CesrTA Status Report

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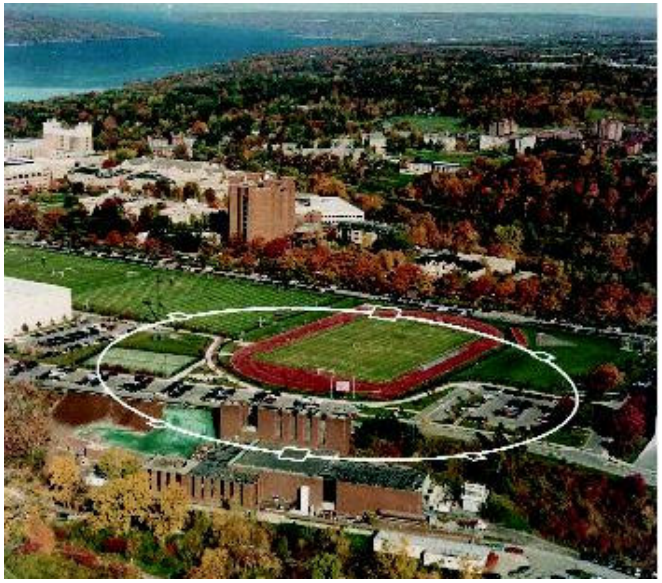
July 8, 2009

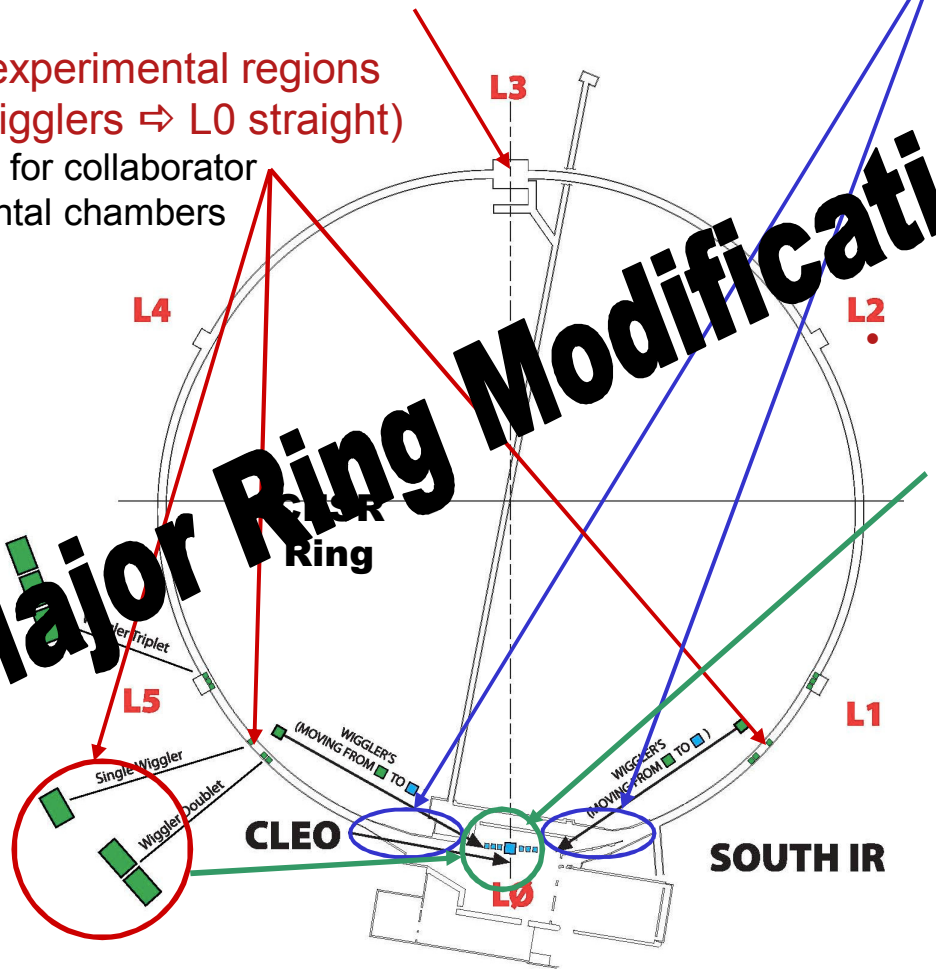


Overview

- Recent News
  - Completed Run #3 (May 12 – June16)
    - 109 of 240 planned running days now provided
    - Major focus on commissioning efforts
  - CTA09 (June 25-26)
    https://wiki.lepp.cornell.edu/ilc/bin/view/Public/DampingRings/CTA09/WebHome
    - Major review of experimental program
    - 40 participants
    - Planning for next 4 runs (Aug '09, Nov-Dec'09, approx. Mar '10, approx. Jul '10)
    - Organize shift from commissioning focus ⇨ experimental focus
  - Final upgrade down nearing completion
    - Machine Startup – July 23rd
  - Next run starts July 31st (to Sept 8th)

CESR Reconfiguration

- L3 EC experimental region
  - PEP-II EC Hardware: Chicane, upgraded SEY station (coming on line in May)
  - Drift and Quadrupole diagnostic chambers
- New EC experimental regions in arcs (wigglers ⇨ L0 straight)
  - Locations for collaborator experimental chambers



All Major Ring Modifications Complete

- CHESS C-line & D-line Upgrades
  - Windowless (all vacuum) x-ray line upgrade
  - Dedicated optics box at the front of each line
  - Detectors share space in CHESS user cavities
- L0 region reconfigured as a wiggler straight
  - CLEO detector sub-systems removed
  - 6 wigglers moved from CESR arcs to zero dispersion straight
  - Region instrumented with EC diagnostics and mitigation
  - Wiggler chambers with retarding field analyzers and various EC mitigation methods (fabricated at LBNL in CU/SLAC/KEK/LBNL collaboration)

Status Update

- Key tasks:
  - BPM system upgrade:
    - Commissioning work continued during May-June run. Pushing towards full switchover to new system by late summer
  - xBSM upgrade:
    - Commissioning continued work during May-June run including first single-pass measurements
    - Complete electron line deployment during present down and commission (underway)
  - 4ns upgrades
    - 4ns feedback system commissioned during May-June run
    - Upgraded 4ns digitizers for xBSM (component testing during Aug run ⇨ targeting standard operation by Nov-Dec run)
  - L3 EC Hardware
    - Chicane and EC chambers commissioned during May-June run
    - SEY station development and testing underway (in situ measurement upgrade of SLAC hardware)
  - New EC vacuum chambers
    - Wiggler chambers with grooves and electrode mitigation (CU-KEK-LBNL-SLAC) [Groove chamber in preparation for installation Aug 20]
    - Upgraded RFA detectors under development (first units installed)
    - Diagnostic quadrupole chamber for L3 experimental region (installed)
    - Collaborator chambers: CERN (α-C coating - installed); FNAL (enamel with electrode – late 2009); SLAC (new groove design - installed)
    - Reviewing requirements for L3 NEG-coated chamber test
    - Additional chambers depending on initial results through remainder of program
  - EC solenoid windings on CESR drifts (underway)
  - 4 runs planned over course of next year
    - Each approximately 1 month duration