

## Reply on CC1

Frédéric Mentink-Vigier (Referee)

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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

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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  $\tan\cos$  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 than  $\sin(x) \sim x\cos(x)$ , which then makes me wonder why use a worse approximation of  $\sin(x)$ . In fact, I would argue that you could introduce the B2p term starting from line 10., then do the tangent approximation.