


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 2013/02/19
課題番号 Project No. 2012A0002 実験課題名 Title of experiment Spin wave in Nd ₂ CuO ₄ -- Determination of the magnetic exchange coupling of the parent compound 実験責任者名 Name of principal investigator Mengshu Liu 所属 Affiliation University of Tennessee	装置責任者 Name of responsible person Ryoichi Kajimoto 装置名 Name of Instrument/(BL No.) BL01 実施日時 Date and time of Experiment May 29 to June 2

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. Nd ₂ CuO ₄
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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. The instrument of 4SEASONS is a very well built time of flight machine. However, the experiment was not as I expected. We didn't observe any magnetic signal. I am not sure of the reason, but I suspect it is a high background issue. Since the bottom of our sample holder is made of stainless steel, not aluminum, which should be fine if the sample is far away from the bottom. However, the required distance is very short at 4SEASONS, so I adjusted the height to a very low level. Neutrons maybe scattered from the steels which caused high background, and buried the magnetic signal.
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