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Water mass characteristics in the deep layers of the western Ionian basin observed during May 2003

A. Rubino (1,2), D. Hainbucher (1) and B. Klein (3)

(1) Universität Hamburg, Zentrum für Meeres- und Klimaforschung, Institut für Meereskunde, Germany, (2) Università Ca'Foscari di Venezia, Dipartimento di Scienze Ambientali, Italy, (3) Bundesamt fuer Seeschifffahrt und Hydrographie, Hamburg, Germany

Hydrographic data acquired during May 2003 in deep layers of the western part of the Ionian basin by the German research vessel POSEIDON are analyzed. Near the Strait of Otranto a vein of bottom-arrested water of Adriatic origin was clearly identified in its temperature, salinity, as well as dissolved oxygen characteristics. Further south, along the Italian as well as the Sicilian continental shelf, such vein was however not recognized. The water mass characteristics measured in the near-bottom layers of the western Ionian abyssal plain, which indicate a complex water mass distribution in the area, are discussed using also the results of a nonlinear, "plume" numerical model.