

STORSTRØMMEN, NORTHEAST GREENLAND 1:150,000

(Aerial Photogrammetric Map)

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The map shows the glacier complex of Storstrømmen, Kofoed and Hansen Glacier in northeast Greenland. Most of the ablation area of this important glacier complex is covered by the two map sheets. The map was published by the Alfred-Wegener Institute for Polar and Marine Research in co-operation with the Geological Survey of Greenland (GGU, now incorporated in the Geological Survey of Denmark and Greenland GEUS), the Danish Polar Centre, and the University of the German Army, Munich, Germany. The printing was done at the Technical College of Karlsruhe, Germany. The topography is based on aerial photographs from 1978, ground control and aerial triangulation by Kort- og Matrikelstyrelsen, Denmark and was analyzed photogrammetrically by H.F. Jepsen & J.P. Neve at GGU. N. Reeh added glaciological features to the map, e.g., describing boundaries of debris-covered ice, surface meltwater channels, and Holocene moraines. The stake net used for mass balance studies and ice flow measurements is also shown (Bøggild et al. 1994). K. Brunner and G. Fiutak, Munich, did the cartographic work by means of digital cartography.

Storstrømmen is one of the major outlet glaciers in northeast Greenland, with a drainage basin of 32,100 km² in total. For the years 1994 and 1995 mass balance studies yield the following results (Jung-Rothenhäusler, in press):

	1994	1995
ELA [m a.s.l.]	1280	1350
ablation area [km ²]	6155	6723
net ablation [mm WE/a]	510	810
mass balance [mm WE/a]	7	-83

Recent velocity fluctuations of Storstrømmen indicate surge-type behaviour (Reeh et al. 1994), further evidence is presented by Weidick et al. (1996), who describes changes in the glacier extent during the Holocene. For the Storstrømmen Glacier front, called Bredebrae, three positions are shown in the map: the 1978 ice front, the year of the aerial survey, the 1912/13 ice front as described by Koch and Wegener (1930, 1911), and the 1984 ice front as seen by LANDSAT MSS image, the foremost position documented in recent time. The period 1978–1980 was the most active phase of the glacier with ice

velocities at the front of up to 4035 m/a (Jung-Rothenhäusler, in press). Obviously, the advance had come to an end in 1984 and since then a retreat of the ice front can be observed. The total increase of the glacier area between 1978 and 1984 was 118.6 km². Storstrømmen may presently be described as being in the recovery phase, which began 1988 and is ongoing.