Charge transport in the organic doped spin-liquid candidate, \( \kappa-(\text{ET})_4\text{Hg}_{2.89}\text{Br}_8 \), under Pressure YUJI SUZUKI, JUN IBUKA, University of Tokyo, HIROSHI OIKE, RIKEN, KAZUYA MIYAGAWA, University of Tokyo, HIROMI TANIGUCHI, Saitama University, KAZUSHI KANODA, University of Tokyo — The family of layered organic conductors \( \kappa-(\text{ET})_2X \) plays an important role in the study of Mott physics, which is a major subject in the condensed matter physics. While most \( \kappa-(\text{ET})_2X \) compounds have half-filled bands and antiferromagnetic nature, the title compound \( \kappa-(\text{ET})_4\text{Hg}_{2.89}\text{Br}_8 \) (\( \kappa\text{-HgBr} \)) is an exceptional doped system which is supposed to be the only doped spin-liquid candidate up to the present. The transport study under controlled pressure, which enables us to investigate this intriguing system with tuning the correlation strengths, revealed that \( \kappa\text{-HgBr} \) shows a transition or crossover from a non-Fermi liquid to a Fermi-liquid as pressure increases.\(^1,2\) In the present work, we have carried out the detailed transport measurement under pressure for \( \kappa\text{-HgBr} \) with static magnetic fields applied normal to the conducting layers. I will discuss the in-plane and out-of-plane charge transport in normal and superconducting states in this doped spin-liquid candidate with variable electron correlation.


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