Supporting Information for "Summer hydrography and circulation in Storfjorden, Svalbard, following a record low winter sea-ice extent in the Barents Sea"

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1. Figure S1

Introduction

In Section 3.4 we discuss water mass transformation in Storfjorden arguing in particular that a direct evidence is provided by the presence of unstable density profiles indicating overturns. Such profiles are found at Stations 14 and 15, to the north of the main depression of Storfjorden, and at Stations 35, 36, 37 and 39, along the section south of the sill.

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In the text we refer to Figure 10, where instabilities are apparent as a vertical bending and wiggling of highlighted isopycnals. As these may sometimes be difficult to distinguish in the gridded density field, the supporting information includes a figure showing vertical profiles of potential density for a subset of three stations among the stations listed with instabilities.
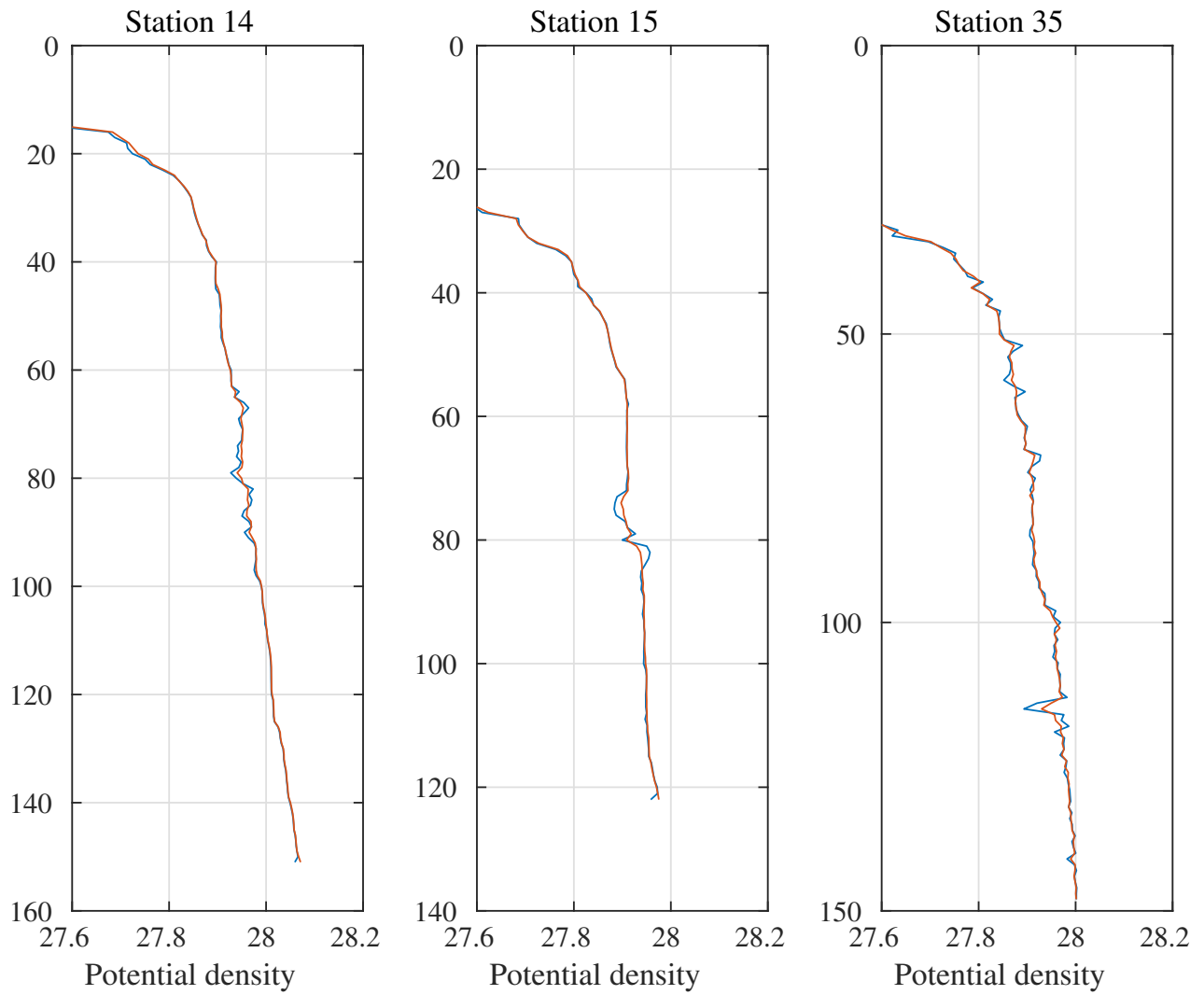
Figure S1. Vertical profiles of potential density anomaly σ_θ at Stations 14 and 15 (to the north of the main depression) and Station 35 (south of the sill). The density from the two pairs of CTD sensors is shown for each profile and the density range has been zoomed to focus on the part of the profiles where instabilities are apparent. Units in kg m^{-3}. Vertical scale in m.