Supporting Information for:

**Radiocarbon measurements of dissolved inorganic carbon (DIC) in sediment porewater and seawater at AWI MICADAS**

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Tables S1 and S3

Table S1

PS128 seawater DIC radiocarbon results measured at AWI MICADAS

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **AWI#** | **Sample** | **Depth [m]** | **F14C** | **σF14C** | **Mass [µgC]** |
| 9377.1.1 | PS128\_11-1\_21  | 10 | 0.8735 | 0.0079 | 59 |
| 9377.1.2 | PS128\_11-1\_21  | 10 | 0.8827 | 0.0083 | 57 |
| 9377.2.1 | PS128\_11-1\_21  | 10 | 0.8958 | 0.0074 | 48 |
| 9377.2.2 | PS128\_11-1\_21  | 10 | 0.8894 | 0.0071 | 49 |
| 9378.1.1 | PS128\_11-1\_20  | 70 | 0.8665 | 0.0079 | 58 |
| 9378.1.2 | PS128\_11-1\_20  | 70 | 0.8815 | 0.0079 | 60 |
| 9378.2.1 | PS128\_11-1\_20  | 70 | 0.8719 | 0.007 | 49 |
| 9378.2.2 | PS128\_11-1\_20  | 70 | 0.8808 | 0.007 | 49 |
| 9379.1.1 | PS128\_11-1\_19  | 150 | 0.876 | 0.0079 | 59 |
| 9379.1.2 | PS128\_11-1\_19  | 150 | 0.8657 | 0.0078 | 61 |
| 9379.2.1 | PS128\_11-1\_19  | 150 | 0.8664 | 0.0071 | 51 |
| 9379.2.2 | PS128\_11-1\_19  | 150 | 0.8638 | 0.0073 | 49 |
| 9380.1.1 | PS128\_11-1\_15 | 520 | 0.8624 | 0.0078 | 60 |
| 9380.1.2 | PS128\_11-1\_15 | 520 | 0.8581 | 0.0079 | 57 |
| 9380.2.2 | PS128\_11-1\_17  | 300 | 0.9022 | 0.0074 | 50 |
| 9381.1.1 | PS128\_11-1\_17 | 300 | 0.9048 | 0.0081 | 54 |
| 9381.1.2 | PS128\_11-1\_17 | 300 | 0.9045 | 0.008 | 56 |
| 9381.2.1 | PS128\_11-1\_15  | 520 | 0.8511 | 0.0073 | 48 |
| 9381.2.2 | PS128\_11-1\_15  | 520 | 0.8544 | 0.0072 | 48 |
| 9382.1.1 | PS128\_11-1\_13  | 900 | 0.853 | 0.0078 | 60 |
| 9382.1.2 | PS128\_11-1\_13  | 900 | 0.8519 | 0.0077 | 58 |
| 9382.2.1 | PS128\_11-1\_13  | 900 | 0.8444 | 0.0071 | 52 |
| 9382.2.2 | PS128\_11-1\_13  | 900 | 0.8442 | 0.0071 | 51 |
| 9383.2.1 | PS128\_11-1\_11  | 1400 | 0.843 | 0.0072 | 48 |
| 9383.2.2 | PS128\_11-1\_11  | 1400 | 0.8366 | 0.0071 | 50 |
| 9384.1.2 | PS128\_11-1\_9  | 1800 | 0.8427 | 0.0081 | 58 |
| 9384.2.1 | PS128\_11-1\_9  | 1800 | 0.8432 | 0.0072 | 51 |
| 9384.2.2 | PS128\_11-1\_9  | 1800 | 0.8286 | 0.0072 | 48 |
| 9385.1.1 | PS128\_11-1\_7  | 2200 | 0.8522 | 0.008 | 59 |
| 9385.1.2 | PS128\_11-1\_7  | 2200 | 0.8401 | 0.0077 | 58 |
| 9385.2.1 | PS128\_11-1\_7  | 2200 | 0.8413 | 0.0074 | 49 |
| 9385.2.2 | PS128\_11-1\_7  | 2200 | 0.8442 | 0.0073 | 48 |
| 9386.1.1 | PS128\_11-1\_1  | 2690 | 0.8622 | 0.0078 | 54 |
| 9386.2.1 | PS128\_11-1\_1  | 2690 | 0.8452 | 0.0072 | 55 |
| 9386.2.2 | PS128\_11-1\_1  | 2690 | 0.8454 | 0.0071 | 47 |

Table S2

PS128 seawater DIC radiocarbon results measured at NOSAMS

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **NOSAMS#** | **Sample** | **Depth [m]** | **F14C** | **σF14C** |
| OS-167612 | PS128\_11-1\_7, 2200 m | 2200 | 0.8520 | 0.0018 |
| OS-167613 | PS128\_11-1\_1, 2690 m | 2690 | 0.8512 | 0.0021 |
| OS-167589 | PS128\_11-1\_21, 10 m  | 10 | 0.8809 | 0.0020 |
| OS-167590 | PS128\_11-1\_20, 70 m | 70 | 0.8800 | 0.0018 |
| OS-167591 | PS128\_11-1\_19, 150 m | 150 | 0.8725 | 0.0019 |
| OS-167592 | PS128\_11-1\_17, 300 m | 300 | 0.8654 | 0.0021 |
| OS-167593 | PS128\_11-1\_15, 520 m | 520 | 0.8529 | 0.0023 |
| OS-167594 | PS128\_11-1\_13, 900 m | 900 | 0.8536 | 0.0017 |
| OS-167595 | PS128\_11-1\_11, 1400 m | 1400 | 0.8499 | 0.0018 |
| OS-167596 | PS128\_11-1\_9, 1800 m | 1800 | 0.8467 | 0.0022 |

Table S3

HE627 porewater DIC radiocarbon results measured at AWI MICADAS

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **AWI#** | **Sample** | **Depth [cm]** | **F14C** | **σF14C** | **Mass [µgC]** |
| 13299.1.1 | HE627\_2-8\_Bottom | -5 | 1.0277 | 0.0067 | 46 |
| 13300.1.1 | HE627\_2-8\_0-1cm | 0.5 | 1.0053 | 0.0066 | 53 |
| 13301.1.1 | HE627\_2-8\_1-2cm | 1.5 | 1.0152 | 0.0067 | 59 |
| 13302.1.1 | HE627\_2-8\_2-3cm | 2.5 | 1.0204 | 0.0068 | 61 |
| 13303.1.1 | HE627\_2-8\_3-4cm | 3.5 | 1.0180 | 0.0078 | 63 |
| 13304.1.1 | HE627\_2-8\_4-5cm | 4.5 | 1.0123 | 0.0067 | 61 |
| 13305.1.1 | HE627\_2-8\_5-6cm | 5.5 | 1.0142 | 0.0067 | 61 |
| 13306.1.1 | HE627\_2-8\_7-8cm | 7.5 | 1.0128 | 0.0067 | 65 |
| 13307.1.1 | HE627\_2-8\_8-9cm | 8.5 | 1.0117 | 0.0067 | 68 |
| 13308.1.1 | HE627\_2-8\_9-10cm | 9.5 | 1.0101 | 0.0067 | 69 |
| 13309.1.1 | HE627\_2-8\_11-13cm | 12 | 1.0142 | 0.0070 | 68 |
| 13310.1.1 | HE627\_2-8\_14-16cm | 15 | 1.0070 | 0.0066 | 71 |
| 13311.1.1 | HE627\_2-8\_17-19cm | 18 | 0.9966 | 0.0065 | 68 |
| 13312.1.1 | HE627\_2-8\_20-22cm | 21 | 1.0027 | 0.0067 | 68 |
| 13313.1.1 | HE627\_4-10\_Bottom | -5 | 1.0341 | 0.0066 | 48 |
| 13314.1.1 | HE627\_4-10\_0-1cm | 0.5 | 0.9947 | 0.0067 | 56 |
| 13315.1.1 | HE627\_4-10\_1-2cm | 1.5 | 1.0019 | 0.0066 | 59 |
| 13316.1.1 | HE627\_4-10\_2-3cm | 2.5 | 1.0080 | 0.0067 | 63 |
| 13317.1.1 | HE627\_4-10\_3-4cm | 3.5 | 1.0197 | 0.0066 | 71 |
| 13318.1.1 | HE627\_4-10\_4-5cm | 4.5 | 1.0067 | 0.0067 | 67 |
| 13319.1.1 | HE627\_4-10\_5-6cm | 5.5 | 1.0183 | 0.0068 | 62 |
| 13320.1.1 | HE627\_4-10\_6-7cm | 6.5 | 1.0154 | 0.0068 | 62 |
| 13321.1.1 | HE627\_4-10\_7-8cm | 7.5 | 1.0074 | 0.0066 | 57 |
| 13322.1.1 | HE627\_4-10\_8-9cm | 8.5 | 1.0227 | 0.0068 | 62 |
| 13323.1.1 | HE627\_4-10\_9-10cm | 9.5 | 1.0082 | 0.0066 | 69 |
| 13324.1.1 | HE627\_4-10\_11-13cm | 12 | 1.0061 | 0.0066 | 71 |
| 13325.1.1 | HE627\_4-10\_14-16cm | 15 | 0.9865 | 0.0067 | 67 |
| 13326.1.1 | HE627\_4-10\_17-19cm | 18 | 0.9911 | 0.0067 | 64 |
| 13327.1.1 | HE627\_4-10\_20-22cm | 21 | 0.9880 | 0.0066 | 63 |
| 13328.1.1 | HE627\_4-10\_23-25cm | 24 | 0.9751 | 0.0066 | 72 |
| 13329.1.1 | HE627\_4-10\_26-28cm | 27 | 0.9686 | 0.0065 | 75 |
| 13330.1.1 | HE627\_4-10\_29-31cm | 30 | 0.9439 | 0.0065 | 77 |
| 13331.1.1 | HE627\_4-10\_32-34cm | 33 | 0.9545 | 0.0066 | 82 |