

## **New high resolution views of the bed of Pine Island Glacier, West Antarctica**

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Pine Island Glacier (PIG) in West Antarctica is currently losing ice at a rate equivalent to ~7% of current sea-level rise, and predicting its future is therefore an important scientific goal. Though the glacier has now been the focus of several modelling studies, the different models disagree on the likely future pace of loss and its spread inland. Significantly, all models depend critically on the form of the subglacial conditions used, and though the general form of the bed has been mapped from surveys over the last decade, the resolution of bed required for modelling to be improved, i.e. at the sub-km scale, has hitherto been unavailable. Addressing this dearth of detailed bed information was therefore a key objective for the 2013/14 UK iSTAR (ice Sheet sTAbility Research programme) traverse across PIG.

We deployed the British Antarctic Survey's DEep-LOoking Radio Echo Sounder (DELORES) to sound 10 x 15 km patches of the bed in six locations across PIG. Each patch was surveyed in 22 parallel transects lying 500 m apart and which were each 15 km long. Along each radar transect, the bed was sounded approximately every 5 m. The patches sample the main trunk of the ice stream, the beds of four of the main tributaries, and as a control site, an inter-tributary ridge. Here we present an image of the ice-sheet bed at each of the six sites. We show that the nature of the bed varies significantly between sites, and make some preliminary interpretations of the subglacial forms relative to those observed in palaeo-ice stream settings.

Poster drawn to the tune of: Amundsen Sea (*West Coast Blues*)