

## ***Interactive comment on “The Seasonal Phases of an Arctic Lagoon Reveal Non-linear pH Extremes” by Cale A. Miller et al.***

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Received and published: 23 November 2020

Lines 487-489 - The lowest salinity of the sensor data (pH\_INT and pH\_EXT) presented in Figure 3c of Gonski et al. (2018) was  $S=3.26$  while the lowest salinity sensor data with coincident bottle samples collected with which to compare was  $S\sim 9$ . pH\_INT was stable at both places while pH\_EXT was not at the former. A follow-up paper to Gonski et al. (2018) is currently in the final stages of preparation that looks at the performance of the Durafet and its internal and external electrodes down to  $S<0.5$  at sub-zero temperatures in a dynamic euryhaline estuary as well. The authors should clarify how "stability" down  $S\sim 5$  was verified (i.e., with sensor data only or sensor data with coincident bottle sample data) since the sentence in its current form is inaccurate.

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Lines 1024-1026 - Further salinities of validation samples should be added to Table 1 for clarity if language about salinity will be kept as well. Finally the date of collection for the second validation sample should be changed to 26 Apr. 2019 since 26 Apr. 2018 is not covered by the data presented in Figure 2.

Other than that, congratulations on an excellent manuscript and best of luck seeing it through to publication.

Please also note the supplement to this comment:

<https://bg.copernicus.org/preprints/bg-2020-358/bg-2020-358-SC1-supplement.pdf>

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Interactive comment on Biogeosciences Discuss., <https://doi.org/10.5194/bg-2020-358>, 2020.

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