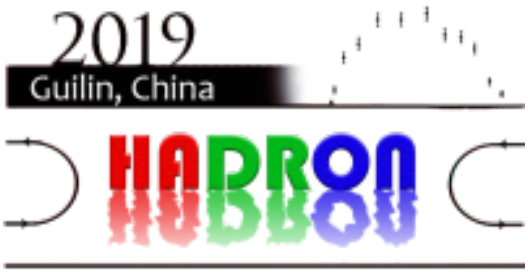

Contribution ID: **76** Type: **Leading parallel**

Experimental study of double hypernuclei at J-PARC

Wednesday, 21 August 2019 10:45 (25 minutes)

Double Λ hypernuclei and Ξ hypernuclei, collectively called "double hypernuclei", have come to play important roles in hadron nuclear physics as valuable information sources of baryon-baryon interaction. The most effective method to investigate them is event-by-event analysis with photographic emulsion sheets. An emulsion experiment to detect double hypernuclei has been performed in the J-PARC hadron facility in 2016-17.
By this experiment, quantitative data on ΛΛ or Ξ*N* interaction in a nucleus are being accumulated successfully.
A new nuclide of double hypernucleus, _{ΛΛ}Be, was observed in this experiment. This event was interpreted as the production and decay of ¹⁰_{ΛΛ}Be, ¹¹_{ΛΛ}Be, or ¹²_{ΛΛ}Be* via Ξ⁻ capture in Oxygen-16.
Several other interesting events have been found and further event search is going on.

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