

# ***Interactive comment on “Effects of nitrate and phosphate supply on chromophoric and fluorescent dissolved organic matter in the Eastern Tropical North Atlantic: a mesocosm study” by A. N. Loginova et al.***

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## Comments

1. DIN and DIP should be fully abbreviated 2. “Fluorescence properties of CDOM (FDOM) allow discriminating between different structural CDOM properties” Here, “Fluorescence properties of CDOM (FDOM)” should be replaced by “Fluorescent DOM (FDOM)”. 3. “where effects of DIP (“Varied P”) and DIN (“Varied N”) supply” is confusing that should be revised 4. “The bound-to-protein amino acid-like FDOM component”

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should be replaced as “protein-like or aromatic amino acid-like” 5. Page 7225, Lines 15 to 20: This study should more properly explain about FDOM components. Each component (aromatic amino acids or protein, fulvic acids or humic acids) are mostly composed of two peaks, one at shorter wavelength region and another is longer wavelength region. That discussion should be properly written. Another most important issue of this study is that authors should not use the Raman Unit that make changes the component excitation and emission wavelengths and changes fluorescence intensity. I strongly recommend, not to use Raman Unit, Author can use the arbitrary unit (a.u.) or standard Quinine sulphate unit (QSU). Such effect causes a lot of differences in excitation emission wavelengths in Table 3 from other references that mentioned in the Table. Authors can find the differences from the following reference how does differ with other peaks and wavelengths and EEM spectra too. [Reference: Mostofa KMG, Liu CQ, Yoshioka T, Vione D, Zhang YL, Sakugawa H (2013) Fluorescent dissolved organic matter in natural waters. In: Mostofa KMG, Yoshioka T, Mottaleb A, Vione D (Eds), Photobiogeochemistry of Organic Matter: Principles and Practices in Water Environments, Springer, New York, Chapter 6, pp 429-559]. 6. Author then rewrite the next paragraph and the related explanation regarding FDOM. 7. Authors did not show the three fluorescent components as an EEM Figure that should be needed to show in the manuscript.

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