

Relic Neutrinos with Cosmic Gravitational Focusing

Thursday, 10 October 2024 16:00 (15 minutes)

The cosmic gravitational focusing (CGF) of relic neutrinos can provide an independent measurement of the absolute neutrino masses with a dependence on the fourth power of mass. In addition, CGF can help determine neutrino mass ordering. I will show that our projected CGF at DESI has a comparable sensitivity to the existing clustering method. Combining the projected CGF and clustering method can greatly constrain the neutrino mass and improve neutrino mass ordering from cosmology. Also, this result from cosmology can affect the prospects of neutrinoless double beta decay and single beta decay measurements.

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