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**SEEP (Shelf Edge Exchange Processes)-II**

Biscaye Pierre E.

The SEEP (Shelf Edge Exchange Processes)-II experiment was the second of two that took place in the Middle Atlantic Bight (MAB) of the eastern U.S. continental shelf and slope. The experiment included an array of 10 multi-instrumented moorings deployed for 15 months and 10 oceanographic cruises, all designed to address the problem of the fate of continental shelf particulate matter in general, and organic carbon in particular. This paper provides the setting and background for the SEEP Program, the SEEP-II experiment and an introduction to the 18 papers constituting the subject of this special volume. Because those papers lack one of a general nature on the physical oceanographic setting of the experiment, that aspect is treated in somewhat more detail here.

The results of the experiment overwhelmingly show that the working hypothesis on which the SEEP Program was undertaken and sponsored by the Department of Energy is not valid. That is, there is not an export to the adjacent slope and open ocean of a large proportion of the particulate matter introduced to and biologically generated in the waters of the continental shelf; most of the biogenic particulate matter is recycled by consumption (bacterial and otherwise) and oxidation on the shelf, and only a small proportion (of order  $\ll 5\%$ ) is exported to the adjacent slope. The small amount that is exported appears to be deposited preferentially in the sediments of an area of the slope centered at about 1000 m, and the export and sedimentation to that depocenter appears to increase from the northern to the southern MAB.

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