



# Gamma beam collimation system and profile imager for ELI-NP



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ELI-NP-GBS is a **high-brilliance gamma source** that will produce **monochromatic** beams in the energy range **0.2-19.5 MeV** by inverse Compton scattering of a laser from an accelerated electron beam.

- To obtain a monochromatic beam from inverse Compton **collimation** of the emission is necessary (continuously adjustable divergence between 70 and 700  $\mu\text{rad}$ )
- A description of the **collimation system** design, an overview of the simulation carried out and expected performance is presented
  
- A set of various detectors will provide a complete characterization of the gamma beam
- **A gamma beam profile imager (GPI)** based on a **thin scintillator screen** and a **high-resolution CCD-camera** has been developed to measure the transverse spatial distribution
- The design, experimental tests and expected results from the GPI are briefly described.

