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# Impact of seasonal lake storage variability on the global continental water budget

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Lakes cover more than 3% of the continental surface and therefore store a huge amount of water. However, given that their global distribution is still subject to large uncertainties, very little is known about the seasonal and interannual variability of global lake water storage and how it impacts the global water cycle.
Most Land Surface Models (LSMs) that are run globally do not take into account lakes and therefore neglect their impact on the global water cycle. This assumption might lead to some significant uncertainties when closing the water budget. The study presented here aims to address this issue by using the Variable Infiltration Capacity (VIC) model, run at a global scale (Greenland and Antarctica excluded) over a 10-year time span (1998-2008). VIC has been run with and without its lake module activated and the change in storage for these different runs are compared among themselves and to available nadir altimeter satellite observations. These comparisons will allow us to give a rough estimate of the potential contribution of lakes to the variability of the global continental water budget and how it compares to the contribution of other terrestrial water storage components (like soil moisture).