## Supplemental material

**Table S1.** List of parameters per sampling stations

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Station** | **Date (UTC 2016)** | **Latitude (° N)a** | **Longitude (° W)a** | **Parameters** |
| G100 | 09-June | 68.499 | 56.792 | UVPa, pigments, phytoplankton samples, biogenic silica |
| G101 | 10-June | 68.497 | 57.132 | UVP, dissolved nutrients |
| G102 | 10-June | 68.496 | 57.480 | UVP, pigments, phytoplankton samples, biogenic silica |
| G103 | 11-June | 68.499 | 57.639 | UVP, dissolved nutrients |
| G104 | 11-June | 68.498 | 58.153 | UVP, pigments |
| G105 | 11-June | 68.499 | 58.522 | UVP |
| G106 | 11-June | 68.500 | 58.824 | UVP, dissolved nutrients |
| G107 | 11-June | 68.498 | 59.179 | UVP, pigments, biogenic silica |
| G108 | 12-June | 68.509 | 59.497 | UVP |
| G109 | 12-June | 68.516 | 59.844 | UVP, dissolved nutrients |
| G110 | 12-June | 68.534 | 60.167 | UVP, pigments, biogenic silica |
| G111 | 13-June | 68.471 | 60.440 | UVP |
| G112 | 13-June | 68.554 | 60.652 | UVP, dissolved nutrients |
| G113 | 13-June | 68.497 | 60.878 | UVP |
| G114 | 13-June | 68.516 | 61.104 | UVP |
| G115 | 13-June | 68.456 | 61.356 | UVP, pigments, phytoplankton samples, biogenic silica |
| G200 | 14-June | 68.584 | 60.103 | UVP, pigments, dissolved nutrients. |
| G201 | 14-June | 68.633 | 59.947 | UVP, pigments, phytoplankton samples, biogenic silica |
| G202 | 15-June | 68.659 | 59.604 | UVP |
| G203 | 15-June | 68.685 | 59.420 | UVP, dissolved nutrients |
| G204 | 15-June | 68.709 | 59.257 | UVP, pigments, phytoplankton samples, biogenic silica |
| G205 | 16-June | 68.743 | 58.936 | UVP |
| G206 | 16-June | 68.773 | 58.739 | UVP, pigments, dissolved nutrients |
| G207 | 16-June | 68.804 | 58.492 | UVP, pigments, phytoplankton samples, biogenic silica |
| G208 | 16-June | 68.821 | 58.300 | UVP |
| G209 | 16-June | 68.850 | 58.082 | UVP, pigments |
| G210 | 16-June | 68.876 | 57.862 | UVP |
| G211 | 17-June | 68.908 | 57.650 | UVP, pigments, dissolved nutrients |
| G300 | 17-June | 68.999 | 56.790 | UVP, pigments, phytoplankton samples, dissolved nutrients, biogenic silica |
| G3000 | 17-June | 69.007 | 55.991 | UVP |
| G301 | 18-June | 69.001 | 57.010 | UVP |
| G302 | 18-June | 69.000 | 57.249 | UVP, dissolved nutrients |
| G303 | 18-June | 69.000 | 57.485 | UVP, pigments |
| G304 | 18-June | 69.000 | 57.711 | UVP |
| G305 | 18-June | 69.000 | 57.949 | UVP, dissolved nutrients |
| G306 | 18-June | 69.000 | 58.189 | UVP |
| G307 | 18-June | 69.002 | 58.416 | UVP |
| G308 | 19-June | 69.002 | 58.653 | UVP, dissolved nutrients |
| G309 | 18-June | 69.000 | 58.740 | UVP, pigments, phytoplankton samples, biogenic silica |
| G310 | 19-June | 69.026 | 59.055 | UVP, pigments |
| G311 | 19-June | 68.993 | 59.329 | UVP |
| G312 | 19-June | 69.012 | 59.564 | UVP, pigments, Phytoplankton samples |
| G313 | 19-June | 69.011 | 59.799 | UVP, dissolved nutrients |
| G314 | 20-June | 69.010 | 60.050 | UVP |
| G315 | 20-June | 69.006 | 60.190 | UVP, pigments |
| G316 | 20-June | 69.001 | 60.516 | UVP |
| G317 | 20-June | 69.007 | 60.743 | UVP, dissolved nutrients. |
| G318 | 20-June | 69.007 | 60.953 | UVP, pigments, phytoplankton samples, biogenic silica |
| G319 | 21-June | 69.002 | 61.194 | UVP |
| G320 | 21-June | 69.033 | 61.438 | UVP, dissolved nutrients |
| G321 | 21-June | 68.958 | 61.632 | UVP, pigments |
| G322 | 21-June | 68.989 | 61.883 | UVP |
| G323 | 21-June | 69.009 | 62.122 | UVP, dissolved nutrients |
| G324 | 21-June | 68.996 | 62.358 | UVP, pigments, Phytoplankton samples. Biogenic silica |
| G325 | 22-June | 68.999 | 62.603 | UVP, dissolved nutrients |
| G400 | 24-June | 68.020 | 62.419 | UVP, pigments |
| G401 | 25-June | 68.072 | 62.126 | UVP |
| G402 | 25-June | 68.075 | 61.860 | UVP, dissolved nutrients |
| G403 | 25-June | 68.031 | 61.601 | UVP, pigments, phytoplankton samples, biogenic silica |
| G404 | 25-June | 68.094 | 61.355 | UVP |
| G405 | 26-June | 68.094 | 61.077 | UVP, dissolved nutrients, biogenic silica |
| G406 | 26-June | 68.080 | 60.816 | UVP, pigments |
| G407 | 26-June | 68.098 | 60.547 | UVP |
| G408 | 26-June | 68.118 | 60.268 | UVP, dissolved nutrients |
| G409 | 26-June | 68.106 | 59.994 | UVP, pigments, phytoplankton samples biogenic silica |
| G410 | 27-June | 68.110 | 59.729 | UVP |
| G411 | 27-June | 68.116 | 59.451 | UVP, dissolved nutrients |
| G412 | 27-June | 68.112 | 59.201 | UVP, pigments, Dissolved nutrients |
| G413 | 27-June | 68.115 | 58.937 | UVP, pigments, Phytoplankton samples. Biogenic silica |
| G414 | 27-June | 68.112 | 58.688 | UVP, dissolved nutrients |
| G415 | 27-June | 68.112 | 58.421 | UVP |
| G416 | 28-June | 68.115 | 58.117 | UVP |
| G417 | 29-June | 68.114 | 57.864 | UVP, dissolved nutrients |
| G418 | 28-June | 68.114 | 57.770 | UVP, pigments, phytoplankton samples, biogenic silica |
| G419 | 29-June | 68.113 | 57.344 | UVP |
| G420 | 29-June | 68.109 | 57.072 | UVP, dissolved nutrients |
| G500 | 29-June | 70.001 | 56.898 | UVP, pigments |
| G501 | 29-June | 70.000 | 57.186 | UVP |
| G502 | 30-June | 70.000 | 57.458 | UVP, dissolved nutrients |
| G503 | 30-June | 70.000 | 57.765 | UVP, pigments |
| G504 | 30-June | 70.002 | 58.072 | UVP |
| G505 | 30-June | 70.000 | 58.363 | UVP, dissolved nutrients |
| G506 | 30-June | 70.004 | 58.656 | UVP, pigments |
| G506.5 | 30-June | 70.002 | 58.889 | UVP |
| G507 | 30-June | 70.009 | 59.125 | UVP, pigments, phytoplankton samples, biogenic silica |
| G508 | 01-July | 70.004 | 59.287 | UVP |
| G509 | 01-July | 69.997 | 59.510 | UVP, dissolved nutrients |
| G510 | 01-July | 70.000 | 59.808 | UVP, pigments |
| G511 | 01-July | 70.000 | 60.092 | UVP |
| G512 | 01-July | 70.000 | 60.362 | UVP, pigments, Phytoplankton samples. Dissolved nutrients. Biogenic silica |
| G513 | 01-July | 69.997 | 60.681 | UVP |
| G514 | 01-July | 70.004 | 60.974 | UVP, dissolved nutrients |
| G515 | 02-July | 69.997 | 61.239 | UVP, pigments |
| G516 | 02-July | 70.003 | 61.561 | UVP |
| G517 | 02-July | 69.992 | 61.855 | UVP, dissolved nutrients |
| G518 | 02-July | 69.997 | 62.152 | UVP |
| G519 | 02-July | 70.017 | 62.422 | UVP, pigments, biogenic silica |
| G521 | 03-July | 69.997 | 63.018 | UVP, dissolved nutrients |
| G600 | 03-July | 70.511 | 63.988 | UVP, pigments, phytoplankton samples, biogenic silica |
| G601 | 27-June | 70.503 | 63.703 | UVP |
| G602 | 27-June | 70.513 | 63.407 | UVP, dissolved nutrients |
| G603 | 04-July | 70.501 | 63.042 | UVP, pigments |
| G604 | 04-July | 70.500 | 62.802 | UVP, pigments |
| G604.5 | 06-July | 70.502 | 62.625 | UVP, biogenic silica |
| G605 | 04-July | 70.503 | 62.517 | UVP, pigments, phytoplankton samples, dissolved nutrients, biogenic silica |
| G606 | 04-July | 70.500 | 62.196 | UVP |
| G607 | 06-July | 70.500 | 61.912 | UVP, dissolved nutrients |
| G608 | 07-July | 70.502 | 61.606 | UVP, pigments |
| G609 | 07-July | 70.501 | 61.309 | UVP, dissolved nutrients |
| G610 | 06-July | 70.500 | 61.014 | UVP, dissolved nutrients |
| G611 | 06-July | 70.500 | 60.719 | UVP |
| G612 | 06-July | 70.513 | 60.433 | UVP, pigments |
| G613 | 06-July | 70.502 | 60.123 | UVP, dissolved nutrients |
| G614 | 06-July | 70.501 | 59.832 | UVP |
| G615 | 05-July | 70.499 | 59.525 | UVP, pigments, phytoplankton samples, biogenic silica |
| G616 | 07-July | 70.500 | 59.236 | UVP |
| G617 | 07-July | 70.499 | 58.939 | UVP, dissolved nutrients |
| G618 | 07-July | 70.500 | 58.645 | UVP, pigments |
| G700 | 08-July | 69.501 | 57.870 | UVP, pigments |
| G701 | 08-July | 69.501 | 58.157 | UVP, dissolved nutrients |
| G702 | 08-July | 69.502 | 58.436 | UVP |
| G703 | 07-July | 69.500 | 58.724 | UVP, pigments, phytoplankton samples, biogenic silica |
| G704 | 08-July | 69.500 | 59.001 | UVP |
| G705 | 08-July | 69.502 | 59.287 | UVP, dissolved nutrients |
| G707 | 08-July | 69.512 | 59.805 | UVP, pigments, phytoplankton samples, biogenic silica |
| G708 | 09-July | 69.503 | 60.150 | UVP, pigments |
| G709 | 09-July | 69.501 | 60.427 | UVP |
| G710 | 09-July | 69.502 | 60.706 | UVP |
| G711 | 09-July | 69.500 | 61.012 | UVP, pigments |
| G712 | 09-July | 69.323 | 60.984 | UVP |
| G713 | 09-July | 69.336 | 60.220 | UVP, pigments, phytoplankton samples, biogenic silica |
| G714 | 10-July | 69.500 | 61.865 | UVP |
| G715 | 10-July | 69.500 | 62.140 | UVP, dissolved nutrients |
| G716 | 10-July | 69.500 | 62.427 | UVP, pigments |
| G717 | 10-July | 69.503 | 62.713 | UVP |
| G718 | 10-July | 69.503 | 63.001 | UVP, dissolved nutrients |
| G719 | 10-July | 69.501 | 63.233 | UVP, pigments, phytoplankton samples, biogenic silica |

a Latitute and longitude were applicated to Underwater Video Profiler (UVP) sampling.

**Table S2.** Pigment concentrations in the EML

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Station** | **Date (UTC 2016)** | **Latitude (° N)** | **Longitude (° W)** | **Chl *a* concentrationEML (µg L–1)** | **Phaeopigment EML (µg L–1)** |
| G100 | 09-June | 68.499 | 56.792 | 1.73 | 0.048 |
| G102 | 10-June | 68.496 | 57.480 | 0.87 | 0.025 |
| G107 | 11-June | 68.498 | 59.179 | 1.85 | 0.023 |
| G110 | 12-June | 68.534 | 60.167 | 0.48 | 0.007 |
| G115 | 13-June | 68.456 | 61.356 | 0.28 | 0.005 |
| G200 | 14-June | 68.584 | 60.103 | 0.68 | 0.010 |
| G201 | 14-June | 68.633 | 59.947 | 0.37 | 0.008 |
| G204 | 15-June | 68.709 | 59.257 | 1.72 | 0.028 |
| G206 | 16-June | 68.773 | 58.739 | 2.46 | 0.031 |
| G207 | 16-June | 68.804 | 58.492 | 1.69 | 0.027 |
| G209 | 16-June | 68.850 | 58.082 | 0.42 | 0.010 |
| G211 | 17-June | 68.908 | 57.650 | 1.14 | 0.021 |
| G300 | 17-June | 68.999 | 56.790 | 1.37 | 0.098 |
| G303 | 18-June | 69.000 | 57.485 | 1.64 | 0.067 |
| G309 | 18-June | 69.000 | 58.740 | 1.50 | 0.023 |
| G310 | 19-June | 69.026 | 59.055 | 1.62 | 0.025 |
| G312 | 19-June | 69.012 | 59.564 | 0.65 | 0.012 |
| G315 | 20-June | 69.006 | 60.190 | 0.54 | 0.007 |
| G318 | 20-June | 69.007 | 60.953 | 0.33 | 0.006 |
| G321 | 21-June | 68.958 | 61.632 | 0.48 | 0.009 |
| G324 | 21-June | 68.996 | 62.358 | 0.60 | 0.007 |
| G400 | 24-June | 68.020 | 62.419 | 0.43 | 0.015 |
| G403 | 25-June | 68.031 | 61.601 | 0.06 | 0.002 |
| G406 | 26-June | 68.080 | 60.816 | 0.44 | 0.005 |
| G409 | 26-June | 68.106 | 59.994 | 0.56 | 0.007 |
| G412 | 27-June | 68.112 | 59.201 | 0.60 | 0.014 |
| G413 | 27-June | 68.115 | 58.937 | 0.45 | 0.013 |
| G418 | 28-June | 68.114 | 57.770 | 0.28 | 0.019 |
| G500 | 29-June | 70.001 | 56.898 | 0.43 | 0.026 |
| G503 | 30-June | 70.000 | 57.765 | 0.24 | 0.010 |
| G506 | 30-June | 70.004 | 58.656 | 1.51 | 0.035 |
| G507 | 30-June | 70.009 | 59.125 | 1.79 | 0.052 |
| G510 | 01-July | 70.000 | 59.808 | 0.75 | 0.012 |
| G512 | 01-July | 70.000 | 60.362 | 2.25 | 0.000 |
| G515 | 02-July | 69.997 | 61.239 | 0.79 | 0.010 |
| G519 | 02-July | 70.017 | 62.422 | 0.25 | 0.006 |
| G600 | 03-July | 70.511 | 63.988 | 0.62 | 0.009 |
| G603 | 04-July | 70.501 | 63.042 | 0.41 | 0.006 |
| G604 | 04-July | 70.500 | 62.802 | 0.40 | 0.005 |
| G605 | 04-July | 70.503 | 62.517 | 0.22 | 0.005 |
| G608 | 07-July | 70.502 | 61.606 | 0.93 | 0.011 |
| G612 | 06-July | 70.513 | 60.433 | 0.70 | 0.008 |
| G615 | 05-July | 70.499 | 59.525 | 3.28 | 0.041 |
| G618 | 07-July | 70.500 | 58.645 | 0.68 | 0.009 |
| G700 | 08-July | 69.501 | 57.870 | 0.21 | 0.000 |
| G703 | 07-July | 69.500 | 58.724 | 0.45 | 0.008 |
| G707 | 08-July | 69.512 | 59.805 | 1.01 | 0.013 |
| G708 | 09-July | 69.503 | 60.150 | 0.36 | 0.000 |
| G711 | 09-July | 69.500 | 61.012 | 0.55 | 0.006 |
| G713 | 09-July | 69.336 | 60.220 | 0.93 | 0.008 |
| G716 | 10-July | 69.500 | 62.427 | 0.06 | 0.005 |
| G719 | 10-July | 69.501 | 63.233 | 0.82 | 0.013 |