

ICE SHEET SURFACE VELOCITIES ALONG THE TRAVERSE ROUTE FROM ZHONGSHAN STATION TO DOME A, EAST ANTARCTICA

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During the 2004/05 austral summer season, the 21st CHINARE (Chinese National Antarctic Research Expedition) carried out the fifth inland ice sheet traverse which extends 1300km from Zhongshan Station to Dome A, East Antarctica. Between 1996/97 and 2004/05, geodetic GPS surveying were used to measure ice sheet surface velocities at approximately 60 km intervals along the traverse route (longitudes 77°E, latitudes 69°-80°S). This report details the methodology, processing and results of the GPS measurements taken over the entire route. GAMIT/GLOBK software has been used to process all of the GPS data, the precision was better than 20cm. Horizontal velocities at each of the GPS sites along the traverse were extracted from our GLOBK solution. Results show that velocities along the traverse route vary between 1ma^{-1} and 100ma^{-1} .