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Insights into Cenozoic glacial evolution of the east Antarctic Wilkes Land sector based on seismic stratigraphic correlations with IODP 318 sites

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Sesimic stratigraphic interpretations in the eastern Wilkes Land margin have been validated by drilling during the Integrated Ocean Drilling Program (IODP) Expedition 318 (January-March 2010). Sediment cores give insights on the age and nature of previously inferred glacial seismic units in this margin. We presente the chronostratigraphic framework for the glacial units in the Wilkes Land margin based on the age-depth data obtained shipboard from the study of siliceous microfossils, palynomorphs, calcareous microfossils and magnetostratigraphy. The ties between drilled IODP Sites and the seismic profiles have been achieved through p-wave velocity data obtained from whole-core and discrete sediment samples. Isopoach maps for the different glacial seismic units, provide information on changes in the location of depocenters and depositional environments in time that are discussed in terms of tectonic and glacial evolution in this margin.