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Search for candidate nuclei for nuclear MQM measurement

UMESH SILWAL, University of Wyoming, PRAJWAL MOHANMURTHY, University of Chicago, JEFF WINGER, Mississippi State University — The Baryon Asymmetry of the Universe (BAU) requires charge-parity (CP) violating physical processes. The predicted values of electric dipole moments (EDM) and Magnetic quadrupole moments (MQM) calculated from the Standard Model (SM) is insufficient to explain the observed BAU. These moments are enhanced significantly in deformed nuclei. The nuclear MQM is free from the Schiff shielding. Hence, in this work, we will be presenting the survey result of a list of candidate deformed nuclei for nuclear MQM measurement and their contribution to atomic EDM.

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