

Geosci. Model Dev. Discuss., referee comment RC1  
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## Comment on gmd-2021-165

Anonymous Referee #1

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Referee comment on "A Generative Adversarial Model for Radar Echo Extrapolation Based on Convolutional Recurrent Units" by Kun Zheng et al., Geosci. Model Dev. Discuss., <https://doi.org/10.5194/gmd-2021-165-RC1>, 2021

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In this paper, a new GAN based sequence prediction model is developed for precipitation nowcasting. Experimental results are reported to demonstrate the effectiveness of the proposed method. I have the following suggestions:

(1) There are many deep learning extrapolation methods developed for precipitation nowcasting, for example, ConvGRU, TrajGRU, PredRNN, etc. The authors are suggested to compare with some of these methods.

(2) Some important references are missing, for example

[a] Chuyao Luo, Xutao Li, Yongliang Wen, Yunming Ye, Xiaofeng Zhang:  
A Novel LSTM Model with Interaction Dual Attention for Radar Echo Extrapolation. Remote. Sens. 13(2): 164 (2021)

[b] Xie P , X Li, X Ji, et al. An Energy-Based Generative Adversarial Forecaster for Radar Echo Map Extrapolation[J]. IEEE Geoscience and Remote Sensing Letters, 2020, PP(99):1-5.

[c] Chuyao Luo, Xutao Li, Yunming Ye:  
PFST-LSTM: A SpatioTemporal LSTM Model With Pseudoflow Prediction for Precipitation Nowcasting. IEEE J. Sel. Top. Appl. Earth Obs. Remote. Sens. 14: 843-857 (2021)