

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

### **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.