Stimulate the discussion
&
Closing Remarks

to

SiD collaboration meeting

30 January 2008

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Intro remarks

This has been a sobering meeting

Funding situation in UK & US
especially towards ILC

Attendance down……

SiD keeps making progress

As we have heard several times (Barry, Jerry) the case for a Linear Collider remains strong. Science has not changed.

Also EPP2010 & P5 in 2007

Am convinced that current P5 in US will come to same conclusion.

Rest of world (world minus (UK+US)) has not changed its mind.

So I am convinced that LC will remain priority

Therefore SiD is needed & <u>we</u> need to continue

Next step: LOI

Human problem: what will be the time scale for realizing LC/SiD ?

This could be the end of my talk

Not much else to say

Short term and mid term goals for SiD

- Create a LOI (or whatever it will be called) and submit to Research Director (RD)
- Interact with RD and communicate clear intention to submit LOI
- Become a "validated" LOI

Hard to see beyond this, because it is not clear.
Even "validation" meaning is not quite clear

However: It is necessary to be "validated", because it will be required for any future steps for SID

Timeline LOI previous

Date	Milestone
10/1/08	Submit LOI
9/1/08	Begin Final Edit of LOI; complete authorlist
8/1/08	**Complete LOI Draft** Collaboration Review and Comment
6/1/08	**GEANT4 Description Ready** Performance Studies Ready Benchmarking Studies Ready
5/08	**Freeze Detector Design** SubSystems Fully Specified Subsystem Technologies/Alternates Selected Conceptual Engineering Designs Ready
3/08	**Freeze Global Parameters** First Pass Detector Design
2/08	**First Pass Global Parameters**
12/07	**Subgroup Plans Defined** Milestones and Deliverables Manpower Resources Needed

10/1/2008

A new draft time line for the SiD LOI

Date	Milestone	Activities
4/09	**Submit LOI**	
3/09	**Begin Final Edit of LOI**; complete authorlist	
2/09	**Complete LOI Draft** Collaboration Review and Comment	Additional goals ??
9/08	**GEANT4 Description Ready** Performance Studies Ready Benchmarking Studies Ready	
6/08	**Freeze Detector Design** SubSystems Fully Specified Subsystem Technologies/Alternates Selected Conceptual Designs Ready	
4/08	**Freeze Global Parameters** First Pass Detector Design	At UK meeting ?
3/08	**First Pass Global Parameters**	
	Optimization studies	Optimization studies
01/08	**Subgroup Plans Defined** Milestones and Deliverables Manpower Resources Needed	

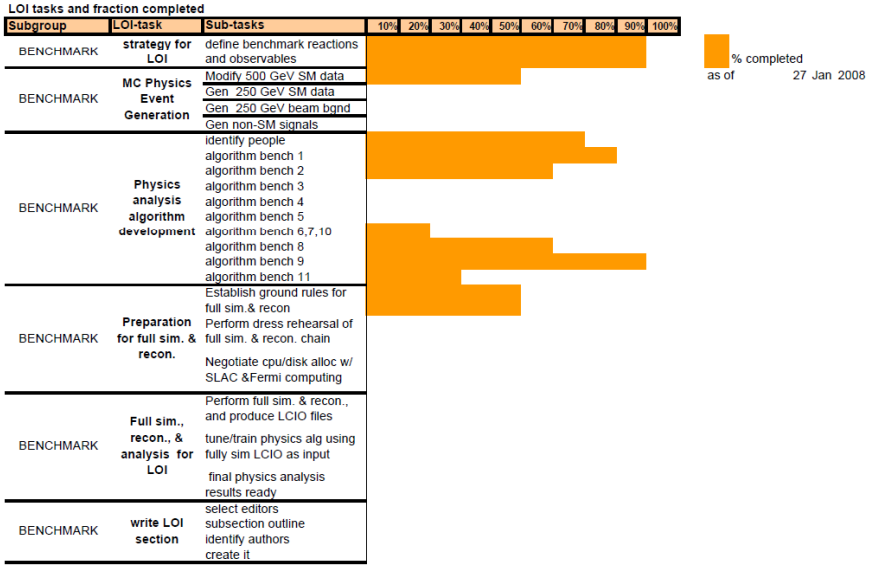
Benchmarking

LOI input

We need the planning input we requested; adjust time line

List of LOI tasks and time line for these tasks

Subgroup	LOI-task	Sub-tasks
BENCHMARK	strategy for LOI	define benchmark reactions and observables
BENCHMARK	MC Physics Event Generation	Modify 500 GeV SM data
		Gen 250 GeV SM data
		Gen 250 GeV beam bgnd
		Gen non-SM signals
BENCHMARK	Physics analysis algorithm development	identify people
		algorithm bench 1
		algorithm bench 2
		algorithm bench 3
		algorithm bench 4
		algorithm bench 5
		algorithm bench 6,7,10
		algorithm bench 8
		algorithm bench 9
		algorithm bench 11
BENCHMARK	Preparation for full sim. & recon.	Establish ground rules for full sim.& recon
		Perform dress rehearsal of full sim. & recon. chain
		Negotiate cpu/disk alloc w/ SLAC &Fermi computing
BENCHMARK	Full sim., recon., & analysis for LOI	Perform full sim. & recon., and produce LCIO files
		tune/train physics alg using fully sim LCIO as input
		final physics analysis results ready
BENCHMARK	write LOI section	select editors
		subsection outline
		identify authors
		create it



~~Engineering~~

Pre-conceptual thoughts All the way to commissioning

Need to continue this in SiD

Can not produce anything believable without it

Example: Global parameters needed

Detector	Radius (m)		Axial (z) (m)	
	Min	Max	Min	Max
Vertex Detector	0.01	0.06	0.00	0.18
Central Tracking	0.21	1.25	0.00	1.61
Endcap Tracker	0.00	0.49	0.85	1.37
Barrel Ecal	1.27	1.41	0.00	1.79
Endcap Ecal	0.21	1.27	1.65	1.79
Barrel Hcal	1.42	2.37	0.00	2.74
Endcap Hcal	0.21	1.41	1.79	2.74
Coil	2.46	3.27	0.00	2.74
Barrel Iron	3.28	5.92	0.00	2.75
Endcap Iron	0.21	5.92	2.75	5.39

Detector R&D

Need to identify SiD specific R&D or R&D needed for SiD

Should SiD have its own R&D program ???

May work in the US, now that everything is up for grabs

Does NOT work outside US because of existing R&D collaborations/efforts

My Answer:
(now)

no we should not have our own R&D program;
just identify R&D that is needed.

This may change when SiD is a "validated" detector concept

HCAL technology

(guaranteed blood pressure increaser)

Choice of technologies or better: choice of baseline

We will have options

Need options, even just to cover E_{cm}

There is a procedure;

If HCAL group is not able to come to a choice of baseline and options, create SiD internal committee to make this selection.

Time scale was: March-April 2008

Vishnu: started laying out the arguments, "pro and con"

Information from sub systems

tests of all sizes is useful input

Final remarks

Thank you all for coming/contributing remotely

Under difficult circumstances

Thanks to SLAC and the SLAC SiD group for hosting this meeting.

Thanks Rich Partridge.

Next meetings:

Feb 8 at CERN to establish contact with CERN/CLIC

Feb 11 with French groups

March 3-6 Sendai meeting (ACFA)

April 14-15 SiD meeting @ RAL

THE END