Contribution ID: **359**   Type: **Poster**

Development of I&C main functions for ITER VUV spectrometers and prototype test at KSTAR

Wednesday 7 June 2017 13:40 (2 hours)

The main I&C (Instrumentation and Control) functions of the ITER VUV (Vacuum Ultraviolet) spectrometer have been prototyped based on ITER CCS(CODAC Core System) and tested at KSTAR. The ITER VUV spectrometer consists of VUV core, divertor VUV and VUV edge, which are expected to use a common VUV detector model, Andor BI(back-illuminated)-CCD(Charge-Coupled Device). While many other auxiliary functions are required for the full plant I&C system, the core functions of the plant I&C system for ITER VUV spectrometer are to acquire VUV spectra from VUV detectors and to trigger the data acquisition at desired timings. A C++ fast controller software as well as an EPICS ioc has been developed on ITER CCS to implement this core function of data acquisition with triggering. Andor Linux SDK(Software Development Kit) was utilized for the implementation of data acquisition from the envisaged VUV detector while NI-SYNC library was utilized for the generation of triggering signal with PXI-6683H timing board. The developed prototype has been tested with the envisaged VUV detector and optical convertor modules at KSTAR. The developed codes will be utilized for the automated VUV data acquisition during 2017 KSTAR campaign.

Eligible for student paper award?

No

Authors: AN, YoungHwa; Dr SEON, Changrae (National Fusion Research Institute); Mrs CHOI, Jihyun (National Fusion Research Institute); Dr CHEON, MunSeong (National Fusion Research Institute); PAK, Sunil (National Fusion Research Institute); Dr LEE, H.G. (National Fusion Research Institute); Dr LEE, Woong-ryol (National Fusion Research Institute)

Co-authors: Mr MARTIN, Vincent (Bertin Technologies); SIMROCK, Stefan; Dr BARNSLEY, Robin (ITER); Dr BERNASCOLLE, Philippe (ITER Organization)

Presenter: AN, YoungHwa

Session Classification: W.POS: Poster Session W

Track Classification: Diagnostics and instrumentation