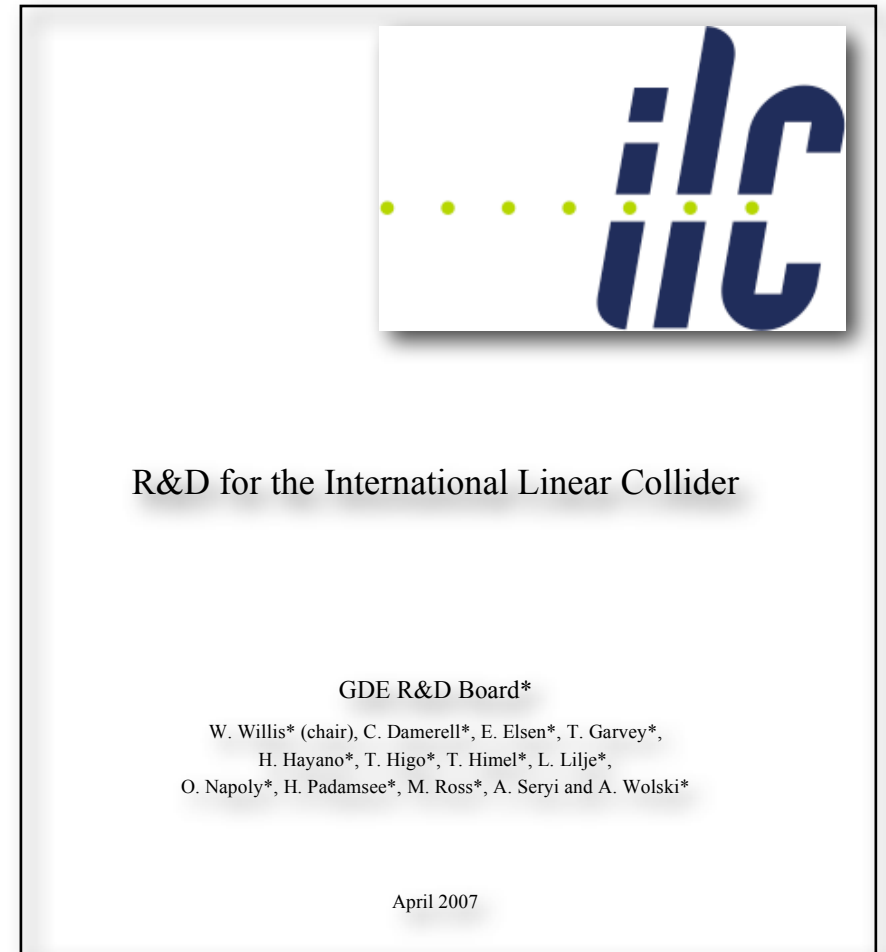


S5 Task Force – Recent Feedback and Plans

E.Elsen

R&D Document has been prepared

- Document available from R&D board Wiki-page
- formed the basis of the input to the MAC meeting April 26-27, 2007
- information derived from the discussions in the working groups and task forces



R&D Presentation @ MAC Meeting

- Presentation by O Napoly
- e^+ Source aspects mentioned:
 - Undulator based source
 - undulator
 - OMD
 - remote handling
 - upgrade to higher polarization
 - positron source system
 - Alternative Positron Sources
 - outlining options

Discussion during Meeting

- Yield
 - what are the margins?
 - The positron yield is a critical parameter and immediately affects the luminosity. (The consequences are comparable to those from the e-cloud effect in the damping rings)
- Alternative sources (with personal interpretation)
 - MAC wanted to hear more (scientific interest) but did not provoke a longer discussion at this time since the plans have not been sufficiently advanced
 - MAC also realised that there is a broader interest
 - CLIC
 - Super-B

Written Feedback from MAC Meeting

- The committee notes that a summary was provided of many activities, and attention should be paid to their effects. The committee acknowledges progress with positron sources.
- The committee is concerned about (or may need to understand better) the margin in the positron yield.
- The committee encourages assessing the synchrotron radiation load and collimation on the undulator beam pipe.

Consequences on R&D (as opposed to EDR)

- Margins in e^+ yield (including collimation assumptions)
 - undulator
 - target
 - OMD
 - DR
 - transport
- Undulator
 - synchrotron radiation
 - heat load, collimation
 - effect on polarisation?

Simulation

Consequences on R&D cont'd

- Polarisation
 - It has not been sufficiently recognised that the beams will have (a possibly unknown) degree of polarisation
 - requires serious study
 - Upgrade scenarios to full polarisation
- What are the R&D milestones for the Compton path?