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# BLAST

## **A space observatory in the upper atmosphere**

Even if it is high on a mountaintop in Chile or Hawaii, a ground-based observatory is subject to atmospheric distortion that obscures certain space features. Space telescopes make up for the shortcomings of terrestrial ones, but they are very expensive.

A creative team of researchers from Canada, the U.S., the U.K., and Mexico devised an economical mission called BLAST, for "balloon-borne large aperture sub-millimetre telescope." Carried 35 km above Earth by a huge balloon to a point between the uppermost reach of the atmosphere and space, the telescope has a clearer view than any ground-based sub-millimetre telescope.

Surveys of the Milky Way and beyond will help us better understand the formation and evolution of galaxies, the birth of stars, and the distribution of dust in nearby galaxies. BLAST scientists will study radiation emitted by interstellar dust that obscures visible and ultraviolet light.

The Canadian Space Agency, the Natural Sciences and Engineering Research Council, AMEC Dynamic Structures and NASA have all contributed to BLAST. Canada designed and built the gondola, the pointing control system, and most of the electronic equipment.

The Canadian science team is led by Dr. Barth Netterfield of the University of Toronto and Dr. Mark Halpern of the University of British Columbia. BLAST flew in June 2005 in the Arctic; a second flight is planned for 2007 in Antarctica.



Take part in the adventure at  
[www.space.gc.ca](http://www.space.gc.ca)

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