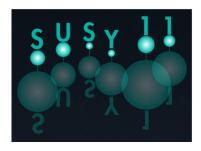
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Big-bang nucleosynthesis with a long-lived charged massive particle including ⁴He spallation processes

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We propose helium-4 spallation processes induced by long-lived stau in supersymmetric standard models, and investigate an impact of the processes on light elements abundances. We show that, as long as the phase space of helium-4 spallation processes is open, they are more important than stau-catalyzed fusion and hence constrain the stau property.

T.~Jittoh, K.~Kohri, M.~Koike, J.~Sato, K.~Sugai, M.~Yamanaka and K.~Yazaki, arXiv:1105.1431 [hep-ph]. (accepted for publication in Phys. Rev. D)

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