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## Judith: A Software Package for Synchronised Analysis of Test-beam Data

The Judith software performs pixel detector analysis tasks utilising two different data streams such as those produced by the reference and tested devices typically found in a testbeam. This software addresses and fixes problems arising from the desynchronization of the two simultaneously triggered heterogeneous data streams by detecting missed triggers in either of the streams. The software can perform all tasks required to generate particle tracks using multiple detector planes: it can align the planes, cluster hits and generate tracks from these clusters. This information can then be used to measure the properties of a particle detector with very fine spatial resolution. It was successfully used by the authors at DESY in a KarTel telescope with an ATLAS Diamond Beam Monitor module as a DUT as well as more recently by other groups testing pixel detectors at CERN PS and SPS.

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