Contribution ID: **325** Contribution code: **S3 Accelerators and Synchrotron Radiations** Type: **Poster Presentation**

Diagnostics of electron temperature and plasma density by OES and Langmuir probe in linear helicon plasma device

High-density linear plasma devices can generate plasmas, which have similar properties to that of the Tokamaks[1,2]. But, they have a much less complex structure and fewer components. The linear devices are much more cost-effective than the tokamaks for plasma material interaction studies.
In this work, results of plasma diagnostics by optical emission spectroscopy(OES) and Langmuir probe for electron temperatures and plasma densities will be presents. The electron temperatures and plasma densities depend on gas flow rate, gas pressure and rf power. The physics of their dependence will be discussed.
Reference
1. Caughman et al., Plasma source development for fusion-relevant material testing, Journal of Vacuum Science & Technology A: Vacuum, Surfaces, and Films 35, 03E114 (2017)
2. R. H Goulding et al., Progress in the Development of a High Power Helicon Plasma Source for the Materials Plasma Exposure Experiment, Fusion Science and Technology, (2017)

Author: Mr KAEWPAWONG, Suttirak (1Plasmas and electromagnetic waves research laboratory, Walailak University)

Presenter: Mr KAEWPAWONG, Suttirak (1Plasmas and electromagnetic waves research laboratory, Walailak University)

Session Classification: Poster: S3 Accelerators and Synchrotron Radiations

Track Classification: Accelerators and Synchrotron Radiations