Dr. Adena Williams Loston, NASA's Associate Administrator for Education, visited JPL last month for the first time since her appointment to the job about six months ago. Loston met with education, public engagement and communications representatives to discuss current initiatives and also spelled out the efforts to organize and enhance agency education programs.

"NASA Administrator Sean O'Keefe is very interested in inspiring the next generation of explorers," she said. O'Keefe seeks a strategic focus and leadership across the agency. Noting that in the past, education work was handled in 17 different locations at the agency, she said, "the focus now is on a unifying voice and direction for NASA, a national agenda." Working with teachers, students and parents has never been more important for NASA, she said, in the next three to five years, 60 percent of the agency's workforce will be eligible for retirement, which is a "crucial problem for the agency," she said.

In order to help overcome this, Loston mentioned four major initiatives underway in her office: 
- NASA's educational goals for both pre-college and post-secondary education will focus on a pipeline called "STEM," an acronym for science, technology, engineering and math.
- One of Loston's goals is to have NASA employees go to schools and "share why we do what we do." 
- Ensure that the NASA Education Program is properly investing taxpayers' resources.
- Engage underrepresented students, educators and researchers.

In addition, several programs are underway to reach out to students and educators:

- Science and Technology Scholarship Program.
- The "corporate recruitment strategy" Loston will ask each NASA associate administrator about their work-force needs over the next three to five years. Her office will identify institutions that will provide students with the needed skill sets, and NASA will fully fund students' tuition for a commitment come back and work for the agency.
- Loston said she will work with NASA's human resources and equal opportunity leadership on this initiative. A report on its progress is due to be presented by O'Keefe by September.
- NASA Explorer Schools.
- NASA will provide curriculum targeted for students in grades 5 through 8, and teachers will come up with an implementation plan for their school. This is a three-year partnership.

Loston also lauded the efforts put forth in informal education, where the agency works with planetariums, museums, etc. "Not all education takes place in the classroom," she acknowledged.

She noted the only three federal departments with education as part of their mandate are NASA, the Department of Education and the National Science Foundation. "NASA is not trying to overtake the role of the Department of Education," she said. "The Department of Education wants us at the table. We at NASA have the tools that can delight, inspire and excite the next generation."
More than $313,000 was awarded to about 100 JPL technologists and contractors during April 22 ceremonies honoring the NASA Space Act Award. The Space Act Award recognizes scientific and technical innovation that is of significant value to aeronautics or space activities. A monetary award is presented to each contributor of the technology. Award holders will add to the innovation, using patents and/or licensing agreements.

One example: Charles Davis, a software engineer at JPL has developed a technique to reduce the computational time required for aeroelastic analysis. The technique has been patented and is now being commercialized by the developer. Davis was awarded $5,000.

Other recipients included:

- Dr. Patrick Collier, a computer scientist at JPL, who was awarded $5,000 for developing a system to automatically analyze images of the Moon.
- Dr. James Boyk, a computer scientist at JPL, who was awarded $5,000 for developing a system to automatically analyze images of the Sun.
- Dr. Eric Smith, a computer scientist at JPL, who was awarded $5,000 for developing a system to automatically analyze images of the Earth.
- Dr. Michael Brown, a computer scientist at JPL, who was awarded $5,000 for developing a system to automatically analyze images of the Mars.

The Space Act Awards are classified into three categories: Engineering, where at least one of the innovators has been employed by a NASA center; Mentor, where a NASA employee has been a mentor to one of the innovators; and Innovative Research, where at least one of the innovators is a student or a new employee.

The awards are made to encourage technology transfer and to recognize the contributions of innovators to the advancement of NASA's mission.
For the first time in two years, JPL will soon welcome the public for an Open House celebration. The event will be held May 17-18, from 9 a.m. to 5 p.m. each day.

Highlighted by exhibits, models and displays from the Earth, Mars, Solar System, Technology and Universe theme areas, visitors will have a great opportunity to learn about everything that is JPL. Lab staff members will be available to answer questions about their work at many of the exhibits.

Kids will have the opportunity to design their own constellation inside a plastic bag “planetarium,” build an interplanetary spacecraft, be “run over” by a lightweight, eight-wheeled rover, and more. Fun hands-on activities for preschool-age children will also be available.

Here’s a sampling of what’s coming up:

**Earth**

- Research on oceans, solid Earth and the atmosphere
  - Numerous Earth Science projects
  - Kids can visit their “corner” to play an adventure game and come discover the planet we call home

**Image Processing**

Unique capabilities of the nine cameras on MSL, the Multi-angle Imaging Spectro-Radiometer: Stereo and 3-D images of Earth, along with videos and animation. Find out what a new instrument will tell us about Earth’s surface, clouds, and particles in the air.

**Technology**

Robots, Cutting-Edge Technology, New Methods

- Watch URBIE the rover climb stairs; Spiderbot the robot walk; a moving android head; and a robotic hand with artificial muscles
- The latest in optical infrared cameras; an ultrasonic motor and water jet (low-power alternatives for future missions); demonstrations of an ultrasonic drill designed for use on surfaces of other planets, such as Mars
- Visit with Southern California high school teams that built robots with JPL engineers and volunteers

**Instrument Systems Laboratory**

- Animations, 3-D imaging, high-definition television, and image processing.

**Solar System**

Cassini-Huygens, Deep Impact, Genesis and Stardust

See models of the Huygens probe that will parachute through Titan’s murky atmosphere; the first mission to look inside a comet; and both JPL sample return missions. Touch a meteorite and see the world’s lightest solid, aerogel.

New Millennium Program

Future technologies and a demonstration of an ion propulsion engine, the most fuel-efficient way to cruise the solar system as successfully demonstrated by Deep Space 1.

**Mars**

Mars Exploration Rover Mission

Get an in-depth look at the In-Situ Instrument Laboratory, which houses an indoor simulated Martian landscape. Engineers will explain full-scale models and simulate the pyrotechnic process that deploys the rovers from their landers. Kids will have fun being “run over” by a lightweight rover and coloring their own rover.

Odyssey and Global Surveyor

See models of the spacecraft and an impressive display from their Martian photo albums.

**Other Exhibits**

Welcome to Outer Space

View this multimedia production about JPL’s missions in von Kármán Auditorium, along with various space exhibits and a full-scale model of the Voyager spacecraft.

Deep Space Operations

Learn about the multiple roles of the huge antennas of the Deep Space Network from the gallery in the Space Flight Operations Facility. See a scale model of a possible array antenna of the future, an exhibit of space images and students’ murals.

Regional Planetary Image Facility

An archive of images in many types of formats from past and present JPL missions. Part of a network of 38 NASA image facilities, RMF has one of the largest collections of original Mars images and a full collection of planetary maps.

Spacecraft Assembly Facility

Visit High Bay 2, the largest clean room at JPL.

Spacecraft Fabrication Facility

Where a spacecraft goes from “Art-to-Part”—from technical drawings to precision spacecraft components.

**General Information and Security**

Parking, Lab Access

- Employees and volunteers may park on Lab but must drive through the South Gate. Access to the Blue Lot will only be available from the west side of the lot; normal on-Lab access will be closed.
- Visitor parking will be in the West, Blue, East and Arroyo lots; visitors may enter the East Lot via Arroyo Ave.
- Main Gate traffic will be restricted to outbound tour buses and emergency vehicles.
- The Visitors Lot will be restricted to guests requiring parking for the disabled.
- The primary pedestrian checkpoint will be at the Main Gate.
- Visitors must ride parking lot buses from the East and Arroyo lots to the Main Gate; walking in from the East or South gates will be prohibited.

Security

- Security for the Open House is being enhanced for the safety and enjoyment of the public and JPL staff, with an increased presence of security guards and fire department personnel, as well as additional support from outside local law enforcement. Security will be supplemented by JPL’s Urban Search and Rescue Team.
- All vehicles, persons and possessions will be subject to inspection.
- Prohibited items include backpacks, ice chests, alcohol, illegal drugs, weapons, dangerous devices, explosives, skateboards, skates (including inline) and animals.
- Personnel should secure all sensitive items and lock all interior office and lab doors prior to event.

Assistance

- For emergencies, from on-Lab phones dial 911; from cell phones, dial 818-393-3333.
- For non-emergencies, from on-Lab phones dial 4-3530; from cell phones, dial 818-354-3330.

If you can volunteer a half-day, full day or both days, call Public Services at ext. 4-0112.
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Letters

My family and I would like to thank everyone for the kindness and thoughtfulness after the passing of my grandmother. She would have liked this to come from our sincere and deep appreciation for the flower sent by you. 

Adriana Vicente and family

JPL’s Pl’s kids have their day

About 700 children of JPL staff members attended “Take Our Daughters and Sons to Work” Day on April 24 in addition to seeing how mom and dad do their work, these children enjoyed a number of exhibits and activities. At JPL children and adults play hydrogen atoms and during a fuel cell demonstration, at center a balloon is inflated to power a Mars Rover; at right a visitor checks out a solar telescope.

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Design + Layout
Adrian Jac, Audrey Staffin
Design/Services
Chief Photographer
Bob Brown/Photo Lab

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