CMP Seminar

Professor Bella Lake

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Monday October 3rd, 2022 @ 4:10 p.m. Via Zoom

Experimental investigation of quantum spin liquid candidate $PbCuTe_2O_6$

Unlike conventional magnets where the magnetic moments are partially or completely static in the ground state, in a quantum spin liquid they are in collective motion down to the lowest temperatures. The importance of this state is that it is coherent and highly entangled without breaking local symmetries. The spin liquid state is expected to occur in highly frustrated magnets such as those consisting or triangular and tetrahedral arrangements of magnetic ions. This state is however very rare with only a few Hamiltonians known theoretically to support it and only a few experimental realizations in existence.

This talk will discuss the investigation of the new compound $PbCuTe_2O_6$. Neutron scattering and other experimental data will be presented alongside theoretical calculations which together show that the properties of $PbCuTe_2O_6$ are consistent the quantum spin liquid state.

Zoom Link ~ https://msu.zoom.us/j/91306465685

Meeting ID: 913 0646 5685

Passcode: 760462

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