

Sulfur isotope fractionation derived from reaction-transport modeling in the Eastern Equatorial Pacific – Supplementary Materials

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Supplementary figures are as follows:

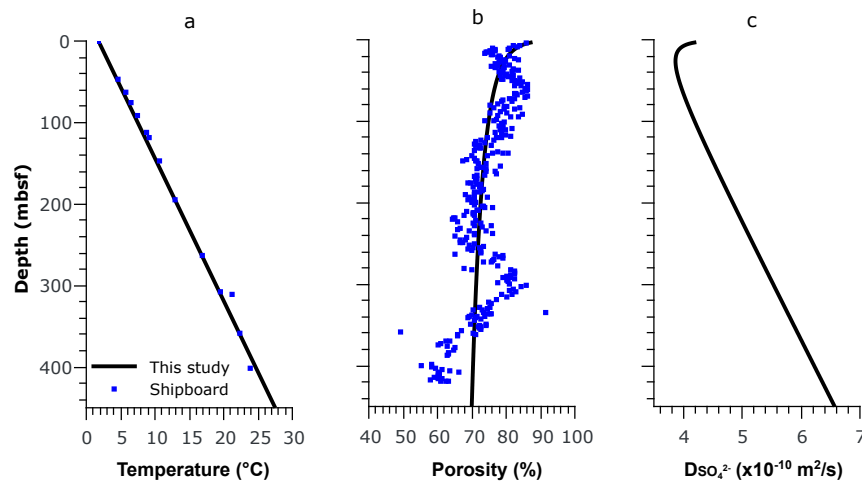


Fig. S1. Downcore (a) temperatures, (b) porosities and (c) sulfate diffusion coefficients calculated from porosity and temperature data (Boudreau, 1997; Leg 201 Shipboard Scientific Party, 2003). Squares denote Site 1226 shipboard data, whereas solid lines present the smoothed data prescribed into the reaction-transport model (see Methods of the main text).

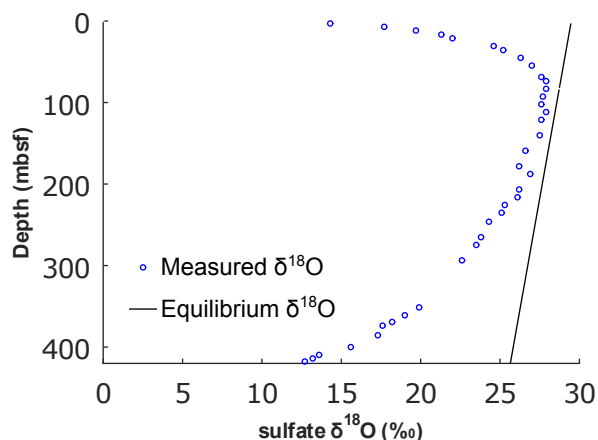


Fig. S2. Porewater sulfate $\delta^{18}\text{O}$ (VSMOW) measured from Site 1226 (Blake et al., 2006). The equilibrium values are approximations calculated based on Fritz et al. (1989).

References

- Blake R.E., Surkov A.V., Böttcher M.E., Ferdelman T.G. and Jørgensen B.B. (2006) Oxygen isotope composition of dissolved sulfate in deep-sea sediments: eastern equatorial Pacific Ocean. In *Proceedings of the Ocean Drilling Program, Scientific Results* (eds. B. Jørgensen, S. D'Hondt and D. Miller). volume 201, pp. 1–23.
- Boudreau B.P. (1997) *Diagenetic Models and Their Implementation: Modelling Transport and Reactions in Aquatic Sediments*. Springer, Berlin.
- Fritz P., Basharmal G., Drimmie R., Ibsen J. and Qureshi R. (1989) Oxygen isotope exchange between sulphate and water during bacterial reduction of sulphate. *Chemical Geology: Isotope Geoscience section* **79**(2), 99 – 105. doi:10.1016/0168-9622(89)90012-2.
- Leg 201 Shipboard Scientific Party (2003) Site 1226. In *Proceedings of the Ocean Drilling Program, Initial Reports 201* (ed. D'Hondt, S.L., Jørgensen, B.B., Miller, D.J., et al.), Ocean Drilling Program, College Station, T.X. pp. 1–96.