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The Cryosphere Discussions

Interactive comment on "Mountain glaciers of NE Asia in the near future: a projection based on climate-glacier systems' interaction" *by* M. D. Ananicheva et al.

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Validation could be conducted by the comparison of the temperature trends for the past 50 years (Ananicheva et al, 2003) and the scale of glacier-area change - the latter obtained using Landsat images and the USSR Glacier Inventory for the same time period (Ananicheva, in pressĚ GLIMS book). The first-mentioned paper uses weather-station records in the region of Suntar-Khayata Mountains, to extrapolate a 2.5-4žC (1.5-2žC) annual (summer) warming trend over the last 50 years. For this period, glacier area declined by about 20ECHAM4 scenario, the summer temperature increase for these mountain regions in 2049-60 will be 3.5-4.0ž C and - taking into account the accelerating pace of glacier melting - 60-70in solid precipitation due to warming, and cyclone-activity intensification, in the 1950s-2000s (2049-2060) did not

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(will not) compensate ablation although they tend to delay the melting effects. Thus we can say that the general tendencies of glacier change under our projection are consistent with the real situation that has already taken place in the study region during the last 50 years of climate warming.

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27 April 2008

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