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Size Compression of Nucleon Pair On Nuclear Surface

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We investigate the size changing of 2n, 2p, and 2d during their emission from ⁶He, ⁶Be, ⁶Li, and ¹⁸F in the microscopic calculation framework. The average size of the subsystem in the nucleus is defined with the two-dimensional reduced width amplitude (RWA). The results show that all of these nucleon pairs, including the boundary deuteron(2d) pair, will happen the size compression at the surface of the nucleus. With further investigation into the behavior of the RWA, we propose that the pairing effect is strongly affected by the quantum feature of the wave function.

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