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# Effect of spins on the orbital dynamics of a binary system

So far, the post-Newtonian technique has generated spin-less gravitational waveforms of binaries in quasi-circular orbits to a very high degree of precision, or to a high post-Newtonian order. Including spins and eccentricity in the system brings challenges that have not been fully tackled to a high degree of accuracy. The inclusion of spins leads to characteristic effects on the orbital dynamics of the binary and in turn, on the gravitational wave waveform. Advanced earth-based or space-borne detectors can detect such effects on the gravitational wave signals due to spins. Hence it becomes important to model gravitational waves with the presence of spin. In this work, we calculate the effects of spins on the evolution of orbital elements under the parametrized Quasi-Keplerian scheme.

## Email

xeonese@gmail.com

## Affiliation

IIT Madras

**Author:** BHATTACHARYYA, Soham (IIT Madras)

**Co-authors:** Dr MISHRA, Chandra Kant (IIT Madras); Prof. FAYE, Guillaume (ITP Paris); Mr SRIDHAR, Omkar (IIT Madras); Dr HENRY, Quentin (AEI Golm)

**Presenter:** BHATTACHARYYA, Soham (IIT Madras)

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