Federal Aviation Administration

15TH ANNUAL FAA COMMERCIAL SPACE TRANSPORTATION CONFERENCE

SPEAKERS

15-16 FEBRUARY 2012

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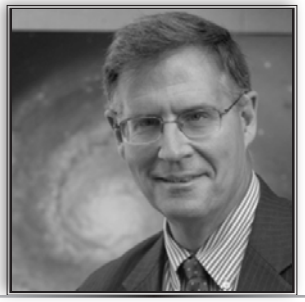
HQ-12-0163.INDD

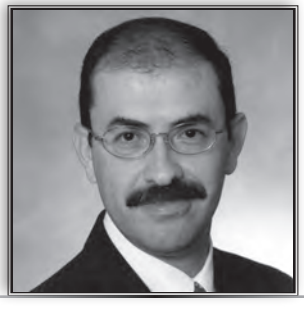


John R. Allen

Dr. John R. Allen serves as the Program Executive for Crew Health and Safety at NASA Headquarters, Washington DC, where he oversees the space medicine activities conducted at the Johnson Space Center, Houston, Texas. Dr. Allen received a B.A. in Speech Communication from the University of Maryland (1975), a M.A. in Audiology/Speech Pathology from The Catholic University of America (1977), and a Ph.D. in Audiology and Bioacoustics from Baylor College of Medicine (1996). Upon completion of his Master's degree, he worked for the Easter Seals Treatment Center in Rockville, Maryland as an audiologist and speech-language pathologist and received certification in both areas. He joined the US Air Force in 1980, serving as Chief, Audiology at Andrews AFB, Maryland, and at the Wiesbaden Medical Center, Germany, and as Chief, Otolaryngology Services at the Aeromedical Consultation Service, Brooks AFB, Texas, where he directed research and clinical services. Colonel Allen then served as the Commander of the Air Force DoD Medical Element at Andrews AFB. He was detailed by the Air Force to the Space Operations Mission Directorate (SOMD), NASA Headquarters from September 2001 to December 2005. He retired from the Air Force in February 2006 and was hired by NASA to continue on in his current capacity. He serves as a liaison between the Human Exploration and Operations Mission Directorate and the Office of Chief Health and Medical Officer. While on active duty he was a member of the DoD Hearing Conservation Working Group, and served for six years as Consultant to the Air Force Surgeon General in Audiology, Speech Pathology, and Hearing Conservation. He serves on the Committee On Space Weather under the National Space Weather Program Office of the Federal Coordinator for Meteorology. He served as a member of Space Environmental Gap Analysis Work Group, reporting OSTP and on the Research to Operations/Operations to Research work group, responding to the Decadal Strategy for Solar and Space Physics (Heliophysics).

Christine Anderson

Christine Anderson is the Executive Director of the New Mexico Spaceport Authority. She is responsible for the development and operation of the first purpose-built commercial spaceport--Spaceport America. She is a recently retired Air Force civilian with 30 years service. She was a member of the Senior Executive Service, the civilian equivalent of the military rank of General officer. Anderson was the founding Director of the Space Vehicles Directorate at the Air Force Research Laboratory, Kirtland Air Force Base, New Mexico. She also served as the Director of the Space Technology Directorate at the Air Force Phillips Laboratory at Kirtland, and as the Director of the Military Satellite Communications Joint Program Office at the Air Force Space and Missile Systems Center in Los Angeles where she directed the development, acquisition and execution of a $50 billion portfolio. She is a Fellow of the American Institute of Aeronautics and Astronautics. Anderson earned a B.S. in mathematics from the University of Maryland, and completed the National Security Leadership Program at Johns Hopkins University and the Senior Management in Government Program at Harvard University.



Melchor Antuñano

Dr. Melchor Antuñano was born in Mexico City and is a graduate of the National Autonomous University of Mexico School of Medicine. He completed the Residency Program in Aerospace Medicine at Wright State University in Dayton, Ohio. He was

awarded a post-doctoral research associateship by the U.S. National Research Council of the National Academy of Sciences at the USAF School of Aerospace Medicine in San Antonio, Texas. He is currently the Director of the FAA Civil Aerospace Medical Institute in Oklahoma City. He is credited with 568 professional presentations and invited lectures at national and international conferences in aerospace medicine in 37 countries, and with 57 scientific publications covering a variety of aerospace medicine topics. He is Past-President of the U.S. Aerospace Medical Association, the U.S. Space Medicine Association, and the Iberoamerican Association of Aerospace Medicine. He is a Fellow of the Aerospace Medical Association and the Aerospace Human Factors Association. He is Chancellor of the International Academy of Aviation and Space Medicine and member of the International Academy of Astronautics. He is Honorary Member of the Austrian, Brazilian, Colombian, Greek, Mexican, Slovanian and Turkish Societies of Aviation/Aerospace Medicine. He is a faculty member at Wright State University School of Medicine, the University of Texas Medical Branch in Galveston, and the National University of Colombia School of Medicine. Dr. Antuñano has received 72 awards and recognitions for his academic, administrative, and research achievements.

Craig E. Campbell

Craig Campbell joined Alaska Aerospace Corporation as President and Chief Operating Officer in February 2011. His background includes 35 years aerospace experience in the United States Air Force and Alaska Air National Guard, culminating as The Adjutant General, Alaska National Guard.

Craig is professionally trained as an Air Traffic Controller. His military experience included logistics and supply, long range planning, executive staff support at the headquarters level, and finally serving as Vice Commander, 168th Air Refueling Wing, Alaska Air National Guard prior to his appointment to General Officer.

While serving as The Adjutant General, Craig led the transformation of the Alaska National Guard for over six years. In this role he: oversaw the Alaska Army National Guard development of missile defense operations and security missions at Ft Greely, Alaska; initiated the first associate (active duty and National Guard) organization in Alaska with acceptance of the new C-17 strategic airlift mission at Elmendorf AFB; transferred the air defense surveillance mission in Alaska from the active duty to the Alaska Air National Guard; transferred the space surveillance mission at Clear AFS from the active duty to the Alaska Air National Guard; and oversaw the complex relocation project of closing Kulis ANGB, constructing new facilities at Elmendorf AFB for the Alaska Air National Guard and relocating the 176th Wing from Kulis ANGB to Elmendorf AFB.

Craig has an extensive private sector background, with over 15 year's aviation consulting experience. He has conducted airport master planning, environmental planning, economic feasibility studies, and facilities location planning both in the US and internationally.

Craig also served in public office, starting in 1985 with his election to the Anchorage Assembly, where his leadership capabilities were demonstrated as he twice served as Chair of the body. He was appointed by Governor Frank Murkowski in 2002 as the Commissioner, Department of Military and Veterans Affairs and was promoted to General Officer with subsequent assignment as The Alaska National Guard Adjutant General. He was retained by Governor Sarah Palin as both Commissioner and Adjutant General, later being appointed by her in July 2009 as the Lieutenant Governor, State of Alaska. A position he held until December 2010.

Craig earned his undergraduate degree at the University of Tulsa, Oklahoma. He also has a Masters Degree in Public Administration from Golden Gate University, and a Masters Degree in National Security and Strategic Studies from the Naval War College. Craig and his wife, Anne Marie, live in Eagle River, Alaska; have two grown daughters and four granddaughters. Craig is a licensed pilot.

Andrew Chaikin

Award-winning science journalist and space historian Andrew Chaikin has authored books and articles about space exploration and astronomy for three decades. Writerdirector and explorer James Cameron (Avatar, Titanic, Aliens of the Deep) has called him "our best historian of the space age."

Chaikin is best known as the author of A Man on the Moon: The Voyages of the Apollo Astronauts, widely regarded as the definitive account of the moon missions. First published in 1994, this acclaimed work was the main basis for Tom Hanks' 12-part HBO miniseries, From the Earth to the Moon, which won the Emmy for best miniseries in 1998.

Chaikin's newest books, co-written with Victoria Kohl, are Voices from the Moon (VikingStudio) featuring excerpts from his conversations with Apollo astronauts, and Mission Control, This is Apollo (Viking Childrens) a book for young readers illustrated withpaintings by Apollo moonwalker Alan Bean. Both were published in 2009.

A Passion for Mars, published in 2008 by Abrams, tells the story of Mars exploration in human and scientific terms. Chaikin is also the author of Air and Space: The National Air and Space Museum Story of Flight, published in 1997 by Bulfinch Press.

His essays include the chapter on human spaceflight in The National Geographic Encyclopedia of Space, published in 2004, and Live from the Moon: The Societal Impact of Apollo for NASA's 2007 book The Societal Impact of Spaceflight.

Chaikin is a commentator for National Public Radio's Morning Edition, and has appeared on Good Morning America, Nightline, The Colbert Report, and the NPR programs Fresh Air and Talk of the Nation. He has been an advisor to NASA on space policy and public communications, and teaches space history for NASA's Academy of Program and Project Engineering Leadership (APPEL). He has also taught about space exploration at Williams College and is an online instructor Montana State University.

A former editor of Sky & Telescope magazine, Chaikin has also been a contributing editor of Popular Science and has written for Newsweek, Air&Space/Smithsonian and other publications.

A graduate of Brown University, Chaikin served on the Viking missions to Mars at NASA's Jet Propulsion Laboratory, and was a researcher at the Smithsonian's Center for Earth and Planetary Studies before becoming a science journalist in 1980.

Kelvin Coleman

Kelvin Coleman currently serves as the Senior Advisor for Space Transportation Development in the Federal Aviation Administration's Office of Commercial Space Transportation (FAA/AST) in Washington, D.C. Mr. Coleman's role is to strategize, plan, and advance FAA/AST initiatives to foster growth, expansion, and competitiveness of the U.S. Commercial Space Transportation sector. Principal to Coleman's responsibilities is the fostering and improvement of cooperation and partnering amongst the FAA and industry toward enabling commercial space transportation to leverage Next Generation Air Transportation System (NextGen) capabilities and operational improvements. In collaborating closely with the FAA's NextGen, Air Traffic, and other business lines, Coleman's work is focused on devising plans and building roadmaps that lead to more effective and efficient integration of commercial space transportation operations in the U.S. National Airspace System now and in the future.

Most recently, Coleman has served as FAA/AST Program Lead for Space Traffic Management. Coleman also previously served as Special Assistant to the FAA Associate Administrator for Commercial Space Transportation where he was chiefly responsible for strategic and business planning. Prior to joining FAA/AST, Coleman worked for the U.S. Naval Air Systems Command (NAVAIR). While at NAVAIR, Coleman served as a guidance, navigation, and control engineer and later as a systems engineer supporting a variety of weapon system acquisition programs.

Mr. Coleman holds a Bachelor of Science degree in Electronics and Computer Engineering from George Mason University, and a Master of Business Administration degree from Marymount University. Mr. Coleman resides in Upper Marlboro, Maryland with his wife Tracey, and two daughters, Kelcey and Kendal.

Sean T. Connaughton

Sean T. Connaughton is Secretary of Transportation for the Commonwealth of Virginia serving in the cabinet of Governor Bob McDonnell. As Secretary, he oversees seven state agencies with more than 9,700 employees and combined annual budgets of $5 billion.

Connaughton was named U.S. Maritime Administrator by President George W. Bush in 2006. As Maritime Administrator, he was head of the Maritime Administration, U.S. Department of Transportation, and responsible for the daily management of that agency and its promotional programs for the marine transportation industry.

Prior to joining the McDonnell administration, he served as Corporate Vice President, Government Affairs for the American Bureau of Shipping, one of the world's leading ship and marine classification societies.

Connaughton is a graduate of the U.S. Merchant Marine Academy and served the U.S. Coast Guard as both a commissioned officer and as a civil servant in the Office of Marine Safety, Security, and Environmental Protection. After gaining a Master's degree from Georgetown University, he joined the American Petroleum Institute, representing companies involved in the energy and marine transportation industries, during which time he also earned a law degree from George Mason University.

As a lawyer in private practice he specialized in maritime and international law. He has appeared before the United States Supreme Court and is a member of the Virginia Bar Association and the District of Columbia Bar Association. He served in the U.S. Naval Reserve from 1986 until retiring in 2006. He is a graduate (with honors) of the U.S. Naval War College.

He was selected to receive the 2009 Vincent T. Hirsh Maritime Award for Outstanding Leadership by the Navy League of the United State, named the "2007 Maritime Person of the Year" by the Propeller Club of the United States and was awarded the "2007 Government Man of the Year" by the Maritime Port Council of Greater New York and Vicinity. In 2007, he was awarded an honorary doctorate in Public Administration from the Massachusetts Maritime Academy. The Journal of Commerce named him to its 2008 "JOC Leadership Roll" and in 2009 he was presented with the "Maritime Samaritan Award" from the Apostleship of the Sea of the United States.

He and his wife, Teresa, have two children - Courtney and Sean Jr.

Hugh Q. Cook

Hugh Q. Cook, Jr. began working in the space industry with Hi Shear Technology in Torrance, CA in 1981 developing ordnance devices for satellites and launch vehicles. Upon graduation from Northrop University in 1987 with a Bachelor's Degree in Mechanical Engineering, Hugh joined General Dynamics Space Systems, makers of the Atlas family of launch vehicles. While there, he was instrumental in the development of the Atlas IIAS, and was named Principle Engineer for Solid Rocket Motors. His next assignment in 1993 was the development of the Conestoga launch vehicle for EER systems, of Seabrook, MD as Chief Engineer and Launch Conductor. Beal Aerospace Technologies of Dallas TX retained Hugh in 1997 as Director of Engineering for their BA-2 launch vehicle development project. Following this, the Federal Aviation Administration Office of Commercial Space Transportation in Washington, D. C. appointed him Division Manager of their Systems Engineering division in 2001. Alliant Techsystems asked him to join them as Program Director to develop their ALV X1 hypersonic test vehicle project in 2004. In

2007, Hugh accepted a position as Vice President of Engineering for Bal Seal Engineering, Inc. of Foothill Ranch, CA, a diversified manufacturer of precision engineered products. In 2011, Hugh opened his consulting practice, specializing in engineering, organizational development, and risk management.

Frank Culbertson

Mr. Culbertson is responsible for Orbital's human spaceflight programs, including commercial transportation services to the International Space Station (ISS) and the Orion Launch Abort System.

Prior to joining Orbital, Mr. Culbertson was a Senior Vice President at Science Applications International Corporation (SAIC), initially as Program Manager of the Safety, Reliability and Quality Assurance contract at the National Aeronautics and Space Administration (NASA) Johnson Space Center in Houston, Texas, before progressing to business unit general management and, most recently, Director of SAIC's Global Climate Change Programs. Before joining SAIC, Mr. Culbertson had a distinguished career as both an astronaut for NASA and as a Naval Aviator.

Mr. Culbertson was originally selected as a NASA astronaut candidate in 1984. For the next 18 years, he served in a variety of critical spaceflight and management roles for NASA's Space Shuttle and Space Station programs, including three launches aboard the Space Shuttle and command of the International Space Station. These flights included piloting STS-38 Atlantis in 1990, commanding STS-51 Discovery in 1993, and launching on STS-105 Endeavour to the ISS in 2001, plus returning aboard STS-108 Discovery after four months on the ISS. During Expedition 3 to the ISS, which began in August 2001 and returned to Earth in December 2001, Mr. Culbertson and his two Russian crewmates lived and worked in space for 129 days. In total, he has logged over 144 days in space and over five hours of extra-vehicular activity (space walk) experience.

Mr. Culbertson is a graduate of the U.S. Naval Academy at Annapolis, MD. His career in the U.S. Navy included several deployments aboard aircraft carriers and tours as an instructor pilot and automatic carrier landing system test pilot. He has logged almost 7,000 hours flying time in 50 different types of aircraft and has made more than 350 carrier landings. He retired from active duty as a U.S. Navy Captain in 1997.

Ken Davidian

Ken Davidian has worked for the FAA's Office of Commercial Space Transportation (AST) in Washington, DC since 2008 and is currently the AST Director of Research and Program Manager for the FAA Center of Excellence for Commercial Space Transportation. Since 2010, Mr. Davidian has been the Chair of the International Astronautical Federation Entrepreneurial & Investment Committee and the American Astronomical Society Vice President of Strategic Communications. Between the years of 2008-2011, Mr. Davidian led AIAA Commercial Space Group.

In 1983, Mr. Davidian started his career at the NASA Lewis Research Center. Between 1997 and 1999, Mr. Davidian was assigned by NASA to work as the Assistant Director of Operations for the Summer Session Program at the International Space University in Strasbourg, France. Upon his return to NASA, Davidian worked in the Plans and Programs Office.

In 2001, he left government service and entered the private sector in many positions. He has worked for Paragon Space Development Corp., as Director of Operations for the X PRIZE Foundation, and then again for Paragon.

In 2004, Mr. Davidian moved to Washington, DC to work on NASA's prize program, Centennial Challenges. Mr. Davidian received his BS degree in Aeronautical and Astronautical Engineering from the Ohio State University in 1983, and an MS degree in Mechanical Engineering from Case Western Reserve University in 1987. He attended the International Space University Summer Session Program in 1989.

Steven Davis

Dr. Steven Davis is the Director of Advanced Projects at SpaceX. He has worked at SpaceX since 2003, where he has also worked as Chief Engineer on the Falcon-1 Guidance, Navigation, and Control system and as Lead Systems Engineer on the Dragon Spacecraft Program.

Steve has a B.S. in Finance and a B.A.S. in Mechanical Engineering from the University of Pennsylvania, an M.S. in Particle Physics from the University of Durham, an M.S. in Aerospace Engineering from Stanford University, and a Ph.D. in Economics from George Mason University.

Nickolas Demidovich

Nick Demidovich joined the Systems Engineering and Training division of FAA's Office of Commercial Space Transportation in 2007.

Nick has over 24 years experience serving in leadership roles in systems engineering and program management on a wide variety of space and space-related programs.

He has managed mission design, development, manufacturing and launch/flight tests of satellites and missiles, and upgrades to prolong the operational life of complex systems.

As an Air Force officer his assignments involved navigation satellites, commercial upper stages, reentry vehicles and command and control equipment for both Peacekeeper and Minuteman ICBMs, National Missile Defense (as program lead for flight testing) and weather satellites. He was awarded the Air Force Achievement Medal, the Air Force Commendation Medal, the Air Force Meritorious Service medal (with 2 Oak Leaf Clusters) and the Defense Meritorious Service Medal.

After retiring from the Air Force, Nick served as a program manager at Johns Hopkins University Applied Physics Laboratory, where he managed rapid prototyping of free space optical communication architectures as well as advanced concepts and mission design for both interplanetary probes and earth-orbiting science satellites.

Nick received a BS from Purdue University in Aeronautics & Astronautics, an MS in Aerospace Engineering from the University of Southern California. He is a graduate of the Advanced Program Manager's Course at Defense Acquisition University at Fort Belvoir, Virginia.

Robert Dickman

Robert S. Dickman is the current executive director of the American Institute of Aeronautics and Astronautics (AIAA), he premier technical society dedicated to global leadership in the aerospace community. General Dickman has held this position since 2005. Prior to his position at AIAA, he was deputy for Military Space, in the Office of the Undersecretary of the Air Force from 2002 to 2005, responsible to the Department of Defense (DOD) Executive Agent for Space for strategic planning; budget preparation; system acquisition and science and technology oversight; interagency and White House coordination; and Congressional interactions for all military space efforts. General Dickman has also held the following positions: director of Corporate Operations, National Reconnaissance Office, 1998-2000; DOD space architect, 1995-1998; director of Space Programs, U.S. Air Force Headquarters, 1995; director of the Eastern Range and Commander of the 45th Space Wing at Patrick Air Force Base and Cape Canaveral, Florida, 1993-1995; and director of Plans, Air Force Space Command, Colorado Springs, Colorado, 1992-1993.

He retired from the Air Force in 2000. General Dickman has over 35 years of experience in space-related basic research, systems development and procurement, launch and on-orbit operations, strategic planning, and financial management.

Mary Lynne Dittmar

Mary Lynne Dittmar, Ph.D., is President and CEO of Dittmar Associates, Inc., an engineering and consulting firm in Houston, Texas. Previously, she managed International Space Station Mission Operations and Spaceflight Training for the Boeing Company, and later served as Boeing's Chief Scientist and Senior Manager for their Commercial Space Program.

Mary Lynne is a strategic advisor to C-suite executives and Senior Executive Service leaders in government, industry, and industry associations, specializing in aerospace and hi-tech sectors. She helps executives ensure that strategic planning, business development and mission execution remain stable and forward-looking in the midst of change. Mary Lynne also provides insight into legislative, regulatory and policy processes at the regional and national level, and helps executives set direction for engagement with customers, influencers, stakeholders, and the public.

In her spare time, she loves hanging out with her four stepchildren and two grandchildren, sings professionally, loves to write, and engages in the unusual hobby of "volcano-chasing" – hiking and photographing volcanoes in various stages of eruption.

Jayfus T. Doswell

Dr. Jayfus T. Doswell is the founder, president, and chief executive officer (CEO) of Juxtopia, LLC, a privately held for profit biomedical and information technology company that improves human performance with wearable technology. Before starting Juxtopia in 2001, Dr. Doswell lead several commercial engineering teams at fortune 500 companies ranging from Lockheed Martin and SAIC to BearingPoint. Dr. Doswell has also successfully lead Juxtopia to secure research and development funding for the development of Juxtopia innovative wearable technology products, specifically Juxtopia's context-aware augmented reality systems (CAARS) product from which various wearable AR products lines may be created to improve human performance from combat casualty care to space exploration. Dr. Doswell is also co-founder and Vice President of Phezu Space, a commercial space company focused on space asset servicing. To accelerate space commercialization for minority entrepreneurs, Juxtopia has secured a Space Act Agreement with NASA Goddard to expose small minority businesses to NASA Goddard's technology, scientists, and facilities towards space product commercialization. Dr. Doswell also conducts space commercialization outreach under The Juxtopia Group, Inc., a 501c not for profit organization, by mentoring young student engineers and scientists who are participating on the JURBAN team entered into the Google Lunar X PRIZE Competition to engineer and launch a robot to the moon by 2014. Additionally, The Juxtopia Group, Inc. in partnership with JAKA Consulting, holds an annual Space Entrepreneurship Forum on Capital Hill to encourage African Americans to create profitable businesses in the lucrative commercial space industry.

Dr. Doswell earned a Bachelor of Arts (BA) from Oberlin College with degrees in Cognitive Neuro-Psychology and Computer Science; a Masters degree in Systems and Computer Science from Howard University; and a Ph.D. degree in Information Technology from George Mason University.

Dan Dubbs

Dan has decades of significant systems engineering, program management, and leadership experience in space systems including launch vehicle safety systems and associated requirements. As a systems engineer, manager, and director Dan's safety experience includes both Launch Vehicle, Launch Operations, and Range Safety for: Eastern Test Range - Space Shuttle Transportation System (STS), Inertial Upper Stage (IUS) program, Titan 34D launch program, Titan IV program, Centaur upper stage program, Atlas II/IIAS program, New Design - Boeing EELV proposal team, Satellite Operations - Connexion by Boeing ground station manager, and the Sea Launch program.

Dan is currently the Energia Logistics Ltd. director responsible for the Sea Launch Program operations support including: Home Port Support Services which includes facilities, logistics, technicians, and project management; U.S. Mission Operations which includes range and communications, payload operations contract support, translation, and strategic and campaign planning; marine contract support; Environmental, Heath and Safety which includes, site system safety, mission safety coordinator, environmental safety, & operations safety, and configuration management systems. Most recently Dan was responsible for updating of the Sea Launch Program launch license which was approved in June of 2011 and the successful launch of the Atlantic Bird 7 satellite in October of 2011.

Before assuming his current position, Dan performed in several positions which relate directly to launch operations safety including: VP Launch Operations, Senior Mission Director, Assistant Mission Director and Payload Integration Manager for the Sea Launch Program.

Before joining the Sea Launch team, Dan held engineering and management positions directly related directly to space operations safety with Boeing Commercial Space Company, General Dynamics Space Systems, Lockheed Martin, and the United States Air Force.

Chaka Fattah

Congressman Chaka Fattah is Senior Member of the House Appropriations Committee. This committee is responsible for setting spending priorities of over $1 trillion in annual discretionary funds. Congressman Fattah is Ranking Member on the Subcommittee on Commerce, Justice, Science and related agencies (CJS). The Subcommittee on CJS oversees close to $70 billion in discretionary spending. Fattah also sits on the Energy and Water Development Subcommittee. Fattah is Co-Chair of the Congressional Urban Caucus a bipartisan group of 57 Members representing America's metropolitan centers.

Congressman Fattah, representing the 2nd District of Pennsylvania, is serving in his 9th term in the U. S. House of Representatives. Before his election to United States Congress in 1994, Fattah served six years as a Representative in the State House followed by six years as a State Senator. Time Magazine named Fattah one of the 50 most promising leaders in the country.

Fattah is the recipient of numerous honors and awards including 10 honorary doctorates and the University of Pennsylvania's Fels Center of Government Distinguished Alumni Achievement Award, where in May of 1986, Congressman Fattah earned a Master's degree in Governmental Administration. In 1984, Fattah attended Harvard University's John F. Kennedy School of Government where he received a certificate in the Program for Senior Executives in State and Local Government.

The Congressman is married to Renee' Chenault-Fattah, a lawyer and TV news anchor. The Fattahs and their four children are long-time members of the Mt. Carmel Baptist Church in Philadelphia, PA. An avid golfer, Congressman Fattah is also a bike enthusiast.

Joe Fuller

Joe Fuller is the founder and CEO of Futron Corporation, a Bethesda, Maryland aerospace consulting company. It is a leader in providing decision management solutions to aerospace, telecommunications and other technology enterprises. The company combines its technical, management, and business knowledge to help customers make higher quality decisions and improve performance and results. Its market intelligence and safety and risk management products and services are recognized and accepted as industry standards, and are influential in academic, government and commercial space realms.

Highly regarded Futron studies include those on space tourism, space industry economics, spaceports, space industry surveys, and many other aspects of global space commerce. The company's Space Tourism Study help energized the emerging industry by forecasting a $1B market for suborbital flights. Futron's Space Competitiveness Index, the first of its kind, analyzes and compares leading space faring nations. The globally recognized company is engaged in numerous government and industry research and technology management activities.

Before founding Futron, Fuller spent 20 years at NASA as an aerospace systems engineer, project manager, and senior executive. Today, through his company, he is actively engaged in wide-ranging government, commercial, and international aerospace initiatives.

William H. Gerstenmaier

William H. Gerstenmaier is the Associate Administrator for Space Operations. In this position, Gerstenmaier directs NASA's human exploration of space. He also has programmatic oversight for the international space station, space shuttle, space communications and space launch vehicles.

Formerly Gerstenmaier was the program manager of the International Space Station Office at NASA's Johnson Space Center in Houston, and was responsible for the overall management, development, integration, and operation of the International Space Station.

In 1977, Gerstenmaier began his NASA career at the Glenn Research Center in Cleveland, Ohio, performing aeronautical research.

Beginning in 1988, Gerstenmaier headed the Orbital Maneuvering Vehicle (OMV) Operations Office, Systems Division at Johnson Space Center, where he was responsible for all aspects of OMV operations. Subsequently, he headed Space Shuttle/Space Station Freedom Assembly Operations Office, Operations Division and was Chief, Projects and Facilities Branch, Flight Design and Dynamics Division.

Gerstenmaier also served as Shuttle/Mir Program Operations Manager from 1995 to 1997. In 1998, Gerstenmaier became manager of Space Shuttle Program Integration, where he was responsible for the overall management, integration, and operations. In December 2000, he was named deputy manager of the International Space Station Program.

Gerstenmaier received a bachelor of science in aeronautical engineering from Purdue University in 1977 and a master of science degree in mechanical engineering from the University of Toledo in 1981. In 1992 and 1993, he completed course work for a doctorate in dynamics and control with emphasis in propulsion at Purdue University.

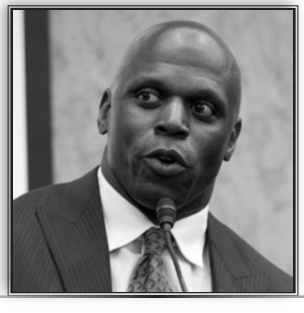
Gerstenmaier is the recipient of numerous awards, including three NASA Certificates of Commendation, two NASA Exceptional Service Medals, a Senior NASA Outstanding Leadership Medal, and the Presidential Rank Award for Meritorious Executives. He also was honored with an Outstanding Aerospace Engineer Award from Purdue University. He is married to the former Marsha Ann Johnson. They have two children.

Mike Gold

Mike Gold currently serves as Bigelow Aerospace's Director of D.C. Operations & Business Growth. Mr. Gold is responsible for a broad array of activities at Bigelow Aerospace including international business development; export control; media, corporate, and federal relations; as well as NASA Space Act Agreement implementation, patent report maintenance, and strategic planning. Prior to joining Bigelow Aerospace in a full-time capacity, Mr. Gold previously assisted the company as an attorney in the Washington office of Patton Boggs, LLP. While at Patton Boggs Mr. Gold supported several clients in high-tech and education-related fields with a specialty in advanced aerospace ventures. Mr. Gold has also served as a state aerospace business development officer, an attorney in the Washington office of McGuire Woods, LLP, and as a summer law clerk at NASA Langley Research Center. In September of 2008 Mr. Gold was appointed by the Secretary of the U.S. Department of Transportation to serve on the Commercial Space Transportation Advisory Committee ("COMSTAC"). As part of his appointment, Mr. Gold chairs the COMSTAC's Export Controls Working Group. Mr. Gold is a member of the District of Columbia and New York State Bar Associations, and graduated from the University of Pennsylvania Law School where he founded and served as the first Coordinating Editor of the Journal of Constitutional Law. Mr. Gold has written three law review articles on the topic of export control and commercial space, "Lost in Space: A Practitioner's First-Hand Perspective on Reforming the U.S.'s Obsolete, Arrogant, and Counterproductive Export Control Regime for Space-Related Items and Technologies", published in the Journal of Space Law, Volume 34, 2008; "The Wrong Stuff: America's Aerospace Export Control Crisis", published in the Nebraska Law Review, Volume 87, 2008; and, "Thomas Jefferson, We Have a Problem: The Unconstitutional Nature of the U.S.'s Aerospace Export Control Regime as Supported by Bernstein v. U.S. Department of Justice", published in the Cleveland State Law Review, Volume 57, 2009.

Doug Graham

Doug Graham joined AST in October 2001. He received his undergraduate degree in engineering from the University of Oklahoma. He also holds a Masters of Business Administration from California State University. He served in the U.S. Air Force, completing assignments with Space Division (communications satellites), the Ballistic Missile Office (Peacekeeper and Small ICBM programs), and the Advanced Cruise Missile system program office. He is a certified expert in DOD acquisition policy and program management, having taught at both the Air Force Systems Acquisition School and the Defense Systems Management College. As an employee of TRW, Doug supported FAA's ARQ-300 and AUA-430 in the development of National Airspace System (NAS) weather system requirements and the acquisition of various weather-observing systems. After joining AST, Doug managed the environmental reviews for the Oklahoma Spaceport and Blue Origin, established the Spaceport Improvement Grants program, and oversees several of AST's human spaceflight related R&D projects.



Ken Harvey

Ken Harvey is a veteran entrepreneur with over 14 years of experience. He is currently the President and founder of JAKA consulting group, a professional and business development and management agency which helps create and mature companies or individuals into their full capacity. He is also currently the

Director of Responsibility and Co owner of Phezu Space.
Ken is also a former 11 year National Football League player having played for the Phoenix Cardinals, and the Washington Redskins, from 1988 to 1999. He played collegiately at the University of California, Berkeley and was selected by the Cardinals in the first round (twelfth overall) in the 1988 NFL Draft. Harvey was a four-time Pro Bowl selection from 1994 to 1997.

Allen Herbert

Allen Herbert is CEO of Phezu Space, LLC an emerging space consulting firm located in Baltimore, Maryland. Under his leadership, Phezu combines its management and business knowledge to assist clientele in achieving their business goals.
Mr. Herbert has over 25 years of experience in technology industries and government relations. He has utilized his diverse experience to assist domestic and international public agencies and private sector firms. His commitment to space driven ventures are evident in his personal and professional pursuits, which include numerous articles and publications. His vision of future space exploration includes developing initiatives that will provide a means for the common man to venture into space.
Allen believes that now is the time for businesses and organizations not traditionally apart of the Space industry to become an integral component of this new growth segment in space technology and advancements on earth. Mr. Herbert an Aerospace Engineer received his B.S. degree from the University of Southern California. His industry background and business acumen directs Phezu's consulting services to enhance a firm's business opportunities and investments aimed at domestic opportunities and space projects in developing nations.
Phezu seeks to combine our functional expertise and strategic team building to make space accessible to the average citizen. Through a partnership in Southern Africa, Phezu Space is seeking to assist an emerging African space program.

Michael P. Huerta

Michael P. Huerta is the Acting Administrator of the Federal Aviation Administration. He assumed this role on December 5, 2011.
Huerta is responsible for the safety and efficiency of the largest aerospace system in the world. He oversees a $15.9 billion dollar budget, over 47,000 employees and is focused on ensuring the agency and its employees are the best prepared and trained professionals to meet the growing demands and requirements of the industry. Huerta also oversees the FAA's multi-billion dollar NextGen air traffic control modernization program as the United States shifts from ground-based radar to state-of-the-art satellite technology.
Huerta was confirmed by the U.S. Senate as the FAA's Deputy Administrator on June 23, 2010.
Huerta is an experienced transportation official who has held key positions across the country. His reputation for managing complex transportation challenges led him to the international stage when Huerta was tapped as a Managing Director of the 2002 Olympic Winter Games. The Olympics drew 2,400 athletes from 78 countries to Salt Lake City. Huerta was critical in the planning and construction of a variety of Olympic transportation facilities, as well as the development of a highly successful travel demand management system that insured the transportation system operated safely and efficiently.
Before joining the FAA, Huerta held senior positions at Affiliated Computer Services from 2002-2009 rising to the position of President of the Transportation Solutions Group; ACS is now a Xerox company specializing in business processes and information technology.
Huerta was commissioner of New York City's Department of Ports, International Trade and Commerce from 1986-89. He then served as the Executive Director of the Port of San Francisco from 1989-1993. From 1993-98, he held senior positions in the U.S. Transportation Department in Washington, D.C., serving under

Secretary Federico Pena and Secretary Rodney E. Slater.

He holds a bachelor's degree in political science from the University of California-Riverside and a master's in international relations from the Woodrow Wilson School of Public and International Affairs at Princeton University.

Timothy Robert Hughes

Tim Hughes is Vice President and Chief Counsel for Space Exploration Technologies Corp. (SpaceX). Headquartered in Hawthorne, CA with launch facilities at Cape Canaveral,

Vandenberg AFB, and the Reagan Test Site in the Marshall Islands, SpaceX was founded in 2002 by entrepreneur and PayPal co-founder, Elon Musk. SpaceX has developed a family of launch vehicles intended to reduce the cost and increase the reliability of access to space. In 2008, SpaceX's Falcon 1 launch vehicle became the first privately developed liquid fuel rocket to orbit the Earth, and SpaceX was awarded a $1.6 billion contract with NASA to carry cargo to the International Space Station with its Falcon 9 launch vehicle and Dragon spacecraft. In June 2010, SpaceX's Falcon 9 launch vehicle successfully reached orbit on its maiden launch. And in December 2010, SpaceX became the first private entity ever to perform the successful Launch and Reentry of a space capsule.

As lead corporate attorney for SpaceX since 2005, Mr. Hughes is responsible for the company's legal, regulatory, and government affairs. These responsibilities include oversight of the company's launch licensing, commercial and government contracting, export controls, litigation, insurance, and legislative agenda.

Prior to joining SpaceX, Mr. Hughes served as Majority Counsel to the Committee on Science and Technology in the United States House of Representatives. Among other things, Mr. Hughes was responsible for drafting and shepherding the passage of commercial human spaceflight legislation, H.R. 3752 and H.R. 5382, the Commercial Space Launch Amendments Act of 2004 (enacted as P.L. 108-492), which established the legal and regulatory framework for private human spaceflight in the United States.

A graduate of William and Mary Law School and honors graduate of Georgetown University's School of Foreign Service, Mr. Hughes' work experience also includes four years as a senior associate with the Telecommunications and Litigation groups of a national law firm, Drinker Biddle & Reath, LLP, and two years as an attorney in the Office of the Chief Counsel for the United States Secret Service.

John Kelley

Dr. Kelley serves as the Program Executive (PE) for the Ground Systems Development and Operations Program in the newly formed Human Exploration and Operations Mission Directorate at NASA HQ.

As the PE for Launch Services Office he served as the Civil Space Co-chair with the Secretary of the Air Force Staff for Range and Launch Infrastructure Modernization. Other launch related assignments include the program and technical advisor to the Director of Launch Services for all Earth Science and Heliophysics missions. His interagency work spans several decades of NASA policy and technical leadership roles with the White House, OSD, Air Force, Navy, NRO, MDA, OSTP, NSC and NOAA. In the area of Space Operations, his most notable mission was Science Program Manager for the Shuttle Radar Topography Mission (STS-99) that set five firsts in space. International space experience included Chairperson for the Consultative Committee for Space Data Standards (CCSDS) and ISO Subcommittees SC-13 and SC-14 on Space Communications subjects.

Before joining NASA, Dr. Kelley served as a U.S. Navy officer in leadership positions in both active duty and reserves to include the establishment of Navy Space Command. He is a 1976 graduate of the U.S. Naval Academy; Naval War College graduate and holds Master degrees and a Doctorate from the University of Southern California. He is a member of AIAA.

Ajay Kothari

Dr. Ajay Kothari is President and Founder of Astrox Corporation, an Aerospace R&D company located in suburban Washington DC. He has been Principal Investigator or Program Manager on more than 25 contracts from DOD and NASA, focused on rocket and hypersonic vehicle designs and studies which have led to an innovative hypersonic vehicle design for the Air Force in collaboration with Boeing. He has been a pioneer in developing the Inward Turning Hypersonic Vehicles which will be able to go to Low Earth Orbit.

He was President of his high school and was recipient of the "Best Student of the School" award for scholarship and extracurricular activities. He was also awarded National Merit Scholarship and has over 40 publications. He was awarded the "Engineer of the Year" award by ASEI (American Society of Engineers of Indian Origin) in 2011 and has been invited to speak on aerospace subjects by many entities.

Jim Kuzma

Space Florida announced the hiring of Jim Kuzma as Senior Vice President and Chief Operations Officer (COO) in January 2012. Kuzma's hiring is one of several organizational changes being initiated to help Space Florida create capacity for improved client responsiveness, better face a dynamic marketplace and take advantage of increased business development opportunities in the aerospace industry.

In his new role, Kuzma will be handle operations and client fulfillment functions, including Space Florida's increasing responsibilities for aerospace facilities and infrastructure, spaceport operations, technology advancement, talent supply chain initiatives and education programs. Kuzma has more than 20 years experience in the U.S. Navy and most recently served as the commanding officer of the Naval Ordnance Test Unit (NOTU) based in Cape Canaveral. He has also served as a division chief for the U.S. Strategic Command (Joint Functional Component Command for Intelligence, Reconnaissance and Surveillance) in Washington DC, and as deputy director of operations for Submarine Forces out of Norfolk, VA. He holds a Master of Science in Engineering Management from the Catholic University of America and a Master of Science in National Resource Strategy from the Industrial College of the Armed Forces.

Michael D. Leinbach

Michael D. Leinbach is the Director of Human Spaceflight Operations for United Launch Alliance. In this role, he supports the development of designs and processes for the launch of humans on ULA's Atlas and Delta systems.

Before joining ULA in January 2012, Leinbach had a distinguished 27-year career with NASA at Kennedy Space Center (KSC). Beginning in 2000, he led the launch team for 37 space shuttle missions, serving as the final "go" for launch, and as the senior operations expert for all flight elements and ground support equipment processing.

Leinbach joined NASA in 1984 as a structural engineer in the Design Engineering Directorate. He served as a lead design engineer for a variety of launch pad systems including the Orbiter Weather Protection and Emergency Egress Slide Wire systems. In 1988, he became a NASA Test Director in the Shuttle Management and Operations and in 1991, was named Shuttle Test Director, conducting the terminal countdown and launch of 17 space shuttle missions.

From January 1998 to May 2000, Leinbach served as the deputy director of the Space Station Hardware Integration Office, where he was responsible for all International Space Station (ISS) component processing at KSC and contractor manufacturing locations. He also oversaw the development and execution of the Multi-Element Integrated Test Program, which verified the functionality and operability of the first phase of the ISS program in a configuration, on the ground, as close to the on-orbit final assembly as possible.

He has been honored with numerous awards including the 2004 Presidential Rank Award, NASA's Exceptional Service Medal and NASA's Medal for Outstanding Leadership.

Leinbach holds a Bachelor of Science degree in architecture and a Master of Engineering in civil engineering with emphasis in structural dynamics from the University of Virginia.

Alan J. Lindenmoyer

Alan J. Lindenmoyer was appointed manager of the Commercial Crew and Cargo Program Office as part of the Exploration Systems Mission Directorate at the Johnson Space Center in November 2005. He is responsible for managing NASA's investments to stimulate efforts within the private sector to develop and demonstrate space transportation capabilities that could ultimately lead to the availability of commercial cargo and human spaceflight services. The office manages Commercial Orbital Transportation Services (COTS) and Commercial Crew Development (CCDev) development and demonstration projects - innovative public-private partnerships to help develop and demonstrate the vehicles, systems, and operations for cargo and crew space transportation services to and from low-Earth orbit. COTS demonstrations have paved the way for the procurement of commercial services to resupply the International Space Station and other future Exploration needs.

Mr. Lindenmoyer has over 29 years of experience in NASA's human spaceflight programs. He joined the Goddard Space Flight Center in 1982 as a cooperative education student and became a flight structures engineer upon receiving a Bachelor of Science in Aeronautical Studies with Engineering and a commercial/instrument pilot license from Embry-Riddle Aeronautical University in 1983. In 1986, he received a Master of Science degree in Aerospace Engineering from the University of Maryland. Mr. Lindenmoyer joined NASA Headquarters in 1987 as a structural dynamics engineer for the Space Station Freedom Program. He moved to Houston in 1990 where he held progressively more responsible management positions in the International Space Station Program, including: Assistant Manager for the Vehicle Office; Assistant to the Deputy Program Manager for Technical Development; Manager of the Configuration Management Office; and Technical Integration Manager.

John M. Logsdon

Dr. Logsdon is Professor Emeritus of Political Science and International Affairs at George Washington University's Elliott School of International Affairs. Prior to his leaving active faculty status in June 2008, he was on the faculty of the George Washington University for 38 years; before that he taught at the Catholic University of America for four years. He was the founder in 1987 and long-time Director of GW's Space Policy Institute. He is also a faculty member of the International Space University. He holds a B.S. in Physics from Xavier University (1960) and a Ph.D. in Political Science from New York University (1970).

Dr. Logsdon's research interests focus on the policy and historical aspects of U.S. and international space activities. He is author of the award-winning John F. Kennedy and the Race to the Moon (2010) and The Decision to Go to the Moon: Project Apollo and the National Interest (1970) and is general editor of the multi-volume series Exploring the Unknown: Selected Documents in the History of the U.S. Civil Space Program. He has written numerous articles and reports on space policy and history. He is frequently consulted by the electronic and print media for his views on space issues.

Dr. Logsdon is a member of the Board of Directors of the Planetary Society and the Advisory Board of the London Institute of Space Policy and Law. From September 2008-August 2009, he held the Charles A. Lindbergh Chair in Aerospace History at the Smithsonian Institution's National Air and Space Museum. In 2003, he served as a member of the Columbia Accident Investigation Board. He is a former member of the NASA Advisory Council and its Exploration Committee. From 1998-2008, he was a member of the Commercial Space Transportation Advisory Council of the Department of Transportation.

Kathryn Lueders

Kathryn Lueders has served as the NASA International Space Station Program's Transportation Integration Manager for the past five years. In this function, she is responsible for the management of the ISS integration for the COTS vehicle development program, the management of the ISS Commercial Resupply Services contract, and oversees the international partner vehicles for NASA (ATV, HTV, Soyuz and Progress).

She has served NASA for nineteen years in various functions with increasing responsibility including acting as the White Sands Test Facility Shuttle OMS/RCS Depot Manager, the ISS Program Post Production Support manager, the deputy ISS Program Logistics and Maintenance Manager, the ISS Program Vehicle Systems Integration Manager, and previous to her current job, as the ISS Program COTS Integration Manager.

She has a BBA in Finance from the University of New Mexico and a BS and MS in Industrial Engineering from New Mexico State University. She is married with four children and currently resides with her family in Houston, TX.

Barbara (B.K.) Lunde

Barbara (B. K.) Lunde is the Training Instruction Specialist for AST and an inspector in AST's Safety Inspection Division.

Ms. Lunde has B.A. and M.S. degrees in physics from Northwestern University and a Ph.D. in physics from Iowa State University. B. K. was a Research Engineer with the Draper Lab of MIT, where she got two patents on accelerometers. She was an Aerospace Engineer at NASA's Goddard, working on spacecraft instrumentation.

She developed and taught courses in Spacecraft Systems Engineering, Remote Sensing, and other subjects. She developed, received and completed a contract with NASA to test an experiment in metal purification, which would have used microgravity.

B. K. is a registered Professional Engineer (PE). She has been with AST for eight years.

Joseph Mazur

Dr. Mazur is an Associate Director of the Space Sciences Department at The Aerospace Corporation. He has a B.S. degree in Physics from the University of Chicago, and M. S. and Ph.D. degrees in Physics from the University of Maryland. He has over seventeen years of experience in space science and space environments, including advanced particle detectors, space physics, solar energetic particles, trapped particles in the Earth's magnetosphere, and space environment effects on space systems.

He is active in the design and construction of advanced particle detectors, the analysis of space physics data from spacecraft, and the design of low-impact space environment monitors. His scientific research interests include the composition, acceleration, and transport of solar energetic particles in interplanetary space and trapped particles in the Earth's magnetosphere.

He was co-investigator on the NASA Solar, Anomalous, and Magnetospheric Particle Explorer, the NASA/ESA Ulysses mission, the NASA Lunar Reconnaissance Orbiter, and was an instrument investigator on the NASA Advanced Composition Explorer spacecraft. He is currently principal investigator of a high-energy proton spectrometer for the NASA Radiation Belt Storm Probes mission.

Dr. Mazur has authored or co-authored more than 50 scientific publications on interplanetary and trapped energetic particles and has presented more than 15 invited talks at scientific conferences.

Robert McDonnell

Bob McDonnell was sworn in as the 71st governor of the Commonwealth of Virginia on January 16, 2010. In his campaign for the office he received nearly 59% of the vote, and the most votes of any candidate for governor in Virginia history.

As Virginia's Chief Executive, he has built a record of results.

Governor McDonnell inherited an unprecedented $6 billion in budget shortfalls. He defeated a proposed $2 billion increase in the state income tax, kept existing car tax relief in place and brought Democrats and Republicans together to close the shortfall without a single tax increase, producing a $400 million surplus. During that same time 80% of McDonnell's legislative proposals passed Virginia's bi-partisan General Assembly.

In 2011, McDonnell saw 92% of his legislative proposals pass the bi-partisan General Assembly, including his plan that makes the largest investment in transportation in Virginia in a generation, and legislation to make college more affordable and accessible for Virginia students.

Job creation and economic development remain the governor's top priority. The unemployment rate in Virginia has fallen from 7.2% when McDonnell took office to 6.2% today, and Virginia was recently named by CNBC as "The Best State for Business" in the country.

The governor has dedicated his life to public service. He served 21 years in the U.S. Army, both active duty and reserve, retiring as a Lieutenant Colonel in 1997.

Upon graduating from law school in 1989 he served as a Virginia Beach prosecutor. McDonnell was elected to the Virginia House of Delegates in 1991. He was elected as the 44th attorney general of Virginia in 2005.

McDonnell was raised in Fairfax County. He graduated from the University of Notre Dame (BBA), Boston University (MSBA) and Regent University (JD and MA). In addition, he has received an honorary doctor of laws degree from the College of William and Mary, and an honorary doctor of humane letters from Virginia Commonwealth University. He and his wife Maureen have been married for 35 years. They have 5 children, ages 20-31. Their oldest daughter, Jeanine, served in the U.S. Army, including a tour of duty in Baghdad, Iraq in 2005-2006.

Stephen McKeever

Dr. Stephen McKeever is the Oklahoma secretary of science and technology. He previously served as vice president for research and technology transfer at Oklahoma State University and was the executive director of the OSU Multispectral Lab in Ponca City. McKeever first joined the physics faculty at OSU in 1983 rising to the level of regents professor in 1990. He was named a Noble Research Fellow in Optical Materials in 1987 and served as head of the physics department at OSU from 1995 to 1999 and associate dean for research in the College of Arts & Sciences from 2000 to 2003. McKeever was named the More Oklahoma Science and Technology (MOST) chair of experimental physics in 1999 and eventually became vice president in 2003.

McKeever obtained bachelor's and master's degrees as well as a doctor of philosophy from the University of Wales. He has authored or co-authored more than 190 scientific publications and five books and has six U.S. and nine international patents.

Neil Milburn

Neil was born in Middlesbrough England and is the British version of the Rocket Boys. His fascination with space and rocketry began with that same seminal moment, staring into the night skies of Northern England to try and spot Sputnik. Enthralled by the first human in space, cosmonaut Yuri Gagarin, his formative years were spent watching the Mercury, Gemini and Apollo programs from afar.

Neil spent almost thirty years in private industry in a variety of roles – engineering, international sales and marketing - before he found his niche doing small engineering company start-ups and turnarounds. In this role he moved to the USA in 1982 and forgot to go home (but legal . . . a US citizen since 2006.) In 2003 he "semi-retired" and fulfilled a lifelong promise to pay back a childhood debt to his early mentors by taking up teaching International Baccalaureate Physics in Texas.

In 2000, Neil was one of the four original founding members of the team that eventually became Armadillo Aerospace. What started as a short term project has now matured into one of the leading AltSpace companies in the world. Neil is currently the VP of Program Management for Armadillo Aerospace, responsible for business development, federal compliance, permitting & licensing and safety. In the very, very near future, Neil WILL fulfill his lifetime ambition and keep the dream alive by becoming an Armadillo Aerospace astronaut.

Neil lives in Plano with his wife of thirty plus years; he has three sons, two daughters-in-law, and three grandchildren.

Charles E. Miller

Mr. Miller is the President of NexGen Space LLC, which provides client-based services at the intersection of commercial, civil, and national security space and public policy.

Mr. Miller is a former NASA Senior Advisor for Commercial Space where he advised senior NASA leaders on commercial space options and strategies. At NASA he served as the leader of NASA's propellant depot study, program executive for NASA's Commercial Reusable Suborbital Research program, manager of the Commercial RLV Technology Roadmap study, and managed NASA's emerging commercial space activities.

Mr. Miller is the co-founder of Nanoracks LLC, a disruptive entrepreneurial venture that is operating with five customer payloads at the ISS, generating revenue, with at least 50 customer payloads in the backlog.

He is the co-founder and former President and CEO of Constellation Services International, Inc. (CSI).

Miller also has served as a consultant to the U.S. Air Force, DARPA and many commercial firms in the area of commercial space and reusable space access.

Miller was the founding Chairman and President of ProSpace where he served from 1996 to 1999. Under Mr. Miller's leadership, ProSpace was instrumental in the passage of space-related legislative initiatives, including the Commercial Space Act of 1998, funding for NASA's X-33, Future-X and Space Solar Power programs, and the U.S. Air Force's RLV Technology Development program.

Miller has received several awards for his work in the aerospace field, including the "Vision in Action" award from the Space Frontier Foundation, the "Space Pioneer" award from the National Space Society, and the "Exceptional Leadership" award from the California Space Development Council.

Mr. Miller studied engineering at the California Institute of Technology and has a BS in Business Administration (Finance) from the California State University of Chico.

Michael P. Moses

The Vice President of Operations will oversee the Virgin Galactic commercial suborbital spaceflight program, operating from Spaceport America in New Mexico. Moses will develop and lead the team responsible for spaceship operations and logistics, flight crew operations, customer training, and spaceport ground operations, with overall operational safety and risk management as the primary focus.

Moses joins Virgin Galactic following a distinguished career in NASA's recently-retired Space Shuttle Program, bringing a proven record of safe, successful and secure human spaceflight missions, spaceport operations, and human spaceflight program leadership. He served at the NASA Kennedy Space Center in Florida as the Launch Integration Manager from 2008 until the landing of the final Shuttle mission in July 2011. He was responsible for supervising all Space Shuttle processing activities from landing through launch, and for reviewing major milestones including final readiness for flight. He also served as chair of the Mission Management Team and provided ultimate launch decision authority for the final 12 missions of the Space Shuttle Program.

Prior to his most recent NASA role, Moses served as a Flight Director at the NASA Johnson Space Center where he led teams of Flight Controllers in the planning, training and execution of all aspects of Space Shuttle missions. Before being selected as a Flight Director in 2005, Moses had over 10 years experience as a Flight Controller in the Shuttle Propulsion and Electrical Systems Groups.

Moses holds a bachelors degree in physics from Purdue University, a masters degree in space sciences from Florida Institute of Technology and a masters degree in aerospace engineering from Purdue University. He is a two-time recipient of the NASA Outstanding Leadership Medal as well as other NASA commendations and awards.

John P. Mulholland

As Vice President and Program Manager, Commercial Crew Programs, John Mulholland leads Boeing's efforts on commercial crew and cargo programs, including our Commercial Crew Development (CCDev) Space Act Agreement. Mulholland ensures that innovations and capabilities from across Boeing are used in development of space transportation vehicles to support NASA and commercial customers.

Prior to his present position, Mulholland was the vice president and program manager for Boeing's Space Shuttle Program from January 2008 to August 2011. Mulholland lead Boeing in its role as the major subcontractor to United Space Alliance (USA) in support of its operations contract with NASA's Space Shuttle Program. He was responsible for overall direction and successful execution of Boeing's Space Shuttle Program.

Prior to this position, Mulholland was the program director and chief engineer for Boeing's Space Shuttle Orbiter team. In that role, Mulholland led the NASA, USA, and Boeing Orbiter Technical Integration Team in the Space Shuttle Columbia accident investigation.

Previously, he was a Boeing associate program director for Orbiter Vehicle Engineering where he led a team of about 400 employees in Huntington Beach, California, Houston, Texas, and Kennedy Space Center, Florida.

A NASA Exceptional Achievement Medal recipient, Mulholland was employed at NASA's White Sands Test Facility in New Mexico from 1986 to 1996. From 1996 to 2002, he worked at NASA's Johnson Space Center (JSC) in Houston, Texas, as a space shuttle deputy manager of operations and project engineer. During his time at JSC, Mulholland was responsible for orbiter vehicle modifications, flight and ground processing anomaly resolution, and flight preparation and vehicle modification processes.

Mulholland is a graduate of New Mexico State University with a bachelor of science in chemical engineering and a master's in mechanical engineering.

James A. M. Muncy

James A. M. Muncy founded PoliSpace, an independent space policy consultancy, in early 2000 to help space entrepreneurs and intrapreneurs succeed at the nexus of business, public affairs, and technology. His clients have included several companies in the emerging private human space flight industry, firms offering commercial services to NASA spaceflight programs, and government managers of Air Force military space projects.

In 2004 and 2005 Muncy led two successful industry lobbying efforts: winning enactment of the Commercial Space Launch Amendments Act of 2004 (P.L 108-492), and securing an amendment to the Iran Nonproliferation Act to allow NASA to buy commercial space goods and services with Russian content.

Muncy spent over five years working for the U.S. House of Representatives. Muncy held the lead responsibility for issues and programs such as reusable launch vehicles, human space flight commercialization, military space technology, export control reform, range modernization, and future NASA programs. Before joining congressional staff in late 1994, Muncy spent nine years as a space policy and marketing consultant for various clients including NASA, NOAA, several private firms, and the not-for-profit space community, while also securing a graduate degree. In the mid-1980's he worked for two and a half years as a policy assistant in the White House Office of Science and Technology Policy. Muncy began his career in space policy in 1981 as a staff advisor in the Office of Congressman Newt Gingrich, where he helped Mr. Gingrich co-found the Congressional Space Caucus A long-time leader in the space advocacy community, Muncy co-founded the Space Frontier Foundation in 1988 and served as its Chairman of the Board for six years. Muncy holds an MS in Space Studies from the Center for Aerospace Sciences at the University of North Dakota and a BA from the University of Virginia, where he was an Echols Scholar.

Erin Neal

Erin Neal is a director of congressional relations for Alliant Techsystems, Inc. (ATK) taking the lead for interactions on the hill in support of Aerospace Systems. Erin is also a director of government relations for civil and commercial space products, serving as ATK's liaison to the National Oceanic and Atmospheric Administration (NOAA), and the Departments of Commerce, Transportation, and State. Prior to these positions, Erin served as ATK's director for senate relations. Prior to this position, Erin was a director of congressional relations in support of ATK's NOAA, Air Force and Defense-wide (DARPA, Missile Defense Agency) activities. She has been with ATK since January of 2004.

She came to ATK from Ball Aerospace & Technologies Corp., where she was a manager for government relations. Prior to joining Ball, she worked as a legislative assistant to U.S. Senator Bill Nelson (D-FL).

Before working in the Senate, Erin was a space and telecommunications policy analyst at the Congressional Research Service. Erin also taught high school math and physics for two years while serving as a Peace Corps volunteer in Cameroon. She is an active member and past President of Women in Aerospace, past President and current member of the Board of Directors for the National Space Club, and past member of the Board of Directors for the American Astronautical Society. Erin currently chairs Aerospace Industries Association (AIA)'s National Security Space Legislative Action Team. She is a past cochair of the Satellite Industry Association's (SIA) Export Control Working Group. She holds a Master of Arts in international affairs and public policy from George Washington University, and graduated with a Bachelor of Science degree in physics from Centenary College of Louisiana. In 2007, she received the first ever Outstanding Member Award from Women in Aerospace.

Erin, her husband Rob, and their daughter Lizzie reside in Arlington, Virginia.

George C. Nield

Dr. George C. Nield serves as the Associate Administrator for Commercial Space Transportation at the FAA. He has over 30 years of aerospace experience with the Air Force, at NASA, and in private industry. Dr. Nield came to FAA from the Orbital Sciences Corporation, where he served as Senior Scientist for the Advanced Programs Group.

His previous assignments include working as an Astronautical Engineer at the Space and Missile Systems Organization, a Flight Test Engineer at the Air Force Flight Test Center, and an Assistant Professor and Research Director at the USAF Academy. He was the Manager of the Flight Integration Office for the Space Shuttle Program at the NASA Johnson Space Center, and later worked on both the Shuttle/Mir Program and the International Space Station Program.

A graduate of the United States Air Force Academy, he holds an M.S. and Ph.D. in Aeronautics and Astronautics from Stanford University, and an MBA from George Washington University. He is also a Flight Test Engineering graduate of the USAF Test Pilot School. Dr. Nield is a registered Professional Engineer and a Fellow of the American Institute of Aeronautics.

Steven M. Palazzo

Congressman Steven M. Palazzo represents the fourth congressional district of Mississippi and some of the finest people in the country. Like them, Steven believes in limited government, a strong defense, and the need for common-sense solutions to today's challenges.

Congressman Palazzo was sworn into office on January 5, 2011 and serves on the House Armed Services and Science, Space and Technology Committees.

Born in Gulfport, Mississippi, Steven attended Saint John's High School before earning his Bachelor's and Master's degrees in accounting from the University of Southern Mississippi. During college, Steven met his wife Lisa and they are the proud parents of three children. The Palazzo family attends St. James Catholic Church.

In 1988, Steven enlisted in the Marine Corps Reserves. As a member of 3rd Force Reconnaissance, Steven celebrated his 21st birthday in the deserts of the Middle East, while serving in the Persian Gulf War. After finishing his tour in the Marine Corps, Steven enlisted in the Mississippi Army National Guard, where he still serves.

Steven and his wife started a small business in 2001, giving him a unique perspective on what it means to create jobs and manage a budget. Over time, they have been able to grow their CPA firm into a successful agency that specializes in helping Americans living abroad with their income taxes.

In 2006, Steven was elected in a special election to the Mississippi House of Representatives. A year later, Steven was reelected to a full term. During his time in the state legislature, Steven utilized his background in business to push through a tax cut for Mississippians and authored a resolution reaffirming the 10th Amendment, which properly defines a limited role for the federal government by reserving power for the states

Jerome Pearson

Jerome Pearson is President of STAR, Inc., a small business in Mount Pleasant, South Carolina. He invented the Earth and lunar space elevators, developed multi-winglets for lowered aircraft drag, published engineering solutions to global warming and

space debris, and conceived the propellantless electrodynamic spacecraft EDDE. Before founding STAR, Inc., he was an engineer at NASA Langley and Ames, and a branch chief for the Air Force Research Lab. He is author of nearly 100 technical publications, including invited articles for Encyclopaedia Britannica and Space Safety. He has done TV interviews on space elevators and global warming, and was featured in the Discovery Channel series Science of the Impossible. He is an Associate Fellow of AIAA, a Fellow of the BIS, and a Member of the International Academy of Astronautics.

John D. Porcari

John D. Porcari has served as the 19th United States Deputy Secretary of Transportation since June 1, 2009.

As Deputy Secretary, Porcari is the Department of Transportation's chief operating officer with responsibility for day-to-day operations of the 10 modal administrations and the work of more than 55,000 DOT employees nationwide and overseas. Porcari is focused on transportation's key role in economic development and providing the foundation for America's future prosperity.

Before becoming Deputy Secretary, Porcari served an unprecedented two tours as Secretary of the Maryland Department of Transportation from January 2007 to June 2009 and between 1999 and 2003.

Between 2003 and 2007, Porcari served as vice president for administrative affairs at the University of Maryland, College Park. He previously served as Deputy Secretary of Transportation for Maryland and as Assistant Secretary for Economic Development Policy at the Maryland Department of Business and Economic Development. Before his positions in the state government, he served as vice president of a civil engineering and land use consulting firm and at the local government level.

Porcari received his B.A. degree from the University of Dayton and his Master of Public Administration from the Rockefeller College, State University of New York at Albany.

Greg Rasnake

Before becoming Director of External Relations in the FAA Office of Commercial Space Transportation, Greg Rasnake served as Chief of Legislative Affairs at the Department of Justice - Bureau of Alcohol, Tobacco, Firearms, and Explosives. Greg previously served as a Staff Attorney, Congressional Liaison, and Deputy Director of Budget at the Federal Aviation Administration. A veteran of the U.S. Army, Greg is a Member of the Oklahoma Bar Association, a graduate of Longwood College and of the University of Oklahoma College of Law.

Garrett Reisman

Garrett Reisman is responsible for working with NASA to prepare SpaceX's Falcon 9 rocket and Dragon spacecraft to carry astronauts. Reisman's experience as an operator of both American and Russian spaceflight hardware will help SpaceX in the development of human interfaces including controls, displays, seats, suits and environmental control systems.

Reisman came to SpaceX from NASA where he served as an astronaut starting in 1998. He has flown on two space shuttle missions, during which, he logged over 3 months in space including over 21 hours of extravehicular activity (EVA) in 3 spacewalks. Dr. Reisman served with both the Expedition-16 and the Expedition-17 crews as a Flight Engineer aboard the International Space Station.

Reisman holds a B.S. in Economics and a B.S. in Mechanical Engineering and Applied Mechanics from the University of Pennsylvania, an M.S. in Mechanical Engineering from the California Institute of Technology, and a Ph.D. in Mechanical Engineering from the California Institute of Technology. He is an FAA Certified Flight Instructor.

Frank Rose

Mr. Rose currently serves as the Deputy Assistant Secretary of State for Space and Defense Policy. In this position, he is responsible for advising the Assistant Secretary and, as required, the Under Secretary for Arms Control and International Security, on key issues related to arms control and defense policy. These issues include missile defense, military space policy, and conventional arms control. His responsibilities also include liaison with the U.S. Intelligence Community on issues related to the verification of arms control treaties and agreements.

Prior to joining the State Department June 2009, Mr. Rose held various national security staff positions in the U.S. House of Representatives, including service as a Professional Staff Member on both the House Armed Services Committee and the House Permanent Select Committee on Intelligence. Mr. Rose has also held numerous positions within the Office of the Secretary of Defense, including as Special Assistant to the Assistant Secretary of Defense for Strategy and Threat Reduction; and Policy Advisor in the Office of the Assistant Secretary of Defense for International Security Policy. Previous to that, he worked as a National Security Analyst with Science Applications International Corporation and on the staff of U.S. Senator John F. Kerry (D-MA).

Mr. Rose received his Bachelors degree in History from American University in 1994 and a Masters degree in War Studies from Kings' College, University of London in 1999. He is a recipient of the Department of Defense Exceptional Public Service Award (2001), the Office of Secretary of Defense Award for Excellence (2002), and the Office of the Secretary of Defense Medal for Exceptional Civilian Service (2005).

Bob Rutledge

Bob Rutledge is the Lead of the Space Weather Forecast Office at NOAA's Space Weather Prediction Center (SWPC). SWPC is the Nation's official source for space weather watches, warnings, and alerts. Prior to joining SWPC, Bob worked at NASA's Johnson Space Center as the International Space Station (ISS) Radiation System Manager, responsible for oversight of the development and sustaining engineering of NASA's operational radiation measurement hardware onboard ISS. Bob began his career at NASA with the Space Radiation Analysis Group with responsibilities spanning planning, modeling, measurement, and operational management of astronaut radiation exposures.

Alex Saltman

Alex Saltman became the Executive Director of the Commercial Spaceflight Federation in November 2011. He has a wide range of experience in space policy, government, and scientific research. He previously served as the Legislative Director for Congressman Schiff, who represents an area of Southern California that includes NASA's Jet Propulsion Laboratory, and who, as a member of the House Appropriations Committee, has been a leading figure in space policy and NASA appropriations issues. In that capacity, Saltman oversaw a staff of five and led legislative efforts from conception to enactment, while advising the Congressman on science, space, energy, environment, and nonproliferation issues, as well as on relevant appropriations matters.

Saltman joined the Congressional office after receiving an American Physical Society Congressional Fellowship, having previously worked as a scientific researcher at the Stanford Linear Accelerator National Laboratory. Saltman has also worked for Wired Magazine and contributed freelance articles to the publication. A native of Texas, Saltman earned his bachelor's degree in physics from Harvard University and his doctorate degree in physics from Stanford University.

William L. Shelton

Gen. William L. Shelton is Commander, Air Force Space Command, Peterson Air Force Base, CO. He is responsible for organizing, equipping, training and maintaining mission-ready space and cyberspace forces and capabilities for North American Aerospace Defense Command, U.S. Strategic Command and other combatant commands around the world. General Shelton oversees Air Force network operations; manages a global network of satellite command and control, communications, missile warning and space launch facilities; and is responsible for space system development and acquisition. He leads more than 46,000 professionals, assigned to 88 locations worldwide and deployed to an additional 35 global locations.

General Shelton entered the Air Force in 1976 as a graduate of the U.S. Air Force Academy. He has served in various assignments, including research and development testing, space operations and staff work. The general has commanded at the squadron, group, wing and numbered air force levels, and served on the staffs at major command headquarters, Air Force headquarters and the Office of the Secretary of Defense. Before assuming his current position, General Shelton was the Assistant Vice Chief of Staff and Director, Air Staff, U.S. Air Force, Pentagon, Washington, D.C.

Karen Shelton-Mur

Karen Shelton-Mur holds both a B.S. (1995), and M.S. in Meteorology (1998) from Texas A&M University. She joined AST in 2003 as a natural environment technical specialist in AST's Systems Engineering and Training Division (AST-300). She was later transferred to the Space Transportation Development Division where she has been working on Space Traffic Management/Space Weather Issues. While at AST, she has held various positions including Program Manager for Safety Approvals, Safety Approval Team Lead, Experimental Permit Team lead, RLV Safety Inspector, and Emergency Planner. She serves on several interagency teams.

Before coming to AST she worked for the U.S. Space Shuttle Program at Johnson Space Center as a Flight Design Engineer for United Space Alliance and as an intern for the National Weather Service's Space Flight Meteorology Group.

She is currently a Major in the DC Air National guard. Her assignments include: Commander, 121st Weather Flight, Deputy Commander Joint Force Headquarters/Det 1.

Mark Sirangelo

Mr. Sirangelo leads Sierra Nevada Space Systems, a producer of satellites, space transportation vehicles, propulsion systems and space subsystems. Sierra Nevada has been involved during its 20+ years of combined activity in over 400 space missions and has produced over 4,000 systems, subsystems and components

for a wide variety of earth orbit and planetary missions. SNC is also the owner and prime developer of the Dream Chaser, an orbital vehicle transportation system currently being funded in partnership with NASA as a replacement vehicle for the Space Shuttle. Mr. Sirangelo was formerly the Chairman & CEO of SpaceDev, Inc., prior to its merging with SNC and has spent his career leading aeronautics, space and technology companies.

Mr. Sirangelo's industry board memberships include being the Chairman Emeritus of the Commercial Spaceflight Federation, the founding and current Chairman of eSpace, The Center for Space Entrepreneurship and a Trustee for the Aeronautics Industries Association. His charity boards include being a board member and trustee of the National Center for Missing & Exploited Children and a founder, Vice Chairman and Treasurer of the International Centre for Children.

Corporate and personal awards include NASA/Space Foundation's Technology Hall of Fame, the Defense Industry's Fast Track 50, Deloitte's Fast Track 500, being a finalist in Ernst &Young's Entrepreneur of the Year and on Inc. Magazine's top 200 companies. Mr. Sirangelo holds Doctorate, MBA and Bachelor of Science degrees, has been scientifically published, has served as an officer in the US Military and is a licensed pilot.

Zoe Szajnfarber

Dr. Zoe Szajnfarber is an Assistant Professor of Engineering Management and Systems Engineering at the George Washington University. Her research seeks to understand the fundamental dynamics of innovation in technology-intensive governmental organization, as a basis for decision-making. She received her bachelor's degree in Engineering Science from the University of Toronto (B.A.Sc. 2005+PEY). Szajnfarber conducted her graduate work at the Massachusetts Institute of Technology, earning dual masters' degrees in Aeronautics & Astronautics (S.M. 2009) and Technology Policy (S.M. 2009) and a doctorate in Engineering Systems (Ph.D. 2011). Her dissertation focused on technology infusion at NASA and involved substantial field work at the Goddard Space Flight Center. Outside of academia, Dr. Szajnfarber has worked as a systems engineer at MDA Space Missions (Canadarm Program) and Dynacon Inc. (Microsatellites); and as a researcher at the European Space Agency (Advanced Concepts Team).

Julia Tizard

As Operations Manager, Julia is responsible for growing the operations of VRIGIN GALACTIC, LLC (VG), which is hoped to be the world's first Spaceline. Julia started with Virgin Galactic Ltd. in London, working on the medical and training programs for VG spaceflight participants. Having transferred to the US in 2009, Julia is now part of the leadership team establishing the VG business, including supervising delivery of the spaceflight system, operational planning, and budgeting and contract management. She is responsible for building a team of 55-60 full time operations personnel and is leading the delivery of documentation and protocols of the operating company.

Julia graduated from the University of Manchester, UK and has a PhD in Astrophysics and an MPhys/Astro (hons) degree. She has been part of many publications covering various areas of space science and is a member of American Institute of Aeronautics and Astronautics, National Space Society and International Association of Astronomical Artists.

Julia is a keen mountain climber and marathon runner. She enjoys all kinds of travel and exploration. She has climbed the highest peaks in the Alps and Africa and completed a marathon at the geographic North Pole in 2010. Her attention has now turned to the challenges of the American continent and hopes to plan and realize future expeditions in the US while working to get Virgin Galactic to Space.

Ron Turner

Dr. Turner is a Fellow with Analytic Services Inc. He is an internationally recognized expert in radiation risk management, particularly in response to solar storms. For nine years he was the ANSER point of contact to the NASA Institute for Advanced Concepts (NIAC), an independent institute charged with creating a vision of future space opportunities to lead NASA into the twenty-first century, and he is currently the Senior Science Advisor to the new, NASA Innovative Advanced Concepts Program. He is on the National Research Council (NRC) Committee on Solar and Space Physics, is Co-Lead of the Research to Operations working group supporting the NRC Heliophysics Decadal Survey, and recently supported the NRC Committee for the Evaluation of Radiation Shielding for Space Exploration (May 2008). He is on the Advisory Council to the National Space Biomedical Research Institute Center for Acute Radiation Research. He served on an NRC Committee looking at precursor measurements necessary to support human operations on the surface of Mars (May 2002). He earned his Ph.D. in physics from the Ohio State University.

Jon Turnipseed

As Virgin Galactic's Head of Safety, Jon's role is to define and develop the operational safety framework and lead the team in keeping safety as Virgin Galactic's North Star. His responsibilities encompass all safety aspects of the company's operations, from standard OSHA compliance through space launch mission activities. He also coordinates Safety programs with Scaled Composites, The Spaceship Company and with Spaceport America. Jon has held key leadership roles with diverse aerospace organizations and companies such as NASA, Computer Sciences Corporation, Integrated Science Solutions Inc., AlliedSignal Aerospace, Rockwell International, and he is a retired Major from the U.S. Air Force.

Jon is a Professional Member of the American Society of Safety Engineers and as a member of their governmental affairs committee has twice testified before Congress. He holds the highest formally accredited safety ranking as a Certified Safety Professional and has a Bachelor of Business Administration Degree from the University of Iowa and a Master's Degree in Safety from Central Missouri State University.

Linda Tyree

Linda Tyree joined United Launch Alliance (ULA) in 2006 and assumed her current position as leader of the System Safety and Systems Management department within Quality, Safety and Mission Success (QSMS). In this capacity she and her team are responsible for QSMS's infrastructure to include business processes and compliance, performance and health measurements, Perfect Product Delivery® initiatives and training, and all matters pertaining the United Launch Alliance's System Safety program. Her System Safety responsibilities include leadership of the team performing safety analyses of ULA's launch vehicle and mission integration activities. The System Safety department has also developed and executes a company-wide Error Prevention program. Before Linda's current assignment, she served 20 years in the USAF within the acquisition and engineering fields on the Titan and Atlas programs, several critical national spacecraft programs, and the Peacekeeper Ballistic Missile Program. While in the USAF supporting the Atlas program, Linda held several

positions. She was Space and Missile System Center's in-plant technical director and later became the Atlas Program Manager having responsibility for the successful launch of both National Reconnaissance Office and USAF payloads. Linda holds a Bachelor's degree in Electrical Engineering from Southern Illinois University at Edwardsville, and a Master's degree in Systems Management from University of Southern California.

Robert Uemura

Colonel Robert K. "Rob" Uemura is the Chief of the Space Operations Division, Directorate of Space & Cyber Operations, Deputy Chief of Staff for Operations, Plans and Requirements, Headquarters United States Air Force. The Space Operations Division provides leadership and oversight of operations and policy development for AF space operations mission areas, and is the HQ USAF lead in developing plans, programming and budgets for operational space force support and space force enhancement to include AFSCN, GPS, NDS, ITW&AA, MCCC, MILSATCOM, DMSP/DWSS, DSP/SBIRS, SEW, Space C2, Spacelift, Launch Ranges, and ground based radar programs.

Col Uemura earned his commission in 1990 through the Reserve Officers' Training Corps program at Texas A&M University. He is a career Space and Missile officer with operational expertise in the Minuteman III Intercontinental Ballistic Missile weapon system and the Defense Satellite Communications System Phase III program. His career in space and missile operations included command of an ICBM squadron. In addition to his operations experience, Col Uemura held several key staff positions at North American Aerospace Defense Command, United States Space Command, United States Northern Command, as well as Headquarters United States Air Force Plans & Programs Directorate. Prior to his current assignment, he attended Air War College, Air University, Maxwell AFB, AL as a student of Strategic Studies.

Pam Underwood

Pam Underwood is an Aerospace Engineer with the FAA Office of Commercial Space Transportation at Kennedy Space Center, Florida. Her office is responsible for facilitating the partnership for commercial human spaceflight with the NASA Commercial Crew Program. Previous to her current assignment she worked for AST from their field office at Patrick AFB, Florida. Her responsibilities included facilitating the partnership for launch safety and representing AST to the common standards working group with NASA and the United States Air Force. She earned a B.S. degree in Aerospace Engineering from Embry-Riddle Aeronautical University, and a M.S. degree in Aerospace Engineering from Virginia Tech. Before joining AST Pam worked as an Integration Engineer supporting the Solid Rocket Booster Element on the space shuttle program at Kennedy Space Center, and as a Wind Tunnel Test Engineer at the National Transonic Facility at NASA Langley Research Center.

Gary L. Wentz

Gary L. Wentz, Jr. served as the Chief Engineer of the Science and Mission Systems at the Marshall Space Flight Center (MSFC), Huntsville, Alabama from January 2006 until 2010. The Science and Mission Systems activities at MSFC range from exploration systems design and development, International Space Station element and payload hardware development, to Science Research and development activities. He resigned from

NASA service in August 2010. Soon thereafter, Wentz started in the position of President at Stratolaunch Corporation, a small entrepreneurial company.

Wentz joined NASA in January 1993 as an Experiment Fluid Systems Test Engineer at the Kennedy Space Center (KSC). He worked extensively preparing domestic and international scientific experiments to fly on-board the Space Shuttle. In 1996, he was selected to join the Space Station Hardware Integration Office at KSC, which was responsible for the integration and test of Space Station hardware from the manufacturing site to the launch pad. With delivery of the flight hardware to KSC in 1999, he was appointed as the resident KSC manager at the MSFC in support of MSFC managed payloads. In October 2002, Mr. Wentz joined the Marshall Space Flight Center team as the Program Integration lead for the 2nd Generation RLV Program Office; appointed as the Chief of Staff for the Orbital Space Program Manager in 2003. He was named the Deputy Manager for Exploration at the MSFC in 2004.

Prior to joining the NASA team, he supported Martin Marietta in the depot integration and test of the Low Altitude Navigation and Targeting Infrared for Night (LANTIRN) system for the USAF F-16 and the TOW-Cobra attack helicopter missile systems.

Wentz earned his B.S. in Aerospace Engineering and a M.S. in Engineering Management from the University of Central Florida, Orlando, Florida. He is the recipient of the NASA Outstanding Leadership Medal, NASA Certificate of Commendation, the NASA Space Station Program Team Excellence Award, numerous group achievements, and certificates of achievement

George Whitesides

George Whitesides is the CEO and President of Virgin Galactic, the spaceflight company founded by Sir Richard Branson. With Scaled Composites, the company has developed the WhiteKnightTwo and SpaceShipTwo vehicles, based on the X Prize-winning SpaceShipOne. In his role, Whitesides is responsible for guiding all aspects of the company to commercial operation at Spaceport America in New Mexico. This includes oversight of The Spaceship Company, a joint venture with Scaled to manufacture additional vehicle sets.

Prior to Virgin Galactic, Whitesides served as Chief of Staff for NASA, where he provided policy and staff support to the agency's Administrator. Upon departure from the agency he was awarded the Distinguished Service Medal, the highest award the agency confers.

Prior to his role at NASA, Whitesides served as Executive Director of the National Space Society (NSS). NSS is a space policy and advocacy group.

Whitesides currently serves on the board of Virgin Unite USA, the philanthropic organization of Virgin Group; the World Economic Forum's Global Agenda Council on Space Security; and the advisory board of the Rotary National Award for Space Achievement Foundation. He is a fellow of the UK's Royal Aeronautical Society.

Whitesides began his career at Orbital Sciences Corporation as executive intern and subsequently special assistant to the president. He served as Vice President of Marketing for Zero Gravity Corporation, a private space-tourism company, during its launch period, and Director of Marketing for Blastoff Corporation, a space- experience company funded by film and technology leaders.

With his wife Loretta Hidalgo Whitesides, Whitesides co-founded Yuri's Night, an annual global celebration of space that has been celebrated in over 50 countries. Mr. Whitesides co-founded Permission to Dream, a global space education program that donated telescopes to underprivileged children.

Whitesides has testified on American space policy before the United States Senate and the President's Commission on Implementation of United States Space Exploration Policy. Whitesides maintains an active speaking and media schedule. Whitesides was selected by Space News as one of twelve 'People to Watch.'

Mr. Whitesides received his undergraduate degree in public and international affairs with honors from Princeton University's Woodrow Wilson School, a master's degree in geographic information systems and remote sensing from the University of Cambridge in England, and was a Fulbright Scholar to Tunisia. Whitesides is a licensed private pilot and certified parabolic flight coach.

Space Available for Notes