

# GlueX Charged Track Reconstruction Status

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February 27, 2009

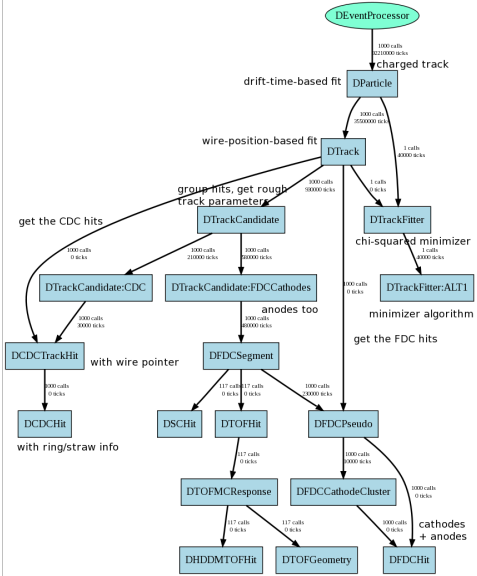
# Track Reconstruction

- 1 Ask for the appropriate vector of objects:

```
vector<const DParticle*>particles;  
eventLoop->Get(particles);
```

- 2 DParticle is derived from DKinematicData
- 3 Both can be found in the src/libraries/PID directory
- 4 Future work
  - 1 multiple track events
  - 2 improvement in calculation measurement errors

# Track Reconstruction: calling diagram



# Parametric Monte Carlo

- ① Motivation: detector simulation complicated and expensive
- ② Approach
  - ① calculate tables of efficiency and resolution as a function of momentum and angles, for charged and neutrals, using full Monte Carlo, in advance (experts)
  - ② smear ideal 4-vectors by tabulated resolution (user)
  - ③ fill analyzed vectors with results (user)
- ③ Main Resource: Wiki page “HOWTO run the semi-parametric Monte Carlo”

# Parametric Monte Carlo: getting started

## ① What you need

- ① Hall D build
- ② checkout and build `hdparsim` plug-in (see wiki for Subversion repository location)
- ③ checkout and build any other plug-ins you need (example below)

## ② How to run

- ① generate Monte Carlo events, do not run them through the detector simulation (`my_mc.hddm`)
- ② example: `hd_root --plugin=hdparsim --plugin=invariant_mass_hists -PDEFTAG:DParticle=HDParseSim -PDEFTAG:DPhoton=HDParseSim my_mc.hddm`