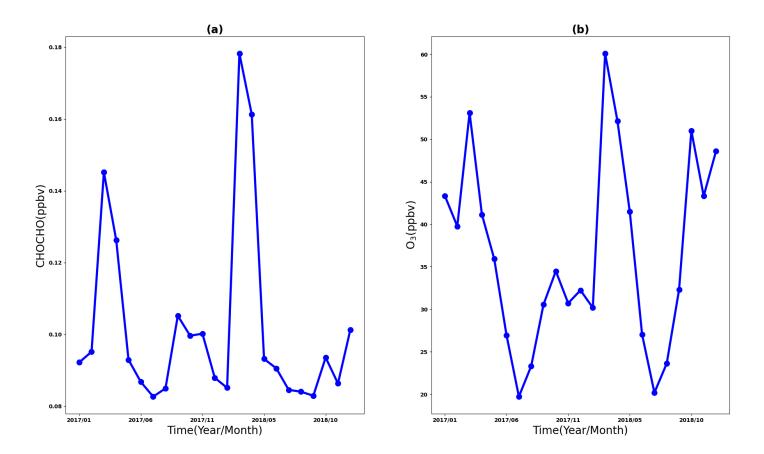
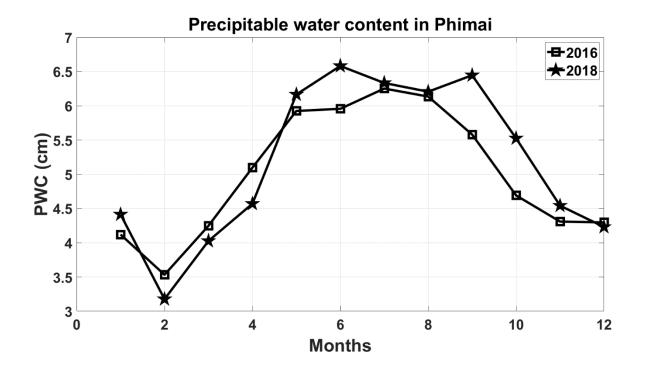
## **Supplement**



**Figure S1:** The seasonal variations in the glyoxal (CHOCHO) and ozone (O<sub>3</sub>) concentrations in the 0-1 km layer in Phimai, retrieved using the JM2 algorithm.



**Figure S2:** The seasonal variations in precipitable water content in Phimai in 2016 and 2018, retrieved from the microwave radiometer observations.