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POS-G63 – The ground state of the disordered triangular lattice

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The simplest example of geometric frustration is found in the two-dimensional triangular lattice. While the ground state of the Heisenberg model in this lattice is known to be Néel ordered, some recent low-temperature experiments on various triangular lattice compounds have unambiguously demonstrated the presence of short-range ordering, continuous excitation spectra, and non-trivial spin dynamics. These studies highlight the roles played by frustration and quenched disorder present in laboratory samples to engender a competition between prospective spin liquid and spin glass ground states. Inspired by these observations, this presentation focuses on a set of results that clarify the nature of the true ground state of the disordered triangular lattice.

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