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MICROPARTICLE DISTRIBUTION IN THE DOME SUMMIT SOUTH ICE CORE, EAST ANTARCTICA

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The microparticle record from the Dome Summit South ice core, Law Dome, East Antarctica is investigated using a Coulter Multisizer to provide concentration and size distribution at selected depths. This core site has an unusually high accumulation rate (640 kg m^2/a) during the Late Holocene, and extends to approximately 90,000 years before present (BP). The site also shows evidence for large accumulation changes during the deglaciation which are explored here through variations in the inferred dust flux. The most significant feature identified is the abrupt decline in microparticle concentration during the deglacial transition ending around 15,000 years BP at the onset of the Antarctic Cold Reversal, identified through the oxygen isotope record. This pattern agrees with equivalent records from Vostok and Dome C.