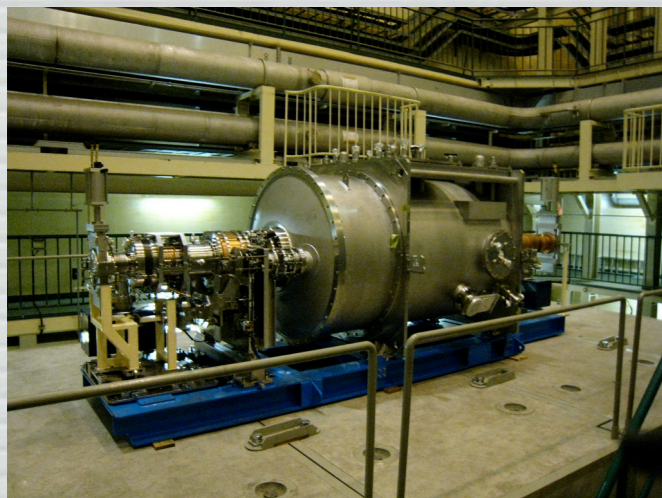
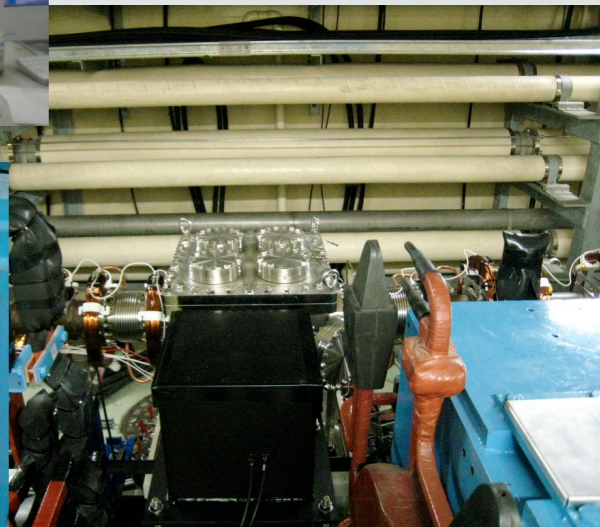
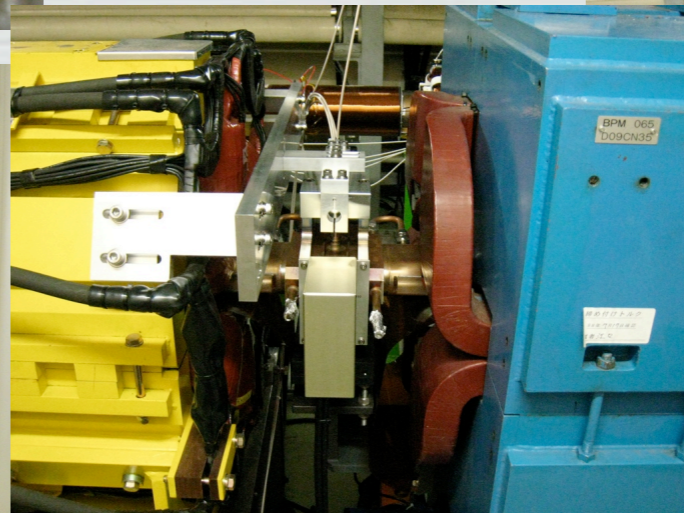
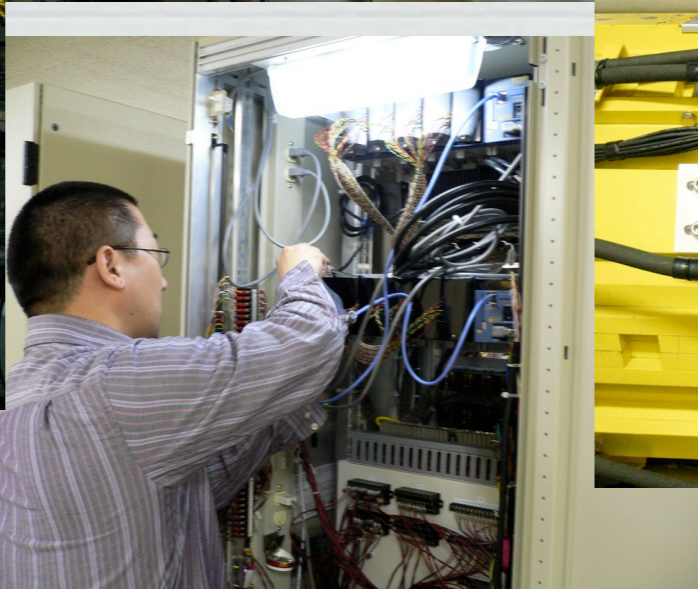
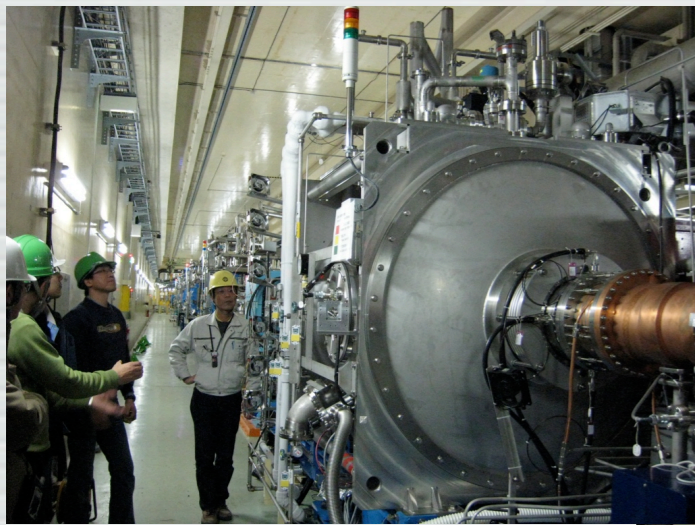


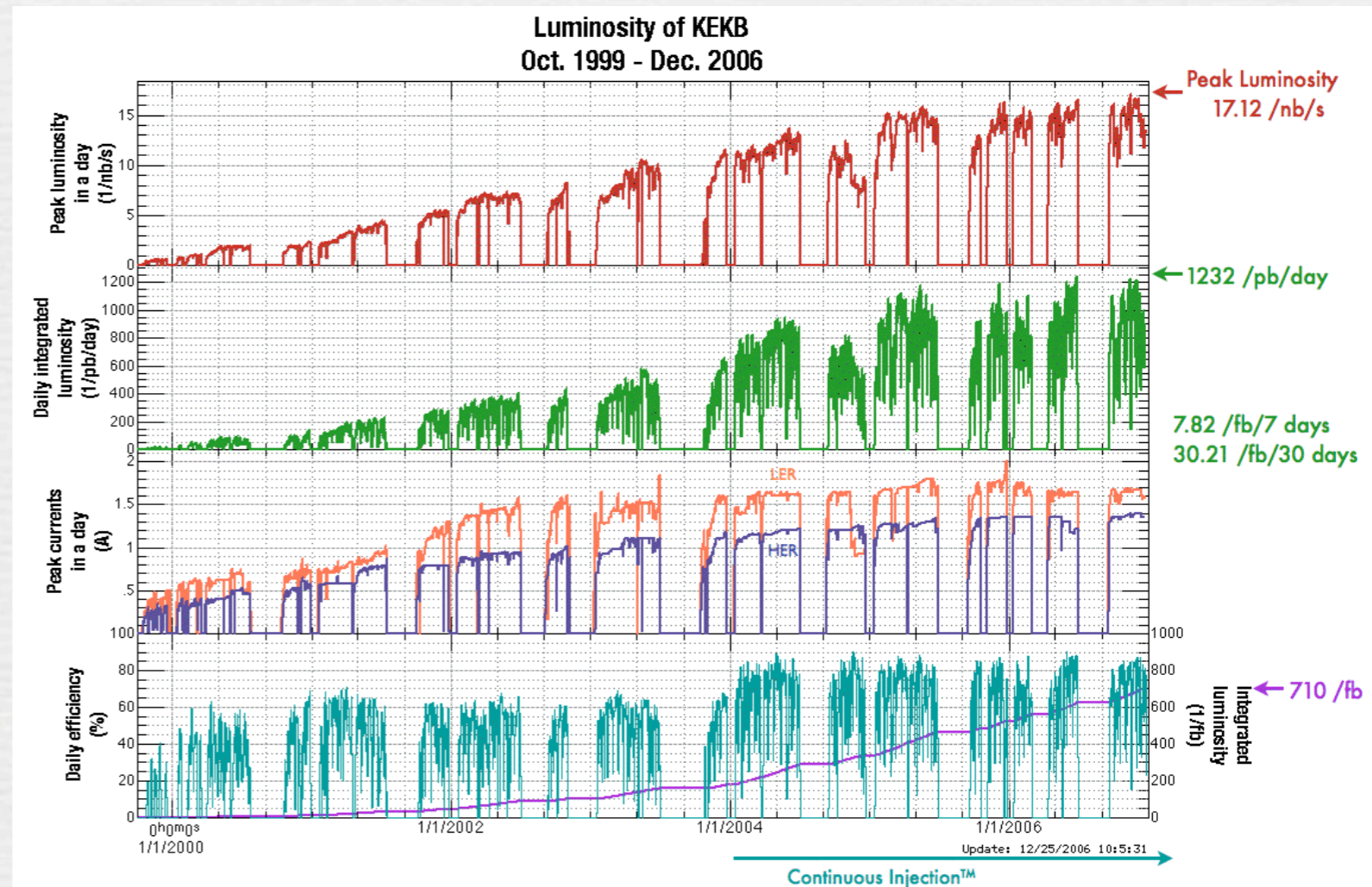
KEKB Overview



12th KEKB Accelerator Review
March 19, 2007
K. Oide

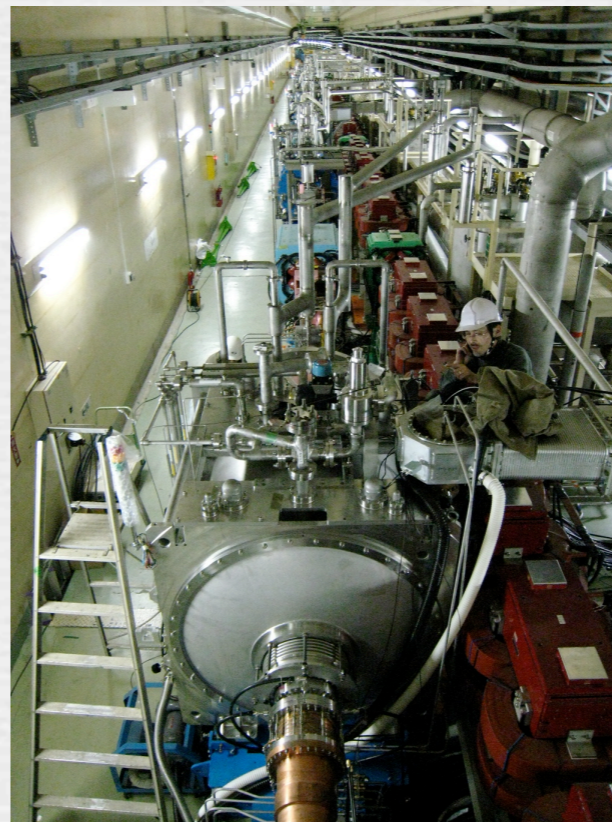
KEKB before Crab

- ★ Achieved $1.71 \times 10^{34} \text{ cm}^{-2} \text{ s}^{-1}$.
- ★ Accumulated 710 fb^{-1} at Belle.
- ★ Improvements in tuning, optics, monitors, positron production, injector, etc. (Funakoshi's talk)
- ★ R&D for future.



Crab Cavities

- ★ Two cavities were successfully produced and assembled. (Hosoyama, Y. Morita, Nakai's talks)
- ★ Basically good performance in the horizontal tests. (Y. Yamamoto's)
- ★ Installed successfully in both rings on schedule. (Ono's)
- ★ Commissioning of the cavities has been basically good, with and without beam. (Akai's)



Crab Crossing (Koiso's talk)

- ★ A number of checks have confirmed the effective head-on collision:
 - streak camera (Ikeda's) / crab-phase scan / crab voltage sign change and scan / horizontal beam-beam kick, and more ...
- ★ The highest vertical beam-beam tune-shift parameter is about 0.08 so far, which is a little higher than the geometrical gain due to head-on.
- ★ It is too early to say conclusion. We need more ideas!
- ★ Spend 2-3 more weeks for low current tuning until ideas run out.
- ★ After that, try high current operation for 1 month, hopefully to achieve higher or comparable luminosity to the before crab operation.

SuperKEKB

- ★ On Oct. 25, 2006, The Japan Association of High Energy Physicists (JAHEP) unanimously approved *Prospects for Elementary Particle Physics* saying:

We, the Japanese HEP community, recognize that physics at the energy frontier is of primary importance. With this understanding, we give the highest priority to the realization of the ILC. Before the ILC experiment commences, **we will also promote flavor physics** that is complementary to physics at the energy frontier. We should pursue the above two goals as a single master plan.

Japan is now taking the lead in a wide range of accelerator technologies that are essential to carry out the ILC and flavor experiments. To realize the ILC, we have to facilitate industrialization of state-of-the-art accelerator technologies and boost accelerator R&D for the ILC. For this purpose, we will **unify the existing accelerator R&D activities for both the energy frontier and the flavor physics projects**.

In Japan, the K2K experiment, which was the first long-baseline neutrino experiment in the world, was carried out successfully while the KEK B factory has been constantly improving world luminosity records. Furthermore, J-PARC construction will be completed soon. Based on these achievements, we will endeavor to make neutrino and kaon experiments at J-PARC successful, and **promote an upgrade of the B factory** to achieve a significant breakthrough in luminosity in order to explore new physics that emerges in the phenomena of b, c and τ decays.

- ★ Since then, no official response has been made by the Management of KEK.
- ★ No budget request to the government for any new projects will be possible before the completion of J-PARC (JFY2009).