



Supplement of

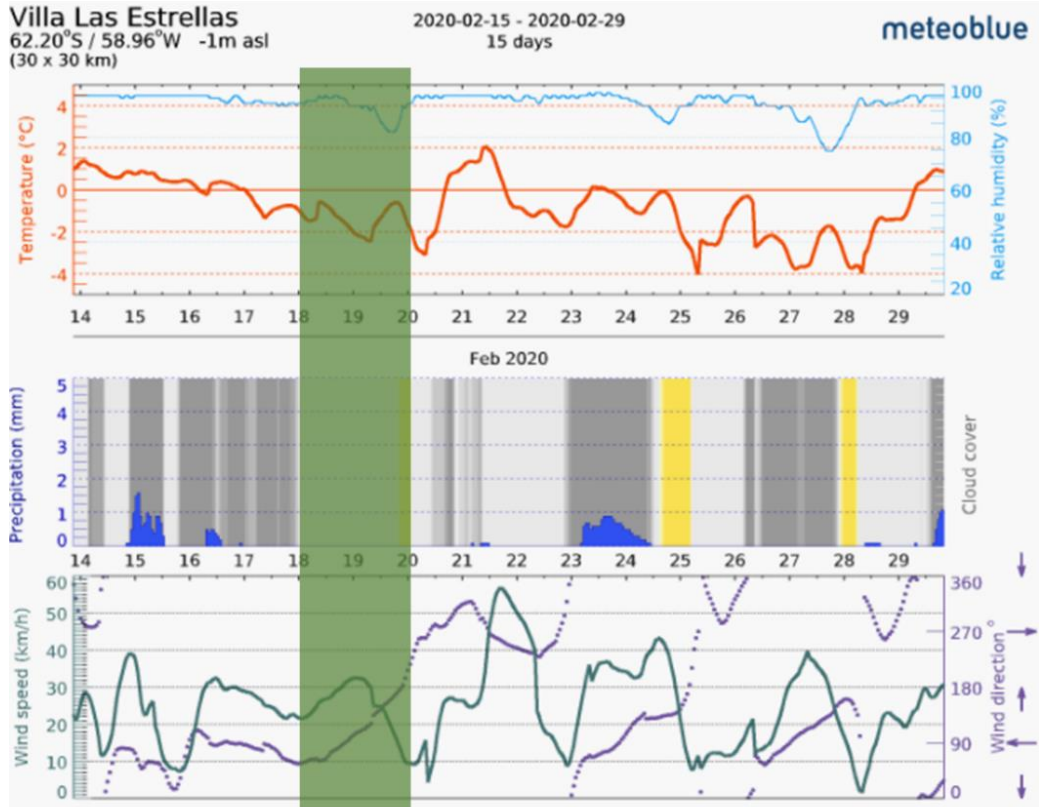
A pilot study about microplastics and mesoplastics in an Antarctic glacier

Miguel González-Pleiter et al.

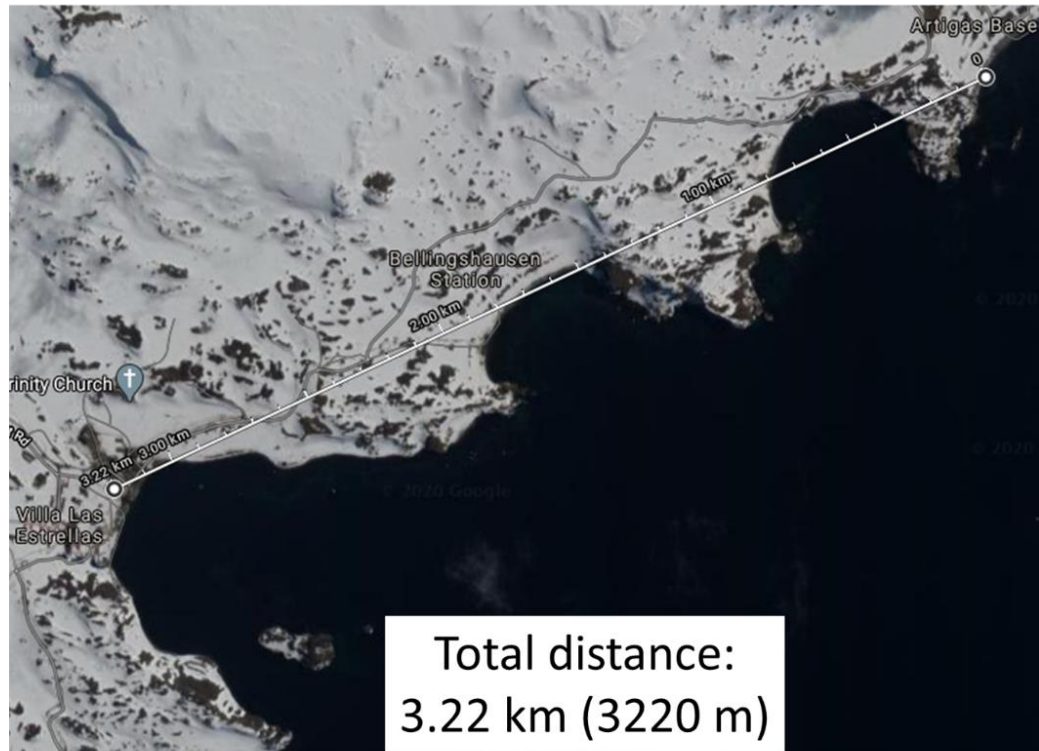
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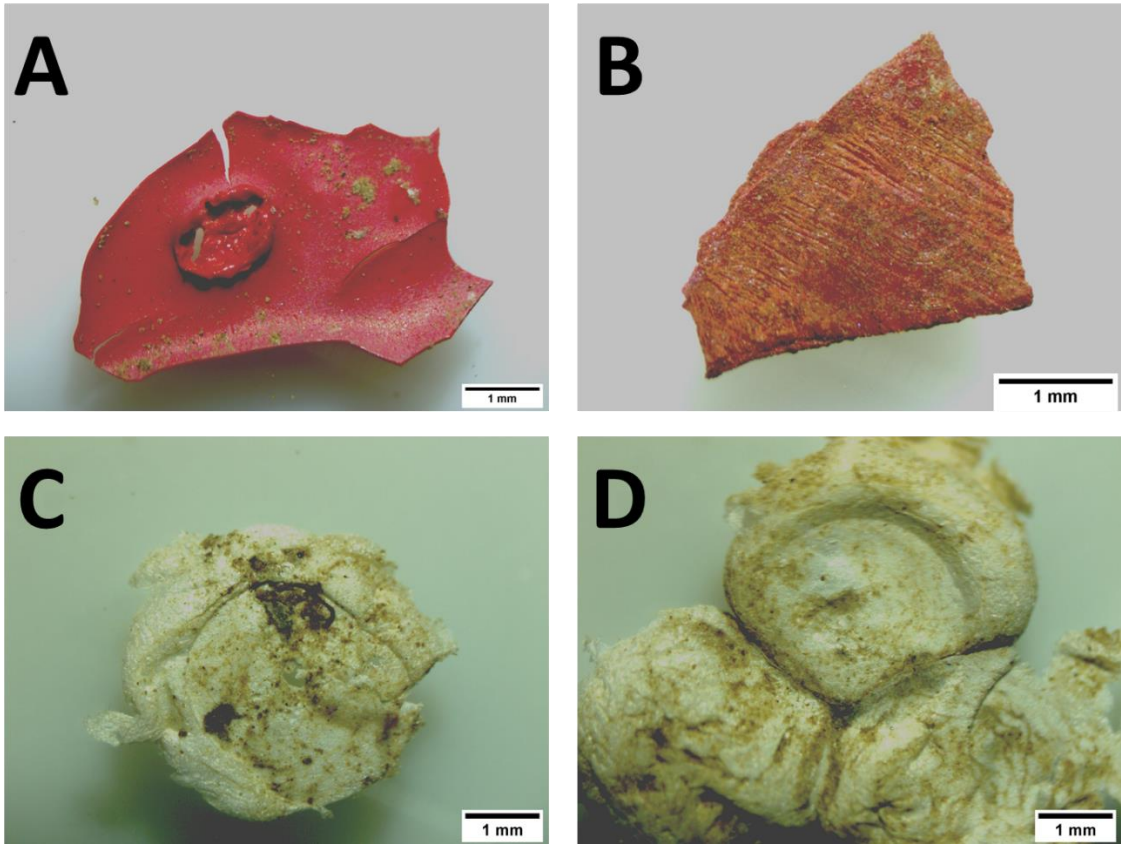


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Figure S1. Weather conditions in *Villa Las Estrellas*, during February 2020 based on the available information we had access to (i.e. *La Villa de la Estrellas*, *Fildes Peninsula climatological information*) (A), green rectangle indicates the study period (18/02/2020 and 20/02/2020), and (B) the distance between *Villa Las Estrellas* and Artigas Beach (source: © Google Maps).



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Figure S2. Representative photos of the plastics found on the ice surface close to Uruguay lake (top) and Ionosferico lake (bottom).

60 **Table S1.** Characteristics of plastics found into the squares used for the assessment of plastic
 61 concentration on ice surface close to Uruguay lake and close to Ionosferico lake that constitute
 62 part of the ablation zone of Collins Glacier in Maxwell Bay in King George Island (Antarctica).

Area	ID Square	Polymer	Color	Size 1 (µm)	Size 2 (µm)	Type
Uruguay	1	EPS	White	4100	4022	Microplastic
Uruguay	1	Polyester	Red	4822	2544	Microplastic
Uruguay	2	Polyester	Red	6662	3747	Macroplastic
Uruguay	3	not detected	-	-	-	-
Uruguay	4	not detected	-	-	-	-
Uruguay	5	EPS	White	12628	11334	Macroplastic
Uruguay	6	not detected	-	-	-	-
Uruguay	7	not detected	-	-	-	-
Uruguay	8	not detected	-	-	-	-
Uruguay	9	not detected	-	-	-	-
Uruguay	10	not detected	-	-	-	-
Uruguay	11	not detected	-	-	-	-
Uruguay	12	Polyester	Red	2292	1356	Microplastic
Uruguay	Mean	0.17 EPS/m ² and 0.25 Polyester/m ²				
Ionosferico	1	EPS	White	7583	5591	Macroplastic
Ionosferico	2	not detected	-	-	-	-
Ionosferico	3	not detected	-	-	-	-
Ionosferico	4	not detected	-	-	-	-
Ionosferico	5	EPS	White	3817	3318	Microplastic
Ionosferico	6	not detected	-	-	-	-
Ionosferico	Mean	0.33 EPS/m ²				

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81 **Table S2.** Characteristics of plastics found at the end of the experiment into the squares used
 82 for the assessment of atmospheric dry deposition of plastics on ice surfaces that constitute part
 83 of the ablation zone of Collins Glacier (King George Island, Antarctica).

Area	ID Square	Polymer	Color	Size 1 (μm)	Size 2 (μm)	Type
Uruguay	1	EPS	White	4100	4022	Microplastic
Uruguay	1	Polyester	Red	4822	2544	Microplastic
Uruguay	2*	Polyurethane	Brown	> 5000	> 5000	Macroplastic
Uruguay	3*	EPS	White	9301	8265	Macroplastic
Uruguay	4*	Polyester	Red	6989	6834	Macroplastic
Uruguay	4*	Polyester	Red	6168	5891	Macroplastic
Uruguay	4*	Polyester	Red	5909	501	Macroplastic
Uruguay	4*	Polyester	White	> 5000	> 5000	Macroplastic
Uruguay	5	EPS	White	12628	11334	Macroplastic
Uruguay	6*	EPS	White	9720	7963	Macroplastic
Uruguay	6*	EPS	White	6292	5567	Macroplastic
Uruguay	6*	EPS	White	9192	9023	Macroplastic
Uruguay	6*	EPS	White	5595	4574	Macroplastic
Uruguay	6*	EPS	White	7847	3640	Macroplastic
Ionosferico	1	EPS	White	7583	5591	Macroplastic
Ionosferico	2*	EPS	White	6437	5220	Macroplastic
Ionosferico	2*	EPS	White	10932	7572	Macroplastic
Ionosferico	2*	EPS	White	5278	4726	Macroplastic
Ionosferico	2*	EPS	White	9363	9186	Macroplastic
Ionosferico	3*	EPS	White	9209	7932	Macroplastic
Ionosferico	3*	EPS	White	7946	3834	Macroplastic
Ionosferico	3*	EPS	White	13155	7925	Macroplastic
Ionosferico	4*	EPS	White	7007	6905	Macroplastic
Ionosferico	4*	EPS	White	7094	5112	Macroplastic
Ionosferico	4*	EPS	White	16737	16085	Macroplastic
Ionosferico	5	EPS	White	3817	3318	Microplastic
Ionosferico	6*	EPS	White	11576	11105	Macroplastic

84 Asterisks indicate squares different from those used for the assessment of plastic concentration.

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