

Patterns of glacier response to disintegration of the Larsen B ice shelf, Antarctic Peninsula

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Glaciers that flowed into the former Larsen B ice shelf have responded to its March 2002 disintegration in different ways. Several glaciers (including the large Crane Glacier) experienced prolonged front retreat while others have retreated, advanced, and retreated again, and still others appear not to have responded to ice shelf collapse at all. Here, we document retreat patterns and place them in a glaciological context. The distinct classes of behavior observed around the Larsen B embayment demonstrate the importance of three-dimensional, geographic setting to the response of outlet glaciers to perturbations at their downstream ends.