

High precision study of antineutron and hyperons interact with nuclei at a future super J/ψ factory

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Physicists investigate the subatomic world by bombarding their subject of study with a hail of tiny subatomic “bullets”. From the way these “bullets” bounce off their target one can infer a wealth of detailed information about the target’s structure. Different kinds of subatomic “bullets” probe different aspects of the target, certain important aspects of the force holding atomic nuclei together can only be investigated by shooting particles called antineutrons and hyperons, which are believed to be very difficult to produce and control. However these usually rare particles can be produced in copious amounts and easily launched as a spinoff of a “super J/ψ factory”. This opens fresh research opportunities in particle and nuclear physics, as well as in astrophysics and medical physics, requiring no additional infrastructure.

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