

Study of the γ -ray strength using relativistic RPA models

Ioannis Daoutidis

Institute for Astronomy and Astrophysics, Universit Libre de Bruxelles, Belgium

An implementation of the relativistic random-phase approximation with the proper treatment of the continuum has been developed for the relativistic point-coupling model and applied to investigate collective excitations, such as the E1 strength distribution of nuclear reactions. The results are compared with the spectral implementation of the same model. In particular, we investigate the impact of the continuum coupling to the low-lying energies. In heavy nuclei, where the escape width is negligible, we find an excellent agreement with recent experimental results.