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Abstract

^{234}Th-derived carbon export fluxes were measured in the Atlantic Ocean under the GEOTRACES framework to evaluate basin-scale export variability. Here, we present the results from the northern half of the GA02 transect, spanning from the equator to 64°N. As a result of limited site-specific C/^{234}Th ratio measurements, we further combined our data with previous work to develop a basin wide C/^{234}Th ratio depth curve. While the magnitude of organic carbon fluxes varied depending on the C/^{234}Th ratio used, latitudinal trends were similar, with sizeable and variable organic carbon export fluxes occurring at high latitudes and low to negligible fluxes occurring in oligotrophic waters. Our results agree with previous studies, except at the boundaries between domains, where fluxes were relatively enhanced.