

 MLF Experimental Report	提出日 Date of Report
課題番号 Project No. 2009A0007 実験課題名 Title of experiment Correlation between Magnetism and Superconductivity in Iron-Oxypnictide Superconductors 実験責任者名 Name of principal investigator Ryosuke Kadono 所属 Affiliation KEK-IMSS	装置責任者 Name of responsible person Y. Miyake 装置名 Name of Instrument/(BL No.) D1 実施日 Date of Experiment June 14, 16, 2009

試料、実験方法、利用の結果得られた主なデータ、考察、結論等を、記述して下さい。(適宜、図表添付のこと)
 Please report your samples, experimental method and results, discussion and conclusions. Please add figures and tables for better explanation.

1. 試料 Name of sample(s) and chemical formula, or compositions including physical form.
Iron-arsenide, $\text{Ca}(\text{Fe},\text{Co})\text{AsF}$, with Co concentration of 0.125.

2. 実験方法及び結果 (実験がうまくいかなかった場合、その理由を記述してください。)
Experimental method and results. If you failed to conduct experiment as planned, please describe reasons.
Fractional yield of superconducting and magnetic phases were respectively determined by conventional muon spin rotation/relaxation measurements under zero and transverse field conditions. The deduced yields were perfectly in line with those obtained previously for other Co concentrations, which supports our argument for the occurrence of insular superconductivity in Co-doped iron pnictides.

2. 実験方法及び結果(つづき) Experimental method and results (continued)