



*Supplement of*

## **Significant continental source of ice-nucleating particles at the tip of Chile's southernmost Patagonia region**

**Xianda Gong et al.**

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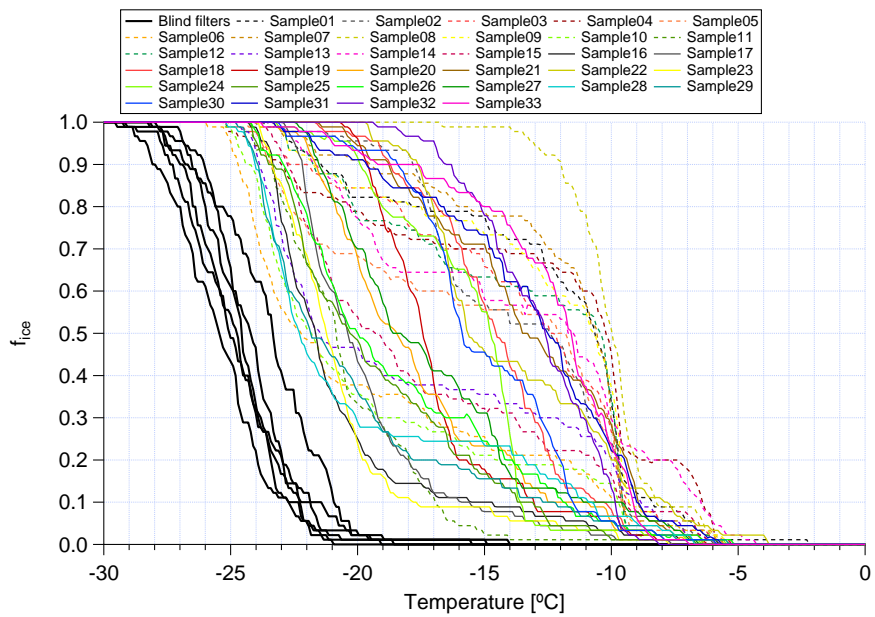
## S1 Sample information

**Table S1.** The information of PM<sub>10</sub> filter samples, including sample number, start time, end time, duration, total sampling volume, sampling volume per well, and sample groups.

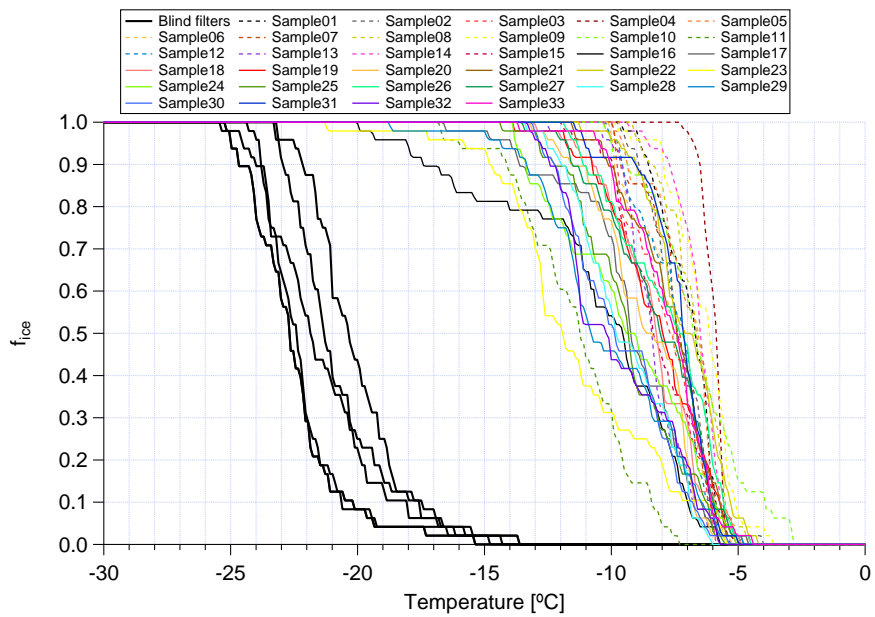
Sample Number	Start Time	End Time	Duration	Total Volume	Volume Per Droplet	Volume Per Well	Group
-	yyyy/mm/dd hh:mm:ss	yyyy/mm/dd hh:mm:ss	[hour]	[L]	[L]	[L]	-
Sample01	2019/05/08 16:46:00	2019/05/15 16:46:00	168.00	87292.80	29.0976	703.1920	CH
Sample02	2019/05/22 16:00:00	2019/05/29 16:00:00	168.00	87292.80	29.0976	703.1920	CH
Sample03	2019/05/29 16:00:00	2019/06/04 16:00:00	144.00	74822.40	24.9408	602.7360	CH
Sample04	2019/06/04 16:00:00	2019/06/20 16:00:00	384.00	199526.40	66.5088	1607.2960	CH
Sample05	2019/06/20 16:00:00	2019/07/02 16:00:00	288.00	149644.80	37.4112	911.8980	CH
Sample06	2019/07/02 16:00:00	2019/07/09 16:00:00	168.00	87292.80	21.8232	531.9405	CH
Sample07	2019/07/09 16:00:00	2019/07/17 16:00:00	192.00	99763.20	33.2544	803.6480	CH
Sample08	2019/07/17 16:00:00	2019/07/31 16:00:00	336.00	174585.60	58.1952	1406.3840	CH
Sample09	2019/07/31 16:00:00	2019/08/08 16:00:00	192.00	99763.20	33.2544	803.6480	CH
Sample10	2019/08/08 16:00:00	2019/08/14 16:00:00	144.00	74822.40	18.7056	455.9490	CH
Sample11	2019/08/14 16:00:00	2019/08/22 16:00:00	192.00	99763.20	24.9408	607.9320	CL
Sample12	2019/08/22 16:00:00	2019/08/29 16:00:00	168.00	87292.80	21.8232	531.9405	CH
Sample13	2019/08/29 16:00:00	2019/09/05 16:00:00	168.00	87292.80	21.8232	531.9405	CH
Sample14	2019/09/05 16:00:00	2019/09/26 16:00:00	504.00	261878.40	87.2928	2109.5760	CH
Sample15	2019/09/26 16:00:00	2019/10/03 16:00:00	168.00	87292.80	29.0976	703.1920	CH
Sample16	2019/10/03 16:00:00	2019/10/09 16:00:00	144.00	74822.40	24.9408	602.7360	WL
Sample17	2019/10/09 16:00:00	2019/10/16 16:00:00	168.00	87292.80	29.0976	703.1920	WL
Sample18	2019/10/16 16:00:00	2019/10/23 16:00:00	168.00	87292.80	29.0976	703.1920	WL
Sample19	2019/10/23 16:00:00	2019/11/06 16:00:00	336.00	174585.60	58.1952	1406.3840	WL
Sample20	2019/11/06 16:00:00	2019/11/13 16:00:00	168.00	87292.80	29.0976	703.1920	WL
Sample21	2019/11/13 16:00:00	2019/11/20 16:00:00	168.00	87292.80	21.8232	531.9405	WH
Sample22	2019/11/20 16:00:00	2019/11/27 16:00:00	168.00	87292.80	29.0976	703.1920	WH
Sample23	2019/11/27 16:00:00	2019/12/04 16:00:00	168.00	87292.80	29.0976	703.1920	WL
Sample24	2019/12/04 16:00:00	2019/12/11 16:00:00	168.00	87292.80	29.0976	703.1920	WL
Sample25	2019/12/11 16:00:00	2019/12/18 16:00:00	168.00	87292.80	21.8232	531.9405	WL
Sample26	2019/12/18 16:00:00	2019/12/26 16:00:00	192.00	99763.20	33.2544	803.6480	WL
Sample27	2019/12/26 16:00:00	2020/01/06 16:00:00	264.00	137174.40	45.7248	1105.0160	WL
Sample28	2020/01/06 16:00:00	2020/01/15 16:00:00	216.00	112233.60	28.0584	683.9235	WL
Sample29	2020/01/15 16:00:00	2020/01/22 16:00:00	168.00	87292.80	21.8232	531.9405	WL
Sample30	2020/01/22 16:00:00	2020/01/29 16:00:00	168.00	87292.80	21.8232	531.9405	WL
Sample31	2020/01/29 16:00:00	2020/02/05 16:00:00	168.00	87292.80	21.8232	531.9405	WH
Sample32	2020/02/05 16:00:00	2020/02/12 16:00:00	168.00	87292.80	21.8232	531.9405	WH
Sample33	2020/02/12 16:00:00	2020/02/19 16:00:00	168.00	87292.80	21.8232	531.9405	WH
Blind01	2019/04/02	2019/04/25	-	-	-	-	Blind filter
Blind02	2019/05/28	2019/06/04	-	-	-	-	Blind filter
Blind03	2019/07/02	2019/07/09	-	-	-	-	Blind filter
Blind04	2019/07/02	2019/07/09	-	-	-	-	Blind filter
Blind05	2019/07/09	2019/07/17	-	-	-	-	Blind filter
Blind06	2019/07/09	2019/07/17	-	-	-	-	Blind filter



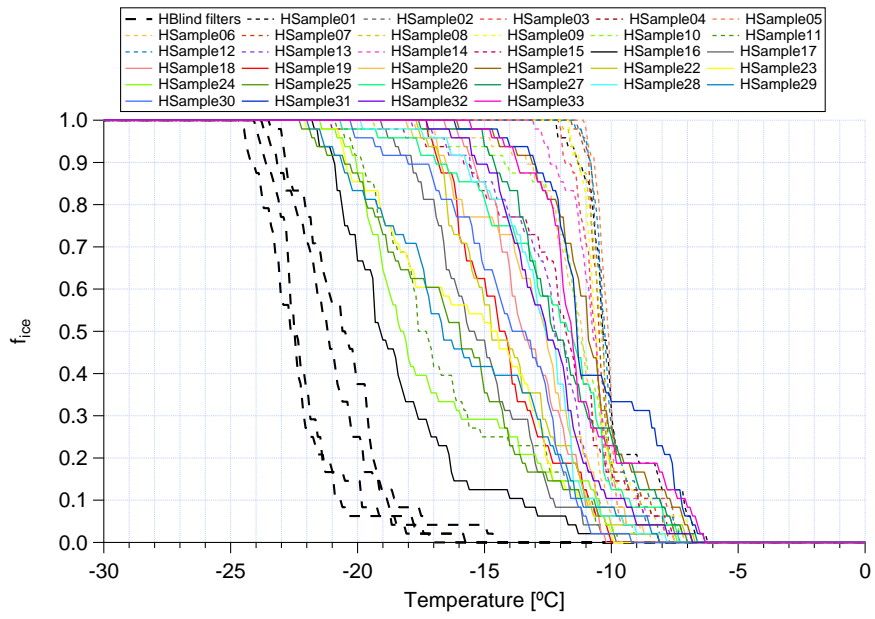
**Figure S1.** Map of the area surrounding Punta Arenas in the left panel. Location and distance of three measurement stations in the right panel.



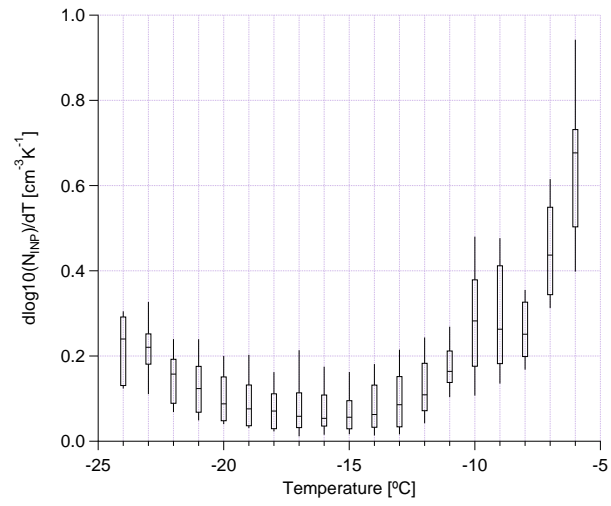
**Figure S2.** Frozen fraction ( $f_{ice}$ ) of filter samples measured by LINA (Leipzig Ice Nucleation Array) as a function of temperature.



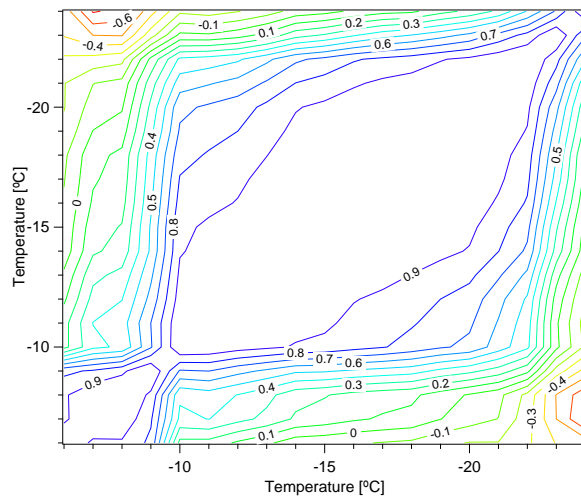
**Figure S3.** Frozen fraction ( $f_{ice}$ ) of unheated filter samples measured by INDA (Leipzig Ice Nucleation Array) as a function of temperature.



**Figure S4.** Frozen fraction ( $f_{ice}$ ) of heated filter samples measured by INDA (Leipzig Ice Nucleation Array) as a function of temperature.

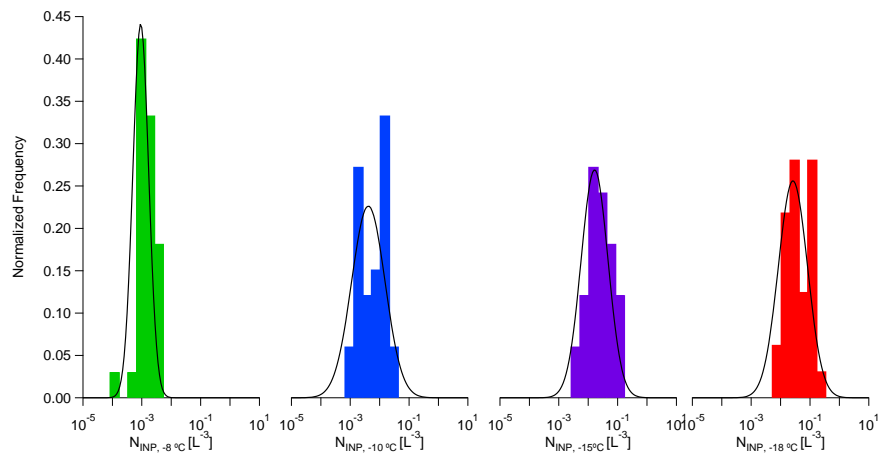


**Figure S5.** The increase rate of  $N_{\text{INP}}$  as a function of temperature.



**Figure S6.** The contour plot of correlation coefficient between  $N_{INP}$  at different temperatures.





**Figure S7.** Frequency distribution of measured  $N_{\text{INP}}$  at  $-8$ ,  $-10$ ,  $-15$  and  $-18$  °C with lognormal fit curves.