

Interactive comment on “The hydrological response of baseflow in fractured mountain areas” by A. Millares et al.

Anonymous Referee #2

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Subsurface component of hydrological cycle plays a crucial role in the hydrology of high mountain Mediterranean catchments. Since the lack of direct data, the development of indirect methods for assessing the relationships between water storage and subsurface discharge is the great interest.

The authors provide a methodology for analysing the nature of baseflow response, distinguishing quick and slow response, in three mountainous catchments. They conclude that the observed pattern in baseflow response reflect the highly fractured material underlying the studied catchment.

The paper is scientifically interesting and the results can result in a gain of understanding of hydrology of Mediterranean mountain areas. There are, however, some

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weaknesses that the authors should tackle before the publication of the paper:

-A more detailed information about hydrogeological characteristics of the catchments should be provided. The authors concluded that the baseflow response is due to highly fractured area but no information is given that support this conclusion.

-I would suggest a more detailed description of the method used for building master recession curve from the recession segments. It is not clear how the segments are combined in both upward and downward approaches to produce the MRC

-Page 3364, line 18 What does N mean?

-The number of catchments is not high enough to drawn conclusions about the linkages between catchment characteristics and the value of storage parameter? In any case, authors should provide the definition of the indexes used.

-Finally, conclusion section must be reduced. I suggest deleting the paragraph regarding the catchment characteristics.

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