

Interactive comment on “Streamflow response of a small forested catchment on different time scales” by A. Zabaleta and I. Antiguëdad

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The paper of Zabaleta and Antiguëdad that I reviewed examines the hydrological response of a small catchment to rainfall by means of time series and geostatistical analysis. The paper is well organized and the applied methodology is valid. The applied time series analysis has been used by a number of authors in order to characterize karst systems but the innovation of this paper is the use of this type of analysis to a river catchment. The extracted results seem very logical despite the quite small size of the time series (only 5 year). The main weakness of the paper is the lack of consideration of the hydrogeology of the river basin. The results show the dominance of a base flow component which appears to both autocorrelation and cross correlation analysis

as well as to the chemical composition of the surface water. The authors refer that 94% of the bedrock consists of flysch, namely a low permeability formation. I suppose that a number of small springs flow in the contact between the high permeable sandstones and limestones with the impermeable marls which support the base flow of the river. I believe that a more detailed hydrogeological analysis could enhance the assumption of a high regulated river system. Minor point: a graph showing the river discharge in a daily or monthly basis is missing.

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