

## ***Interactive comment on “A denoising stacked autoencoders for transient electromagnetic signal denoising” by Fanqiang Lin et al.***

**Anonymous Referee #1**

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This paper is about the deep learning of geophysics, especially the application of stacked denoising auto-encoder in transient electromagnetic method. This is an innovative application point with innovation. After I read it, the following questions should be addressed carefully:

1. The sample selection for learning is not clearly described in the paper. Please add the sample selection instructions, and specify the source of the samples and the selection principles.
2. Please describe the parameters of the experimental platform, the hyper-parameter indexes in the model, and the code of the main model module.
3. Please add more description of the specific parameters and experimental details of kalman filter and wavelet transform.
4. The related work section over introduces the encoder related literature. Please elaborate the literature of transient electromagnetic signal noise reduction and signal filtering.
5. The loss

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in figure 1 is calculated as two regularized losses. What does that mean? It should be explain detail.

6. Please explain the relationship between figure 5 and the corresponding explanatory text. And whether the coordinates in Figure 5 is correct?

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Interactive comment on Nonlin. Processes Geophys. Discuss., <https://doi.org/10.5194/npg-2018-39>, 2018.

C2