

The setup is mounted below a TBS, which does not offer a way of controlling the direction or the altitude as precisely as an uncrewed aerial vehicle (UAV) might. It is clear that a TBS offers many other advantages, but I do wonder how the PUFIN is oriented in relation to the wind. Do you have a way to make sure that the filter inlets are oriented towards the wind or away from the wind?"

Could you please additionally respond to this comment?

Apologies for missing this point in our previous response. We have now addressed this comment by adding the following text to Section 2.2: "PUFIN does not incorporate a wind vane or active orientation system to maintain the inlet facing into the wind. Consequently, the inlet orientation relative to the ambient airflow can vary during TBS operations, which may introduce some uncertainty in sampling efficiency. However, each filter is sampled at flow rates of up to 11 L min^{-1} , corresponding to an inlet velocity of approximately 6 m s^{-1} for the $\frac{1}{4}$ -inch inlet used in PUFIN. This active aspiration facilitates aerosol collection even when the inlet is not optimally aligned with the wind, especially given the wind speeds under which ARM TBS deployments are typically conducted."

Additionally, the following was added to the Summary: "Future iterations of the system may incorporate a wind-alignment mechanism to further characterize and optimize sampling efficiency under varying flight conditions."