

## ***Interactive comment on “Characteristics of marine shipping emissions at berth: profiles for PM and VOCs” by Qian Xiao et al.***

**Anonymous Referee #1**

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This manuscript provides detailed information on ship atmospheric emissions while the ships are in Jingtang port and using auxiliary engines. This important topic has tended to be overlooked given the focus on emissions from ships' main engines. I recommend that authors consider the following points before publication. 1. More information is needed about Jingtang port, for example the annual traffic, exposure to other atmospheric emissions such as passing ships and centres of population. A map could be useful here. 2. It should be noted that the new Chinese sulphur limit for auxiliary engines corresponds to the global shipping limit that will apply from the year 2020. The findings presented in this manuscript are also relevant to proposals for ships in berth to be able to use electricity from land instead of auxiliary engines – it would be helpful to discuss this option in the light of the measurements made. 3. More

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detail is needed concerning the ambient sampling. Was the sampling site placed so that it was significantly affected by passing ship traffic and/or built up areas and road traffic? 4. In the conclusions, a “slight decrease from 23.82% to 23.61%” is noted. Given the uncertainties involved in the sampling, it may be more reasonable to state that the ratio was unchanged at 24%, unless it can be shown that the ratio can be measured to better than 1% uncertainty. 5. Figure 2: the symbols for ship emissions should be explained. Why are there no error bars for diesel and gasoline? 6. Figure 4 is large and gives unnecessary detail. Delete this figure and show ranges and/or standard deviations in Figure 3. 7. Figure 7 shows a lack of clear correlation between sulphur and vanadium. 6 ships have high sulphur but low vanadium. 8. Figure 8 does not add important information and can be deleted. 9. Figure 10 – complement with an ambient/vessel correlation. Editorial points: 1. A table of the abbreviations used should be included. 2. The figure legends are too concise – they should provide a clear description of the data shown in each figure. 3. The English language needs editing

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