Physics/cost Scope
- the way ahead

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Background

1. We all surely agree that the communication, interaction and understand between GDE and Physics & Detector community could be improved.
2. We made a start with the “Brau Committee” – PDWG - and the GDE Physics Questions Committee.
3. This discussion has been an important next step.
4. What is the way forward to continue to improve communications?

Some points from discussion

1. We must try to head off the inflationary estimates from e.g. DoE which will make the ILC sound expensive and to have increased no matter what we do – we must pre-empt that by coming out with our own estimates of contingency, inflation etc in the accounting methods of various countries.
2. Value engineering and R&D improvements should give us some headroom to deal with future cost increase pressures.
3. Staging in various different scenarios should be carefully considered.

Some points from discussion

4. An important figure of merit is the realistic & achievable integrated luminosity over an extended period.
5. Experiments always do better once they start to run than are predicted in any of the design studies.
6. There are ideas to utilise the low-power consumption at low E to improve SB2009 lumi, e.g. improving rep. rate, more bunches, etc. All in the end constrained by damping ring performance – need to work out the constraints and damping rings. More detailed discussion on Sunday @ 11:00 in BDS parallel session.

Some points from discussion

7. Realism in what can be achieved is an important factor. If a machine's physics case is significantly affected by 20% drop in machine parameters, we are in trouble.
8. What is the minimum performance of the ILC below which it isn't worth building?
9. Positron polarisation is very important and can be a substitute for luminosity?
10. "Don't throw the baby out with the bath water"

What do we need to do?

"Terms of reference"

1. Facilitate and catalyse discussion between those designing the machine & experiments.
2. Ensure that the consequences of any proposed changes to machine design are as well understood as possible.
3. Facilitate understanding of interplay between machine design and physics reach to optimise cost/performance of the ILC.

Physics/cost scope - the way ahead

- Members of the PDWG:

  J. Brau (Chair); M. Thomson, K. Buesser, F. Keisuke, A. Miyamoto, T. Markiewicz, M. Berggren, Stewart Boogert, D. Miller, T. Barklow, T. Maruyama, N. Graf

- Member of the GDE Physics Questions Committee:

  B. Foster & A. Seryi (Co-Chairs); J. Clarke, M. Harrison, D. Schulte, T. Tauchi

Options:

1) Leave things as they are
2) Form a completely new group – n members
3) Merge the BC & GDEPQC – 18 members
4) Merge “ + 1 member from each of Concept Management + 1 GDE PM – 21 members
5) Leave BC & GDEPQC as is and appoint a “Steering Group”

- Joint chairs from BC&GDEPQC + 2 from BC, 2 from GDEPQC, 1 from each Concept Management, 1 GDE PM – 9 members

Summary

- There seems to be general agreement that cost containment IS essential, and that we need to pay careful attention that design changes we make are optimised w.r.t the physics.
- Please think about the best way forward to ensure this dialogue works well – email me with suggestions and we will try to find the best way forward.