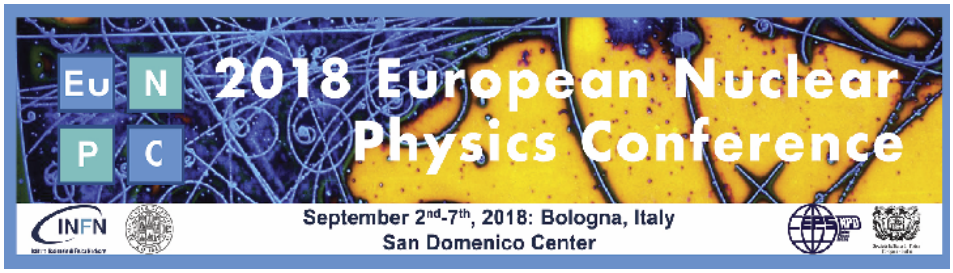

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Perspectives on Nuclear Structure Studies with Electromagnetic Probes

Wednesday, 5 September 2018 11:00 (30 minutes)

Electromagnetic (EM) coupling is small compared to hadronic interaction. Reaction cross sections of EM probes with nuclei can be, therefore, calculated perturbatively and are in principle under control to any desired precision. EM probes are, thus, well appreciated for being best suited for precision studies of nuclear structure. They have signicantly contributed to our understanding of nuclear structure physics through a vast amount of precision data in the past. Accelerator technology and instrumentation have been advanced in recent years. High duty-factor recirculating linear electron accelerators with very low energy spread as well as energy-tunable quasi-monochromatic -ray beams with large photon flux and high degrees of polarization open up new routes for precision studies of key questions of nuclear structure physics. We address advances in the relevant technology and discuss recent experimental progress in nuclear structure obtained from the usage of electromagnetic probes. Examples from the superconducting Darmstadt linear electron accelerator, S-DALINAC, [1, 2] and from the High-Intensity-ray Source (HIS) at Duke University will be provided [3, 4]. We will dare an outlook to future opportunities including those that will open up at the intense -ray beam at the Extreme Light Infrastructure - Nuclear Physics (ELI-NP) presently under construction at Magurele, Romania.

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