

An Early Holocene Relative Sea-Level Record from the Mississippi Delta

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The early Holocene was characterized by shrinking ice sheets and warm temperatures, making it an important interval for understanding future sea level changes. However, there are relatively few high-resolution sea-level records from the early Holocene. Here we present a basal peat relative sea-level (RSL) record from the Mississippi Delta that shows relative sea-level (RSL) rise of 5-6 mm/year in the interval from 7.7-10.7 ka. This vertically precise record contains index points and upper limiting points which are differentiated geochemically. Importantly, this record is useful for comparison both with previously published RSL records from around the globe and with glacial isostatic adjustment (GIA) model output. This Mississippi Delta record shows a much lower rate of sea-level rise than is seen in contemporaneous far-field records. GIA model results, when compared with our Mississippi Delta record, offer possible constraints on Early Holocene ice sheet contributions.