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CLHEP dependencies in Event Model classes

Introduction

This page contains a list of the dependencies of Event Model classes on CLHEP Vector, Matrix and Geometry ones. The purpose is to identify the dependencies in preparation for the eventual migration to the new proposed vector, transformation and linear algebra packages of the new MathCore [↗](#) library of SEAL/ROOT.

Event model packages

GaudiKernel/v19r3/GaudiKernel

IMagneticFieldSvc.h forward declaration of

```
namespace HepGeom {  
  
template <class T> class Vector3D; template <class T> class Point3D;  
  
}
```

Kernel/LHCbKernel/v5r12/Event

No dependencies

Kernel/LHCbKernel/v5r12/Kernel

CaloPrint.h:

- CLHEP/Vector/!LorentzVector.h
- CLHEP/Matrix/Matrix.h
- CLHEP/Geometry/Transform3D.h

Only used for printing out CLHEP classes as strings. All in PI obviously.

lcgStl.h:

- CLHEP/Geometry/Point3D.h
- CLHEP/Geometry/Vector3D.h

Dummy declarations for dictionary generation.

Kernel/LHCbKernel/v5r12/src

CaloPrint.cpp:

- CLHEP/Matrix/Vector.h
- CLHEP/Matrix/DiagMatrix.h
- CLHEP/Matrix/SymMatrix.h

More printing.

Event/Event/v4r7/Event

Collision.h:

- CLHEP/Geometry/Point3D.h

HepPoint3D in PI

MCHit.h:

- CLHEP/Geometry/Point3D.h
- HepGeom::Point3D, HepGeom::BasicVector3D in PI

MCParticle.h:

- CLHEP/Vector/LorentzVector.h

HepLorentzVector in PI

MCVertex.h:

- CLHEP/Geometry/Point3D.h

HepPoint3D in PI

Event/GenEvent/v3r3p1/Event

No dependencies

Event/CaloEvent/v13r9/Event

CaloDataFunctor.h:

- CLHEP/Geometry/Point3D.h

HepPoint3D used INTERNALLY

MCCaloSensPlaneHit.h:

- CLHEP/Vector/LorentzVector.h

HepLorentzVector used inPI

CaloPosition.h:

- CLHEP/Matrix/Vector.h
- CLHEP/Matrix/SymMatrix.h

HepVector and HepSymMatrix used in PI

CaloMomentum.h:

- CLHEP/Vector/LorentzVector.h

Event/Event/v4r7/Event

- CLHEP/Matrix/SymMatrix.h

HepLorentzVector and HepSymMatrix in PI

Event/ITEvent/v13r2p1/Event

No dependencies

Event/OTEvent/v14r0p1/Event

No dependencies

Event/TrEvent/v14r3/Event

TrStateProjector.h:

- CLHEP/Matrix/Vector.h

TrState.h:

- CLHEP/Matrix/Vector.h
- CLHEP/Matrix/SymMatrix.h

TrStateL.h:

- CLHEP/Matrix/Vector.h
- CLHEP/Matrix/SymMatrix.h

TrStateP.h:

- CLHEP/Matrix/Vector.h
- CLHEP/Matrix/SymMatrix.h

Event/MuonEvent/v4r0/Event

No dependencies

Event/RichEvent/v8r4/Event

MCRichHit.h: *CLHEP/Geometry/Point3D.h

HepPoint3D in PI

MCRichOpticalPhoton.h:

- CLHEP/Geometry/Point3D.h
- CLHEP/Geometry/Vector3D.h

HepPoint3D and HepVector3D in PI

MCRichSegment.h:

- CLHEP/Geometry/Vector3D.h

Event/CaloEvent/v13r9/Event

- CLHEP/Geometry/Point3D.h

HepPoint3D, HepVector3D, HepGeom::Point3D, HepGeom::Vector3D in PI

Event/RichEvent/v8r4/RichEvent

RichGeomPhoton.h:

- CLHEP/Geometry/Point3D.h

HepPoint3D in constructor and PI

RichTrackSegment.h:

- CLHEP/Geometry/Point3D.h
- CLHEP/Geometry/Vector3D.h

HepPoint3D and HepVector3D in PI

CRJ 28/07/2005 : The RichEventModel only uses vector-like and point-like classes. As long as easy conversion between the old and new classes is easy, I see no reason why RichEvent cannot be updated.

Event/VeloEvent/v13r2p1/Event

No dependencies

Event/L0Event/v14r3/Event

L0CaloCandidate.h:

- CLHEP/Geometry/Point3D.h

HepPoint3D in PI

Event/TrgEvent/v5r5/Event

L1Score.h:

- CLHEP/Geometry/Point3D.h

HepPoint3D in PI

TrgCaloParticle.h:

- CLHEP/Vector/LorentzVector.h
- CLHEP/Geometry/Point3D.h

HepLorentzVector, HepPoint3D in PI

TrgState.h:

- CLHEP/Geometry/Point3D.h
- CLHEP/Matrix/Vector.h

Event/RichEvent/v8r4/Event

- CLHEP/Matrix/SymMatrix.h

HepPoint3D, HepVector, HepSymMatrix in PI

TrgVertex.h:

- CLHEP/Geometry/Point3D.h
- CLHEP/Matrix/SymMatrix.h

HepPoint3D, HepSymMatrix in PI

Event/PhysEvent/v8r9/Event

Particle.h:

- CLHEP/Matrix/SymMatrix.h
- CLHEP/Vector/LorentzVector.h
- CLHEP/Geometry/Point3D.h
- CLHEP/Matrix/Matrix.h

HepSymMatrix, HepMatrix, HepLorentzVector, HepPoint3D in PI

ProtoParticle.h:

- CLHEP/Vector/LorentzVector.h
- CLHEP/Geometry/Point3D.h

No dependency. Why does it include CLHEP stuff?

Vertex.h:

- CLHEP/Units/SystemOfUnits.h
- CLHEP/Matrix/SymMatrix.h
- CLHEP/Geometry/Point3D.h

HepPoint3D, HepPoint3D, HepSymMatrix in PI

Event/DAQEvent/v5r2p1/Event

No dependencies

Event/LinkerEvent/v1r8/Event

No dependencies

Kernel/Relations/v2r5

No dependencies

Event/EventAssoc/v1r5

No dependencies

Event/TrgEvent/v5r5/Event

Event/EventUtils/v1r0

No dependencies

Event/PackedEvent/v1r0/src

UnpackCollision.cpp: HepPoint3D used INTERNALLY

UnpackMCParticle.cpp: Hep3Vector used INTERNALLY

UnpackMCVertex.cpp: HepPoint3D used INTERNALLY

UnpackTrStateL.cpp: HepVector, HepSymMatrix used INTERNALLY

UnpackTrStateP.cpp: HepVector, HepSymMatrix used INTERNALLY

-- JuanPalacios - 19 Jul 2005

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