

## ***Interactive comment on* “Short Commentary on Marine Productivity at Arctic Shelf Breaks: Upwelling, Advection and Vertical Mixing” by Achim Randelhoff and Arild Sundfjord**

### **Anonymous Referee #1**

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The authors made good points on explaining the shelf-break upwelling is regional phenomena and there are other factors need to be considered, such as the wind stress, stratification, vertical mixing and advection. The authors proactively cautioned crowning the shelf-break upwelling as a universal paradigm over new ice depleting Arctic Ocean.

1. Are the authors arguing a false impression? The self break upwelling itself is a regional phenomena. Did any of the papers that the authors refereed, Carmack and Chapman, 2003; Falk-Petersen et al., 2014; Wassmann et al., 2015; Våge et al., 2016; Haug et al., 2017), claimed that the shelf break upwelling is a “universal” phenomena?

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2. The example that the authors gave, the Barents Sea, does not have favourable wind for the wind driven upwelling. Why the authors suggest that people will mistakenly think that the salinity front observed is a shelf break upwelling?

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