**Supplementary Materials to**

Water masses variability in inner Kongsfjorden (Svalbard) during 2010-2020

Authors

Francesco De Rovere1,2, Leonardo Langone2, Katrin Schroeder3, Stefano Miserocchi2, Federico Giglio2, Stefano Aliani4, Jacopo Chiggiato3

Affiliations:

1 Department of Environmental Sciences, Informatics and Statistics, Università Ca’ Foscari di Venezia, Venezia, Italy

2 CNR-ISP, Consiglio Nazionale delle Ricerche, Istituto di Scienze Polari, Bologna, Italy

3 CNR-ISMAR, Consiglio Nazionale delle Ricerche, Istituto di Scienze Marine, Venezia, Italy

4 CNR-ISMAR, Consiglio Nazionale delle Ricerche, Istituto di Scienze Marine, Lerici, Italy

Corresponding author: jacopo.chiggiato@cnr.it

Table S1: Summary information of CTD surveys utilised to produce the T-S diagram in Figure 6.

|  |  |  |  |
| --- | --- | --- | --- |
| Date | Longitude (°E) | Latitude (°N) | Bottom Depth (m) |
| 12/09/2010 | 12.187 | 78.92067 | 76 |
| 04/09/2013 | 12.25883 | 78.91438 | 100 |
| 09/09/2013 | 12.25312 | 78.91223 | 93 |
| 10/09/2013 | 12.27977 | 78.91738 | 75 |
| 10/09/2013 | 12.27887 | 78.92575 | 93.2 |
| 10/09/2013 | 12.2259 | 78.92602 | 40 |
| 11/09/2013 | 12.24732 | 78.91503 | 103 |
| 08/09/2014 | 12.21668 | 78.91495 | 77 |
| 10/09/2014 | 12.25532 | 78.91825 | 97 |
| 10/09/2014 | 12.27737 | 78.92207 | 85 |
| 17/06/2015 | 12.29817 | 78.91848 | 87 |
| 18/06/2015 | 12.25575 | 78.91502 | 101 |
| 19/06/2015 | 12.26003 | 78.91475 | 99 |
| 20/06/2015 | 12.24537 | 78.91397 | 100 |
| 22/06/2015 | 12.25312 | 78.9141 | 101 |
| 23/06/2015 | 12.25453 | 78.91423 | 101 |
| 22/06/2015 | 12.30247 | 78.91797 | 79 |
| 26/06/2015 | 12.24337 | 78.91362 | 100 |
| 26/06/2015 | 12.29897 | 78.91803 | 83 |
| 27/06/2015 | 12.2458 | 78.9139 | 102 |
| 19/05/2016 | 12.24832 | 78.91358 | 102 |
| 24/05/2016 | 12.25062 | 78.91395 | 100 |
| 25/05/2016 | 12.2394 | 78.84775 | 103 |
| 29/05/2016 | 12.24423 | 78.91417 | 102 |
| 14/06/2017 | 12.24423 | 78.91417 | 102 |
| 23/06/2017 | 12.24423 | 78.91417 | 102 |
| 03/07/2018 | 12.23357 | 78.91493 | 103 |
| 05/07/2018 | 12.26883 | 78.91517 | 106 |
| 05/07/2018 | 12.25538 | 78.92137 | 115 |
| 05/07/2018 | 12.26962 | 78.9272 | 84 |
| 06/07/2018 | 12.24347 | 78.91653 | 108 |
| 06/07/2018 | 12.10033 | 78.91512 | 102 |
| 06/07/2018 | 12.2547 | 78.92173 | 117 |
| 06/07/2018 | 12.26945 | 78.92715 | 85 |
| 08/09/2020 | 12.2443 | 78.91438 | 105 |
| 11/09/2020 | 12.24857 | 78.91392 | 103 |

Table S2: Summary information of CTD survey utilised to produce the section graphics in Figure 7 and 8.

|  |  |  |  |
| --- | --- | --- | --- |
| Date | Longitude (°E) | Latitude (°N) | Bottom Depth (m) |
| 08/09/2014 | 12.4083 | 78.8873 | 53 |
| 08/09/2014 | 12.375 | 78.8942 | 37 |
| 08/09/2014 | 12.3151 | 78.9036 | 30 |
| 08/09/2014 | 12.2627 | 78.9073 | 39 |
| 08/09/2014 | 12.2166 | 78.9149 | 77 |
| 10/09/2014 | 12.1851 | 78.9256 | 69 |
| 10/09/2014 | 12.1674 | 78.9432 | 128 |
| 10/09/2014 | 12.1133 | 78.945 | 179 |
| 17/10/2015 | 12.423 | 78.885 | 74 |
| 17/10/2015 | 12.4636 | 78.8737 | 31.6 |
| 17/10/2015 | 12.3676 | 78.8913 | 38 |
| 17/10/2015 | 12.3211 | 78.8947 | 40 |
| 17/10/2015 | 12.2686 | 78.9022 | 31.6 |
| 18/10/2015 | 12.2104 | 78.9074 | 89 |
| 18/10/2015 | 12.1673 | 78.913 | 111 |
| 05/07/2018 | 12.1204 | 78.9186 | 130 |
| 05/07/2018 | 12.4657 | 78.8789 | 74 |
| 05/07/2018 | 12.427 | 78.8854 | 92 |
| 05/07/2018 | 12.3946 | 78.8905 | 80 |
| 05/07/2018 | 12.3541 | 78.8974 | 32 |
| 05/07/2018 | 12.2896 | 78.9018 | 43 |
| 05/07/2018 | 12.1678 | 78.9125 | 113 |
| 05/07/2018 | 12.1353 | 78.9192 | 122 |
| 09/09/2020 | 11.9795 | 78.9415 | >300 |
| 11/09/2020 | 11.9745 | 78.9406 | 305 |
| 11/09/2020 | 12.5663 | 78.8666 | 71.3 |
| 11/09/2020 | 12.4663 | 78.8745 | 32.7 |
| 11/09/2020 | 12.3721 | 78.8905 | 38.7 |
| 11/09/2020 | 12.3225 | 78.895 | 43.6 |
| 11/09/2020 | 12.2699 | 78.9033 | 37 |
| 11/09/2020 | 12.2485 | 78.9139 | 103 |
| 11/09/2020 | 12.1701 | 78.9132 | 103 |
| 11/09/2020 | 12.1152 | 78.918 | 133 |