

Dear editors and referees:

Thank you for all your considerable suggestions! I have revised my manuscript accordingly.

1. We incorporated the reason why precipitation was not included as a predictor in the machine learning model into the “Sect. 2.5” in the revised manuscript as follows:

Page 7, line 168-173:

Although windward precipitation is relevant to foehn processes, it was not included as a predictor in this work because it is more an outcome variable than a precursor signal in the existing physical mechanisms studies of foehn (Elvidge and Renfrew, 2016; Kusaka et al., 2021). And its high spatiotemporal variability and observational uncertainties offer limited predictive value for model training. Windward specific humidity ( $Q_{\text{Wind}}$ ) was used to represent moisture conditions instead, with its significant impacts on foehn formation confirmed by SHAP analysis (Fig. 2d).

2. We removed the hyperlinks and add the full URL(s) instead in section "Data Availability" accordingly.

3. We adjusted the reference list according to the standards of *ACP*.

Thanks again for your valuable reviewing!

Yours, sincerely

Authors

April 28th., 2026