

Detection of ultra high frequency gravitational waves from compact binary coalescences with resonant cavities

Friday 8 December 2023 10:00 (12 minutes)

In this talk I will try to clarify the situation about astrophysical sources that might be observed with haloscope experiments like GrAHal, sensitive to gravitational waves in the 1-10 GHz band. The GrAHal setup is taken as a benchmark. We follow a very pedagogical path so that the full analysis can easily be used by the entire community who might not be familiar with the theoretical framework. Different relevant physical regimes are considered in details and some formulas encountered in the literature are revised. The distances that can be probed and expected event rates are carefully evaluated, taking into account degeneracies between physical parameters. We show where experimental efforts should be focused to improve the sensitivity.

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