Abstract Submitted
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Observation of Non-Gaussian Statistics and Levy Flights in Nitrogen Vacancy Centers DAVID LEVONIAN, Harvard Univ, MICHAEL GOLDMAN, University of Maryland, KRISTIAAN DEGREVE, Harvard, SWATI SINGH, Williams College, DANIEL TWITCHEN, MATTHEW MARKHAM, Element Six Ltd, MIKHAIL LUKIN, Harvard — A nitrogen-vacancy center can be used as a probe of the interacting ^{13}C nuclear spins in a diamond crystal. Under the right conditions, its behavior can be described as a random walk with step sizes drawn from a distribution without a well-defined mean or standard deviation. Its behavior is then described by Levy statistics, providing an opportunity to study Levy statistics in a well understood system.

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