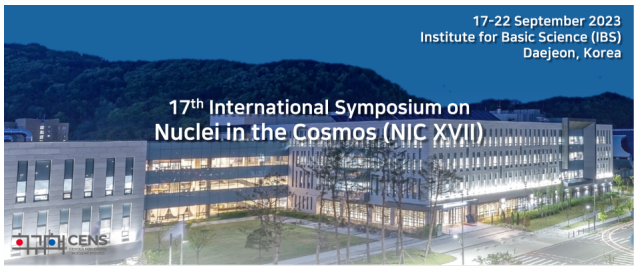

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New targets for relic antineutrino capture

Tuesday, 19 September 2023 17:10 (5 minutes)

^{163}Ho has been considered as a suitable candidate for the capture of relic antineutrinos. However, the detection of the relic antineutrino using ^{163}Ho is extremely challenging with current techniques. Therefore, we have searched for new targets for relic antineutrino detections through the resonant capture on nuclides undergoing electron capture. We have investigated nuclear and atomic properties of all nuclides. And we finally propose ^{131}Ba, ^{159}Dy, ^{175}Hf, ^{195}Au, and ^{243}Cm as new candidates for the relic antineutrino detection, and call for high precise experiments of Q_{EC}-values and intensities of EC decays for these new candidates.

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