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Natural Hazards and Earth System Sciences
Discussions

Interactive comment on "Influence of meteorological factors on rockfall occurrence in a middle mountain limestone cliff" *by* J. D'Amato et al.

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The authors thank the reviewer for his useful comments.

A new paragraph has been introduced to discuss the influence of climate and altitude:

"5.4. Influence of climate on rockfall frequency

Rainfall and freeze-thaw have been identified as triggering factors of rockfalls. It means that they can decrease the stability of rock compartments which are close to the limit equilibrium. Consequently, they can also decrease the stability of compartments which are farer from the limit equilibrium. Then they are also preparatory causal factors for

rockfalls occurring without rainfall or freeze-thaw. Consequently, the number and intensity of the rainfall and freeze-thaw episodes (i.e. the climate and the altitude) influence the annual rockfall frequency. It seems reasonable to suggest that the relations between meteorological parameters and hourly rockfall frequency holds for other climatic conditions in a similar rock mass (when the joints are not initially filled with ice as it occurs in permafrost areas)."

Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., 3, 7587, 2015.