

CALICE @ Tokyo

- Introduction -



CALICE Collaboration Meeting
September 2017
Tokyo, Japan

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MPP Munich

Thank You!

- A warm thank you to our hosts:

大谷航 (Wataru Ootani) and the University of Tokyo Team!

- And thank you all for coming to this meeting



東京大学
THE UNIVERSITY OF TOKYO

The Present Landscape: Future Energy Frontier

- Continued uncertainty about ILC: Now being proposed as a 250 GeV Higgs Factory as a first stage - pointing out upgrade possibility, but no “built-in” path to higher energy by longer tunnel, or additional cryomodules installed
 - Expect statement by Japan within the next ~ 12 months
- CEPC on a “less aggressive” time schedule as planned initially - but progressing
 - CDR planned in the coming months
 - Working towards internationalisation - next workshop early November
- European projects CLIC & FCC: Working towards the Update of the European Strategy
 - Input due end of 2018
 - CLIC summary report building on CDR, detailed description of 380 GeV machine
 - FCC CDR - including HE-LHC
 - Also quite some material on HL-LHC expected
 - Strategy process 2019 / 2020: Expected to provide guidance - also beyond Europe

CALICE - Where We Are

- Our detector prototypes now all are in the phase of “**technological prototypes**”:
After the demonstration of the principle of highly granular calorimeters, we are now showing that these detectors are indeed capable of fulfilling “real-world” constraints
- Further results from combined systems (ECAL + HCAL) approach publication readiness
- First beams of ECAL and HCAL systems together using technological prototypes
- Our technologies increasingly make their way into other experiments, diversifying the CALICE portfolio:
 - CMS HGCALE (silicon, scintillator)
 - ATLAS HGTD (silicon)
 - and a large number of other smaller applications - plus new ideas being investigated: Calorimetry in neutrino beams, ...

CALICE - Where we are

- We are moving towards the goals set out when CALICE was founded:
 - Proof of the principle of highly granular calorimetry
 - Establishment of viable technical solutions for collider experiments
 - Common running and performance analysis of ECAL + HCAL systems

How do we make our results as useful as possible to the wider community?

- Should we provide a evaluation of the strong and weak points of the different technologies we are studying - to inform choices of experiments ?
 - Not a “ranking” of technologies - too many factors contribute, which influence the position of a given application in the “optimisation” parameter space.
- Would be a compact resource on experience with different technologies in CALICE

What do you think? Is this useful?

Is this doable without getting stuck in “political” debates?

⇒ Topic of a discussion on Wednesday afternoon.

Upcoming Events

- CHEF 2017 in Lyon next week
- Workshop “Future Opportunities for Test Beams at DESY” next week
 - Please provide input to me in the next two days if you have ideas / wishes for test beam capabilities at DESY that would be useful for CALICE!
- LCWS 2017, Strasbourg, France, October 23 - 27
- Next CALICE Meetings to be decided here in Tokyo - Proposals
 - **Spring 2018: Mainz, Germany**
possible dates March 7 - 9, 2018 (Wed - Fr.), or the week of March 13 - 17 (either Mo - Wed or Wed. - Fr)
 - **Fall 2018: Shanghai, China**
possible dates Week of September 17 - 21 (either Mo - Wed or Wed. - Fr)
or the week of September 24 - 28 (either Mo - Wed or Wed. - Fr)

A Word on Technology

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The good old times...

Back then things were so much better...

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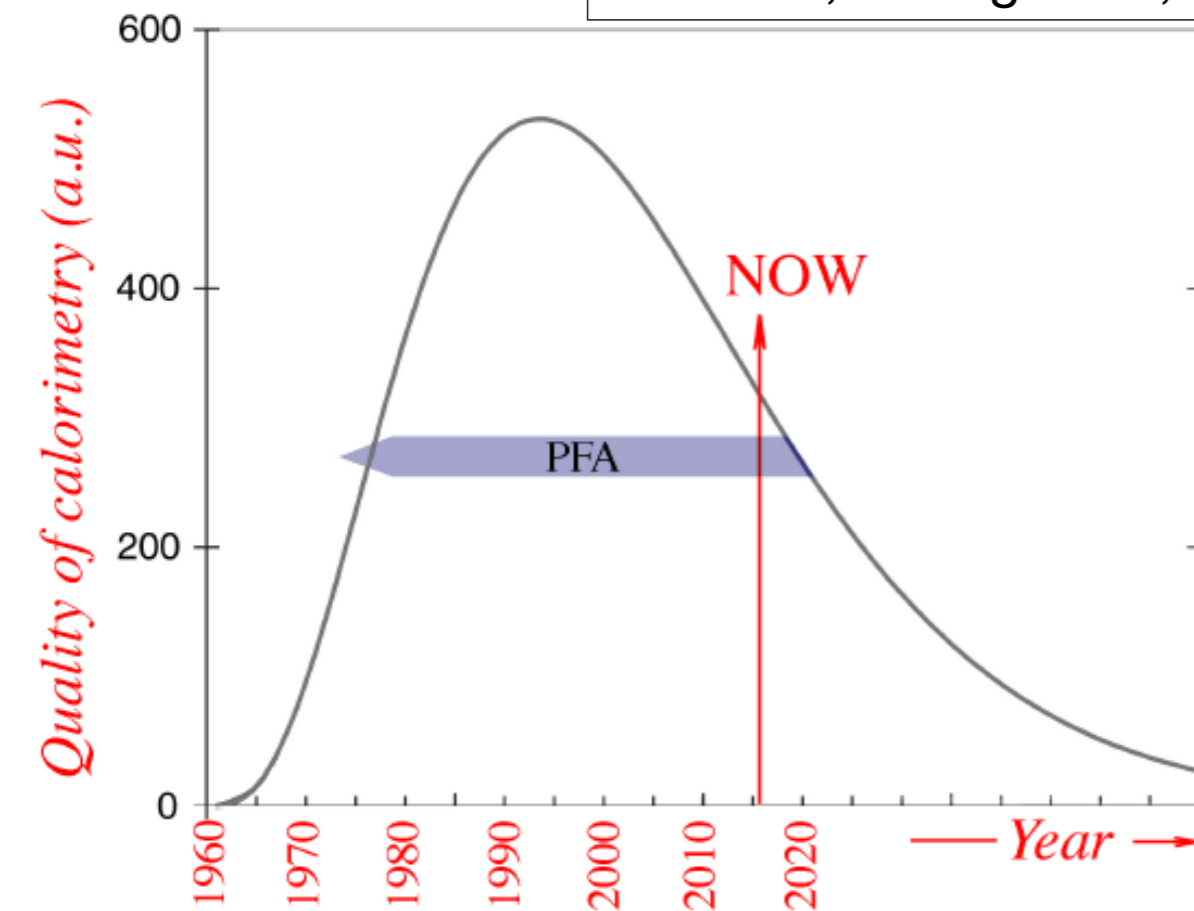
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M. Livan, R. Wigmans, : arXiv:1704.00661 / Instruments 1, 3 (2017)



“This approach is followed, for example, in projects carried out in the CALICE framework, which is geared towards application of PFA [...]

combined with a strong belief that all eventual problems can be solved with technology. [...]

Because of these developments, we fear that the future of calorimetry is bleak. [...]

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Technology makes all the difference!