Reviewer report 1:

General comments:

Comment #1: The authors declare “three distinct transport mechanisms” could bring BB aerosol from nPSEA to Taiwan both in the Abstract and the Section 4. However, the three mechanisms all depends on the same mechanism (strong westerlies in the free Troposphere) to transport BB aerosol from nPSEA to Taiwan. The differences among the three mechanisms in fact lie on how the BB aerosol interacts with the local pollutants in Taiwan. Therefore, it might be inappropriate to say “three transport mechanisms” in the context of East Asian region. Please consider to change those expressions according to the descriptions in line 450 which in fact make more sense.

Answer #1: Agree. Sentence revised as below.

Revision #1: The BB aerosols from nPSEA is carried by the subtropical westerlies in free troposphere to the western North Pacific, while BB aerosol has found to interacts with the local pollutants in Taiwan region through three conditions: (a) overpass western Taiwan and enter central mountain area, (b) mix down to western Taiwan, (c) transport of local pollutants up and mix with BB plume on higher ground. The second condition that involves the prevailing high-pressure system from Asian cold surge is able to impact the most population in Taiwan.

Comment #2. The authors decide to compare the simulation from 2013 with observations from 2014 in Section 3.2 because of “incomplete MPLNET dataset of 2013”. However, the reason is not convincing enough. On one hand, figure 4a shows quite complete MPLNET data coverage in 2013 which seems enough to give an average of good quality. On the other hand, the authors could do a simulation of 2014 and then get similar results if fire conditions are similar between 2013 and 2014 (as stated in lines 248-250).

Answer #2: After going through previous literature for year 2013 in Pani et al (2016) and year 2014 in Wang et al (2015). We agree that the aerosol extinction profiles are indeed different, hence using data from year 2014 to represent for year 2013 is not sensible. Hence, we have extracted data from year 2013 from MPLNET for the subsequent comparison.
Pani, S. K., Wang, S. H., Lin, N. H., et al.: Radiative effect of springtime biomass-burning aerosols over northern indochina during 7-SEAS/BASELInE 2013 campaign, Aerosol Air Qual. Res., 16(11), 2802–2817, https://doi.org/10.4209/aaqr.2016.03.0130, 2016.
Wang, S.-H., Welton, E. J., Holben, B. N., et al.: Vertical Distribution and Columnar Optical Properties of Springtime Biomass-Burning Aerosols over Northern Indochina during 2014 7-SEAS Campaign, Aerosol Air Qual. Res., 15, 2037–2050, https://doi.org/10.4209/aaqr.2015.05.0310, 2015a.

Revision. #2: The 3-hourly average profile of the extinction coefficient from MPLNET v0 L1.5a, **IWrp+EC** and **FWrp** model output during 13 – 28 Mar 2013 at DAK station is illustrated in Fig. 4b-d. In Fig.4b, the MPLNET extinction coefficient is low at the surface and peaks between 2.5–3.2 km. The model output has a lower elevation over DAK station has modelled a higher extinction coefficient, which is likely to be accumulation effect due to lower wind condition. (Please refer to the manuscript for more write-ups)

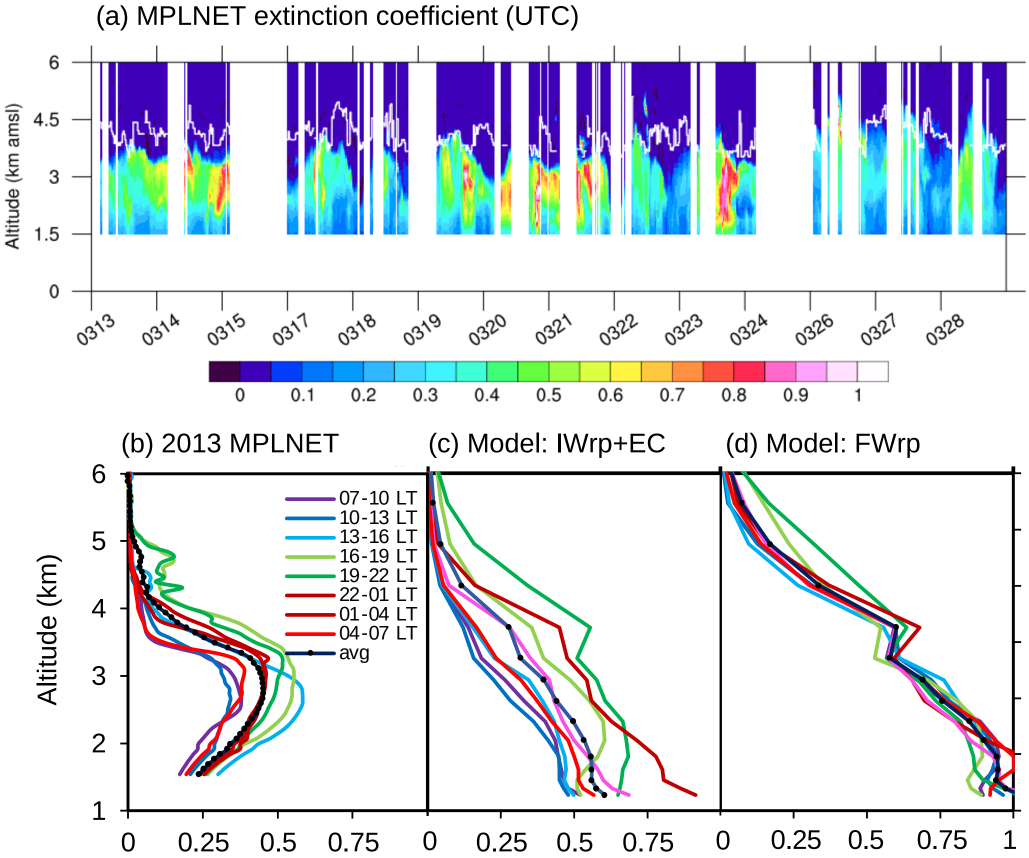


Figure 4: Vertical extinction coefficient profiles between 13 to 28 Mar 2013 at DAK station from (a) MPLNET with boundary layer height (white), (b) MPLNET 3-hourly average extinction coefficient, (c) IWrp+EC 3-hourly averaged model output, (d) FWrp 3-hourly averaged model output.

Comment #3a.

Section 3.3 is not well organized which makes the reader difficult to follow.
For example, the authors seem to indicate the high resolution of FINN inventory plays the key role in the good performance of the in-line calculation. However, without another experiment using a lower emission resolution and the same in-line calculation as a comparison, such indication is only a speculation and should not appear in the conclusion (lines 455-457) as a strong argument.

Answer #3a: Agree. The argument is based on the understanding of each emission inventory and indeed without additional comparison run, this statement is not conclusive. The corresponding sentences are revised.

Revision #3a (Section 3.3): The FINN dataset provides high-resolution data for each fire (1 km^2) **compared to the other emission dataset (GFEDv4s: 0.25º; GFASv1.2: 0.1º). As the finest study domain at the burning source is downscaled to 5km, the FINN dataset would have the nearest representation of the emission grid distribution. BB emission in the nPSEA is mainly caused by small fires and dry conditions over the period (Giglio et al., 2013; Reid et al., 2013), hence the representation of the small fires (usually accounted from 500 m burnt area) in the emission inventory is crucial. This might have been one of the reason that it fits better in.** the inline calculation with the plume-in-grid concept.

Revision #3a (Conclusion): The sub-grid scale allocation of the BB emission requires **fitting and testing of** BB emission inventory **to make sure it reproduces** the individual fires with distinct and realistic peaks.

Comment #3b: Also, "BB emission is mainly caused by small fires and dry conditions over the period in the region" is not enough for the readers to understand "why the inline module worked well to represent the BB condition". I guess the heights prescribed in the off-line module tend to overestimate the plume height under dry conditions (dryer atmospheric stratification damps the pyro-convection through entrainment). Therefore, the in-line module which considers the atmospheric condition performs better. Anyway, more information is needed.

Answer #3b: Agree that the explanation is incomplete. The statements are being revised for clarity.

Revision #3b (Section 3.3): **From this study, it is seen that the prescribed heights in the offline method have overestimated the plume rise height under the dry weather condition where the atmospheric stratification has no control on the pyro-convection through entrainment. While, the inline module (IWrp+EC) considers the variability of atmospheric condition over the mountain region better**.

Comment #3c: At last, does Figure 8 represent the near surface level or some upper levels? In either case the corresponding statement is needed in Figure 8.

Answer #3c: Figure 8 represents the near surface level. The caption is revised to clarify the figure content.

Comment #3d: In addition, is it possible that the difference between Figure 8b and 8c results from the different smoldering fraction between FWrp and IWrp+EC. As shown in Figure 2c and 2e, at 17:00 LST (around 9:00 UTC), FWrp (IWrp+EC) happens to have small (big) smoldering fraction which means little (much) aerosol is emitted near the surface and fire hotspots are therefore unclear (clear) in figure 8b. If so, the authors should reconsider the validity of some statements in Section 3.3.

Answer #3d: Additional run (F0: offline at near surface only) as suggested in Comment #4 is included to look at the role of the smoldering fraction on the near surface distribution of PM_{10}. For the F0 scenario, no smouldering is included, but it still has a higher near surface PM_{10} concentration compared to FWrp with smouldering, and similarly, there is no distinguishable "hotspot" of PM_{10} seen in both F0 and FWrp. Hence, we understood that the "hotspot" is not due to the role of smouldering but the role of the inline plume rise instead.

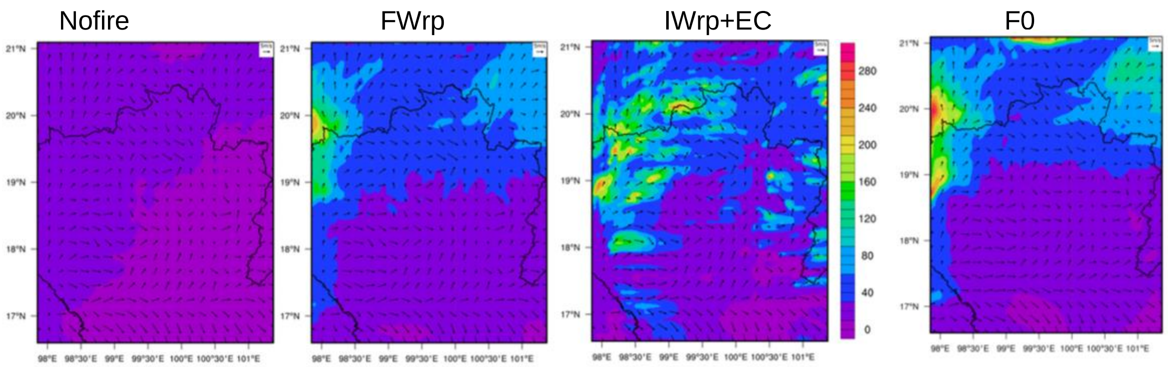


Figure 8: Spatial distribution of near surface PM10 concentration on 19 Mar 17:00 LST over burning regions of nPSEA for 4th domain (d04)

Comment #4. Finally not mandatory and only a suggestion, is it possible to add another simulation in which biomass burning pollutants are emitted directly into the first model layer (near surface layer)? Such setup is still used in many (even some of the most state-of-art) models and probably works better as a control or benchmark than the "Nofire" setup if the authors want to emphasize the importance of in-line plume rise module.

Answer #4: Thanks for the suggestion, we have included the additional simulation which the biomass burning pollutants is injected to the first model layer ("F0") for the sensitivity analysis in Section 3.1. However, for the subsequent part in Section 3, the result has shown that the offline module "FWrp" has higher accuracy compared to "F0", hence we will retain the current setting. In Section 4 where transport of biomass burning aerosol to Taiwan is concerned, we have decided to remain with the "Nofire" since the comparison is trying to differentiate the source of the aerosol whether it is local emission or trans-boundary biomass burning aerosols, but not focus on testing of the inline plume rise modules. In Fig. 7, the F0 scenario is similar to FWrp. Due to the near surface distribution of BB emission in F0, the main difference in the lower AOD present over the sea, where the emission from F0 is very likely to have deposited. In Fig.8, the near surface PM_{10} concentration is compared and the distribution profile of F0 is again similar to FWrp, but F0 has expectedly higher concentration due to the intial distribution of BB over near surface layer only.

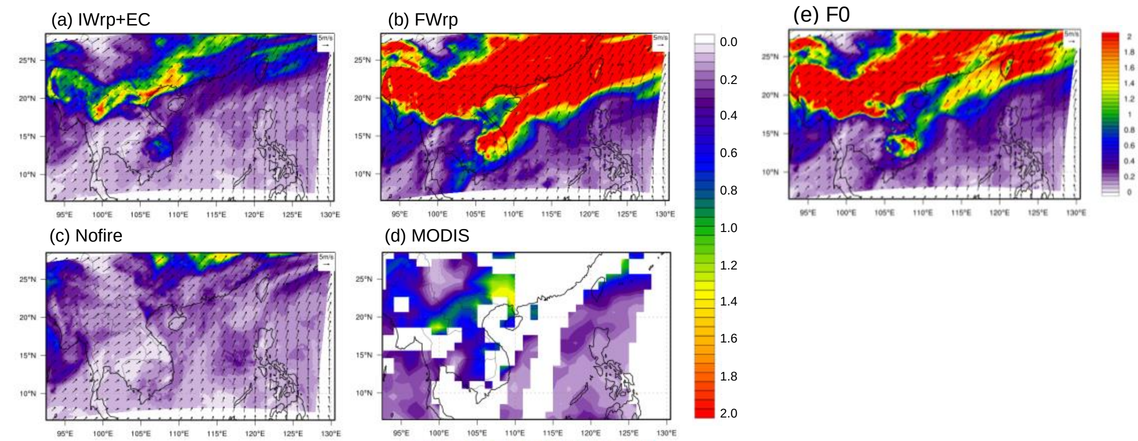


Figure 7: Comparison of daily total column AOD on 20 Mar (10:30 LST) of model output (a) IWrp+EC, (b) FWrp, (c) Nofire, (e) F0 with (d) MODIS data from Figure 5. Vector profiles given in (a-c) are the surface wind profile.

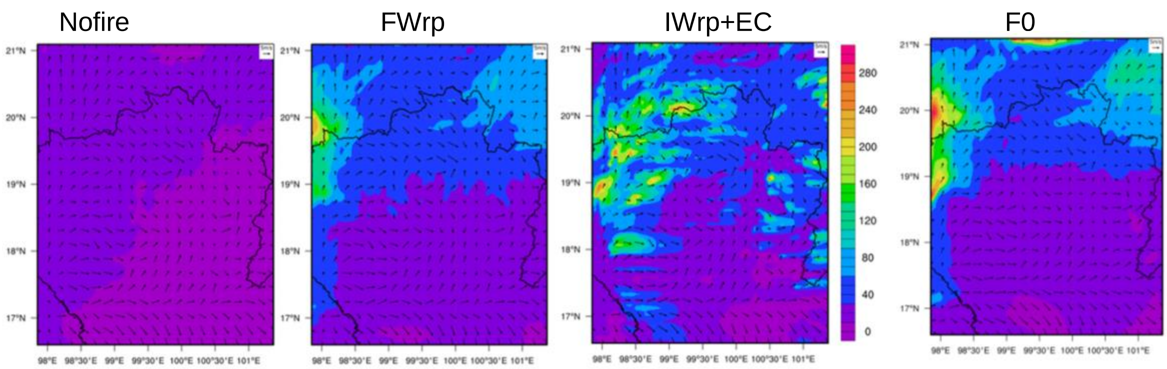
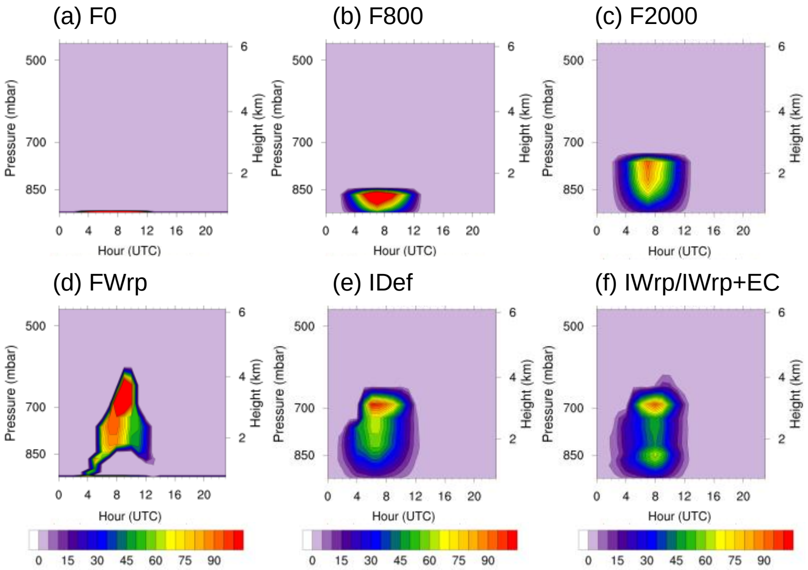


Figure 8: Spatial distribution of near surface PM10 concentration on 19 Mar 17:00 LST over burning regions of nPSEA for 4th domain (d04)

Revision #4 (Table 2): Case setup to evaluate PLMRIM performance

Fire emission	Plume rise module	Initial plume rise allocation (Injection height)	Time variant	Anthropogenic Emission (d01, d02, d04)
Nofire		-	-	MIX
F0	No	*Plume: near surface layer* *Smoldering fraction*: no	-	MIX
F800	No	*Plume top:* 0.8 km *Plume bottom:* 0 km *Smoldering fraction*: no	-	MIX
F2000	No	*Plume top:* 2.0 km *Plume bottom:* 0 km *Smoldering fraction*: no	-	MIX
FWrp	No	*Plume top and bottom &* *Smoldering fraction:* Fire heat flux and prescribed bins of acres burnt	Daily fire size	MIX
IDef	Inline	*Plume top and bottom*: 1.5 x effective plume rise height *Smoldering fraction*: yes	Daily atmospheric stability	MIX
IWrp	Inline	*Plume top and bottom*: 1.5 x effective plume rise height *Smoldering fraction*: FWrp	Daily fire size and daily atmospheric stability	MIX
IWrp+EC	Inline	Same as IWrp	Same as IWrp	Updated SEA region with ECLIPSE



Revision #4 (Figure 2): Initial CO emission rate (mol/s) profile at Mae Hong Son, Thailand on 13 Mar 2013 (UTC) for each case setup in Table 2 with (a) F0, (b) F800, (c) F2000, (d) FWrp, (e) IDef, (f) IWrp/IWrp+EC.

Revision #4 (Table 3): Performance of modelled chemistry field with different settings of PLMRIM at mountain site in western North Pacific (LABS) and nPSEA (DAK). R: correlation coefficient; MFB: Mean Fractional Bias; MFE: Mean Fractional Error; MNB: Mean Normalized Bias; MNE: Mean Normalized Error.

Parameters	Index	Standard	F2000	F800	F0	FWrp	IDef	IWrp	IWrp+EC

LABS - Taiwan									
Daily PM_{10}	R	x > 0.5	**0.69**	**0.69**	**0.57**	**0.65**	**0.69**	**0.69**	**0.68**
	MFB	-0.35< x< 0.35	0.82	0.80	0.67	1.07	**0.11**	**0.07**	**0.03**
	MFE	x< 0.55	0.82	0.80	0.67	1.07	**0.33**	**0.32**	**0.25**
Hourly O_3 (>40 ppb)	R	x > 0.45	**0.46**	**0.46**	0.22	**0.52**	**0.49**	0.39	0.27
	MNB	-0.15< x< 0.15	**0.11**	**0.10**	**0.11**	0.22	0.18	**0.12**	**0.08**
	MNE	x< 0.35	**0.20**	**0.20**	**0.19**	**0.26**	**0.24**	**0.20**	**0.17**
Hourly CO	R	x > 0.35	**0.60**	**0.59**	**0.56**	**0.61**	**0.62**	**0.62**	**0.53**
	MNB	-0.5< x< 0.5	**0.51**	**0.50**	**0.30**	0.63	**0.45**	**0.43**	**0.29**
	MNE	x< 0.5	0.55	0.55	**0.38**	0.66	**0.50**	**0.49**	**0.38**
DAK- Thailand									
Daily $PM_{2.5}$	R	x > 0.5	**0.85**	**0.86**	**0.87**	**0.76**	**0.78**	**0.79**	**0.79**
	MFB	-0.35< x< 0.35	0.59	0.59	0.58	0.53	**0.29**	**0.35**	0.36
	MFE	x< 0.55	0.63	0.62	0.61	0.61	**0.32**	**0.38**	**0.38**

Revision #4 (Table C1): Performance of modelled chemistry field with different setting of plume rise model at other EPA stations in Taiwan and PCD stations in NT

Parameter	Index	Standard	F2000	F800	F0	FWrp	IDef	IWrp	IWrp+Ec
TW stations (EPA)									
Daily PM_{10}	R	x > 0.5	0.22	0.22	0.29	0.17	0.34	0.34	0.30
	MFB	-0.35< x< 0.35	-0.35	-0.36	-0.53	**-0.26**	-0.70	-0.71	-0.79
	MFE	x< 0.55	0.60	0.60	0.66	0.58	0.74	0.75	0.81
Daily $PM_{2.5}$	R	x > 0.5	0.30	0.30	0.45	0.26	**0.48**	**0.49**	**0.46**
	MFB	-0.35< x< 0.35	**-0.11**	**-0.12**	**-0.21**	**-0.02**	-0.57	-0.58	-0.61
	MFE	x< 0.55	**0.44**	**0.43**	**0.44**	**0.44**	0.61	0.61	0.64
Hourly O_3 (>40 ppb)	R	x > 0.45	**0.58**	**0.58**	**0.65**	**0.57**	**0.55**	**0.55**	**0.61**
	MNB	-0.15< x< 0.15	**0.09**	**0.08**	**0.01**	**0.09**	**0.10**	**0.09**	**-0.01**
	MNE	x< 0.35	0.22	0.22	0.21	0.22	0.22	0.22	0.21
Hourly CO	R	x > 0.35	0.24	0.24	0.28	0.24	0.24	0.24	0.29
	MNB	-0.5< x< 0.5	**0.14**	**0.14**	**0.11**	**0.18**	**0.11**	**0.11**	**0.09**
	MNE	x< 0.5	0.55	0.55	0.55	0.56	0.56	0.56	0.56
NT Stations (PCD)									
Daily PM_{10}	R	x > 0.5	**0.76**	**0.75**	**0.75**	**0.77**	**0.83**	**0.84**	**0.84**
	MFB	-0.35< x< 0.35	-0.40	-0.45	-0.45	**-0.30**	-0.91	-0.86	-0.85
	MFE	x< 0.55	0.60	0.64	0.64	**0.50**	0.91	0.87	0.86
Hourly O_3 (>40 ppb)	R	x > 0.45	0.44	0.44	0.42	0.45	**0.47**	**0.49**	**0.49**
	MNB	-0.15< x< 0.15	**-0.04**	**-0.07**	-0.48	**-0.01**	0.27	0.22	0.23
	MNE	x< 0.35	**0.25**	**0.25**	0.74	**0.24**	0.39	0.37	0.37
Hourly CO	R	x > 0.35	**0.41**	**0.42**	**0.42**	**0.37**	**0.41**	**0.45**	**0.45**
	MNB	-0.5< x< 0.5	-0.50	-0.51	**-0.48**	**-0.48**	**-0.25**	**-0.21**	**-0.21**
	MNE	x< 0.5	0.74	0.74	0.74	0.74	0.74	0.74	0.74

Comments by line:

Comment L22. It might be confusing to use “the calibrated model” because no specific calibration is mentioned in the abstract. Use “Such setup” or “This measures” might be better.

Answer: Ok.

Revised: **Such setup** greatly improves not only the BB aerosol concentration prediction over near-source and receptor ground-based measurement sites but also the aerosol vertical distribution and column aerosol optical depth of the BB aerosol along the transport route.

Comment L23. The authors might want to say “BB aerosol concentration prediction” instead of “BB emission prediction”. Emission is the flux at which the pollution is emitted to the atmosphere and usually not predicted by the model. Please check the whole paper to avoid similar mistakes.

Answer: Ok.

Revised: Such setup greatly improves not only the BB **aerosol concentration** prediction over near-source and receptor ground-based measurement sites but also the aerosol vertical distribution and column aerosol optical depth of the BB aerosol along the transport route.

Comment L24. Please consider to remove the contents inside the brackets. It is unnecessary and even confusing to mention the observation type like MODIS AOD and CALIPSO in this way.

Answer: Ok.

Revised: Such setup greatly improves not only the BB aerosol concentration prediction over near-source and receptor ground-based measurement sites but also the **aerosol vertical distribution and column aerosol optical depth** of the BB aerosol along the transport route.

Comment L52. "the vertical distribution percentage of BB emission was".

Answer: Ok.

Revised: In those models, the vertical distribution percentage of **BB emission** was set to be constant throughout the case.

Comment L65. "interaction" between what and what?

Answer: Ok.

Revised: Knowing that the atmospheric circulation over nPSEA is also affected by terrain, the work now intends to incorporate **the interaction of the atmospheric stratification and BB plumes** into the PLMRIM.

Comment L81. "supply" instead of "supplies". Please check the whole manuscript to avoid such grammatical mistakes.

Answer: Ok.

Revised: The 7-SEAS spring campaigns carried out during the BB season **supply** abundance of data to the near source burning and receptor.

Comment Table1. Please include information about the emission inventory for D04.

Answer: Ok.

Revised (Table1): d01, d02, **d04**: MICS-ASIA 2010, biogenic emission from MEGANv2.1

Comment L156. Only one "and" is needed.

Answer: Ok.

Revised: The inline plume rise algorithm couples the interaction of BB plumes dispersion with the basic weather dynamics to determine the effective plume rise height**, subsequently** the plume top and bottom.

Comment L170. "Burnt area size" is not the same as "Fire size". "Fire size" is more proper in this context. Table 2. In line "IDef", "Smoldering fraction: yes" makes no sense. Please check if it is a mistake. Otherwise, more details are needed.

Answer: Ok.

Revised: IWrp has updated Idef with the WRAP empirical specification on **fire size**.

Comment L224. "The systematic peaks for these pollutants are believed to be the uncertainties involving the FINN BB emission". This sentence is confusing. Do the authors mean "the systematic error for"?

Answer: Ok.

Revised: The **systematic errors for these pollutants at the peak points** are believed to be the uncertainties involving the FINN BB emission (Pimonsree et al., 2018).

Comment Table 3. "MNB" and "MNE" still exist without explanation. Please check the whole manuscript to replace them with "MFB" and "MFE", Also, it is strange to find R decreases when MNB and MNE both decrease from IWrp to IWrp+EC. More explanation might be needed.

Answer: The explanation for MNB and MNE are included at the text, table caption and Appendix C. Result is cross-checked to make sure that it is correct. While comparing IWrp to IWrp+EC, the reduction of MNE and MNB indicates the error from the model data has converged towards the observation, in other words, the value from simulation has become closer to observation. While reduction of R is the weaken correlation for the entire simulation and observation dataset, in other words, the overall trend of between two dataset might have changed. Hence, these two statistical indicators are different in terms of interpretation of the result accuracy, and it is not impossible to have the reduction of R with the reduction of the error bias. In this study, the improvements of result shown by the reductions of MNE and MNE have a strong signals, up to 50% improvements for MFE of daily PM_{10} and MNE of hourly O_3 and CO. The reduction of R is approximately 1% for daily PM_{10} and hourly CO, which have been rather insignificant and might possibly be the numerical noise. Hence, the overall performance of IWrp+EC is still to be considered as improved in this context.

Revised (Table 3): Table 3 shows the performance of PLMRIM on daily PM_{10}, daily $PM_{2.5}$, hourly O_3 and hourly CO at LABS and DAK according to the model benchmark (correlation coefficient, R; Mean Fractional Bias, MFB; Mean Fractional Error, MFE; **Mean Normalized Bias, MNB; Mean Normalized Error, MNE**) suggested by the Taiwan EPA (Appendix C).

Revised (Table 3 Caption): Performance of modelled chemistry field with different settings of PLMRIM at mountain site in western North Pacific (LABS) and nPSEA (DAK). R: correlation coefficient; MFB: Mean Fractional Bias; MFE: Mean Fractional Error; **MNB: Mean Normalized Bias; MNE: Mean Normalized Error.**

Revised (Appendix C):

Mean Normalized Bias (MNB): MNB = $\frac{1}{N}\sum_{i=1}^{N}(\frac{M_i-O_i}{O_i}) \times 100\%$

Mean Normalized Error (MNE): MNE = $\frac{1}{N}\sum_{i=1}^{N}\left|\frac{M_i-O_i}{O_i}\right| \times 100\%$

Comment Figure 3. The unit "ug/m-3" is wrong. Please use either ug/m3 or ug*m-3. Also, colors look different between lines in legend and figure. (For example, the line representing observation is black in the figure but appears to be gray in the legend).

Answer: Ok. The legend colour and label for figure unit are updated.

Revised (Figure 3):

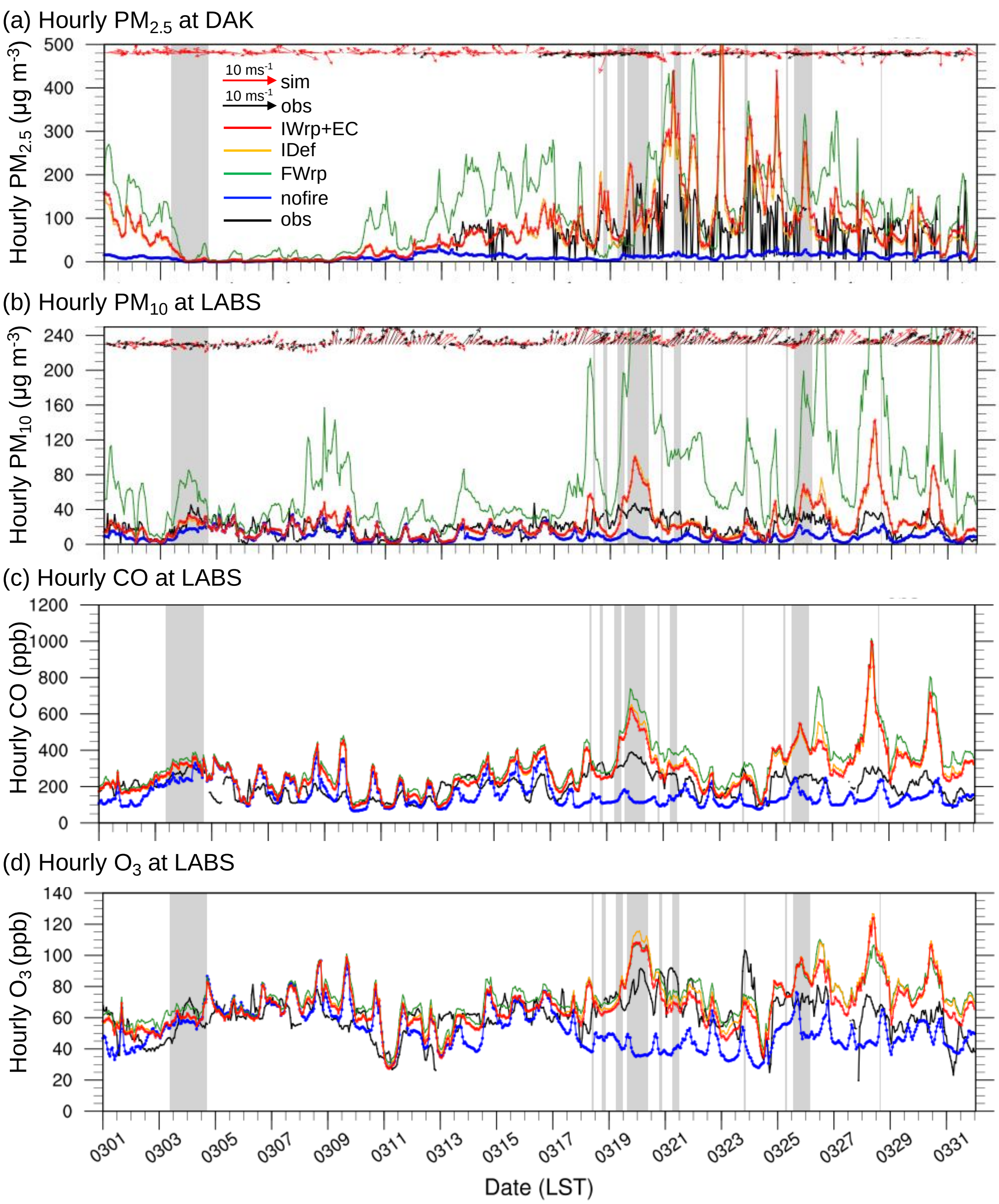


Figure 3: Comparison of PLMRIM (observation (black), nofire (blue), FWrp (green), IDef (orange), IWrp+EC (red) of (a) hourly wind field and $PM_{2.5}$ at DAK, and (b,c,d) hourly wind field and (b) PM_{10} (b), (c) CO, (d) O_3 at LABS in Mar 2013; Grey shade highlights the high pollution hour at LABS (CO > 300 ppb, PM_{10} > 35 μg m^{-3}). Wind field for observation (black) and simulation (red) are shown in vector form.

Comment L240. Is the lidar "MPLNET v0 L1.5a" at the same position as DAK station? If so, please indicate it in section 2.1 and in Figure 1.

Answer: Ok.

Revised: In line with the 2014 7-SEAS spring campaign conducted in nPSEA, **the MPLNET device is located at the Doi Ang Khang Meteorology (DAK) Station to collect the near-source aerosol vertical distribution profile (v0 L1.5a) data.** The gridded extinction, diagnosed from the planetary boundary layer height and vertical aerosol extinction coefficient data collected is used to verify the performance of the model output (Wang et al., 2015a).

Revised (Figure 1 Caption): Figure 1: (a) Domain setup of model (domain 1-4) with terrain height information; (b) 3rd domain covering Taiwan (d03) with information of terrain height (contour fill), AA' cross section (dotted red line), locations of Taiwan EPA air quality and CWB weather stations (black dots) and LABS receptor site (big red dot); (c) 4th domain covering part of nPSEA (d04) with terrain height (contour fill), BB' cross section (dotted red line), location of Thailand PCD ground air quality stations (black dots) and DAK source site (big red dot). **The latter also stationed the MPLNET device.**

Comment L249. Please replace the letter "x" (ex) with symbol "×" (multiply). Also check the whole paper to avoid similar mistakes.

Answer: Ok.

Revised: The incomplete MPLNET dataset of 2013 has prompted the use of the data from 2014 (Version 2 and Level 1.5) (Wang et al., 2015a) with a similar number of burning hotspots (sum of hotspot covered in model domain 2: 2013 = 1.1×10^5, 2014 = 1.2×10^5) and AOD (averaged from MERRA-2 AOD product in model domain 2: 2013 = 0.34, 2014 = 0.38) during the period of study.

Revised: Therefore, the total columnar AOD data provided by $1^o \times 1^o$ MODIS Terra Level 3 AOD product (MOD08_D3, Platnick et al, 2015) during the same period (20 Mar 10:30 LST) is used for the verification of the aerosol concentration.

Revised: The boundary condition data in WRF model uses the reanalysis weather data. These data are assimilated with measurement data, they are available in coarse resolution (1° × 1°).

Revised: Given that the 3rd domain is of 5 km × 5 km resolution, the height of Mt. Lulin might be averaged out by the lower terrain surrounding it and the model height of Mt. Lulin is lower (2216 m, layer = 1) than its original height (2862 m).

Comment L362. The sentence "It is because the boundary layer height......" is out of context. Please delete it or reorganize the context.

Answer: Noted. The sentence is deleted.

Comment L408. The sentence "The detection of BB intrusion into surface sites ......" is not consistent with the context. The mechanism mainly describes the near surface pollutants get upward and mix with the BB smoke above, rather than BB smoke gets downward and intrude into surface.

Answer: Agreed. The sentence is better suited in Section 4.2 and hence moved over.

Revised: A larger amount of fine nanoparticles from local sources is measured at LABS especially during the morning even not during the **spring** burning season.

Comment L416. "BB aerosols have the most direct influence on the surface site in western Taiwan" is not enough for readers to understand why it "is coherent to the reduction of surface O_3, NO_x, and SO_4^{2-} aerosols in 2006". More explanation is needed.

Answer: Agree on the confusion caused. Statement rephrased for clarity.

Revised: Among the three mechanisms, the BB aerosols have **a more** direct influence on the surface site in western Taiwan **under the second mechanism. Such condition occurred due to Asian continental cold surge that the high-pressure system moves south-eastwards. Under favourable upwind weather condition, the dust can be lifted and transported downwind to react with the BB aerosols. Such situation is shown on the co-existence of two major pollution event (dust and BB) that reduces the** surface O_3, NO_x, and SO_4^{2-} aerosols over **western Taiwan** in 2006 (Dong et al., 2018).

Comment L422. Please reorganize the sentence "The allocation fraction will need to improve looking......" which is difficult to understand.

Revised: The allocation **of smoldering** fraction **in SEA** will need **to be improved to account of the tendency of** small fires to smolder (Akingunola et al., 2018; Zhou et al., 2018).

Comment Figure D2. The figure has never been mentioned in the main text. It could be removed if it is unnecessary for your conclusions.

Answer: Thanks for noticing. It's been removed.