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A Kagome Map of Spin Liquidsx[1] KARIM ESSAFI, OWEN BENTON, LUDOVIC D. C. JAUBERT, Okinawa Inst of Sci Tech — Competing interactions in frustrated magnets prevent ordering down to very low temperatures and stabilize exotic highly degenerate phases where strong correlations coexist with fluctuations. We study a very general nearest-neighbour Heisenberg spin model Hamiltonian on the kagome lattice which consist of Dzyaloshinskii-Moriya, ferro- and antiferromagnetic interactions. We present a three-fold mapping which transforms the well-known Heisenberg antiferromagnet (HAF) and XXZ model onto two lines of time-reversal Hamiltonians. The mapping is exact for both classical and quantum spins, *i.e.* preserves the energy spectrums of the HAF and XXZ model. As a consequence, our three-fold mapping gives rise to a connected network of quantum spin liquids centered around the Ising antiferromagnet. We show that this quantum disorder spreads over an extended region of the phase diagram at linear order in spin wave theory, which overlaps with the parameter region of Herbertsmithite $ZnCu_3(OH)_6Cl_2$. At the classical level, all the phases have an extensively degenerate ground-state which present a variety of properties such as ferromagnetically induced pinch points in the structure factor and spontaneous scalar chirality which was absent in the original HAF and XXZ models.

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