



## Stable Isotopes in Surface Snow along a Traverse Route from Zhongshan Station to Dome A, East Antarctica

Minghu Ding and Cunde Xiao

Chinese Academy of Meteorological Sciences, Beijing, China (dingminghu@cams.cma.gov.cn)

Samples of surface snow were collected for stable isotope analysis along the traverse route from Zhongshan to Dome A (East Antarctica) from Dec 28th, 2007 to Feb. 8th, 2008. The stable oxygen isotope ratios of these samples were measured to investigate their relationships with temperature and geographical parameters (latitude, longitude, altitude and distance to the coast). Local relationship between  $\delta D$  and surface temperature is established to be  $6.4 \pm 0.2\text{‰}$  per degree, very similar to the average for East Antarctic. The deuterium excess shows a pattern of high values over Antarctica, particularly at Dome A. We compare our data with an atmospheric general circulation model which includes stable water isotopes (ECHAM5-wiso). The model simulation captures the right levels of  $\delta D$ , but overestimates  $\delta^{18}\text{O}$ .