I broadly agree with the other review comment from May 5 2022 so will not repeat those comments here. My main concern is that this is framed as an analysis to better understand biomass burning aerosol properties in different regions. But as the other reviewer notes the material here is more or less known already from previous laboratory, ground, airborne, and satellite studies. So it feels like the authors decided to do an exploratory analysis with their satellite product (they are part of the SGLI algorithm development team) and report what they found, rather than setting out to design an analysis aimed to improve our understanding of biomass burning using the most relevant data sets possible.

To me this puts the paper in a difficult place. I can see two directions. As the other reviewed noted, this data product does not appear to have been thoroughly validated (the ATBD linked is not enough as it does not provide evaluation) which casts all of the results into doubt. One path would be to use the data collected, together with AERONET sites, to do an evaluation of the SGLI aerosol data product in biomass burning conditions. This would be valuable for the data user community. However such a manuscript would be more suitable for AMT than ACP so in that case I would recommend the authors withdraw and resubmit a revised version there.

The other possible direction for the paper would be to try to learn something new about biomass burning aerosols. That probably needs a much deeper analysis using multiple...
satellite products together with ground or model data. To me it feels not enough to just do an analysis using only your own satellite product and ignoring the many other useful data sets that can complement it, if the real motivation here is scientific study as opposed to promoting your own data product. As it is I am afraid I am not sure I learned very much from this study and don’t see a situation where I might cite the work on my own research.

Either way to me this feels like a paper that should be withdrawn and resubmitted as the changes would go beyond the scope of major revisions.