

Review of Qiao et al. (submitted to AMT)

I forgot that I had reviewed an earlier draft of this paper and reviewed this version “independently” of the previous one. I find the same issues I had with the previous version. I think the paper is quite good on the whole, but there are a couple of unsolved problems:

- 1) MODTRAN 4.3 is outdated.
- 2) Fig. 11 shows that the slope, intercept and correlation coefficient are all worse for the 1.36 micron band, so the statement on L297 is not supported. Section 6 contains a similar statement.

L37: “economical to build observation network” -> “it is economical to build an observation network with them”

L55: “940nm” -> “940 nm”

L61: Why is the “three-parameter formulation method” very sensitive to ‘air quality’? I don’t believe this is true since path lengths are geometric. Also “formulation method” is redundant in my opinion.

L65: “easily not” -> “not easily”

L78: 10-15 -> 3

L79: resolution is the wrong word. ‘bandwidth’ is better. Are these values true for both UV bands and for the three visible bands and for the 4 near-IR bands?

L86: are -> is

L90: Considering -> Consider

L91: are -> is

L130: ‘completely’ is an adverb and does not belong here.

L160: Note that random noise cannot give a biased slope, non-zero intercept or any MB. This is simply a point of information, no need to change the wording.

L169: great -> greater

L176: extenuated -> attenuated

L194: “under high aerosol loading atmosphere” -> “in an aerosol-laden environment”

L223: “above” -> “the above”

L255: atmosphere -> conditions

L257: atmosphere -> periods (or conditions)

L295: “at the” -> “at”

L296: “near-infrared band” -> “other near-infrared bands”

L299: “a” -> “a dry”

L300: This conclusion is not supported by the results. Please reword. Maybe consider limiting to even drier conditions.