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Recent topics on two frustrated spin compounds

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Experiments on two compounds are introduced. One is Ag_2MnO_2 that contains an S-2 triangular lattice and shows unique phase transitions possibly associated with spin chirality degree of freedom expected for the classical XY spin model on the triangular lattice. The other is volborthite $\text{Cu}_3\text{V}_2\text{O}_7(\text{OH})_2 \cdot 2\text{H}_2\text{O}$ presenting an S-1/2 slightly distorted kagome lattice. This is obviously a quantum spin system: neither long-range order nor spin gap has been observed down to ~ 50 mK, much lower than $J \sim 100$ K. Surprisingly, very recent experiments under magnetic fields have found that there are at least three “transitions” in the ground state.