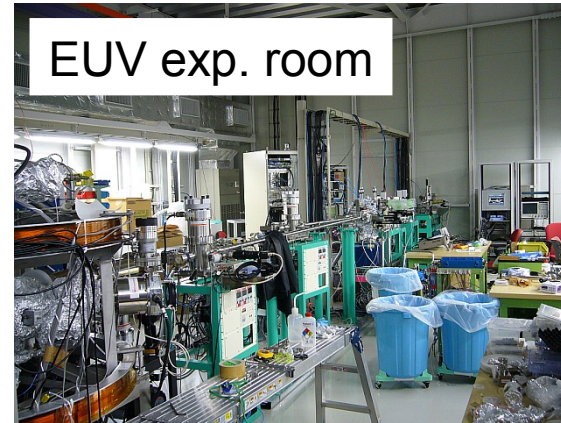
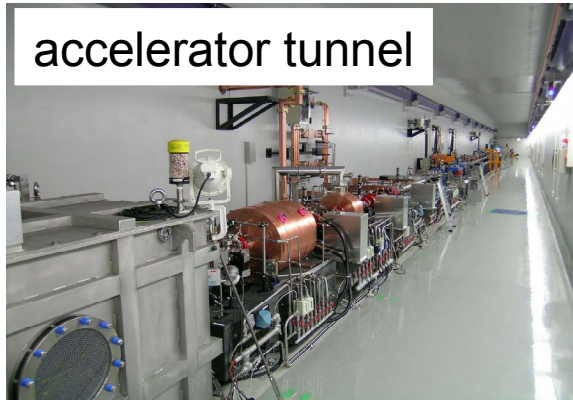


# Low Level RF and Timing System for XFEL/SPring-8

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## SCSS test accelerator



## construction of XFEL building



see you on Thursday **THP104**

# XFEL/SPring-8

SPring-8 Compact SASE Source

$\lambda=0.1\text{nm}$  with 8GeV

facility Length  $\sim 700\text{m}$

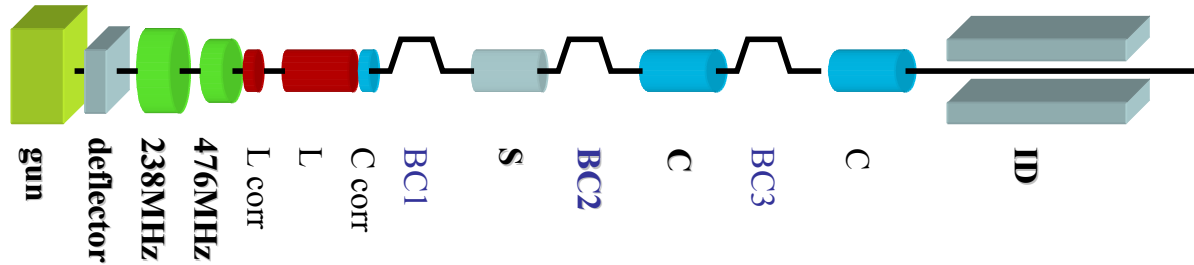
[ low emittance gun ] + [ high gradient acceleration ] + [ in-vacuum undulator ]

$0.6\pi$  mm mrad

35MV/m FR101 inagaki

high bunch-compression ratio

sensitive to phase & amp. fluctuation of cavities



# test accelerator

$\lambda=50\text{nm}$  with 250eV

facility length  $\sim 70\text{m}$

Stability (238MHz)

phase 0.02deg rms

amplitude  $3E-4$  rms

Jitter of beam arrival time

46fs rms

Stable SASE saturation

amp. jitter < 10% rms

