

Review for “Species Correlation Measurements in Turbulent Flare Plumes: Considerations for Field Measurements”. Second Iteration.

The authors addressed all the specific comments and technical corrections by the reviewers and improved the manuscript accordingly. Some of their answers were supported with additional graphics and discussion. They included arguments in their response to clarify between their experimental technique and other experimental techniques (aircraft-based mainly), giving more context to their results.

An additional brief paragraph about the variability of BC/H₂O and BC/CO₂ ratios was included, and they justify the development and main features of optical attenuation measurements to support the experimental technique. In addition, a brief paragraph related to crosswind conditions was included in the manuscript.

I recommend publication of the manuscript after addressing the following minor technical corrections.

Technical corrections

Figure 3. Please correct the Figure. qamb appears twice, and qcol is missing
Figure 8. Perhaps add “*aggregated*” in the Figure’s description to be in correspondence with the wording in Table 2.

Ln 219. Change “*meant*” to “means”

Ln 362. Change “*minimum required samples size*” to “minimum sample sizes”

Ln 383. Consider changing “*interrogates*” for another word

Ln 384. Change “*etc*” to something like “among others”

Ln 401. Consider removing “*perfectly-*”