

## Featured Stories



### InSight shakes up Americafest July 4th celebration

Patrons to the Rose Bowl's "Americafest" Fourth of July celebration were treated to fireworks, a Michael Jackson tribute band, and marsquakes demonstrations courtesy of JPL's Mars InSight Roadshow team.

According to Rose Bowl organizers, more than 30,000 people attended the celebration, the largest such fireworks display ever held in Southern California. But before the 9 p.m. pyrotechnics began, participants were able to check out a half-scale model of InSight at the main entrance of the Rose Bowl, and learn about the upcoming Nov. 26 landing on Mars.

Mars Public Engagement manager Carolina Carnalla-Martinez said the crowd favorite was the "Make Your Own Marsquake" jump pad, where kids and adults alike could jump and see seismometer readings on a screen—simulating how InSight's seismometer, SEIS, will work on the martian surface.

"We had people of all ages come up and participate in our exhibits and ask questions," Carnalla-Martinez said. "We had a great cross-section of the public and I ended up doing lots of interactions in Spanish as well. There were people who had never heard of InSight or knew that it was on its way to Mars, and this event was a great way to get the word out."

The robotic lander will study the planet's deep interior using seismology and other geophysical measurements. Crowds were drawn in by the lander model, asking questions to InSight team members

who represented several of InSight's subsystems including navigation; testbed; entry, descent and landing (EDL); and instrument deployment.

This was the third year JPL has collaborated with the Americafest celebration at the Rose Bowl, now in its 92nd year. Last year, the JPL exhibit celebrated the 20th anniversary of the Mars Pathfinder rover landing, and in 2016, JPL's public engagement team highlighted the Juno satellite's Jupiter orbit insertion.



*The Mars public engagement team at the Rose Bowl, with a model of the InSight lander.*

## **On the Road**

This year's July 4th event at the Rose Bowl was just one stop on a statewide tour. Since March 30, the InSight roadshow team has been visiting all over California in their decal-decorated van, giving the public a chance to learn about marsquakes, and how InSight will study the "inner space" of Mars: its crust, mantle and core.

During its tour, the Roadshow team has focused on making stops at museums, planetariums and libraries that are members of the NASA Museum Alliance—a program run by JPL's Informal Education Group since 2002 that provides access to NASA staff, resources and professional development.

"Every museum we've visited has shown an attendance increase when we are there for the weekend, and it's just been a great experience to grow awareness of the InSight mission, and the alliance's mission as well," said Sarah Marcotte, museum services representative for the Mars Public Engagement team.

The roadshow concept was new for JPL's public engagement team, building off some of its previous public exhibits by bringing a sense of "locality" to the InSight mission.

"We thought a roadshow through quake-prone California made sense because it highlighted InSight's mission of studying seismic activity on Mars, and also because the launch from Vandenberg was the first interplanetary mission ever to originate from the West Coast," Carnalla-Martinez said.

The InSight tour also set a new standard for speed and efficiency. Previous public engagement tours for missions such as the Mars Curiosity rover included a nationwide circuit, where the displays and exhibits were shipped to each new destination. But with the InSight roadshow, the exhibits and interactive displays fit in the van, cutting costs and allowing the team to be more flexible with choosing tour stops and dates.

“We’ve been able to be nimble: pop up, engage the public, educate, and go,” Marcotte said. So far, the tour has made 13 stops, including Redding’s Turtle Bay Exploration Park, San Francisco’s Exploratorium, the Lompoc City Airport for the InSight launch viewing, and Orange County’s Discovery Cube Museum.

The tour included a stop at the Griffith Observatory for the Mars close approach on July 30; next is the San Diego Air and Space Museum Aug. 3-5.



*JPL Director Mike Watkins addresses this summer’s interns.*

## **JPL Director welcomes summer interns**

On Monday, July 16, JPL Director Mike Watkins welcomed a large group of summer interns to the Lab. The talk was so popular, it filled Pickering Auditorium to standing room only.

The JPL internship programs enable students to work alongside JPL researchers for 10 weeks or longer. Through these research experiences and a wealth of enrichment activities—including seminar series, laboratory tours, career opportunities and social events—JPL encourages its approximately 1,100 annual interns to discover, create, network and learn.

Watkins began his presentation by talking about the origin of JPL as an intrepid group of Caltech students launching rockets in the arroyo in 1936. This led to America’s first satellite, Explorer 1, in 1958, and has since expanded to the exploration of planets in our solar system and beyond. His presentation included an overview of the Lab: not only how many acres, buildings, and people make up JPL, but also the 23 spacecraft and nine instruments currently in operation.

He finished his talk by highlighting upcoming launches that will keep JPL busy in the next few years: the Deep Space Atomic Clock launching this fall, OCO-3 next February, the Mars 2020 rover and the Mars Helicopter technology demonstration, as well as COSMIC-2 in 2020, NISAR and SWOT in 2021, and the Europa Clipper and Psyche missions in 2022. These missions all have benefitted from JPL intern contributions, and—for more than a few of them—could be a future career focus.

A 15-minute Q&A period followed the presentation. The students asked about next-generation missions, the role of the Director, prospects for employment at JPL, and much more. Watkins said that around 70 percent of Early Career Hires were former JPL interns, proving that internship programs are a cost-effective pipeline into the workforce. The program gives both the interns and prospective hiring managers the opportunity to evaluate the potential employment fit, and ensures a future workforce to formulate and manage NASA's next-generation missions.

"I enjoyed listening to the director of JPL give advice on how interns can help improve JPL, and about the direction the Lab is going in the future," said Jasmine Smith, a junior studying mechanical engineering at Tuskegee University.

Intern Josh Gaston agreed. "Dr. Watkins' talk was phenomenal," said the aerospace engineering junior, also from Tuskegee University. "It inspired me to consider JPL as a job opportunity."



*Teachers-in-training perform a straw rocket demonstration.*

## **Educating the world's future educators**

When Isaac Tenorio found out he had gotten into NASA's Educator Institute at JPL, he was excited about what he would learn, and the wealth of experiments and lesson plan ideas he could bring back with him to start his teaching career on the tiny island of Saipan—a U.S. commonwealth in the western Pacific.

But after a week on Lab, Tenorio—a senior at Northern Marianas Island College in Saipan—was surprised to discover how eager he was to bring his knowledge and experience at JPL back to his fellow colleagues.

“The amount of information, activities and experiments we learned about over the week was just so valuable, I’m excited to share this entire experience with my classmates so they can use it in their future classrooms,” Tenorio said.

Tenorio was one of 50 pre-service teachers accepted to attend the NASA Minority University Research and Education Project’s (MUREP) week-long Educator Institute held at JPL this past June. The program’s objective is to bring students from Minority Serving Institutions to NASA centers for a unique STEM professional development opportunity aimed at equipping the next generation of teachers.

Education Program Specialist Ota Lutz said the Educator Institutes have always been a chance to empower future teachers, and each day’s schedule is filled with a mix of learning activities—such as Play-Doh volcano demonstrations—tours of JPL’s facilities, and talks from scientists, researchers and engineers.

“Textbooks are good, but sometimes you just need some current information and to put together a cardboard rover, or to build a 20-foot inflatable planetarium out of trash bags,” Lutz said. “We can provide those lessons, those up-to-date experiences backed by some of the world’s leading research.”

## **Geographic Diversity**

While the Educator Institutes typically attract students from schools in the Los Angeles region, this year’s program included representatives from Northern Marianas College and Salish Kootenai College—a Native American tribal college in Montana.

Julius Weaselhead was one of five students from Salish Kootenai participating in this year’s program. Once she finishes her senior year, Weaselhead hopes to teach third grade in a tribal community.

“I really feel empowered to use the tools and lesson plans that NASA has outlined on its education sites,” Weaselhead said. “I have never been a big STEM person, but after this week, I feel like I can bring a hands-on approach to teaching science-based topics.”

Having schools participating from outside California brought a new layer of geographic diversity to the program, and meant that the educators were sometimes getting the education.

“It’s something we don’t think about much, but Los Angeles is home to the second largest population of Native Americans in the country,” Lutz said. “We often talk about meeting the needs of underserved or minority communities in the region, and it is really good for the local teachers in the area, and us, to think about the Native American presence here. Understanding cultural heritage while at the same time teaching science-based curriculum is important.”

## **Hitting Close to Home**

For Tenorio and his fellow Northern Marianas College students, a climate change presentation by Science Data Application Lead Karen Yuen turned into a real-world wake up call for the entire group.

“You don’t see it here in the mainland, but over there, the sea levels are rising, we’re losing our islands,” Tenorio said. “A lot of our brothers and sisters on neighboring islands, their homes are gone. I wanted to

let other people know about our situation back home, and that every action really does count. Every conservation act really does count. I cannot blame anybody for not caring. It's a tiny island in the Pacific and we're way out there. But I want people to know that this is happening. And I felt like that was a special moment when I was able to tell people here, and they know now."

Lutz said Tenorio's words resonated with the group.

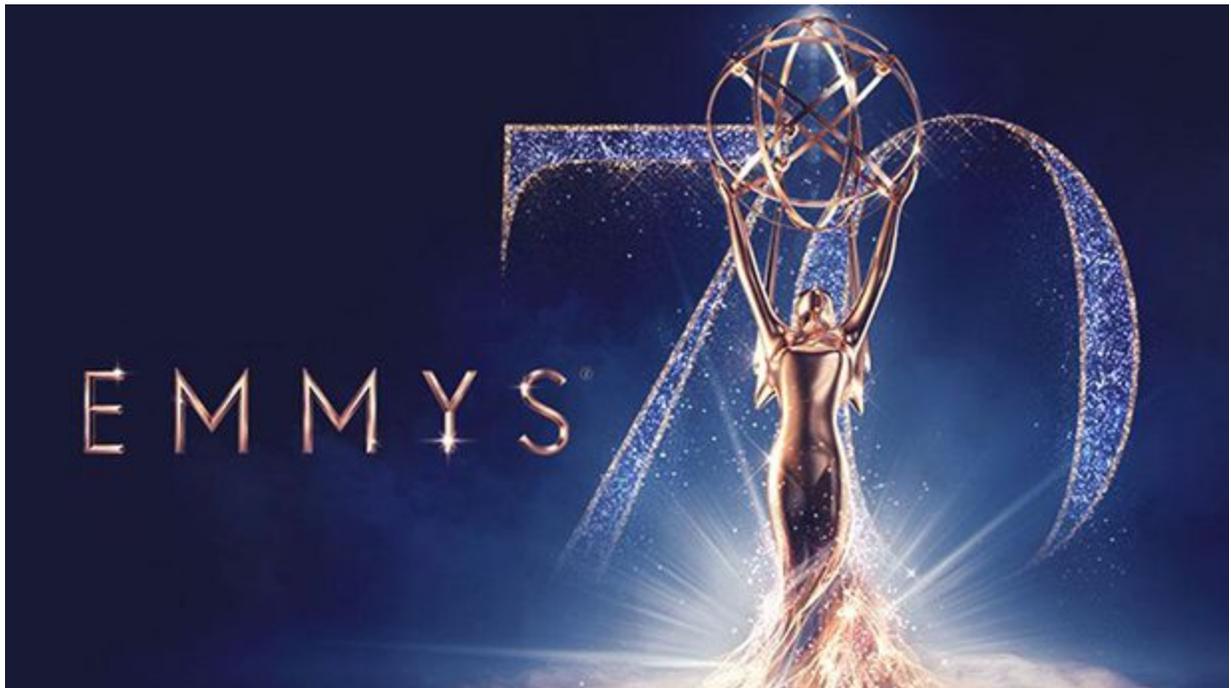
"I was watching the faces of the kids from the local colleges, and they were just silent. It really brought home that what we're talking about here is really happening out there."

It was indicative of what the MUREP Educator Institute is about: Give future educators the information and tools NASA has at its disposal, and empower teachers to inspire the next generation of students.

"Our activities and lessons are tools, they're not the be-all-end-all," Lutz said. "What we strive to do is educate teachers on how to educate the next generation of scientists, mathematicians and so on to not just be good students, but critical thinkers."

This particular MUREP Educator Institute ran from June 25-29, focusing on pre-service teachers planning to teach elementary grades once they finish their schooling. In addition to Northern Marianas College and Salish-Kootenai College, pre-service teachers from UC Riverside, Cal State Northridge, Cal State Dominguez Hills, Cal State Los Angeles and La Sierra University attended. JPL hosted another week-long session July 23-27 for future high school teachers.

Visit the [MUREP Educator Institute](#) for more information.



## JPL lands Emmy nomination

The Academy of Television Arts & Sciences nominated JPL for Outstanding Original Interactive Program for its coverage of the Cassini mission's Grand Finale at Saturn, including news, web, education, television and social media efforts.

In 2017, after nearly 20 years in space and 13 years revealing the wonders of Saturn, the Cassini orbiter was running out of fuel. As a final act, Cassini began a whole new mission—its Grand Finale. This journey into the unknown would end with a spectacular plunge into the planet. JPL created a multi-month digital campaign to celebrate the mission's science and engineering accomplishments and communicate why the spacecraft must meet its end in the skies of Saturn.

The multi-faceted campaign included regular updates on Twitter, Facebook, Snapchat, Instagram and the Cassini mission website; multiple live social, web and TV broadcasts during which reporter and public questions were answered; a dramatic short film to communicate the mission's story and preview its endgame; multiple 360-degree videos, including NASA's first 360-degree livestream of a mission event from inside JPL mission control; an interactive press kit; a steady drumbeat of articles to keep fans updated with news and features about the people behind the mission; state-standards aligned educational materials; a celebration of art by amateur space enthusiasts; and software to provide real-time tracking of the spacecraft, down to its final transmission to Earth.

Cassini's first, daring dive into the unexplored space between the giant planet and its rings kicked off the campaign on April 26, 2017. It culminated on Sept. 15, 2017, with live coverage of Cassini's plunge into Saturn's atmosphere, with the spacecraft sending back science to the very last second.

The Primetime Emmys will be awarded by the Academy of Television Arts & Sciences in Los Angeles on Sept. 17. The Creative Arts Emmys, which includes interactive awards, will be presented during a separate ceremony on Saturday, Sept. 15, at the Microsoft Theatre in Los Angeles.

The Cassini-Huygens mission is a cooperative project of NASA, the European Space Agency and the Italian Space Agency. JPL, a division of Caltech in Pasadena, manages the mission for NASA's Science Mission Directorate, Washington. JPL designed, developed and assembled the Cassini orbiter.

For more information about Cassini, go to <https://www.nasa.gov/cassini> and <https://saturn.jpl.nasa.gov>

# Upcoming Events



## Project Jupyter for large-scale science

Project Jupyter co-founder Brian Granger will speak Monday, Aug. 6 from noon to 1 p.m. at the Hub, 111-104. An overflow room in 301-234 has been reserved.

**Abstract:** Project Jupyter is an open-source project that exists to develop software, open standards, and services for interactive and reproducible computing. The main application developed by the project is the Jupyter Notebook, a web application that allows users to create documents that combine live code with narrative text, mathematical equations and visualizations. Since its creation in 2011, the Jupyter Notebook has become a widely-used, open standard for developing, sharing, communicating and reproducing computational work in scientific computing and data science.

This talk will give an overview of Project Jupyter and its open-source software and open standards for interactive computing. Examples of its usage across a broad range of industries, disciplines and organizations will be used to illustrate the main ideas upon which Jupyter is founded. It will end by describing and demonstrating current work and strategic initiatives on JupyterLab, JupyterHub, Binder and Altair.

**Bio:** Granger is an associate professor of physics and data science at Cal Poly San Luis Obispo. His research focuses on building open-source tools for interactive computing, data science, and data visualization. Granger is a leader of the IPython project, co-founder of Project Jupyter and the Altair project for statistical visualization, and an active contributor to a number of other open-source projects focused on data science in Python. He is an advisory board member of NumFOCUS and a faculty fellow of the Cal Poly Center for Innovation and Entrepreneurship. Along with other leaders of Project Jupyter, he is a winner of the 2017 ACM Software System Award.



## **Movies at the Hub: 'The Pathfinders'**

The JPL Library and Archives will be showing the "Beginnings of the Space Age: The Pathfinders" at noon on Wednesday, Aug. 8 at the Hub (111-104). Bring your lunch, get to know the people and events that have made the Lab the way it is today.

It started with an order to land something on Mars—cheaply. In NASA's new era of "faster, better, cheaper," this mission had to create a radically different way of building a spacecraft. The Pathfinders tells the story of a small group of JPLers who dismissed warnings that a cut-rate mission to Earth's distant neighbor would cut short their careers. With a Martian parachute that could not be tested in Earth's atmosphere, and the last-minute addition of a remote-controlled vehicle that would not look out of place in a toy store, the Pathfinder mission was a doubter's dream. Yet the future prospects of JPL, and of a Mars program in its infancy, depended on bouncing successfully onto the rocky Red Planet and releasing a curious six-wheeled wanderer, in hopes of starting a revolution in space exploration.

Selected books from NASA history will be given away after each movie.

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## 'You Can't Take It With You'

Nine JPLers are part of the Caltech Players presentation of the heart-warming comedy for two weekends starting Friday, Aug. 10, in the gardens of Caltech's historic Alumni House.

Show dates are Friday through Sunday, Aug. 10-12, and Thursday through Saturday, Aug. 16-18. All performances are at 8 p.m.

With its host of exuberant, eccentric characters, George S. Kaufman and Moss Hart's production has remained an American favorite for 80 years, yet is surprisingly timely in its themes of acceptance, inclusion, and tolerance, with its story of how a community can come together to become a family and have a blast in the meantime.

The JPLers in the production are: actors Anne Marinan (Alice), Benjamin Solish (Paul), Azeemuddin Khaja (Henderson), David Coren (Ed), Ashley Stroupe (Gay Wellington) and Manan Arya (De Pinna); director David Seal, assistant director Barbie Insua and house manager Jan Biferno.

Seal will lead a cast and crew of students, staff, JPLers, alumni and local talent. Together, these Caltech Players create a hilarious and touching evening of theatre suitable for all ages.

Tickets, available at the door, are \$10 for general admission, \$5 for students with ID; cash or check only. To reserve tickets for specific performances, please fill out the form. Reserved tickets will be held until 10 minutes before curtain, when they will be released.

Free parking is available on Hill Street and in the garage on Holliston Avenue south of Del Mar Boulevard.

For more information, please see <http://explicit.caltech.edu> or email [explicit@caltech.edu](mailto:explicit@caltech.edu).

# JPL Classifieds

Ads submitted July 21-27

Submit an ad to: [universe@jpl.nasa.gov](mailto:universe@jpl.nasa.gov)

## For Sale

CONCERT TICKETS (2), Nathaniel Rateliff and the Night Sweats, Aug.15 at the Greek Theatre, section A, row K, seats 33 and 35; \$55 each/obo. Scott: 508-361-9565, Scott22g@msn.com.

EXERCISE BIKE, Diamondback 510 Sr, ergonomic recumbent, just like new, only a few hours of use, 20 workout programs including target heart rate and 16 levels of resistance; these units sell for \$900-\$1,100 plus tax; sell for \$415/obo. 818-399-9638, jheapy@sbcglobal.net.

### Vehicles / Accessories

'03 HONDA Accord EX V6 coupe, 211,529 miles, leather interior, heated seats, moonroof, a/c, airbags, runs great, perfect first car, \$3,600. Call/text 818-350-2756, Ara.

'06 SUBARU Impreza 2.5i sedan, manual transmission, 61,000 mi, good condition, asking \$6,300. 603-831-0481, Matt.

'05 TOYOTA Corolla, great condition, 143,000 miles, clean title, automatic transmission, good gas mileage, a/c works great, highly reliable, runs flawlessly and has never been in an accident, available Aug. 20; \$4,700/obo. Text/call Elizabeth Wig, 774-258-1637 or elizabethpwig@gmail.com.

## Wanted

RENTAL in Montrose/La Crescenta/Glendale, in the Glendale Unified School District; require 2+ bedrooms, 1.5+ bathrooms, looking for a well-maintained house in a quiet neighborhood with a lease starting in late August. launch\_high@yahoo.com, Oleg.

SPACE INFORMATION/memorabilia from U.S. & other countries, past & present, for personal use (see <http://www.youtube.com/watch?v=S7PvjGp7mCU>). mrayman@alumni.princeton.edu, 818-790-8523, Marc Rayman.

## For Rent

ALTADENA, incredible, spacious, light-filled guest house in a lovely area; 1 large bedroom, with an additional room that can be used as office or small second bedroom; large living room with high ceilings, kitchen, large bathroom, ample closet space; all utilities included with a brand-new central air conditioner; the house is situated far from the main house, with plenty of outdoor space making it feel like a private

home; 2 large lemon trees outside your front door, plenty of street parking; \$2,150.  
lori.schlachter@gmail.com.

ALTADENA, furnished room with awesome view for lease; non-smoker to share a beautiful 4-bedroom, 3-bath house across from community garden, close to local colleges, Pasadena city schools, walking distance to JPL. utilities are included, central air/heat, internet access; near 210/134/110/bus stop/shopping/banking/entertainment/restaurants; \$900/month. 818-370-0601.

ALTADENA (91001) furnished loft with awesome view for lease; non-smoker to share beautiful 4-bedroom, 3-bath house across from community garden, available Sept.; close to local colleges, Pasadena city schools, walking distance to JPL, utilities are included, central air/heat, internet access, near 210/134/110/bus stop/shopping/banking/entertainment/restaurants; \$775/month. 818-370-0601.

LA CRESCENTA, updated 3 bedroom, 2 bath duplex, 2 blocks north of CV High School; completely remodeled, fireplace, central air/heat, washer dryer, bonus sunroom with beautiful views, new appliances, pets considered; available Sept. 1, two-year lease requested; \$2,950/month. 818-415-8334.

PASADENA, furnished apartment available Oct. 1 for a 1-year lease, one block north of Caltech at the corner of Wilson Ave. and Del Mar Blvd., 2 bedroom + 2 baths, 1,367 square feet, top floor with lots of light, one-car covered-garage, \$2,795/month. 626-376-4071 (H), 626-487-7038 (C).

## Vacation Rentals

BAHAMAS, Freeport, resort on beach, 1Bd, 1ba, sleeps 4, fully equipped kitchen incl. stove, microwave, D/W, cable TV, VCR, phone; Sept. 29 2018 Sat – Oct 5 2018 Friday. 626-524-3954, elango555@gmail.com.

MAMMOTH, Snowcreek, 2 bd., 2 ba. + loft, sleeps 6-8, fully equip'd kitchen incl. microwave, D/W, cable TV, VCR, phone, balcony w/mtn. vw., Jacz., sauna, streams, fishponds, close to Mammoth Creek, JPL discount, no pets. 626-798-9222, 626-840-3749 or valeriee@caltech.edu.

MAMMOTH, Snowcreek, beautiful updated condo, 2 bd., 2 ba. + loft (sleeps 6-8), great location by pond/meadow, new appliances, TVs, DVD players, free wireless Internet and washer/dryer, no pets. 818-952-2696 or BigMtnPrettySky@gmail.com.

MAMMOTH, remodeled 2 bed/2 bath + loft, short walk to Canyon Lodge; Courchevel 6 features full kitchen, cable/Internet TV, DVD, Blu-Ray, wireless hi-speed Internet, 2-car garage, Jacuzzis, grill, pool; no pets. <http://Courchevel6.com>.

MAMMOTH, Wildflower, 1br 1ba ground floor, sleeps 4 adults+2 children, remodeled with WiFi, smart HDTVs and Premier DTV; ski/kayak storage, spa, sauna and pool close by; click <http://www.mammothlakesluxurycondo.com>. wildflower47@begleyteam.com.

# JPL Family News

## Awards

JPL Principal Scientist **Bruce Tsurutani** on July 15 was presented with the Committee on Space Research (COSPAR) Space Science Award for his outstanding contributions to space science. Tsurutani, a space weather research specialist in the Astrophysics and Space Sciences Section, received the honor during the 42nd COSPAR Scientific Assembly in Pasadena. Additionally, an asteroid discovered in 1990 called “1990 RCB” was named after Tsurutani by COSPAR and is now called “(6313) Tsurutani Asteroid.”

Tsurutani, who earned a B.A. and Ph.D in physics from UC Berkeley, has been with JPL since 1972. For more information on the award, please visit

[https://cosparhq.cnes.fr/sites/default/files/press\\_release\\_cospar\\_awards\\_2018.pdf](https://cosparhq.cnes.fr/sites/default/files/press_release_cospar_awards_2018.pdf)

## Passings

**Michael Carney**, 79, a retired systems electrical engineer, died April 11. Carney joined JPL in 1961 and retired in 2005 from the Systems Test and Launch Operations Section. He is survived by his wife, Sylvia, sons John and Guy, two granddaughters and a great-granddaughter.

**Paul Massier**, 94, a retired senior research engineer, died July 6. Massier joined JPL in 1955 in Section 3, Power Plant Research, where he conducted experimental research on heat transfer in rocket nozzles. He then developed a lightweight, brazed-rib rocket thrust chamber and supersonic diffusers for evaluating high-altitude rocket-engine performance at ground level. Massier was promoted to group supervisor in 1958. Through his retirement in 1989, he conducted research in electrical propulsion concepts, new horizons in propulsion, confined vortex flows in nozzles, and many other technologies.

**John Michel**, 78, mathematician, died May 15. Michel joined JPL in the 1960s as a full-time employee. In 1970 he joined the mathematics faculty at Marietta College in Ohio. He continued to consult at JPL for almost 30 years, often spending his summers in residence at the Lab in the Navigation and Mission Design sections. Michel worked on a variety of projects including Voyager, Galileo, Cassini, and the Mars Exploration Rovers. He worked for a number of years in the development of statistical maneuver analysis software. He received the NASA Group Achievement Award for his work on Galileo. Michel received two teaching excellence awards at Marietta, where he served as chairman of the Mathematics Department. He was also section president of the Mathematical Association of America for the state of Ohio. At the time of his death, Michel was distinguished professor emeritus of mathematics. Michel is survived by his wife, Kay; son Jeff; and grandchildren Ellie and Hank Keefer. He was preceded in death by his daughter Jennifer Keefer. A celebration of life was held for Michel at Marietta College. Memorial contributions can be made to the John and Katherine Michel Fund for Mathematics at Marietta College.

Retired Telecommunications and Mission Operations Director **Paul Westmoreland**, 86, died July 22. Westmoreland earned a bachelor's degree in electrical engineering from USC and a master's from UCLA before joining JPL in 1960 as a research engineer. He took on several positions of increasing responsibility and later managed the Deep Space Network Data Systems Development Section, the Large Advanced Antenna System Project and the Mission Control and Computer Center Development Section. From 1980 to 1990, he was manager of the Telecommunications and Data Acquisition Engineering Office, responsible for the design and implementation of the DSN. Westmoreland was honored with NASA's Exceptional Service and Outstanding Leadership medals. He retired in 1999.

Westmoreland is survived by his daughter, Cyndy. The family requests that donations in his name be considered to the Kiwanis Club of La Cañada. A celebration of life will be held Saturday, Aug.4 at Westmoreland's home in Tujunga. Please RSVP to 818-522-7129.

## Letters

I would like to sincerely thank JPL for the wonderful plant that I received after my mother's passing in May, and to thank my Asteroids, Comets and Satellites Group for the lovely flowers they sent. I would also like to thank my Cassini colleagues and my planetary science colleagues for their thoughtful cards and for their sympathy and support during this time. I am very lucky to work with such a wonderful group of people. **Linda Spilker**

I would like to express thanks to my colleagues at JPL for their expressions of kind sympathy on the passing of my mother Margie Lehman, and to the Mars Odyssey team and the ERC for the lovely plants. She was a wonderful person who we miss very much. **David Lehman** and family