

Figure F1. Eastern Amundsen Sea continental shelf and rise bathymetry. Red stars mark Expedition 379 sites on the Resolution Drift (RD), which is one of five large north–northeast-striking sediment drift bodies on the rise. Green circles show the location of Proposal 839 primary and alternate drill sites. Gray lines show the location of existing seismic lines. Annotated glacial troughs on the shelf are Dotson-Getz Trough (DGT), Pine Island Trough West (PITW), Pine Island Trough East (PITE), Pine Island Trough Central (PITC), and Abbot Trough (AT).

Figure F2. Antarctic ice sheet models for the Pliocene (modified from DeConto and Pollard, 2016) and the Last Interglacial (modified from Sutter et al., 2016) simulating the collapse of the WAIS in each of these two warm times. Major ice retreat in the Amundsen Sea Embayment (ASE) seems to be a precursor for partial or total WAIS collapse.

Figure F3. Seismic profile across continental rise of the eastern Amundsen Sea with interpreted major sedimentary units and boundaries of a sediment drift system (modified from Uenzelmann-Neben and Gohl, 2014). CDP = common depth point.

Figure F4. Site U1532 on the northwestern segment of Seismic Line AWI-20100130 that crosses the Resolution Drift. Seismic horizons at the bases of the Pleistocene and Pliocene were preliminarily identified from the core

records. Estimated age of the horizon at the base of Unit ASR-II is from Uenzelmann-Neben and Gohl (2014).

Figure F5. Distribution of Holes U1532A–U1532G. See Figure F1 for regional location map.

Figure F6. Site U1533 on Seismic Line TH86003B (Yamaguchi et al., 1988) at the lowermost western flank of the Resolution Drift. Seismic horizons at the bases of the Pleistocene and Pliocene were preliminarily identified from the core records. Estimated age of the horizon at the base of Unit ASR-II is from Uenzelmann-Neben and Gohl (2012).

Figure F7. Distribution of Holes U1533A–U1533D. See Figure F1 for regional location map.

Figure F8. Composite lithostratigraphic summary, Holes U1532A–U1532D and U1532G. Lithostratigraphic subunits are divided based on changes in facies assemblages. MS = magnetic susceptibility.

Figure F9. Composite lithostratigraphic summary, Holes U1533A–U1533D. Lithostratigraphic subunits are divided based on changes in facies assemblages.