



An intercomparison of cyclone tracking methods in relation with extreme events in the Mediterranean region

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The Mediterranean area has been long recognized as a very active region for cyclone activity with a well defined branch of the mid-latitude cyclone track crossing it. Several studies have described a strong seasonal signal and identified trends at multidecadal scale. However, cyclone tracking critically depends on the procedure adopted and differences among results that are produced by different methods can be large. It is important to analyze to which extend these features are robust and characterize the synoptic climatology of the Mediterranean region or whether they significantly depend on the adopted tracking algorithm. This study compares the results of different cyclone tracking algorithms in relation to two classes of extreme events in the Mediterranean area: storm surges and extreme precipitations. This analysis is based on the IMILAST (Intercomparison of Mid Latitude Storm diagnostics) project, which has made available a set of cyclone tracks computed by different algorithms and by different groups. These data allow exploring the uncertainties associated to the different procedures and how they affect the cyclone statistic in the Mediterranean region.