#2 Review comments to manuscript "Methane ebullition as the dominant pathway for carbon sea-air exchange in coastal, shallow water habitats of the Baltic Sea" with author replies marked "AC":

1) The authors tested the relation to temperature of CH4 ebulltive fluxes and found no significant relationship, yet, they reported higher fluxes in summer, presumably as a response to warmer conditions. There seems to be a problem in articulating/reconciling these two findings that should be addressed.

AC – L 292 changed to: "Ebullition was confined to depths of 3 m or less, with 90% of events occurring at surface water temperatures above 11 °C. However, the magnitude of the ebullitive flux events did not consistently vary with either depth or temperature. Statistical analysis revealed inconsistency in the significance of the relationships between these variables and flux magnitude across the habitats (see Supplementary Material Table S1). Thus, while depth and temperature thresholds may govern the onset of ebullition, they appear less influential on the magnitude of the flux within the ranges where ebullition was occurring."

2) The authors need to state in the M&M that there was no pressure compensation in the chambers and they assume that over-pressure had no effect on the flux measurements.

AC – Added to L 130: "Flux measurements were conducted without compensating for potential pressure changes within the chamber as such variations have been shown to be minor (< 1 %) in light-weight floating chambers like the one used in this study (Martinsen et al., 2018). Pressure gradients of this magnitude between the ambient air and chamber environment would have a negligible effect on the flux."