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**Cooling and Thermometry for Fermionic Atoms in an Optical Lattice** JEAN-SEBASTIEN BERNIER, TUNG-LAM DAO, LORENZO DE LEO, CORINNA KOLLATH, ANTOINE GEORGES, Centre de Physique Theorique - Ecole Polytechnique, FABRICE GERBIER, CHRISTOPHE SALOMON, Ecole Normale Supérieure, MICHAEL KOEHL, University of Cambridge — We propose a set of novel experimental tools to cool and measure the temperature of fermionic atoms loaded into an optical lattice. The proposed cooling method is based on spatial entropy modulation while the temperature detection scheme relies on Raman spectroscopy.

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