

A Simplified Method for Estimating Outflow from the Bottom of Snowpack

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To ensure the safety of train operation, it is important to estimate the outflow from the bottom of snowpack affecting the full-depth avalanche. Therefore, the authors examined a simplified method for estimating outflow from the bottom of snowpack, which can be applied to railway disaster prevention, on the basis of heat balance observations, snowmelt observations and previous studies. Consequently, the simplified method, which combines a snowmelt (heat balance) model and a percolation model, yields a good estimate of outflow from the bottom of snowpack at 1-hour intervals using four input data available from the nearest AMeDAS: I.e., air temperature, precipitation, wind speed and duration of sunshine.