

# **Japan-Korea Workshop on Physics and Technology of Heating and Current Drive**

**Monday, February 17, 2025 - Tuesday, February 18, 2025**

**National Institute for Fusion Science, Room 801 Building No.1**

## **Scientific Program**

Feb. 17th

10:15 - 10:45 Registration

10:45 - 10:55 Opening

Session 1 10:55 - 12:10 Chair: Sonjong Wang (KFE)

10:55 – 11:20

"Status of LHD ECH system for next campaign and related topics", Masaki Nishiura (NIFS)

11:20 – 11:45

"Study of Microwave Transmission Mode Content in KSTAR ECH transmission line from Measured Field Intensity", Ajay Kumar Pandey (KFE) -online-

11:45 – 12:10

"Effect of vertical space of vacuum vessel on formation of closed flux surfaces by ECH", Masaki Uchida (Kyoto Univ.) -online-

12:10 – 13:15 Lunch Time

Session 2 13:15-14:55 Chair: Hiroe Igami (NIFS)

13:15 – 13:40

"Recent activity in dual frequency (142/208 GHz) gyrotron development and transmission line system", EunMi Choi (UNIST)

13:40 – 14:05

"External magnetic field effect and correction coil design for the ITER gyrotrons", Satoru Yajima (QST)

14:05 – 14:30

"Non-inductive plasma ramp-up using 8.56 GHz ECH system on QUEST"  
Takahiro Yamaguchi (Kyushu Univ.)

14:30 – 14:55

"Result of ECRH Operation in the integrated commissioning phase and the progress towards the initial research phase on the JT-60SA", Hibiki Yamazaki (QST)

Break

14:55 – 15:15

Session 3 15:15-16:55 Chair: Masaki Nishiura (NIFS)

15:15 – 15:40

"Status and recent experimental results of KSTAR NBI system", SeulChan Hong (KFE). -online-

15:40 – 16:05

"Negative Ion Production Characteristics of Two-Region Arc Plasma (TRAP) Ion Source", Kihyun Lee (KAERI). -online-

16:05 – 16:30

“Oscillation of negative ion beamlet and effect on beam focusing for negative-NBI”, Kenichi Nagaoka (NIFS)

16:30 – 16:55

“Study of Beam Trajectory in KSTAR Neutral Beam Injector using Beamlet-Based Model”, Byoung Seung Kim -online-

Feb. 18th

Session 4-1 9:30-10:45 Chair: EunMi Choi (UNIST)

9:30 – 9:55

“Hybrid simulation of Alfvén Eigenmodes due to multiple fast ions in the Large Helical Device”, Ryosuke Seki (NIFS)

9:55 – 10:20

“Simultaneous Estimation of Edge Plasma Density Profiles and Heating Beam Properties via Bayesian Inference and Gaussian Process Regression in the KSTAR H-BES System”, Jaewook Kim (KFE)

10:20 – 10:45

“Estimation of Electron Cyclotron Plasma Heating Profiles Based on Ray Tracing Simulation Data”, Jiho Park (KFE) -online-

10:45 - 11:05 Break

Session 4-2. 11:05-11:55

11:05 -11:30

“Kinetic full wave analysis of electron cyclotron waves using integral form of dielectric tensor”, Atsushi Fukuyama (Kyoto Univ.)

11:30 – 11:55

“Observation of non-thermal RF radiations excited during external heating”, Hiroe Igami (NIFS)

11:55 – 13:00 Lunch Time

Session 5 13:00-14:15 Chair: Tetsuo Seki (NIFS)

13:00 – 13:25

“Non-inductive start-up experiment with various lower-hybrid launch scenarios on TST-2”, Naoto Tsujii (Univ. Tokyo)

13:25 – 13:50

“Development of a Lower Hybrid Fast Wave Antenna and Low Power Coupling in KSTAR Plasmas”, Jong Gab Jo (KAERI) -online-

13:50 – 14:15

“Report on the helicon current drive in KSTAR and the expected performance in Korean DEMO reactor”, Sonjong Wang (KFE)

14:15 – 14:30 Closing

14:30 – 15:30 Tour: LHD experiment hall & heating equipment room