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## **Sub-shelf melting consequences of recent and future Pine Island Glacier ice shelf calving events**

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In recent years, the ice shelf of Pine Island Glacier has experienced several significant calving events. It is understood that the presence of the ice shelf in conjunction with a subglacial ridge provide a strong topographic barrier to warm Circumpolar Deep Water spilling onto the continental shelf, but it is not known how this barrier will respond to this recent, and possible future, calving events. In this presentation, I shall present results of numerical simulations of ocean circulation under Pine Island Glacier, which indicate a strong sensitivity to such calving events, and discuss the implications of these results for the overall stability of the glacier.