



Preliminary results of moving windows approach applied to monthly and seasonal temperature trend in Spanish mainland

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Length and starting period defines currently de signal of trend, significance and value in temporal climate series. This is one of the main reasons for which it is very difficult task the comparison between climate trend analyses that not share the same exact period. By the other hand, along any temporal series trends can vary from time to time according to starting year and length and thus they can mask variations in the temporal evolution of the variable.

In this communication, we present an approach to how results can vary according to the selected period, an interesting point of the research since it detects the moment in which, eventually after identifying the sign of trend, it begins or stops being significant. To do that we have analyzed seasonal and monthly series of maximum and minimum temperatures of Spanish mainland from MOTEDAS dataset using temporal windows between 60 years and 20 years along the 1951-2010 period.

The global results are presented in triangular diagrams (for regional series), and specifically two different analyses, which are complementary, will be presented in detail for the entire area by using maps: the progressive moving windows (the vertical of graphical triangle) and regressive moving windows (the hypotenuse of graphical triangle). With the progressive approach (i.e. the same starting year incrementing the length of period) is detected the temporal window when the trend begin to be significant, while on the other hand the regressive windows (i.e. the last year remain constant) show us when those tendencies ceases to be significant.

This analysis detects very interesting things, from which we will present examples and case studies for the seasonal and monthly analysis combining both approaches (regressive and progressive) and analyzing the behavior in the space for the thermometric measurements.