## Abstract Submitted for the DNP10 Meeting of The American Physical Society

A unified force theory describing several two-particle systems from subatomic to cosmic KEN NAITOH, Waseda University — Our previous report based on a quasi-stability concept applied to momentum conservation (K. Naitoh, JJIAM, 2001) revealed the reason why several particles such as biological cells, nitrogenous bases, and liquid droplets have the bimodal size ratios of about 2:3 and 1:1. The present paper extended with stochastic mechanics and indeterminacy principle also reveals the reason why a neutron impacting uranium 235 leads to the fusion of asymmetric and symmetric size ratios. This paper also clarifies the other asymmetric ratios related to the halo structure in atoms. Moreover, we show the reason why the models based on energy conservation and variation principle did not explain the fusion. The present theory can be applied for several levels of parcels from baryons to stars in the cosmos: specifically, at the level of nuclear force, van der Waals force, surface tension, and force of gravity.

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