Atmospheric
Chemistry
and Physics

Open Access

Discussions

EGU

Interactive comment on "A robust clustering algorithm for analysis of composition-dependent organic aerosol thermal desorption measurements" *by* Ziyue Li et al.

Anonymous Referee #1

Received and published: 7 October 2019

The authors present a well structured detailed report of method they are proposing to analyse thermograms collected using FIGAERO-CIMS data. Although the manuscript focusses on cluster analysis, it clear that a considerable amount of work has gone into collecting the data, and developing and trialling the method (Noise-Sorted Scanning Clustering). It is difficult to find fault in the work. Their introduction gives a good panorama of the cluster analysis and air quality data vista. They select the various suitable cluster analysis methods and make comparisons using their data before justifying their choice of NSSC. The data flow is well described and supported by illustrations and them exemplified by application to laboratory generated SOA. It will be interesting to see how this method deals with ambient data.

The following points are simply minor considerations on how to improve the presentation taking into consideration this is a paper on a new method of clustering and as a reader, I am asking if I could reproduce this method for a different application or in a different code.

1. I appreciate the descriptions given of the methods and especially figure 2 and I am asking myself if more detailed mathematics be included to describe the method?

2. I can see that there is a lot of information conveyed in figures 5, 7, 9, 10 and especially 13 and I am asking myself if they can be enhanced to better convey their message?