

Searching for mirror neutrons and dark matter with cold neutron interferometry

Thursday 10 July 2025 14:40 (20 minutes)

We present a novel neutron interferometry scheme designed to probe the potential existence of mirror neutrons, which have been proposed as viable dark matter candidates. Our theoretical analysis shows that, if mirror neutrons exist, ordinary neutrons would acquire a detectable geometric phase due to their mixing with these mirror partners

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Session Classification: Poster Session 3

Track Classification: S07 –Nuclear Physics, Energy Science and Technology, Accelerators and beams