

# An Offline Framework for High-dimensional Ensemble Kalman Filters to Reduce the Time-to-solution

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Dear reviewer,

Thank you very much for your comments. We have modified the manuscript according to your suggestions and comments, please see the attached new manuscript.

Best regards,

Yongjun ZHENG on behalf of the authors

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This work seeks to reduce the time to solution of an offline EnKF via a dynamically running job scheme and a parallel IO algorithm. Numerical results show that the offline EnKF is significantly faster than the online EnKF in terms of time-to-solution. This reviewer finds the paper to be well written, and the ideas proposed to be novel. Therefore I recommend acceptance after minor revisions.

Minor comments:

The existing work on parallelizing EnKF is not well represented. For a more complete view of where the field is and where the current work stands, the reviewer suggests that the authors consider at least the following references, given here by their DOI:

[10.1175/MWR-D-13-00011.1](https://doi.org/10.1175/MWR-D-13-00011.1)

[10.1145/3293883.3295722](https://doi.org/10.1145/3293883.3295722)

[10.1137/16M1097031](https://doi.org/10.1137/16M1097031)

[10.1016/j.jocs.2017.04.005](https://doi.org/10.1016/j.jocs.2017.04.005)

[10.1007/s10586-017-1407-1](https://doi.org/10.1007/s10586-017-1407-1)

[10.1007/s10236-015-0888-9](https://doi.org/10.1007/s10236-015-0888-9)

[10.5281/zenodo.1086985](https://doi.org/10.5281/zenodo.1086985)

[10.1175/JTECH2049.1](https://doi.org/10.1175/JTECH2049.1)

[10.1016/j.cageo.2012.10.007](https://doi.org/10.1016/j.cageo.2012.10.007)

Thank you very much for the comment and suggestion. All these papers are cited properly in the new manuscript (see L24-27 P2, L31-34 P2, L3-4 P3, and L23-24 P4). Also the new cited papers are shown in blue in the references in the new manuscript.