

Abstract Submitted
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Mysteries of GMR strengths in $A \sim 90$ region¹ KRISHICHAYAN, DAVE YOUNGBLOOD, Y.-W. LUI, J. BUTTON, Texas A&M University — The giant monopole resonance (GMR) in ^{90}Zr [1] is an almost symmetric peak with a second component at higher energy that significantly affects the energy of the GMR and hence the nuclear compressibility extracted from its position. We have studied several Zr and Mo nuclei to investigate this second component. For ^{90}Zr and $^{96,100}\text{Mo}$ the lower narrow peak at $E_x \sim 15\text{-}17$ MeV contains the bulk of the E0 strength whereas the upper peak at $E_x \sim 24$ MeV in these nuclei contains less than 25% of the E0 EWSR. However the addition of two nucleons to ^{90}Zr results in a very different picture. In ^{92}Zr , the higher peak at $E_x \sim 25.5$ MeV contain 38% of the E0 EWSR and in ^{92}Mo the higher peak at $E_x \sim 24$ MeV contains 65% of the E0 EWSR while only 42% is located in the narrow lower peak. Due to this pronounced high energy component, the centroid energy in ^{92}Mo is more than 2 MeV higher than in ^{90}Zr . The energies of the lower peaks in these nuclei changes as expected ($\sim A^{-1/3}$) while the energies of the higher peaks are close to the same. In order to explore the feature in detail, data from $^{90,92,94}\text{Zr}$ and $^{92,94,96,98,100}\text{Mo}$ are being analyzed and the results will be presented. [1] D.H.Youngblood. et al., PRC 69, 054312 (2004)

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