



# Numerical simulations of the Ising model on the Union Jack lattice

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This paper reviews the work of Wu and Lin on the Union Jack lattice Ising model. This model is of interest as it one of the few to display re-entrant phase transitions. Specifically we re-examine their result for the general anisotropic sublattice magnetisations, comparing these with the works of Vaks, Larkin and Ovchinnikov, and our own numerical simulations. We discuss the disagreements found in both sublattice predictions including non-zero antiferromagnetic results and a rotational variance. We will then suggest additional conditions and modified formulae that will allow valid results to be produced.

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