The spatial footprint of hydrothermal scavenging on $^{230}Th_{XS}$-derived mass accumulation rates

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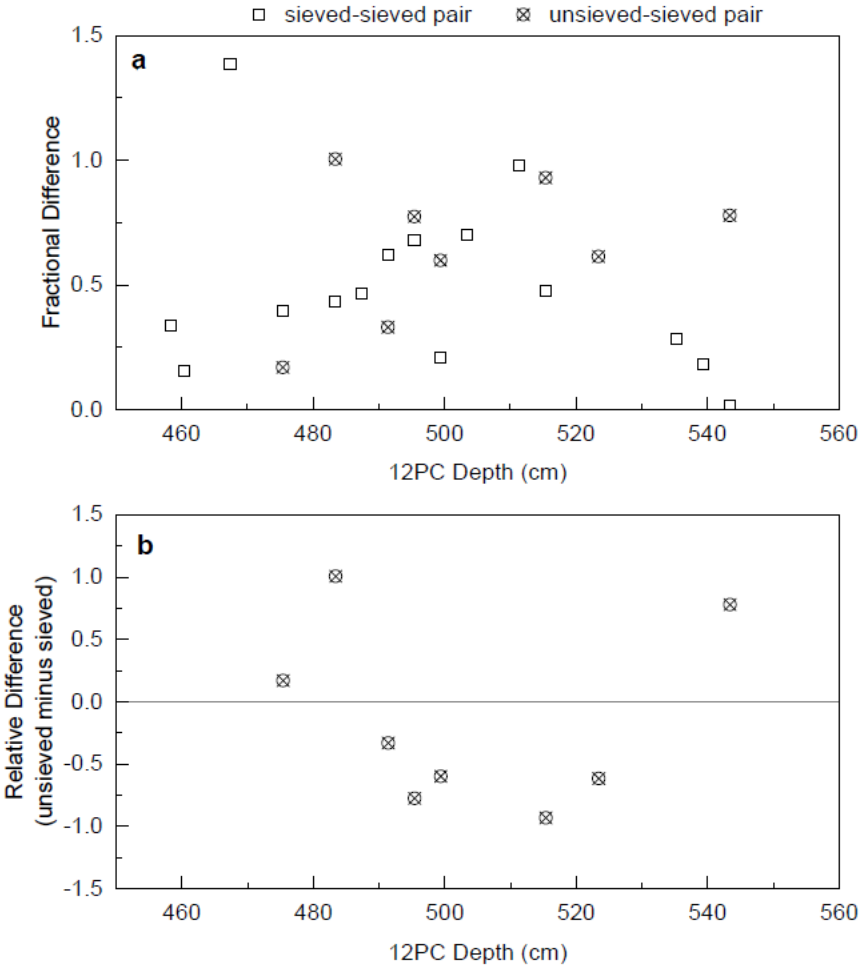
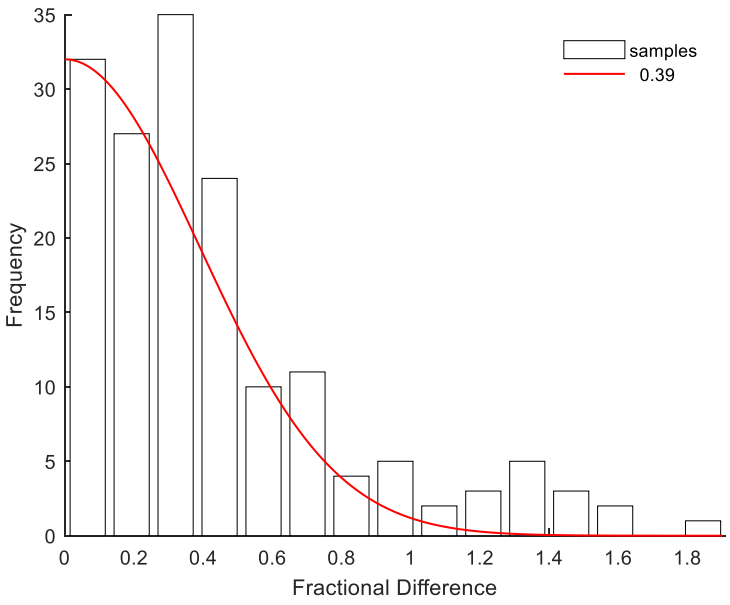
Supplemental Tables (included as .xlsx files)

1) Table S1 – Juan de Fuca Ridge helium analyses.
2) Table S2 – Mid-Atlantic Ridge thorium analyses.
3) Table S3 – Broken Spur hydrothermal element data.
4) Table S4 – Compiled Mid-Atlantic Ridge data.
5) Table S5 – Compiled Juan de Fuca Ridge data.

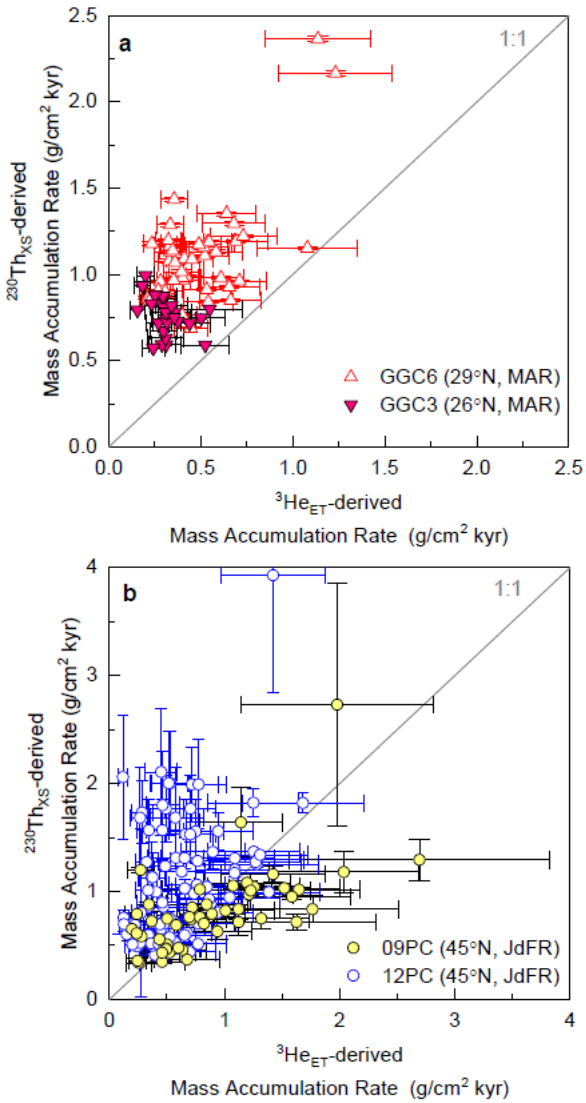
Supplemental Figures



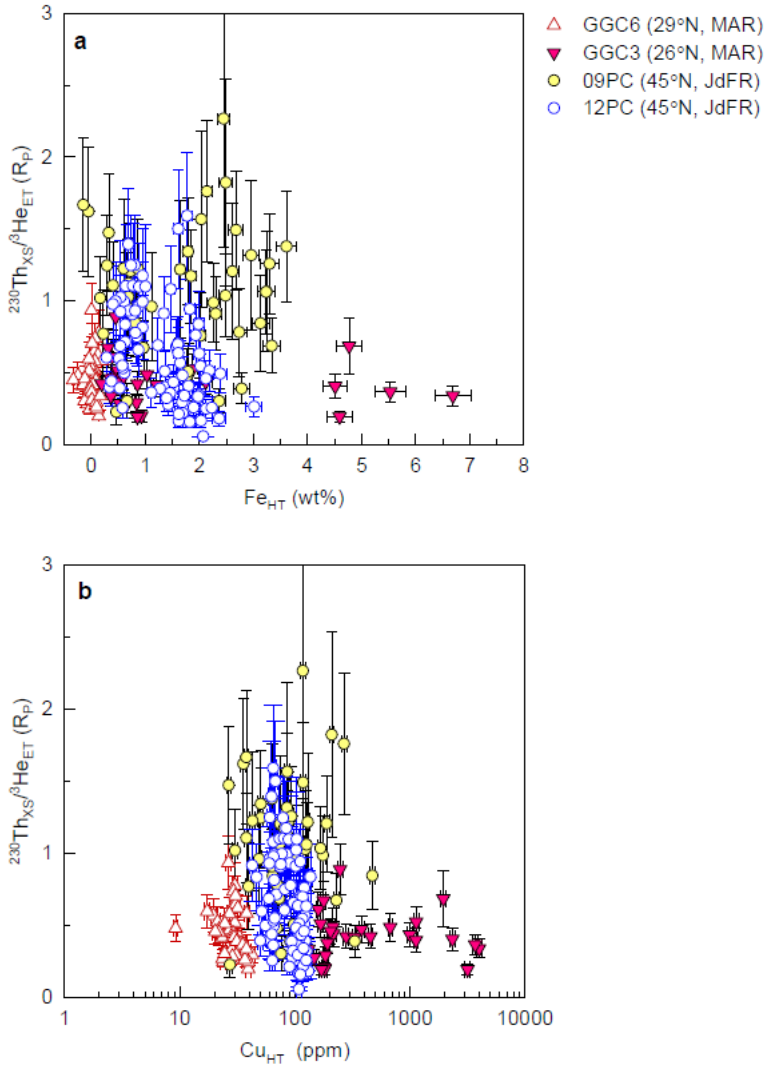
Supplemental Figure S1: a) Comparison of fractional differences in $^{3}He_{ET}$ concentrations between replicated pairs of sample aliquots sieved at the 64 μm level (sieved-sieved pairs; open squares) and pairs for which one aliquot was not sieved (unsieved-sieved pairs; crossed circles). b) The relative difference of unsieved-sieved pair replicates is computed by subtracting the $^{3}He_{ET}$ concentration of the sieved aliquot from that of the unsieved aliquot and diving by their average. No systematic difference between the reproducibility or relative magnitude of $^{3}He_{ET}$ concentrations for sieved and unsieved samples is observed. Samples are from AT26-19-12PC Section 4 and correspond to ages between ~520 and 608 ka.



Supplemental Figure S2: Reproducibility of Juan de Fuca Ridge (AT26-19-09PC, -12PC) helium analyses. Fractional differences in the concentrations of $^{3}He_{ET}$ in 164 replicated sample aliquots. The distribution of fractional differences is best fit by a Gaussian distribution with 1σ uncertainties (red line) of 39%.



Supplemental Figure S3: Comparison of $^{3}He_{ET}$- and $^{230}Th_{XS}$-derived mass accumulation rates for sediment cores from a) the Mid-Atlantic Ridge (MAR; GGC3, GGC6) and b) the Juan de Fuca Ridge (JdFR; 09PC, 12PC).



Supplemental Figure S4: Comparison of sedimentary $^{230}Th_{XS}/^{3}He_{ET}$ values and concentrations of a) hydrothermal iron (Fe_{HT}) and b) hydrothermal copper (Cu_{HT}) in sediments from the Mid-Atlantic Ridge (MAR; GGC3, GGC6) and the Juan de Fuca Ridge (JdFR; 09PC, 12PC). Absolute $^{230}Th_{XS}/^{3}He_{ET}$ ratios have been divided by the local production ratio (R_P) to allow for comparison between sites of different depths.