

## NASA begins sixth year of flights studying polar ice changes

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On October 16, NASA's Operation IceBridge mission began its sixth season of airborne studies in Antarctica. The research flights monitor ice sheets, glaciers, and sea ice conditions to provide baseline measurements before the ICE-Sat2 satellite launches in 2017.

The flights will investigate unsurveyed areas of the Antarctic, as well as rapidly changing glaciers and ice shelves. Trends in ice thickness and mass vary widely across the continent, and scientists hope that new data will help them better understand the processes controlling land and sea ice.

Ice sheets and glaciers are of particular interest because they contribute directly to rising sea levels as they melt. For example, the unstable West Antarctic ice sheet contains enough water to raise sea level by 10-15 feet over the next several centuries. Sea ice does not contribute to sea level rise because it already floats on the ocean, but it does provide an important buffer that protects continental ice shelves from waves and warming water temperatures. Scientists hypothesize that decreasing sea ice in the Arctic and Antarctic may have played a role in recent ice shelf collapses.

Sources: National Aeronautics and Space Administration, National Snow and Ice Data Center, Science, SpaceDaily

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