

DELIVERY RECORD

Client: Laboratory of Advanced Science and Technology for
Industry (LASTI), University of Hyogo

Facility: NewSUBARU

Location: Hyogo, Japan

1 October 2018

 **MITSUBISHI HEAVY INDUSTRIES MECHATRONICS SYSTEMS, LTD.**

Machinery Systems Sales Department

MHIMS0115008

- 1. OVERVIEW**
- 2. SHORT UNDULATOR**
- 3. LONG UNDULATOR**
- 4. OPTICAL KLYSTRON**
- 5. 8-TESLA SUPERCONDUCTING WIGGLER**

1. OVERVIEW

List of Main Supplies

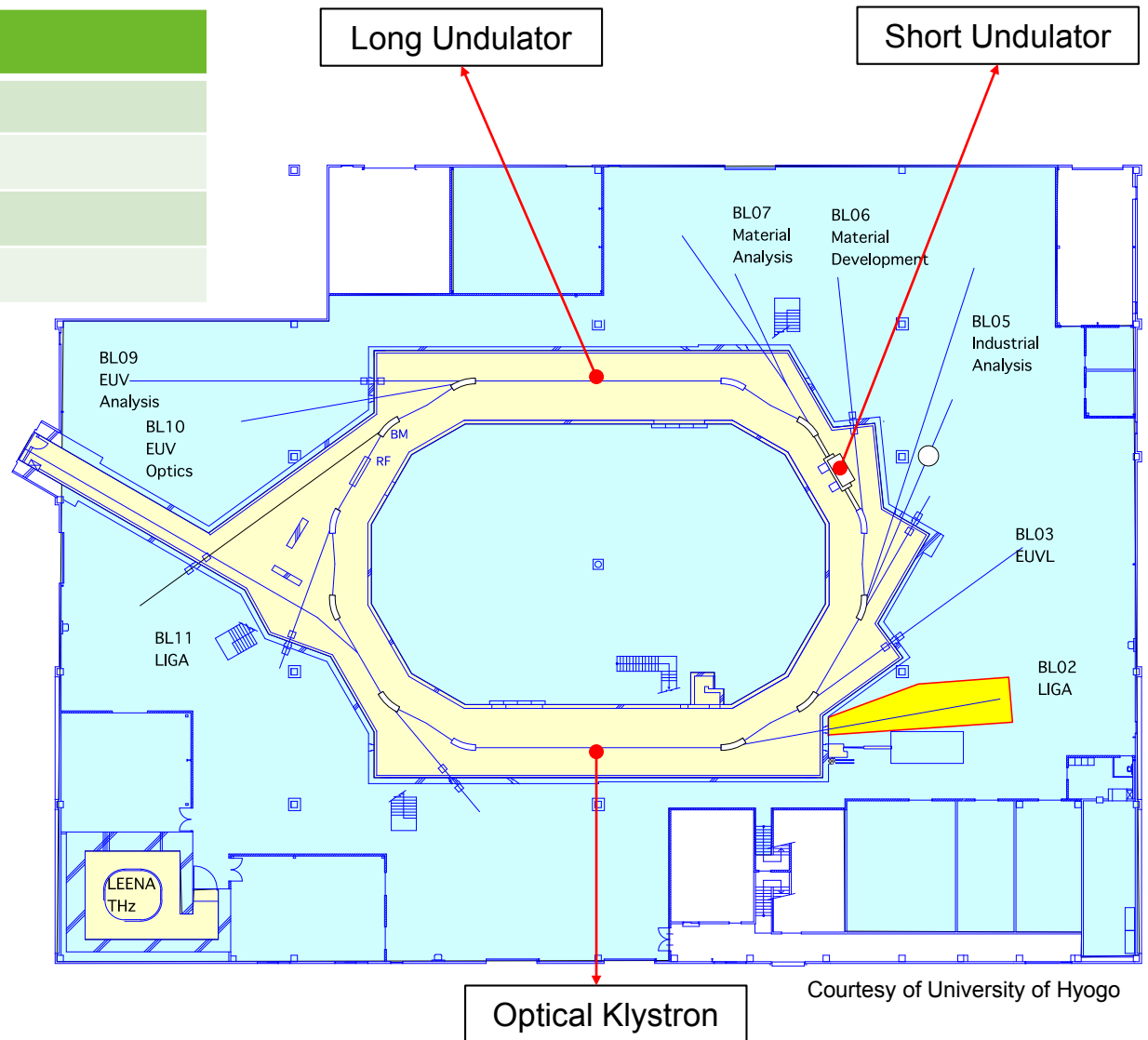
Long Undulator

Short Undulator

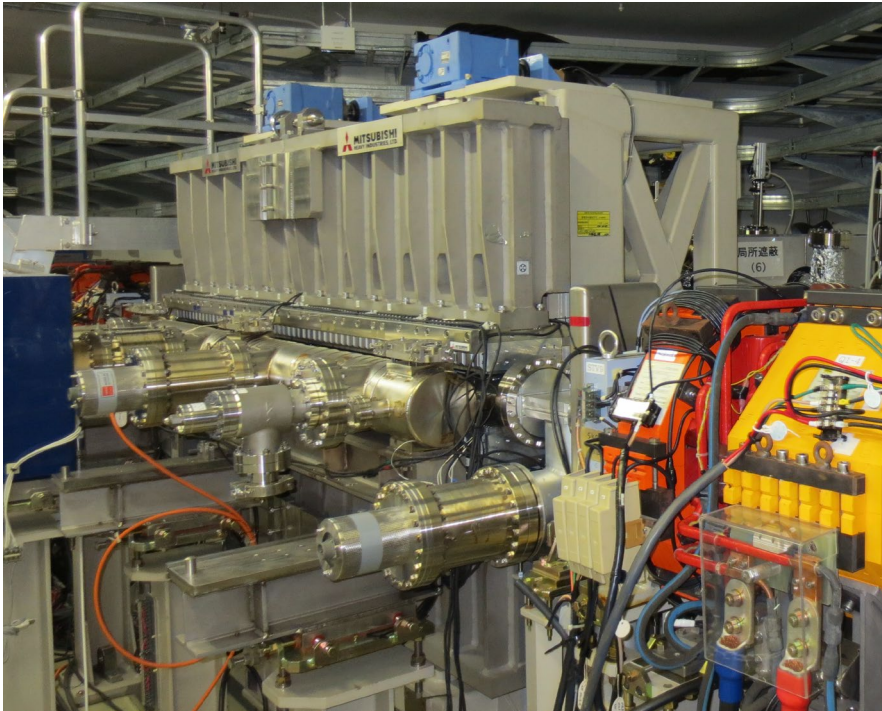
Optical Klystron

8-Tesla Superconducting Wiggler ⁽¹⁾

⁽¹⁾ Currently uninstalled.



2. SHORT UNDULATOR



Main Parameters

Type	Halbach
Permanent Magnet	NdFeB
Period	76mm
Period Number	30
Total Length	2.28m
Minimum Gap	25mm
Magnetic Field	0.75T
K Parameter (Kmax)	5.3

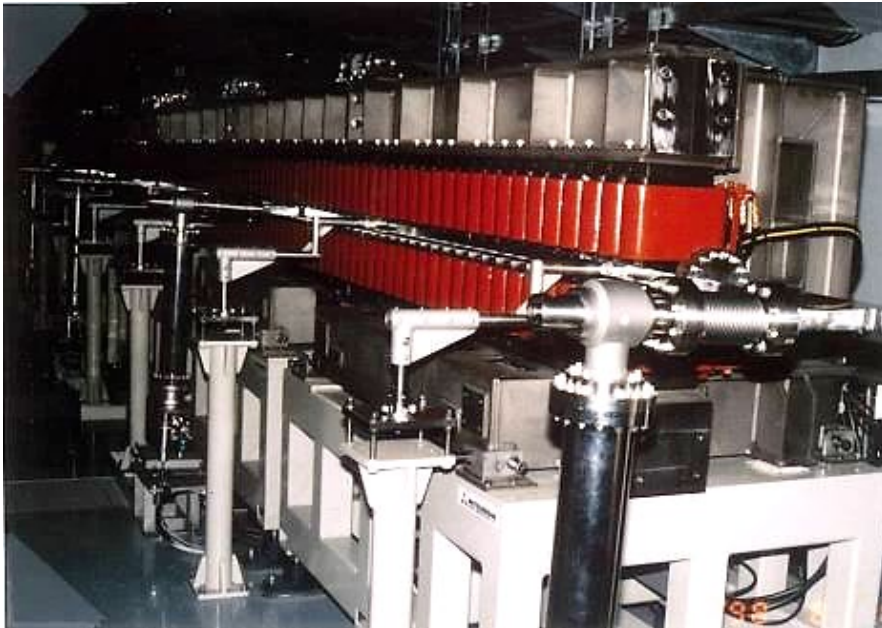
3. LONG UNDULATOR

Main Parameters

Type	Halbach
Permanent Magnet	NdFeB
Period	54mm
Period Number	200
Total Length	10.8m
Minimum Gap	25mm
Magnetic Field	0.49T
K Parameter (Kmax)	2.5



4. OPTICAL KLYSTRON



Main Parameters

Type	Variable Period Electromagnet
Period	160mm / 320mm
Period Number	32.5 x 2 / 16.5 x 2
K Parameter (Kmax)	4.0 / 11.3
Total Length	10.92m
Magnetic Field	0.77T

Excitation Power Source for Optical Klystron



5. 8-TESLA SUPERCONDUCTING WIGGLER

Main Parameters

Coil Type	Race-track, Hybrid
Pole Number	3
Superconductor	Nb ₃ Sn / NbTi
Coil Cooling	4K Liquid Helium
Cooling Type	Re-condensable Bath Cooling
Peak Magnetic Field	8.22T



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