

Interactive comment on “Critical evaluation of cloud contamination in the MISR aerosol products using MODIS cloud masking products” by Y. Shi et al.

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General Comments:

This paper “Critical evaluation of cloud contamination in the MISR aerosol products using MODIS cloud masking products” provides the assessment of cloud contamination on MISR aerosol products using MODIS cloud masking products. This paper also notes that the MODIS cloud mask (which includes IR channels that is not available on MISR) can be applied to assist cloud clearing of MISR aerosol retrievals. This method combining multiple sensors is useful and could be used for future improvement of the

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MISR aerosol product. Overall this manuscript is generally well written and easy to understand and it should be published in AMT.

Comment 1: In Figure 2, the fractional data density illustrated in the color contours is very confusing. What is the period of data in Figure 2? Is that figure plotted with one year’s data (2007) or case study data?

Comment 2: In both Table 1 and 2, the RMS and MAE of $F_{cc}>20\%$, $F_{cc}>50\%$ and $F_{cc}>80\%$ filtering alone should be included.

Table 2, the RMSE and MAE over land show minimal improvement (Self-QAed vs Thin cirrus filter: RMSE=0.143 vs 0.143 and MAE= 0.072 vs 0.070) in filtering with a thin cirrus cloud filter, which should be mentioned/explained. This may be because of MODIS cirrus cloud mask is not sensitive to cirrus cloud in certain circumstances (for example, $COD<0.3$).

Comment 3: In figure 3 (e) and (f), and figure 4 (d), over North Africa, there are some positive biases after filtering with MODIS cloud mask. The authors should explain these biases.

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