CALICE software and analysis support

Shaojun Lu, Clemens Guenter
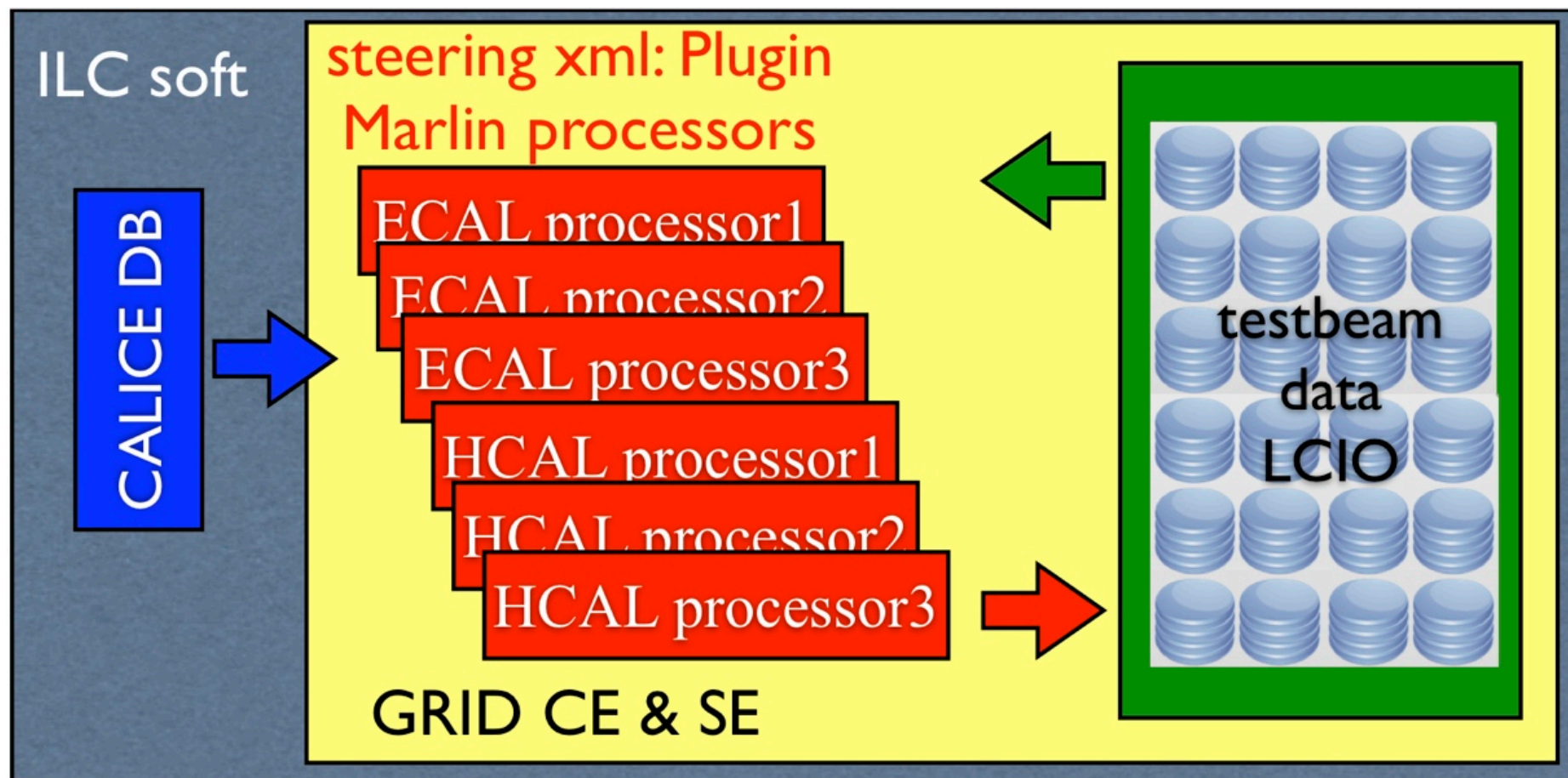
shaojun.lu@desy.de

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CALICE software

- ILC software framework
- GRID: Computing Elements and Storage Elements
- MySQL database: test beam hardware configuration and calibration constants
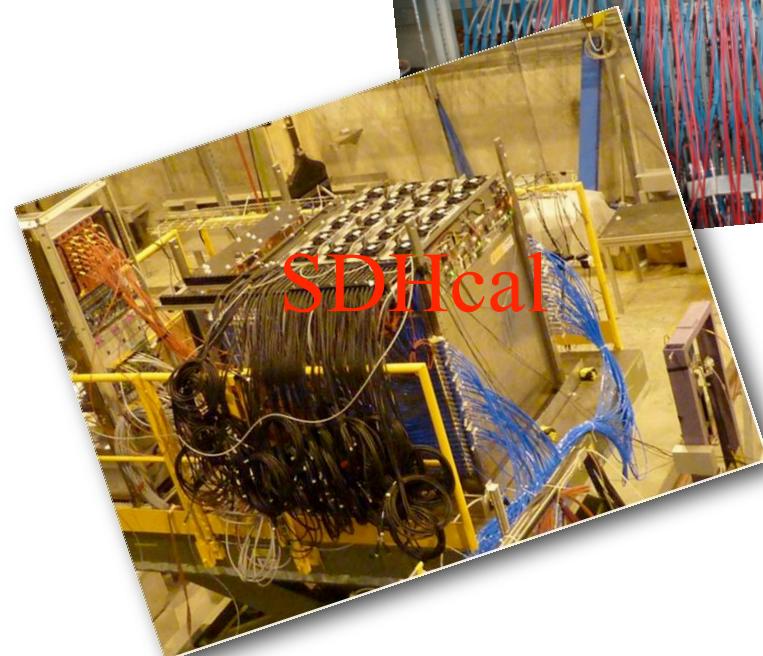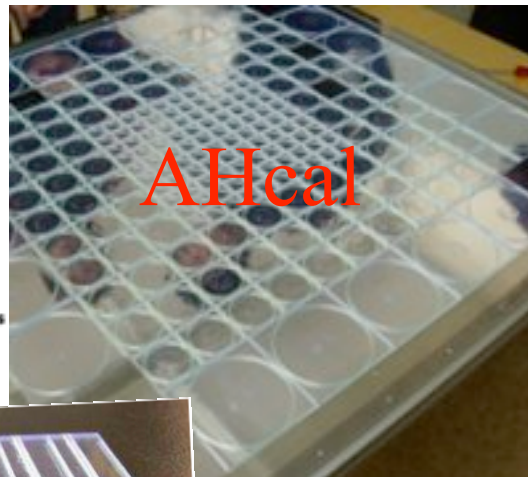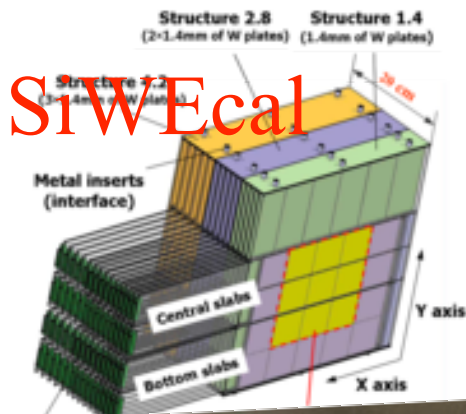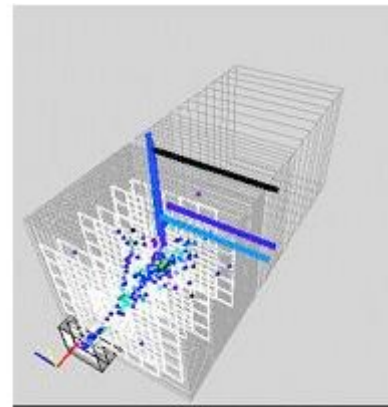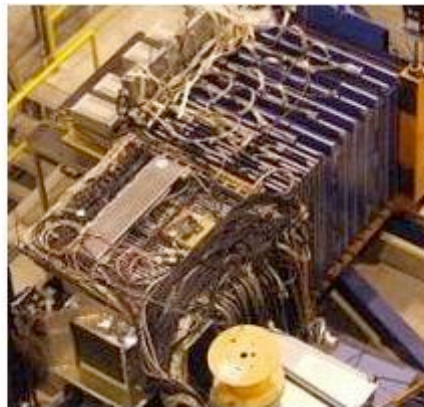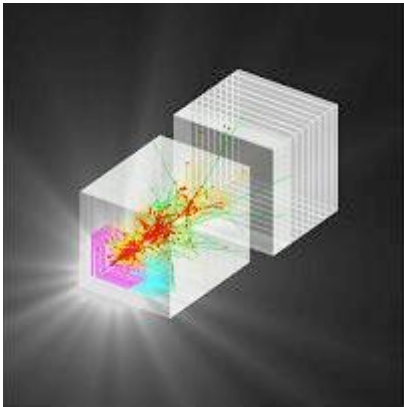
CALICE software

- The current developing version has been built and tested against ilcsoft v01-14-01.

- All packages can be accessed globally in the SVN server "http://svnsrv.desy.de/"

CALICE collaboration testbeam

- CALICE collaboration testbeam:

US Dhcal

SiWEcal

AHcal

SDHcal

SciEcal

CALICE software status

	Marlin conv	CALICE db tools	Marlin reco	Mokka sim	Marlin digi
SiW Ecal	Y	Y	Y	Y	Y
Sci Ecal	Y	Y	D	D	N
AHcal	Y	Y	Y	Y	Y
US DHcal	Y	Y	D	N	N
SDHcal		U	D	N	N

Yes	Developing	No	Unknown

Analysis support

- Mokka plugin: ShowerDecomposition

  - download from ILC software <u>Mokka</u>

- overlay processor: EasyJetProcessor

 - download from <u>calice_analysis</u>

Mokka plugin

- ShowerDecomposition for AHCAL:

  - To access the detailed Geant4 processes information
  - Identify the processes in the hadronic shower
  - Provide the the flag as the user requested
  - To calculate the energy fraction with this tag
- The relevant update have been done also for the Mokka sensitive detector drivers, to make sure that the Mokka plugin will also be able to access the CALICE test beam model geometry.
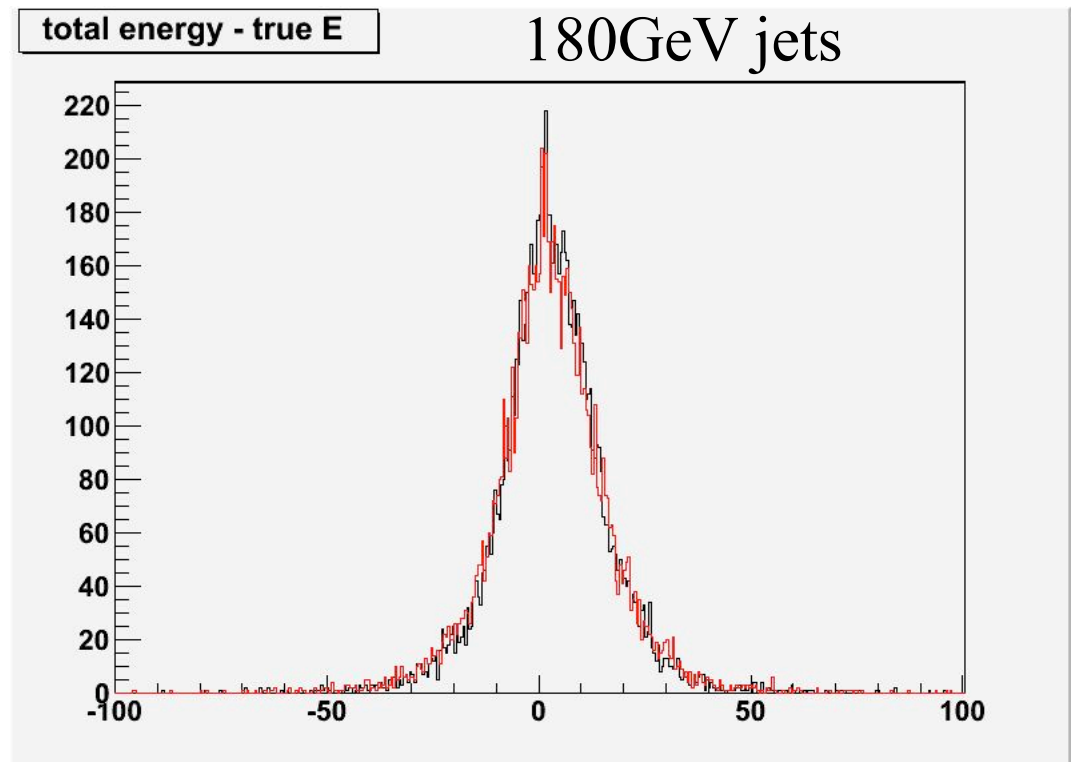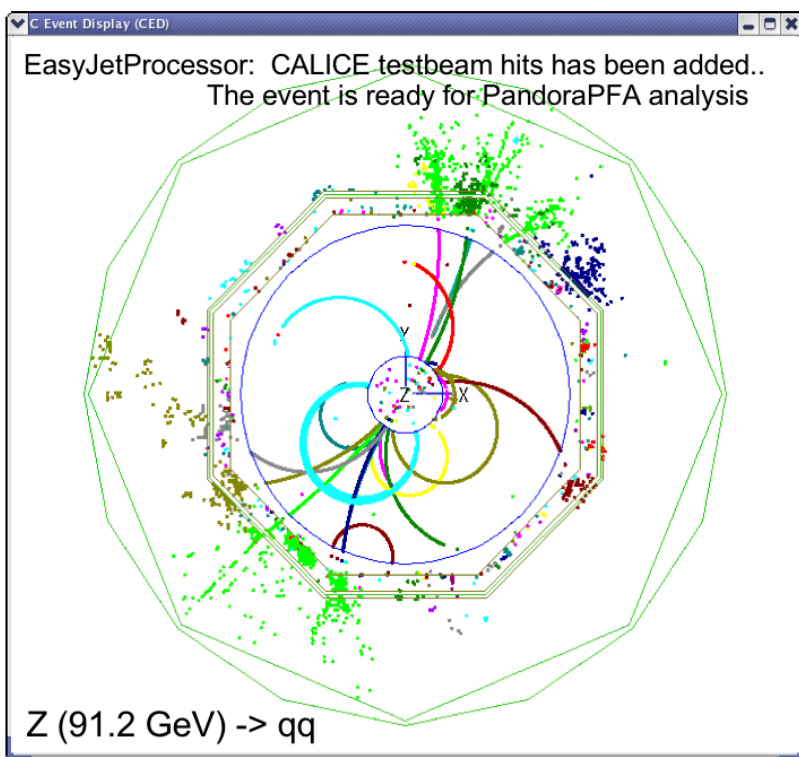
Mokka plugin

Marco Ramilli and Clemens Guenter
will present the detail studies with this Mokka plugin

- For example:
  - Iron absorber (FNAL test beam)
  - QGSP_BERT_HP
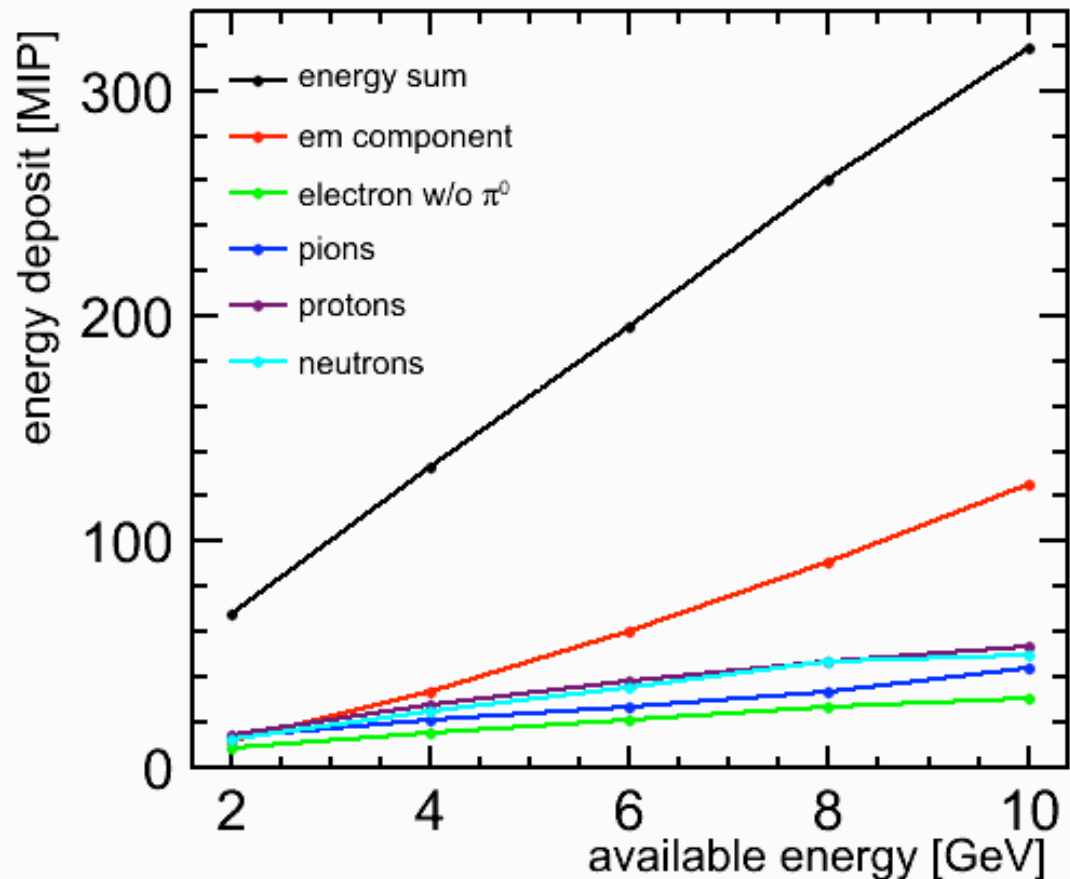
ILD: Event overlay processor

- EasyJetProcessor: (Sergey Morozov)

  - Replace the multi-particle shower in ILD calorimeter with the CALICE test beam data.
  - Provide more realistic input data for ILC PFA.

Administrative information

- Grid VO:

  - Users have to re-sign the Acceptable Usage Policy AUP regularly (every 2 years).

  - You get informed on that.

  CALICE: https://grid-voms.desy.de:8443/voms/calice

- Wanted:

  - CALICE Monte Carlo Mass production responsible group/person

Summary

- The software, that has been developed for the existing ECAL and HCAL physical prototype works fine.

- For the new prototypes, the next generation, the software development is ongoing.

  - The converter processor for the AHCAL next generation prototype has been done. It convert Labview output ascii file into ilcsoft lcio format, and at the same time sort the event.

- The reconstruction processors for Sci ECAL were existing, and need to be finalized and released.

- The Mokka ShowerDecomposition plugin and EasyJetProcessor for PFA studies with test beam data are available.