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Hydrology and Earth System Sciences Discussions

Interactive comment on "Is streamflow increasing? Trends in the coterminous United States" *by* N. Y. Krakauer and I. Fung

A. Castellarin

attilio.castellarin@unibo.it

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The study addresses a very interesting topic and deals with the assessment of the existence of trends in the annual streamflow sequences of conterminous United States. Also, the Authors focus on possible interpretations of such trends in the context of climate change, land use modifications, and increase of atmospheric concentrations of carbon dioxide. Douglas et al. (2000) examined the possible presence of trends in floods and low flows in the United States, assessing the impacts of spatial correlation. The authors clearly show that the cross-correlation of flow records dramatically reduces the effective number of samples available for trend assessment. They show that ignoring the spatial correlation of low-flow sequences results in the detection of statistically significant trends in several major hydrologic regions across the USA, but in fact, when

the effects of cross-correlation are not ignored, statistically significant upward trends can be found in the Midwestern US only. The Authors also provide a possible interpretation for the detected trends. Given the topic, the geographical area considered in the study and the relevance of its results, I would recommend the Authors to include in their review of the literature the study by Douglas et al. (2000).

E. M. Douglas, R. M. Vogel, C. N. Kroll (2000) Trends in floods and low flows in the United States: impact of spatial correlation, Journal of Hydrology, 240(1-2), 90-105.

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 5, 785, 2008.