

Interactive comment on “Improved singular spectrum analysis for time series with missing data” by Y. Shen et al.

Anonymous Referee #2

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Abstract: the abbreviation are not proper. For example improved SSA ISSA or similarly SSAM. These should be changed as it is not common. The introduction is very poor. They need to inform what are the novelties of the proposed technique and why its work better than the previous approach. The definition and explanation in page 1953, just before section 3 should go to introduction as explained above. In fact, this motivates your work. Of course, it needs to be expended. Page 1954: We use the 30 h window size ($L = 120$),: This is very important issue. Window length. You did not mention about selection of window length and moreover, the sensitivity of your proposed method to L . The following source might are related to window length selection among many papers on this issue: 1- Multivariate Singular Spectrum Analysis: A General View and New Vector Forecasting Approach. International Journal of Energy and Statistics, 01, 55-83. 2- On the Separability Between Signal and Noise in Singular Spectrum Analysis. C862

Fluctuation and Noise Letters. 3- Separability and Window Length in Singular Spectrum Analysis. Comptes Rendus Mathematique, 349, 987-990. 4- Hydroelectric Energy Forecast, International Journal of Energy and Statistics. 01, 205 (2013). Simulation. The performance of the new method should be evaluated with the simulation study. Here the authors use two series of the data sets. However, to have a comprehensive view, they need to consider several issues. Table 2: The is no mean and also mean absolute error. The results indicate that the new approach works better in terms of variance, but reporting mean is important to see the bias of the residual. Figure 2: is very informative. Accordingly, I would recommend having similar figure for simulated data.

Interactive comment on Nonlin. Processes Geophys. Discuss., 1, 1947, 2014.