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Eastern US Continental Shelf Carbon Budget: Integrating Models, Data Assimilation, and Analysis

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First Paragraph

The past two decades have seen the development of large multidisciplinary oceanographic programs that focus on understanding carbon cycling processes in coastal and oceanic environments. Synthesis and modeling activities typically followed toward the ends of these programs (e.g., Joint Global Ocean Flux Study), usually long after the field experiments had been planned and carried out. A lesson from these programs was articulated in subsequent community planning reports (e.g., the Ocean Carbon Transport, Exchanges and Transformations Report [OCTET; http://www.msrb.sunysb.edu/octet/Workshop_Report.htm] and Ocean Carbon and Climate Change Report [OCCC; http://www.carboncyclescience.gov/documents/occc_is_2004.pdf]): future ocean carbon cycle research programs should promote close collaborations among scientists with expertise in measurement, data analysis, and numerical modeling at every stage of development—formative stages of hypothesis building, planning and execution of field programs, data analysis, numerical modeling, and synthesis.

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