

# How to use the LHCb note class for $\text{\LaTeX}$

## Internal Note

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## Document Status Sheet

<b>1. Document Title: How to use the LHCb note class for L<sup>A</sup>T<sub>E</sub>X</b>			
<b>2. Document Reference Number: CERN/LHCb/Latex/InternalNoteClass</b>			
<b>3. Issue</b>	<b>4. Revision</b>	<b>5. Date</b>	<b>6. Reason for change</b>
Draft	1	December 3, 2003	Version of Sébastien and Niko
Draft	2	April 26, 2004	Modifications of Benjamin. New style files, the style is a bit closer to a standard LHCb note.
Draft	3	July 20, 2005	Add a bug reports section.
Draft	4	October 26, 2005	Recompiles because of a change to the style.

## 1 How to start

You have to get the class file and style files. These files are available on the web, in the LHCb pages. Go to <http://lhcb-comp.web.cern.ch/lhcb-comp/Support/Latex/default.htm> and download `lhcb-ext.sty`, `lhcb.sty` and `lhcbnote.cls`. Put them in the directory where your T<sub>E</sub>X file resides.

## 2 How to use it

Loading the LHCb note style files can be done either with the class file or with the style files. Both ways provide macros specific to LHCb and change the layout to make it close to the Framemaker reference.

### 2.1 The document class

There is a `lhcbnote` document class. It is based on the `article` document class. So, use macros of the `article` class. Start your L<sup>A</sup>T<sub>E</sub>X file with

```
\documentclass{lhcbnote}
```

This basically loads the `article` class with the `twoside` and `a4paper` options.

Then write a standard L<sup>A</sup>T<sub>E</sub>X article (but use the LHCb specific macros described below).

### 2.2 The style files

An other way to begin an LHCb note is the following:

```
\documentclass[a4paper,twoside]{article}  
\usepackage{lhcb-ext}  
\usepackage{lhcb}
```

This is what the `lhcbnote` class does.

The `lhcb-ext` package is mandatory because it provides the macros specific to LHCb notes (issue number, revision number, etc.). The `lhcb` package changes the look of the standard L<sup>A</sup>T<sub>E</sub>X article to LHCb note.

This way to start a note first permits you to have a bit more control on what options are passed to the `article` class. Second, you can disable the LHCb note layout by commenting the line which load the `lhcb` package (but do not remove the `lhcb-ext` package). If the `lhcb` package is not loaded, the LHCb note looks exactly like a standard L<sup>A</sup>T<sub>E</sub>X article, even if you use LHCb specific macros (they will be ignored).

## 2.3 The commands

Here is the list of new commands defined in the lhcbnote class in order to customize your document. These customizations appear in the title page and in the header of the other pages.

- `\doctyp{#1}`  
allows to define the type of document.
- `\dociss{#1}`  
The issue number of the document
- `\docrev{#1}`  
The revision number of the document
- `\docref{#1}`  
The document reference
- `\doccre{#1}`  
The document creation date
- `\docmod{#1}`  
The document last modification date (you can use `\today` to systematically print the current date)
- There is also an environment for including the document status sheet. Open it with `\begin{status}` and close it with `\end{status}`. Add status entries in between with the `\entry` (see the example).

## 3 Bug reports

So far, this style file for L<sup>A</sup>T<sub>E</sub>X has not been widely used and there are probably bugs in it. Feel free to send questions and comments to Benjamin Gaidioz ([benjamin.gaidioz@cern.ch](mailto:benjamin.gaidioz@cern.ch)).

## 4 An example

An example of a simple LHCb note is shown on Fig. 1.

```
\documentclass{lhcbnote}

\title{Simple LHCb note}
\author{A. U. Thor}
\doctyp{Internal Note}
\dociss{1}
\docrev{0}
\docref{LHCb-42-2004}
\doccre{January 5, 2004}
\docmod{\today}

\begin{document}

\maketitle

\begin{abstract}
Put your abstract here.
\end{abstract}

\begin{status}
\entry{Draft}{1}{December 3, 2003}{First version. Introduction only,
conclusion is missing}
\entry{Draft}{2}{December 16, 2003}{Added conclusion.}
\entry{Final}{1}{April 26, 2004}{Checked english}
\end{status}

\tableofcontents
\listoffigures
\listoftables

\section{Introduction}
This is an example of an LHCb note.

\section{Conclusion}

\end{document}
```

**Figure 1** An example of an LHCb note. You may start from this skeleton to write your own.