



ICALEPCS 2015

International Conference on Accelerator
& Large Experimental Physics
Control Systems

Status of the control system of the PAL-XFEL

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Mini-Oral for MOM306



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PAL-XFEL (2015. 7. 4)



0.1-nm Hard X-ray 10-GeV XFEL

- **Project Period: 2011 ~ 2015**
- **Total Budget: 400 M\$**
- **Accelerator Length: 1.11 km**



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Klystron & Modulator Gallery

- PAL-XFEL Control Covers:
 - EPICS Control System
 - Embedded EPICS IOCs
 - High Level Control
 - Event Timing System
 - Beam Synchronous Acquisition
 - RF Synchronization System
 - Machine Interlock System



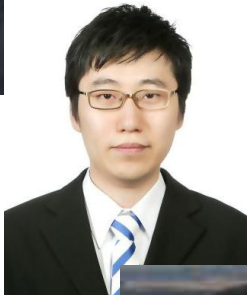
Linac Tunnel

<i>Parameter</i>	<i>Nominal Value</i>
FEL Radiation Wavelength (nm)	0.1
Beam Energy (GeV)	10
Slice Emittance (mm-mrad)	0.5
Beam Charge (nC)	0.2
Peak Current (kA)	3.0
Repetition Rate (Hz)	60
Electron Source	Photo-cathode RF Gun
Linac Structure	S-band Normal Conducting



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- Future Work
 - Commissioning of the PAL-XFEL
 - Stabilization of the PAL-XFEL
 - Upgrade of Control System
- PAL-XFEL Control Group
 - Changbum Kim
 - Geon-Yeong Mun
 - Soungyoul Beak
 - Dong Cheol Shin
 - Byoung Ryul Park
 - Jihwa Kim
 - Woul-woo Lee

