SUSY 2023



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Audible Gravitational Echoes of New Physics

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Based on the recent article [2023.02399], we discuss the LISA potential for finding evidence of New Physics from measurements of the Stochastic GW Background (SGWB). As a benchmark scenario, we study a version of the low-scale Majoron model equipped with lepton number symmetry and an inverse seesaw mechanism for neutrino mass generation. In particular, we discuss under which circumstances the model can be probed at LISA and which implications result for collider physics observables, such as the Higgs trilinear coupling, the scalar mixing angle and the mass of a new CP-even Higgs boson. If time allows, we will also report on a scenario of symmetry restoration at zero temperature based on a model with two scalar leptoquarks.

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