# Frontiers in Gamma Ray Spectroscopy FIG18

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# Nuclear structure studies with brilliant gamma beams at ELI-NP

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**Content** :

he emerging experimental program with brilliant gamma beams at the Extreme Light Infrastructure – Nuclear Physics facility (ELI-NP), which is under construction in Magurele, Romania will be presented with emphasis on the prepared day-one experiments. Experiments at ELI-NP will cover nuclear resonance fluorescence (NRF) measurements, studies of large-amplitude motions in nuclei, photofission and photonuclear reactions of astrophysics interest, and measurements of photonuclear reaction cross sections. The physics cases of the flagship experiments at ELI-NP will be discussed, as well as the performance of the related instruments which are under construction for their realization.



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