

**Erratum: Momentum-Resolved Observation of Thermal  
and Quantum Depletion in a Bose Gas**  
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In this Letter, we were unaware of the presence of spin impurities (in the magnetic substate  $m_J = 0$ ) in the Bose-Einstein condensates (BECs) we analyzed. We therefore erroneously interpreted the data as if we had been dealing with the expansion of a pure BEC in the substate  $m_J = +1$ . Although we had underlined a series of caveats, this led us to associate the observed  $1/k^4$  tails in the momentum distribution with the quantum depletion of the BEC.

In later experimental developments, we realized that our BECs contained a small number of spin impurities, and that their effect can be substantial even at very low concentrations. Indeed, in [1], we demonstrate that the observed algebraic tails are not a manifestation of the quantum depletion of the BEC (since the tails disappear when we remove the impurities), but rather result from the interaction between the spin impurities and the BEC during the out-of-equilibrium expansion dynamics.

[1] H. Cayla, P. Massignan, T. Giamarchi, A. Aspect, C. I. Westbrook, and D. Clément, Observation of  $1/k^4$ -Tails after Expansion of Bose-Einstein Condensates with Impurities, *Phys. Rev. Lett.* **130**, 153401 (2023).