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Projected changes in pyroconvective conditions in the Iberian Peninsula at the end of the 21st century

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Extreme wildfire events associated with strong pyroconvection have gained the attention of the scientific community and the society in recent years. Strong convection in the fire plume can influence fire behaviour, as downdrafts can cause abrupt variations in surface wind direction and speed that can result in bursts of unexpected fire propagation. Climate change is expected to increase the length of the fire season and the extreme wildfire potential, so the risk of pyroconvection occurrence might be also altered. Here, we analyse atmospheric stability and near-surface fire weather conditions in the Iberian Peninsula at the end of the 21st century to assess the projected changes in pyroconvective risk during favourable weather conditions for wildfire spread.