

Possible electron neutrino sources with a modulated monochromatic component

To produce a beam of electron neutrinos one can use β^+ -decaying nuclei, accumulated in a storage ring. Such a beam can have a considerable monochromatic part if the nuclei decay is due to electron capture with significant probability. Under certain conditions, in particular, when using hydrogen-like ions, this monochromatic fraction can be modulated. The requirements for the nuclei of such hydrogen-like ions are stated. Two situations are considered: entirely monochromatic modulated beams (from isotopes decaying only via electron capture) and intense combined beams with a modulated monochromatic component (from isotopes decaying both via β^+ -decay and electron capture). For both cases, nuclei that can be used as beam sources are selected.

Session and Location

Monday Session, Poster Wall #118 (Auditorium Gallery Left)

Poster included in proceedings:

yes

Primary authors: Dr BARABANOV, Alexey (National Research Center «Kurchatov Institute»); Mr TITOV, Oleg (National Research Center «Kurchatov Institute»)

Presenter: Mr TITOV, Oleg (National Research Center «Kurchatov Institute»)

Track Classification: Poster (participating in poster prize competition)