

Interactive comment on “Bacterial biomass distribution in the global ocean” by E. T. Buitenhuis et al.

Anonymous Referee #1

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General comments This work compiles a database from mostly published flow cytometry results of the abundance of prokaryotes in the world's oceans and uses it to estimate the biomass of prokaryotes. Its systematic approach is a great improvement over previous estimates. One of the nicest aspects of this study is that it identifies sources of errors in the current estimate, the largest of which is likely to be the uncertainty in the estimate of the amount of carbon per cell. In addition, regional gaps in the existing data sets are clearly demonstrated.

Specific comments Because flow cytometry does not distinguish between bacterial and archaeal cells, the methodology actually counted both groups. Thus, the measurement was of the number of prokaryotes and not bacteria.

Technical corrections p. 305, line 20: 'he inventory' should be 'the inventory' Figure 4
C70

should be cited in the text.

Interactive comment on Earth Syst. Sci. Data Discuss., 5, 301, 2012.