Supplementary Material

"Repeatability and randomness in heterogeneous freezing nucleation"

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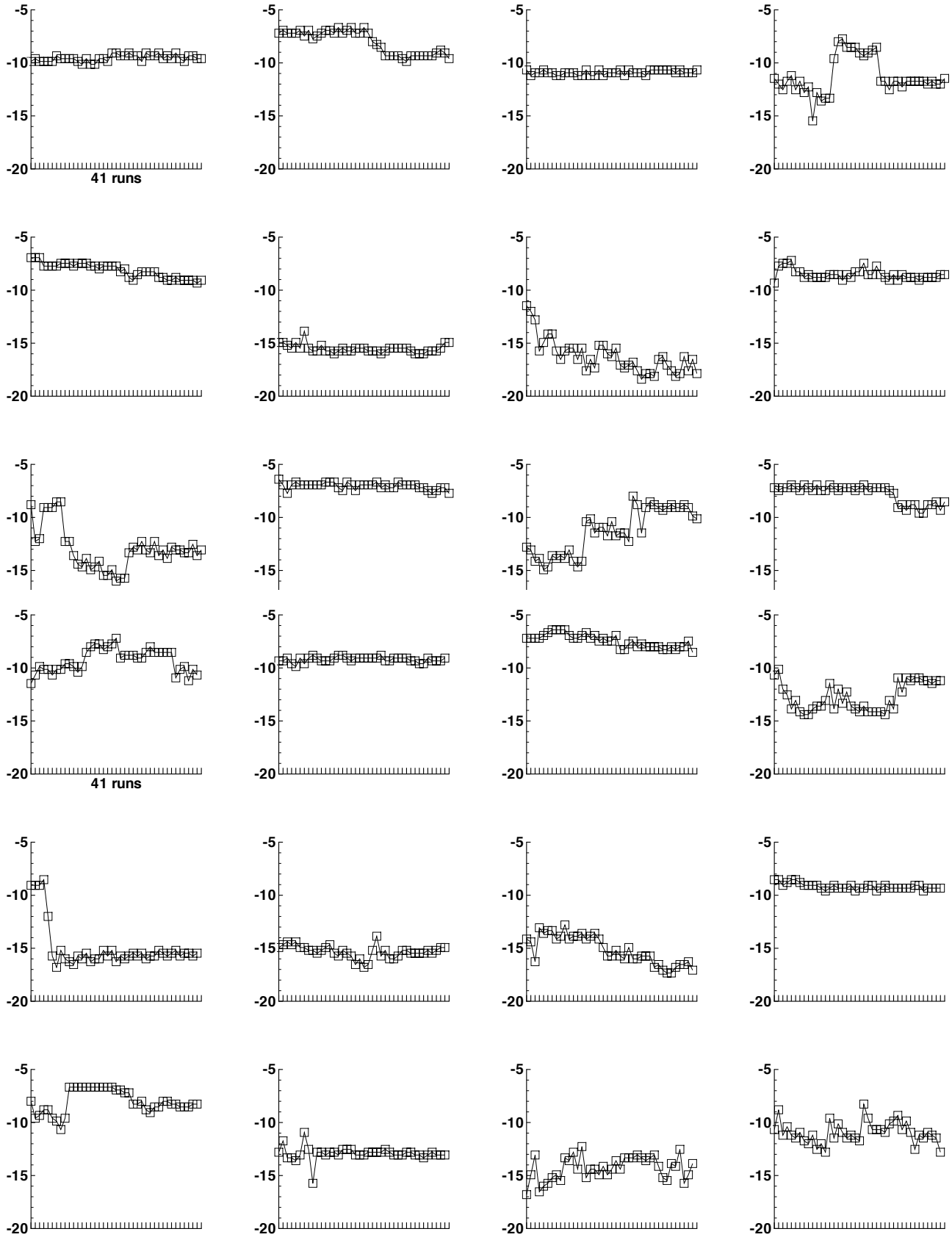
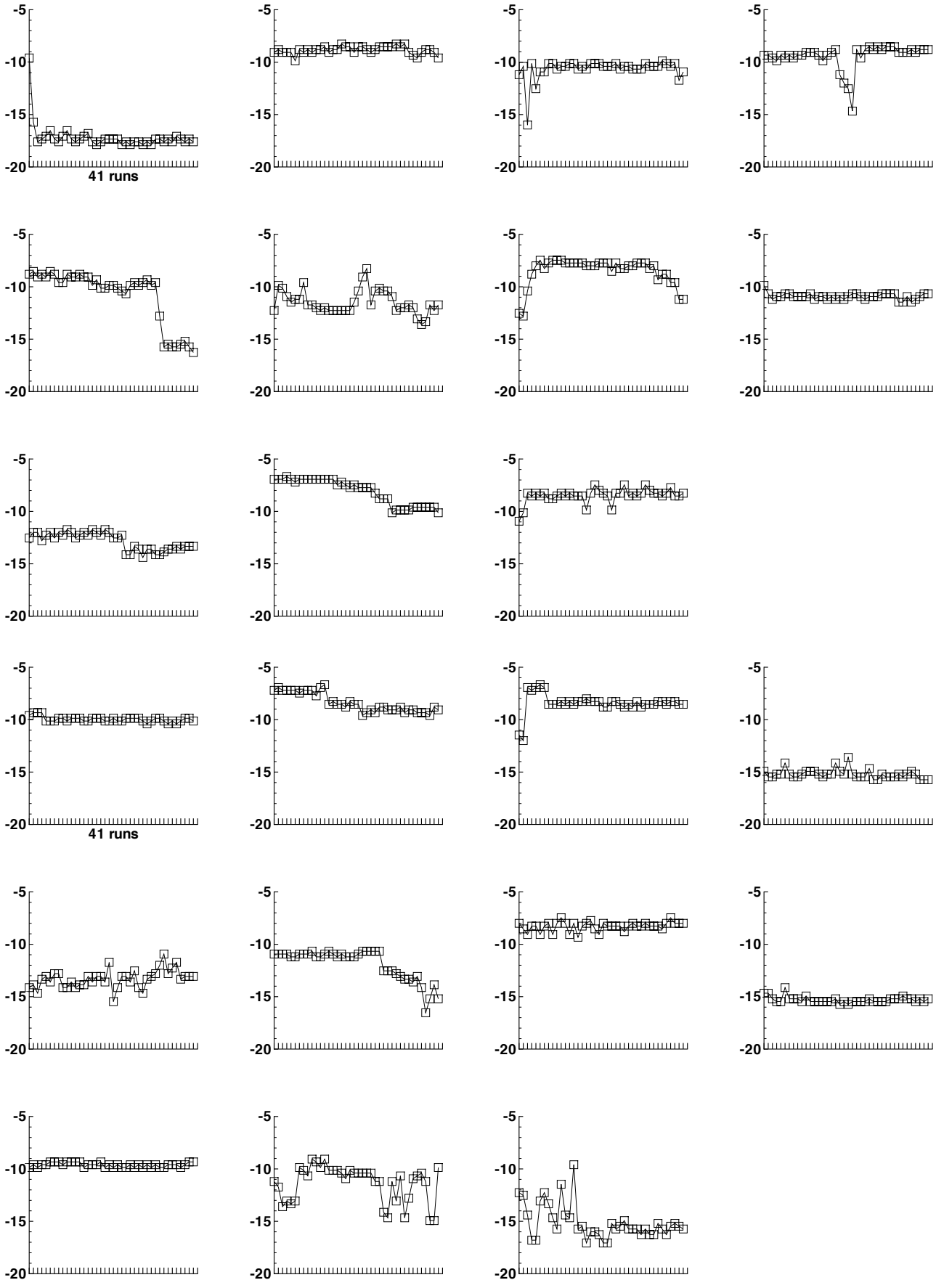
Figures S1 to S4: Sequences of freezing temperatures for individual drops from the SN subsets of the samples discussed in the paper. The ordinate scale in all of these graphs is the freezing temperature in °C.

Figure S1 (next two pages): Histories of nucleation temperatures of 46 drops over 41 cycles of cooling and warming for the SN subset of soil sample A. These drops were selected on the basis of freezing temperatures > – 15.2°C in run #6.


-5
-10
-15
-20
41 runs
-5
-10
-15
-20
41 runs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-20
41 runs
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-20
41 runs
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-15
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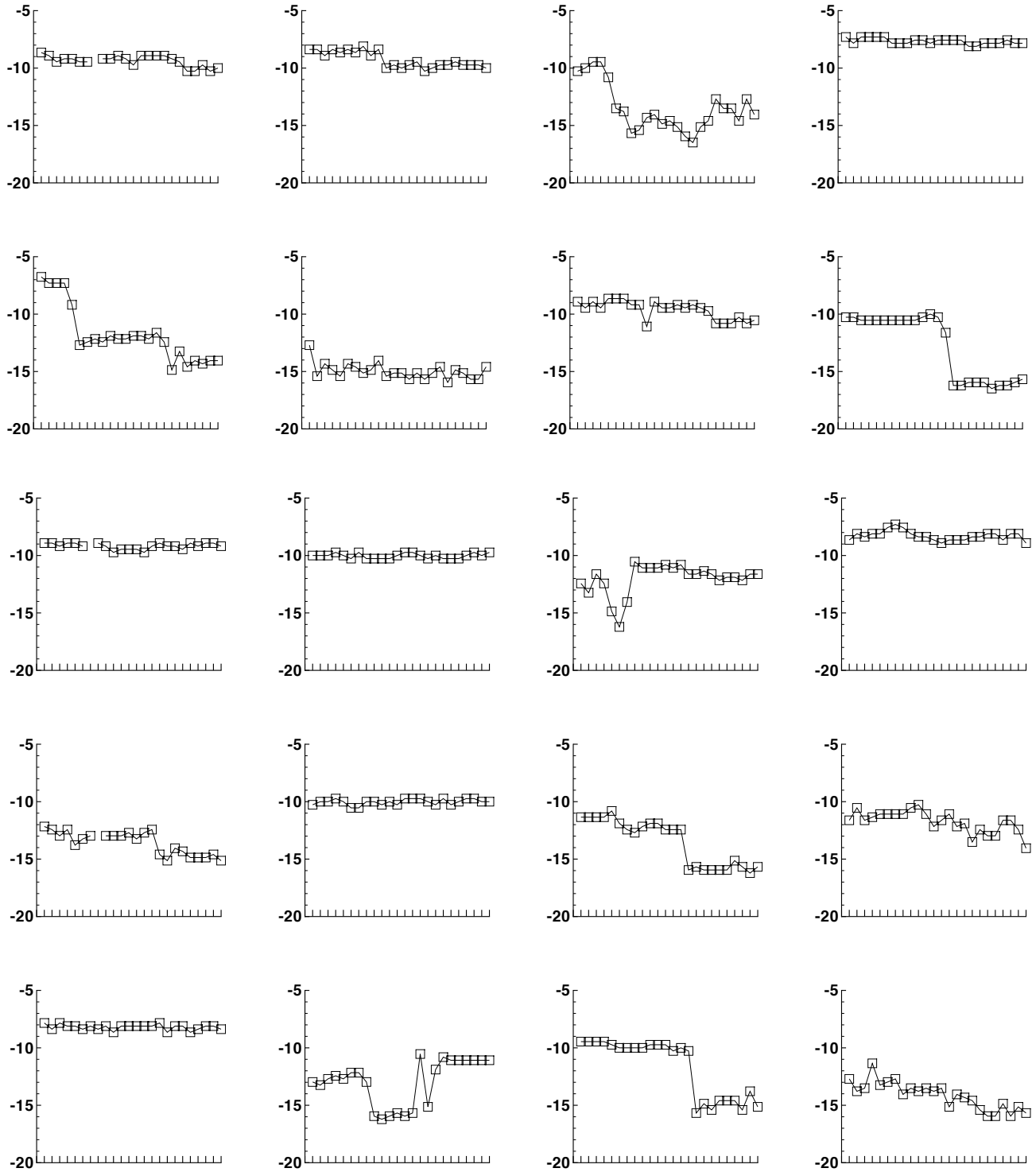
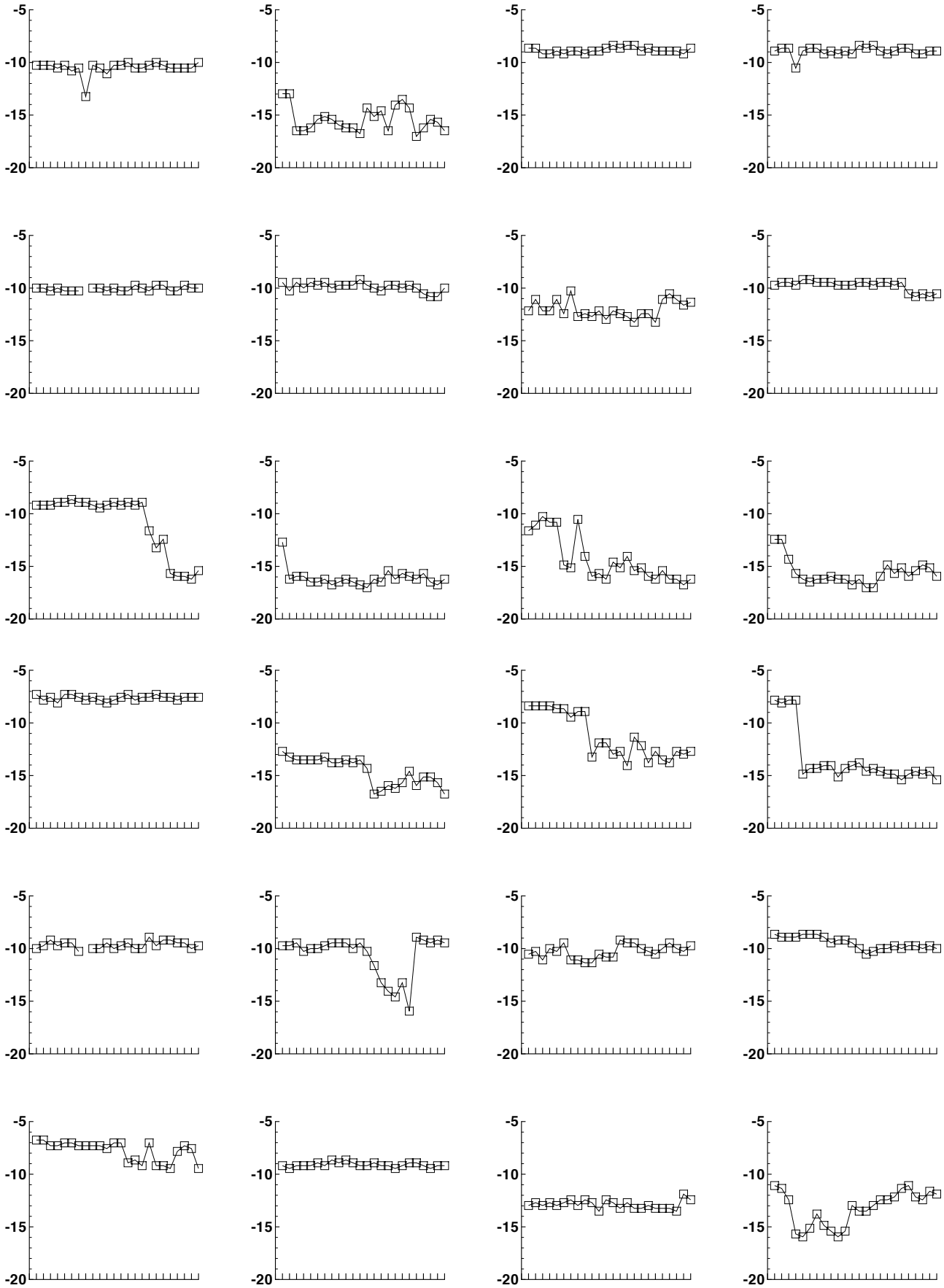
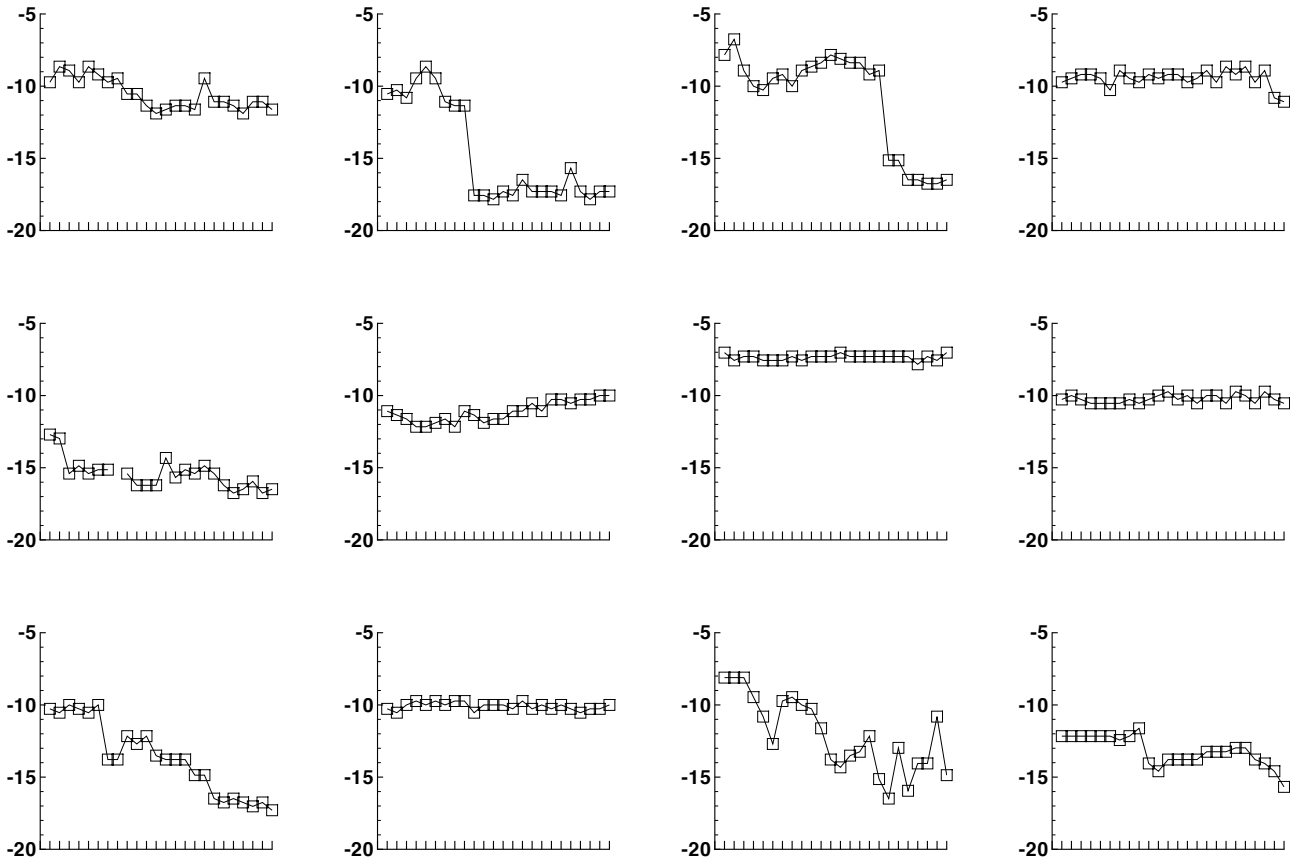
-20

Figure S2 (below and next three pages): Histories of nucleation temperatures of 56 drops over 24 cycles of cooling and warming for the SN subset of soil sample B. These drops were selected on the basis of freezing temperatures > – 13.5°C in run #19.

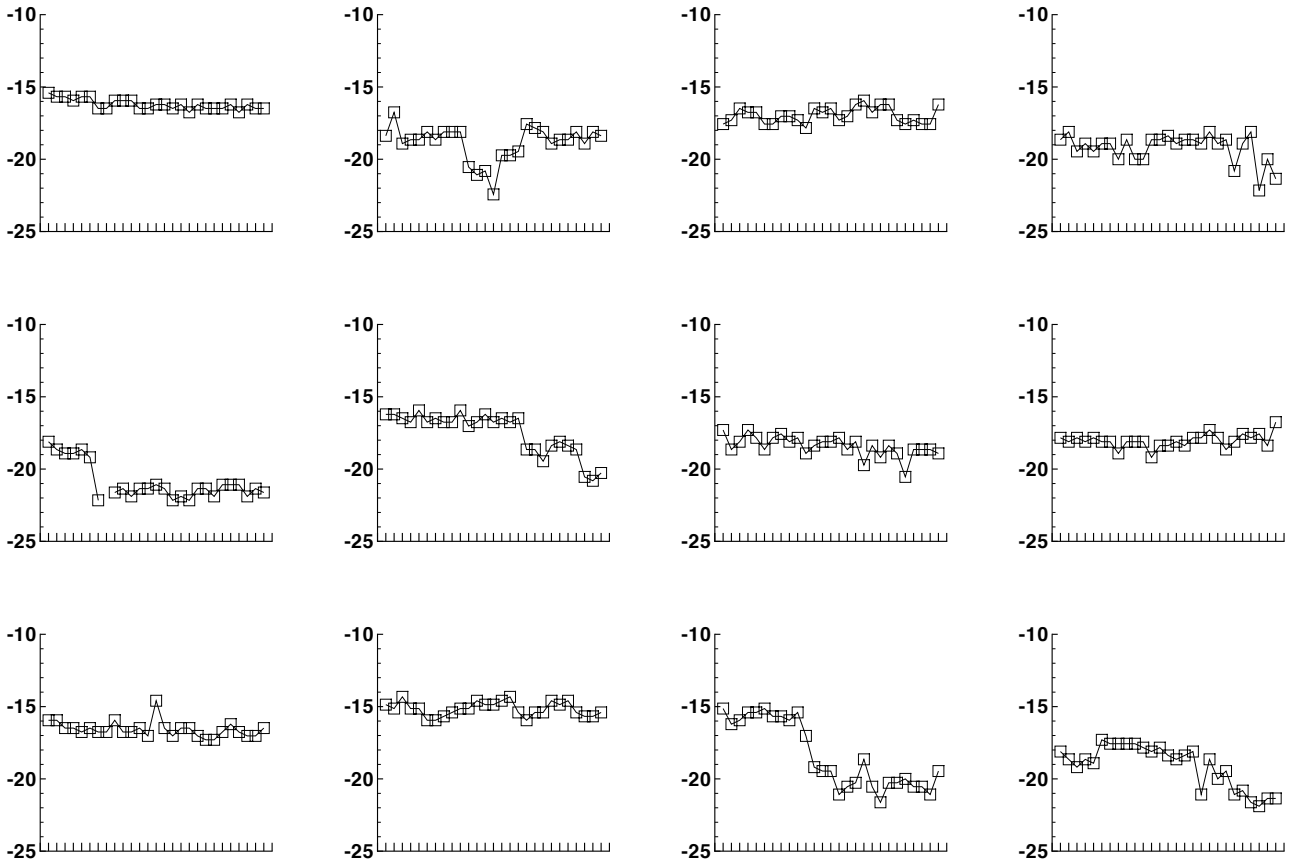



-5
-10
-15
-20



end of Figure S2

Figure S3 (below and next page): Histories of nucleation temperatures of 35 drops over 27 cycles of cooling and warming for the SN subset of a distilled water sample. These drops were selected on the basis of freezing temperatures > – 18.7°C in run #13.



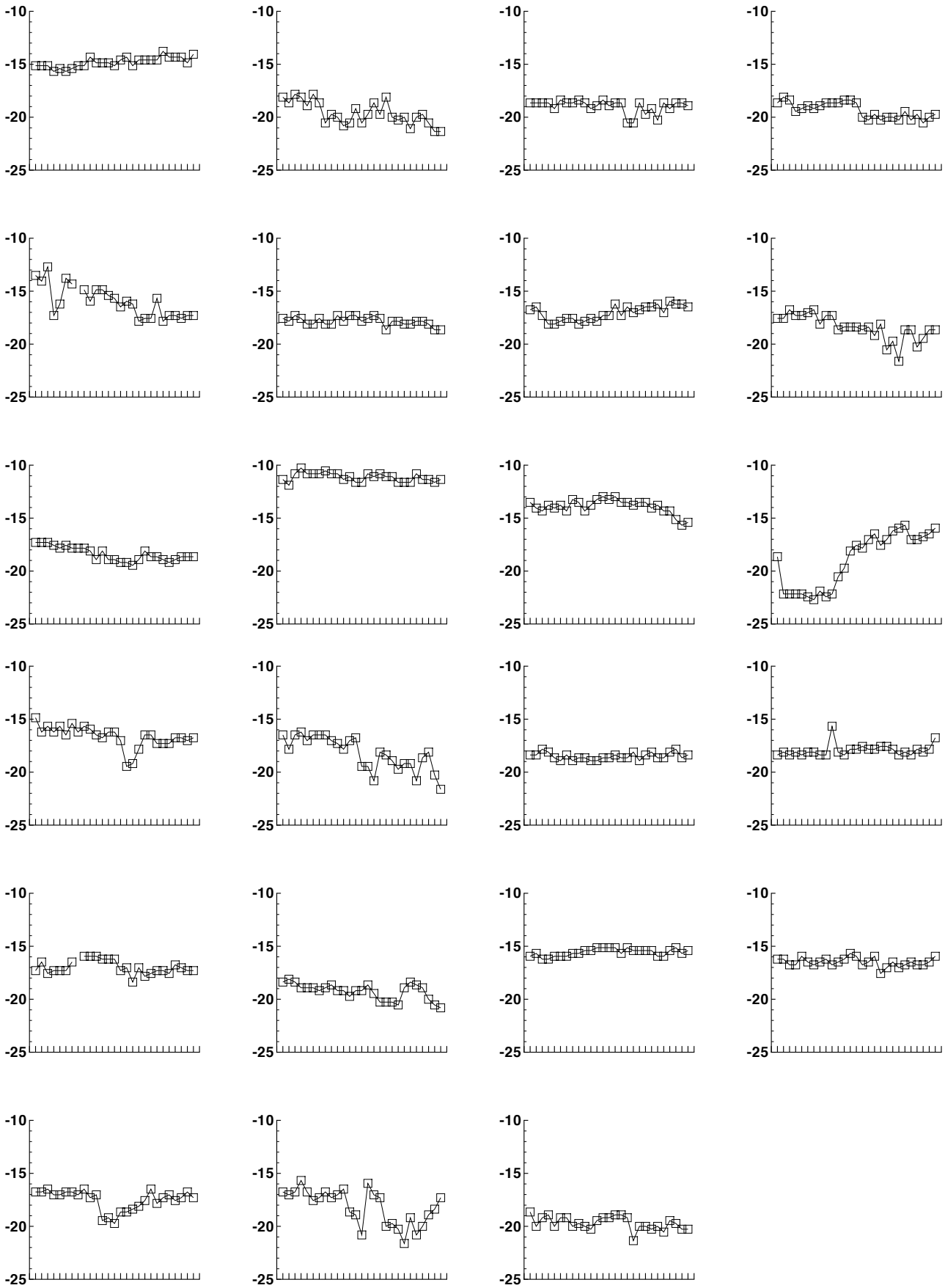
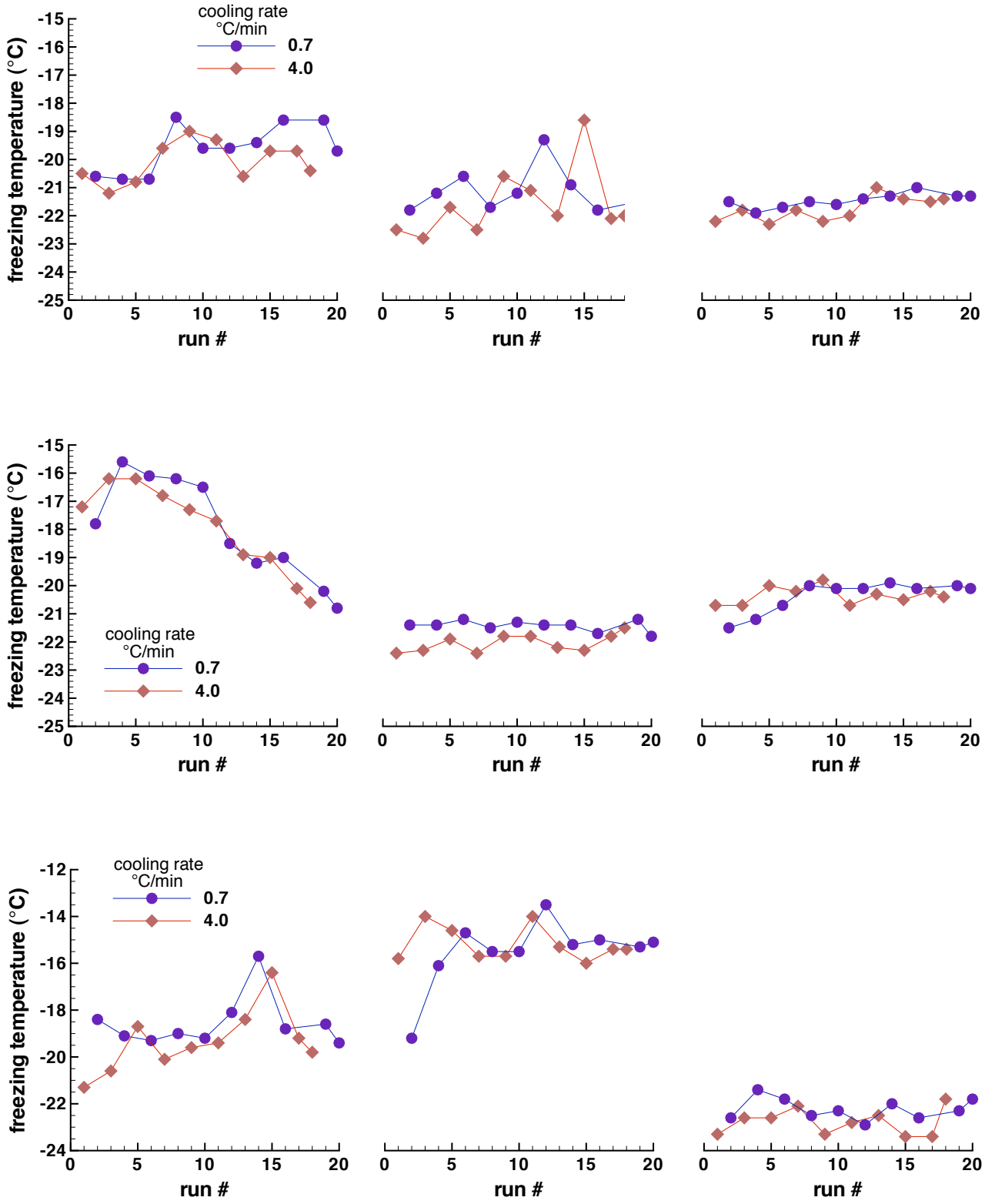
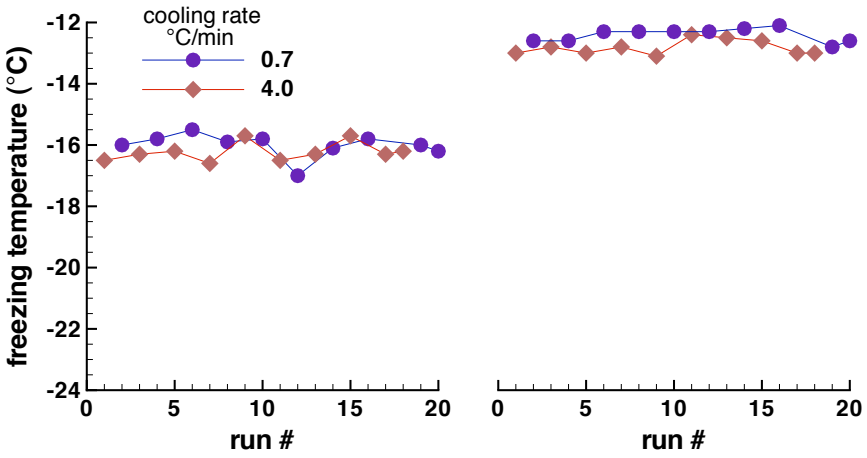

-10
-15
-20
-25

Figure S4 (this and following page): Histories of nucleation temperatures of 11 drops over 20 cycles of cooling and warming with the rate of cooling alternating between 0.7°C min^{-1} and 4.0°C min^{-1}.




cooling rate
°C/min
0.7
4.0
freezing temperature (°C)
-12
-14
-16
-18
-20
-22
-24
0
5
10
15
20
run #
0
5
10
15
20
run #