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Algebraic Model of the Nucleus AUSTIN MCGRATH, GABRIELA POPA, Ohio University — The atomic nucleus can be found in discrete energies the same way the atom itself does. These energies are found in few groups separated by some distances. For these reason, the model that best describe the energy levels is called the shell model. The nuclei go from having one energy value to another by getting a extra energy (excitations) or by loosing some energy (emitting energy). There are several microscopic and macroscopic models that are able cu calculate these energies and the transition probabilities from one energy to another for certain groups of nuclei. We are working on using an algebraic model to describe heavy deformed nuclei with an atomic mass between 150 to 200.

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