**Table S2.** Correlation matric (nonparametric Spearman’s rho, *ρ*) of particulate organic carbon (POC), particulate organic nitrogen (PON), dissolved organic carbon (DOC), dissolved organic nitrogen (DON), nitrate, nitrite and ammonium (DIN), and chlorophyll *a* (Chl *a*) concentration at all depth (0 – 1000 m) at all stations in May and August.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |
|  |  |  | **POC** | **PON** | **DOC** | **DON** |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| **MAY** | **PON** | *ρ*  *n* | 0.973\*\*  118 |  |  |  |
|  | **DOC** | *ρ*  *n* | -0.343\*\*  118 | -0.295\*\*  118 |  |  |
|  | **DON** | *ρ*  *n* | -0.451\*\*  96 | -0.418\*\*  96 | -0.013  96 |  |
|  | **Chl *a*** | *ρ*  *n* | 0.902\*\*  118 | 0.940\*\*  118 | -0.222\*  118 | -0.357\*\*  96 |
|  | **DIN** | *ρ*  *n* | -0.838\*\*  116 | -0.868\*\*  116 | 0.286\*\*  116 | 0.286\*\*  96 |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| **AUG.** | **PON** | *ρ*  *n* | 0.984\*\*  145 |  |  |  |
|  | **DOC** | *ρ*  *n* | -0.278\*  84 | -0.240\*  84 |  |  |
|  | **DON** | *ρ*  *n* | 0.138  81 | 0.122  81 | -0.061  80 |  |
|  | **Chl *a*** | *ρ*  *n* | 0.653\*\*  144 | 0.686\*\*  144 | -0.101  83 | -0.044  80 |
|  | **DIN** | *ρ*  *n* | -0.839\*\*  139 | -0.841\*\*  139 | 0.103  79 | -0.470\*\*  80 |
|  |  |  |  |  |  |  |

\*\*Correlation is significant at the 0.01 level \*Correlation is significant at the 0.05 level