

## **ICESat Launches From Vandenberg Air Force Base**

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The Ice, Cloud, and Land Elevation Satellite (ICESat) was launched from Vandenberg Air Force Base, Calif., on Sunday, Jan. 12, 2003. The ICESat mission will help scientists understand global warming by measuring the height of the Earth's polar ice masses.

Ball Aerospace built the ICESat spacecraft bus for the NASA altimetry mission based on its highly accurate Ball Commercial Platform 2000 (BCP 2000), the spacecraft bus also used for the QuikSCAT and QuickBird missions.

ICESat will employ the Geoscience Laser Altimeter System (GLAS) to measure changes in the Antarctic and Greenland ice sheets, where nearly 77 percent of the planet's fresh water is frozen. ICESat will measure the elevations of clouds and land while traveling 17,000 mph from pole to pole and circling the Earth once every 100 minutes. NASA's Goddard Space Flight Center designed and built GLAS, a next-generation space-lidar -- a pulsed laser technology for mapping the Earth's surface.

"To understand and predict future changes in the Earth's climate it's critical to measure ice thickness at the poles," said Zubin Emsley, ICESat program manager for Ball Aerospace. "The Greenland and Antarctic ice sheets cover 10 percent of the Earth's land area, and contain 77 percent of the Earth's fresh water and 99 percent of its glacier ice. The baseline measurements provided by ICESat are key to understanding future weather patterns."

As part of NASA's Earth Observing System, the five-year ICESat mission will also gauge the vertical structure of clouds and aerosols in the atmosphere; map the topography of land surfaces; and measure the roughness, reflectivity, vegetation heights, snow cover, and sea-ice surface characteristics.

The Ball Aerospace BCP 2000 bus, procured by NASA for the ICESat mission, is specifically designed for remote sensing missions.

ICESat will be controlled on-orbit by the University of Colorado's Laboratory for Atmospheric and Space Physics.

Image available at: <http://www.ball.com/aerospace/media/images/icesat.html>

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### Forward-Looking Statements:

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SOURCE: Ball Aerospace & Technologies Corp.

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