

# Annual Meeting of the Swiss Physical Society 2024



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## **【11】 Physics of the early universe and the intensity frontier of particle physics**

*Tuesday 10 September 2024 09:00 (45 minutes)*

Cosmology and neutrino experiments provide the key evidence that the Standard Model of particle physics, although extremely successful in explaining existing accelerator data, is not a complete theory of Nature. In particular, it contradicts the observed neutrino oscillations, does not provide a dark matter, and does not explain the excess of matter over anti-matter in the Universe. Taking these facts as a guiding principle for the quest for a theory that lies beyond the Standard Model, I will overview the arguments for the existence of new particles with masses below the Fermi scale and discuss the experimental prospects to search for them at new high-intensity experiments in particle physics.

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