

Universe

Jet Propulsion Laboratory

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I n s i d e

News Briefs, Calendar 2	Old-World Craft, High-Tech World 3
Award for Excellence 2	"Botball" Competition 4
Info Fair Spreads the Word 2	Passings, Letters, Classifieds . . 4

JPLers' kids have their day

More than 500 visit Lab to be with mom, dad

By Mark Whalen

Kids and parents gather around JPL's Dr. Yoseph Bar-Cohen as he demonstrates an ultrasonic drill during Take Your Child to Work Day April 26. Bar-Cohen also demonstrated a robotic arm (front of table) and android head. Below: Mabel Wong, left, daughter of Cynthia Wong of Section 389, and Christina Cheung, daughter of Kar-Ming Cheung of Section 331, work on their rocket-propelled rovers.



Bob Brown/JPL Photo Lab

a record turnout of almost 550 children of JPL employees took the day off from school April 26 for the annual Take Your Child to Work Day as they got a glimpse of how mom and dad spend their time at the Laboratory.

Grandparents, aunts, uncles, brothers, sisters, family friends and others also got involved in escorting the 9- to 17-year-old girls and boys to their workplaces and to a number of special activities on Lab.

"We had a wonderful and successful Bring Your Child to Work Day," said Tania Geddes of the Human Resources Directorate, one of the event's organizers. "I saw excitement in the eyes of the children who visited us and their questions were filled with curiosity and enthusiasm. We did reach our goal of sparking the children's interest in science and engineering.

"I want to thank the scientists, engineers volunteers and committee members who participated to make this a successful event," she added.

Kids' activities included the construction of an "interactive rover," fashioned out of sticks, styrofoam and balloons. JPL's Asian American Council provided the materials and help. In addition, Dr. Yoseph Bar-Cohen and Giovanni Pioggia demonstrated an ultrasonic drill, robotic arm and android head, all under development in JPL's Nondestructive Evaluation and Advance Actuators Lab; Connie Gennaro coordinated a Mars rover demo; and Bernardo Lopez and Alfonso Feria explained the workings of the Inflatable Structures Lab.

"My son, Ryan, and I had a wonderful time. It was extremely well planned and organized," said Swen Williams of Section 212. "Ryan was excited to learn about the important and extensive contributions that JPL has made to our world. Although Ryan has enjoyed science from exposure to it in school, he told me that he appreciates it even more after witnessing some of the amazing things that come about from the research and development performed by JPL.

"The presentations were particularly well done and interesting," he added. "Our warm thanks to JPL for promoting and participating in this national event that exposes children to the workplace and the education and career choices that they will soon be facing. Ryan says that he's looking forward to returning next year."

"My two daughters very much enjoyed the opportunity to see where their mother and father work," said Byron Yetter of Section 920, whose wife, Karen, also works on Lab, in Section 368. "My daughters were both also very impressed that a place like JPL would take the time and the effort to do so many things 'just for them.' They woke up the next morning still talking about being run over by the 'Mars Rover.'"

Open house coming next weekend

JPL's annual Open House will be held on Saturday and Sunday, May 19 and 20, from 9 a.m. to 5 p.m. The event is attended to full capacity every year, and this year should be no exception. This year's theme is "JPL 2001: A Space Odyssey," and for thousands of people from around the country this event provides an opportunity to go behind the scenes at the Lab.

JPL's Open House is a free, fun-filled, family event that has a little of everything for space enthusiasts, from virtual flying lessons to building a spacecraft, or having a picture taken in infrared light. For non-space buffs, it is an opportunity to look inside a NASA center and discover more about some of the latest technological advancements. Everyone will have the chance to meet with scientists and engineers who will staff booths to answer questions about current and future missions.

Parking for visitors will be provided free near the Oak Grove main gate and on the eastern boundary of JPL, accessible from Windsor Avenue via the Arroyo Boulevard exit off the 210 Freeway. Trams will run non-stop between all lots and JPL's main gate. Air-conditioned buses with tour guides will move people to and from different locations around the facility.

The Public Services Office is the primary coordinator for JPL's Open House and if you are willing to volunteer your services please call ext. 4-0112. The event will be Web-cast live on Saturday from 11 to noon, accessible at www.jpl.nasa.gov/webcast/openhouse. For more information, pictures and maps, log on to <http://www.jpl.nasa.gov/open-house/index.html>.



Bob Brown/JPL Photo Lab

Lab aids emergency vehicle warning system

By Carolina Martinez

A Monrovia fire truck speeds through an intersection during a demonstration of the early warning system. The lighted icon at top of the display warns drivers that an emergency vehicle is approaching.



Frank Semerano



The city of Monrovia has successfully tested an emergency vehicle intersection early warning system that will alert drivers to approaching emergency vehicles to reduce the potential for traffic collisions.

E-VIEWS Safety Systems Inc. designed the system with assistance from JPL's Technology Affiliates Program.

Monrovia plans to install transponders in 20 police and 10 fire emergency vehicles and the installation of visual display boards on traffic signal mast-arms above the centers of eight city intersections.

The transponders will communicate via

microwave with receivers on the display boards. As the emergency vehicle approaches the intersections, the police officer or firefighter activates the transponder, which automatically turns the traffic light to yellow, then red, for cross traffic.

The intersections' visual warning display signs will also be activated and approaching drivers will see bright flashing vehicle warning symbols on the displays, informing them of the direction from which emergency traffic is approaching, from as far as 1,067 meters (3,500 feet) out. The lighted icons will appear to move across the displays synchronized with the actual emergency vehicle's movement.

News Briefs

Builder selected to add DSN antenna

NASA has selected a builder to add an advanced dish antenna, 34 meters in diameter (112 feet), near Madrid, Spain, one of the three sites of the Deep Space Network.

"We are getting ready for a crunch period beginning in November 2003," said RICH MILLER, head of DSN planning and commitments at JPL. In late 2003 and early 2004, the United States, Europe and Japan will each have missions arriving at Mars, two other spacecraft will be encountering comets, and a third comet mission will launch. Several other missions will have continuing communication needs.

NASA has selected Schwartz-Hautmont Construcciones Metalicas S.A. of Tarragona, Spain, as the successful bidder to build a new antenna to be completed at Madrid by November 2003. The antenna is the biggest piece in about \$54 million worth of improvements that NASA's Office of Space Science, Office of Space Flight, and Space Operations Management Office have set as priorities for increasing the DSN's capabilities by late 2003. Other parts of the plan would improve the capabilities of existing antennas at all three of the networks tracking complexes: Madrid; Canberra, Australia; and Goldstone, near Barstow.

Blood drive coming mid-May

The next JPL/Red Cross Blood Drive, will be held in von Karman Auditorium on May 15 from 10 a.m. to 4 p.m. and May 16 from 7 a.m. to 1 p.m.

The Red Cross is experiencing a shortage of O-negative blood. However, all blood types are needed.

Sign-up sheets will be available prior to the blood drive at Occupational Health Services, Building 310-202, and on their home page, http://eis/medical/blood_form.html. Last-minute signups are available at von Karman Auditorium, but be prepared to wait a little longer if you do not have an

appointment. To change an appointment, call the Pasadena Red Cross, (626) 799-0841, ext. 630.

Architect program deadline nears

Friday, May 25 is the last day to apply for the two-year JPL Mission Architect Development Program internship. The name of the program, formerly known as the Architect Development Program, recently has changed to include the word "mission," distinguishing it from the new CSMISS Software Architect Program, begun this year.

To apply for the MADP internship, submit a resume and a one- or two-page letter of interest stating why you would be a good candidate for the program, with concurrence by your division manager, to Maria Raygoza, human resources staffing, mail stop T-1720C. Candidates and their division managers should also retain copies. For more information, visit the MADP Web site at <http://eis/adp>.

Ethics Office offers training

The next ethics training class available to all personnel is scheduled for Tuesday, May 22 from 3 to 4pm in Building 180-101.

A list of training sessions is available online at <http://hr/et>. One-hour sessions are offered monthly or can be arranged for group presentations. Call MARTHA AVINA, ext. 4-3154.

Mission assurance event at Glenn

NASA's Office of Safety and Mission Assurance is sponsoring the annual Assurance Technology Conference May 30-31 at Glenn Research Center.

The event, which will provide a forum for technical interchange among NASA safety and mission assurance personnel, will focus on cutting-edge and unique technical advances in providing mission assurance services, tools and processes to the agency's enterprise initiatives. For information, call CHUCK BARNES at ext. 4-4467.

A May 2 awards ceremony honored the following recipients of the 2001 Award for Excellence:

Exceptional Business Operations, Individual: Antonio Fonseca, Robin Moncada, Sheryl Rinker, Aram Yagubian; **Team:** Contractor Labor Electronic Invoicing System Process Action Team.

Exceptional Leadership, Individual: Teresa Bailey, Michael Hecht, Thomas Livermore, Anthony Martin, Marc Rayman, Carolyn Stevens.

Exceptional Quality, Individual: Maurice Argoud, Kay Ferrari, Lorraine Johnson, Taifun O'Reilly, Kenneth Peters; **Randii Wessen; Team:** Plane -

tary Photojournal Team, Space Place Web Site Team, SRTM Real Time Science Team, SSV Animation Team.

Exceptional Technical Excellence, Individual: Alberto Behar, Guy Beutelshcies, Duane Bindschadler, Scott Bryant, Joseph Lewis, John Waters, Brian Wilcox; **Team:** Deep Space 1 Rescue Team, DSN Command Replacement Team, Fuel Cell Team, GPS Software Team, Keck Interferometer Development Team, SWAT LO Development Team.

For pictures of the honorees and descriptions of their awards, log on to <http://eis/sec614/reward>.

Award for Excellence



Info fair helps communicators spread the word

The April 26 Information Providers Fair sponsored by the Library, Archives, and Records Section provided a learning and networking event for visitors and participants alike. The theme for the fair—Connecting Knowledge: Celebrating the Power of Networking—reflected the fair's purpose of bringing together and sharing the diverse information resources and services available at JPL.

In his opening remarks, Institutional Associate Director Kirk Dawson was highly supportive of the event and recognized its importance. "Clearly, in order to be successful, JPL has to recognize that the information we need is widely distributed throughout the Laboratory, and to make that available requires something like the JPL Information Providers network. As the Lab gets more and more complicated with more projects, more information and new technology, this is a prime way to making sure people can get at what they need to do their job."

The fair included 27 poster sessions and 10 online demonstrations that provided insights into the resources and services of 23 organizations. "An estimated 300 to 350 visitors attended, and the information providers were engaged non-stop in discussions about their services and resources," noted Teresa Bailey of the JPL Library, one of the event's organizers.

For more information visit the fair Web site at <http://beacon/infindex.html> or call Bailey at ext. 4-9233.

Special Events Calendar

Ongoing Support Groups

Alcoholics Anonymous—Meetings are available. Call the Employee Assistance Program at ext. 4-3680 for time and location.

Codependents Anonymous—Meeting at noon every Wednesday. Call Occupational Health Services at ext. 4-3319.

End of Life Issues and Bereavement—Meets the second Monday of the month at noon. For location, call the JPL Employee Assistance Program at ext. 4-3680.

Gay, Lesbian and Bisexual Support Group—Meets the first and third Fridays of the month at noon in Building 125-133. Call the Employee Assistance Program at ext. 4-3680 or Randy Herrera at ext. 3-0664.

Parent Support Group—Meets the third Thursday of the month at noon. For location, call the JPL Employee Assistance Program at ext. 4-3680.

Senior Caregivers Support Group—Meets the the first Tuesday of the month. For time and location, call the JPL Employee Assistance Program at ext. 4-3680.

Friday, May 11

Von Kármán Lecture Series—Blaine Baggett, executive manager of JPL's Office of Communications and Education, will present "The Beginnings of a Legacy: Stories from JPL's Early



Years," at 7 p.m. in The Forum at Pasadena City College, 1570 E. Colorado Blvd. Open to the public.

Saturday, May 12

Bandorama—The Caltech Jazz Bands and Concert Band will present a concert of jazz and classical music at 8 p.m. in Beckman Auditorium. Special laser effects will be used to highlight a performance of Handel's "Royal Fireworks Music." Admission is free. Call (626) 395-4652.

Tuesday, May 15

Investment Advice—TIAA/CREF will hold one-on-one counseling sessions from 9 a.m. to 3 p.m. in T-1720. For an appointment, call (877) 209-3140, ext. 2614, or log on to www.tiaa-cref.org.

JPL Hiking+ Club—Meeting at noon in Building 303-209.

Wednesday, May 16

Investment Advice—Fidelity and TIAA/CREF will hold one-on-one counseling sessions from 9 a.m. to 3 p.m. in T-1720. To schedule an appointment with Fidelity, call (800) 642-7131. For TIAA/CREF, call (877) 209-3140, ext. 2614, or log on to www.tiaa-cref.org.

JPL Stories—Former JPL Deputy Director Peter Lyman will describe

some of the lesser-known experiences and close calls during his years at the



Lab with "A Broken Shroud, a Leaky Valve, and Much, Much More" at 4 p.m.

in the Library, west end of Building 111-104. Call Teresa Bailey at ext. 4-9233.

Music On the Mall—Incendio (www.incendiomusic.com) will perform a blend of world music featuring rumba flamenco, guitars and Middle Eastern-influenced world-fusion beginning at noon. A raffle will be held at 12:35 p.m.; winner must be present to win.

Thursday, May 17

Parent Support Group—Dr. Larry Brooks, a local clinical psychologist who specializes in working with children, adolescents and families, will lead a discussion called "The Effects of Divorce on Children" from noon to 1 p.m. in Building 180-703. Call Gregory Hickey at ext. 4-0776.

Saturday, May 19

Folk Music—Singers Cathy Barton and Dave Para, whose music features traditions of Missouri and the Ozarks, will perform at 8 p.m. in Caltech's Winnett Lounge. Tickets are \$12 for adults, \$4 for kids under 12. Call (626) 395-4652.

Spring Concert—The Caltech Men's and Women's Glee clubs will be joined by the Caltech-Occidental Chamber Orchestra at 8 p.m. in Ramo Auditorium. Admission is free. Call (626) 395-4652.

Tuesday, May 22

Investment Advice—Fidelity will hold one-on-one counseling sessions from 9 a.m. to 3 p.m. in T-1720.

TIAA/CREF Investment Workshops—Several sessions will be held in Building 180-101. The discussion from 10 a.m. to noon will focus on historical stock performance, performance difference of growth and value stock, diversity among stocks and bonds, and how to approach correction and recoveries sanely. From noon to 1 p.m., employees newly eligible to participate in the retirement plan can enroll. Investment options and assistance in completing enrollment forms will be available. From 1 to 3 p.m., learn about identifying and prioritizing your personal financial goals, deciding which TIAA-CREF products will help you meet those goals, and creating an allocation your assets among these products that makes the most sense for you.

Wednesday, May 23

JPL Toastmasters Club—Meeting at 5:30 p.m. in the Building 167 conference room. Guests welcome. Call Jim Raney at ext. 4-6301.

"The Coming Revolution in Photography"—Caltech professor emeritus of engineering and applied science Dr. Carver Mead will speak at 8 p.m. in Beckman Auditorium. Admission is free. Call (626) 395-4652.

Friday, May 25;

Sunday, May 27

Piano Concerts—Caltech pianist-in-residence James Boyk will perform in Dabney Lounge at 8 p.m. Friday and at 2:30 p.m. Sunday. Admission is free. Call (626) 395-4652.

Corrections

A photo caption on page 4 in the May 4 issue of Universe misidentified Great Britain's Prince Andrew.

In the April 27 issue, the list of employees who retired in April contained misspellings of the names of retirees George Jaivin and Catherine Magnano.



Richard Hasegawa / JPL Photo Lab

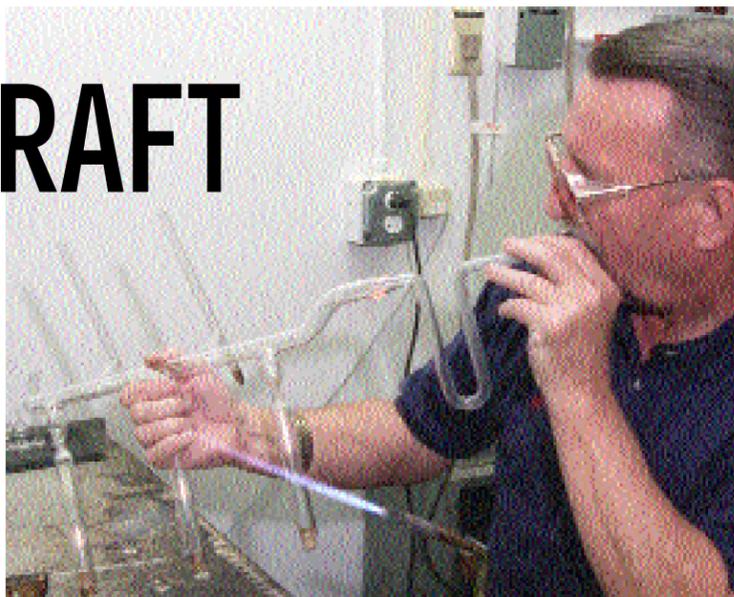
JPL staff check out posters and displays in the Library during the Information Fair.



JPL glassblower provides a vital service to Lab scientists and researchers

An OLD-WORLD CRAFT in a HIGH-TECH WORLD

By Gia Scafidi



Photos by Bob Brown / JPL Photo Lab

Above, below right: Juergen Linke uses a flame on glass to help form his creations.

At above right, he smoothes out glass connections on a vacuum manifold.

Top: a condenser, used for purification distillations.

researchers and scientists. With torch in hand, he provides quick services and modifications to glassware used in numerous disciplines, including photochemistry, vacuum systems, biochemistry, spacecraft instrumentation and fuel cell research.

"Juergen's glassware makes our research possible," said Stanley Sander, enior research scientist in JPL's Chemical Kinetics and Photochemistry Group. "A lot of the chemical reactions we carry out in our lab studies of atmospheric chemistry require specialized glassware, including some very exotic designs made from both Pyrex and quartz. In my discussions with colleagues from laboratories all over the world, I find that Juergen is one of the few people who has both the skills and experience to construct the specialized apparatus required for this research."

"At JPL, scientists and researchers come to me with an idea; we discuss it; resolve a plan; and I create it," explained Linke. "When I can buy it, I buy it. When it's not available, then that's my time to show off."

And rightfully so.

A natural glassblower, Linke started blowing glass in 1955, at the ripe young age of 15. He spent a year and a half at an occupational college in Berlin, Germany, his birthplace, where he learned neon and quartz glassblowing. It wasn't long before Linke's skill led to a three-and-a-half-year-apprenticeship position with a large German glass company.

"I remembered a friend whose family had a glass shop," Linke recalls. "It was clean and warm, and a job not everyone had. So, I took it." After this he was hired to blow glass for the University of Berlin, and simultaneously earned a master's degree in scientific glass blowing.

"The best part about glassblowing is that there are no rules. You can't have too heavy a hand and you have to be somewhat creative. But other than that, you just develop a certain feel and find your way," noted Linke. "The first six months usually tell if you have what it takes."

Since his early glassblowing days, Linke's talent and experience have taken him through different countries and unique

For the past 25 years, Juergen Linke has worked his wonders in JPL's glass shop.

Meshing old-world craftsman skills with modern space technology, Linke transforms his creative energy into unique glassware for JPL and Caltech

work environments. In 1967, he worked for a mid-size glass company in El Monte. After being laid off in 1969, he moved to Guadalajara, Jalisco, Mexico for three years with his wife. In Mexico, he blew glass for researchers and taught the art to chemistry students. Eventually, he made his way back to the states, and began working at JPL in 1976. Linke also blows glass for researchers at Edwards Air Force Base, northeast of Los Angeles.

"Our work would almost be impossible without Juergen's considerable talent," said Dr. Chris Webster, lead scientist for Atmospheric Chemistry in Division 32. "The fluidity of his design provides a custom-built interface between our high-tech miniaturized planetary instrumentation and the pre-flight laboratory calibration resources."

Over the years, Linke's talent and experience have saved the Laboratory a significant amount of time and money that would have otherwise been spent on contracting jobs out to the glass industry.

"Having a glassblower is like having a fire fighter," said Edward Cohen, principal scientist in JPL's Atmospheric Chemistry Group. "When you need one, you need one right now." Over the years, when the Lab considered eliminating

"Our work would almost be impossible without Juergen's considerable talent."

— Dr. Chris Webster, lead scientist for Atmospheric Chemistry in Division 32

the glass blower position, Cohen and others sent memos urging the administration to keep Juergen on. "I can't stress enough how important it is to have him here."

Despite the value and importance, Linke sees old trades, such as his, being lost to modern technology.

"In 20 to 50 years, the glassblowers will be gone," he said. He noted the importance of companies taking the time and money to train younger people in the craftsman trades.

On a smaller scale, Linke tries to do his part.

"I give everyone the opportunity to learn," he said. "Many people spend their lunches in my glass shop. They practice and practice and practice. And then one day they just get it."



Lab hosts student robot competition

With JPL's help, a group of about 100 students last month engaged in a spirited competition of robots that they proudly designed, built and programmed.

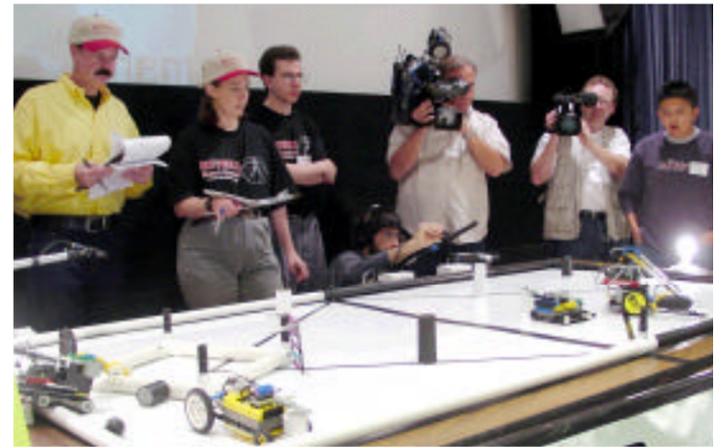
Eleven teams of Southern California middle- and high-school students came to JPL April 29 to test the skills of the robots they had built over the preceding six weeks.

The robots were made out of Legos, and programmed in "C" language to operate autonomously, said event organizer Dr. Ben Smith, manager of JPL's Autonomy Program, who noted that 14 JPL engineers and computer scientists helped the students. On a table-top field, the robots moved balls from tubes into a nest. "The students had a really fun time, the parents and teachers thought it

was a great experience, and it generated a lot of excitement in robotics and autonomy," Smith said. "The most frequent comment I heard was, 'I want to do this again next year!'"

The winning team in this regional was Gabrielino High School of San Gabriel, whose robot had a hook design that grabbed the nest and dragged it back to their side. Jordan High School's Team-1 came in second, and the MAST Academy from San Diego came in third. These teams all received a trophy and a grant from the American Association of Artificial Intelligence to travel to Seattle to compete in the national Botball competition in August.

Smith thanked the volunteers who gave up their Sunday to make the event a big success. The event was



Judges and onlookers check out the Botball competition held at JPL April 29.

co-sponsored by the NASA Robotics Autonomy Technology Program, the JPL Autonomy Program, the Center

for Space Mission Information and Software Systems and the Mars Technology Program.

DailyPlanet
CHECK FOR THE JPL COMMUNITY

Take a look at
JPL's new online
news source

<http://www.jpl.nasa.gov/dailyplanet>

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previous issues of
Universe online

<http://universe.jpl.nasa.gov>

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Notice to Advertisers

Advertising is available for JPL and Caltech employees, contractors and retirees and their families. No more than two ads of up to 60 words each will be published for each advertiser. Items may be combined within one submission.

Ads must be submitted on ad cards, available at the ERC and the Universe office, Bldg. 186-118, or via e-mail to universe@jpl.nasa.gov.

Ads are due at 2 p.m. on the Monday after publication for the following issue.

All housing and vehicle advertisements require that the qualifying person(s) placing the ad be listed as an owner on the ownership documents.

Passings

RICHARD MOULDER, 61, a program manager in Section 360, died April 16 from complications of diabetes at his home in Utah.

Moulder had worked at the Lab since 1973. He is survived by ex-wife Ellen and children Faxon, Mark and Maureen. Services were private.

JOSEPH GANINO, 60, staff assistant in the Technology and Applications Programs Directorate, died of a heart attack April 17.

Ganino had worked at JPL since 1992. He is survived by his wife, Kathryn, sons John and Anthony, daughters Ann Frishmuth and Lisa Levesque, and seven grandchildren. Memorial services were held at Assumption of Blessed Virgin Mary Church in Pasadena.

JOHN PORTER, 74, a retired member of the technical staff in Section 290, died of cardiac arrest April 19.

Porter worked at the Lab from 1951-87. He is survived by his wife, Mary, three children, 11 grandchildren and two great grandchildren.

Services were held at Rose Hills Park in Whittier.

Letters

The family of Joe Ganino wishes to thank all those at JPL who attended the memorial service on Monday, 23 April and/or sent wonderful flowers, cards, or donations in his memory. We will always remember the kind words that honored Joe's hard work and dedication. You were his other "family." May God bless you and your families.

Kathy, Anne, John, Lisa
and Tony Ganino

On behalf of my family and myself, I would like to thank the ERC for the lovely plant sent to commemorate the sudden passing of my father. Our grief was eased by the kind thoughts, prayers and support we received from friends in Section 215 and co-workers at JPL.

Marlene Link

On behalf of my family, I would like to thank all my fellow employees for their support and sympathy cards, and JPL for the beautiful flowers following the passing of my mother-in-law on April 21.

John Beedy and family

My husband Arnie and I wish to thank my co-workers on the MER Project for their support and expressions of concern and sympathy during the recent passing of Arnie's mother. Thank you to the ERC for the lovely plant.

Christine Preheim

Classifieds

For Sale

AIR CONDITIONER, Kenmore, window mounted, cools liv. rm. or bdrm. used 1 summer, bought new for \$600, sell \$475/obo. 626/792-8272.
AIR CONDITIONER, Fedders, fits windows up to 39" wide, 10,000 BTU unit, clean, exc. cond., 10 months old, still under warranty, \$200. 626/796-4218.

BABY ACCESSORIES, car seats, bassinet, clothing, shoes, etc; HOME FURNISHINGS, lamps, artificial plant, exercise bike, cardio-glide, oriental furn., pictures, stools, curtains, rugs, artifacts, vases, bedding, pillows, clothes, nice interior door. 626/398-1988.

BABY ITEMS: high chair, vg cond.; bassinet, as new; stroller, vg cond.; changing table, as new, light salmon pine wood. 626/584-1164, Muriel.
BABY/TODDLER ITEMS: exerciser, \$25; girl's tricycle, \$25; toddler activity center & table, \$10; wooden puzzles & toys, almost new clothes & shoes for toddler & infant girls, reasonably priced. 626/798-6248.

BICYCLES, Schwinn, men's and women's, 10 spd., exc. cond., \$250/both/obo; CAMERA, Pentax 35 mm SLR Super ME, new black body 50 mm 1.4, 80-200 zoom and 28 mm lenses, 2 flashes, auto winder, equipment case, exc. cond., \$300. 626/793-7879.

BUNK BED, split-level top is twin, bottom is full matr., blue metal, almost new, used 8 mo., twin mattress included, \$99. 249-4561.

CAMPSITE, at El Capitan, north of Santa Barbara, June 1-3, \$30. 956-1744, Barbara.

CHINA CABINET, vg cond., \$100. 323/550-8701.

CHINA CABINET, 1950s Drexel mahogany, e-mail for photo lelson@altavista.com, \$800 cash and carry. 353-9367.

COFFEE, Kona, top of the line, 100% pure/ sun dried, hand-picked from top-qual. trees, rich, dark roast, limited supply, discounted 45% at intro. price of \$21/lb. 626/584-9632.

COMPUTER SYSTEM, P2 350, 256 MB RAM, IBM 8.4 GB HDD, 52X CD ROM, monitor, keyboard, mouse, \$400/obo. 626/379-4509.

DESK, antique mahogany, roll top desk and chair, \$1,500; TABLES, 2 custom rod iron indoor/outdoor, with heavy glass top \$2,500; COUCH, sectional, beige, almost new, \$250; COFFEE TABLE, \$75; TABLES, 4 stacked, \$200; BAR CART, \$150; TOYS, child's bike, etc, best offer. 248-8853.

DESK, golden oak, real wood, 60" x 32", two regular drawers plus one file drawer in each pedestal; FILE, 2-drawer lateral, golden oak, matches desk, \$150/set, will sell separately. 891-6836, Steve.

DESK & CHAIR, Steelcase, wood laminate top, side board for computer or typewriter, high back, black leather chair, \$300/all. 790-4028.

DISHWASHER, Sears Kenmore, old but works perfectly, pick up in Canyon Country, \$75. 653-2000, Stan.

DRUM SET, beginners, almost new, \$275/ obo. 790-3667.

FURNITURE: prices reduced, antique din. rm. set, qn.-sz. bedrm. set, modern liv. rm. set, antique Eastlake side chair, <http://home.earthlink.net/~elrey10> for pictures, info., prices. 909/482-4425.

GOLF BALLS, used, money goes to pet rescue organiz., \$.25/ball or donation. 626/792-8272.

GPS, Garman GPS III, moving map display, exc. cond., little use, \$200. 626/793-7879.

KITCHEN CABINET, with stainless steel sink, chrome faucet and spray, white Formica, with 3 doors and 1 drawer, 39" H x 52" W x 26" D, \$65. 626/798-0329.

LOVE SEAT, early Am. style, blue, \$50. 626/797-5387.

MASSAGE CHAIR, like new, Earthlite's "The Travelor," w/carrying case and video, normally sells for \$489, sell \$389. 893-3108, lv. msg.

OVEN, convection, GE Profile, under counter or in wall, 30" wide, 220V, exc. cond., pick up in Canyon Country, \$500. 653-2000, Stan.

REFRIGERATOR, GE Hotpoint, \$100, clean, works great, self defrost freezer. 626/446-7736 or 626/287-9433.

ROTISSERIE, elec., w/extras, cooks great healthy meals, cost \$300, sell \$100; PAINT SPRAYER, Campbell-Hausfeld, airless, w/ gun, recently refurb., nds. hose & tip, \$100;

TAPE BACKUP UNIT, lomega, 2 GB/tape w/5 new tapes, parallel port, \$70. 352-0075.

TABLE, dinette, square glass top 5' x 5' w/ metal feet & 4 matching chairs, \$800/obo; BAR STOOLS, 4 matching, metal frame, all in superb cond., \$400/obo. 626/398-3480.

TELESCOPE, 36" x 2.4", Polaris by Meade, non-tracking, like new, rarely used, many lenses, all in original box, \$100/obo. 661/251-7616, Ben.

TELEVISION, Mitsubishi big screen, 50", beautiful wood cabinet, projection type, stereo sound, \$850. 790-1893.

TENT, Sportsmen, heavy canvas, all-weather, 3-man umbrella type, \$200+ value, \$75;

RECORD PLAYER, 3-speed, works, \$10;

RADIO, am/fm, two external walnut cabinet speakers, \$15. 626/793-1895.

TEXTBOOKS, vintage, math, science, foreign language, 1920-50, \$5/ea. 952-7472.

TRAIN SET, wood, 27 pieces, older style, may be Brio, \$30. 626/303-1927.

VIDEO MIXING CONSOLE, Panasonic AV-12 for editing together two VHS/S-VHS or Hi-8 sources into a single professional tape, very nice, lots of features, \$2,500 new, sell \$250; VHS-VCR, Magnavox, portable, with docking station and older style video camera, camera works fine, VCR needs cleaning/ adjustment, \$25; SCANNER, sheet feed, gray scale parallel port, \$20. 352-0075.

WASHER, Whirlpool, compact automatic, moveable/portable installation, exc. cond., 18 months old, ideal for apartment/condo, cost \$500, sell for \$250/obo. 626/796-4218.

Vehicles/Accessories

CADILLAC Fleetwood, 55K orig. miles, looks and runs like new, \$4,000. 626/289-6802.

'93 CHEVROLET Astro Van XLT, teal green, Dutch doors, seats 8, AM/FM cassette, p/s, p/b, power seat on driver's side, 110K miles, \$3,500/obo. 562/923-5301.

'86 CHEVROLET S-10 Blazer, 4 X 4, 129,000 mi., 1 owner, a/c, pwr. windows/locks steering, trailer hook, roof rack, tilt steering, cruise cont., runs gd, everything working, gd tires, passed last emission test, \$2,900. 661/513-9079.

'99 DODGE Dakota sport truck, single cab, liner & cover, 20K mi., \$14,000/obo. 634-6510.

'94 FORD Explorer Sport, 5 spd., 4 wd, 96K mi., black, gray leather, all power, 10 disk CD, alarm, alloy wheels, 5 new tires, \$7,500/obo. 323/655-5864.

'92 FORD 250 XLT, with camper shell, only 29,600 miles, 4 spd. stick, trailer package, dual tanks, CB radio and more, exc. cond., \$12,500/obo. 626/398-0539, Tom.

'91 FORD T-Bird, auto V6, 120K miles, white w/red interior, gd. tires, fully equipped, auto seat belts, well maint., \$5,800. 241-1774.

'91 FORD T-Bird, V8, 34,600 mi., new front brakes, tires and battery, int. and ext. in vg cond., drive to appreciate performance, \$4,200. 951-3467.

'89 FORD Ranger XLT, King Cab, w/camper shell, carpeted adjustable insert, V6, 2.9L eng., a/c, pwr. steering/windows/doors, tow pkg., am/fm/cass., cruise control, tilt wheel, well maintained, exc. cond., 80K mi., \$4,500/obo. 626/791-7645.

'86 FORD F250, 1 owner, 107K mi., new tires, complete towing package, over/under, newer shell, air shocks, dual tanks, \$4,000. 310/374-2366, Dan or leeredondo@visto.com.

'90 HOLIDAY RAMBLER travel trailer, 33', all new tires, awnings, a/c, extra clean, \$6,000. 310/374-2366, Dan or leeredondo@visto.com.

'00 LINCOLN LS, black ext./gray int., 28K mi., V6, sport pkg., \$25,500. 363-2410.

'91 LINCOLN Mark VII, only 69K mi., exc. cond., beautiful, must see, \$5,000. 542-4152.

'87 NISSAN 300 ZX, 160,000 miles, black, a/c, automatic, sunroof, good cond., fun car, \$2,900/obo. 545-9435 or 521-3673, cell.

'95 SATURN SL Sedan, 5 spd., white exterior, gray interior, a/c, 74,000 miles, exc. running cond., good physical cond., mileage 27 city, 37 freeway, am/fm/tape, no accidents, \$3,900/obo. 957-5742.

'92 TOYOTA Camry SE, V6, 5 spd., 3.0 litre, 115K mi., one owner, fair cond., sunroof, power windows, locks, cruise control, alloys, \$4,500/obo. 626/794-8720, Andy.

'93 VOLVO 240 wagon, 81K miles, teal green metallic, automatic, a/c, am/fm/cassette, 3rd seat, roof rack, great family car, just had 80K service, new brakes, Blue Book is \$13,500; sell \$12,000. 626/791-4206.

'86 VW Golf, 5 spd., runs great, exc. gas mileage, 152K mi., \$1,100/obo. 626/683-7018.

'74 VW Thing, classic summer cruiser, 1776 engine, full roll-bar, \$3,250. 626/446-7736 or 626/287-9433.

'70 VW Bug, parts car, straight body, good glass, engine & transmission, \$300. 626/446-7736 or 626/287-9433

Wanted

DRAFTING TABLE, for young college student studying graphic arts, economical and compact preferable. 996-6518, Catherine.

MARS ROVERS, Mattel, for Board of Education Awards, need approx. 24 but will buy less. 248-1038, Gordon.

SPACE INFORMATION/memorabilia from U.S. & other countries, past & present. 790-8523, Marc Rayman.

VOLLEYBALL PLAYERS, coed, all levels of play, Tues. nts. 8-10 p.m. at Eagle Rock High School, \$3/night. 956-1744, Barbara.

For Rent

ARCADIA, furnished guest house, utilities included, laundry facilities, no pets, must be non-smokers, \$650, 626/441-0041, Kris.

EAGLE ROCK house, large 2 bd. + office, hill-top, garage, yd., view, wood floors, f/p, a/c, fridge, stove, microwave, laundry rm., totally remodeled, gated, 5849 Buena Vista Terrace, LA 90042, \$1,450 + sec., 1st & last. 790-1893.

LA CANADA/FLINTRIDGE, sep.sm. rm. w/ba., a/c, partially furn., gated, sep. entr., temp. OK, close to JPL, very priv., \$150/wkly. 790-1893.

PASADENA, lg. studio apt. w/sep. living area, sep. kitch. & ba., fully furn., close to Caltech & PCC, \$750 + utilities. 626/351-9641.

PASADENA, fully furn. room, sep. entrance, share kitchen and ba., close to Caltech and PCC, \$495, utilities included. 626/351-9641.

PASADENA, 1915 Craftsman bungalow, 2 bd., 2 ba., near Lake and Woodbury, large lr/dr, f/p, laundry, att. 1-car garage/shop, large private courtyard. 626/794-8726.

Real Estate

EAST PASADENA, exc. townhouse/condo, desirable loc.: 2 bd., 1 full, 2 x .75 ba., 2 f/p, lg. liv. rm., lg. dining/sitting area, sun-room: 2-car gar., end unit, priv. entry: park-like grounds, pool, sauna, Jacz.; all baths, kitch. newly remodeled: all new plumbing fixtures, tiles, granite in kitch., new carpets & wood floors throughout; must see, \$265,000. 626/798-2987.

MONTROSE, 5 min./JPL, 3-level townhouse, 8 yrs. old, 1,900 sq. ft., 3 + 2.5, incl. lg. master suite, Jacz. tub, very lg. gourm. kitch. w/granite counters + breakfast nook, 2 sky lites, alarm syst., lg. 2-car attached gar., exc. view + exc. neighborhood, new roof, \$319,000. 249-0453.

SANTA MONICA MOUNTAINS, 20 acres, Malibu address, valley view, ocean horizon, good well water, commercial elec., cross streets are Mullholland and Davis Rd., sell as 1 unit only, \$495,000. 626/797-1673.

TUJUNGA, move-in cond., 2 story, 3 bd., 2 full ba., large country kitchen, f/p, cent. air, built in '80, RV access, cute yard w/covered patio, 2-car attached garage, built-in speakers, \$228,888. 848-9977 ext. 323, agent.

Vacation Rentals

BIG BEAR cabin, quiet area, walk to village, two bedroom, sleeps 8, completely furnished, TV/VCR, f/p, \$75/night. 249-8515.

BIG BEAR LAKEFRONT lux. townhome, 2 decks, tennis pool/spa, nr. skiing, beaut. master bdrm. suite, sleeps 6. 949/786-6548.

CAMBRIA, ocean front house, sleeps up to 4, excellent view. 248-8853.

HAWAII, Kona, ocean front on Keauhou Bay, house & guest house comfortably slp. 6, 3 bd., 2 ba., rustic, relaxing, beautiful; swim-ming, snorkeling, fishing, spectac. vw: near restaur., golf, other attractions. 626/584-9632.

HAWAII, Maui condo, NW coast on beach w/ocean view, 25 ft. fr. surf, 1 bd. w/loft, compl. furn., phone, color TV, VCR, mcrow., d/w, pool, priv. lanai, slps. 4, 4/15-12/14 \$105/nt./2, 12/15-4/14 \$120/nt./2, \$10/nt. add'l person. 949/348-8047.

LAKE ARROWHEAD house, small 4 bd., 2 1/2 ba., sleeps 10, quiet, secluded, relaxing, woody area of Cedar Glen http://www.highcountryrents.com/cedar_run.html for pictures/rates, JPLers book directly with owner for 2 weekends get 1 + cleaning fees, \$370/weekend. 626/403-0446, owner.

MAMMOTH, Chamonix condo, 2 bd., 2 full ba., sleeps 6, fully eq'pd elec. kitch incl. micro-wave & extras, f/p & wood, color TV, VCR, cable, FM stereo, pool sun area, o/d Jacz., sauna, game, rec. & laundry rms, play & BBQ areas, conv. to lifts, hiking, shops, summer events, daily/ weekly rates, summer rates thru Oct. 249-8524.

MAMMOTH, Courchevel, fully equipped unit, 2 bd., 2 ba., sleeps 6, summer rates for summer activities, fishing, mountain biking, hiking. 661/255-7958.

MAMMOTH, Snowcreek, 2 bd., 2ba., + loft, sleeps 6-8, fully equipped kitchen incl. micro-wave, d/w, cable TV/VCR, phone, balcony w/view to mtns, Jacuzzi, sauna, streams, fishponds, close to Mammoth Creek, JPL discount. 626/798-9222 or 626/794-0455.

OCEANSIDE condo, beachside, fully furn. 2 bd., 2 ba., f/p, full kitch., quiet, relaxing, beautiful setting, BBQ, pool, spa, game rm., grt ocean vw., easy walk to pier and restaur., slps 6, 2-nt. min., avail. weekly or monthly. 909/981-7492, Jim or Darlene, dhaughe@yahoo.com.

OCEANSIDE, on the sand, charming 1 bd. condo, panoramic view, walk to pier or harbor, pool, spa, game rm., sleeps 4. 949/786-6548.

PACIFIC GROVE hse, 3 bd., 2 ba., f/p, cable TV/VCR, stereo/CD, well-eq'pd kit w/microw., beaut. furn. close to golf, beaches, 17 Mile Dr., Aquar., Cannery Row. JPL disnt. 626/441-3265.