

## ***Interactive comment on “Thirteen-years of observations on primary sugars and sugar alcohols over remote Chichijima Island in the western North Pacific” by Santosh Kumar Verma et al.***

### **Anonymous Referee #1**

Received and published: 15 September 2017

#### General:

In general this paper reports valuable measurements for a number of sugars and sugar alcohols over a remote site in the middle of the open ocean over a long time period and conducts rational discussions for their seasonal and temporal trends, variation due to transportation and meteorological parameters, and source apportionment. The chemical, statistical, and other supplementary techniques for sample and data analyses are handled quite properly in order to provide and support their observations and conclusions.

C1

As another anonymous referee mentioned, the English writing of the manuscripts should be further carefully checked and improved.

Overall, I think the paper is of decent quality for ACP to accept for publication after minor revision.

#### Individual Questions:

1. Although this might be complex and not so feasible, is there a better way to clearly present the types or contributions of parameters (i.e., local emission, wind, oceanic emission, etc) that dominate or influence the observed concentrations in different seasons?

2. Could you use the different wind directions, based on the backward air trajectory analysis, to categorize different sources of incoming aerosols, and investigate their influence? For example, westerly wind for aerosol transported from Asian continent; trade winds in summer/autumn for Pacific Ocean; no wind for local emission, etc..

#### Detailed Comments:

Line 73 - the sentence starting with "Previous studies..." needs revision in term of grammar.

Line 77 - the word "form" seems to be "from".

Line 82 - the sentence starting with "Thus, ..." can be removed, and the narrative in this and the next paragraph can be largely refined.

Line 183 - this section about PMF can be considerably shortened by removing unrelated content and using reference.

Line 510 - "20004a" seems to be "2004a"?

Line 514 - be consistent about using hyphenation, for example, "BB tracers" or "BB-tracers".

C2

