



## **An attempt to discover hidden dynamical patterns in sea areas using satellite altimetry**

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The difference between the sea surface height measured in altimetry and the actual mean sea surface height is due to dynamic and (quasi) stationary effects and to errors of the measurements. The main part of these effects and errors can be modelled or reduced by averaging over larger time intervals. After modelling, it may be expected the relation between the corrected footprint seen by the altimeter signal and the sea surface slope to be still different establishing thus early and late signal arrivals. In this experimental investigation we apply a Recurrence Quantitative Analysis (RQA) using a free algorithm at Jason altimeter data sets for the same periods and with respect of different sea areas. In particular the analysed sets are raw data and corrected for wet and dry atmosphere and tides. The objective of this recurrence graphical analysis is to seek for deterministic and non stationary signals such as hidden dynamical patterns or non linearity among the same type of altimetry data at open and close sea as well as between the raw and corrected data at the same sea region.