Balloons provide a unique aerial platform for scientific observation. Balloons can fly one hundred times closer to the surface of Mars than orbiters and can travel a thousand times further than rovers in a comparable period, providing views of much broader areas of the Martian surface. Balloons have been flying for decades in Earth’s stratosphere, which has an atmosphere as thin as that on the surface of Mars.

NASA Headquarters has selected two proposals, of which the Wallops Flight Facility’s Balloon Program Office is a partner, that will allow balloon technology to be applied to exploration of Mars. The Mars balloon would deploy soon after a spacecraft enters the Mars atmosphere and would be rapidly inflated from a helium tank as the payload descends beneath a parachute. After inflation is complete, the parachute and tanks would detach and the balloon would fly at a nearly constant altitude both day and night.

Strong, lightweight, leak-proof materials are under development to permit large payloads to be flown on such a balloon.

Tests of balloon deployment in the Earth’s atmosphere are currently underway as well.

Another kind of lightweight balloon that may be useful on Mars is called a Solar Montgolfiere, named after the French brothers who flew the first hot air balloon. It does not have to be inflated with a light gas such as helium.

An opening at the bottom of the balloon would fill up with Martian “air” while falling to the surface. The Montgolfiere balloon can play two important roles in exploration:

- The balloon would provide a soft, slow landing for small payloads on potentially hazardous terrain, with greater control than a parachute-assisted or rocket landing system.
- Once the Montgolfiere drops its payload, the balloon could go back up into the atmosphere with a small gondola that would perform imaging and gather other science for the rest of the day. These images would show greater detail than orbiters far above the surface.

The Mars Helium Superpressure Balloon and Mars Montgolfiere Balloon effort will include materials testing as well as balloon fabrication and stratospheric flight testing.

The joint effort between NASA Wallops Flight Facility; the Jet Propulsion Laboratory, Pasadena, Calif.; and Global Solutions for Science and Learning, Inc., (GSSL), Tillamook, Ore., has been funded for a period of three years.
**Building F-6.**

**Building E-2** or from Lucille Fox in

Tickets for the luncheon are available

 sessions.

required for the morning and afternoon

Energy and Health

11:30 a.m. to 12:45 p.m. - Alternative, chakra balancing through creative visuals, tappery, and elimination of negative beliefs, heart-centered approach for stress relief.

9 to 11 a.m. - Energy Psychology: A

Luncheon (11:30 a.m. - 12:30 p.m.)

Morning session (9 - 11 a.m.)

Enjoy one, two, or three sessions!

Morning session (9 - 11 a.m.)

Lunchen (11:30 a.m. - 12:30 p.m.)

Afternoon session (1:30 - 3:30 p.m.)

9 to 11 a.m. - Energy Psychology: A heart-centered approach for stress relief and elimination of negative beliefs through creative visuals, tappery, and chakra balancing.

11:30 a.m. to 12:45 p.m. - Alternative, Holistic Therapies to Improve Your Energy and Health

1:30 to 3:30 p.m. - Is Your Glass Half Empty or Half Full? How your beliefs create your reality and the life you really want.

Training requests may be required for the morning and afternoon sessions.

Tickets for the luncheon are available from the Wallops Exchange Store in Building E-2 or from Lucille Fox in Building F-6.

**Please Obey Speed Limits**

**SPEED LIMIT 15**

**SPEED LIMIT 35**

**Main Base**

**Retirement Planning Workshop - CSRS/FEERS**

9 a.m. – 4 p.m. June 16-18, 2004 E-2 Training Room

Description:

This workshop addresses, in depth, considerations necessary for planning a smooth transition into retirement. Topics covered include CSRS/FEERS, FGLI, FEHBP, Disability, Deposit/Redeposit; TSP, Annual/Sick Leave, Annuity Calculation, Best Date to Retire, COLA's, Survivor Benefits, etc.

You will learn:

· Retirement system benefits

· Life and health insurance, Social Security and Medicare, financial planning

· Legal and estate planning and financial planning for your future

Who Should Attend: CSRS/FEERS (government) employees who are 3 - 5 years from retirement or retirement eligible and their spouse.

For more information on this workshop, visit: http://ohrcoursecatalog.gsfc.nasa.gov/search/description.cfm?course=981

**Property Awareness**

We need you (all users of government equipment) to help stop the loss, theft and abuse of government property.

Please make sure all documents are prepared and approved before you loan, excess, send out for repair, or cannibalize any equipment. For further information or assistance, call Regina Waters at extension 1337.

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**Editor:** Betty Flowers