



Weather and event generators based on analogues of atmospheric circulation

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Analogues of atmospheric circulation have had numerous applications on weather prediction, climate reconstructions and detection/attribution analyses. A stochastic weather generator based on circulation analogues was recently proposed by Yiou (2014) to simulate sequences of European temperatures. One of the features of this weather generator is that it preserves the spatial and temporal structures of the climate variables to be simulated. This method is flexible enough to be combined efficiently with a storm detection algorithm in order to generate large catalogues of high impact extra-tropical storms that hit Europe.

I will present the gist of the method of circulation analogues and some performances. Two promising applications for weather generators based on this method (ensemble climate prediction and extra-tropical storms) will be tested.

References

Yiou, P.: AnaWEGE: a weather generator based on analogues of atmospheric circulation, *Geosci. Model Dev.*, 7, 531-543, doi:10.5194/gmd-7-531-2014, 2014.