

SDHCAL activities dashboard

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Hope you're doing well

Coronavirus outbreak

- China : Going rather well.
- Korea : Going rather well.
- Europe (Belgium, France, Spain) : Going better, research labs slowly reopening.

Ongoing activities

Test beam analysis

all TB

- Uniformity (Bing+SJTU)
- Low Energy hadrons (Bing+SJTU)
- Uses of BDT (Bing+SJTU)

09/2018 only

- SiWECAL+SDHCAL (Hector+CIEMAT : (done ?))
- Tricot electronics (GG, Imad (?) on hold (?))

2015 only

- Analysis with rotated device (**Hector**)

Ongoing activities

Hardware

- 2m² GRPC+HR3 ASU+ new DIF (Lyon+ CIEMAT)
- Timing electronics (CMS muon for strip and SJTU for SDHCAL pads)
- Cooling for CEPC (SJTU)
- SJTU lab (SJTU)

Simulation

- ILD SDHCAL simulation/reconstruction performance monitoring (Camilo, CIEMAT)
- Tricot simulation (on hold)
- Timing in simulation (developments by Guillaume Garillot → Analysis by Imad)
- Prototype simulation upgrade (Multithreading, ...) (François)

Ongoing activities

PFA

- ArborPFA → APRIL (Bo, → GG)
- Rand Index (GG, on hold)
- PFA with timing (Imad starting)

Digitisation

Incorporate GRPC response modeling to digitiser, (Clermont+Lyon).

ILD/CEPC Analysis

- CIEMAT
- $e^+e^- \rightarrow \gamma\gamma VV$ (Bing)
- include FCC-ee also ?

AIDA++ \Rightarrow Aidanova status

AIDA 2020 Expression of Interest

- EOI #145 PFA (ARTIC) : Included in software WP (50 k€).
- EOI #58 Timing SDHCAL and EOI #57 Tricot electronics : merged and included in WP gaseous detectors \Rightarrow Aidanova : reduced financing (50 k€, Mary Cruz representative)

SDHCAL removed from high granularity calorimeter WP

AIDA++ 2nd Open meeting at CERN, 09/23,

<https://indico.cern.ch/event/838461/>

Published papers

Recent

- SJTU work : JINST 14 (2019) no.10, P10034
<http://inspirehep.net/record/1762795>.
- CHEF 2019 proceedings : <https://arxiv.org/abs/2002.09678> (there were 3 SDHCAL talk at CHEF 2019)

Publications

Papers, short term

- Transformation of BDT note CALICE-CAN-2019-001 <https://inspirehep.net/record/1718039> into a paper, **submitted to JINST**. <https://arxiv.org/abs/2004.02972>
- Current analysis of test beam data (GRPC uniformity, low energy hadrons, ...) ?

Notes in preparation

- Bo : APRIL PFA (on hold, **Bo got a position in a chinese university**)
- Bing : Low energy hadrons + uniformity studies

Papers, medium term

- More on GRPC response modeling by Clermont ?

Coming meetings

Recent workshops

- Spring 2020 CALICE meeting, March 4-6, McGill
<https://agenda.linearcollider.org/event/8343/overview> Very little SDHCAL presence (2 persons)
One talk by Mary-Cruz
- FCC France, May 14-15, By video,
<https://indico.in2p3.fr/event/20792/> (summary next meeting ?)
- CALICE analysis meeting, one day in May 18-20 (one talk by Hector)

Coming workshops

- 3rd CEPC Workshop EU Edition, May 4-7, Marseille, **POSTPONED to spring 2021** <https://indico.in2p3.fr/event/20053/>

Coming conferences

Abstract closed

- ICHEP 2020 July 30 - August 5, Prague <http://ichep2020.org/>, 1 CALICE talk, going online

Open to abstract

- CALOR2020 → CALOR2021, May 17-21 2021, Sussex, UK, <https://indico.cern.ch/event/847884/> (abstract 12/7/20 to 03/26/21)
- TIPP 2020, May 24-29, British Columbia, Canada, **CANCELED** <https://indico.cern.ch/event/864722/> (abstract up to 04/24/20)
- PANIC 2020, **POSTPONED** August 30 - September 3 2021, Lisbon, Portugal, <https://indico.lip.pt/event/592/> (abstract will reopen in 2021)

More specialized meetings

Electronics

- Pico-second timing detectors, July 1-3, Zurich, Switzerland, <https://indico.cern.ch/event/861104/>, **POSTPONED** to June 16-18 2021

Advanced software

- IML Machine Learning Workshop, June 2-5, CERN, **POSTPONED to October 19-22** <https://indico.cern.ch/event/852553/> (Abstract open up to September 4)
- ACAT 2020 (Advanced Computing and Analysis Techniques in Physics Research) September 8-12, Daejon, South Korea, **POSTPONED** to end of 2021 <https://indico.cern.ch/event/855454/>, abstract up to 04/07/2020

Request from CALICE

News from autumn 2019 CALICE Meeting

- Message from Roman. Clean/update the CALICE twiki page.
<https://twiki.cern.ch/twiki/bin/view/CALICE/SdHCal>

ILD regular meetings

- Participation in ILD analysis and software meetings could/should increase.
- Plan an ILD meetings summary at each SDHCAL meeting ?
- Increase physics analysis for ILD/CEPC.

Outlook

Flash info

- A virtual machine with ILCsoft+some SDHCAL soft ready soon.

Today

- Discussion on Higgs analysis.

Don't hesitate to add any important activity, paper, or conference, I may have miss.

Next meetings

Europe (summer) 9-11 / China 15-17 / Korea 16-18

- June 11th
- June 25th

Backup

Past meetings

- LCWS2019, October 28 - November 1 2019, Sendai,
<https://agenda.linearcollider.org/event/8217/> : one talk by Bo on APRIL PFA
- CEPC workshop, November 18-20, IHEP, Beijing,
<https://indico.ihep.ac.cn/event/9960/>, a SDHCAL talk by Bing.
- CHEF2019, November 25-29, Kyushu,
<https://indico.cern.ch/event/818783/> 3 talks (Bing, GG, Djamel)
 - PID with Boosted Decision Tree (Bing)
 - Digitizer (Djamel)
 - APRIL PFA (GG)
- RPC2020, February 10-14, Roma,
<https://agenda.infn.it/event/19942/> **No abstract submitted**