Combined Session Pol↔BDIR

– Talks + discussion –

Polarisation Session 2

'ECFA04'@Durham, September 2nd, 2004

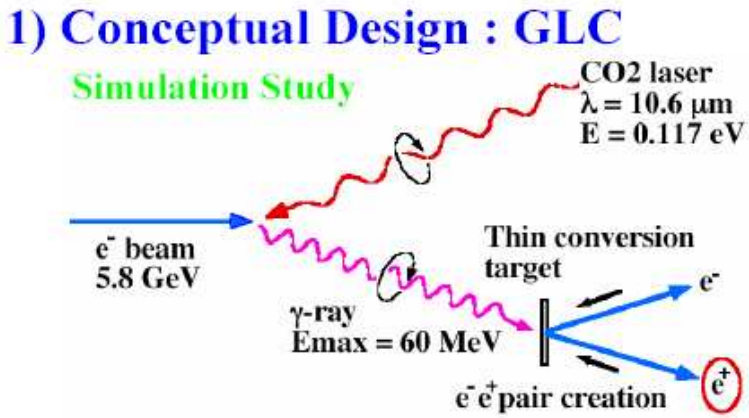
- Talk: Helical undulator Work in Daresbury (D. Scott)
- Talk: CsI(Tl) Calorimeter and status of the E166 experiment
- Discussion: design of pol. e+ sources
- Talk/Discussion: Cavitity design for Compton polarimeter (F.Zomer)
- Discussion: Which crossing angle welcome for ILC?
- Discussion: (New) Simulations needed concerning 'pol. source → IP?
- Open questions? Polarisation report?

Discussion about pol. e^+ sources for the ILC

- any criticism to the current sc design? Anything forgotten?

- Is only the undulator scheme applicable? What's about the laser scheme

  A. Stahl@LCWS04: undulator – 'simpler', but couples e^- source to operation of high-energy e^- beam



10 CO_2 lasers
+
High Current
e^- accelerator

T. Omori et al.,
NIM A500 (2003)
232-252

Omori, LCWS04

pol. γ done in 2002

pol e^+ under way

$\rightarrow$ shouldn't we also think about some parts of this scheme?

Discussion+Talk: high-energy polarimetry

- Talk: Fabian Zomer

- Anything we have to be careful because of fulfilling the 'scope document'

- Time for putting back the crossing angle discussion...
  $\longrightarrow$ were we happier with a – at least – small crossing angle?
  $\longrightarrow$ what would be the minimum crossing angle we could live with
  $\longrightarrow$ when and how could we use the 'chicane' scheme for downstream pol

- Anything else?

Discussion on depolarisation effects

- could problems occur 'pol. source $\leftrightarrow$ IP'?
- which new simulations were needed?
- Anything else?

What is included so far in our polarisation report?

'Physics' structure

- general remarks about couplings, eff. polarisation etc.
- Quantum numbers of selectrons
- Background example in Susy and ED
- Susy examples
- New physics in $f\bar{f}$ (incl. section on transverse pol.)
- CP observables in SM particle sector (incl. transverse pol.)
- Precision measurements: GigaZ
- Monte-Carlo Generators

Machine+polarimetry details

- e^- polarisation: SLD
- e^+ polarisation (laser-based, Daresbury helical design)
- NLC polarimeter
- measurement via physics processes