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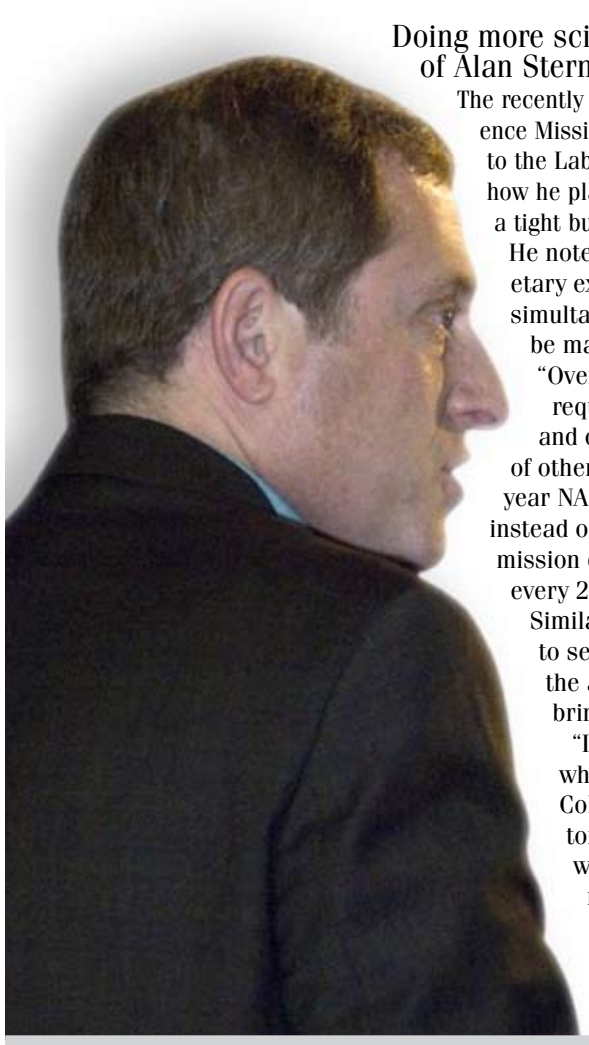
MORE SCIENCE, TIGHT BUDGET

Stern makes first JPL visit since taking over Science Mission Directorate

By Janna Brancolini



Carol Lachata / JPL Photolab

Doing more science on a limited budget was the theme of Alan Stern's June 21 all-hands meeting at JPL.

The recently appointed associate administrator of NASA's Science Mission Directorate used the meeting during his first visit to the Lab in his new NASA role to field questions and explain how he plans to accommodate more science initiatives, even on a tight budget.

He noted that it's possible to have successful Mars, planetary exploration, astronomy and Earth science programs simultaneously, but in order to do so compromises must be made.

"Over the course of a decade we can do both, but it will require some discipline," he said of Mars sample return and outer-planet missions. "We will have to skip a couple of other things we might have done." For example, in one year NASA might decide to fund one Discovery mission instead of two. Or the agency might consider skipping a Mars mission during one of the launch opportunities that come every 26 months for that planet.

Similarly, he believes that NASA can launch missions to search for Earth-like planets around other stars, but the agency needs to "reinvent" its exoplanet program to bring down the size and cost of missions.

"I'm a pragmatist," said the agency science chief, who came to NASA Headquarters this spring from Colorado where he has served as principal investigator for the New Horizons mission to Pluto. "Do you want 70 percent of something? Or 100 percent of nothing?"

Stern said that researchers needed to be more efficient both with money and with time, and cited an increase in international collaboration as one way to save money.

"If another country accomplishes some of the data sets, that's to everybody's benefit," he said. "We can provide parts of missions, so we don't have to build single missions from scratch, and make it a win-win."

While making such compromises, one area that Stern stressed would not experience budget cuts is the NASA science directorate's research and analysis programs—the way it issues some 3,000 grants to scientists to conduct research. He said he has told his division directors that cuts in research and analysis to solve funding problems for spacecraft missions are "off the table."

The science chief said he plans to streamline NASA's system of awarding grants, making it possible to get bigger grants for longer periods—thus reducing paperwork.

Stern also expressed his interest in building a science program to dovetail with NASA's plans to send humans back to the moon and eventually to Mars. "Lunar science has been dormant for decades," he said, noting that he'd like to see a strong lunar science community similar to the growth of the Mars science community over the last 15 years.

"I think we have to have (human exploration) as a nation," he said. "If it falters, people will ask why we have space science. We can't predict what we will learn from actually having field expeditions operating on the surfaces of planets with 21st-century technology. The same for asteroids. It's really exciting. We have to do it; I don't think we have a choice."

As another way of achieving more science on a limited budget, Stern says he would like to expand NASA's suborbital program—sending instruments aloft on balloons or sounding rockets.

To view a webcast of Stern's talk, log on to *http://tv.jpl.nasa.gov/Multicasts4.aspx.*

Badging moves forward

By Mark Whalen

More than 3,000 people have initiated the application process for the new identification credential JPL will provide this fall.

About 7,500 people—including JPL employees, category A on-site contractors and others requiring unescorted access to the Lab—will be required to complete the process under Homeland Security Presidential Directive 12, an executive order mandating implementation of a policy for a common identification standard for federal employees and contractors.

Remote users of JPL information technology systems will eventually be required to undergo a background investigation as part of this process.

An estimated 98 percent of JPL employees and contractors will need to submit Standard Form 85 to initiate a background investigation process, said JPL Deputy Director Gene Tattini. Those requiring a higher level of clearance will submit Standard Form 85P to initiate background investigations.

"Initially, we weren't as clear as we should have been, in terms of some of the forms people are required to submit," said JPL Deputy Director Gene Tattini. "Given that lack of information, people assumed the worst. And some of our folks still assume the worst.

"All the release form does is to ask permission to verify the entries you've made," Tattini said. "It does not give the investigating agency the right to go into your medical records or financial records, unless they come back and *specifically* ask for your permission. Under no circumstances could this process be used to open your mail or tap your telephones."

Fearing release of private data, some JPLers have expressed concerns about background investigations. "While I empathize with these folks, it's very difficult for me to conjure up a scenario where the investigating agencies would go any further than place of birth, employment and school history, unless they find something abnormal on the form," Tattini said. "All they're trying to do is to verify you are who you say you are, and that you're not a threat to the Lab or your co-workers."

Abnormalities could include the discovery that an employee did not provide factual information; for example, "claiming you graduated from a university and that university never heard of you," noted Amanda Beckman-Hezel, implementation manager for the rebadging.

"There is also a question about the government's ability to protect this information once it's in a database," Tattini said. "I think that NASA Administrator Mike Griffin answered that question at the all-hands meeting here when he indicated you can't presume somebody's going to be dishonest and steal some of this information. And there have been no examples we're aware of that information from these databases has ever been leaked to an unauthorized source."

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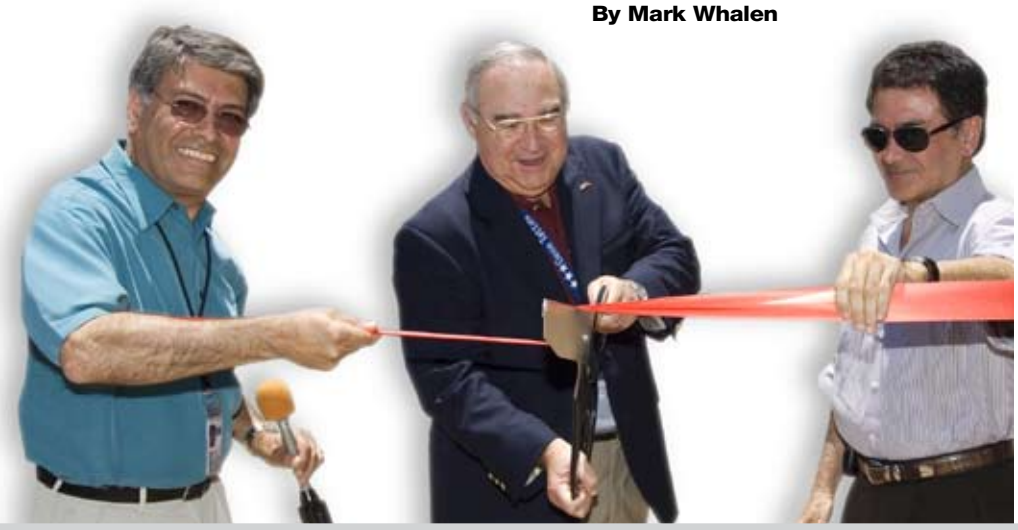
A better way to MARS

By Mark Whalen



JPL Deputy Director Gene Tattini dedicates the new Mars Yard with help from Samad Hayati, left, and Firouz Naderi. Below is Scarecrow, a model of the Mars Science Laboratory rover.

Photos by Dutch Slager / JPL Photolab

The Mars Program dedicated newly remodeled and expanded Mars Yard June 19.

JPL engineers unveiled the Scarecrow, a full-scale model of the Mars Science Laboratory rover that will launch in 2009. Lacking a body at this point in its development, this model tests the rover's mobility systems. Demonstrations showed the device's six wheels, each with independent motors and steering, that successfully climbed steep, tall and craggy rocks.

The Mars Yard, at the corner of Pioneer and Loki roads, is about six times larger than the old one and can accommodate other large rovers such as Athlete. Besides the simulated martian rocks and soil, the yard also has a steep hill that will test the types of angles and slopes that could be encountered on Mars. The facility also includes a new building featuring a roll-up door that allows test rovers to enter and exit.

Samad Hayati, manager of the Mars Technology Program, noted that the Mars Yard has proven itself time and again as a valuable outdoor testbed.

He said that as a result of successful Mars Yard tests on the Mars Exploration Rovers, several new capabilities have been developed for Spirit and Opportunity:

• More sophisticated path planning that expands the planning horizon, thus eliminating local traps that the rovers have experienced in the past, was developed by Carnegie-Mellon University for the Mars Technology Program and implemented by Arturo Rankin, Advanced Robotic Controls Group.

• Visual target tracking to reach targets of interest in a closed-loop sense, thus eliminating stopping and communicating with operators on Earth for verification before proceeding. Won Kim, Mobility and Manipulation Group, is principal investigator.

• Automated instrument placement, which includes safety checks for deploying the manipulator arm. Patrick Leger, Mobility and Manipulation Group, is principal investigator.

• Automated detection of dust devils and clouds, thus eliminating the transmission of large data files to Earth that only occasionally contain scientific data. Steve Chien, Artificial Intelligence Group supervisor, and Rebecca Castano, Machine Learning and Instrument Autonomy Group, are principal investigators.

The Mars Exploration Rovers' flight software version 9.2, which has been baselined for the Mars Science Laboratory rover, includes these new technologies, Hayati added. He credited the overall effort to Khaled Ali, flight software/data management team lead.

badging

Continued from page 1

Tattini isn't concerned that a few JPL employees have discussed their dissatisfaction with the process with the local news media.

"Everybody has the right to talk to the media or with their congressional representatives," he said. "I've even heard that some folks are considering legal action. If they do that on their own time, not use JPL resources, and not affiliate their positions with JPL policy, they have all the rights to do that."

"In no way, shape or form will there be any type of retribution for appropriately exercising their free speech rights," Tattini added.

Unless NASA either changes their requirements or deadline—neither of which seems likely at this time—to enter JPL after Oct. 27 each employee will be required to have the new credential badge or have voluntarily initiated the process by which they will get a badge. "Those who choose not to obtain a NASA badge so they can continue employment at JPL will be considered to have resigned effective Oct. 27," Tattini said.

To avoid a backlog, the goal is to have everyone complete their applications prior to the end of September. Details are outlined at *http://hspd12.jpl.nasa.gov/GettingTheCard.*

Hezel said background investigations would not be completed by Oct. 27, but not to worry. "Five days after your investigation has been initiated, you will be considered badge-eligible," she said.

After that five-day period, JPL Security will contact staff members to make an appointment to have a new picture taken; fingerprints will also be done at that time.

Paperwork is submitted to the federal government's Office of Personnel Management. After forms have been verified, new badges are returned to JPL. At a final appointment with JPL Security, staff members will create a personal identification number for their new badge and will also verify their identification with a thumbprint on the embedded "smart card" chip.

Appointments will be done in phases over the summer.

"You will probably never know that the background check happened, unless something comes up," Tattini said. "Then you will be notified personally by a government official that something in your background needs further clarification. JPL will not be informed of the specifics of any issue."

A number of Labwide question-and-answer sessions on the rebadging have been scheduled, the next of which will be on Monday, July 9, at 8:30 a.m. in Building 180-101. Visit *http://dailyplanet* for an updated schedule.

All questions and feedback from these meetings and others are being gathered for the rebadging website (*http://hspd12.jpl.nasa.gov*), where they will be added to the list of frequently asked questions. Tattini said the list would include questions of general Labwide concern rather than individual inquiries.

"A large number of people at JPL have thought that either the JPL senior leadership, or Caltech, should have pushed back on these requirements," Tattini said. "It took a lengthy period of time for us to convince employees that this is beyond our control.

"What we're attempting to do now is make this process as painless as we possibly can," he added. "Randy Aden and his staff in the Office of Protective Services have had to be extremely adaptable and flexible to get this done, and they have hired 40 temporary employees to help us expedite the process. And as we introduced this to JPL, NASA Headquarters' guidance to us has been changing and fluid; they were trying to understand how this new system was going to affect JPL, just as we were trying to understand how it would affect us."

"Speaking from personal experience, having gone through security clearances a number of times, this is not an onerous process," Tattini added. "The intent here is not to invade anyone's privacy. It's just to make sure you are who you say you are, and quite frankly, people should feel more comfortable about this, given the world we live in today."

HONORING ACHIEVEMENT

In recognition of outstanding accomplishments, performance and key contributions to NASA over the past year, the agency presented its annual Honor Awards on June 21 to JPL employees, contractors and partners.

Alan Stern, NASA associate administrator for space science, joined JPL Deputy Director Gene Tattini in presenting 162 awards in 11 categories to individuals and groups representing both government and non-government employees.

Stern, in his first visit to JPL since joining NASA Headquarters, told the gathering that JPL is "an absolute treasure to this nation" and "is enthusing the world on what humans can achieve."

Here is a list of the honorees:

Richard Hasegawa / JPL Photolab

Left: Moustafa Chahine, center, accepts the Exceptional Scientific Achievement Medal from Charles Elachi, left, and Alan Stern.

Top: Exceptional Service Medal winner Lauri Sager-Devirian.

Bottom: Exceptional Service Medal winner Robert Chandler.

Public Service Group Achievement Award

Given to a group of nongovernment employees in recognition of an outstanding accomplishment that has contributed substantially to the NASA mission.

CSU–CIRA Team, Descent Imager/Spectral Radiometer Team, Huygens Atmospheric Structure Instrument Team, Interdisciplinary Science Team, Mars Reconnaissance Orbiter Lockheed Martin Space Systems Company Development Team, RSC Orbit Analyst Team, Spitzer Space Telescope Anomaly Recovery Team, Surface Science Package Team, USAF Payload Test Center Management Team.

Public Service Medal

Awarded to any individual who was not a government employee during the period in which the service was performed. The award is granted for exceptional contributions to the NASA mission.

Bryce Billings, Patrick Carr, Allan Cheuvront, Randall Coffey, Calvin Craig, Paul Finley, Sandra Freund, Timothy Halbrook, Robert Hurt, Steven Jolly, Stephen Long, Michael McGee, David Perkins, Lisa Storrie-Lombardi, Joseph Vellinga.

Exceptional Technology Achievement Medal

Awarded for technology contributions achieved in early technology development significantly contributing to the NASA mission, exemplary collaborative effort in achieving significant technology transfer, or exceptional utilization of a NASA-developed technology resulting in a significant commercial application.

Yoaz Bar-Sever.

Exceptional Scientific Achievement Medal

Awarded for unusually significant scientific contributions toward achievement of the NASA mission. This award may be given for individual efforts that have resulted in a contribution of fundamental importance in this field or have significantly enhanced understanding of this field.

Donald Brownlee, Moustafa Chahine, Eric Rignot.

Exceptional Engineering Achievement Medal

Awarded for unusually significant engineering contributions toward achievement of the NASA mission. This award may be given for individual efforts or applications of engineering principles or methods that have resulted in a contribution of fundamental importance in this field or have significantly enhanced understanding of this field.

James Baughman, Eastwood Im, Steven Jones, Chia-Yen Peng.

Equal Employment Opportunity Medal

Awarded to both government and nongovernment individuals for outstanding achievement and material contribution to the goals of NASA's Equal Employment Opportunity programs either within the government or within community organizations or groups.

Edward Tunstel.

Exceptional Service Medal

Awarded for significant, sustained performance characterized by unusual initiative or creative ability that clearly demonstrates substantial improvements or contributions in engineering, aeronautics, spaceflight, administration, support or space-related endeavors that contribute to the NASA mission.

David Agle, Raymond Becker, Stephen Bridges, Stanley Butman, Robert Chandler, Cary Fox, David Halpern, Julie Ispirian, Rosaly Lopes-Gautier, Miguel Marina, Thomas May, Donald Moore, Lauri Sager-Devirian, Stanley Sander, Richard Williamson.

Outstanding Leadership Medal

Awarded for notably outstanding leadership that affects NASA technical or administrative programs. The leadership award may be given for an act of leadership, for sustained contributions based on a leader's effectiveness, the productivity of the leader's program or for the leader's demonstrated ability in developing the administrative or technical talents of other employees.

Thomas Duxbury, Thomas Gavin, James Graf, Fuk Li, Chi Lin, Thomas Livermore, David Nichols, Magalene Powell-Meeks, William Weber, Richard Zurek.

Distinguished Service Medal

Awarded to any person in the federal service who, by distinguished service, ability or courage, has personally made a contribution representing substantial progress to the NASA mission in the interest of the United States. The contribution must be so extraordinary that other forms of recognition by NASA would be inadequate. This is the highest honor that NASA confers.

Matthew Landano, Eugene Tattini, Charles Yamarone.

Exceptional Achievement Medal

Awarded for a significant, specific accomplishment or contribution clearly characterized by a substantial and significant improvement in operations, efficiency, service, financial savings, science or technology that contributes to the NASA mission.

Aseel Anabtawi, Ralph Basilio, Ronald Boain, Carl Buck, Ronald Carlson, Calvin Chambers, Steven Collins, Michael E. Davis, Leslie Deutsch, Tracy Drain, Stephen Durden, Charles D. Edwards, Anne Elson, Grant Faris, Raymond Frauenholz, Robert Gaskell, Matthew Gonzales, Charles Halsell, Glen Havens, Terry Himes, Edward Hirst, Michael Hughes, Benhan Jai, Thomas Jedrey, Martin Johnston, Alexander Konopliv, Jeffrey Levison, Karen Liao, Larry Matthies, Frank Mortelliti, Jeffrey Plaut, Julie Reiz, Jose Rodriguez, Mark Rokey, Ross Salawitch, Martha Scarbrough, Calina Seybold, Dawn Skinner, Suzanne Smrekar, Stephen Synnott, Marla Thornton, Peter Tsou, Ramona Tung, Tom Wahl, Kenneth Williams, Steven Wissler, Peter Xaypraseuth, Tung-Han You.

Group Achievement Award

Given in recognition of an outstanding accomplishment that has been made through the coordination of many individual efforts and has contributed substantially to the accomplishment of the NASA mission. This award may be used to recognize the accomplishments of either a total government employee group or, as a team award, a group comprised of both government and nongovernment personnel.

94 GHz High-Power Amplifier Development Team; Acquisition Division Pillars Metrics Team; Aerosol Collector and Pyrolyser Team; AIRS Science Team; Athlete Development Team; Audiovisual Services Team; Cassini Spacecraft Operations Hydrazine Tank Recharge Team; CloudSat Management Team; CloudSat Radar Flight Operations Team; CloudSat Radar Instrument Team; CloudSat Spacecraft Team; Cosmic GPS Receiver Team; Deep Impact Mission Design Team; Deep Impact Sequence Team; Descent Image Motion Estimation System Group; Descent Trajectory Working Group; Doppler Wind Experiment Team; DSN-Mission Bistatic Scattering Radio Science Experiments Team; Earned Value Management Implementation Team; Earth Observing One Sensorweb Team; Electra UHF Transceiver Team; Employee Information Processing Center Team; Gas Chromatograph and Mass Spectrometer Team; Higher Education Programs Group; Institutional Communications Team; Integrated Material Management Initiative Team; Library, Archives and Records Section; Mars Express Bistatic Radar Operations Team; Mars Reconnaissance Orbiter Flight Engineering Team; Mars Reconnaissance Orbiter Ground Data System Team; Mars Reconnaissance Orbiter Mission Planning & Sequencing Team; Mars Reconnaissance Orbiter Navigation Team; Mars Reconnaissance Orbiter Project Operations Support, Mission Planning and Sequencing Teams; Media Relations Team; MRO L+18 Tiger Team; Multi-Mission DSN Allocation & Planning Team; NASA Instrument Cost Model Group; Public Services Team; SeaWinds/AMSR Processing Team; Sharad Instrument Development Team; SIM Engineering Milestone 1 Team; SIM Engineering Milestone 2 Team; SIM Engineering Milestone 3 Team; SIM Optical Interferometry Performance Test Facility Team; Spitzer Anomaly Response & Recovery Team; Spitzer Operations Efficiency & Risk Mitigation Team; Spitzer Space Telescope Observing Program for Students & Teachers; Stardust Flight Operations Team; Stardust Recovery Team, Stardust Risk Management Team; Task Order Closeout Group; TES Level 2 Algorithm Team; Wideband VLBI Science Receiver Team.

News Briefs


Chelsea Graf


Eleanor Jaeger


Jessie Dicovitsky

Two JPL lunar proposals selected

NASA has selected proposals, including two from JPL, for future lunar science activities. In addition, the agency has established two new programs that will enhance research made possible by the Vision for Space Exploration.

The two selected proposals from JPL—"Autonomous Lunar Geophysical Experiment Package" (William Banerdt, principal investigator) and "Lunar Laser Transponder and Retroreflector Science" (Slava Turyshev, principal investigator)—are among the seven chosen by NASA from more than 70 submissions under the Lunar Sortie Science Opportunities Program.

These newly funded efforts in the space science community will complement two new programs established in the Science Mission Directorate's Planetary Sciences Division at NASA Headquarters: the Lunar Advanced Science and Exploration Research Program and the Lunar Reconnaissance Orbiter Participating Scientist Program.

The seven selected proposals will result in advanced development for simple, autonomous instrument packages deployed on the lunar surface by astronauts. Such "suitcase science" packages could open up a wide variety of research applications regarding the moon and the lunar environment.

For the other selected proposals and more information, visit *http://www.nasa.gov/home/hqnews/2007/jun/HQ_07141_moon_science.html*.

Riding club requests quiet

JPL Security has requested that staff members entering or exiting the Lab via Oak Grove Drive be mindful of our neighbors at the Flintridge Riding Club.

The club has an arena adjacent to the checkpoint and unnecessary noises could be distracting to the horses and riders.

JPLers are asked to take extra care when passing through the checkpoint canopy. Please do not rev your engine or squeal your tires. Radios and stereos should be at reasonable volume. Also, be aware of your speed and remember that honking of horns should only be done for safety reasons.

Credit union awards scholarships to graduates

Children of two JPL employees and one Caltech employee have each received $1,000 as recipients of Caltech Employees Federal Credit Union's annual scholarship award.

Chelsea Graf, daughter of Jim Graf, deputy director for the Earth Science and Technology Directorate, and Eleanor Jaeger, daughter of Jim Jaeger of the Multimissions Operations Group, both graduated from La Cañada High School in June. Chelsea will attend Princeton University this fall, while Eleanor will attend the University of California at Berkeley.

Jessie Dicovitsky, daughter of Gary Dicovitsky, Caltech vice president for development and alumni relations, graduated from Polytechnic School in Pasadena and will attend Princeton in the fall.

The scholarship competition is open to high school seniors whose families have credit union accounts. About 40 students applied this year. Winners are chosen based on their grade point averages, extracurricular school activities and awards. Contestants also answer an essay question, which this year involved how they would teach other young adults about the importance of good savings and spending habits.

Passings


Donald Fowler

Donald Fowler, 81, Caltech's general counsel from 1975 to 1990 and a former JPL Executive Council member, died May 18.

As general counsel, Fowler was responsible for providing general legal and patent services for Caltech as well as JPL. Fowler was also responsible for negotiating and administering for Caltech the prime contract with NASA.

Fowler joined Caltech in 1963 and was promoted to general counsel in 1975. From 1985 until his retirement in 1990, he also served as secretary and co-counsel of the California Association for Research in Astronomy, a nonprofit corporation established jointly by Caltech and the University of California to design, construct and operate the W.M. Keck Observatory on Mauna Kea in Hawaii, the world's largest optical telescope.

Fowler is survived by his wife, Anna; daughter Kelly and son Mark; and four grandchildren. Services were held May 22 in Cambria, Calif.

Retiree **Ruth Slack,** 88, died April 27.

Slack worked at the Lab from 1951 to 1982. She is survived by stepsons Jonathan and Philip and daughter-in-law Grace Slack. Services were private.

Retiree **Louis Toth,** 89, died May 17.

Toth joined JPL in 1961 and retired in 1980. He is survived by his son, Robert. Services were private.

Retiree **Emanuel Voils,** 80, died June 3.

Voils worked at JPL from 1978 to 1992. He is survived by sons Ansel and Aeron and daughter Gladys Strange. Services were private.

Retirees

The following JPL employees retired in July:

Philip Moynihan, 38 years, Section 382; **E.M. (Myles) Standish**, 35 years, Section 343; **Warren Nogaki,** 20 years, Section 312; **Howard Rockstad,** 16 years, Section 374; **Gary Swift,** 16 years, Section 514.

Letters

To my many friends at JPL—and to those of you who have retired before me—I have come to a fork in the road, and to quote Yogi Berra, I am taking it. As of June 1, 2007, I retired after 38 years of rarified intellectual adventure. And I thank you all for making this incredible journey possible. It was my privilege to have known and worked with all of you, and called you my friends. Organizations are too often perceived as inanimate organisms and judged solely by their artifacts. But people comprise organizations, and it's what they know and what they do that makes places like JPL stand with such prominence and distinction. You older folk are counted among the brightest people on the planet, and it's been my honor for all these years to be accepted in your midst. The younger generation has a formidable task to maintain that reputation, and their success will depend upon their stamina, intellect and imagination. Let's hope they are up to the challenge. It's not an easy decision to select a retirement date after all this time, but I have many other unexplored roads yet to travel and I'm anxious to get started. I've got a lot of distance to cover before sundown! So thanks again for a most exhilarating "E-coupon" ride!

Phil Moynihan

I would like to thank the outpouring of sympathy and support provided by my JPL CloudSat and Orbiting Carbon Observatory project team members on the recent passing of my father. The plant from the JPL community and the dried flower arrangement from the CloudSat team are greatly appreciated. Thank you for your support.

Dawn Skinner

I would like to express a sincere thank you for all the concern, support and condolences I've received during the recent passing of my mother. The kind words of consolation have truly provided me comfort during this difficult time. The beautiful JPL plant sent to my family's home is a nice reminder of the heartfelt gestures I've received. Thank you again on behalf of my family and myself.

Gloria Nguyen

I am deeply grateful for the support of my family and friends on the recent passing of my partner, Timothy Fechter. I am especially thankful for the thoughts and prayers of many colleagues here at JPL. I also appreciate the beautiful plant the Lab sent in Tim's memory.

Ed Sewall

My family and I would like to thank the JPL community and especially those from Division 27, NBS and the P-Card Team, for their kind thoughts and support on the recent passing of my father, Ralph. The beautiful plant from the ERC and the cards we received were heartfelt and greatly appreciated during this tough time. Ralphie really enjoyed his time serving as a consulting instructor of presentation skills for Professional Development during the '80s and '90s, and felt the JPLers he served were amongst the finest folks he'd ever encountered. Their support during his brief illness and subsequent passing certainly reinforces this notion, and has made a difficult transition that much easier to bear.

Rory Carey and family

My family and I would like to express our deep appreciation for the support and expressions of sympathy from the JPL community following the death of my father, Donald Fowler. It is very apparent that during his years here, he made many friends. This outpouring of support has meant a great deal to my family. He was an asset to JPL and an asset to our family and will be greatly missed. Thank you so much.

Kelly Pittman

My family and I would like to express our sincere appreciation for the beautiful anthurium plant sent by JPL and for the kind expression of sympathy for the passing of my mother-in-law.

Al Nakata

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