

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

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Thank you for your valuable comments. Somehow the reviewer is misinterpret the term “improved scheme” with improved algorithm. Improved scheme relates to the use of large archive of satellite imagery simultaneously in different band wavelengths.

As per understandings of the authors, the main objection raised is of the methodology details. As mentioned in the abstract about the fundamental characteristics identification of fronts and was answered in page 6 Para 2:

“Overlay scheme was used in ArcGIS environment for the identification of exactgeographic locations where these fundamental parameters of frontogenesis meet invisible,

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infrared and water vapor bands. The overlay scheme was important as the assertion of frontogenesis should meet the three fundamentals.”

In this technique each classified (water vapor, infra-red) and visible band image undergoes visual inspection. For better understanding and results of visual interpretation of frontal process, expert opinion and theoretical literature was used. The visual inspection of images results in the identification of geographical locations of the fundamental characteristics belongs to fronts as mentioned in the manuscript with literature citations.

The identified fundamentals of fronts on visual inspection of each image were overlaid. The geographical location was recorded (for the existence of front) only if all the fundamentals from visible, infra-red and water vapor imagery had same location.

The pattern of the fronts is clearly mentioned under heading 3.2. The selected area is the maximum extent in which the frontal spells in each season were identified by using the visual inspection, classification and overlay schemes. However, methodology as discussed above will be modified in revised manuscript.

While discussing the rainfall trends within geographical delineated extent of frontogenesis emphasis was made on the variation in the trend of peak rainfall. However, to correlate the rainfall with the existence of fronts, a case of Pakistan was put in concern. The topic of research also explaining the point in itself.

Minor edits highlighted are acknowledged and will be amended in the revised manuscript.

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