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【105】The early Universe in a multiferroic

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Jumping from the expanse of galactic scales to land in the laboratory might seem a gargantuan task. Common to both, however, is the concept of symmetry breaking and in particular the formation of topological defects. This work looks at the formation of topological defects in multiferroic hexagonal manganites whose ferroelectric behavior enables the direct imaging of these defects. I also show how this material can be used to study the Kibble-Zurek model of topological defect formation in the early universe and give quantitative insights on the number of domains formed during the spontaneous symmetry breaking phase transition.

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