

Interactive comment on “Northern Hemisphere Contrail Properties Derived from Terra and Aqua MODIS Data for 2006 and 2012” by David P. Duda et al.

Anonymous Referee #3

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General comments: This paper compare the linear contrail coverage, optical property, and radiative forcing data over the Northern Hemisphere (NH) 2006 and 2012 year of Terra and Aqua MODIS imagery. In the section of Methodology, authors said they employ the optimized CDA algorithm with different contrail masks, while the mid-range Mask B have the best overall balance between falsely detected and missed contrails.

Specific comments: Different with other two Referees, I have such the following specific suggestions: 1. The CDA and modified CDA had made lots of great works, and the detection efficiency raise up all the time. But authors did not release their source code and date sets. It is different to compare their result for other scientists, for ex-

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ample different contrails detection method with the same datasets, or the CDA and modified CDA with other satellite imagery. 2. Two new masks (labeled Mask D and E) were developed to estimate contrail cirrus coverage. Please illustrate the difference among different masks. How the post-processing method detect non-linear contrail cirrus missed by the CDA, whether could be verified with Geostationary satellite in local region?

3. Author said that the total contrail cirrus coverage visible in the MODIS imagery may be three to four times larger than the linear contrail, how to make sure that.

I suggest the authors could release the source of contrail detection and the data sets, while carefully revise the paper with more comparisons and more restrictive conclusions. With the source code and data sets as supplementary materials, I think more and more scientists will participate the research how the contrails impact radiative forcing, even climate change.

Interactive comment on Atmos. Chem. Phys. Discuss., <https://doi.org/10.5194/acp-2018-993>, 2018.

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