

Figure F1. Bathymetric map of South Atlantic Ocean with location of sites drilled during Expeditions 390 and 393 (i.e., SAT). DSDP Leg 3 sites are also shown. Figure modified from Teagle et al. (2023). WOCE = World Ocean Circulation Experiment, RGR = Rio Grande Rise, ERGR = eastern Rio Grande Rise, MAR = Mid-Atlantic Ridge, TdC = Tristan de Cunha hotspot.

Figure F2. Crossplots of selected element raw counts from XRF scanning, Site U1556. A. Fe vs. Ca. B. Ti vs. Fe. C. Al vs. Ar. D. Si vs. Ca. E. K vs. Fe. F. Ti vs. Ca. G. Si vs. Ti. H. Ba vs. Br. I. Sr vs. Ca.

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Figure F3. Correlogram for elements above XRF detection limits (>1000 counts/s), Site U1556 splice. Black numbers = Spearman's rank correlation coefficients. Correlation is on a color gradient from purple ($\rho = -1$; negative correlation) to yellow ($\rho = 1$; positive correlation). Higher ellipticity of the ellipse in each correlogram grid represents stronger correlation.