DATES & DATA

December 22

Astronomy seminar: The JSC Astronomy Seminar Club will meet at noon Dec. 22, 29 and Jan. 5 and 12 in Bldg. 31, Rm. 248A. For more information, call Al Jackson at x35037.

Spaceland Toastmasters meet: The Spaceland Toastmasters will meet at 7 a.m. Dec. 22, 29 and Jan. 5 and 12 at the House of Prayer Lutheran Church. For more information, call George Salazar at x30162.

Spaceteam Toastmasters meet: The Spaceteam Toastmasters will meet at 11:30 a.m. Dec. 22, 29 and Jan. 5 and 12 at United Space Alliance, 600 Gemini. For more information, call Patricia Blackwell at (281) 280-6863.

December 23

Communicators meet: The Clear Lake Communicators, a Toastmasters club, will meet at 11:30 a.m. Dec. 23, 30 and Jan. 6 and 13 at Freeman Library, 16602 Diana Lane. For more information, call Allen Prescott at (281) 282-3281 or Mark Caronna at (281) 282-4306.

January 6

Warning System Test: The site-wide Employee Warning System will perform its monthly audio test at noon Jan. 6. For more information, call Bob Gaffney at x34249.

January 9

National Space Society meets: The "Westside" group of the Clear Lake area chapter of the National Space Society will meet at 2 p.m. Jan. 9 at Silicon Graphics, 11490 Westheimer, Suite 100. For details, call Murray Clark at (281) 367-2227.

January 11

Aero Club meets: The Bay Area Aero Club will meet at 7 p.m. Jan. 11 at the Houston Gulf Airport clubhouse at 2750 FM 1266 in League City. For more information call Larry Hendrickson at x32050.

National Space Society meets: The Clear Lake area chapter of the National Space Society will meet at 6:30 p.m. Jan. 11 at the Freeman Memorial Branch Library, 16602 Diana Lane. For more information call Murray Clark at (281) 367-2227.

NPMA meets: The National Property Management Association will meet at 5 p.m. Jan. 11 at Robinette and Doyle Caterers, 216 Kirby in Seabrook. Dinner costs $14. For more information call Sina Hawsey at x36582.

January 12

IAAP meets: The Clear Lake/NASA Chapter of the International Association of Administrative Professionals (formerly Professional Secretaries International) will meet at 5:30 p.m. Jan. 12 at Bay Oaks Country Club. Cost is $16. For details and reservations, call Tami Barbour at (281) 488-0055, x238.

January 13

Airplane club meets: The Radio Control Airplane Club will meet at 7 p.m. Jan. 13 at the Clear Lake Park building. For more information call Bill Langdoc at x35970.

MAES meets: The Society of Mexican-American Engineers and Scientists will meet at 11:30 a.m. Jan. 13 in Bldg. 16, Rm. 111. For more information, call George Salazar at x30162.

January 14

Astronomers meet: The JSC Astronomical Society will meet at 7:30 p.m. Jan. 14 at the Center for Advanced Space Studies, 3600 Bay Area Blvd. For details, call Chuck Shaw at x35416.

January 19

Scuba club meets: The Lunarfins will meet at 7:30 p.m. Jan. 19. For more information, call Mike Manering at x32618.

January 20

Directors meet: The Space Family Education board of directors will meet at 11:30 a.m. Jan. 20 in Bldg. 45, Rm. 712D. For details on this open meeting contact Lynn Buquo at x34716.

January 22

Volunteers sought: AIAA seeks volunteers to assist with "Physics is Fun" event January 22 from 9 a.m. to noon in Gilruth gym. Volunteers can bring their own demonstrations or use established demonstrations to share with the more than 100 anticipated middle school students. For more information contact Joy Conrad at jconrad@averstar.com.

January 24

Alzheimer's support group meets: The Clear Lake Alzheimer's Caregiver Support Group will meet at 7:30 p.m. to 9 p.m. January 24 in the first floor conference room, St. John Hospital West building, Nassau Bay. For details, contact Nancy Malley at (281) 480-8917 or John Gouveia (281) 280-8517.

January 27

Radio Club meets: The JSC Amateur Radio Club will meet at 6:30 p.m. January 27 at the Piccadilly, 2465 Bay Area Blvd. For more information, call Larry Dietrich at x39198.

February 21 - 25

Engineers Week: For volunteer opportunities see http://www4.jsc.nasa.gov/scripts/ eweek/

Payload Safety Conference

The Nassau Bay Hilton, Houston, Texas, will be the site of a Payload Safety Conference on February 23-25, 2000. The conference theme is "Mission Success Starts with Safety."

The objectives of the conference are to provide payload organizations with a common, accurate understanding of payload safety technical and process requirements, to foster synergy within the payload safety community, and to promote payload safety as the foundation for mission success. The conference is primarily intended for personnel responsible for the design and safety certification of International Space Station and shuttle payloads, including payload safety engineers, project managers, and technical support specialists.

General sessions will include presentations on payload safety challenges in the ISS era, the payload safety Data Management System, and process and technical requirements for both ground and space flight safety. More specialized sessions will be offered on technical topics, including pressure systems and pressure vessels, batteries, materials, structures, fracture control, fire detection and suppression, extravehicular activity, toxicology, electrical power distribution, and bonding and grounding.

Dr. Bonnie Dunbar will address attendees at the conference luncheon on February 24.

The conference Web site is located at www.rsis.com/nasa/conference/intro/

If you have any questions, contact Michael Ciancone at 281-483-8848 or e-mail at mciancon@ems.jsc.nasa.gov.

Roundup takes holiday break until January 14

This issue of *Space Center Roundup* will be the last of 1999. The next scheduled date of publication would have been December 31. The first Roundup of 2000 will be published on January 14. The *Roundup* editors wish everyone a safe and happy holiday season and a great 2000. ■

NASA BRIEFS

NEW TECHNOLOGY WILL INCREASE ON-TIME LANDINGS

Help may soon be on the way to air travelers frustrated with ever-increasing delays at the nation's airports.

NASA, Honeywell Technology Center and Honeywell Airport Systems have developed new technology that could solve a significant part of the problem. Called Airborne Information for Lateral Spacing (AILS) and Closely Spaced Parallel Approaches (CASPER), the systems expand on existing communication and navigation technology to allow planes to land safely in bad weather on parallel runways spaced as closely as 2,500 feet apart.

Currently, the minimum runway separation during low visibility is 4,300 feet, which means that some of the nation's busiest airports have to shut down one of their closely spaced runways when weather conditions deteriorate. Some of the airports where this new technology could improve on-time arrivals are Detroit, Seattle, Minneapolis and Memphis.

GAMMA-RAY BURSTS LIGHT WAY TO EARLY UNIVERSE

NASA astronomers say they have uncovered a specific property of gamma-ray bursts that will enable them to gauge the distances to thousands of these powerful explosions, many perhaps beyond the reach of all existing telescopes.

This finding, experts say, may allow scientists to determine the geometry of the universe throughout its various epochs, as well as when and where massive stars formed in the very early universe.

A team led by Dr. Jay Norris, an astrophysicist at NASA's Goddard Space Flight Center, performed the new analysis using data from NASA's Compton Gamma Ray Observatory and several optical telescopes.

"If our finding holds up, this could be a new window on the distant universe," said Norris.

Gamma-ray bursts occur randomly several times a day without warning, typically last only a few seconds to a minute, and apparently release more energy than any explosions in the universe other than the Big Bang itself.

ASTRONOMERS DISCOVER NEW PLANETS

A team of astronomers searching the galaxy with powerful telescopic instruments has found six new planets orbiting nearby stars, increasing the number of planets astronomers have discovered outside our solar system by more than 25 percent. This brings the total number of known planets outside the solar system to 28, all of which have been found within the last five years.

The astronomers made the discoveries as part of a long-term project supported by the National Science Foundation and NASA to survey 500 nearby stars for orbiting planets. Steven Vogt, University of California, Santa Cruz; Geoffrey Marcy, University of California, Berkeley; and Paul Butler, Carnegie Institution, along with Kevin Apps, a student at the University of Sussex, England, used the Keck I telescope in Hawaii, outfitted with the "HIRES" spectrometer. They will report their findings in the *Astrophysical Journal.*

SPACE CENTER Roundup

The Roundup is an official publication of the National Aeronautics and Space Administration, Johnson Space Center, Houston, Texas, and is published by the Public Affairs Office for all space center employees. The Roundup office is in Bldg. 2, Rm. 181. The mail code is AP3. The main telephone number is x38648, and the fax is x32000. Electronic mail messages may be directed to:

Editor . . . . . .William Jeffs . . . . . .william.p.jeffs@jsc.nasa.gov

Assistant Editor . . . . . .Nicole Cloutier . . . . . .ncloutie@ems.jsc.nasa.gov

PRSRT STD
U.S. POSTAGE
PAID
WEBSTER, TX
Permit No. G27