

## ***Interactive comment on “Influence of the North Atlantic Oscillation on European tropospheric composition: an observational and modelling study” by Richard J. Pope et al.***

### **Anonymous Referee #3**

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I was going to write a detailed review, but, I noticed that the other two reviewers have already broadly pointed out the concerns I had when I was reading the manuscript. In my opinion, the focus of the study is misplaced and the message is lost in trying to demonstrate/show different things instead of focussing on one particular topic. For example, it is known since few decades that NAO has a strong influence on northern European pollution variability. However, that does not rule out that one should not study this any more as our understanding of the processes and the tools constantly improves. So, I will not criticize the main motivation behind this study, however, I do feel that the authors should have focussed on either revealing/discussing a new mechanism or complimenting the existing ones. The way the study has concluded is too vague

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to delineate precisely what new knowledge has been gained. May be, the authors should take a step back and re-think what their results really convey. I also, have a few other points that the authors might consider improving. 1. I do not understand why the authors chose these three species, TCNO<sub>2</sub>, O<sub>3</sub> and PAN and what is their interdependency and why should we study their covariability. 2. The selection of the regions is not properly motivated (Fig.5) 3. It is not clear what have we actually learned from using the model in addition to observations. What is the exact process that was revealed by modeling that was not known before.

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