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Contribution ID: 3181    Type: **Poster not-in-competition (Graduate Student) / Affiche non-compétitive (Étudiant(e) du 2e ou 3e cycle)**

## **(POS-15) $^{19}\text{F}$ NMR investigation of barlowite kagome lattice Heisenberg antiferromagnet $\text{Zn}_{1-x}\text{Cu}_{3+x}(\text{OD})_6\text{FBr}$ ( $x \sim 0.05, 0.5, \text{ and } 1$ )**

*Tuesday 7 June 2022 17:40 (2 minutes)*

The Quantum Spin Liquid is a novel magnetic ground state, characterized by quantum entanglement without long range magnetic order. Kagome lattice Heisenberg antiferromagnet is a prime candidate of quantum spin liquid owing to highly frustrated spin  $\frac{1}{2}$ 's arranged on a corner sharing triangle geometry. We report  $^{19}\text{F}$  NMR investigation of a series of "barlowite" kagome material  $\text{Zn}_{1-x}\text{Cu}_{3+x}(\text{OD})_6\text{FBr}$  with  $x \sim 0.05, 0.5, \text{ and } 1$  based on the inverse Laplace transform analysis on the spin-lattice relaxation rate  $1/T_1$ .

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**Session Classification:** DCMMP Poster Session & Student Poster Competition (8) | Session d'affiches DPMCM et concours d'affiches étudiantes (8)

**Track Classification:** Technical Sessions / Sessions techniques: Condensed Matter and Materials Physics / Physique de la matière condensée et matériaux (DCMMP-DPMCM)