### 2014 ROTARY NATIONAL AWARD FOR SPACE ACHIEVEMENT

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## MARINE PILOT.

## SHUTTLE COMMANDER.

# MAJOR GENERAL.

## LEADER.

For his courage and commitment to serving our nation on the ground, in the air and in space, Boeing is proud to congratulate Charles F. Bolden, Jr. on receiving the 2014 National Space Trophy.





The Rotary National Award for Space Achievement (RNASA) Foundation takes great pleasure in recognizing the Honorable Charles F. Bolden, Jr., NASA Administrator, retired Major General United States Marine Corps and former NASA astronaut as the recipient of the prestigious 2014 National Space Trophy.

**NASA Administrator** Photo (NASA Photo August 2009)

advance the missions and goals of the U.S. space program.

#### Nominated

Bolden was nominated by Col. Robert Cabana, Director of the Kennedy Space Center and former astronaut, STS-41, STS-53, STS-65 and STS-88, and by Mr. Robert Jacobs, NASA Deputy Associate Administrator. Office of Communications.

Cabana nominated Bolden for his "many years of dedicated service and exceptional leadership through an extremely challenging transition in America's space program, establishing NASA's exploration architecture for the future, and enabling successful commercial operations to low Earth orbit," and Jacobs nominated Bolden for his "dedication to public service, leadership, and contributions to aeronautics and aerospace throughout a distinguished military and civilian career."

#### Education

Bolden was born in Columbia, South Carolina. He graduated from C. A. Johnson High School in Columbia, South Carolina in 1964. He earned a Bachelor of Science degree in electrical science from the United States Naval Academy in 1968, and was commissioned as a second lieutenant in the Marine Corps. He earned a Master of Science in systems management from the University of Southern California in 1977.

#### **Military Career**

Bolden received a commission as a second lieutenant in the United States Marine Corps following graduation from the United States Naval Academy in 1968. He was president of his class. He underwent flight training at Pensacola, Florida, Meridian, Mississippi, and Kingsville, Texas, before being designated a Naval Aviator in May 1970. After completing flight training in 1970, he became a naval aviator.

Bolden flew more than 100 combat missions into (continued on next page)

#### Rotary National Award for Space Achievement

North and South Vietnam, Laos, and Cambodia in the A-6A Intruder while assigned to VMA(AW)-533 at Royal Thai Air Base Nam Phong, Thailand, from June 1972 to June 1973.

Upon returning to the United States, Bolden began a two-year tour as a Marine Corps selection officer and recruiting officer in Los Angeles, California, followed by three years in various assignments at Marine Corps Air Station El Toro, California.

In June 1979, Bolden graduated from the United States Naval Test Pilot School at Naval Air Station Patuxent As Administrator, Bolden River, Maryland and was assigned to the Naval Air Test Cenleads a nationwide NASA team to ter's Systems Engineering and Strike Aircraft Test Director-



Rose Garden at a Marine Airbase in Nam Phong, Thailand, in 1972 (Bolden Photo)

ates. While there, he served as an ordnance test pilot and flew numerous test projects in the A-6E, EA-6B, and A-7C/E airplanes. He has logged more than 6,000 hours flying time.

Bolden was selected as an astronaut candidate by NASA in 1980. He was a member of the NASA Astronaut Corps until 1994. Bolden returned to active duty in the U.S. Marine Corps to become Deputy Commandant of Midshipmen at the U.S. Naval Academy on June 27, 1994. The commandant of

midshipmen is the second-in-command at the United States Naval Academy.

In July 1997, he was assigned as the Deputy Commanding General of I Marine Expeditionary Force. From February to June 1998, he served as Commanding General, I MEF (Forward) in support of Operation Desert Thunder in

Kuwait. In July 1998, he was promoted to his final rank of major general and assumed his duties as the Deputy Commander, United States Forces Japan. He then served as the Commanding General, 3rd Marine Aircraft Wing, from August 9, 2000 until August 2002. He retired from



Flying AH-1J Cobra attack helicopter, Miramar, San Diego in 1996 (Bolden Photo)





Talking with Marines in Okinawa, Japan in 1998 (Bolden Photo)

(continued from previous page)

the Marine Corps in January 2003.

Bolden's 34-year career with the Marine Corps also included 14 years as a memfice.

#### **Astronaut Career**

Bolden was selected as an astronaut candidate by

NASA in 1980 and became an astronaut in August 1981. A veteran of four space flights, he has logged over 680 hours in space. Bolden's career included 14 years as a member of NASA's Astronaut Office.

His technical assignments included: Astronaut Office Safety Officer; Technical Assistant to the Director of Flight Crew Operations: Special Assistant to the Director of the Johnson Space Center; Astronaut Office Liaison to the Safety, Reliability and Quality Assurance Directorates of the Marshall Space Flight Center and the Kennedy Space Center; Chief of the Safety Division at JSC; Lead Astronaut for Vehicle Test and Checkout at the Kennedy Space Center; and Assistant Deputy Administrator, NASA Headquarters.

On STS-61-C, Bolden piloted Space Shuttle Columbia launched on January 12,1986. During the six-day flight, January 12 to January 18, the crewmembers deployed the SATCOM KU band satellite, and conducted experiments in astrophysics and materials processing.

On STS-31, Bolden piloted Space Shuttle Discovery

launched on April 24, 1990. During the five-day mission, April 24 to April 29, 1990, the crew deployed the Hubble Space Telescope and conducted a variety of middeck experiments. They also used a variety of cameras, including both the IMAX in cabin and cargo bay cameras, for Earth observations from their record-setting altitude of over 400 miles.

On STS-45, Bolden commanded a crew of seven aboard Space Shuttle Atlantis, launched on March 24, 1992. During the nineday mission, March 24, 1992 to



Astronaut photo - STS-61-C - Bolden piloted **Space Shuttle Columbia** (NASA Photo Jan. 1986)

April 2, 1992, the crew operated the thirteen experiments.

On STS-60, Bolden commanded a crew of six aboard Space Shuttle Discovery launched on February 3, 1994. During the nine-day mission, February 3, 1994 to February 11, 1994, the crew carried the Space Habitation Module-2 (SPACEHAB), the Wake Shield Facility, and conducted a series of joint U.S./Russian science activities. This was the ber of NASA's Astronaut Of- historic first joint-American/Russian Space Shuttle mission involving the participation of a Russian cosmonaut Sergei Krikalev as a mission specialist crewmember.

Bolden's NASA astronaut career also included technical assignments as the Astronaut Office Safety Officer; Techni-

cal Assistant to the Director of Flight Crew Operations; Special Assistant to the Director of the Johnson Space Center in Houston; Chief of the Safety Division at Johnson (where he oversaw efforts to return the shuttle to flight safely after the 1986 Challenger accident); lead astronaut for vehicle test and checkout at the Kennedy Space Center in Florida; and Assistant Deputy Administrator at NASA Headquarters.



Bolden with son Che` at Marine Corps Birthday Ball in November, 2013 (Bolden Photo)

Bolden was the first person to ride the Launch Complex 39 slide wire baskets which enable rapid escape from a Space Shuttle on the launch pad. The need for a human test was determined following a launch abort on STS-41-D where controllers were afraid to order the crew to use the untested escape system.

In May 2006, he was inducted to the U.S. Astronaut Hall of Fame.

#### Chief Executive Officer of JACKandPANTHER LLC

Prior to his nomination as NASA administrator, Bolden was Chief Executive Officer of JACKandPANTHER LLC, a small business enterprise providing leadership, military, and aerospace consulting, as well as motivational speaking.

#### **NASA Administrator**

On May 23, 2009, Bolden was nominated by President Barack Obama and confirmed by the U.S. Senate on July 15, 2009, as the 12th Administrator of the National Aeronautics and Space Administration. He began his duties as head of (continued on page 34)



## PUSHING THE ENVELOPE

Marine. Test pilot. Astronaut. NASA leader. Charles Bolden has soared high, whatever the task. In a long and distinguished career, he has achieved new milestones in space and laid the groundwork for future exploration of our solar system.

In this spirit, we congratulate him for receiving RNASA's National Space Trophy, an honor richly deserved.

From the men and women of Lockheed Martin





Col. Robert Cabana, Director of the Kennedy Space Center (NASA Photo)

STS-88, will present the pres-Award for Space Achievement Office. to the Honorable Charles F. United States Marine Corps and former NASA astronaut, STS-61-C, STS-31, STS-45, and

Cabana said, "It's an extreme honor for me to be able

to present the National Space Trophy to our Administrator, my good friend, and fellow Marine, Charlie Bolden. I can think of no one more deserving at this point in our Nation's quest to explore space. He has led the agency through an extremely challenging transition that has seen the safe fly out of the Shuttle, the extension of the International Space Station to 2024, the establishment of a budding commercial space industry, and the implementation of a human exploration architecture that will once again allow us to explore beyond our home planet."

STS-60.

After earning a bachelor of science in mathematics from the U.S. Naval Academy in 1971, Robert D. Cabana was commissioned a Second Lieutenant in the U.S. Marine Corps. He completed Naval Flight Officer training in Pensacola in 1972 and served as an A-6 bombardier/navigator with Marine Air Wings in Cherry Point, N.C., and Iwakuni, Japan.

He returned to Pensacola in 1975 for pilot training and was designated a Naval Aviator in September of 1976, earning the Daughters of the American Revolution award as the top Marine to complete flight training that year. He graduated with distinction from the U.S. Naval Test Pilot School in 1981, and served in the Flight Systems Branch at the Naval Air Test Center until 1984.

Cabana was selected as an astronaut candidate in June

Rotary National Award for Space Achievement

Col. Robert Cabana, Di- 1985, and completed his initial astronaut training in early rector of the Kennedy Space 1986. He was assigned to the Johnson Space Center As-Center and former astronaut, tronaut Office, serving in a number of leadership positions STS-41, STS-53, STS-65, and including lead astronaut in the Shuttle Avionics Integration Laboratory; Mission Control Spacecraft Communicator, fatigious 2014 Rotary National mously known as CAPCOM; and Chief of NASA's Astronaut

A veteran of four space flights, he has logged over 910 Bolden, Jr., NASA Adminis- hours in space, serving as the pilot on missions STS-41 and trator, retired Major General STS-53 and Mission Commander on STS-65 and STS-88, the first assembly mission of the International Space Station in December of 1998.

> Following STS-88, he served in numerous, successively challenging, senior management positions, ultimately becoming Deputy Director of the Johnson Space Center in Houston; Director of the Stennis Space Center in Mississippi and, currently, tenth Director of the Kennedy Space Center in Florida. He retired as a Colonel from the Marine Corps in September 2000 and was appointed a member of NASA's Senior Executive Service.

> He has logged over 7,000 hours in 46 different kinds of aircraft. He is a Fellow in the Society of Experimental Test Pilots, a 2008 inductee into the Astronaut Hall of Fame, an Associate Fellow in the AIAA, and he has received numerous personal awards and decorations, including the Distinguished Flying Cross and the Presidential Distinguished Rank Award.

He is married to the former Nancy Joan Shimer of Cor-



tland, N.Y. They have three grown children and reside in Cocoa Beach, Florida. His hobbies include mud runs, cycling, and doing aerobatics in his 1978 Super Decathlon.

Astronaut photo from STS-88, the first assembly mission of ISS in December of 1998 (NASA Photo)



#### THE DARK SIDE OF THE MOON

The Apollo 8 astronauts were the first people to see the dark side of the moon with their own eyes. The black ceramic [ZrO2] Co-Axial Speedmaster salutes the pioneering spirit that took them to a place no human had ever been and it pays homage to the Speedmaster Professional chronographs worn by every Apollo astronaut. OMEGA is a proud partner in mankind's greatest dreams.







**Canadian Space Agency** astronaut Chris Hadfield flew on STS-74, STS-100, and ISS Soyuz TMA-07M. (NASA Photo)

The Rotary National Award Space Achievement for (RNASA) Foundation is pleased to recognize former Canadian Space Agency astronaut, author, and musician Chris A. Hadfield with the prestigious Award.

The citation reads "Astronaut, test pilot, engineer! Space walker, scientist, musician! Tweeter extraordinaire and social media phenomenon! Global celebrity! Expedition 35 International Space Station Commander, Chris Hadfield, is all these things and more!"

Hadfield said, "It is a thrill

to be recognized for something that I enjoy doing so much. Sharing the experience and the importance of human space flight with people around the world has been, for me, both a duty and privilege. Technology has lowered barriers to communicating to and from anywhere on or off our planet, making it easy to connect on a variety of levels. I hope my efforts will inspire others to take up the calling to share their part in the unfolding story of human space exploration".

He received his glider pilot license in high school, became a test pilot in the Royal Canadian Air Force, and earned a mechanical engineering degree at the Royal Military College.

During his military career, Hadfield attended the U.S. Air Force Test Pilot School and also received a Masters in Aviation Systems from the University of Tennessee Space Institute. He retired from the military as a Colonel in 2003 with 25 years' service, having flown more than 70 different types of aircraft.

Hadfield is a veteran of three space missions: Shuttle missions STS-74, STS-100, and International Space Station mission Soyuz TMA-07M. He was the first Canadian to operate the Space Shuttle's Canadarm in space, the first Canadian to walk in space, and the first Canadian commander of the International Space Station.

Hadfield retired from the Astronaut Corps in July 2013,

following his third trip to space and his five months as ISS Commander. He will be a professor at the University of Waterloo in Ontario, Canada, in the fall of 2014.

Hadfield's awards and military decorations include the Appointment to the Order of Ontario in 1996, receipt of the Vanier Award in 2001, NASA Exceptional Service Medal in 2002, Meritorious Service Cross, the Queen's Golden Jubi-2014 Space Communicator lee Medal in 2002 and the Queen's Diamond Jubilee Medal in 2012. He is the only Canadian to have received both a military and civilian Meritorious Service Cross, the military medal in 2001 and the civilian one in 2013.

> In 1988, Hadfield was granted the Liethen-Tittle Award (top pilot graduate of the USAF Test Pilot School) and was named US Navy Test Pilot of the Year in 1991. He was inducted into Canada's Aviation Hall of Fame in 2005. Upon taking command of the International Space Station, Queen Elizabeth II, Queen of Canada, sent Hadfield a personal message of congratulations. Hadfield was commemorated on Royal Canadian Mint silver and gold coins for his spacewalk to install Canadarm2 on the International Space Station in 2001.

> He is also an author, musician, and a social media expert. Hadfield's new book is entitled "An Astronaut's Guide to Life on Earth". He has a Twitter account with more than 1,000,000 followers, and also a Tumblr blog. Hadfield has had multiple YouTube releases of songs and performances. Forbes magazine described Hadfield as "perhaps the most social media savvy astronaut to ever leave Earth".

> He will also be honored with the Space Foundation's 2014 Douglas S. Morrow Public Outreach Award for his use of social media to engage millions of followers while chronicling life aboard the ISS.

> Hadfield is married to Helene Walter Hadfield with three children, and enjoys skiing, playing guitar, singing, riding, writing, running, and playing volleyball and squash.



Astronaut Chris Hadfield sings "Space Oddity" on the ISS in May 2013. (NASA Photo)



Orbital Sciences Corporation congratulates Maj. General Charles Bolden (USMC-Ret.) 2014 National Space Trophy recipient

As well as Orbital's Stellar Award Nominees: the COTS, Minotaur V, CHIRP and Antares Programs









Veronica and Curiosity August 2012 (McGregor Photo)

Veronica McGregor, the 2013 Space Communicator Award winner, and Manager of News and Social Media at NASA's Jet Propulsion Laboratory in Pasadena, California, is presenting the 2014 Space Communicator Award to former Canadian Space Agency astronaut, author, and musician-Chris A. Hadfield.

McGregor was honored with 2013 Space Communicator Award at last year's RNASA Gala. She said as she received her award, "I'm humbled to receive

this honor from RNASA and join the group of previous recipients who have done so much to communicate the excitement of space exploration to the public."

The 2013 RNASA award citation said, "For more than twenty years as a manager at NASA/JPL and a producer at CNN, Veronica McGregor has been in the vanguard of sharing the story of space exploration with a worldwide audience."

McGregor is the Manager of News and Social Media at NASA's Jet Propulsion Laboratory in Pasadena, California. As such, she leads all major media campaigns for missions including the Mars Exploration Rover landings, Deep Impact mission to a comet, Cassini mission at Saturn, Mars Curiosity Rover landing, and many others.

Using social media platforms such as Twitter, Facebook, YouTube, and Ustream.tv, McGregor has been responsible for delivering NASA content to wider audiences than ever before.

In 2008, she created @MarsPhoenix on Twitter that became the 5th most followed account during that summer. In 2009, McGregor created NASA's first "tweetup" at JPL which has since been replicated into 70 similar events now dubbed "NASA Socials." These events are held across the country to bring the public "behind the scenes" to witness a NASA mission or a launch. She also created NASA's first Ustream. tv channel that enables viewers to ask questions directly to mission scientists and engineers during live streaming events.

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In 2010, she implemented "Curiosity Cam," a live streaming webcam that broadcast the construction of the Mars rover inside the JPL Spacecraft Assembly Facility with live chat capability. The live stream brought in 4.5 million views between October 2010 and June 2011.

Curiosity Cam continued to broadcast all events related to the mission, including launches, landing, and press conferences. Over three million viewers watched Curiosity landing commentary live on Ustream in August 2012.

A. Hadfield. McGregor earned her bachelor's degree in communica-McGregor was honored tion studies from the University of California, Los Angeles in 2013 Space Communica- 1990.

> McGregor is the recipient of numerous awards including JPL's Explorer Award for Strategic Leadership, the NASA Honor Award for Social Media Development and NASA's Exceptional Service Medal. In 2013 her team won the Webby Award and the South by Southwest Interactive Award for the Curiosity social media campaign.

> In 2010, Forbes.com listed her as one of the "20 Inspiring Women to Follow on Twitter.", and at last year's RNASA Gala on April 26, 2013, McGregor was honored with RNASA's 2013 Space Communicator Award.

> McGregor's current work is part of what she calls the "hivemind" behind the @MarsCuriosity rover and has been featured in Mashable, The Daily Beast, NBC, CNET, and others. She is currently tweeting as @AsteroidWatch, @NA-SAJPL, @MarsRovers, and through her personal account @ VeronicaMcG.

From 1986 to 2001, McGregor worked for CNN covering major stories including the Pathfinder mission landing on Mars. Other high profile stories included the San Francisco and LA earthquakes, the Rodney King trial, OJ Simpson trial, and the 2000 presidential election Florida recount.



McGregor accepting Space Communicator Award at 2013 RNASA Banquet (RNASA Photo)



All of us at the Space Foundation congratulate Charles F. Bolden, 2014 recipient of the prestigious National Space Trophy.

> We thank the Rotary National Award for Space Achievement Foundation for providing this well deserved recognition of his many years of dedicated service and exceptional leadership of NASA.





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Visit www.SpaceFoundation.org or call +1.719.576.8000



# Atremaut Schularship Foundation

Zarrella at the Astronaut Scholarship Foundation's 40th Anniversary celebration of the Apollo 14 mission. (Astronaut Scholarship Foundation Photo)

The RNASA Foundation is pleased to have former CNN correspondent John Zarrella as the emcee of RNASA's 28th annual awards gala. On January 3, 2014, Zarella retired from CNN after thirty-two years. He covered the space program as a correspondent for thirty years.

Zarrella is in the process of setting up JZ Media to handle space reporting, commercial and corporate voice-over work, media training, and a space blog. He is currently working with the Federal Alliance for Safe Homes, Flash, regarding disaster mitigation

and also creating safety videos for them.

From Miami Beach, Florida, Zarrella earned a bachelor's degree in English from St. Thomas University, formerly Biscayne College in 1976 where he helped establish the college's journalism program.

Zarrella worked in local television from 1975 to 1981 in Miami, West Palm Beach, Baltimore, and Atlanta. He served as executive producer at WJTV-TV in Miami and WBAL-TV in Baltimore.

Zarrella joined CNN in November 1981 as executive producer at CNN world headquarters in Atlanta where he was responsible for the overall look and content of all hard newscasts.

He was CNN's Miami correspondent, named to this position when the Miami bureau was established in December 1983. Zarrella was responsible for CNN's coverage of news in Florida, Central and South America and the Caribbean.

From 1981 to 1983 he was the Executive Producer of Daybreak. Zarrella was hired to create and launch the program. In 1985, he was assigned for four months to CNN's Cairo Bureau.

Zarrella covered nearly every hurricane to strike the United Sates since 1979 including Hugo, Andrew, Katrina, Rita, Ike, Gloria, Wilma, and Charlie, and he was in New Or-

leans when the levees broke. He also covered the Pope's visit to Cuba; the eruption of the Montserrat volcano, and the Cuban and Haitian refugee crises.

Zarrella was a principal correspondent for CNN's coverage of the U.S. space program and he covered 75 Space shuttle launches. He was the CNN network correspondent on site when the 1986 Challenger shuttle disaster occurred.

Zarrella also covered John Glenn's 1998 return to space, Hubble, Hubble Repair, Challenger, Columbia, both returns to flight, Atlantis final flight, Endeavour's trip through L.A., Mars Landers, Curiosity, Pathfinder, and the Polar Lander.

He wrote and hosted a year long special series for CNN's American Morning, "Counting Down Cady", following astronaut Cady Coleman (Missions STS-73, STS-93, Soyuz TMA-20, Expedition 26/27) as she prepared and trained for flight to the International Space Station Soyuz TMA-20, Expedition 26/27. The series ran between 2009 and 2010.

Zarrella also wrote and hosted a one hour documentary for CNN "Beyond Atlantis: The Next Frontier" on July 8, 2011, after NASA's final space shuttle launch – STS-135.

He has been honored numerous times for his reporting contributions. In 2003, the Florida Emergency Preparedness Association gave Zarrella its prestigious Media Award for "outstanding efforts to inform the public of the problem of hurricanes and the issues faced by emergency managers." In 2002, the National Hurricane Conference awarded him its Outstanding Achievement Award for his work on "Hurricane: When the Big One Hits".

Zarrella's many awards include two Emmy Awards for his coverage for Katrina, Oklahoma City, Pacific Sunami, and the Presidential election coverage. He has also been honored with the 2013 Media Award from the National Space Club Florida, the 2009 Media Award from the National Space Club in Huntsville and two National Hurricane Conference Media Awards. He is married to Robin Zarrella with four children,



and enjoys fishing, golf, and gardening.

Zarrella at the Vehicle Assembly Building at Kennedy Space Center (Zarrella Photo)



## a.i. solutions, Inc. congratulates Maj. Gen. Charles F. Bolden, Jr., USMC (Ret.)

ai-solutions.com

for receiving the 2014 National Space Trophy. We also applaud all of the Stellar Award Winners and Nominees for their achievements.

Space Mission Design and Operations | Launch Vehicle and Missile Systems Engineering Flight Dynamics Ground Systems | Emergency Management and Cybersecurity FreeFlyer® Flight Dynamics Software

### CHARLIE BOLDEN

ARES Corporation celebrates the 28<sup>th</sup> Anniversary of the Rotary National Award for Space Achievement (RNASA) Foundation and congratulates Charlie Bolden for outstanding leadership and dedication to the advancement of U.S. space exploration capability.



PROGRAM MANAGEMENT AND INTEGRATION | ENGINEERING DESIGN AND ANALYSIS | RISK MANAGEMENT AND ANALYSIS SYSTEM ENGINEERING AND INTEGRATION | INFORMATION TECHNOLOGY | SAFETY AND MISSION ASSURANCE





Astronaut Karen Nyberg mission specialist in September 2007 (NASA Photo)

The RNASA Foundation welcomes Astronaut Dr. Karen L. Nyberg as a Stellar Award presenter this evening. Nyberg flew to the International Space Station (ISS) on STS-124 aboard Discovery from May 31 to June 14, 2008, and became the 50th woman in space on her first mission. She also flew on Expeditions 36 and 37 from May 28 to November 10, 2013.

Nyberg was born in Vining, Minnesota. She earned

a Bachelor of Science degree in Mechanical Engineering, Summa Cum Laude, from the University of North Dakota in 1994, and a Master of Science in Mechanical Engineering in 1996 and a Doctorate in Mechanical Engineering in 1998 from the University of Texas at Austin. Her studies at the University of Texas at Austin centered on human thermoregulation and experimental metabolic testing and control, and focused on the control of thermal neutrality in space suits. This work at the Austin BioHeat Transfer Laboratory led to her doctorate in 1998.

She worked at the Johnson Space Center as a Coop from 1991 to 1995 and received a patent for work she completed in 1991 on the Robot Friendly Probe and Socket Assembly.

After completing her doctorate degree, Nyberg accepted a position with the Crew and Thermal Systems Division, working as an Environmental Control Systems Engineer to improve space suit thermal control systems and evaluate firefighter suit cooling technologies.

She provided conceptual designs of the thermal control system for the Advanced Mars and Lunar Lander Mission studies, and environmental control system analysis for a collapsible hyperbaric chamber.

#### Rotary National Award for Space Achievement

Nyberg was selected as an Astronaut Candidate by NASA in July 2000, and she reported for training in August 2000. Following the completion of the two-year training program, she was assigned technical duties in the Astronaut Office Station Operations Branch where she served as a Crew Support astronaut for the Expedition 6 crew during their sixmonth mission aboard the International Space Station.

to June 14, 2008, and became In July 2006, Nyberg took part in NEEMO 10, a deep-sea the 50th woman in space on training and simulation exercise at the Aquarius underwaher first mission. She also ter laboratory, to help NASA prepare for the return of as-flew on Expeditions 36 and 37 tronauts to the moon and manned missions to Mars. She and her crewmates lived and worked underwater for seven days.

Nyberg was in the crew of STS-124, which flew to the ISS in May 2008. This was the second of three flights to deliver components to complete the Japanese Kibō laboratory.

She recently served as a flight engineer on Expeditions 36 and 37 aboard the International Space Station, having launched on Soyuz TMA-09M. She has now spent a total of 180 days in space.

Nyberg has been recognized with numerous honors including the Space Act Award, NASA JSC Patent Application Award, NASA Tech Briefs Award, NASA JSC Cooperative Education Special Achievement Award, Joyce Medalen Society of Women Engineers Award, D.J. Robertson Award of Academic Achievement, and the University of North Dakota School of Engineering & Mines Meritorious Service Award.

Nyberg is married to astronaut Douglas Hurley. They have a son. She enjoys running, sewing, drawing, painting,



backpacking, piano, and spending time with her family.

Photo taken in the cupola of the Intern during Expeditions 36/37 on 10-14-13. (NASA Photo)





Astronaut pilot Doug Hurley STS -135 -T38 (NASA Photo)

The RNASA Foundation welcomes Astronaut Douglas G. Hurley, Colonel, U.S. Marine Corps (retired), as a Stellar Award presenter this evening. He flew as the pilot on STS-127 in July 2009, and was again the pilot on STS-135, the final flight July 2011.

He was born in Endicott, New York, and graduated from Owego Free Academy, Owego, New York, 1984. Hurley earned his Bachelor of Science in Civil

Engineering, Magna Cum Laude with Honors, from the Tulane University in New Orleans, Louisiana, in 1988.

He received his commission as a Second Lieutenant in the U.S. Marine Corps from the Naval Reserve Officer Training Corps at Tulane University, in 1988. After graduation, Hurley attended the Basic School in Quantico, Virginia, and the Infantry Officers Course.

Following Aviation Indoctrination in Pensacola, Florida, he entered flight training in Texas, and was designated a Naval Aviator in August 1991.

Hurley reported to Marine Fighter/Attack Training Squadron 101 at Marine Corps Air Station El Toro, California, for initial F/A-18 training. Upon completion of training, he was assigned to Marine All Weather Fighter/Attack Squadron 225, making three overseas deployments to the Western Pacific.

Over his 4 1/2 years with the "Vikings," he served as Aviation Safety Officer and Pilot Training Officer. Hurley was then selected to attend the United States Naval Test Pilot School at Naval Air Station Patuxent River, Maryland.

After graduation in December 1997, he was assigned to the Naval Strike Aircraft Test Squadron as an F/A-18 Project Officer and Test Pilot. At "Strike," Hurley participated in a variety of flight testing, and became the first Marine pilot to fly the F/A-18 E/F Super Hornet. He was serving as the Operations Officer when he was selected as a pilot by NASA in July 2000. Hurley has logged over 5,000 hours in more than 25 aircraft.

#### Rotary National Award for Space Achievement

Hurley reported for astronaut training in August 2000. Following the completion of two years of training, he was assigned technical duties in the Astronaut Office. These included jobs as a "Cape Crusader," where he was the lead Astronaut Support Personnel for shuttle missions STS-107 and STS-121 as well as serving a support role for several other shuttle missions. He also worked Shuttle Landing and Rollout, on the Columbia Reconstruction Team at Kennedy of the Space Shuttle program in Space Center, and the Source Evaluation Board for the selection of the Orion spacecraft.

> In 2006 and 2007 he was the NASA Director of Operations at the Gagarin Cosmonaut Training Center in Star City, Russia. He went on to become the Astronaut Office Safety Chief, and currently serves as Assistant Director, New Programs for the Flight Crew Operations Directorate. There he leads the crew office effort in support of the Commercial Crew, Orion, Space Launch System, and Ground Systems and Development Programs.

> Hurley flew on STS-127, International Space Station Assembly Mission 2J/A, aboard Endeavour from July 15 to July 31, 2009. He flew on STS-135/ULF7, aboard Atlantis from July 8 to July 21, 2011, which was NASA's final flight of the Space Shuttle program. He has accumulated more than 683 hours in space.

> He retired from the United States Marine Corps in September 2012, after more than 24 years of service.

> Hurley's awards and military decorations include the Legion of Merit, the Defense Superior Service Medal, the Defense Meritorious Service Medal, the Meritorious Service Medal, two Navy and Marine Corps Commendation Medals, and various other service and personal awards.

> He is married to NASA astronaut Karen Nyberg. They have one son. He enjoys hunting and spending as much time as possible with his family in the Texas Hill Country.



Doug, his son, and wife Karen (Family Photo)





David W. Thompson, **Executive Officer of Orbital Sciences Corporation** (Orbital Photo)

RNASA Foundation The is pleased to have David W. Thompson, Chairman, President and Chief Executive Of- Entrepreneur of the Year. ficer of Orbital Sciences Cor-Keynote Speaker.

thereafter moved with his Chairman, President and Chief family to Spartanburg, South Carolina where he spent his youth. Dave earned a B.S. in Aeronautics and Astronautics

from M.I.T., a M.S. in Aeronautics from Caltech, and a M.B.A. from Harvard Business School.

In 1982, Dave co-founded Orbital Sciences Corporation and has served as its Chairman and Chief Executive Officer for the last 32 years. Since the early 1980's, Orbital has developed, built and launched over 800 rockets, satellites and other space systems, in support of commercial communications, Earth and space science, human space flight and national defense applications.

Before co-founding Orbital, Dave was special assistant to the president of Hughes Aircraft Company's Missile Systems Group and was a project manager and engineer on advanced rocket engines at NASA's Marshall Space Flight Center. As a college student, he worked on the first Mars landing missions at Caltech's Jet Propulsion Laboratory and on Space Shuttle projects at NASA's Langley Research Center and Johnson Space Center.

As a result of his work at Orbital, Dave was awarded the National Medal of Technology, was honored as Virginia's Industrialist of the Year, and was named High-Technology

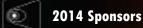
He also received the National Air and Space Museum Troporation, as this evening's phy from the Smithsonian Institution and was honored with the von Kármán International Wings Award by the Aero-Dave was born in Philadel- space Historical Society. He was selected as Satellite Execuphia, Pennsylvania but shortly tive of the Year by Via Satellite Magazine, was recognized with the Arthur C. Clarke Lifetime Achievement Award, and was presented with the World Technology Award for Space by The Economist Magazine.

> Dave is an Honorary Fellow of the American Institute of Aeronautics and Astronautics, where he served as President for the 2009-2010 year; a Fellow of the American Astronautical Society; the Royal Aeronautical Society; the International Academy of Astronautics; and is a member of the U.S. National Academy of Engineering.

> Dave and his wife, the former Catherine Jensen, are the parents of a daughter, Maggie. Dave enjoys traveling with his family, the Outer Banks of North Carolina and American history.



Thompson speaking at a recent Orbital All-Hands Staff Meeting (Orbital Photo)



#### CORPORATE TABLE SPONSORS

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Rotary National Award for Space Achievement

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#### STELLAR AWARD EVALUATION PANEL

Arnold D. Aldrich General Kevin P. Chilton Dr. Glynn S. Lunney

SPECIAL THANKS Jeffrey Carr Irene Chan Craig Insurance Mark E. Hollis, CPA Hyatt Regency Houston MRI Technologies NASA Johnson Space Center Space Center Rotary Club

#### PROGRAM

28th Annual Rotary National Award for Space Achievement Gala Friday, April 11, 2014 Houston Hyatt Regency Imperial Ballroom

> 6:00 RECEPTION Victoria Reva-Dorsch, Pianist

7:00 WELCOME Rodolfo González, Chairman, RNASA Foundation

PRESENTATION OF THE COLORS Clear Lake High School, Clear Creek ISD Cadets from 2nd Battalion JROTC

**NATIONAL ANTHEM** The Love Antioch Brothers, Antioch Missionary Baptist Church

**INVOCATION** Elder Daniel Jones, the Seventy of The Church of Jesus Christ of Latter-day Saints

#### DINNER

8:15 2013 YEAR-IN-REVIEW FILM Space City Films

MASTER OF CEREMONIES John Zarrella

**KEYNOTE SPEAKER** David Thompson, Chairman, President, and Chief Executive Officer of Orbital Sciences Corporation

PRESENTATION OF SPACE COMMUNICATOR AWARD to Chris Hadfield Veronica McGregor, NASA Jet Propulsion Laboratory Manager of News and Social Media

**PRESENTATION OF STELLAR AWARDS** NASA Astronauts Karen Nyberg and Douglas Hurley

PRESENTATION OF NATIONAL SPACE TROPHY to Charles F. Bolden, Jr. Robert D. Cabana, NASA Kennedy Space Center Director

PRESENTATION OF THE OMEGA WATCH Thomas P. Stafford

#### **RECOGNITION OF SPONSORS AND CLOSING**

Made entirely of lead crystal, the 500-pound National Space Trophy is shaped like a graceful rocket above a base that is reminiscent of exhaust clouds or the frozen moons of some distant world. A thin white line spirals around the column, etching our pathway to the stars, drawing our attention to the bubble of air in the tip of the cone - a bubble as fragile and beautiful as human life, shining with the bright light of hope and dreams for the future. The Trophy is on permanent display at Space Center Houston along with the portrait of the most recent trophy recipient.



Stere's to this year's out-of-this-world achievers.

Aerojet Rocketdyne employees congratulate **Charles F. Bolden, Jr.,** recipient of the 2014 National Space Trophy. We also congratulate the Stellar Award nominees and winners for their contributions to the American space program.



www.rocket.com





All rows L to R, Back: Bob Wren, Marcus Havican, Jayant Ramakrishnan, Bill Taylor (Vice Chairman), Gary Johnson, Tim Kropp Third: Geoff Atwater (Treasurer), Rodolfo González (Chairman), Mike Hernandez, Joe Mayer

**Second:** Shelley Baccus, Duane Ross, Frank Perez, Rosalind Perez, Philip Harris, Irene Chan

Front: Jenny Devolites, Marilyn Musial, Marianne Dyson, Lindsey Cousins, Susan Gomez

**Not pictured:** Floyd Bennett, Sheryl Berg (SCR President), Kippy Caraway, Jeff Carr, Mary Alys Cherry, Steven Fredrickson, Jacinda Green, Diana King, Jack Lister, Pat Patton, Branelle Rodriguez, John Russo, Delia Stephens, L. Jean Walker (Secretary), Lori Wheaton (*Photo by J. Pamela, 2013*)

Rotary National Award for Space Achievement

The Rotary National Award for Space Achievement (RNASA) Foundation was founded in 1985 to organize and coordinate an annual event to recognize outstanding achievements in space and create greater public awareness of the benefits of space exploration. Each year, the Foundation presents the National Space Trophy (NST) to an outstanding American (see previous winners on page 21) who has made major contributions to our nation's space program.

Nominations are solicited each fall from leaders in government, industry, and professional organizations. The winner is selected by a vote of the RNASA's Board of Advisors (page 33) that includes current and former NASA center directors, leaders of aerospace corporations, space journalists, and previous award recipients.

Since 1989, the RNASA Foundation has also recognized the "unsung heroes" of the space program with Stellar Awards (pages 24-32) for individual and team achievements.

The RNASA Foundation is a nonprofit organization governed by a Board of Directors, a majority of whom must be members in good standing of the Space Center Rotary (SCR) club. One third of the directors are elected each June for three-year terms except for the SCR president who serves for one year while president.

The RNASA Committee (pictured) serves the board and includes the directors, officers, corporate representatives, event coordinators, and dedicated Rotarians who help organize and produce a quality and memorable evening for our sponsors (page 17) and guests.

Excess funds remaining after event expenses are donated to space-related educational programs. Last year, the proceeds were donated to the NASA Aerospace Scholars Program in honor of NST Winner Kay Bailey Hutchison. The Aerospace Scholars Program provides thousands of students the opportunity to experience the exciting work being done at Johnson Space Center.

The RNASA Foundation is grateful for the enthusiasm and support it receives from the aerospace industry, educational organizations, NASA, and the Department of Defense that allows the continued recognition of outstanding achievements in space exploration. MEITechnologies, Inc. congratulates **Charles F. Bolden**, 2014 National Space Trophy recipient



MEIT also congratulates all Stellar Award nominees and winners on their contributions and dedication to our nation's space program.



Visit us online at www.MEITechinc.com

#### PREVIOUS NATIONAL SPACE TROPHY RECIPIENTS

1987 - Dr. Maxime Faget 1988 - Hon. Don Fugua 1989 - V. Adm. Richard Truly, USN (Ret.) 1990 - Dr. Lew Allen 1991 - Dr. Aaron Cohen 1992 - Dr. Norman R. Augustine 1993 - Lt. Gen. Thomas Stafford, USAF (Ret.) 1994 - Edward C. "Pete" Aldridge, Jr. 1995 - Daniel Goldin 1996 - Capt. Robert L. Crippen, USN (Ret.) 1997 - George W.S. Abbey 1998 - President George H.W. Bush 1999 - Dr. Christopher C. Kraft, Jr. 2000 - Capt. John W. Young, USN (Ret.) 2001 - Tommy Holloway 2002 - Dr. George E. Mueller 2003 - Roy S. Estess 2004 - Neil A. Armstrong 2005 - Dr. Glynn S. Lunney 2006 - Col. Eileen Collins, USAF (Ret.) 2007 - Eugene F. "Gene" Kranz 2008 - Capt. Eugene Cernan, USN (Ret.) 2009 - Dr. Michael D. Griffin 2010 - William H. Gerstenmaier 2011 - General Kevin P. Chilton 2012 - Michael L. Coats 2013 - Hon. Kay Bailey Hutchison





Each fall, the RNASA Foundation solicits Stellar Award nominations of space industry workers and teams deserving of special recognition. This year, 124 individual and 40 team nominations were received in four categories (see citations on pages 24-32). "Each company and organization may only nominate a select few people or teams in each category, so just being nominated is quite an achievement," noted Jennifer Devolites, the RNASA Stellar Awards Committee chairman. "The Foundation is proud to bring the outstanding work of all the nominees to the attention of a wider community."

All nominees are treated to an insiders' tour of Johnson Space Center (JSC) and an awards luncheon with a distinguished speaker. This year's speaker was Dr. Stanley Love(see profile on page 23). Nominees receive framed certificates of recognition and blue ribbons to wear at the evening banquet so that guests can identify them and offer their congratulations.

The winners of the Stellar Awards are chosen by an esteemed panel of judges based on which accomplishments will have the most impact on future space activities and that meet the criteria of recognizing "unsung heroes." The winners are announced at the banquet where they receive a distinctive engraved marble trophy generously sponsored this year by ATK.

#### **STELLAR AWARDS EVALUATION PANEL**

**Dr. Glynn S. Lunney**, is a member of the RNASA Board of Advisors who is serving his twelfth year on the Stellar Awards Evaluation Panel. He was the 2005 National Space Trophy winner.



Lunney graduated from the University of Detroit in 1958. He worked at what is now Glenn Research Center in Cleveland, Ohio and transferred to Langley in Vir-

Dr. Glynn S. Lunney RNASA Photo

ginia 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 served at NASA Headquarters twice during 1976 and later in 1980, first as deputy associate administrator (AA) for Space Flight, and then as acting AA for Space Transportation Operations. In 1981, he returned to Houston to manage the Space Shuttle Program.

In 1985, Lunney left NASA and became president of Rockwell's Satellite Systems Division in California. After a tour at Rockwell Space Systems Division, 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.

Arnold D. Aldrich is a member of the RNASA Board of Advisors who is serving his seventh year on the Stellar Award Evaluation panel.

Aldrich joined the Space Task Group at Langley Field in 1959 following graduation from Northeastern University. He held a number of key flight operations management positions during the Mercury, Gemini, and Apollo programs. He



Arnold D. Aldrich RNASA Photo

served as Skylab deputy program manager; Apollo Spacecraft Program Office deputy manager during the Apollo Soyuz Test Project; Orbiter Project manager during development of Space Shuttles 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 recovery and return-to-flight efforts. He then served as AA for Aeronautics and Space Technology and, later, AA for Space Systems Development.

In 1994, Aldrich left NASA and joined Lockheed Missiles and Space Company in Sunnyvale, California. He was 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's headquarters in Bethesda, Maryland. He retired 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.

**General Kevin P. Chilton** is a member of the RNASA Board of Advisors who is serving his second year on the Stellar Award Evaluation panel. The former astronaut and commander of US Strategic Command received the 2011 National Space Trophy.



A graduate of the U. S. Air Force (USAF) Pilot Training and Test Pilot Schools, Chilton holds a B.S. in engineer-

General Kevin P. Chilton RNASA Photo

ing science from the USAF Academy and an M.S. in mechanical engineering from Columbia University. He served operation and test assignments in the RF-4, F-4, and F-15 prior to his selection as an astronaut in 1987.

Chilton piloted the maiden flight of Endeavour on STS-49 in 1992, and the Space Radar Laboratory mission, STS-59, in 1994. In 1996, he commanded STS-76, the third docking mission to the Russian Space Station Mir. He served as deputy program manager for the International Space Station until leaving NASA in 1998.

Chilton served on the Air Force Space Command Staff, the Air Staff, the Joint Staff, and commanded the 9th Reconnaissance Wing, 8th Air Force, Joint Functional Component Command for Space and Global Strike, and Air Force Space Command. From 2007 to 2011, he commanded the U. S. Strategic Command overseeing plans and operations for all U. S. forces conducting strategic deterrence and the Department of Defense's space and cyberspace operations. He retired from the Air Force in 2011 and now serves as a director of Orbital Sciences, Level 3, Anadarko, the Aerospace Corporation, and Schafer Corporation.

#### **STELLAR LUNCHEON SPEAKER**

NASA Astronaut, Dr. Stanley G. Love, was the featured speaker at the Stellar Awards Luncheon earlier today. He flew on STS-122 Atlantis from February 7 to February 20, 2008, logging more than 306 hours in space, including more than 15 hours in two spacewalks.



Love is working in the Astronaut Office's Exploration Branch and also serves as a representative of the Crew Office to

**Love** NASA Photo

Dr. Stanley G.

the NASA program that is developing the new Space Launch System heavy-lift rocket.

From San Diego, California, he earned a Bachelor of Science degree in Physics from the Harvey Mudd College in 1987, a Master of Science degree in 1989, and a Doctor of Philosophy degree in 1993.

Love attended the University of Oregon, the University of Washington, and did postdoctoral research at the University of Hawaii in 1994. In 1995, he was awarded a prize postdoctoral fellowship at the California Institute of Technology.

Love worked in the Jet Propulsion Laboratory in 1997, and completed astronaut training in 1998.

From 1999 to 2003 he served in the Astronaut Office. In 2004, Love and fellow astronaut, Dr. Ed Lu, co-invented the gravity tractor, a novel method to controllably modify the orbits of hazardous asteroids.

He left active flight status in 2010, and in 2011, he served as a crew office representative to the Space Launch System program team.

Love's many awards include the NASA Space Flight Medal (STS-122), eight Lyndon B. Johnson Space Center Individual Performance Awards, three NASA Group Achievement Awards, Lyndon B. Johnson Space Center Certificate of Appreciation, United States Antarctica Service Medal, and the NASA Space Flight Awareness Team Award.

He is married to Jancy McPhee Love with two children, and enjoys martial arts, alpine hiking, and reading and writing science fiction and appreciation of new music, cult films, and anime.

#### OMEGA WATCH PRESENTER Lt. Gen. THOMAS STAFFORD, USAF (Ret.)

Once again, OMEGA has generously donated a watch to the recipient of the National Space Trophy. The watch is presented by Lt. Gen. Thomas P. Stafford, USAF (Ret.), the recipient of the Trophy in 1993, and a member of the RNASA Board of Advisors.



From Weatherford, Oklahoma, <sup>L</sup> Stafford graduated from the U.S. Naval Academy in 1952 and became an Air

Lt. Gen. Thomas P. Stafford RNASA Photo

Force fighter and test pilot. He was the pilot for Gemini 6 in 1965 and the commander for Gemini 9 the next year. Stafford commanded Apollo 10 in 1969 and Apollo-Soyuz in 1975. He left NASA to command the Air Force Flight Test Center, and in 1978 became Deputy Chief of Staff at Air Force Headquarters in D.C. He retired in 1979, and co-founded the consulting firm of Stafford, Burke, and Hecker in Alexandria, Virginia. In 1990, Stafford chaired the team that prepared "America at the Threshold" to advise NASA on returning to the Moon and exploring Mars.

The RNASA Foundation wishes to express its gratitude to OMEGA and General Stafford for more than a decade of support to our annual event.



**Christopher B. Abbott of Orbital Sciences Corporation** - Outstanding contributions and leadership in the integration and testing of the Cygnus cargo vehicle.

Adam J. Amar of NASA Johnson Space Center - Outstanding efforts in support of human spacecraft development, and pioneering contributions to the field of multi-physics analytical tool development.

**Sagar A. Bhatt of Draper Laboratory** - Exemplary technical excellence and innovation in developing and demonstrating the ISS optimal propellant maneuver.

**Stephanie D. Booth of Boeing** - Exceptional diligence in providing timely solutions to complex procurement issues and negotiated savings for the NASA Docking System project.

**Romeo T. Chua of Boeing** - Outstanding contributions to the development, successful integration and delivery of the ICU and iPEHG units as part of the ISS HRCS/ODAR upgrade.

**Lt. Schuyler L. Collis of United States Air Force** - Outstanding accomplishments in enabling greater access to the X-37B, a key asset for advancing U.S. space technologies.

**Anthony J. Cook of Boeing** - Exceptional dedication, teamwork, integration skill, and technical leadership contributing to development of a new O2/N2 resupply system and expedited issue resolution preserving launch manifest and EVA schedules.

James M. Dearman of Lockheed Martin - Outstanding human spaceflight contributions to the Orion MPCV parachute systems analysis and integration.

**Shana Diez of SpaceX** - Outstanding technical expertise and leadership of reusability for the SpaceX Grasshopper and F9R development vehicle programs, representing critical steps toward the goal of building reusable rockets.

**Scott Duffin of Orbital Sciences Corporation** - Outstanding leadership and technical management as lead systems engineer for Green Shift, Cygnus COTS demo mission and vehicle manager for Cygnus Orb-1 Spacecraft.

**Capt. Elizabeth M. Eames of United States Air Force** - Exceptional leadership and engineering judgment supporting innovative flight software upgrades and quick resolution of National Reconnaissance Office on-orbit satellite anomalies.

**Melissa D. Flores of NASA Johnson Space Center** - Significant contributions in human capital and technologies that enable safer, affordable, and sustainable human space exploration.

**Stephanie M. Gill of Boeing** - Outstanding service and leadership to the ISS program and the Extra Vehicular Activity team.

**Charles W. Gray of Booz Allen Hamilton** - Exceptional innovation and leadership in the ISS program office.



2013 Early Career Stellar Award recipients. L to R: Foreman (presenting), Gill, Johannes, Grant, Vareha, Megivern, Stott (presenting). (NASA photo, 2013)

Jennifer L. Hayes of NASA Glenn Research Center - Outstanding redesign recommendations that made crucial impacts to the success of two NASA spaceflight projects.

**Capt. David E. Hillshafer of United States Air Force** - Exceptional leadership in implementing innovative solutions to provide a new on-demand weather capability for combatant commanders and the space community.

**1st Lt. Michael A. Holloway of United States Air Force** - Outstanding leadership of a four stage, space rocket mission that resulted in the successful launch of the Operationally Responsive Space Office Space Test Program-3 satellite.

**Michael H. House of Aerojet Rocketdyne** - Exceptional rocket engine combustion devices and pyrotechnic ignition systems leadership, technical excellence, and innovation.

**Robert J. Hubbard of NASA Kennedy Space Center** - Exceptional leadership and project management, ensuring continued use of the Shuttle Landing Facility for future commercial and government horizontal launch and landing activities through a partnership with Space Florida.

Mallory A. Jennings of NASA Johnson Space Center - Exceptional efforts in space suit and crew survival systems, contributing to ISS and future exploration.

**Jacob N. Johnson of Boeing** - Outstanding leadership and technical excellence in developing ISS Docking Adapter subsystems ahead of schedule with zero Critical Design Review issues.

**Peter Kalnenieks of UTC Aerospace Systems** - Exceptional technical and skills leadership in engineering for development hardware and the sustaining of the EMU Program Hardware.

**Steven Korkowski of L-3 STRATIS** - Exceptional modeling and simulation technical excellence, ensuring successful development of ALHAT and Morpheus vehicle testbeds, TS21 high-fidelity training simulations for manned spaceflight operations, and C2V2 flight software for ISS and visiting vehicles.

**David Lobosco of Orbital Sciences Corporation** - Exceptional understanding of current space systems and a vision for where the US must head to sustain superiority in space.

**Kavya Manyapu of Boeing** - Exceptional commercial crew spacecraft test planning and flight test article design fidelity.

**Cary Maunder of Orbital Sciences Corporation** - Outstanding technical contributions in designing and developing the Generalized Predictor Guidance and Nutation/Precession Control Algorithm for the Minotaur V LADEE mission.

Jeremiah S. McNatt of NASA Glenn Research Center - Technical excellence, hard work, and dedication to furthering space photovoltaics through research and development and educational outreach.

**Travis A. Moseman of Boeing** - Exceptional contributions to the safe and successful design of the NASA Docking System project.

**Jonathan Overly of Aerojet Rocketdyne** - Exceptional early career achievements in the development of advanced monopropellant technology.

**Maj. Jeffrey M. Pasqual of United States Air Force** - Exceptional leadership and engineering judgment in spearheading the effort to transform the NRO ground system, increasing targeting accuracy by 98%, and making critical contributions to national security space systems.

**Robert H. Plunkett of MEI Technologies, Inc.** - Exceptional leadership and technical management of a series of ISS-based platforms designed to conduct externally attached experiments.

**Kevin Pryor of Orbital Sciences Corporation** - Exceptional early career contributions to ATRR, EAGLE, and other programs at Orbital Sciences.

Jeremy Pyle of Orbital Sciences Corporation - Outstanding leadership as the CDH flight software chief architect and technical lead for the Orbital COTS Cygnus-D1 Demonstration Mission.

**Capt. Maximilien H. Reele of United States Air Force** - Exceptional contributions to the furtherance of national space situational awareness and space control through state-of-the art technology.

**Mihailo D. Rutovic of NASA Johnson Space Center** - Astute understanding of engineering disciplines, effective team leadership, and personal dedication to the success of NASA Johnson Space Center aircraft operations.

**Ryan R. Schultz of United States Air Force Research Laboratory** - Exceptional collaboration to shape the requirements and ease market adoption for next generation solar cells.

**Capt. George R. Sondecker IV of United States Air Force** - Outstanding contributions to the SENSE CubeSat experiment, demonstrating the potential for low-cost small satellites to perform operational Air Force missions.

**Capt. Philip H. Swenson of United States Air Force** - Exemplary technical skill producing Atlas V rockets and outstanding leadership in the successful integration, test and launch of National Reconnaissance Office satellites.

**Anthony Tyson of Aerojet Rocketdyne** - Outstanding steadystate engine balance analysis and test planning support to the J-2X engine development test program.

**Capt. Allen J. Varghese of United States Air Force** - Outstanding technical knowledge producing defensive counterspace systems and exceptional leadership developing flight software that will command spacecraft for the next decade.

**Jerald A. Webber of Boeing** - Outstanding achievements in advancing human spaceflight through excellence in leadership of propulsion systems analysis and design.

**Roberto Woods of UTC Aerospace Systems** - Exceptional technical and leadership skills in the design of Environmental Control and Life Support Systems for three manned space vehicles.



**Joseph P. Arves of Lockheed Martin** - Exceptional technical leadership of Orion's exploration mission spacecraft for deep-space mission flexibility.

**Ian A. Ballinger of Keystone Engineering Company** -Pioneering industry engineering leadership in the field of spacecraft propellant tanks and composite overwrapped pressure vessels.

**Thomas E. Basciano of Boeing** - Outstanding technical and leadership contributions to the International Space Station data systems.

**Maj. Robert J. Beal of United States Air Force** - Intense leadership and drive in the development of the next-generation imaging and space-control technologies, and foundational efforts developing improved processes for national systems.

Jack P. Brazzel Jr. of NASA Johnson Space Center - Exceptional leadership in human spaceflight rendezvous and docking across multiple programs.

**Harold D. Brian of Bastion Technologies, Inc.** - Exceptional dedication and technical achievements that resulted in improved ISS crew and mission control training and communications.

**Corey D. Brown of Aerojet Rocketdyne** - For outstanding technical expertise and customer support of the GPSII F-3 anomaly investigation.

**Paul A. Cooper of Aerojet Rocketdyne** - Innovation, technical excellence and outstanding support of the Titan, Space Shuttle, Delta and Missile Defense Programs.

**Michael S. Dorsch of Orbital Sciences Corporation** - Outstanding technical leadership of the development of the new Antares Medium Class Launch Vehicle that resulted in a fully successful first flight to orbit on April 21st, 2013.

**Robert A. Douglass of United States Air Force** - Exceptional leadership of space missions, including expertise that resulted in the successful launch of the NASA Lunar Atmosphere Dust and Exploration Experiment and the Operationally Responsive Space Office Space Test Program-3 satellite.

**Robert J. Durkin of NASA Johnson Space Center** - Outstanding leadership of the Neutral Buoyancy Laboratory during post-Shuttle transition while evolving commercial services in the mission critical, government facility.

Jean E. Engle of NASA Johnson Space Center - Successful development of an innovative multi-faceted archive of human space flight knowledge destined to influence future human spaceflight missions.

**Brent A. Fergurson of Oceaneering Space Systems** - Exceptional contributions to personnel safety during critical and potentially hazardous crew EVA training operations at the JSC Neutral Buoyancy Facility.

Wayne A. Greenwood of Bastion Technologies, Inc. -Extraordinary engineering expertise, dedication, and tenacity in continuously offering creative solutions to technically challenging problems.

**Robb L. Hughes of ATK** - Exceptional technical leadership in pioneering flight avionics and supporting ground test equipment for the new SLS booster.

Jana W. Hurzeler of Boeing - Outstanding leadership and guidance to the NASA Docking System procurement IPT that has resulted in timely resolution of supply chain issues and ensured successful acquisition of critical NDS subsystems.

**Brian Keller of Orbital Sciences Corporation** - Outstanding Leadership and Technical Management as Lead Engineer for Rendezvous/Prox Ops for Orbital's Cygnus spacecraft.

**Beth L. Lasater of ARES Corporation** - Exceptional technical contribution, leadership, and dedication in support of Systems Engineering and Integration functions for the International Space Station, Constellation, and Orion Programs.

**London Lawson of Orbital Sciences Corporation** - Outstanding technical leadership of a new class of spacecraft that enables rapid, low cost demonstration of new technologies.

**George M'Sadoques of UTC Aerospace Systems** - Exceptional technical and skills leadership in engineering for development of critical life support systems for the International Space Station, Orion, and CST-100.

**Dr. Avi M. Mandell of NASA Goddard Space Flight Center** - Pioneering advances in theoretical and observational studies of the formation of planetary systems enabling the design of future instruments that will characterize extrasolar planets in space and from Earth.

Whitney E. Maples of NASA Johnson Space Center - Exceptional technical, leadership, and management contributions to NASA's human spaceflight mission operations.

**David O. McMahon of NASA Johnson Space Center** - Outstanding commitment the organization, utilizing broad technical experience and inclusive leadership to make strategic and tactical improvements in project management.

**Maj. Steven S. Mink of United States Air Force** - Exceptional leadership in project management and engineering contributing to the United States' national security by advancing technologies to ensure space superiority and freedom of action in space.

**Katrien L. Morgan of ARES Corporation** - Exemplary leadership of the Visiting Vehicle Integration Team in integrating International Partner, Commercial Cargo and Commercial Crew vehicles into the ISS, ensuring efficient and safe operations.

**Hung Nguyen of L-3 Communications** - Exceptional development of high-fidelity, crew-in-the-loop new technology simulations and models leading to efficient, high-quality spacecraft and mission designs.

James Nicholson of Orbital Sciences Corporation - Outstanding leadership and technical Management as Chief Engineer of Orbital Sciences Cygnus Spacecraft.

**Daniel J. Niedermaier of Boeing** - Outstanding technical excellence and significant contributions in leading vibroacoustic analysis in support of Boeing Space Exploration projects.

**Michael R. Orlowski of Orbital Sciences Corporation** -Outstanding leadership as the Mission Operations Director of the Orbital COTS Cygnus -D1 Demonstration Mission and follow-on Commercial Re-Supply Services Missions.

**Kevin E. Orr of Boeing** - Outstanding technical excellence in complex systems engineering projects supporting a wide range of space programs. **Renae D. Pilipowskyj of United States Air Force** - Exceptional leadership and engineering judgment supporting innovative flight software upgrades and quick resolution of NRO on-orbit satellite anomalies.

Kelly A. Robertson of National Reconnaissance Office -Exemplary leadership and technical savvy in integrating satellite solutions into complex critical spacecraft, significantly improving data collection at low cost, resulting in far greater efficiencies.

Jonathan P. Rustick of Orbital Sciences Corporation -Exceptional dedication and technical excellence resulting in the successful design, development, and operations of the COTS-D1 Mission in support of NASA's ISS cargo resupply program.

**Dr. Amy A. Simon of NASA Goddard Space Flight Center** - Exceptional contributions to planning, sequencing, calibrating, and interpreting results from instruments on Voyager, Galileo, Cassini and OSIRIS-Rex spacecraft expanding knowledge of planets and asteroids and the formation of our Solar System.

**Jeffrey T. Somers of Wyle** - Outstanding leadership and technical excellence in conducting life science research to develop spacecraft standards for protecting space explorers.

**Dr. Edward De la rosa Sosa of Jacobs** - Exceptional perseverance, leadership, and technical competence in nanotechnology research at Johnson Space Center.

**Brian R. Sproles of Aerojet Rocketdyne** - Outstanding leadership to the test operations of human rated rocket propulsion systems for more than twenty seven years.

**Vincent C. Yarnot of Aerojet Rocketdyne** - Excellence in monopropellant technology development and successful flight engine deliveries for commercial, military, and space science missions.



**2013 Middle Career Stellar Award recipients. L to R:** Stott (presenting), Garcia, Dodd, Feng, Keilich, Engle, Foreman (presenting). Not pictured: Curran, Lane, and Lundquist. (*NASA photo, 2013*)



Michael Bain of Orbital Sciences Corporation - Outstanding leadership as technical manager and team leader of Orbital Sciences Cygnus cargo services team.

Jeffrey A. Breen of Aerojet Rocketdyne - Long-standing contributions to the sustainment and evolution of the RL10 Engine Program at Aerojet Rocketdyne.

**Thomas B. Buchalski of UTC Aerospace Systems** - Exceptional contributions to assembly of NASA hardware, including rocket programs, Space Shuttle, Extravehicular Mobility Unit, Space Station life support, and Orion.

**Byron K. Calvert of Boeing** - Tireless performance leading the SLS core stage loads and dynamics team's effort to meet hardware design releases, resulting in SLS meeting its PDR requirements and NASA customer expectations.

John M. Childress of NASA Johnson Space Center - Recognized technical expertise, knowledge, and leadership in operational safety for the International Space Station and commercial cargo/crew missions.

**Dr. Pamela E. Clark of Catholic University of America** - Outstanding efforts to enable use of the CubeSat architecture for deep space research.

**Michael R. Clark of Jacobs** - Numerous contributions to NASA programs from Apollo to current Advanced Exploration Systems, including the Morpheus testbed.

**Jeffrey H. Cook of ATK** - Career-long creative and dedicated pursuit of engineering excellence enabling the path to deep space destinations.

**Christine B. Cooley of Aerojet Rocketdyne** - Exceptional long-standing leadership and contributions to the RL10 and other Aerojet Rocketdyne rocket propulsion engineering and program management endeavors.

**Ty Dalton of ATK** - Innovation in composite and metallic structures for human spaceflight and unmanned space vehicles.

Keith Davies of Orbital Sciences Corporation - Outstanding leadership and technical management as Lead Cygnus Vehicle Manager.

Thomas H. Freeman of United States Air Force - Exceptional leadership on four space and one target launch missions, including expertise that resulted in the successful NASA Lu-

nar Atmosphere Dust and Exploration Experiment and the Operationally Responsive Space Office Space Test Program-3 satellite.

**Donald E. Galler of Aerojet Rocketdyne** - Outstanding achievement in advancing the knowledge and application of the rocket engine performance and operability discipline on Aerojet Rocketdyne propulsion programs.

**Ross A. Hewitt of Aerojet Rocketdyne** - Outstanding leadership in the development, production, and flight of critical rocket propulsion systems spanning 50 years.

John E. James of NASA Johnson Space Center - Ingenuity and innovative leadership of JSC Technology Transfer.

**Howard L. Jones of MEI Technologies, Inc.** - Sustained achievement and numerous contributions to the spaceflight community.

**Robert L. Josker of Aerojet Rocketdyne** - Invaluable contributions and leadership in the areas of liquid rocket propulsion and space power to advance America's space programs.

**Jeff Kelley of Oceaneering Space Systems** - Outstanding contributions to numerous space flight programs in the areas of manufacturing production control and quality inspection.

**Dr. David Q. King of Aerojet Rocketdyne** - Outstanding technical leadership in the advancement of electrical propulsion for thirty-seven years.

Lucy V. Kranz of NASA Johnson Space Center - Outstanding leadership and expertise in the programmatic control of large Human Spaceflight Programs and personal dedication to the National Aeronautics and Space Administration's mission.

Susan P. Kroskey of NASA Kennedy Space Center - Exceptional leadership, expert financial analysis, and strategic guidance on NASA's most complex fiscal issues, including KSC's quest to transform from a Space Shuttle-unique to a multi-use space launch complex.

**Michael R. Laible of Boeing** - Outstanding leadership in onorbit dynamic measurements and model correlation for the ISS primary structure.

**Dr. Chui Wing Lam of Wyle** - Excellence and innovation furthering the understanding and mitigation of negative toxicological exposures related to the Space Shuttle, ISS, and Exploration Programs.

**Dennis A. Lascola of Boeing** - Exceptional experience and Design for Manufacturing and Assembly expertise applied throughout multiple aerospace programs, resulting in numerous accomplishments and process improvements.

**Dr. Roscoe Lee of Jacobs** - Outstanding technical contributions within the NASA community, most recently as a subject matter expert for ISS Guidance, Navigation, and Control.

Victoria A. Margiott of UTC Aerospace Systems - Exceptional technical and leadership skills in systems engineering for the continued operation and extravehicular activities of the ISS.

**David S. Matthews of United Space Alliance** - Unwavering commitment to technical excellence to maximize the safety of space flight for astronauts in Space Shuttle, Orion/Multi-Purpose Crew Vehicle, and commercial crew providers.

Maj. Gen. William N. McCasland of United States Air Force -Pioneering space solutions for the warfighter and the Nation by developing new technologies, acquiring and operating the latest space systems, and influencing national space policy for over 30 years.

**Tom A. Mulder of Boeing** - Outstanding contributions to Boeing's Commercial Crew Transportation System development.

**Thomas Nguyen of Oceaneering Space Systems** - Outstanding contributions to the analytical assessment of numerous space flight development programs.

William S. O'Keefe of United Space Alliance - Significant accomplishment in championing the development and application of Space Flight Resource Management principles for human spaceflight operations throughout a 30 year career spanning the Space Shuttle and ISS Programs.

**Michael O'Toole of UTC Aerospace Systems** - Exemplary leadership in developing life support products, command and control interfaces, process control, system health monitoring, and safety systems operating flawlessly on the ISS for 15 years.

**Michael J. Offie of Boeing** - Outstanding technical ability and unwavering dedication to excellence resulting in being recognized as an expert in the field of steady and unsteady aerodynamic loads.

**Dr. Brian D. Ramsey of NASA Marshall Space Flight Center** - Pioneering development of technologies that have set the standard for high energy X-ray optics and for exceptional mentorship and federal service.

**Dr. Dennis C. Reuter of NASA Goddard Space Flight Center** - Exceptional contributions to the design and operations of successful Earth and planetary space flight missions, including Earth Observer-1, Lewis, New Horizons, and the developing OSIRIS-REx.

**Dr. George R. Schmidt of NASA Glenn Research Center** - Exceptional dedication, leadership, and technical excellence in the development of advanced propulsion and power technologies for future space missions.

**Ruben A. Smith of Boeing** - Outstanding technical excellence in pyrotechnic systems design and development supporting human spaceflight programs for an entire career.



**2013 Late Career Stellar Award recipients. L to R:** Foreman (presenting), Halchak, Levy, Shinguchi, Seaback, Christensen, Nygren, Stott (presenting). Bragodo not pictured. (*NASA photo, 2013*)

Jane Marie Stearns of Boeing - Outstanding leadership to the ISS Program, enabling future successful science and operations.

David A. Steffy of Orbital Sciences Corporation - Outstanding technical and management contributions to the space community for over twenty five years, including the first multiple-satellite LEO constellation spacecraft and the development of our country's newest medium-class launch vehicle.

Patrick L. Swaim of Boeing - Sustained career-long high performance and exemplary contributions to the advancement of space exploration.

Timothy C. Tripp of Boeing - Sustained and significant contributions to manned spaceflight supporting Spacelab, SPACEHAB and ISS.

Scott T. Vogt of Aerojet Rocketdyne - Outstanding leadership in the development, production, and flight of critical manned flight systems spanning a successful career of over 35 years.

Melba M. York of ARES Corporation - Exceptional dedication and leadership to the US space program spanning from Apollo to Orion, mentoring and positively influencing others along the way.

Douglas J. Zimpfer of Draper Laboratory - Exceptional leadership, dedication and technical innovation in support of NASA's human exploration missions.

### SPACE CITY FILMS SALUTES CHARLES F. BOLDEN, JR. **RECIPIENT OF THE 2014** NATIONAL SPACE TROPHY



2013 Team Stellar Award recipients. L to R: Stott (presenting), Evans (JSC), Pierce (Boeing), Sannes (Lockheed Martin MPCV), Cerimele (JSC Webb), Sauvageau (SAIC), Witeson (ATK), Hinde (Lockheed Martin Orion), Foreman (presenting). (NASA photo, 2013)



Advanced Booster Reliability Enhancement Team of ATK -Innovative application of composites technologies for use in human rated propulsion systems.

Antares AJ26 Development and Flight Team of Aerojet Rocketdyne - Exceptional contributions to the mission success of the AJ-26 engine providing propulsion for the Antares vehicle and cargo to the ISS.

Antares Launch Vehicle Program of Orbital Sciences Corporation - Successful development of the new Antares Medium Class Launch Vehicle that resulted in a fully successful first flight to orbit on April 21st, 2013.

Astronaut Applicant Screening – Team Reaction Exercise Team of Wyle - Pioneering approaches to enhance astronaut applicant screening, optimizing the assessment of team and individual skills critical for successful long-duration missions, and providing a key step toward selecting the next generation explorers.

**Commercial Crew Transportation System Certification Team of Boeing** - Successful development of a Joint Commercial/ Government Certification Process for the Commercial Crew Transportation System.

**Commercial Orbital Transportation Services (COTS) Proj**ect Team of NASA Johnson Space Center - Extraordinary achievement and successful execution of NASA's Commercial Orbital Transportation Services Space Act Agreement with Orbital Sciences.

**Commercial Satellite Communications (COMSATCOM) Pathfinder Team of United States Air Force** - Relentless research, teamwork and perseverance by the COMSATCOM Pathfinder team in developing an innovative affordable solution for meeting future DoD SATCOM demand.

**Commercially Hosted Infrared Payload (CHIRP) Team of Orbital Sciences Corporation** - Exceptional achievement resulting in novel and cost effective ways to demonstrate new space technologies.

**Composite Cryotank Technology Demonstration (CCTD) Team of NASA Glenn Research Center** - Outstanding technical excellence in development and demonstration of low cost, lightweight composite cryogenic propellant tanks for future heavy lift vehicles and other in-space applications. **Contingency EVA Team of UTC Aerospace Systems** - Outstanding achievement in preparation for and execution of a contingency EVA to eliminate an ammonia leak that jeopardized the ISS.

**Cygnus Development Team of Orbital Sciences Corporation** - Successful development and launch of a new safe, reliable, and affordable commercial space transportation system, enabling future growth of our Nation's space program.

**Cygnus Guidance, Navigation & Targeting Team of Draper Laboratory** - Outstanding technical excellence and innovative, first time accomplishments in guidance, navigation, and targeting software for the COTS Cygnus vehicle.

**DARPA Robotics Challenge Team of Jacobs** - Exceptional achievement in the design, analysis, build, and integration of the NASA/JSC DARPA Robotics Challenge robot.

Edwards/Dryden Space Transit and Space Launch Test Team of United States Air Force - Exemplary teamwork by the Hypersonic Combined Test Force and NASA Dryden in forging new ground with the first flight of the Sierra Nevada Corporation Dream Chaser and a subscale buildup of a new airborne space launch platform capability.

**Engineering Services Tool Team on NASA Robotic Refueling Mission Team of ATK** - Exceptional teamwork in designing and building tools and test task boards for NASA's Robotic Refueling Mission, successfully opening a new space market.

International Space Station (ISS) Simplified Aid for Extravehicular Activity (EVA) Rescue (SAFER) Team of Jacobs - Exceptional achievement in the development and qualification of the ISS Simplified Aid for Extravehicular Activity Rescue (SAFER).

International Space Station Primary Structure Life Extension Team of Boeing - Superior team work, dedication, and technical proficiency demonstrated in successfully extending the International Space Station primary structure life through 2020.

**ISS Docking Adapter Mechanical Design Team of Boeing** -Outstanding teamwork and technical excellence resulting in a highly successful IDA Critical Design Review conducted ahead of schedule, supporting NASA strategy for commercial crew docking to ISS. **ISS Integrated Comm Unit (ICU) Development Team of Boeing** - Forward-thinking and leadership in the development of the integrated communication unit, providing ISS expanded science data bandwidth and a flexible architecture for the future.

**ISS Passive Thermal Control System (PTCS) Process Improvement Team of Boeing** - Outstanding team dedication to continuous process improvement yielding efficiencies, savings and benefits to human spaceflight aboard the ISS.

James Webb Space Telescope Engineering/Manufacturing Team of ATK - Successful completion of the state-of-the-art thermally stable JWST primary mirror support structure, a significant milestone for the NASA Flagship mission.

Joint Space Operations Center Mission System (JMS) Acquisition Support Team of United States Air Force - Exceptional teamwork in implementing a trailblazing Major Automated Information System program to deliver a predictive space battle management and command and control system.

**Keyboard Camera Command Tool Team of Barrios/USA** -Successful development of an automated capability to track commercial visiting vehicles and Earth targets using the ISS external cameras.

**Minotaur V Launch Vehicle Development Team of Orbital Sciences Corporation** - Successful design, integration, and inaugural mission execution of the Minotaur V launch vehicle.

Modeling Analysis, Visualization, and Robotic Integration Center of Booz Allen Hamilton - Outstanding technical excellence and innovation in the areas of CAD modeling analysis, external and internal configuration tracking, robotic kinematic analysis, and mass and aerodynamic property development in support of the ISS Program.

Office of Chief Counsel Team of NASA Johnson Space Center - Exceptional creativity and achievement in evolving the rule of law into the frontier of space, and among private commercial and public spacefarers.

Orion Exploration Flight Test 1 Active Thermal Control and Power Management Hardware Team of UTC Aerospace Systems - Outstanding teamwork in successfully building, testing and delivering subsystem hardware for integration into the Orion Program EFT-1 mission.

**Orion Exploration Flight Test -1 Power On Test Team of Lockheed Martin** - Successful integration and powered testing of the Orion Exploration Flight Test -1 spacecraft with new stateof-the art avionics and flight software architecture.

**Payload Integration Managers of Boeing** - Outstanding technical excellence in providing payload integration services and problem resolution to the International Space Station payload developer community.

**Portable Simulator for On-Board International Space Station Emergency Training Team of NASA Johnson Space Center** -Successful definition and development of a software tool that enables the crew and the international flight control team to realistically practice emergency scenarios. **Propulsion Test Office NASA White Sands Test Facility of NASA White Sands Test Facility** - Exemplary achievements in rocket engine testing in support of the Nation's space flight programs.

**RS-68 Engines Delta IV Heavy Vehicle Staggered Start Development and Implementation Team of Aerojet Rocketdyne** - Outstanding dedication towards flawless implementation and first flight success of the Delta IV staggered engine start.

**Space Electro-Optical Division of United States Air Force** -Significant contributions to the future of our nation's space program through state-of-the-art, large-aperture, deep space object tracking observatories combining advanced modeling and simulation techniques to produce space situational awareness intelligence products for Department of Defense and NASA programs.

**Space Environmental NanoSatellite Experiment (SENSE) Team of United States Air Force** - Outstanding teamwork on the Space Environmental NanoSatellite Experiment (SENSE) launched in November 2013, demonstrating that low-cost CubeSats can perform operational Air Force missions.

Space Launch System (SLS) Core Stage Design Analysis Leadership Team of Boeing - Outstanding accomplishment in applying best practices to establish a rigorous design analysis approach, using heritage tools and data to ensure rapid progress toward SLS launch, maintaining uncompromising engineering rigor in processes, and assisting the NASA customer in issue resolution.

**Space Launch System (SLS) Team of NASA Marshall Space Flight Center** - Exceptional technical and programmatic excellence in the design, development, and maturation of the Space Launch System, this nation's next great heavy lift launch vehicle.

Space Medicine Clinical Research Training Program of Baylor College of Medicine, Center for Space Medicine, National Space Biomedical Research Institute - Outstanding research and training program for flight surgeons and crew survivability.

Space Surveillance Telescope (SST) Team of Defense Advanced Research Projects Agency - Outstanding technical excellence in the development and demonstration of a ground-based telescope to address gaps in observational coverage that hamper space situational awareness in operational space.

Title III National Security Space Risk Mitigation Initiative Team of United States Air Force Research Laboratory - Exceptional teamwork in maintaining, enhancing, and accelerating the availability of satellite production capacity, including creating merchant supplier capabilities to serve the broad satellite system customer communities.

**Wetlab-2 Team of Lockheed Martin** - Outstanding development of a new method for real-time sample analysis on the ISS, enabling investigators to optimize experiments by modifying protocols for subsequent repeat analysis without the need for sample return.



Geoge W.S. Abbey Jim Albaugh Arnold D. Aldrich Edward C. Aldridge, Jr. Jim Asker Dr. Norman R. Augustine Virgina A. Barnes Capt. Daniel Brandenstein, USN (Ret.) Col. Robert D. Cabana, USMC (Ret.) Dr. Donald J. Campbell Jeffrey E. Carr Mark E. Carreau Capt. Eugene Cernan, USN (Ret.) Gen. Kevin P. Chilton, USAF (Ret.) Capt. Michael L. Coats, USN (Ret.) Col. Eileen M. Collins, USAF (Ret.) Col. Richard O. Covey, USAF (Ret.) Capt. Robert Crippen, USN (Ret.) Capt. Frank L. Culbertson, Jr., USN (Ret.) **Ronald D. Dittemore** Maj. Gen. Joe H. Engle, ANG/USAF (Ret.) Hon. Donald Fuqua William H. Gerstenmaier Hon. John H. Glenn, Jr. Dr. Gerald D. Griffin Dr. Michael D. Griffin Henry W. Hartsfield Jim Hartz J. Milt Heflin Cynthia Hendershot **Richard J. Hieb** Shepard W. Hill

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#### (continued from page 4)

the agency on July 17, 2009. As Administrator, Bolden leads a nationwide NASA team to advance the missions and goals of the U.S. space program.

At NASA, Bolden has overseen the safe transition from 30 years of space shuttle missions to a new era of exploration focused on full utilization of the International Space Station and space and aeronautics technology development. He has led the agency in developing a Space Launch System rocket



Bolden and his wife Jackie and granddaughter Mikaley in 2002. (Bolden Photo)

fleet of Earth-observing satellites, and continued progress toward the 2018 launch of the James Webb Space Telescope, the successor to the Hubble Space Telescope.

Also during Bolden's tenure, the agency's support of commercial space transportation systems for reaching low-Earth orbit have enabled successful commercial cargo resupply of the space station and significant progress toward returning the capability for American companies to launch astronauts from American soil by 2017.

#### Bolden's voice broadcast on the surface of Mars

On August 28, 2012, Bolden was the first human to have his voice broadcast on the surface of Mars or any other planet. Although the Curiosity rover has no speakers, it received the transmission of his voice and then beamed it back to Earth.

#### Virtual host for Shuttle Launch Experience

A few years before his appointment by President Barack Obama to be administrator of NASA, Bolden auditioned, along with professional actors, for the role of virtual host for NASA's "Shuttle Launch Experience", an educational attraction at the Kennedy Space Center Visitor Complex in Merritt Island, Florida. Aside from his experience with NASA, Bolden won the role on performance ability. The attraction educates visitors about the preparation, production and

provides the visitors with a first-hand simulation experience of ascent into space upon a NASA space shuttle vehicle.

#### Awards

Bolden's 34-year career with the Marine Corps also included 14 years as a member of NASA's Astronaut Office. Bolden's military decorations include the Navy Astronaut Badge, Defense Distinguished Service Medal, Defense Superior Service Medal, Legion of Merit (1 award star), Distinguished Flying Cross, Defense Meritorious Service Medal (1 oak leaf cluster), Air Medal (1 award star and Strike/Flight numeral 8), NASA Outstanding Leadership Medal, NASA Exceptional Service Medal (2 award stars), NASA Space Flight Medal (3 award stars), Navy Unit Commendation, National Defense Service Medal (1 service star), Vietnam Service Medal (2 service stars), Marine Corps Recruiting Ribbon, Vietnam Gallantry Cross unit citation, and the Vietnam Campaign Medal, In March of this year he received the 2014 AAS Space Flight Award, and tonight he receives the 2014 National Space Trophy.

#### Degrees

Bolden has also received an Honorary Doctor of Science Degree from the University of South Carolina (1984), and Honorary Doctor of Humane Letters from Winthrop College (1986), the University of Southern California Alumni Award of Merit (1989), an Honorary Doctor of Humane Letters from Johnson C. Smith University (1990), an Honorary Doctor of Laws from Monmouth University (2011), an Honorary Doctor of Public Service from the University of Maryland University College (2012), and an Honorary Doctor of Engineering from the University of Bristol (2014).

#### **Bolden's Family**

Bolden is married to the former Alexis (Jackie) Walker of Columbia, South Carolina. Their family consists of son Che', a Lieutenant Colonel in the United States Marine

Corps, daughter-inlaw Penelope "Penny" Jane McDougle from Sydney, Australia, three granddaughters, Mikaley, Kyra, and Talia, and daughter Kelly Michelle, a plastic surgeon at the Howard University Hospital in Washington, DC.



**Bolden Family Photo - February 2014** (Bolden Photo)

cutting-edge technologies for the missions of tomorrow. During Bolden's tenure, the agency's science activities include an unprecedented landing on Mars with the Curiosity

rover, launch of a spacecraft to Jupiter, enhancing the nation's

# REDEFINING BOLD

ATK congratulates all Stellar Award nominees, winners and Maj. Gen. Charles F. Bolden, Jr., (USMC-ret.), recipient of the 2014 National Space Trophy for excellence in the advancement of America's space goals.



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## CONGRATULATIONS

## MAJOR GENERAL CHARLES F. BOLDEN

2014 NATIONAL SPACE TROPHY RECIPIENT

We salute your leadership and achievements that have led America's space program towards new horizons.

# JACOBS