



復旦大學

Edition for muon chapter & preliminary plan for installation

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FOR MUON GROUP

FUDAN UNIVERSITY

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Chapter 8 Muon detector

Editors will work together on the revision.

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} Baseline option
} Backup option

Hengne Li should associate the simulation/performance, software.

Scintillator option

Editors will work together on the revision.

8.1 Introduction

8.1.1 Physic requirement

8.1.2 Geometry

8.1.3 Technologies (brief introduction for PS and RPC)

8.2 Plastic scintillator

8.2.1 Simulation via Geant4

8.2.2 Detector channel: scintillator strip, SiPM, and WLS fiber

8.2.3 Front-end electronics and integrated high voltage

8.2.4 Radiation hardness

8.3 Module and installation

8.4 Performance

8.4.1 Efficiency

8.4.2 Time resolution

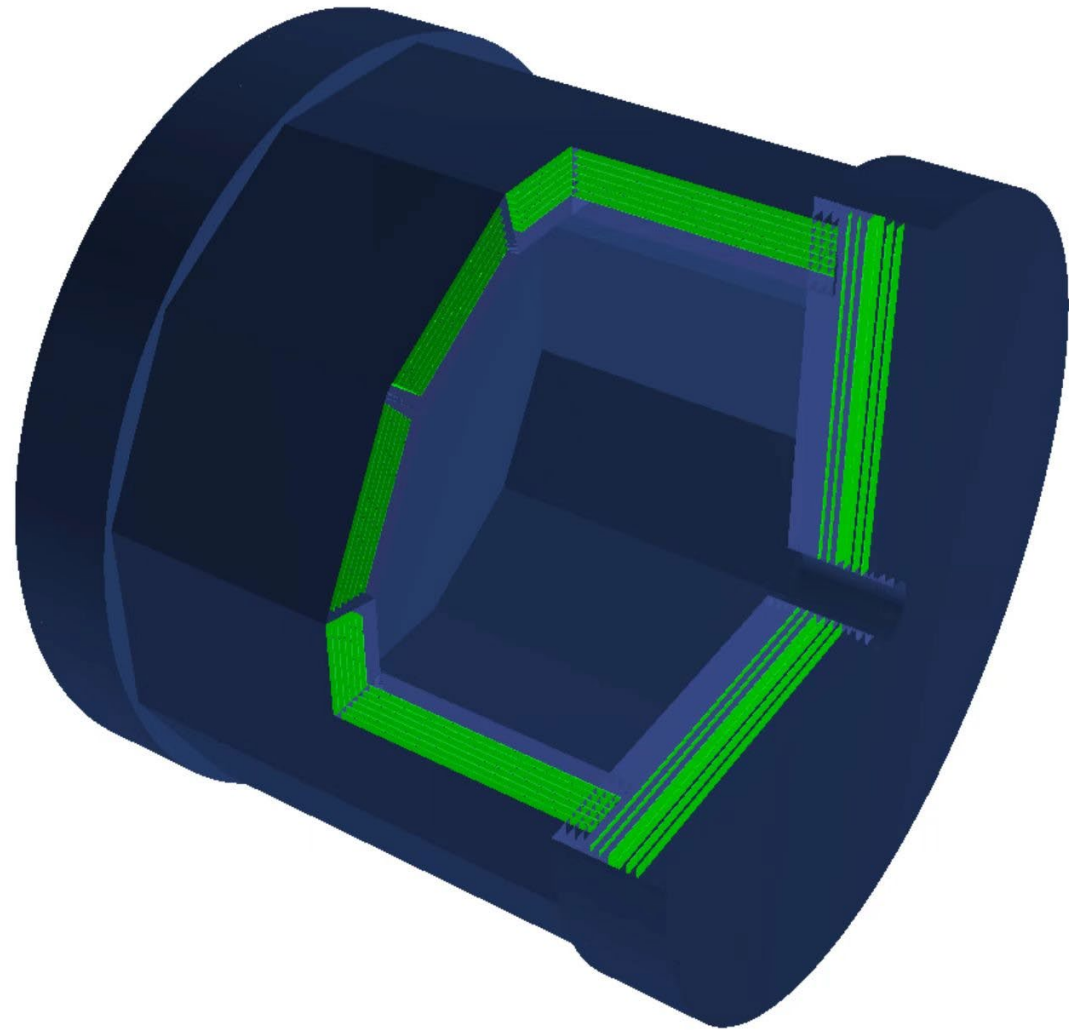
8.4.3 Muon ID

8.4.4 Cost

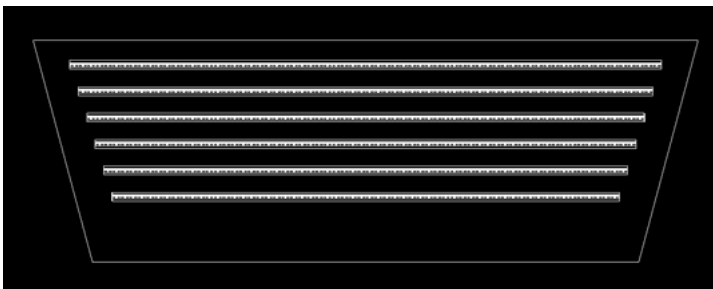
8.5 Conclusion



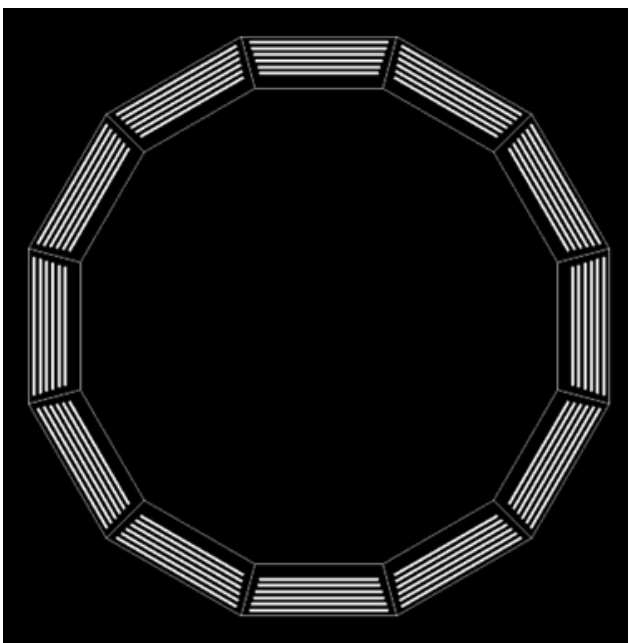
Structure of the Muon detector



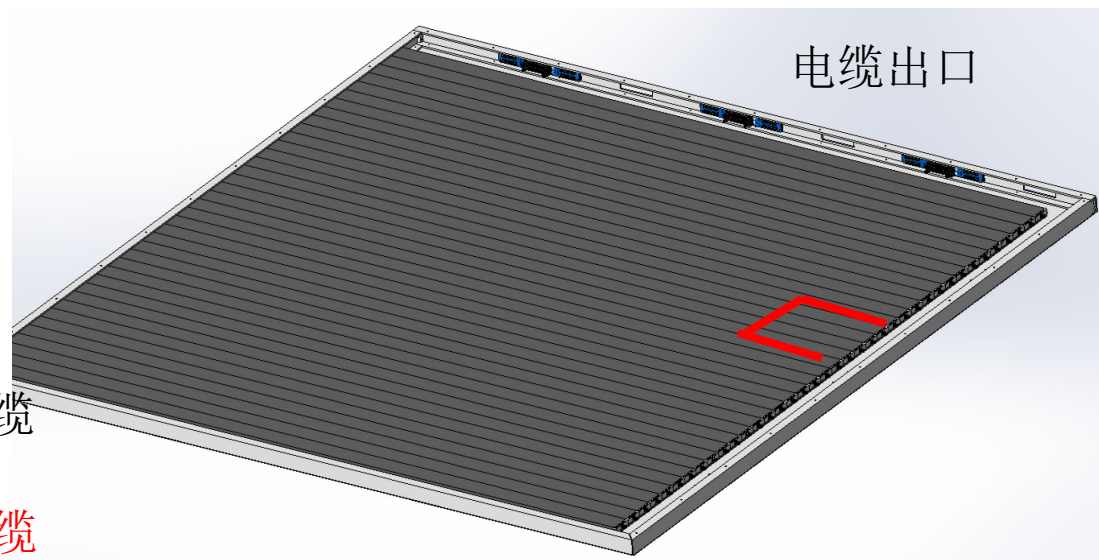
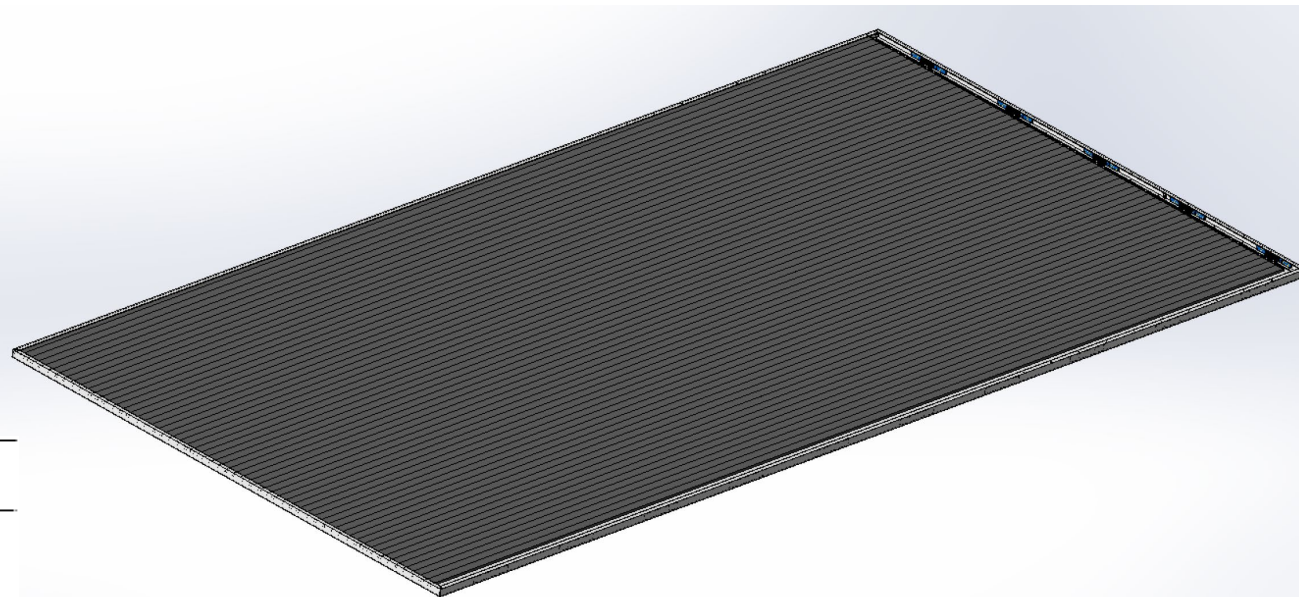
Geometry and installation: Barrel



Length of the barrel: 10m



Layer	Stripe	Length
2	100	2.4m
4	100	2.48m
6	100	2.56m
8	100	2.64m
10	100	2.72m
12	100	2.8m



安装方法：每层放两个模板，长度5m，宽度2.4-2.8m之间。电缆出口在窄侧。

应考虑电子学都集成到前端，可以降低电子学噪声，并减少电缆的使用。

Geometry and installation: Endcaps

