

Motion of spinning particles near Schwarzschild black holes: exact solution

Friday 7 July 2023 09:20 (20 minutes)

The spin of the secondary in large mass ratio inspirals contributes to the inspiral phasing at the same order as the conservative self-force. Hence, treating the secondary spin at least to linear order is important for precise waveforms from these systems. In this talk I will present solutions of general motion of spinning test particles near a Schwarzschild black hole to linear order in spin in the form of elliptic integrals. I will also comment on how this relates to the generic Kerr problem and the prospect of obtaining similar results in more general spherically symmetric space-times.

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Session Classification: Friday Morning