## Dark Matter and Stars: Multi-Messenger Probes of Dark Matter and Modified Gravity

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## **Preheating in Higgs Inflation**

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We investigate the post-inflationary dynamics of Higgs-Inflation within the framework of Einstein-Cartan gravity, with a particular emphasis on the scalar sector of the theory. Notably, we find that the inflaton potential is capable of supporting the formation of meta-stable non linear structures, which can generate a significant gravitational wave signal, and significantly modify the standard expansion history of the Universe.

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