

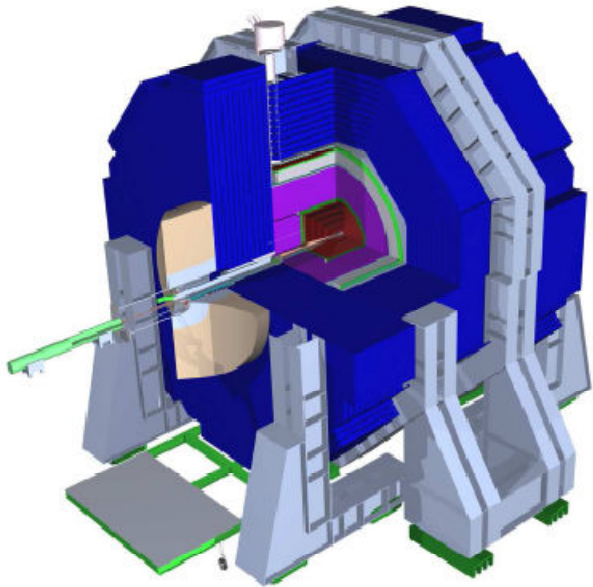
# Post Validation: SiD's Next Steps



2009 Linear Collider Workshop of the Americas  
SiD Working Group Meeting  
October 1, 2009  
John Jaros

## SiD Letter of Intent

31 March 2009



SiD Letter of Intent was submitted 31 March, 2009 and signed by 244 physicists and engineers, representing 77 institutions, worldwide

The SiD LoI and other information about SiD can be found on the SiD webpage:

<http://silicondetector.org/display/SiD/home>

# Validated!

Email excerpts from Sakue Yamada on August 19, 2009:

Dear Harry and John,

I received IDAG report last Monday. As ILCSC was expected today, Wednesday, I waited to inform you of the recommendation to see how ILCSC responds.

ILCSC endorsed the recommendation and I am glad to inform that SiD was recommended to be validated.

***Congratulation! It is a result of the hard works of you and your colleagues.***

There will be many new works waiting. I will contact you in due time with more info and issues to consider.

All the best,

Sakue

# Bravo!

- All of SiD should take pride in their part of this accomplishment.
- A small band of heroes must be singled out:

<b>Sim/Recon Group</b>	Detector defined, backgrounds and 100M events generated & reconstructed & analyzed! An international effort!
<b>Full Recon Packages</b>	SiD Iowa PFA & Stand-alone SiD Tracking
<b>SiD Benchmarking</b>	Benchmarks completed and then some Good to the last IDAG question
<b>SiD Calorimetry</b>	Calibrations and PFA Performance Studies
<b>SiD Tracking</b>	Alignment, Performance Studies, 5 Layer Defense!
<b>SiD MDI</b>	Semper apparatus paratus

# Sakue's Work Plan for a Detailed Baseline Design by 2012

- Demonstrate proof of principle for critical components
- Define a feasible baseline design
- Develop a realistic conceptual engineering design of the detector, including full subsystem integration, supports, services, dead spaces
- Develop a correspondingly realistic simulation of the full detector
- Develop push-pull designs and procedure
- Realistically simulate and analyze updated benchmark reactions, including backgrounds
- Simulate and study new 1 TeV benchmarks
- Develop an improved cost estimate

**Tall order! But it's where we need to go.**

# SiD's Immediate Goal: A SiD Work Plan by October 20, 2009

Sakue has requested the following by Oct 20, before the November PAC meeting in Pohang Nov 3:

## ***SiD Work Plan for preparing the detailed design report by 2012***

- Detailed timeline with milestones
- List of resources required

We have an excellent start on such a plan in the LoI R&D Plan.

This meeting will be used to review and discuss our first drafts of the SiD Work Plan. Your feedback needed.

SiD Exec will produce a brief SiD Work Plan document for Sakue based on progress at this meeting. A draft will be distributed to SiD for comment before being sent to Sakue.

# Today's Agenda: Toward a SiD Work Plan

**Thursday 01 October 2009**

## **Detectors: SiD Working Group**

08:50 Q & A with the Research Director and IDAG Chair (30')  
Sakue Yamada, Michel Davier

09:20 SiD's R&D Plan and Opportunities for New  
Collaborators (40') Andy White (*UT Arlington*)

10:30 SiD Sim/Recon Plans (20') Norman Graf (*SLAC*)

10:50 Support Needed for SiD (20') Harry Weerts (*ANL*)

11:10 CLIC Studies and SiD' (30') Lucie Linssen (*CERN*)

11:40 Open Discussion: SiD's Future (20')

# We can write a work plan.

## Can we *do* a work plan?

- Generating a SiD Work Plan will be a valuable exercise if we are hard-nosed about prioritizing R&D and we are pragmatic in setting our goals.

*We needed to do this for the Lol, and did so. One more time!*

- Pursuing the SiD Work plan can only be successful ***if we can...***
  - ...ratchet up the R&D effort and engage new collaborators/new support to pursue the essential R&D
  - ...retain engineering and sim/recon infrastructure support from the labs for realistic detector integration, MDI, and simulation



# SiD's Future depends on Building Support

- Get ILCSC behind the 2012 Detector Technical Reports  
Help in creating a viable US ILC strategy
- Grow SiD Internationally by growing the SiD R&D Effort.  
We need the help. We need the breadth. We need the support.  
It could seed a real collaboration.
- Get GDE Support for Detectors  
Push pull and vibration control are joint GDE/detector concerns  
and deserve GDE support.

# Broad Brush Timetable...working back

- Late 2012      **Deliver SiD Technical Report**
- Early 2012      **Write STR**  
Complete benchmarking and performance studies  
Last minute R&D demonstrations
- Mid 2011      **Define SiD Baseline in GEANT4**  
Make Baseline Technology Selections  
Complete Detector Optimization  
Complete Engineering Designs
- Begin Physics Benchmarking and Performance Studies**  
Generate and reconstruct MC data
- 2010            **Conduct critical detector and MDI R&D**
- Prepare Sim/Recon for Realistic Detector Description**
- 2009            **Develop and initiate SiD Work Plan**

# The SiD Chronicles

- Volume 1 *SiD Detector Outline Document  
2006*
- Volume 2 *SiD Letter of Intent  
2009*
- Volume 3 *SiD Technical Report  
coming 2012*

Third time's the charm!