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

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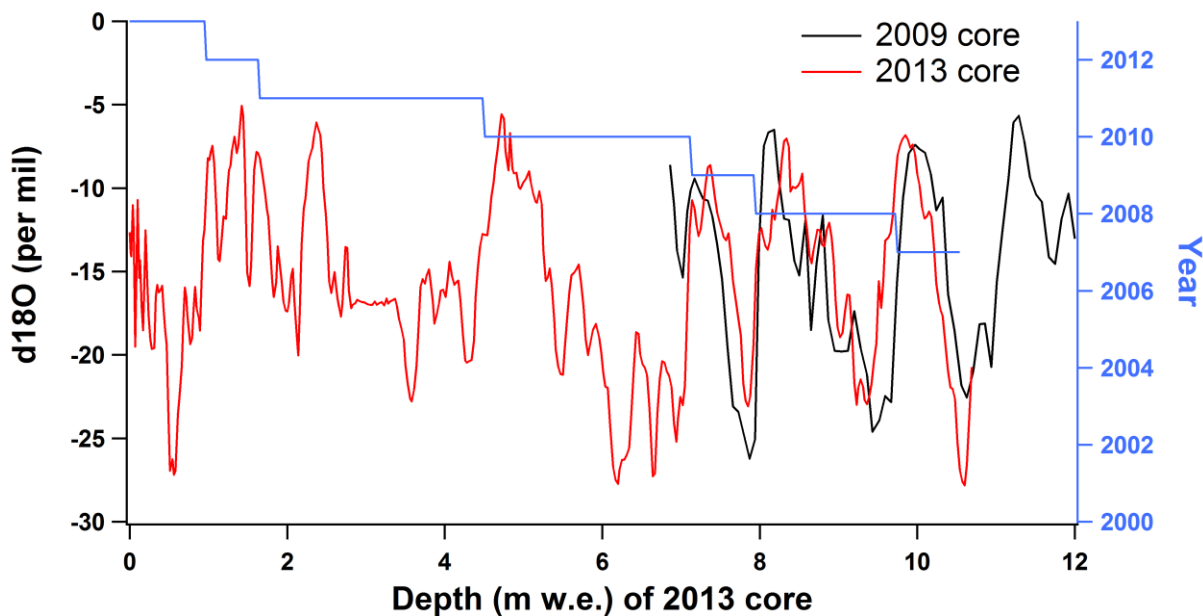


Figure S1. An overlapping section of the 2009 core and the 2013 core. We used the common $\delta^{18}\text{O}$ feature dated year 2009-2007 and located at 7-11 m w.e. depth along the 2013-core depth scale to extend the 2009-core record (main core) with the 2013-core record.

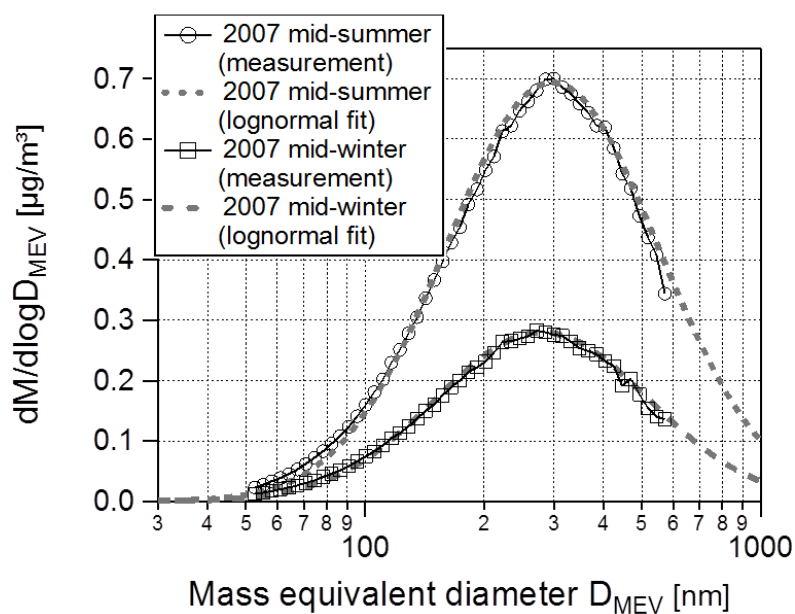


Figure S2. Example of measured rBC mass size distributions (bin size, $\#=50$) and their lognormal fits of snow layers corresponding to 2007 summer and winter.

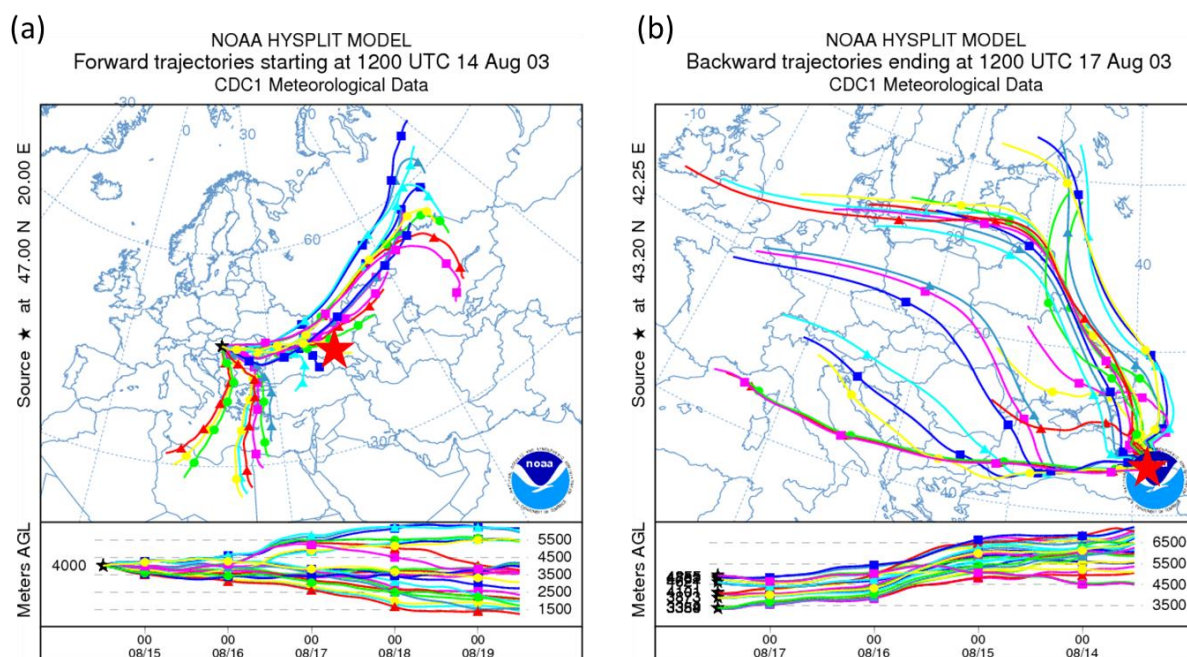


Figure S3. Air mass trajectories from HYSPLIT model using a CDC1 global reanalysis meteorological data. (a) Forward trajectories starting at an area with intense forest fires (47.00N; 20.00E; 4000 m above ground level) on 14 August 2003 (Barbosa et al., 2004; Hodzic et al., 2006). (b) Backward trajectories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

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