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EXPERIMENTS AT CERN IN 1991

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The DELPHI Detector (Detector with Lepton Photon and Hadron Identification)

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DELPHI is a general purpose detector for physics at LEP on and above the Z^0 , offering three-dimensional information on curvature and energy deposition with fine spatial granularity as well as identification of leptons and hadrons over most of the solid angle. A superconducting coil provides a 1.2 T solenoidal field of high uniformity. Tracking relies on the inner detector, the Time Projection Chamber (TPC), the outer detector and forward drift chambers. Electromagnetic showers are measured in the barrel with high granularity by the High Density Projection Chamber (HPC) and in the endcaps by $1^\circ \times 1^\circ$ projective towers composed of lead glass as active material and photodiode read-out. Hadron identification is provided mainly by liquid and gas Ring Imaging Counters (RICH). The segmented magnet yoke serves for hadron calorimetry and as filter for muons, which are identified in two drift chamber layers. In addition, scintillator systems are implemented in the barrel and forward regions, as well as a Small Angle Tagger (SAT) for luminosity determination and a 3-layer micro vertex silicon detector for high precision vertex and lifetime measurements.

DELPHI GROUP