



## Abstract View

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# The Middle Atlantic Bight Cold Pool: Evolution of the Temperature Structure During Summer 1979

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### ABSTRACT

Temperature data spanning the entire Middle Atlantic Bight (MAB) during 1979 are used to study the structure and evolution of the cold pool. The Nantucket Shoals and New England Shelf appear to be the source of the coldest water found in the MAB in late winter. During the spring and summer, water within the cold pool in the New York Bight north of Hudson Canyon remains colder than any shelf water either to the northeast or southwest. Thus the coldest cold-pool water persists there as a remnant of winter-cooled water rather than being replenished by a colder upstream source, and south of Hudson Canyon, cold-pool temperatures decrease in June and July as colder water from upstream is advected southwestward along the coast. Both temperature data and direct current measurements suggest that the mean alongshore current has a minimum between Nantucket Shoals and Hudson Canyon. The alongshore variation of shelf topography appears to be responsible for the spatial variation in both the

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alongshelf drift speed and the thermal structure of the cold pool.

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