

第518回基礎科学セミナー

日時：6月19日(水) 13:00~15:00

場所：先端基礎研究交流棟1階 第1会議室

講演者： Taisuke HATTORI 氏

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演題： ^{59}Co NMR/NQR on
ferromagnetic superconductor UCoGe

Ferromagnetic (FM) superconductors have attracted much interest, since exotic spin-triplet superconductivity has been anticipated. Among FM superconductors, UCoGe [1] is one of the most readily explored experimentally, because of its high superconducting transition temperature ~ 0.7 K at ambient pressure.

From precise angle-resolved NMR and Meissner measurements we found that the magnetic field along the c axis strongly suppresses the Ising FM fluctuations along c axis and that the superconductivity is observed in the limited field region where the FM spin fluctuations are active. The observed novel results are interpreted by the model calculation in which the longitudinal FM spin fluctuations tuned by $H||c$ drive the superconductivity, and thus the pairing is in the spin-triplet state.

I will summarize the ^{59}Co NQR / NMR results and discuss the spin-triplet scenario.

[1] N. T. Huy et al., Phys. Rev. Lett. 99 (2007) 067006.

[2] T. Hattori et al., Phys. Rev. Lett. 108 (2012) 066403.

<問い合わせ先>
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