

## ***Interactive comment on “Statistical validation of a 3-D bio-physical model of the western North Atlantic” by M. K. Lehmann et al.***

**Anonymous Referee #3**

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The authors evaluate the skill of a high resolution biological-physical model of the north-east North American shelf by comparing model results with satellite remote sensing data using a defined set of quantitative metrics. The new model results are also compared with previous modeling studies highlighting the improvements resulting from the new model formulation. The manuscript is very well written and organized and the subject is well within the scope of Biogeosciences. The analysis is thorough and the goals, results and conclusions are clearly presented. The manuscript also presents original results in the sense that it is one of the first implementations of a moderately complex ecosystem model in a high resolution regional model of northeast continental shelf. I have little to say except for a comment and a couple of typos/errors I found.

- Comparing models of different ecological complexity is always tricky. There are dif-

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ferences in physics and model resolution and how these interact with the biology. But I think the authors present enough evidence to back up their conclusions. Particularly, the role of the two phytoplankton groups in the different regions.

- On page 5672 line 22 I believe it should be CHLOROPHYLL and not SST. Figure 4 shows surface chlorophyll concentrations.

- In the appendix, in equation A8, shouldn't it be "K" and not "T" in the denominator?

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