

## CO12-1 New Project for Improving the Utilization Activity on KUR and HL in KURRI under Strategic Promotion Program for Basic Nuclear Research

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**INTRODUCTION:** A new project for improving the utilization activity on KUR and HL in KURRI starts under the Nuclear energy initiative, Research reactor and hot laboratory utilization program, “improvement of utilization on KUR and HL in KURRI”. It is 2.5 years program.

**OUTLINE:** The outline of this program is shown in Fig1. It has five main research items. 1) Neutron fluence evaluation system for BNCT: Two dimensional real time neutron fluence evaluation system will be developed. The measurement precision will be 5%, though the present one is 10-20%. 2) Total micro-element analysis system: A

short-lived neutron activation analysis and a prompt- $\gamma$  ray analysis systems will be developed to increase suitable elements for micro-element analysis. A X-ray fluorescence analysis system and ICP-AES will be also introduced to improve the user utility. 3) Neutron imaging for two phase flow void ratio database for nuclear safety research: Though the neutron flux of KUR is low, a sample condition which is high electric power two phase flow system can make it special. 4) Material irradiation test device: A Tensile tester with high temperature sample controller and an electron microscope with sample tensile and temperature controller will be prepared. 5) Health physics:

**CONCLUSION:** KUR will restart soon and the operation until 2016 is assured. We will try to make an ideal model of small neutron source(s) in a university.

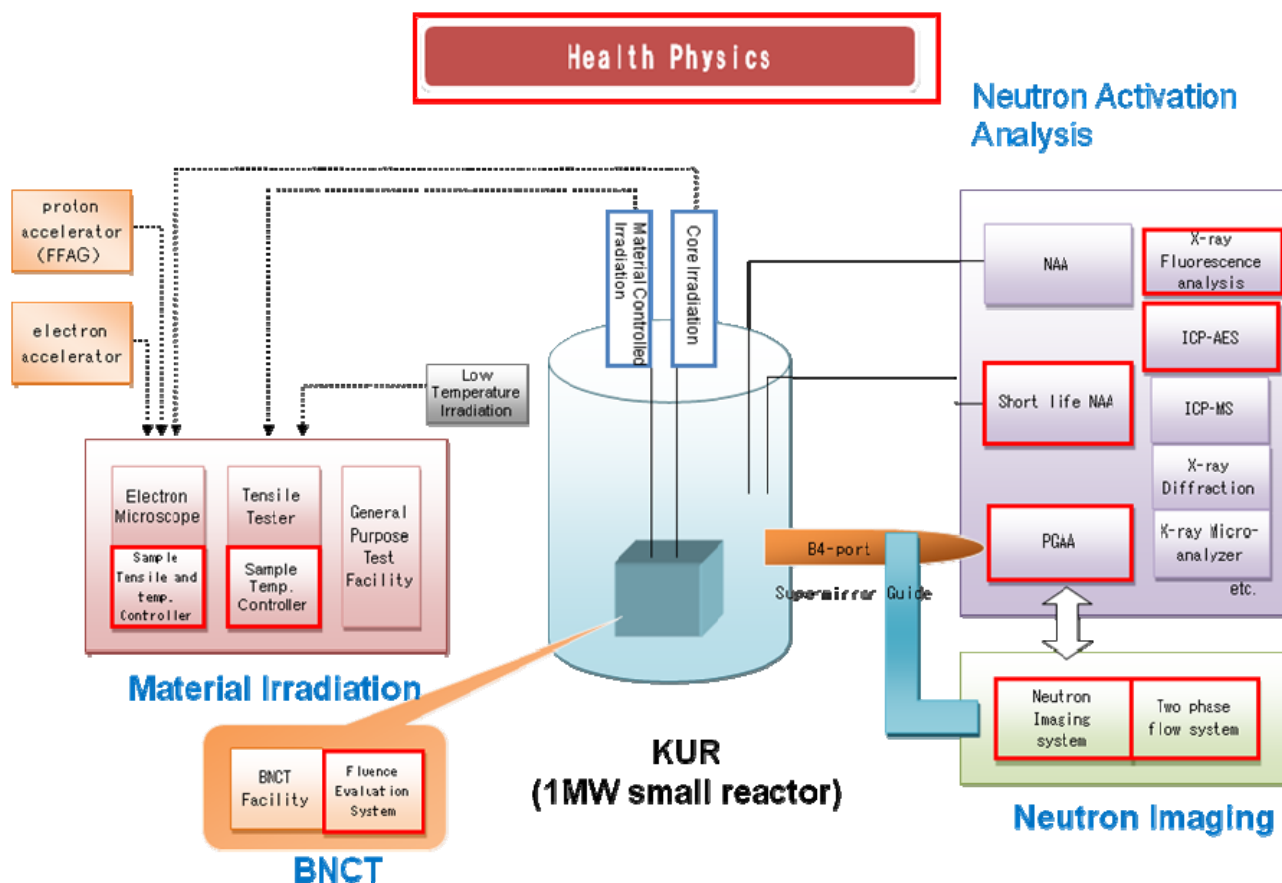


Fig. 1. Outline of the new program “Improvement of Utilization on KUR and HL in KURRI”

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