Review of: "Artifact Subspace Reconstruction (ASR) for electroencephalography artifact removal must be optimized for each unique dataset"

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Potential competing interests: The author(s) declared that no potential competing interests exist.

After the revision, it seems to me that the contribution is sufficient. The authors This paper systematically evaluates ASR on 31 EEG recordings taken during a source episodic memory retrieval task. Independent component analysis (ICA) and an independent component classifier, ICLabel, are applied to separate artifacts from brain signals to quantitatively assess the effectiveness of ASR. The manuscript entitled " Artifact Subspace Reconstruction (ASR) for electroencephalography artifact removal must be optimized for each unique dataset" has been investigated in detail. The study seems very valuable. The topic addressed in the manuscript is potentially interesting and the manuscript contains some practical meanings, however, there are some issues which should be addressed by the authors:

1. The "Abstract" section can be made much more impressive by highlighting your contributions. The contribution of the study should be explained simply and clearly.

2. The "Introduction" section needs a revision in terms of providing more accurate and informative literature review and the pros and cons of the available approaches and how the proposed method is different comparatively. Also, the motivation and contribution should be stated more clearly. The justification of the proposed method is needed? What is the advantage of using ICA?

3. The manuscript not contain a flowchart or graphical representation of a process. This pictorial representation can give step-by-step solution of the given problem.

4. What makes the proposed method suitable for this unique task? What new development to the proposed method have the authors added (compared to the existing approaches)? These points should be clarified.

5. . The complexity of the proposed model and the model parameter uncertainty are not mentioned.

6. In section 5, How to set the parameters of proposed model for better performance For ICA missing the decorrelation approach used. Can be symmetric ('symm'), i.e. estimate all the independent component in parallel, or deflation, i.e. estimate independent component one-by-one like in projection pursuit; Number of independent components to be estimated. Default equals the dimension of data.

7. How to control the convergence of ICA: by Stopping criterion. Or by the Maximum number of iterations; The SNR measurement before and after separation, etc.?

8. What makes the proposed method suitable for this unique task? What new development to the proposed method have

the authors added (compared to the existing approaches)? These points should be clarified.

9. In "experiment" section should be added in a more highlighting, argumentative way. The author should analysis the reason why the tested results is achieved.

10. In page 6 which technique used for signal decomposition?

11. In page 7, for which the remaining components were rejected.

12. Section Conclusion - Authors are suggested to include conclusion and the real actual results for the best performance of their proposed methods in comparison towards other state of the art methods to highlight and justify the advantages of their proposed method.