

Abstract Submitted
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Equation of State of a Strongly Interacting Atomic Fermi Gas¹

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MIT, UMASS AMHERST COLLABORATION — We present absorptive in-situ
imaging of an ultracold Fermi gas of Li-6 in the unitary regime. The low noise
density distribution in an external potential directly reveals the Equation of State
under the local density approximation. Regions of low density allow us to extract the
chemical potential and the temperature using the virial expansion of the equation of
state. The experimental results are compared to recent Monte-Carlo calculations.

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