Referee Comments – A comprehensive assessment of emissions from prescribed fires in two Mediterranean shrublands: chemical and morphological analysis

(https://doi.org/10.5194/egusphere-2026-952)

General Overview:

The manuscript (egusphere-2026-952) presents results from prescribed fires in two Mediterranean shrublands in 2016. The analysis includes emission factor, chemical composition, and morphology. The topic of this study falls within the scope of the journal Atmospheric Chemistry and Physics (ACP). This manuscript is generally laid out well and shows its academic value. This manuscript is recommended to be published after addressing the concerns and comments below with minor revisions.

Major Concern:

- Tables 1, 2, and 3 are mentioned but not provided in the manuscript.

Minor Concerns:

- Figure 1: Please provide the Direction, Scale, and Legend.
- Equation 1: The 100 on the right-hand side of the equation is suggested to be replaced with 100%.
- Lines 153 - 154: How are the numbers 53.3% and 53.2% obtained? Are they obtained from the chemical analysis described in Section 2.2? If so, please specify here for clarity.
- Line 161: How can the particle overlapping be avoided by estimating sampling periods? Please provide more detailed descriptions.
- Lines 184 - 185: How were the proportions 53.5% and 5936% obtained? Please provide detailed descriptions.
- Line 187: The numbers 90 and 90.6 are suggested to be replaced with 90% and 90.6%.
- Lines 191 - 192: Is there a way to quantitatively estimate the amount and effect of litter and mulch? If so, please provide relevant descriptions. If not, how can

this statement be convincing with academic rigor? Please make revisions accordingly.

- Lines 192 - 196: How can the residence time and the rate of spread be both higher at the same time?
- Line 207: Is the “subtracted from” meant to be “subtracted by” or not? Please double check.
- Lines 287 - 289: Does this statement mean that 0.104 is higher than 3.4, and that 0.241 is higher than 4.2? If not, please revise the statement to improve clarity and readability. Make sure to provide descriptions on how to determine if the K^+/EC values are considered high or not.
- Line 346: The 90.6 and 70.8 are suggested to be replaced with 90.6% and 70.8%.
- Line 365: The word “though” seems to be a typographical error of “through”.