

SUPPLEMENTARY INFORMATION

“Dust-climate couplings over the past 800'000 years from the EPICA Dome C ice core”

F. Lambert^{1,2}, B. Delmonte³, J. R. Petit⁴, M. Bigler^{1,2,5}, P. R. Kaufmann^{1,2}, M. A. Hutterli⁶, T. F. Stocker^{1,2}, U. Ruth⁷, J. P. Steffensen⁵ & V. Maggi³

¹Climate and Environmental Physics, Physics Institute, University of Bern, Sidlerstrasse 5, 3012 Bern, Switzerland.

²Oeschger Centre for Climate Change Research, University of Bern, 3012 Bern, Switzerland. ³Environmental Sciences Department, University of Milano Bicocca, Piazza della Scienza 1, 20126 Milano, Italy. ⁴Laboratoire de Glaciologie et Géophysique de l'Environnement (LGGE), CNRS-University J. Fourier, BP96 38402 Saint-Martin-d'Hères cedex, France. ⁵Centre for Ice and Climate, Niels Bohr Institute, University of Copenhagen, Juliane Maries Vej 30, 2100 Copenhagen ØE, Denmark. ⁶British Antarctic Survey, High Cross, Madingley Road, Cambridge CB3 0ET, UK. ⁷Alfred Wegener Institute for Polar and Marine Research, Columbusstrasse, 27568 Bremerhaven, Germany.

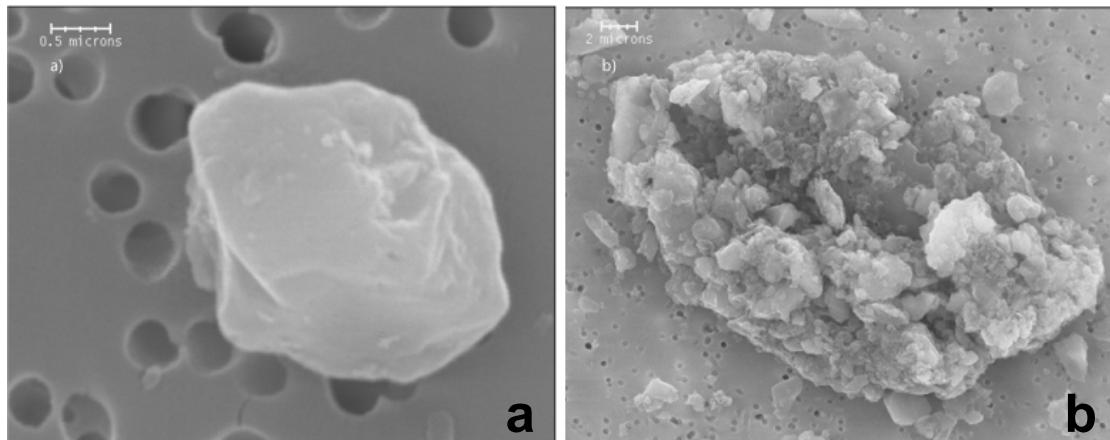


Figure S1: Particle aggregates (image from [SR1])

- a) Typical aeolian dust particle found in the EDC ice core at 2345 m depth (256 kyr BP).
- b) Particle aggregate found at 2912 m depth (537 kyr BP). Note the different scale.

Reference:

[SR1] Delmonte B., Quaternary variations and origin of continental dust in East Antarctica. Ph.D. Thesis, University of Siena (Italy) and University Joseph Fourier, Grenoble, France. 273 p

Table S1: Samples treated with sonication (EDC ice core)

Depth (m)	dust mass (10^{-9} g/g)	
	before sonication	after sonication
3139.37	1164	1019
3140.47	5220	No measurement
3141.57	1078	682
3142.67	4446	434
3143.71	18315	279
3147.07	373	No measurement
3148.17	437	393
3149.27	139	86
3150.37	271	288
3151.47	153	111
3152.57	124	118
3153.67	77	68
3154.77	6135	120
3155.87	42630	No measurement
3156.95	92	82
3158.07	210	177
3159.17	151	97
3160.27	176	65
3161.37	4759	62
3162.47	28050	101
3163.57	122	95
3164.67	82	98
3165.29	46	46
3166.87	1734	29
3167.97	33	29
3169.07	103	24
3170.17	21	16
3171.27	35	29
3172.36	12745	27
3173.47	68	34
3174.57	38	38
3175.67	994	44
3176.77	62	24
3178.97	69	20
3180.07	44	28
3181.19	35	32
3182.27	75	56
3183.36	7125	108
3185.50	315	187
3186.67	938	817
3187.77	13500	727
3188.87	15230	1315