

## ***Interactive comment on “Biogeochemical controls on the bacterial population in the eastern Atlantic Ocean” by S. B. Neogi et al.***

**Anonymous Referee #2**

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### General comment

The manuscript by Neogi and co-authors presents a large data set on biogeochemical parameters, total bacterial abundance, and counts of total cultivable bacteria and of cultivable *Vibrio* and Enterobacteriaceae. The results cover a variety of geographical areas and depth layers in the eastern Atlantic Ocean. Based on correlations among parameters the authors describe and discuss possible controlling factors of the abundance of total bacteria, and of *Vibrio* and Enterobacteriaceae. The manuscript is well organized and written. My major concern is that the originality of the manuscript is hidden in a large data set that does not provide any novel information. The horizontal and vertical distribution of inorganic nutrients, dissolved organic matter and bacterial abundance is well documented in the literature. Far less is known on the spatial distri-

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bution of cultivable *Vibrio* and Enterobacteriaceae, and of the potential environmental factors that control their abundances. This aspect deserves more attention and should be the focus of a re-submitted manuscript that has undergone major revisions.

### Specific comments

I suggest the authors shorten substantially the description and the discussion of the results on biogeochemical parameters and total bacterial abundances.

Fig. 4: I suggest the authors apply a multivariate analysis to present the correlations among all parameters in a single graph. Several of the cited references could be replaced by more recent publications.

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