



## **Signature of Asian Monsoon dynamics in the mass and energy balance of a Tibetan glacier**

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Changes in the Asian monsoon climate, and associated glacier changes, are predominant topics of current climate research. In this study we use a suite of three tools: direct field measurements from Zhadang Glacier on the southern Tibetan Plateau (5500-6000 m a.s.l.); a high-resolution mass balance model; and the numerical atmospheric model WRF. By combining these methods, the goal is to tie the physical processes which control glacier accumulation and ablation to various aspects of Asian monsoon dynamics (interannual and intraseasonal variability). Such approaches have high potential to improve our understanding of the link between Asian glaciers and the monsoon over multiple space-time scales. Even if these approaches (must) focus on rather short time spans due to the difficult data collection and the expense of merging interdisciplinary methods, they represent the basis for future research on both (i) deriving paleomonsoon dynamics from paleoglaciers; and (ii) better predicting future glaciation in our changing climate.