

Interactive comment on “²³¹Pa and ²³⁰Th in the ocean model of the Community Earth System Model (CESM1.3)” by Sifan Gu and Zhengyu Liu

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Dear Sifan Gu and Zhengyu Liu,

In the manuscript, you mention that for the purpose of Pa/Th computation (beginning of section 2.2) you need four particles field as follow:

"The implementation of ²³¹Pa and ²³⁰Th requires four particle fields: CaCO₃, opal, particulate organic carbon (POC) and dust. These particle fields can be obtained from the ecosystem driver from the ecosystem module (Jahn et al., 2015)."

However, Jahn et al., 2015 does not describe anything related to the opal cycle, unless I overlooked it. Hence, though you show the particle flux field in the manuscript, there is no reference to how the opal flux is computed in relation to the Si cycle.

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Could you please update this part to clarify how the opal flux is computed?

Best wishes,

Didier Roche

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