## SPREADING WIDTHS OF GIANT DIPOLE RESONANCES IN THE LEAD REGION

Arsenyev N.N.<sup>1</sup>, <u>Nazmitdinov R.G.<sup>1,2</sup></u>, Severyukhin A.P.<sup>1,2</sup>, Åberg S.<sup>3</sup> <sup>1</sup> Joint Institute for Nuclear Research, 141980 Dubna, Russia; <sup>2</sup> Dubna State University, 141982 Dubna, Russia; <sup>3</sup> Mathematical Physics, Lund University, S-22100, Lund, Sweden E-mail: rashid@theor.jinr.ru

The statistical properties of the isovector dipole excitations in the energy interval 9.5–18 MeV for a few nuclei of the lead regions are analysed thoroughly within the microscopic approach and the Random Matrix Theory [1–3]. The microscopic approach is based on the mean field simulated by means of the Skyrme interaction Sly4 and the volume pairing interaction. The quasiparticle random phase approximation and the coupling between one- and two-phonon states are employed to generate excited states. The comparison of the results obtained with the aid of the coupling, calculated microscopically and by means of the Gaussian random distribution, demonstrates a close similarity in the description of the spreading widths of the Isovector Dipole Resonance of the considered nuclei. A good agreement is obtained with the microscopic description of the decay widths as well if the random distribution is used for the coupling of the one-phonon states with the two-phonon states that are also generated by the Gaussian Orthogonal Ensembles distribution.

- 1. A.P.Severyukhin et al. // Phys.Rev. C.2017. V.95. P.061305(R).
- 2. A.P.Severyukhin et al. // Phys.Rev. C.2018. V.97. P.059802.
- 3. A.P.Severyukhin et al. // Phys.Rev. C.2018. V.98. P.044319.