

実験報告書様式(一般利用課題・成果公開利用)

(※本報告書は英語で記述してください。ただし、産業利用課題として採択されている方は日本語で記述していただいても結構です。)

	提出日 Date of Report 2013/02/15
課題番号 Project No. 2012A0098 実験課題名 Title of experiment Study of magnetism in perovskite manganite superlattice by polarized neutron reflectrometry 実験責任者名 Name of principal investigator Kubota Masato 所属 Affiliation JAEA	装置責任者 Name of responsible person Takeda Masayasu 装置名 Name of Instrument/(BL No.) Sharaku BL17 実施日時 Date and time of Experiment 10/25 9:00 ~ 11/2 18:00

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. [(LaMnO ₃) ₂ /(SrMnO ₃) ₂] superlattices

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. We mount the thin film onto a sample holder and put it into cryostat, combined with a superconducting magnet. Wavelength of neutron beam with $2.4 < \lambda < 8.4 \text{ \AA}$ was used. Superconducting magnet was installed at beamline BL17 in the previous day. Some of experimental days assigned for us were used as a kind of commissioning for the initial installation of the superconducting magnet.

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

Besides, we were unfortunately trouble in the movement of the sample stage.

In detail, the sign of the transformation movement for the sample stage was assigned in an opposite direction to an adequate direction, which guides us to a wrong alignment of the sample.