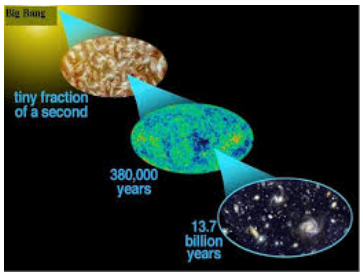

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Neutrinos: Dirac or Majorana

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Abstract
Neutrinos: Dirac or Majorana
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To understand the origin of small neutrino mass, a question arises whether neutrinos are Dirac or Majorana particles? This is one of the most fundamental problems of the modern day neutrino physics. For this, we are considering bottom up approach i.e. to go for phenomenological models which are in tune with the latest precise data. Texture specific mass matrices have been phenomenologicaly analyzed for both Dirac and Majorana neutrinos. If neutrinos are Majorana particles, neutrinoless double beta decay would occur. We outline here how the present knowledge of mixing angles and mixing matrix elements could help to determine the nature of neutrinos. Along with this, several quantities such as neutrinoless double beta decay ⟨mee⟩, Jarlskog’s rephasing invariant parameter in the leptonic sector Jl and the corresponding Dirac like CP violating phase have been calculated.

Keywords

Texture specific mass matrices, Dirac and Majorana Neutrinos, Neutrinoless double beta deacy , CP violation

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