

Interactive comment on “Variability and Trends in Physical and Biogeochemical Parameters of the Mediterranean Sea during a Cruise with RV MARIA S. MERIAN in March 2018” by Dagmar Hainbucher et al.

Anonymous Referee #2

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Title: Variability and Trends in Physical and Biogeochemical Parameters of the Mediterranean Sea during a Cruise with RV MARIA S. MERIAN in March 2018

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In this manuscript, a survey on long-term variability and trends in physical and biogeochemical parameters of the Mediterranean Sea during a cruise conducted in March 2018 with RV MARIA S. MERIAN, was carried out. The investigation was conducted

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with the aim to assess the hydrographical situation after the major climatological shifts in the eastern and western part of the Mediterranean basin.

Abstract

Page 2 line 1: "... variability can be influenced by ..." change to "variability of this system can be influenced by ...";

Methods

Page 7 lines 4-5: Figure 1, "yellow squares" are difficult to detect in the figure 1;

Page 15 line 11: "NO₃, NO₂, PO₄" change to subscript;

Page 16 Table 9: correct letters and numbers disposition;

Page 16 line 28: "m-cresol" change m- to Italic style;

Page 21 line 9: "NO₃" change to 3 subscript "NO₃".

Discussion and Conclusion

Page 23 Figure 2: numbers inside figure 2 are difficult to read;

Page 25 line 10: "Otranto Strait Strait" change to "Otranto Strait";

Page 26 lines 8-19: "... nutrient limitation of heterotrophic prokaryotes growth, ...". Previous investigations indicate that the Mediterranean Sea is a P-limited system, especially in the eastern basin, and that phosphate availability may limit both primary production and heterotrophic bacteria. Analyses of heterotrophic microbial communities conducted during cruise investigations, have been included in some investigations, giving insights on DOC consumption by heterotrophic prokaryotes, and report DOC data combined with microbiological information. The metabolism of the dominant heterotrophic and photoheterotrophic bacterial plankton populations is synchronized to autotrophic processes. Little is known about how microorganisms degrade and metabolize this pool of organic nutrients. Isolation and characterization of bacterial strains

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obtained from native water samples collected during cruise, could add information on the role of different strains of bacterial community in degrading DOC.

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