

[Topics of technical discussion on the PPPL SPA system and interfaces]

(as suggested by Dr. Yeong-Kook Oh)

- SPA power supply
 - Specification of SPA power supply
 - AC voltage, DC voltage/current rating, duty cycle
 - coil impedance including busline
 - Circuit diagram and key components
 - Protection circuitry and grounding scheme of SPA
 - Noise reduction methods
 - Control interfaces between PCS and SPA power supply

- Patch panel (Connection box / terminals of the RWM coil)
 - Design guidelines for the connectors, buslines, or switches
 - Busline cross-section and consideration of temperature rise
 - Insulation requirements under high frequency electric lines
 - Other considerations and experience

- Grounding System
 - Grounding method of NSTX-U
 - Grounding method of power supplies
 - Grounding method of diagnostic system
 - Noise reduction methods for noise generated by SPA (special noise filters?)

- Motor-Generator (MG) operation and its effect on the operation of other systems
 - Specification of MG system
 - Power, voltage, motor speed, operation duty cycle
 - MG operation
 - Operation range of MG voltage, frequency
 - Influence of transformer inrush current when opening Circuit Breaker
 - Considerations in MG operation

o NSTX-U Facility Tour

- NSTX-U facility
- SPA Power System (SPA, busline, connection box, RWM coil, etc.)
- MG system
- Grounding System

o NFRI delegation

- Dr. Yeong-Kook OH (head of delegation, director of Fusion Engineering Research Center, NFRI)
- Mr. Jaehoon CHOI (Electric Engineer and Team leader of power supply engineering team for KSTAR)
- Mr. Jong Kook JIN (Electric Engineer, of power supply engineering team for KSTAR)
- Mr. Hyun Sik AHN (Electric Engineer, of power supply engineering team for KSTAR)
- Mr. Kun Su LEE (Mechanical Engineer, of structural engineering team for KSTAR)