To obtain a monochromatic beam from inverse Compton collimation of the emission is necessary (continuously adjustable divergence between 70 and 700 μrad).

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.

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.