Supplemental material for "Seasonality and response of ocean acidification and hypoxia to major environmental anomalies in the southern Salish Sea, North America (2014–2018)"

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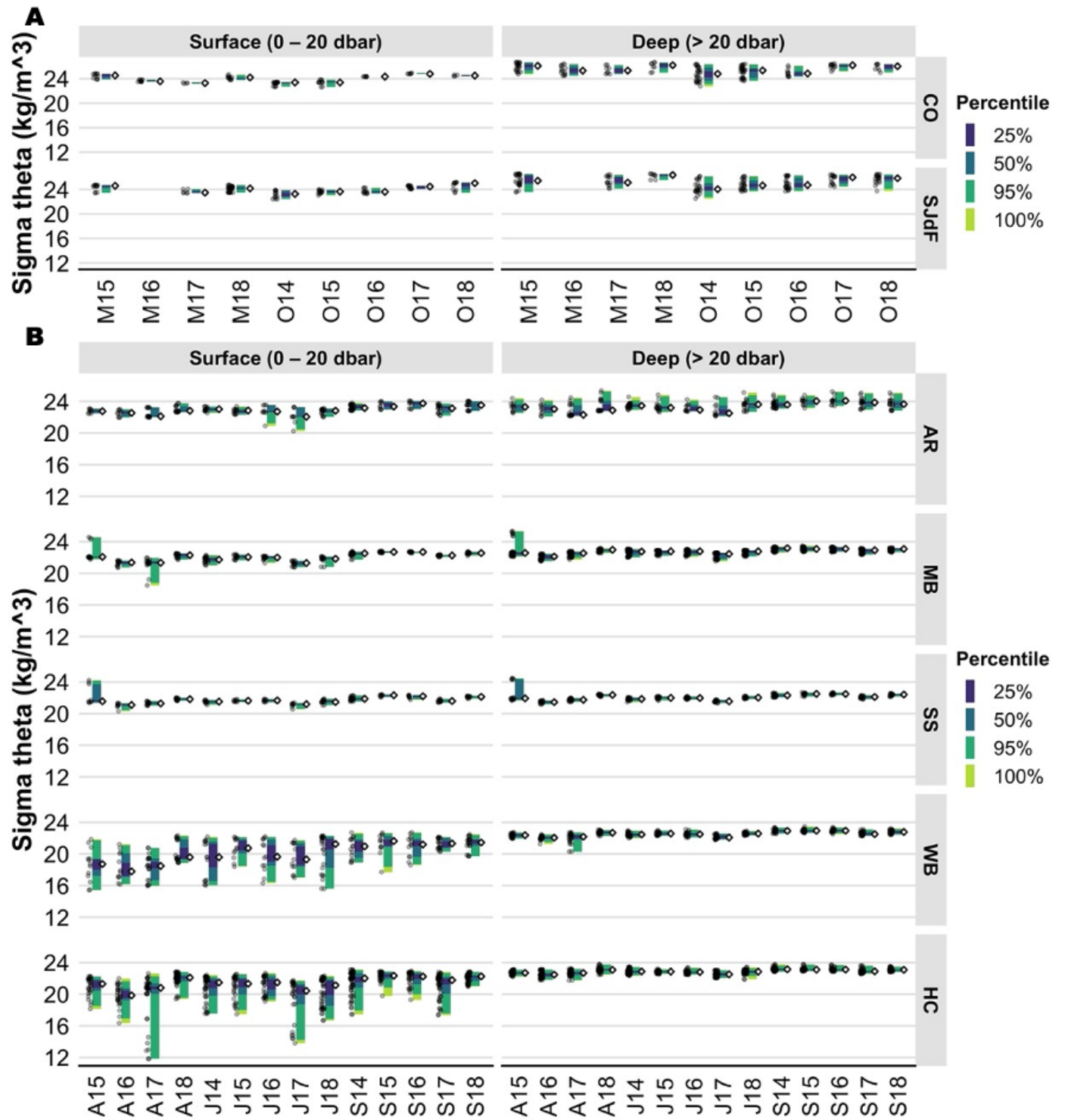
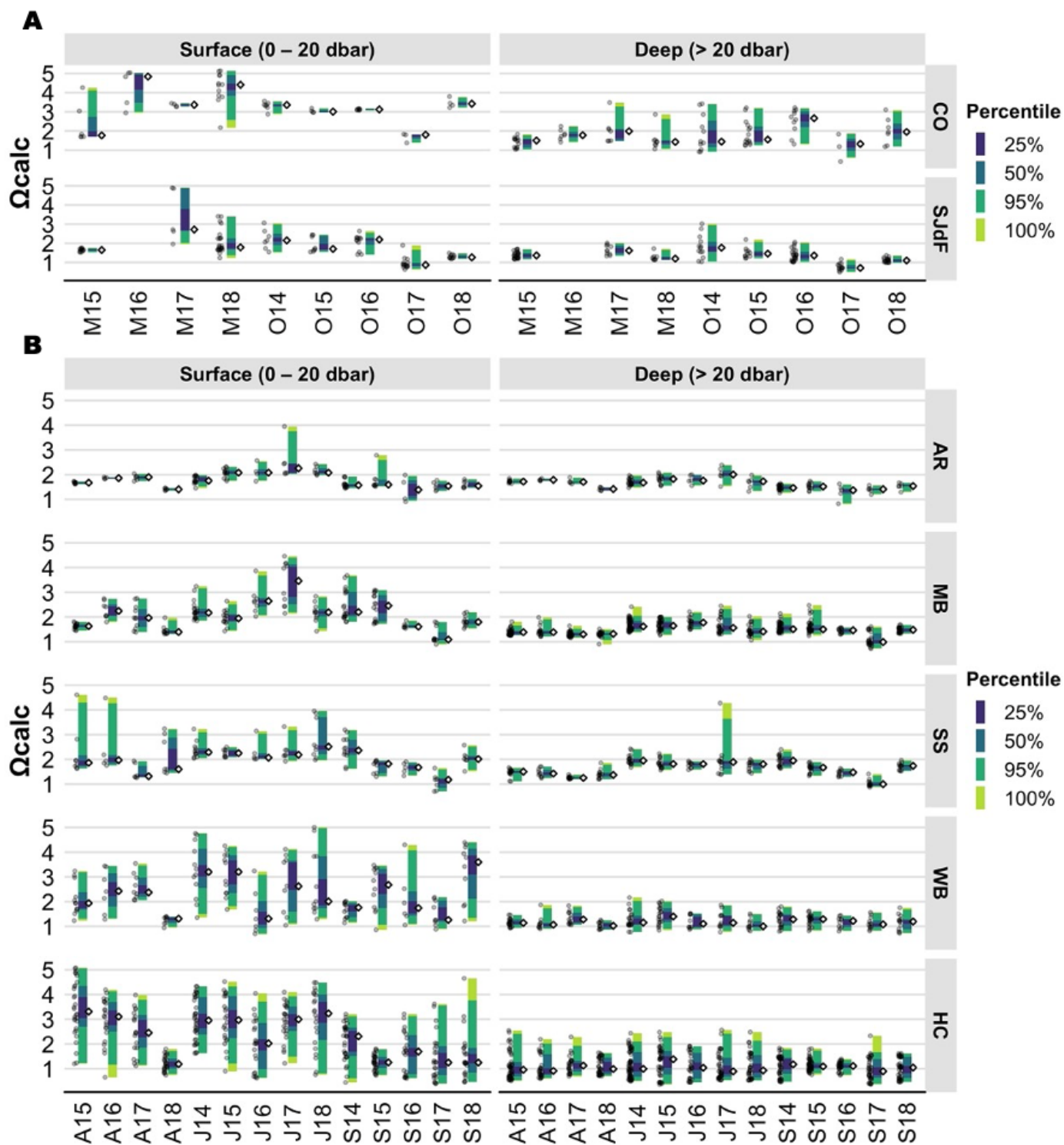
Supplemental figures, with captions

25   **Figure S1:** Raincloud plots for potential density anomalies (σ_θ) in A) coastal (CO) and Strait of Juan de Fuca (SJdF) Sound-to-Sea surveys in the early and late upwelling season (May and October, respectively) and B) Puget Sound (PS) surveys during April, July, and September beginning in the summer of 2014. PS basins are Admiralty Reach (AR), Main Basin (MB), South Sound (SS), Whidbey Basin (WB), and Hood Canal (HC). Figure organization is the same as in Figures 3–8 in the main text.

30 **Figure S2:** Raincloud plots for calcite saturation state (Ω_{calc}). Figure organization is the same as in Figure S1.

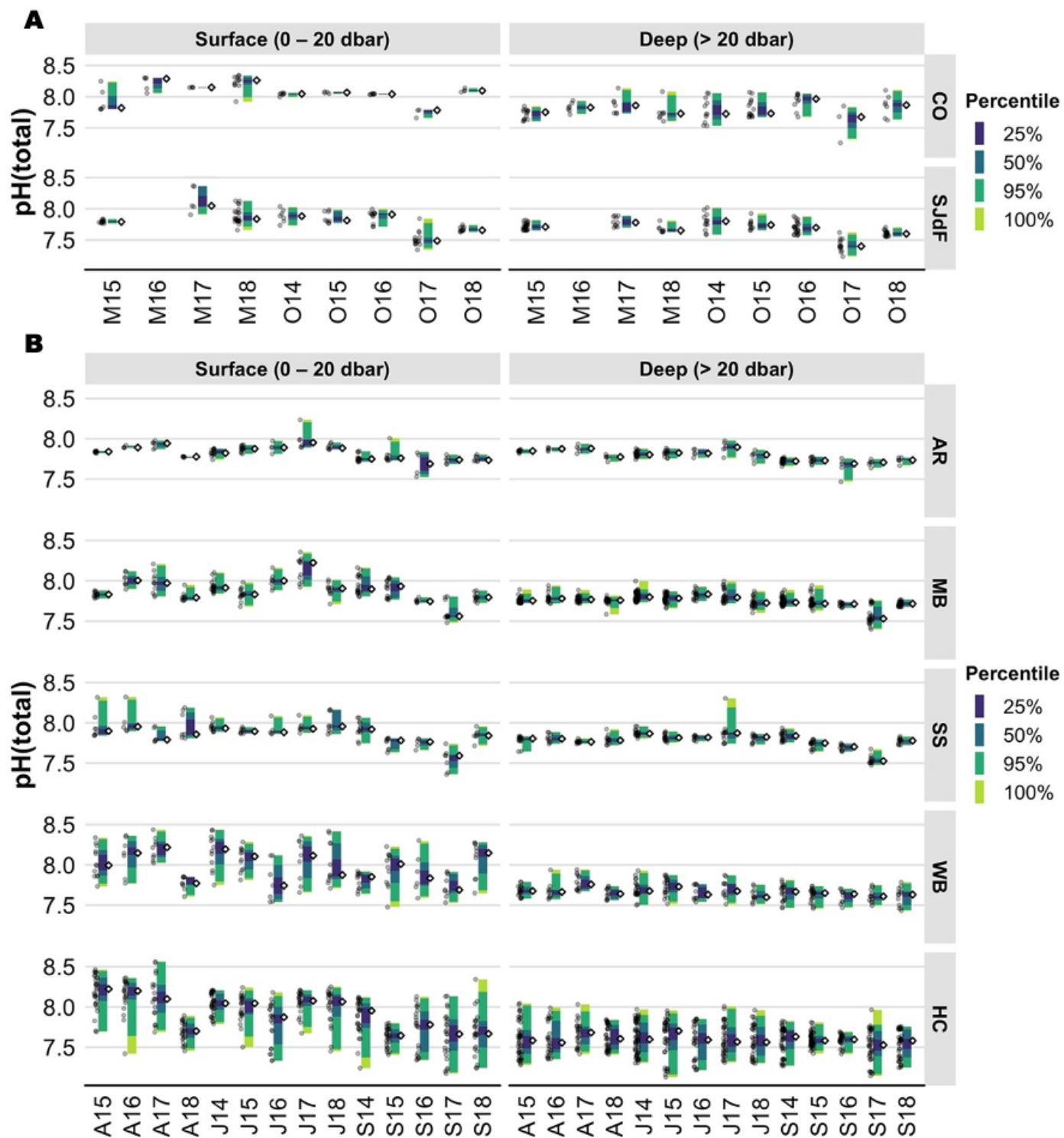
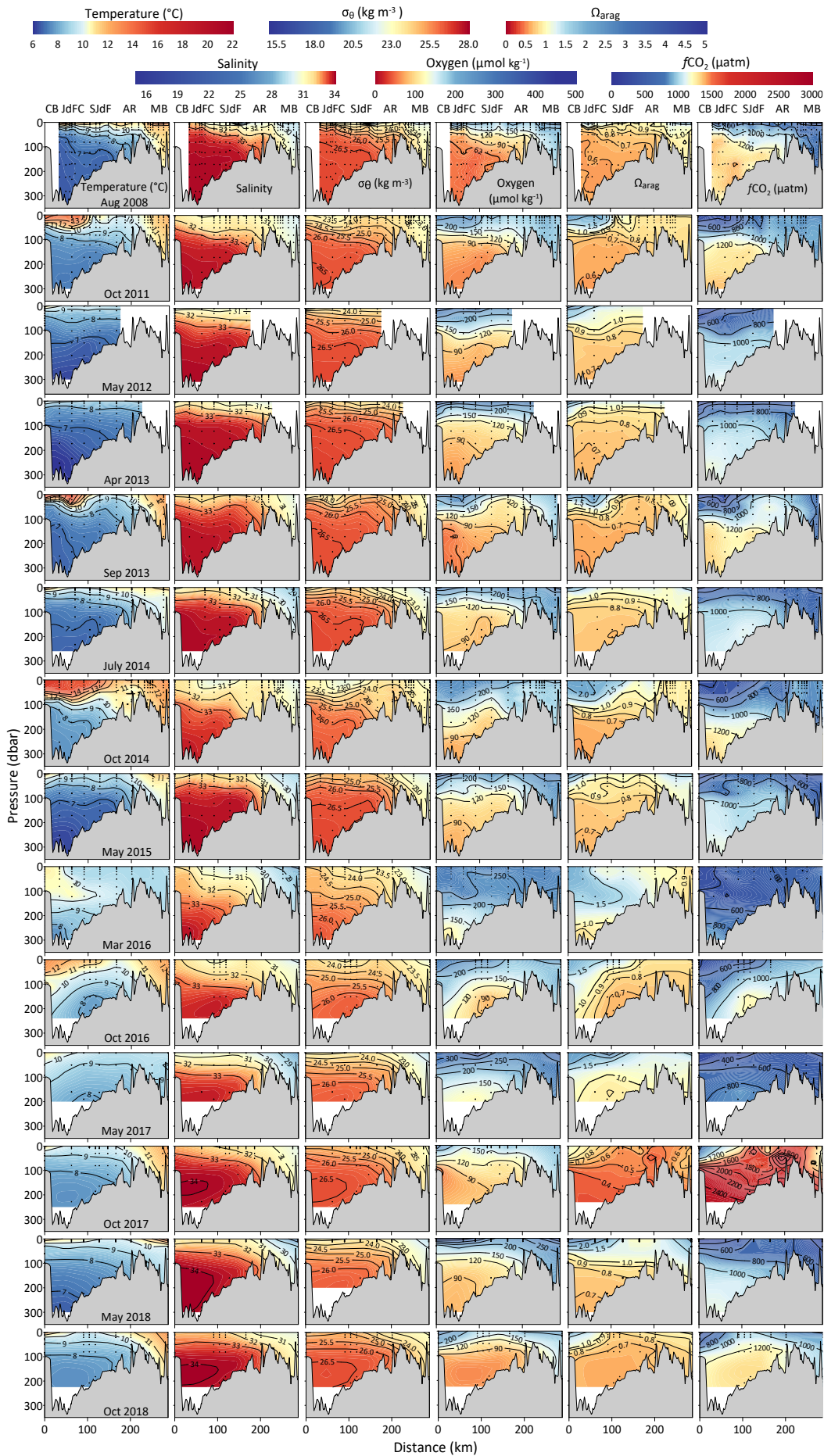



Figure S3: Raincloud plots for pH on the total scale (pH(total)). Figure organization is the same as in Figure S1.

35 **Figure S4:** Depth transect plots from Sound-to-Sea cruises for CTD temperature, salinity, potential density anomaly, adjusted CTD oxygen, aragonite saturation state (Ω_{arag}), and CO_2 fugacity (fCO$_2$) in respective columns. The month and year when each cruise began is indicated in left panel of each row. Each panel shows ocean conditions starting at the Ćháʔba· mooring (CB), traveling through the Juan de Fuca Canyon (JdFC) and the Strait of Juan de Fuca (SJdF), over the glacial sills in Admiralty Reach (AR), and into the Main Basin (MB) of Puget Sound as the distance along transect increases (see map in Figure 1). Color scales are the same for each parameter across Figure S4 and the comparable Puget

40 Sound figures (Figures S5–S6).

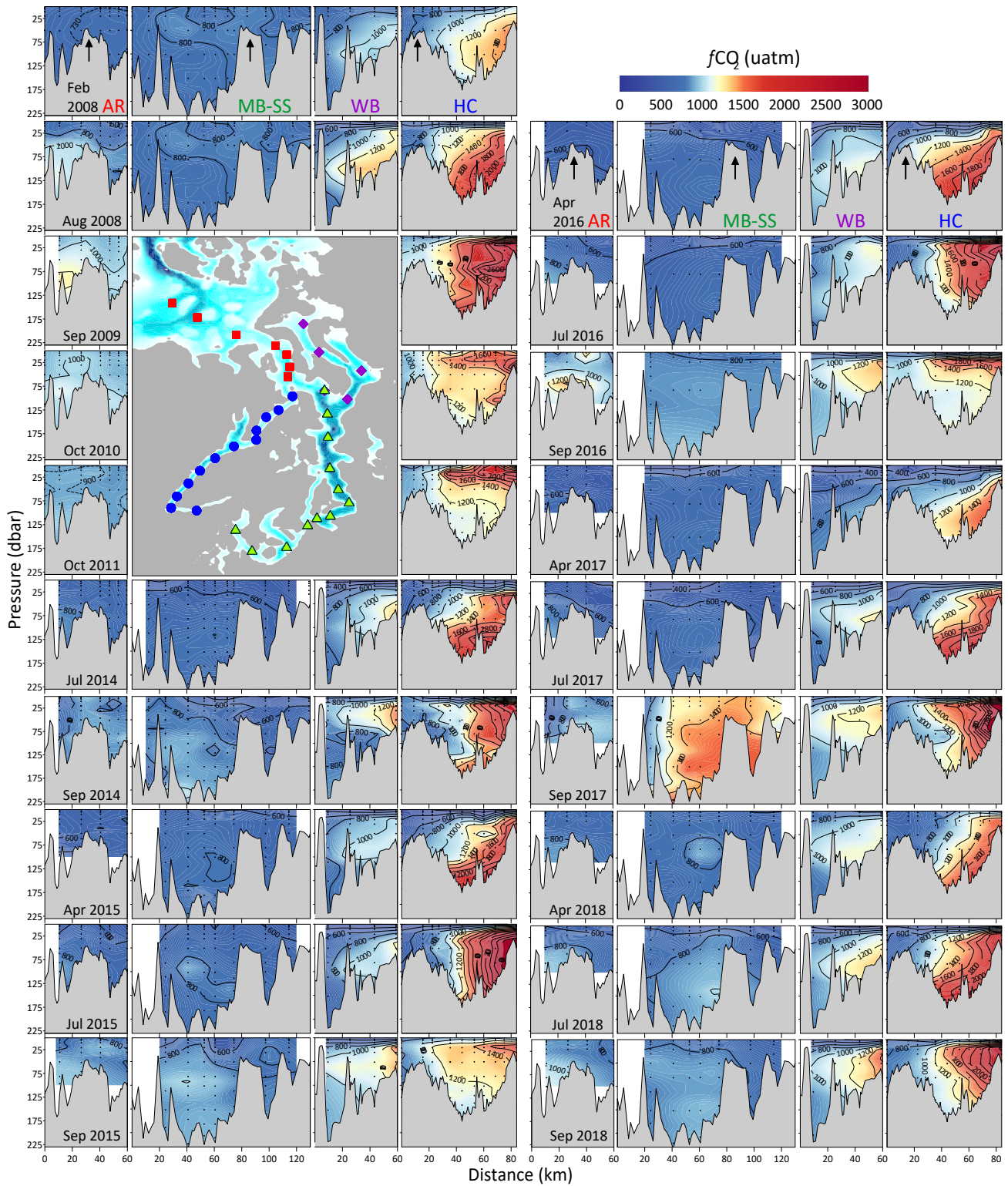



Figure S5: Depth transect plots from all Puget Sound cruises by sub-basin for calculated CO$_2$ fugacity values (fCO$_2$, µatm), with the month and year when each cruise began indicated in the left panel of each row, noting that there are two columns consisting of four panels each to encompass all cruises. From left to right, panels within each column correspond to Admiralty Reach (AR), Main Basin–South Sound (MB–SS), Whidbey Basin (WB), and Hood Canal (HC). Colours of abbreviations correspond to station colours in Figure 1. Admiralty Reach panels show the bathymetric profile and ocean conditions from the Strait of Juan de Fuca (SJdF) on the left going through Admiralty Reach toward Puget Sound on the right. The other three panels start at the nearest point on their respective transects inside Puget Sound from Admiralty Reach and progress to the distal end of the transects shown in the Figure 1 inset map as distance along transect increases.

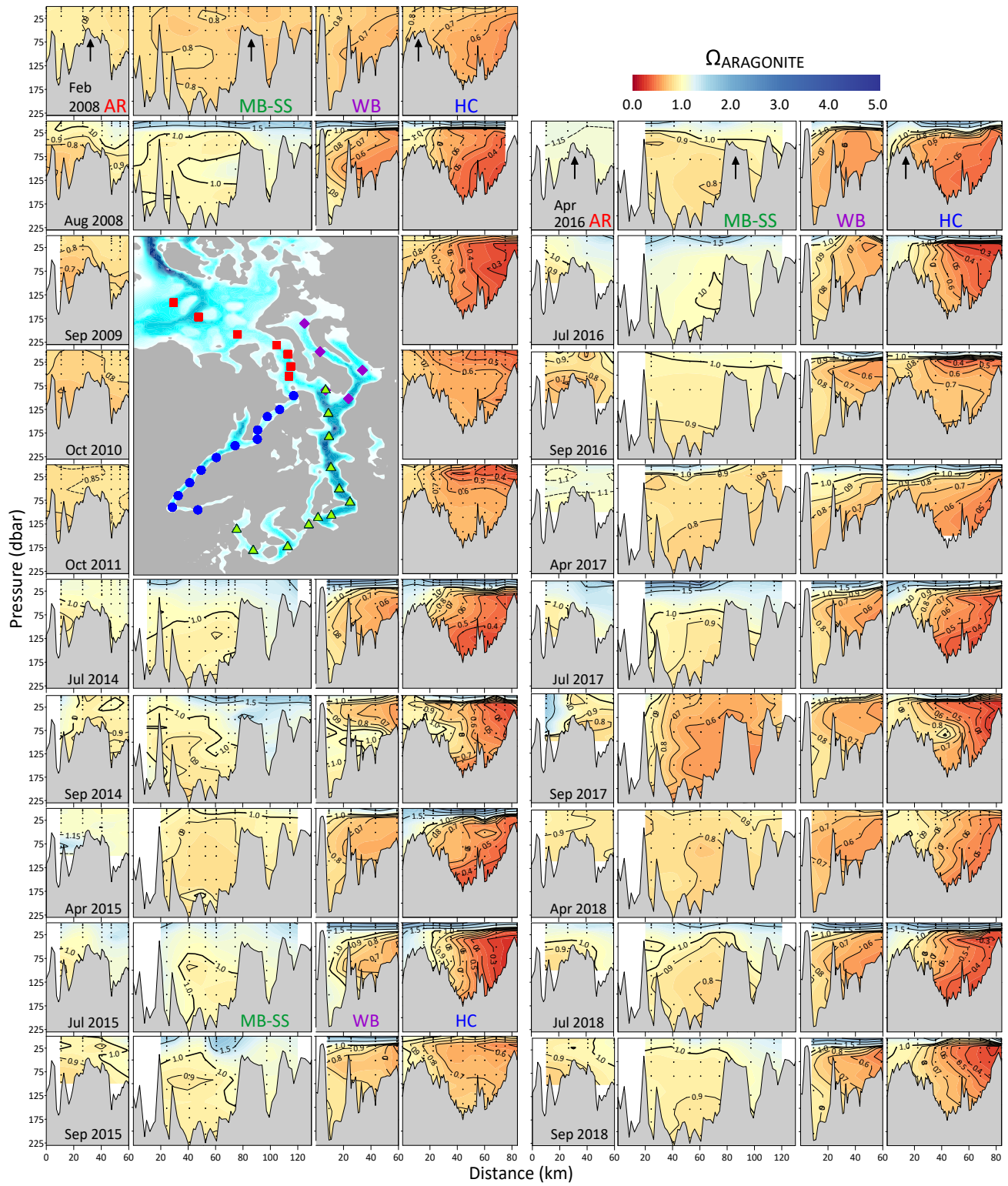



Figure S6: Depth transect plots from all Puget Sound cruises for aragonite saturation state (Ω_{arag}). Figure organization is the same as in Figure S4.

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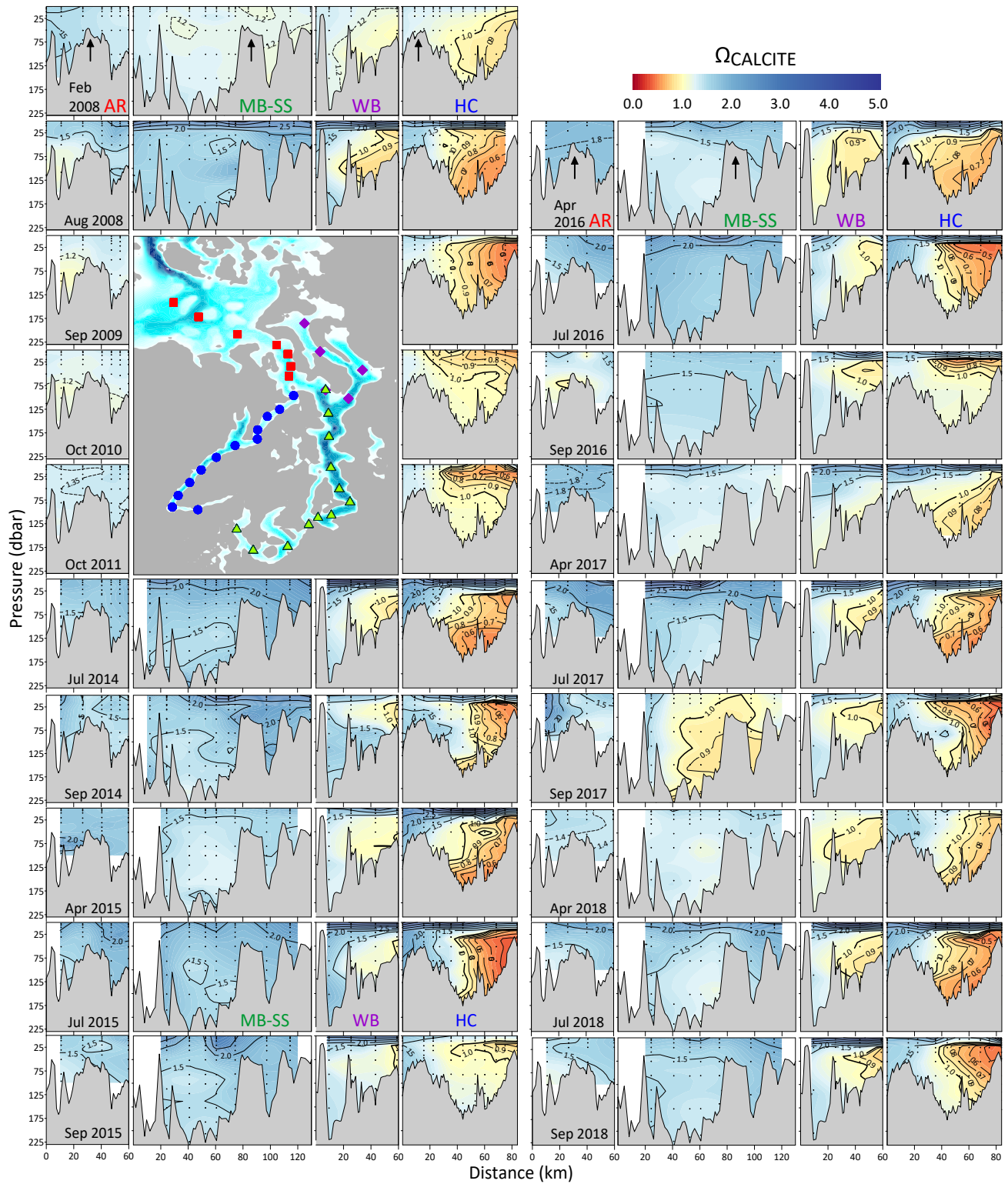
Figure S7: Depth transect plots from all Puget Sound cruises for calcite saturation state (Ω_{calc}). Figure organization is the same as in Figure S4.
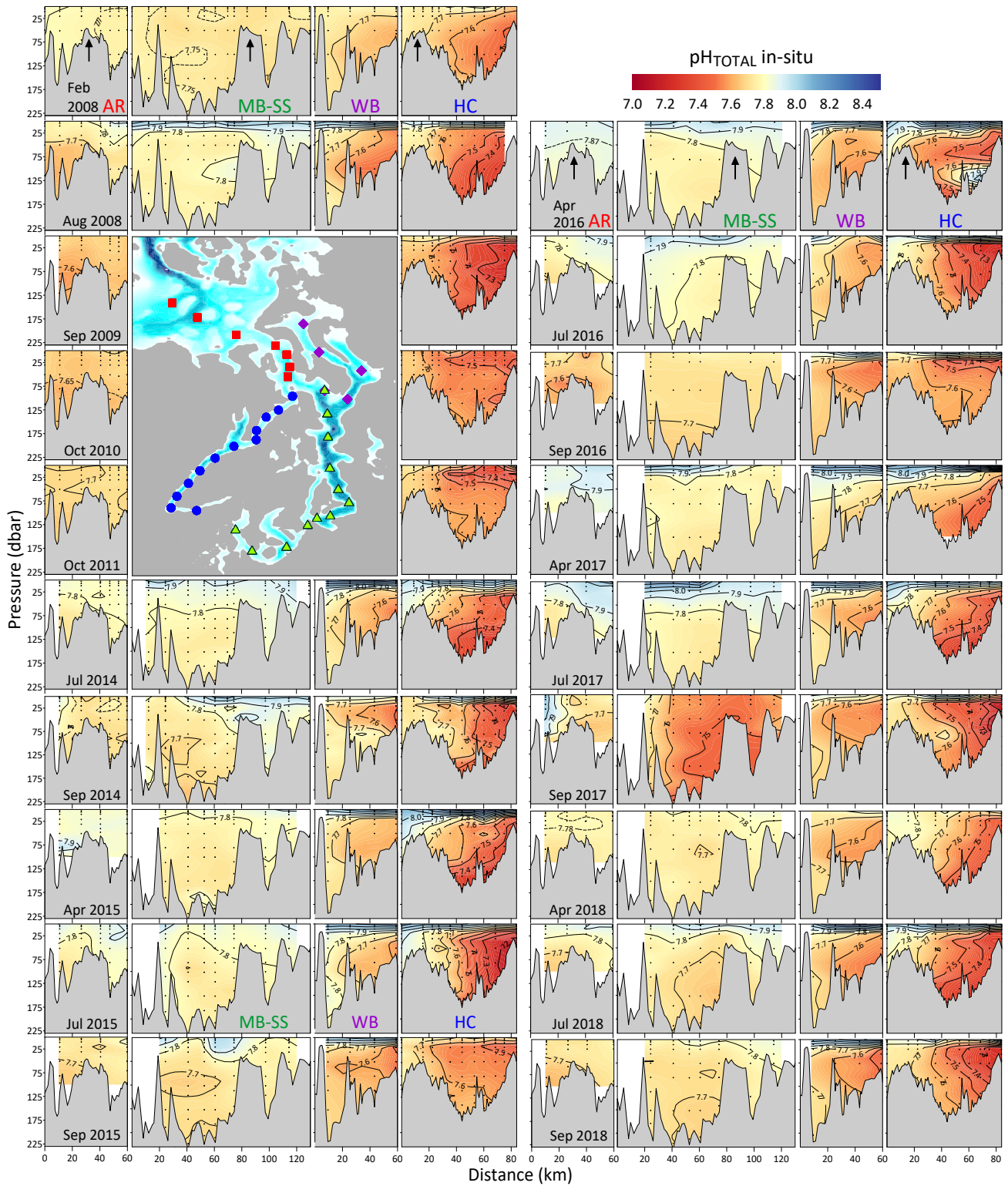
Figure S8: Depth transect plots from all Puget Sound cruises for pH on the total scale (pH$_T$). Figure organization is the same as in Figure S4.

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