Revision

You still haven't quite dealt with reviewer 1's point; you have kept in the analysis which uses as an error term a term that include systematic variance from another factor. Remove these analyses and just report your model averaging.

In this sentence:

"a TMS site (ipsilateral vs contralateral) effect is evident and that timing differences are unlikely, as reflected by the evidence against a model which solely includes timing or a model that includes an interaction with timing, and the low posterior odds for an averaged model which includes the TMS factor." This is for experiment 1. I take it the last "TMS factor" is "TMS timing factor"? But when you average that BF is 0.73 for timing, which is rather far from the benchmark for evidence. The interaction BF is close enough, so you can conclude that there is moderate evidence against an interaction. Just leave it at that. Experiment 2 has good enough evidence against a timing effect.

The discussion spends a long time exploring this exploratory lack of timing effect, taking it as established, on a par with your pre-registered analyses. You need to moderate this. For example the sentence "Experiments 1 and 2 provided evidence against a TMS timing effect,.." should refer only to experiment 2. And you also need to explicitly label this finding as exploratory. You can keep discussion of it, but add as an exploratory findiing, it would be useful for future research to independently confirm it..

Dear Prof. Dienes,

We appreciate the additional clarification regarding the exploratory analyses, and we apologize for failing to address this concern in the previous rounds of review. We have now updated our Stage 2 according to your suggestions.

Specifically, we have now removed the error term analysis (and the respective tables: Table 4 and Table 6 in the previous version) and we have only kept the analyses from model averaging.

In addition, to address Reviewer's 1 concern, we have updated our exploratory analysis section to reflect the indecisive evidence for the TMS timing factor in Experiment 1.

Based on the changes described above, the two paragraphs describing the rmANOVAs are rephrased as follows (pg. 32):

"[…] To explore the model that better represents the data, we conducted analysis on the factor effects by calculating the likelihood ratio representing the change from prior odds to posterior odds for each factor in the model averaged by all the models that include each factor (BF_{incl}). The BF_{incl} for all factors and interactions are provided in Table 4. In detail, the inclusion of the TMS site factor resulted in the highest BF_{incl} (BF_{incl} = 23.01). Also, there was moderate evidence against the inclusion of an interaction of TMS site and TMS timing (BF_{incl}

= .34), however, the inclusion of the TMS timing factor resulted in indecisive evidence (BF_{incl} = .73). The results of the exploratory Bayesian rmANOVA inform us that, in line with the registered analyses of Experiment 1, a TMS site (ipsilateral vs contralateral) effect is evident and that an interaction with TMS timing is unlikely.

Experiment 2. A similar exploratory Bayesian rmANOVA, was implemented to explore the possible effects across the TMS condition, site, and timing factors. In detail, we explored a two (real vs sham) by two (ipsilateral vs contralateral) by two (200 ms, 1000 ms) model (Figures 6A and 6D). As with Experiment 1, we performed an analysis of effects by calculating a BF_{incl} for each factor and interaction included in the model. The BF_{incl} resulting from this analysis are presented in Table 5. Specifically, the highest BF_{incl} was produced by the TMS condition model (BF_{incl} = 31.45), followed by that of the TMS site model (BF_{incl} = 15.45). The models including solely TMS timing, or TMS timing interactions resulted in low BF_{incl} (all BF_{incl} < .37; see Table 5 for details), thus providing moderate to strong evidence against any timing effects or interactions. The results of the Bayesian rmANOVA are analogous to those registered for Experiment 2, where both a TMS condition (sham vs real) and TMS site (ipsilateral vs contralateral) effects were found, but differences across timings are unlikely."

Additionally, to moderate our discussion, we rephrased the paragraph in page 38, as below:

"In our study, exploratory analyses of data from Experiment 1 provided moderate evidence against an interaction between the site and the timing of the stimulation for the effects of TMS, while Experiment 2 provided moderate to strong evidence against any timing effects. Despite their exploratory nature, these results are aligned with a recent meta-analysis establishing that TMS effects are similar between earlier and later stimulation (Phylactou et al., 2022)."