

SDHCAL activities dashboard

Gérald Grenier

IP2I (previously IPN) Lyon

December 5th, 2019

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(+Antoine ?))
- Tricot electronics (GG, on hold)

2015 only

- Analysis with rotated device (on hold)

Ongoing activities

PFA

- ArborPFA → APRIL (Bo, → GG)
- Rand Index (GG)

Digitisation

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

ILD/CEPC Analysis

- CIEMAT
- $e^+e^- \rightarrow \gamma\gamma VV$ (Bing)

Hardware

- 2m² GRPC+HR3 ASU+ new DIF (Lyon+ CIEMAT) **News at last CALICE meeting**
- Timing electronics (CMS muon)
- Cooling for CEPC (SJTU)
- SJTU lab (SJTU)

Simulation

- ILD SDHCAL simulation/reconstruction performance monitoring (Camilo, CIEMAT)
- Tricot simulation (on hold)
- Timing in simulation (on hold)

AIDA++ status

AIDA 2020 Expression of Interest

- EOI #145 PFA (ARTIC) : Included in software WP (40 k€= 6 monthes financing), iterations with LLR and Frank Gaede ongoing.
- EOI # 135 Digitizer : dropped
- EOI #58 Timing SDHCAL and EOI #57 Tricot electronics : merged and included in WP gaseous detectors. Iterations ongoing.

SDHCAL removed from high granularity calorimeter WP

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

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

Publications

Papers, short term

- Transformation of BDT note CALICE-CAN-2019-001 <https://inspirehep.net/record/1718039> into a paper, **In CALICE**.
- An other paper from SJTU : JINST 14 (2019) no.10, P10034 <http://inspirehep.net/record/1762795>.
- Current analysis of test beam data (GRPC uniformity, low energy hadrons, ...) ?

Notes in preparation

- Bo : APRIL PFA.
- Bing : Low energy hadrons + uniformity studies

Papers, medium term

- ECAL+HCAL analysis, waiting to see the stat.
- More on GRPC response modeling by Clermont ?

Coming meetings

talk/poster to provide

- RPC2020, February 10-14, Roma,
<https://agenda.infn.it/event/19942/> (abstract before december 6)
- CALOR2020, May 18-22, Sussex, UK,
<https://indico.cern.ch/event/847884/> (abstract 12/2/19 to 03/27/20)
- 3rd CEPC Workshop EU Edition, May 4-6, Marseille

Request from CALICE

News from CALICE Meeting

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

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)

Outlook

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

Next meetings

time : Europe (winter) 9-11 / China 16-18 / Korea 17-19

- Thursday december 19th
- End of year break, reconvene in January