

Abstract Submitted
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The Liquid H₂ target for NPDGamma JIAWEI MEI, Indiana University, NPDGAMMA COLLABORATION — The NPDGamma experiment requires a liquid hydrogen target. The target must possess a large volume (17 liters) to produce n-p capture events, be bubble-free to reduce noise in the current-mode gamma array, exist as parahydrogen at 17K to suppress neutron depolarization, be constructed of low Z nonmagnetic materials to pass 2.2 MeV gammas and maintain magnetic field uniformity, and produce negligible parity violation from capture gammas other than hydrogen. It also must incorporate safety features such as triple-confinement of the hydrogen, a relief path which can respond to all credible accident scenarios, and various warning and alarm systems. We will describe the design and performance of the NPDGamma hydrogen target system.

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