Dear Reviewers,

We would like to thank you again for your contribution to the improvement of our article. We make below a point-by-point answer to the Reviewer's last remarks.

We wish you a good receipt of our modified manuscript.

Regards,

The authors

Reviewer 2

- I believe the following reorganization would increase the readability of this manuscript. First, I suggest moving L470-480 to Section 5 Discussion since it is proper material for discussion. Besides, having such material in a conclusion section distracts readers and dilutes the final points of the manuscript.

We agree with the Reviewer. The paragraph has been moved to Section 5.

- Second, this is optional, but I suggest the authors consider moving most (of all) of appendix tables to a supporting material. These are important bits of information, but not critical for understanding the main texts. Note that this manuscript already has six tables.

We could agree with the Reviewer, but we would like to seek the Editor's advice before moving the tables.

- There are numerous typos and unclear expressions in the newly added text. These are not comprehensive; I urge the authors to read through again to polish unrefined bits.

- L25: "future expected changes" to "future changes"
- L30: Add commas before "but" and after "Furthermore"
- L32: Add commas before and after "thus"
- L53: "pre-existent images" is vague; elaborate.
- L59: "the Table" to "Table 1"
- L64: "like" to "e.g.,"
- L78-79: Give examples of "Other DL" with proper citations, or remove the sentence.
- L153: "homogeneous" is vague; elaborate.
- L175: "OMG" to "Object Management Group"
- L238: "an output variables" to "output variables"
- L240: "whatever" to "regardless of"

- L245: Add a comma after "However"
- L253: "lost function" to "loss function"
- L265: "for" to "with"
- L289: Add "that is," before "recall"
- L334-335: The sentence starting with "Furthermore" is unclear; rewrite.
- L335: "losses" to "loses"
- L450: Add a comma after "However"
- L495: Remove the comma after "takes"
- L497 and L509: "in a single metric, the p-value" to ", using a single metric (the p-value)"

We have implemented these technical corrections.

- L360, L426, and L441: "not an issue" and "very high" are vague. Consider rephrasing to "competent to other existing methods"

In line 360, we have added a comparison of metric values with the two other studies about image classification that we have listed in Table 1. For lines 426 and 441, we just recalled that the value of AUC and AUPRC are over 0.99.

The following lines have been added:

"The values of the metrics are very high, over 0.98. They are close to those reported in the studies about image classification that we have listed in Table 1. As a comparison, the accuracy value of our CNN is between those of Shakya et al. (2020) and Liu et al. (2016): 0.97 < 0.98 < 0.99. However, this comparison should be put into perspective: our method of calculating the accuracy is more robust against uncertainty. Additionally, the model of Shakya et al. (2020) is trained and tested on observational data that are quite different from multidimensional meteorological reanalysis data."

- L328: Is a 70:30 split correct? In L264, the split used for hyperparameter tuning is 85:15 since the validation dataset should be considered as a part of training dataset. Just to double check.

The split is correct because we consider that the validation dataset is part of the test dataset as we wanted to detect any overfitting situations.

- L445-447: Needs citations of studies that have shown the more frequent "situations."

We were referring to the studies presented in the introduction. We now mention it in parenthesis.