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Title:	Spin liquid close to a quantum critical point in Na ₄ Ir ₃ O ₈
Authors:	Singh, Yogesh (/jspui/browse?type=author&value=Singh%2C+Yogesh)
Keywords:	Three-dimensional Quantum spin liquid Thermal conductivity
Issue Date:	2013
Publisher:	American Physical Society
Citation:	Physical Review B - Condensed Matter and Materials Physics, 88(22).
Abstract:	Na ₄ Ir ₃ O ₈ is a candidate material for a three-dimensional quantum spin liquid on the hyperkagome lattice. We present thermodynamic measurements of heat capacity C and thermal conductivity κ on high-quality polycrystalline samples of Na ₄ Ir ₃ O ₈ down to T = 500 and 75 mK, respectively. Absence of long-range magnetic order down to T = 75 mK strongly supports claims of a spin-liquid ground state. The constant magnetic susceptibility χ below T ≈ 25 K and the presence of a small but finite linear- T term in C (T) suggest the presence of gapless spin excitations. Additionally, the magnetic Grüneisen ratio shows a divergence as T → 0 K and a scaling behavior, which clearly demonstrates that Na ₄ Ir ₃ O ₈ is situated close to a zero-field QCP.
Description:	Only IISERM authors are available in the record.
URI:	https://journals.aps.org/prb/abstract/10.1103/PhysRevB.88.220413 (https://journals.aps.org/prb/abstract/10.1103/PhysRevB.88.220413) http://hdl.handle.net/123456789/3010 (http://hdl.handle.net/123456789/3010)
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