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Revisiting Grodzins Systematics of B(E2) values[1] BORIS PRITYCHENKO, Brookhaven National Laboratory, MICHAEL BIRCH, BALRAJ SINGH, McMaster University — Using Grodzin's formalism as modified by S. Raman *et al.*, PHYS. REV. **C 37**, (1988) 805 and D. Habs *et al.*, CERN Proposal INTC-P-156 (2002) we analyze systematics of our latest evaluated B(E2) data for all the even-even nuclei in Z=2-104 range published in At. Data Nucl. Data Tables 107 (2016). The analysis indicates a low predictive power of systematics for a large number of cases, and a strong correlation between B(E2) fit coefficients and nuclear shape, shell closing effects. These findings provide a strong rationale for introduction of individual or elemental (grouped by Z) fit parameters. The current systematics estimates of quadrupole collectivities in even-even nuclei yield complementary values for comparison with experimental results and theoretical calculations. The complete list of fit parameters will be presented and possible implications will be discussed.

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