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NASA Develops Child Car-Seat Safety Device

Every year infants and small children die needlessly because they have been left in vehicles, according to KIDS 'N CARS, a national nonprofit safety organization. As a result, NASA has developed a safety device that would alert parents who inadvertently leave their children strapped in car seats.

The NASA device, inspired by aircraft flight-test technology, uses precision materials and electronics to sense when a child is seated in a car infant or booster seat after the driver has left the vehicle.

Called a Child Presence Sensor, the device was developed at NASA's Langley Research Center. The research center is looking for a commercial partner to further develop and market a product based on the technology.



"I wanted something that would serve as a second set of eyes and ears, something that could easily and inexpensively be retrofitted to existing child car seats," said principal inventor William "Chris" Edwards of Langley's Laser Systems Branch. Edwards has small children of his own and had read about cases around the country where well-meaning parents had inadvertently left a small child in a vehicle with disastrous results.

Overloaded, exhausted, distracted or confused by a change in routine, working parents can completely forget that they've left their children unattended. Others may leave sleeping children in car seats while the parents exit their vehicles for what they believe will be a quick errand.

Yet, left alone for only a few minutes, a small child can be abducted, set the vehicle in motion, or — even on a seemingly mild day — suffer a deadly heatstroke.

"These tragic deaths are entirely preventable," said Janette E. Fennell, co-founder and executive director of KIDS 'N CARS. "Parents should never, never leave children alone in a parked vehicle."

Cars are inappropriate places for children to be left without adult supervision. There are systems already installed in our vehicles to warn us that we have left our headlights on or our

keys in the ignition. Our precious children deserve at least that same protection."

The Child Presence Sensor driver alarm, designed to hang on the driver's key ring, sounds ten warning beeps if the driver moves too far away from the vehicle.

If the driver doesn't return within one minute, the alarm will beep continuously and cannot be turned off until it is reset by returning to the child safety seat.

The sensor switch triggers immediately when a child is placed in the seat and deactivates when the child is removed.

The switch has a large activation area with a sensitivity of about eight ounces. The sensor detects weight once the child is placed in the seat, transmitting a unique code to the driver-alarm module via a radio-frequency link. The system incorporates a long-life battery for reliability. If the battery is low, the system alerts the driver with an audible alarm.

Edwards was aware of a simple, yet precise, sensor technology developed for the NASA Langley 757 research aircraft.

The aircraft sensor is mounted in the main landing-gear area to sense environmental effects acting on the aircraft. That data is then beamed to the cockpit by way of a radio-frequency transmitter and receiver system.

Co-inventors Terry Mack and Edward Modlin adapted the self-contained radio-frequency technology from the 757 aircraft project and combined it with Modlin's highly sensitive switch technology to create an inexpensive prototype device.

Model Rocket



PAO Digital Photo

Phil Eberspaker, Policy and Business Relations Office, constructed a one-quarter scale model of a Black Brant IX sounding rocket that has been hung in the Wallops Cafeteria.

Wallops Shorts.....

Range Safety Officer

Dr. John Campbell, Suborbital and Special Orbital Projects, has announced that Mike Patterson of the Safety Office, (Code 803), has been selected Range Safety Officer for the Directorate.

Sounding Rocket Launches

A NASA Black Brant XII sounding rocket was successfully launched from Poker Flat Research Range, Alaska, on February 6. The payload for this mission, Rocket Auroral Correlator Experiment, (RACE), is a comprehensive investigation of the physics of high frequency waves in the auroral ionosphere. Dr. Craig Kletzing, University of Iowa, was the principal investigator. The payload was not going to be recovered.

A NASA Terrier-Black Brant sounding rocket was successfully launched from White Sands Missile Range, N.M., on February 8. The primary objective of the mission was to provide an underflight calibration for the Solar EUV Experiment(SEE) on board the NASA Thermosphere Ionosphere Mesosphere Energetics Dynamics (TIMED) satellite. Dr. Thomas Woods, University of Colorado, was the principal investigator. The payload was recovered.

HESSI Spacecraft Safely Reaches Orbit

NASA's High Energy Solar Spectroscopic Imager, (HESSI) lifted off February 5 from Cape Canaveral Air Force Station, Fla. During its planned two-year mission HESSI will study the secrets of how solar flares are produced in the Sun's atmosphere.

Tucked inside a Pegasus XL rocket, attached to the under belly of the Orbital Stargazer L-1011 aircraft, the spacecraft was carried approximately 113 nautical miles east-southeast of the Cape to an altitude of about 39,000 feet. The Pegasus drop occurred at 3:58 p.m. EST, and after a short powered sequence, delivered the 645-pound HESSI spacecraft into a circular orbit 373 miles above the Earth, inclined at 38 degrees to the equator.

Controllers at the University of California, Berkeley, made initial contact with the spacecraft at 5:33 p.m. EST. NASA Wallops Flight Facility provided radar, telemetry and communication support for the mission.

NASA College Scholarship Fund, Inc.

The NASA College Scholarship Fund, Inc., a Texas nonprofit corporation, was established to award scholarships to qualified dependents of NASA and former NASA employees, Agencywide.

The scholarship fund was established as the direct result of a substantial unsolicited gift offer by the noted Pulitzer Prize winning author, James A. Michener, who gave as his reasons for the gift that he held the people of NASA in such high esteem for their good work through the years and that he thought it important for education to go forward in this country. Many NASA employees have contributed to the fund directly or through the Combined Federal Campaign.

The NASA College Scholarship Fund, Inc., was incorporated under the laws of the State of Texas on Oct. 20, 1982, to receive contributions and to use those contributions and/or income for charitable, educational, and scientific purposes; namely, the awarding of college scholarships to full-time students who are dependents of current or retired employees of NASA and dependents of current reimbursable detailees to NASA.

In addition, college scholarships may be awarded to full-time students who are dependents of former NASA employees or reimbursable detailees to NASA who died while employed by NASA.

Since 1982, 97 scholarships have been awarded to dependents of NASA employees from across the Agency. There are presently 27 dependents who are receiving the scholarship grant.

Six scholarships will be awarded in the amount of \$2,000 each in this 20th year of the program (2002-2003 school year). The renewable scholarship is for a maximum of \$8,000 over 6 calendar years. Applicants must be pursuing a course of study in the science or engineering field that will lead to a recognized undergraduate degree at an accredited college or university in the United States.

Information and an application form are available at the following web site: <http://jscpeople.jsc.nasa.gov/jsc-hro-2/specialprogs/scholarship.htm>

Happy Valentine's Day



SEM Deintegration



PAO Digital Photo

Charlie Lipsett, Shuttle Small Payloads Projects Office, (left) prepares to open the Science Experiment Module (SEM) for students from NORSTAR, Norfolk, Va. The students were at Wallops on February 6 to deintegrate their experiment that flew on STS-108 in December 2001.

Today New York Students... Tomorrow Future Scientists

Students from five New York City schools (St. David's School, The Horrace Mann School, The Museum School, M.S. 44, and the American Museum of Natural History Museum Investigation class) gathered January 29 at the Museum of Natural History to participate in the integration of a Space Experiment Module (SEM-14).

The 200 elementary and junior high school students delivered brief presentations that explained each school's experiment.

Afterwards, students worked diligently putting the finishing touches on their experiments.

Students from the Mott Hall School IS 223 participated in their own SEM integration experience. These future scientists have developed an experiment that examines how radiation affects various fabric samples.

Frank D. Whalen Middle School and Peter Tetard Middle School schools gathered in their classrooms on January 30 to integrate their semester long science experiments that also are a part of SEM-14. While actively filling and sealing vials, students watched as their experiments underwent a series of tests.

Once they received the 'thumbs up' signal indicating that the experiments had passed, the vials were placed in containers and stored for transport to the SEM Lab at NASA Wallops Flight Facility.

From Wallops they will be delivered to the Kennedy Space Center for flight on Space Shuttle Columbia (STS-107), currently scheduled for no earlier than July 11, 2002.

For additional information on SEM-14 go to <http://www.wff.nasa.gov/~sspp/sem/new/sem14.html>

Black History Month

by Lisa Johnson, Wallops EPOO

As our nation celebrates Black History Month, consider borrowing one or more of the following videos to watch with your family. The Equal Opportunity Programs Office (EPOO) at Greenbelt is sponsoring many activities during the month and videotapes may be available at a later date. The Wallops EPOO would like to invite employees to hear Hermetta Hudson, Worcester County NAACP President on February 28 from noon to 12:30 p.m. in the Wallops Gym, Building D-10.

Videos available include:

“The Josephine Baker Story”

“Lady Sings the Blues”

“Malcolm X”

“Mandela and DeKlerk”

“When We Were Kings”

The Wallops Black History Club annual “Dinner with Entertainment” is scheduled for March 16, at the Elks Lodge in Accomac, VA. Tickets are \$20. Flyers will be distributed with further details.

For further information, call Lisa Johnson on x1412.



President's Day February 18



Travel News

10:30 a.m.

February 12

Building E-2, Conference Room

Get the latest on flyer miles, airport security, refunds, electronic ticketing, etc. Get the answers to questions or concerns about our agency-wide travel contractor, CI Travel Agency. For additional information, contact Tim Abbott on x1647.

Lunch N Learn

February 20

11:30 a.m. to 12:30 p.m.

Williamsburg Room, Building E-2

“A Friend in Need” is the topic of the Employee Assistance Program's February Lunch and Learn. Bring your lunch and join Linda Zeman for some simple, but effective, short-term counseling techniques to help yourself and others in everyday situations.

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