

ACC022-07

Room: Exhibition hall 7 subroom 1

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## Carbon stable isotope and characteristics of organic particles in an ice core from Dunde Ice cap in the Qilian Mountains

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Organic particles in a 51 m deep ice core drilled in 2002 on the Dunde Ice cap in the Qilian Mountains, western China were analyzed. Insoluble particles in the ice core consisted of mineral and organic particles. Percentage of organic particles to total insoluble particles was 18% in average. Size of the organic particles ranged from 10 to 200  $\mu\text{m}$ . Microscopy revealed that some of the particles contained microbes such as cyanobacteria and green algae. The concentration of the particles largely varied from year to year. Carbon stable isotope of the organic particles ranged -30.1 to -12.4 permil. The variation in the carbon stable isotope may be determined by source of the organic matter: soil organic matter from ground surface surrounding the ice cap and that derived from production of snow algae on the surface of the ice cap.

Keywords: ice core, china, carbon stable isotope, organic particle, snow algae