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Summertime hailstorms over Switzerland in surrogated climate change simulations

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The surrogated climate change approach was used for simulating the summer hailstorms over Switzerland at the end of the 21st century, supposing the RCP85 scenario. The changes of spatial and temporal distribution of simulated hailstorms in comparison with the current climate simulations were analyzed, as well as changes in the hailstone size and hailstorm footstep characteristics. The changes of extreme cases with large hailstones were also examined. Based on the assessment of the model performance in reproducing the current climate hailstorms, preliminary estimations of expected hailstorm frequency and intensity change have been performed for different regions of Switzerland.