

Interactive comment on “Dynamic variability examination of Mediterranean frontogenesis: teleconnection of fronts and flood 2010” by B. A. Munir et al.

Anonymous Referee #2

Received and published: 27 February 2016

General comment This paper focuses on the frontal activity in the eastern Mediterranean and western Asia. The study considers the variation of the geographical extent of the fronts for the years 2010-2011 and the relation between the fronts and the rainfall, with a focus on the flooding period on Pakistan occurred in summer 2010.

Specific comments

The main problem with this paper is that the methodology used to identify the fronts is not considered at all. The first sentence of the paper, in the Abstract says: "An improved scheme for the detection of Mediterranean frontal activities is proposed, based on the identification of cloud pattern, thermal gradient and water content of air masses using Meteosat-7 satellite imagery." But this methodology is not presented. The only

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sentence about it is: "The unsupervised classification was performed on each image of infra-red and water vapor bands. The identification process was based on the fundamentals of frontogenesis in 2-dimensional domains (sharp boundary of clouds in visible, thermal gradient in infra-red, and presence of moisture content in water vapor imagery)". Which is the improvement, and, more importantly, which is the methodology?

When analysing the pattern of the fronts in 2010-2011 only the findings are discussed but the reader cannot reproduce the results because the methodology used and how it applied is not reported. How the authors conclude that the area selected for 2010-2011 are those where the fronts occurred. Which is the number of fronts detected by the methodology?

The analysis of the correlation of the fronts with the precipitation pattern is based on the qualitative comparison between the TRIMM precipitation patterns with the geographical area covered by the fronts in the years 2010-2011. This correlation is qualitative and more efforts should be done to make it more quantitative.

I suggest a review of the English because there are some errors and few sentences are not understandable.

Minor points See the pdf attached.

Please also note the supplement to this comment:

<http://www.nat-hazards-earth-syst-sci-discuss.net/nhess-2015-290/nhess-2015-290-RC2-supplement.pdf>

Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., doi:10.5194/nhess-2015-290, 2016.

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