

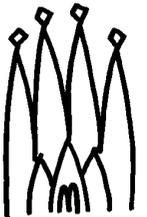


1

Introduction

Layout of tutorial

Where to find documentation



Outline

- **1. Getting started**
- **2. Beginning to write a physics selection algorithm**
- **3. Basic tools for selection algorithms**
- **4. Utility tools**
- **5. Connection to MonteCarlo truth**



Aim of the tutorial

- To make you more familiar with some DaVinci specific terminology
- Explain the reason behind some choices
- To show you which are and how to use the available tools you would want to use

..... Help you to start to write a physics selection



Assumptions

- **It is assumed that you know the way the LHCb software is structured**
 - cmt packages
 - conventions
- **It is assumed that you are familiar with the Gaudi architecture**
 - algorithms, algtools, services, data stores...
- **It is assumed that you have either followed the Gaudi tutorial or have learned to use Gaudi by yourself**

Some reminder will be made when relevant



Methodology

- **Topical presentations on the various point with example code**
 - Each tool will be presented one at the time (with related tools one after the other)
- **At the same time we will show the use of the tool in a concrete selection algorithm: SelectJPsi2mumu**
- **After each topic in each presentation we will stop for questions**



DaVinci Documentation

- **DaVinci working group**
 - Meetings on Wednesday afternoons (“scheduled” every 2-3 weeks) with conference call
 - Agenda available on the weekly meeting
 - All discussions relating to physics analysis software
- **DaVinci web page**
<http://lhcb-comp.web.cern.ch/lhcb-comp/Analysis/>
- **DaVinci working group mailing list**
lhcb-davinci@cern.ch
ANY question related to physics software!
- **This tutorial**
Will have a link from the DaVinci web page



Documentation

- **All LHCb software documentation is available from the Computing web page**
<http://lhcb-comp.web.cern.ch/lhcb-comp/>
- **Gaudi Documentation**
 - **Web page**
<http://lhcb-comp.web.cern.ch/lhcb-comp/Frameworks/Gaudi/>
 - **User Guide**
 - **Tutorial**
- **All LHCb Gaudi-based software has automatically generated documentation**



Documentation

- **CLHEP**

<http://wwwinfo.cern.ch/asd/lhc++/clhep/>

- **STL**

<http://www.sgi.com/tech/stl/>



Tentative Schedule

14:00	1 Introduction	G.Corti
14:05	2 Getting started	G.Corti
14:15	3 Beginning to write a selection algorithm	G.Corti for S.Amato
14:45	4. How to load and save data	G.Corti
15:50 Coffee Break		
16:10	5. Manipulating data: ParticleFilter and Criteria	Ph.Charpentier for S.Amato
16:30	6. Manipulating data: Vertexing	Ph.Charpentier for S.Amato
16:50	7. Manipulating data: Geometrical tool	Ph.Charpentier for M.Gandelman
17:00	8. UtilityTools	O.Dormond
17:30	9. Particles2MC Associators	Ph.Charpentier



Credits

**S.Amato, Ph.Charpentier, G.Corti, O.Dormond,
J.deMello, E.deOliveira, M.Gandelman,
J.H.Lopes, C.Nunes, C.Padilla**

