

***Interactive comment on* “Research on the initial abstraction – storage ratio and its effect on hydrograph simulation at a watershed in Greece” by E. A. Baltas et al.**

E. A. Baltas et al.

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Thank you very much for your constructive comments. They have contributed to the improvement of the paper. All suggestions and technical corrections have been taken into account and all sections in the revised paper have been rewritten. Additionally, many more studies have been reported in order to generalize and extend the results to other case studies. The scope of the paper is better presented, as a trial to improve the method. The objectives of this paper are two; the first is the determination of the initial abstraction ratio (I_a/S), in a 15.18 km² experimental watershed in Greece, by analyzing measured rainfall/runoff events. Eighteen storm events of various rainfall depths were used for that purpose. Moreover, the initial abstraction ratio was deter-

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mined in a subwatershed with different landuses and geological formations, based on common, but fewer storm events and conclusions were drawn regarding the change in ratio value. The second objective of the paper is to examine whether the use of a lower than 20 percent ratio in SCS-CN methodology improves hydrograph simulation at the time scale of individual storm events. For the implementation of this objective, the SCS method was used for the computation of the time distribution of excess rainfall for each storm event, using 2 different ratios, the ratio of the measured rainfall/runoff event and the 20 percent empirical ratio. The simulated hydrographs were evaluated by calculating the absolute and average relative errors in peak and time to peak flow rate.

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