Figure S1: Diurnal variation of NPF event characteristics (a) Condensational Sink and (b) Coagulation loss during December 12, 2016.
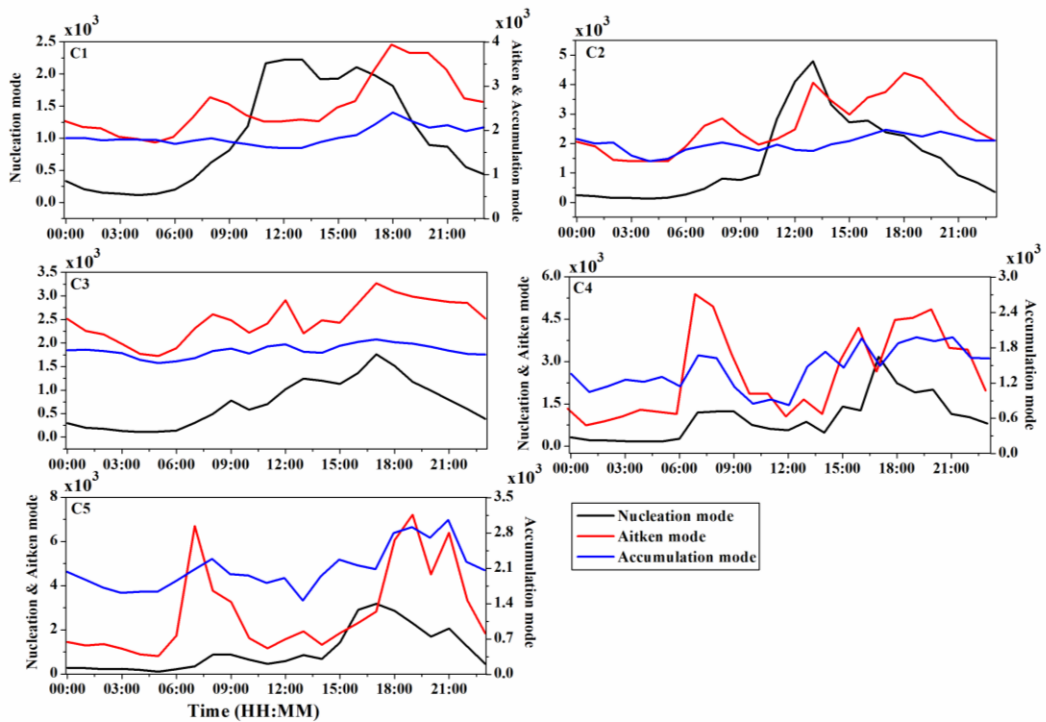
Figure S2: Diurnal Variation of particle number concentrationin three modes - nucleation, aitken and accumulation mode for each cluster.
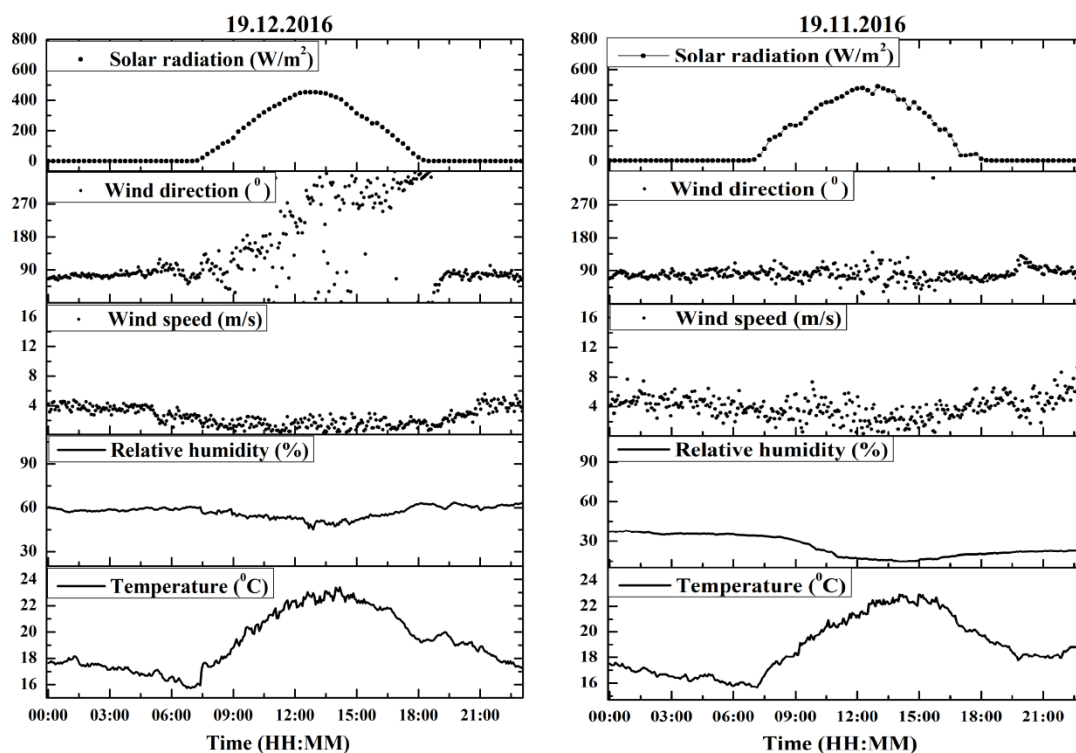
Figure S3: Diurnal variation of meteorological conditions - Solar radiation (SR), Wind direction (WD), Wind speed (WS), Relative Humidity (RH) and Temperature (T) on a non-NPF day - 19th December 2016 (left panel) and a weak-NPF day - 19th November 2016 (right panel)
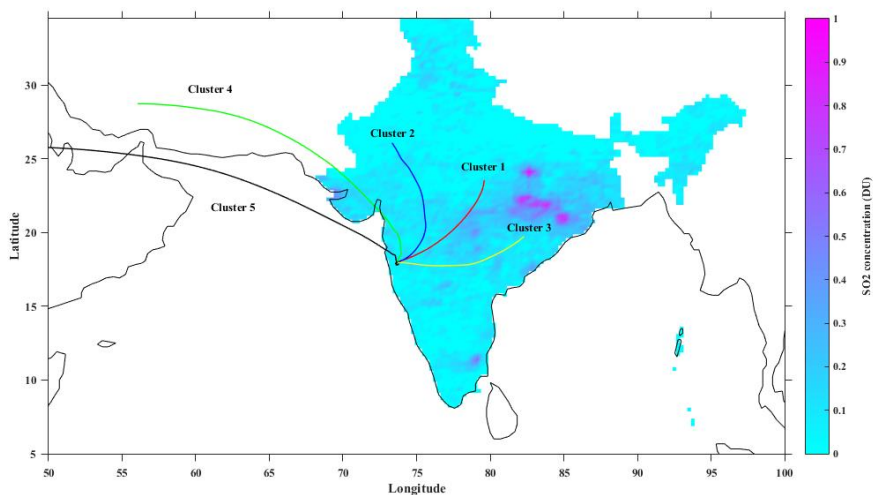
Figure S4: The spatial distribution (0.25 deg × 0.25 deg) of SO$_2$ emissions (vertical column density) over the Indian region from November 2016 to February 2017. The data was extracted from the OMI satellite (http://giovanni.sci.gsfc.nasa.gov/). Clusters C1-C4 (from Figure 4) are also depicted in the figure.