

Interactive comment on “Testing the applicability of neural networks as a gap-filling method using CH₄ flux data from high latitude wetlands” by S. Dengel et al.

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As the authors mentioned "Neural net-works have the reputation of being a “black box” where transparency is limited in most cases (Elizondo and Gongora, 2005)." However, in our paper (Moffat et al, 2010) we show how the information contained in the ANNs can be used for interpreting ecosystem datasets. The inductive modeling approach is demonstrated for eddy covariance measurements of net carbon fluxes at the Hainich forest in Germany. By identifying the hierarchy of the climatic controls of the ecosystem response as well as their multidimensional functional relationships, ANNs can be used as a direct interface to the data.

C3016

Reference: Moffat, A. M. et al., Characterization of ecosystem responses to climatic controls using artificial neural networks. *Global Change Biology* 16, 2737 (2010).

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