



## **Differences in ice retreat across Pine Island Bay, West Antarctica, since the Last Glacial Maximum: Indications from multichannel seismic reflection data**

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An understanding of the glacial history of Pine Island Bay (PIB) is essential for refining models of the future stability of the West Antarctic Ice Sheet (WAIS). New multichannel seismic reflection data from inner PIB are interpreted in context of previously published reconstructions for the retreat history in this area since the Last Glacial Maximum. Differences in the behavior of the ice sheet during deglaciation are shown to exist for the western and eastern parts of PIB. While we can identify only a thin veneer of sedimentary deposits in western PIB, eastern PIB shows sedimentary layers  $\leq 400$  msTWT. This is interpreted as a result of differences in ice retreat: a fast ice retreat in western PIB accompanied by rapid basal melting led to production of large meltwater streams, a slower ice retreat in eastern PIB is most probably the result of smaller drainage basins resulting in less meltwater production.