

2019  
ROTARY NATIONAL AWARD FOR SPACE ACHIEVEMENT



ENGINEER

ENTREPRENEUR

INNOVATOR

SPACE PIONEER

For his invaluable contributions to science and space exploration, Boeing is proud to congratulate David W. Thompson on receiving the 2019 National Space Trophy.



Orbital Photo



## NATIONAL SPACE TROPHY RECIPIENT DAVID W. THOMPSON



RNASA

The RNASA Foundation is pleased to recognize Mr. David W. Thompson, Retired President and CEO of Orbital ATK, as the 2019 National Space Trophy Recipient.

### NOMINATED

Mr. Thompson was nominated for the award by Captain Frank Culbertson (U.S. Navy, Retired) of Northrop Grumman Corporation. Mr. Culbertson selected Thompson for "four decades of outstanding leadership and pioneering innovations in the development and operation of launch vehicles and satellite systems, which have transformed scientific, exploratory, commercial and defense applications of space."

### EDUCATION AND EARLY CAREER

Thompson earned his B.S. in Aeronautics and Astronautics from the Massachusetts Institute of Technology, a M.S. in Aeronautics from Caltech, and an MBA from Harvard Business School. Summer internships during college and graduate school led him to the Jet Propulsion Laboratory, Johnson Space Center and Langley Research Center. It was during this time that Thompson worked on the Viking program and the first Mars landing mission. He began his four-decade career in space technology as a young engineer at NASA's Marshall Space Flight Center in 1978 where he worked on the Space Shuttle program.

### ORBITAL

Thompson's career as a space entrepreneur and business leader accelerated in the early 1980's when he and two Harvard Business School classmates founded Orbital Sciences Corp., a startup that focused on the development of space transportation systems for commercial, military and scientific customers.

As one of the world's first commercial space enterprises, Orbital pioneered the investment of private capital for space systems development and manufacturing in the 1980's and 1990's. During this time, the company created a family of six new launch vehicles, including the Pegasus rocket and several missile defense vehicles,



Thompson Photo

Thompson's boyhood rocketry culminated in a high school project that launched small monkeys to mile-high altitudes in 1972.



Orbital Photo

Thompson and his two Orbital co-founders, Scott Webster (L) and Bruce Ferguson (R), with seed-capital investor Fred Alcorn of Houston in the early 1980's.



Orbital Photo

Orbital's Pegasus rocket team created the world's first privately-developed space launch vehicle, which made its inaugural flight in 1990.



NATIONAL SPACE TROPHY RECIPIENT  
**DAVID W. THOMPSON**

as well as an array of lower-cost satellites for both low-Earth orbit (LEO) and geosynchronous orbit (GEO) applications. Thompson's vision was that diverse customers – from traditional government agencies to new privately-owned satellite operators – would use these products, and that commercial-style business practices would reduce their costs and delivery times. The success of this strategy is reflected in the more than 1,000 rockets and satellites delivered by the company to over 50 customers since the 1980's.

Under Thompson's leadership, Orbital expanded beyond its original business of research and manufacturing into providing space-based services in the 1990's and 2000's. New ventures in those decades included its ORBCOMM satellite data and messaging system, the first global network based on dozens of small LEO satellites, and its ORBIMAGE commercial satellite imaging fleet, which pioneered privately-owned remote sensing spacecraft. More recently, the company partnered with NASA to develop the Antares rocket and Cygnus spacecraft commercial cargo system for the International Space Station (ISS), which has conducted 12 supply missions to ISS over the past six years. And later this year the company plans to inaugurate the world's first in-space robotic servicing and repair of GEO communications satellites, launching an exciting new form of commercial space operations.

**MERGERS**

In 2014, Orbital and its long-standing industry partner, Alliant Techsystems, merged to form Orbital ATK, a larger, more diversified space and defense systems company with a broader product line, including rocket propulsion for NASA's Space Launch System (SLS) heavy-lift vehicle as well as motors for tactical and strategic missiles. Finally, last year Northrop Grumman purchased Orbital ATK for over \$9 billion, forming Northrop's Innovation Systems business sector. The merger with Northrop is expected to generate faster growth and new products for customers, as well as creating greater opportunities for thousands of the company's space engineers and scientists.

*continued on page 36*



Orbital Photo

*Orbital's fast growth led to its initial public stock offering in 1990, the first space company to do so.*



Orbital Photo

*Thompson and Antonio Elias, Orbital's Chief Engineer, received the National Medal of Technology from George H.W. Bush.*



Orbital Photo

*Garrett Pierce (L) and J.R. Thompson (R) played critical roles as CFO and COO during the company's last two decades.*



*Northrop Grumman  
 Congratulates  
 David W. Thompson  
 2019 National Space  
 Trophy Recipient*

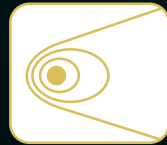
All of your colleagues are proud to honor a true visionary who helped shape the space industry and "bring the benefits of space down to earth."



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**NORTHROP GRUMMAN**

NATIONAL SPACE TROPHY PRESENTER  
**FRANK CULBERTSON**



**RNASA**

The RNASA Foundation is pleased to welcome retired NASA Astronaut and US Navy Captain, Frank Culbertson as 2019's NST Presenter.

Born and raised in South Carolina, Culbertson earned his Bachelor of Science degree in Aerospace Engineering from the United States Naval Academy in 1971. After serving aboard the USS Fox (DLG-33) off the coast of Vietnam, he began flight training in 1972, receiving his wings as a Naval Aviator in 1973. He spent the next 11 years logging over 450 successful carrier landings aboard various ships, graduating with distinction from the US Naval Test Pilot School, and eventually accumulating over 8900 hours in 60 different types of aircraft. He remains an active pilot.



NASA Photo

Culbertson was selected for the astronaut training program in 1984, beginning his training in Houston, and supporting various shuttle missions on the ground. In 1986, he reported to Washington DC where he worked with NASA, the Presidential Commission, and the U.S. Congress on the Challenger accident investigation. He went on to serve as the lead astronaut at the Shuttle Avionics Integration Laboratory (SAIL) and lead CAPCOM for seven missions.

Culbertson's turn in space came in 1990 when he flew aboard Atlantis on STS-38. The five-day mission conducted Department of Defense operations and was the first shuttle to land in Florida since 1985. His second mission came in 1993 as Commander of Discovery on STS-51. The crew successfully deployed two satellites, then retrieved one of them, and conducted an EVA to evaluate Hubble Satellite repair tools, ending the mission with the first night landing at Kennedy Space Center.

Between 1994 and 1998 Frank served as Manager of the Shuttle-Mir Program in JSC's Russian Projects Office, negotiating directly with the Russian Space Agency. He oversaw nine Shuttle docking missions to the Russian Space Station Mir, and the operations of seven US astronauts, who spent over 30 cumulative months on the Russian station. Culbertson received a Rotary Stellar Award in 1997 for his leadership.

Culbertson served as commander of the ISS during his third and final mission in 2001 launching aboard Discovery on STS-105. Frank's watched the terrible events of September 11, 2001 unfold from his vantage point 254 miles above New York City and Washington. He poignantly remarked in a letter dated September 13 "It's horrible to see smoke pouring from wounds in your own country from such a fantastic vantage point." The crew spent 129 days living and working on the ISS.

Frank retired from NASA in 2002 and went on to serve as Senior Vice-President for SAIC in Houston and later as a Senior Vice-President for Orbital Sciences, eventually becoming President of the Space Systems Group, serving through two mergers.

Culbertson has received numerous awards, including the Legion of Merit, the Distinguished Flying Cross, the NASA Outstanding Leadership Medal, NASA Space Flight Medals, the Gagarin Gold Medal, and the Navy Commendation Medal.



## PAST NST RECIPIENTS



- 1987 - Maxime Faget
- 1988 - Don Fuqua
- 1989 - Richard Truly
- 1990 - Lew Allen
- 1991 - Aaron Cohen
- 1992 - Norman R. Augustine
- 1993 - Thomas Stafford
- 1994 - Edward C. Aldridge
- 1995 - Daniel Goldin
- 1996 - Robert L. Crippen
- 1997 - George W.S. Abbey
- 1998 - George H.W. Bush
- 1999 - Christopher C. Kraft
- 2000 - John W. Young
- 2001 - Tommy Holloway
- 2002 - George E. Mueller
- 2003 - Roy S. Estess

- 2004 - Neil A. Armstrong
- 2005 - Glynn S. Lunney
- 2006 - Eileen Collins
- 2007 - Eugene F. Kranz
- 2008 - Eugene Cernan
- 2009 - Michael D. Griffin
- 2010 - Bill Gerstenmaier
- 2011 - Kevin P. Chilton
- 2012 - Michael L. Coats
- 2013 - Kay Bailey Hutchison
- 2014 - Charles F. Bolden
- 2015 - Robert D. Cabana
- 2016 - Charles Elachi
- 2017 - John Grunsfeld
- 2018 - Robert Lightfoot

## BOARD OF ADVISORS

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- Eileen M. Collins
- Richard O. Covey
- Robert Crippen
- Frank L. Culbertson
- Ronald D. Dittmore

- Charles Elachi
- John W. Elbon
- Joe H. Engle
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- Donald Fuqua
- William H. Gerstenmaier
- Mark Geyer
- Gerald D. Griffin
- Michael D. Griffin
- John M. Grunsfeld
- Jim Hartz
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- Jorge Hernandez
- Richard J. Hieb
- Tommy W. Holloway
- Neil B. Hutchinson
- Kay Bailey Hutchison
- Sandra G. Johnson
- John C. Karas

- Janet L. Kavandi
- Joseph P. Kerwin
- Eugene F. Kranz
- Debbie Kropp
- Robert Lightfoot
- Glynn S. Lunney
- Sandra H. Magnus
- Todd A. May
- David D. McBride
- Vernon McDonald
- Robert E. Meyerson
- Lon Miller
- Bob Mitchell
- Mark E. Mulqueen
- George C. Nield
- Miles O'Brien
- Ellen Ochoa
- William W. Parsons
- J. Gregory Pavlovich
- Thomas B. Pickens
- William F. Readdy

- Kenneth S. Reightler
- Harrison H. Schmitt
- Christopher J. Scolese
- Brewster H. Shaw
- Mark N. Sirangelo
- Thomas P. Stafford
- William A. Staples
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- Richard D. Stephens
- Michael Suffredini
- Edward M. Swallow
- Richard H. Truly
- William Vantine
- Elizabeth Wagner
- George Whitesides



FEATURED SPEAKER  
**JIM BRIDENSTINE**



The RNASA Foundation is pleased to welcome NASA's 13th Administrator, Jim Bridenstine as tonight's featured speaker.

Bridenstine's career in federal service began in 1998 in the U.S. Navy, where he accrued over 1,900 flight hours on E-2C Hawkeye's and F-18 Hornets. He flew combat missions in Iraq and Afghanistan and later flew at the Naval Strike and Air Warfare Center, the parent command to TOPGUN. He was promoted to Lieutenant Commander in 2012 while flying missions in Central and South America.

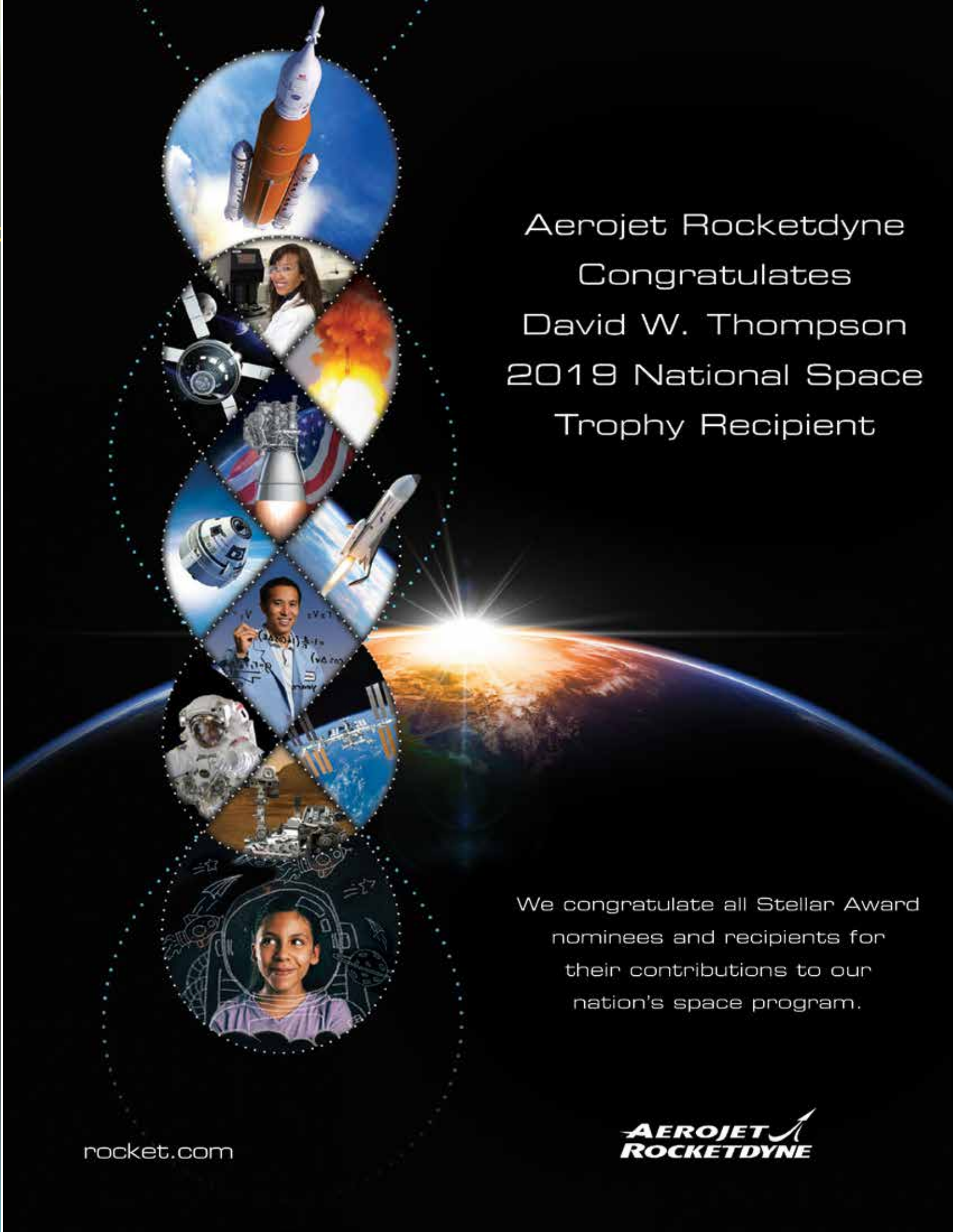


NASA Photo

Following active duty, Bridenstine moved to Oklahoma where he served as the Executive Director of the Tulsa Air and Space Museum & Planetarium and was later elected to represent Oklahoma's First Congressional District in the U.S. House of Representatives. It was during this time in the US House that Bridenstine served on the Armed Services Committee and the Science, Space and Technology Committee. In 2016, he introduced the American Space Renaissance Act, a bill he described as a repository for advancing US space interests.

Bridenstine was confirmed as NASA's thirteenth Administrator on April 19, 2018. Named as one of five game changers in the world of space by SpaceNews in 2015, Bridenstine is focused on continuing to lead the world in space exploration. He is a vocal advocate of building sustainable, reusable infrastructure on the Moon by way of the SLS rocket and its accompanying crew capsule, Orion. True to form, the vehicle will be the most powerful rocket ever constructed since its predecessor, Saturn V launched Neil, Buzz, and Michael to the Moon 50 years ago this July. Looking further into the future, Bridenstine has his sights set on Gateway, a command module that will orbit the Moon and allow NASA a unique opportunity to research the long term effects of deep space on the human body before embarking on a manned mission to Mars. As for low-Earth orbit, Bridenstine is already looking to private companies such as Boeing and SpaceX for taxi service to and from the ISS. While his main focus is centered on exploration where no commercial market exists, he recognizes the integral role of privatization in global communication, weather forecasting, fiber optics and medical research.

Bridenstine earned a Bachelor of Arts degree from Rice University in 1998, and an MBA from Cornell University in 2009. He has three children with his wife, Michelle.



Aerjet Rocketdyne  
Congratulates  
David W. Thompson  
2019 National Space  
Trophy Recipient

We congratulate all Stellar Award  
nominees and recipients for  
their contributions to our  
nation's space program.



HONORED GUEST  
**WILLIAM SHATNER**



**RNASA**

The RNASA Foundation is pleased to welcome William Shatner as tonight's honored guest and recipient of the 2018 Space Communicator Award.

Long known for his role as Captain James Kirk of Star Trek's USS Enterprise, Shatner has inspired generations of young explorers. His role as Captain Kirk spanned nearly three decades, first on the 1960's NBC television series and, later, in seven feature films between 1979-1994.



Shatner Photo

Bob Jacobs, NASA Deputy Associate Administrator for Communications, who nominated Shatner in 2018 said, "Many past, present, and future NASA astronauts, engineers and scientists admit their inspiration for pursuing their particular careers was because of the adventures over the past five decades of Capt. James T. Kirk and the crew of the starship U.S.S. Enterprise."

Shatner has long been an advocate of international space exploration efforts. In recent years, he has supported numerous NASA outreach activities to educate the public and to inspire a new generation of explorers.

In 2011, Shatner donated his time in honor of Space Shuttle Discovery's final flight. He recreated the famous Star Trek introduction for the crew of STS-133 saying, "These have been the voyages of the space shuttle Discovery. Her 30-year mission: to seek out new science, to build new outposts, to bring nations together in the final frontier, to boldly go and do what no spacecraft has done before." He also narrated the space shuttle 30th anniversary documentary.

In 2012, Shatner narrated the Grand Entrance to Mars presentation which guided viewers through Curiosity's complex landing on the Martian surface. In order to make a successful soft landing, the Curiosity spacecraft had seven minutes to slow down from 13,000 mph as it rocketed through the atmosphere. It was appropriately dubbed the "seven minutes of terror".

He continued his support in the fall of 2017 by sending a message to the Voyager spacecraft on its 40th anniversary. It read "We offer friendship across the stars. You are not alone." Launched in 1977, the Voyager probe is beaming back data from the furthest reaches of our solar system. As of January 2018, Voyager was 13 billion miles from Earth.

Shatner was born in 1931 in Montreal, Quebec, Canada. He graduated from McGill University in 1952 with a Bachelor of Commerce degree. His career began in 1954 when he performed at the Stratford Shakespeare Festival in Stratford, Ontario in productions such as Sophocles' Oedipus Rex, and Henry V. Shatner has three daughters and lives in Southern California with his wife, Elizabeth.



HONORED GUEST PRESENTER  
**BOB JACOBS**



**RNASA**

Jacobs is a senior NASA spokesperson and serves as the deputy assistant administrator for the Office of Communications. He is responsible for leading and executing many of the agency's public outreach activities and his career and academic studies include extensive experience in leadership, organizational change, and crisis communications.



NASA Photo

An Emmy Award winning journalist and strategic communicator, he has been an innovator in the use of emerging technologies to better engage the public in NASA's compelling stories of exploration and discovery. He launched the agency's social media use in Nov. 2008 and is also responsible for the agency's primary internet homepage and NASA Television. He pushes for nontraditional ways to tell the agency's story, such as the popular NASA shoes recently released by Vans and Nike, American Girl's 2018 Girl of the Year, and feature films such as First Man, Hidden Figures and the Martian.

A native of Nashville, Tenn., he earned a bachelor's degree from Middle Tennessee State University, Murfreesboro, and a master's degree from Seton Hall University, South Orange, N.J. In short, he is a space communications nerd.

**David Thompson**  
Congratulations on being selected as the 2019 National Space Trophy recipient. We thank you for your outstanding leadership and dedication to the advancement of space exploration.

We would also like to congratulate all of the 2019 Stellar award recipients.

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**MORGAN BRENNAN**



**RNASA**

The RNASA Foundation is please to welcome CNBC Reporter Morgan Brennan as tonight's Emcee.

Prior to joining CNBC in 2013, Morgan spent four years writing and reporting for Forbes Media, including Forbes Life Magazine and Forbes.com. She covered topics ranging business and finance to real estate and development. She quickly transitioned to roles both in front of and behind the camera, serving as anchor, reporter, and producer at Forbes Video Network. She was a regular guest on shows such as "Forbes on Fox" and MSNBC's "Weekends with Alex Witt". Her report on Sam Zell, Equity Group Investments chairman, was featured on the cover of the 2013 Forbes 400 issue.



CNBC Photo

These days, Morgan can be found co-anchoring CNBC's "Squawk Alley" alongside Carl Quintanilla and John Fortt. The show, which airs weekdays from the floor of the New York Stock Exchange, covers financial news with a focus on technology. Brennan's harried days begin around 3:30am each morning as she prepares for the momentum of a live, ever changing broadcast. Prior to her assignment as co-host, Morgan was a general assignment reporter based in Englewood Cliffs, New Jersey where she covered many space related stories including NASA's plans to colonize the Moon and Insight's Mars landing in 2018. She is a familiar face at space symposiums where she has established herself as a leader in the coverage of the evolving commercial space industry.

Brennan graduated summa cum laude from New York University in 2009 where she earned a Bachelor of Arts in Anthropology and Media Studies. Her interest in the journalism took hold in 2008 when she interned at Newsweek International as a fact-checker and contributing writer. She and her husband Matt live in New York and have one daughter together.

WELCOME ADDRESS  
**RON BURTON**

Ron Burton retired as president of the University of Oklahoma Foundation Inc. in 2007. He is a member of the Cleveland County, Oklahoma, and American Bar Associations and is admitted to practice in Oklahoma and before the U.S. Supreme Court. He is a founder and past president of the Norman Public School Foundation and founder and past board member of the Norman Community Foundation.



Rotary Int'l Photo

Burton has been a Rotarian since 1979 and has served as RI president; RI director; Foundation trustee and vice chair; RI Board Executive Committee member; RI president's aide; committee vice chair and chair; task force member; International Assembly group discussion leader, assistant moderator, and moderator; and district governor. A recipient of RI's Service Above Self Award, Burton also has received The Rotary Foundation's Distinguished Service Award and International Service Award for a Polio-Free World. He and his wife, Jetta, are Paul Harris Fellows, Benefactors, and members of the Arch Klumph Society and Bequest Society of The Rotary Foundation.



The Coalition for Deep Space Exploration salutes David W. Thompson for being a pioneer and champion of the commercialization of space. His innovation, creativity and commitment advanced both the private space industry and our nation's critical aerospace and defense programs.

Thank you, Dave.

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**MEI Technologies, Inc.**

Congratulates

**Mr. David Thompson**  
Retired President and CEO of Orbital ATK

**2019 National Space Trophy Recipient**

MEI Technologies, Inc. (MEIT) also commends all of the Stellar Award nominees on their dedication and contributions to our nation's space program.



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OMEGA WATCH PRESENTER  
**THOMAS STAFFORD**



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, Stafford graduated from the U.S. Naval Academy in 1952 and became an Air 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.



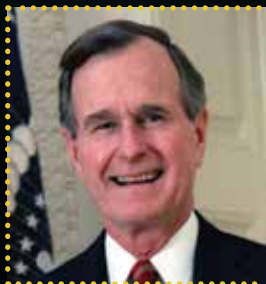
RNASA Photo

IN MEMORY OF  
**GEORGE H.W. BUSH**



The RNASA Foundation would like to recognize George H.W. Bush, our nation's 41st President and winner of the 1998 NST, for his contributions to the American space program.

Bush's life of service began in 1942 when he joined the US Navy immediately following high school. Stationed aboard the *USS San Jacinto*, Bush was one of the Navy's youngest commissioned pilots at that time. He flew 58 combat missions and was awarded the Distinguished Flying Cross and three Air Medals.



Presidential Portrait-1989

Bush's career in politics began in 1963 when he was elected chairman of the Harris County, Texas Republican Party. In 1966, Bush became the first House Republican to represent his Houston district. Over the next 10 years he went on to serve as Ambassador to the United Nations, Chairman of the Republican National Committee, Director of the CIA and Chief of the US Liaison Office in China.

Bush's time at 1600 Pennsylvania Avenue began in 1981 when he served as Ronald Reagan's Vice-President for two terms before going on to win the Presidency in 1988. Bush was a strong supporter of NASA and worked diligently to establish a long-term vision, maintain funding and make meaningful, lasting appointments.

Bush left office in 1993 and moved to Houston with his beloved wife, Barbara. They were fixtures of their community for 25 years until their passing six months apart in 2018.



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Technologies That Matter.**

Congratulations to NASA for more than 50 years of historic achievement and **Mr. David Thompson, 2019 National Space Trophy winner.**

We salute all the 2019 Stellar Award nominees for their dedication to space exploration. We thank RNASA for honoring these heroes of the American space program.

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STELLAR PRESENTER  
**MARK VANDE HEI**



The RNASA Foundation is pleased to welcome Astronaut Mark Vande Hei as a stellar awards presenter.

Vande Hei earned his Bachelor of Science in Physics from Saint John's University in 1989 and a Master of Science in Applied Physics from Stanford University in 1999. Vande Hei's military service began in 1989 when he was commissioned by the U.S. Army following graduation from St. John's. Stationed in Italy in the 325th Infantry Regiment, Mark served as a combat engineer platoon leader, heavy engineer platoon leader, and a cold-weather-training officer. He later moved to Fort Carson, Colorado where he commanded C Company, 4th Engineer Battalion. In 1999, Mark transitioned to the classroom where he served as an assistant professor in the Department of Physics at the U.S. Military Academy, West Point for four years. In 2003, he reported to the Army's 1st Space Battalion at Peterson Air Force Base where he was a space support team leader. This role led him to a 12-month deployment to Iraq in support of Operation Iraqi Freedom. He retired from the military in 2016 as a Colonel.



NASA Photo

Mark reported to the Johnson Space Center in 2006 where he served as the ISS CAPCOM for five expeditions. He was selected as one of nine members of NASA's 20th astronaut class in 2009. He served as Flight Director during his maiden flight aboard Expedition 53/54 in September 2017. During his 168-day mission, Mark competed four space walks and was part of the first long-term increase in US crew size, enabling NASA to log a record-setting 100 hours of research time. Prior to Expedition 53/54, Mark was selected as an aquanaut on the NEEMO 18 undersea exploration mission. The 8-day mission was conducted aboard Aquarius, the world's only undersea laboratory located 3 miles off the coast of Key Largo, Florida. Mark conducted studies ranging from the effects of isolation on crewmembers to heart rate monitoring using Bluetooth technology.

Vande Hei has been honored with many awards including the Legion of Merit; Joint Service Commendation Medal; Joint Meritorious Unit Award; Southwest Asia Service Medal; and NASA's Achievement Medal. He is a member of the Veterans of Foreign Wars of the United States, Member of Sigma Pi Sigma, the physics honor society. He and his wife Julie are the proud parents to two children. He enjoys exercise, camping, windsurfing and reading

STELLAR PRESENTER  
**DR. SHANNON WALKER**



The RNASA Foundation is pleased to welcome Dr. Shannon Walker as a stellar awards presenter.

A native Houstonian, Dr. Walker earned her Bachelor of Arts degree in Physics, a Master of Science and a Doctorate of Philosophy in Space Physics from Rice University. She joined NASA's civil service in 1995 where she worked on robotics integration for the ISS. In 1999, she moved to Moscow, Russia for one year where she worked on avionics integration and on-orbit integrated problem solving for the ISS. After returning to Houston, she served as the technical lead for the ISS MER and Deputy Manager of the On-Orbit Engineering Office.



NASA Photo

Shannon was selected as part of the 19th Astronaut class in 2004. After her rigorous training which included extensive physiological tests, T-38 flights and survival instruction, she served as a support astronaut for Expedition 14 and CAPCOM for STS-118.

In 2007, Dr. Walker began training for a long-duration ISS flight and was selected to serve as Flight Engineer on Expedition 24/25 in 2010. During her 163-day mission, Dr. Walker worked on over 130 microgravity experiments and was the robotics operator during three spacewalks.

Following her spaceflight, Dr. Walker has served as the Deputy of the Soyuz and Safety Branches and the Chief of the ISS Operations Branch. In 2011, she commanded the NEEMO 15 mission aboard Aquarius, the world's only underwater laboratory located 3 miles off the coast of Key Largo, Florida. Shannon was also a member of the 2014-2015 Antarctic Search for Meteorites (ANSMET) expedition in which she joined two mountaineers and six planetary scientists on a research mission to locate and study meteorites.

Dr. Walker is the recipient of the Goethe Institute Scholarship for Study Abroad, Rice Fellowship for Graduate Study, Rockwell Sustained Superior Performance Award; seven Group Achievement Awards for work in the International Space Station Program; three Going the Extra Mile Awards for work in the International Space Station Program; and a Space Flight Awareness Award for contributions to the International Space Station Program. She is a member of the Aircraft Owners and Pilots Association (AOPA) and The Ninety-Nines International Organization of Women Pilots. She and her husband astronaut Andy Thomas live in Houston. She enjoys cooking, running, weight training, flying, camping and travel.



# AGENDA

Friday, April 26, 2019  
Houston Hyatt Regency Imperial Ballroom

## 6:00 RECEPTION

**7:00 WELCOME**  
Rodolfo González, Chairman, RNASA Foundation  
Ron Burton, Past President of Rotary International

**PRESENTATION OF THE COLORS**  
Clear Brook High School, Clear Creek ISD  
Cadets from 3rd Battalion JROTC: Victoria Sanchez, Jacob Mendoza, Andrew Pinchbeck, Aysel Villarreal  
Escorted by Corey Cato, First Sergeant (Retired)

**NATIONAL ANTHEM**  
Clear Creek High School Chamber Singers Solo Quartet

**INVOCATION**  
Reverend Tracye Ruffin, Retired Hospice Chaplain, Disciples of Christ-Christian Church

## DINNER

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

**MASTER OF CEREMONIES**  
Morgan Brennan, CNBC Reporter

**FEATURED SPEAKER**  
Jim Bridenstine, NASA Administrator

**HONORED GUEST, WILLIAM SHATNER**  
Introduction of William Shatner by Bob Jacobs, NASA HQ

**PRESENTATION OF STELLAR AWARDS**  
Mark Vande Hei and Dr. Shannon Walker, NASA Astronauts

**PRESENTATION OF NATIONAL SPACE TROPHY TO MR. DAVID THOMPSON**  
Frank Culbertson, Northrop Grumman

**PRESENTATION OF THE OMEGA WATCH**  
Thomas Stafford

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# RNASA FOUNDATION



All Rows L to R:  
 Second Row: John Branch, Gary Johnson, Rodolfo Gonzalez (Chairman), Jayant Ramakrishnan, Bill Taylor (Vice Chairman)  
 First Row: Bob Wren, Geoff Atwater (Treasurer), Delia Stephens, Maria Montemayor, Irene Chan, Duane Ross  
 Not Pictured: Nancy Anderson (Space Center Rotary President), Shelley Baccus, Jeff Carr, Stephanie Castillo, Mary Alys Cherry, Lindsey Cousins, Jenny Devolites, Steven Fredrickson, Susan Gomez, Marcus Havican, Mike Hernandez, Zach Holliday, Rich Jackson, Tim Kropp, Veronica McGregor, Frank Perez, Branelle Rodriguez, Celina Rogers, Linda Singleton, L. Jean Walker (Secretary), Lori Wheaton.

The Rotary National Award for Space Achievement (RNA-SA) 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 7) 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 7) 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 heroes of the space program with Stellar Awards (pages 24-34) 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 21) and guests.

Excess funds remaining after event expenses are donated to space-related programs. Following the 2018 event, proceeds were donated to the NASA Aerospace Scholars Program which 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.



RNASA

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# STELLAR AWARDS PROGRAM

Each fall, the RNASA Foundation solicits Stellar Award nominations of space industry workers and teams deserving of special recognition. 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 Scott Tingle. 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 "heros of the space program." The winners are announced at the banquet where they receive a distinctive engraved marble trophy generously sponsored this year by Northrop Grumman.

## STELLAR AWARDS EVALUATION PANEL

**ARNOLD ALDRICH** is a member of the RNASA Board of Advisors who is serving his twelfth year on the Stellar Award Evaluation panel. Aldrich joined the Space Task Group at Langley Field in 1959 following graduation from Northeastern University. He served as Skylab deputy program manager; Apollo Spacecraft flight controller at the remote sites and mission control during Program Mercury, Gemini and Apollo; 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 was appointed Associate Administrator for Aeronautics and 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.

**Arnold Aldrich**  
RNASA Photo



**COLONEL EILEEN COLLINS, USAF (Ret.)** and former NASA astronaut, STS-63, STS-84, STS-93, and STS-114, is a member of the RNASA Board of Advisors who is serving her fifth year on the Stellar Awards Evaluation Panel. She was the recipient of the 2006 National Space Trophy and she received the award as NASA's first female Space Shuttle Pilot and Commander. Collins earned her associate's

**Eileen Collins**  
RNASA Photo



degree in math/science from Corning Community College in 1976, her BA in math and economics from Syracuse University in 1978, a Master of Science degree in operations research from Stanford University in 1986, and a Master of Arts degree in space systems management from Webster University in 1989. Following graduation, she was a T-38 instructor pilot and a C-141 commander and instructor. From 1986 to 1989, Collins taught math at the USAF Academy in Colorado and was a T-41 instructor. She graduated from the Air Force Test Pilot School at Edwards AFB in 1990 before her selection that year as a pilot astronaut.

**MICHAEL COATS** is a member of the RNASA Board of Advisors and is serving his fourth year on the Stellar Award Evaluation panel. The former astronaut and former NASA Johnson Space Center Director received the 2012 National Space Trophy. Coats received his B.S. degree from the Naval Academy in 1968 and went on to earn his pilot's wings the very next year. He flew 315 combat missions in Southeast Asia from the USS Kitty Hawk from 1970 to 1972. Following test pilot training in 1974, he was project officer and test pilot for A-7 aircraft until selection as a flight instructor at the U.S. Naval Test Pilot School in 1976. He was selected as an astronaut in 1978 and piloted STS 41D in 1984, the maiden flight of Discovery. He went on to command STS-29 and STS-39. Between 1991 and 2005, Coats worked for Loral Space Information Systems, Lockheed Martin Missiles and Space and Lockheed Martin Space Systems. He was the Director of JSC from 2005 until 2012. Under his leadership, JSC implemented over 80 partnerships and hosted summits and job fairs to help displaced workers. To help NASA attract and retain future leaders, Coats instituted the Program Project Management Development, the Space Systems Engineering Development, and the Project Leadership programs. He was inducted into the Astronaut Hall of Fame in 2007. He is now the proud full-time "Pops" to three adorable and perfect granddaughters.

**Michael Coats**  
RNASA Photo



**GENERAL KEVIN CHILTON** is a member of the RNASA Board of Advisors who is serving his fifth year on the Stellar Award Evaluation panel. He was the recipient of the 2011 National Space Trophy. A graduate of the U.S. Air Force (USAF) Pilot Training and Test Pilot Schools, Chilton holds a BS in engineering science from the USAF Academy and an MS in mechanical engineering from Columbia University. He was selected as an astronaut in 1987. Chilton piloted STS-49 and STS-59 and commanded STS-76 in 1996. He served as deputy program manager for the ISS until leaving NASA in 1998. From 2007 to 2011, he commanded the U.S. Strategic Command overseeing 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 CenturyLink Corporation.

**Kevin Chilton**  
RNASA Photo



## STELLAR LUNCHEON SPEAKER

Scott Tingle spoke at the stellar awards luncheon at the Clear Lake Hilton earlier today. Tingle was raised in Massachusetts where he earned a Bachelor of Science in Mechanical Engineering from Southeastern Massachusetts University. He went on to earn a Master of Science in Mechanical Engineering from Purdue. Captain Tingle was commissioned as a Naval officer in 1991 and has served aboard the USS Nimitz and USS Carl Vinson. He has accumulated more than 4,500 flight hours in 51 types of aircraft, 750 carrier arrestments and 54 combat missions. Tingle was selected as a member of NASA's 20th Astronaut class in July 2009. He served as the Flight Engineer for Expedition 54/55 which launched on December 17, 2017. During the 168-day mission, Tingle worked on hundreds of scientific experiments and dozens of educational events as part of NASA's Year of Education on Station. Scott and his wife Raynette have three children.

**Scott Tingle**  
NASA Photo



# EARLY CAREER

Samuel Anderson of Collins Aerospace - Exceptional technical leadership to advance additive manufacturing applications for safety and fracture-critical human space-flight hardware.

Zerar S. Baksh of The Boeing Company - Excellence in conducting system-safety hazard analyses and identifying hazards early in the design, therein leveraging the value of the contribution to the overall flight success of the SLS program.

Chelsea A. Bohannon of Aerojet Rocketdyne – Consistent, key leadership of numerous RL10 investigative teams, utilizing unique skills to mobilize resources, and keeping team members organized and focused on corrective solutions.



2018 Early Career Stellar Awardees, L to R: Shane Kimbrough (presenting), Leslie K. Padilla, Michael V. Nayak, Jennifer E. Matty, Elishabet Lato, Anton P. Kiriwas, Sam T. Hablitzel, Ian Fischer, John H. Burke, Alessa Makuch, Peggy Whitson (presenting), Daniel Rodgers (not pictured) (RNA SA Photo)

Gregory A. Bond of SAIC - Outstanding leadership, professional excellence, and technical contributions enhancing safe human spaceflight for years to come.

Kathleen S. Bonner of Northrop Grumman Innovation Systems - Outstanding leadership of Orion attitude control motor valve IPT development and qualification, and distinguished community service through STEM activities.

Ebony J. Bowens of The Boeing Company - Demonstrated leadership, technical accomplishments, and expertise leading the installation, operation, and integration of the International Space Station's new lithium ion batteries on-orbit.

Peter Carow of Oceaneering Space Systems - Outstanding technical knowledge, unwavering attention to detail, and exemplary work ethic in the development of the DARPA Robotic Servicing of Geosynchronous Satellites (RSGS) Tool Changer project.

Jason R. Carpenter of Sierra Nevada Corporation - Exceptional innovation and tenacity in applying new technologies to mission simulations, and creating a single tool that can certify program requirements and train operators in a true Test-Like-You-Fly scenario.

Timothy Chow of Aerojet Rocketdyne - Outstanding performance in providing materials and processing support to the RS-25 turbopump team.

1st Lt. Foster E. Davis of the United States Air Force - Outstanding technical leadership to resolve multiple launch vehicle anomalies and successfully launching National Security Space-priority payloads in support of warfighters across the globe.

Capt. Jessica M. Dixon Galbreath of the United States Air Force - Superior technical leadership of launch vehicle processing in direct support to the scientific exploration of Mars and National Security Space missions.

Zachary Dwyer of Northrop Grumman - Outstanding leadership of the successful operation of the Cygnus cargo vehicle.

Nicholas P. Fabry of Aerojet Rocketdyne - Outstanding design execution on the AR1 thrust chamber assembly design completion.

Capt. Sean M. Frederick of the United States Air Force - Successful development, delivery, and fielding of a classified, revolutionary capability for a multi-billion dollar initiative that is reshaping military satellite communications.

Thomas Gay of Collins Aerospace - Exceptional achievements in systems engineering and analyses resolving complex problems in support of the Crew Space Transportation, Orion, and the Universal Waste Management System programs.

Melissa Higgins of Jacobs - Outstanding contributions to Earth Science and to sharing NASA's Earth Science data with educators, students and the public.

Capt. Andrew R. Hilton of the United States Air Force - Outstanding achievements solving complex technical problems on space vehicles, leading to numerous successful satellite deliveries and GPS capabilities to billions of users worldwide.

Jibbie John of ARES Corporation - Outstanding service as the liaison to ISS Payload Developer customers, including facilitating access to JSC ISS Information Technology resources.

Kayla Lenzo of Lockheed Martin - Exceptional performance as the Orion Spacecraft Network Architect and Manager, strengthening the foundation for the exploration architecture and future buildup of NASA's Deep Space Gateway.

Jacob McGee of The Boeing Company - Exceptional dedication and perseverance in overcoming substantial obstacles to reestablish a certified supplier base that is competent and capable of executing critical SLS manufacturing processes.

Kara D. Parks of United Launch Alliance - Exceptional contributions to launch operations for the Delta IV launch site propulsion engineering team and the broader company.

David P. Reiniger of The Boeing Company - Outstanding contributions to human space flight programs, including guiding the SLS Green Run design certification processes that have contributed greatly to the development and implementation of safe and reliable human spaceflight programs.

Julianna Scheiman of SpaceX - Exceptional leadership of the Transiting Exoplanet Survey Satellite (TESS) and PAZ missions, and development of SpaceX contributions to emerging NASA deep space missions.

Brian M. Schwing of NASA Johnson Space Center - Outstanding innovation in the development of a new approach to crew display development for future human space flight missions.



Dr. Joseph Shoer of Lockheed Martin - Innovative leadership in adapting large program systems engineering and Assembly Test & Launch Operations (ATLO) practices to smaller missions, such as CubeSats, for emerging commercial space markets and government agencies.

Erin B. Voltz of The Boeing Company - Outstanding dedication and skill in analyzing the design and development of two critical space flight systems, the ISS Oxygen Generator Assembly and Starliner CST-100 Fluids Compatibility, while meeting program schedules and far exceeding expectations for an early-career engineer.

Dr. William Q. Walker of NASA Johnson Space Center - Exceptional technical achievements and leadership in supporting NASA's development of safer lithium ion battery systems.

Sarah K. Walsh of NASA Johnson Space Center - Outstanding performance as the project manager for significant Extravehicular Activity projects, including the High Performance EVA Glove and EMU Data Recorder.

William A. Watson of KBRWyle - Steadfast leadership and strong personal drive to make futuristic ideas a reality in space station operations.

1st Lt. Nathan P. Weiss of the United States Air Force - Outstanding technical leadership to resolve multiple launch vehicle anomalies, and successfully launching National Security Space-priority payloads in support of warfighters across the globe.

Neil Wells of United Launch Alliance - Exemplary technical expertise in strength analysis, driving development, design and mission success, including leadership of Vulcan Centaur booster development.

Cassie Wong of Northrop Grumman - Outstanding leadership and exemplary performance in leading the efforts to develop, test and operationally deploy the Cygnus Common Communications for Visiting Vehicles (C2V2) ISS communications system and other emerging space components.

Michael D. Wood of The Boeing Company - Outstanding leadership, technical ability and commitment to improving quality for human space flight programs, including significant contributions to the SLS green run testing.



2018 Mid Career Stellar Awardees, L to R: Peggy Whitson (presenting), Satish C. Reddy, Laura M. Lucier, William E. Green, Justin McFatter, Rocky E. Nelson, Mark W. Hilburger, Jerry Draper, Trevor M. DeVault, Robert M. Atkins, Lawrence M. Robertson, Shane Kimbrough (presenting) (RNASA Photo)

## MID CAREER

Mark Arend of Northrop Grumman Innovation Systems - Sustained excellence and technical leadership in the introduction of advanced capabilities for the Cygnus and Orion spacecraft.

Dr. Edward B. Bierhaus of Lockheed Martin - Outstanding contributions to the field of planetary science that successfully combine scientific research with sound engineering implementation, resulting in high-value science for the knowledge of all humankind.

Stephen W. Boggess of The Boeing Company - Outstanding contributions to U.S. human spaceflight program electrical power systems including on Space Shuttle, International Space Station, and Starliner CST-100 programs.

Thomas Byers of The Boeing Company - Exceptional leadership in executing 17 qualification tests for the Space Launch System vehicle, substantiating the structural and functional integrity of the vehicle.

Katherine Chen of ARES Corporation - Exemplary innovation, dedication and accomplishment in support of Orion Program strategic assessments, substantially improving MPCV program planning and mission success.

Timothy M. Cox of The Boeing Company - Outstanding leadership with Failure Mode and Effects Analyses and Critical Item Lists (FMEA/CIL's) over the years, identifying single failure points in design solutions, eliminating risk, and achieving failure tolerance for safe and reliable human spaceflight.

Martin R. Fraske of Leidos - Outstanding achievement in designing the first robotic compatible multi-layer insulation frame that was successfully utilized during the deployment of the pump fluid control system on ISS.

Marc A. Gibson of NASA Glenn Research Center - Outstanding leadership of the groundbreaking Kilopower Reactor Using Stirling Technology (KRUSTY) experiment,

paving a path for NASA space fission power systems.

Stephanie M. Gill of The Boeing Company - Outstanding technical excellence, leadership, and valued accomplishments contributing to the ISS program and ISS extra-vehicular activity mission success.

Thomas Guay of The Boeing Company - Outstanding accomplishment in delivery, setup and execution of eight propulsion development tests, setting the foundation for functional performance, and validating the design for the SLS Propulsion System.

Ehren B. Holt of Aerojet Rocketdyne - Outstanding leadership and structural evaluation support to successfully evolve additively manufactured RL10 engine components.

Matthew T. Jakubek of Aerojet Rocketdyne - Exceptional leadership of the successful development, qualification, and delivery of the CST-100 Starliner CM RCS monopropellant thrusters.

Christopher J. Johnson of NASA Johnson Space Center - Outstanding technical contributions to human space flight as the Capsule Parachute Assembly System (CPAS) Project Manager.

Timothy J. Lindsey of KBRWyle - Outstanding development and coordination in the field of astronaut EVA training and efficient EVA execution.

Elizabeth A. Medina of The Boeing Company - Outstanding leadership in the development of the thruster firing pulse train for the International Space Station Russian Segment motion control system.

Dr. Jennifer Mindock of KBRWyle - Exceptional contributions to the success of software and hardware operations in non-manned vehicle exploration projects, and leadership in systems engineering for human risk mitigation for spaceflight.



Eric W. Monda of United Launch Alliance - Outstanding contributions to developing new capabilities that significantly enhance ULA's ability to rapidly evolve and evaluate launch system capabilities.

Katrien Morgan of ARES Corporation - Dedication and exceptional support of Commercial Crew vehicle integration.

Kwaku B. Nornoo of Jacobs - Outstanding innovation, leadership and contribution to electrical and avionics system development and Human Spaceflight.

Jeremy L. Parr of NASA Kennedy Space Center - Exceptional engineering as lead design engineer for NASA's Exploration Ground Systems' Landing and Recovery, with solutions controlling recovery of the crew module and ensuring safety of flight crews.

Timothy P. Pepe of Lockheed Martin - Outstanding leadership associated with driving the successful delivery of hundreds of first-time development mechanisms and pyrotechnic devices for human spaceflight and the Orion Spacecraft Program.

Miguel A. Pereira of Sierra Nevada Corporation - Exceptional leadership, ingenuity, dedication and gumption in championing new technologies and processes that challenge traditional thinking to reduce program risks.

Dr. Daniel Polis of Sierra Nevada Corporation - Outstanding technical leadership in design and manufacturing of the Dream Chaser primary structures.

Norma A. Rissmiller of Oceaneering Space Systems - Outstanding technical knowledge, superb attention to detail and exemplary management in contributing to the development of human spaceflight hardware.

Amber E. Rist of The Boeing Company - Outstanding leadership for the Next Space Technologies for Exploration Partnerships Phase 2 (NextSTEP-2) project, demonstrating broad technical knowledge and project management to develop the technologies needed to take humans beyond low earth orbit to Mars.

Michael Schrader of Northrop Grumman Innovation Systems - Outstanding leadership in providing flawless orbit insertion of the fastest human-made object, the Parker Solar Probe, with the historic STAR 48BV rocket motor.

Matthew P. Scudder of The Boeing Company - Demonstrated leadership, technical accomplishments, and expertise supporting the International Space Station electrical power subsystem.

Laura A. Shaw of NASA Johnson Space Center - Exemplary development, certification, and demonstration of innovative hardware and flight techniques to fully utilize the International Space Station as an engineering testbed for Exploration-class Environmental Control and Life Support Systems.

Lt. Col. Jason T. Shibata of the United States Air Force - Outstanding contributions to advancing military space, leading to successful operations and delivery of GPS to billions of users worldwide.

David Shindo of NASA Johnson Space Center - Exemplary, innovative, and extensive contributions to NASA's human space flight programs, ensuring mission success and safety on ISS, Orion, and Gateway through steadfast pursuit of excellence in the discipline of materials and processes.

Todd O. Sullivan of KBRWyle - Exceptional knowledge and expertise in the field of materials science applied to aerospace and other industries.

Long H. Tran of CACI, Inc. - Outstanding contributions developing the Ascent Abort 2 (AA-2) simulation used to test the flight software and flight hardware, and also to prepare flight controllers for the Orion AA-2 Abort Test.

Sean Tully of Northrop Grumman - Exceptional spacecraft systems engineering skills and leadership in evolving and greatly enhancing the capabilities of the Cygnus ISS Cargo resupply vehicle.

Nathan J. Vassberg of NASA Johnson Space Center - Outstanding sustained assurance of crew safety for several human spaceflight programs.

Karen M. Waltzer of The Boeing Company - Outstanding leadership of the International Space Station Avionics and Software Data Integration Team, providing updated command and telemetry capabilities in support of US crewed vehicle integration.

Angela Young of Lockheed Martin - Engineering excellence in innovative special tooling designs that improve workflow for spacecraft manufacturing, production and transportation operations.

## LATE CAREER

Jama P. Barrera of MRI Technologies - Outstanding support of human spaceflight, including STS and ISS program integration and coordination in the areas of Extravehicular Activity (EVA) and ISS assembly and maintenance support.

John E. Bedard of Collins Aerospace - Exemplary success in space hardware development, advocacy of commonality of components and process improvement, and effective leadership style.

Eugenia Bopp of KBRWyle - Exemplary leadership and outstanding contributions over a career dedicated to the protection and enhancement of the health and safety of humans in space.

Stanley A. Bouslog of NASA Johnson Space Center - Exceptional leadership and technical contributions to NASA's aerothermodynamics and thermal protection system communities, leading to success of the Space Shuttle, Orion and advanced TPS development efforts.

Daniel Cap of Aerojet Rocketdyne - Outstanding design leadership for the AR1 main injector and selective laser melting.

Jeffrey W. Coots of The Boeing Company - Successful leadership of over 1000 development, qualification and certification tests within Human Space Flight programs, resulting in certified space modules and vehicles for exploration and research.

Paula R. Curran of MRI Technologies - Exemplary responsiveness and knowledge of the Engineering Review Boards supporting Orion, facilitating successful meeting schedul-

ing that is praised by the Program, International Partners, and the NASA customer.

Karen J. Dahlman of Jacobs - Distinguished contracts career that enhanced the effectiveness of NASA's programs through procurement approaches employing an innovative blend of project management, acquisition strategies, and requirements definition to achieve quality, efficiency, and compliance.

Thomas S. Davis of Collins Aerospace - Pioneering expertise and significant knowledge of complex component manufacturability resulting in recognition as the ISS expert in numerous program areas, including the heat exchangers on the Active Thermal Cooling System, the Metal Oxide Regenerators for the Extravehicular Mobility Unit, the Pump Flow and Control Subassembly, and the Water Processor Assembly.

Edward K. Fein of NASA Johnson Space Center - Exceptional service and personal dedication, with impacts that are widely recognized as important contributions to NASA's human spaceflight and technology transfer missions.

Phil Flugstad of Aerojet Rocketdyne - Outstanding design leadership and execution on the Orion Crew Module Reaction Control System.

William M. Foster of KBRWyle - Outstanding leadership and technical excellence as an International Space Station Mission Control Center (MCC) Ground Control (GC) Flight Controller.



Thomas H. Franssen of The Boeing Company - Exceptional contributions to International Space Station development, sustainment and technological advancement in support of human space exploration, including leadership of battery programs ensuring the longevity of NASA's mission in low Earth orbit.

Joseph H. Frisbee of KBRWyle - Exceptional and long history of providing unique and groundbreaking analyses in the field of orbital debris risk characterization.

James M. Gann of The Boeing Company - Outstanding accomplishment and selfless contributions to 6 space station elements, 10 satellites, the most powerful launch vehicle, parts inventory planning, and management of more than \$1 billion of supplier manufacturing contracts in the space industry.

Dr. Tushar K. Ghosh of CACI, Inc. - Critical spacecraft dynamics support to the U.S. human spaceflight program for over 30 years.

Dr. Louis Ghosn of NASA Glenn Research Center - Exceptional knowledge and expertise in the fields of structural and fracture mechanics, contributing to the success of numerous NASA missions.

Jon P. Haas of NASA Langley Research Center - Outstanding technical leadership of NASA Engineering and Safety Center's frangible joint modeling and data analysis.

Wanda S. Hobley of NASA Johnson Space Center - Distinguished career advancing human spaceflight, leading by example, and focusing on getting the tough jobs done instead of caring about who gets the credit.

William A. Johns of Lockheed Martin - Extraordinary excellence and innovation in space exploration mission success.

Peter W. Keilich of Collins Aerospace - Exemplary career advancing technology and furthering NASA's critical interests in specialized coatings, lubricants, and manufacturing processes affecting human space flight missions and operations on the Shuttle, ISS, Orion, and Crew Transportation System programs.

William H. Lilly of SAIC - Outstanding success maintaining and managing the Quality Assurance inspection function at the NASA Johnson Space Center, contributing to the success of every major NASA human spaceflight program for the past 38 years, as well as future human spaceflight endeavors.

William D. Manha of Jacobs - Exemplary life-long career as a pressure system safety expert, enhancing the ability to perform exploration and science activities in space.

Sandra A. Massey of NASA Kennedy Space Center - Exceptional dedication, technical excellence, and pioneering spirit in advancing reimbursable financial management for commercial and government partnerships vital to our future in space exploration.

Frederico Merheb of The Boeing Company - Outstanding technical leadership in design, testing and troubleshooting of purge, vent, and hazardous gas (PV&HG) detections systems, influencing numerous past, present, and future space vehicles including SSP Orbiter, SLS Core Stage, SLS Exploration Upper Stage, and Boeing's Phantom Express.

Daniel H. Meyer of Aerojet Rocketdyne - Exceptional technical leadership in design, development, qualification, production, and flight operations in the solid rocket motor industry.

Susan M. Motil of NASA Glenn Research Center - Exceptional leadership, planning, and execution of the European Service Module design and delivery.

Kevin A. Mutz of The Boeing Company - Exemplary leadership of the International Space Station Command & Data Handling Team, enabling the team to achieve major goals while connecting the work to ISS mission success.

Dr. Stephen F. Palopoli of Northrop Grumman - Unparalleled dedicated support of propellants and propellant development for space exploration mission requirements.

David W. Pressler of The Boeing Company - Outstanding technical leadership of the International Space Station Communications and Tracking Team's Ku and S-Bands subsystems, ensuring mission success.

Amin Rezapour of NASA Johnson Space Center - Superb leadership of the NASA Spacecraft team in the resolution of issues related to the SpaceX Dragon Spacecraft.

Dr. Scott M. Smith of NASA Johnson Space Center - Exceptional leadership, dedication and innovative contributions to the field of nutritional biochemistry in spaceflight.

Gary F. Stewart of Collins Aerospace - Exceptional dedication, hard work, and technical excellence in testing and verification of new designs of complex flight hardware supporting NASA and Navy space programs.

Aubrey Stewart of The Boeing Company - Invaluable contributions and leadership in the production of multiple space vehicles in support of the advancement of America's space programs.

Brian Sutter of Lockheed Martin - Outstanding technical expertise in space orbital mechanics and leadership of the design, development and implementation for NASA's planetary missions.

Bobbie Gail Swan of NASA Johnson Space Center - Outstanding leadership to NASA and human spaceflight programs which have significantly advanced the cause of human spaceflight.

Sagar N. Vidyasagar of Leidos - Exceptional accomplishment in designing a passive cold box using new technology to deliver valuable crew comfort items with temperature constraints to the International Space Station.

Jeffery Volosin of NASA Goddard Space Flight Center - Sheer determination and outstanding leadership of the TESS project, which resulted in the successful launch of TESS on April 18, 2018.

Don R. Wilbanks of Jacobs - Superior performance in the execution of structural testing supporting the Apollo, Apollo-Soyuz, Space Shuttle, ISS, and Orion Programs.

Kevin N. Wolf of The Boeing Company - Outstanding sustained contributions to ensure exceptional reliability, maintainability, and supportability of the International Space Station.

Frank Wood of ARES Corporation - Stellar contributions and leadership to the success of the ISS Program Information Technology Services team.



2018 Late Career Stellar Awardees, L to R: Shane Kimbrough (presenting), Frank Salazar, Susan B. Rainwater, Terry L. McGee, Curtis Johnson, Daryl Ethington, Susan L. Crippen, Wesley R. Bruner, Lee J. Archambault, David M. Wilt, Peggy Whitson (presenting) (RNASA Photo)



# STELLAR TEAM

**Aerojet Rocketdyne AR22 10X10 Test Team** - Exceptional performance throughout the AR22 test program sequence of ten tests in ten days at NASA's Stennis Space Center.

**AR-22 Engine Integrated Test Team of NASA Stennis Space Center** - Outstanding teamwork in safely and successfully conducting the AR-22 test project, which included an unprecedented 10 hot-fires in under 240 hours.

**Boeing SLS Engine Section Test Article Team** - Outstanding team accomplishment in successfully testing the first major structural qualification article for the Space Launch System, proving structural confidence in the design of the engine section of the world's most powerful rocket.

**C2V2 (NASA's Common Communications for Visiting Vehicles) of Northrop Grumman Innovation Systems** - Outstanding accomplishment in successful Common Communications for Visiting Vehicles (C2V2) Cygnus system development, integration and test, followed by flawless flight use on the OA-9 and NG-10 missions to the ISS.

**Capsule Parachute Assembly System Project Team of NASA Johnson Space Center** - Exemplary technical and management contributions in the design, development, test, evaluation, and certification of the Orion parachute system.

**Commercial Crew Program RD-180 Team of NASA Marshall Space Flight Center** - Outstanding achievement in certifying the RD-180 engine system for Human Space Flight for the Commercial Crew Program.



**2018 Stellar Team Awardees, L to R:** Peggy Whitson (presenting), Gary Ruff (Saffire Project Team), Sean O'Dell (Orion Spacecraft Test and Qualification Team), Greg Byrd (RS-25 Assembly Team), Jeremy Banik (Roll-Out Solar Array Team), Blake Watters (Orion Launch Orbit Abort System Propulsion Team), Kenneth Anderle (James Webb Space Telescope Test Team), Latasha Spear (Architecture and Plans Branch), Jessica Chang (Autonomous Flight Termination System Team), Shane Kimbrough (presenting) (RNASA Photo)



**CST-100 Starliner Crew Module Reaction Control System (CM RCS) Thruster Development Team of Aerojet Rocketdyne** - Successful development, qualification, and delivery of the CST-100 Starliner CM RCS monopropellant thrusters.

**Electronic Procedures Applications Software Suite Development Team of KBRWyle** - Outstanding accomplishment in successfully enabling a new paradigm of Mission Control to shape the beyond-LEO future of human space exploration.

**EXpedite the Processing of Experiments to Space Station On-Orbit Sustaining Engineering Team of The Boeing Company** - Exemplary and long-standing team contributions in support of science on-board the International Space Station, ensuring readiness when payload developers need it.

**Integrated Communications Unit Upgrade to Double International Space Station Downlink Speed Team of The Boeing Company** - Outstanding innovation in doubling the downlink data rate the ISS Integrated Communications Unit can deliver, increasing the capability of onboard research and the subsequent increase in data delivered to ground researchers.

**ISS Medical Accessory Kits Team (IMAK Team) of KBRWyle** - Excellence in expanding and ensuring the highest quality emergency medical care for the ISS Astronauts.

**Kilopower Fission Surface Reactor Team of NASA Glenn Research Center** - Successful kilopower demonstration of a fission surface power system that can enable new NASA missions.

**Launch Service Agreement Development Team of the United States Air Force** - Pioneering innovation and contributions to the multi-year Launch Service Agreement strategy, ensuring U.S. leadership in rocket propulsion and launch systems.

**Lockheed Martin InSight Launch & Landing Team** - Outstanding accomplishment in the successful design, development, launch and landing of InSight on Mars, marking Lockheed Martin's fourth Mars mission landing with NASA – an accomplishment no other company or nation has achieved.

**Lockheed Martin Orion European Service Module Integration & Delivery Team** - Successful delivery and integration of the European Service Module (ESM) for Orion's Exploration Mission-1 flight test to the far side of the Moon and back.

**METTS SLS Core Stage Structural Test Article Instrumentation Installation Team of Aerie Aerospace** - Exceptional dedication and craftsmanship for the successful instrumentation installation on NASA's Space Launch System (SLS) core stage structural test articles.

**Modeling, Analysis, Visualization, Robotics, and Integration Center (MAVRIC) Team of Booz Allen Hamilton** - Exceptional team accomplishments in performing configuration, viewing and clearance analysis for International Space Station and Gateway using advanced simulation technologies critical to mission success and human safety.

**NASA TechPort Team of ARES Corporation** - Outstanding accomplishment and teamwork in the creation, implementation and operation of NASA's Technology Portfolio application (TechPort) that has enhanced NASA technology communication across the world.

**Neutral Buoyancy Laboratory (NBL) Landing and Recovery (L&R) Team of Raytheon Company** - Exceptional operational and engineering contributions to NASA and Commercial Crew water-based recovery of Human Space Flight hardware.

**Neutron Star Interior Composition Explorer (NICER) Team of NASA Johnson Space Center** - Breakthrough science in astrophysics studying the interior of neutron stars and demonstrating the use of pulsars to navigate to distant objects in space.

**Oceanering's Robotic Tool Changer Development Team** - Outstanding technical excellence in design, build, and test of tool changers for on-orbit Robotic Satellite Servicing.

**Orion Ascent Abort-2 Crew Module and Separation Ring Project Team of NASA Johnson Space Center** - Outstanding efforts in accelerating the Orion AA-2 launch date by producing fully integrated flight elements, operations capabilities, and ground support.

Parker Solar Probe STAR 48BV Team of Northrop Grumman Innovation Systems - Flawless orbit insertion of the fastest human-made object, the Parker Solar Probe, with the historic STAR 48BV rocket motor.

Parker Solar Probe Thermal Control Team of Collins Aerospace - Exceptional dedication, technical excellence and breakthrough innovation by advancing a unique solar array cooling system that enables solar probes to operate in extreme thermal conditions and improve our understanding of the Sun.

RS-25 Main Combustion Chamber Team of Aerojet Rocketdyne - Outstanding team contributions to human spaceflight for the redesign of the RS-25 Main Combustion chamber, reducing cost and lead time.

Space Communications and Navigation (SCaN) Testbed Team of NASA Glenn Research Center - Exceptional advancement of software defined radio technology through the development, operation, and experiments of the Space Communications and Navigation Testbed aboard the International Space Station.

Space Medicine Operations Team of NASA Johnson Space Center - Outstanding accomplishment achieving mission success in the face of a serious and unique on-orbit medical condition.

SpaceX Production Team - Exceptional production efforts enabling rapid launch cadence and manufacturing innovations, including the first Falcon Heavy and Block 5 Falcon upgrades.

Transiting Exoplanet Survey Satellite Project Team of NASA Goddard Space Flight Center - Exceptional teamwork overcoming many challenges through sheer force and determination, leading to a successful TESS launch on April 18, 2018.

XR-5 Hall Current Thruster (HCT) Wear Test Team of Aerojet Rocketdyne - Continuing success of the Aerojet Rocketdyne XR-5 hall current thruster wear test.

# Deep Space is Calling

As the space industry goes beyond low earth orbit, Leidos helps the world's exploration and human spaceflight innovators answer the call with mission-minded information technology, engineering and science solutions.



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## NATIONAL SPACE TROPHY RECIPIENT DAVID W. THOMPSON

### HONORS AND AWARDS

Thompson is active in many foundations and has been honored with numerous awards. He is an Honorary Fellow of the American Institute of Aeronautics and Astronautics (AIAA), a Fellow of the American Astronautical Society and the Royal Aeronautical Society, and a member of the U.S. National Academy of Engineering. He was AIAA's President for the 2009-2010 year, and today serves as a member of the Boards of Trustees of Caltech, the Aerospace Corporation, the Carnegie Institution for Science, and the Hertz Foundation. He has been honored with the National Medal of Technology by President George H.W. Bush as well as Virginia's Industrialist of the Year and High-Technology Entrepreneur of the Year by Inc. Magazine, among many others.

### FAMILY MAN

Thompson is happily married to Catherine, his wife of more than 35 years, and is the proud father of Maggie, a Ph.D. candidate in astrophysics at the University of California. They live in Virginia and California with their two dogs, Booster and Rocket.



Orbital Photo

The Orbital ATK management team rings the bell to begin trading the new company's stock at the NYSE in 2014.



Thompson Photo

A proud Catherine and Dave congratulate Maggie upon her graduation from Princeton in 2016.



# C O N G R A T U L A T I O N S

to the 2019 Stellar Award Winners and this year's National Space Trophy Recipient:



## DAVID THOMPSON

2019 NATIONAL SPACE TROPHY RECIPIENT

We salute your many achievements and dedicated leadership that was instrumental in the development of air-launched rocket technology and the more than 1,000 satellites, launch vehicles, and space systems that have pioneered a new frontier within low-Earth orbit.

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