

Seminar: PEP-II Status

J. Seeman

10:00 AM

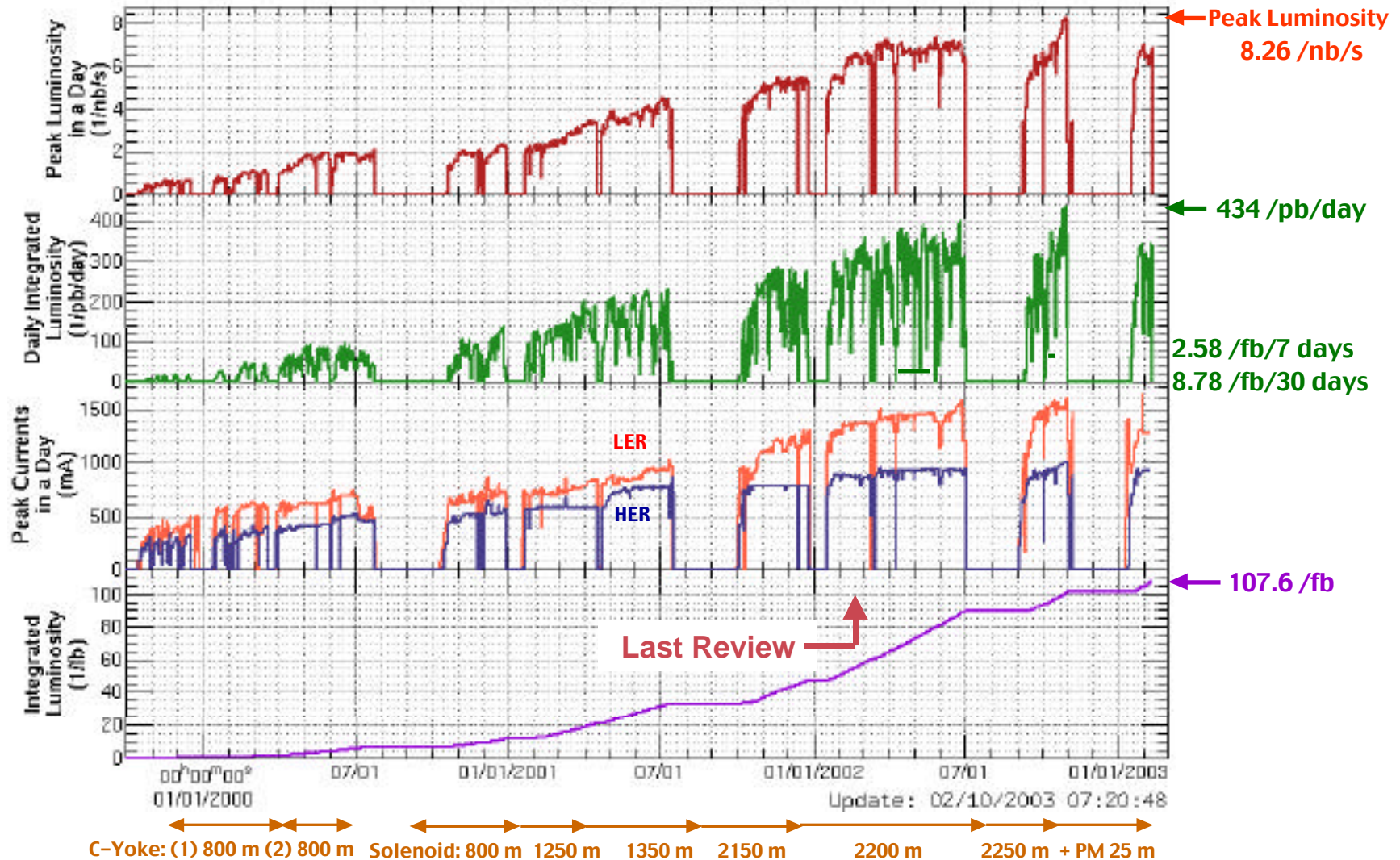
Thursday, Feb. 13, 2003

Meeting Room @ KEKB Control Bldg

An Introduction to the KEKB Review 2003

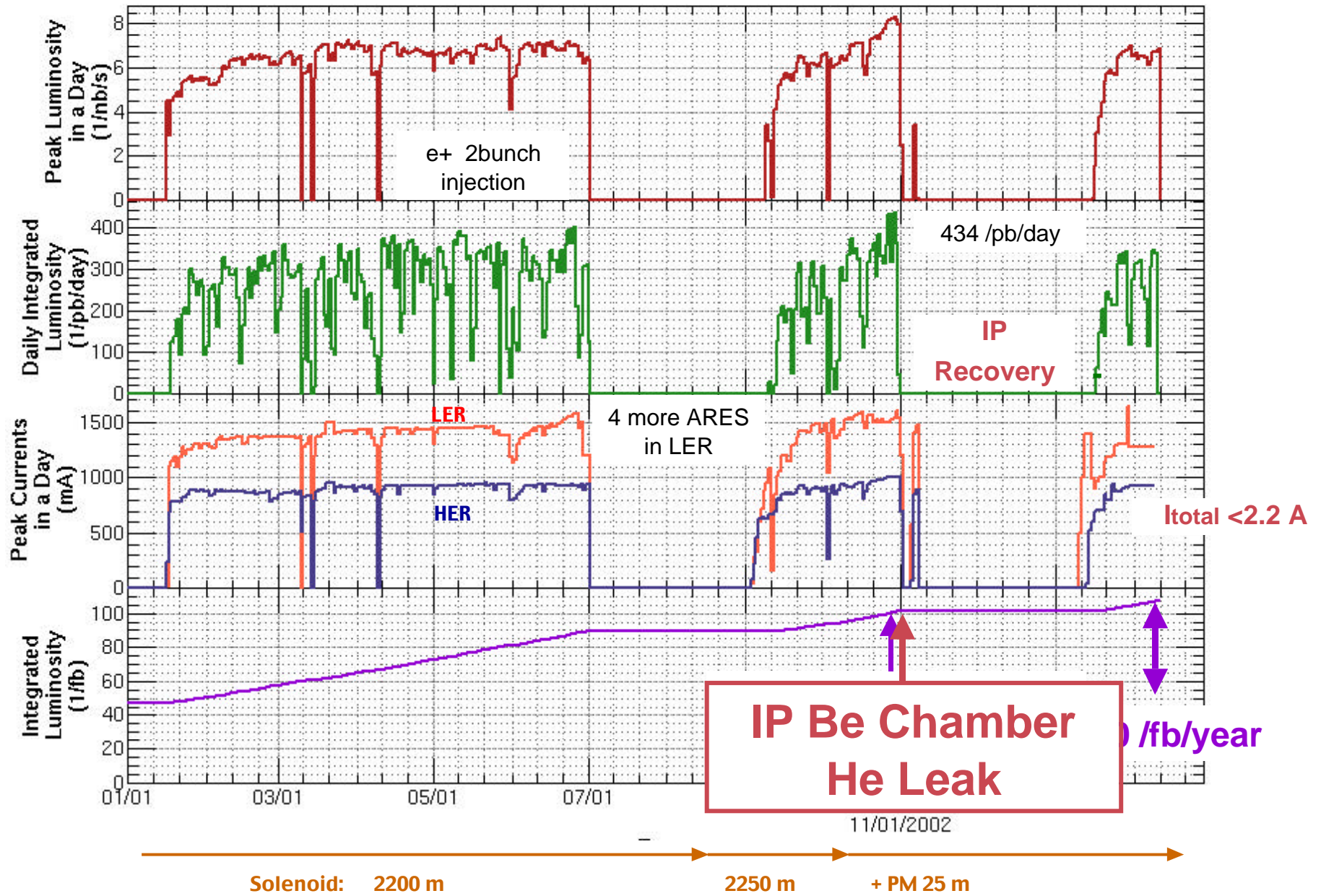
Feb. 10, 2003 K. Oide

Luminosity of KEBK
Oct. 1999 - Feb. 2003



Luminosity of KEKB Jan. 2002 - Feb. 2003

8.26 /nb/s



Since the last Review,

- Accumulated > 50 /fb in a year,
 - exceeded 100 /fb in total.
- $> 80\%$ of the design luminosity
- No LER blowup < 1.8 A
- High current operation is still a big issue.
 - Heating of components
 - Movable masks
 - Instabilities & feedback
- Many progresses in various fields
 - RF, vacuum, Linac&injection, feedback, monitors, abort, etc.
- IP leak: the longest unscheduled shutdown
 - still limiting the current (psychologically?)

Future:

- Possibility of a strong beam-beam interaction (K. Ohmi)
 - Head-on (crab) collision
 - $y = 0.1 - 0.2$
 - x close to 0.5
 - $z = y^* = 3$ mm
- 0.4 to $1 \cdot 10^{36} \text{ cm}^{-2} \text{ s}^{-1}$ @ LER17 A
 - 0.4 to $1 \cdot 10^{35} \text{ cm}^{-2} \text{ s}^{-1}$ @ LER1.7 A

Crab Crossing

- First priority for the future upgrade
- The 1st cavity in HER in 2005
 - Test of cavity operation with beam
 - Crabbing all around the ring
- Also in LER, early 2006?
 - Test of beam-beam effect
 - Immediate luminosity boost if everything successful
- An alternative design of cavity is necessary for higher current operation