



Collaboration Meeting



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Argonne National Laboratory



CALICE Collaboration Meeting
LAPP, Annecy, France
September 9 – 11, 2013

Welcome



Thanks to **Yannis Karyotakis** and **Max Chefdeville** for hosting this meeting

And thanks to **everyone** for coming

General News

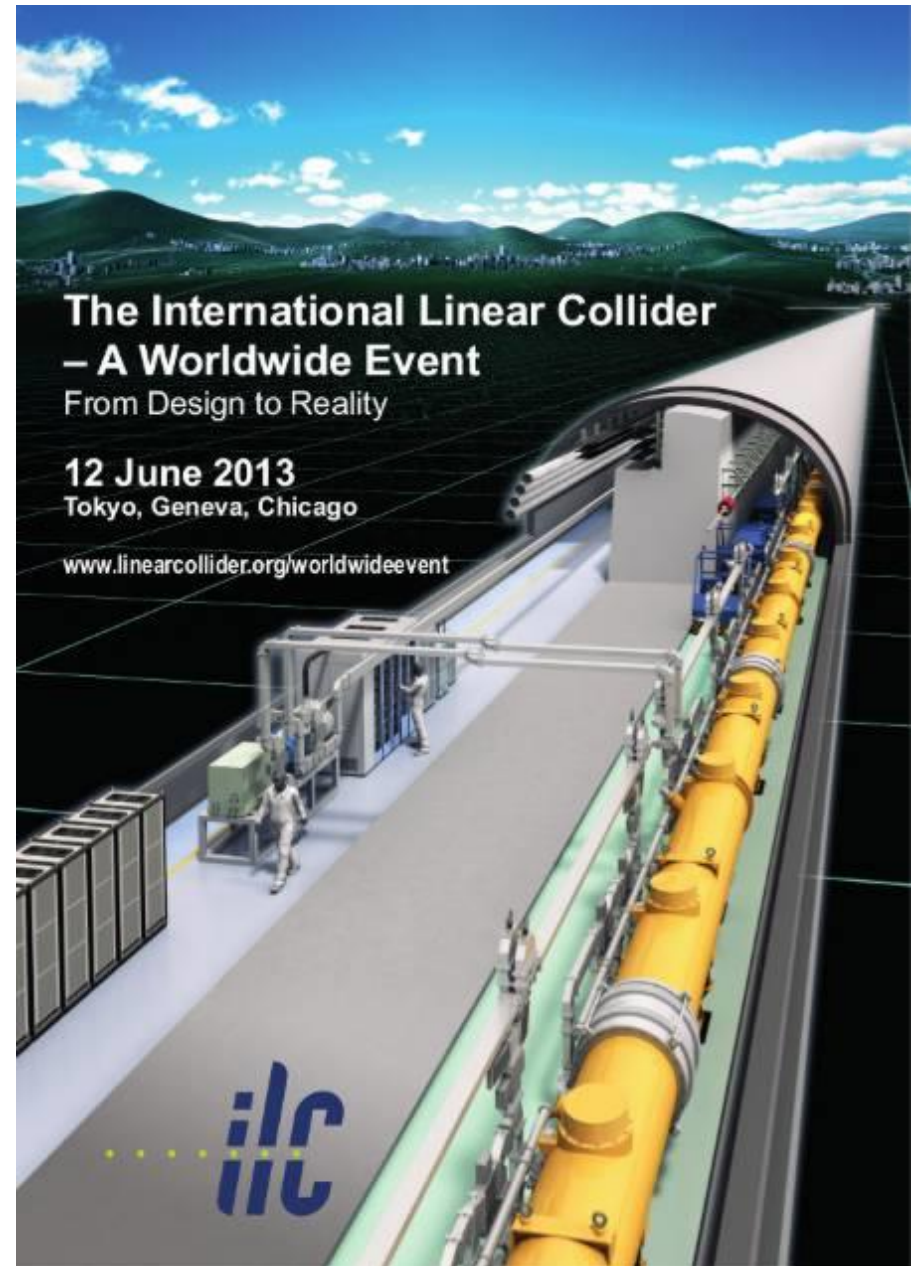
Completion of ILC

Technical Design Report



Handing-over ceremony
on 12 June 2013

Tokyo: Lyn Evans → Shinzo Abe
CERN: Brian Foster → Rolf-Dieter Heuer
Fermilab: Barry Barish → Pier Oddone



ILC Timeline

20 years from first idea to prototype linear collider

1965 Maury Tigner, Nuovo Cimento 37 (1965) 1228
1988–98 SLAC Linear Collider (SLC)

25 years to complete the ILC design

2013 Technical design report
Cost review done
Linear Collider Collaboration is being formed
Japan selected a site

2013 – 16

Prepare a proposal to the funding agencies

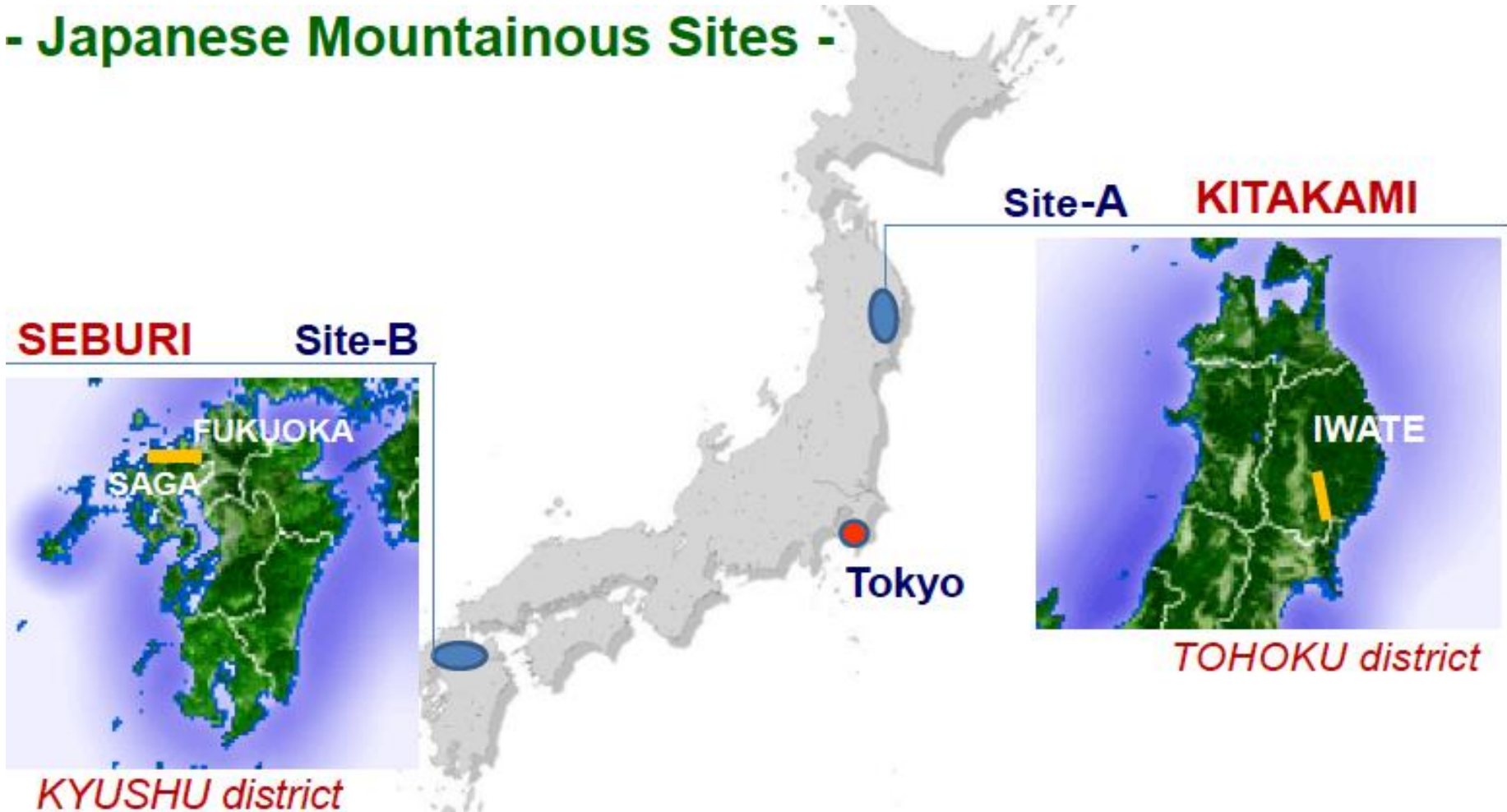
2016

The ILC is Good to Go



ILC Site Options

- Japanese Mountainous Sites -



ILC Site Selection

Announcement on August 23, 2013

Kitakami – Northern site



General News

Snowmass 2013

U.S. HEP planning exercise
Started in 2012

Many frontiers

Energy, intensity, cosmic,
instrumentation, computing,
facilities, outreach...

Executive summary (no recommendation)



Particle Physics Project Prioritization Panel (P5)



Recommendation by 2014

SNOWMASS CSS 2013

ON THE MISSISSIPPI

JULY 29 - AUGUST 6, 2013



ORGANIZED BY THE DIVISION OF PARTICLES AND FIELDS OF THE APS
HOSTED BY THE UNIVERSITY OF MINNESOTA

STUDY GROUPS

Energy Frontier
Chip Block (Michigan State),
Michael Peskin (SLAC)
Intensity Frontier
JoAnne Hewett (SLAC),
Harry Werts (Argonne)
Cosmic Frontier
Jonathan Feng (University of California, Irvine),
Steve Ritz (University of California, Santa Cruz)
Frontier Capabilities
William Barletta (MIT),
Mumtaz Ghosh (LBNL)
Instrumentation Frontier
Marcel Dennerau (Argonne),
Howard Nicholson (Mt. Holyoke),
Ron Lipton (Fermilab)
Computing Frontier
Lothar Bauerick (Fermilab),
Steven Gottlieb (Indiana)
Education and Outreach
Marge Burdeen (Fermilab),
Dan Cronin-Hennessy (Minnesota)
Theory Panel
Michael Dine (University of California, Santa Cruz)

LOCAL ORGANIZING COMMITTEE

Marcela Carena (Fermilab and University of Chicago)
Dan Cronin-Hennessy (Minnesota, Chair)
Prisca Cushman (Minnesota)
Lisa Everett (Wisconsin)
Alec Habig (Minnesota, Duluth)
Ken Heller (Minnesota)
Jody Kaplan (Minnesota)
Yuichi Kubota (Minnesota)
Jeremy Mans (Minnesota)
Bridget McCoy (Minnesota)
Marvin Marshak (Minnesota)
Jarek Nowak (Minnesota)
Keith Olive (Minnesota)
Gregory Pawloski (Minnesota)
Ron Poling (Minnesota)
Marco Peloso (Minnesota)
Yongzhong Qian (Minnesota)
Roger Rusack (Minnesota)
Wesley Smith (Wisconsin)

DPF EXECUTIVE COMMITTEE

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• Lynne Orr (University of Rochester)
• Yuri Gershtein (Rutgers University)
• Nikos Varelas (University of Illinois, Chicago)
• Robert Bernstein (Fermilab)
• Sally Seidel (University of New Mexico)



WWW.SNOWMASS2013.ORG

POSTER DESIGN BY
KATE SCHALOW

General News

SiD ECAL

Very ambitious design:

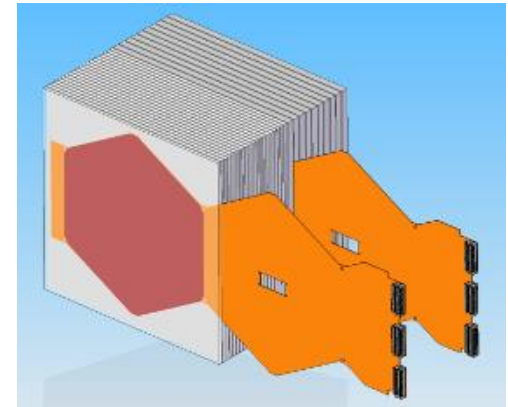
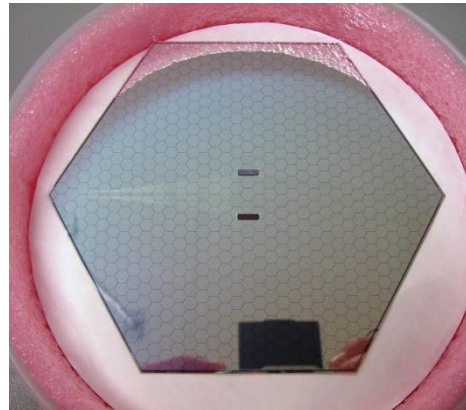
- ~1,000 channels per wafer
- KPiX chip bump bonded to wafer
- 1.1 mm active gap
- Power pulsing...

First test beam

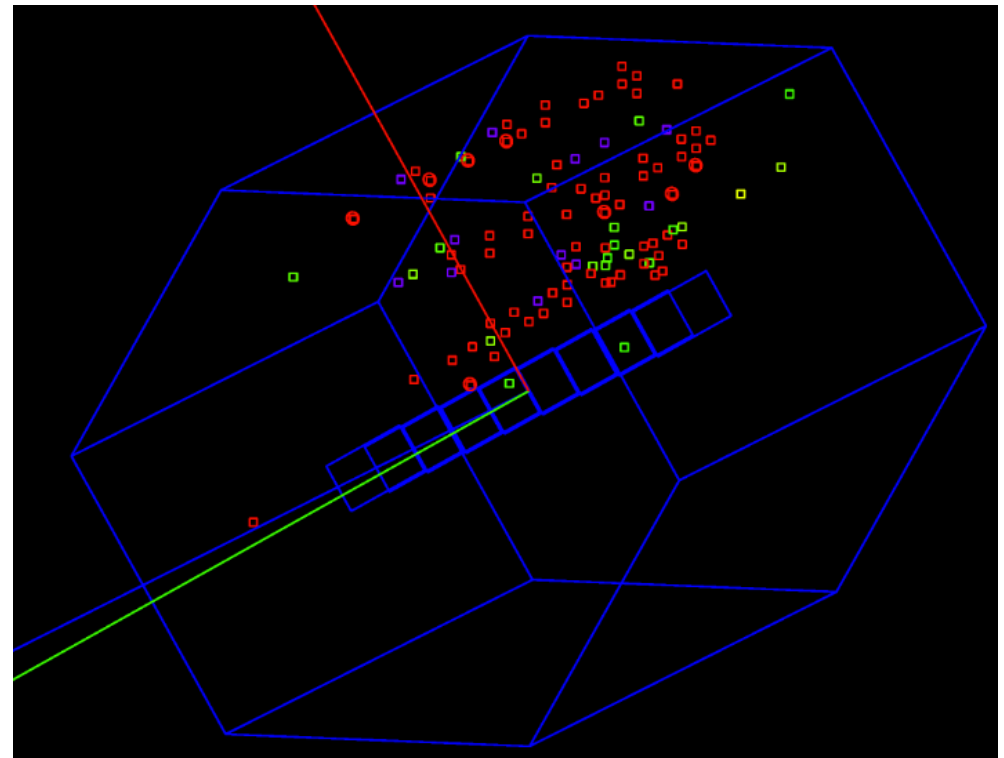
- End station A at SLAC
- Few days in July
- 9 layers interleaved with W-plates

Next test beam

- Early in 2014
- Additional layers



3 electrons in the SiD ECAL



Status of papers

- **Since last Collaboration meeting:**
 - Validation of GEANT4 Monte Carlo Models with a Highly Granular Scintillator-Steel Hadron Calorimeter; [2013 JINST 8 P07005](#); e-Print: [arXiv:1306.3037](#)
 - Track segments in hadronic showers in a highly granular scintillator-steel hadron calorimeter ; e-Print: [arXiv:1305.7027](#); accepted by JINST
- **Active EBs for papers:**
 - Performance of a CALICE Scintillator-Strip Electromagnetic Calorimeter First Prototype (**Jeans**)
 - Construction and beam tests of a tungsten calorimeter read out using scintillator strips (**Coterra, Uozumi, Takeshita ...**)
 - Optimization of Energy Resolution in the DHCAL (**Smith**)
 - W-AHCAL 2010 (PS) data (**Lucaci-Timoce**)
 - Hadrons in SiW ECAL (**van der Kolk**)
 - Analysis of T3B data – two papers (**Simon**)

Analysis notes

- *CAN040* Proton results from AHCAL (Marina Chadeeva)
 - Approved for CHEF
- *CAN041* Uniformity of pion response in AHCAL (Mathias Götze)
- *CAN042* New DHCAL analysis results (Burak Bilki)
 - Approved for CHEF
- *CAN043* New T3B results (WDHCAL, FastRPC) (Simon, Weuste, Szalay)
 - Approved for CHEF
- *CAN044* WAHCAL analysis (2011 data) analysis (Angela Lucaci-Timoce)
 - Approved for EPS-HEP 2013 poster

In review:

- *CAN045* Fractal Dimension analysis (Manqi Ruan)



Conversion of CANs to papers?

- The following are still pending:
 - CAN009 (muons in AHCAL) No recent news (Simon)
 - CAN012 (SCEcal small DESY test) – Paper under review (Jeans)
 - CAN016 (SCEcal FNAL test) – Paper under review (Coterra).
 - CAN017 (ECAL position/angle resolution) – probably needs more work, but author no longer in CALICE.
 - CAN023 (Hough transform) worth publishing (Fehr)
 - CAN025 (Pions in SiW ECAL @ FNAL) – Paper under review (v.d.Kolk)
 - CAN029 (AHCAL leakage correction) Should publish.
 - CAN030-032, 039, 042 (DHCAL) analysis still ongoing (Repond et al)
 - CAN033, 038, 043 (T3B) Papers in preparation (Simon et al)
 - CAN034 (AHCAL FNAL analysis) Should publish.
 - CAN036 (WAHCAL PS data) Paper under review (Lucaci-Timoce)
 - CAN037 (SDHCAL) analysis still ongoing (Laktineh et al)
 - CAN039 (WDCAL) analysis ongoing? (Repond et al.)
 - CAN040 (Protons in AHCAL) Should publish (Chadeeva)
 - CAN041 (Uniformity of AHCAL) ??? (Götze)
 - CAN044 (WAHCAL SPS data) Should publish (Lucaci-Timoce et al.)



Conferences

■ Recent conferences

- CHEF2013 Calorimetry for High Energy Frontier (Paris; 22-25 April 2013)
 - [17 CALICE or CALICE-related talks](#)
- ECFA LC2013 (DESY Hamburg 27-31 May 2013)
 - [12 CALICE talks](#) (fewer than usual?)
- EPS-HEP 2013 (Stockholm 18-24 July 2013)
 - [1 talk; 1 poster](#)

■ Forthcoming conferences.

- 4th ICATPP Conference (Villa Olmo, Como 23-27 September 2013)
 - [Two talks proposed.](#)
- 13th Topical Seminar on Innovative Particle and Radiation Detectors (Siena) (7 - 10 Oct. 2013; Siena)
 - [Not aware of any talks](#)
- 2013 IEEE NSS/MIC Symposium (Seoul, October 27th - November 2nd)
 - [At least 5 abstracts submitted](#)
- [LCWS 2013](#) (Tokyo 11-15 November)
 - [Should start planning soon](#)

At this meeting

Three full days...

Discussion session on Wednesday

Open for any topic which should be discussed by the collaboration as whole
So far: **CALICE and the LHC**



ENJOY THE MEETING

