A WAIS analog found on Mars polar cap

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Measurements by the Mars Orbiter Laser Altimeter (MOLA) provide a detailed surface topography of the north polar cap of Mars. The surface profile through the head of Chasma Boreale shows a concave-up shape which is similar to West Antarctic ice stream.

"Onset", defined as the location of the transition between inland ice flow (corresponding to a convex-up shape profile) and ice-stream flow (corresponding to a concave-up shape profile), is clearly detected. Chasma Boreale is the largest reentrant in the north polar cap of Mars and has been considered to form likely due to localized basal melting, water production and outflow. A flowline model is applied to simulate the ice flow along the transect of Chasma Boreale. The polar cap is assumed to deform as water ice according to Glen's flow law. The basal melting and sliding over the bed of Chasma Boreale are examined. The calculations suggest that basal melting and sliding may have been experienced in the region of Chasma Boreale.

Oral
Focused question: *"WAIS look-alikes" – Are there good analogs to West Antarctic behavior elsewhere and what can we learn from these areas?*