Contribution ID: **58** Type: **Oral**

Development of TPF-1 Plasma Focus for Education

Wednesday 24 May 2017 16:30 (15 minutes)

The plasma focus is a device that uses high voltage and electromagnetic force to induce plasma generation and acceleration, in order to cause nuclear reactions. Radiation of various types (X-ray, gamma ray, electrons, ions, neutrons) can be generated using this method during the pinch phase, thus making the plasma focus able to serve as a radiation source. Material testing, modification, and identification are among the current applications of the plasma focus. Other than being an alternative option to isotopic sources, the plasma focus, which requires multidisciplinary team of personnel to design, operate, and troubleshoot, can also serve as an excellent learning device for physics and engineering students in the fields including, but not limited to, plasma physics, nuclear physics, electronics engineering, and mechanical engineering. This work describes the parameters and current status of Thai Plasma Focus 1 (TPF-1) and the characteristics of the plasma being produced in the machine using a Rogowski coil.

Author: Dr PICHA, Roppon

Co-authors: PROMPING, Jiraporn; CHANNUIE (TUNG), Jatechan; POOLYARAT, Nopporn; SANGAROON, Siriyaporn (Mahasarakham University); TRAIKOOL, Tipwimol

Presenter: Dr PICHA, Roppon

Session Classification: A4: Plasma and Nuclear Fusion

Track Classification: Plasma and Ion Physics, Nuclear and Radiation Physics