

Draft proposal for LC test beam slides
(for discussion on 6/4/2009)

- Slide 1
 - Who are we? Describing the community
 - ILC + CLIC
 - 3 LoI's for the ILC (#authors, #institutes, #european institutes)
- Slide 2 (or more slides)
 - Summary of the detector technologies involved
- Slide 3
 - Summary of current/previous use of CERN test beams, and of other test beams world-wide

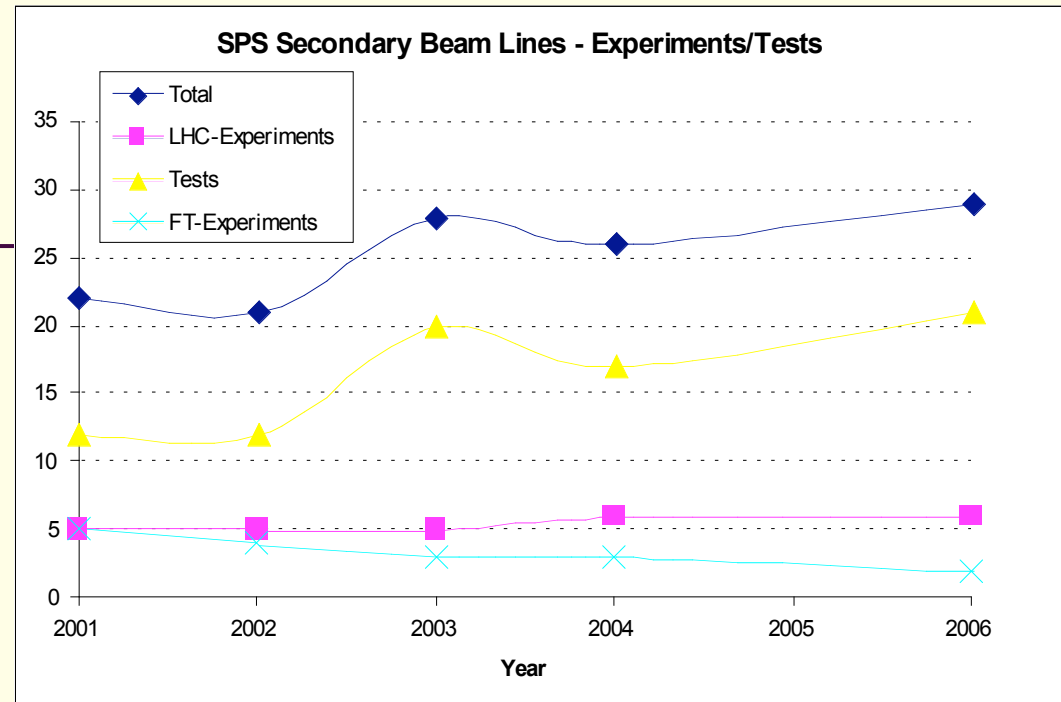
- Slide 4
 - Plans for a combined test beam
 - Explanation
 - What it involves
- Slide 5
 - Other use of test beams at CERN (e.g. PS beam, irradiations, stand-alone tests)
- Slide 6
 - Summary of request to CERN
 - Estimated beam time at combined test beam (#days as a function of the year)
 - Estimated beam time at other CERN beams
 - Permanent infrastructures required
 - Any other request for CERN infrastructures?

For reference: Felix's abstract submitted to the workshop

The physics potential at future electron positron linear colliders demands detectors with excellent precision. In the recent years new technologies have been developed, **low mass silicon tracking systems, micro-pattern gas detectors for TPC readout and ultra-compact and highly granular calorimeters for particle flow reconstruction**. They were established in first proof-of-principle prototypes. In the next stage larger and more realistic prototypes are being prepared, so system aspects need to be addressed. They range from **seamless and scalable mechanical design, electronics integration and power management to the interplay of different sub-detector components, their alignment, common data acquisition and combined use in the reconstruction of particle flow objects**. We propose to create a generic test beam facility for integrated detector tests. The set-ups comprise vertexing, tracking and calorimetric components together, such that the performance of the entire system can be tested. **The facility should provide beams of different types and energies, the necessary infrastructure in terms of mechanical, thermal and electrical services, and magnetic fields**. To test and compare different sub-detector technologies, each component in the set-up must be exchangeable.

User statistics

In 2008:
32 SPS user groups,
of which ~50% for LHC



Linear collider SPS test beam use in 2008:

- **Vertex/tracking** (EUNET, DEPFET, LCFI...):
 - 6 groups, 65 days at SPS, 10 days at PS
 - Good synergy between groups, big use of EUNET telescope
- **Calorimetry**
 - Digital HCAL tests (RPC and Micromegas)
 - 10 days at SPS, 30 days at PS