

CLHEP Status

Discussion notes

Support status

- Never formal support
- LCG experiments changing event models not to use CLHEP
- But ATLAS still using
- Difficulties with persistency
 - Changes between 1.8 and 1.9
- Wish list of improvements - GenVector
- Formal architects forum

Major Players

- Geant4
- CDF & D0
- LCG
 - ATLAS
 - CMS
 - LHCb
- Generators
 - ThePeg
 - Herwig++
- Other users

CLHEP packages

- Units - G4 ThePeg
- Vector - G4 ThePeg KtJet HepMC ATLAS
- Random G4 ThePeg LHCb CMS ATLAS
- HepMC conversion methods
- HepPDT
- Evaluator LHCb
- GenericFunctions Herwig++
- Geometry G4 HepMC
- Matrix ATLAS? CMS
- RandomObjects
- StdHep - no users?
- RefCount - RunII?
- Cast - RunII?
- Exceptions - RunII?

What to do?

- CLHEP release without
 - HepMC
 - HepPDT
 - StdHep
- Can we do this????
- Whose code will this break?
- Enormous notice on webpage
- Do this when HepMC moves to 4 doubles

Future plans

- CLHEP continues to exist
- Someone should continue to maintain it
- Who?? LCG?
- No new packages
- No development
- Binaries for LHC experiments
- Users should consider long term plans
- Use same license as G4

HepMC vector proposal

- Replace Vector with struct of 4 doubles
 - x, y, z, t
 - Also 3 vector: x, y, z
- No one has time to deal with changing vectors (except CMS)
- Standalone - no dependencies

Issues

- Read back old version (ROOT)
- Knows instances of class
- Need code to deal with this?
- Lynn promises alpha release by end of week
- Is this OK for CMS?

Formal steps

- CMS and other experiments must be consulted
- Circulate proposal
 - Along with alpha release
 - Also mention CLHEP license proposal
- Meeting next Tuesday

More proposals

- Separate IO into a different library
- GenEvent is memory format
- HepMC is final state? Not always
- Validation of IO
- Integrate HepMC? Pass to next step
- More information

persistency

- ROOT IO
- Other binary
- Ascii for readable checks