

Glacial-interglacial sea water isotope change near the Chilean Margin as reflected by $\delta^2\text{H}$ of C37 alkenones.

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Figure S1-S3

Table S1

Age model

Table S1. Age tie points added to the ^{14}C record from Muratil et al., 2010. The Laschamp Event at 41 ka is defined for ODP 1234 and 1235 based on the magnetic susceptibility (Mix et al. 2003). For ODP 1235 three additional radiocarbon measurements of benthic foraminifera *Uvigerina* were added in this study/.

| Age tie point | ODP1235 | ODP1234 |
|----------------------------------|---------|---------|
| 41 ka Laschamp Event | 51 m | 27 m |
| 21.323 ± 192 ^{14}C age | 26 m | |
| 20.866 ± 198 ^{14}C age | 22 m | |
| 20.354 ± 215 ^{14}C age | 195 m | |

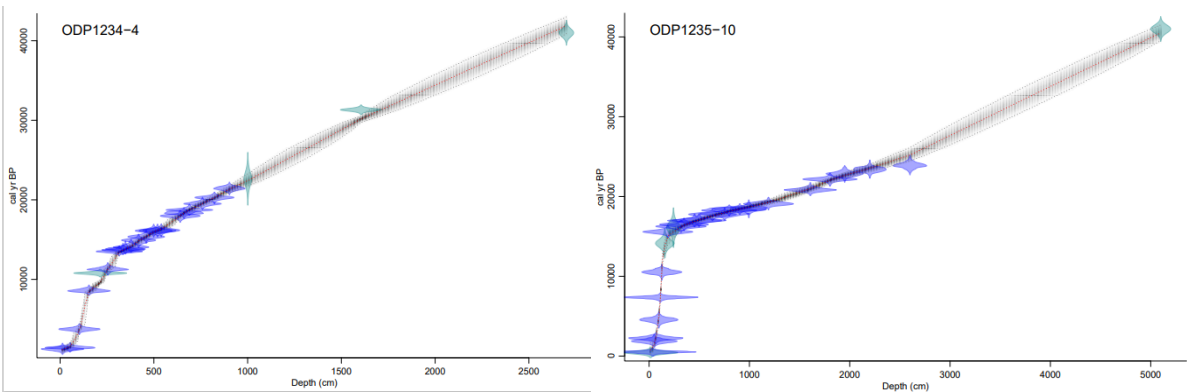


Figure S1 Age-depth model for ODP core 1234 and ODP 1235 compiled with rbacon.

Modern ocean water isotopes and salinity

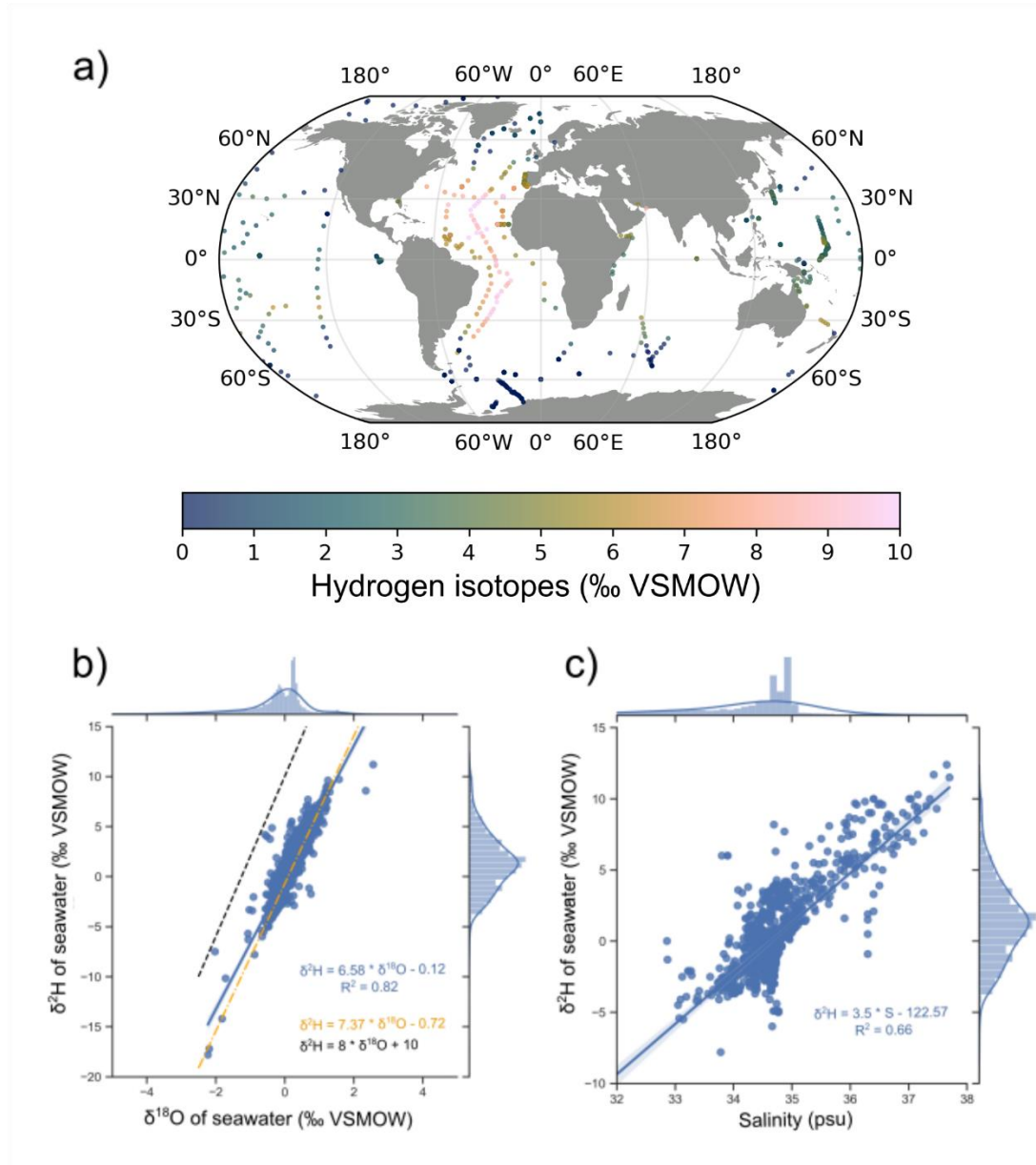


Figure S2. Distributions and correlations of salinity, oxygen and hydrogen isotope composition of open-ocean water (Rohling et al., 2007; Schmidt et al., 1999; Waterisotope Database 2022 managed by Bowen; Gould et al., 2019; Weiss et al., 2019; Srivastava et al., 2010). **a)** Global Map showing the datapoints of open-ocean hydrogen isotopes of seawater used to constrain the modern open-ocean waterline (MOOWL). **b)** Linear-regression of hydrogen and oxygen isotopes of seawater, in blue the extended dataset used in this study, orange displays the relationship described by Rohling et al., 2007, black dashed line represents the Meteoric Waterline according to Craig et al., 1961, 1965. **c)** Linear-regression of salinity and hydrogen isotopes of seawater.

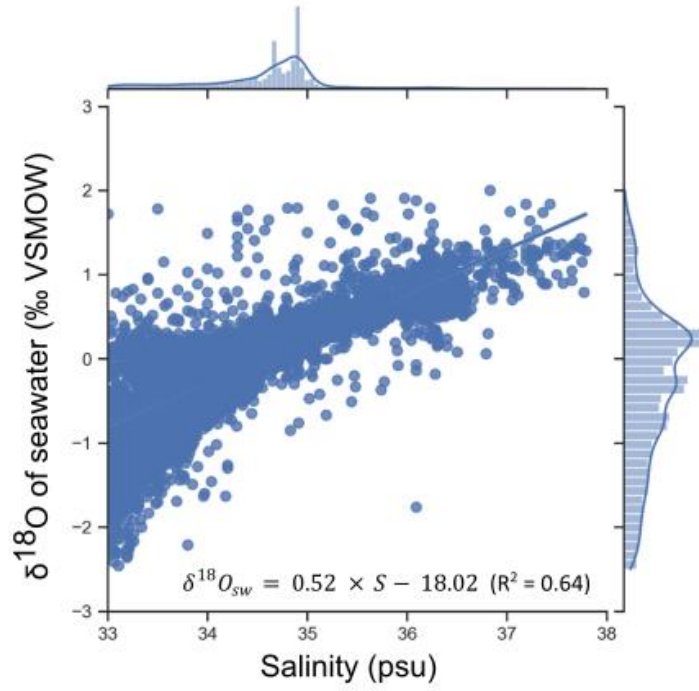


Figure S3. Linear-regression of salinity and oxygen isotopes of seawater based on published data (Rohling et al., 2007; Schmidt et al., 1999; Waterisotope Database 2022 managed by Bowen; Gould et al., 2019; Weiss et al., 2019; Srivastava et al., 2010).