SUPPLEMENTARY INFORMATION FOR:
Collective geographical eco-regions and precursor sources driving Arctic new particle formation

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Table S1: List of sampling sites and NPF events (689 in total). We separate sites into "types" based upon the classification given by Schmale et al., (2021).

Site	Lat	Lon	Elevation a.s.l (m)	Type	Number of NPF events
Alert (ALE)	82.5	-62.3	210	Archipelago	20
Nord (VRS)	81.6	-16.7	24	Greenland	64
Gruvebadet (GRU)	78.9	11.9	67	Svalbard	155
Zeppelin (ZEP)	78.9	11.9	474	Svalbard	251
Barrow (BAR)	71.3	-156.6	5	Continental	31
Tiksi (TIK)	71.6	128.9	35	Continental	168
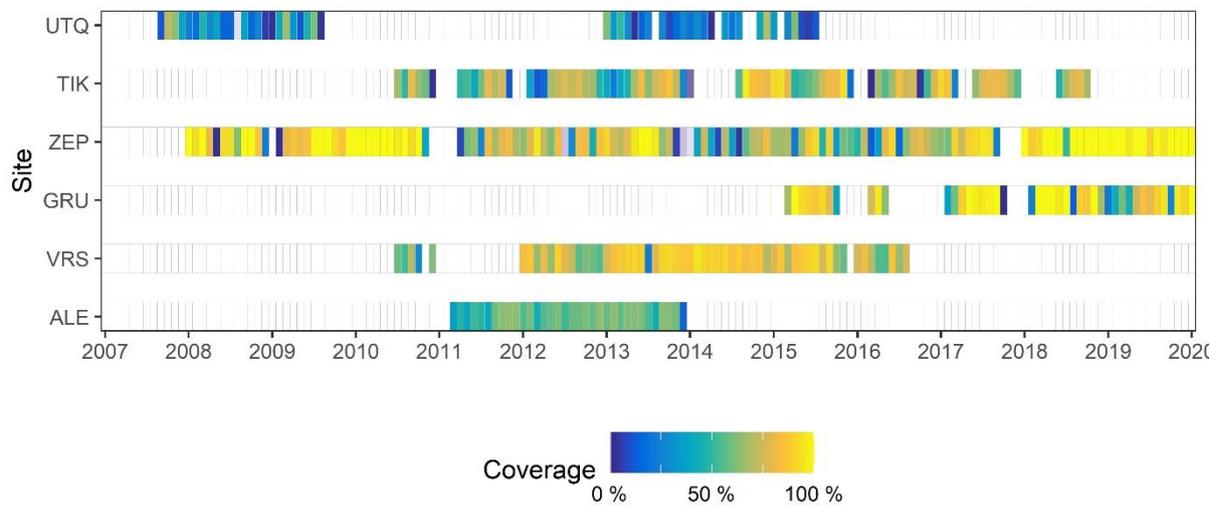
Figure S1: Data coverage for each of the sites. Each individual cell corresponds to one full month of measurements. Fill colour corresponds to the total number of available hourly data as a percentage of the total hours within that month.
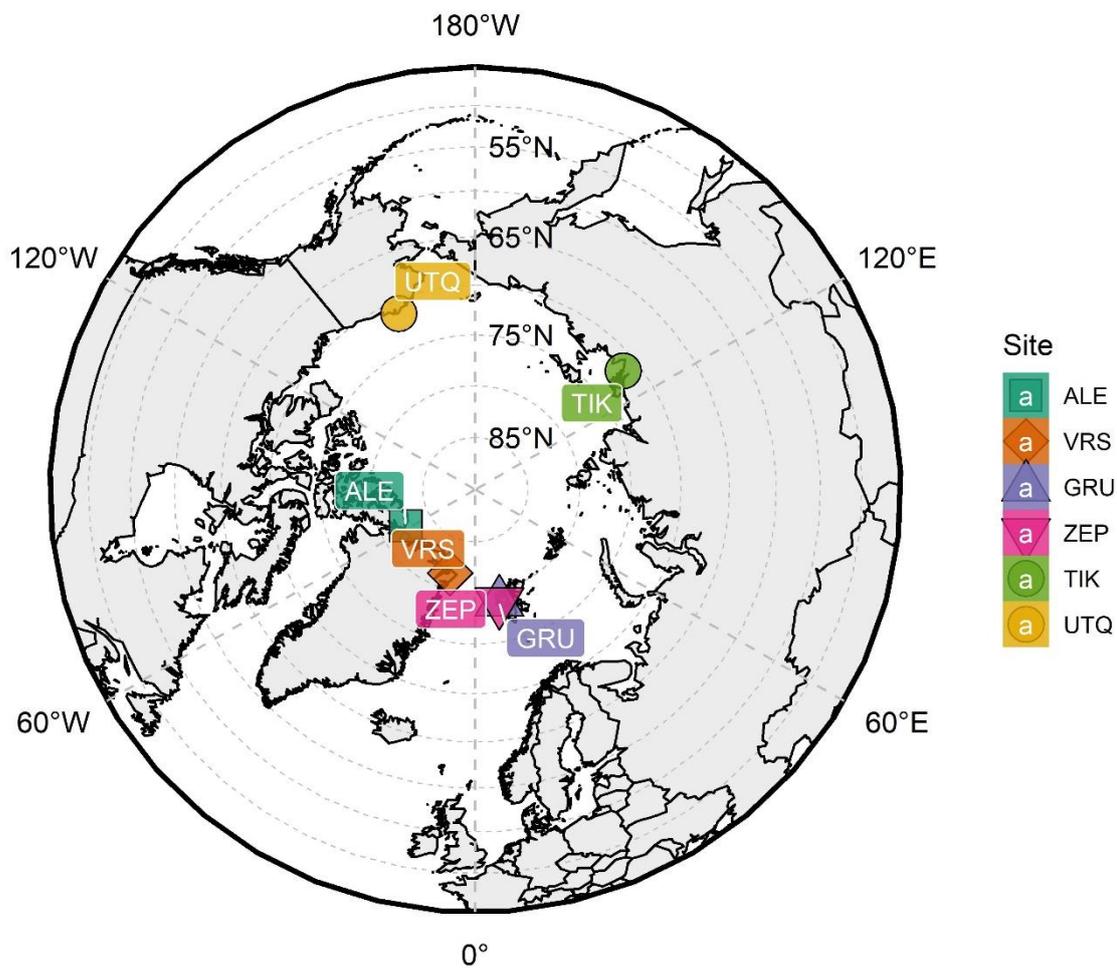
Figure S2: Location of each of the Arctic measurement sites
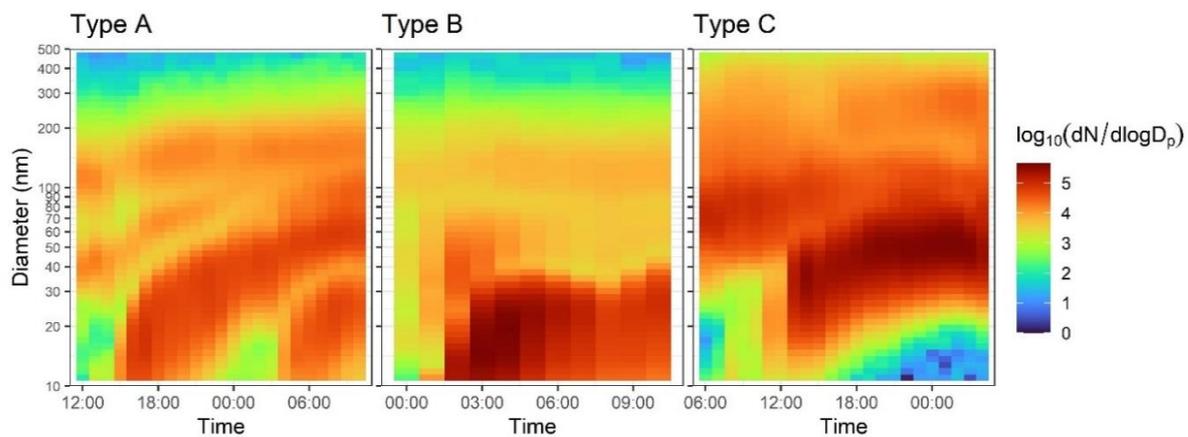
Figure S3: Example type A, type B, and type C new particle formation events at the TIK site
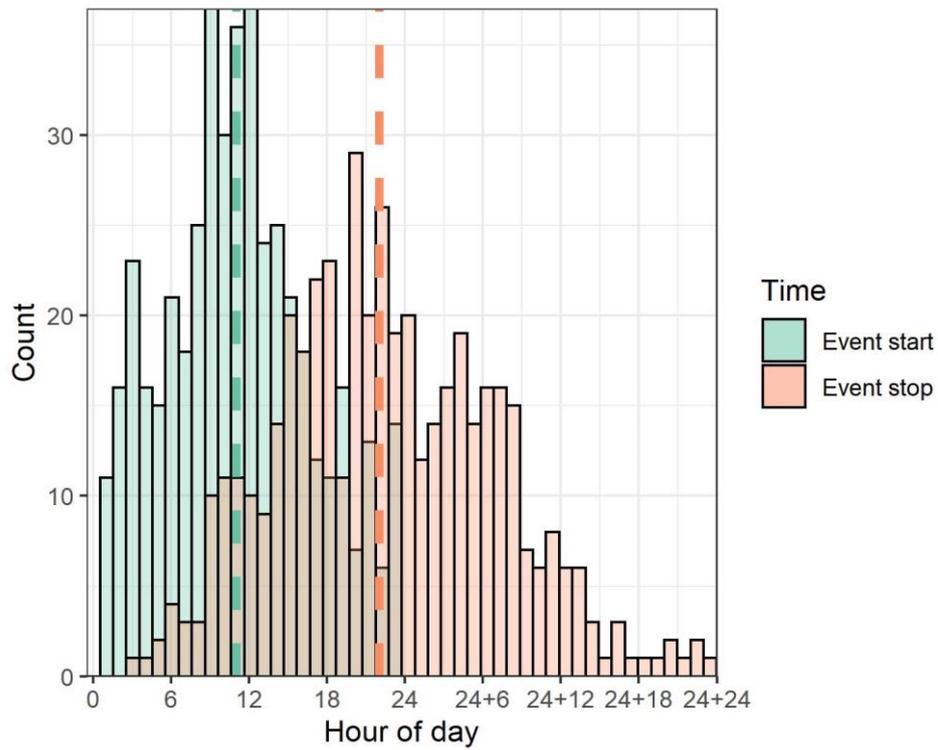
Figure S4: Average hour of day for the beginning/end of measured NPF event. Dashed lines represent median start and stop times respectively. Labels stating 24+X represent events that continue past the 24th hour of the day on which the event begins.
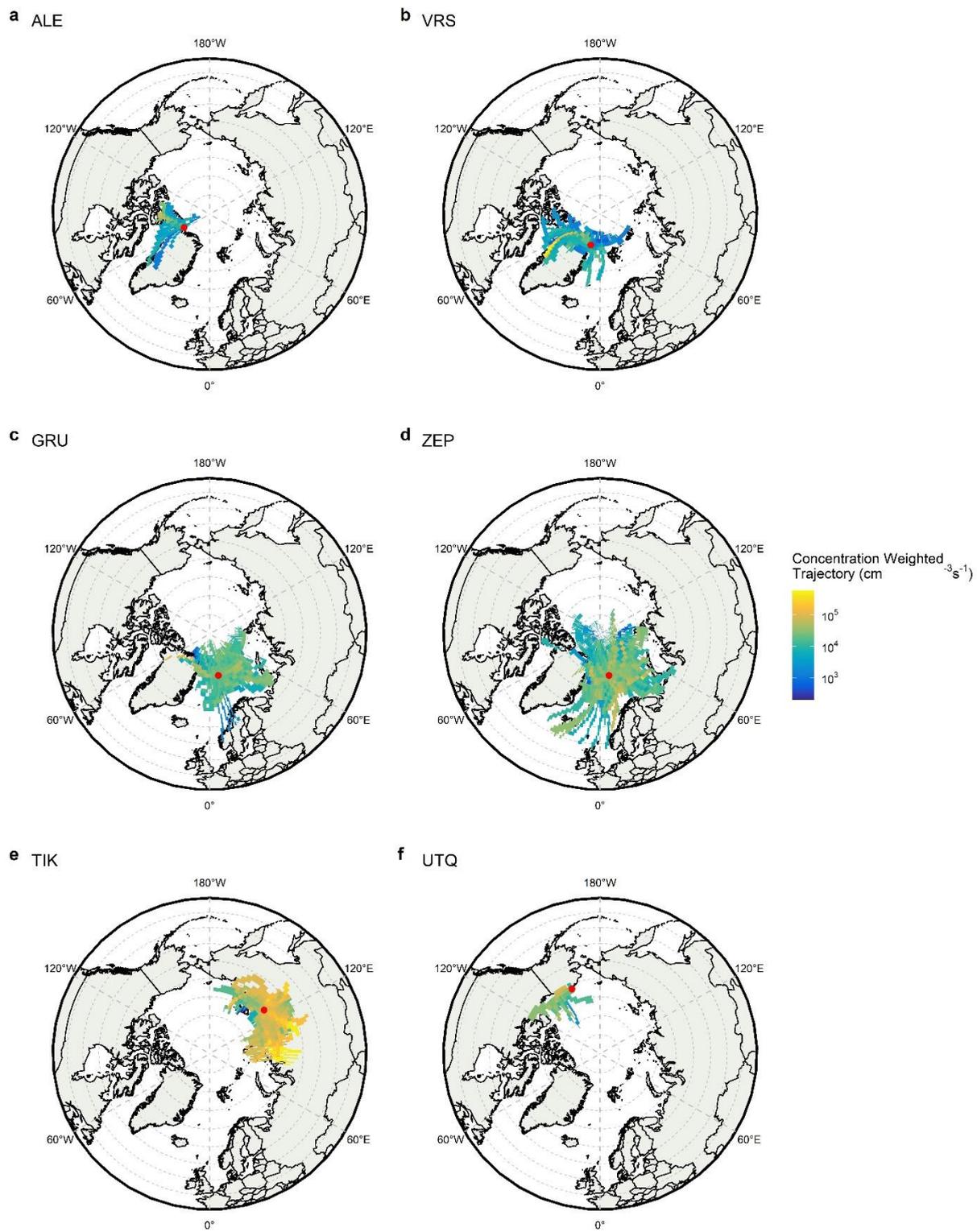
Figure S5. 72-hour back trajectories plotted on a 1º by 1º grid, weighted by the source rate of equivalent sulphuric acid vapour driving particle growth, for (a) ALE, (b) VRS, (c) GRU, (d) ZEP, (e) TIK, and (f) UTQ.