Black carbon variability since preindustrial times in Eastern part of Europe reconstructed from Mt Elbrus, Caucasus ice cores

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Supplementary figures

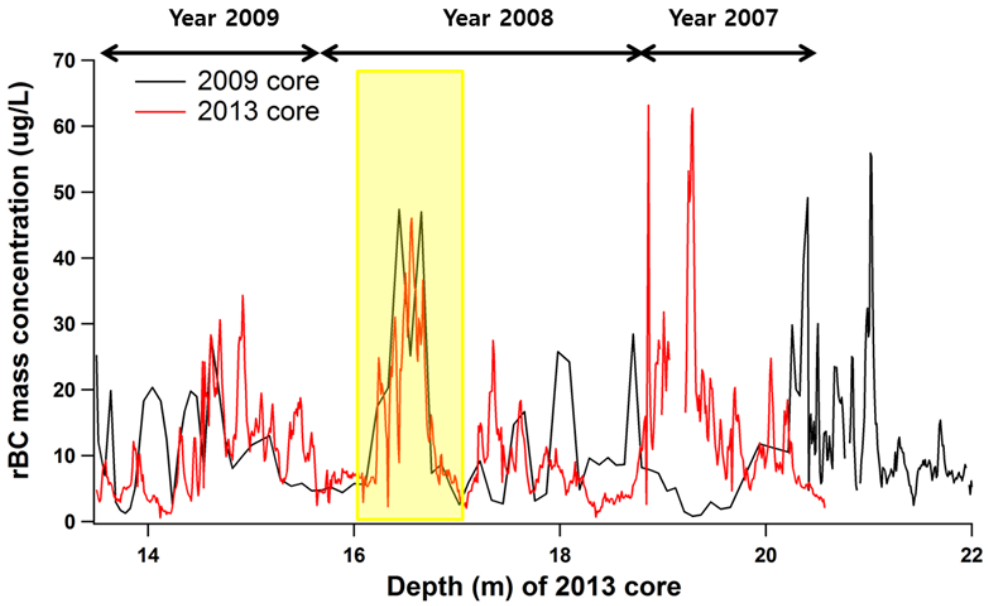

Figure S1. An overlapping section of the 2009 core and the 2013 core. We used the common rBC feature dated late 2008 and located at 16–7 m depth along the 2013-core depth scale (yellow area) to extend the 2009-core record (main core) with the 2013-core record (shallow core). Note that differences in snow compaction related to differences in depth between 2009 and 2013 cores explain distortions between the two rBC signals.

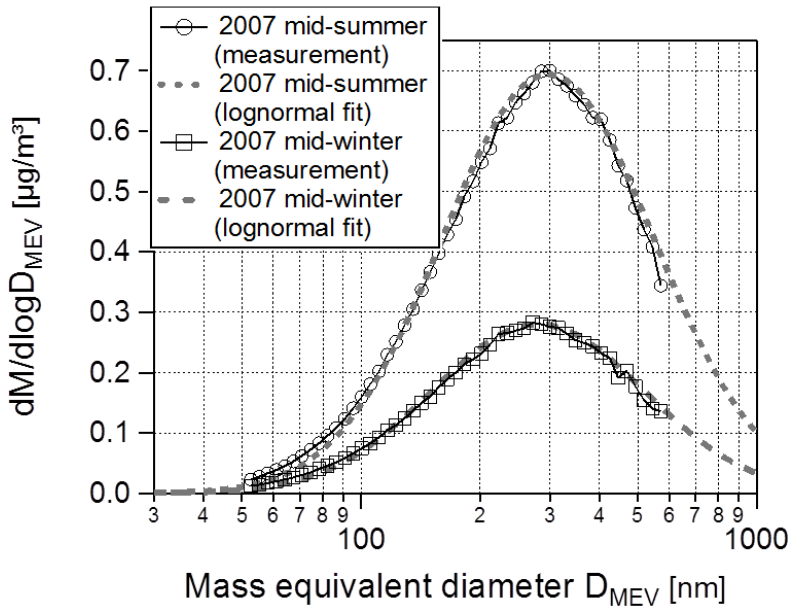

Figure S2. Example of measured rBC mass size distributions (bin size, #=50) and their lognormal fits of snow layers corresponding to 2007 summer and winter.

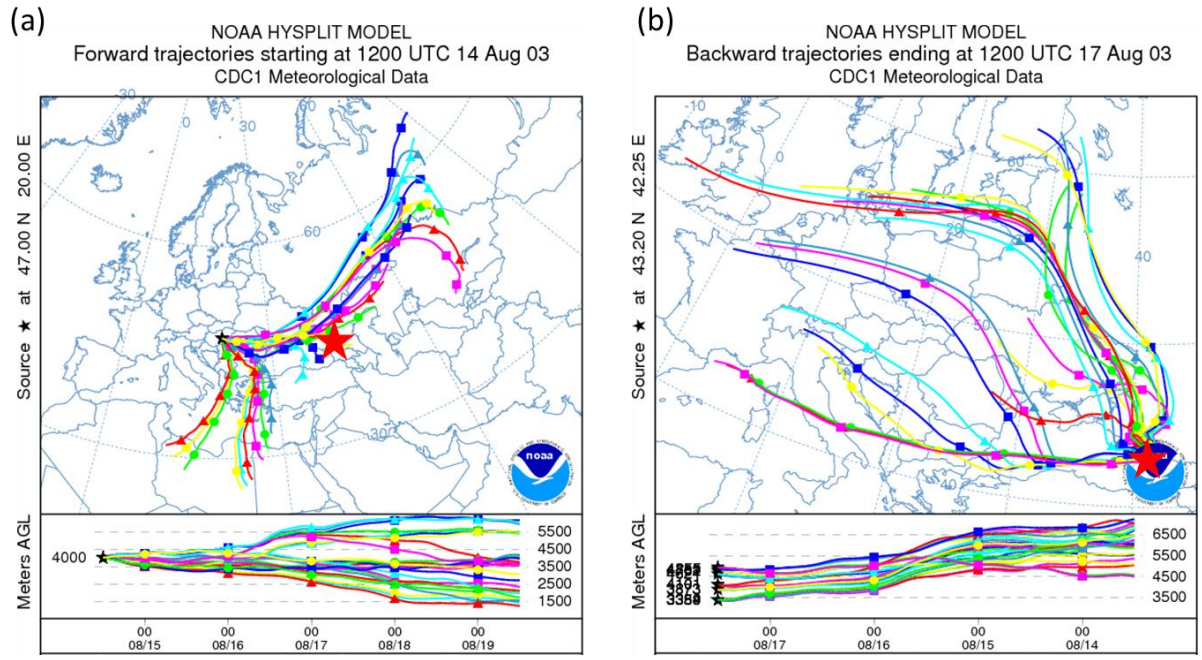

Figure S3. Air mass trajectories from HYSPLIT model using a CDC1 global reanalysis meteorological data. (a) Forward trajectories starting at an area with intense forest fires (47.00N; 20.00E; 4000 m above ground level) on 14 August 2003 (Barbosa et al., 2004; Hodzic et al., 2006). (b) Backward trajectories starting at ELB (43.20N; 42.25E; 5115 modelled a.s.l.) on 17 August 2003. Red star indicates the ELB site.