Study of strongly interacting matter using dimuons produced in Pb+Pb collisions at $\sqrt{s_{NN}} = 2.76$ TeV

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Abstract

It is very difficult to write all work I have done in small abstract so I will write it at last.

Declaration

This dissertation is the result of my own work, except where explicit reference is made to the work of others, and has not been submitted for another qualification to this or any other university. This dissertation does not exceed the word limit for the respective Degree Committee.

Vineet Kumar

Acknowledgements

Of the many people who deserve thanks, some are particularly prominent, such as my supervisor. . .

Preface

This thesis describes my research on various aspects of the CMS Heavy Ion physics program, centred around the CMS detector and LHC accelerator at CERN in Geneva.

Contents

"Writing in English is the most ingenious torture ever devised for sins committed in previous lives."
    — James Joyce

Chapter 1.

Standard Model and Quark Gluon Plasma

I will write about introduction here.

Chapter 2.

The CMS experiment

"There, sir! that is the perfection of vessels!"
    — Jules Verne, 1828–1905

2.1. The LHC

The Large Hadron Collider (LHC) at CERN is a new hadron collider, located in the same tunnel as the Large Electron-Positron collider (LEP) [1]. Where LEP's chief task was the use of 90–207 GeV e^- e^+ collisions to establish the precision physics of electroweak unification...
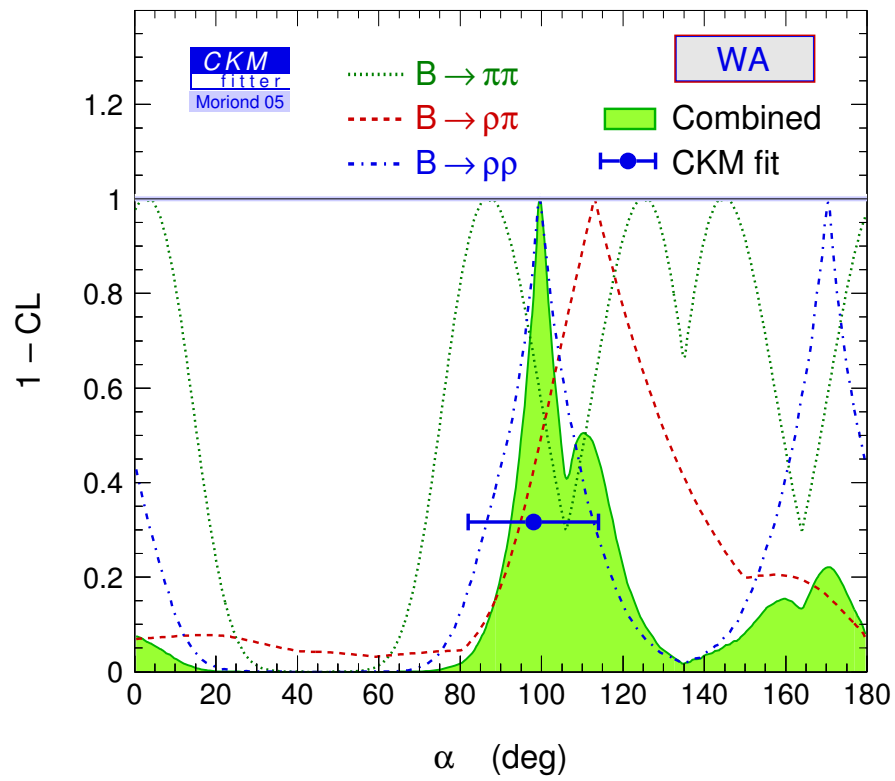
2.2. The CMS experiment

Figure 2.1.: CKM Fitter constraints on α from combined $B \to \pi\,\pi$, $B \to \rho\,\pi$ and $B \to \rho\rho$ decay analyses.

Chapter 3.

DiMuon Continuum from semileptonic decay of heavy mesons

Appendix A.

Pointless extras

Appendixes (or should that be "appendices"?) make you look really clever, 'cos it's like you had more clever stuff to say than could be fitted into the main bit of your thesis. Yeah. So everyone should have at least three of them...

A.1. Like, duh

Padding? What do you mean?

A.2. $y = \alpha x^2$

See, maths in titles automatically goes bold where it should (and check the table of contents: it *isn't* bold there!) Check the source: nothing needs to be specified to make this work. Thanks to Donald Arsenau for the teeny hack that makes this work.

Colophon

This thesis was made in $\LaTeX 2_\varepsilon$ using the "hepthesis" class [2].

Bibliography

[1] G. Brianti, Phys. Rept. **403-404**, 349 (2004).

[2] A. Buckley, The hepthesis LaTeX class.

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