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## Extreme Light Infrastructure - Nuclear Physics (ELI-NP): Present status and perspectives

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ELI Nuclear Physics, one of the 4 pillars of ELI, will be built in Bucharest-Magurele, Romania. It is meant as a unique research facility to investigate the impact of very intense electromagnetic radiation (Extreme Light) on matter with specific focus on nuclear phenomena and their applications. The extreme light is realized at ELI-NP in two ways: by very high optical laser intensities and by the very short wavelength beams on  $\gamma$ -ray domain. The Gamma Beam System, based on Compton backscattering of a laser beam on electron beam accelerated by a warm LINAC, will produce variable energy gamma beam ( $E_\gamma = 0.2 - 19.5$  MeV) with a very good bandwidth (in the  $10^{-3}$  domain) and with very high brilliance. This combination allows for stand-alone experiments with a state-of-art high-intensity laser, standalone high resolution  $\gamma$ -beam experiments or combined experiments of both photon sources. The description of the future ELI-NP facility, the planned experiments and the status of the project implementation will be presented.

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