

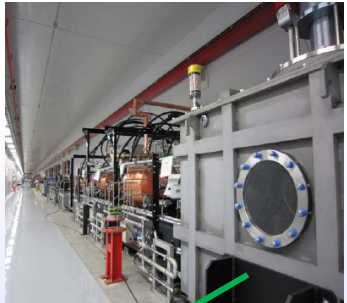
# Radiation Safety Interlock System for SACLA (XFEL/SPring-8)

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Poster Reference WEMMU011

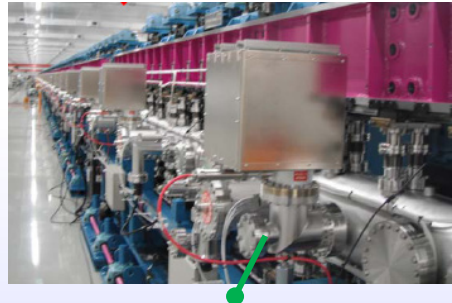
# Overview of SACLA



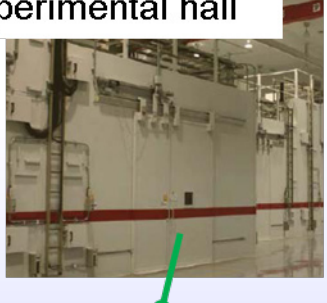
GUN



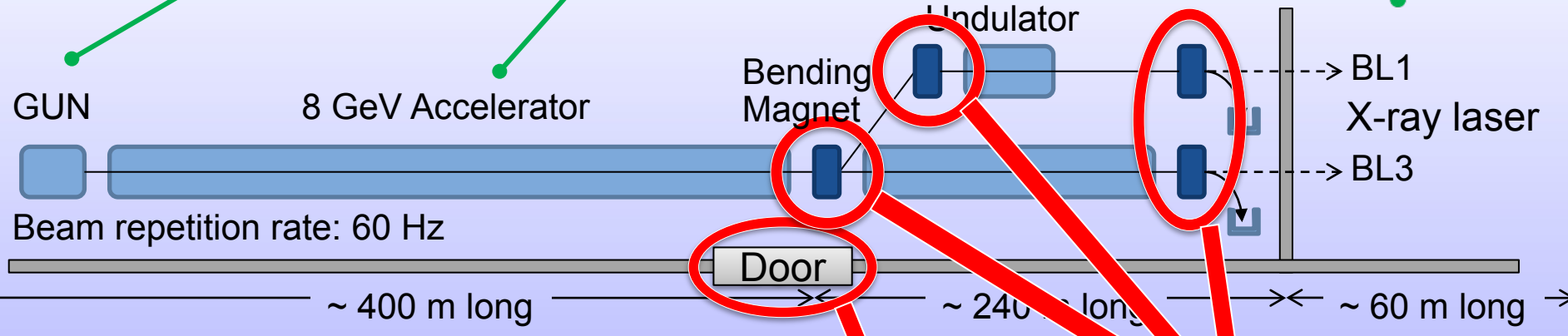
8 GeV Accelerator



Undulator



Experimental hall



Beam repetition rate: 60 Hz

~ 400 m long

~ 240 m long

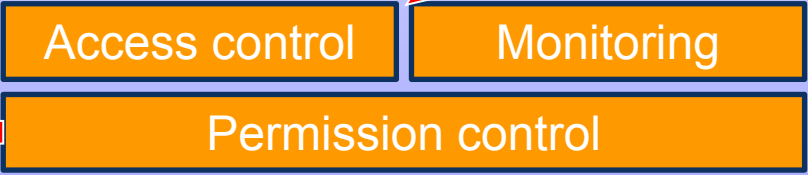
~ 60 m long

Klystron gallery



GUN, Beam chopper, 73 RFs

Accelerator systems (~ about 400 m long)



Radiation Safety Interlock System

# Radiation Safety Interlock System

## Requirements

- **Response time within 16.6 ms**, because beam repetition rate is 60 Hz.
- Permission transmission :
  - Long distance transmission,
  - Many accelerator systems

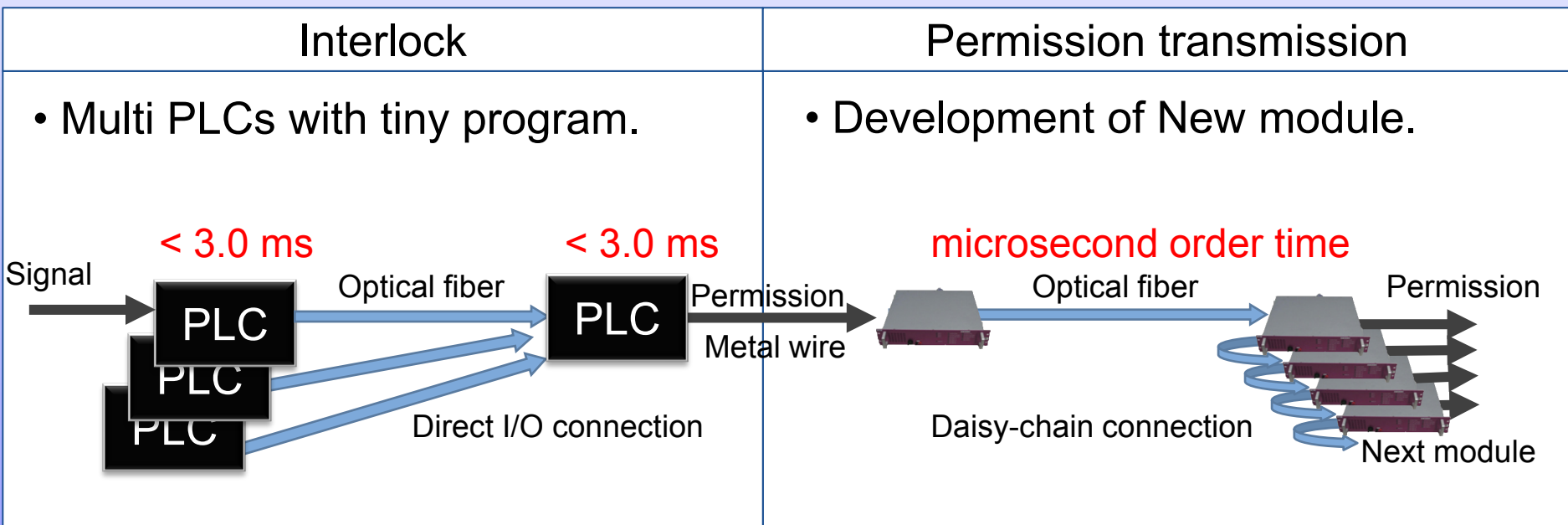


- PLC-based system
  - Reliability, Stability

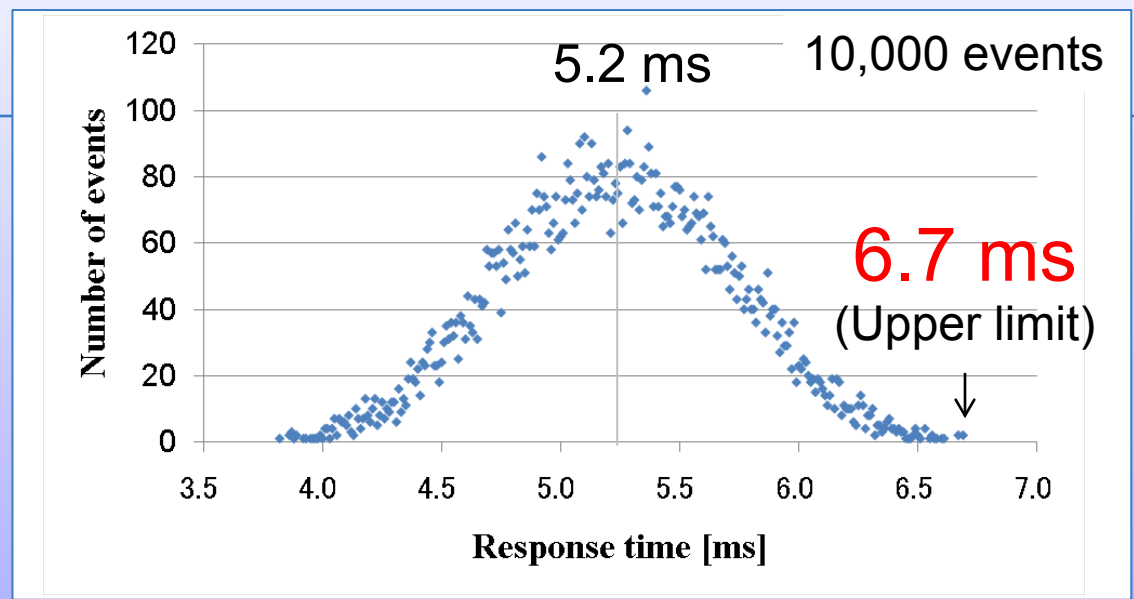
However,



- PLC network is slow.



# Total Response Time



< 16.6ms



Please come and see my poster: **WEMMU011**