

Electromagnetic modulation of monochromatic neutrino beams

Thursday, 8 October 2015 14:15 (15)

We discuss the possibility to produce a modulated monochromatic neutrino beam. Monochromatic neutrinos can be obtained in electron capture by nuclei of atoms or ions. Hydrogen-like ions are of particular interest. It is shown that monochromatic neutrino beam from such hydrogen-like ions with nuclei of non-zero spin can be modulated because of different probabilities of electron capture from hyperfine states. Modulation arises by means of inducing of electromagnetic transitions between the hyperfine states. Requirements for the hydrogen-like ions with necessary properties are discussed. A list of the appropriate nuclei for such ions is presented.

Presentation type

Section talk (10+5 min)

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Session Classification : Nuclear physics and particle physics - parallel IX

Track Classification : Nuclear physics and particle physics