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Binary White Dwarfs as Gravitational Wave Sources

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Gravitational Waves have proven to be an excellent tool for understanding populations of binaries. For the upcoming LISA detector, Binary White Dwarfs are one of the most promising sources. In this work, we focus on modelling the Gravitational Wave background from White Dwarf Binaries in the LISA sensitivity range and building a model of their population in the Milky Way.

The COMPAS binary synthesis program is used for population synthesis of the White Dwarf Binaries. Various evolution prescriptions and initial model parameters are used to study diverse population of White Dwarf Binaries. We investigate the dependence of the background spectrum on the assumptions on binary analysis. We discuss the possibility of constraints on binary evolution that LISA gravitational wave observations may yield.

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