

Alpine Snow Cover in Kilometer-Scale Climate Simulations

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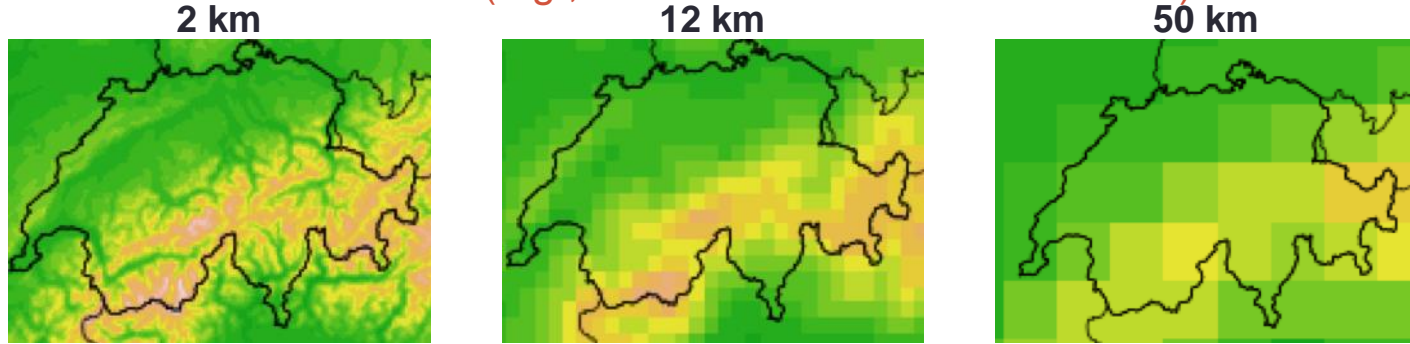
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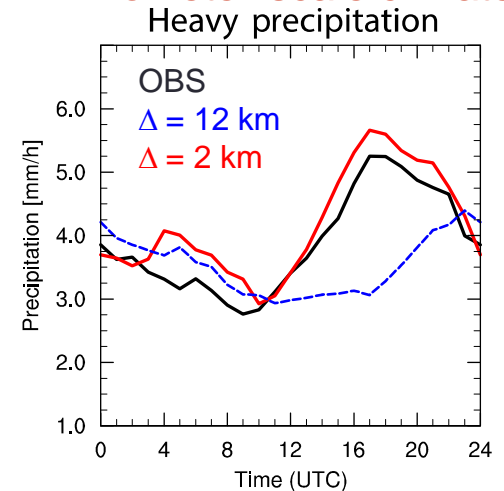
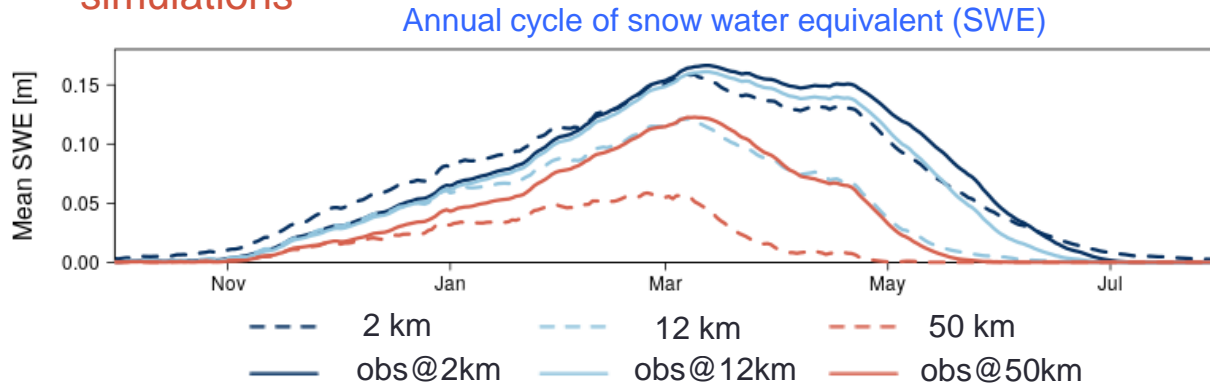
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- Use of high-resolution (kilometer-scale) simulations - better representation of topography, explicit representation of convection (e.g., rain showers and thunderstorm)



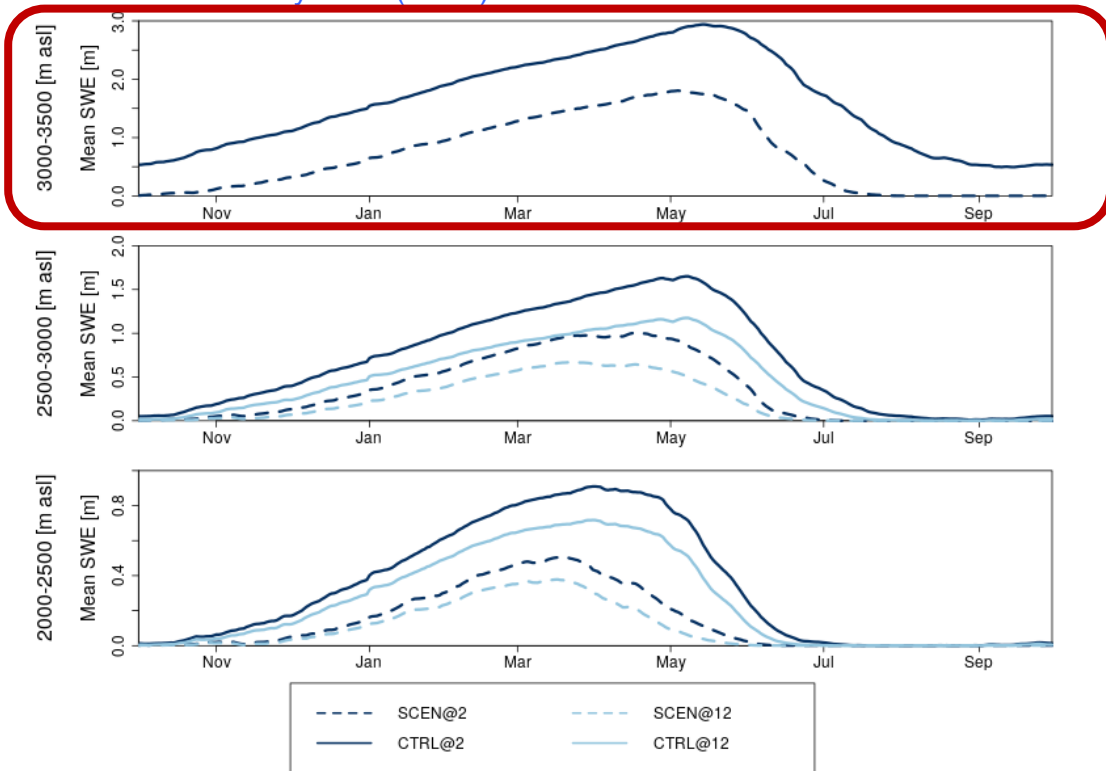
- Improved representation of snow cover, clouds and precipitation in kilometer-scale climate simulations



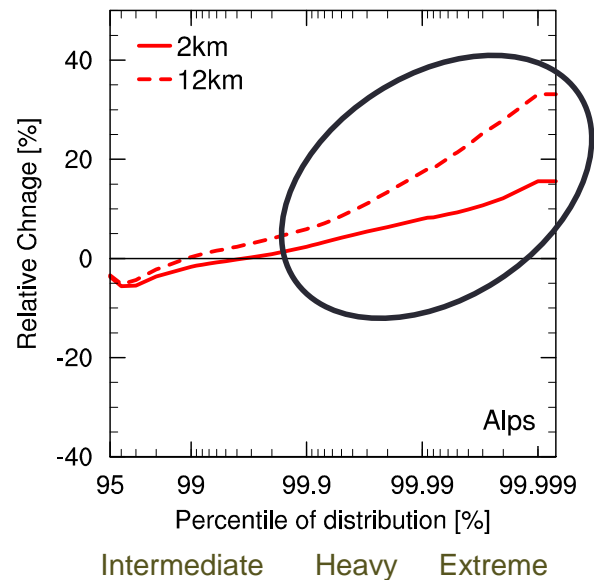
- How can we benefit from km-scale simulations in climate change simulations?

What new do we learn?

Annual cycle of (SWE) in control and scenario simulations



Projected changes in hourly precipitation



(Lüthi et al., 2019, Ban et al., 2019 submitted)