The onset of stability for light $\Lambda\Lambda$, $\Lambda\Xi$ and $\Lambda\Lambda\Xi$ hypernuclei

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Abstract

Few-body calculations of light $\Lambda\Lambda$ hypernuclei are reviewed in the light of recent reports on new experimental candidates for ${}^{4}_{\Lambda\Lambda}$H and ${}^{6}_{\Lambda\Lambda}$He. Preliminary few-body calculations of light $\Lambda\Xi$ hypernuclei, using the strong $\Lambda\Xi$ interactions due to the $SU(3)$ extension of the NSC97 model, are reviewed and the onset of stability for these as well as for light $\Lambda\Lambda\Xi$ hypernuclei is discussed.