Contribution ID: **361** Type: **Poster**

Design of the optical emission spectroscopy diagnostic system and preliminary experimental results in RF negative ion source

Wednesday 7 June 2017 13:40 (2 hours)

The development of radio frequency (RF) negative ion sources for neutral beam systems requires knowledge of the plasma parameters. Optical emission spectroscopy (OES) is a non-invasive and in situ diagnostic tool, so optical emission spectroscopy diagnostic system are designed to be applied to the measurements of the RF negative ion source, and diagnostic principle and simplified analysis methods for plasma parameters are introduced. A preliminary results of a variety of plasma parameters are obtained based on the part of the local thermodynamic equilibrium (PLTE) state. When the discharge power is 25kW and the discharge operates pressure is 0.5Pa, the electron temperature is about 0.83eV and the positive hydrogen ion density is 2.7×1018/m3.

Eligible for student paper award?

Yes

Authors: LIU, zhi-min; WANG, yan; YAN, jing-yan; LIANG, li-zhen; HU, chun-dong

Presenter: WANG, yan

Session Classification: W.POS: Poster Session W

Track Classification: Diagnostics and instrumentation