

ILCSoft reconstruction software for the ILD Detector Concept at ILC

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The International Linear Collider is proposed as the next large accelerator project in High Energy Physics. The ILD Detector Concept Study is one of three international groups working on designing a detector to be used at the ILC. The ILD Detector is being optimised to employ the so called Particle Flow paradigm. Such an approach means that hardware alone will not be able to realise the full resolution of the detector, placing a much greater significance on the reconstruction software than has traditionally been the case at previous lepton colliders. This means that it is imperative that the detector is optimised using a full reconstruction chain employing prototypes of Particle Flow Algorithms. To meet this requirement ILD has assembled a full reconstruction suite of algorithms contained in the software package ILCSoft, comprising of low level digitisation through to higher level event analysis, such as jet finders and vertexing. The reconstruction software in ILCSoft uses the modular C++ application framework Marlin that is based on the international data format LCIO. ILCSoft also contains reconstruction packages for the detector prototype test beam studies with the EUDET project. Having developers create reconstruction software for both the full detector and prototype studies within one single package maximises the of application of algorithms. In this talk we give an overview of the reconstruction software in ILCSoft.

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