


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。)

 <b>MLF Experimental Report</b>	提出日 Date of Report
課題番号 Project No. 2015A0064 実験課題名 Title of experiment Total Cross-Section Measurement for Gd-155 and 157 実験責任者名 Name of principal investigator Atsushi Kimura 所属 Affiliation Japan Atomic Energy Agency	装置責任者 Name of responsible person Yosuke Toh 装置名 Name of Instrument/(BL No.) BL04 実施日 Date of Experiment 2015/3/6~2016/3/22

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.
Gd-157 Foil 30mm * 30mm * 200nmt (6 Sheets) 30 mm x 30mm x 2μmt (12 Sheets)  Gd-155 Foil 30mm * 30mm * 200nmt (6 Sheets) 30 mm x 30mm x 2μmt (12 Sheets)

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.
Total cross section measurements for Gd-155 and 157 were performed with the neutron time-of-flight method at the ANNRI in MLF/J-PARC using isotopically enriched Gd samples. The measurements were performed with Li-glass detectors placed at the flight length of 29 m.  Pulse-high spectrum and raw TOF spectrum is shown in Figure 1. Data analysis to obtain the cross section is currently undergoing.

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

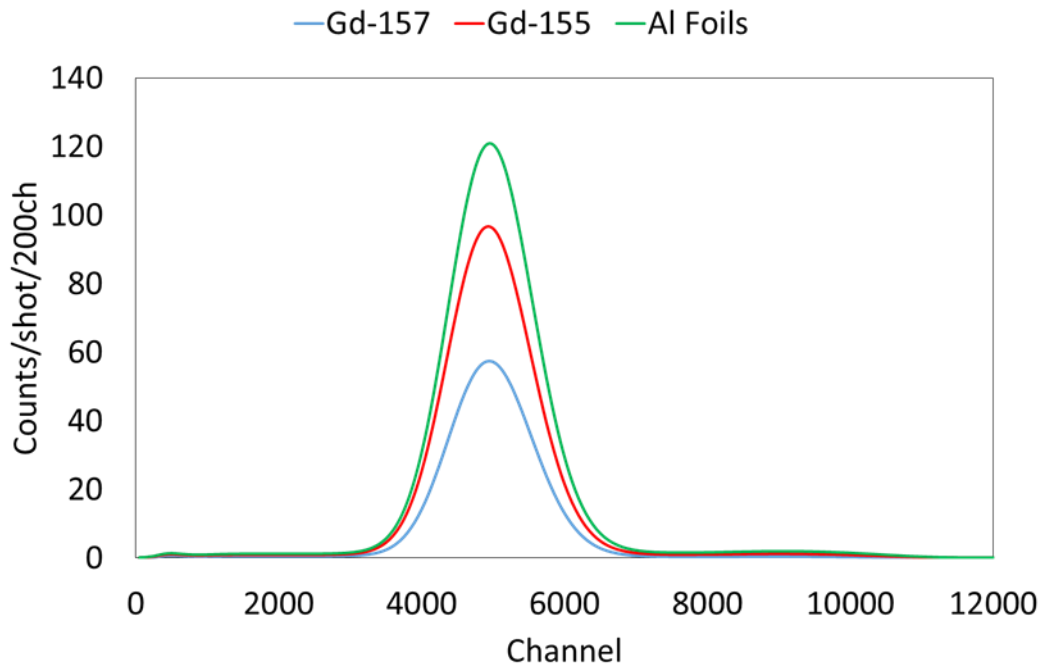


Figure 1. Pulse height spectrum of the Li-6 Detectors.

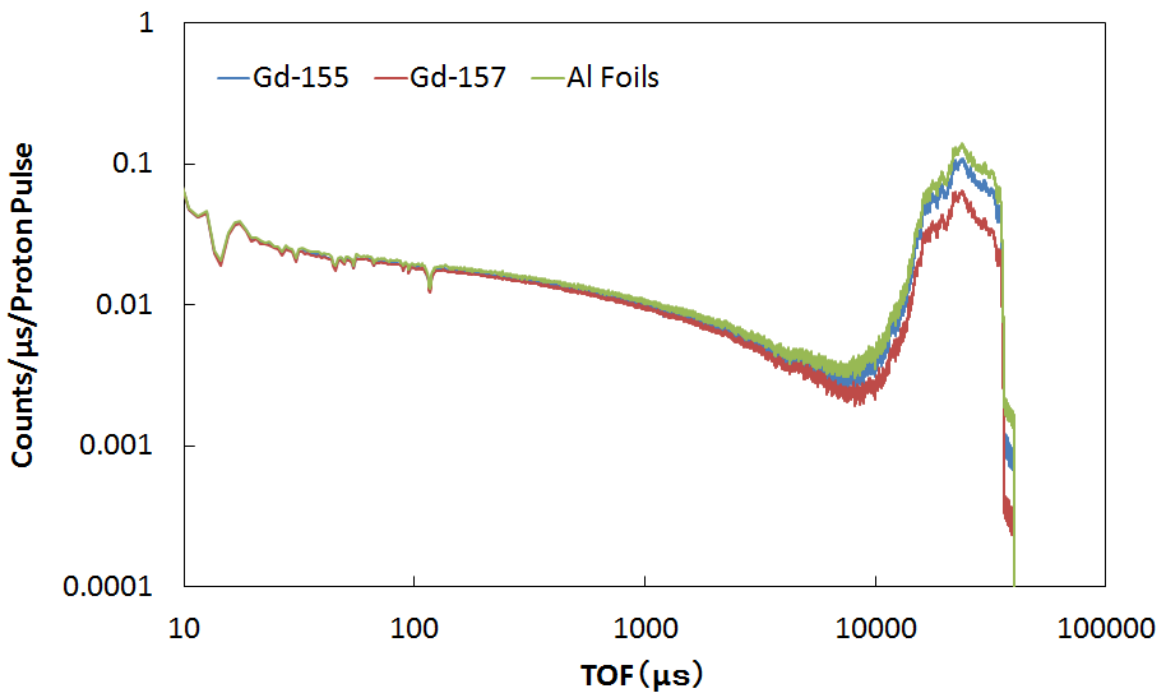


Figure 2 Raw TOF spectrum.