

## Interactive comment on "Data assimilation of two-dimensional geophysical flows with a Variational Ensemble Kalman Filter" by Z. Mussa et al.

Z. Mussa et al.

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Thanks for your comments. We will include all the references as you have suggested.

Page 13 line 15

The reference about L-BFGS "X.Zou, I. M. Navon, M. Berger, K.H. Phua, T.Schlick, and F.X. Le Dimet: Numerical Experience with Limited Memory Quasi-Newton and Truncated Newton Methods, , SIAM Journal on Optimization, 3, No. 3, 582-608 (1993)" will be added as suggested.

Page 20, line 11:

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A reference about the shallow water equation model "Y. Li, I. M. Navon, P. Courtier and P. Gauthier: Variational data assimilation with a semi-Lagrangian semi-implicit global shallow water equation model and its adjoint, Monthly Weather Review, 121, No. 6, 1759-1769 (1993)" will be added as suggested.

Page 21, line 5

A reference "I.M. Navon, Beny Neta and M. Y. Hussaini: A perfectly matched layer approach to the linearized shallow water equations models, Monthly Weather Review, 132, No 6, 1369-1378 (2004)" will be added as suggested.

Page 27 line 16. Changes will be made as suggested.

Interactive comment on Nonlin. Processes Geophys. Discuss., 1, 403, 2014.