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Thermalisation of interacting bosons on a lattice

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Abstract –This paper is inspired by work done by Marcos Rigol et al. **??**, who showed numerically that a one-dimensional gas of hard-core bosons on an optical lattice (an integrable system) relaxes to an equilibrium state that is characterised by the Generalised Gibbs Ensemble (GGE). The GGE is a thermodynamic ensemble that has been extended to take into account all of the conserved quantities of a system. We explore the question of whether similar behaviour can be seen in smaller systems, which we can solve more exactly, where the strength of the interactions is increased to approach the hard-core limit.

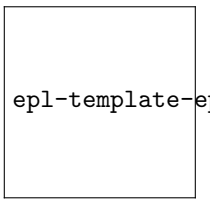

Fig. 1: Figure caption.

Table 1: Table caption.

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$$0 \neq 1 \tag{1}$$

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REFERENCES

[1] Author F., Author S. and Author T., *Some Rev. A*, **69** (1969) 9691.
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[3] Editor A. (Editor), *Some Book of Interest*, Vol. **9** (Publishing house, City) 1939, sect. A.