

Multibeam mapping with Swedish icebreaker *Oden*

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Stockholm University multibeam systems

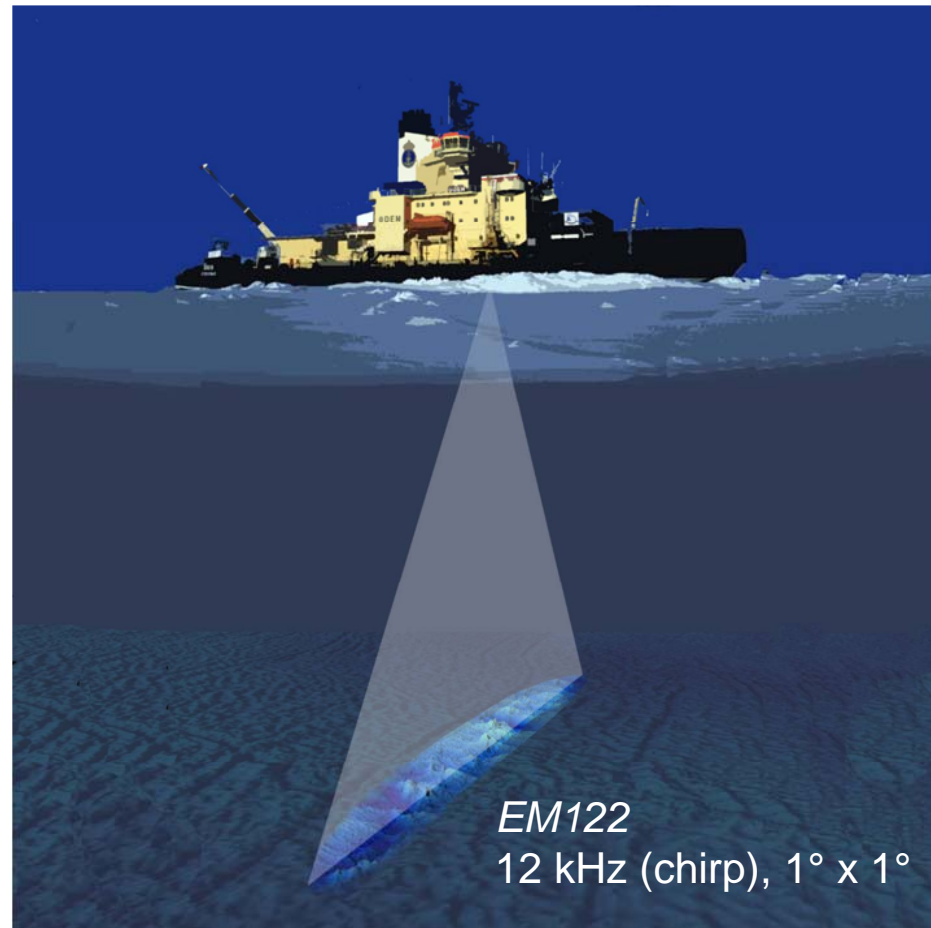
Oden: Kongsberg EM122

Portable: Kongsberg EM2040



Financed by:

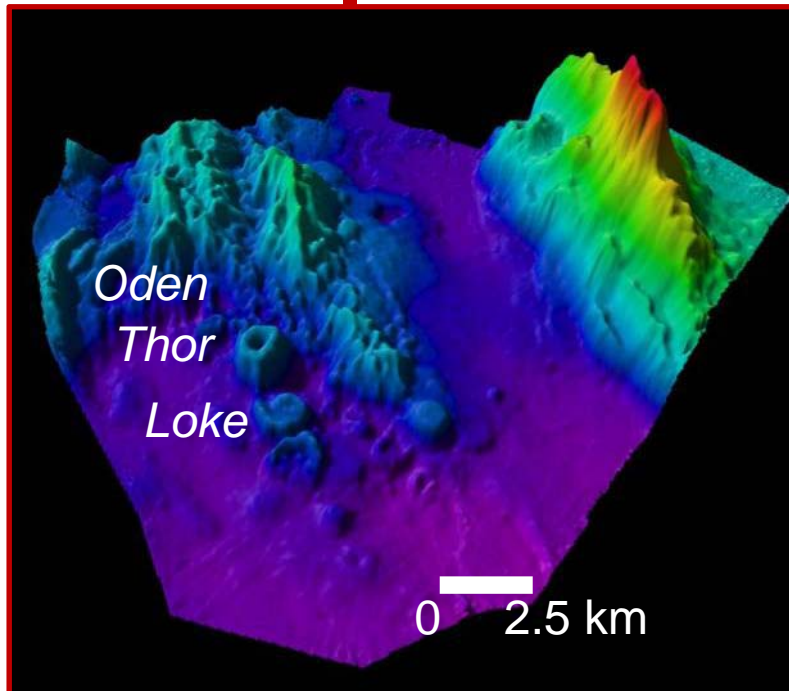
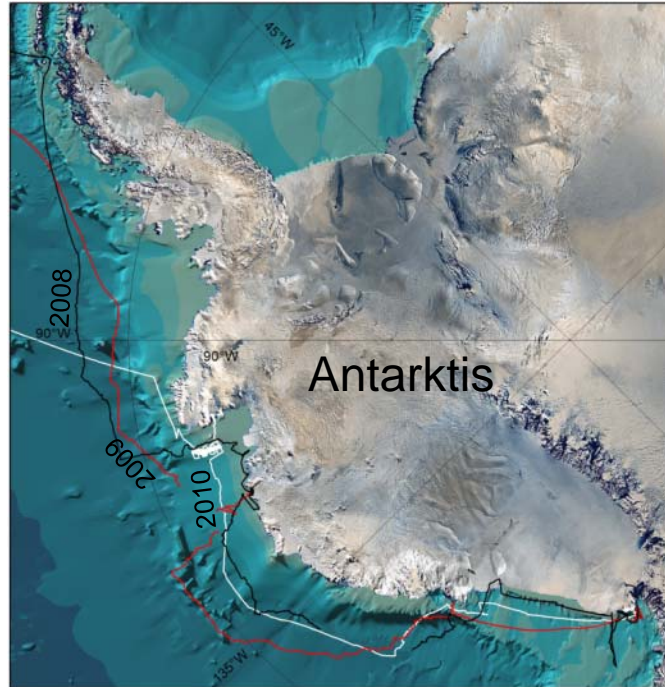
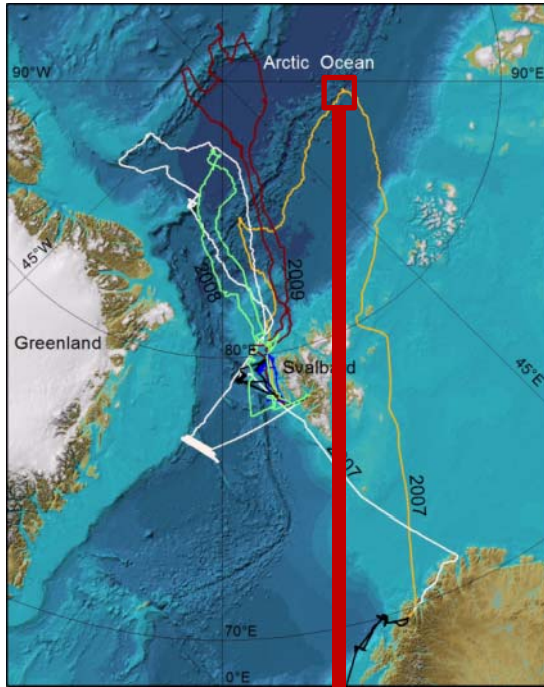
Knut and Alice Walleberg Foundation; Swedish Research Council; Swedish Maritime Administration





Stockholms
universitet

Oden expeditions 2007-2010



<http://oden.geo.su.se/>
Oden Mapping Data Repository



Home IGV

Oden Mapping Data Repository

Here are mapping data retrieved by Icebreaker Oden available for download. First choose cruise and then browse among all available data files.

Filter data

Year

2007

- SAT (Sea Acceptance Test)
- AGAVE 2007
- LOMROG 2007
- OSO 0708

2008

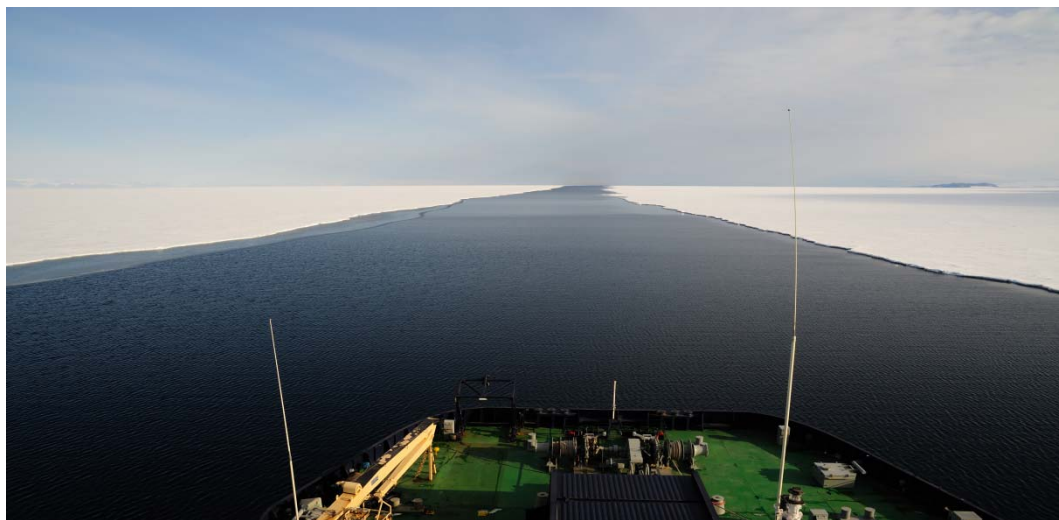
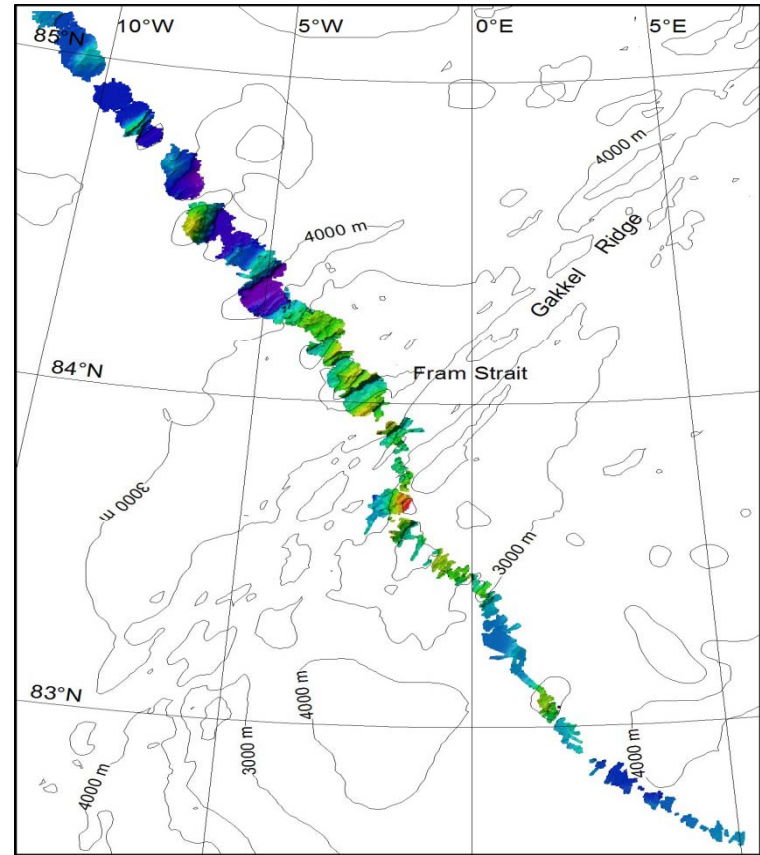
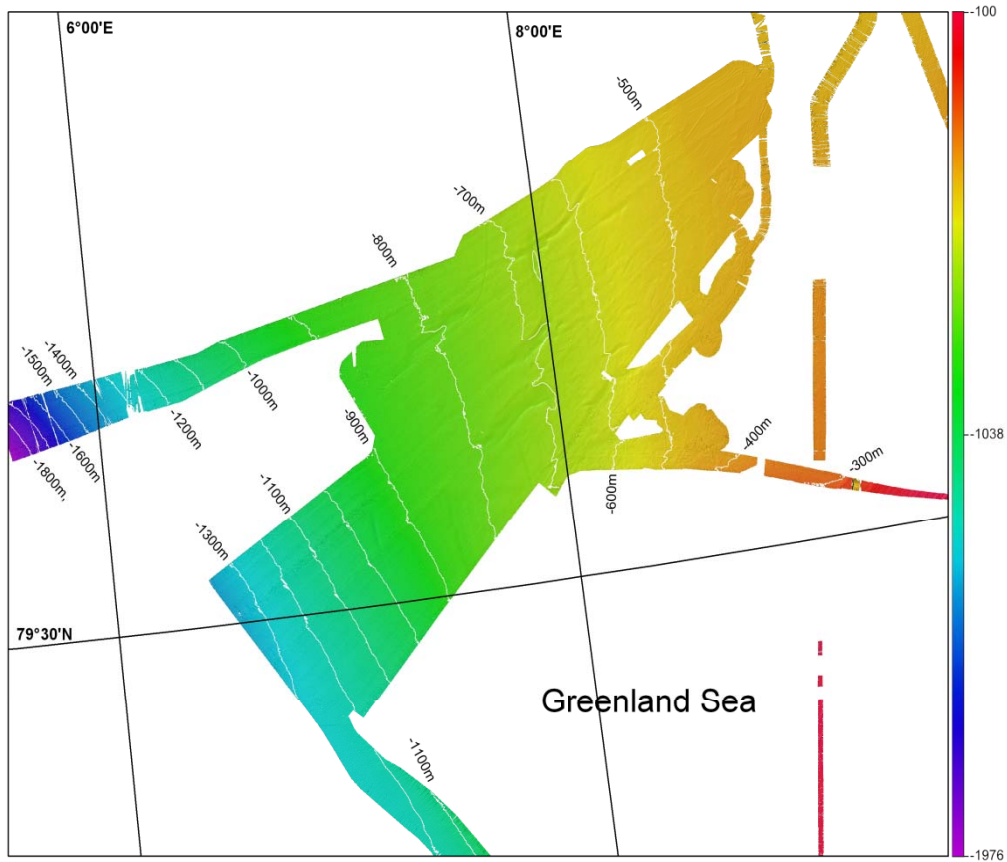
- SAT0809 (Sea Acceptance Test)

2009

- SAT (Sea Acceptance Test)
- OSO 0910

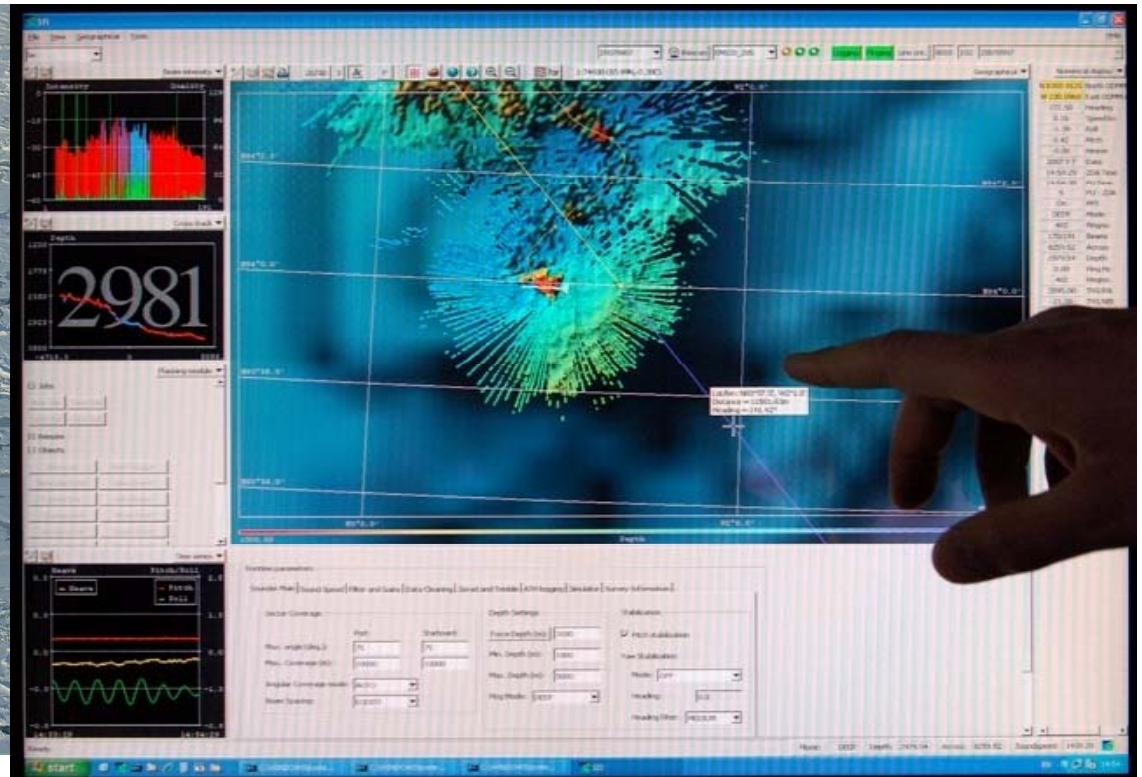
Map view





Mapping in sea ice



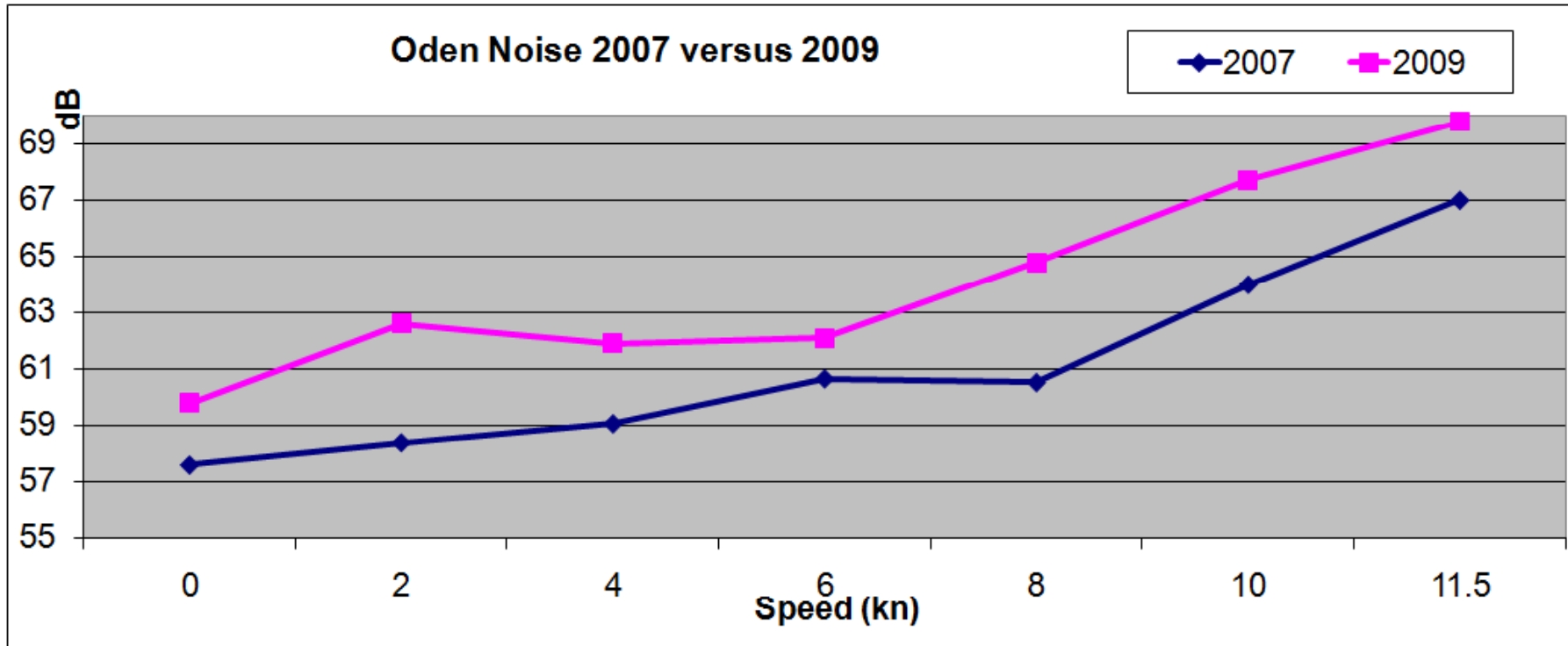


Finding or breaking up an opening large enough to spin the icebreaker around 360°.

Results: Worked superbly in 10/10, 4 m thick, ice conditions. Data can be difficult to process.

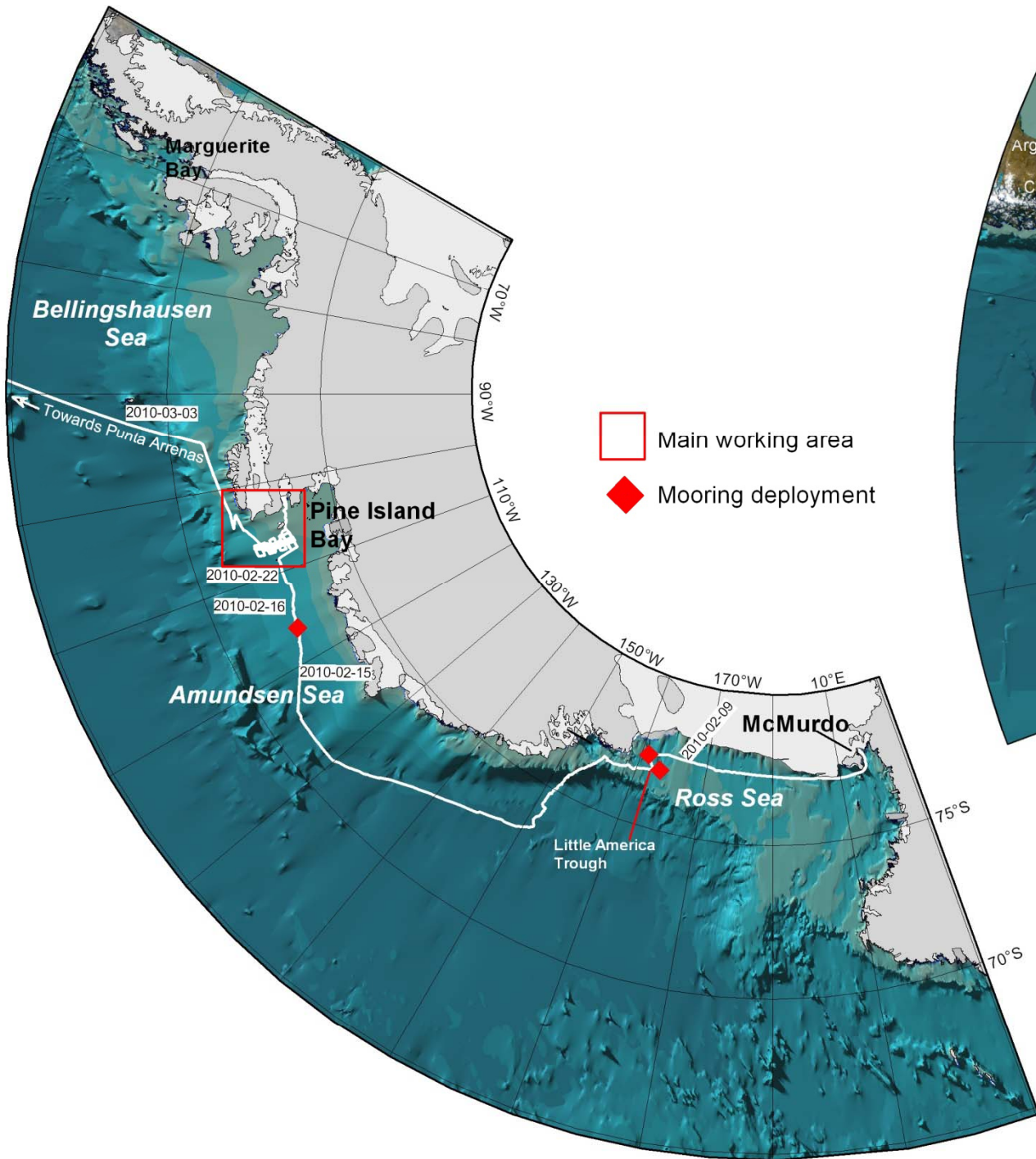


Icebreakers are noisy, but they are made to break ice!

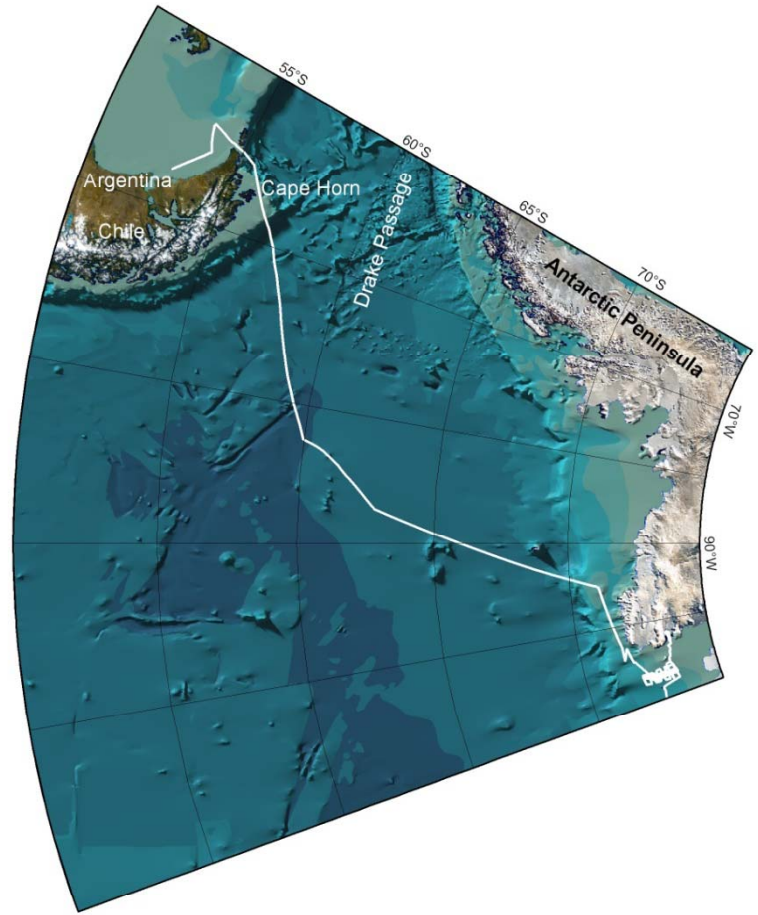


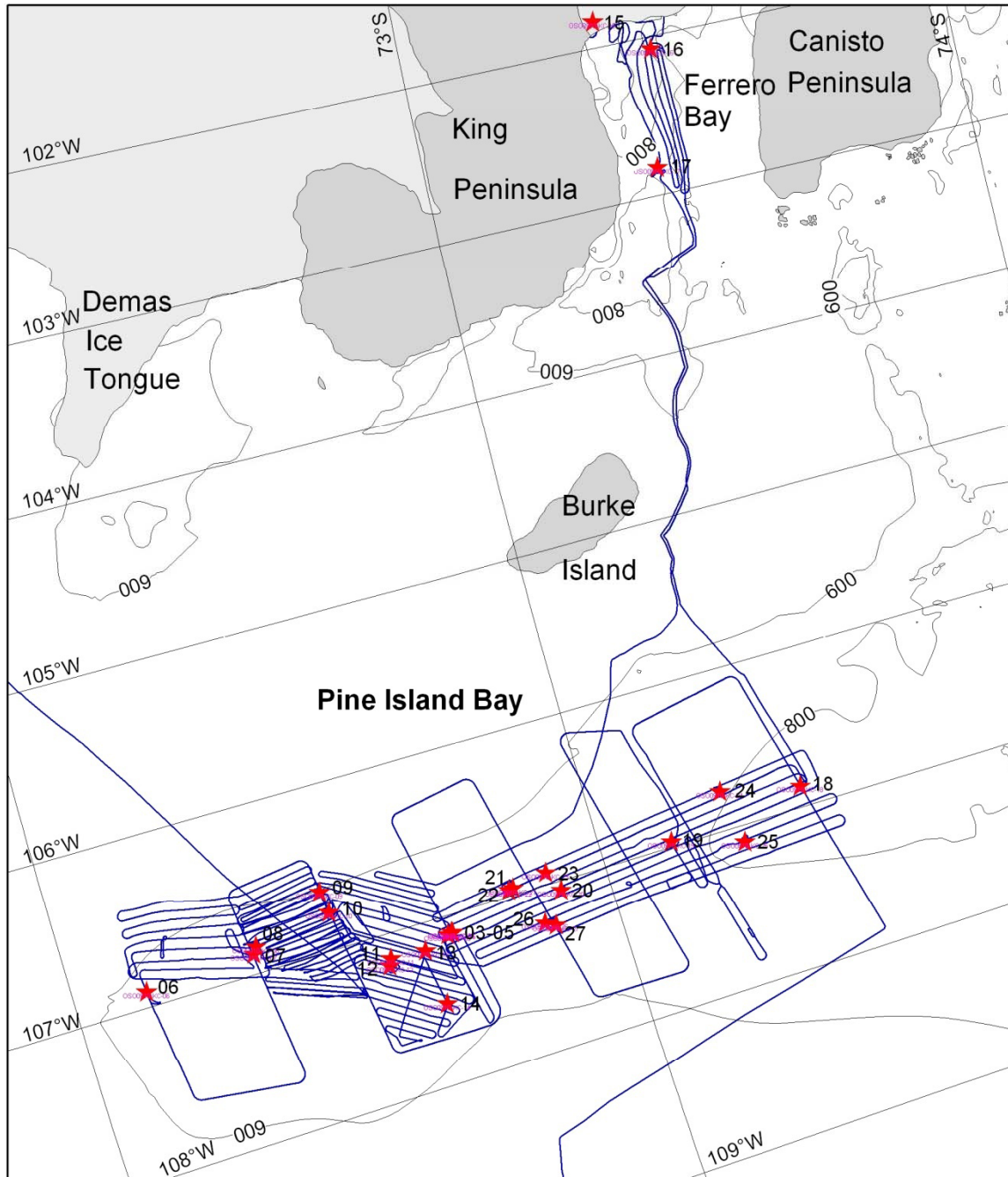
Multibeam mapping with Swedish
icebreaker *Oden* in Pine Island Bay,
West Antarctica

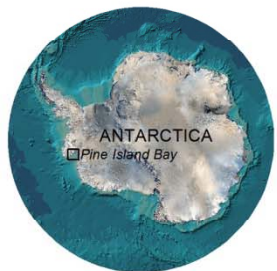




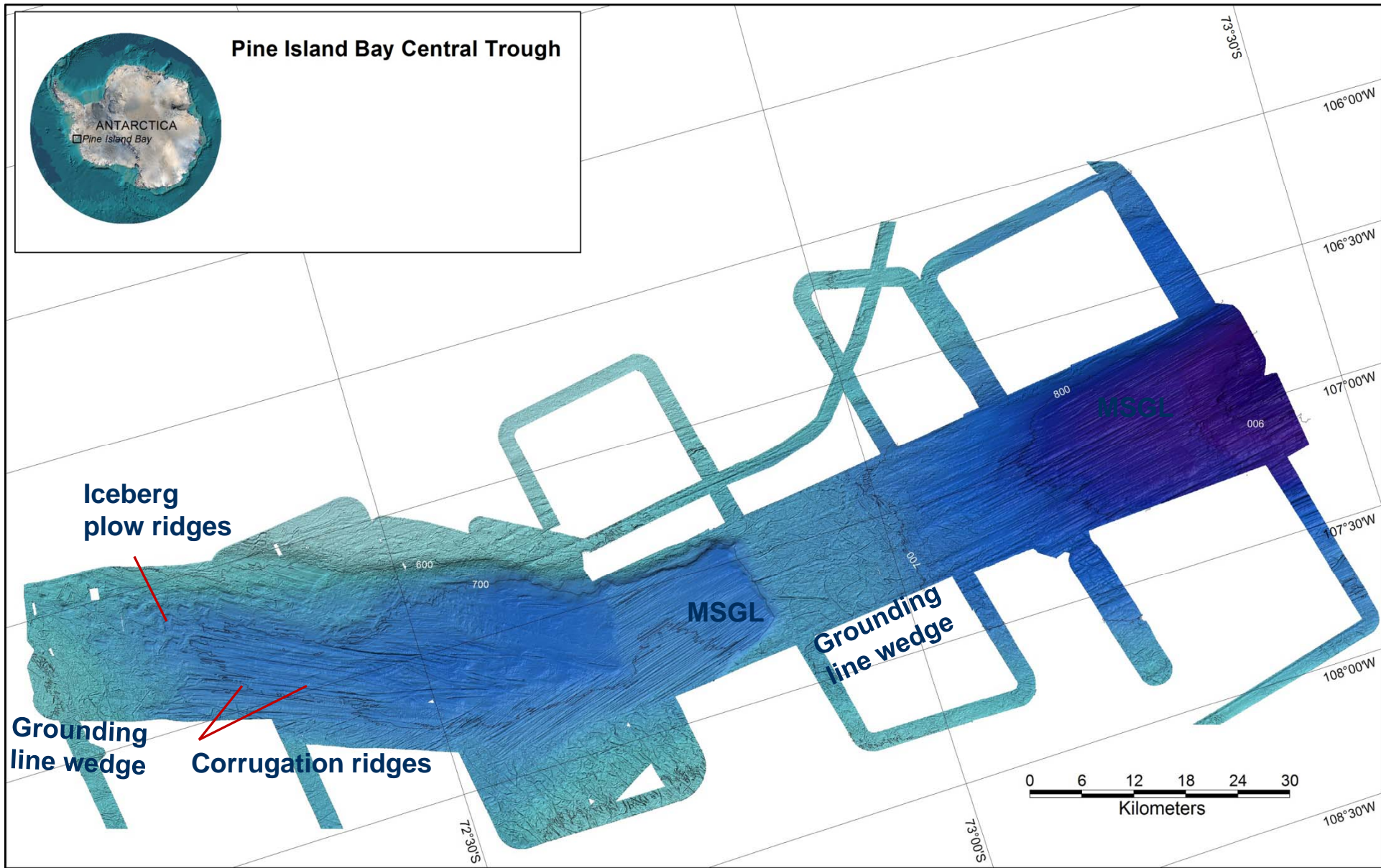
- Main working area
- ◆ Mooring deployment

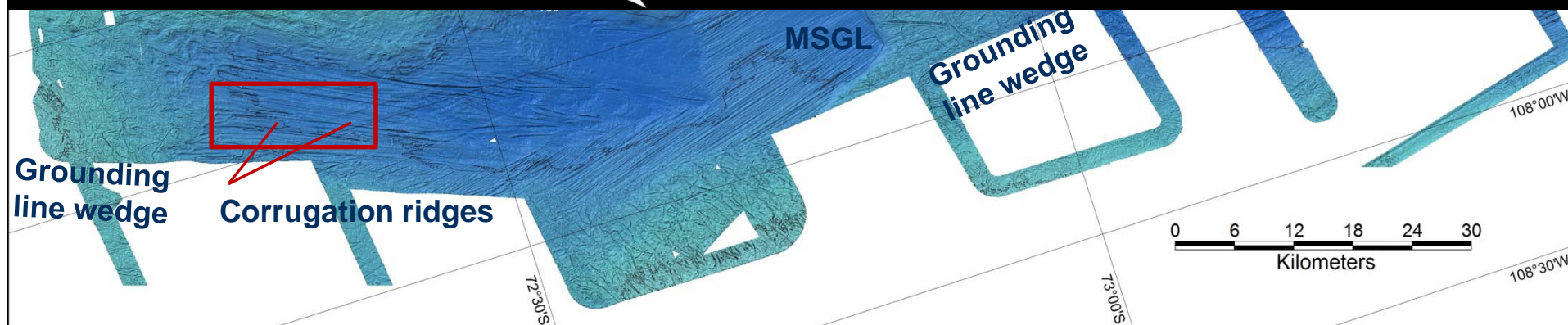
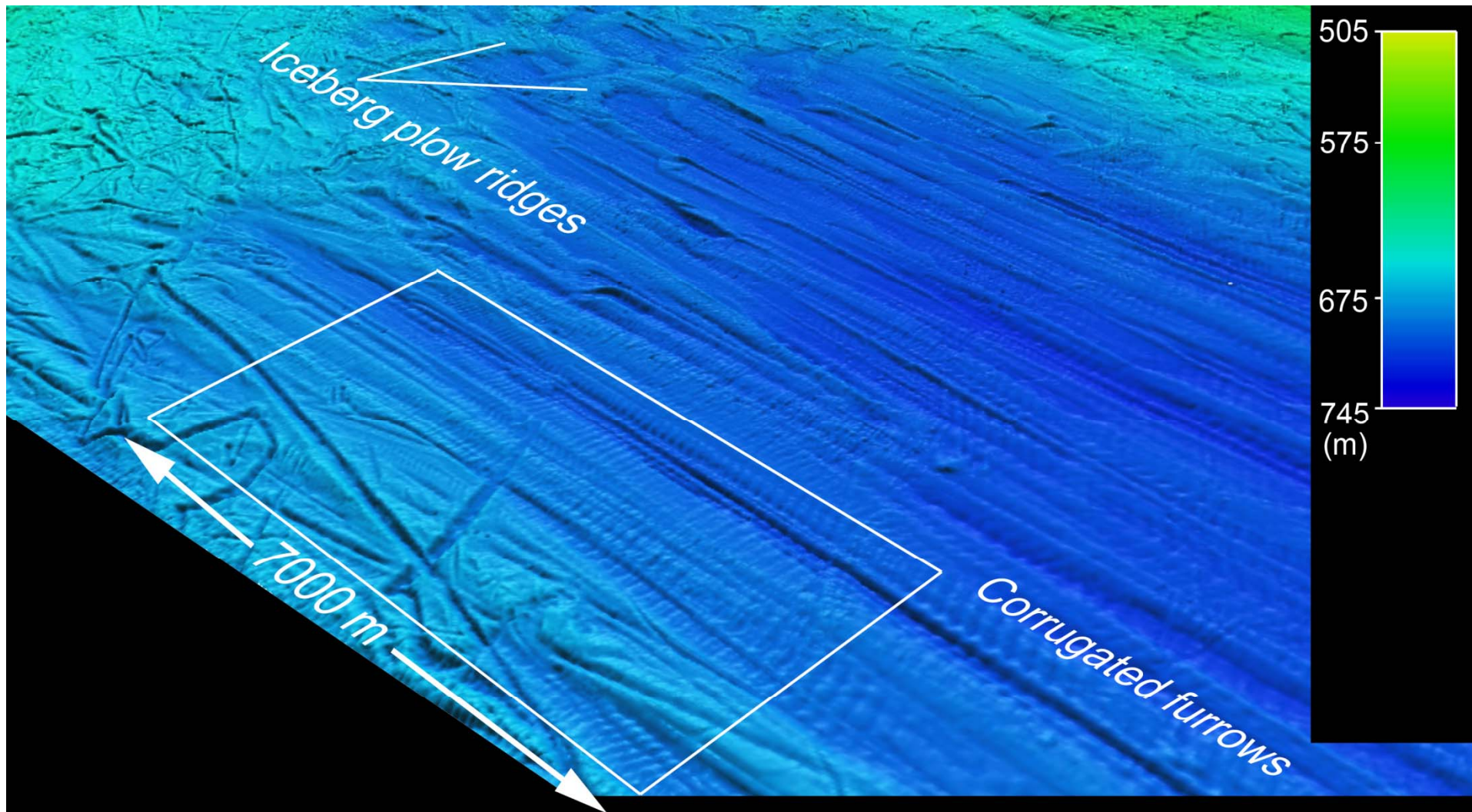




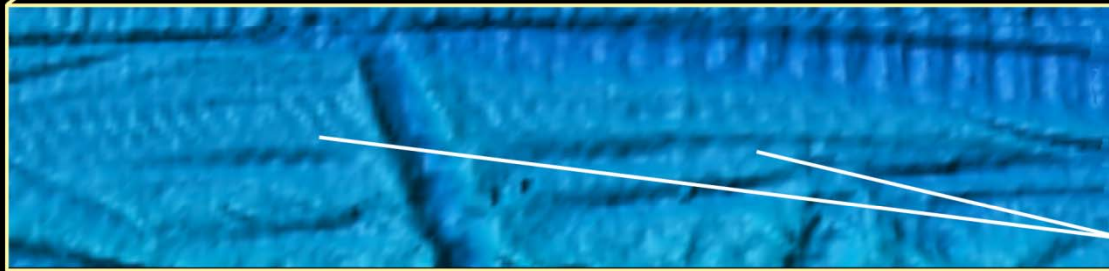
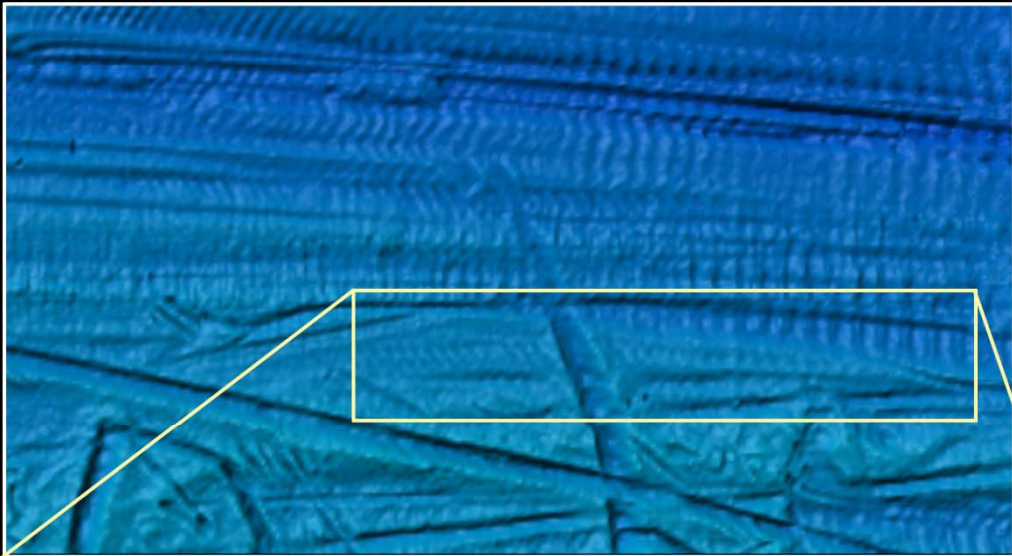


Pine Island Bay Central Trough

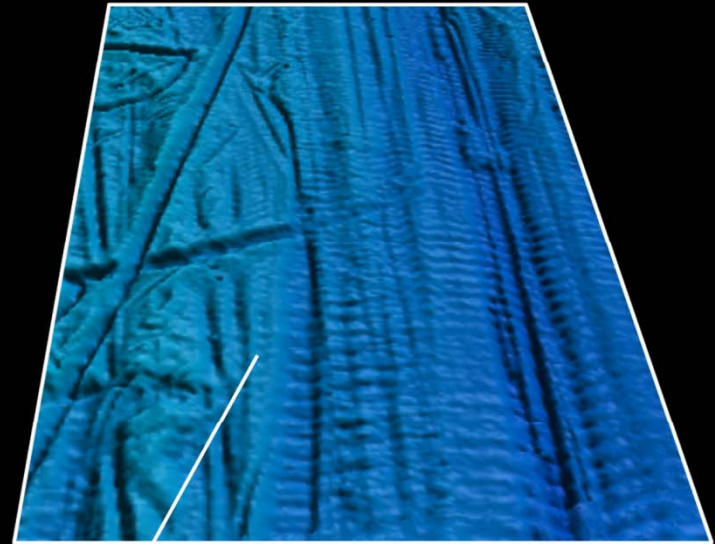




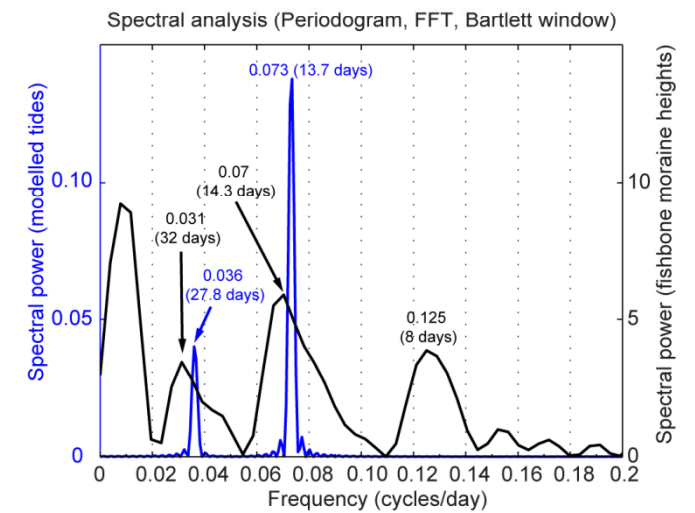
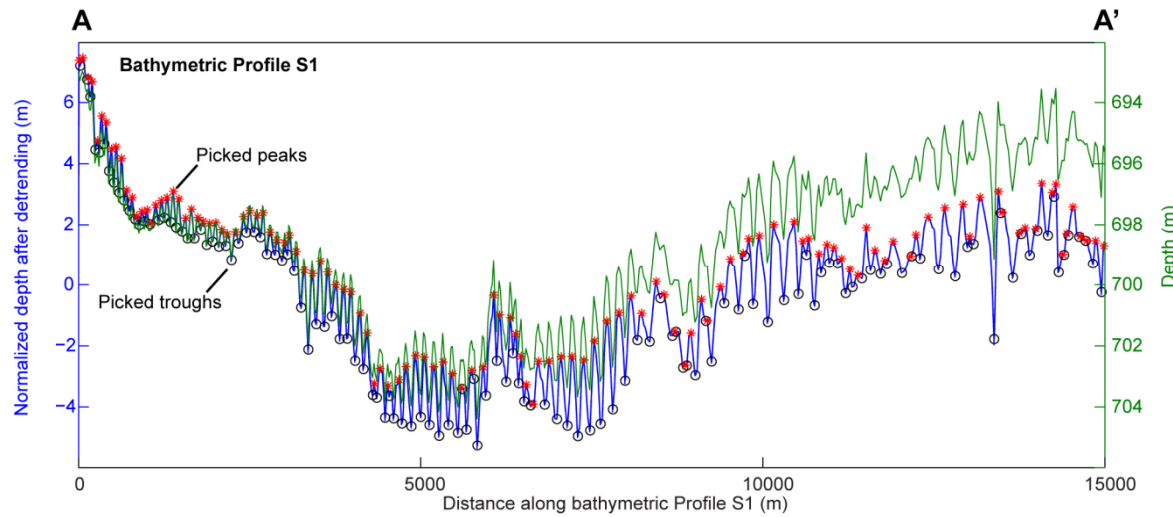
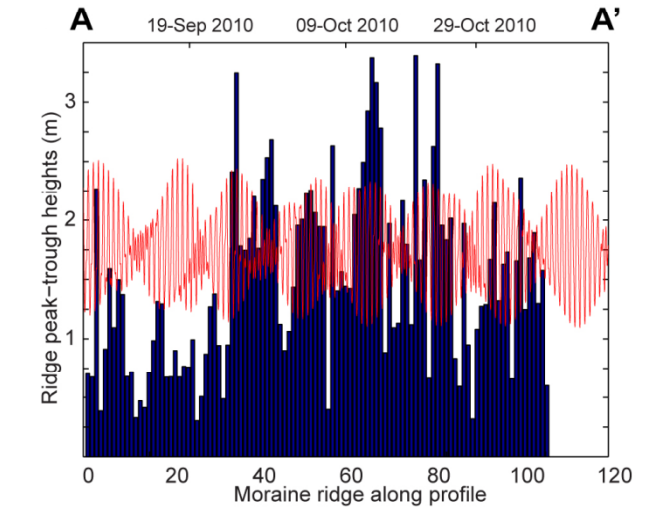
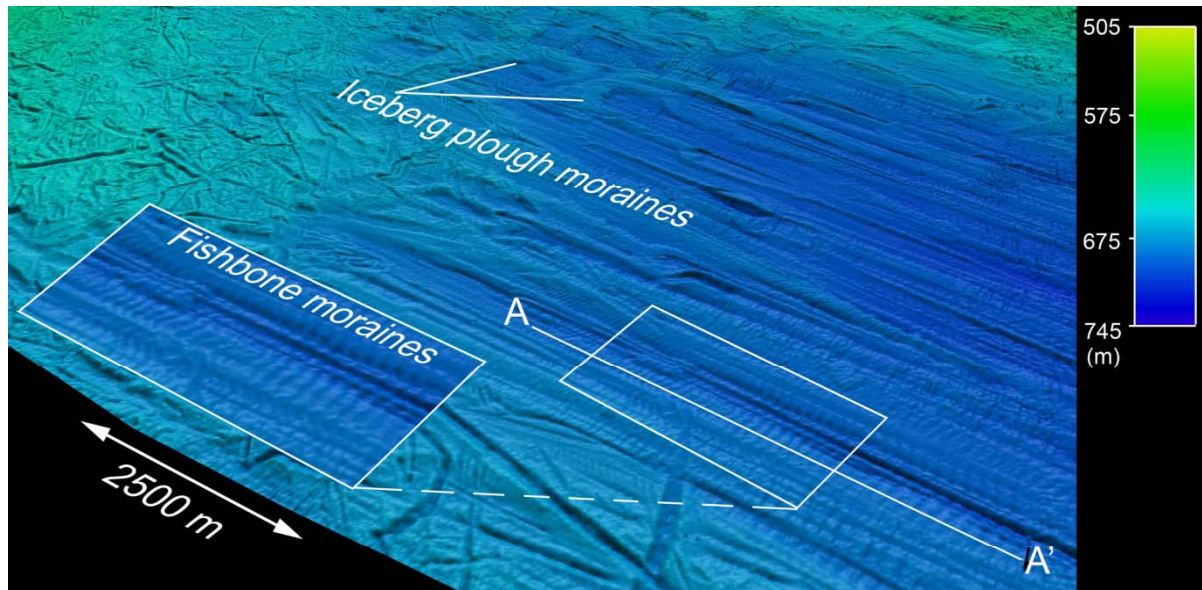
Top-view

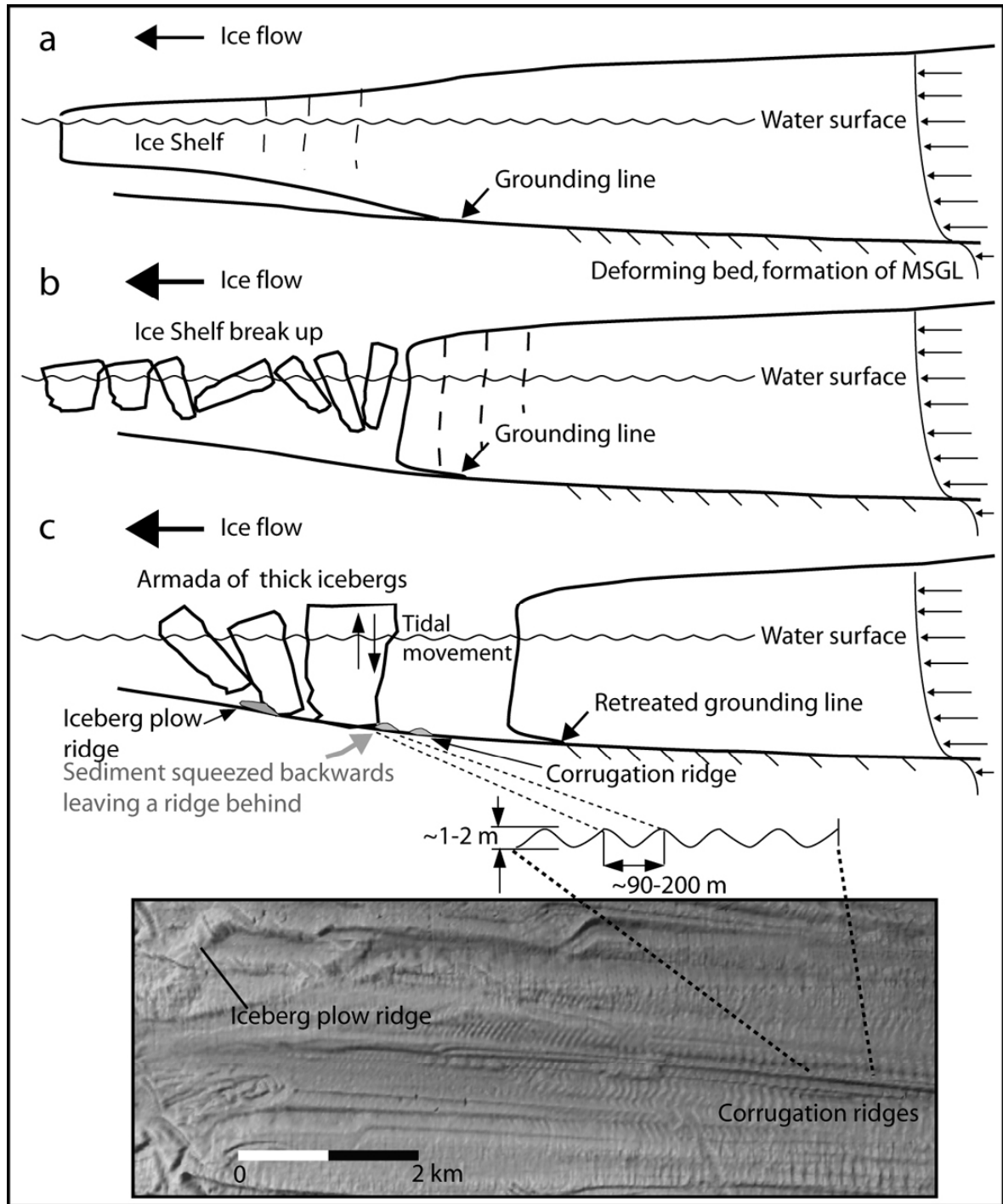
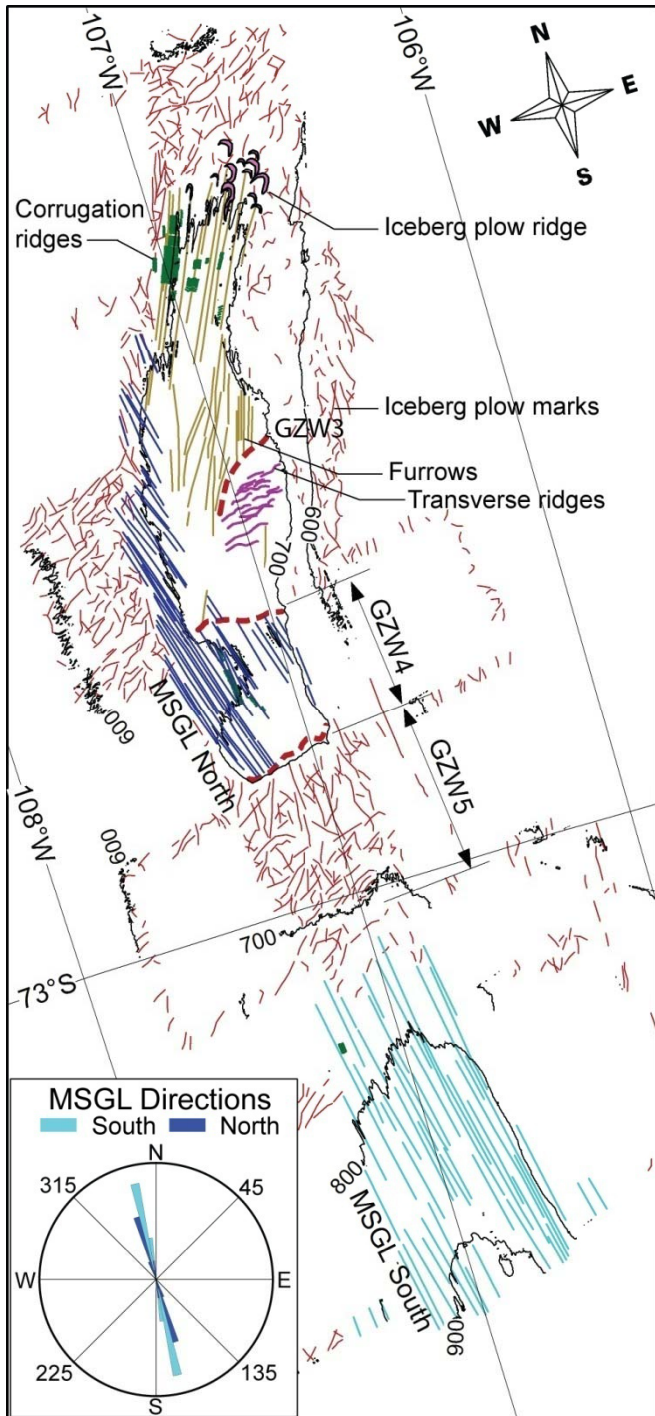


Rear-view



Corrugation ridges with different orientation in cross-cutting furrow

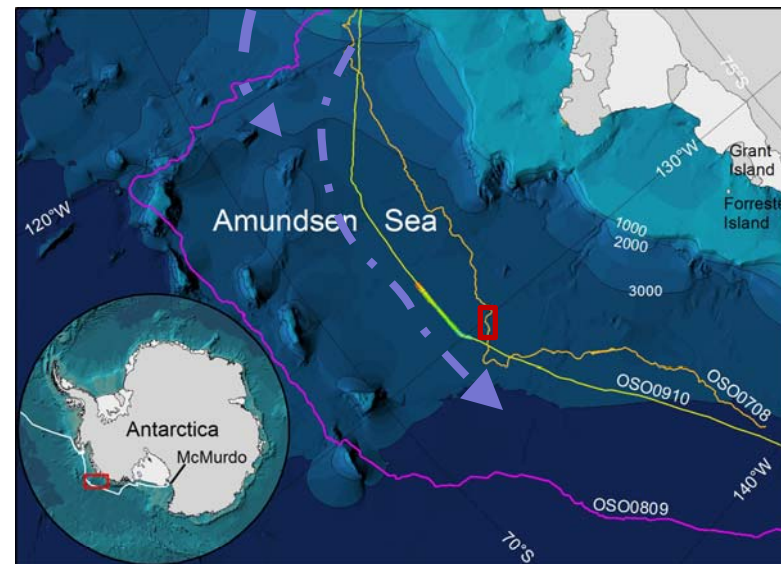
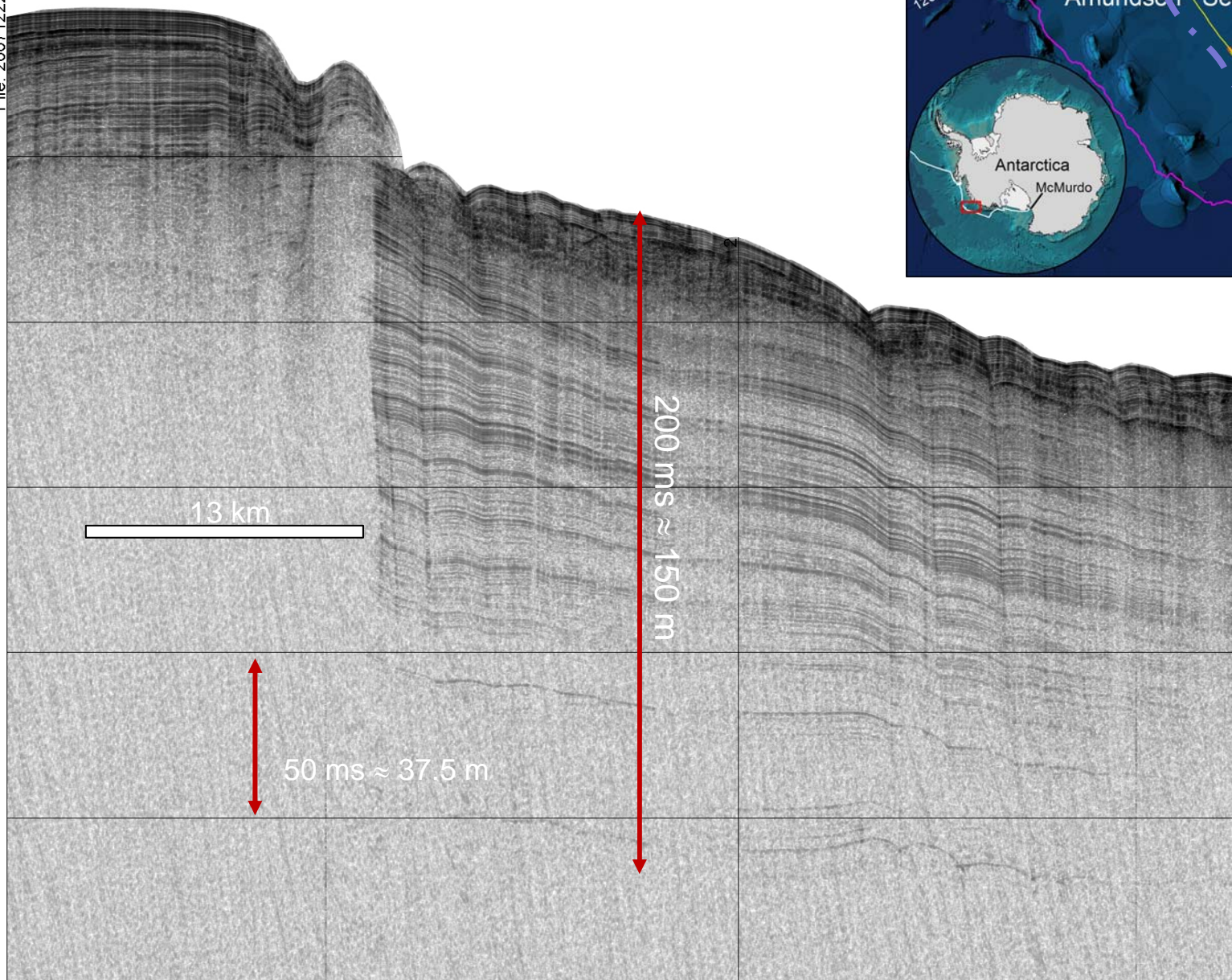






High-resolution satellite data show the Wilkins Ice Shelf collapse in detail, including blocks of ice that have tipped over and blocks of ice that have remained upright. (Formosat image © 2008 Dr. Cheng-Chien Liu, National Cheng-Kung University and Dr. An-Ming Wu, National Space Organization, Taiwan.)

Sediment drift



Westward
current flow
creating the
channel
asymmetry
and drift
deposits