

# Table of Contents

<b>The LHCb Event Model.....</b>	<b>1</b>
Developing new Event Model classes.....	1
Documentation of Event Model classes.....	1
Persistent data sets.....	1
Decoders and Raw Event locations, accessing and manipulating the raw event:.....	2

# The LHCb Event Model

The LHCb Event Model describes the event data classes and their relationships.

## Developing new Event Model classes

- All event model classes must be described in XML which is then parsed by the Gaudi Object Description [package](#) to produce C++ header files and the dictionaries required for persistency. More information is given in the Tutorial [Tutorial](#)
- Each event model class must have a unique ClassID. Look at the list of existing Class IDs, choose a new one in the appropriate range and update the list.
- Code should follow the conventions described in LHCb-2001-142 [LHCb-2001-142](#)
- See also this presentation [presentation](#) covering KeyedContainer, KeyedObject and association to MC truth

## Documentation of Event Model classes

The event model classes are released as part of the LHCbSys [project](#). Please refer to the latest LHCbSys doxygen web [web](#) and release notes [release notes](#) for up to date code documentation. The links below are to other sources of documentation.

- Persistent base classes [persistent base classes](#) - Container classes and base classes for data objects
- Channel ID classes: LHCbID
- Physics Event Model
- See also:
  - ◆ Monte Carlo Event Type Definition Rules LHCb-2005-034 [LHCb-2005-034](#)
  - ◆ Particle to MC truth matching
- Track Model - see also LHCb-2006-007 [LHCb-2006-007](#)
- Calo Event Model [Calo Event Model](#)
- L0 Event Model
- OT Event Model
- Rich Event Model
- ST Event Model (STChannelID, STCluster, STLiteCluster, STSummary): see LHCb-2008-047 [LHCb-2008-047](#)
- Velo Event Model: LHCb-2006-054 [LHCb-2006-054](#)
- VP Event Model: LHCb-PUB-2013-018 [LHCb-PUB-2013-018](#)
- Classes to build external relationships between classes:
  - ◆ Linkers (LHCb-2006-008 [LHCb-2006-008](#))
  - ◆ Relations (LHCb-2005-005 [LHCb-2005-005](#))

See also:

- The current event model structure and its limitations [limitations](#) - talk by F.Dordei at the 6th LHCb Computing Workshop, 2015-11-16
- Event Model Review - comprehensive review that took place in 2005
- Minutes [minutes](#) of design meetings in 2001/2002
- Event Data Model Conventions [conventions](#) - Draft from 2000

## Persistent data sets

- RawEvent, RawBank types and formats [formats](#)
- MicroDST
- rDST [rDST](#) (obsolete)

## Decoders and Raw Event locations, accessing and manipulating the raw event:

- RawEventJuggler, the framework for storing and accessing multiple raw events.

-- MarcoCattaneo - 22 Sep 2008

---

This topic: LHCb > LHCbEventModel

Topic revision: r17 - 2017-01-05 - MarcoCattaneo



Copyright &© 2008-2019 by the contributing authors. All material on this collaboration platform is the property of the contributing authors.

Ideas, requests, problems regarding TWiki? Send feedback