



# **1 Lagrangian trajectories over the coral reef systems of Veracruz (Western Gulf of Mexico)**

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The coral reef systems of Veracruz, is a coastal area situated on the western continental shelf of the Gulf of Mexico. At present, is unknow how the large scale circulation promoted by the seasonal wind fluctuations, gyres, tides, river discharges, could affect them. The lagrangian trajectories (of more than 5 hrs. of length) collected since July of 2004 until present, showed a current pattern in agreement with the current pattern induced by the seasonal synoptic wind circulation of the western continental shelf. However, reef geometry, in conjunction with the diurnal component of the tide seems to play an important role in the current distribution over the area.