



Supplement of

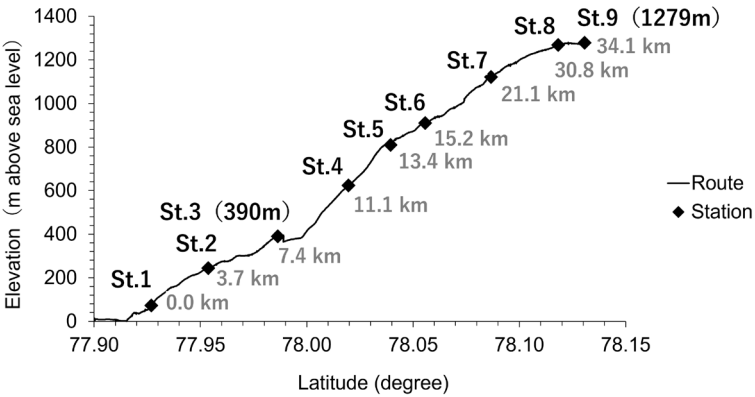
Characteristics of snowpack chemistry on the coastal region in the northwestern Greenland Ice Sheet facing the North Water

Yutaka Kurosaki et al.

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13 This file includes:
14 Figs. S1 ~ S7
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18 **Figure. S1: Elevation above sea level of each station.** Gray values denote the distance from St. 1 to each station.
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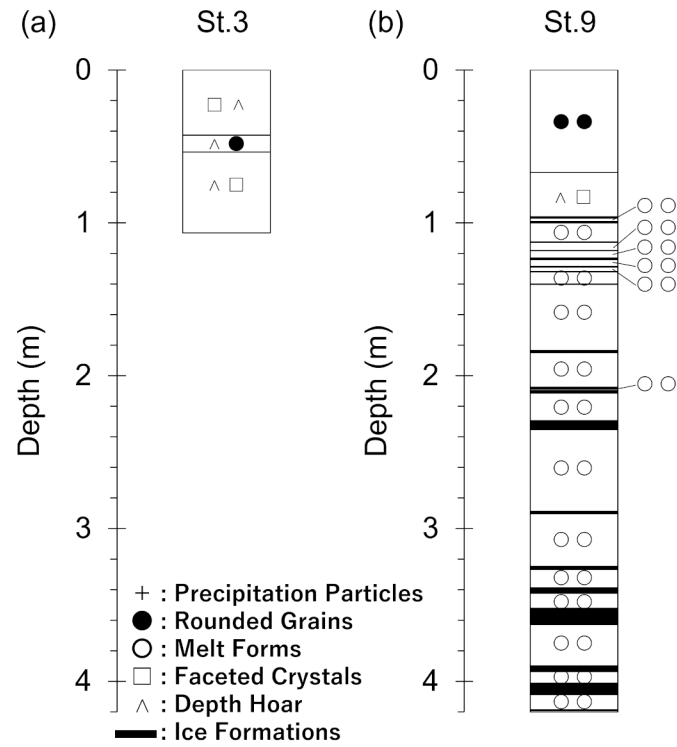


Figure. S2: Vertical profiles of the physical stratigraphy at (a) St.3 and (b) St.9.

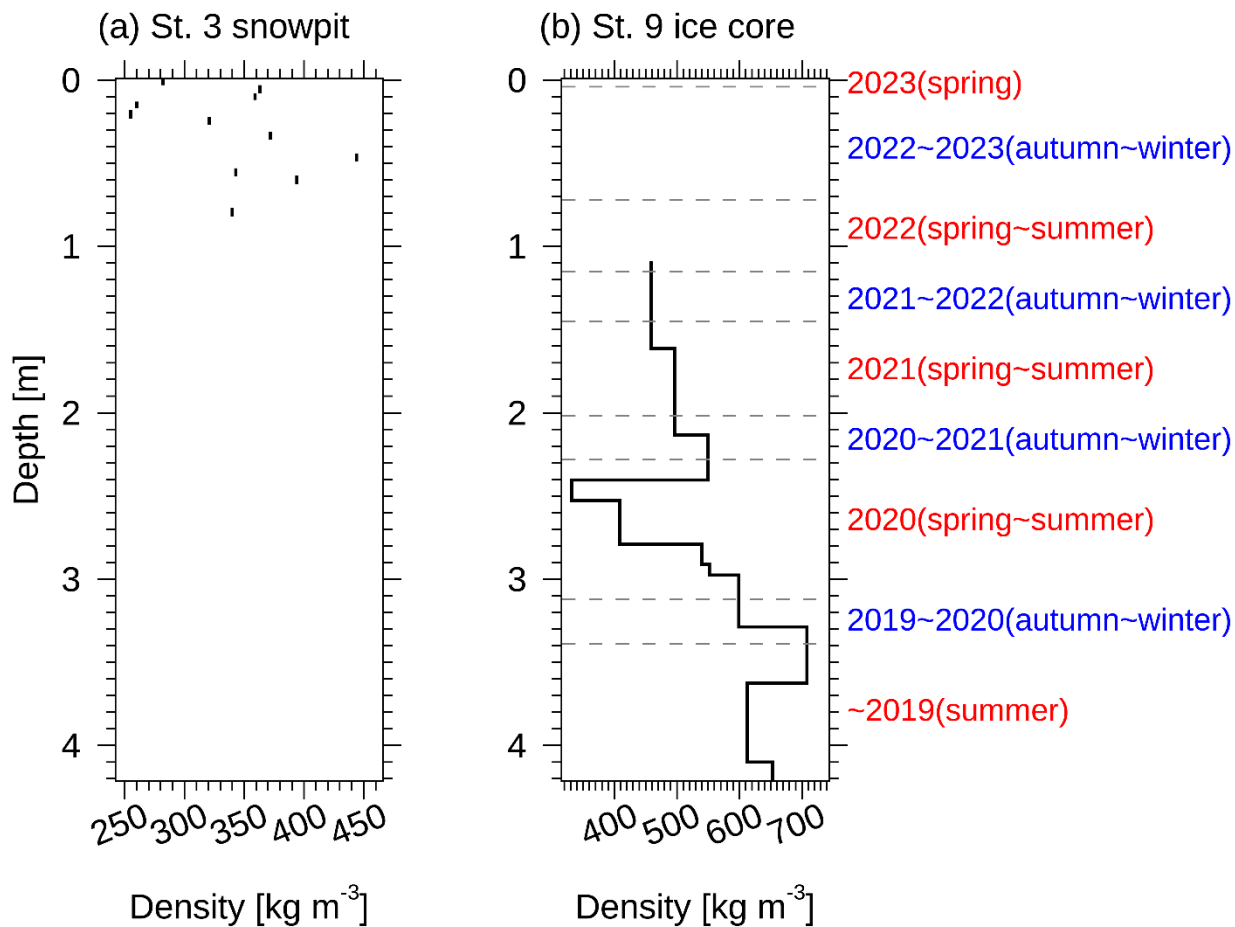
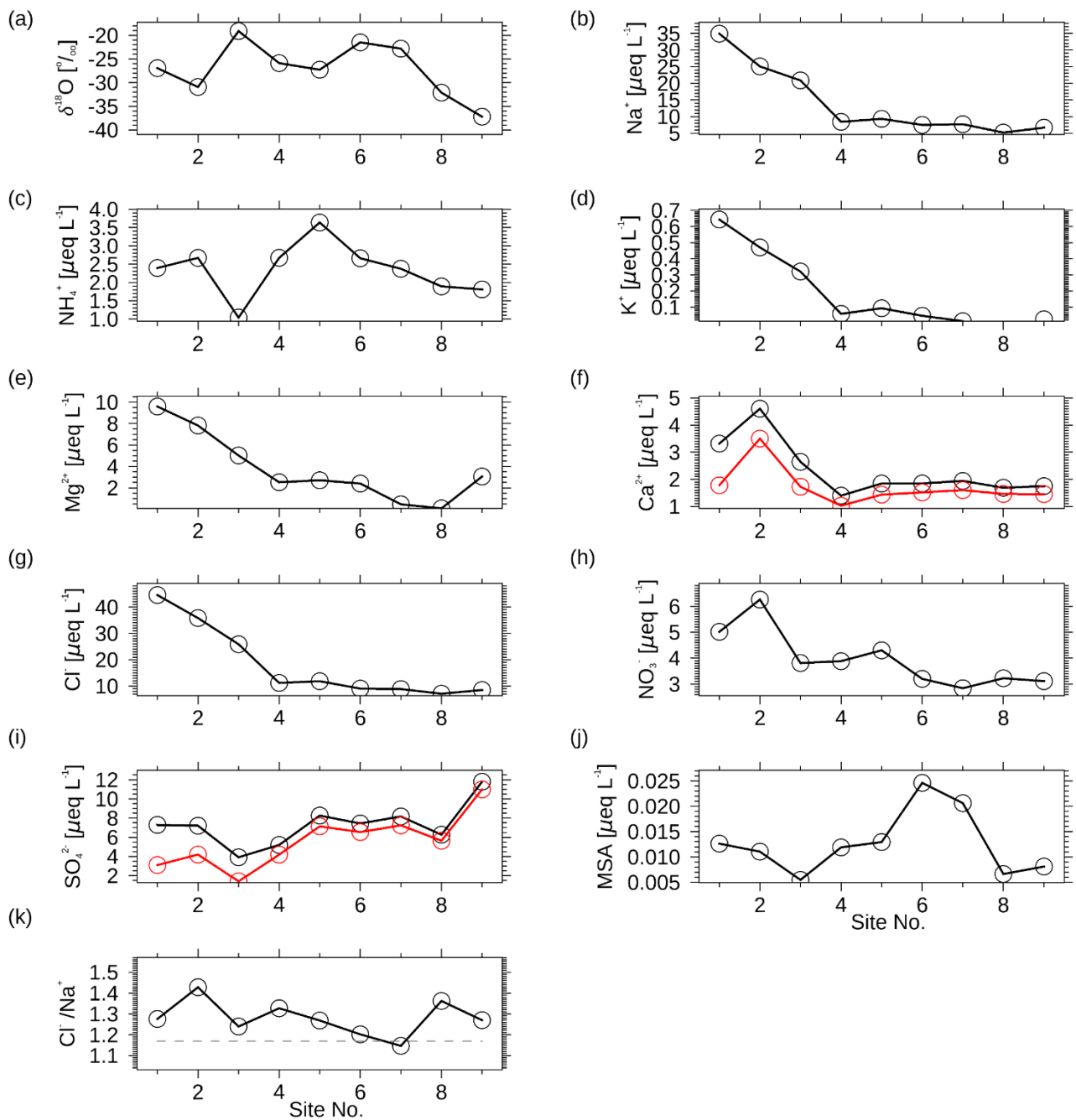
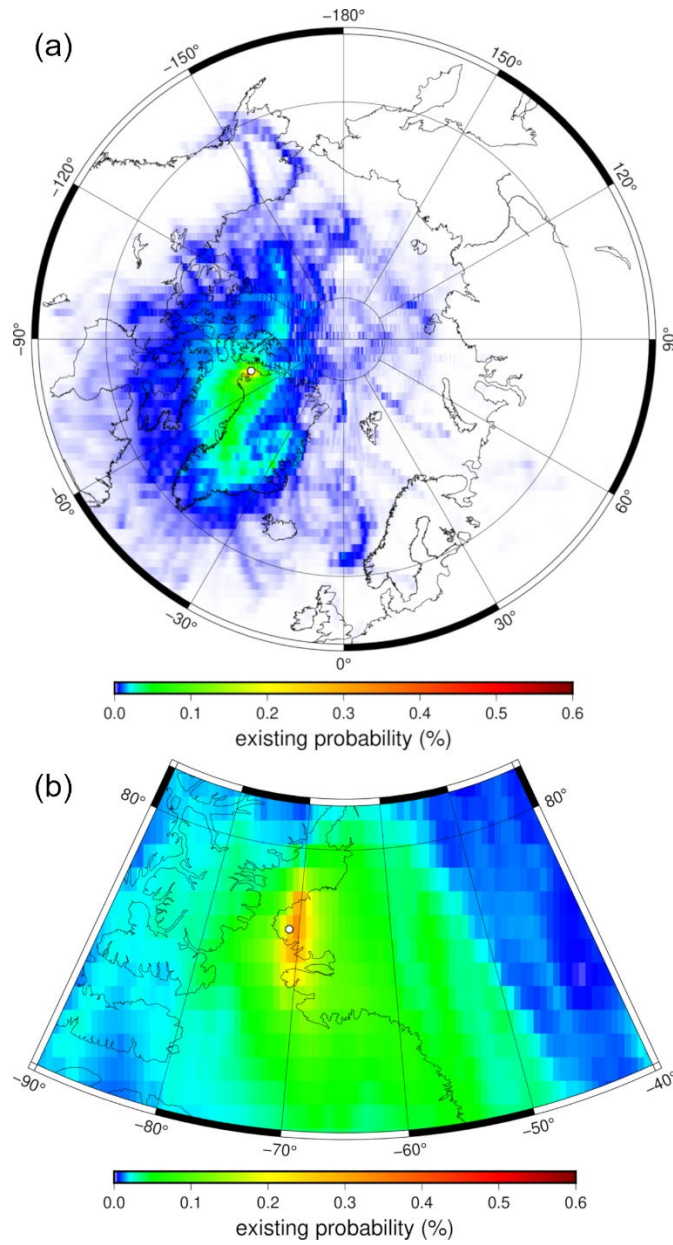


Figure. S3: Vertical profiles of the snow density at (a) St.3 and (b) St.9.



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30 **Figure. S4: Spatial variability in (a) $\delta^{18}\text{O}$, (b) Na^+ , (c) NH_4^+ , (d) K^+ , (e) Mg^{2+} , (f) Ca^{2+} , (g) Cl^- , (h) NO_3^- , (i) SO_4^{2-} (j) MSA**
 31 **and (k) Cl^-/Na^+ concentrations in surface snow.** The black and red curves denote the total concentration and non-sea-
 32 salt (nss) fractions, respectively. The gray dashed line in (k) denote the Cl^-/Na^+ ratio in seawater (1.17).



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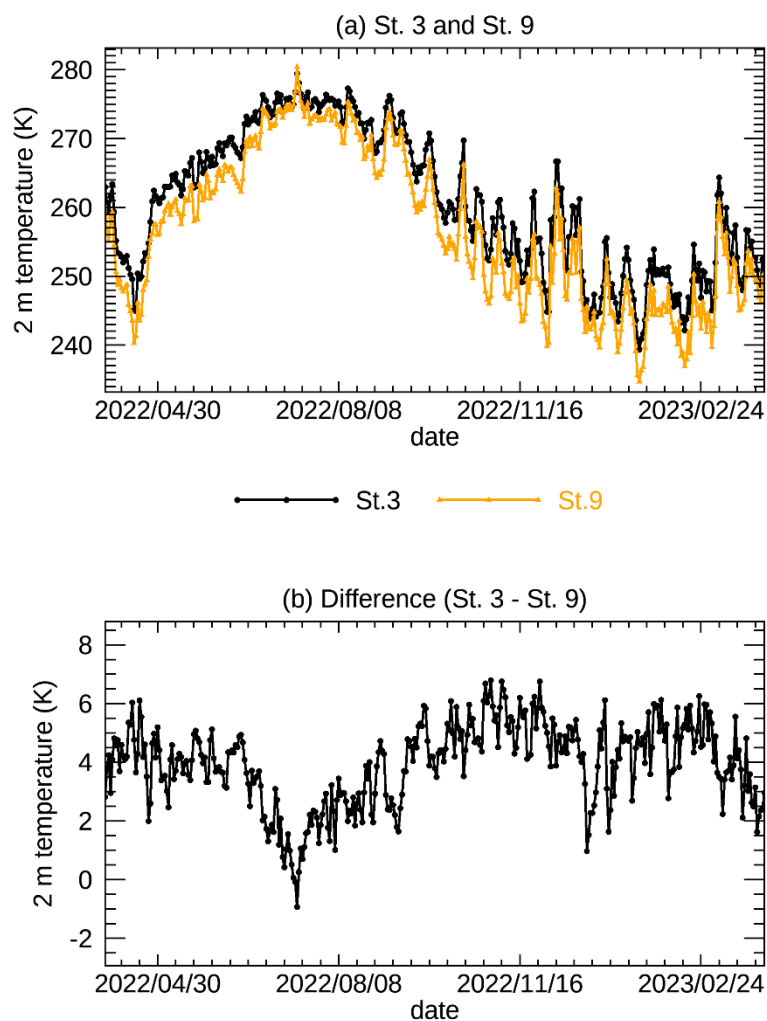
34 **Figure S5: Existence probability of an air mass occurring during the past during 7 days reaching the St. 9 in whole of**

35 **year from 2019–2023. (a) and (b) display Arctic area (> 60°N) and around northwestern Greenland, respectively. Black**

36 **circles show the position of the St. 9.**

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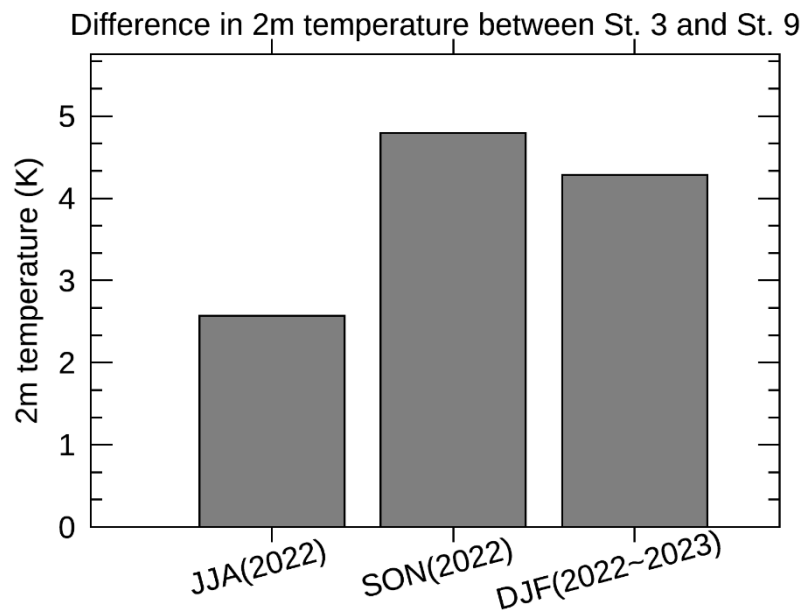
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40 **Figure S6: Diurnal variations in (a) 2 m air temperature at St. 3 and St. 9, and (b) 2 m air temperature difference**
 41 **between St. 3 and St. 9.**

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46 **Figure S7: Seasonal variations in the difference of 2 m air temperature between St. 3 and St. 9.**
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