

S1 Supplementary figures

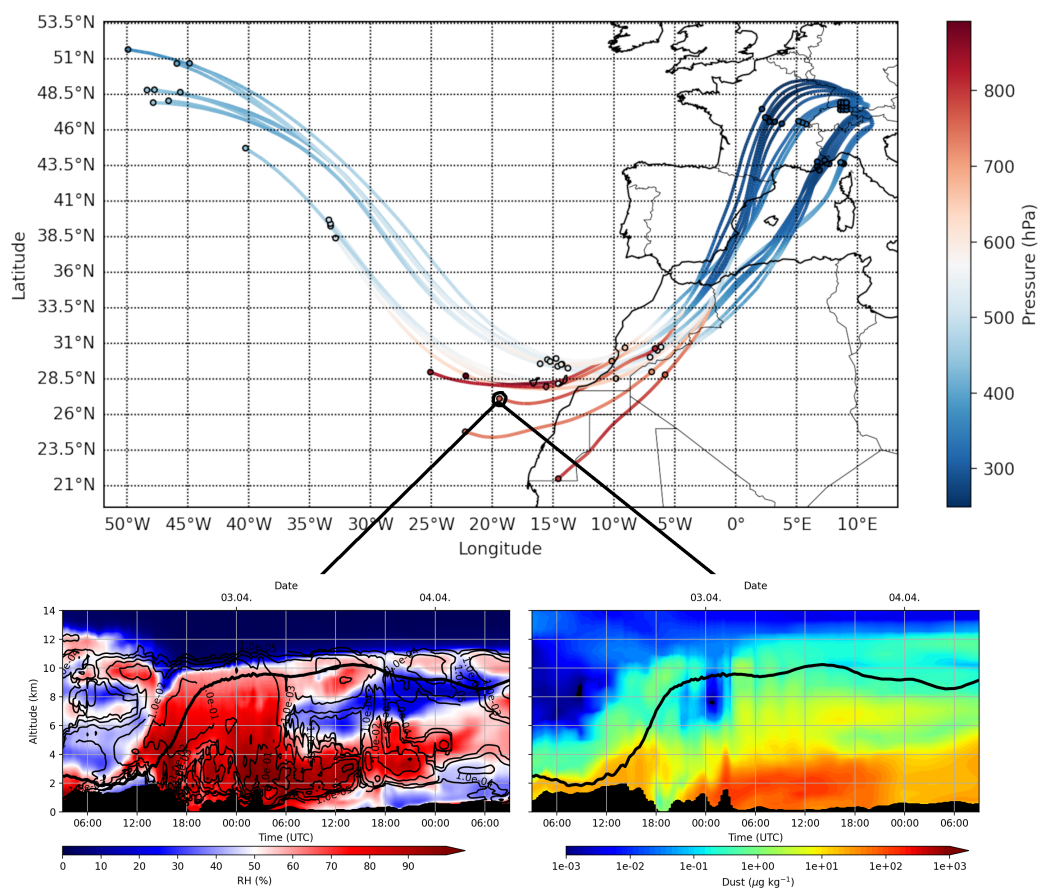


Figure S1. Back trajectories using LAGRANTO initialized at 47.7°N and 8.9°E from 250 and 300-hPa levels to 72 hours prior from April 4th 09 UTC. Circles correspond to 12 hour mark along the trajectory. Lower panels show single parcel trajectory starting 54 hours backwards from 09 UTC on April 4th. Lower left panel represents relative humidity over water (RH) with black contour lines showing the total cloud water content (magnitude interval in mg m^{-3}) and lower right panel represents the dust total mass from CAMS reanalysis for column located at parcel trajectory drawn with blue solid line.

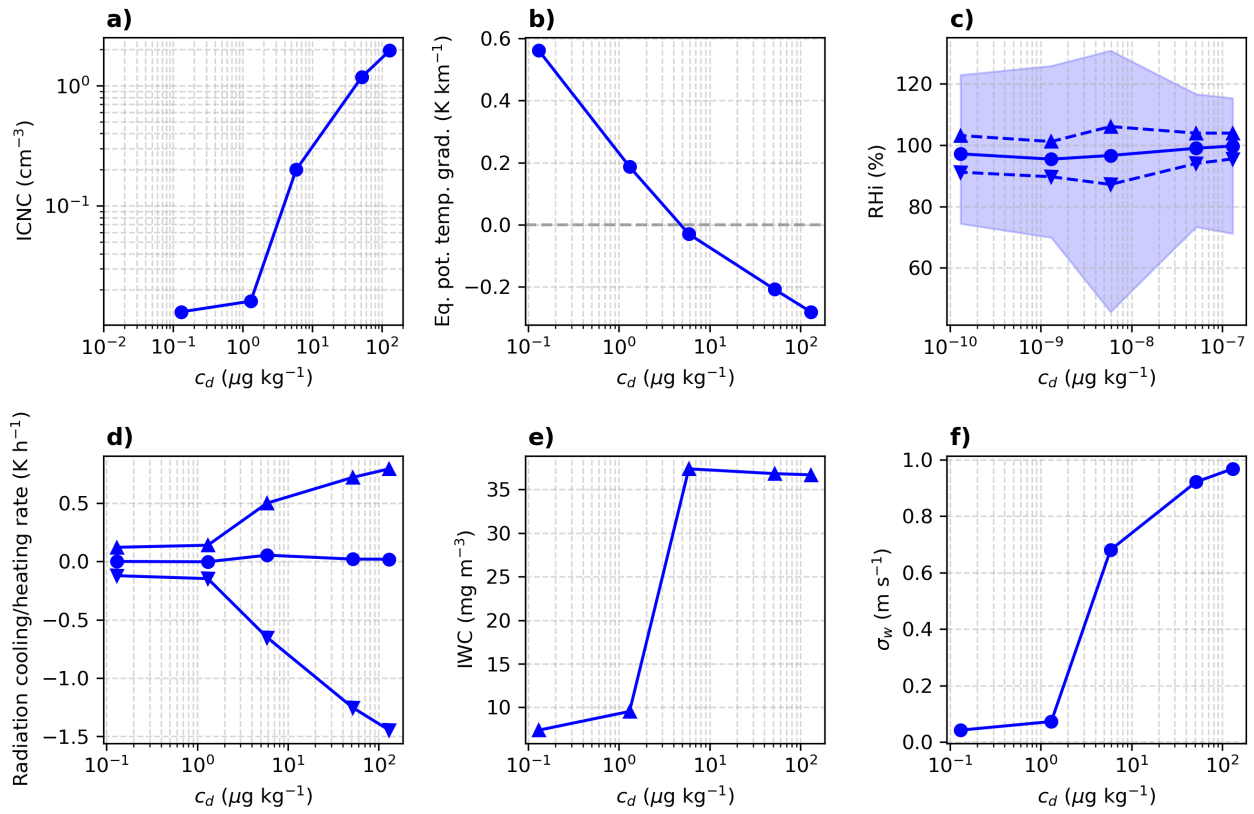


Figure S2. Figure 13 in terms of mineral dust concentration mass mixing ratio c_d ($\mu\text{g kg}^{-1}$) integrated over $D_p = 0.25\text{--}6 \mu\text{m}$.

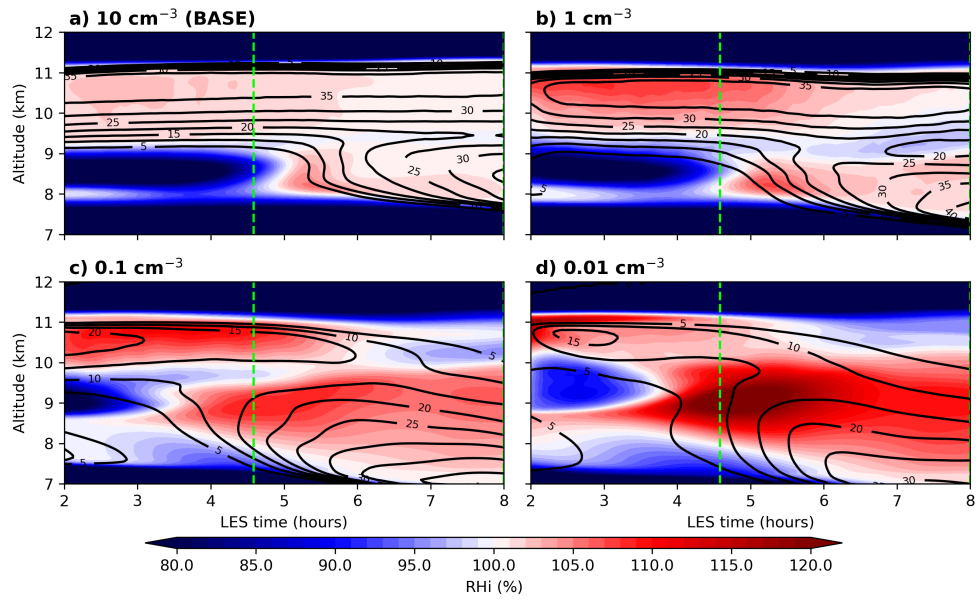


Figure S3. IWC temporal evolution within the model domain for varied N_D .

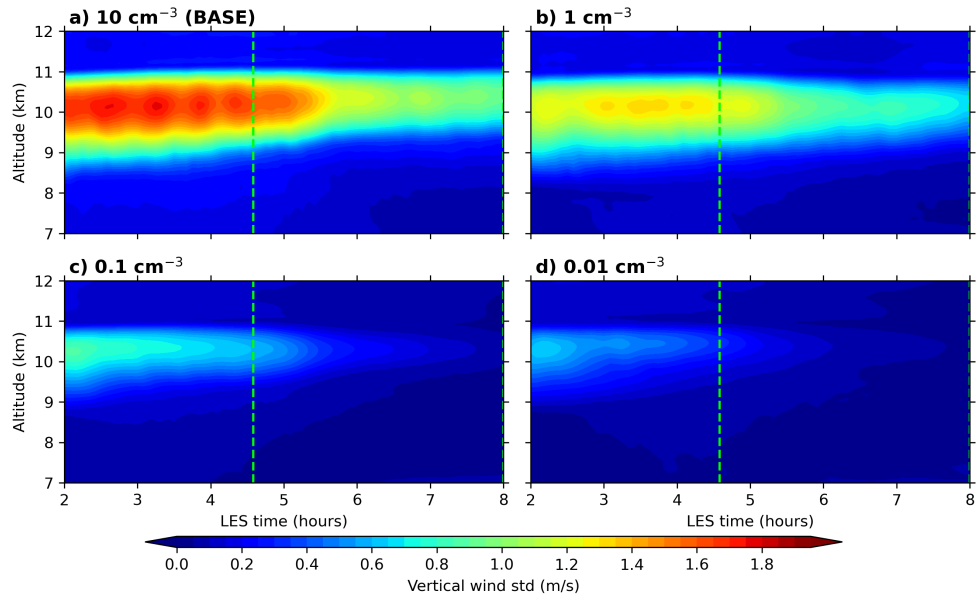


Figure S4. Vertical wind velocity standard deviation temporal evolution within the model domain for varied N_D .

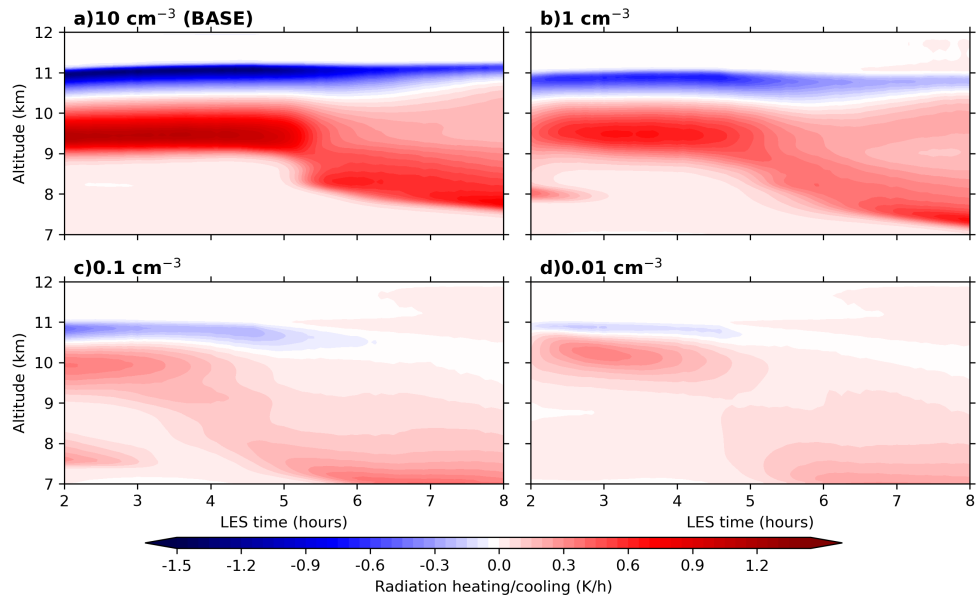


Figure S5. Net radiation heating rate temporal evolution within the model domain for varied N_D .

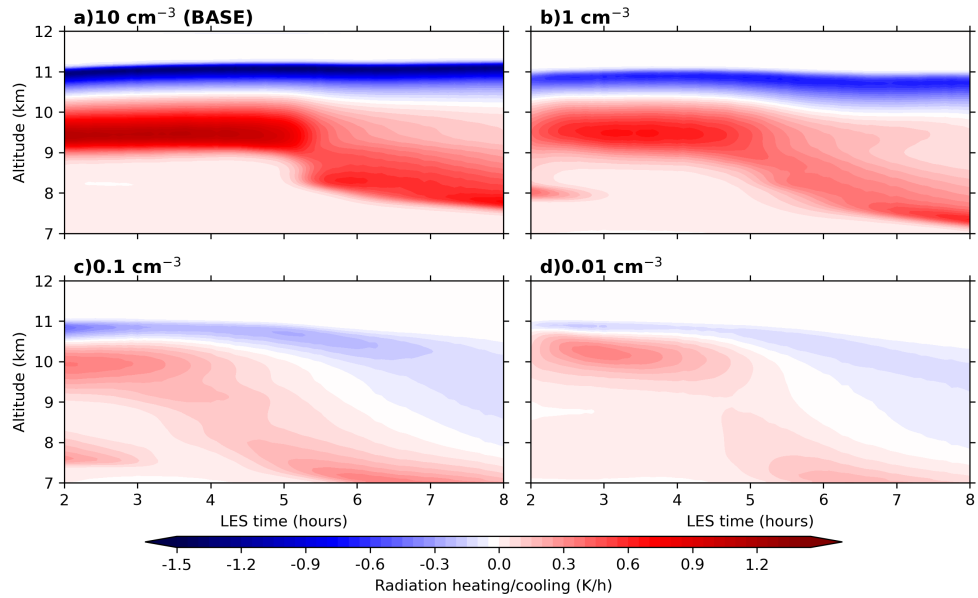


Figure S6. LW heating rate temporal evolution within the model domain for varied N_D .

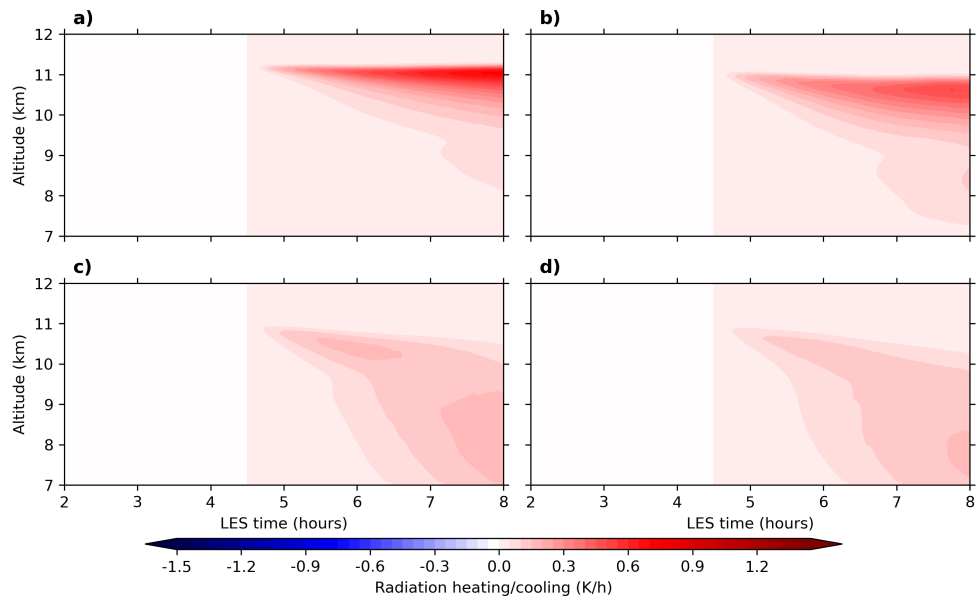


Figure S7. SW heating rate temporal evolution within the model domain for varied N_D .