



## Supplement of

## Expanding seawater carbon dioxide and methane measuring capabilities with a Seaglider

Claudine Hauri et al.

Correspondence to: Claudine Hauri (chauri@alaska.edu)

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Figure S1. Profiling experiments from May 7th with HydroC CO2T-0422-001 sensor mounted on the rosette. a) Pressure vs time on the left (black) axis with diamonds showing rosette CTD values of pressure (red filled diamond), and temperature vs time on the right (blue) axis and temperature (blue filled diamond) at the time of the bottle fire. b)  $pCO_2$  measured by the rosette mounted SG HydroC CO<sub>2</sub> sensor as raw (gray line) and response time corrected signal (thick black line;  $pCO_{2,Rosette}^{RTC}$  in Table 3) with shaded relative uncertainty of 2.5% (weather goal; Newton et al., 2015). Discrete  $pCO_2^{disc}(pH_{lab}, DIC)$  shown as red diamonds with vertical red error bars showing combined standard uncertainty (Orr et al., 2018). Table 3 shows differences between discrete  $pCO_2^{disc}(pH_{lab}, DIC)$  and  $pCO_{2,Rosette}^{RTC}$ . The SG HydroC CO<sub>2</sub> sensor started a zeroing interval at 18:59 on May 7, 2022, so  $pCO_{2,Rosette}^{RTC}$  is not shown after that time but signal recovery can be seen in the uncorrected signal (gray line).