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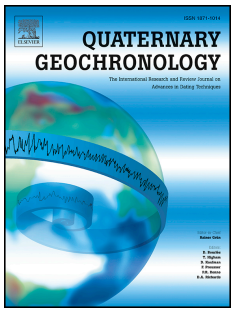

Calculation of the reservoir age from organic and carbonate fractions of sediments in the Gulf of Cariaco (Caribbean Sea)

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CALCULATION OF THE RESERVOIR AGE FROM ORGANIC AND CARBONATE FRACTIONS OF SEDIMENTS IN THE GULF OF CARIACO (CARIBBEAN SEA)

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ABSTRACT. A set of 24 AMS ^{14}C measurements were performed on different sediment fractions from short gravity cores taken from the Gulf of Cariaco (northeastern Venezuela) in order to construct a detailed sedimentary archive for recent centuries. A local reservoir effect was expected because of i) strong upwelling from the neighboring Cariaco Trough and anoxia and ii) the specific geomorphological setting related to active faults with seeps and diapirism. Measurements were thus performed on different components: sediment bulk organic fraction (SBOF), pteropods shells (surface water), bivalve shells (bottom), and plant fragments. Based on comparisons of the different results, we discuss different age corrections and calibrations, which lead us to consider a negligible local reservoir correction (ΔR) for the bivalve and pteropod shells, which show no reservoir age for carbonate and an absence of water