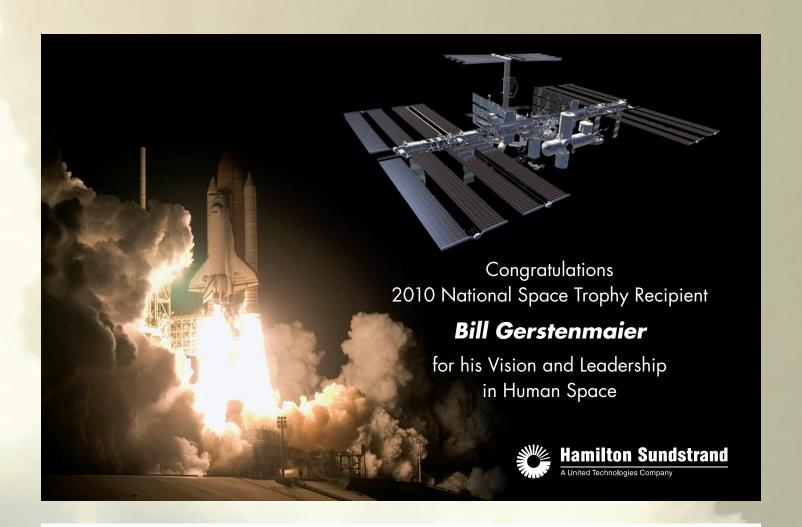
Foreman has been recognized with the Legion of Merit, Defense Meritorious Service Medal, Meritorious Service Medal, Navy Commendation Medal, Navy Achievement Medal and various other awards. He left the Navy in June 2009.

He is married to the former Lorrie Dancer of Oklahoma City. They have three children. He enjoys golf, home repair/improvement, working out, and spending time with his family.

Foreman called Bill Gerstenmaier an "awesome guy." "Those of us who have been fortunate enough to fly in space under his leadership know full well the magnitude of his contributions. His has always been the calm voice of reason."



Foreman during STS-129 (NASA, 2009)





# HONORING BILL GERSTENMAIER









EXPERIENCE INNOVATION DEDICATION



United Space Alliance is proud to honor Bill Gerstenmaier for his contributions to space operations, commitment to the human space flight team, and dedication to advancing exploration.

# K. Megan McArthur

### 2010 STELLAR AWARD PRESENTER





K. Megan McArthur (NASA)

Maintaining the RNASA tradition of having experienced astronauts present the Stellar Awards, is NASA Astronaut K. Megan McArthur, PhD. McArthur was a member of the STS-125 Hubble repair crew last May.

MacArthur was born in Honolulu, Hawaii in 1971, but considers California, where her parents currently live, her home state. She graduated from St. Francis High School in Mountain View, CA in 1989 and headed to the University of California-Los Angeles. She earned her BS in aerospace engineering there in 1993, and then began graduate work at the Scripps Institution of Oceanography in La Jolla, California.

McArthur's research at Scripps focused on underwater acoustic propagation, digital signal processing, and on determining geoacoustic models to describe very shallow water waveguides--using measured transmission loss data in a genetic algorithm inversion technique. She served as chief scientist during at-sea data collection operations. She also planned and led diving operations during sea-floor instrument deployments and sediment-sample collections.

While at Scripps, she participated in a range of inwater instrument testing, deployment, maintenance, and recovery, and collection of marine plants, animals, and sediment. During this time, McArthur also volunteered at the Birch Aquarium at Scripps, conducting educational demonstrations for the public from inside a 70,000 gallon exhibit tank of the California Kelp Forest. She completed her PhD in oceanography at UC-San Diego in 2002.

Selected as a mission specialist by NASA in July 2000, McArthur reported for training in August 2000. Fol-

lowing the completion of two years of training and evaluation (and completing her PhD), she was assigned to the Astronaut Office Shuttle Operations Branch working technical issues on shuttle systems in the Shuttle Avionics Integration Laboratory. McArthur then served as the crew support astronaut for the Expedition 9 crew, Edward Fincke and Gennady Padalka. She spent six months in Russia during this mission aboard the International Space Station which extended from April to October of 2004. She also worked in the Space Station and Space Shuttle Mission Control Centers as a CAPCOM.

After years of training, McArthur's first flight into space was aboard Space Shuttle Atlantis on STS-125, the fifth and final shuttle mission to the Hubble Space Telescope, May 11-24, 2009.

The 19-year-old telescope spent six days in the shuttle's cargo bay undergoing an overhaul. The crew, commanded by Scott Altman and piloted by Gregory Johnson, overcame frozen bolts, stripped screws, and stuck handrails to refurbish the Hubble Space Telescope with four new or rejuvenated scientific instruments, new batteries, new gyroscopes, and a new computer. McArthur's primary responsibility was operation of the robotic arm during five spacewalks conducted by Andrew Feustel, Michael Good, John Grunsfeld, and Michael Massimino.

The mission successfully extended and improved the observatory's capabilities through 2014. In completing her first space mission, McArthur logged almost 13 days in space, traveling 5,276,000 miles in 197 Earth orbits.

McArthur is married to fellow astronaut Robert L. Behnken who completed his second shuttle flight this February on STS-130. McArthur enjoys SCUBA diving, backpacking, and cooking.



McArthur operates the robotic arm during Hubble Servicing Mission STS-125 (NASA, 2009)

ARES Corporation honors **William H. Gerstenmaier** for his many outstanding achievements and contributions to NASA's human exploration of space, the oversight of the International Space Station, Space Shuttle, space communications and space launch vehicles.







Congratulations on receiving the 2010 National Space Trophy!



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MEI Technologies, Inc. salutes

Bill Gerstenmaier,

2010 National Space Trophy recipient

MEITechnologies also commends its Stellar Award nominees, and all nominees and winners, on their dedication and contributions to our nation's space program.



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APRIL 30, 2010



### 6:00 RECEPTION

Victoria Reva, pianist

### 7:00 WELCOME

Rodolfo González, Chairman, RNASA Foundation Honorable Annise Parker, Mayor of Houston

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

> NATIONAL ANTHEM Hans Stockenberger

### INVOCATION

Reverend Robert S. Barras, Pastor, Saint Bernadette Catholic Church

### DINNER

### 8:15 YEAR-IN-REVIEW VIDEO

Space City Films

MASTER OF CEREMONIES

Miles O'Brien, Miles O'Brien Productions

SHUTTLE TRIBUTE VIDEO Space City Films

KEYNOTE ADDRESS Major General Charles Bolden, Jr., USMC (Ret.), NASA Administrator

> PRESENTATION OF STELLAR AWARDS Captain Michael Foreman, USN (Ret.), NASA Astronaut K. Megan McArthur, PhD, NASA Astronaut

PRESENTATION OF NATIONAL SPACE TROPHY
Captain Michael Coats, USN (Ret.), Director, NASA Johnson Space Center

tain Michael Coats, USN (Ret.), Director, NASA Johnson Space Center Mike Griffin, PhD, Professor, University of Alabama in Huntsville

PRESENTATION OF THE OMEGA WATCH Lt. General Thomas Stafford, USAF (Ret.)

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Dr. Christopher C. Kraft Jr.

Dr. Glynn S. Lunney

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### **SPECIAL THANKS**

Jeffrey Carr Craig Insurance Hyatt Regency Houston MRI Technologies United Space Alliance Irene Chan

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Capt. Gregory C. Johnson, USN (Ret.)

NASA Johnson Space Center

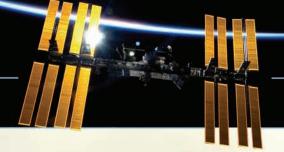
### **CREDITS**

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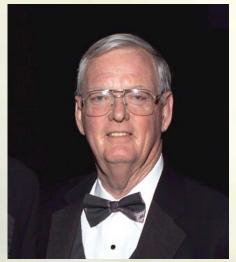
# Aldrich, Kraft, Lunney

# STELLAR AWARD EVALUATOR PANEL









Arnold D. Aldrich

Christopher C. Kraft Jr.

Glynn S. Lunney

Each year, the Rotary National Award for Space Achievement solicits nominations for Stellar Awards for individuals and teams from the government, military, and industry. In order to ensure recognition of individuals at all stages of their careers, nominations are solicited in four categories: Early Career, Midle Career, Late Career, and Teams.

The nominations are reviewed by a Stellar Awards Evaluation Panel led by the legendary Dr. Christopher C. Kraft Jr., a driving force in the U.S. human spaceflight program from its beginning to the Space Shuttle era. Kraft has been involved with the RNASA awards from the beginning, as a member of the RNASA Board of Advisors, and has served as a RNASA Stellar Award evaluator since 1997.

Kraft graduated from Virginia Polytechnic in 1944. He joined NASA's predecessor at Langley Field in Virginia the next year and spent fourteen years testing aircraft. When NASA formed in 1958, Kraft was one of the 36 original members of the Space Task Group developing Project Mercury. He created the engineering and operations organization that designed and controlled the first human missions.

Kraft was the first flight director, and held that position for all of Mercury, and the first seven flights of Gemini. He was director of Flight Operations through Apollo 12, and then became deputy director of what is now Johnson Space Center. He became director in 1971, playing a vital role in the success of the final Apollo missions and the first Space Shuttle flights.

He retired in 1982 and served as a consultant and board member of various Houston companies, 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 2001 and was a New York Times best-

seller. Kraft has received numerous awards, including the 1999 National Space Trophy.

Serving for the seventh year in a row on the 2010 Stellar Awards Evaluation Panel, is former Apollo flight director and Shuttle manager Glynn S. Lunney.

Lunney, the 2005 National Space Trophy winner graduated from the University of Detroit in 1958. He worked at the Lewis (now Glenn) Research Center in Cleveland, Ohio and transferred to Langley in Virginia in 1958. Lunney joined the Space Task Group in 1959 and moved to Houston in 1962. He was a flight director for Gemini and Apollo and head of the Flight Director's Office starting in 1968. He received an honorary doctorate from the University of Scranton in 1971. In 1972, Lunney became manager of the Apollo-Soyuz Test Project, and manager of the Apollo Spacecraft Office starting in 1973.

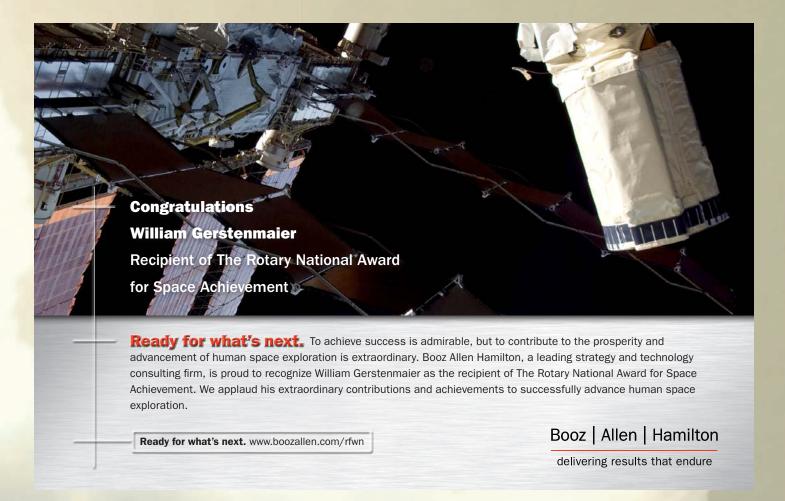
Lunney also served at NASA Headquarters in Washington, DC twice: as deputy associate administrator (AA) for Manned Space Flight from January-August of 1977, and then for six months in 1980 as acting AA for Space Transportation Operations. In 1981, he was selected manager of the Shuttle Program.

Lunney left NASA in 1985 and became president of Rockwell's Satellite Systems Division. After a tour at Rockwell Space Systems Division in Downey, CA, he returned to Houston in 1989 to lead Rockwell's Space Operations Co. that became part of United Space Alliance (USA) in 1995. Lunney was VP and program manager of USA's Space Flight Operations contract until his retirement in 1999.

NASA veteran Arnold Aldrich joined the RNASA Stellar Award Evaluation Committee in 2008 when the ailing Aaron Cohen (see tribute page 33) had to step aside.

Following graduation from Northeastern University

continued on next page



in 1959, Aldrich joined the Space Task Group at Langley Field. He held a number of key flight operations management positions during the Mercury, Gemini, and Apollo programs. He then served as Skylab deputy program manager; Apollo Spacecraft Program Office deputy manager during the Apollo Soyuz Test Project; Orbiter Project manager, where he oversaw the development of Discovery and Atlantis; and Space Shuttle Program manager. Following the Challenger accident, Aldrich was appointed director of the National Space Transportation System (Space Shuttle Program) at NASA Headquarters where he led Space Shuttle program recovery. He then served as associate administrator (AA) for Aeronautics and Space Technology and, later, AA for Space Systems Development.

Aldrich left NASA in 1994 and joined Lockheed Missiles and Space Company in Sunnyvale, CA as vice president, Commercial Space Business Development and then vice president, Strategic Technology Planning. With the merger of Lockheed and Martin Marietta, he became director of Program Operations at Lockheed Martin headquarters in Bethesda, MD. He retired from Lockheed Martin in 2007 and is now an aerospace consultant. Aldrich has received numerous honors including the Presidential Rank of Distinguished Executive and the NASA Distinguished Service Medal.

Stellar Awards Committee Chairman Jennifer Mitchell reported that this year, there are 32 nominees in the Early Career category, 42 in the Middle Career category, 29 in the Late Career category, and 33 nominees in the Team

category representing NASA, the United States Air Force, and 23 different corporations. Individual nominees and team representatives (wearing blue ribbons) were treated to a guided behind-the-scenes tour of Johnson Space Center and attended a special luncheon presentation by Hubble Servicing Mission pilot Captain Gregory C. Johnson at the Nassau Bay Hilton.



Stellar Award Luncheon Speaker Capt. Gregory C. Johnson, USN (Ret.) (NASA)

Stellar win-

ners are selected based on which accomplishments hold the greatest promise for furthering future activities in space, the extent to which the nominee played a key role in the accomplishment, and the extent to which the nominee meets the goal of recognizing "unsung heroes." The winners will be announced this evening by Stellar Award presenters (see pages 14 and 16), Astronauts Captain Michael Foreman, USN (Ret.) and K. Megan McArthur, PhD.

### EARLY CAREER

**James Avis of MEI Technologies, Inc.** - Outstanding technical contributions to the transition and upgrade of a design data management system.

Gregg C. Baumer of NASA Johnson Space Center (JSC) - Exceptional leadership and technical achievement in establishing high expectations for the design and development of crewed Constellation vehicles.

**Jason R. Best of ATK Space Systems** - Outstanding team leadership and technical excellence in human spaceflight critical transducer development and anomaly resolution.

Capt. Jerald W. Bouie Jr. of United States Air Force (USAF) - Extraordinary leadership and exceptional application of systems engineering to establish a solid technical baseline for the Global Positioning System (GPS) IIIA space vehicle development program, a pathfinder for "Back to Basics" acquisition for National Security Space programs.

**Jonathan T. Bowie of NASA JSC -** Outstanding contributions to the vehicle level design and optimization process of the Altair lunar lander.

Alicia A. Carrillo of ATK Space Systems – Exemplary systems engineering skill, tenacity, and technical accomplishments in support of Ares I and human spaceflight.

**Antja H. Chambers of NASA JSC** - Exceptional dedication and technical expertise as an Extra-Vehicular Activity (EVA) Project engineer ensuring that NASA astronauts will have fully functional equipment for critical tasks.

Amber S. Gell of Lockheed Martin – Outstanding technical contributions to Orion systems engineering and dedication to the Orion Educational Outreach Program.

Carrie L. Green of ARES Corporation - Innovative development of a modified hazard analysis approach for efficiently and safely addressing both ground and flight hazards

Kathryn V. Gregory of Pratt & Whitney Rocketdyne - Outstanding team leadership in development of an innovative, critical debris mitigation device for unmanned upper stage propulsion.

Phillip A. Hammond of The Boeing Company - Extraordinary personal dedication, technical knowledge and customer focus in ensuring accurate thermal products are delivered for Space Shuttle cargo verification.

Amanda M. Houghton of Pratt & Whitney Rocketdyne - Outstanding contributions to the development and qualification of RS-68A engine ignition devices.

Ryan W. Irwin of Pratt & Whitney Rocketdyne - Significant contributions to the RS-68 and RS-68A engine programs.

**Daniel P. Kelly of MEI Technologies, Inc.** - Outstanding innovation in the advancement of detector technology, including development and fabrication of the micro-shutter array for the James Webb Space Telescope.

Tyler Lebrun of Pratt & Whitney Rocketdyne – Unwavering, proactive pursuit of innovative design approaches to mitigate J-2X gas generator discharge duct issues because of combustion instability.

Matthew W. Maples of NASA JSC - Exemplary dedication and leadership in assuring the safe and effective application of pyrotechnic technology for the Constellation Program.

**Tyler Nester of ATK Space Systems** - Exceptional knowledge and development of creative technical solutions for addressing the thrust oscillation issue on the Ares I launch vehicle.

William J. O'Hara IV of Lockheed Martin - Outstanding leadership and technical development in the field of environmental control and life support systems for human spaceflight.

**Capt. Gina A. Peterson of USAF** - Extraordinary leadership in sustaining the GPS atomic clock industrial base and the design of the GPS III satellite payload which is critical to national security, economic prosperity, and international agreements.

**Daniel C. Porter of Bastion Technologies, Inc.** - Outstanding contributions to STS-123 mission success, including resolution of issues with the Dextre robotic system.

**Simeon D. Powell of Lockheed Martin** - Exemplary contributions to NASA's human spaceflight program, including technical excellence in analytical structural dynamics and structural verification of shuttle and International Space Station (ISS) payloads.

Christopher B. Prouty of Lockheed Martin - Outstanding human spaceflight contributions in the areas of EVA and Orion Crew Exploration Vehicle parachute systems that improved crew safety and ensured mission success.

### EARLY CAREER

**Zachary R. Putnam of Draper Laboratory** - Excellence and innovation in development and implementation of the skip entry guidance algorithms to enable Orion lunar missions.

**Ethan A. Reid of Barrios Technology** - Conceptualization and rapid design implementation of a temporary sleep station that allows ISS crew members to perform hygiene activities in a private enclosed space.

Jessica Rye of ATK Space Systems - Significant contributions in promoting our nation's Human Space Flight Program, including leadership of communications and publicity for Ares I-X.

Chaine J. Selig of The Boeing Company - Significant contributions to external tank pressurization system modeling and analysis in support of Space Shuttle anomaly investigations and flight safety improvements.

Michelle K. Smith of ESCG/GeoControl - Outstanding performance in assessing the flight readiness of orbiter main propulsion system hardware, allowing the Space Shuttle Program to determine that the system was safe to fly.

Daniel J. Stevens of Barrios Technology - Successful implementation of an upgrade to the ISS communications link in the Flight Control Room, identification and resolution of ISS camera issues, and service as the lead communications and tracking officer for ISS Increment 21.

**David G. Teltschik of SAIC -** Outstanding leadership and technical contributions to the International Space Station Program on behalf of Safety and Mission Assurance.

**Donald E. Varanauski of The Boeing Company -** Exceptional ability in the modeling of rocket propulsion fluid systems in support of a proposed NASA rocket propulsion test stand.

Lee Vyoral of Oceaneering Space Systems - Outstanding leadership, unwavering attention to detail and exemplary work ethic in managing the development, delivery, and sustaining engineering of EVA space hardware.

**Shawn R. White of Honeywell Aerospace Engineering & Technology** - Innovative application of technical knowledge and leadership skills in the development of Orion abort decision logic requirements.



**2009** Stellar Awards Winners in Early Career Category. L to R: Astronaut Leland Melvin (presenting), Capt. Garrett W. Knowlan of the USAF, Timothy M. Miller of MEI Technologies, Elliot P. Harik or The Boeing Co., Dr. Benjamin S. Kirk of NASA JSC, Zebulon Scoville of NASA JSC, Capt. Bai L. Zhu Zhu of the USAF, Timothy Hinerman of Pratt & Whitney Rocketdyne, and Astronaut Sunita Williams (presenting) (NASA, 2009)

### MIDDLE CAREER

Maren L. Anderson of ATK Space Systems - Superior efforts on the Space Shuttle reusable solid rocket motor flight certification and launch support.

**Dr. Elias Azzi of Lockheed Martin** - Outstanding contributions to NASA's Human Space Flight Program in thermal and environmental systems analysis, and to analytical verification of Space Shuttle and ISS payloads.

**Bruce D. Baker of The Boeing Company** - Outstanding expertise in the field of weights engineering and contributions to the Space Shuttle Program.

**Bradley N. Bell of L-3 Communications** - Pioneering efforts in developing unrivaled state-of-the-art 3D computer graphics rendering software used in astronaut and flight controller training systems and in engineering analyses for the Space Shuttle, ISS, and Constellation vehicles.

**Kevin S. Berry of SAIC -** Outstanding dedication, extensive technical expertise, and contributions to Safety and Mission Assurance at NASA JSC for more than 20 years.

George F. L. Brittingham of United Space Alliance - Exceptional contributions and outstanding dedication to the U.S. Space Program as a Space Shuttle closeout crew middeck and flight deck insertion technician.

**Patrick F. Brown of ARES Corporation -** Outstanding contributions in identifying and mitigating ISS on-orbit stowage risks

**LeRoy E. Cain of NASA JSC** - Exceptional leadership of the Mission Management Team during the Hubble Space Telescope Servicing Mission.

**Dr. Charles H. Campbell of NASA JSC** - Unparalleled leadership and technical excellence in the area of hypersonic aerosciences, supporting both current and future human space exploration.

**Robert K. Crain of ARES Corporation** - Exceptional knowledge, dedication, and vision in the development and implementation of the Constellation Program systems engineering processes and practices.

**John P. DiManno Jr. of ATK Space Systems** – Outstanding leadership and commitment in space systems benefiting the future of space exploration.

**Stanley R. Donahoe of NASA JSC** - Exceptional leadership as the NASA engineering lead in developing an international docking standard for future joint international missions.



**Dr. Edward J. Fitzgerald of The Boeing Company -** Outstanding technical leadership of a geographically diverse rocket propulsion engineering team on the space shuttle orbiter.

Jennifer P. Hall of United Space Alliance - Outstanding dedication and leadership contributions to Space Shuttle operations in support of successful human space flight.

**Lt. Col. Michael O. Hedenskoog of USAF** - Outstanding leadership of systems and specialty engineering for the GPS III satellite development program.

William C. Hill of NASA Headquarters - Exceptional leadership and contributions to the human spaceflight community guiding the Space Shuttle Program activities.

**Lt. Col. Edward J. Hospodar Jr. of USAF** - Extraordinary leadership, innovation, and enduring contribution to National Security Space Program acquisition, operations, and legislation.

**Cynthia E. Hudy of Lockheed Martin** - Outstanding leadership of the Orion Project Requirements Definition and Management Team.

**Robert J. Hundl of The Boeing Company** - Exceptional leadership within the space community and ability to solve complex issues in the field of orbiter mass properties.

**Reed A. Kakuska of Pratt & Whitney Rocketdyne** - Unwavering pursuit of innovative approaches to complex propulsion issues enabling sustained mission success for Atlas V and Delta IV upper stages.

Michael T. Kirsch of NASA Engineering and Safety Center - Exceptional dedication, leadership and engineering excellence in the design, manufacture and test of a composite crew module to demonstrate the advanced technologies required to assemble a composite spacecraft.

**Daniel C. Lee of Hamilton Sundstrand** - Exceptional technical and programmatic accomplishments in support of the Human Space Flight Program and the Vision for Space Exploration.

Lee S. Mason of NASA Glenn Research Center - Outstanding leadership and technical contributions leading a multiagency technical team in the development of power system technology and components resulting in an affordable space nuclear power system for NASA's Fission Surface Power Project for use on the lunar and Martian surfaces.

### MIDDLE CAREER

**John A. McCullough of NASA JSC** - Exceptional leadership of the NASA JSC Flight Director Office including ongoing mission preparations and execution, stewardship of the human spaceflight operations culture, and development of the mission operations workforce and leadership team.

**Jeffrey McQuillan of MEI Technologies, Inc.** - Exceptional leadership and technical expertise in support of NASA's Exploration Life Support Project Office in risk and earned value management, and development of process improvements.

**Dr. Evgeny V. Menkin of ARES Corporation** - Exemplary contributions to visiting vehicle integration that increased safety and reliability, reduced costs, and simplified ISS operations.

Amanda M. Mitskevich of NASA Kennedy Space Center - Exceptional leadership of the Launch Services Program in executing the planning and launch of NASA's critical one-of-a-kind scientific and robotic missions.

James W. Nord of Pratt & Whitney Rocketdyne - Outstanding engineering support to Space Shuttle main engine mission success and Space Shuttle Program.

**Nigel J. Packham of NASA JSC** - Outstanding leadership and contributions to the mission success of NASA's Human Space Flight Program.

Satya Pilla of The Boeing Company - Exceptional technical expertise and leadership of structural design and analysis teams, ensuring the quality and safety of the Space Shuttle Program.

**Brian Rehrer of Jacobs Technology** - Exceptional leadership of critical and challenging NASA JSC Crew and Thermal Systems Division projects for five Space Shuttle missions in 2009.

Mark R. Reinecke of Hamilton Sundstrand - Outstanding contributions to the Ares I upper stage thrust vector control system from design concepts to Integrated Product Team leadership.

Anna A. Ronalds of Bastion Technologies, Inc. - Exceptional leadership, technical expertise and dedication to NASA human spaceflight programs in systems engineering, integration, and strategic analysis.

Jerry L. Ryzewski of Oceaneering Space Systems - Extraordinary dedication to technical excellence and total customer satisfaction in EVA hardware development and sustaining engineering support.

John H. Scott of NASA JSC - Sustained exemplary technical contributions and leadership in pursuit of advanced energy conversion system concepts and developments benefitting future human exploration of space.

Jeffrey Semrau of Honeywell Space Systems - Outstanding technical excellence in development and implementation of high-fidelity parachute modeling in support of Orion crew module design.

**Samuel R. Wiley of Aerojet** - Exceptional spacecraft propulsion system leadership, including successful development and flight of the Near Earth Asteroid Rendezvous (NEAR) and Mercury Surface Space Environment Geochemistry and Ranging (MESSENGER) spacecrafts.

Rita G. Willcoxon of NASA Kennedy Space Center - Exceptional leadership of the NASA Launch Vehicle Processing Directorate to implement the Agency's goal of safe completion of the Space Shuttle Program and help lead the nation's space program into the future.

West M. Womack of Lockheed Martin - Superior accomplishments in systems engineering as the Orion spacecraft integrator.

**Brian S. Wygle of Pratt & Whitney Rocketdyne** - Outstanding contributions to the successful execution of RS-68 and RS-68A engine production, development, and certification testing.

**John A. Zagaja III of Hamilton Sundstrand** - Exceptional technical and programmatic accomplishments in support of the Human Space Flight Program and the Vision for Space Exploration.

**Richard J. Zeitler of United Space Alliance** - Exceptional skill, dedication and personal hands-on commitment to ensure safe and reliable performance of the orbiter through leadership of a large, complex team to address a broken poppet in the orbiter main propulsion system flow control valve.



Stellar Award winners receive a marble trophy similar to the one shown here. (RNASA)

### LATE CAREER

Rami R. Al-Ayoubi of United Space Alliance - Outstanding contributions to the Space Shuttle and ISS operations teams for 30 years as an electrical power system engineer and flight controller.

**David Arnold of United Space Alliance** - Exceptional dedication, hard work, expertise and knowledge furthering the understanding of the advanced crew escape suit components.

**Dr. Paul A. Bartolotta of NASA Glenn Research Center** - Exemplary career-long dedication and service providing technical excellence for NASA to meet mission goals in advanced space access and enable the next generation of spaceflight.

**Roger L. Boyer of NASA JSC** - Significant safety improvements to Safety and Mission Assurance's products, services, and processes for the Space Shuttle Program, Constellation Program, and the Orion Project.

Rafael A. Bustamante of Pratt & Whitney Rocketdyne - Exceptional dedication and expertise in launch site integration of the RL10 engine into Atlas, Titan and Delta launch vehicles for U.S. assured access to space.

**Eugene Chamberlain of Hamilton Sundstrand** - Exceptional knowledge and efforts spanning 47 years of service in configuration management supporting NASA space programs.

Jerry J. Clubb of ATK Space Systems - Outstanding technical excellence in the field of spacecraft avionics development and operations with significant contributions to America's flagship Human Space Flight and Exploration Programs.

**Dr. David Finkleman of Center for Space Standards and Innovation** - Significant contributions to international space operations and cooperation as convenor, International Organization for Standardization Space Operations Working Group.

**Dr. David H. Goeken of L-3 Communications** - Outstanding contributions to developing state-of-the-art on-board and control center software applications used to create highly effective and cost-efficient solutions for astronauts and flight controllers.

**Gene R. Grush of NASA JSC** - Exemplary service, innovation, and leadership in support of the Space Shuttle, ISS, and exploration initiatives in the propulsion discipline.

**George E. Hartnett of The Boeing Company** - Exceptional performance leading the Loads and Dynamics Analysis Team's efforts to mitigate STS-129 Space Shuttle main engine ignition and overpressure technical concerns, enabling mission success.

**Edward M. Henderson of NASA JSC** - Exceptional achievement leading the Shuttle Derived Heavy Lift Vehicle Study Team.



2009 Stellar Awards Winners in Middle Career Category. L to R: Astronaut Sunita Williams (presenting), Terrell A. McClain of The Boeing Co., Dr. Bruce M. Steinetz of NASA Glenn, Carol L. Webber of Lockheed Martin, Edward J. Mango of NASA KSC, Dwight "Chip" Link Jr. of The Boeing Co., Barry G. Goldstein of NASA JPL, and Astronaut Leland Melvin (presenting). Not Pictured: Mark B. Schrock of United Space Alliance. (NASA, 2009)

### LATE CAREER



**Kenneth C. Kan of Pratt & Whitney Rocketdyne** - Outstanding leadership for more than 34 years to the Space Shuttle Main Engine (SSME) Flight and Test team, contributing to the safety the Space Shuttle.

**Dr. Thomas F. Limero of Wyle** - Successful path-finding efforts in the identification, modification, and deployment of commercial-off-the-shelf technology to meet ISS air quality monitoring requirements and ensure crew health and safety.

Marla K. Manley of Pratt & Whitney Rocketdyne - Distinguished service in support of the SSME Program.

Jeannie L. Nillen of Wyle Integrated Science and Engineering - Career dedication to space nutritional research and leadership in life sciences research and operations at JSC.

Edmund J. O'Keefe of The Boeing Company - Pioneering new and advanced techniques in the field of vibroacoustics analysis in support of human spaceflight.

**Hector V. Ortiz-Perez of Hamilton Sundstrand** - Outstanding contributions to the advancement of human space-flight as an expert in thermal and stress analysis.

**Dr. Ounyoung Park of ATK Space Systems** - Outstanding dedication and exceptional technical expertise in support of thermal analyses and testing for the nation's human spaceflight programs.

Michael L. Raftery of The Boeing Company - Exemplary leadership throughout the development, launch, activation and transition to sustaining operations of the ISS.

**Dorothy S. Rasco of NASA JSC** - Exceptional management achievements in support of Space Shuttle transition and retirement planning.

Emmette H. Reeves of Blackhawk Management Corp. - Outstanding technical leadership and diligence in addressing integrated logistics support requirements and scope-of-work negotiations involving Russian equipment for the ISS waste hygiene compartment.

Michael B. Renfroe of United Space Alliance - Outstanding logistics support to the Space Shuttle Program for more than 20 years.

**James T. Rucker of SAIC** - Significant contributions to the Human Space Flight Program through establishment of the Receiving Inspection and Test Facility.

**Steven L. Sharp of The Boeing Company -** Exemplary career driven by a deep passion for human space flight, resulting in innovative and safe solutions for flight crews.

Marvin W. Tripett of Cimarron Software Services, Inc. - Excellence in software development and support services to the NASA aerospace community for more than 42 years.

**Timothy G. Whitney of The Boeing Company -** Outstanding leadership skills and business management acumen resulting in successful human spaceflight programs.

Larry A. Witherup of Pratt & Whitney Rocketdyne - Distinguished career and excellence in meeting the demands of space flight.

Randall J. Zelik of Pratt & Whitney Rocketdyne - Outstanding technical performance in support of SSME software development and shuttle flight safety.



# **2009** Stellar Awards Winners in Late Career Category.

L to R: Astronaut Leland Melvin (presenting), Thomas V. Sanzone of Hamimlton Sunstrand, Anita E. Gale of The Boeing Co., Scott A. Cannon of ATK Launch Systems, Dr. Yiting Wen of MEI Technologies, Inc., Lynn F. H. Cline of NASA HQ, Jon D. Frandsen of Pratt & Whitney Rocketdyne, and Astronaut Sunita Williams (presenting). (NASA, 2009)

### **TEAM CATEGORY**

Advanced Diagnostic Ultrasound in Microgravity Project Team of Henry Ford Health System - Successful development and implementation of a crew training program for ultrasound use in space to assess health and medical problems.

Advanced Mission Design Analysis Team – Copernicus Tool Development of ESCG/ERC - Successful development, validation, and promotion of the NASA-wide use of the Copernicus trajectory design and analysis tool.

Ares I-X First-Stage Team of ATK Space Systems - Successful development of the integrated propulsion vehicle, enabling the Ares I-X launch.

Ares I-X Team of NASA - Successful completion of the Ares I-X test flight, the first new vehicle tested at Kennedy Space Center since 1981, and the tallest current rocket in the world.

Battery Charger Module (BCM) Team of Oceaneering Space Systems - Dedicated effort and exceptional technical expertise enabling the Space Station Program to replace anomalous on-orbit BCM units, and provide future ISS crews with reliable battery charging and discharging capabilities for years to come.

Center for Space Standards and Innovation of Analytical Graphics, Inc. - Successful establishment and operation of the world's first non-governmental satellite collision avoidance and orbit data service

Certification of Flight Readiness (CoFR) Team of ARES Corporation - Outstanding implementation of the CoFR process, enabling NASA ISS vehicle managers to say the

word "Go" with conviction for launch and operations.

Crew Aids and Tools Team of ATK Space Systems - Extraordinary perseverance, hard work and technical excellence for the unprecedented ability to deliver on-time more than 100 new tools for Hubble Space Telescope Servicing Mission 4 within a very aggressive 10-month schedule.

Development and Manufacture of Repair Material for Shuttle Orbiter Damage Team of ATK Space Systems - Successful development and manufacture of a material to perform on-orbit repair of cracks and small holes in the Space Shuttle orbiter wing.

Fast, Affordable, Science and Technology Satellite and Laser Detection System Integration Team of USAF, Air Force Research Laboratory - Successful integration of mission payloads using a new class of very low cost launch vehicles, opening doors for inexpensive satellites and space experiments.

Geodesic Dome Phased Array Antenna Team of USAF, Satellite Control & Network Systems Group - Outstanding accomplishment of simultaneous satellite operations with a revolutionary new antenna.

Hyperspectral Imager for the Coastal Ocean Remote Atmospheric and Ionospheric Detection System Experiment Payload (HREP) of USAF - Successful deployment of HREP, the first major Earth observing payload on the ISS and the first U.S. payload to fly on the Japanese Lab Exposed Facility.

**Integrated Design Optimization Team of NASA JSC** - Exemplary teamwork and outstanding technical contribution to the Orion vehicle design.



### 2009 Stellar Awards in Team Category.

L to R: Astronaut Sunita Williams (presenting), Timothy Miller (Low-Density Parity Check Team of MEI Technologies, Inc.), Jeffrey Pilet (External Tank Engine Cut-Off System Redesign and Certification of Lockheed Martin), Kevin Window (ISS Solar Alpha Rotary Joint Recovery Team of NASA JSC), Barry Goldstein (Phoenix Project Team of NASA JPL), Suzanne Davidson (ISS Joint Station Local Area Network Team of The Boeing Company), and Astronaut Leland Melvin (presenting). (NASA, 2009)

## **TEAM CATEGORY**

**Integrated Suit Test Team of MEI Technologies, Inc.** - Exceptional dedication and achievement in creating a robust suited human performance testing process for the JSC Integrated Suit Testing.

ISS Reboost Anomaly Team of The Boeing Company - Outstanding dedication and attention to detail displayed in resolving the on-orbit ISS reboost anomaly.

ISS Space Flight Resource Management Working Group of United Space Alliance - Development of a state-of-the-art training program for embedding team-skills training into technical training to improve team performance and safety.

Launch Abort Motor Team of ATK Space Systems - Successful design, development and demonstration of the first full-scale turn flow technology designed to pull the Orion crew safely away in case of emergency during launch.

Max Launch Abort System of NASA Engineering and Safety Center - Exceptional dedication, ingenuity and technical excellence in the design, development and flight test of the max launch abort system.

One EVA Team of Hamilton Sundstrand - Outstanding track record of successful EVA missions allowing NASA to complete ISS, Hubble and Space Shuttle operations.

Orbital Taurus II Safety and Mission Assurance Support Team of ARES Corporation - Exceptional achievement in designing a methodology to evaluate range safety compliance of foreign, heritage systems.

Orion Flight Software Smart Mass Memory Card Team of Honeywell International - Exceptional dedication, hard work, and technical excellence in the design and modeling of the Orion avionics smart mass memory card.

Overhead Crane Simulator/Trainer Team of United Space Alliance - Successful development and validation of a configurable tool that precisely simulates overhead crane operations for vehicle assembly processes and provides the capability to model operations for future vehicles and stacking environments.

Rapid Attack Identification Detection and Reporting System Block 10 Team of USAF, Space Superiority Systems Wing - Outstanding technical and program management expertise in developing the nation's defensive counterspace capability.

Review of Human Space Flight Plans Committee Support Team of The Aerospace Corporation - Exceptional technical and programmatic contributions in support of the Review of Human Space Flight Plans Committee.

RL10 Assured Access to Space of Pratt & Whitney Rocketdyne - Outstanding technical excellence and execution during the Evolved Expendable Launch Vehicle RL10 Assured Access to Space Program which designed and qualified reliability enhancements to the RL10 engine system.

Sabatier Reaction System Team of Hamilton Sundstrand - Successful delivery of the Sabatier system using a unique business model to provide NASA with additional water production on ISS.

Shuttle Orbit Flight Control Team of Draper Laboratory - Exceptional contributions in developing, certifying and providing real-time support of the Space Shuttle orbiter flight control system to enable assembly of the ISS.

Space Electronic Components Group of USAF, Air Force Research Laboratory - Exceptional contributions to development of spacecraft computers and microelectronic components for NASA scientific exploration.

Space Shuttle Flow Control Valve Poppet Debris Analysis Team of The Boeing Company - Outstanding performance in the analysis of the Space Shuttle flow control valve poppet debris anomaly.

Space Shuttle Main Engine Nozzle Technical Support Team of Pratt & Whitney Rocketdyne - Technical excellence in supporting the SSME nozzle and the five successful Space Shuttle missions in 2009.

**Tactical Satellite-3 Program of USAF** - Pioneering demonstration of the utility of space-based hyperspectral imagery using the highest spectral resolution imaging spectrometer ever launched.

United States Special Operations Command Space Branch of USAF - Exceptional dedication in integrating space based capabilities into plans and operations of the special operations warfighter community.

**Virtual Science Institutes of Lockheed Martin** - Unwavering pursuit of innovative technologies and educational programs to build a strong virtual research community.

# **RNASA** Committee

### and BOARD OF DIRECTORS





Back row: Steven Fredrickson, Bob Wren, Frank Perez, Geoff Atwater (Treasurer), Rodolfo González (Chairman), Duane Ross, Mike Hernandez, S. John Wilkins III, Tim Kropp, Daniel B. Weber. Middle row: Floyd Bennett, Jon McKinnie, Jayant Ramakrishnan, Jennifer Mitchell, Kippy Caraway, Shelley Baccus, Bill Taylor (Vice Chairman), Bill Geissler, Gary Johnson. Front row: Branelle Cibuzar, Mary Alys Cherry, L. Jean Walker (Secretary), Marianne Dyson, Sheila Self. Not pictured: Jeffrey Carr, Irene Chan, Ann Charles, Lindsey Cousins, Susan Gomez, David Hamblin, Marcus Havican, Jack Lister. (*Photo by J. Pamela Photography, Inc.*)

Established twenty-four years ago by the Space Center Rotary Club, the Rotary National Award for Space Achievement (RNASA) Foundation exists to recognize the people whose work in the field of space exploration has lasting impact and benefits. The Foundation carries out its goal through organizing an annual awards gala.

The top award is the National Space Trophy being presented to William Gerstenmaier this year. Outstanding individuals (see page32 for previous winners) are first nominated by government, industry, and professional organizations. The winner is then selected by a vote of the Foundation's Board of Advisors (page 31) that includes current and former NASA center directors, presidents of aerospace corporations, space journalists, and previous award recipients. The confidential votes are tabulated by an independent accounting firm.

To recognize the "unsung heroes" of the space program, Stellar Awards for individual and team achievements are solicited from NASA, the military, and industry leaders in human and unmanned spaceflight programs. The awards are divided into four categories: Early, Middle, and Late Career, and Teams. Nominations (pages 22-29). Nominations are reviewed by a distinguished panel (pages 20-21) who selects the winners based on which accomplishments hold the greatest promise for furthering future successes in space.

The RNASA Foundation is a nonprofit organization that depends on corporate sponsorships (page 19) to create an

event that has been called the "Academy Awards of Space Achievement." Any excess funds remaining after event production expenses are donated to space-related educational programs. Past recipients of donations include Purdue, the University of Houston-Clear Lake, the Wings of the Eagle Foundation, and Parks College of Engineering at St. Louis University. In 2008, a donation was made to help establish the National Flight Academy adjacent to the National Museum of Naval Aviation in Pensacola, FL.

The RNASA Foundation also supports the Texas High School Aerospace Scholars (HAS) program that celebrated its tenth anniversary last summer. RNASA Foundation scholarship donations allow more students to complete on-line lessons and then spend a week during the summer at Johnson Space Center where they are briefed by engineers, scientists, and astronauts; and compete in building rovers, rockets, and landers. Since 1999, more than 6,600 students have participated in the program. Students are nominated to participate by their Texas state legislator through a competitive process.

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, and support of today's students who will become our future space explorers.

# Rotary National Award for Space Acheivement

# **BOARD OF ADVISORS**

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Richard (Rick) D. Stephens

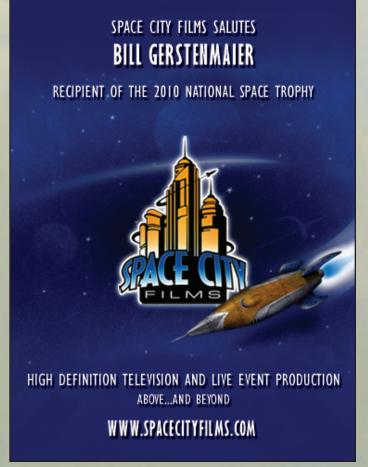
Randy Stone

V.Adm. Richard H. Truly, USN (Ret.)

Dr. William Vantine

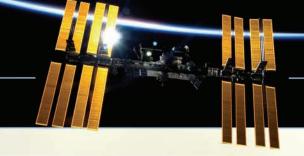
S. John Wilkins III

Capt. John W. Young, USN (Ret.)



# National Space Trophy

# 1997-2009 RECIPEINTS





**2009**Michael D. Griffin



2008 Capt. Eugene Cernan, USN (Ret.)



**2007** Eugene F. "Gene" Kranz



2006 Col. Eileen Collins, USAF (Ret.)



2005 Dr. Glynn S. Lunney



2004 Neil A. Armstrong



2003 Roy S. Estess



2002 Dr. George E. Mueller



**2001** Tommy Holloway



2000 Capt. John W. Young, USN (Ret.)



1999 Dr. Christopher C. Kraft Jr.



1998 President George H.W. Bush



1997 George W.S. Abbey



1996 Capt. Robert L. Crippen, USN (Ret.)



1995 Daniel Goldin



1994 Edward C. "Pete" Aldridge Jr.



1993 Lt. Gen. Thomas Stafford, USAF (Ret.)



1992 Dr. Norman R. Augustine



**1991** Dr. Aaron Cohen



1990 Dr. Lew Allen



1989 V. Adm. Richard Truly, USN (Ret.)



1988 Hon. Don Fuqua



1987 Dr. Maxime Faget



## TRIBUTE TO 1990 AND 1991 TROPHY WINNERS



Lew Allen (NASA Photo, 1990)

The RNASA Foundation is saddened to report the passing of previous National Space Trophy winner, General Lew Allen, USAF (Ret.), PhD. The Trophy was presented to Allen by then-NASA Administrator Richard Truly on February 15, 1990 for rekindling "the public's interest in our neighboring planets and their orbiting moons" while serving as Director of the Jet Propulsion Lab (JPL) in California.

Allen was born in 1925 in Miami, Florida, graduated from West Point in 1946, and served

in the Strategic Air Command's 7th Bombardment Group at Carswell Air Force Base. He received his master's and PhD in physics from the University of Illinois in 1952 and 1954. He rose to the rank of General in the Air Force, eventually becoming the Air Force Chief of Staff and member of the Joint Chiefs of Staff.

Allen retired from the Air Force and became the director of JPL and vice president of the California Institute of Technology in 1982. There, he oversaw the teams responsible for the Magellan Venus radar mapper, the Galileo mission to Jupiter, the Voyager 1 flybys of Jupiter and Saturn,



and the Voyager 2 flybys of Jupiter, Saturn, Uranus, and Neptune. Allen left JPL in 1990 and served as Chairman of the Board of the Charles Stark Draper Lab in Boston, MA until 1995.

RNASA was fortunate to have Allen serve on the Foundation's Board of Advisors from 1989 until his death on January 4, 2010, at his home in Potomac Falls, Virginia.



Aaron Cohen and Richard Truly (NASA Photo, Space News Roundup, 3-8-91)

The 1991 National Space Trophy winner, Aaron Cohen, sadly passed away on February, 25, 2010. Cohen was cited for his leadership in increasing America's capabilities in space through safer and more efficient operation of the space shuttle. At the February 25, 1991 event, Cohen also received a Rotary Internation-

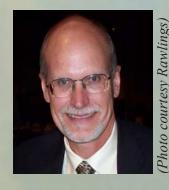
al Foundation Paul Harris Fellow medallion (visible in above photo).

Born in 1931, Cohen earned a mechanical engineering degree from Texas A&M in 1952, and a master's in applied mathematics from Stevens Institute of Technology in 1958 (and later, an honorary doctorate from Stevens as well as the University of Houston—Clear Lake). After serving in the Army, Cohen joined NASA in Houston in 1962.

Cohen was chief of Apollo Command Service Module Project Engineering at Johnson Space Center (JSC). From 1972-82, he was manager of the Space Shuttle Orbiter Project, directing the orbiter's development and first test flights. He served as director of JSC Research and Engineering and became JSC director in 1986, after the Challenger disaster. Under his leadership, the shuttle returned safely to flight in 1988. Cohen became Acting Deputy Administrator at NASA HQ in 1992. He returned to JSC in 1993, and then retired to become a Zachry Professor of Engineering at Texas A&M.

Cohen supported RNASA from its creation in 1987, serving on the Board of Advisors for all 24 years, and also on the Stellar Evaluation Panel from 1997 to 2007.

# **COVER ARTIST Pat Rawlings**

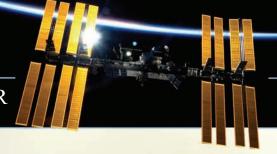


Science Applications International Corporation (SAIC) has once again sponsored the services of renowed space artist Pat Rawlings to create the original cover art for the program book. Rawlings painted the portrait for the first National Space Trophy winner in 1987, again in 1991, and

for every winner since 2001. Rawlings' paintings, digital images and designs have been produced in and on hundreds of magazines, books, TV programs and films. The artist consults with experts, uses computer models, topographical maps, and space and family photos to make scenes as accurate as possible. "Telling stories of space through imagery allows me to explore the connections between extraterrestrial locations, the history of space exploration, and the possibilities of tomorrow's technology." Gerstenmaier's portrait will be on display with the trophy at Space Center Houston for the next year.

# William H. Gerstenmaier

# 2010 NATIONAL SPACE TROPHY WINNER



continued from page 4



**Gerstenmaier congratulates** 3. "Flying the ISS for Exp. 10 crew from Russian control center (NASA, 10-16-04) without the Shuttle

"Our job was to protect the flying crew and plan for their safe return and continued operation of the ISS," Gerstenmaier plained. The Expedition 6 crew consisted of Americans Ken Bowersox and Don Pettit, and Russian Nikolai Budarin who had launched to ISS in November 2002. Instead of returning on Atlantis in March, they came home on a Soyuz in May 2003, and were replaced by a crew of 2 instead of 3. "Flying the ISS for without the Shuttle was an extremely

difficult challenge," Gerstenmaier said. The shuttle was grounded until July 2005, and then again for another year.

Gerstenmaier felt the loss of Columbia very personally. "As part of the ISS team, I sat in the Flight Readiness Reviews when we discussed bi-pod foam loss on an earlier mission. I made assumptions and did not ask hard questions. I failed to realize how complicated and unintuitive space flight really is. The system and environment in which we operate is at the limits of our engineering capability. There will be surprises and unknowns. We need to keep looking for clues and determine the margin in which our designs are operating. We need to not be afraid of learning new things. We need to be willing to take risk. Our job is to determine to the best of our ability that level of risk. We need to both fly and be safe."

### **Associate Administrator**

Combining his Space Shuttle and ISS experience, Gerstenmaier was selected for his current position as NASA Associate Administrator for Space Operations in August 2005, overseeing a budget of \$6.2 billion and the work of 8,000 people around the world. He and his wife now reside in Alexandria, Virginia.

Gerstenmaier's leadership has been recognized with many honors and awards. Aviation Week and Space Technology has twice (in 1996 and in 2002) awarded Gerstenmaier with the Laureate Award. NASA recognized him with three Certificates of Commendation, two Exceptional

Service Medals, and a Senior NASA Outstanding Leadership Medal (2001). In 2004, for his work in maintaining the safe operation of ISS, he was nominated for a Service to America Medal. He received the Presidential Rank Award for Meritorious Executives in 2005. The Huntsville National Space Club awarded him the Von Braun award in 2006. He received an AIAA International Cooperation Award (2006), and was elected as an AIAA Fellow (2007). The Federation of Galaxy Explorers honored him with the 2007 Space Leadership Award. Purdue University honored him with the Outstanding Aerospace Engineer (2003), Distinguished Alumni Award (2007), and as an Old Master (2008).

Asked what he saw as the Space Shuttle's most important contribution to the space program, Gerstenmaier said, "Shuttle allowed us to do tremendous things in space: satellite repair and retrieval; planetary payload deploys; science missions; and finally, to build the International Space Station. The reusable design pushed technology to new levels. The shuttle made us a true leader in space. The shuttle also allowed us to explore, live, and learn as an international team."

As a final thought, Gerstenmaier added, "Folks often think of the launches, hardware, and software and systems involved in space flight. I think of the people that I have been blessed to work with throughout my career. I feel humbled and blessed when I think of the folks all over the world that I have had the privilege to know and work closely with. Space flight attracts a very special group of people and I am blessed to know and consider those folks my friends."

As the Space Shuttle era ends and the Space Station Utilization era begins, it is the privilege of the RNASA Foundation and its sponsors to recognize the hard work and leadership that Bill Gerstenmaier has contributed to the success of these complex human endeavors by awarding him with the National Space Trophy.



AA Gerstenmaier and former NASA Administrator Mike Griffin in Baikonur (NASA, October 2005)





Great achievements are led by great leaders.

# **JACOBS**

Congratulates
Bill Gerstenmaier

2010 National Space Trophy Recipient