

If budget is adopted, NASA's future never brighter, Weiler tells JPLers

By Mark Whalen

If NASA's proposed fiscal year 2011 budget is approved by Congress, "the future's never been any brighter" for the agency and for JPL, according to Ed Weiler, NASA associate administrator for the Science Mission Directorate, who addressed JPL staff April 14.

"I like to refer to this budget, President Obama's first, as a good news/great news budget," he told the crowd in the Flight Projects Center auditorium. "It's good news for ... heliophysics, astrophysics and planetary—because they got stable or slightly increasing budgets with inflation."

Weiler noted that with the current state of the economy, most discretionary federal agencies are seeing decreases in funding rather than stability. "The fact that science could maintain stability, if not get a little inflation, was incredibly good for us this year," he said.

The news is particularly positive for Earth science, which is proposed to get a 61 percent increase, approximately \$2.4 billion more over the next five years. Weiler noted that while in recent years the Office of Space Science budget in-

creased, Earth science received cuts. He said the bump in funding for Earth science has been "a long time in coming."

"This shows that our president is clearly an advocate for science, and especially for Earth science," Weiler said.

Among Earth science missions, Weiler said, JPL's Orbiting Carbon Observatory 2, a follow-on to the mission lost in 2009 through a launch-vehicle failure, is considered a "national-needs mission" due to its ability to provide critical continuity in carbon-dioxide measurements. He said the new mission is partially funded by a 2010 augmentation from the Office of Management and Budget as well as from federal stimulus dollars. Funding would also cover not only a replacement mission, but also to build a second instrument to be used for a future flight.

Weiler also noted the importance of NASA's continually developing partnerships with the European Space Agency; in particular, for the Mars program.

"The partnership with the European Space Agency has gotten better and better," he said, adding that a major



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Ed Weiler, NASA associate administrator for the Science Mission Directorate

Dutch Slagter / JPL Photo Lab

accomplishment over the last 12 months is the agencies' agreement to plan beyond a single Mars mission through an entire program all the way through Mars sample return.

Citing Mars Reconnaissance Orbiter's finding of ice just below the Martian surface earlier this year, Weiler said, "If you're interested in human exploration of the solar system, this is a profound discovery. Mars Reconnaissance Orbiter has been up there long enough that it occasionally sees the effects of a meteorite—not from 4 billion years ago or a billion years ago, but from a few months ago.

"This is profoundly important for the idea of Mars being the ultimate destina-

tion; I'm so glad that the president has made that decision that Mars is the ultimate destination for human exploration."

Weiler added that he was concerned about the future of the U.S. Mars program a couple of years ago, but "We are really in a different place now. We've got the second biggest space agency on Earth [the European Space Agency] signing up [with NASA] to do every Mars mission for the next 10 years, together. That's a powerful combination."

NASA's budget for the fiscal year that starts in October will soon be considered by Congress. "Remember," Weiler told the audience, "the president proposes, and Congress disposes."



Dutch Slagter / JPL Photo Lab

Members of Lew Allen Jr.'s family at the memorial were, from left, Allen's wife Barbara, daughter Marjorie Dauster, son Lew Allen III and daughter Barbara Miller.

Allen remembered at JPL memorial

Former JPL Director Lew Allen Jr. was remembered in an April 7 memorial tribute as a quiet but strong leader whose vision was a key factor in JPL becoming a leader in research and technology development.

Hundreds of colleagues and friends gathered at the Flight Projects Center auditorium to pay tribute to Allen, who died Jan. 4 at age 84. He served as JPL director from 1982 to 1990.

Allen, a physicist, was credited with the foresight more than two decades ago that miniaturized detectors and other components would be critical for space study. Thus, a major part of his legacy will be the development of JPL's Microdevices Laboratory.

"He was the first person who invested in us developing technology and techniques to detect planets around

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New visitor center highlights open house

Annual Laboratory showcase will take place May 15–16

The newly updated visitor center at von Kármán Auditorium is the keystone to the 2010 JPL Open House, set for Saturday and Sunday, May 15–16. Themed “Worlds Beyond,” the event will showcase JPL’s past, present and future.

“As a world-class organization, JPL receives tens of thousands of visitors each year, so we are really pleased to have the opportunity to upgrade JPL’s von Kármán visitor center,” said Anita Sohus, JPL’s lead for informal education and project manager for the upgrade project.

The von Kármán lobby has been incorporated into the exhibit space, welcoming visitors with a look at the history of JPL and a model of America’s first satellite, Explorer 1. The reception desk in the lobby has been removed, and a new information center office has been built to the right of the entrance to the lobby. In the auditorium, the Voyager Golden Record will be in a new display that features a touchscreen to hear the greetings and sounds of planet Earth and see the images that are on the record.

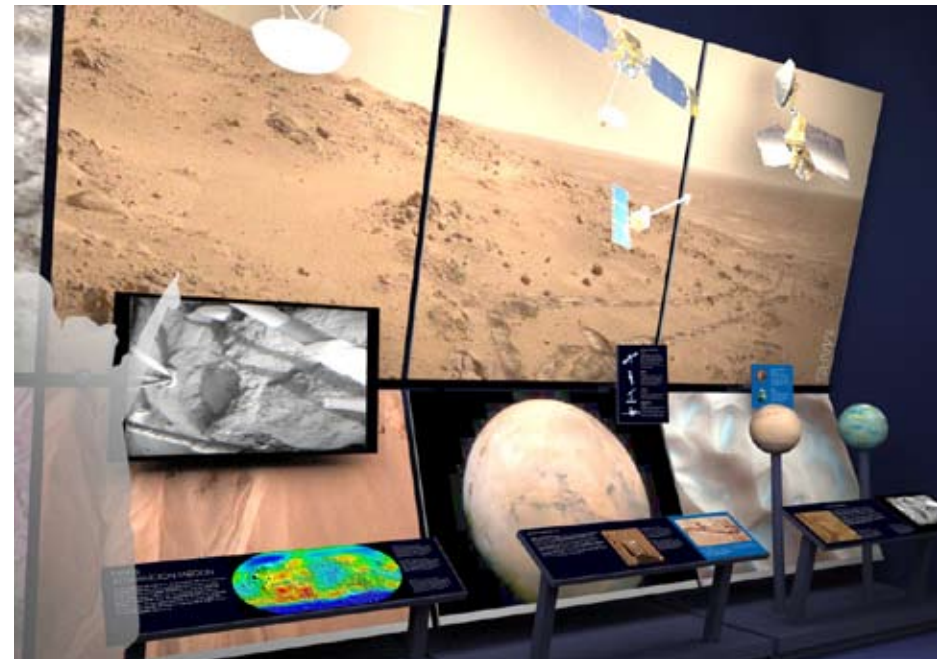
The exhibits celebrate our solar system and the universe, and highlight JPL’s contributions to space exploration. Large panel images depict the “destinations” while video monitors and touchscreens provide insight into the missions and the people.

The full-scale Galileo spacecraft replica remains as an iconic centerpiece of outer planet exploration. Its story is more fully explained through videos on a touchscreen. The mini-theater area has been upgraded with a 103-inch monitor that will be able to show NASA TV and videos.

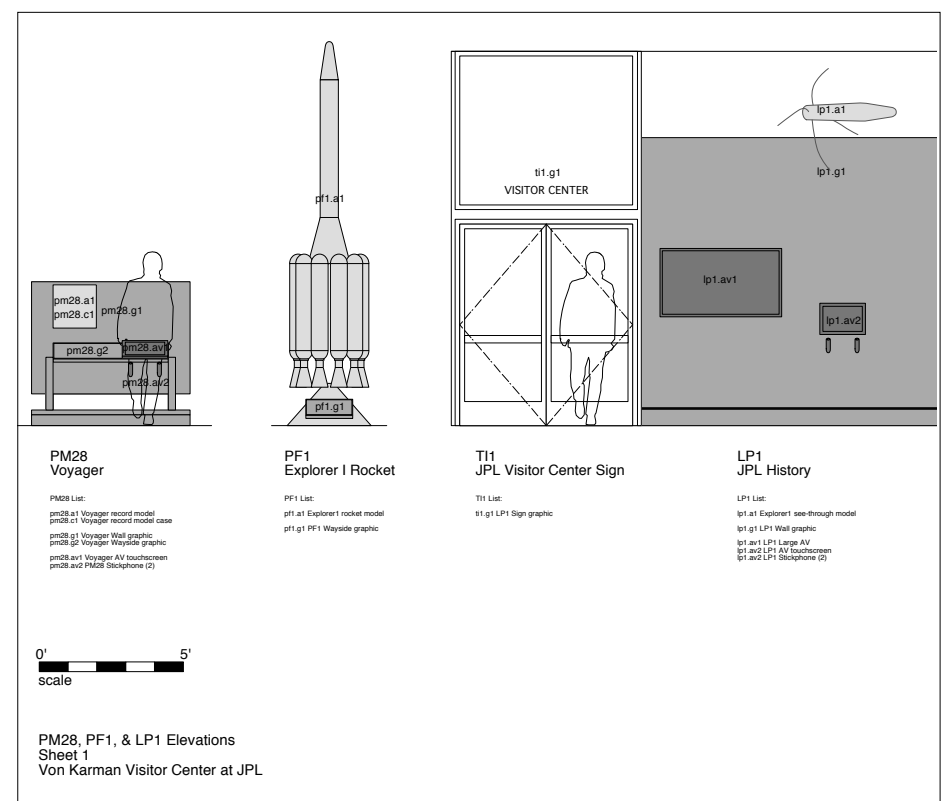
“We are really excited to once again have a moon rock on display, as well as part of Surveyor 3’s lunar surface sampler,” said Sohus. The moon rock was brought to Earth in 1972 by the crew of Apollo 16. Surveyor 3 landed inside a crater in southeast Oceanus Procellarum in April 1967. In November 1969, the Apollo 12 crew landed within about 180 meters of Surveyor 3 and returned pieces of the spacecraft to Earth. JPL’s Surveyor series was the first U.S. effort to make a soft landing on the moon.

The museum will also feature an interactive data globe called a Magic Planet, measuring 2 feet in diameter, on which visitors will be able to look at changes in Earth’s clouds, carbon, ocean winds, and other weather and climate data. The globe can also be used to show other planets and moons.

Sohus noted the core team in the redesign effort included Blaine Baggett, executive manager of JPL’s Office of Communications and Education; Kimberly Lievense, manager of the Public Services Office; Marian Inova, manager of Audio-Visual Services; and JPL Acquisitions, Facilities, and Design Services.



JPL’s Mars missions are featured in a display in the new visitor center.



Allen *Continued from page 1*

neighboring stars,” noted JPL Director Charles Elachi. The director cited the success of the currently operating European Space Agency Herschel/Plank mission to study the early universe, for which the focal plane and sub-millimeter detectors were created in the Microdevices Lab. “This would have been unthinkable 10 years ago,” Elachi said.

“In all the ways that one can measure greatness, Lew was a great man,” said retired Caltech President Tom Everhart, who recalled Allen as a “very distinguished, independent thinker. I was impressed with his deep knowledge, his ability to listen, extract information and summarize the essential points.”

Everhart also praised Allen for his service on the Keck Interferometer board of directors and the Summer Undergraduate Research Fellowship Program.

“Like many in this audience, I am personally indebted to him for many things,” Everhart said. “Most of all, I miss his advice and his friendship.”

Albert Wheelon, retired CEO of Hughes Aircraft Corp. and a life trustee on Caltech’s Board of Trustees, chaired

the JPL oversight committee during Allen’s tenure as director. Wheelon noted that as a U.S. Air Force officer Allen “made an enormous contribution to reconnaissance and general intelligence” and spotlighted the contributions to World War II made by scientists and engineers in terms of sonar, radar and operations research.

“I think JPL was very lucky to have Lew as a director,” Wheelon told the audience, “because he was a match for all of you.”

Pete Lyman, who served as JPL deputy director for the last several years under Allen, called the former director “brilliant and easy to work for. He was fascinating and enjoyable, and of all the people I worked with, he was my favorite.”

Allen’s legacy will also include the prestigious Lew Allen Award, given annually to leading JPL science researchers during the early part of their careers.

JPL Astronomy and Physics Director Jakob van Zyl recalled the events surrounding his being named one of the earliest recipients of the Allen Award.

“Imagine somebody less than 10 years out of school being invited to have lunch with a man of Allen’s accomplishments,” van Zyl said. “Mous Chahine, who was the chief scientist at the time, went over the rules of engagement and protocol with us—he said, ‘Be prepared, Allen will ask about your research; talk about any topic you want during lunch—except parking and office space.’”

“I remember Allen was asking extremely knowledgeable questions, and it was a very engaging conversation. The thing I remember most is how important and appreciated he made us feel that day. It went very well, and just before the lunch ended he turned to me and said, ‘I’m surprised nobody’s brought up parking and office space yet.’”

“He was first and foremost a great leader,” Elachi said. “I always felt when I was on the Executive Council, and even before that, no matter what was happening, Dr. Allen wanted to get us to the other side safely and do the right thing. He knew things were going to work fine ... he had that calmness and steadiness that gave you the feeling you’re heading in the right direction.”



Vacation leads to valuable lessons in astronomy, culture

By Catherine Sum



In photo at far left, Paulo Younse is surrounded by children at the Amani Orphanage in Tanzania. Younse led activities (lower left) that showed them how the solar system works and also introduced them to telescopes.



For many JPLers, it's become commonplace to speak publicly about their careers and experiences. Talks are given almost daily, and there is always someone ready to listen.

This was the case earlier this year when Paulo Younse, a mechanical engineer in the Robotic Hardware Systems Group, prepared to address a small group huddled together in a darkened room. "Raise your hands if you look at the stars at night," he said to an anxious audience.

Except that this conference wasn't held in an auditorium, nor was it a typically scheduled appearance for Younse. Rather, he was speaking in a classroom nestled in the footsteps of Mount Kilimanjaro. The audience was a group of orphans and the language Swahili.

"Inua mikono yenu kama mwangalia nyota saa usiku," Younse said, and as he requested, arms shot up in the air to show that yes, they were indeed stargazers. Then Younse saw the children's eyes light up as they watched videos of astronauts on the moon, rovers on Mars and shuttles launching into space.

What began as a holiday for Younse turned into an opportunity for outreach, in which he was able to organize and bring, through donations, one large telescope and 100 smaller telescopes to Amani Orphanage in the village of Moshi, Tanzania.

The 100 small telescopes were bought through contributions given by JPLers who heard about Younse's trip through his colleague Karen Woodson, who came up with the idea to bring telescopes for the children. She spearheaded the donation campaign, and eventually ended up with enough money for the instruments, with participation coming from about 20 JPL employees. Also, a large refractor telescope was donated by Scope City, located in Sherman Oaks.

Younse came across the orphanage while planning for his trip to Tanzania.

"I contacted them before leaving for Africa and they invited me to talk to the children about space and robotics," he said. "It was a challenge developing a lesson for children, many of whom had never been to school before, had little previous exposure to science and space, and having to present entirely in Swahili since they did not speak English."

However, the children were quickly won over by the images before them, and according to Younse, the room was soon filled with upraised hands, while the air buzzed with inquisitive questions.

"It was rewarding to see the children walk away inspired from their newly-discovered knowledge of their universe!" he said.

Equally excited was one of the teachers at the orphanage, who had learned about telescopes all his life but never had the opportunity to work with one. "He has a college education and had read all about telescopes growing up," Younse said, "but this was the first time he had ever seen one in person."

Even more rewarding for Younse was explaining to the children how to use their new telescopes. However, "I did need to show them which end to look through," he admitted.

Younse's excursion to the orphanage was part of a longer vacation to different African countries that he had planned for during the month of January.

While there, he climbed Mount Kilimanjaro, witnessed the great wildebeest migration on the Serengeti, went snorkeling with dolphins off the coast of Zanzibar and spent a day with Hadzabe Bushmen, learning how they hunt and survive in the wild.

But still, Younse said, it was the people of Tanzania that impacted him the most.

"It wasn't just the towering mountains, magnificent wildlife and breathtaking landscape that made it memorable," he said. "Over three weeks in their land, I had the opportunity to get to know them and their culture quite well. Much of these experiences will remain only in my memory but with a camera in hand, I am able to [share] a few snapshots of who these people were at the time I met them."

It was also having the chance to spread his passion for space exploration and robotics with children that made the trip all the more worthwhile for Younse.

"It was a humbling experience coming from JPL," he said, "where we push the limits of technology and have so much knowledge accessible to us, to working with a set of children from a small village who live such simple lives with very limited educational resources available to them."

News Briefs



Instrument honored as 'Best of Green'

Green news website *treehugger.com* has chosen JPL's Atmospheric Infrared Sounder as a "Best of Green Award" winner in the site's Science & Technology category.

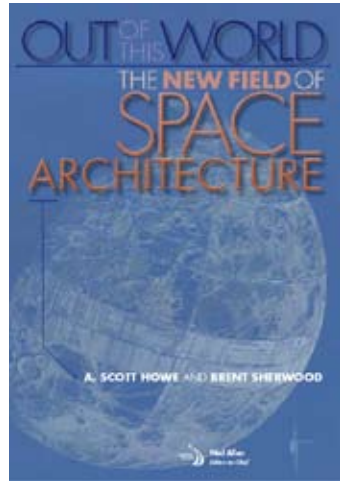
The sounder is one of six instruments on NASA's Aqua satellite. The website said, "the data it has given scientists on carbon dioxide in the Earth's atmosphere truly brought climate science into the 21st century. Without it, our understanding of the planet's climate would much be poorer."

For more information, visit <http://www.treehugger.com/best-of-green>.

New book highlights emerging field

JPLers Brent Sherwood and Scott Howe are coauthors of a new book titled "Out of This World: The New Field of Space Architecture."

Sherwood, manager of the Strategic Planning and Project Formulation Office, said the book is the first reference work about a new field that



bridges architecture and aerospace engineering. Howe is a member of the Exploration Systems Concepts Group (312E).

Published by the American Institute of Aeronautics and Astronautics, the 30-chapter volume on the theory and practice of designing and building inhabited environments in outer space brings together 26 authors from around the globe who are practitioners of space architecture.

For more information, visit <http://www.aiaa.org/content.cfm?pageid=360&id=1748>.

Childcare benefit in June

The JPL/Caltech Child Educational Center will hold its annual wine-tasting benefit and auction Saturday, June 12 from 6:30 to 10 p.m. at Caltech's Avery House.

Tickets for the event, themed "Cirque des Soirées," are \$75 in advance (\$85 at the door) and are available at the center's office, 140 Foothill Blvd., La Cañada, adjacent to La Cañada High School.

All proceeds from the evening will directly benefit the children of the CEC, a non-profit organization that has provided high-quality childcare and educational outreach services since 1979.

The benefit will feature memorable wines and microbrews from all over the world, as well as culinary treasures from French cuisine. In addition, the Chad Edwards Quartet, along with singer Valerie Watson of Club Nouveau, will perform live jazz. Edwards is chief telecommunications engineer for the Mars Exploration Program.

The evening's live auction includes a trip to Paris. Guests may bid on a

JPL kids have their day



Photos by Thom Wynne, JPL Photo Lab



Children of JPLers enjoy remote-control rovers, above, provided by JPL's Multi-Generational Exchange Starts Here affinity group, during "Bring Your Child to Work Day" April 22. At left, Mars Exploration Rover Project Manager John Callas helps visitors with their stomp rockets. More than 500 kids between 9 and 17 attended the annual event.

variety of items in the silent auction, such as getaway packages, gourmet dinners, tours, tickets, children's activities and services ranging from landscaping consultation to spa treatments.

For more information, contact Julie Halverson-Godson at 818-354-3418 or julieh@caltech.edu, or visit <http://www.ceconline.org>.



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Passings

John Porretta, 75, retired manager of JPL's Accounting Section, died Oct. 5.

Porretta worked at the Lab from 1959 to 1999. He is survived by his wife, Mikki; children Mark Porretta, Peggy Porretta, Julie Porretta, Brian Duncan and Michael Schulz; and grandchildren Nicholas, Chelsea, Rick, Jake, Andrew, Talia and Domenic.

Services were held at Holy Angels Church in Arcadia.



Betty Riley

Betty Riley, 95, a retired mailroom supervisor and JPL Library secretary, died Jan. 11.

Riley joined JPL in 1946 and retired in 1979. She is survived by her granddaughter, Audrey Gutierrez.

Services were held at Live Oak Memorial Park in Monrovia.

Teodor (Ted) Lungu, 54, a former JPL software engineer and member of the technical staff, died March 13.

Lungu worked at JPL from 1990 until 2008, contributing to the Science Data Engineering and Archiving Group and Microwave Atmospheric Science Team. He was a senior software engineer in Atmospheric and Oceanic Sciences Section, where he developed software for retrieval of atmospheric species profiles. From 2001 to 2008, Lungu served as a senior member of the technical staff, working in JPL's Physical Oceanography Distributed Active Archive Center.

He is survived by his wife, Madalina, and a daughter. Funeral services were held March 20 at Pierce Brothers Valhalla Memorial in North Hollywood.

Dan Kubly, 80, retired from the System Integration Section, died March 14.

Kubly worked at JPL from 1969 to 1985. He is survived by his wife, Cora Lee, four children, eight grandchildren and two great-grandchildren. Services were held at Forest Lawn in Glendale.

Dalton Bergan, 99, a retired facilities manager, died March 20.

Bergan joined the Lab in 1956 and served as manager of the Facilities and Plant Engineering Design Section, retiring in 1973. He was also involved in wind tunnel design and numerous building designs on Lab.

Bergan is survived by his son Carl (and wife Linda), daughters Ann (Dan) and Joan (Eugene) and granddaughter Kari.

Services were private.

Letters

Many thanks to Kathy Reilly and John's friends at JPL for all the cards and the beautiful floral tribute to John and especially the charitable contribution they made to the Maryknoll sisters in John's name. I am so grateful, as was John, for your love and friendship. God bless you all.

Mikki Porretta

My family would like to express our sincere gratitude and appreciation for the support and concern received from my colleagues on the Cassini navigation and SCO teams and from Section 343 after my mother's death, followed by my father's death only 12 days later. The beautiful flower arrangement and potted plants that

you sent us brought us comfort. In this time of grief, the friendship you showed to my family is what carried us through. I know I was lucky to have both my parents for as long as I did but I miss them. My JPL colleagues are truly my extended family who's been by my side through all the good and bad times in my life.

Rodica Ionasescu

My family and I would like to thank all our friends at JPL for their support and kindness during the illness and after the passing of my wife Karen. Thank you for the cards, plants and other generous gifts that we received in this period. It helped us cope with this painful and difficult time for all of us.

Jim Cutts

Retirees

The following JPL employees retired in April:

Marie Petrie, 44 years, Section 3330; **Kent Frewing**, 43 years, Section 1000; **Gene Wester**, 38 years, Section 3465; **Richard Halverstadt**, 26 years, Section 314F; **Magdi Carlton**, 25 years, Section 3150; **Virgil Hammon**, 11 years, Section 1854.