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Hands-On: Track reconstruction of testbeam data with EUTelescope

Tuesday, 28 January 2020 16:30 (2h 30m)

Scope of the tutorial

In this tutorial, the participant will learn how to reconstruct particle tracks of the EUDET-type telescopes with the *EUTelescope* framework. *EUTelescope* has many functionalities to reconstruct your taken testbeam data step by step. After converting the raw data (interface to *EUDAQ*), it is possible to cluster event entries and form hits on the telescope planes. For the alignment of the telescope planes as well as for the final step, the fitting of the track, the general broken lines (*GBL*) algorithm will be used.

The working principle of *EUTelescope* will be shown by doing three types of reconstruction analysis. First part is to begin with an empty telescope, so no DUT. After this, a scattering material will be used to show the material budget imaging possibility. Finally, an active DUT will be analyzed.

The goal of the hands-on is to have a possibility to perform a *EUTelescope* reconstruction, based on the presented examples, but being able also to transfer the reconstruction steps to the user's own testbeam data.

Preparation

We will offer different options to follow the hands-on by *EUTelescope*. An installation guide as well as further preparation recommendations will be provided in time before the workshop here: https://github.com/eutelescope/eutelescope/wiki/Install-and-preparation-for-BTTB8.

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Session Classification: Hands-on tutorials