Supplement of Clim. Past, 13, 1609–1634, 2017
https://doi.org/10.5194/cp-13-1609-2017-supplement

Climate of the Past
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Supplement of

Antarctic climate variability on regional and continental scales over the last 2000 years

Barbara Stenni et al.

Correspondence to: Barbara Stenni (barbara.stenni@unive.it)

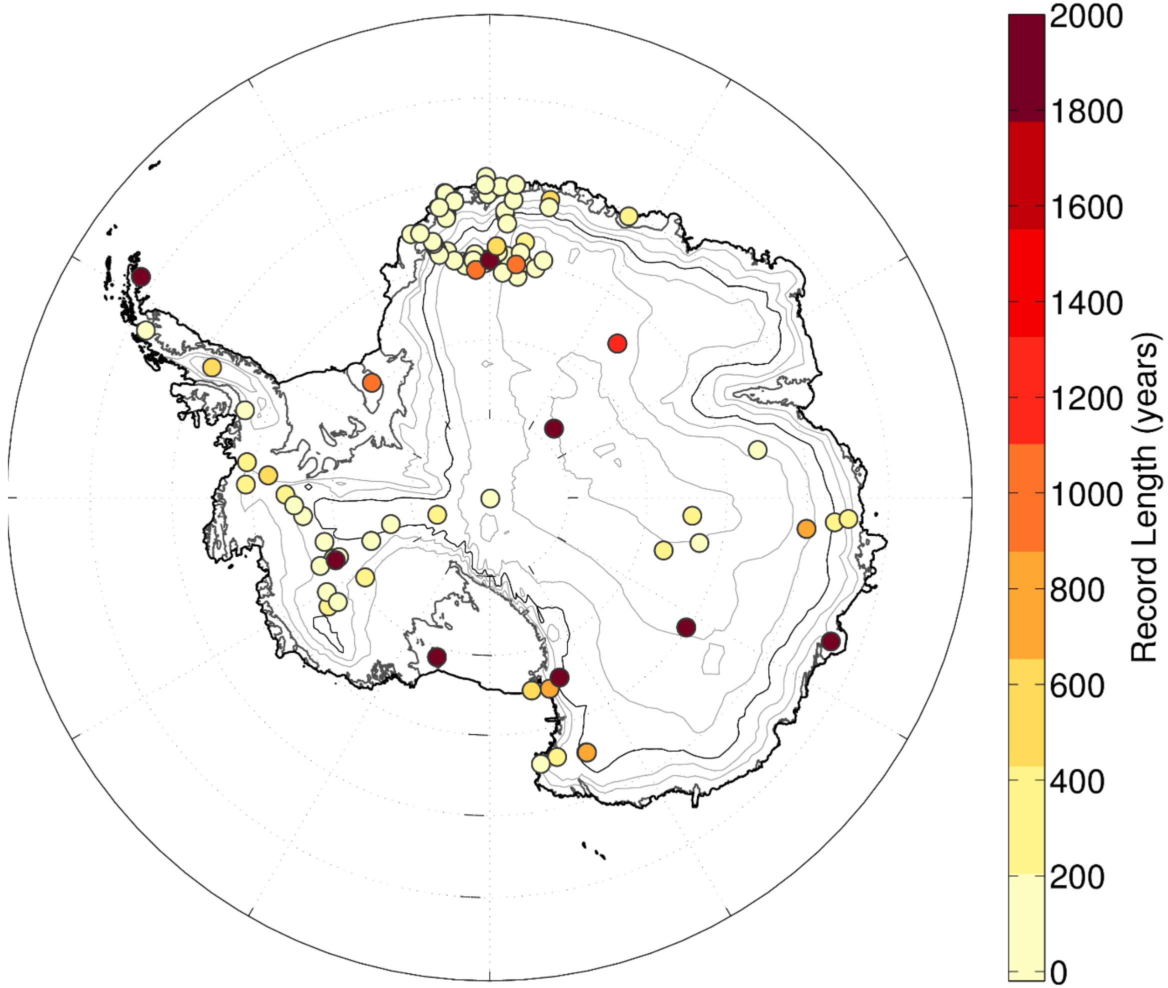


Figure S1. Length of records (years) for the new PAGES Antarctica2k database.

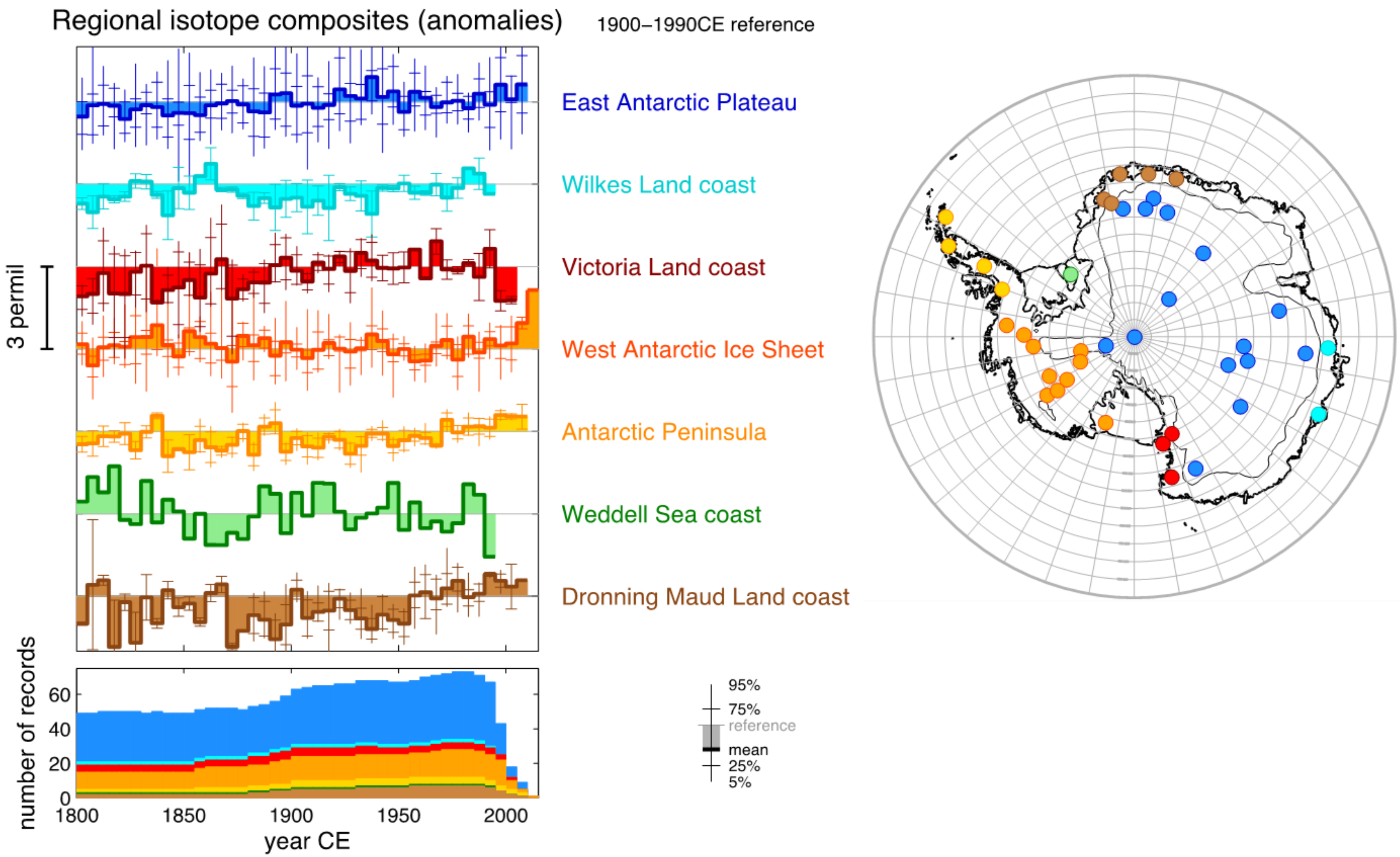


Figure S2. 5y un-weighted data for the last 200 years. Simple average of all the records in a region (left panel) after having reduced the data in the same grid (2°lat, 10°long), see map on the right panel. For each 5y bin the mean $\delta^{18}O$ anomaly across all records in the climatic region is calculated, as well as the distribution of $\delta^{18}O$ anomalies within each bin, expressed relative to the 1960-1990CE interval. The number of records used in the reconstructions for the different regions are displayed at the bottom.

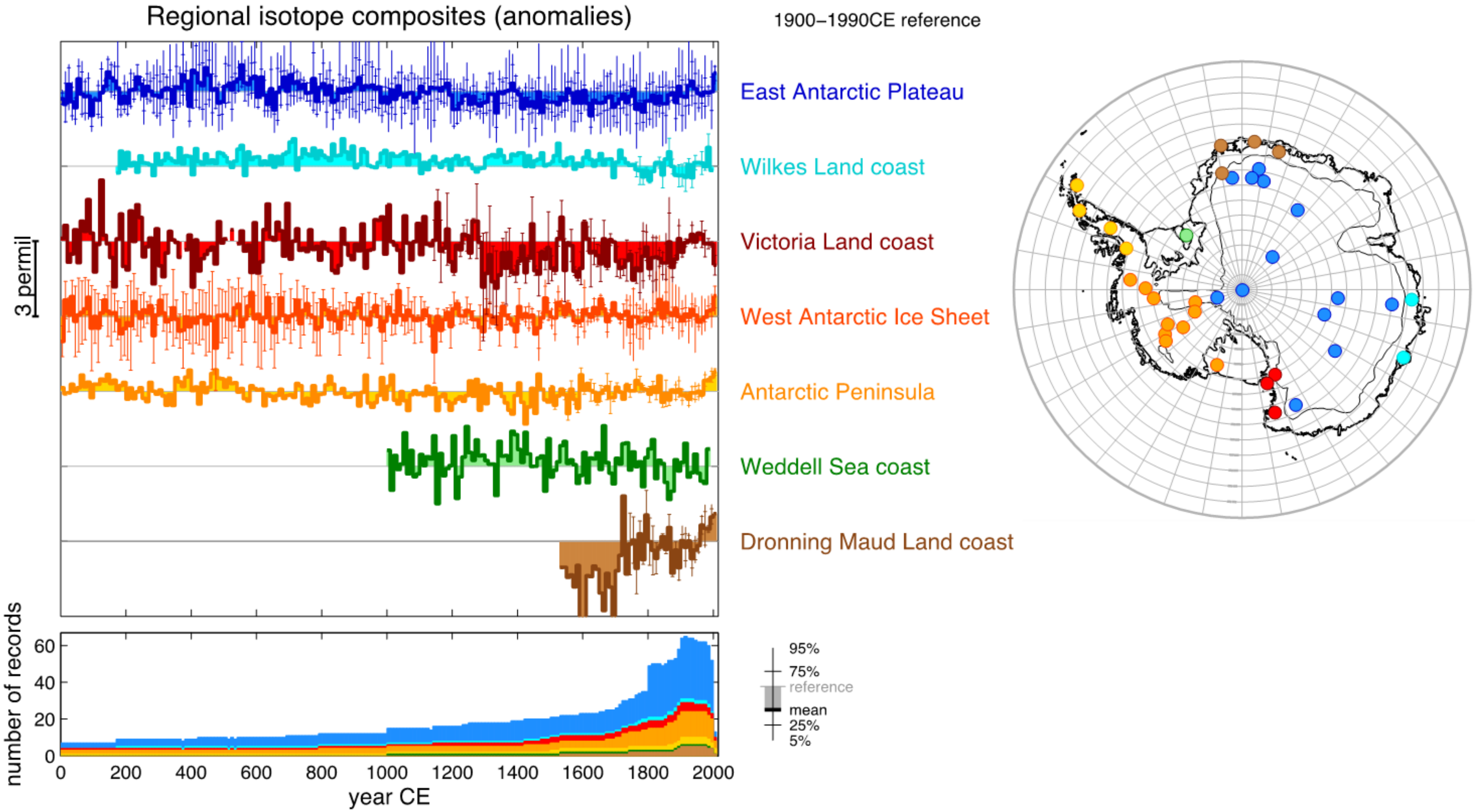


Figure S3. 10y un-weighted data for the last 2000 years. Simple average of all the records in a region (left panel) after having reduced the data in the same grid (2°lat, 10°long), see map on the right panel. For each 10y bin the mean $\delta^{18}O$ anomaly across all records in the climatic region is calculated, as well as the distribution of $\delta^{18}O$ anomalies within each bin, expressed relative to the 1900-1990CE interval. The number of records used in the reconstructions for the different regions are displayed at the bottom.

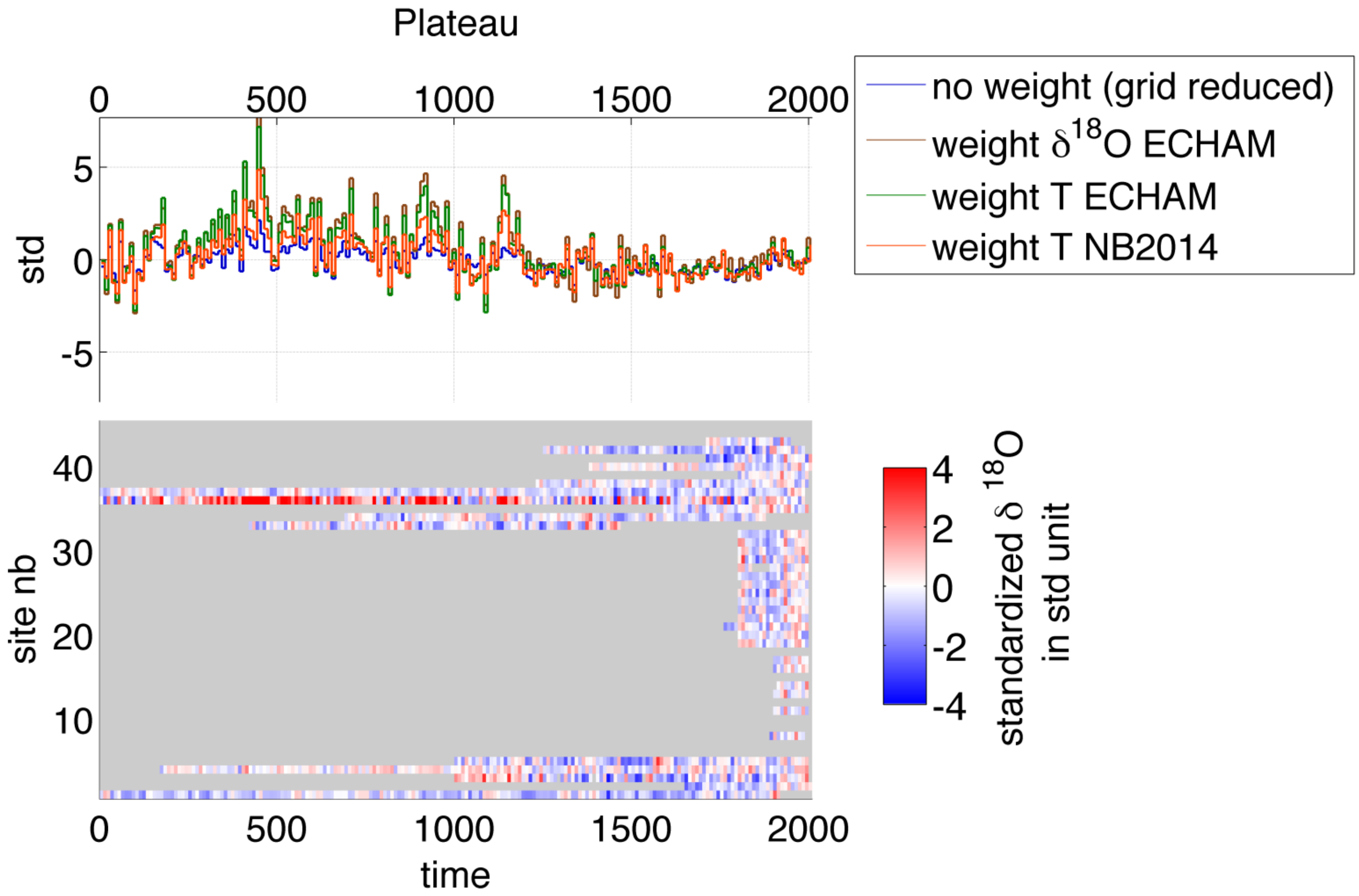


Figure S4. Upper panel: 10y averaged standardised $\delta^{18}O$ records for un-weighted (grid-reduced) and weighted composites (for the different weighting methods see the text for explanation) for the East Antarctic Plateau region over the last 2000 years. Bottom panel: 10y averaged standardised $\delta^{18}O$ records for the individual ice core records that contribute to this region. Sites with no data reflect ice cores which failed the length requirements (minimum 90y of data for 10y binned composites). For the site numbers refer to Table S1.

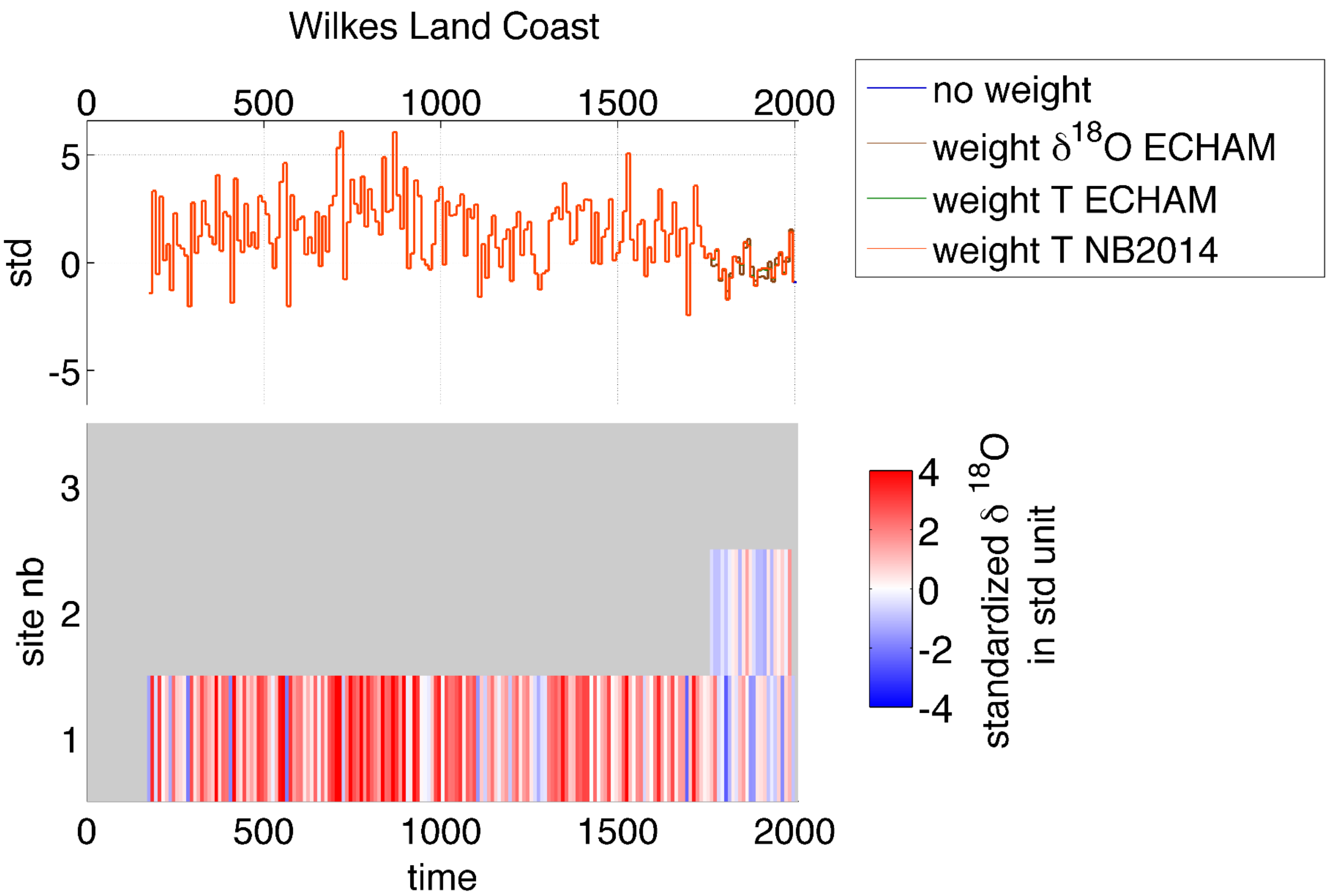


Figure S5. Upper panel: 10y averaged standardised $\delta^{18}O$ records for un-weighted (grid-reduced) and weighted composites (for the different weighting methods see the text for explanation) for the Wilkes Land Coast region over the last 2000 years. Bottom panel: 10y averaged standardised $\delta^{18}O$ records for the individual ice core records that contribute to this region. Sites with no data reflect ice cores which failed the length requirements (minimum 90y of data for 10y binned composites). For the site numbers refer to Table S1.

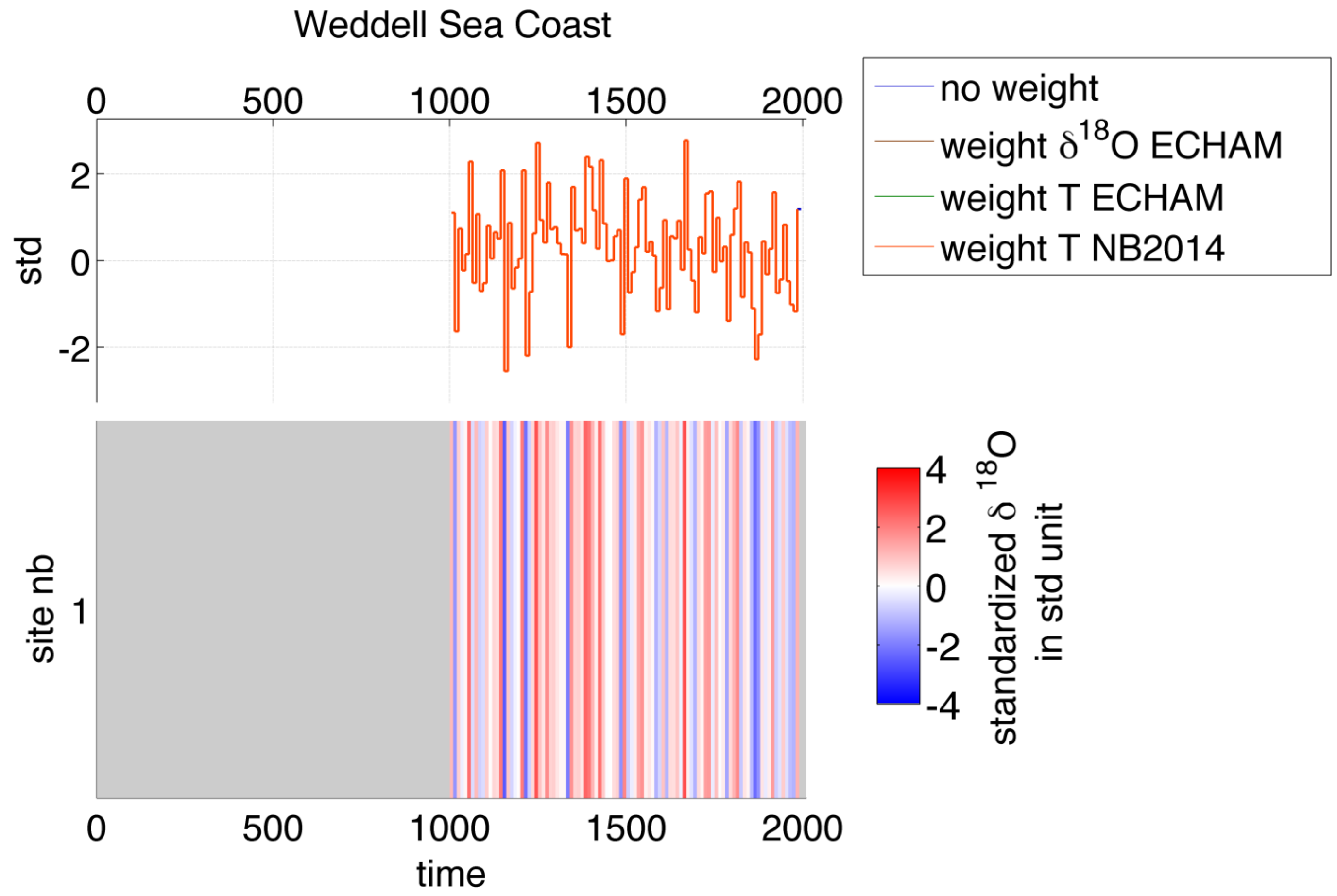


Figure S6. Upper panel: 10y averaged standardised $\delta^{18}O$ records for un-weighted (grid-reduced) and weighted composites (for the different weighting methods see the text for explanation) for the Weddell Sea Coast region over the last 2000 years. Bottom panel: 10y averaged standardised $\delta^{18}O$ records for the individual ice core records that contribute to this region. Sites with no data reflect ice cores which failed the length requirements (minimum 90y of data for 10y binned composites). For the site number refer to Table S1.

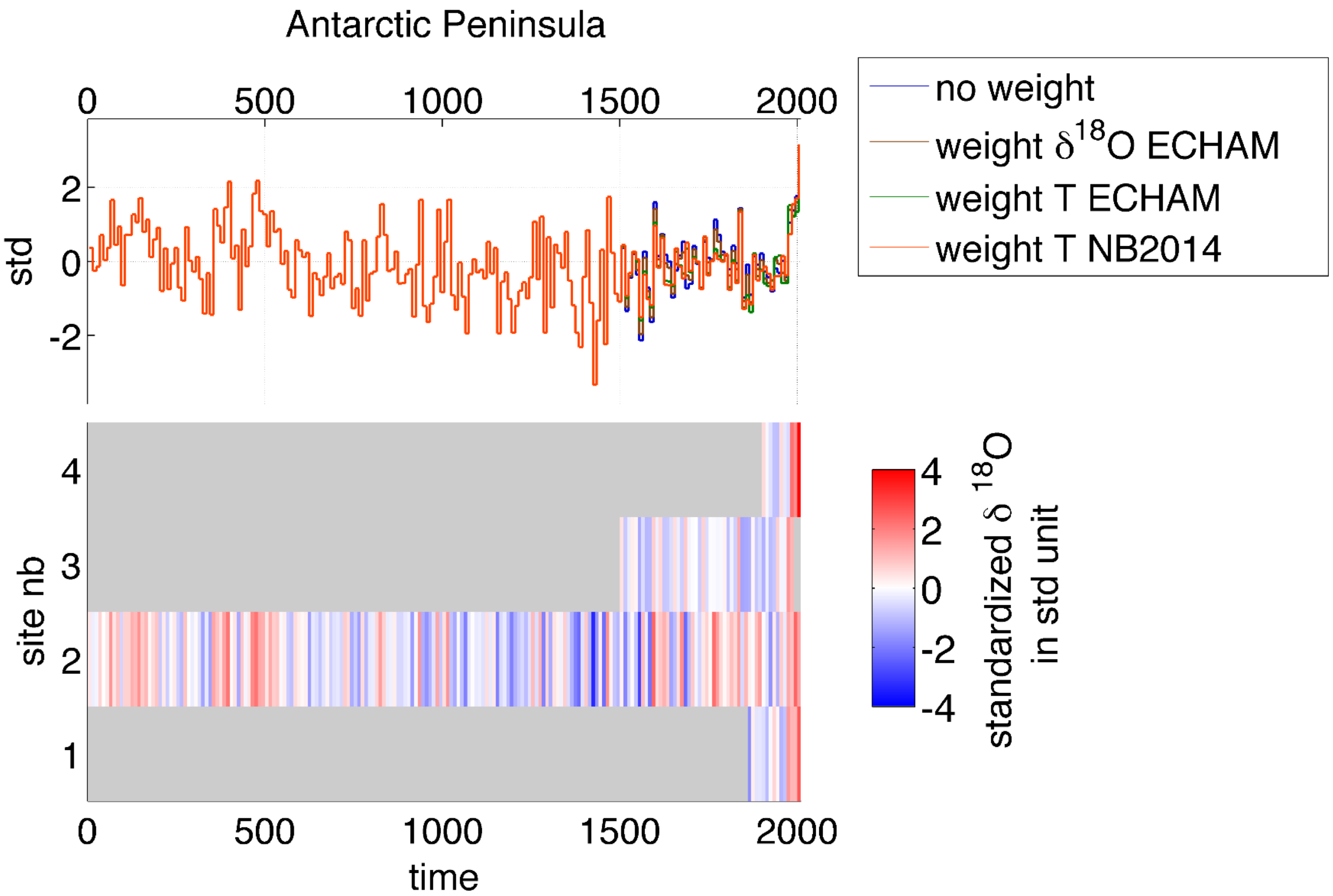


Figure S7. Upper panel: 10y averaged standardised $\delta^{18}O$ records for un-weighted (grid-reduced) and weighted composites (for the different weighting methods see the text for explanation) for the Antarctic Peninsula region over the last 2000 years. Bottom panel: 10y averaged standardised $\delta^{18}O$ records for the individual ice core records that contribute to this region. Sites with no data reflect ice cores which failed the length requirements (minimum 90y of data for 10y binned composites). For the site numbers refer to Table S1.

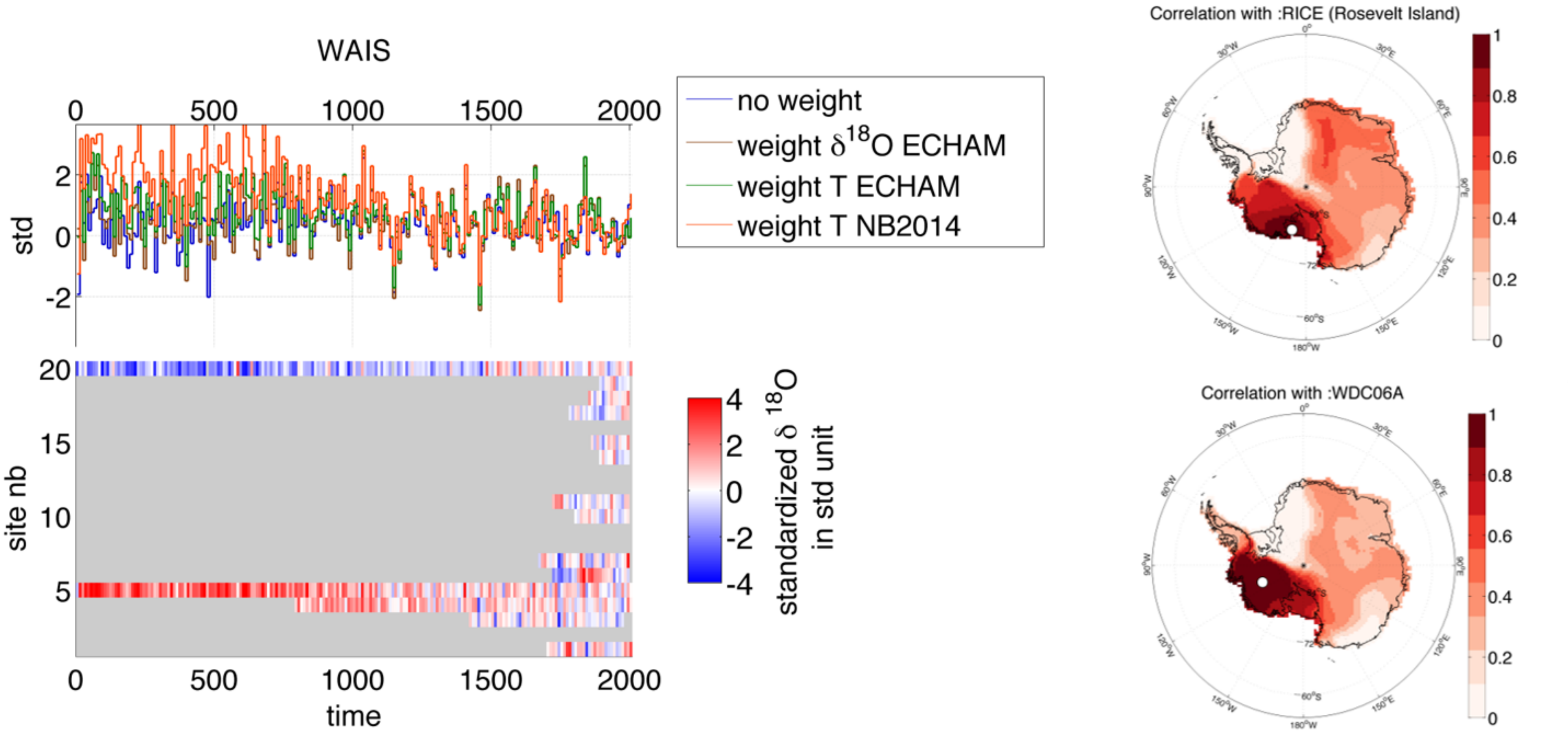


Figure S8. Left panel, top part: 10y averaged standardised $\delta^{18}O$ records for un-weighted (grid-reduced) and weighted composites (for the different weighting methods see the text for explanation) for the West Antarctic Ice Sheet region over the last 2000 years. Left panel, bottom part: 10y averaged standardised $\delta^{18}O$ records for the individual ice core records that contribute to this region. Sites with no data reflect ice cores which failed the length requirements (minimum 90y of data for 10y binned composites). For the site numbers refer to Table S1. Right panel: the upper figure shows the temperature correlation map, using the NB2014 reconstruction (Nicolas and Bromwich, 2014), for the RICE site (white dot), and the bottom figure shows the correlation map for the WAIS Divide site (white dot).

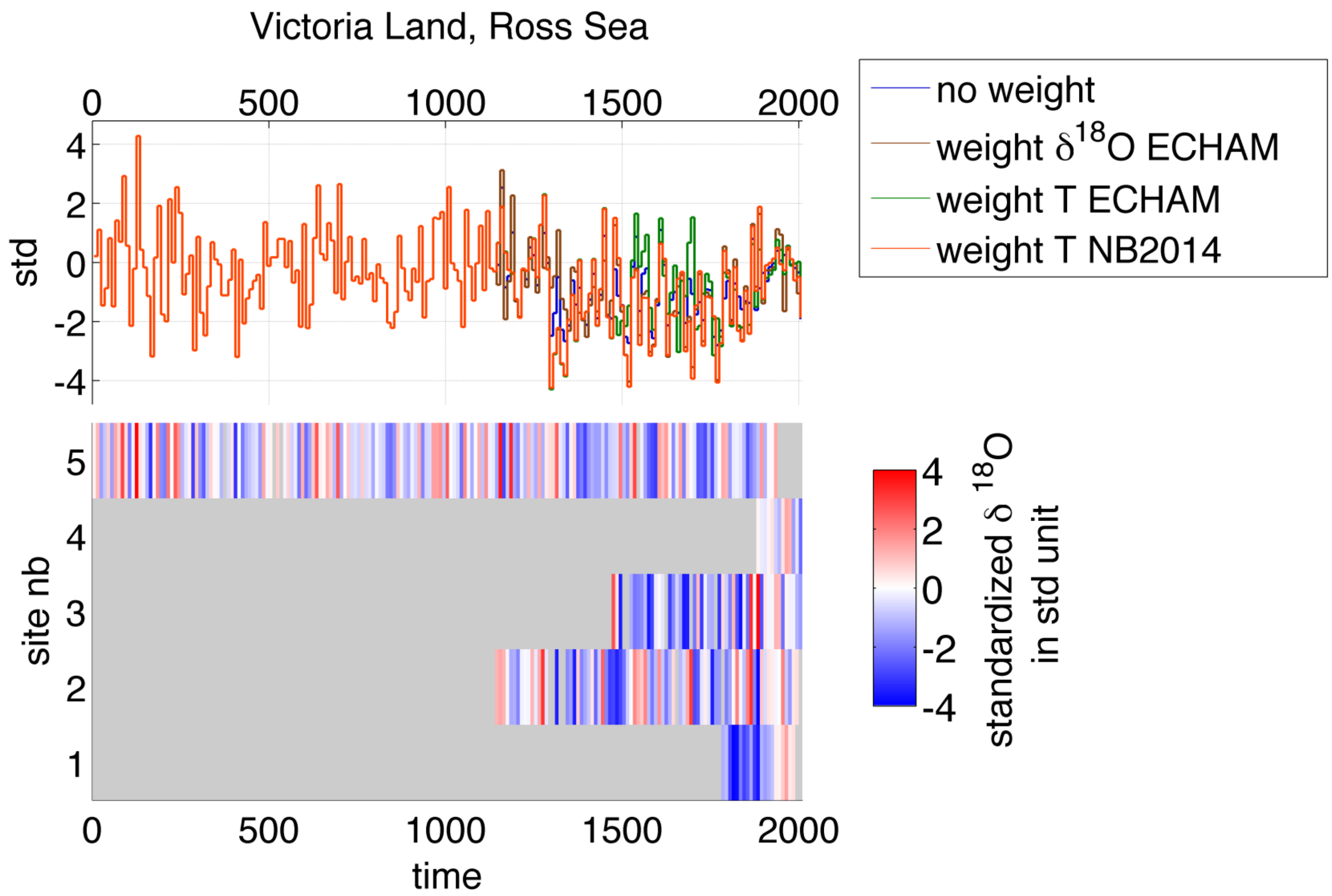


Figure S9. Upper panel: 10y averaged standardised $\delta^{18}O$ records for un-weighted (grid-reduced) and weighted composites (for the different weighting methods see the text for explanation) for the Victoria Land Coast region over the last 2000 years. Bottom panel: 10y averaged standardised $\delta^{18}O$ records for the individual ice core records that contribute to this region. Sites with no data reflect ice cores which failed the length requirements (minimum 90y of data for 10y binned composites). For the site numbers refer to Table S1.

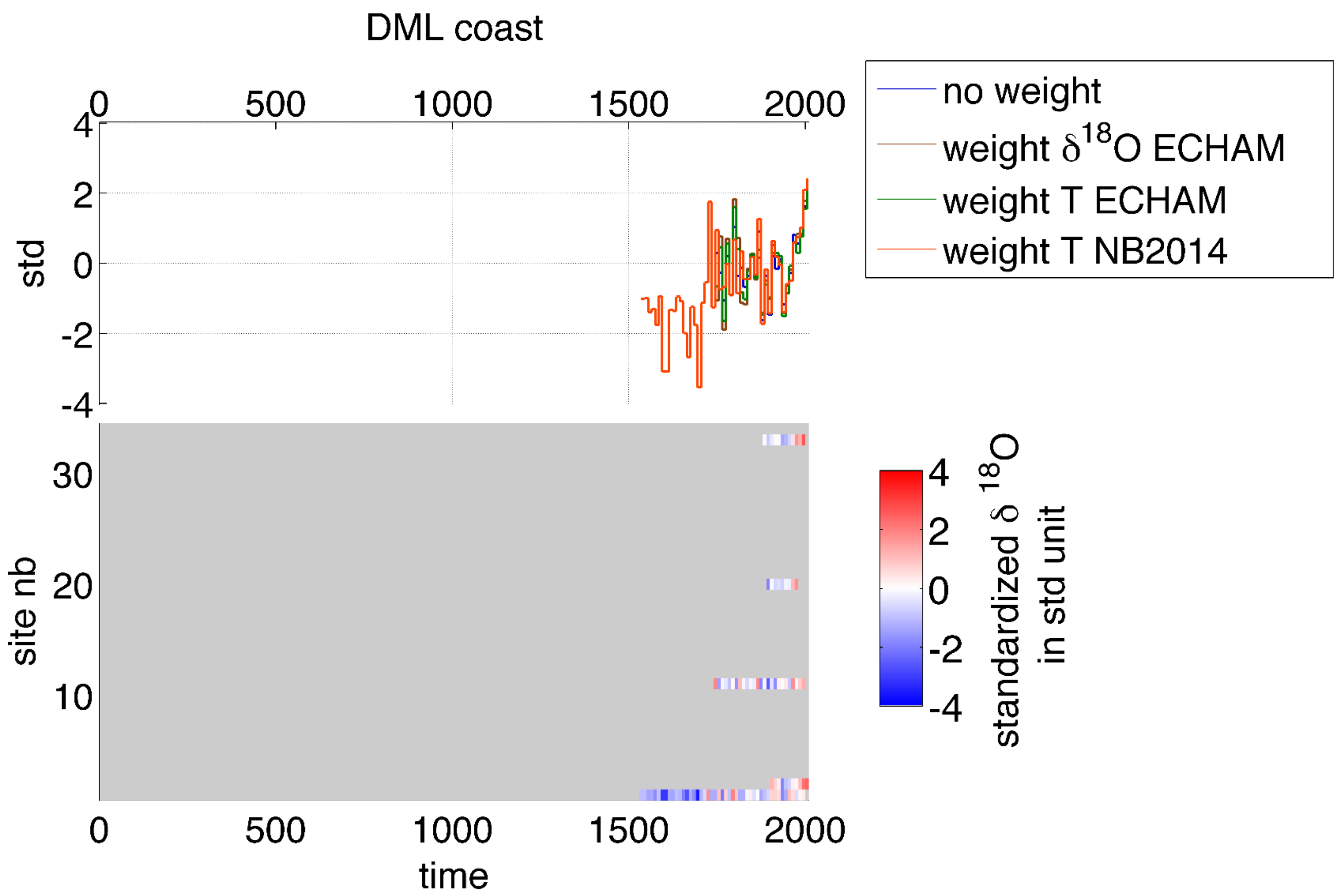


Figure S10. Upper panel: 10y averaged standardised $\delta^{18}O$ records for un-weighted (grid-reduced) and weighted composites (for the different weighting methods see the text for explanation) for the Dronning Maud Land Coast region over the last 2000 years. Bottom panel: 10y averaged standardised $\delta^{18}O$ records for the individual ice core records that contribute to this region. Sites with no data reflect ice cores which failed the length requirements (minimum 90y of data for 10y binned composites). For the site numbers refer to Table S1.

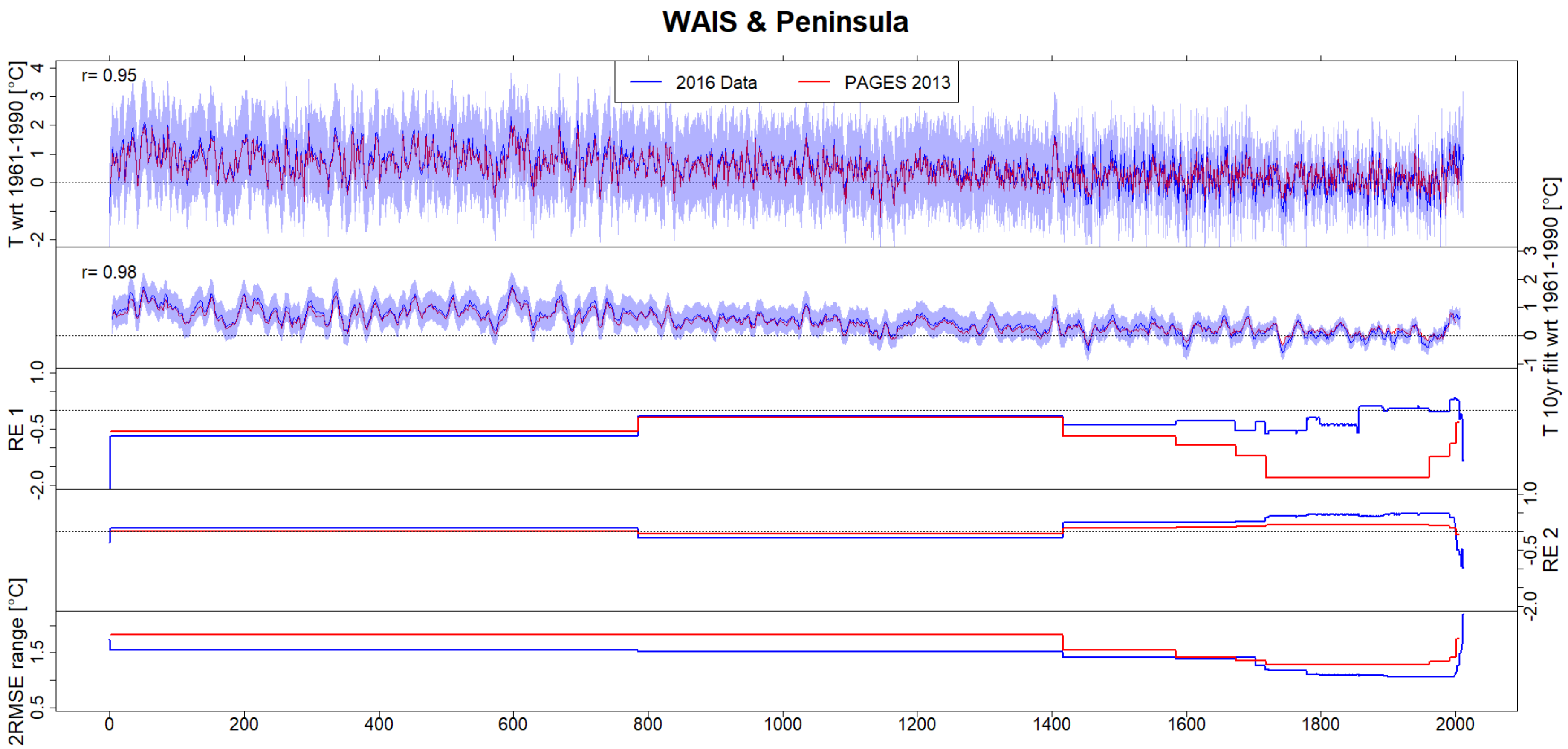


Figure S11. Comparison of CPS reconstructions of West Antarctic (regions WAIS & Peninsula) mean temperatures over 167-2010 CE. Red: results from PAGES 2k Consortium (2013). Blue: Updated results using the new ice core isotope data collection described herein and the NB2014 temperature target. Blue shading: 2RMSE uncertainties of the updated reconstruction. Top panel: Unfiltered interannual reconstructions. Second panel: 10-year running mean of reconstructions. Third (fourth) panel Reduction of Error skill from a split-calibration-verification exercise using 1961-1976 for calibration (verification) and 1977-1991 for verification (calibration). Bottom panel: 2RMSE reconstruction uncertainty range.

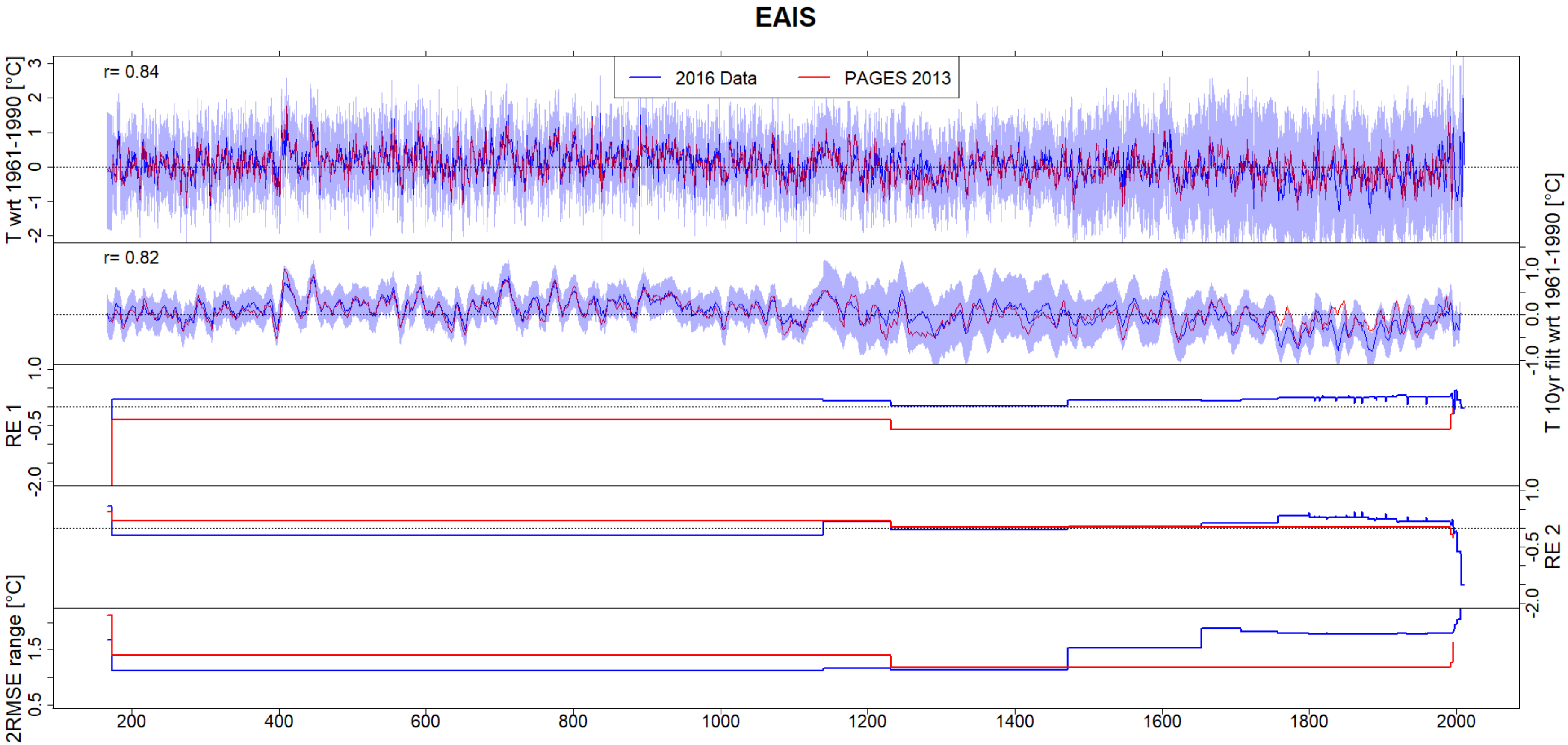
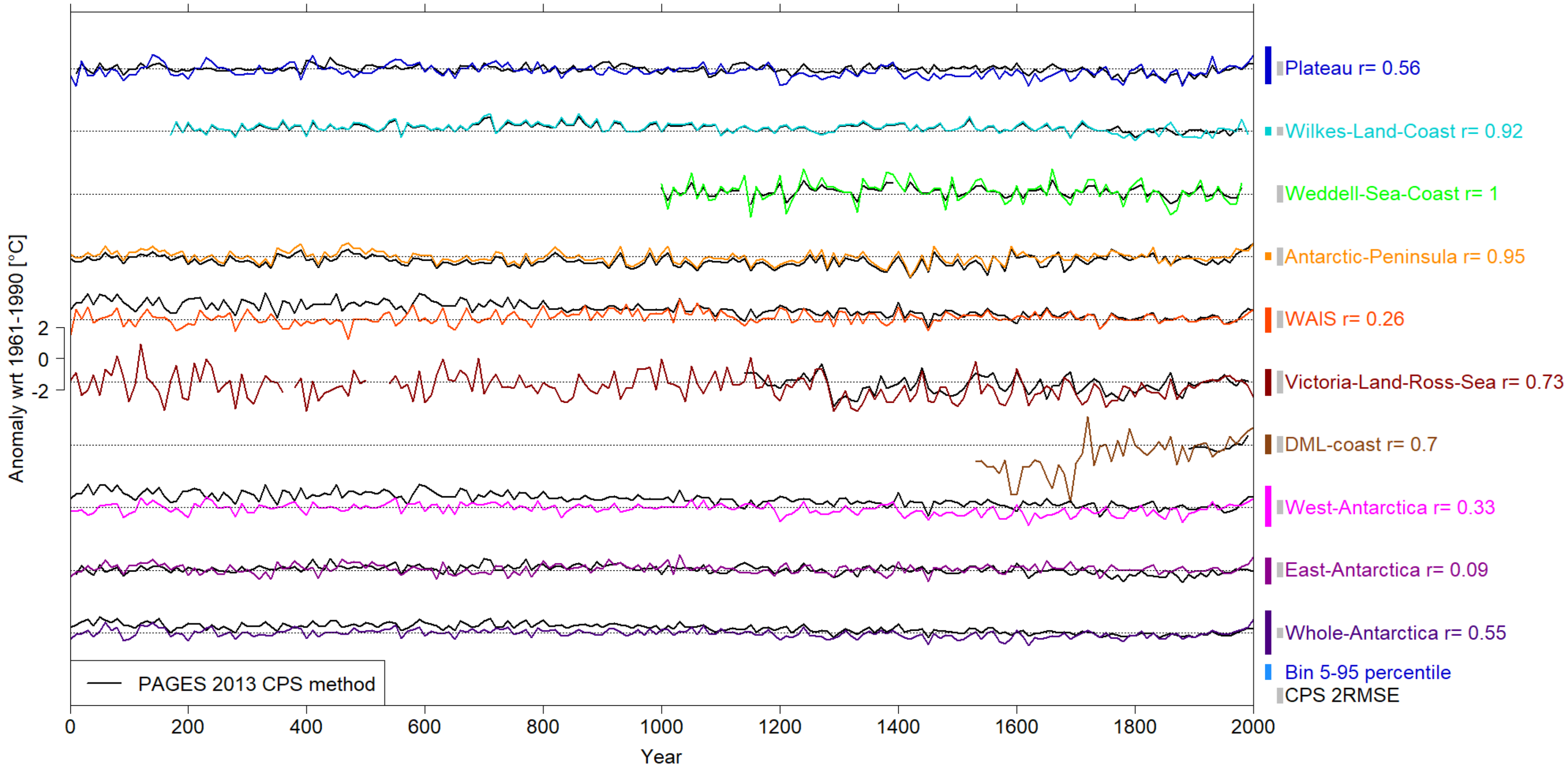


Figure S12. Comparison of CPS reconstructions of East Antarctic (all regions except WAIS & Peninsula) mean temperatures over 167-2010 CE. Red: results from PAGES 2k Consortium (2013). Blue: Updated results using the new ice core isotope data collection described herein and the NB2014 temperature target. Blue shading: 2RMSE uncertainties of the updated reconstruction. Top panel: Unfiltered interannual reconstructions. Second panel: 10-year running mean of reconstructions. Third (fourth) panel Reduction of Error skill from a split-calibration-verification exercise using 1961-1976 for calibration (verification) and 1977-1991 for verification (calibration). Bottom panel: 2RMSE reconstruction uncertainty range.



Figures S13. Comparison of the simple composites (10 year bins; colored lines) from each region with the CPS reconstructions (decadal averages; black lines). Pearson Correlation coefficients are indicated for each region. Note that CPS reconstructions are shorter for some regions because records that do not cover the 1961-1991 calibration window or have negative correlations with the target are excluded from the CPS reconstruction. Bars, on the right, beside the region names indicate the width of the uncertainty estimates averaged over the entire reconstruction period. For the simple composites the uncertainties represent the 5%-95% range from the individual records and for CPS they reflect the 2RMSE from calibration.

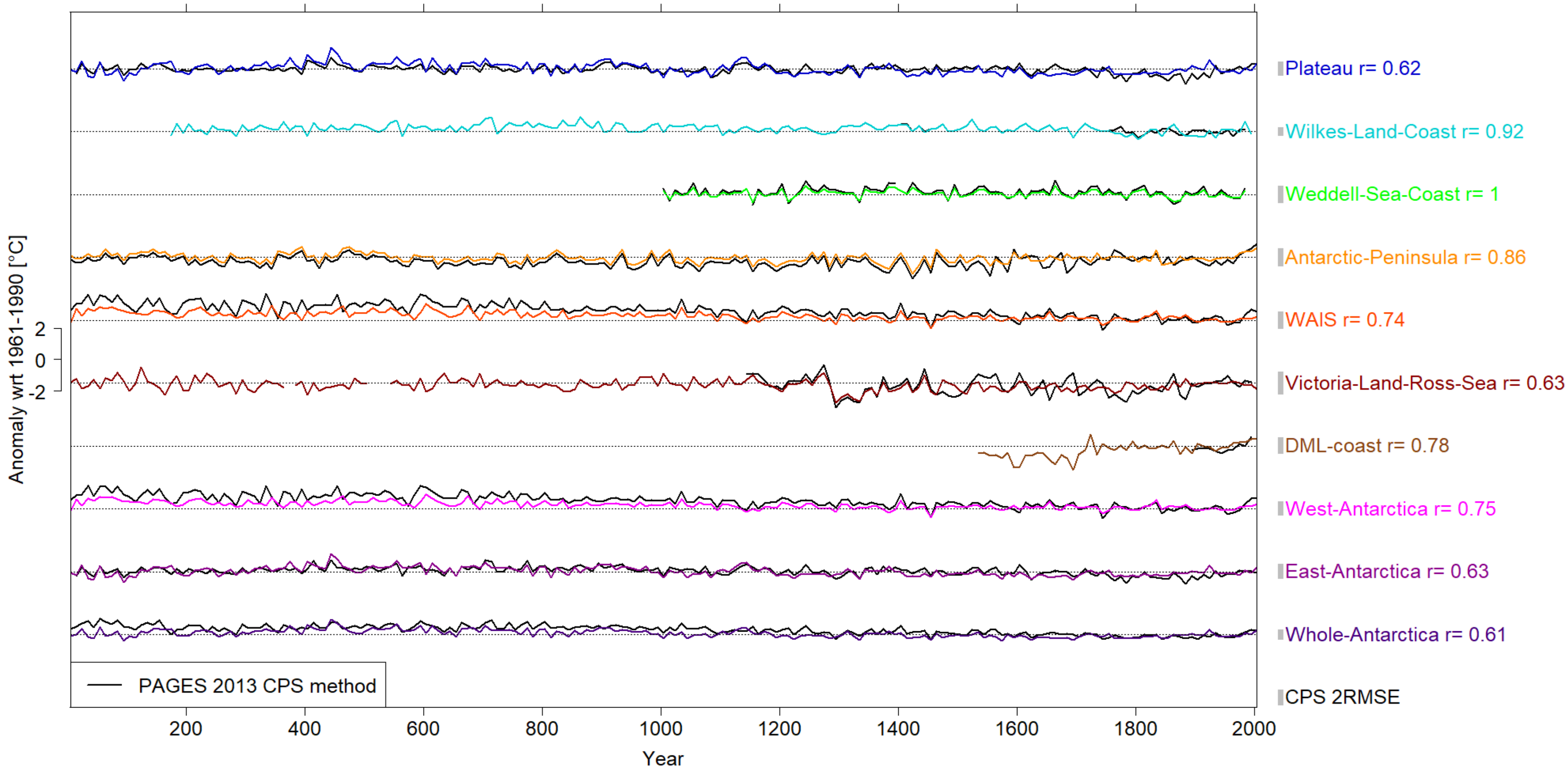


Figure S14. Comparison of the weighted composites (10 year bins; colored lines) from each region with the CPS reconstructions (decadal averages; black lines). Pearson Correlation coefficients are indicated for each region. Note that CPS reconstructions are shorter for some regions because records that do not cover the 1961-1991 calibration window or have negative correlations with the target are excluded from the CPS reconstruction. Bars, on the right, beside the region names indicate the width of the uncertainty estimates averaged over the entire reconstruction period. For the simple composites the uncertainties represent the 5%-95% range from the individual records and for CPS they reflect the 2RMSE from calibration.

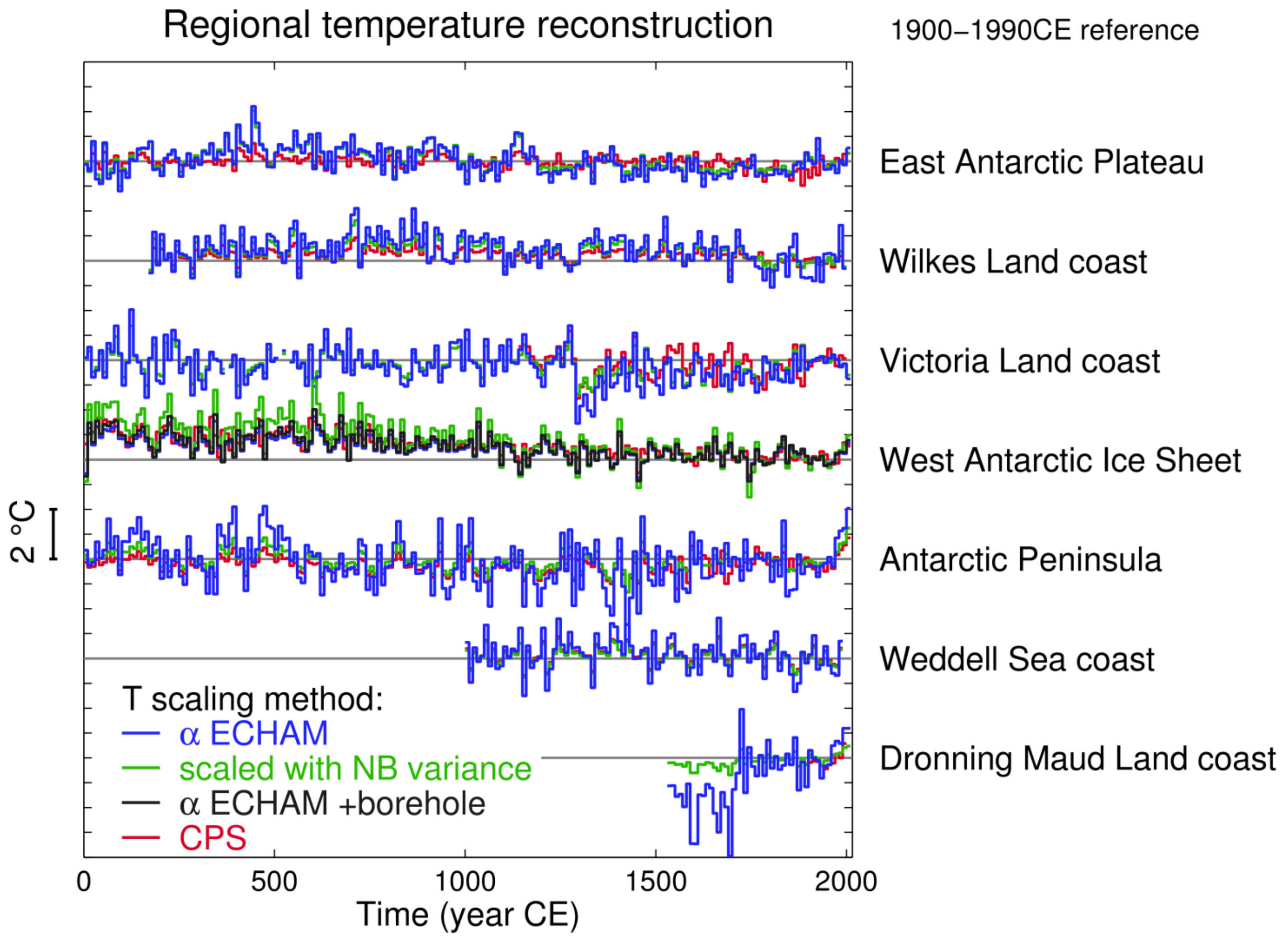


Figure S15. Plot comparing the temperature scaling methods using 10y averages: in blue the CPS method; in green the method which uses the NB2014 variance for scaling (different weighting method compared to CPS); in red the method based on the correlation between annual mean regional $\delta^{18}O$ and regional T from ECHAM-wiso forced by ERA-Interim; in black the West Antarctic Ice Sheet region is adjusted to match the temperature trend between 1000 and 1600 CE based on borehole temperature measurements (Orsi et al., 2012).

Table S1. Identification number (the first number identifies the region: 1 East Antarctic Plateau, 2 Wilkes Land Coast, 3 Weddell Sea Coast, 4 Antarctic Peninsula, 5 West Antarctic Ice Sheet, 6 Victoria Land Coast and 7 Dronning Maud Land Coast), site name, latitude and longitude, elevation, minimun and maximum time period covered by the core, data resolution, inclusion (Y) or not (N) in this study and previous PAGES 2k reconstructions (a: PAGES 2K consortium, 2013; b: PAGES 2k consortium, 2017), bibliographic citation of the core sites and original data URL.

Site id	Site name	Lat (dec degree)	Long (dec degree)	elevation (m)	Min year (CE)	Max year (CE)	Resolution (years)	Included	Citation	original data URL
1.01	EDC Dome C	-75.1	123.39	3233	3	1919	15	Y, a, b	Jouzel et al, 2001; Stenni et al., 2001	https://www.ncdc.noaa.gov/paleo/study/6080
1.02	Vostok VRS13	-78.47	106.83	3488	1654	2010	1	Y, b	Ekaykin et al., 2014	https://www1.ncdc.noaa.gov/pub/data/paleo/pages2k/pages2k-temperature-v2-2017/data-current-version/Ant-Vostok.Ekaykin.2014-2.txt
1.03	B31Site DML07	-75.58	-3.43	2680	1000	1994	1	Y, b	Graf et al., 2002	https://doi.pangaea.de/10.1594/PANGAEA.104882
1.04	B32Site DML05	-75	-0.01	2892	166	1996	1	Y, b	Graf et al., 2002	https://doi.pangaea.de/10.1594/PANGAEA.104881
1.05	B33Site DML17	-75.17	6.5	3160	1000	1997	1	Y, b	Graf et al., 2002	https://doi.pangaea.de/10.1594/PANGAEA.104888
1.06	DML E98	-72.68	3.67	2751	1976	1996	1	N	Isaksson et al., 1999	NOT USED
1.07	DML L89	-74.65	12.8	3406	1962	1996	1	Y	Isaksson et al., 1999	https://www.ncdc.noaa.gov/paleo-search/study/22589
1.08	FB96 DML01	-74.86	-2.55	2817	1895	1995	1	Y	Oerter et al., 1999	https://www.ncdc.noaa.gov/paleo/study/22589
1.09	FB96 DML02	-74.97	-3.92	3014	1919	1995	1	Y	Oerter et al., 1999	https://doi.pangaea.de/10.1594/PANGAEA.104876
1.1	FB97 DML03	-74.49	1.97	2843	1941	1996	1	Y	Oerter et al., 1999	https://doi.pangaea.de/10.1594/PANGAEA.104879

1.11	FB97 DML04	-74.41	7.22	3161	1905	1996	1	Y	Oerter et al., 1999	https://www.ncdc.noaa.gov/paleo/study/22589
1.12	FB97 DML05	-75	0.01	2882	1930	1996	1	Y	Oerter et al., 1999	https://doi.pangaea.de/10.1594/PANGAEA.104880
1.13	FB97 DML06	-75	8.01	3246	1899	1996	1	Y	Oerter et al., 1999	https://www.ncdc.noaa.gov/paleo-search/study/22589
1.14	FB97 DML07	-74.59	-3.44	2669	1908	1996	1	Y	Oerter et al., 1999	https://doi.pangaea.de/10.1594/PANGAEA.104863
1.15	FB97 DML08	-75.75	3.29	2962	1919	1996	1	Y	Oerter et al., 1999	https://www.ncdc.noaa.gov/paleo-search/study/22589
1.16	FB97 DML09	-75.93	7.22	3145	1897	1996	1	Y	Oerter et al., 1999	https://www.ncdc.noaa.gov/paleo-search/study/22589
1.17	FB97 DML10	-75.22	11.35	3349	1900	1996	1	Y	Oerter et al., 1999	https://www.ncdc.noaa.gov/paleo/study/22589
1.18	DML11 FB9803	-74.85	-8.5	2600	1921	1997	1	Y	Oerter et al., 2000	https://doi.pangaea.de/10.1594/PANGAEA.104883
1.19	DML18 FB9804	-75.25	-6	2630	1801	1996	1	Y	Oerter et al., 2000	https://doi.pangaea.de/10.1594/PANGAEA.104889
1.2	DML19 FB9805	-75.17	-1	2840	1800	1997	1	Y	Oerter et al., 2000	https://doi.pangaea.de/10.1594/PANGAEA.104890
1.21	DML05 FB9807	-75	0.04	2880	1758	1997	1	Y	Oerter et al., 2000	https://doi.pangaea.de/10.1594/PANGAEA.104880
1.22	DML20 FB9808	-74.75	1	2860	1801	1997	1	Y	Oerter et al., 2000	https://doi.pangaea.de/10.1594/PANGAEA.104891
1.23	DML03 FB9809	-74.5	1.96	2843	1801	1997	1	Y	Oerter et al., 2000	https://doi.pangaea.de/10.1594/PANGAEA.104879
1.24	DML21 FB9810	-74.67	4	2980	1801	1997	1	Y	Oerter et al., 2000	https://doi.pangaea.de/10.1594/PANGAEA.104892
1.25	DML22 FB9811	-75.08	6.5	3160	1801	1997	1	Y	Oerter et al., 2000	https://doi.pangaea.de/10.1594/PANGAEA.104893
1.26	DML23 FB9812	-75.25	6.5	3160	1810	1997	1	Y	Oerter et al., 2000	https://doi.pangaea.de/10.1594/PANGAEA.104894

1.27	DML16 FB9813	-75.17	5	3100	1800	1997	1	Y	Oerter et al., 2000	https://www.ncdc.noaa.gov/paleo-search/study/22589
1.28	DML15 FB9814	-75.08	2.5	2970	1801	1997	1	Y	Oerter et al., 2000	https://doi.pangaea.de/10.1594/PANGAEA.104887
1.29	DML14 FB9815	-74.96	-1.5	2840	1801	1997	1	Y	Oerter et al., 2000	https://doi.pangaea.de/10.1594/PANGAEA.104880
1.3	DML13 FB9816	-75	-4.51	2740	1800	1997	1	Y	Oerter et al., 2000	https://doi.pangaea.de/10.1594/PANGAEA.104885
1.31	DML12 FB9817	-75	-6.5	2680	1800	1997	1	Y	Oerter et al., 2000	https://doi.pangaea.de/10.1594/PANGAEA.104884
1.32	DML02S SS9813	-74.97	3.92	3014	1801	1997	1	Y	Oerter et al., 2000	https://doi.pangaea.de/10.1594/PANGAEA.104878
1.33	Dome F 1993	-77.32	39.7	3810	424	1467	5	N, b	Kawamura et al., 2007	https://www1.ncdc.noaa.gov/pub/data/paleo/pages2k/pages2k-temperature-v2-2017/data-current-version/Ant-DomeF1993.Uemura.2014.txt
1.34	Dome F 2001	-77.32	39.7	3810	695	1875	10	Y, b	Horiuchi et al., 2008	https://www1.ncdc.noaa.gov/pub/data/paleo/pages2k/pages2k-temperature-v2-2017/data-current-version/Ant-DomeF2001.Uemura.2008.txt
1.35	US-ITASE-2002-4	-86.5	-107.99	2586	1594	2003	0.12	Y, b	Steig et al., 2013	http://dx.doi.org/10.7265/N5QJ7F8B
1.36	Plateau Remote	-84	43	3330	2	1986	1	Y, b	Cole-Dai et al., 2000	https://www1.ncdc.noaa.gov/pub/data/paleo/pages2k/pages2k-temperature-v2-2017/data-current-version/Ant-PlateauRemote.Mosley-Thompson.2013.txt
1.37	TALDICE -Talos Dome	-72.82	159.18	2315	4	1991	11	Y, b	Stenni et al., 2011	https://www1.ncdc.noaa.gov/pub/data/paleo/pages2k/pages2k-temperature-v2-2017/data-current-version/Ant-TalosDome.Stenni.2002.txt

1.38	TD96 Talos Dome	-72.8	159.06	2316	1232	1995	1	Y, b	Stenni et al., 2002	https://www.ncdc.noaa.gov/paleo-search/study/2465
1.39	SPRESSO (South Pole)	-89.93	144.39	2835	1801	1998	1	Y	Steig et al., 2013	http://nsidc.org/data/docs/agdc/nsidc0536/
1.4	NUS 08-7	-74.12	1.6	2673	1382	2008	0.25	Y	Steig et al., 2013	http://nsidc.org/data/docs/agdc/nsidc0536/
1.41	NUS 07-1	-73.72	7.94	3174	1706	2005	0.21	Y	Steig et al., 2013	http://nsidc.org/data/docs/agdc/nsidc0536/
1.42	400th km	-69.95	95.62	2777	1254	1987	5	Y	Ekaykin et al., 2017	https://www.clim-past.net/13/61/2017/cp-13-61-2017-supplement.zip
1.43	NVFL-1	-77.11	95.07	3775	1711	1944	1	Y	Ekaykin et al., 2017	https://www.clim-past.net/13/61/2017/cp-13-61-2017-supplement.zip
1.44	NVFL-3	-76.41	102.17	3528	1978	2009	1	Y	Ekaykin et al., 2017	https://www.clim-past.net/13/61/2017/cp-13-61-2017-supplement.zip
1.45	PV-10	-72.81	79.93	2800	1976	2009	1	Y	Ekaykin et al., 2017	https://www.clim-past.net/13/61/2017/cp-13-61-2017-supplement.zip
2.01	DSS Law Dome	-66.77	112.81	1370	173	1995	1	Y, b	PAGES2k consortium, 2013	https://data.aad.gov.au/metadata/records/LD2012-d18O-Native-age
2.02	105th km	-67.43	93.38	1407	1757	1987	1	Y	Vladimirova and Ekaykin, 2014	https://www.clim-past.net/13/61/2017/cp-13-61-2017-supplement.zip
2.03	200th km	-68.25	94.08	1990	1640	1988	1	N	Ekaykin et al., 2017	NOT USED
3.01	Berkner Island (South) B25	-79.57	-45.72	890	1000	1992	1	Y, b	Mulvaney et al., 2002	https://doi.pangaea.de/10.1594/PANGAEA.728157
4.01	Gomez	-73.59	-70.36	1400	1858	2006	1	Y	Thomas et al., 2009	https://www.ncdc.noaa.gov/paleo-search/study/12543

4.02	James Ross Island	-64.2	-57.69	1542	0	2007	1	Y, b	Mulvaney et al., 2012	https://www1.ncdc.noaa.gov/pub/data/paleo/pages2k/pages2k-temperature-v2-2017/data-current-version/Ant-JamesRossIsland.Mulvaney.2013.txt
4.03	Dyer Plateau	-70.68	-64.87	2002	1505	1988	1	Y	Thompson et al., 1994	http://www.bas.ac.uk/data/uk-pdc/
4.04	Bruce Plateau	-66.04	-64.08	1975.5	1900	2009	1	Y	Goodwin et al., 2016	ftp://ftp.ncdc.noaa.gov/pub/data/paleo/icecore/antarctica/bruce/bruce2016d18o.txt
5.01	Ferrigno	-74.57	-86.9	1354	1703	2010	1	Y, b	Thomas et al., 2013	https://www1.ncdc.noaa.gov/pub/data/paleo/pages2k/pages2k-temperature-v2-2017/data-current-version/Ant-Ferrigno.Thomas.2013.txt
5.02	Bryan Coast	-74.5	-81.68	1177	1712	2010	1	N	Thomas et al., 2015	NOT USED
5.03	Siple Station	-75.92	-84.25	1054	1417	1983	1	Y, b	Mosley-Thompson et al., 1996	https://www1.ncdc.noaa.gov/pub/data/paleo/pages2k/pages2k-temperature-v2-2017/data-current-version/Ant-SipleStation.Mosley-Thompson.1990.txt
5.04	WDC05A	-79.46	-112.09	1806	786	2005	1	Y, b	Steig et al., 2013	http://dx.doi.org/10.7265/N5QJ7F8B
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5.06	US-ITASE-1999-1	-80.62	-122.63	1350	1724	2000	0.5	Y	Steig et al., 2013	http://dx.doi.org/10.7265/N5QJ7F8B
5.07	US-ITASE-2000-1	-79.38	-111.24	1791	1673	2001	0.1	Y, b	Steig et al., 2013	http://dx.doi.org/10.7265/N5QJ7F8B
5.08	US-ITASE-2000-2	-79.73	-111.5	1675	1979	2000	0.025	N	Steig et al., 2013	http://dx.doi.org/10.7265/N5QJ7F8B
5.09	US-ITASE-2000-3	-78.43	-111.92	1742	1971	2001	0.043	Y	Steig et al., 2013	http://dx.doi.org/10.7265/N5QJ7F8B

5.1	US-ITASE-2000-4	-78.08	-120.08	1697	1798	2000	0.085	Y	Steig et al., 2013	http://dx.doi.org/10.7265/N5QJ7F8B
5.11	US-ITASE-2000-5	-77.68	-124	1828	1718	1999	0.18	Y	Steig et al., 2013	http://dx.doi.org/10.7265/N5QJ7F8B
5.12	US-ITASE-2000-6	-78.33	-124.48	1639	1965	1998	0.09	Y	Steig et al., 2013	http://dx.doi.org/10.7265/N5QJ7F8B
5.13	US-ITASE-2001-1	-79.16	-104.97	1842	1986	2002	0.038	N	Steig et al., 2013	http://dx.doi.org/10.7265/N5QJ7F8B
5.14	US-ITASE-2001-2	-82	-110.01	1746	1892	2002	0.037	Y	Steig et al., 2013	http://dx.doi.org/10.7265/N5QJ7F8B
5.15	US-ITASE-2001-3	-78.12	-95.65	1620	1858	2002	0.048	Y	Steig et al., 2013	http://dx.doi.org/10.7265/N5QJ7F8B
5.16	US-ITASE-2001-4	-77.61	-92.25	1483	1986	2001	0.058	N	Steig et al., 2013	http://dx.doi.org/10.7265/N5QJ7F8B
5.17	US-ITASE-2001-5	-77.06	-89.14	1239	1780	2002	0.078	Y	Steig et al., 2013	http://dx.doi.org/10.7265/N5QJ7F8B
5.18	US-ITASE-2002-1	-82	-110.01	1746	1855	2003	0.072	Y	Steig et al., 2013	http://dx.doi.org/10.7265/N5QJ7F8B
5.19	US-ITASE-2002-2	-83.5	-104.99	1957	1894	2002	0.046	Y	Steig et al., 2013	http://dx.doi.org/10.7265/N5QJ7F8B
5.2	RICE (Roosevelt Island)	-79.36	-161.7	550	-44	2011	0.14	Y	Bertler et al., in prep.	https://doi.pangaea.de/10.1594/PANGAEA.880396
6.01	Hercules Névé	-73.1	165.4	2960	1770	1992	1	Y	Stenni et al., 1999	https://www.ncdc.noaa.gov/paleo-search/study/22401
6.02	VLG	-77.33	162.53	625	1140	2000	1	Y, b	Bertler et al., 2011	https://doi.pangaea.de/10.1594/PANGAEA.866368
6.03	Mt Erebus Saddle - MES	-77.52	167.68	1600	1473	2007	0.08	Y, b	Rhodes et al., 2012	https://www.ncdc.noaa.gov/paleo-search/study/13175

6.04	Whitehall Glacier WGH	-72.9	169.08	400	1882	2006	1	Y	Sinclair et al., 2012	https://doi.pangaea.de/10.1594/PANGAEA.880396
6.05	Taylor Dome	-77.78	158.72	2365	-25	1939	1.7	Y	Steig et al., 2000	http://doi.org/10.17911/S9H59X
7.01	IND 22B4	-70.86	11.54	500	1533	1994	1	Y	Laluraj et al., 2011	https://www1.ncdc.noaa.gov/pub/data/paleo/pages2k/pages2k-temperature-v2-2017/data-current-version/Ant-CoastalDML.Thamban.2012.txt
7.02	IND 25B5	-71.34	11.59	1300	1903	2006	0.08	Y	Naik et al., 2010	https://www.ncdc.noaa.gov/paleo-search/study/22602
7.03	DML G3	-69.83	-0.62	57	1993	2009	1	N	Schlosser et al., 2012	NOT USED
7.04	DML G4	-70.9	-0.4	66	1983	2009	1	N	Schlosser et al., 2012	NOT USED
7.05	DML G5	-70.55	-0.05	82	1983	2009	1	N	Schlosser et al., 2012	NOT USED
7.06	DML G8	-70.42	2.02	58	1991	2009	1	N	Schlosser et al., 2014	NOT USED
7.07	DML LP1	-70.24	4.8	48	1992	2009	1	N	Schlosser et al., 2014	NOT USED
7.08	DML M2	-70.33	-0.12	75	1981	2009	1	N	Schlosser et al., 2012	NOT USED
7.09	DML S20	-70.25	4.82	63	1956	1996	1	Y	Isaksson et al., 1999	https://www.ncdc.noaa.gov/paleo-search/study/22589
7.1	DML S32	-70.32	-0.8	53	1995	2009	1	N	Schlosser et al., 2014	NOT USED
7.11	DML S100	-70.24	4.8	48	1737	1999	1	Y	Kaczmarska et al., 2006	https://www.ncdc.noaa.gov/paleo-search/study/22589
7.12	DML A89	-72.66	-16.65	30	1975	1988	1	N	Isaksson et al., 1994	NOT USED
7.13	DML C89	-72.77	-14.77	70	1976	1987	1	N	Isaksson et al., 1994	NOT USED

7.14	DML D89	-73.46	-12.56	300	1974	1988	1	N	Isaksson et al., 1994	NOT USED
7.15	DML E89	-73.6	-12.43	700	1973	1988	1	N	Isaksson et al., 1994	NOT USED
7.16	DML E91	-73.6	-12.43	700	1932	1991	1	Y	Isaksson et al., 1996	https://www.ncdc.noaa.gov/paleo-search/study/22589
7.17	DML F89	-73.83	-12.22	800	1970	1988	1	N	Isaksson et al., 1994	NOT USED
7.18	DML G89	-74.02	-12.03	1200	1971	1988	1	N	Isaksson et al., 1994	NOT USED
7.19	DML H89	-74.35	-11.73	1200	1973	1988	1	N	Isaksson et al., 1994	NOT USED
7.2	DML B04	-70.62	-8.37	28	1892	1981	1	Y	Schlosser et al., 2002	https://www.ncdc.noaa.gov/paleo-search/study/22589
7.21	DML E002	-70.62	-8.37	39	1972	1986	1	N	Oerter et al., 1999	NOT USED
7.22	DML E040	-70.96	-8.52	58	1971	1986	1	N	Oerter et al., 1999	NOT USED
7.23	DML E090	-71.4	-8.36	75	1969	1986	1	N	Oerter et al., 1999	NOT USED
7.24	DML E143	-71.84	-8.62	298	1967	1986	1	N	Oerter et al., 1999	NOT USED
7.25	DML E160	-71.98	-8.73	559	1969	1986	1	N	Oerter et al., 1999	NOT USED
7.26	DML E180	-72.17	-8.83	788	1973	1984	1	N	Oerter et al., 1999	NOT USED
7.27	DML FB0189	-70.66	-8.25	28	1975	1988	1	N	Schlosser et al., 2002	NOT USED
7.28	DML FB0201	-71.21	-6.79	600	1995	2001	1	N	Fernandoy et al., 2010	NOT USED
7.29	DML FB0203	-71.46	-9.86	630	1996	2001	1	N	Fernandoy et al., 2010	NOT USED
7.3	DML A98	-71.9	3.08	1520	1971	1996	1	N	Isaksson et al., 1999	NOT USED

7.31	DML B89	-72.13	3.18	2044	1971	1996	1	N	Isaksson et al., 1999	NOT USED
7.32	DML S15	-71.2	4.61	800	1974	1996	1	N	Isaksson et al., 1999	NOT USED
7.33	DML FB9802	-74.21	-9.75	1439	1881	1997	1	Y	Oerter et al., 2000	https://www.ncdc.noaa.gov/paleo-search/study/22589
7.34	H72	-69.2	41.08	1214	1832	1999	1	N	Nishio et al., 2002	NOT USED

Table S2: Statistics of the 165-1900 CE slope, for different methods. The slope is expressed in °C 1000y^{-1}, the slope uncertainty is the 2σ confidence interval.

			normalised			ECHAM			NB2014		
	start	end	Slope □ 1000y^{-1}	slope error	p-value	Slope °C 1000y^{-1}	slope error	p-value	Slope °C 1000y^{-1}	slope error	p-value
1. East Antarctic Plateau	160	1900	-1.14	-0.29	0.00	-0.56	-0.14	0.00	-0.48	-0.12	0.00
2. Wilkes Land Coast	170	1900	-0.59	-0.48	0.02	-0.24	-0.17	0.01	-0.16	-0.13	0.02
3. Weddell Sea Coast	1000	1900	-0.41	-0.92	0.38	-0.24	-0.54	0.38	-0.12	-0.27	0.38
4. Antarctic Peninsula	160	1900	-0.41	-0.27	0.00	-0.43	-0.27	0.00	-0.16	-0.11	0.00
5. West Antarctic Ice Sheet	160	1900	-1.33	-0.26	0.00	-0.47	-0.11	0.00	-0.93	-0.18	0.00
6. Victoria Land Coast	160	1900	-0.85	-0.44	0.00	-0.31	-0.21	0.00	-0.27	-0.14	0.00
7. Dronning Maud Land Coast	1530	1900	4.98	-3.20	0.00	5.96	-3.27	0.00	0.97	-0.62	0.00
West Antarctica	160	1900	-0.72	-0.18	0.00	-0.21	-0.08	0.00	-0.42	-0.10	0.00
East Antarctica	160	1900	-0.88	-0.19	0.00	-0.44	-0.10	0.00	-0.47	-0.10	0.00

All Antarctica	160	1900	-0.96	-0.15	0.00	-0.45	-0.08	0.00	-0.51	-0.08	0.00

	Borehole			CPS				
	Slope °C 1000y^{-1}	slope error	p-value	Slope °C 1000y^{-1}	slope error	p-value	start date	end date
1. East Antarctic Plateau	NaN	NaN	NaN	-0.17	-0.07	0.00	170	1900
2. Wilkes Land Coast	NaN	NaN	NaN	-0.10	-0.07	0.01	180	1900
3. Weddell Sea Coast	NaN	NaN	NaN	-0.09	-0.27	0.49	1000	1900
4. Antarctic Peninsula	NaN	NaN	NaN	-0.04	-0.10	0.48	170	1900
5. West Antarctic Ice Sheet	-0.55	-0.13	0.00	-0.61	-0.09	0.00	170	1900
6. Victoria Land Coast	NaN	NaN	NaN	-0.54	-0.58	0.07	1140	1900
7. Dronning Maud Land Coast	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
West Antarctica	-0.53	-0.11	0.00	-0.56	-0.08	0.00	170	1900
East Antarctica	NaN	NaN	NaN	-0.25	-0.07	0.00	170	1900
All Antarctica	-0.34	-0.06	0.00	-0.38	-0.06	0.00	170	1900

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