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To B or not to B: Primordial magnetic fields from Weyl anomaly and Beyond

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場所 : 本館2階 239 物理学系輪講室

概要

For more than twenty years, it has been argued that the Weyl anomaly of quantum electrodynamics sources cosmological magnetic fields in the early universe. If true, this would be a natural way to produce the seed magnetic fields of our universe within the Standard Model. In this talk, I will examine this long-standing claim and show that there is actually no production of coherent magnetic fields from the Weyl anomaly, irrespective of the number of massless charged particles in the early universe. I will also comment on other possibilities for magnetic field generation.

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