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Climate and environmental change at the last glacial-interglacial transition in Southern Africa: issues for current research

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Southern Africa is in a critical position with regard to the study of large-scale climate shifts during the Late Quaternary, being located at the boundary between tropical, sub-tropical and temperate climate systems, and also between the Atlantic, Indian and Southern Oceans. Today, the south-western part of the sub-continent receives precipitation mainly from westerly frontal systems in the winter (April to September), whereas the east and north of the region is dominated by summer precipitation from easterlies driven by the Inter-tropical Convergence Zone, between which is a corridor in which year-round precipitation occurs. By comparison with other regions of the world, there are few reliable quantified palaeoclimatic data records for the southern Africa for the last glacial cycle, and these are generally restricted to either the immediate vicinity of the Tropic of Capricorn or the south-west coastal zone, resulting in a large gap in palaeoclimatic records centred on Lesotho and SE South Africa, especially in the sub-tropical and temperate summer precipitation zone.

This poster presents a 'review of reviews', highlighting key findings derived from evidence-based studies and regional climate modelling experiments to examine the nature of climate and environmental changes that occurred in southern Africa at the switch from global glacial to interglacial climate phases. This poster will highlight major gaps in our current understanding, especially with regard to the identification of time-series of reliable quantified palaeo-temperature and palaeo-precipitation data through which to verify and refine regional climate models such as the PMIPII experiments.