Contribution ID: **618** Type: **Invited Speaker / Conférencier invité**

Magnetic Fluctuations Measurements in Magnetized Confinement Plasmas

Tuesday 16 June 2015 09:15 (30 minutes)

Both the magnetic fluctuations and electron density fluctuations are important parameters for fusion-oriented plasma research since fluctuation-driven transport dominates in high temperature magnetic confinement devices. The far-infrared laser systems are employed to measure both the Faraday rotation and electron density simultaneously with time response up to a few microseconds in reversed filed pinch, tokamaks. Fast time response combined with low phase noise also enables us to directly measure magnetic and density fluctuations. The various MHD activities such as sawtooth crash, tearing reconnection and fast particle modes have been observed in various magnetic confinement devices. The high temporal resolution of polarimetry provides excellent platform to study internal magnetic fluctuations and magnetic fluctuation induced transport. The work is supported by US Department of Energy.

Author: Dr DING, Weixing (UCLA)

Presenter: Dr DING, Weixing (UCLA)

Session Classification: T1-8 Special session to honor Dr. Akira Hirose I (DPP) / Session speciale en l'honneur de Dr. Akira Hirose I (DPP)

Track Classification: Plasma Physics / Physique des plasmas (DPP)