**Table 1**: *Kendall-Tau correlation coefficients for paired grid-level biological (rows) and physical (columns) variables. Bold numbers indicate significant correlations (p-value < 0.05).*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Retreat Proximity** | **Sea Ice Duration** | **Surface Salinity** | **MaxN2** | **MLD** | **WWUpper** |
|  | *(relative days)* | *(days)* | *(g kg-1)* | *(s-1)* | *(m)* | *(m)* |
|  |  |  |  |  |  |  |
| **Chla** *(mg m-3)*  **PP** *(mgC m-3 d-1)*  **SpecPP** *(mgC mgChla-1 d-1)*  **TCaro:Chla** *(ratio)*  **PSC:Chla** *(ratio)*  **PPC:Chla** *(ratio)*  **PrimPPC:Chla** *(ratio)*  **SecPPC:Chla** *(ratio)* | **0.381**  0.297  0.107  0.079  -0.092  0.184  0.160  -0.198 | **0.247**  0.147  0.148  0.117  0.028  0.028  -0.044  -0.095 | **-0.348**  **-0.352**  -0.253  -0.030  0.194  -0.154  -0.162  **0.319** | **0.351**  **0.419**  **0.386**  0.274  -0.019  **0.410**  **0.438**  -0.221 | **-0.429**  **-0.371**  -0.307  -0.221  0.057  **-0.381**  **-0.390**  0.247 | **-0.431**  **-0.504**  **-0.571**  **-0.362**  -0.068  **-0.394**  **-0.450**  0.131 |
|  |  |  |  |  |  |  |