**Table S1**. Overview over the conditions at the process station in May and August as given in Randelhoff et al. 2018: sea ice concentrations, depths of the mixed layer (dML), photic zone (Zeu) and the upper and lower end of the nitracline (dN) at each station. The water layer from the surface to the lower end of dN defines here the productive layer (0 - 30 m in May; 0 – 40 m in August). The average concentration of nitrate and nitrite (NOx), phosphate (PO43-), silicate (Si), and chlorophyll *a* (Chl *a*) within the productive layer are given (range of concentrations given in brackets). The phytoplankton bloom stage is classified as given in Reigstad et al. (this volume).

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| **St** | **Date**  **(mm/dd)** | **Ice conc. (%)** | ***d*ML**  **(m)** | ***Z*eu**  **(m)** | ***d*N**  **(m)** | **NOx**  **(µM)** | **Si**  **(µM)** | **Chl *a***  **(µg L-1)** | | | **Bloom**  **stage** | |
|  |  |  |  |  |  |  |  | |  |  | |
|  |  |  |  |  |  |  |  | |  |  | |
| **P1** | 05/18 | 25 | 10 | 23 | 10-30 | 6.9  (4.7-9.0) | 2.2  (1.8-3.0) | | 7.9  (3.9-11.6) | growing | |
| **P3** | 05/23 | 85 | 10 | 19 | 16-30 | 3.2  (0.7-7.5) | 1.1  (0.9-1.6) | | 12.0  (6.9-14.5) | peak | |
| **P4** | 05/25 | 40 | 11 | 22 | 20-30 | 4.0  (0.02-11.1) | 0.8  (0.5-1.4) | | 6.5  (3.9-9.0) | decaying | |
|  |  |  |  |  |  |  |  | |  |  | |
| **P5** | 08/09 | 0 | 15 | 22 | 23-40 | 2.4  (0.2-9.4) | 2.0  (0.5-4.3) | | 2.0  (0.2-3.3) | post | |
| **P6** | 08/11 | 90 | 10 | 48 | 26-40 | 1.4  (0.02-3.9) | 1.0  (0.6-1.7) | | 0.9  (0.3-2.1) | post | |
| **P7** | 08/13 | 70 | 9 | 45 | 12-40 | 3.7  (0.2-7.6) | 1.5  (0.6-2.7) | | 1.4  (0.5-1.8) | post | |
|  |  |  |  |  |  |  |  | |  |  | |