

## Anonymous Referee #2

The paper is well written and easy to follow, and the subject is relevant. The paper should be published with minor corrections. Minor points follow.

Thank you for your valued time dedicated to reviewing this paper. We believe that these modifications will improve the manuscript. Here you can find the response to your comments, questions, and suggestions.

Beginning of page 4: the “historical” flood of Florence in 1966 was also a consequence of an atmospheric river (Malguzzi P., G. Grossi, A. Buzzi, R. Ranzi, R. Buizza: The 1966 “century” flood in Italy: A meteorological and hydrological revisitation. Journal of Geophysical Research: Atmospheres 111, D24, DOI: 10.1029/2006JD007111, 2006)

We have included the reference in the text. Thank you very much for point out this very interesting study which we were unaware of.

Page 4 line 20: the formula has a misprint (/ instead of =).

We have rephrased the sentence in order to become clear.

Page 4 line 26: for instead of For.

The typo was corrected.

Page 6 line 7: delete has.

The sentence was corrected.

Page 6 line 12: ...to detect ARs ....can broadly be divided into...

The sentence was corrected.

Page 7 line 7: word should be world.

The typo was corrected.

Page 8 line 12: graphs b) and d) are too flat to identify a minimum.

We agree with the reviewer that it is difficult to identify a minimum pressure after the MDP in Figure S1. We have changed the text accordingly the reviewer’s suggestion.

Page 9 lines 5-8: are you referring to the general trend of NEC cases from -36h to 36h? Please clarify.

The sentence was clarified and is in the present form clearly states that the specific lines mentioned by the reviewer are referring to NEC cases.

Page 9 line 12: ...methodologies. However,...

The sentence was corrected.

Page 9 line 20: ...moisture flux near the cyclones..

The sentence was rephrased.

Page 10: figures S3 and S4 are really not needed.

We understand the reviewer's concern about Supplementary Figures S3 and S4 since the results are similar to the ones found for the Atlantic Basin. However, we believe that its inclusion Supplementary Figures are important for the potential readers outside the North-Atlantic-European domain. For this reason, and since the Supplementary Figures S3 and S4 do not influence the size of the main manuscript we choose to maintain them.

Page 10, last paragraph of section 4: hypothesis instead of hypothesized. The evidence that the AR is already present at MPD-36h for EC may be a strong argument to support the conclusion, since it may be considered as a precursor.

We have replaced hypothesizes by hypothesis.

Page 11 line 3: of the is repeated.

The typo was corrected.

Page 11, line 18: the sentence "This insight can be potentially helpful to enhance the predictability. . . ." is too vague and difficult to be sustained given these results (in my opinion). Please try to be more specific.

This is a fair comment, which we partially agree with. Also following the comments by the other reviewers, we have changed the pertinent text and made an effort to "moderate the expectation" regarding the content of the paper.