

滞在型研究員報告書

Activity Report for the NAOJ Visiting Fellows Program

所 属 (Institution)	Beijing Normal University
氏 名 (Name)	Yuefan Guo
研究課題名 (Research subject)	Squeezed light experiment
滞在期間 (Period of stay)	年 月 日～ 年 月 日 2016 08 22 2016 10 05
受入責任者氏名 (NAOJ host researcher)	Raffaele Flaminio

1. 滞在型研究員として国立天文台滞在中に行った活動について簡単にお書きください。

(Summarize your activities during the stay using the NAOJ Visiting Fellows Program.)

My activity has been carried out in the context of the project for producing frequency-dependent squeezing to prepare the future upgrade of KAGRA.

I have worked mainly on the experiment of squeezed light, this time my work is based on testing the SHG(Second harmonic generation) housing. At first, I connected all the wires for thermal control and thermal display. Then try to test the PZT part of the SHG housing.

2. 今回滞在型研究員として得られた成果について簡単にお書きください。

(Summarize your research products from the stay.)

1. The first part of my work here, I put the thermal sensor into the SHG housing, connected the wires of the thermal sensor and Peltier with the thermal controller. Successfully monitored and controlled the temperature inside the housing. But since the temperature we need is much higher than the room temperature(65°C), in this period we cannot reach that temperature with the existing design of the housing, so according to the circumstance of this step, we sent the housing back to redo the design.

Also I connected the wire of the PZT with the PZT driver, then we can use the PZT driver to control the length of the SHG cavity. Then with the simple Michelson Interferometer which used in TAMA for visitor presentation, I check the system working condition and also get the transfer function of it.

Also I helped with the glue work of the BS suspension mirror, glue the wire bricker and the magnet onto the mirror.

3. この制度について何か御意見がありましたら、お書きください。

(Please provide any comments about this program.)

This is my second time in GWPO of NAOJ with the Visiting Fellows Program, so everything is much more familiar than last time. The staffs from the general office and from GWPO office both gave me a lot of help in many aspects. It is really a precious opportunity to be part of this program, and really good experience working in NAOJ.