



NCASE

National Conference on Aviation
and Space Education

2006 National Conference on Aviation and Space Education

Exploring New Worlds Together Program Guide

October 19 - 21, 2006
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A. Scott Crossfield

test pilot, engineer, and
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The NCASE Planning Committee wishes to thank our volunteers for all their hard work, time, and effort dedicated to making the conference possible. Please take a moment and thank the 'red shirts' volunteer for all they do!

Special thanks to Claudine Edelblute, NCASE Project Manager

Welcome!



Dear Conference Attendees,

On behalf of the NCASE Planning Committee, welcome to the 2006 National Conference on Aviation and Space Education!

We believe your NCASE experience will provide you with relevant, motivating information to help your students excel in science, math, and technology, as well as many other subjects. Aviation and Space educational concepts can contribute tremendously to the quality of our nation's future leaders.

This year's conference is dedicated to A. Scott Crossfield, legendary for his experiences with the X-15 aircraft, the space program, and many other challenges as an engineer and test pilot. In addition, his dedication to teachers was equal to none. Since 1986, Scott attended every NCASE as a speaker and supporter, and to personally bestow his beloved A. Scott Crossfield Aerospace Education Teacher of the Year Award to deserving educators.

Participate in hands-on, minds-on concurrent sessions and interact with "the best in the field". Seminars include: National Science Teachers Association (NSTA): NSTA SciPacks: Just-in-Time Online learning of Core Science Content, ESTES: Estes Rocketry 101, Baylor College of Medicine: From Outer Space to Inner Space, and much more.

Keynote motivational speakers include Dr. James Garvin, NASA GSFC Chief Scientist, Hoot Gibson, NASA Astronaut (retired), as well as other noted distinguished speakers sharing their insights.

The conference includes over 25 exhibitors, authors for book signings, door prizes and more. Learn about connecting aviation and space with your entire curriculum and applying National Content Standards and No Child Left Behind. Educators will be eligible to earn one Graduate Credit or 30 CEUs.

As we celebrate the 38th NCASE together we have many sponsors, partners, and volunteers to thank. Please take a moment to visit with them and offer your own words of appreciation. They are here because the National Conference on Aviation and Space Education - Exploring New Worlds Together is all about you! You are the key to our nation's future!

Sincerely,

The NCASE Planning Committee

Dear Educators,

On behalf of The Boeing Company, welcome to the National Conference on Aviation and Space Education. This will be an exciting opportunity to learn about current aerospace programs and discuss the implications for inspiring our nation's next generation of scientists, engineers and explorers.



Boeing is the largest aerospace company in the world. We have operations in 48 states and 67 countries. Our products operate on a daily basis supporting the international movement of people and goods, supporting the warfighter in defense of our nation, and making possible the exploration of space. I have first-hand experience with the quality of these products during my time as an Air Force pilot and a NASA Space Shuttle astronaut.

These amazing systems are as good as they are because of the people who design, build, maintain and operate them. It is because of this human capital requirement that our future success as a nation depends on the young girls and boys sitting in your classrooms today. They will lead us into a whole new world of technology and aerospace operations unimaginable today.

Clearly you are helping to shape the future of America and the world. You, our nation's teachers, are a national resource. Boeing is, therefore, proud to serve as a sponsor of this Conference and to promote the professional development of educators through our grant and volunteer programs.

Have fun! Learn lots! Get re-energized! Stay committed! Excellence in the classroom and in the field of aerospace has the potential to maintain our technological leadership, ensure national security, and improve the quality of life for all Americans.

Sincerely,

A handwritten signature in black ink that reads "Brewster H. Shaw".

Brewster H. Shaw
Vice President & General Manager
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Letter from Northrop

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October 19, 2006

Dear NCASE Attendee,

Ken Cook Co. is honored to be one of this year's sponsors of 2006 NCASE. We developed and contributed the graphics for the conference.

This conference promotes and explores aviation education.

Share your experiences from this conference with your students and fellow educators. As president of NCAE, I encourage you to use their resources. Remember:

The National Coalition for Aviation and Aerospace Education represents government, industry, labor and professional associations united to promote aviation and space education activities and resources, increase public understanding of the importance of aviation aerospace, and support education initiatives at the local, state and national levels.

Visit the NCAE web site at www.aviationeducation.org to learn more about available resources through member organizations.

I remain a steadfast supporter of NCASE, LCASE and the National Coalition for Aviation Education (NCAE) through the help of the talented people of our member organizations plus Ken Cook Co. staff.

The future is bright. Your students are the future, continue to encourage, motivate and nurture growth in all classroom activities.

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October 19, 2006

Dear Conference Participants:

Welcome to Virginia and the 2006 National Conference on Aviation and Space Education (NCASE). NCASE is a wonderful opportunity to bring educators from all disciplines together with colleagues, educational leaders, aviation and space exploration personalities, and industry representatives to help bring the wonder of aviation and space to the nation's students.

During the next three days, you will have an opportunity to attend sessions focused on core subject areas with an emphasis toward hands-on, minds-on activities applied to the National Science Education Standards and the Virginia Standards of Learning.

Conference tracks include:

- science of aviation and space;
- teaching and learning methodologies and technologies using aerospace education as the theme;
- outreach for aerospace education; and
- importance of educating youth for aerospace careers.

Over forty aviation and space education concurrent sessions have been planned for this conference. You will also have the chance to tour the National Air and Space Museum, and the new Udvar-Hazy Center. Motivational keynote speakers for the conference include NASA Goddard Space Flight Center Chief Scientist, Dr. James Garvin and NASA Astronaut (retired), Robert L. (Hoot) Gibson.

Again, welcome to the 2006 NCASE conference and enjoy your time in Virginia!

Sincerely,

Linda M. Wallinger

Linda M. Wallinger
Assistant Superintendent for Instruction

Conference Schedule

Thursday, October 19th			
Start Time	End Time	Event	Room
Noon	6:00pm	Registration	Grand Foyer
10:00am	11:30am	Leadership Conference on Aviation and Space Education Session	Alexandria
Noon	1:00pm	Crossfield Teachers Gathering	Alexandria
6:00pm	6:45pm	New Attendee Welcome All Attendees Reception <i>Sponsored by AIAA, 75th Anniversary</i>	Salon H, J, K
7:00pm	8:30pm	Hangar Talk	Salon A, B, C
Friday, October 20th			
Start Time	End Time	Event	Room
7:30am	5:30pm	Registration	Grand Foyer
8:15am	9:45am	General Assembly <i>Dr. James Garvin, NASA GSFC, Chief Scientist</i> <i>Thomas Crouch, Author; NASM Senior Curator</i>	Salon A, B, C
10:00am	11:00am	Coffee with Exhibitors	Salon H, J, K
10:00am	3:30pm	Exhibit Hall <i>Book Signing, Author Thomas Crouch</i>	Salon H, J, K
12:30pm	1:30pm	Ice Cream Social <i>Sponsored by the AIAA, 75th Anniversary</i>	Salon H, J, K
10:30am	5:00pm	Concurrent Sessions	See Program Schedule
6:15pm	6:45pm	Banquet Reception (Cash Bar, Only)	Grand Foyer
17:00pm	9:30pm	Crown Circle – Crossfield Banquet <i>(Ticketed Event)</i>	Salon A, B, C
Saturday, October 21			
Start Time	End Time	Event	Room
7:30am	10:30am	Registration	Grand Foyer
8:15am	9:45am	General Assembly <i>Hoot Gibson, NASA Astronaut (retired)</i> <i>Ken Hyde, President, Wright Flight Experience</i>	Salon A, B, C
10:00am	11:00am	Coffee with Exhibitors	Salon H, J, K
10:00am	1:30pm	Exhibit Hall <i>Book Signing, Authors: Thomas Hill,</i> <i>Allan Janus, Lonnie Schorer,</i> <i>Winston Scott and Mary Feik (featured)</i> <i>Special Guest: Buzz Aldrin, NASA Astronaut (retired)</i>	Salon H, J, K
10:30am	3:45pm	Concurrent Sessions	See Program Schedule
12:00pm	1:15pm	Brewer Luncheon <i>(Ticketed Event)</i>	Salon 1 & 2
4:30pm	5:30pm	General Assembly <i>Awards, Prizes, & Conference Wrap-up</i> <i>Special Guest Speaker: Buzz Aldrin, NASA Astronaut (retired)</i>	Salon A, B, C

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For information on AFA programs which promote science and math education at the elementary and secondary school level visit our booth at NCASE or the web at WWW.AFA.ORG

Conference Items

Your **Name Tag** is your 'get in free' ticket for the exhibit hall, general assembly, receptions, and concurrent sessions. Please be sure to wear your name tag at all times during the conference.

Opening Events, Thursday, October 19th, New Attendee Welcome - All Attendee Reception held in Salon H, J, K and **Hangar Talk**, a tribute to A. Scott Crossfield, immediately follows the reception.

The **Crown Circle – Crossfield Banquet** and the **Brewer Luncheon** are ticketed events. If you have not already purchased your ticket in advance, you may do so at the registration desk.

The **Registration Desk** and **Information Desk** are located in the Grand Foyer. Lost items and message board are located at the Information Desk. Conference volunteers will be wearing red shirts and khaki slacks with special name tags for easy recognition. These volunteers can help make your conference experience a pleasant one by answering any questions you may have.

Be sure to check the schedule for Book Signings, Coffee Breaks, and the Friday Ice Cream Social in the **Exhibit Hall!** The Internet Island is located in the Exhibit Hall for free internet access.

Dress code is business casual with formal attire for the elegant Crown Circle – Crossfield evening event.



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General Assembly Speakers

Key Note Speakers



Dr. James B. Garvin

NASA GSFC, Chief Scientist

Dr. James Garvin graduated from Brown magna cum laude in 1978. After receiving his Masters of Science from Stanford in 1979, Garvin returned to Brown to pursue a PhD in planetary geological sciences under Professor T. A. Mutch and J. W. Head in 1980, and completed his Ph.D in 1984. He has published over 60 research articles, ranging from remote sensing oceanic islands on Earth, to the characteristics of rocks on Mars, Venus, and the Moon.

Garvin is NASA's Chief Scientist, serving the Agency and the Administrator as the primary advisor for the entire NASA science portfolio. His duties include advising the senior leaders of the Agency on matters that range from how science fits into the Vision for Space Exploration to the basic scientific research and development priorities for the Agency. In his former capacity as the Lead NASA Scientist for Mars Exploration, Dr. Garvin was instrumental in formulating and developing the NASA scientific strategy for Mars, and most recently, that for the Moon as well.

Dr. Garvin has been a NASA scientist for twenty years, which spans his entire career beyond graduate school. He came to NASA's Goddard Space Flight Center in late 1984 as a staff scientist, and soon thereafter he helped catalyze development of new spaceflight experiments for exploring the landscapes of Mars, the Moon, and planet Earth. As NASA's Chief Scientist, Dr. Garvin brings the experience gained from his 20 year career as a NASA scientist, spanning such disciplines as Earth system science, Mars Exploration, lunar exploration, Venus, asteroids, and the outer planets. At present he remains a Co-investigator on NASA's ongoing Mars Global Surveyor, Canada's Radarsat, and ESA's Envisat missions.

In 1999, the NASA Administrator asked Garvin to chair the Next Decade Planning Team (DPT) for the purpose of developing science-driven, technology-enabled pathways for human exploration beyond low-Earth orbit. In chairing the DPT team, Garvin and his team helped shape the antecedents of what became the Vision for Space Exploration (VSE), which is NASA's current direction and mandate.



Robert (Hoot) Gibson

(Captain, USN)

NASA Astronaut (retired)

Robert (Hoot) Gibson graduated from Huntington High School, Huntington, New York, in 1964; received an associate degree in engineering science from Suffolk County Community College in 1966, and a bachelor of science degree in aeronautical engineering from California Polytechnic State University in 1969. Hoot is married to Dr. M. Rhea Seddon of Murfreesboro, Tennessee and they have four children. He enjoys home built aircraft, formula one air racing, running and surfing during his free time.

In 1992, Hoot was awarded the Federation Aeronautique Internationale (FAI) "Louis Bleriot Medal", and the Experimental Aircraft Association (EAA) "Freedom of Flight" Award (1989). He established world records for "Altitude in Horizontal Flight," Airplane Class C1A in 1991, and "Time to Climb to 9000 Meters" in 1994. His military awards include: the Defense Superior Service Medal; the Distinguished Flying Cross; 3 Air Medals; the Navy Commendation Medal with Combat "V"; a Navy Unit Commendation; Meritorious Unit Commendation; Armed Forces Expeditionary Medal; Humanitarian Service Medal; and Vietnam Campaign Medal.

Hoot entered active duty with the Navy in 1969. While assigned to Fighter Squadrons 111 and 1, during the period April 1972 to September 1975, he saw duty aboard the USS Coral Sea (CVA-43) and the USS Enterprise (CVAN-65) -- flying combat missions in Southeast Asia. He is a graduate of the Naval Fighter Weapons School, "Topgun." Gibson returned to the United States as an F-14A instructor pilot with Fighter Squadron 124. He graduated from the U.S. Naval Test Pilot School in June 1977, and later became involved in the test and evaluation of F-14A aircraft while assigned to the Naval Air Test Center's Strike Aircraft Test Directorate.

His flight experience includes over 6,000 hours in over 50 types of civil and military aircraft. He holds airline transport pilot, multi-engine, and instrument ratings, and has held a private pilot rating since age 17. Gibson has also completed over 300 carrier landings.

Selected by NASA in January 1978, Gibson became an astronaut in August 1979. Gibson has flown five missions: STS 41-B in 1984, STS 61-C in 1986, STS-27 in 1988, STS-47 in 1992, and STS-71 in 1995. Gibson served as Chief of the Astronaut Office (December 1992 to September 1994) and as Deputy Director, Flight Crew Operations (March-November 1996).

On his first space flight Gibson was the pilot on the crew of STS 41-B which launched from the Kennedy Space Center, Florida, on February 3, 1984. Gibson was the spacecraft commander of the STS 61-C mission. Gibson subsequently participated in the investigation of the Space Shuttle Challenger accident, and also participated in the redesign and recertification of the solid rocket boosters. As the spacecraft commander of STS-27, Gibson and his five-man crew, launched from the Kennedy Space Center, Florida, on December 2, 1988, aboard the Orbiter Atlantis. On Gibson's fourth space flight, the 50th Space Shuttle mission, he served as spacecraft commander of STS-47, Spacelab-J, which launched on September 12, 1992 aboard the Orbiter Endeavour. In five space flights, Gibson has completed a total of 36-1/2 days in space. Gibson left NASA in mid-November to pursue private business interests.

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We salute the Civil Air Patrol, the National Coalition for Aviation Education, the generous NCASE Sponsors, and all the NCASE speakers and participants for their tremendous contributions supporting aviation and space education!

In particular, we admire the spirit of cooperation and partnership at NCASE 2006 that so well exemplifies the positive character attributes of the aviation community, adding inspiration and value to the lessons we offer youth in the many academic subjects relating to flight.

THANK YOU ALL!



Visit our website and enjoy finding many ideas and assets to help you in your general aviation endeavors! Our site has many documents, lists of resources, instructions for our grants, and useful links to other sites. All this is intended to help aviators, aviation groups, and others improve the state of the art in general aviation and also to tell their stories so the public can gain a wider understanding of this important activity. www.wolf-aviation.org



Featured Guest Speakers



Ken W. Hyde

President, The Wright Experience, Inc.

Ken Hyde is a native of Nokesville, Virginia who earned both mechanics' and pilot's licenses while still in high school. After graduation, he went to work as a mechanic for Capital Airlines. In 1961, he joined the team at Bendix Corporation as a co-pilot/mechanic for the operation of instrumented aircraft for calibrating worldwide tracking stations for NASA projects Mercury, Gemini and Apollo.

He joined American Airlines in 1965 and retired in September 1999, with 33 years of service as a commercial pilot. The same year he went to work for American Airlines, he founded Virginia Aviation, an antique aircraft restoration company. He first gained national attention as the restorer of a number of vintage aircraft taking honors in 1975 as EAA Grand Champion and 1987, in addition to numerous awards and recognitions. His list of restored projects for museums, include several aircraft for the Smithsonian Institute's National Air & Space Museum and a veritable who's who of aviation museums throughout the United States. In December of 2000, Ken was inducted into the Virginia Aviation Hall of Fame. He was awarded the Paul Tissandier Diploma by the Federation Aeronautique Internationale in 2003. In August of 2004, he was presented with the Brewer Aerospace Award from the National Headquarters of the Civil Air Patrol.

Ken discovered that the meticulous Wright brothers put very little of their work on paper or in one research place. These gaps in the historical record have given rise to the Wright Experience, a team of historians, engineers, pilots and mechanics, led by Ken, and dedicated to more completely telling the Wright story in order to inspire the next generation of innovators. Ken's work on the 1903 Wright Flyer flown at the commemoration of the Centennial of Flight provided him the opportunity to work closely with Scott Crossfield.



Thomas D. Crouch

National Air and Space Museum, Curator

Author

Smithsonian curator and historian Tom D. Crouch will highlight his book, "Racketeers and Gentlemen Engineers". The book is an account of the significant contributions of the American Institute of Aeronautics and Astronautics and its predecessor organizations have made to the evolution of flight. It covers the story of visionary individuals and dedicated engineers who changed society. The book traces the early struggles to create and

distinguish aeronautics as a distinct profession, through the technological advances brought on by two world wars and the advances spawned by the Space Age.

Tom Crouch is senior curator of the Division of Aeronautics at the Smithsonian Institution's National Air and Space Museum. He is the author and editor of more than a dozen books and many articles for both magazines and scholarly journals.

Hangar Talk

Thursday, October 19th
Salon A, B, C

Hangar Talk is an engaging, casual dialogue session and an open exchange of information with the audience in an evening's tribute to the late A.Scott Crossfield.


Famed aviator and X-15 test pilot Scott Crossfield had his first flight at the age of six in an oil company airplane and says that he does not recall ever having desired any other career than aviation. He began flying lessons at the age of twelve, in return for delivering newspapers at the Wilmington Airport. By the time he graduated from high school, he had resolved to emulate such famous test pilots as Boeing's Eddie Allen and the Air Force's Jimmy Doolittle. He received both his Bachelor of Science and Master of Science degrees in aeronautical engineering from the University of Washington.

Mr. Crossfield's distinguished career in aviation began in 1942 as a U.S. Navy pilot and fighter gunnery instructor. From 1946 to 1950 he was the Chief Operator at the University of Washington's F. K. Kirsten Wind Tunnel, and from 1950 to 1955 he was an aeronautical research pilot for the National Advisory Committee on Aeronautics at Edwards High Speed Flight Station. From 1955 to 1961 Scott Crossfield was the design specialist, X-15 project pilot, and chief engineering test pilot for North American Aviation - Los Angeles Division. He was involved in all phases of X-15 specification and design, cockpit and control systems, engine systems, structures, and so forth. He was also the pilot for the first thirty demonstration flights of the X-15.

In 1967 Scott joined Eastern Airlines as a division vice president. After four years he was promoted to staff vice president working transportation development issues for the airline, a position in which he remained until leaving Eastern in 1974 to assume the position of senior vice president at Hawker Siddeley. He has worked as an independent technical consultant for several corporations, House committees and sub-committees, NASA, and the FAA. Scott was involved with the Centennial of Flight celebration, teaching pilots to fly the replica Wright Flyer.

Our sincere thanks to his family for their continued support: wife Alice; sons Tom, Paul, Tony, Robert; daughters Sally and Becky.


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Hangar Talk Panelists

Eugene Deatrick

Following graduation from the United States Military Academy, Eugene (Gene) Deatrick entered the U.S. Army Air Corps in 1946. His assignments include Electronics Test Squadron whose mission was the development of new radar bombing equipment and as a Bomber Engineering Test Pilot. During his career, Deatrick flew more than 50 different types of aircraft and accumulated more than 12,000 hours of flying.

In 1965, he volunteered for Vietnam. While in Vietnam, Deatrick flew 402 combat missions in the A-1E Skyraider. He was responsible for the rescue of Lt. Dieter Dengler, USN, who had escaped from a prison camp after six months of captivity. Deatrick returned to the United States and was assigned as Commandant of the USAF Aerospace Research Pilot School, Edwards Air Force Base, CA. In 1968, he was selected to attend the National War College. Following his graduation, he was assigned to the Joint Staff, Office of the Joint Chiefs of Staff. Subsequently he became the Director of Test, Air Force Systems Command, Andrews AFB, MD and retired from the United States Air Force in 1974.

He currently serves as an aerospace representative in the Washington D.C. area for several companies. He and his wife, Zane have two sons and two grandsons. Deatrick's distinguished career includes numerous awards and honors, to include the Distinguished Flying Cross and the Bronze Star for Valor. In 1969, he earned a Masters Degree from George Washington University. In 2005, he received the National Aeronautic Association's Elder Statesman of Aviation award for his service to the United States military, especially as one of its top test pilots. His life-long friendship with Scott Crossfield will add to Hangar Talk, and will include remembrances of their test pilot years together.

Mary Feik, Aviation Pioneer; Col, CAP

After overhauling her first automobile engine when she was 13 years old, Mary turned to aircraft engines and military aircraft by age of 18. She continued her passion by teaching aircraft maintenance to crew chiefs and mechanics for the U.S. Army Air Force in 1942. During WWII, she became an expert on many military aircraft and is credited with becoming the first woman engineer in research and development in the Air Technical Service Command's Engineering Division at Wright Field in Dayton, Ohio. Mrs. Feik flew more than 5,000 hours as a B-29 flight engineer, engineering observer, and pilot in fighter, attack, bomber, cargo, and training aircraft. She designed high-performance and jet fighter pilot transition trainers as well as aircraft maintenance trainers. She has authored pilot training operational manuals for many of the military aircraft and reports in engineering and the physical sciences for distribution throughout the armed forces.

Mrs. Feik retired from the National Air and Space Museum Paul E. Garber Restoration Facility as a Restoration Specialist. She continues to restore antique and classic aircraft. Mary has had a life-long dedication to aviation education with the U.S. Air Force, the Civil Air Patrol, and other aviation organizations. She has received numerous awards and recognition for her life-time of accomplishments and continues to conduct speaking engagements across the nation. Her passion for aerospace education and love of engineering began her life-long friendship with Scott Crossfield.

Hoot Gibson

(see page 8)

Kochersberger, Kevin

Research Associate Professor, Mechanical Engineering

Fascinated with flight since he built and flew a hang glider at the age of 15, Kevin Kochersberger eventually found himself working with Ken Hyde and the Wright Experience to create the world's most accurate reproduction Wright aircraft. His involvement in the Centennial of Flight project evolved from dyno testing Wright engines and wind tunnel testing full-scale aircraft, to flying the 1902 Wright glider and the 1903 Wright Flyer. Kevin logged two successful flights in the 1903 machine, and was the pilot aboard the aircraft on December 17, 2003 during the Centennial of Flight Celebration.

Recipient of an Aviation Week and Space Technology 2003 Laureate Award for his involvement in the Centennial Celebration, along with Scott Crossfield (flight training), Ken Hyde (President, Wright Experience) and Terry Queijo (pilot); Kevin is currently a Research Associate professor at Virginia Tech in Blacksburg, Virginia and is working on the next generation of unmanned autonomous aircraft. He holds a Ph.D. in mechanical engineering from Virginia Tech and is a 1,600-hour pilot, flight instructor, and aircraft owner.

Special Guest Speaker

Buzz Aldrin

NASA Astronaut (retired)

Buzz Aldrin was the second human to walk on the moon. On July 20, 1969, he followed Neil Armstrong onto the lunar surface while a third American astronaut, Michael Collins, remained in orbit overhead. Aldrin attended West Point, flew fighter jets in the Korean War, and then earned a doctorate in astronautics from the Massachusetts Institute of Technology (MIT) before joining the NASA astronaut corps in October of 1963. He flew on the Gemini 12 space mission (launched 11 November 1966) and then was chosen as the lunar module pilot for Apollo 11, the first manned mission to the surface of the moon. The success of Apollo 11 made Aldrin, Armstrong and Collins international heroes. Aldrin reached the rank of colonel in the U.S. Air Force.

Since his retirement from NASA, Aldrin has been an unabashed booster for space exploration. He founded Starcraft Boosters, a private rocket design firm. He has authored two books about his experiences in space, "Return to Earth", and "Men From Earth", and the recently published science-fiction novel, "Encounter With Tiber." He and his wife, Lois, live in Laguna Beach. Buzz was inducted into the U.S. Astronaut Hall of Fame on March 19, 1993 and a recipient of the Horatio Alger Association of Distinguished Americans award in 2005.

In his speeches, Buzz encourages audiences to 'reach for the stars' in life and their endeavors. He shares his memories of his momentous walk on the moon, the travels he's taken since and his vision for the future.

Awards

Dr. Mervin K. Strickler, Jr. Aviation Education Leadership Award

Saturday, October 21
Brewer Luncheon,
Salon 1 & 2

Dr. John H. Campbell has been selected for the 2006 Dr. Mervin K. Strickler, Jr. Aerospace Education Leadership Award in recognition of his outstanding achievement in the field of aviation education.

Dr. Campbell has a distinguished career as a physicist and an educator, with a genuine dedication to aviation education, especially focused on soaring. For over two decades he combined his career and love of aviation into the classroom and airports as a college professor and flight instructor.

He is active in many organizations which promote aviation and make these resources accessible to youth. Since 1993, he has chaired the Youth Committee of the Soaring Society of America, Inc (SSA) and led the organization to become one of the premier organizations in the world facilitating and promoting soaring aviation to youth.

Dr. Campbell sees the importance of collaborating with other organizations that share common aerospace education goals. He initiated the SSA-Experimental Aircraft Association (EAA) partnership on the Young Eagles programs. He was a participant in creating the SSA-Civil Air Patrol (CAP) joint glider program Memo of Agreement. Dr. Campbell works extensively to promote aviation and make resources available to youth.

The Dr. Mervin K. Strickler, Jr. Aerospace Education Leadership Award, established in 1995, honors Dr. Strickler, the 'Father of Aviation Education', whose significant contributions to education span more than fifty years. The award is given to recognize individuals who share his personal commitment and have made lifetime personal commitments to aviation education.

The National Coalition for Aviation and Space Education represents government, industry, and aviation special interest groups united to promote aviation education activities and resources; to increase public understanding of the importance of aviation; and to support educational initiatives at the local, state, and national levels.



Dr. Mervin K. Strickler, Jr. Aviation Education Leadership Award ceremony held at the 2006 Airventure

Left - Shelia Bauer, Strickler Award Committee Manager
Center – Dr. John H. Campbell, 2006 Strickler Award Recipient, Education Leadership
Right – Ken Cook, President NCAE

Frank G. Brewer Trophy for Aerospace Education

Saturday, October 21

Brewer Luncheon

Salon 1 & 2

National Aeronautic Association proudly announces that the Docent Corps of the Smithsonian Institution's National Air and Space Museum has been awarded the 2005 Frank G. Brewer Trophy.

The Trophy is awarded annually to an individual, a group of individuals, or an organization for significant contributions of enduring value to aerospace education in the United States.

A particular mission of the all-volunteer docent group is to conduct tours and hands-on educational programs for visitors of all ages. They now provide similar services to visitors at the museum's new Udvar-Hazy Center near Washington, D.C.'s Dulles Airport.

The National Air and Space Museum is the most visited museum in the world with more than 250 million visitors entering its doors since opening in July, 1976. In the museum's mission to "commemorate, educate and inspire," the Docent Corps is an invaluable asset in reaching, educating and inspiring the millions of Americans who visit the museum annually—teaching them about America's heritage and encouraging them to learn more about the science, technology, engineering, and mathematics topics key to our nation's legacy of successes in aviation and space exploration.

According to Museum Director General Jack Dailey, the Docent Corps "has helped inspire generations of scientists, engineers, astronauts, and citizens..."

Dailey credits the group as "a major component of the museum's educational programming and outreach, and continued success."

The National Aeronautic Association is proud to present the Brewer Trophy to the Docent Corps of the National Air and Space Museum.

National Air and Space Museum Docents



Crown Circle- Crossfield Awards

Crown Circle – Crossfield Awards Banquet
Friday, October 20th
Salon A, B, C

Crown Circle for Aerospace Education Leadership

Established in 1979, this award recognizes performance and outstanding leadership in aerospace education. Crown Circle recipients can be proud of having received one of highest awards in aerospace education. Those seeking this honor must demonstrate involvement in and commitment to aerospace education as a local, national, or international leader in aerospace education with performance over an extended term and of great quality. Induction may also be the result of exceptionally unique or extraordinarily outstanding achievement or contributions in aerospace education.



Ms. Jeri Martin

Jeri A. Martin was born in 1956 in Milton, Florida. In 1976 she received her associates degree from Florida College in vocational education; in 1978 a bachelors degree in vocational/technical education from the University of West Florida; and in 1986 her masters degree in science education & administration and supervision from NOVA University. She has been a Florida Educator for twenty-eight years and is currently teaching physical science at Thomas L. Sims Middle School in Pace, FL.

In order to enhance the curriculum for her students and to mentor teachers in Northwest Florida, she has participated in numerous aerospace workshops, programs, and projects, which include some of the following: NASA's Educational Workshop for Math & Science Teachers; Curriculum Designer for the SEDSAT 1 satellite - secondary payload to the Deep Space 1 satellite/Delta II launch at Cape Canaveral Air Force Base; and wrote Aerodynamics curriculum for the National Flight Academy/National Museum of Naval Aviation in Pensacola, FL. In addition Ms. Martin has written for and received over \$100,000 in grant money for laboratory equipment, rockets, and student project materials.

As Vice President - Aerospace Education for the Hurlburt Air Force Association. She engages and collaborates with local academic leaders to ensure aerospace sciences are a prominent part of each curriculum and available to all school children. She successfully plans, executes, and supervises numerous Aerospace Education programs, some of which are an educator Newsletter, design of an aviation/aerospace curriculum notebook and numerous aviation/aerospace teacher workshops in the Northwest Florida area.

Jeri excels in using small segments of video to capture her students' and fellow teachers' interest while enhancing classroom math, science, and technology skills through WSRE/PBS National Teacher Training Institute as a Master Teacher. She has been employing this highly recognized and educationally based program with her students as well as training other educators for the past eight years.

She has been recognized by many organizations for her work in Aerospace Education among which include the AFA Medal of Merit in 2004 and the George D. Hardy Award for Excellence in Aerospace Education in 2003.

Rol Murrow



William Rollins Murrow ("Rol") has a wide-ranging background in high technology, management, media, and aviation. From initial work assisting in aerospace acoustics he has proceeded through his education and a career in film and video production, theatre operations, and management. Along the way his enthusiasm for aviation led from avocation to advocacy of local airports to vocation.

Rol graduated from the UCLA film school as well as the MBA program and worked on many productions, built a production studio, and operated the celebrated Fox Venice Theatre in Los Angeles. In 1975 he learned to fly in a club at Santa Monica Airport and several years later directed the completion of the Museum of Flying at that airport. He cofounded the Air Care Alliance, an umbrella group for a number of volunteer pilot organizations whose members fly to help others. He is a member of EAA and flies Young Eagle missions; belongs to the University Aviation Association; the National Aeronautic Association; Women in Aviation; and the Aero Club of New England, for which he serves as an Advisor. He has earned Commercial, Flight Instructor, and Glider certificates, has logged more than 3,000 flight hours, and owns a vintage 1958 Cessna 172.

From 1991 to 2001 Rol served the Aircraft Owners and Pilots Association (AOPA) as the Northeastern Regional Representative. Always enthusiastic about aviation's positive influence on young people he worked with the FAA's Aviation Education Director to form several state aviation education councils, as well as the National Aviation and Space Education Alliance. Through that work he became involved with the National Coalition for Aviation Education (NCAE) and now serves as an officer for it. He is a Civil Air Patrol Aerospace Education.

In 2001 Rol became full time Executive Director of the Wolf Aviation Fund, which provides grants and information promoting and supporting General Aviation. Working with his Trustees the Fund has focused on aviation education as one of its most important core program areas, and it became a sponsor for last year's Leadership Conference for Aviation and Space Education (LCASE) and this year's National Conference on Aviation and Space Education (NCASE). Rol believes it is through mutually supportive partnerships that we can all help inspire many more children and students through their experiencing the wonders of aviation and space science. He lives and works in the ranching community of Gavilan in Northern New Mexico.

A. Scott Crossfield Aerospace Education Teacher of the Year Award

This prestigious award was first presented in 1986 and has been one of the highlights of every National Conference on Aviation and Space Education. Inspired by the legendary A. Scott Crossfield, this award recognizes and rewards aerospace education K-12 classroom teachers for outstanding accomplishments in aerospace education and for their dedication to the students they teach.

Ricardo V. Soria



Ricardo V. Soria is a native of San Antonio Texas. He resides in Fort Walton Beach Florida with his wife JoAnn and son, Reid. Rick has an undergraduate degree in Resource Management from Troy University and a graduate degree in Educational Leadership from the University of West Florida. He has seven years of military teaching experience and 12 years of teaching experience in the public school systems. His teaching experience has consisted predominately of aviation / aerospace science and related topics.

Rick has been interested in aviation and aerospace since he was in grade school. He began by building plastic model airplanes and went on to build more and more complex models of varying materials. The research on the "X" planes was in high gear when he was a boy and followed their progress with a voracious appetite. Soon, Rick was following the manned space program. He has had a great fascination and interest in all things dealing with aviation and aerospace my whole life. Teachers who were innovative and creative in his life left a lasting impression. He was presented an opportunity to apply for a position as an AFJROTC Aerospace Science Instructor at a local high school and accepted. The curriculum materials AFJROTC and the Civil Air Patrol produced were outstanding. Rick's mission in life is to generate excitement in his students in learning and share his passion in aviation and aerospace.

In 2004, Embry-Riddle Aeronautical University (ERAU) had partnered with our high school (Choctawhatchee HS) to establish a unique educational program. ERAU College professors taught aviation courses in our high school and students earned weighted high school credit and college credit concurrently. In 2004 I decided to start an outreach program to inform community schools about the aviation courses we were teaching at our high school. My School principal financially sponsored the first two aviation summer camps for elementary and middle school students. By the summer of 2005, the Air Force Association Chapter #398 (Hurlburt Field, FL) and Schaller Engineering stepped forward and agreed to sponsor more student aviation camps and two teacher aviation workshops. By summer of 2006, our sponsors included the Air Force Association Chapter #398 (Hurlburt Field, FL) and Schaller Engineering, the Boeing Company and Jacobs Sverdrup and the local CAP Squadron. It has been humbling yet uplifting to work with dedicated sponsors who have the same goals that I have: to educate the citizens of America of the emphasis of science and math in our educational system to assure our continued technological supremacy and national freedom.

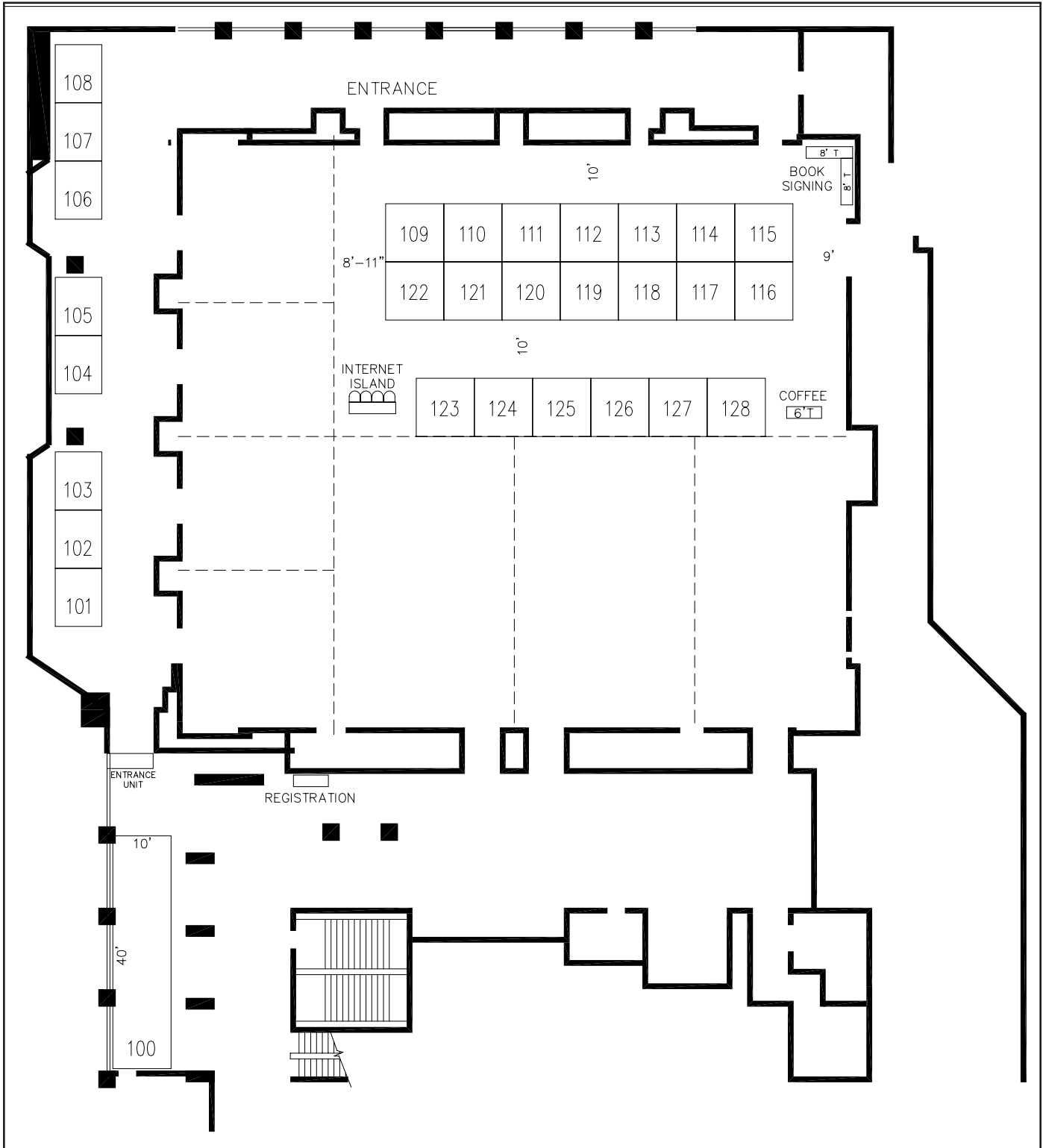
Exhibitors

Exhibitors Hall

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Exhibitor Hall Floor Plan



Exhibitor Description

- **AC Supply**

AC Supply – for all your aerospace education product needs! Prices normally associated for large orders! Estes rocket products; KNEX; Midwest Class-Packs; various radio control airplane products displayed; and too many other quality, aerospace-related products offered at an incredible discount. We take personal pride in fulfilling all your aerospace education product needs. Come stop by our booth for a catalogue and - CAP members, be sure to ask about the special CAP discount on Estes orders.

Call 1-800-536-0238 or email acsupply@swbell.net for a free catalog. CAP information sheet.

- **Adams State College Extended Campus**

Education, students, classrooms, and teachers are ever-changing. Educators are always seeking dynamic ways to promote high quality education, improve student achievement, and motivate students. Adams State College is dedicated to Aerospace Education and pleased to support the Aerospace Education Excellence Award Program. For details visit us at: http://www2.adams.edu/extended_studies/independent/aex/aex.php

- **Aerospace Industries Association**

The Aerospace Industries Association (AIA) represents the nation's leading manufacturers and suppliers of civil, military, and business aircraft, helicopters, unmanned aerial vehicles, space systems, aircraft engines, missiles, materiel, and related components, equipment, services, and information technology.

Visit the website at www.aia-aerospace.org for more information. *

- **Air Force Association**

The Air Force Association (AFA) is an independent, non profit, civilian organization promoting public understanding of aerospace power through educational outreach programs.

- **American Institute of Aeronautics and Astronautics**

Have your students asked “Why learn math and science? Come to this session and you will have the answers that will make your students want to learn more about the aerospace industry. We will use the AIAA web site to show resources that you and your students can use to research careers in aerospace. In addition, the AIAA Classroom Grant program will be reviewed so you can get funding to help with hands-on math and science activities in your classroom. Free membership in AIAA is included in this session.

- **Analytical Graphics Inc (AGI)**

AGI's Educational Alliance Program provides eligible educational groups with free licensing of AGI's industry-leading analysis software for instructional use. STK allows instructors and students to create dynamic, 3-D scenarios of complex space-related topics and solve real space analysis problems. Since establishing its Educational Alliance Program in June 1996, the company has donated its STK software to more than 140 academic institutions across the world. The dollar value of software donated to these educational partners to date totals more than \$1 billion.

- **Apogee Books**

Apogee Books is the world's leading commercial Space Book Publisher. Working with the world's national space administrations and private space industries to educate and bring you the latest on the high frontier.

- **A. Scott Crossfield Teacher of Year**

In keeping with the conference tribute, A. Scott Crossfield T-shirt memorabilia will be on sale with all proceeds going toward the A. Scott Crossfield Teacher of the Year Award. Limited quantities, first-come, first served. Growing our future, for our future!

- **Blue Skies Ideas**

Blue Skies Ideas offers educational CDs that contain aerospace-themed activities, organized by age group and subject, for teachers and adults to use to intrigue and motivate youngsters. CDs for Grades K-3, Grades 4-6 and Grades 7-12 each include more than 100 suggested activities, resources, and sample lesson plans.

- **Boeing Company**

The Boeing Company is the world's leading aerospace company, with its heritage mirroring the history of flight. It is the largest manufacturer of commercial jetliners and military aircraft, providing products and services to airlines and U.S. and allied armed forces around the world. In addition, Boeing is committed to investing in teachers so that every student has a chance to thrive and every community becomes a vibrant place to live.

- **Civil Air Patrol**

The Civil Air Patrol Drug Demand Reduction (DDR) Program is chartered with the responsibility to make CAP an environment that promotes and supports education, community involvement, social responsibility, and respect for individuals. Since 1994, the scope of the Program has expanded to include the entire CAP organization with an emphasis on the Cadet Program. The CAP DDR Program works jointly with the DDR programs of the USAF; USAF Reserve, National Guard, Community Anti-Drug Coalitions of American agencies, the Drug Enforcement Administration, and the FBI's Community Outreach Program.

- **Discovery of Flight – Wright Experience**

Experience flying the 1911 Wright Model B! Visit the Discovery of Flight – Wright Experience booth and take the controls of the Wright aircraft. The simulation software was developed by Bihle Applied Research from wind tunnel evaluations of authentic reproductions of the Model B. This exhibit will also contain displays about the Foundation's upcoming 1908 Centennial celebrations of the Wright brothers' first public flights and hands on-artifacts.

- **Evergreen Aviation Museum**

“The Captain Michael King Smith Education Institute”

The Evergreen Aviation Museum is best known as the home of the world's largest wooded aircraft, the Howard Hughes Spruce Goose. Plus, they have a SR 71 Blackbird, a Grumman F6F-3 hellcat, a Titan II Missile and a B-17 bomber. In addition there is more 60 other historic aircraft on display. Along with artwork, traveling displays and café and gift store. The Museum is located about three miles southwest of McMinnville, Oregon, across the street from the McMinnville Airport. The Museum hours are 9:00am to 5:00 pm.

- **Earthly Delights**

Delight's Earthly Delights features jewelry inspired by the beauty of science. Necklaces which feature models of scientific concepts include the following: The Solar System, The DNA Molecule, Photosynthesis, Constellations including those of the Zodiac, Orion, and the Summer Triangle. New this year will be models of the energy levels of the elements gold and silver. Necklaces made from meteorites that landed in Siberia in 1947 will be available. For more information see our website DelightsEarthlyDelights.com

- **Estes Rockets**

Estes Rockers “Ignite the Imagination”™ of your students! Estes, the world's leader in model rocketry, provides cost-saving rocket and engine LAB Packs™, curricula and model rocket accessories. Stop by our booth to register to win rockets! Visit our Estes Rocketry Resource Center at www.esteseducator.com.

- **Federal Aviation Administration**

The FAA Office of Commercial Space's mission is to ensure protection of the public, property, and the national security and foreign policy interests of the United States during a commercial launch or re-entry activity and to encourage, facilitate, and promote U.S. commercial space transportation. Our vision is to be recognized as the world's foremost authority on commercial space transportation.

- **Girls With Wings**

Girls With Wings™ (GWW) is an e-commerce merchandising and public awareness project that focuses its efforts on promoting young girls' interest in aviation-related careers and hobbies. The GWW emerging product line offers apparel for girls of all ages, allowing them to become connected with aviation from the time they are born. Website activities and inspirational stories of women involved in various aspects of aviation will motivate girls to pursue their own skyward adventures. For more information please visit www.girlswithwings.com

- **Ken Cook Co.**

Ken Cook Co. produces materials supporting various aerospace education initiatives conducted by NCAE member groups. The company produces the Raytheon and Beechcraft educational materials, for information see www.aviation-education.com. In addition Ken Cook Co. offers a the automated literature fulfillment solution that enables your distribution channels partners and/or consumers to order as few as a single copy of your product literature directly from your website. They select the format - a printed manual, files on CD/DVD or an immediate PDF download - and pay for the products at the time of order. Because each order is produced only after the order has been paid for, it turns your literature cost center into a revenue generator. Your company has no warehousing costs, no in-house administrative costs and no up-front printing fees to tie-up capital. It's that simple.

- **Mars Society**

<http://www.marssociety.org/>

The time has come for humanity to journey to Mars and we're ready. We must go for the knowledge of Mars, for the knowledge of Earth, and for our humanity itself.

Though Mars is distant, we are far better prepared today to send humans to Mars than we were to travel to the Moon at the commencement of the space age. Given the will, we can have our first teams on Mars within a decade and make it the second safest place for humans in the Solar System. Visit our exhibit to see how.

- **MuseumWorx**

MuseumWorx is known for producing exceptional interactive space exhibits ranging from simulators, simulation software, space suits, and everything in between. We engage and excite minds with our design, fabrication, and informal education.

- **National Aeronautic Association – Embry Riddle University - NASAO**

The National Aeronautic Association (NAA) and National Association of State Aviation Officials (NASAO) are jointly responsible for the annual Young Peoples Aviation/Space Art Contest. Each year's winning is forwarded to the international competition for final judging. Embry-Riddle Aeronautical University (ERAU) is archiving the winning paintings which are available for on-line viewing. Representative selections of original paintings are being exhibited at NCASE.

- **National Aeronautics & Space Administration**

The Mission of the National Aeronautics and Space Administration (NASA) is to pioneer the future in space exploration, scientific discovery, and aeronautics research. Educational materials will be available which convey the science, technology, engineering and mathematics behind these activities

- **National Air & Space Museum**

The mission of the National Air and Space Museum is to commemorate, educate, and inspire, and thanks to the Boeing Corporation we are doing just that. With the generous support of the Boeing Corporation, the National Air and Space Museum's Steven F. Udvar-Hazy Center Education Division has provided Teacher In-Service training and aerospace education resources to thousands of local area teachers. Be sure to stop by the booth to pick up some of these resources and advice on how to incorporate aerospace education in your classroom, you will be glad you did.

- **National Association of Rocketry**

The National Association of Rocketry (NAR) is all about having fun and learning more with and about sport rockets. We are the oldest and largest sport rocketry organization in the world. Since 1957, over 80,000 serious sport rocket modelers have joined the NAR to take advantage of the fun and excitement of organized rocketry. Visit the NAR website www.nar.org for information about America's largest sport rocketry organization. *

- **National Coalition for Aviation Education**

The National Coalition for Aviation Education (NCAE) includes most groups active in aviation and space education and supports their missions, while supporting schools' initiatives at the local, state and national levels. NCAE also maintains a comprehensive guide to the resources available from the many organizations they list. To see the list or obtain additional information regarding NCAE please visit the web site: www.aviationeducation.org

- **National Geospatial Intelligence Agency**

The National Geospatial-Intelligence Agency (NGA) provides timely, relevant, and accurate geospatial intelligence in support of national security objectives. NGA is a member of the U.S. Intelligence Community and a Department of Defense Combat Support Agency.

- **National Oceanic & Atmospheric Administration**

NOAA is a Federal Science agency focused on the condition of the oceans and atmosphere. NOAA science touches the lives of all Americans through Weather, Climate, Satellite Data, Solar Weather, Oceans and Coasts, and Fisheries.

- **National Science Teachers Association**

Discover the many journals, publications, teaching tools, professional development opportunities, student and teacher competitions, and much more from the largest science teacher organization in the world. Pick up FREE copies of select publications, check out our online services and products, and see why we are the primary resource for all teachers of science.

- **Northrop Gramman**

Need copy

- **Quest Aerospace, Inc.**

Did you know that the repeated acceptance of brochures, business cards and other promotional material can lead to Terribilis Shoulderus Hurtis (TSH)? Break the cycle of TSH by dropping by the Quest Education Central booth, sitting down, and building a wide array of awesome new educational products! Launch your own helicopter, build (and take home) a Quest model rocket, or see if you can help Mr. Egg complete his mission by parachuting safely to earth (without a crack). We'll be building something new every hour - so stop by, have fun, and learn how Quest Aerospace can help you excite, inspire and explore!

- **Space Camp & Aviation Challenge**

The U.S. Space & Rocket Center® offers adventures that are out of this world! With a daily visit to our museum or a trip to U.S. Space Camp® or Aviation Challenge®, we take a unique, fun, and hands-on approach to learning at the world's largest space travel attraction. You can experience astronaut and fighter pilot training for students, teachers, groups, parent/child pairs and companies! To learn more about how to plan your mission to Space Camp or Aviation Challenge, contact Blake Mathis at 1-800-241-5104.

- **Wolf Aviation Fund**

The Wolf Aviation Fund promotes and supports General Aviation. The Fund provides grants and information to help individuals and groups in their worthy aviation endeavors. Please visit the Wolf Aviation Fund web site for additional information: <http://www.wolf-aviation.org/>

- **World Aerospace Education Organization**

World Aerospace Education Organization is dedicated to raising the awareness of aerospace activities around the world. The membership is made up of a diverse group of people who are excited to share their knowledge and experience with others of all ages and backgrounds.

- **Virginia Department of Aviation**

The Virginia Department of Aviation mission is to cultivate an advanced, market driven aviation system that is safe, secure and provides for economic development; promote aviation awareness and education and provide executive flight services for the Commonwealth Leadership. At NCASE, the Department will share information and materials for aviation education and awareness that are available in the Commonwealth of Virginia. Applications for the Department's teachers grant and student scholarship programs and for the 2007 International Aviation Art Contest (Virginia competition) will be available.

* AIA and NAR have created the world's largest rocketry-based aerospace design and flying challenge competition for student teams of middle and high schools students, the Team America Rocketry Challenge (TARC). Winning teams share in a prize pool of more than \$60,000 annually. Applications for TARC and additional information on NAR and sport rocketry are available during the conference. Please stop by the AIA – NAR booth for cool rocket giveaways and door prizes!

Friday Conference Program Sessions

Date: Friday, October 20

Salon G

10:30 - 11:30 am

Session Title: Kentucky Aviation Academies

Presenter: Bill Schneider, Teacher, Simon Kenton High School

Co-presenter: Tim Smith

Grade Level: Middle

National Standards: Science, Math

Track Theme: Aviation

Description: Kentucky's Transportation and Education Departments joined forces on Aviation Academies for classroom teachers. Session details will feature the plan and the results of the academies.

Salon C

10:30 - 11:30 am

Session Title: Microgravity: Bad to the Bone!

Presenter: Rudo Kashiri, Aerospace Education Services Program, National Aeronautics and Space Administration, Langley Research Center

Co-presenter: N/A

Grade Level: Middle

National Standards: Science

Track Theme: Space

Description: Current NASA research on physiological changes during extended stays in space will be discussed to help participants learn about microgravity and its effects on the body.

Salon B

10:30 - 11:30 am

Session Title: ITEA-CATTS Human Exploration Curricula and the EbD Network:

Presenter: Shelli Meade, Space Exploration Curricula K-12, ITEA

Co-presenter: Barry Burke

Grade Level: All Grade Levels

National Standards: Technology

Track Theme: Space

Description: Educators and NASA scientists partnered to develop these exciting, contemporary curricula. The EbD Network model embeds and enhances the curricula, incorporating professional development and feedback.

Salon A

10:30 - 11:00 am (30 minutes)

Session Title: NSTA SciPacks: Just-in-Time Online learning of Core Science Content

Presenter: Steven Rapp, National Science Teachers Association

Co-presenter: N/A

Grade Level: All Grade Levels

National Standards: Science

Track Theme: Teach the Teacher

Description: Learn about NSTA's latest product to support your professional development to meet NCLB requirements.

Friday Conference Program Sessions

Friday, October 20th

Salon D/E

10:30 - 11:30 am

Session Title: EAA Aviation Education Dissemination Program, "Free" Teacher Training, Curriculum Materials, Online Aero Scholars Course

Presenter: Jim McGrath, Education Consultant, Experimental Aircraft Association

Co-presenter: Dr. Lee Siudzinski

Grade Level: Elementary

National Standards: Science, Math, Technology, Reading/Language Arts, and Social Studies

Track Theme: Other

Description: Teachers will receive "Free Teacher Training, Curriculum Materials, On-Line Scholars Course for participating in the EAA Charter School Dissemination Grant. The EAA Charter School was awarded dissemination grants in 2005 and 2006 to replicate the standards based integrated aviation curriculum materials and teacher training models in Wisconsin and across the United States. The EAA Aviation Charter school students have demonstrated increased academic achievement compared to non-charter school students in a research study conducted by Dr. John Witte, University of Wisconsin, Madison.

Salon F

10:30 - 11:00 am (30 minutes)

Session Title: The American Competitiveness Initiative, Math, Science, and Aviation Education

Presenter: Tony Fowler, Director of Interagency Affairs, U.S. Department of Education

Co-presenter: N/A

Grade Level: All Grade Levels

National Standards: Science, Math

Track Theme: Other

Description: The speaker will summarize the latest activity related to improving mathematics and science education nationally. Updates will be provided on No Child Left Behind and the Competitiveness Initiative.

Salon D/E

1:30 - 2:30 pm

Session Title: Why Do I Have to Learn Math & Science? Careers That Motivate and Inspire Students.

Presenter: Lisa Bacon, Program Manager, Precollege Programs, American Institute of Aeronautics and Astronautics

Co-presenter: N/A

Grade Level: All Grade Levels

National Standards: Related to careers using math, science, engineering and technology

Track Theme: Careers in the Classroom

Description: Have your students asked "Why learn math and science? Come to this session and you will have the answers that will make your students want to learn more about the aerospace industry. We will use the AIAA web site to show resources that you and your students can use to research careers in aerospace. In addition, the AIAA Foundation Classroom Grant program will be reviewed so you can get funding to help with hands-on math and science activities in your classroom. Free membership in AIAA is included in this session.

Friday Conference Program Session

Friday, October 20th

Salon B

1:30-2:30 pm

Session Title: Aviation Science with Charley's Gizmos

Presenter: Charley Rodriguez, Board of Directors, Member, Southern Illinois Wings of Charity Flight Academy

Co-presenter: N/A

Grade Level: Secondary

National Standards: Science

Track Theme: Experiential Learning

Description: Come explore a series of demonstrations designed to teach aerodynamics. Lessons in this session range from simple visual Bernoulli demonstrations to a series of experiments involving the measurement and calculation of lift and drag in a homemade wind tunnel.

Salon F

1:30-2:30 pm

Session Title: The Importance of STEM Education in a Path to Military and Commercial Pilot Careers

Presenter: Lynda Meeks, Girls with Wings (Very Important Pilots, LLC) and Generate LIFT, INC.

Co-presenter: Kathleen Meilahn, Cindy Jacobs

Grade Level: Secondary

National Standards: Other (Aviation Careers)

Track Theme: Aviation

Description: The role math, science, engineering, and technology play in supporting a professional pilot career and activities suggested for young adults to prepare for this occupation.

Salon A

1:30-2:00 pm (30 minutes)

Session Title: Chicago Web Docent Project: The Story of Hubble Space Telescope

Presenter: Julia Borst Brazas, Director, Chicago WebDocent, Chicago

Public Schools/University of Chicago Internet Project

Co-presenter: Joy Reeves, Science Specialist, Claremont Math & Science

Academy, Chicago Public Schools

Grades: Middle

National Standards: Science, Technology

Track Theme: Space

Description: An interactive, online curriculum module for middle school students that presents lessons on the scientific, technological, and social impact of the Hubble Space Telescope.

Salon A

2:00-2:30 pm (30 minutes)

Session Title: Simulation Creation Technology for Novice Programmer Teachers using SimBuilder Squeak

Presenter: Dr. Cheryl Seals, Department of Computer Science and Software Engineering, Auburn University

Co-presenter: Ken Rouse, Alexandria Williams, Fred Strickland

Grade Level: Middle

National Standards: Science

Track Theme: Teach the Teachers

Description: This tutorial will introduce teachers to SimBuilder Squeak. A software package that will allow novice programmers to create educational simulations from scratch. We have created a minimalist tutorial that teachers can use on their own once they return home to help them in a guided exploration of the simulation created environment. The Squeak environment is freeware and is being used in many schools. This introduction is planned to share the benefits of this software with a wider audience.

Friday Conference Program Session

Friday, October 20th

Salon C

1:30 - 2:30 pm

Session Title: Resources and Information for educators from FAA and the National Coalition for Aviation Education

Presenter: Shelia Bauer, National Program Manager, Aviation and Space Education, Federal Aviation Administration

Co-presenter: Rol Murrow, Director, National Coalition for Aviation Education, Ex Director Wolf Aviation Fund

Grade Level: Middle

National Standards: Other (Aviation & Space incorporated into core subjects)

Track Theme: Other

Description: Representatives of the FAA, Wolf Aviation Fund and NCAE will discuss "finding aerospace education resources and getting the most in Web surfing for curriculum ideas, human resources, handouts, career, scholarship, and grant information."

Salon A

2:45 - 3:45 pm

Session Title: Aeroscholars: Online Aviation Education National Courses for High School Students

Presenter: Dr. Lee Siudzinski, Vice President of Education, Experimental Aircraft Association

Co-presenter: N/A

Grade Level: Secondary

National Standards: Science, Math, Technology, and Social Studies

Track Theme: Aviation

Description: Fundamentals and Advanced Aviation Science courses follow National Science Standards, provide high school and college credit, and prepare students for the FAA Private Pilot Written Examination.

Salon C

2:45 - 3:45 pm

Session Title: A New Look at Gamma-Ray Bursts with the Swift Satellite:

Presenter: Cheryl Niemela, NASA Educator Ambassador, Rogers High School

Co-presenter: N/A

Grade Level: Secondary

National Standards: Science

Track Theme: Space

Description: Recent discoveries into the most energetic events in the Universe (gamma-ray bursts) will be highlighted and uncovered using NASA's Swift satellite data.

Salon B

2:45 - 3:45 pm

Session Title: Up Close and Personal with Large Scale Rocketry Components

Presenter: Gary Dahlke, Systems Engineer, National Aeronautics and Space Administration

Co-presenter: N/A

Grade Level: Secondary

National Standards: Science

Track Theme: Teach the Teachers

Description: Hands-on demonstration of the inner workings of a large scale high powered rocket.

Friday Conference Program Session

Friday, October 20th

Salon F

2:45 - 3:45 pm

Session Title: Art and Science (with lots of reading and math) in Summer School Space Camp

Presenter: Debbie Evans, Teacher, Chouteau High School

Co-presenter: Donna Coppedge

Grade Level: Elementary

National Standards: Science

Track Theme: Teach the Teachers

Description: Voyage to summer school space camp with science and art! Lots of proven teacher tested ideas, lessons, and activities incorporating science, art, math and reading.

Salon G

2:45 - 3:15 pm

Session Title: Aerospace for Educators: Removing the Unknowns about Teaching Aerospace Concepts in the Classroom

Presenter: Doug Baldwin, Chief, Udvar-Hazy Education, National Air and Space Museum, Steven F. Udvar Hazy Center

Co-presenter: Margy Natalie

Grade Level: All Grade Levels

National Standards: Science, Math, Technology, Reading/Language Arts, and Social Studies

Track Theme: Teach the Teachers

Description: With lots of fun and hands-on demonstrations I hope to remove some of the fears and/or unknowns of using aerospace education concepts in the classroom.

Salon D/E

2:45 - 3:15 pm

Session Title: A System's Approach to Education Systems

Presenter: Jim McMurtray, Executive Director, National Alliance of State Science and Mathematics Coalitions

Co-presenter: N/A

Grade Level: All Grade Levels

National Standards: Science, Math

Track Theme: Other

Description: A CHALLENGE TO AEROSPACE EDUCATORS: DESIGN THE FUTURE

In operation, our present education system effectively works to remove a significant portion of the student population from the STEM pipeline and to divert them from the pursuit of advanced science, mathematics and technology content. It has evolved this filtering-out process over time but this is not what we want it to do in today's economy.

Finding the critical path to a more effective and appropriate system for delivering STEM content is the subject of this presentation.

Friday Conference Program Session

Friday, October 20th

Salon F

4:00 - 5:00 pm

Session Title: Future Flight Design

Presenter: Amy Krajnak, Teacher, Kelleys Island School

Co-presenter: N/A

Grade Level: Middle

National Standards: Science, Technology

Track Theme: Aviation

Description: Engage yourself in hands-on and web-based activities for grades 5-8. Participants solve a flight challenge and explore activities with various flight vehicles. CD provided.

Salon C

4:00 - 5:00 pm

Session Title: Legalized Murder: The Army Flies the Mail

Presenter: Ronald Ferrara, Middle State Tennessee University

Co-presenter: N/A

Grade Level: Secondary

National Standards: Secondary

Track Theme: Aviation

Description: In February, 1934 President Roosevelt cancelled all existing airmail contracts turning the routes over to the army. A catastrophe resulted with 12 army pilots killed.

Salon D/E

4:00 - 5:00 pm

Session Title: Satellites in the Classroom

Presenter: Kathleen Foy, Teacher, Crystal Lake Middle School

Co-presenter: N/A

Grade Level: Middle, Secondary

National Standards: Science

Track Theme: Space

Description: Satellites impact every part of our daily life. Learn how to incorporate satellites into your curriculum. Make your own GPS satellite model, play with gyroscopes, locate the ISS, track a variety of satellites and find out how your student scientists can connect to satellites orbiting your school.

Salon B

4:00 - 5:00 pm

Session Title: Readin', Writin', and Rockets: Free Online Professional Development in Aerospace Education for Teachers

Presenter: Thomas Cavanagh, Embry Riddle Aeronautical University

Co-presenter: N/A

Grade Level: Secondary

National Standards: Science

Track Theme: Space

Description: The future of inservice/preservice training: online, anytime, anywhere. Come learn about a FREE web portal of educational modules with a special emphasis in aerospace education.

Friday Conference Program Session

Friday, October 20th

Salon G

4:00 - 5:00 pm

Session Title: Force and Motion: Authentically Speaking

Presenter: Stuart Sharack, Airspace Systems Educator, Juliet Long School

Co-presenter: N/A

Grade Level: Middle

National Standards: Math

Track Theme: Teach the Teachers

Description: NASA's Airspace Systems Education Cohort (ASEC) presents Smart Skies where students use inquiry exploring distance/rate/time problems in air traffic control. Other interactive multimedia programs shared.

Salon A

4:00 - 4:30 pm (30 minutes)

Session Title: NSTA SciGuides! Sites, Solutions, Success

Steven Rapp, National Science Teachers Association

Co-presenter: N/A

Grade Level: All Grade Levels

National Standards: Science

Track Theme: Teach the Teachers

Description: Learn about NSTA's latest product to support your professional development to meet NCLB requirements.

Saturday Conference Program Sessions

Saturday, October 21st

Salon F

10:30 - 11:30 am

Session Title: Just For Fun

Presenter: Dr. Paul Fortin, Education Organization Representative

Co-presenter: Jane Fortin

Grade Level: Middle, Secondary

National Standards: Science, Math

Track Theme: Careers in the Classroom

Description: Each school year has slow days, such as approaching holidays, last week of school, and when fill in activities are needed to occupy students. This session discusses a few fun activities which stimulates thought and involves problem solving.

Salon A

10:30 - 11:30 am

Session Title: Johnny's Airport

Presenter: Cynthia Keeling, Program Manager Educator Resource Center NASA IV&V Facility

Co-presenter: N/A

Grade Level: Elementary

National Standards: Science

Track Theme: Aviation

Description: The Johnny's Airport Adventure storyboard is an interactive, hands-on activity designed to reinforce the topics introduced in "Johnny's Airport Adventure Story."

Salon B

10:30 - 11:30 am

Session Title: Estes Rocketry 101

Presenter: Ann Grimm, Director of Education, ESTES Rockets

Co-presenter: N/A

Grade Level: Middle

National Standards: Science

Track Theme: Space

Description: Hands-on and fun! Estes rockets provide high motivation for students. Build your own rocket and learn model rocket basics. Free Estes rocket and curriculum materials.

Salon D/E

10:30 - 11:00 am (30 minutes)

Session Title: The Aerospace Program at Manchester Middle School, Richmond, VA

Presenter: Vincent Hughes, Science teacher, Manchester Middle School

Co-presenter: N/A

Grade Level: Middle, Secondary

National Standards: Science

Track Theme: Space

Description: This session examines the broad reach of the aerospace program at Manchester Middle School in Richmond, Virginia.

Saturday Conference Program Sessions

Saturday, October 21st

Salon G

10:30 - 11:30 am

Session Title: Blast Off to a Day in Space

Presenter: Brooks Cima, Teacher, Alexander Elementary School

Co-presenter: Jo Pender, Michael Hopkins

Grade Level: Elementary, Middle

National Standards: Science

Track Theme: Space

Description: This is a session that will offer teachers in grades 1-6 (and CAP members planning an AE Day) creative ideas that cross curricular boundaries and take students on a simulated ride into space.

Salon C

10:30 - 11:00 am (30 minutes)

Session Title: Sponsoring the Team America Rocketry Challenge

Presenter: Trip Barber, Vice-President, National Association of Rocketry

Co-presenter: J.P. Stevens, Allison Harvey

Grade Level: Middle, Secondary

National Standards: Science

Track Theme: Teach the Teachers

Description: Learn how educators and CAP AE Officers can participate in the largest Model Rocketry contest in the country.

Salon F

1:30 - 2:30 pm

Session Title: From Outer Space to Inner Space

Presenter: Barbara Tharp, Assistant Director, Baylor College of Medicine

Co-presenter: Nancy Moreno

Grade Level: Middle

National Standards: Science

Track Theme: Space

Description: There are many reasons to study life sciences in microgravity. What can we learn in space about our bodies here on Earth?

Salon D/E

1:30 - 2:30 pm

Session Title: How to Use Model Rocketry in the Classroom Without Being a Rocket Scientist

Presenter: Vince Huegele, Education Committee Chairman, National Association of Rocketry

Co-presenter: Stewart McNabb

Grade Level: Middle, Secondary

National Standards: Science

Track Theme: Teach the Teachers

Description: An introduction to concepts of using model rocketry in the classroom to teach core science topics for multiple grade levels. Hands-on examples provided.

Saturday Conference Program Sessions

Saturday, October 21st

Salon G

1:30 - 2:30 pm

Session Title: SPACE: Student Participation in Aerospace for Classroom Education

Presenter: Ginger Reasonover, Science Lab Coordinator

Co-presenter: Phyllis Sanders, Kim Smith and Chuck Chisam, Third Grade Teachers, David Lipscomb Elementary School

Grade Level: Elementary

National Standards: Science, Math

Track Theme: Teach the Teachers

Description: You can create a Space Day for your school. Hands-on activities will be presented which will encourage teamwork, critical thinking, and exploration. Activities reinforce Newton's Laws, exploration of constellations, and working in space.

Salon B

1:30 - 2:30 pm

Session Title: Teaching Materials and Adaptation Ideas from the Education Department of NASM's Steven F. Udvar-Hazy Center

Presenter: Margy Natalie, FCPS Aerospace Educator in Residence 2003-2006, National Air and Space Museum, Steven F. Udvar Hazy Center

Co-presenter: Ken Larson, Floris Elementary School

Grade Level: Elementary, Middle

National Standards: Science, Math, Technology

Track Theme: Teach the Teachers

Description: Learn about different programs at the Udvar Hazy Center and experience a number of showcased activities. Lessons are standards based and easily adaptable.

Salon C

1:30 - 2:30 pm

Session Title: Applied Practical Mathematics and Aeronautical Charts

Presenter: Richard Klein, Aviation Education Alliance

Co-presenter: N/A

Grade Level: Middle

National Standards: Math

Track Theme: Teach the Teachers

Description: Learn how to locate airports on Aeronautical Charts and use scales for flight planning.

Salon A

1:30 - 2:30 pm

Session Title: Ten Ideas for Aerospace Education

Presenter: Michael McArdle, Lt. Col. Civil Air Patrol, GRL, DCS/AE Education Officer

Co-presenter: Sherwood Williams

Grade Level: N/A

National Standards: Science, Math

Track Theme: Teach the Teach

Description: Ten ideas for aerospace education are offered that have worked to achieve AE success. As a Civil Air Patrol Aerospace Education Officer or Director of Aerospace Education, you can either go crazy or succeed. Which will it be for you? This session offers something for everyone, come-one-come-all!

Saturday Conference Program Sessions

Saturday, October 21st

Salon C

2:45 - 3:45 pm

Session Title: High School Aerospace/Aeronautic Symposium Featuring “Student Simulated Space Walk in a Neutral Buoyancy Laboratory”

Presenter: Russ Billings, Teacher, Kearsley High School

Co-presenter: N/A

Grade Level: Secondary

National Standards: Science

Track Theme: Space

Description: High school physics students design a “space module” to be deployed into the school's swimming pool and then perform experiments and present aerospace/aeronautics material to the public.

Salon F

2:45 - 3:45 pm

Session Title: Launching Language Arts in the Classroom

Presenter: Kristy Curtin, Teacher, Guthrie High School

Co-presenter: Kathy Curtin, Kelly Wardlaw

Grade Level: Middle, Secondary

National Standards: Science, Reading/Language Arts

Track Theme: Space

Description: Participants will learn ways to merge language arts and space exploration through mythology, poetry, and creative writing. Lesson plans and handouts included.

Salon A

2:45 - 3:15 pm (30 minutes)

Session Title: NSTA Symposia and Web Seminars: Face-to-Face and Online Professional Development

Presenter: Steven Rapp, National Science Teachers Association

Co-presenter: N/A

Grade Level: All Grade Levels

National Standards: Science

Track Theme: Teach the Teachers

Description: Learn about NSTA's latest product to support your professional development to meet NCLB requirements.

Salon A

3:15 - 3:45 pm (30 minutes)

Session Title: NSTA SciPacks: Just-in-Time Online learning of Core Science Content

Presenter: Steven Rapp, National Science Teachers Association

Co-presenter: N/A

Grade Level: All Grade Levels

National Standards: Science

Track Theme: Teach the Teachers

Description: Learn about NSTA's latest product to support your professional development to meet NCLB requirements.

Saturday Conference Program Sessions

Saturday, October 21st

Salon B

2:45 - 3:45 pm

Session Title: Utilizing STK within the Classroom: Bringing Space into the Classroom using STK

Presenter: Julie Bachmann, Technical Marketing Engineer, Analytical Graphics, Inc.

Co-presenter: N/A

Grade Level: Secondary

National Standards: Science

Track Theme: Teach the Teachers

Description: Introduce a new dimension to your curriculum by giving students hands-on experience with AGI's industry-leading, commercial off-the-shelf STK analysis and visualization software.

Salon D/E

2:45 - 3:45 pm

Session Title: Educational Opportunities with the Air Force Association

Presenter: Ann Sagle, Air Force Association Education

Co-presenter: Jeri Martin

Grade Level: All Grade Levels

National Standards: Other

Track Theme: Other

Description: AFA provides scholarships, grants and educator recognition for America's teachers and students to stimulate STEM in classrooms.

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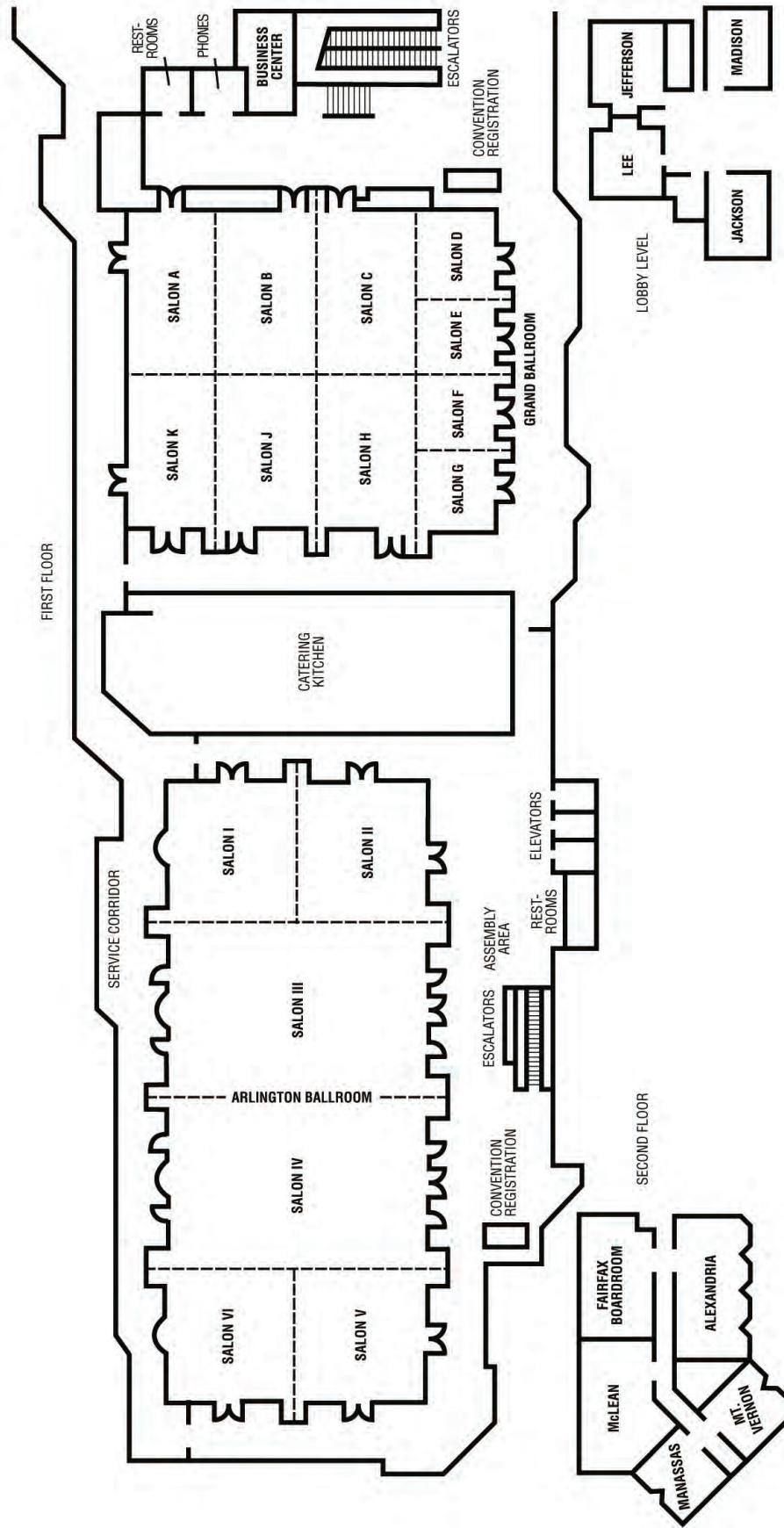
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9-12

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LCASE Session
Thursday, October 19
10:00 – 11:30

Session: Leadership Conference on Aviation and Space Education (LCASE)
Moderator: Ken Cook, Ken Cook Co. and President, NCAE
Presenters: Rol Murrow, Wolf Aviation Fund
Tony Fowler – U.S. Department of Education
Shelia Bauer – FAA
Mary Anne Thompson – Air Force Education Fund
Judy Rice – Civil Air Patrol
Theme: Leadership to meet Aviation and Space Education challenges
Description: Overview of the 2005 LCASE conference and developments since the conference.
A panel discussion and open forum addressing the issues presented



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