NASA scientific balloons to return to flight

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(PhysOrg.com) -- NASA's scientific balloon program is resuming flights this month after an extensive evaluation of its safety processes following a mishap during an April launch attempt from Australia. NASA's high-altitude balloons fly instruments for scientific and technological investigations that contribute to our understanding of Earth, the solar system, and the universe.

In October, a NASA mishap review board listed 25 causes that contributed to the accident, including insufficient risk analysis, contingency planning, personnel training, government oversight and public safety accommodations. More information on the investigation is available at: www.nasa.gov/centers/goddard/b … 0965a7fa_mishap.html

"NASA's Goddard Space Flight Center, Wallops Flight Facility, and contractor balloon team have done an outstanding job over the past eight months to develop and implement plans to return the balloons to flight," said Jon Morse, director of the Astrophysics Division in the Science Mission Directorate at NASA Headquarters in Washington. "We look forward to once again conducting groundbreaking science with these balloon systems."

To prepare for the resumption of flights, NASA developed a corrective action plan to address the recommendations from the mishap review. To return to flight, NASA has:

- Developed a more stringent launch safety area in which the balloon launch vehicle can maneuver in order to protect the safety of the public;
- Revised the safety procedures used to conduct balloon launches;
- Instituted NASA independent ground and flight safety roles to ensure that balloon launches are conducted safely;
- Redesigned the launch head mechanism that failed to work properly during the Australia aborted launch;
- Developed plans to better respond to mishaps and close calls with respect to balloon launch operations.

NASA has approved flights that are scheduled throughout this month over Antarctica. During the Antarctica flights, NASA will use a vehicle that was specifically designed to launch the balloons instead of a commercially obtained mobile crane, which was used during the mishap in Australia. The launch vehicle is built to handle the large, long-duration balloon (LDB) payloads on the compacted snow launch surface. The LDB program in Antarctica is a partnership between NASA and the National Science Foundation, and is carried out through the U.S. Antarctic Program -- a continuous national research presence on the continent since 1956 that is managed by NSF.

NASA's scientific balloons are composed of a lightweight polyethylene film, similar to sandwich wrap. Flying to altitudes of nearly 25 miles, many of the balloons inflate to almost the size of a football stadium and carry payloads weighing up to 6,000 pounds.

NASA's Wallops Flight Facility in Virginia manages NASA's scientific balloon program for the Science Mission Directorate. Under NASA safety supervision, launch operations are conducted by the Columbia Scientific Balloon Facility in Palestine, Texas, which is managed by the Physical Science Laboratory of New Mexico State University in Las Cruces.

More information: sites.wff.nasa.gov/code820/

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