

**Reply to reviewer:**

The manuscript has been improved during the revision process and the authors have made sufficient changes to respond to reviewer comments. I encourage accepting the manuscript with following minor revisions.

**Reply:** The authors would like to thank the reviewer for an excellent review and we believe the manuscript has truly benefited from the suggested changes.

**Section 3.1.:**

The authors have improved the section discussing black carbon emission factors. As commented before and pointed out by the second reviewer, the ship service speed and EGCS (and also ballast / laden condition) are not independent groups. I would suggest the authors to show additional figures where the data points shown in Figure 5 are shown in such a manner that the service speed is in the x-axis and BC emission on the y-axis and circles or color coding is used to indicate the data points of ship with or without EGCS. (Similar figure could be shown for ballast / laden condition). This might perhaps accompany the table A1 or be two additional panels in Figure 5.

The additional figure would provide the reader a better understanding of the underlying data behind the statistical analysis and dependency between service speed and EGCS in the observations.

**Reply:** We have added the Figure B1 in the Appendix B as suggested by the reviewer. Also, we have added the following sentence to the Section 3.1.:

“ $EF_{BC}$  as a function of ship service speed between different loading conditions and EGCS is presented in Figure B1 of Appendix B.”

**Conclusions L339-340:**

For the conclusion regarding BC emission from ships with EGCS, I would encourage to modify the sentence to include the remark that majority of EGCS equipped ships also had faster service speed.

**Reply:** We have added the following sentence to the Conclusions as suggested by the reviewer:

“The majority of vessels equipped with EGCS also had faster service speeds.”