Atmospheric
Chemistry
and Physics
Discussions

Interactive comment on "Associativity Analysis of SO$_2$ and NO$_2$ for Alberta Monitoring Data Using KZ Filtering and Hierarchical Clustering" *by* Joana Soares et al.

Anonymous Referee #3

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The paper nicely describes the application of KZ filtering and hierarchical clustering of SO2 and NO2 data, both from observed and modelled time series in Alberta region. The paper is very well written and structured and easy to follow, although i recommend the authors to follow the classical structuring under introduction, materials and methods, results , etc... I think the paper is suitable for publication in ACP with few minor comment i raise below.

1) The abstract is too long and can be shortened only giving the key results and a recommendation to follow.

2) Can the authors explain why they consider only SO2 and NO2?

3) In the introduction, between lines 25-39, the authors only list the available literature but do not make a synthesis of these results and link it to their motivation of doing this study. What was missing in these studies?

4) Is it not possible to higher in resolution in the modelling part as 2.5 km resolution might be coarse for the purpose of the study? I think this deserves a discussion.

5) Figure title of S6, S7 and S8 are wrong, please correct them to SO2.