

# Inside Wallops



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Goddard Space Flight Center  
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## Genesis Scientists Bouncing Back from Hard Landing

### Wallops Supports Mid-Air Recovery Effort

Scientists who conducted the preliminary assessment of the Genesis canister following its landing are encouraged by what they see. They believe it may be possible to achieve the most important portions of their science objectives.

“We are bouncing back from a hard landing, and spirits are picking up,” said Orlando Figueroa, Deputy associate Administrator for Programs for the Science Mission Directorate at NASA Headquarters.

The Genesis sample return canister entered Earth’s atmosphere at 9:52:47 a.m. MDT on September 8 and entered the preplanned entry ellipse in the U.S. Air Force Test and Training Range, Dugway Proving Ground, southwest of Salt Lake City, Utah, as predicted. As a result of its parachute not deploying, the canister impacted the ground at a speed of 311 kilometers per hour (193 mph). The impact occurred near Granite Peak on a remote portion of the range. No people or structures were anywhere near the area.

“For the velocity of the impact, I thought there was surprisingly little damage,” said Roy Haggard of Vertigo

Inc., Lake Elsinore, Calif., who took part in the initial reconnaissance of the canister.

Chris Shreves, NASA Mechanical Systems Branch, attended the Genesis Sample Return Mission and was present for the landing. There was no attempt to perform a planned mid-air recovery of the re-entering canister due to what is believed to be parachute failure on the canister. Key parts of the mid-air recovery hardware ‘catch gear’ — the poles, hooks, retraction winches — were provided by Wallops to NASA’s Jet Propulsion Laboratory, Pasadena, Calif. Using two specially equipped helicopters, numerous practice attempts for a mid-air recovery using this equipment were successful and televised world wide.

The Genesis mission was launched in August 2001 on a journey to capture samples from the storehouse of 99 percent of all the material in our solar system — the sun.

The samples of solar wind particles, collected on ultra-pure wafers of gold, sapphire, silicon and diamond were designed to be returned for analysis by Earth-bound scientists.

## Wallops Shorts.....

### Launch News

Two NASA sounding rockets in the EQUIS II campaign were successfully launched on September 7 at 23:45 and 23:56 Z, from Roi Namur, Kwajalein Atoll. A Black Brant VB carried instrumentation to understand the complex electro-dynamics and neutral-plasma coupling inherent to the equatorial lower ionosphere during nighttime conditions. Good science data was obtained.

The Terrier-Orion carried experiments containing Trimethyl Aluminum (TMA), a tracer of atmospheric motions, that when released formed milky, white clouds in the nighttime sky. The trails revealed the neutral wind profiles on both the upleg and downleg segment of the flight. The TMA releases appeared nominal and were observed by three remote camera sites.

Dr. Robert Pfaff, NASA Goddard Space Flight Center is the principal investigator. John Hickman, NASA Sounding Rocket Program Office, is the campaign manager, and Tracy Gibb, NASA Sounding Rocket Operations Contract (Northrup-Grumman) is the mission manager.

An 11.82 million cubic foot NASA scientific balloon was successfully launched from Ft. Sumner, N.M., on September 11. The flight was to test the Mars science lander drogue parachute extraction system and determine drag and performance characteristics of the new parachute design. This was the second flight in a series of three. The main parachute experienced deployment problems resulting in a degraded descent profile. The payload was recovered in excellent condition. Dr. Robert Mitcheltree, Jet Propulsion Laboratory was the principal investigator. Total flight time was 2 hours 17 minutes.

### In the News

The Tiger – Clemson University  
“Rockets Aid Weather Research”

The Kwajalein Hourglass  
“Night Riders in the Sky”

The Daily Times  
“Youngsters Fly High at Virginia Space Camp”

Space.Com  
“Mystery Cloud’ Appears Over Eastern US and Canada”

The Dallas Morning News  
“An Air of Scientific Research”



Photo by Betty Flowers

Launch preparations continue in the EQUIS II mission from Roi Namur in the Kawjalein Atoll. (Pictured bottom) Don Langley, NASA Electrical Engineering Branch; (upper left) Mark McGuire, NASA Sounding Rocket Operations Contract, Northrup-Grumman (NSROC) and (upper right) Scott Hudson, NSROC.

## Water Bottle Rocket Challenge

October 6, 2004  
12:30 p.m.  
Softball field near pavilion

Each entry should adhere to the rules listed below:

\*You must use a regular sized two-liter bottle without a large lip beneath the cap/top for your first/primary stage. No oversized bottles. They will not fit the launcher.

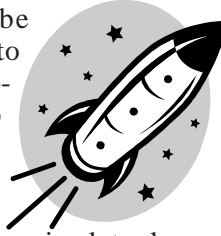
\*Rocket fins may not extend more than two inches past the lip of the bottle nozzle, when inverted. This is due to launcher restrictions.

\*All rockets must be made from scratch by the entrant. No store-bought rockets/rocket parts.

\*All rockets will be inspected for defects in the pressurized regions and can be rejected by the launch team.

\*All rockets should be made out of paper, cardboard and/or plastic. No rockets containing metal or other materials will be allowed, excluding 2<sup>nd</sup> stage and recovery initiators.

\*Rockets will be pressurized up to 65 psi using a two-liter bottle and up to 35 psi using a one-liter bottle.



No rocket is required to have a recovery system and second stages are allowed. Each participating rocket must be at the Pavilion by 11 a.m. for display.

The following awards will be given for the competition:

\***Apollo**- highest flight (TBD by the Tracking Team)

\***Gemini**- best flight (overall performance - TBD by elevation, trajectory, 2<sup>nd</sup> stage, and deployment of recovery system by the Flight Team Panel.)

\***Mercury**- Honorable Mention (Determined by the FlightTeam Panel)

Contact Ed Parrott eparrott@pop100.gsfc.nasa.gov or at x1681 for further information or to register.

## Wet Summer Continues Through August

By Bob Steiner, Meteorologist

Rain, Rain, go away! August 2004 was the second wettest August on record with 11.19 inches recorded. This is 7.48 inches above the normal of 3.71 inches, making August "04" the third wettest month in the history of recorded weather data at Wallops. Measurable rain was recorded on 14 days, the normal is 9 days.



hours on the 8<sup>th</sup> did, in fact, set a new daily record low for the date.

Wind was of little concern during August with only two days recording winds of 30 mph or greater. The strongest gust was 37 mph on the August 30.

October will be here soon bringing a hint of fall with cooler temperatures. The average high on October 1 is 73 degrees with temperatures decreasing to 63 degrees by the end of the month. Average lows begin the month at 55 degrees ending with a norm of 45 degrees for the end of the month.

October is a relatively dry month averaging only 2.88 inches of measurable precipitation falling normally on 8 days. Hurricane season will still have two months left, October and November. With several active hurricanes in August and the first of September, and September normally being the most active month of the tropical storm season we can only keep a sharp vigil during October.

Be watchful for children now that school has resumed. Get out and enjoy the delightful weather we are currently experiencing.

## Fixed Income Products....

### How Bonds Play a Role in Your Portfolio

WHO: Gail Ludwig, Financial Advisor  
The Medallion Group, Salisbury, MD

WHAT: Brown Bag Seminar  
Bring your own lunch!

WHEN: Tuesday, September 21,  
11:30 a.m.-12:30 p.m.

WHERE: Williamsburg Room  
E-2 Cafeteria Building

### De La Hoya vs. Hopkins Middleweight Championship Title Boxing

September 18  
9 p.m. on the Big Screen  
Doors open at 8 p.m.  
Building F-3, Rocket Club  
For further information contact Robert Tittle, x1244

### Dart League Kick-off Meeting

September 14

5:30 p.m. in  
Building F-3,  
Rocket Club



Luck of the draw to follow.

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The Dart League is a WEMA/MAC activity.

### Wallops Beach Clean-up Saturday, September 18 9 a.m. at the Island gate

Call Marianne Simko, x2127 to sign up for the 2004 Wallops Beach Cleanup

### Eastern Shore Community College Workforce Training and Continuing Education

Classes include: Basic Masonry/Cement, Building Code Review Seminar, Building Contractor Licensing Prep, Intermediate to MS Excel, Introduction to CADD, Introduction to MS Word, Introduction to Photo Shop

For more information or to register call, Mary Walker, at (757) 789-1751 or (757) 789-1752.

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www.wff.nasa.gov  
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