Commissioning schedule of Shintake-monitor

Taikan SUEHARA

Dept. of Physics, The Univ. of Tokyo

Taikan SUEHARA, 2nd ATF2 project meeting @ KEK, 2006/5/31

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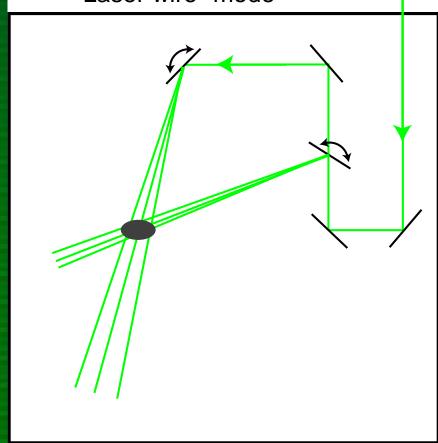
- Measurable range of Shintake-monitor
 - Interferometer mode
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- Commissioning schedule
 - FFTB's experience
 - ATF2 plan

Shintake-monitor measurable range (interferometer mode)

- Vertical
 - 20 ~ 360 nm (30°, 174° setup, 10%~90% modulation)
- Horizontal
 - 380 ~ 1800 nm (6° setup, 10%~90%)
- For commissioning, Beam size larger than 360nm (V) 1800nm (H) should be covered by another monitor
 - Solid wire (before or with Shintake-monitor, IP or non-IP)
 - "Laser wire" mode (next slide)

Simple "Laser wire" mode

"Laser wire" mode



- For larger beam size,
 "Laser wire" mode will be available.
- A few to 100 μm beam can be measured.
- With proper change of lenses and actuators, smaller beam may be measured (but 360 nm will be very difficult)
- Signal strength become lower for larger beam size because of lower density of e- beam. (~100 μm may be limit)

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Commissioning schedule: FFTB's experience

- 1st commissioning: 2 months
 - Unpacking, alignment check (2 weeks)
 - Installing to beam line, alignment (4 weeks)
 - First beam test (2 weeks)
 - Compton signal observed
 - Modulation not observed
- 2nd commissioning: 1.5 months
 - Optics upgrade (4 weeks)
 - Beam test (2 weeks)
 - Success to measure 70 nm beam

Commissioning schedule: ATF2 plan

- R&D finished : Aug. 07
- Transportation to KEK: Sep.07
- Unpacking & component check : Oct.07
- Wait until rough beam tuning finished (?)
- Installing & system check : ~Dec.07 (if no wait)
- Tuning with beam : Feb.08 ~
 - Tuning to reduce background
 - Beam tuning with "Laser wire" mode ?
 - Measurement using interferometer mode

