Although the paper has significantly improved following the review process, a few remaining technical issues must be address:

Page 3, Line 12-13: The authors should briefly elaborate on the cited Wei et al., (2021a) reference, indicating the Himawari data used and obtained results.

Page 3, Line 30: Abbreviations should be given full names when they first appear in the main text, i.e., space-time random forest (STRF); space-time extra-trees (STET). Please double-check and correct such issues throughout the paper.

Improvements to figure captions are necessary as indicated below

It is suggested that the density scatterplots in Figure 3 (current in a 2X5 multi-panel plot) , be plotted as 5X2. Also, please, clearly indicate in the caption what each axis represents (i.e., density scatter plots of A (x-axis) versus B (y-axis)). Clearly explain what the A1 to E1 and A2 to E2 panels represent using full names for the six locations. Also describe the legend included in the panels.

Figure 4: The y-axis dynamic range needs to be expanded (maybe [-40, 40]?), and the caption should be revised to "Boxplots of resulting bias (y-axis) for different PM2.5 concentration ranges in µg/m3 (x-axis)". Describe in the caption the meaning of the green arrow symbol, dark blue and red marks, and the light blue shading.

Figure 5: Suggested caption:
Spatial distributions of model precision in terms of (A)…, (B)…,(C)…. and (D) mean PM2.5 concentration at each site in China. Use full description of the statistical parameters shown in A, B, and C. Add 'Color circles represent different value ranges of shown statistical parameters.'

Figure 6: Suggested caption:
Density scatterplot of 'Actual hourly PM2.5 values (x-axis) model estimated values (y-axis) in hourly PM2.5 estimates in China from (A) 09:00 LT to (I) 17:00 LT. Blue dashed line represents……., and red line represents …..'. Also, list the statistic parameters of the legends in each panel'

Figure 7: Suggested caption: "Same as Figure 6, but for monthly PM2.5 estimates."

Figure 8: Suggested caption : "Score (y-axis) for each model contributing feature factor (y-axis) for the RF(blue) and GBRT (orange) deep neural networks. Dashed line represents the mean values."

Figure 9. This plot is confusing. It is better using black solid and dashed lines instead of blue and orange colors. Please clearly specify in the plots and in the captions, what is plotted in the left and right y-axes of each of the four plots. All the axes' titles should be clearly labeled in the figures and described in the figure caption.

Figure 9: Suggested caption: "Annual variability (x-axis) of monthly average of meteorological parameters AOD, BLH (m), TM (K), RH (%) (right y-axis) and R2 (left y-axis)"

Figure 10. Current caption seems wrong.
Suggested caption: "Hourly Spatial distribution of PM2.5 concentration in China at different local times from (A) 09:00 LT to (I) 17:00 LT."

Figure 11. Suggested Caption: "Same as Fig. 10, but for monthly spatial distribution"