

Abstract Submitted
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Quantum Antiferromagnet on a Hyper-kagome Lattice: Applications to $\text{Na}_4\text{Ir}_2\text{O}_8$ MICHAEL LAWLER, ARUN PARAMEKANTI, HAE YOUNG KEE, YONG BAEK KIM, University of Toronto, ASHVIN VISHWANATH, University of California, Berkeley — Motivated by the intriguing low temperature paramagnetic behaviour recently observed in the Mott insulator $\text{Na}_4\text{Ir}_2\text{O}_8$, we study the quantum antiferromagnet Heisenberg model on a hyper-kagome lattice. Employing a large N generalization of the Schwinger boson description of spin systems uniquely suited to frustrated lattices, we find various closely competing phases for the ground state. Implications of our results for $\text{Na}_4\text{Ir}_2\text{O}_8$ are also discussed.

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