



Operation

IceBridge

Land Ice

***Flying Glaciers***

*NASA's DC-8, an airborne laboratory, flies over an unnamed glacier while surveying the Antarctic Peninsula during Operation IceBridge's 2009 field season.*

*Credit: NASA/Michael Studinger*

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## Operation IceBridge

*An airborne mission monitoring Earth's ice sheets, glaciers, and sea ice*

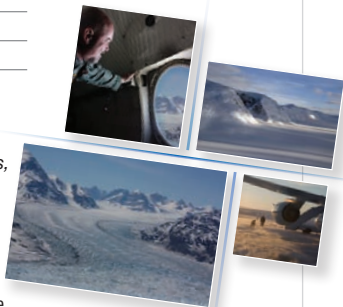
## Land Ice

- Ice sheets and glaciers cover about 5.8 million square miles of Earth's surface, or about 10 percent of the land area.
- Many of the impacts of climate change are being felt first in the Arctic, evidenced by the rapid retreat of major glaciers such as Greenland's Jakobshavn Glacier and by the crumbling of some structures due to permafrost decay.
- Pine Island Glacier drains more than 19 cubic miles of ice per year from the West Antarctic Ice Sheet, and is showing rapid deterioration.
- Instruments on satellites and aircraft use laser or radar instruments to measure elevation of the ice sheets and thickness of the sea ice.

National Aeronautics and Space Administration

**NASA's Cryospheric Science Program**

[www.nasa.gov/icebridge](http://www.nasa.gov/icebridge)



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