Welcome Discovery Festival
Scheduled Activities
Thursday, April 19, through Sunday, April 22, 2012

Outside the Udvar-Hazy Center

- **Human Exploration and Operations Dome**
  Immersive dome experience featuring past, present, and future human exploration and operations throughout the Solar System.

- **Sun Telescope**
  Observe the sun using high-power telescopes with solar filters, guided by world-class scientists from the Solar Dynamics Observatory.

- **Sign a Real Space Shuttle Tire**
  Put your name on a piece of space shuttle history.

- **NASA Mars Mark III Photo Suit**
  Take your picture “on Mars” wearing the latest model spacesuit — an EMU, or Extravehicular Mobility Unit.

- **Orion PA-1 Flight Test Crew Module**
  View the flagship of our nation’s next-generation space fleet, Orion, which is designed for deep space human exploration missions to destinations beyond low Earth orbit such as asteroids, Lagrange points, or even Mars.

- **Education Demonstrations**
  Join Museum educators for some fun interactive demonstrations that encourage greater understanding of the science of flight.

Inside the Udvar-Hazy Center

- **Dynamic Planet: Satellite Image**
  Explore, discover, and learn how NASA uses satellite technology to study our Earth and planets in the solar system and the Universe.
• **Space Weather: Solar Pizza**  
Experiment with the NASA “solar pizzas” that demonstrate the scale sizes of the Earth and Sun and the distances between the two. This is hands-on fun for students ranging from kindergarten through college.

• **The Transit of Venus**  
Transits of Venus across the disk of the Sun are among the rarest of planetary alignments. Indeed, only six such events have occurred since the invention of the telescope. NASA Scientists will be on hand to explain this event, which takes place June 5-6, 2012.

• **Mars in 3D**  
View a 3-D, 360-degree view of Mars that comes from the panoramic camera (Pancam) on NASA’s Mars Exploration Rover *Spirit*.

• **Mars Science Laboratory Inflatable Rover**  
Meet the Inflatable model of NASA newest Mars rover, *Curiosity*. The Mars Science Laboratory (MSL) is currently on its way to the Red Planet and is expected to land on Mars in August 2012.

• **Roll over Rover**  
Have you ever wondered what it would be like to be run over by a six-wheeled Martian rover? These light rovers really show their stuff as they negotiate obstacles of all kinds, even your feet.

• **FIRST Robotics**  
This hands-on robotics activity will have you racing robots through a maze of obstacles, just like real NASA scientists and engineers do as they work the robotic explorers on Mars.

• **Timeline of Physical Science**  
View this iPad application providing a historical timeline of the physical sciences.

• **Challenger Learning Center**  
  o Remote Manipulator System (RMS): In a virtual environment, you can assemble a satellite with a robotic articulated arm.  
  o Remotely Operated Vehicle (ROV): Program the ROV in virtual lunar environment to avoid obstacles and reach a target rock.  
  o Cloud Activity: Using a sample atmosphere that you control, experiment with a liquid that evaporates quickly at room temperature to model water evaporation and condensation.  
  o Try your hand at the Global Climate Change Education Interactives.

• **Mark III Mars Spacesuit**  
The Mark III has a mix of soft and hard suit components which includes a hard upper and lower torso as well as hip elements. It may well be the space suit of the future.

• **Share the Past: NASA Artifact Program**  
The NASA Artifact Program loans shuttle items to institutions connected to space and astronomy. Several artifacts will be on display.
• **Share the Past: NASA History Program**
  Delve into NASA’s history and explore various informational materials put out by the NASA History Office such as books, e-readers, websites, photos, and videos.

• **Space Launch System (SLS)**
  The SLS is a Space Shuttle-derived heavy launch vehicle being designed by NASA. Experts will be on hand to answer questions on the next generation of vehicles that will be exploring far into the Solar System.

• **Commercial Crew Program**
  A variety of models and displays will demonstrate how NASA is partnering with industry to build our future in space.

• **Meet the International Space Station: 1/20 scale model of the ISS**
  Learn more about the ISS by exploring a 15-foot model of this marvel of science and technology.

• **NASA/Shuttle Spinoffs**
  Explore this display of technologies created on the shuttle and now being used on Earth. Each technology's origin stems from some aspect of shuttle development, research, or mission.

• **NASA Aeronautics**
  Witness a demonstration of the very real effects of vacuum and pressure. See a real flight pressure suit. Check out some designs for future aircraft that are more environmentally friendly, and play mobile apps that put you in a wind tunnel or air traffic control tower.

• **NASA Aerospace Education**
  Take-home materials focusing on STEM disciplines (science, technology, engineering, and math) are free for the asking.

• **Rockets to Race Cars**
  This exhibit is a scale replica race car that showcases some of the technological benefits that space exploration has made possible for the automobile and racing industries.

• **Discovery Stations**
  - **Spacesuit**
    Learn what a contemporary spacesuit looks like, how it protects astronauts, and enables them to bring the Earth environment with them into space.
  - **Living and Working in Space**
    Explore with artifacts to find out how astronauts live in space.
  - **Touch a Falling Star**
    Learn more about meteorites and touch a piece of cosmic history.

• **Portable Planetarium**
  Join us for *One World One Sky: Big Bird’s Adventure*. See Big Bird and Elmo as they explore the night sky with Hu Hu Zhu, a Muppet from the Chinese co-production of *Sesame Street*. 
• **Discovery Shuttle Mission Trainer Experience**  
  See a 2/3 scaled-down view of the *Discovery* flight deck. Watch as *Discovery* approaches and lands at the Kennedy Space Center.

• **Discovery in Action Launch Demo**  
  Watch the last launch of *Discovery* with a Museum specialist to give a play-by-play.

• **Discovery Play Zone for Tots**  
  Just for young astronauts, the Play Zone allows participants to play dress-up, put puzzles together, ride an inflatable orbiter, put an orbiter together, and hear stories.

• **Discovery Stage**  
  Don’t miss your opportunity to hear and learn from our special guest astronauts, engineers, and scientists. Look for daily presentation times on your schedule of activities or inquire at the NASM Welcome Center.

• **Create Your Own Mission Patch Art Activity**  
  One of the best known NASA traditions is that of mission patches. Here is your opportunity to create and color your own patch design and show it off to friends and family.

• **NASA Art Quest**  
  Explore the Udvar-Hazy Center with an eye on art. Thirty award-winning works of art from the *Because it Flew Art Competition,* and the *Humans in Space Youth Art Competition* will be on display throughout the Boeing Aviation Hangar. Track down the art and decode a mystery message to earn a prize.

• **Imax Movie: The Dream is Alive**  
  **Thursday April 19, 2012**  
  10:25 am, 1:25 pm, 3:25 pm, 6:30 pm  
  **Friday April 20, 2012 – Monday April 23, 2012**  
  10:25 am, 1:25 pm, 3:25 pm

• **Dock the Shuttle**  
  Join the American Institute of Aeronautics and Astronautics (AIAA) educators as they share what it takes to get off the ground and dock the space shuttle with the International Space Station.

• **Robonaut**  
  Meet a humanoid robotic astronaut named Robonaut, and explore how far robotics has come in supporting astronauts on their missions.

• **Exploring Ultraviolet (UV) light from the Sun**  
  This activity explores UV rays from the Sun and ways we can protect ourselves from these potentially harmful rays.

• **Banner Signing**  
  Be sure to sign the special banner created to welcome *Discovery* to her new home, the National Air and Space Museum’s Steven F. Udvar-Hazy Center.
• **Book Signings**
  Authors of space-related books will be here to sign their books as special mementos of this exciting event.