

Interactive comment on “Eddy-induced Track Reversal and Upper Ocean Physical-Biogeochemical Response of Tropical Cyclone Madi in the Bay of Bengal” by Riyanka Roy Chowdhury et al.

Anonymous Referee #1

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I do not think that the authors completely replied on "Role of cold core eddy in controlling / arresting the northward movement of cyclone Madi", particularly "the slow down of the northward movement of cyclone Madi and its final arrest was mediated by the presence of oceanic cyclonic eddy". The parameter "Feddyl" could explain only the intensity change of a cyclone such as "positive" or "negative" feedback when a translation speed and oceanic parameters were given.

I would like to argue that the authors need to study the effect of a cold eddy on the movement of a cyclone using another method such as numerical experiments by the

coupled atmosphere-ocean model with/without a cold eddy in order to show evidence. At least, it is unreasonable to conclude the effect of a cold eddy on the cyclone movement only with the data used in this study. Otherwise, the authors could find statistical evidence if they analyze the best track data.

Descriptions of biogeochemical oceanic responses to a cyclone are improved with more quantitative descriptions. However, the authors could not provide evidence for the effects of a cold eddy on the cyclone movement, although the effects of a cold eddy on the cyclone intensity change became clear. Because the limit of the open status is 3rd April, I recommend rejection in the current discussion paper.

Interactive comment on Ocean Sci. Discuss., <https://doi.org/10.5194/os-2018-133>, 2019.

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