## Mechanisms regulating the export of dense water from the continental shelf in the Adélie Land region

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The AdÈlie Land region is a significant source of Antarctic Bottom Water (AABW). Dense Shelf Water (DSW), the AABW precursor, is formed on the shelf due to sea ice formation processes. As it flows into the abyssal ocean it mixes with other water masses. The properties of the resulting AABW are determined by both the DSW formation processes as well as the mixing that occurs while the water is being exported from the shelf into the abyssal ocean. Here we explore the mechanisms regulating the export o DSW formed in the Adélie Land and Mertz Glacier regions with a high-resolution regional ocean model. The model, as well as the available observations, show that dense water that accumulates in the shelf during wintertime drains into the abyssal ocean through a system of canyons along the continental slope. Among the processes that control the shelf-slope exchange, tides appear to be important in allowing for the dense water on the shelf to spill into the canyons.