

Interactive comment on “Runoff generation processes during the wet-up phase in a semi-arid basin in Iran” by H. Zarei et al.

Anonymous Referee #3

Received and published: 14 May 2014

General Comments:

This paper reports on a series of rainfall events throughout one wet season in an Iranian catchment. It specifically looks at runoff ratios and changes of pre-event vs. event water fractions and correlates these changes to antecedent soil moisture.

Let me start out by saying that the paper is very well-written. It has been a while since I reviewed a paper with that few spelling and grammatical errors. Also the structure is clear.

What the paper lacks, however, is novelty. The investigated processes have been described before numerous times in different catchments at various locations and the results are expected (more event-runoff in wetter conditions). Also the methods used

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are standard methods (runoff separation with isotope tracers). Maybe the authors could add some other results and analyses of their data in order to go beyond a simple case study.

Specific Comments:

p. 3794, l. 13: How do you define a high flow event?

p. 3796, l. 22- p. 3797, l. 7: This paragraph is redundant.

p. 3798, l. 11: But the event water fraction for event 2 is smaller (72%) than the event water fraction for event 4 (92%). Any explanations for that?

Figures & Tables:

Table 3: The standard deviations of the river isotope measurements of event 2 are so much larger than the standard deviations of the other events. They are even larger than the standard deviations of the rainfall of the event. Why could that be?

Figure 4&5: For better comparability, the y-axes of discharge should have the same range.

Technical Corrections:

p. 3791, l. 6: becomeS

p. 3794, l. 13: ‘...a total runoff of...’

p. 3795, l. 3: ‘...rainfall WERE...’

p. 3795, l. 10: ‘...relief...’

p. 3795, l. 17: ‘difference’ instead of ‘variation’

p. 3795, l. 26: better write: ‘...the isotopic value is less negative than...’

p. 3796, l. 4: large or small?

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p. 3796, l. 9: do not write 'the lightest isotopic content'. Rather write 'most negative isotope value' or 'most depleted in the heavy isotope'

p. 3797, l. 14: '...accumulateS...'

p. 3797, l. 24: '...result...'

p. 3798, l. 24: '...fractions WERE observed...'

p. 3799, l. 8-9: 'OVERALL, the results suggest that the storm event hydrology IS sensitive TO the amount...'

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 11, 3787, 2014.

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