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## SWSM phenomenology

*Friday, 8 July 2022 20:10 (20 minutes)*

The superweak (SW) force is a minimal, anomaly-free  $U(1)$  extension of the standard model (SM), designed to explain the origin of (i) neutrino masses and mixing matrix elements, (ii) dark matter, (iii) cosmic inflation, (iv) stabilisation of the electroweak vacuum and (v) leptogenesis. In this talk we discuss how the parameter space of the model is constrained by providing viable scenarios for the first four of this list. The talk is intended to give a summary of the findings published the following research articles on the arXiv: 1812.11189, 1911.07082, 2104.11248, 2104.14571, 2105.13360, 2204.07100.

### In-person participation

Yes

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