Anonymous Referee #2

The manuscript Merging aerosol optical depth data from multiple satellite missions to view agricultural biomass burning in Central and East China has some interesting results and shows the implementation of a merging tool of two observing platforms. Within the context of the proposed ACP special issue it gives value information and a good methodology implementation. However there is a need of the language use as some sentences are hard to understand. Also some of the results presented have to be shown with the correct number of significant digits otherwise there will be a misunderstanding of the accuracy and precision reached throughout the paper.

Responses: Thanks so much for your positive comments. We have revised the manuscript following your comments and responses are in situ.

Specific Comments

Abstract Line 3 - Peaks in June - What do you mean by that? Abstract Lines 16 and 17 -There existed high correlation (0.8479) between the merged AOD data and AERONET measurements. Please rephrase that. Abstract General Comment - It should be mentioned not only the period of observation but also the number of overpasses the two platforms had.

Responses: Abstract Line 3 - Peaks in June: The most biomass burning events occur in June every year in China. The correlation coefficient between the merged AOD data and AERONET measurements is 0.848.

Introduction Lines 16-17 the aerosols' spatial and temporal distributions - The spatial and temporal distribution of aerosols.

Thanks very much for your suggestion. We have revised it following the suggestion.

Line 24 about half of the aerosol BC - What does BC stand for?

The BC stands for Black Carbon. Revised in the revision version.

Section 2.1 Page 10468 Lines 1-2 we chose to study the time period from 26 May to 16 June 2007 because it is one of the worst ABB events in China - We have chosen...

Revised accordingly.

Tables 1 and 2 Use the same numbers of significant digits

Table 1 and Table 2 have been combined in one table in revised version.

General Comments

Perhaps more days should be used to increase the statistics. Also some numbers should give when comparing the results of the merger used so one can have the right approach of the improvement in aerosols data.

Responses: This paper focused on the analysis of biomass burning procedures using merged AODs. The real AOD at one location and one time is only one value although different AODs may be retrieved from different algorithms and different satellite sensors. Besides, different AOD products have different advantages. In this paper, we intend to show that merged AODs from those different AOD products could be more useful for applications such as biomass burning monitoring.