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Interactive comment on "Seasonal characterization of CDOM for lakes in semi-arid regions of Northeast China using excitation-emission matrices fluorescence and parallel factor analysis (EEM-PARAFAC)" *by* Y. Zhao et al.

Mostofa KMG Mostofa

mostofa@tju.edu.cn

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Comments on "Seasonal characterization of CDOM for lakes in semi-arid regions of Northeast China using excitation-emission matrices fluorescence and parallel factor analysis (EEM-PARAFAC)"

Specific comments: 1) "fluorescence components" should be replaced by ""fluorescent components" throughout the manuscript. 2) Author expression of the fluorescent

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components are needed to change throughout the manuscript. For example, in the abstract: “Two humic-like peaks C1 (Ex/Em= 230, 300/425 nm) and C2 (Ex/Em= 255, 350/460 nm)” here, two humic-like components, not peaks. Similarly, “and two protein-like B (Ex/Em= 220, 275/320 nm) and T (Ex/Em = 225, 290/360 nm) peaks”, here also the same mistakes and also author should separate them easily, not saying two protein-like components: first one should be tyrosine and second one should be “Tryptophan” based on the excitation emission fluorescence peaks. That should be needed to change throughout the manuscript. 3) “The humic-like component is a complex mixture of aromatic and aliphatic compounds fulvic acids and humic acids, which were originated from terrestrial materials or algal decomposition in the waters. While the two protein-like components consist of two dissolved amino acids, i.e., tryptophan and tyrosine. . . .”. Wording and discussion are completely wrong in these sentences. Authors need more study in that issue to distinguish the terrestrial humic substances which are composed of humic and fulvic acids. But aquatic humic-like substances are of algal or phytoplankton origin. Authors need clarify in that regards. Second issue, I have explained in my second comments. “..the two protein-like components consist of two dissolved amino acid..” it is entirely wrong. These issues needed them clarify well.

Author can read the following reference paper for better understanding of Fluorescent DOM (FDOM). [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]

Regards, Khan M. G. Mostofa, Ph.D Professor Institute of Surface Earth System Science Tianjin University 92 Weijin Road, Nankai District, Tianjin 300072, P.R. China Tel: +8615285007291 Email: mostofa@tju.edu.cn

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