

Replies to the Editor's Comments

We thank the Editor for the constructive comments and appreciation of our work.

Below are our point-by-point replies to the Editor's comments.

Comment 1: Page 2 line 57 missing space before parenthesis

Reply 1: Thanks for pointing this out. This has now been addressed.

Comment 2: Page 6, line 148 missing space after semi-colon

Reply 2: Thanks for pointing this out. This has now been addressed.

Comment 3: Page 9, line 188 would continue this sentence and be explicit about the vertical axis in the Figure 6c. ... for the RMX-BA experiment as a function of impact height or geometric height (assume impact height)

Reply 3: This is geometric height, and stated both in the text and on the y-axis label of Fig. 6c.

Comment 4: Page 12 Figure 7b the vertical axis should now read "Impact Metric (%)"

Reply 4: Thanks for pointing this out. This has now been addressed.

Comment 5: Page 13 line 226 would continue the sentence regarding Figure 8

... at various forecast lead times with positive values indicating improvement or benefit from the addition of RO observations.

Reply 5: Thank you for the suggestion. It has been incorporated.

Comment 6: Page 14 line 231 would elaborate that the degradation is largest and more prevalent in the later forecast hours. ... western parts of the domain, with the largest values and occurrences during the later forecast hours.

Reply 6: Thank you for the suggestion. It has been incorporated.

Comment 7: Page 16 line 249 just to be extremely specific and clear would add specific humidity to this sentence. The greatest impact on specific humidity is observed in the ...

Reply: 7 Thank you for the suggestion. It has been incorporated.

Comment 8: Page 16 line 250 The influence on temperature seems to have a strong occurrence around 300 hPa ... in the middle and upper troposphere and remains ...

Reply: 8 Thank you for pointing this out. It has been incorporated.

Comment 9: Page 17, line 269 The sentence reads a little awkwardly, would likely at this point just present the figure overall. The specific components are broken down.

forecasts of specific humidity, temperature and wind at the analysis and at the 72-h forecast.

Reply 9: Thank you for pointing this out. Specific humidity, temperature, and winds have been added to the sentence.

Comment 10: Page 17, line 270 The domain averaged bias for specific humidity (Fig. 11a) for the analysis time in the CNTL experiment shows the model exhibits a pronounced overestimation ...

Reply 10: The suggestion has been incorporated.

Comment 11: Page 19, lines 307 typo... Rain^{CNTL} (while Rain^{IMERG} is written)

Reply 11: Thanks for pointing this out. "Rain^{IMERG}" has been changed to "Rain^{CNTL}."

Comment 12: Additional private note (visible to authors and reviewers only): Again we thank the authors for their careful attention to the reviewers comments and suggestions and the modifications to the manuscript. The application of a 2D bending angle operator in a mesoscale model is a nice achievement and shows a very significant signal in the context of the experiment. We thank you for the contribution.

Reply 12: Thank you for the appreciation.