



Contribution ID: 79

Type: **not specified**

[P10] Efficient Analysis of Test-beam Data with the Corryvreckan software framework

Tuesday 6 October 2020 23:30 (4 minutes)

Future high-energy particle physics experiments pose stringent requirements on the detector technologies. For the next generations of vertex and tracking detectors, a large variety of monolithic as well as hybrid pixel sensors targeting the specific needs of each use-case are developed and tested both in laboratory and test-beam measurement campaigns. Corryvreckan is a flexible, fast and lightweight test-beam data reconstruction and analysis framework based on a modular concept of the reconstruction chain. It is designed to fulfil the requirements for offline event building in complex data-taking environments combining detectors with different readout architectures, but is also capable of online monitoring during data taking. Initially created within the CLICdp collaboration, it is supported by a growing user and developer community from various experiments. Its modular structure allows for a separation between the framework core and the implementation of the algorithms in each module. This allows users to 'plug-in' the wanted modules and configure their parameters easily from one configuration file. With its extensive manual and available tutorials, it is user-friendly and allows to get started quickly with a new analysis. This contribution gives an overview of the Corryvreckan software project, focussing on available features. This is supplemented by example use cases based on recent data-taking campaigns at the DESY test-beam facility.

Presenter: KROEGER, Jens (Ruprecht Karls Universitaet Heidelberg (DE))

Session Classification: Poster II