

Phenomenology 2021 Symposium



Contribution ID: 1369

Type: **Cosmology**

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

Monday 24 May 2021 18:15 (15 minutes)

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

Primary authors: PORTO, Rafael; LIU, Zhengwen (DESY); YANG, Zixin (Deutsches Elektronen-Synchrotron DESY)

Presenter: YANG, Zixin (Deutsches Elektronen-Synchrotron DESY)

Session Classification: Cosmology II