

Recent thinning and migration of the Western Divide, Central West Antarctica

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Here, we report observations recently published in *GRL* (Conway and Rasmussen, 2009) that show the Western Divide, between the Ross and Amundsen Sea sectors in West Antarctica, is currently thinning $\sim 0.08 \text{ m a}^{-1}$ and migrating toward the Ross Sea at 10 m a^{-1} . The asymmetric pattern of thickness change across the divide is not caused by changes in the accumulation gradient, but rather by dynamical thinning that is stronger in the Amundsen Sea sector than in the Ross Sea sector. Available geological and glaciological data indicate that this pattern of thinning has persisted for at least two millennia, with increased asymmetry likely over the past few centuries. Our data however, are not sufficient to determine whether the present-day migration of the Western Divide is a response to long-term (millennial) forcing, shorter-term (centennial) forcing, or both.

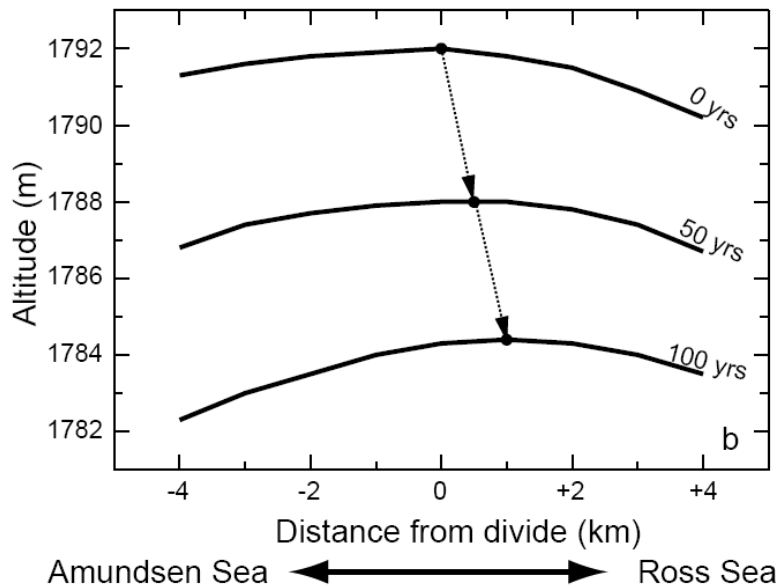


Figure 1: Thinning and migration of the divide that would occur if the present-day pattern of thickness change persists for 50 and for 100 years.

Conway, H, and L.A. Rasmussen. 2009. Recent thinning and migration of the Western Divide, central West Antarctica. *Geophys. Res. Lett.*, 36, L12502, doi:10.1029/2009GL038072.