

Mass balance of Vatnajökull (1991–2001) and Langjökull (1996–2001), Iceland

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Abstract — *The mass balance of the Vatnajökull ice cap has been monitored since 1991 and since 1996 on the Langjökull ice cap. On Vatnajökull the mass balance was positive from 1991 to 1994, close to zero 1994–1995, but negative since then. Vatnajökull has lost 0.6% of the total ice mass, 2.37 m of water evenly spread over its area during the entire 11 year survey period. The mass balance for Langjökull was negative after 1996, in total by 5.73 m, or 3% of the total ice mass. The mass balance of the two ice caps is directly correlated reflecting low winter snow accumulation and high annual temperatures. However, larger variations are seen in the mean specific winter balance of Langjökull than of Vatnajökull.*