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Report of Contributions

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

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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 $^3\Lambda$ H 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 $^3\Lambda$ H hypernucleus MWD lifetime with ~10% resolution as J-PARC E73 experiment; $^4\Lambda$ H hypernucleus 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.

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