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Applications of RPA in the nuclear shell model CALVIN JOHNSON, Dept of Physics, San Diego State University, IONEL STETCU, Dept. of Physics, University of Arizona — In recent work we have described a computational implementation of the random phase approximation (RPA) in the interacting shell model. Such an implementation is computationally much cheaper than full scale diagonalization, and provides a reasonable approximation, to binding energies and transitions, including charge-changing transitions. Here we discuss the latest applications of our computer code, SHERPA, with an emphasis on astrophysics.

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