

Result of J-PARC E73 initial run on observation of weak decay of hypertriton and $^4\Lambda$ lifetime

Wednesday, 2 February 2022 09:00 (45 minutes)

A couple of years ago, heavy-ion based experiments (HypHI, STAR and ALICE) announced surprisingly short lifetime for $^3\Lambda$ H mesonic weak decay (MWD), which is difficult to interpret given the fact that $^3\Lambda$ is a very loosely bound system. It will be very interesting to study this issue with a different experimental approach.

We propose a direct measurement for $^3\Lambda$ Hhypernucleus MWD lifetime with ~10% resolution as J-PARC E73 experiment; $^4\Lambda$ Hhypernucleus lifetime will also be measured as a feasibility test for our experimental approach. In this talk, I will introduce our experimental method and the current status of E73 experiment.

Presenter: MA, Yue (GSI GmbH)