

### **Spatial and temporal snow accumulation at East Antarctic ice sheet in 1993-2010**

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Snow stakes along the traverse routes have been observed for long term monitoring program 'the variation of ice sheet surface mass balance' from the 1960's by the Japanese Antarctic Research Expedition in Shirase glacier drainage basin, East Antarctica. During the traverse route between coastal S16 point (69 02'S, 40 03'E, 580m a.s.l.) to inland Dome Fuji (77 22'S, 39 42'E, 3,810m a.s.l.), the snow stake observations every 2 km have been carried out from 1993. Latest stake heights were measured in January 2011 and February 2011. Net snow accumulations from S16 to Dome Fuji were calculated. Heavy snow events were shown in 1998, 2004, 2005, 2008-2009 and 2010. Otherwise, in 1994, 1996, 1999, 2000, 2001, 2002 and 2006, light snow events were observed. They were different in way accumulating spatial pattern depending on places. The yearly accumulation rates were compared with seasonal change of AAO-index. As a result, yearly accumulation rate and AAO-index of September showed the positive correlation, and the accumulation rate and AAO-index of May were negative correlation. We try to understand the cause of heavy snow and light snow event.