



Workshop Goals

SiD Boulder Workshop
September 17, 2008
John Jaros



Activities from RAL to Boulder

- **Preparing for the LOI**

This is dominating much of what we are doing for SiD: completing the analysis tool kit, optimizing the design, getting benchmark analyses started, and doing the conceptual engineering.

- **Continuing Detector R&D**

- **Thinking beyond the LOI**

What's next? Some guidance is being provided by the Research Director, and some planning is needed for the LOI itself.



Road to the LOI

<u>Date</u>	<u>Milestone</u>
4/09	Submit LOI
3/09	Begin Final Edit of LOI; complete authorlist
2/09	Complete LOI Draft Collaboration Review and Comment
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
3/08	First Pass Global Parameters Optimization studies
01/08	Subgroup Plans Defined Milestones and Deliverables Manpower Resources Needed

Boulder Meeting

RAL Meeting



RAL Action Items

- Fix SiD's Global Parameters ✓
see Marcel Stanitzki's talk
- Get PFA and Track Reconstruction ready ✓
see Mat Charles's and Rich Partridge's talks
- Define *re-baselined* SiD ✓
see Norman Graf's talk
- Get physics benchmarking and performance studies ready to go $\frac{1}{2}$ ✓
see Tim Barklow's benchmarking talk
see Norman Graf's talk on preparing MC data sets

Goal #1: Review our progress. Identify loose ends.



Detailed Planning for the LOI

Road to LOI Excerpt

<u>Date</u>	<u>Milestone</u>
2/09	Complete LOI Draft Collaboration Review and Comment
9/08	GEANT4 Description Ready Performance Studies Ready Benchmarking Studies Ready

There is a lot to do between
Geant4 Ready and Complete LOI

LOI Editors Hiro Aihara, Phil Burrows, and Mark Oreglia are fleshing out a realistic, detailed plan for getting from here to there. [See Hiro Aihara's talk.](#)

Goal #2: Sharpen our vision of what the LOI is, define just what needs to be done, assign work, and enlist authors in breakout sessions tomorrow.



Concerns?

Some potential concerns...are there others?...which are important?

- SiD02 is defined. Is it right?
- Do we have the resources to generate all the MC data needed?
- When will we be ready to start reconstruction?
Do we have the resources to process all the data?
Are the PFA and tracking algorithms adequate?
What's missing?
- Do we have realistic conceptual designs for all subsystems?
- Are subsystem performance studies underway?
- Do we have enough physics analysts?
Can we cover the benchmarking exercises?

**Goal#3: Identify significant problems so
we can address them.**



What's Coming Next?

Long term plans parallel the GDE Schedule

- **Detector Design Phase I 2010**
LOI Validation with IDAG
Advance critical R&D
Continue optimization/update physics performance
Refine MDI plans
- **Detector Design Phase II 2012**
React to LHC Results
Complete needed R&D
Complete technical design
Confirm physics performance
Develop reliable cost estimate



What's coming Next?

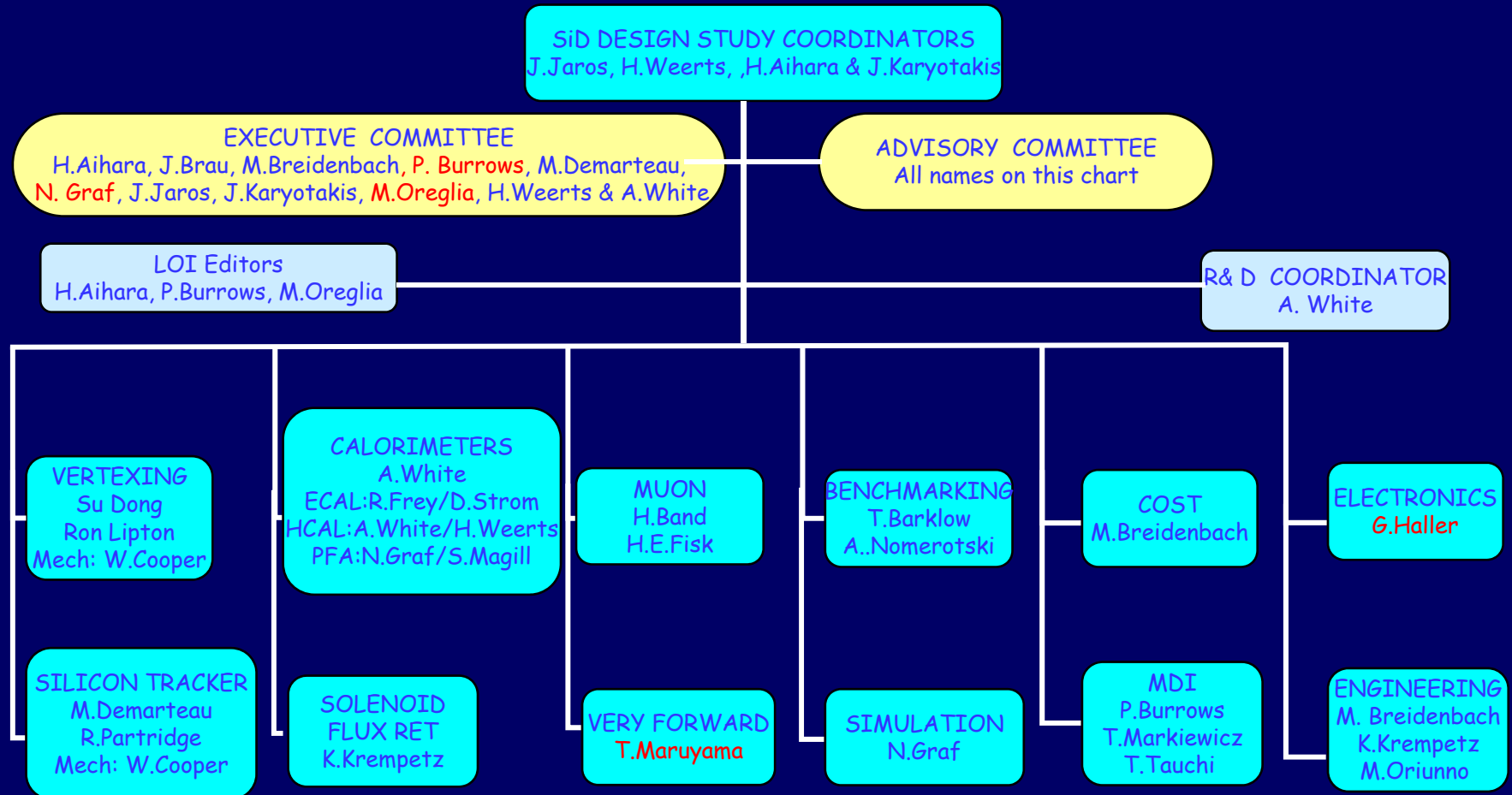
SiD's short term plans support completing the LOI

- **SiD at LCWS08 November 16-20 Chicago**
Check up on data set generation
Review physics benchmarking
Assemble LOI rough draft
Recruit more LOI signatories
Can we meet Saturday, November 15?
- **Next SiD Workshop February/March?**
Review the final LOI draft
Prepare for Validation and Next Steps
Where is the Workshop? When?



SiD organization chart

Subsystems have LOI responsibilities



Goal #4: Enlist new LOI contributors