

Phenomenology 2021 Symposium



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Post-Minkowskian Spinning Binary Dynamics in the Worldline Effective Field Theory Approach

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The worldline effective field theory formalism provides a systematic approach to probe the post-Minkowskian binary scattering processes. Expanding to include spin degrees of freedom, we compute the total change in momentum and spin in the gravitational scattering of compact objects to next-to-leading PM order with linear and bilinear spin effects and arbitrary initial conditions. Using the Boundary-to-Bound correspondence we construct the radial action for elliptic-like orbits for the aligned spin configurations.

Summary

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