



## **Breiðamerkurjökull, SE – Iceland, its maximum extent in the late 19th century and volume loss estimation during the 20th century**

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Breiðamerkurjökull is one of the largest outlet glaciers of the Vatnajökull ice cap, SE-Iceland. This maritime temperate glacier has recessed dramatically since the end of the 19th century, which was the Little Ice Age maximum (LIAmax). We reconstruct a model of the geometry of the outlet during its highstand about 120 years ago. The reconstruction is derived from geomorphological in-field evidences of the glacier margins and supported by the 1904 topographical maps, published by the Danish General Staff, aerial photos and the Army Map Service (AMS) maps of 1945 and written historical documents. We estimate the volume loss since its 1890 Little Ice Age maximum (LIAmax). Area decrease of 115 km<sup>2</sup> or 12 % is depicted. With a recent LiDAR based high resolution digital elevation model from 2010–2011 we revise the mid – 20th century AMS maps to constrain its accuracy and estimate the volume loss since 1945.