

Construction Status of Hadron Experimental Hall

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KEK: High Energy Accelerator
Research Organization,

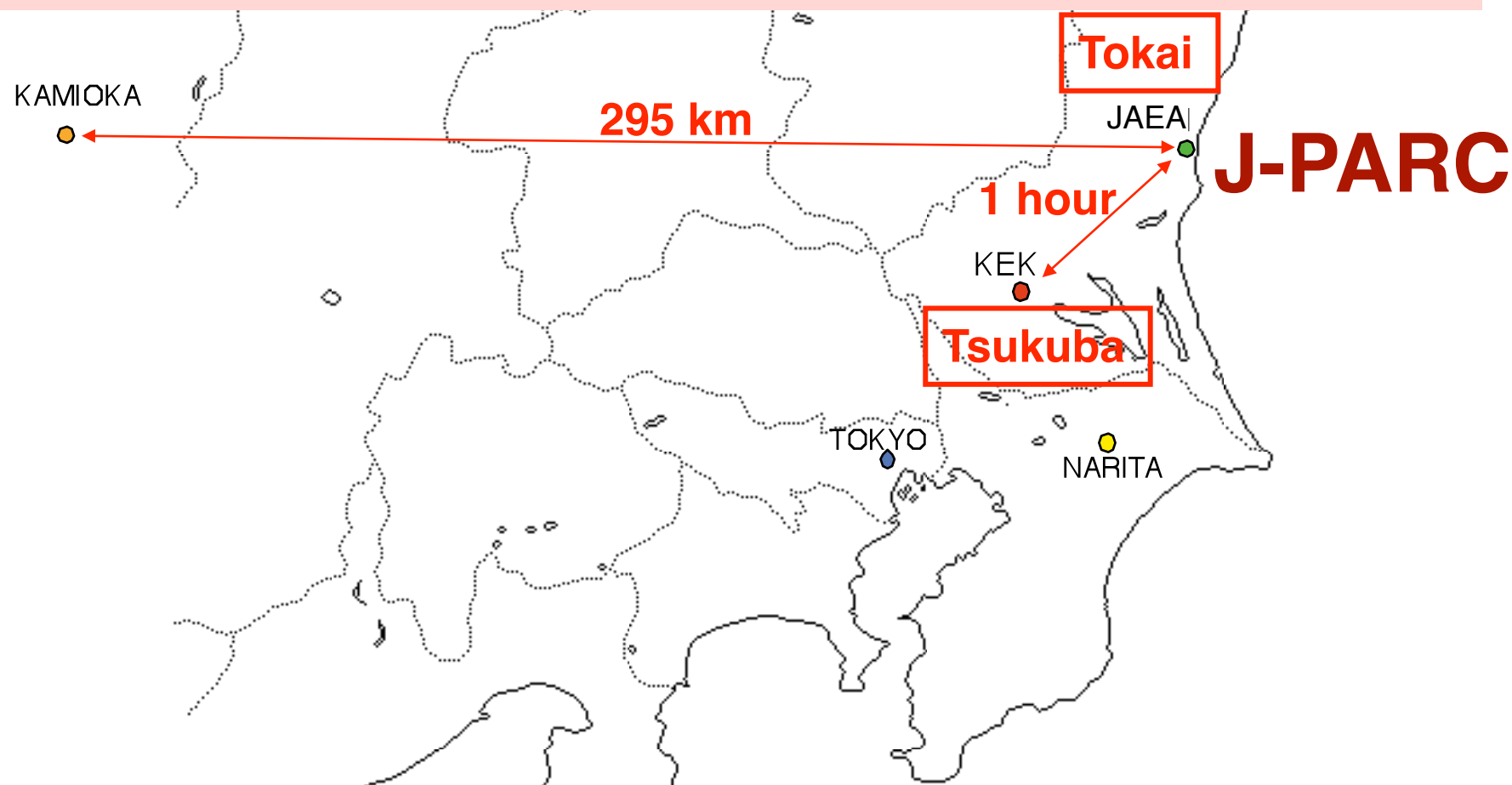
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Location of J-PARC at Tokai



**J-PARC = Japan Proton Accelerator
Research Complex**



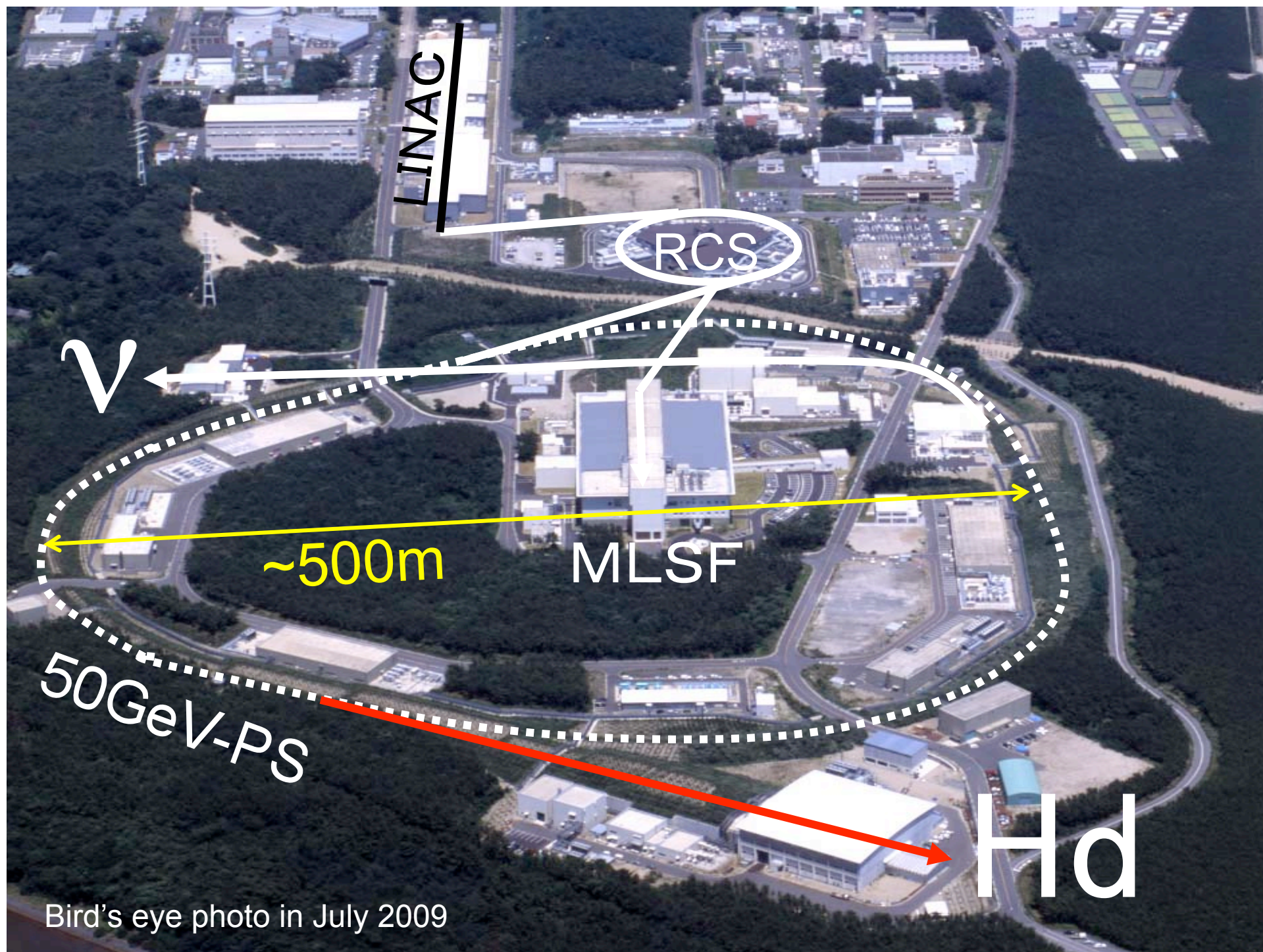


Bird's eye photo in July, 2009

Hadron Facility of J-PARC

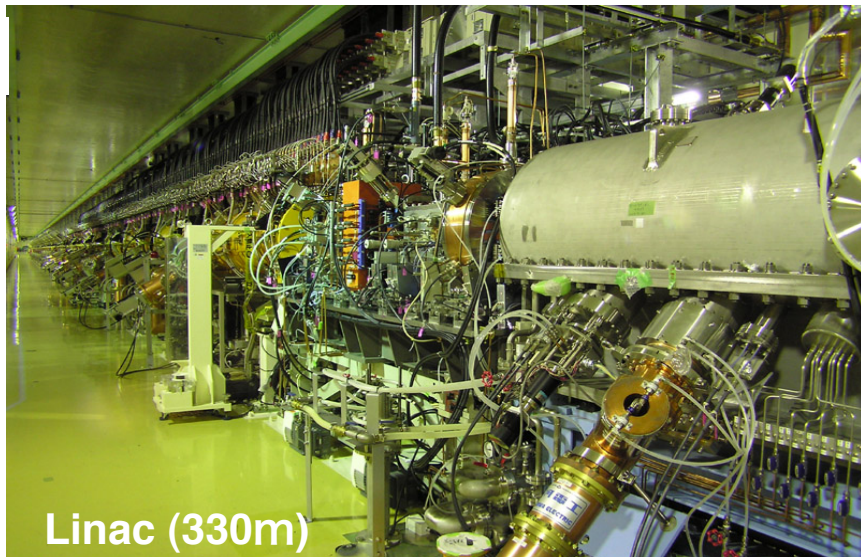


Bird's eye photo in July. 2009



Bird's eye photo in July 2009

Accelerators



Linac (330m)



3 GeV Synchrotron (350m)

Completed by the end of 2008



50GeV Synchrotron (1600 m)



Slow extraction beam-line from
50GeV-PS



Hadron Experimental Hall

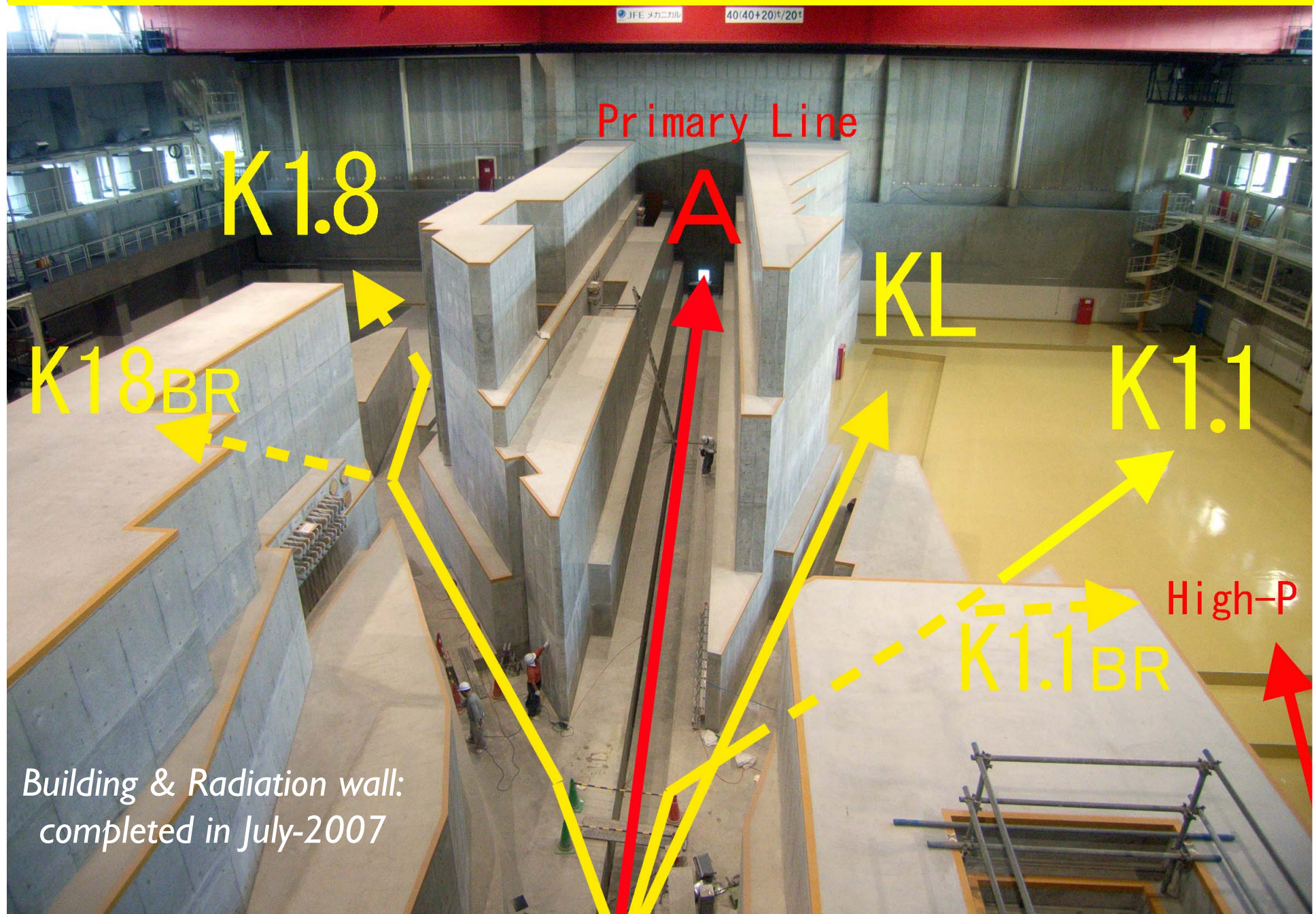
*Building: completed in
July-2007*

**First Beam: January
27th, 2009**

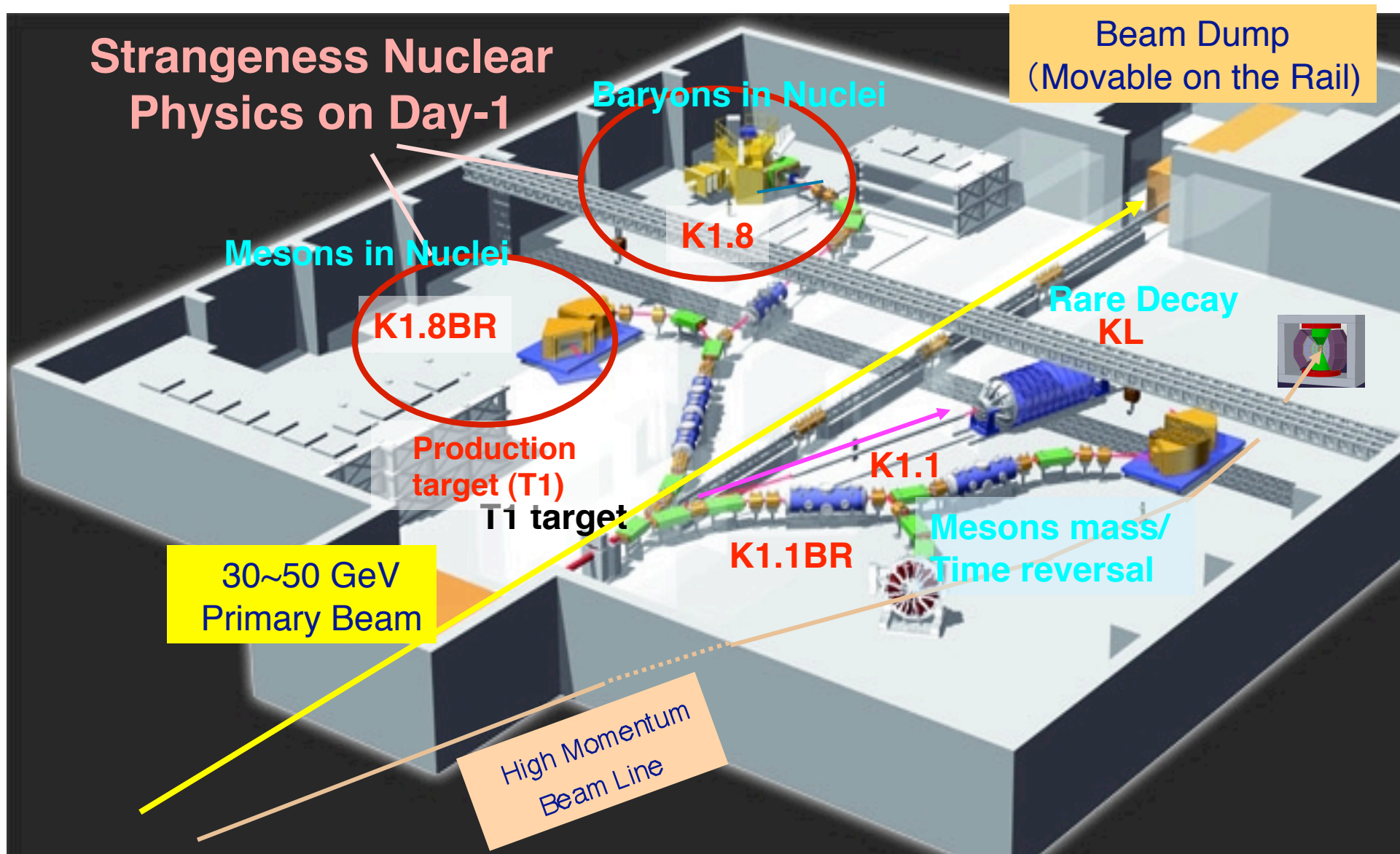
Hadron Experimental Hall
Photo was taken in Oct. 2008

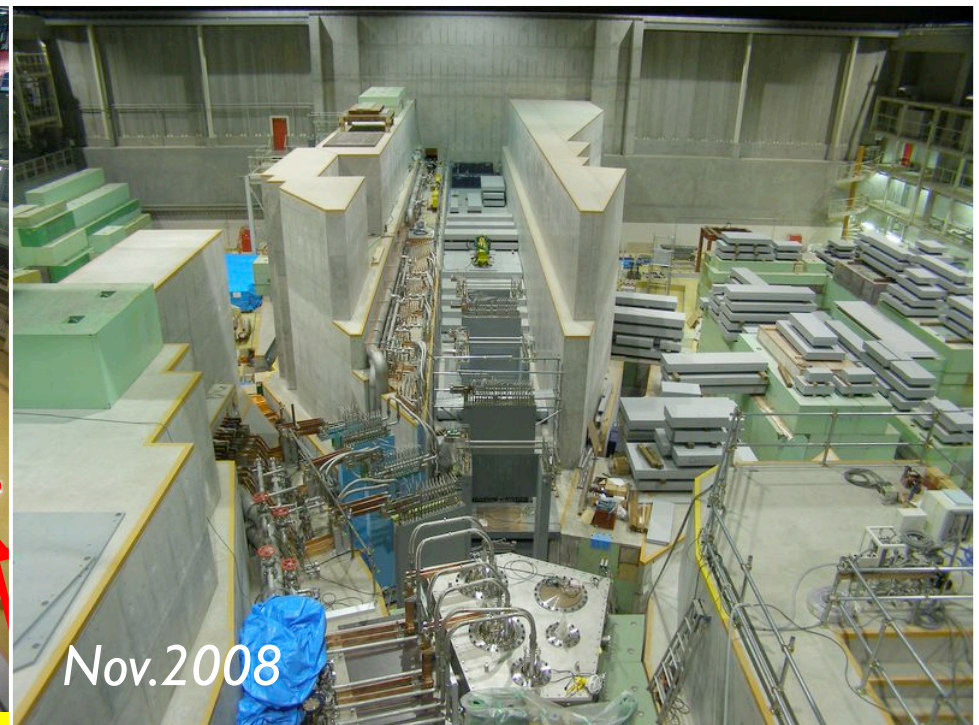
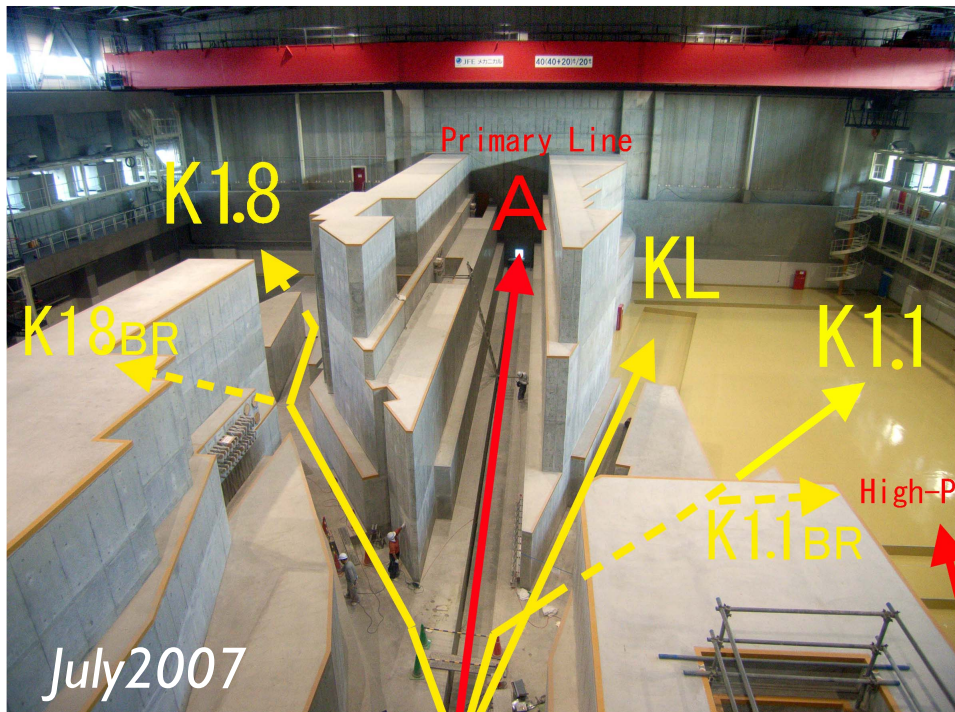


Hadron Experimental Hall (Inside)



Plan View: Hadron Experimental Hall





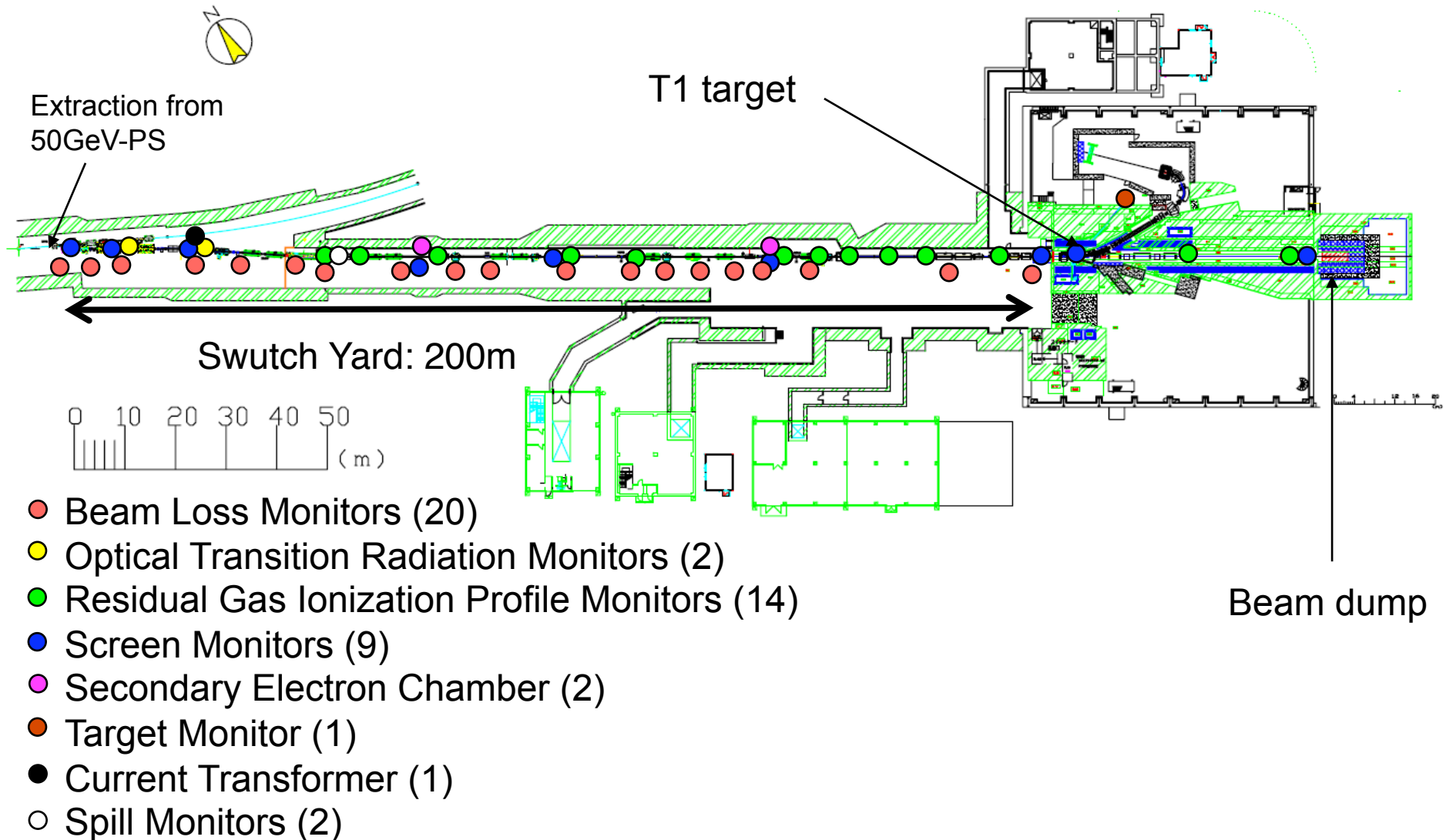
Construction of Hadron Experimental Hall



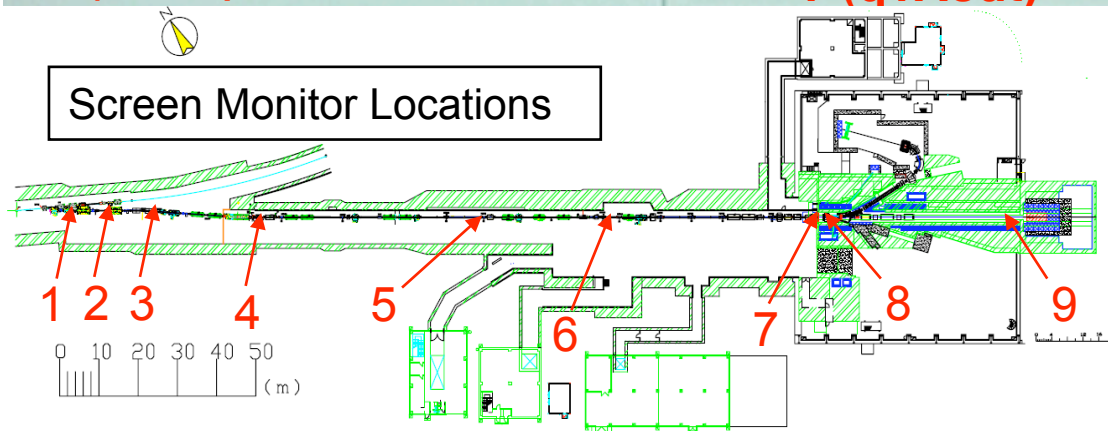
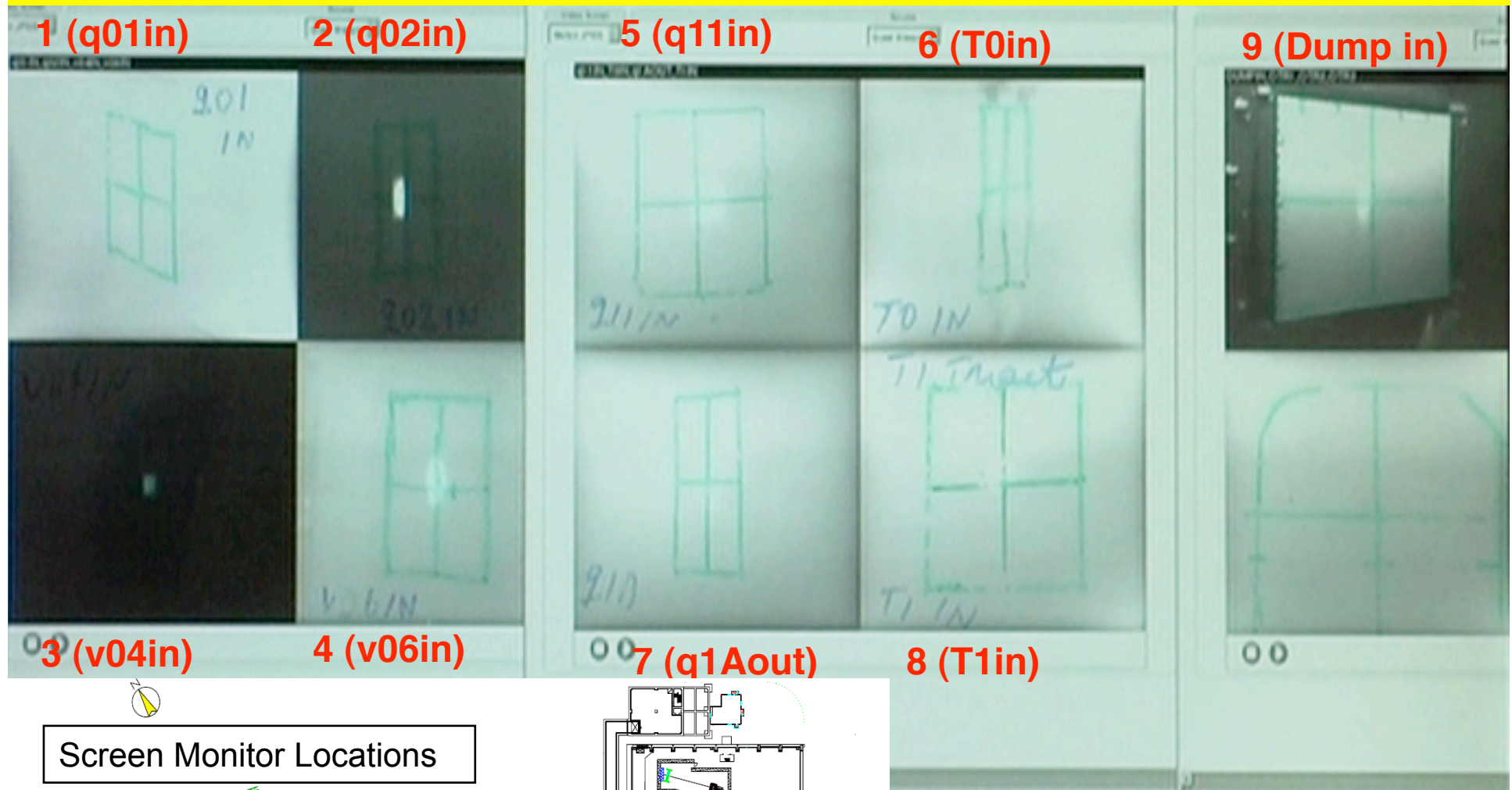
Movie (July 2007~January 2009)



Beam diagnostic devices prepared for the **FIRST BEAM**



Typical Beam Profiles measured with Screen Monitors

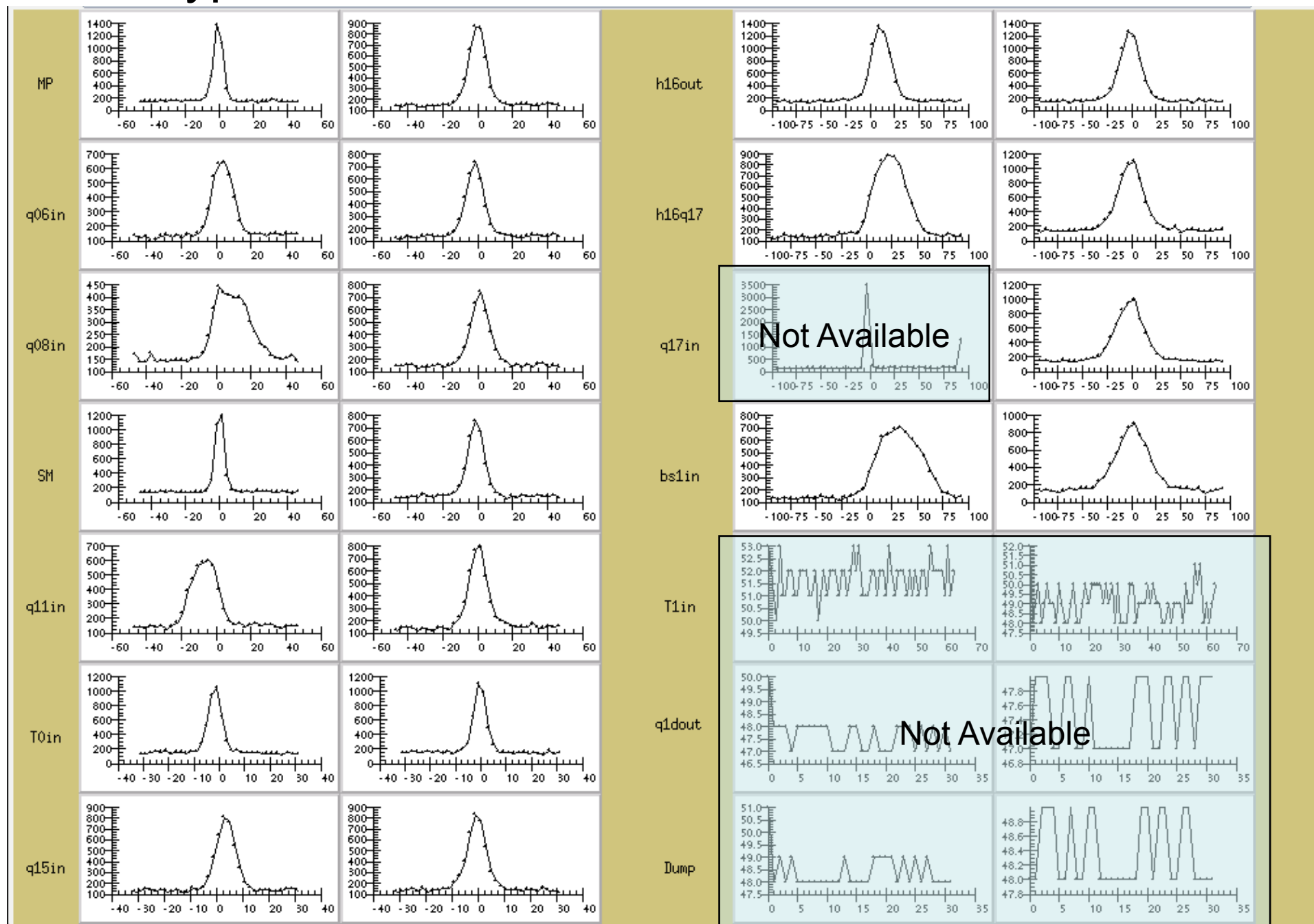


Jan. 27th 2009

於： ハドロンビームライン制御棟

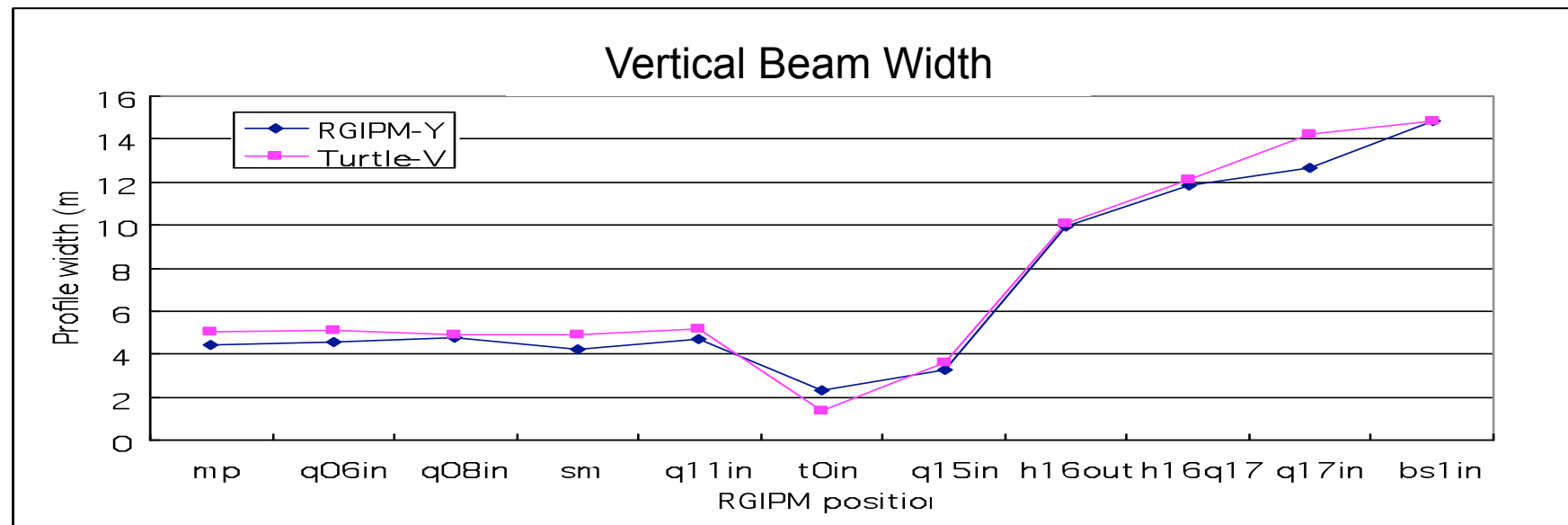
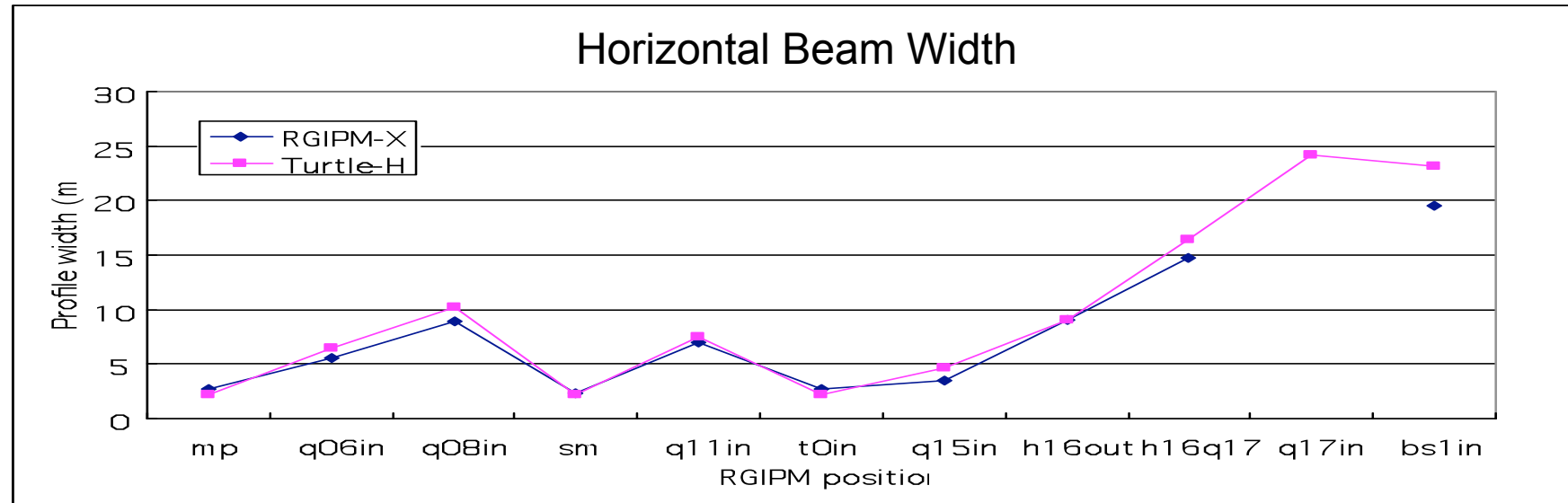


Typical Beam Profiles measured with RGIPM



Beam Profile Widths measured with RGIPM (Run 22, Shot 422)

Decay Turtle emittance
 $\epsilon_H = 4.4\pi\text{mm}\cdot\text{mrad}$
 $\epsilon_V = 2.5\pi\text{mm}\cdot\text{mrad}$



Preparation of Experimental Area

Left-hand side from the upstream

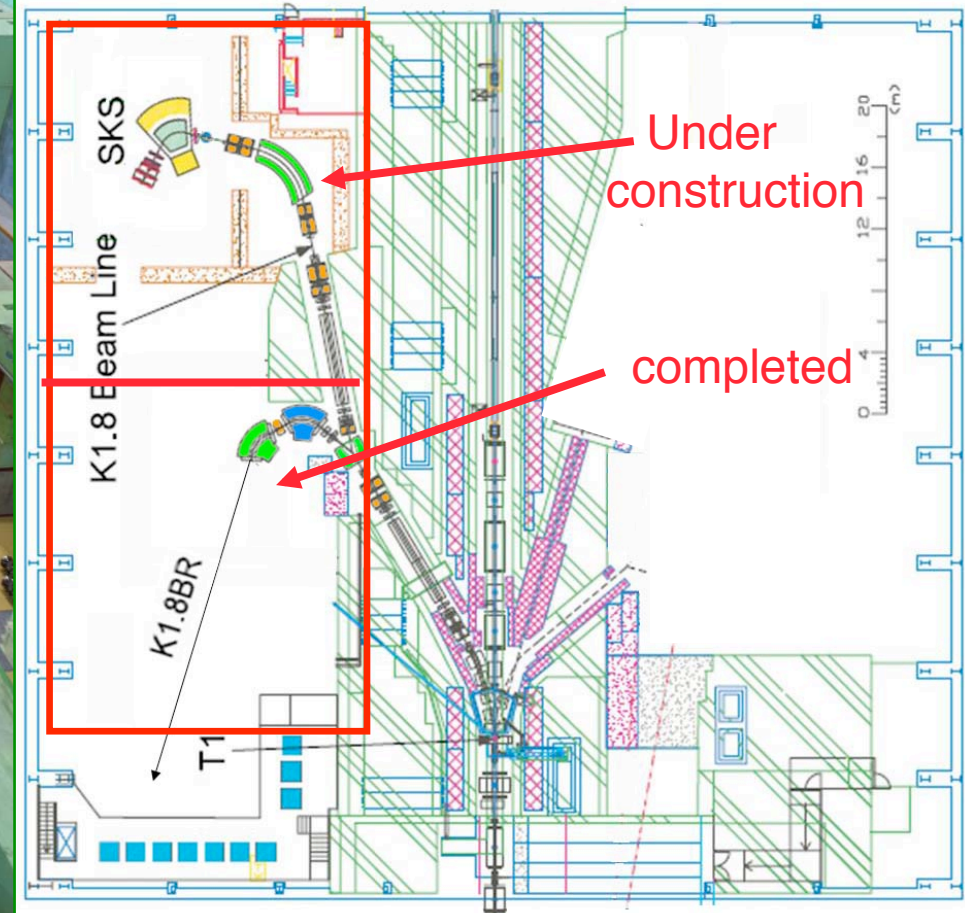
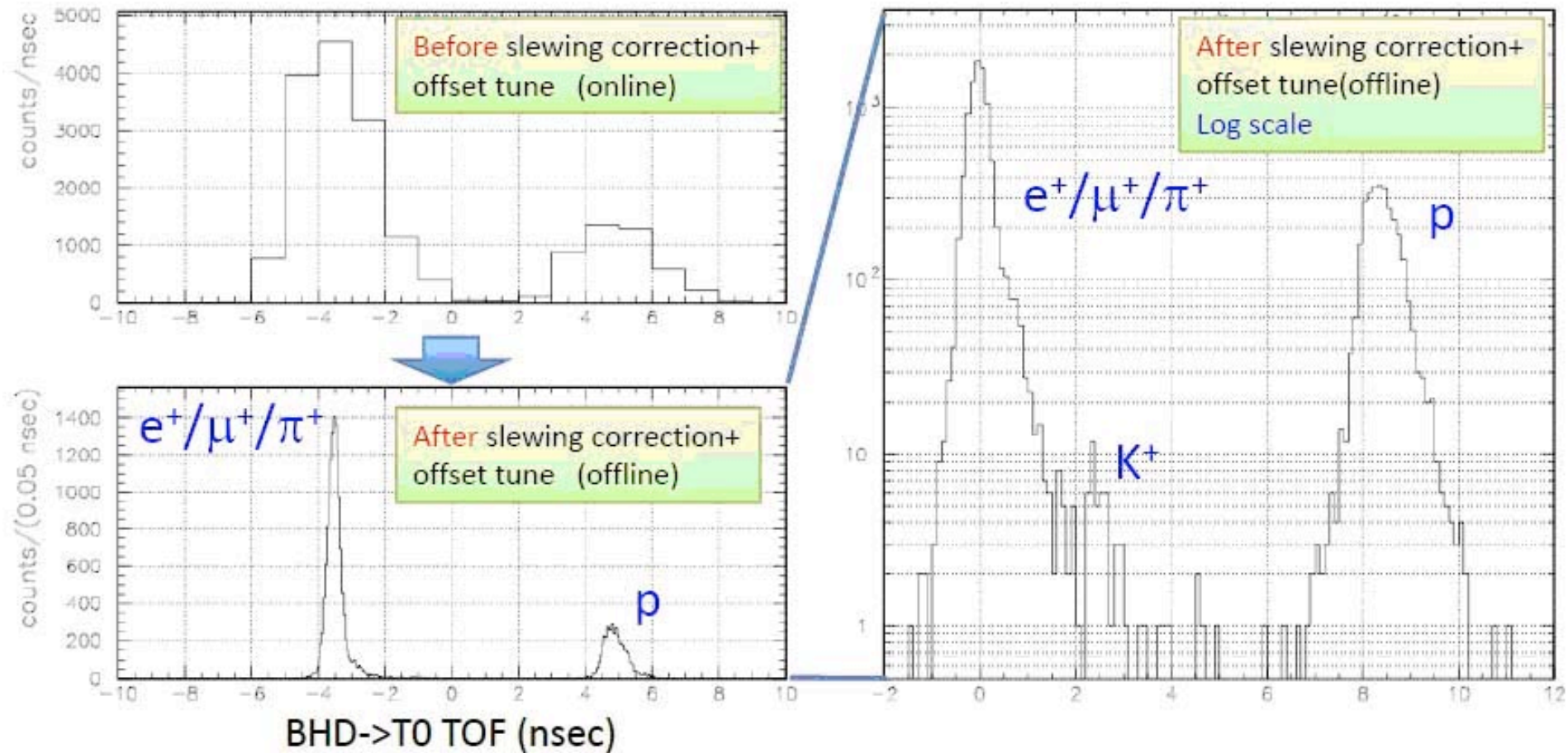


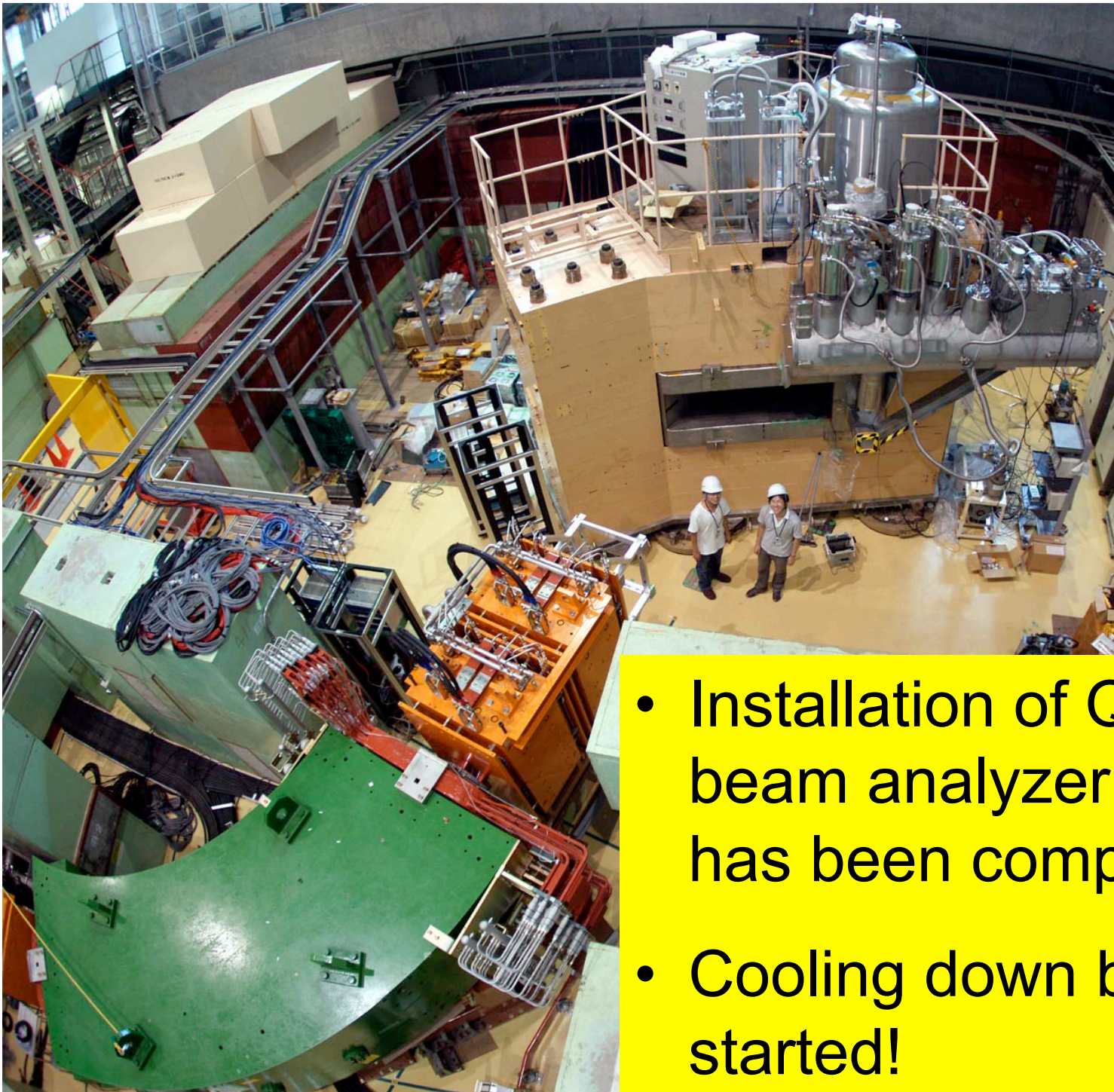
Photo taken June 2009

K^+ Identification with expected yield

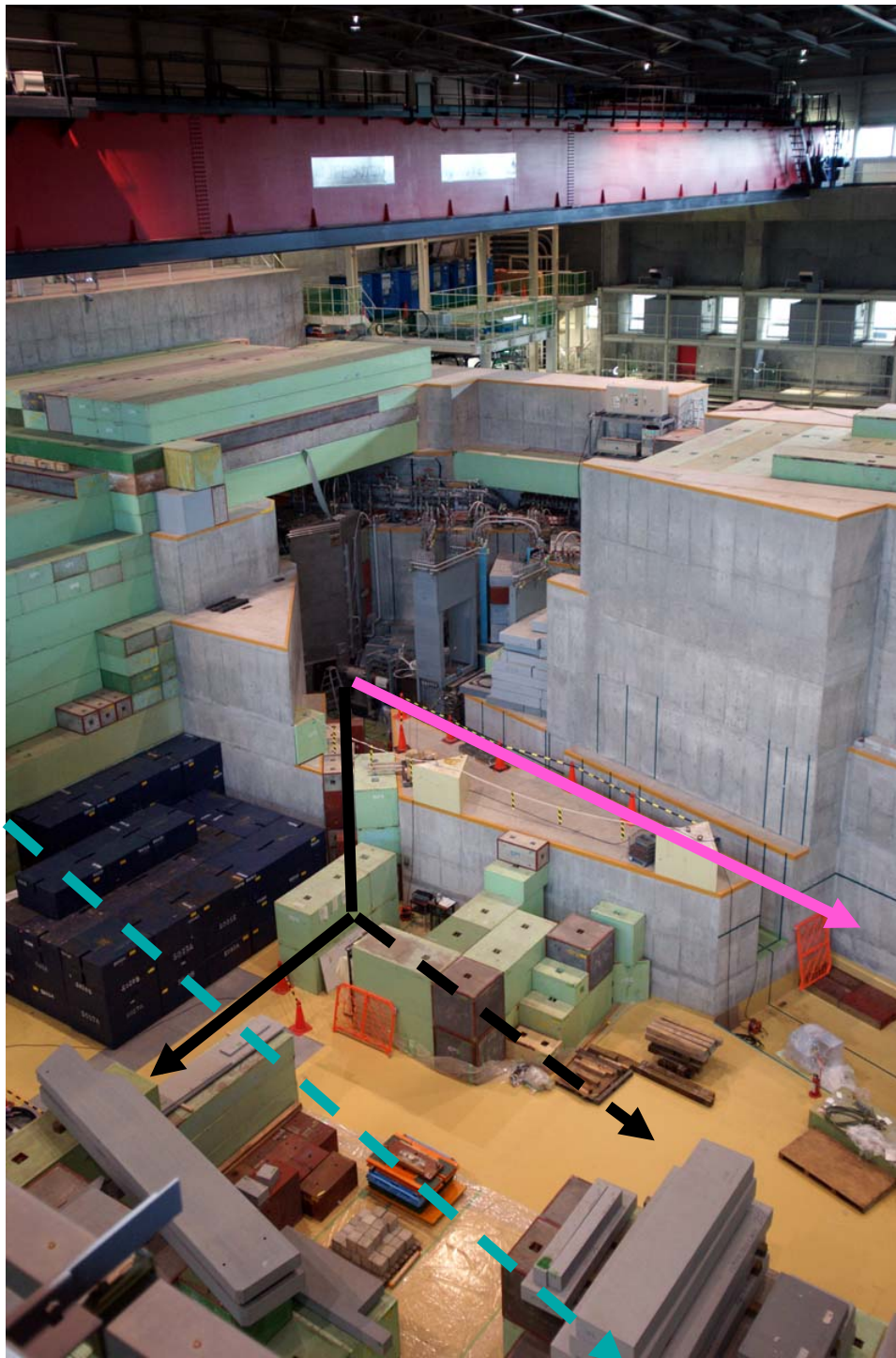


With Electro Static Separator(ESS), π/K ratio will be unity

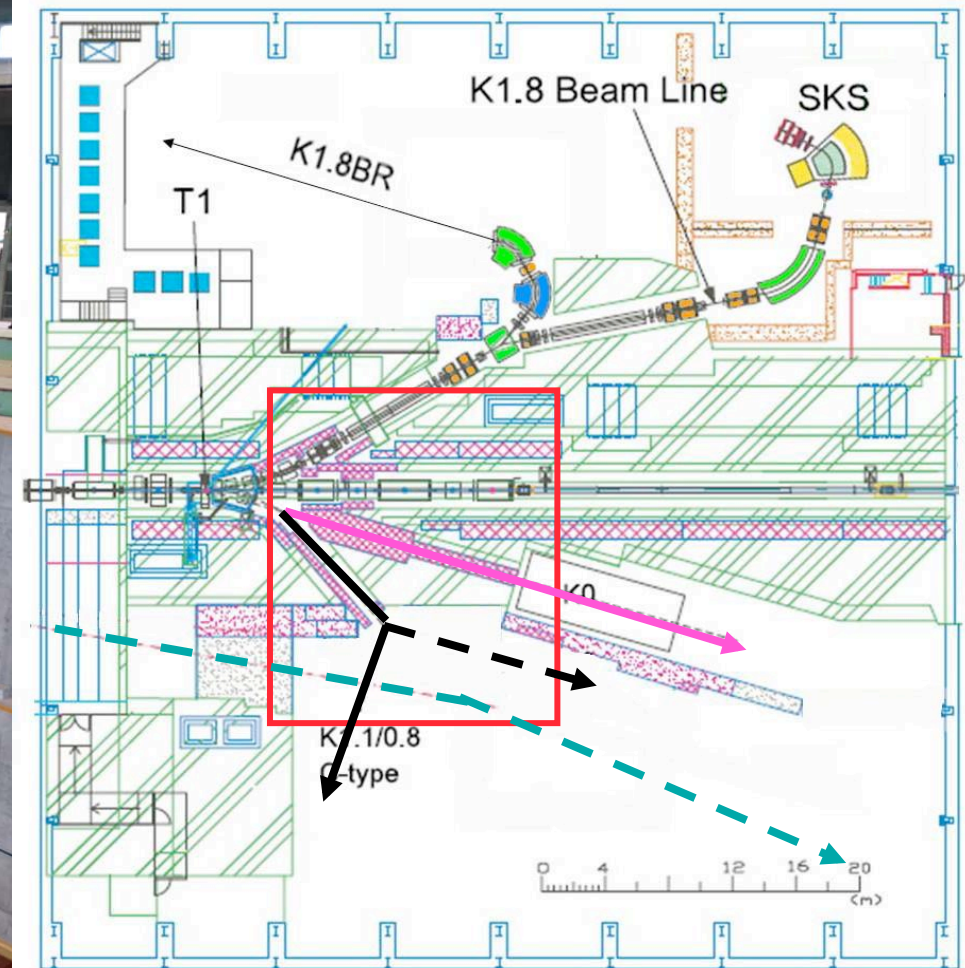
K1.8
Experimental Area
Sept.2009



- Installation of QQDQQ beam analyzer system has been completed!
- Cooling down by Liq. He started!



Right-hand side

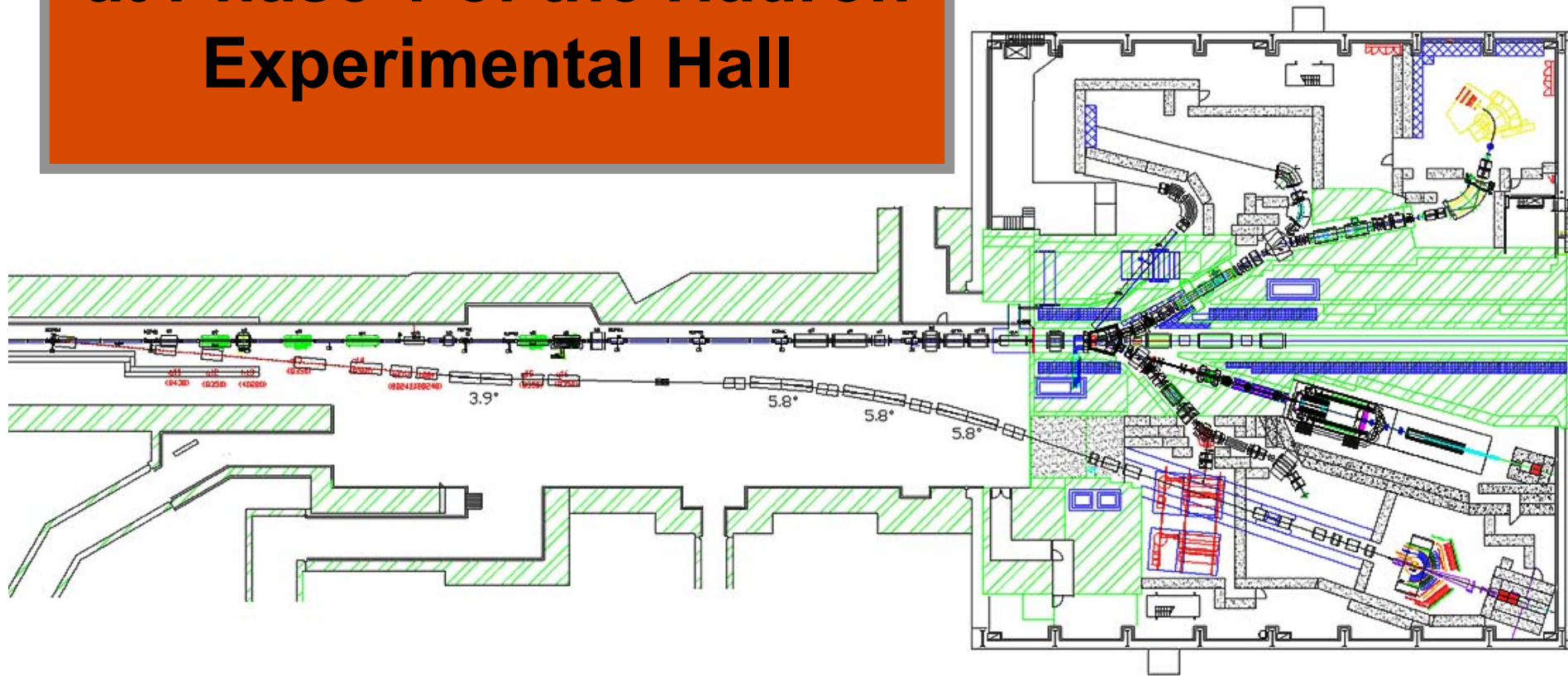


KL Beam Line for $K_L \rightarrow \pi^0 \nu \bar{\nu}$,

Low mom. K1.1 Beam line,

High-p Beam line

Beam Line Construction at Phase 1 of the Hadron Experimental Hall



- K1.8 and KL will be ready by autumn 2009.
- K1.1BR Beam Line will be available by the middle JFY2010.
- Budget Request of the High Momentum Beam Line started in JFY2009.

Summary and/or Present Status

- Hadron Experimental Hall has been completed.
- The first beam was successfully introduced to the Hall on January 27th.
- T1 Target was IN on February 10th and beam commissioning of K1.8BR started.
- Kaons were successfully identified!
- Official Inspection as a safe Radiation Facility was made on February 27th. No problem!
- Experiments started!
- More Beam lines are under construction and budget requesting!