

Interactive comment on “Effects of CO₂ on particle size distribution and phytoplankton abundance during a mesocosm bloom experiment (PeECE II)” by A. Engel et al.

A. Engel et al.

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In his comment, Xavier Mari suggests that for interpretation of the differences in particles size distributions we need to consider sedimentation processes. This is true in general. However, our data show that CO₂ related differences in the particle size distributions evolved during the time of particle production. We are not aware of any sedimentation mechanism that can explain the loss of smaller species/ particles at high CO₂ concentration. TEP production, aggregation and differential sedimentation do not explain our observations, because these processes occurred during the decline of the bloom, not at its beginning and height. Xavier Mari’s conclusions are based upon a misinterpretation of Riebesell et al. (2007). Riebesell et al. (2007) do not refer to a four-fold difference in TEP production between the CO₂ treatments but to a fourfold

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increase in TEP in all treatments during the experiment.

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