

Supplement of article:

334-year coral record of surface temperature and salinity variability in the greater Agulhas Current region

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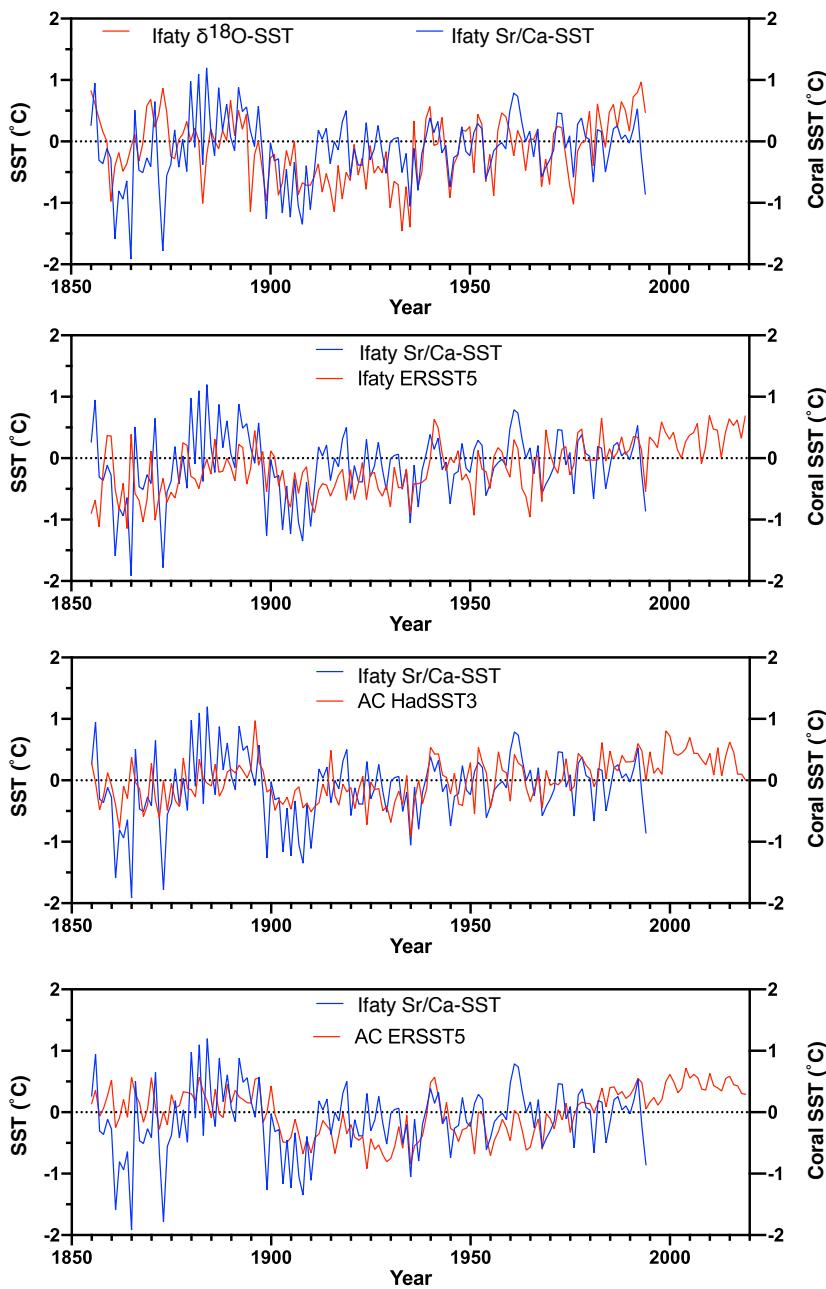


Figure S1 – Ifaty-Tulear Sr/Ca-SST annual anomaly reconstruction (blue) compared to a) $\delta^{18}\text{O}$ -SST (red), b) Ifaty-Tulear ERSST5 (red), c) Agulhas Current core region (AC) HadSST3 and d) Agulhas Current core region (AC) ERSST5.

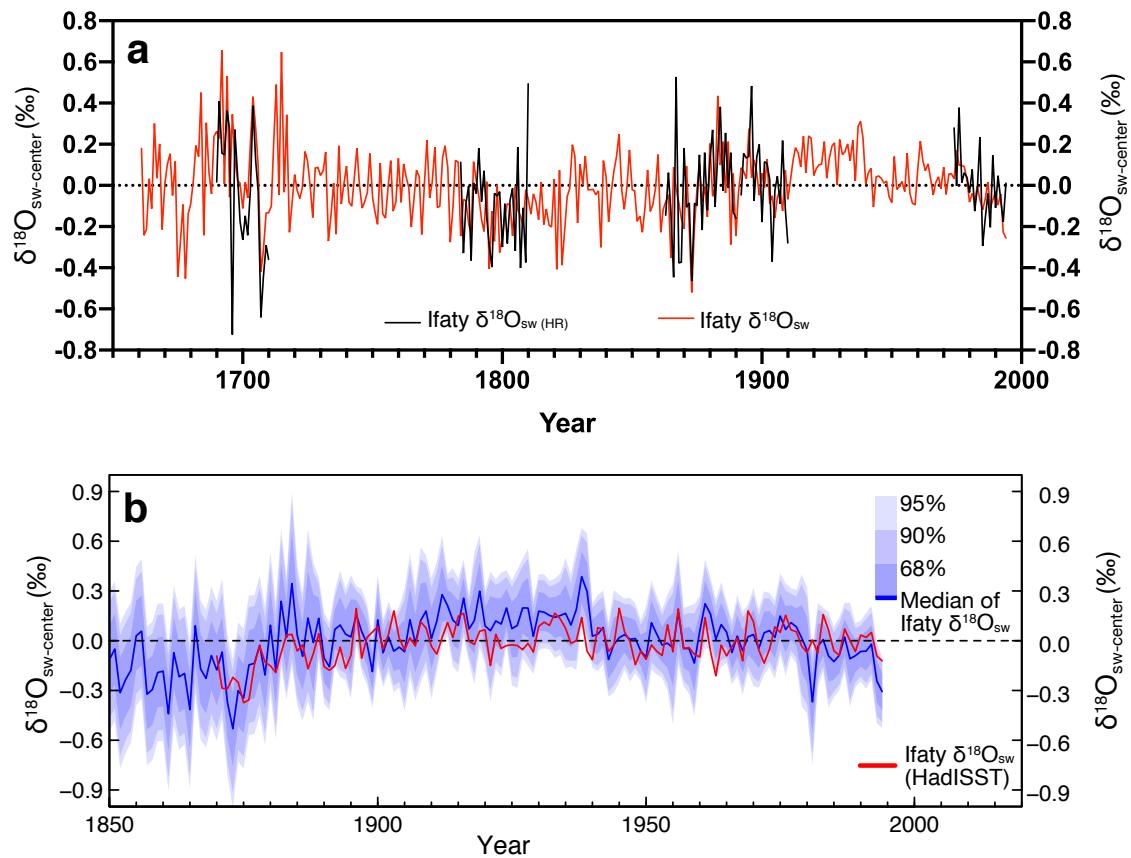


Figure S2 – a) Composite Ifaty-Tulear $\delta^{18}\text{O}_{\text{seawater}}$ anomaly reconstruction (red) based on annual composite Sr/Ca-SST compared to single core Ifaty-4 derived $\delta^{18}\text{O}_{\text{seawater}}$ (black) from bimonthly resolved decadal periods in Zinke et al. (2004). b) Composite Ifaty-Tulear $\delta^{18}\text{O}_{\text{seawater}}$ anomaly reconstruction (blue) based on annual Sr/Ca-SST compared to $\delta^{18}\text{O}_{\text{seawater}}$ derived from HADISST (red) instead of Sr/Ca-SST paired with coral $\delta^{18}\text{O}$. The correlation after linear detrending between both time series is $r=0.51$, $p<0.0001$, $N=122$.

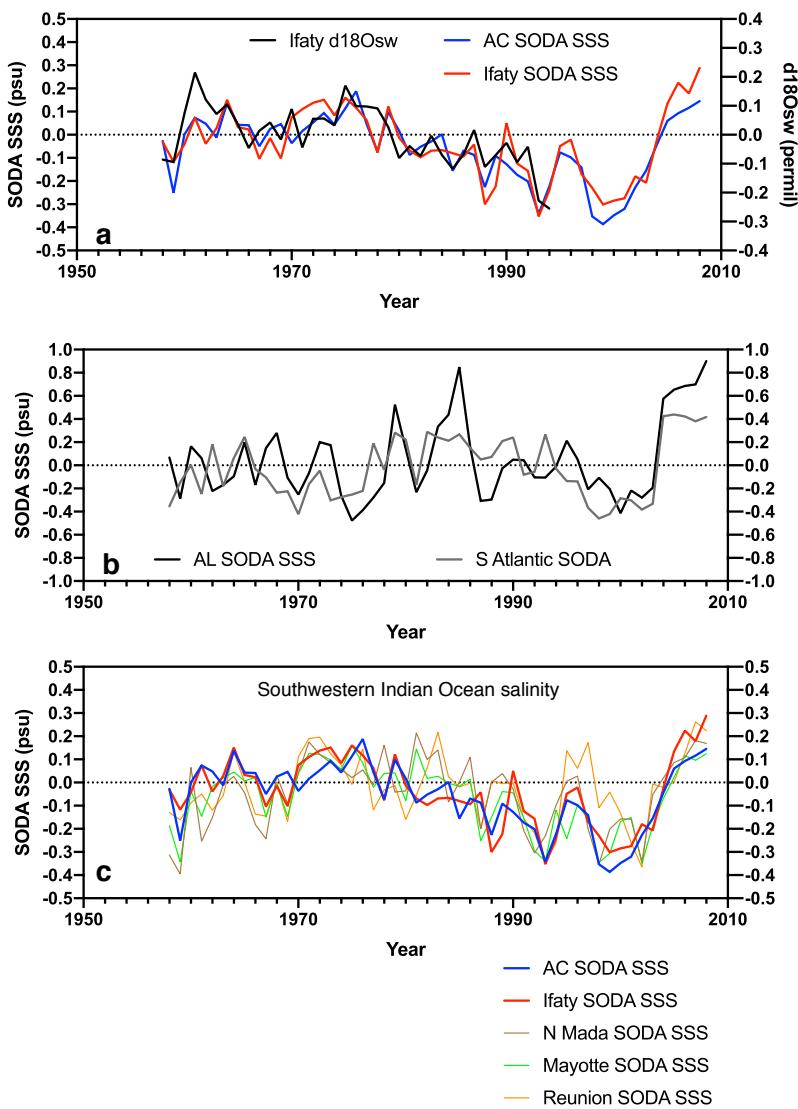


Figure S3 – a) Ifaty-Tulear $\delta^{18}\text{O}_{\text{seawater}}$ anomaly reconstruction (black) compared to Agulhas Current (blue) and Agulhas Leakage (red) regional salinity from SODA reanalysis. **b)** South Atlantic (grey) and Agulhas Leakage (black) regional salinity from SODA reanalysis. **c)** Southwestern Indian Ocean salinity records along the path of the South Equatorial Current show strong co-variability pointing to ocean horizontal advection as major driver of salinity anomalies.

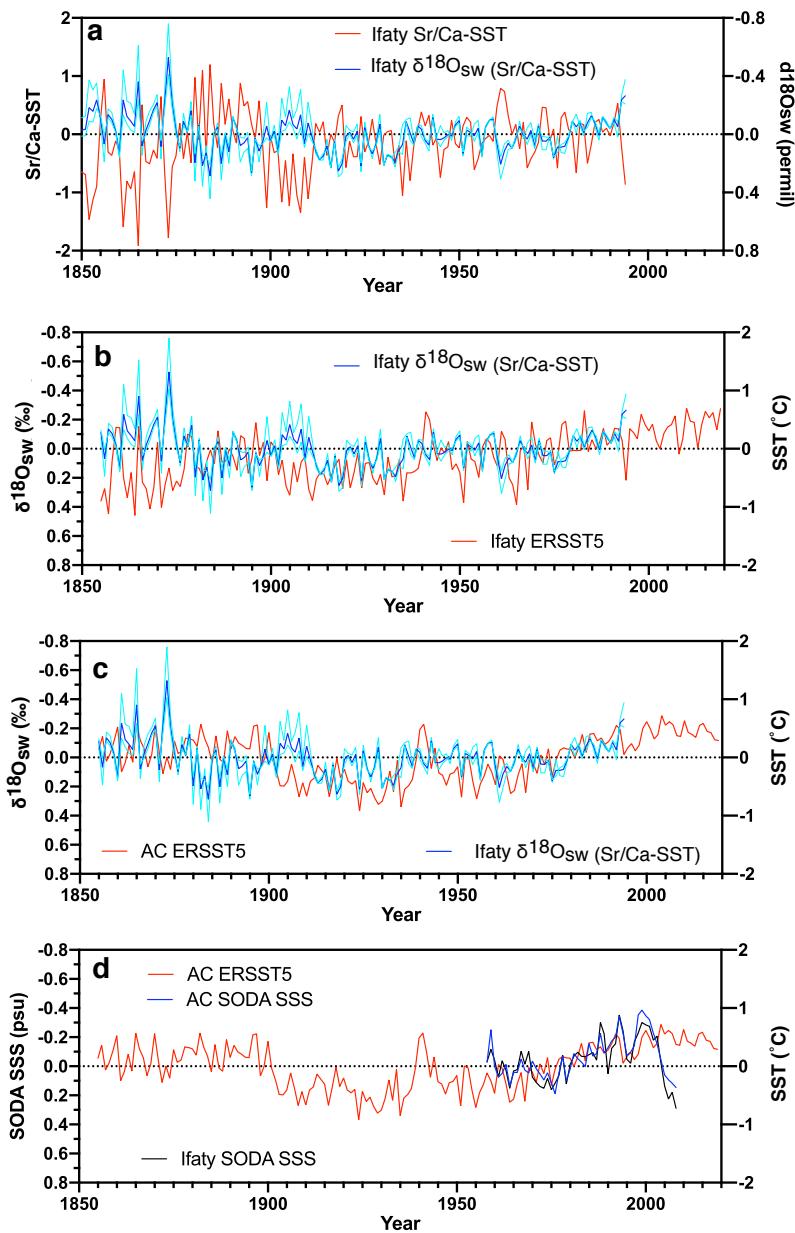


Figure S4 - Ifaty-Tulear $\delta^{18}\text{O}_{\text{seawater}}$ anomaly reconstruction (black; 95% confidence interval = light blue) compared to a) Ifaty-Tulear Sr/Ca-SST reconstruction, b) Ifaty-Tulear ERSST5 reconstruction, c) Agulhas Current core region (AC; red) ERSST5. d) Agulhas Current core region (AC; red) ERSST5 compared to salinity from SODA reanalysis for Ifaty (black) and Agulhas Current core region (AC; blue). Note the warming and freshening of surface waters since the 1970's.

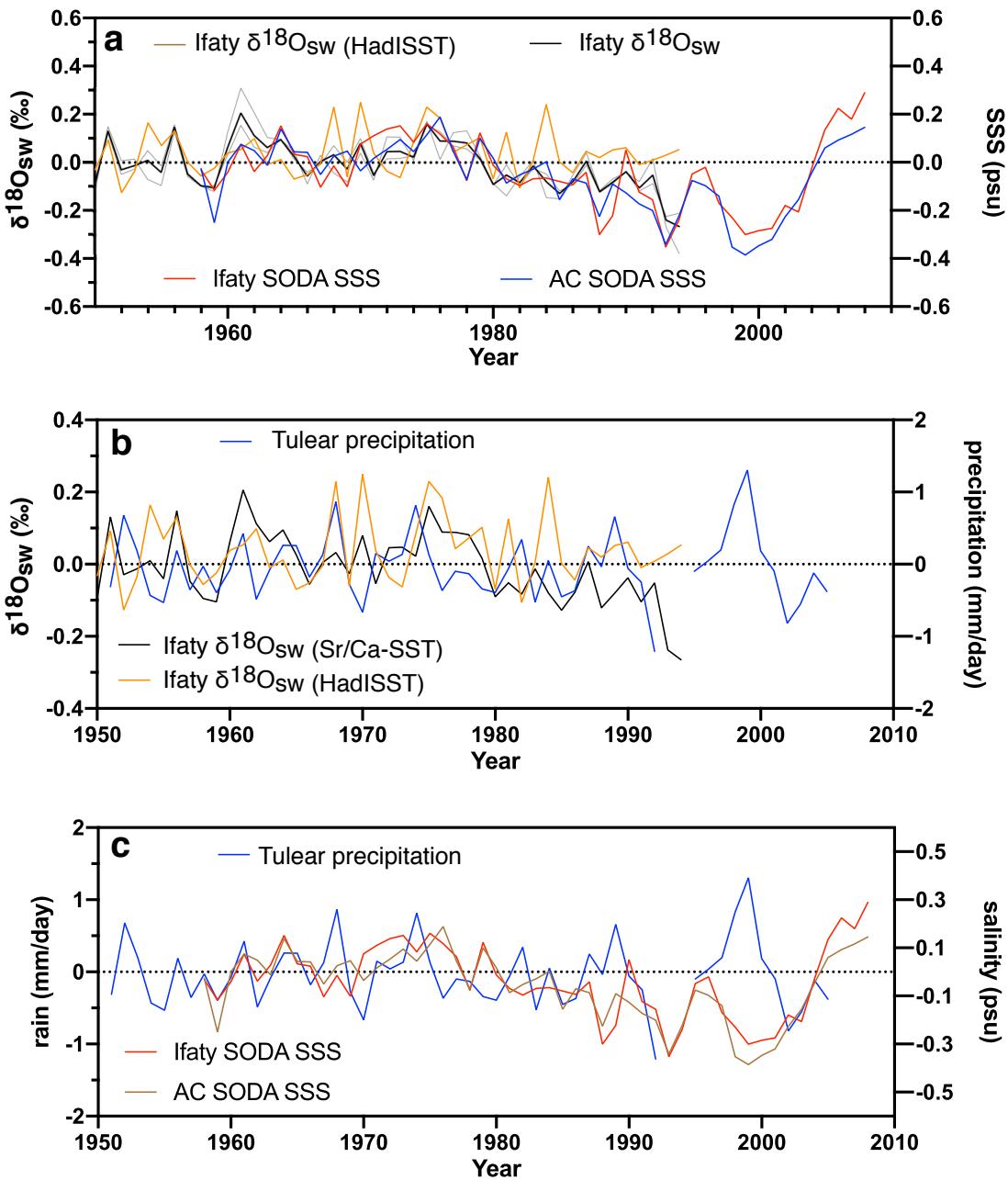


Figure S5 – a) Ifaty-Tulear $\delta^{18}\text{O}_{\text{seawater}}$ anomaly reconstruction (black; orange= $\delta^{18}\text{O}_{\text{seawater}}$ with HadISST) compared to salinity at Ifaty and the Agulhas current core region (AC). **B)** Same as a) yet with Tulear weather station rainfall data (blue) and **c)** Salinity at Ifaty (red) and the Agulhas current core region (AC; brown) compared with Tulear weather station rainfall data (blue).

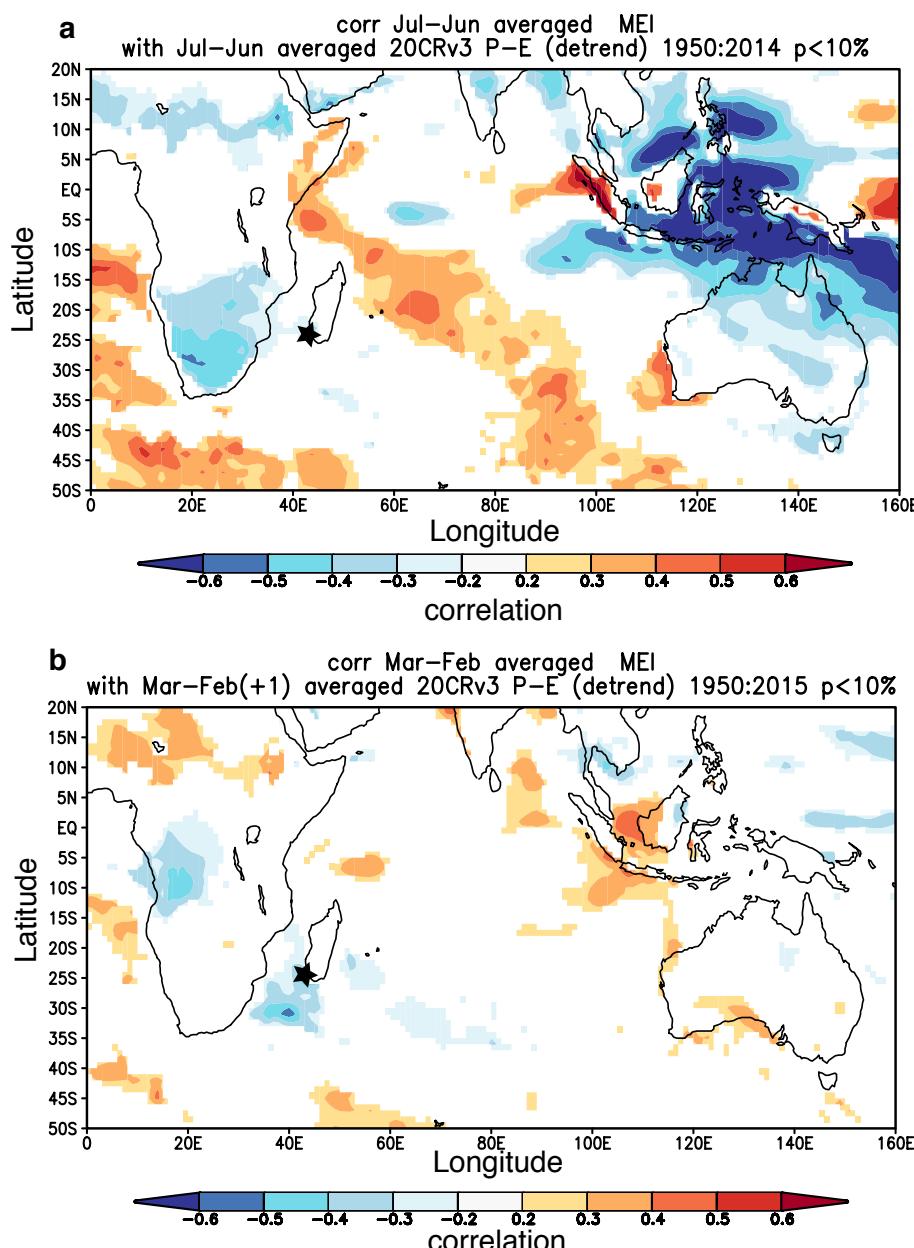
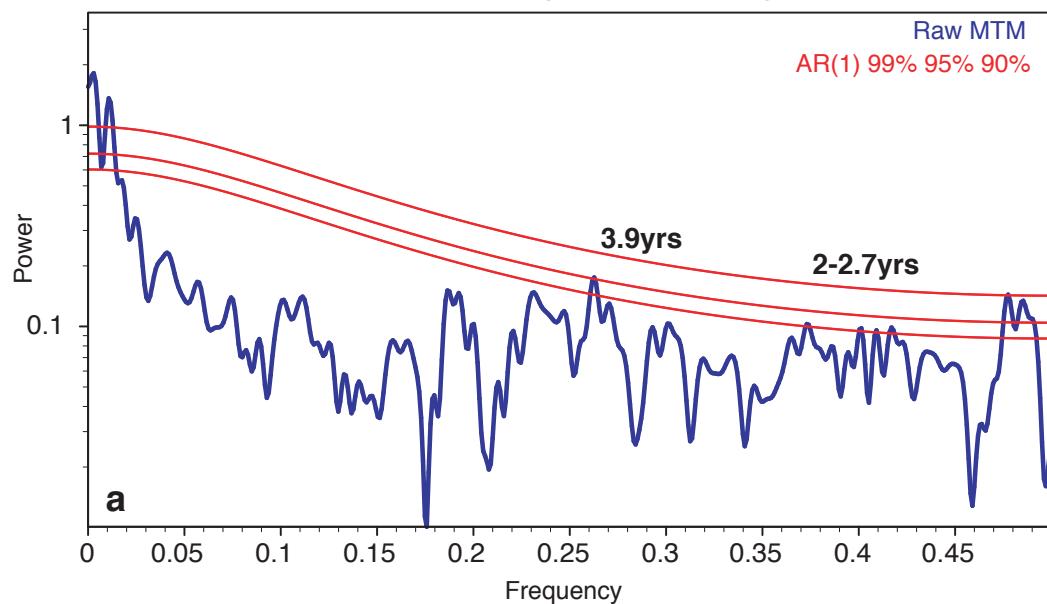


Figure S6 – Spatial correlation between the Multivariate ENSO index (MEI) and the precipitation-evaporation balance from 20th century reanalysis data. a) July to June average correlation and b) March to February with 12 month lag. Note the positive correlations across the southern Indian Ocean which indicates increased rainfall and surface water freshening in a and the negative correlation over Southern Africa (in a) and the Agulhas Current (a and b). The salinity anomalies east of Madagascar are advected into the Mozambique Channel and the South Madagascar Current eventually reaching the Agulhas Current (Grunschreich et al., 2011; Paris et al., 2018). Star marks Ifaty-Tulear coral reef location

ERSST5 Agulhas Current region



Agulhas Current region SODA salinity

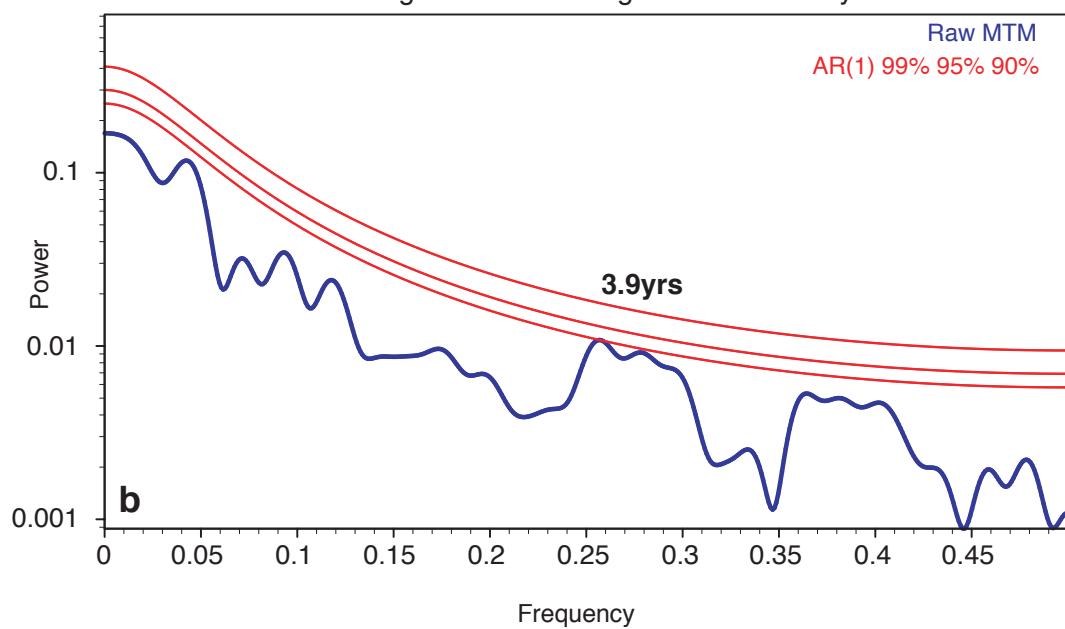


Figure S7 – Multitaper method spectral analysis of a) Agulhas Current region ERSST5 (1854-2020) and b) SODA salinity (1958-2008). Interannual frequencies >90% significance levels indicated.

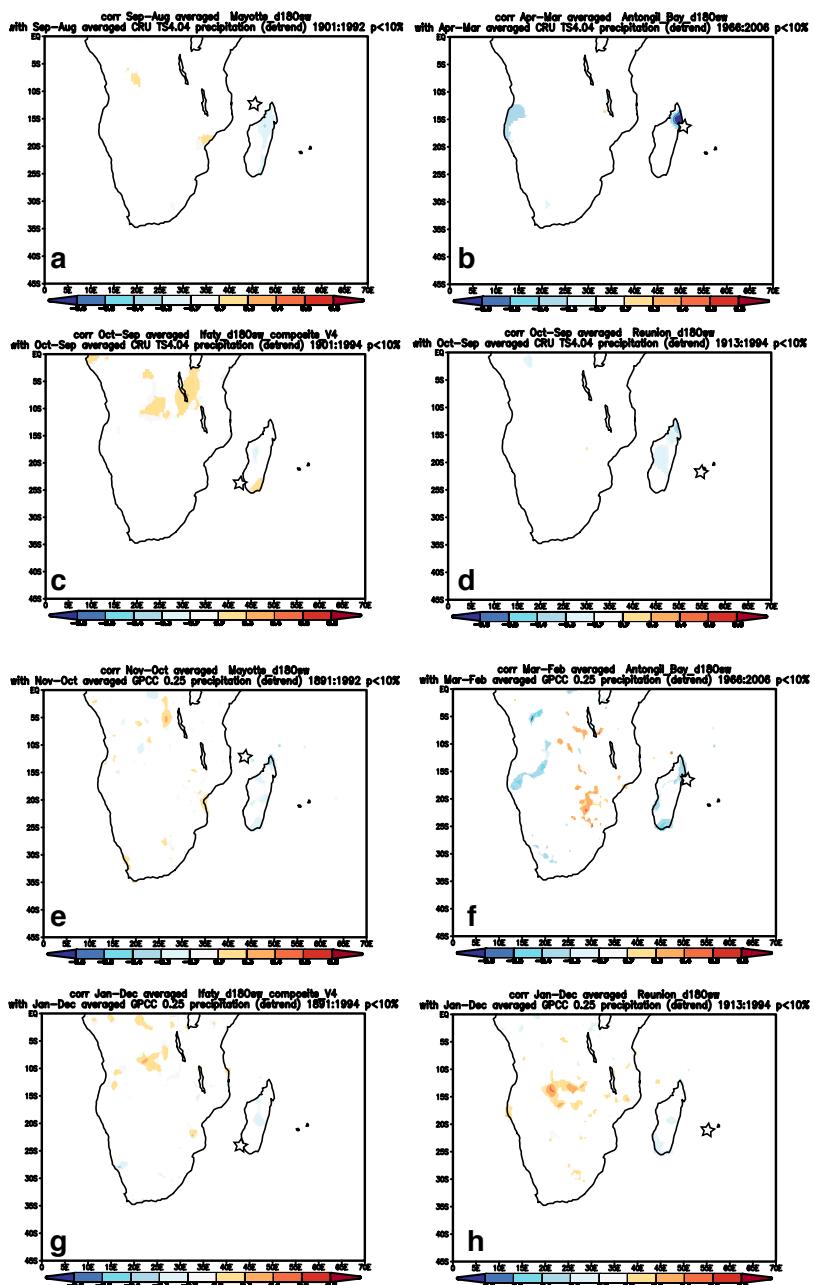


Figure S8 - Comparison of western Indian Ocean $\delta^{18}\text{O}_{\text{seawater}}$ reconstructions (star) with gridded rainfall data. a, e) Mayotte $\delta^{18}\text{O}_{\text{seawater}}$ (Comoro Archipelago; red; Zinke et al., 2008) b, f) Antongil Bay $\delta^{18}\text{O}_{\text{seawater}}$ (northeast Madagascar; Grove et al., 2012), d, h) La Reunion $\delta^{18}\text{O}_{\text{seawater}}$ (Pfeiffer et al., 2019) and c, g) Ifaty $\delta^{18}\text{O}_{\text{seawater}}$ (this study).

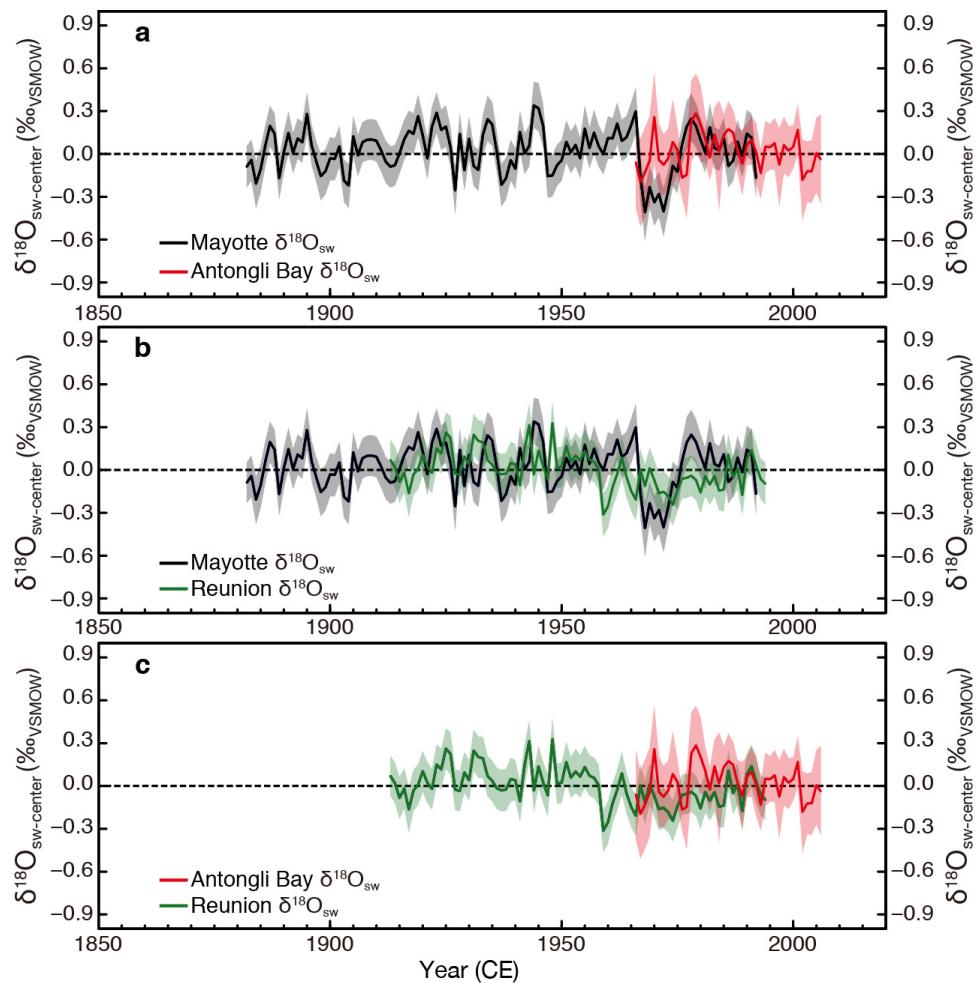


Figure S9 - Comparison of western Indian Ocean $\delta^{18}\text{O}_{\text{seawater}}$ reconstructions. A) reconstructed $\delta^{18}\text{O}_{\text{seawater}}$ for Antongil Bay (northeast Madagascar; Grove et al., 2012) with Mayotte (red; Comoro Archipelago; Zinke et al., 2008) with $r=0.65$, $p=0.0038$, $N=26$, b) reconstructed $\delta^{18}\text{O}_{\text{seawater}}$ for La Reunion (Pfeiffer et al., 2019) with Mayotte (Comoro Archipelago; red; Zinke et al., 2008) with no significant correlation, c) Antongil Bay (northeast Madagascar; Grove et al., 2012) with La Reunion (Pfeiffer et al., 2019) with no significant correlation.

Tables

Table S1 - Correlations of detrended, annual reconstructed SST (IF comp= Ifaty/Tulearcoral composite SST) with annual mean (March to February) SST of instrumental records at Ifaty (IF) and within the Agulhas Current (AC) core region. HadISST (1870-present; Rayner et al., 2003), Had3= HadSST3 (1850-present; Kennedy et al., 2011), ERSST= ERSST5 (1854-present; Huang et al., 2016). All correlations between instrumental data and IF $\delta^{18}\text{O}$ composite and IF Sr/Ca composite with instrumental data were significant at 5% level. Correlations are computed for a maximum number of years in each dataset, taking into account the degrees of freedom for each correlation pair. Ifaty HadSST3 suffers from sparse observation pre-1920, with 50 observations since 1850, while AC HadSST3 is complete since 1850. Correlations computed at <http://climexp.knmi.nl/> (Trouet and Oldenborgh, 2013).

	IF $\delta^{18}\text{O}$ comp	IF Sr/Ca comp	IF HadISST	IF Had3	IF ERSST	AC Had1	AC Had3	AC ERSST
IF $\delta^{18}\text{O}$ comp	1							
IF Sr/Ca comp	0.33	1						
IF HadISST	0.50	0.27	1					
IF Had3	0.34	0.43	0.83	1				
IF ERSST	0.37	0.30	0.81	0.83	1			
AC HadISST	0.58	0.38	0.73	0.46	0.57	1		
AC Had3	0.47	0.35	0.64	0.46	0.60	0.79	1	
AC ERSST	0.54	0.34	0.68	0.51	0.56	0.84	0.87	1

Table S2 – Correlation matrix between annual mean salinity from SODA 2.1.6 and Had EN4.2.1 for tropical and subtropical Indian Ocean sites between 1958 and 2010. Note the lack of significant correlation for the subtropical southwestern Indian Ocean sites.

Site	Coordinates	correlation	p-value
Seychelles	4°S, 54°E	0.44	0.001
Chagos	5°S, 71°E	0.46	0.0006
Cocos Keeling	12°S, 96°E	0.39	0.01
Ningaloo	21°S, 113°E	0.40	0.007
Mayotte	13°S, 45°E	0.31	0.027
N Madagascar	12°S, 50°E	0.24	0.15
St. Marie	15°S, 50°E	-	-
Reunion	21°S, 54°E	0.22	0.19
Ifaty	23°S, 43°E	0.13	0.42
Agulhas Current	32°S, 32°E	-0.17	0.26

Table S3 – Raw data of coral Sr/Ca ratios (mmol/mol) and oxygen isotopes ($\delta^{18}\text{O}$; ‰) from Ifaty and Tulear corals used for the reconstruction of $\delta^{18}\text{O}_{\text{seawater}}$.

year	Ifaty-1 Sr/Ca	Ifaty-1 $\delta^{18}\text{O}$	Ifaty-4 Sr/Ca	Ifaty-4 $\delta^{18}\text{O}$	Tulear-3 Sr/Ca	Tulear-3 $\delta^{18}\text{O}$
1994	8.81	-4.79	8.89	-4.49	8.98	-4.64
1993	8.74	-4.70	8.89	-4.53	8.93	-4.92
1992	8.67	-4.78	8.82	-4.48	8.94	-4.71
1991	8.69	-4.77	8.86	-4.42	8.94	-4.69
1990	8.72	-4.64	8.85	-4.45	8.96	-4.64
1989	8.70	-4.70	8.84	-4.48	8.96	-4.72
1988	8.65	-4.68	8.89	-4.46	8.98	-4.76
1987	8.73	-4.73	8.84	-4.41	8.91	-4.53
1986	8.69	-4.73	8.84	-4.45	8.96	-4.77
1985	8.76	-4.76	8.87	-4.43	8.93	-4.64
1984	8.84	-4.46	8.84	-4.53	8.93	-4.53
1983	8.75	-4.63	8.84	-4.43	8.91	-4.58
1982	8.70	-4.74	8.86	-4.30	8.93	-4.75
1981	8.92	-4.43	8.88	-4.46	9.07	-4.54
1980	8.66	-4.94	8.87	-4.32	8.99	-4.50
1979	8.84	-4.61	8.82	-4.35	8.85	-4.62
1978	8.75	-4.67	8.81	-4.38	8.90	-4.52
1977	8.69	-4.48	8.82	-4.38	8.96	-4.55
1976	8.81	-4.16	8.83	-4.38	8.98	-4.42
1975	8.71	-4.22	8.85	-4.41	8.95	-4.54
1974	8.80	-4.49	8.82	-4.40	8.92	-4.54
1973	8.73	-4.75	8.80	-4.31	8.91	-4.62
1972	8.68	-4.72	8.86	-4.39	8.89	-4.62
1971	8.77	-4.69	8.80	-4.35	8.97	-4.55
1970	8.70	-4.39	8.84	-4.41	9.04	-4.45
1969	8.79	-4.39	8.85	-4.27	8.96	-4.56

1968	8.75	-4.38	8.86	-4.49	9.03	-4.50
1967	8.73	-4.45	8.86	-4.45	8.90	-4.71
1966	8.75	-4.46	8.85	-4.48	8.96	-4.66
1965	8.73	-4.48	8.82	-4.43	8.95	-4.61
1964	8.72	-4.56	8.82	-4.42	8.99	-4.30
1963	8.70	-4.68	8.82	-4.61	8.95	-4.47
1962	8.67	-4.52	8.82	-4.50	8.91	-4.55
1961	8.74	-4.41	8.77	-4.54	8.87	-4.47
1960	8.72	-4.48	8.80	-4.56	8.92	-4.67
1959	8.66	-4.63	8.89	-4.66	9.00	-4.59
1958	8.71	-4.68	8.81	-4.54	9.01	-4.48
1957	8.70	-4.47	8.86	-4.52	8.98	-4.67
1956	8.74	-3.98	8.87	-4.46	8.94	-4.48
1955	8.68	-4.59	8.83	-4.49	9.09	-4.36
1954	8.73	-4.21	8.89	-4.46	9.02	-4.52
1953	8.69	-4.61	8.84	-4.56	8.95	-4.61
1952	8.73	-4.46	8.83	-4.39	8.91	-4.80
1951	8.69	-4.48	8.80	-4.42	9.01	-4.44
1950	8.68	-4.68	8.90	-4.49	8.99	-4.53
1949	8.76	-4.64	8.83	-4.44	8.96	-4.55
1948	8.70	-4.61	8.86	-4.47	8.92	-4.60
1947	8.80	-4.37	8.84	-4.44	8.93	-4.59
1946	8.71	-4.43	8.87	-4.35	8.99	-4.49
1945	8.73	-4.34	8.92	-4.33	9.01	-4.34
1944	8.67	-4.64	8.88	-4.52	8.98	-4.42
1943	8.73	-4.76	8.87	-4.51	8.96	-4.50
1942	8.69	-4.46	8.82	-4.54	8.96	-4.54
1941	8.71	-4.59	8.83	-4.56	8.95	-4.40
1940	8.68	-4.69	8.81	-4.52	8.93	-4.61
1939	8.63	-4.50	8.83	-4.44	8.80	-4.70
1938	8.66	-4.51	8.85	-4.22	8.84	-4.35
1937	8.64	-4.59	8.89	-4.52	8.89	-4.31
1936	8.65	-4.61	8.84	-4.33	8.97	-4.57
1935	8.70	-4.33	8.90	-4.41	8.99	-4.08
1934	8.70	-4.26	8.87	-4.25	8.99	-4.47
1933	8.76	-4.31	8.86	-4.35	9.00	-4.15
1932	8.71	-4.42	8.85	-4.37	8.96	-4.35
1931	8.69	-4.43	8.85	-4.26	8.98	-4.39
1930	8.76	-4.37	8.84	-4.40	8.93	-4.26
1929	8.76	-4.43	8.88	-4.31	8.92	-4.60
1928	8.70	-4.35	8.90	-4.32	8.84	-4.62
1927	8.67	-4.61	8.88	-4.34	8.89	-4.36
1926	8.66	-4.43	8.93	-4.49	8.92	-4.44

1925	8.69	-4.57	8.92	-4.39	8.90	-4.45
1924	8.69	-4.37	8.85	-4.39	8.94	-4.36
1923	8.72	-4.42	8.90	-4.39	8.87	-4.58
1922	8.71	-4.36	8.91	-4.36	8.92	-4.43
1921	8.65	-4.55	8.94	-4.46	8.88	-4.61
1920	8.74	-4.28	8.90	-4.28	8.96	-4.44
1919	8.65	-4.38	8.87	-4.07	8.90	-4.62
1918	8.62	-4.42	8.92	-4.46	8.95	-4.45
1917	8.75	-4.33	8.84	-4.41	8.96	-4.52
1916	8.76	-4.29	8.84	-4.33	8.92	-4.18
1915	8.79	-4.18	8.86	-4.24	8.94	-4.62
1914	8.66	-4.60	8.88	-4.36	8.95	-4.35
1913	8.72	-4.38	8.86	-4.27	8.94	-4.31
1912	8.74	-4.44	8.81	-4.18	8.82	-4.64
1911	8.75	-4.47	8.89	-4.32	8.84	-4.58
1910	8.77	-4.32	8.94	-4.48	8.88	-4.49
1909	8.79	-4.37	8.83	-4.52	8.87	-4.24
1908	8.81	-4.43	8.93	-4.30	8.85	-4.21
1907	8.77	-4.33	8.93	-4.56	8.91	-4.41
1906	8.79	-4.61	8.83	-4.47	8.82	-4.39
1905	8.79	-4.32	8.93	-4.55	8.89	-4.56
1904	8.76	-4.38	8.88	-4.48		
1903	8.78	-4.34	8.93	-4.26		
1902	8.75	-4.39	8.86	-4.43		
1901	8.74	-4.51	8.87	-4.48		
1900	8.78	-4.50	8.80	-4.23		
1899	8.81	-4.42	8.92	-4.38		
1898	8.76	-4.41	8.84	-4.52		
1897	8.68	-4.55	8.83	-4.58		
1896	8.75	-4.39	8.83	-4.25		
1895	8.72	-4.33	8.84	-4.69		
1894	8.68	-4.52	8.83	-4.64		
1893	8.66	-4.49	8.86	-4.52		
1892	8.66	-4.74	8.81	-4.50		
1891	8.75	-4.53	8.84	-4.70		
1890	8.69	-4.66	8.87	-4.57		
1889	8.68	-4.47	8.82	-4.52		
1888	8.64	-4.57	8.92	-4.52		
1887	8.60	-4.47	8.87	-4.63		
1886	8.71	-4.42	8.90	-4.65		
1885	8.65	-4.49	8.90	-4.52		
1884	8.57	-4.43	8.86	-4.40		
1883	8.74	-4.22	8.88	-4.56		

1882	8.60	-4.48	8.84	-4.52		
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1873			8.94	-4.56		
1872			8.88	-4.65		
1871			8.80	-4.63		
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1860			8.85	-4.55		
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1857			8.86	-4.68		
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1855			8.82	-4.45		
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1776			8.88	-4.52		
1775			8.86	-4.56		
1774			8.78	-4.51		
1773			8.82	-4.42		
1772			8.86	-4.62		
1771			8.80	-4.66		
1770			8.81	-4.61		
1769			8.87	-4.52		
1768			8.80	-4.40		
1767			8.82	-4.40		
1766			8.89	-4.39		
1765			8.94	-4.32		
1764			8.88	-4.38		
1763			8.89	-4.45		
1762			8.85	-4.27		
1761			8.88	-4.27		
1760			8.87	-4.47		
1759			8.94	-4.41		
1758			8.89	-4.39		
1757			8.84	-4.34		
1756			8.88	-4.46		
1755			8.94	-4.44		
1754			8.90	-4.42		

1753			8.83	-4.61		
1752			8.93	-4.37		
1751			8.85	-4.35		
1750			8.90	-4.44		
1749			8.85	-4.40		
1748			8.87	-4.41		
1747			8.90	-4.38		
1746			8.90	-4.23		
1745			8.88	-4.33		
1744			8.87	-4.44		
1743			8.89	-4.40		
1742			8.89	-4.36		
1741			8.90	-4.41		
1740			8.86	-4.39		
1739			8.87	-4.40		
1738			8.91	-4.43		
1737			8.82	-4.43		
1736			8.94	-4.48		
1735			8.86	-4.52		
1734			8.90	-4.13		
1733			8.92	-4.30		
1732			8.91	-4.33		
1731			8.88	-4.19		
1730			8.88	-4.31		
1729			8.91	-4.36		
1728			8.88	-4.27		
1727			8.94	-4.14		
1726			8.91	-4.30		
1725			8.92	-4.47		
1724			8.86	-4.47		
1723			8.86	-4.41		
1722			8.87	-4.42		
1721			8.88	-4.38		
1720			8.85	-4.41		
1719			8.91	-4.10		
1718			8.94	-4.20		
1717			8.86	-4.05		
1716			8.94	-4.35		
1715			8.79	-4.16		
1714			8.90	-4.23		
1713			8.80	-4.42		
1712			8.86	-4.32		
1711			8.90	-4.08		

1710			8.94	-4.30		
1709			9.01	-4.55		
1708			9.00	-4.31		
1707			8.96	-4.32		
1706			8.87	-4.31		
1705			8.82	-4.39		
1704			8.77	-4.39		
1703			8.82	-4.17		
1702			8.90	-4.35		
1701			8.94	-4.24		
1700			8.92	-4.20		
1699			8.92	-4.25		
1698			8.93	-4.33		
1697			8.88	-4.09		
1696			8.79	-4.09		
1695			8.99	-4.50		
1694			8.81	-4.13		
1693			8.84	-4.37		
1692			8.76	-4.46		
1691			8.82	-4.43		
1690			8.78	-4.41		
1689			8.80	-4.38		
1688			8.89	-4.22		
1687			8.86	-4.49		
1686			8.84	-4.16		
1685			8.92	-4.21		
1684			8.81	-4.39		
1683			8.89	-4.37		
1682			8.82	-4.44		
1681			8.88	-4.51		
1680			8.89	-4.49		
1679			8.89	-4.52		
1678			8.98	-4.52		
1677			8.87	-4.55		
1676			8.93	-4.34		
1675			8.96	-4.43		
1674			8.86	-4.30		
1673			8.88	-4.36		
1672			8.86	-4.43		
1671			8.86	-4.66		
1670			8.86	-4.49		
1669			8.86	-4.45		
1668			8.79	-4.31		

1667			8.89	-4.29		
1666			8.82	-4.42		
1665			8.90	-4.38		
1664			8.87	-4.46		
1663			8.92	-4.54		
1662			8.91	-4.46		
1661			8.80	-4.49		

Table S4 – Ifaty-Tulear composite $\delta^{18}\text{O}_{\text{seawater}}$ reconstruction based on a Monte Carlo simulation (for details see methods).

year	Median $\delta^{18}\text{O}_{\text{sw}}$ (‰)	68% CI)		90% CI		95% CI		99% CI	
		16%	84%	5%	95%	2.5%	97.5%	0.5%	99.5%
1994	-0.31	-0.42	-0.20	-0.49	-0.13	-0.53	-0.10	-0.60	-0.03
1993	-0.24	-0.37	-0.12	-0.46	-0.04	-0.50	-0.01	-0.58	0.07
1992	-0.02	-0.13	0.09	-0.20	0.17	-0.23	0.21	-0.30	0.29
1991	-0.06	-0.18	0.06	-0.26	0.13	-0.29	0.17	-0.36	0.25
1990	-0.06	-0.16	0.03	-0.22	0.09	-0.25	0.12	-0.30	0.18
1989	-0.09	-0.19	0.01	-0.25	0.08	-0.28	0.11	-0.34	0.17
1988	-0.11	-0.26	0.06	-0.35	0.17	-0.40	0.23	-0.48	0.35
1987	0.02	-0.09	0.13	-0.16	0.19	-0.19	0.23	-0.26	0.29
1986	-0.09	-0.20	0.03	-0.27	0.10	-0.30	0.14	-0.36	0.21
1985	-0.13	-0.23	-0.02	-0.31	0.05	-0.34	0.08	-0.41	0.15
1984	-0.09	-0.25	0.05	-0.35	0.13	-0.40	0.17	-0.51	0.24
1983	0.01	-0.09	0.11	-0.15	0.17	-0.18	0.20	-0.24	0.26
1982	-0.03	-0.16	0.10	-0.24	0.19	-0.28	0.23	-0.35	0.31
1981	-0.37	-0.55	-0.21	-0.68	-0.11	-0.75	-0.06	-0.87	0.03
1980	-0.06	-0.26	0.14	-0.38	0.26	-0.44	0.32	-0.56	0.44
1979	0.02	-0.19	0.22	-0.33	0.34	-0.40	0.40	-0.52	0.52
1978	0.08	-0.03	0.19	-0.10	0.27	-0.14	0.30	-0.21	0.38
1977	0.11	0.01	0.21	-0.06	0.28	-0.09	0.32	-0.16	0.39
1976	0.07	-0.07	0.21	-0.16	0.30	-0.21	0.35	-0.29	0.43
1975	0.15	0.02	0.28	-0.05	0.37	-0.09	0.41	-0.15	0.48
1974	0.02	-0.10	0.14	-0.19	0.21	-0.23	0.24	-0.31	0.31
1973	0.06	-0.05	0.18	-0.12	0.25	-0.16	0.29	-0.22	0.35
1972	0.05	-0.08	0.18	-0.16	0.26	-0.20	0.30	-0.28	0.37
1971	-0.05	-0.17	0.07	-0.25	0.15	-0.28	0.19	-0.36	0.26
1970	0.04	-0.12	0.19	-0.22	0.27	-0.27	0.32	-0.38	0.39
1969	0.02	-0.08	0.12	-0.15	0.19	-0.19	0.22	-0.25	0.28
1968	-0.06	-0.19	0.06	-0.28	0.14	-0.32	0.17	-0.40	0.24
1967	0.03	-0.10	0.15	-0.17	0.24	-0.21	0.28	-0.28	0.35
1966	-0.07	-0.17	0.03	-0.23	0.09	-0.26	0.12	-0.32	0.19
1965	0.05	-0.04	0.15	-0.10	0.21	-0.13	0.24	-0.19	0.29
1964	0.10	-0.04	0.23	-0.12	0.31	-0.16	0.35	-0.24	0.43

1963	0.01	-0.11	0.13	-0.18	0.21	-0.22	0.25	-0.28	0.33
1962	0.16	0.06	0.27	-0.01	0.34	-0.04	0.38	-0.10	0.45
1961	0.22	0.09	0.36	-0.01	0.45	-0.05	0.49	-0.13	0.57
1960	0.06	-0.05	0.16	-0.11	0.24	-0.14	0.27	-0.21	0.34
1959	-0.13	-0.30	0.05	-0.41	0.16	-0.45	0.22	-0.54	0.34
1958	-0.05	-0.18	0.08	-0.27	0.17	-0.32	0.21	-0.40	0.28
1957	-0.05	-0.17	0.07	-0.24	0.15	-0.28	0.20	-0.34	0.28
1956	0.17	-0.01	0.36	-0.10	0.49	-0.15	0.55	-0.22	0.66
1955	-0.04	-0.27	0.17	-0.43	0.29	-0.50	0.34	-0.65	0.45
1954	-0.01	-0.16	0.14	-0.25	0.23	-0.30	0.28	-0.38	0.38
1953	-0.03	-0.13	0.08	-0.19	0.15	-0.22	0.19	-0.29	0.26
1952	0.04	-0.08	0.16	-0.17	0.23	-0.20	0.27	-0.28	0.33
1951	0.11	-0.04	0.24	-0.13	0.32	-0.17	0.36	-0.27	0.44
1950	-0.10	-0.25	0.05	-0.33	0.16	-0.38	0.21	-0.45	0.31
1949	-0.06	-0.15	0.03	-0.21	0.09	-0.24	0.12	-0.30	0.18
1948	0.01	-0.10	0.12	-0.16	0.19	-0.19	0.22	-0.26	0.29
1947	0.01	-0.12	0.14	-0.21	0.22	-0.25	0.26	-0.33	0.34
1946	0.04	-0.07	0.15	-0.14	0.22	-0.17	0.25	-0.24	0.33
1945	0.02	-0.12	0.15	-0.21	0.24	-0.25	0.28	-0.34	0.35
1944	-0.02	-0.18	0.14	-0.27	0.25	-0.31	0.31	-0.38	0.41
1943	-0.11	-0.23	0.00	-0.30	0.07	-0.34	0.11	-0.40	0.18
1942	0.08	-0.04	0.19	-0.11	0.26	-0.14	0.30	-0.21	0.37
1941	0.04	-0.08	0.16	-0.15	0.24	-0.18	0.28	-0.26	0.35
1940	0.03	-0.07	0.13	-0.13	0.19	-0.16	0.23	-0.22	0.29
1939	0.30	0.12	0.47	0.02	0.59	-0.03	0.65	-0.12	0.77
1938	0.39	0.23	0.54	0.14	0.63	0.09	0.68	0.00	0.78
1937	0.19	0.00	0.37	-0.12	0.50	-0.18	0.56	-0.28	0.67
1936	0.09	-0.04	0.24	-0.12	0.34	-0.16	0.40	-0.22	0.50
1935	0.17	-0.01	0.34	-0.11	0.45	-0.16	0.50	-0.26	0.60
1934	0.15	0.03	0.28	-0.05	0.36	-0.09	0.40	-0.16	0.47
1933	0.14	0.02	0.26	-0.06	0.34	-0.10	0.38	-0.17	0.46
1932	0.15	0.05	0.26	-0.02	0.33	-0.05	0.36	-0.11	0.42
1931	0.17	0.06	0.29	-0.01	0.36	-0.05	0.40	-0.11	0.47
1930	0.18	0.06	0.29	-0.02	0.37	-0.06	0.40	-0.13	0.47
1929	0.03	-0.09	0.14	-0.16	0.22	-0.20	0.25	-0.27	0.32
1928	0.20	0.02	0.38	-0.10	0.49	-0.15	0.55	-0.25	0.67
1927	0.20	0.04	0.35	-0.05	0.45	-0.10	0.49	-0.21	0.58
1926	0.09	-0.10	0.27	-0.22	0.38	-0.29	0.43	-0.42	0.54
1925	0.07	-0.10	0.23	-0.21	0.33	-0.27	0.36	-0.38	0.44
1924	0.20	0.08	0.31	0.02	0.38	-0.02	0.42	-0.09	0.50
1923	0.10	-0.06	0.26	-0.17	0.36	-0.21	0.41	-0.30	0.49
1922	0.12	-0.03	0.26	-0.13	0.34	-0.17	0.37	-0.27	0.43
1921	0.06	-0.16	0.27	-0.29	0.37	-0.37	0.42	-0.50	0.51

1920	0.09	-0.03	0.20	-0.11	0.27	-0.14	0.30	-0.23	0.37
1919	0.30	0.12	0.47	0.01	0.58	-0.04	0.63	-0.14	0.74
1918	0.12	-0.08	0.33	-0.20	0.46	-0.26	0.53	-0.36	0.66
1917	0.07	-0.03	0.18	-0.10	0.24	-0.13	0.28	-0.19	0.34
1916	0.26	0.13	0.38	0.06	0.45	0.02	0.49	-0.05	0.56
1915	0.09	-0.05	0.24	-0.15	0.33	-0.19	0.38	-0.28	0.45
1914	0.12	-0.02	0.28	-0.11	0.38	-0.16	0.44	-0.24	0.54
1913	0.21	0.12	0.31	0.06	0.37	0.03	0.40	-0.03	0.46
1912	0.28	0.12	0.45	0.02	0.57	-0.03	0.64	-0.11	0.76
1911	0.12	-0.05	0.30	-0.14	0.42	-0.18	0.48	-0.26	0.59
1910	0.01	-0.17	0.20	-0.29	0.32	-0.35	0.38	-0.46	0.48
1909	0.18	0.00	0.35	-0.12	0.46	-0.17	0.52	-0.28	0.62
1908	0.12	-0.09	0.34	-0.21	0.49	-0.25	0.56	-0.35	0.72
1907	-0.01	-0.19	0.16	-0.30	0.27	-0.36	0.32	-0.48	0.42
1906	0.13	-0.06	0.32	-0.17	0.46	-0.22	0.52	-0.31	0.65
1905	-0.07	-0.26	0.12	-0.37	0.25	-0.42	0.31	-0.53	0.43
1904	-0.04	-0.17	0.09	-0.25	0.17	-0.28	0.21	-0.35	0.27
1903	-0.06	-0.18	0.05	-0.27	0.12	-0.31	0.16	-0.41	0.22
1902	0.02	-0.09	0.13	-0.15	0.20	-0.19	0.24	-0.25	0.29
1901	-0.07	-0.18	0.03	-0.25	0.10	-0.28	0.13	-0.36	0.19
1900	0.13	-0.02	0.27	-0.10	0.36	-0.15	0.40	-0.23	0.47
1899	-0.19	-0.29	-0.08	-0.37	-0.01	-0.40	0.02	-0.49	0.08
1898	-0.02	-0.15	0.11	-0.23	0.19	-0.26	0.23	-0.33	0.29
1897	0.06	-0.07	0.19	-0.15	0.27	-0.19	0.31	-0.26	0.39
1896	0.16	0.07	0.24	0.01	0.30	-0.02	0.33	-0.06	0.38
1895	0.02	-0.20	0.25	-0.31	0.36	-0.35	0.40	-0.42	0.47
1894	0.04	-0.10	0.18	-0.20	0.27	-0.24	0.31	-0.31	0.39
1893	0.09	-0.08	0.26	-0.18	0.37	-0.22	0.42	-0.30	0.51
1892	0.07	-0.05	0.19	-0.12	0.27	-0.15	0.31	-0.22	0.39
1891	-0.16	-0.30	-0.01	-0.38	0.07	-0.42	0.11	-0.49	0.17
1890	-0.11	-0.25	0.04	-0.34	0.13	-0.38	0.17	-0.45	0.24
1889	0.14	0.01	0.26	-0.07	0.35	-0.11	0.38	-0.18	0.46
1888	-0.01	-0.31	0.28	-0.43	0.41	-0.48	0.47	-0.57	0.56
1887	0.14	-0.15	0.42	-0.31	0.60	-0.37	0.67	-0.46	0.80
1886	-0.09	-0.30	0.11	-0.42	0.23	-0.48	0.29	-0.58	0.38
1885	0.03	-0.21	0.27	-0.34	0.40	-0.39	0.46	-0.48	0.56
1884	0.34	0.01	0.65	-0.11	0.83	-0.15	0.90	-0.23	1.04
1883	0.02	-0.20	0.23	-0.31	0.34	-0.35	0.39	-0.43	0.46
1882	0.24	0.01	0.46	-0.11	0.61	-0.15	0.68	-0.23	0.81
1881	-0.18	-0.39	0.03	-0.52	0.16	-0.59	0.23	-0.72	0.37
1880	0.09	-0.12	0.31	-0.25	0.46	-0.32	0.53	-0.44	0.70
1879	-0.21	-0.42	0.00	-0.56	0.13	-0.63	0.20	-0.78	0.34
1878	-0.03	-0.24	0.18	-0.37	0.32	-0.45	0.39	-0.59	0.54

1877	-0.14	-0.35	0.07	-0.49	0.21	-0.56	0.27	-0.71	0.41
1876	-0.15	-0.36	0.06	-0.50	0.20	-0.57	0.27	-0.71	0.41
1875	-0.35	-0.56	-0.14	-0.70	0.00	-0.77	0.07	-0.91	0.21
1874	-0.30	-0.51	-0.09	-0.66	0.04	-0.73	0.11	-0.89	0.27
1873	-0.53	-0.76	-0.31	-0.91	-0.18	-1.01	-0.12	-1.19	0.00
1872	-0.37	-0.59	-0.17	-0.73	-0.03	-0.81	0.03	-0.96	0.17
1871	-0.07	-0.28	0.14	-0.41	0.29	-0.47	0.37	-0.61	0.54
1870	-0.18	-0.39	0.03	-0.53	0.17	-0.60	0.24	-0.76	0.37
1869	-0.09	-0.30	0.12	-0.44	0.25	-0.51	0.32	-0.66	0.46
1868	-0.23	-0.44	-0.02	-0.58	0.12	-0.64	0.18	-0.80	0.32
1867	-0.17	-0.38	0.04	-0.52	0.17	-0.60	0.24	-0.74	0.36
1866	0.09	-0.12	0.30	-0.25	0.44	-0.32	0.51	-0.45	0.67
1865	-0.42	-0.65	-0.20	-0.81	-0.07	-0.89	0.00	-1.07	0.12
1864	-0.20	-0.41	0.01	-0.55	0.15	-0.63	0.21	-0.78	0.33
1863	-0.22	-0.43	-0.01	-0.58	0.12	-0.66	0.19	-0.83	0.31
1862	-0.07	-0.29	0.14	-0.44	0.27	-0.51	0.33	-0.67	0.46
1861	-0.44	-0.66	-0.23	-0.82	-0.09	-0.90	-0.03	-1.07	0.10
1860	-0.18	-0.40	0.02	-0.54	0.16	-0.61	0.22	-0.76	0.36
1859	-0.19	-0.40	0.02	-0.54	0.16	-0.61	0.22	-0.76	0.36
1858	-0.29	-0.51	-0.09	-0.65	0.04	-0.72	0.11	-0.86	0.24
1857	-0.32	-0.54	-0.12	-0.67	0.02	-0.75	0.09	-0.90	0.22
1856	0.06	-0.15	0.27	-0.28	0.42	-0.35	0.49	-0.47	0.64
1855	0.03	-0.18	0.24	-0.32	0.37	-0.39	0.44	-0.52	0.59
1854	-0.18	-0.39	0.03	-0.54	0.17	-0.61	0.23	-0.76	0.36
1853	-0.24	-0.46	-0.03	-0.60	0.11	-0.68	0.18	-0.85	0.30
1852	-0.31	-0.54	-0.10	-0.69	0.03	-0.77	0.10	-0.94	0.24
1851	-0.05	-0.26	0.16	-0.41	0.29	-0.48	0.36	-0.63	0.49
1850	-0.11	-0.33	0.09	-0.47	0.23	-0.54	0.30	-0.72	0.43
1849	-0.06	-0.27	0.15	-0.41	0.29	-0.48	0.36	-0.63	0.49
1848	-0.01	-0.23	0.19	-0.37	0.33	-0.45	0.40	-0.60	0.53
1847	-0.12	-0.33	0.09	-0.48	0.22	-0.55	0.29	-0.72	0.41
1846	-0.30	-0.53	-0.10	-0.68	0.04	-0.76	0.10	-0.91	0.23
1845	-0.01	-0.22	0.20	-0.36	0.34	-0.43	0.41	-0.59	0.57
1844	-0.04	-0.25	0.17	-0.38	0.31	-0.45	0.38	-0.58	0.53
1843	-0.07	-0.28	0.14	-0.41	0.28	-0.48	0.35	-0.63	0.49
1842	-0.04	-0.25	0.17	-0.39	0.31	-0.46	0.38	-0.59	0.51
1841	-0.18	-0.39	0.03	-0.54	0.16	-0.62	0.23	-0.80	0.36
1840	-0.25	-0.46	-0.04	-0.60	0.09	-0.67	0.16	-0.83	0.30
1839	0.02	-0.19	0.23	-0.33	0.36	-0.39	0.43	-0.53	0.57
1838	-0.25	-0.47	-0.04	-0.62	0.10	-0.70	0.16	-0.86	0.28
1837	0.04	-0.18	0.25	-0.32	0.38	-0.40	0.45	-0.55	0.58
1836	-0.13	-0.34	0.08	-0.48	0.21	-0.56	0.28	-0.72	0.40
1835	-0.43	-0.65	-0.22	-0.80	-0.08	-0.88	-0.02	-1.05	0.10

1834	-0.15	-0.36	0.06	-0.51	0.20	-0.58	0.26	-0.74	0.39
1833	0.01	-0.20	0.22	-0.34	0.36	-0.41	0.43	-0.55	0.57
1832	0.09	-0.12	0.30	-0.26	0.44	-0.33	0.51	-0.46	0.65
1831	-0.27	-0.48	-0.06	-0.62	0.07	-0.70	0.14	-0.85	0.26
1830	0.06	-0.15	0.27	-0.30	0.41	-0.36	0.47	-0.50	0.61
1829	-0.18	-0.39	0.03	-0.54	0.16	-0.61	0.23	-0.77	0.35
1828	-0.08	-0.29	0.13	-0.42	0.26	-0.50	0.33	-0.63	0.46
1827	-0.03	-0.24	0.18	-0.38	0.33	-0.45	0.39	-0.58	0.53
1826	-0.25	-0.46	-0.04	-0.60	0.10	-0.68	0.17	-0.83	0.31
1825	-0.16	-0.37	0.05	-0.51	0.19	-0.58	0.25	-0.72	0.39
1824	-0.20	-0.42	0.01	-0.57	0.14	-0.64	0.20	-0.80	0.34
1823	-0.40	-0.63	-0.19	-0.78	-0.05	-0.86	0.01	-1.04	0.14
1822	-0.09	-0.30	0.12	-0.44	0.26	-0.50	0.33	-0.64	0.47
1821	-0.66	-0.90	-0.44	-1.07	-0.30	-1.17	-0.24	-1.35	-0.12
1820	-0.12	-0.33	0.09	-0.47	0.23	-0.54	0.29	-0.68	0.43
1819	-0.24	-0.46	-0.03	-0.60	0.10	-0.67	0.17	-0.84	0.29
1818	-0.23	-0.45	-0.02	-0.59	0.11	-0.67	0.17	-0.83	0.31
1817	-0.25	-0.47	-0.05	-0.61	0.08	-0.68	0.15	-0.84	0.28
1816	-0.39	-0.61	-0.18	-0.77	-0.04	-0.85	0.02	-1.04	0.15
1815	-0.07	-0.28	0.14	-0.42	0.27	-0.49	0.34	-0.63	0.48
1814	-0.29	-0.50	-0.08	-0.65	0.06	-0.73	0.12	-0.88	0.25
1813	-0.29	-0.51	-0.09	-0.66	0.04	-0.73	0.11	-0.87	0.24
1812	-0.26	-0.47	-0.05	-0.61	0.08	-0.68	0.15	-0.83	0.29
1811	-0.30	-0.51	-0.09	-0.65	0.04	-0.73	0.11	-0.88	0.25
1810	-0.29	-0.50	-0.08	-0.64	0.06	-0.71	0.13	-0.85	0.27
1809	-0.16	-0.37	0.05	-0.50	0.19	-0.57	0.26	-0.71	0.40
1808	-0.02	-0.23	0.19	-0.37	0.33	-0.43	0.40	-0.57	0.54
1807	-0.16	-0.36	0.05	-0.50	0.19	-0.57	0.26	-0.72	0.40
1806	-0.33	-0.55	-0.12	-0.70	0.01	-0.77	0.08	-0.93	0.22
1805	-0.06	-0.28	0.15	-0.41	0.28	-0.48	0.35	-0.62	0.49
1804	-0.31	-0.53	-0.10	-0.68	0.03	-0.75	0.09	-0.91	0.21
1803	-0.16	-0.37	0.05	-0.51	0.19	-0.58	0.26	-0.75	0.40
1802	-0.26	-0.47	-0.05	-0.62	0.08	-0.69	0.15	-0.84	0.29
1801	-0.38	-0.60	-0.18	-0.76	-0.05	-0.83	0.02	-0.98	0.15
1800	-0.32	-0.54	-0.11	-0.69	0.02	-0.77	0.08	-0.94	0.21
1799	-0.52	-0.75	-0.31	-0.90	-0.18	-0.99	-0.11	-1.15	0.03
1798	-0.22	-0.43	-0.01	-0.56	0.13	-0.63	0.20	-0.77	0.34
1797	-0.28	-0.49	-0.07	-0.64	0.06	-0.72	0.13	-0.87	0.26
1796	-0.03	-0.25	0.18	-0.38	0.31	-0.46	0.38	-0.59	0.53
1795	-0.62	-0.85	-0.40	-1.01	-0.27	-1.09	-0.21	-1.26	-0.09
1794	-0.21	-0.42	0.00	-0.57	0.12	-0.64	0.19	-0.78	0.33
1793	-0.25	-0.47	-0.05	-0.61	0.08	-0.69	0.15	-0.83	0.28
1792	-0.30	-0.51	-0.09	-0.66	0.04	-0.74	0.11	-0.89	0.25

1791	-0.17	-0.38	0.04	-0.52	0.17	-0.59	0.24	-0.74	0.37
1790	-0.01	-0.22	0.20	-0.36	0.33	-0.43	0.41	-0.58	0.55
1789	0.12	-0.09	0.34	-0.23	0.48	-0.29	0.55	-0.41	0.70
1788	-0.28	-0.50	-0.07	-0.66	0.06	-0.73	0.13	-0.89	0.26
1787	-0.35	-0.58	-0.14	-0.74	-0.01	-0.81	0.05	-0.97	0.18
1786	-0.21	-0.43	0.00	-0.57	0.14	-0.65	0.20	-0.80	0.33
1785	-0.16	-0.38	0.04	-0.52	0.18	-0.60	0.24	-0.76	0.38
1784	-0.57	-0.79	-0.35	-0.96	-0.22	-1.04	-0.16	-1.23	-0.03
1783	-0.20	-0.41	0.01	-0.55	0.14	-0.62	0.21	-0.76	0.36
1782	0.10	-0.11	0.32	-0.24	0.46	-0.31	0.53	-0.43	0.70
1781	0.14	-0.06	0.36	-0.20	0.49	-0.27	0.56	-0.42	0.71
1780	-0.22	-0.45	-0.01	-0.60	0.12	-0.68	0.19	-0.85	0.30
1779	-0.26	-0.48	-0.05	-0.62	0.08	-0.69	0.15	-0.85	0.28
1778	-0.06	-0.27	0.15	-0.41	0.28	-0.48	0.35	-0.64	0.49
1777	0.03	-0.17	0.24	-0.31	0.39	-0.37	0.46	-0.52	0.62
1776	-0.24	-0.45	-0.03	-0.59	0.10	-0.66	0.17	-0.80	0.30
1775	-0.23	-0.44	-0.02	-0.58	0.12	-0.65	0.18	-0.79	0.33
1774	0.11	-0.10	0.32	-0.24	0.47	-0.30	0.54	-0.43	0.69
1773	0.06	-0.15	0.27	-0.29	0.41	-0.35	0.48	-0.48	0.62
1772	-0.29	-0.49	-0.08	-0.64	0.06	-0.72	0.13	-0.87	0.27
1771	-0.11	-0.32	0.10	-0.45	0.25	-0.52	0.32	-0.66	0.47
1770	-0.07	-0.28	0.14	-0.41	0.29	-0.47	0.36	-0.61	0.51
1769	-0.21	-0.43	0.00	-0.57	0.13	-0.64	0.20	-0.79	0.34
1768	0.15	-0.06	0.36	-0.18	0.51	-0.25	0.58	-0.38	0.72
1767	0.10	-0.11	0.31	-0.25	0.45	-0.32	0.52	-0.45	0.66
1766	-0.17	-0.38	0.04	-0.52	0.17	-0.60	0.24	-0.75	0.38
1765	-0.25	-0.48	-0.05	-0.64	0.09	-0.72	0.15	-0.92	0.28
1764	-0.12	-0.33	0.09	-0.47	0.22	-0.54	0.29	-0.69	0.42
1763	-0.21	-0.43	0.00	-0.57	0.13	-0.65	0.20	-0.80	0.33
1762	0.11	-0.09	0.32	-0.24	0.46	-0.31	0.52	-0.45	0.66
1761	-0.01	-0.23	0.19	-0.37	0.33	-0.45	0.39	-0.61	0.53
1760	-0.18	-0.39	0.03	-0.54	0.17	-0.61	0.23	-0.76	0.37
1759	-0.36	-0.59	-0.15	-0.75	-0.02	-0.84	0.05	-1.01	0.18
1758	-0.16	-0.38	0.04	-0.52	0.18	-0.60	0.24	-0.77	0.37
1757	0.09	-0.12	0.30	-0.25	0.44	-0.32	0.51	-0.45	0.66
1756	-0.21	-0.42	0.00	-0.57	0.14	-0.64	0.21	-0.81	0.33
1755	-0.40	-0.62	-0.19	-0.78	-0.06	-0.87	0.01	-1.06	0.13
1754	-0.22	-0.43	-0.01	-0.59	0.12	-0.66	0.18	-0.84	0.31
1753	-0.16	-0.37	0.06	-0.51	0.20	-0.58	0.26	-0.73	0.40
1752	-0.27	-0.50	-0.06	-0.65	0.07	-0.73	0.14	-0.89	0.26
1751	0.03	-0.18	0.24	-0.32	0.37	-0.40	0.44	-0.54	0.58
1750	-0.26	-0.47	-0.05	-0.62	0.09	-0.71	0.16	-0.88	0.28
1749	-0.01	-0.22	0.20	-0.36	0.34	-0.43	0.41	-0.57	0.55

1748	-0.12	-0.33	0.09	-0.47	0.22	-0.54	0.29	-0.70	0.43
1747	-0.18	-0.40	0.03	-0.54	0.17	-0.62	0.23	-0.79	0.36
1746	-0.04	-0.27	0.17	-0.42	0.30	-0.50	0.37	-0.65	0.49
1745	-0.06	-0.27	0.15	-0.41	0.29	-0.49	0.35	-0.63	0.50
1744	-0.15	-0.36	0.06	-0.50	0.20	-0.58	0.26	-0.74	0.38
1743	-0.15	-0.37	0.06	-0.51	0.19	-0.58	0.25	-0.74	0.39
1742	-0.15	-0.36	0.06	-0.51	0.20	-0.58	0.26	-0.75	0.40
1741	-0.21	-0.43	0.00	-0.58	0.13	-0.65	0.20	-0.81	0.33
1740	-0.04	-0.26	0.16	-0.40	0.29	-0.47	0.36	-0.63	0.48
1739	-0.10	-0.31	0.11	-0.46	0.24	-0.53	0.30	-0.67	0.44
1738	-0.26	-0.48	-0.05	-0.63	0.09	-0.71	0.16	-0.89	0.27
1737	0.07	-0.14	0.27	-0.27	0.41	-0.34	0.49	-0.49	0.65
1736	-0.42	-0.65	-0.21	-0.81	-0.08	-0.89	-0.01	-1.06	0.12
1735	-0.18	-0.39	0.03	-0.53	0.17	-0.60	0.23	-0.76	0.36
1734	0.08	-0.14	0.29	-0.29	0.42	-0.36	0.49	-0.51	0.62
1733	-0.18	-0.40	0.03	-0.56	0.17	-0.63	0.23	-0.81	0.36
1732	-0.16	-0.38	0.05	-0.53	0.18	-0.61	0.24	-0.77	0.38
1731	0.06	-0.15	0.27	-0.29	0.40	-0.37	0.46	-0.53	0.60
1730	-0.05	-0.26	0.16	-0.40	0.30	-0.47	0.37	-0.64	0.50
1729	-0.20	-0.42	0.01	-0.58	0.14	-0.66	0.20	-0.83	0.32
1728	0.00	-0.21	0.21	-0.36	0.34	-0.43	0.41	-0.58	0.55
1727	-0.07	-0.30	0.14	-0.45	0.27	-0.54	0.34	-0.71	0.47
1726	-0.15	-0.37	0.06	-0.52	0.19	-0.60	0.26	-0.76	0.40
1725	-0.33	-0.56	-0.13	-0.71	0.01	-0.78	0.08	-0.94	0.21
1724	-0.12	-0.33	0.09	-0.47	0.22	-0.54	0.29	-0.68	0.43
1723	-0.06	-0.27	0.15	-0.41	0.29	-0.48	0.36	-0.61	0.49
1722	-0.13	-0.34	0.08	-0.48	0.22	-0.55	0.28	-0.70	0.42
1721	-0.11	-0.33	0.09	-0.47	0.23	-0.55	0.30	-0.70	0.43
1720	-0.04	-0.26	0.17	-0.40	0.30	-0.47	0.37	-0.62	0.49
1719	0.07	-0.15	0.28	-0.30	0.41	-0.38	0.48	-0.54	0.61
1718	-0.16	-0.38	0.05	-0.54	0.19	-0.62	0.25	-0.80	0.38
1717	0.28	0.07	0.49	-0.07	0.62	-0.14	0.69	-0.28	0.82
1716	-0.31	-0.54	-0.10	-0.69	0.03	-0.77	0.09	-0.96	0.23
1715	0.45	0.24	0.67	0.11	0.81	0.04	0.89	-0.09	1.05
1714	-0.04	-0.26	0.17	-0.41	0.30	-0.49	0.37	-0.64	0.49
1713	0.14	-0.07	0.35	-0.20	0.50	-0.27	0.57	-0.40	0.71
1712	0.02	-0.20	0.23	-0.33	0.36	-0.40	0.43	-0.55	0.56
1711	0.11	-0.11	0.32	-0.26	0.45	-0.33	0.52	-0.50	0.65
1710	-0.25	-0.47	-0.04	-0.63	0.10	-0.71	0.17	-0.87	0.30
1709	-0.75	-1.00	-0.53	-1.17	-0.39	-1.27	-0.32	-1.48	-0.19
1708	-0.48	-0.73	-0.26	-0.90	-0.12	-0.99	-0.06	-1.20	0.07
1707	-0.34	-0.57	-0.12	-0.73	0.02	-0.82	0.09	-1.03	0.21
1706	-0.01	-0.22	0.20	-0.36	0.33	-0.43	0.40	-0.59	0.53

1705	0.11	-0.10	0.32	-0.24	0.47	-0.30	0.53	-0.44	0.68
1704	0.27	0.06	0.48	-0.08	0.63	-0.14	0.71	-0.27	0.86
1703	0.33	0.13	0.54	-0.01	0.69	-0.08	0.76	-0.21	0.91
1702	-0.15	-0.36	0.06	-0.51	0.20	-0.59	0.26	-0.75	0.39
1701	-0.18	-0.41	0.03	-0.57	0.16	-0.66	0.23	-0.83	0.36
1700	-0.09	-0.31	0.12	-0.46	0.26	-0.54	0.33	-0.71	0.45
1699	-0.13	-0.36	0.08	-0.51	0.21	-0.59	0.28	-0.76	0.40
1698	-0.23	-0.45	-0.02	-0.60	0.11	-0.69	0.17	-0.85	0.31
1697	0.18	-0.03	0.39	-0.18	0.52	-0.25	0.59	-0.42	0.74
1696	0.50	0.29	0.71	0.16	0.86	0.09	0.93	-0.04	1.09
1695	-0.61	-0.86	-0.40	-1.03	-0.26	-1.12	-0.19	-1.31	-0.06
1694	0.39	0.18	0.60	0.05	0.74	-0.02	0.82	-0.16	0.96
1693	0.04	-0.17	0.24	-0.31	0.39	-0.38	0.45	-0.52	0.59
1692	0.26	0.04	0.48	-0.09	0.62	-0.15	0.70	-0.29	0.85
1691	0.07	-0.13	0.29	-0.27	0.43	-0.34	0.50	-0.47	0.64
1690	0.23	0.02	0.44	-0.12	0.60	-0.19	0.67	-0.31	0.83
1689	0.20	-0.01	0.42	-0.14	0.56	-0.20	0.63	-0.34	0.77
1688	0.02	-0.19	0.23	-0.34	0.36	-0.41	0.43	-0.56	0.56
1687	-0.16	-0.37	0.05	-0.52	0.18	-0.59	0.25	-0.74	0.39
1686	0.27	0.07	0.48	-0.07	0.62	-0.14	0.69	-0.28	0.82
1685	-0.09	-0.31	0.12	-0.47	0.25	-0.55	0.32	-0.70	0.44
1684	0.12	-0.09	0.33	-0.23	0.47	-0.30	0.54	-0.44	0.68
1683	-0.14	-0.35	0.07	-0.51	0.20	-0.57	0.27	-0.73	0.40
1682	0.05	-0.16	0.26	-0.30	0.40	-0.36	0.47	-0.50	0.62
1681	-0.23	-0.44	-0.02	-0.58	0.11	-0.66	0.18	-0.81	0.30
1680	-0.26	-0.47	-0.05	-0.63	0.09	-0.71	0.16	-0.86	0.28
1679	-0.27	-0.48	-0.06	-0.63	0.07	-0.70	0.14	-0.87	0.28
1678	-0.63	-0.86	-0.41	-1.03	-0.28	-1.12	-0.21	-1.31	-0.08
1677	-0.24	-0.45	-0.03	-0.59	0.11	-0.66	0.18	-0.82	0.32
1676	-0.24	-0.47	-0.03	-0.62	0.10	-0.70	0.17	-0.86	0.30
1675	-0.46	-0.69	-0.24	-0.86	-0.10	-0.95	-0.04	-1.13	0.09
1674	0.05	-0.16	0.26	-0.30	0.40	-0.37	0.47	-0.51	0.59
1673	-0.09	-0.31	0.11	-0.46	0.24	-0.53	0.31	-0.70	0.44
1672	-0.09	-0.30	0.12	-0.44	0.25	-0.51	0.32	-0.65	0.47
1671	-0.31	-0.52	-0.10	-0.66	0.03	-0.74	0.10	-0.89	0.23
1670	-0.16	-0.37	0.05	-0.51	0.18	-0.58	0.25	-0.72	0.38
1669	-0.11	-0.32	0.10	-0.46	0.23	-0.53	0.30	-0.68	0.44
1668	0.29	0.08	0.50	-0.05	0.65	-0.11	0.73	-0.24	0.88
1667	-0.06	-0.27	0.15	-0.42	0.28	-0.49	0.35	-0.65	0.48
1666	0.07	-0.14	0.28	-0.28	0.42	-0.35	0.50	-0.48	0.64
1665	-0.19	-0.41	0.02	-0.56	0.16	-0.63	0.23	-0.80	0.35
1664	-0.16	-0.37	0.05	-0.52	0.18	-0.59	0.25	-0.74	0.38
1663	-0.42	-0.65	-0.22	-0.80	-0.09	-0.88	-0.02	-1.05	0.11

1662	-0.28	-0.50	-0.08	-0.66	0.06	-0.73	0.13	-0.90	0.25
1661	0.05	-0.16	0.26	-0.29	0.40	-0.36	0.48	-0.49	0.61