

**Department of Physics and Astronomy
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Bachelor Thesis in Physics
submitted by

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The comparison of the single QC and the ladder QC of silicon Pixel Sensors for the Mu3e Vertex Detector

This Bachelor Thesis has been carried out by
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Part I

Introduction

1 Introduction

My intention to do this stuff here, is to learn how to write my bachelor thesis in latex

2 Physical background and motivation

2.1 The standard model

2.2 Neutrino oscillations and flavor violation

2.3 Charged lepton flavor violation

3 Mu3e experiment at PSI

3.1 The goal of the Mu3e experiment

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3.3 The Mu3e vertex detector

4 The Detection and physics behind the vertex detector

4.1 The silicon pixel sensors

4.2 PN-junctions

4.3 Pixel Sensors

Part II

Current status of the QC

5 single QC