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EPICA Dust Intercomparison Project: A systematic comparison of different proxies and measurement techniques for mineral dust

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The mineral dust aerosol is a diverse climatic indicator as well as active climatic player, making its quantitative reconstruction an important task. Yet, numerous different proxies and measurement techniques exist to quantify "dust" from ice cores. In this poster we present results from a systematic comparative study of different proxies as well as different measurement techniques for the same proxies. To ensure a good comparability the data were obtained from EDML and EDC ice core samples which were melted and shared among different laboratories. The proxies and techniques represented include: insoluble particle mass (Coulter Counter and Laser Sensor), insoluble particle element concentration (PIXE), mayor ions (Ion Chromatography and Continuous Flow Analyses) as well as total and "acid-available" element concentrations (ICPMS and flow injection methods). Apart from the methodological comparisons systematic differences of mineral dust composition are investigated across the last glacial termination.