

Response to Reviewers

Manuscript EGUSPHERE-2026-1175 (R1→R2)

“RHITA: a web tool for real-time detection of extreme weather events”

August 18, 2026

Dear Editor, dear Reviewers,

We thank you for the further comments. Below we answer the three points raised by Referee #1. The reviewer comments are in *italics* and the new or modified text is quoted

in blue

. The same changes are marked in the track-changes file (`DiffR2_R1.pdf`).

Referee #1

Comment 1

Page 4, lines 94–95: Please correct the phrase “temperature and neutral wind components at 10 m.” Temperature is presumably provided at 2 m, whereas the wind components are provided at 10 m. I suggest: “temperature at 2 m and neutral wind components at 10 m.”

Corrected. The sentence in Section 2.1 now reads:

“For each forecast, we use temperature at 2 m and neutral wind components at 10 m (*u* and *v*) at 3-hourly lead times (3, 6, 9, 12, 15, 18, 21, and 24 h), as well as accumulated precipitation at 24 h lead time.”

Comment 2

I understand and generally accept the rationale for not calculating precision and F1-score using EM-DAT, since events absent from this impact-oriented database cannot necessarily be considered meteorologically false positives. However, describing the reported validation metrics as a “lower bound on algorithmic skill” may be too strong. I suggest revising this statement to clarify that the reported sensitivity provides a partial evaluation against documented impact events, rather than a comprehensive assessment of meteorological detection skill.

We have removed the “lower bound on algorithmic skill” wording and added the following clarification in Section 3.2, after the sentence explaining why false positives are not penalized:

“For the same reason, the sensitivity values reported here should be interpreted as a partial evaluation of the algorithm against documented, impact-relevant events, rather than as a comprehensive assessment of its meteorological detection skill: events that are meteorologically extreme but do not appear in the impact-oriented EM-DAT record are not necessarily missed detections in a physical sense, and a full quantification of detection skill would require an independent meteorological reference not available here.”

Comment 3

The authors have expanded the discussion of parameter dependence but have not performed the suggested sensitivity analysis. A brief supplementary analysis showing how plausible variations in the quantile threshold affect event counts and the main trend results would increase confidence in the robustness of the findings. If this analysis is beyond the scope of the present revision, please state this limitation explicitly in the Discussion and clarify that robustness under alternative parameter configurations was not empirically evaluated in this study.

A full sensitivity analysis would require recomputing the 1950–2024 climatology and all trend statistics for a range of parameter settings, which is beyond the scope of this minor revision. As suggested, we now state this explicitly in the Discussion/Conclusion:

“In this respect, while the influence of the detection parameters is discussed qualitatively, the robustness of the reported event counts and trends under alternative parameter configurations – in particular variations in the quantile threshold q – was not empirically evaluated in the present study. A systematic sensitivity analysis, quantifying how plausible changes in the quantile threshold and in the spatial and temporal parameters affect the detected event statistics and the resulting trends, was beyond the scope of this revision and represents a valuable direction for future work to further assess the robustness of the findings.”

Referee #2

The reviewer returned the checklist without written comments, so no changes were needed.

We hope the manuscript is now suitable for publication.