

Fast Ice Thickness Distribution in the Western Ross Sea in Late Spring

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Introduction

AEM fast ice (plus snow) thickness data in the western Ross Sea were collected between 8 and 13 November 2017 using airborne electromagnetic induction sounding. Thickness data have been partitioned into level and rough ice. In addition to consolidated ice plus snow thickness, under level ice the thickness of the sub-ice platelet layer was also found. The supplementary material contains the time-series of fast ice extent for the western Ross Sea from the dataset of Fraser et al., (2021) for the data shown in Fig. 2, and sample photographs of level and rough ice taken from the air.

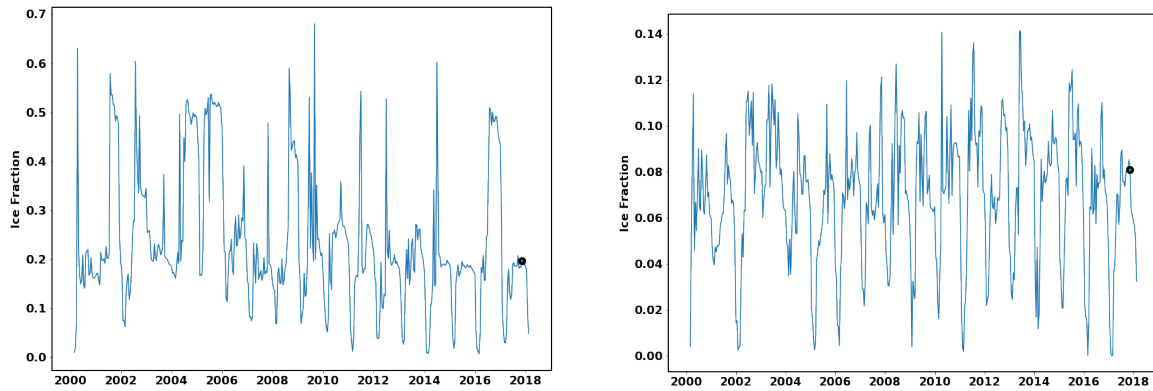


Figure S1. Time series of fast ice fraction from the Fraser et al. (2020) for **(a)** south of 75° S (see geographic area of Fig. 2a) and **(b)** north of 75° S (see geographic area of Fig. 2b). Fast ice fraction is defined as the number of pixels that contain fast ice divided by the possible number of pixels that could contain fast ice (i.e. all non-masked pixels from the Fraser et al. dataset). The pixel sizes are 1000 m x 1000 m. The dates of the AEM thickness surveys are indicated by black circles.



Figure S2 (a) Level ice in vicinity of Parker Ice Tongue between C and D of Fig. 8a&b (aircraft location 73.9101°S, 166.3555°E)
(b) Rough ice in Moubray Bay between L and M of Fig. 8a&b (aircraft location 71.9919°S, 170.9110°E)