Reply on CC1

Frédéric Mentink-Vigier (Referee)

Referee comment on "Intermolecular contributions, filtration effects and signal composition of SIFTER (single-frequency technique for refocusing)" by Agathe Vanas et al., Magn. Reson. Discuss., https://doi.org/10.5194/mr-2022-17-RC2, 2022

Hi Maxim,

All these comments are not essential. The article is dense and this is a lot of work, thus my comments just aim at making the reading easier, and of course this is from my perspective.

Your comment for L159

--> you can keep it. I am suggesting to add the range over which the indices run in all the equations?

Your comment for Eq 9:

--> I understand the logic of V. Since you start with Greek letters for the density matrix, you could continue with another one? There is just one caveat with V, it looks like a voltage.

Your comment for the L170:

It is all about how you presented it L170 and the questions it left me as a reader. I have found the answer L258 where you better explain better what you are doing: you want to include the missing cosine in the product by re-writing the sin as tancos and then do the approximation. This is clear.

However L170 you do not explain the intent. Instead I read L170 as: we approximate $\sin(x) = \tan(x)\cos(x) \sim x \cdot \cos(x)$. However $\sin(x) \sim x$ is a better approximation that $\sin(x) \sim x\cos(x)$, which then makes me wonder why use a worse approximation of $\sin(x)$. In fact, I would argue that you could introduce the B_{2p} term starting from line 10., then do the tangent approximation.