Multibeam mapping reveal past collapse of the Pine Island Bay Ice Shelf, West Antarctica

New results from Oden Southern Ocean Expedition 2009/10 (OSO0910)

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**Oden** mapping capabilities

**Multibeam:** Kongsberg EM122, 12 kHz 1° x 1°

**Chirp subbottom profiler:** Kongsberg SPB120, 2.5-7 kHz 3° x 3°

The system was financed by Knut and Alice Wallenberg Foundation, Swedish Research Council and the Swedish Maritime Administration.
Can a collapsed ice shelf leave imprints in the seafloor?

Pine Island Bay
Pine Island Bay Glacier

- Drains 12% of the entire West Antarctic Ice Sheet (WAIS)
- Has increased its activity dramatically over the last decade
- Holds together with Thwaites ice equivalent to ca 0.9-1.9 m of the World Ocean Level
Analyses of bathymetric profile A-A'

Jakobsson, Anderson et al., in review, Nature Geoscience
Thanks for listening!