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**Manifestations of triaxiality in nuclear spectrum and in electromagnetic transitions** VOLHA ABRAMKINA, Beloit College, ALEXANDER VOLYA, Florida State University — In this presentation we discuss how the triaxiality and its properties can be identified and studied using the nuclear spectrum and electromagnetic transitions between the low-lying states. The methods of evaluating triaxiality are tested using systems with random interactions and using the nuclear shell-model. We apply the developed techniques in studies of realistic nuclei. We treat the moment of inertia tensor independently from the electric quadrupole tensor. This allows an independent evaluation of the K-mixing angle and the Hill-Wheeler triaxiality shape parameter. The connection between the inertial parameters and the shape of the charge distribution are compared with those predicted by the commonly used models of the rigid rotor (the Davydov-Filippov model) and the deformed liquid drop.

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