

Summary of WG1 and GG1

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Results of WG1

- A full list of sub-systems from damping ring to beam dump
 - Will be published and serve as a starting point for improvements
 - Identified some people to work on sub-systems
 - Agreed on some standard format
 - Later XML may come
- Sat together in front of computers
 - Started some result checking

Studies

- Bunch compressor design (P. Tenenbaum, E.-S. Kim, Y. Kim)
 - A few designs developed
 - Need evaluation, status quite different level
- Study of feedback in BDS (L. Hendricksen, A. Latina)
 - Need intra-pulse feedback
 - Problem in high dispersion points
 - Needs to address a number of problems
 - Can have impact on site choice

Studies 2

- Integrated simulations (G. White)
 - Massive computing resources
 - Need to understand angle impact on beam-beam effect
 - Physics community uses results
- Correction of BDS started (not presented)
 - We will work with Glen White

Studies 3

- Main Linac
 - Several studies performed (DESY, FNAL, Cornell, CERN)
 - Curved tunnel seems to work for ILC
 - Different methods used for correction
 - Need to compare results (started)
 - Emittance growth is not small
 - Emittance tuning bumps (dispersion) help (P. Eliasson)
 - Wakefield bumps should be added

Recommendations

- Prepared input for all choices from list
- Are the parameters reasonable?
 - Sofar yes, but need to carry out tuning study
- Can the tunnel follow the curvature of the earth?
 - For ILC it seems so
- Cavity shape
 - Wakefields might be mitigated

Codes

- A number of codes exist
 - SLEPT, LUCRETIA, LIAR, MERLIN, PLACET, CAIN, GUINEA-PIG...
 - Benchmarking is important
 - Not only tracking but correction methods
 - Agreed on using the same misalignments
 - Found people for most codes
- Interest to have a central code repository
 - Strong engagement from FNAL
 - Production codes

GG1: BCD

- Outline of BCD (baseline configuration document)
 - To be ready end of 2005
 - Needs some EDMS
 - Level of detail is still being discussed
 - KEK wants a written specification of what BCD is
 - Requires definition of change control process

GG1: Parameters

- 1 TeV high luminosity option has problem with spent beam
 - For CLIC spent beam line is crucial
- A number of alternative parameter sets presented
 - Different directions
- Will continue to use old sets

Tunnel Configuration

- Ranking in availability
 - Near surface, all RF accessible
 - Two tunnel, RF accessible
 - One tunnel, modulator huts
 - One tunnel
- Improved design may help
- Doesn't CLIC look nice?

Summary

- Some work done
- Much more to be done
- Not quite sure how things will go