

Abstract Submitted
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Are there nuclear structure effects on the isoscalar giant monopole resonance near $A=90$?¹ YOGESH GUPTA, UMESH GARG, K. HOWARD, M. SENYIGIT, Physics Department, University of Notre Dame, Notre Dame, IN 46556, USA, M. ITOH, S. ANDO, A. UCHIYAMA, T. AOKI, Cyclotron and Radioisotope Center, Tohoku University, Sendai 980-8578, Japan, C. IWAMOTO, S. ADACHI, A. TAMII, M. FUJIWARA, Research Center for Nuclear Physics, Osaka University, Osaka 567-0047, Japan, C. KADONO, H. AKIMUNE, Y. MATSUDA, T. NAKAHARA, Department of Physics, Konan University, Hyogo 658-8501, Japan, T. KAWABATA, M. TSUMURA, T. FURUNO, Department of Physics, Kyoto University, Kyoto 606-8502, Japan, M. HARAKEH, N. KALANTAR-NAYESTANAKI, KVI-CART, University of Groningen, 9747 AA Groningen, The Netherlands — The excitation energy of the isoscalar giant monopole resonance (ISGMR) exhibits, in general, a very smooth behavior ($E_x \sim A^{1/3}$) over the periodic Table. In recent work² the Texas A&M group has reported that ISGMR energies for ^{92}Zr and ^{92}Mo are appreciably higher than that for ^{90}Zr , suggesting significant nuclear structure effects on ISGMR and, hence, on the nuclear compressibility. We have measured inelastic scattering of 385-MeV particles on $^{90,92}\text{Zr}$, ^{92}Mo at extremely forward angles, including 0° , using the “Grand Raiden” spectrometer at RCNP, Japan. Results of detailed multipole decomposition analyses to extract the ISGMR strength distributions in the three nuclei will be presented.

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²D. H. Youngblood *et al.*, Phys. Rev. C **88**, 021301 (2013)

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