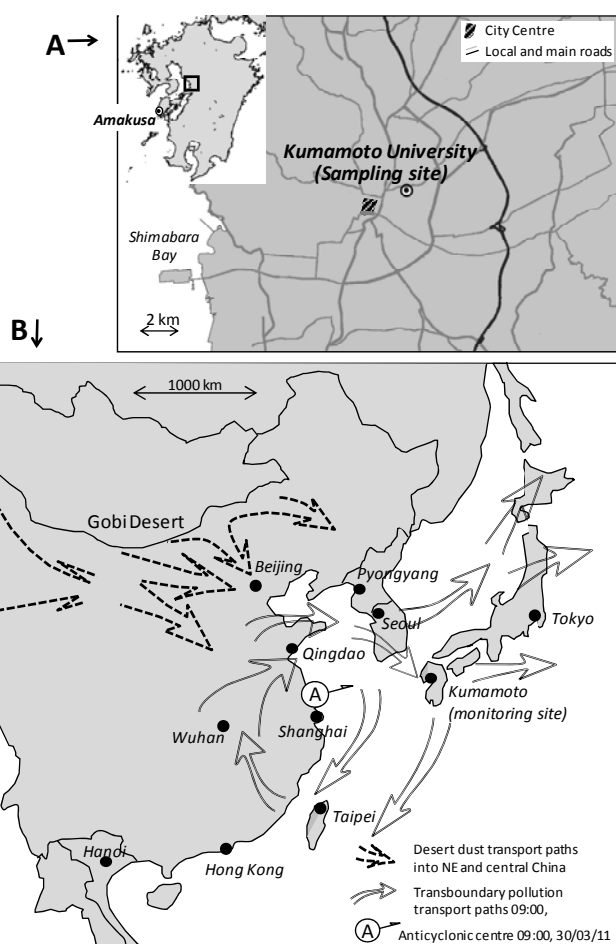


Reviewer #1:

We thank the referee for the comments and suggestions made in both the initial brief review and the later review published in ACPD. Both have enabled us to improve the manuscript. We have made the suggested modifications:

- Abstract: i) We have given in full all acronyms in the abstract, including ICP-AES, ICP-MS, PIXE and PMF; ii) The word “cleansing” accurately describes the removal of most anthropogenic pollutants from the atmosphere at any given location during oceanic advection events (To cleanse = “to remove dirt, filth etc from”: Collins English Dictionary). During and after these events there is of course still natural PM present in the atmosphere (mostly sea salt) but overall PM mass loading is much lower.
- We have modified place names, changing “Gobi desert” for “Gobi Desert”, and “archipelago” for “Archipelago” throughout the text.
- We have drawn and added a new figure 1 which provides a more detailed map of the monitoring site, showing coast and major roads (no major industries are located near the monitoring site).



- We have added comments on the profiles of each source shown in figure 2. We agree with the reviewer that both mineral and road traffic factors have similar profiles, which we attribute to the effect of road dust resuspension on the traffic source. Also the CI concentrations on the PM_{2.5}

factions were too low to be measured by PIXE, which is why they do not appear in the aged sea salt factor.

- During phase 3, when the advection of marine air masses crossed Kyushu, rain only fell on the last day (8 April: 1-3mm/hr). By that time the marine advection event had already taken place, producing the lowest PM concentration on 6 April (a dry, fine day). We have added a note to the text (lines 313-316).
- The reviewer is right noting that the effect of air masses contaminated with coal combustion from mainland Asia should show signals in the sulphur concentrations as well. We did mention in the text that these air masses (phase 4) contain “sulphatic and carbonaceous aerosols”, and this can also be observed in Figure 4a, where levels of sulphur increased especially during the last days of phase 4.
- We have made all grammatical changes as recommended.