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Title: Hydrographic characteristics of the Bransfield Strait (Antarctic) collected by a southern elephant seal between February and August 2008.

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abstract: In this paper we present variations of the thermohaline structure across the Bransfield (BS). We used a data set obtained by CTD-SRDLs fixed in southern elephant seal (SES, *Mirounga leonina*) between 07 February and 17 August 2008, consists of 538 profiles with an average depth of 566.9 +/- 239.3 m and transmitted at a rate of 2.78 times a day. Although BS is one of Southern Ocean regions most historically sampled, here we have the opportunity to show seasonal changes of the oceanic vertical structure that is driven mainly by mechanical forcing and sea and land ice cover. This fact is extremely important especially in a climate change scenario, where the polar regions, due to its sensitivity, require continuous monitoring. The ranges of potential temperature (Θ), salinity (S) and potential density ($\sigma\Theta$) are observed between -1.88 and 1.86°C , $34.00 - 34.79$ psu and $27.26 - 27.99$, respectively. As observed in previous studies the Bransfield Strait Water ($0 > \Theta$ and $34.45 < S < 34.6$) is dominant at depths greater than 100 m, the Circumpolar Deep Water is observed only for a short period at the end of July, probably due to an intrusion between Livingston and Greenwich Islands where the SES remained on this occasion. Surface waters ($\sim 0 - 150$ m) there is a reduction of potential temperatures of about 3°C between the beginning and end of the sampling period, this is mainly due to seasonal changes of air temperature. The opposite occurs with the salinity and potential density, which due to the release of salt for the formation of sea ice causes an increase in these values.