



EGUsphere, referee comment RC1
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Comment on egusphere-2022-360

Leonard Ernst (Referee)

Referee comment on "An update on dissolved methane distribution in the subtropical North Atlantic Ocean" by Anna Kolomijeca et al., EGU sphere,
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This manuscript by Kolomijeca et al. addresses the environmentally important ocean methane paradox (OMP) and both widens and confirms previous studies in this field. Most importantly, their work seems to be rooted on a solid dataset, comprising many parameters, thereby allowing interesting insights into this phenomenon. It also seems to be clear that the two investigated cyanobacterial organisms significantly contribute to methane formation in the marine environment. Still, it does not become fully clear how great the contribution of these organisms to the overall OMP, in comparison to other marine species, really is – this point should be more openly addressed (also if a clear answer cannot be provided). Furthermore, spelling/grammar of the manuscript require minor improvements. Overall, this manuscript provides important field data that (i) confirm and describe the OMP more closely and (ii) thereby help to provide a solid base for future, more mechanistic studies.

Please also note the supplement to this comment:

<https://egusphere.copernicus.org/preprints/2022/egusphere-2022-360/egusphere-2022-360-RC1-supplement.pdf>