

Abstract Submitted
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Using Satellite Data to Monitor Global Climate Change ELIZABETH CARLISLE, Abilene Christian University — Accurate measurement of the ice melt in Greenland is very important in monitoring global climate change. Observations indicate that average global temperature has been increasing for the past 30 years, which should cause significant melting from the ice sheets of Greenland and Antarctica. There has been some controversy over whether the ice mass is increasing or decreasing. In an effort to determine a solution to this controversy, the twin satellites of the Gravity Recovery and Climate Experiment (GRACE) have made detailed measurements of the earth's gravitational field. They have confirmed that while the thickness of the ice in the center of Greenland remains approximately constant, the edges of the ice sheets are melting rapidly. Not only are the ice sheets shrinking, but the rate at which they are shrinking is accelerating. These measurements are in agreement with global climate models. This presentation will focus on the operation of the GRACE system, the effects of the shrinking ice sheets, and the relevance of the experiment to global climate change.

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