Image: Glaciers and mountains in West Antarctica

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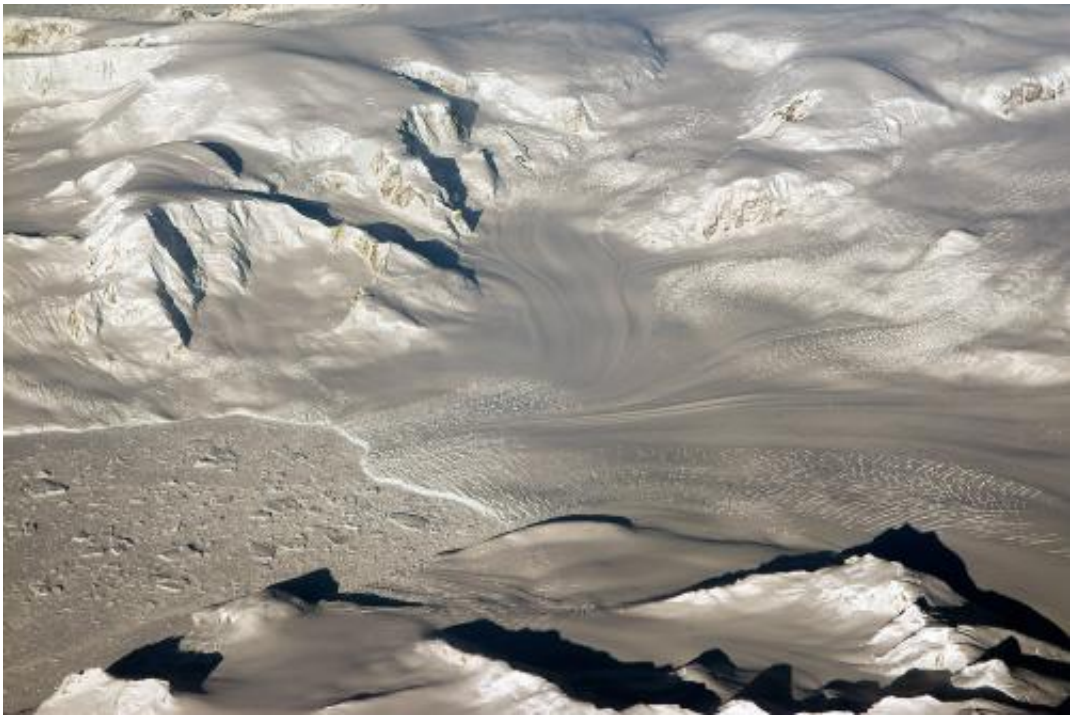

Credit: NASA/Michael Studinger

Glaciers and mountains in the evening sun are seen on an Operation IceBridge research flight, returning from West Antarctica on Oct. 29, 2014.

NASA is carrying out its sixth consecutive year of Operation IceBridge research flights over Antarctica to study changes in the continent's ice

sheet, glaciers and sea ice. This year's airborne campaign revisits a section of the Antarctic ice sheet that recently was found to be in irreversible decline.

IceBridge uses a suite of instruments that includes a laser altimeter, radar instruments, cameras, and a gravimeter, which is an instrument that detects small changes in gravity. These small changes reveal how much mass these glaciers have lost. Researchers plan to measure previously unsurveyed regions of Antarctica, such as the upper portions of Smith Glacier in West Antarctica, which is thinning faster than any other glaciers in the region. The mission also plans to collect data in portions of the Antarctic Peninsula, such as the Larsen C, George VI and Wilkins ice shelves and the glaciers that drain into them. The Antarctic Peninsula has been warming faster than the rest of the continent.

In addition to extending the data record of NASA's Ice, Cloud and Land Elevation Satellite (ICESat), which stopped collecting data in 2009, IceBridge will also help set the stage for ICESat-2 by measuring ice the satellite will fly over.

Provided by NASA