

WAIS Analogs in Greenland?

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Several regions in Greenland have at least some characteristics in common with areas in West Antarctica. Many WAIS tributaries extend as well defined features deep into the interior of the ice sheet. Similar behavior is observed for the ~700-km long Northeast Greenland Ice Stream, which like the Ross Ice Streams, lies in a low accumulation area favoring warmer bed temperatures. Weak-bedded behavior and ice sheet geometry departing from typical parabolic profiles similar to that of Ross Ice Streams is present at the lower end of the Northeast Greenland Ice Stream and Ryder Glacier. Unlike for the Siple Coast, the weak beds do not persist all the way to the grounding lines. Both Pine Island Glacier and Jakobshavn Isbræ are large fast moving glaciers that have undergone recent acceleration. Roughly doubling its speed, Jakobshavn Isbræ accelerated dramatically over the period during which its floating ice tongue disintegrated. Could a break up of the ice shelf in Pine Island Bay lead to similar rapid acceleration?