CROSS TOKAI **Experimental Report** J-PARC	承認日 Date of Approval 2013/03/23 承認者 Approver TAKEDA Masayasu 提出日 Date of Report 2014/10/29
課題番号 Project No. 2012B0155 実験課題名 Title of experiment Development of Angular-Divergent Neutron Reflectometry using Elliptically Figured Focusing Mirrors 実験責任者名 Name of principal investigator Dai Yamazaki 所属 Affiliation J-PARC Center	装置責任者 Name of responsible person Masayasu Takeda 装置名 Name of Instrument/(BL No.) BL17 実施日 Date of Experiment 2012/11/29-12/1

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.

No sample was measured.

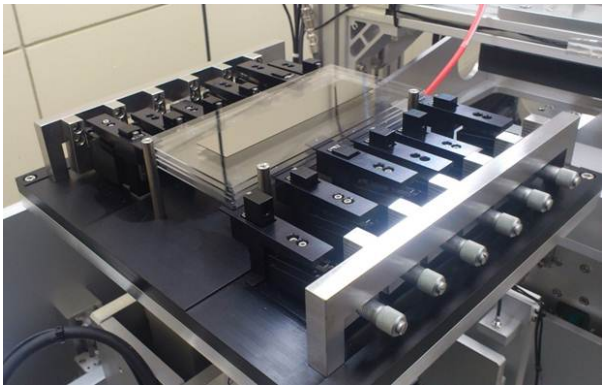
Only performance tests of focusing mirrors were carried out.

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.

Using a 2-dimensional RPMT detector, we tried to observe the neutron beam focused by a stacked focusing supermirror which had already been obtained in the experiment 2012B0144, which was carried out just before this experiment (2012/11/21-28). A photo of the stacked focusing supermirror and the focusing geometry of the mirror are shown in Fig. 1. The focusing geometry is based on ellipses each of which prescribes a single supermirror in the stack and shares their two focal points. Neutron beam is narrowed with the slit S1 at the first focal point, reflected by the stacked mirror and focused to the surface of the RPMT detector at the second focal point.

However, unfortunately, we could not make the RPMT detector work with low signal-to-noise ratio and perform measurements in this machine time of 2012B0155.

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



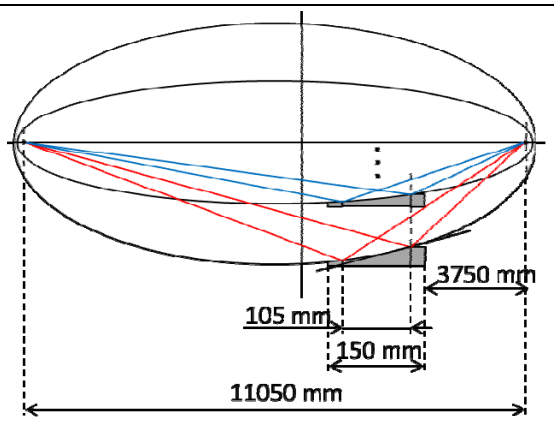


Fig.1 (Left Panel) Stacked focusing supermirror. (Right Panel) Focusing geometry using the stacked focusing supermirror.