

On page 3 line 122 -124, is this sentence correct (it is the sentence that starts with "The model drought's effects..."? This sentence makes it sound like you will evaluate your model again many measurements during drought in the US, but the reference is to a paper in China and the next sentence states how few measurements there are in the US. So I find it a little confusing. On line-122-130 we clarify our intent as this was unintentionally a confusing statement. We meant to convey that very few direct measurements of isoprene during drought exist except for the MOFLUX site and for our paper we focus on the U.S. region and use the EPA AQS monitoring network such as was used in a prior study by the the reference (Wang *et al.* 2017). We use satellite formaldehyde column data to fill in gaps since it's a proxy for isoprene emissions with the reference from (Zhu *et al.* 2016).

"The model's drought effects were extensively evaluated across the U.S., due to the availability of observational evidence during drought at the MOFLUX site and due to the EPA monitoring network for O₃ and PM_{2.5} (Wang *et al.* 2017). While the MOFLUX data are the only available measurements of isoprene emissions during drought, formaldehyde (HCHO), the high yield oxidation product of isoprene, can be used as a proxy for isoprene emissions when no direct ground based observations of isoprene are available (Zhu *et al.* 2016)."

In figure 1a and figure S2a there are missing data I believe in mid-Aug (as noted in your response to reviewer 1. However, there isn't a gap in the timeseries. But rather it seems like there is just a line from the last point before the gap to the first point after the gap. I find this a bit confusing as that line could be taken for data. I would recommend leaving that time period as a gap rather. There is now a gap as requested for the missing data period of 2011 in both the paper and the supplement.

In sections 3.3, 3.4 and 4 there are sometimes when the months are in all caps (e.g. MAY-AUG). Please update those to match the style for writing months in rest of the paper (e.g. May-Aug). This has now been fixed in the paper sections listed above and in the supplement.

In table 2 for 2010, 526 is the only value without a tenths place. I would recommend keeping the same number of significant figures and updating this to 526.x (whatever "x" is). This is now fixed, as data was rounded to the tenths decimal place. The value 525.9765 is rounded to ~526.0.