

Euclid Forecasts on Neutrino Mass through Fisher Matrix

vendredi 15 octobre 2021 14:30 (30 minutes)

In order to prepare a new mission, forecasts are a must. This work builds on a previously made program called TotallySAF designed to produce forecasts for Euclid on a certain number of classic cosmological parameters, through Fisher matrixes. The novelty of this work resides in the addition of a new free cosmological parameter, the neutrino density, directly related to the neutrino mass. Normal order of mass hierarchy is tested, and constraints of around ~ 25 meV are found for the neutrino mass. Numerous problems on the derivation of the Likelihood are also explored, mainly its stability in regards to the derivative step, as they are directly involved with the computations of the Fisher Matrixes elements.

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Classification de Session: Neutrinos