# **Routine Model Verification Checklist**

## Precipitation

Change date on the upper right corner

Add radar Image, observation and satellite figures

Clear verification table

Clear text – keep the following:

“Refer to the table that examines spatial accuracy (SA), temporal accuracy (TA), Hit/miss (H/M), Intensity (Int).”

Ensure that the table legend is included

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **↑ 85%** | **85% - 70%** | **70% - 50%** | **50% - 40%** | **↓ 40%** |

If the event is synoptic use 7 km resolution. Otherwise, use 2.8 km. Use the map on visual weather: visual weather > TEST > Verification: 7 precip or Verification: 2.8 precip

Ensure that the map legend is included in all figures

Change that you label each model runs in this format “Model run: 02 MAR 2022 18 UTC run “

Change the time of model forecast in this format “Time: 23 UTC”

Change the model runs in the table and evaluate the model output using the table bellow

Spatial accuracy: *keep in mind that the model uses the sum of precipitation over the entire hour not only at the top of the hour.*

|  |  |
| --- | --- |
| Almost all areas are covered | **↑ 85%** |
| Some areas are not covered but the distance between areas covered, and the other area is small  **OR**  Area is shifted by a very small percentage (north, south, east, west of the event) | **85% - 70%** |
| Almost half of the areas are covered  **OR**  Area is shifted by a small percentage | **70% - 50%** |
| Almost a 1/3 of the area is covered  **OR**  Area is shifted which can make it hard to forecast but can be used to indicate activity | **50% - 40%** |
| Bad representation. Can’t be used to identify the appropriate area or indicate the possibility of rainfall | **↓ 40%** |

Temporal accuracy:

|  |  |
| --- | --- |
| The same time as observed or ± 1 hour | **↑ 85%** |
| ± 2-3 hours | **85% - 70%** |
| ± 4 hours | **70% - 50%** |
| ± 5 hours | **50% - 40%** |
| No precipitation shown or ± > 6 hours | **↓ 40%** |

Intensity: *Keep in mind that the model uses the sum of precipitation over the entire hour not only at the top of the hour.*

|  |  |
| --- | --- |
| The same | **↑ 85%** |
| Some areas are the same while a small amount lower than observed | **85% - 70%** |
| Half of the areas are the same while the other half is lower than observed | **70% - 50%** |
| Most of the areas are lower than observed or unrepresented | **50% - 40%** |
| Completely different in all aspects  OR  Significantly higher or lower | **↓ 40%** |

Include a general summery in text. If there are problems in the model, what are they? Try to answer at least 2-3 of these points. How can this help identify problems? What will the reader be taking away from this report?

* If the latest 4 runs are acceptable
* If the latest 8 runs are acceptable
* If the latest 12 runs are acceptable
* What are the main problems in the runs? Example: the model simulations indicated rainfall over the area but incorrectly forecasted the intensity.
* Overall, are the model runs acceptable? Can a forecaster use a simulation to confirm rainfall?
* What is the problem area? Example: precipitation is not well represented in the eastern area.

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