

Stability of the Spectral EnKF under nested covariance estimators

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In the case of traditional Ensemble Kalman Filter (EnKF), it is known that the filter error does not grow faster than exponentially for a fixed ensemble size. The question posted in this contribution is whether the upper bound for the filter error can be improved by using an improved covariance estimator that comes from the right parameter subspace and has smaller asymptotic variance. Its effect on Spectral EnKF is explored by a simulation.

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