

Validation of the LNE51 AEGIS Transfer Line Optics and Electrostatic Deflector

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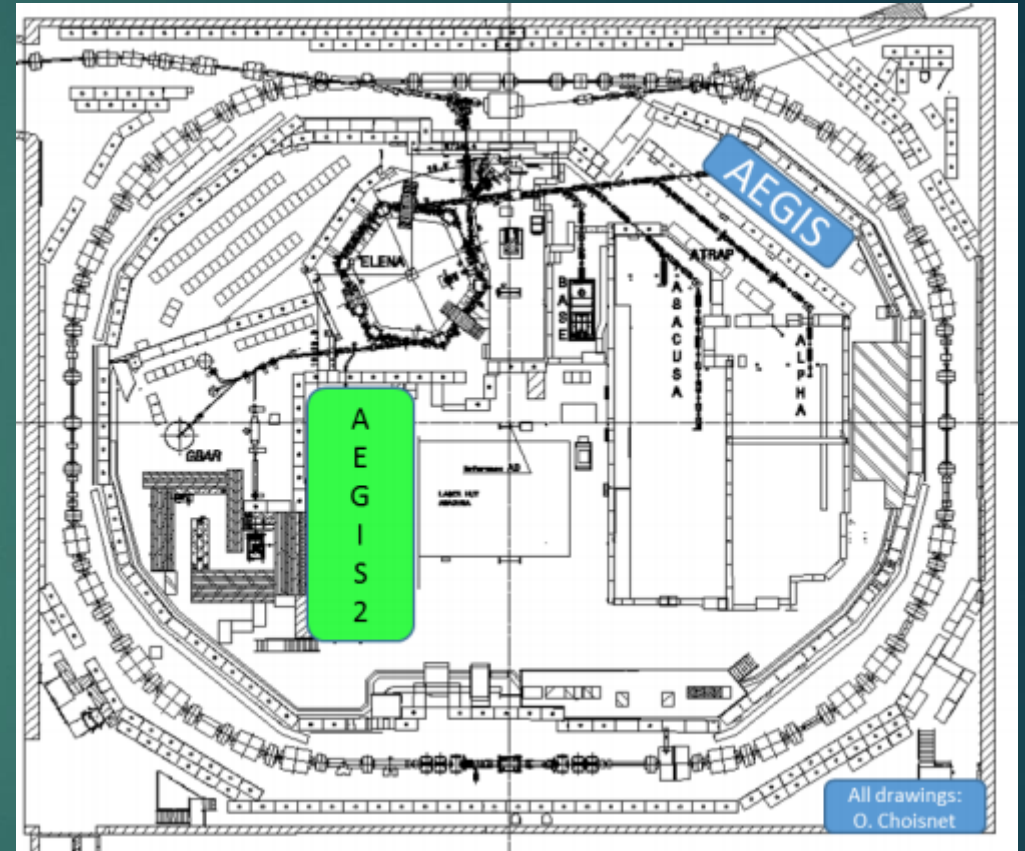
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TE-ABT-BTP Section

- ▶ The Beam Transfer Physics section is a member of the Accelerator Beam Transfer group within the Technology Department
- ▶ The BTP section is responsible for the concept, design, and commissioning of injection/extraction systems and beam transfer lines for a variety of experiments,

What is LNE51?

- ▶ This transfer line will connect the ELENA decelerator to the new location of the AEGIS experiment
- ▶ It is composed of electrostatic deflectors and quadrupoles
- ▶ The antiprotons traveling through the line will have an energy of 100KeV
- ▶ The AEGIS experiment is designed to measure the gravitational acceleration of antihydrogen



My Project

- ▶ Develop the transfer matrix of the ZDSD electrostatic deflector, which will then be added to the matrix of the whole transfer line
- ▶ This deflector is designed to produce a bend angle of 37.7 degrees
- ▶ Time permitting, verify the beam spot size at the experiment target

