

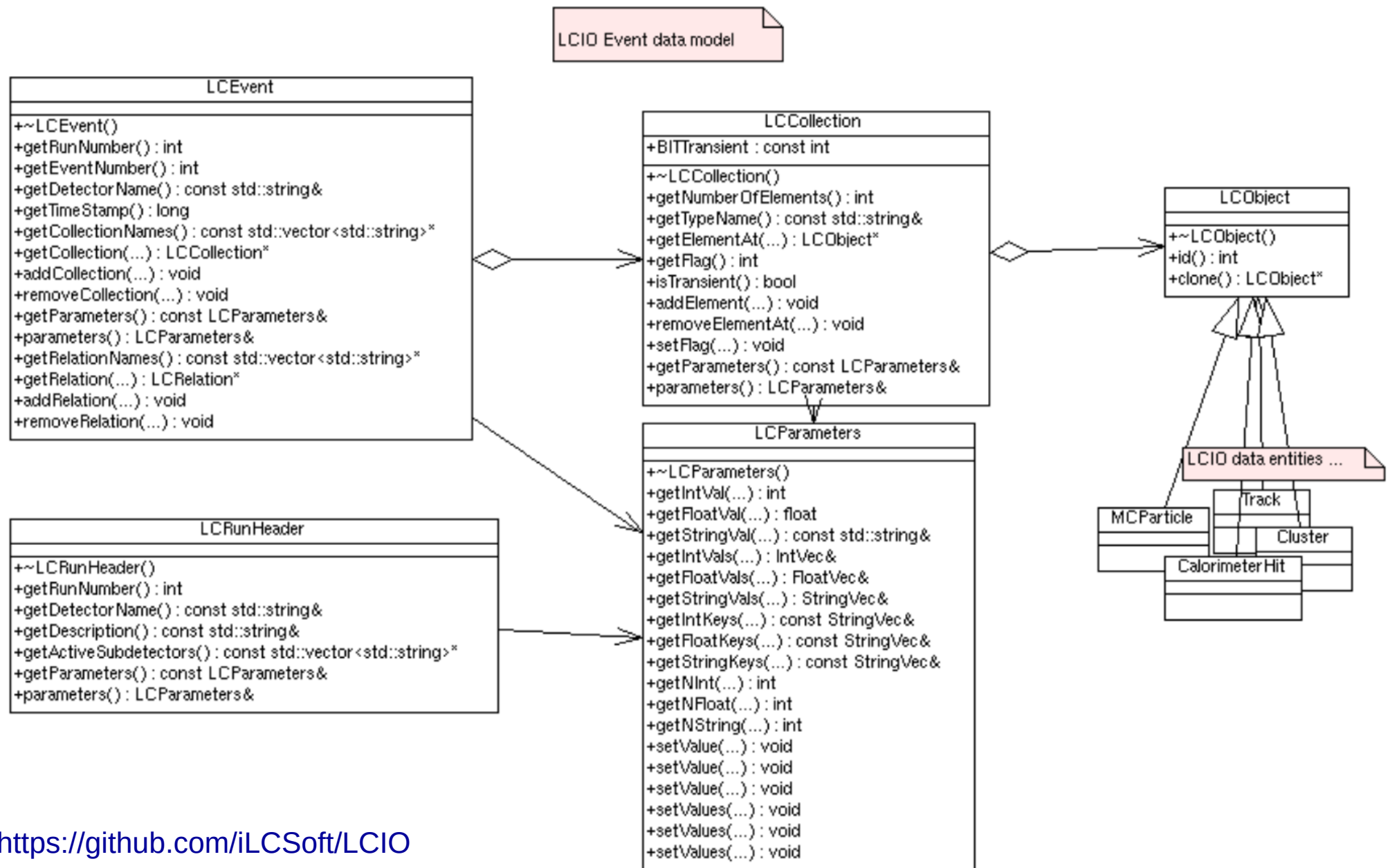
LCIO and Marlin

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LUXE Technical Meeting
June 2, 2021

LCIO EDM

http://lcio.desy.de/v02-09/doc/manual_html/manual.html



Marlin

https://ilcsoft.desy.de/MarlinReco/current/doc/manual_html/manual.html#SECTION00032000000000000000

Marlin (**M**odular **A**nalysis and **R**econstruction for the **L**INear collider) is a simple and generic C++ application framework for the analysis of LCIO data that provides a platform for the distributed development of new reconstruction algorithms.

Marlin supports the implementation of different tasks in individual modules, where tasks can be as simple as creating and filling histograms or as complex as track finding and fitting in the central tracker.

As modules serve dedicated subclasses of the class Processor, Marlin uses LCIO also as its transient data model

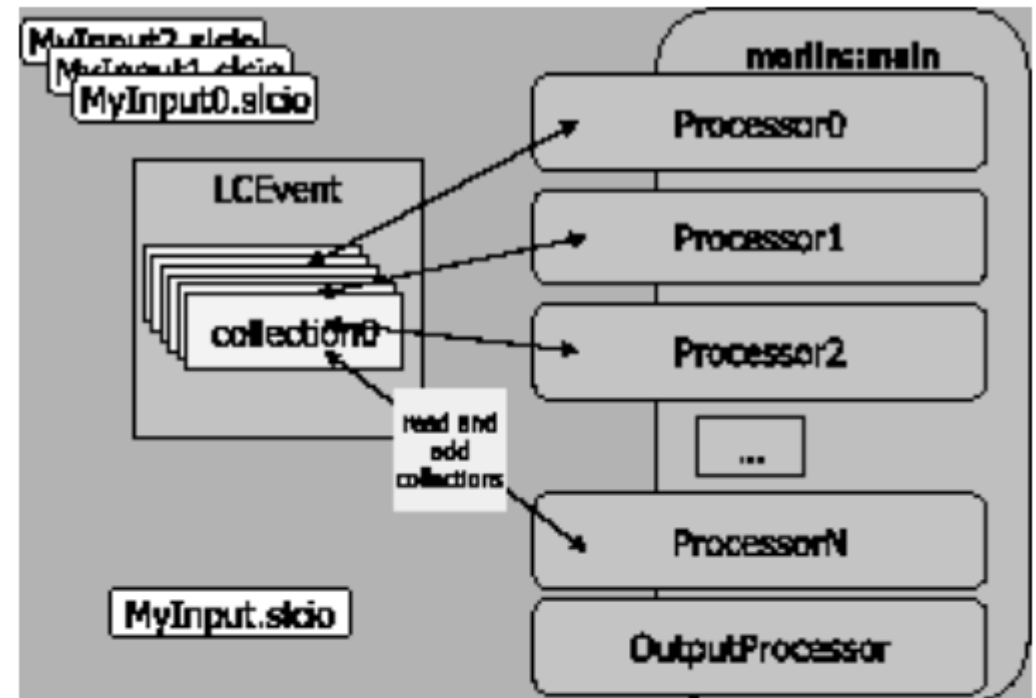


Figure 1: Schematic overview of the modular structure of Marlin. LCIO is used as the transient data model where the LCIO event serves as a container of the data seen by the *Processors*.

Marlin

<https://github.com/iLCSoft/MarlinMT>

MarlinMT: Modular Analysis and Reconstruction for the LINear Collider (Multi-Thread)

build passing

The idea is that every computing task is implemented as a processor (module) that analyzes data in an LCEvent and creates additional output collections that are added to the event. The framework allows to define the processors (and their order) that are executed at runtime in a simple steering file. Via the steering file you can also define named parameters (string, float, int - single and arrays) for every processor as well as for the global scope. By using the framework users don't have to write any code that deals with the IO they simply write processors with defined callbacks, i.e. `init()`, `processRunHeader()`, `processEvent()`, `end()`.

MarlinMT is distributed under the [GPLv3 License](#)

Marlin processors

- FCAL algorithm for LumiCal and BeamCal are implemented as Marlin processors;
- EUTelescope uses lcio and Marlin for reconstruction;
- There is code to translate ALPIDE raw data to lcio;
- PANDORA sophisticated algorithms to match reconstructed tracks to Ecal (Hcal) clusters;