

LC Test Beam Activities

VLCW06

July 20, 2006

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- Facility updates
- Beam Test Activities
- FNAL ILC-Task Force
- Conclusions

Beam Test Activities

Facilities Update

- FNAL:
 - MTBF was brought back up June 2006 after a 14 week shutdown
 - MTBF is offered to a few existing programs
 - An upgrade proposal has been made and the detailed schedule is still being worked out for it
 - Improvement of low E secondary beam rates → See Erik's talk
 - Possible MC beam line availability for additional activities
- EUDET:
 - Kicked off on Feb.15 – 17 at DESY
 - Will utilize DESY and CERN facilities
- CERN:
 - Offers beam tests this year
 - Next year's schedule is unclear
- KEK facility has been shutdown since end of 2005 but ..
 - A new proposal for 3GeV electron beam using bremsstrahlung photons from KEK-B HER

Beam Test Activities

Beam Test Activities

- Many calorimeter activities
 - DHCAL (Repond)
 - RPC DHCAL
 - Three ANL+IU RPC Chambers at MTBF early 2006 (FNAL T955)
 - Plan to go in again in the fall 2006 and slice test in early 2007
 - GEM DHCAL
 - One 30cmx30cm chamber exposed to high intensity, low E electron beam at KAERI in May 2006
 - Plan to expose to hadron beams at MTBF in the fall 2006 and slice test in early 2007
 - NIU TCMT
 - One layer of cassette exposed to beam at DESY in fall 2005
 - Exposed to hadron beams at MTBF early 2006 (FNAL T957)

Beam Test Activities

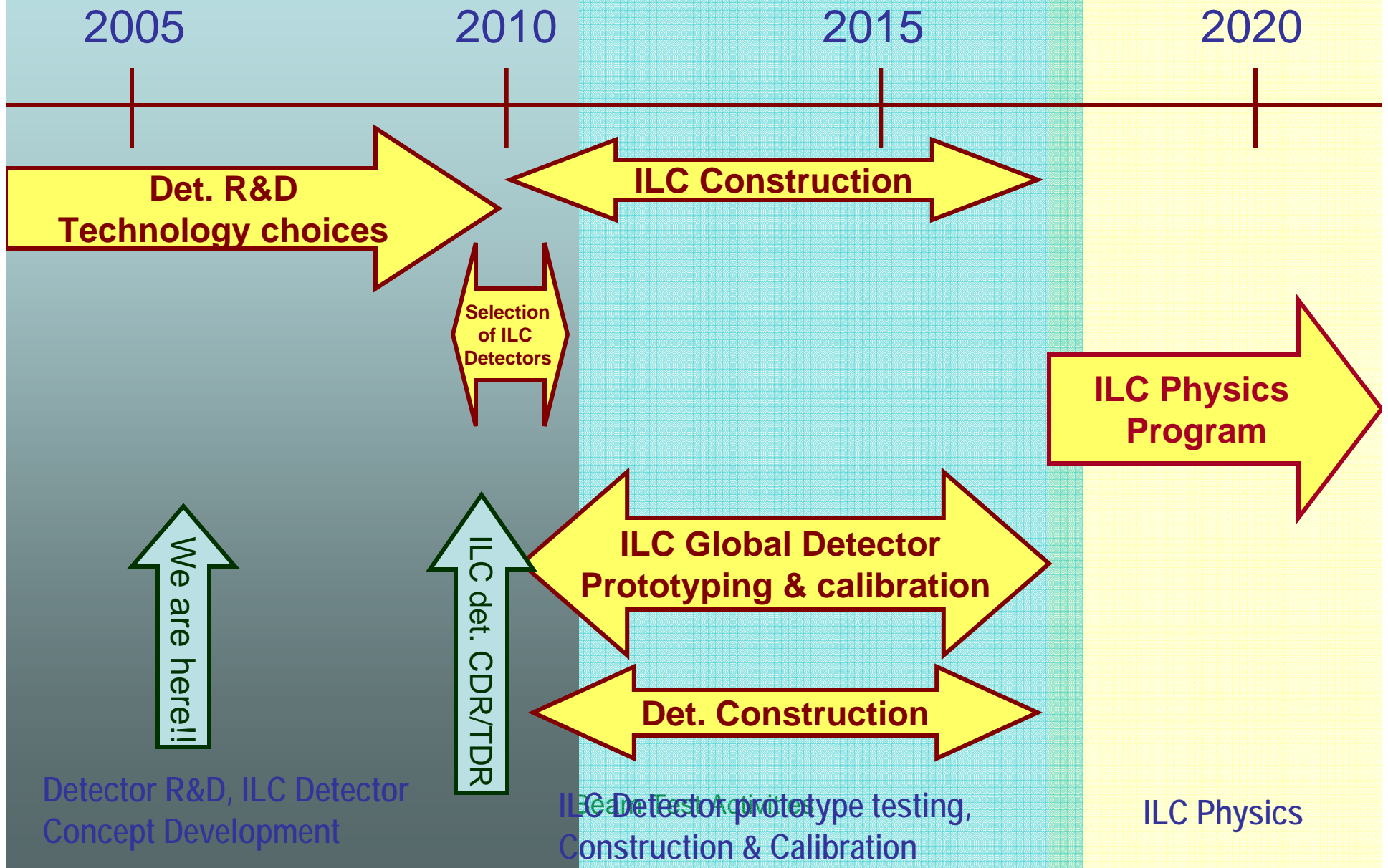
- CALICE (White)
 - Si-W ECAL and Scintillator AHCAL installed at CERN SPS H6 beam line
 - Will be exposed to beams in three distinct periods, totaling 8 weeks
- ASIAN Scintillator-Tungsten ECAL
 - Plans to come in mid to end 2007 to FNAL for beam tests
- Muons
 - FNAL-IU+WSU scintillator muons (Abrams) ongoing at MTBF (FNAL T956)
- Tracking:
 - TPC group wants high E, multi-particle beam at FNAL in 2007
 - No US group plans in the immediate future but some Si tracker activities anticipated in 2007
- Vertex: LBNL Vertex group using LBNL radiation facility
 - Will need pion beams in late 2007 or early 2008
 - $E_{\pi} > 5\text{GeV}$ needed

FNAL ILC-Task Force

- FNAL Directorate initiated TF on increasing FNAL's contribution to ILC and its chance to bid for hosting it
- Test Beam Facilities is one of the working group tasks
 - Made several initial draft recommendations
 - Upgrade of MTBF to meet needs in the immediate future
 - Availability of MCenter for the intermediate future
 - Develop plans to gradually convert Neutrino beam lines to prepare for ILC activities in 3 – 5 year time scale
 - Boost TB activities to a level of experiments
 - Establish beam tests as scientific programs
- The working group needs to collect your requirements for beam tests

Beam Test Activities

LC Detector Time Line





MT

MC

NWA

KTeV

Lab-E

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Pointer 41°50'52.62" N 88°14'58.77" W elev 744 ft

Streaming ||||| 100%

Eye alt 5488 ft

Conclusions

- A lot of beam test activities since the last meeting
 - Still calorimeter driven but other detectors will pick up speed soon
- Some good news in funds to support large scale beam test activities
- A lot more are expected in the near future
- Limited facilities' availability
- Need better coordination within ourselves