

Thanks for the revision of the manuscript. I think the manuscript has clearly improved. I have still one main concern that has not been resolved and that should be addressed prior to publication in ACP.

The methodical part of the back trajectory analysis in section 3 is still insufficient. There is very little or almost no information given how exactly the back trajectories are used for calculation of the immission maps. It seems that the emissions were summed up all along the trajectory without taking the height of the trajectory into account or whether the air parcel had contact with the PBL and a chance to pick up emissions or not. Although I am not an expert on back trajectory analysis, I would consider this issue very essential for the paper. For linking emissions with concentration maps (immission maps) only emissions from grid cells where the back trajectory was close to the ground should be considered. If this is not the case here, I would have doubts regarding the validity and the usefulness of the calculated immission maps and consequently of the key messages of this paper. So it is in my view crucial that the applied back trajectory analysis has been done correctly. This must be demonstrated by a more detailed and convincing description of the applied method.