

ERASMUS MUNDUS MASTER IN NUCLEAR PHYSICS
Academic Year 2024/2025

MASTER THESIS PROPOSAL

TITLE: Commissioning of the S^3 -LEB electrostatic deflector

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ABSTRACT

(just few lines 5-10 explaining briefly the idea of the proposed work and the place where it will be developed).

S^3 will start its commissioning and first experimental runs in the coming years, with first data taking on radioactive isotopes for S^3 -LEB. S^3 -LEB relies on the technique of resonant laser ionization, both for direct laser spectroscopy and for production for subsequent experiments, such as atomic mass measurements or nuclear decay spectroscopy. To be able to distribute the ions to the different experiments, a 90-degree electrostatic quadrupole bender was installed in the beam line. A careful commissioning of this deflector is needed in order to determine precisely its limits. The goal of this internship is to use an offline ion source and time-of-flight detectors in order to determine the acceptance and the transmission efficiency of the 90-degree electrostatic deflector.