1. Record Nr. UNINA9910346735703321 Autore Horst Machguth Titolo Melt Water Retention Processes in Snow and Firn on Ice Sheets and Glaciers: Observations and Modeling Pubbl/distr/stampa Frontiers Media SA, 2018 Descrizione fisica 1 online resource (160 p.) Collana Frontiers Research Topics Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Melt takes place where the surface of glaciers or ice sheets interacts Sommario/riassunto with the atmosphere. While the processes governing surface melt are fairly well understood, the pathways of the meltwater, from its origin to the moment it leaves a glacier system, remain enigmatic. It is not even guaranteed that meltwater leaves a glacier or ice sheet. On Greenland, for example, only slightly more than 50% of the meltwater runs off. The remainder mostly refreezes within the so-called firn cover of the ice sheet. This eBook contains 11 studies which tackle the challenge of understanding meltwater retention in snow and firn from various angles. The studies focus both on mountain glaciers and on the Greenland ice sheet and address challenges such as measuring firn properties, quantifying their influence on meltwater retention, modelling firn processes and meltwater refreezing as well as unravelling the mechanisms within the recently discovered Greenland

firn aquifers.