

8th Beam Telescopes and Test Beams Workshop



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Corryvreckan reconstruction software

Tuesday, 28 January 2020 09:00 (20 minutes)

Corryvreckan is a modular test beam data reconstruction and analysis framework developed within the CLICdp collaboration. 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. The software is written in modern C++, following the C++11 and C++14 standards and has a continually updated extensive user manual. Notable features of Corryvreckan are the 4D tracking capabilities, the online monitoring module useful for checking data quality during data taking, and the ability to use different combinations of triggered and trigger-less devices.

In this talk, the software framework will be outlined, details of the module capabilities are discussed, and improvements since BTTB7 are summarized. In particular, the highly flexible event building logic is explained and supplemented by example use cases based on recent data-taking campaigns at the DESY test beam facility.

In conjunction with this talk there will be a 2.5 hours 'hands-on' tutorial on Corryvreckan during BTTB8, repeated twice.

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