

IEEE TMI-2022-1763.R1: Responses to Editors and Reviewers

Editor

In addition to the changes requested by the reviewers we added data from 11 additional patients which we recorded and were not originally part of the sub-study underlying this publication. Because first and last author moved to different institutions and are busy with new projects, we want to include the complete data set in this publication, which in the meantime was fully reconstructed and analyzed. Unfortunately, for five patients there the scanner mistook the fat peak for the water peak during calibration. Although this could be corrected in postprocessing, this was not done. We will publish this data as well.

Reviewer 1

The authors have addressed almost entirely my previous comments. The comparison to the method by Schneider using temporal TV without B_0 update is particularly careful. Thank you for including it. I have some remaining minor comments.

- (1) *It would be helpful to add the B_0 maps from the different methods in the comparison of Figure 5 (even as a supplementary Figure).*

Thank you for the suggestion. We have added Figure 6, which displays both the initialized B_0 maps and the jointly updated B_0 maps.

- (2) *The point regarding the advantage of simultaneously estimating coil sensitivities remains somewhat lost within the manuscript. The authors could show some coil sensitivity maps using the proposed method and compare them to maps from a reference method.*

Thank you for the suggestion. We have added Figure 13 which compares coil sensitivity maps from the proposed joint estimation method and the reference method ESPIRiT.