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Reply to the editor

Dear Dr. van Heerwaarden,

thank you for your comment which we quote here: " I would like you to take into account this point, and after satisfactory implementation, I think the paper can be published.

I agree with reviewer #2 that Figure 4 indeed suggests that a very simple model (perhaps even a linear one because of the usage of the tanh activaiton function) would do the trick."

We have added a few sentences regarding this comment in our manuscript (marked in green in the latest version).

Let us add a few more remarks on that issue: our comparison with the multivariate linear regression model shows that it performs considerably worse than all ANNs. We think that this is no surprise, since nonlinear functions have to be fitted which is not well possible with any linear model. Capturing nonlinearity seems to us to be the crucial point. Even our simplest ANN with a small number of hidden nodes, but with the nonlinear tanh activation function, is a nonlinear model and seems to be better suited for the problem mainly for this reason. That already a small ANN gives good results may be due to the "easy complexity" of the problem, but doesn't take away from the nonlinearity.

All "simpler" suggestions of reviewer #2 except the first are also nonlinear models and the wide range of these suggestions indicates a certain arbitratiness, which in our opinion can be avoided to a large extent by using ANNs.

Best regards,

Gerd Schädler and Lukas Leufen