

Exploring the universe through quantum interference effects

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Quantum interference effects lead to intriguing phenomena and reshape our exploration of nature. In this colloquium, I will discuss the crucial role played by quantum interference effect in our exploration of nature across vastly different scales. From the cosmological scale, such as gravitational wave detection, physics of matter-antimatter asymmetry, to the smallest scale, such as neutrino physics and high energy particle physics, quantum interference effects play different roles and have very profound implications of the underlying physics. I will review these phenomena and present my recent research discovering the striking effects of quantum interference in Higgs physics. Further utilization of these effects shed light on key puzzles of fundamental physics.

Tuesday

March 19

4:00 P.M.

Rm 118 NSH