



## **Glaciological investigation on Midtdalsbreen, Norway**

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Parameters as thermal regimes, velocity, snow variation and melting of the glacier have an impact on the moraine formation in the front of glaciers. The purpose of this exploration was to study how important the glaciological parameters are for the moraine formation in front of Midtdalsbreen in Norway (60°33'N, 7°25'E). To investigate the formation, glaciological parameters as temperature and velocity were surveyed. All investigation was accomplished in the ablation area, from the front and 500m inwards. Observations show that the moraine forms in the front were formed with transportation of sediments, which are frozen under the base of the glacier sole. The transportation takes place through the natural flow of the glaciers. Glacier velocity measurements show that the velocity in the frontal part was approximately 7cm per day. Further inwards the velocity was approximately 12cm. Measurements of the thermal regime indicated that the glacier has a cold layer, approximately 15m thick, and had a beneath temperate layer. In the front, where the glacier thickness is lower than 15m thick, the glacier is cold-based. The further indicates that the sediments freeze to the glacier sole, where the glacier thickness is 15 meters or less.