

Abstract Submitted
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Non-interacting Fermi gas in a magnetic quadrupole trap TO
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versity of Massachusetts Amherst, FRÉDÉRIC CHEVY, École Normale Supérieure,
CARLOS LOBO, University of Southampton — A non-interacting gas of spin po-
larised ${}^6\text{Li}$ Fermi gas in a magnetic quadrupole trap which is not in thermal equi-
librium can nevertheless show thermal signatures in some cases. This puzzling be-
haviour can be seen by measuring the doubly integrated momentum distribution
along a particular axis. This distribution can be extremely close to a Gaussian from
which we can extract a temperature. However, we show, using molecular dynamics
simulations that the temperature thus measured is generally different along different
axes. We provide a general explanation of this phenomenon based on ergodicity and
check it with further simulations.

To Chun Johnathan Lau
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