## Abstract Submitted for the SES16 Meeting of The American Physical Society

## The model of complex structure of fundamental body and hadron

RONGWU LIU, No Company Provided — Orthodox idea holds that, hadron is composed of fundamental particle quarks which carry mass, electricity, flavor, and color, the fundamental particle quarks are some point-like particles. This article proposes that, fundamental body (such as quark, electron, etc) is composed of fundamental particle (fundamental matter mass and electricity) and fundamental volume field (fundamental matter flavor and color), the fundamental particle lies in the center of fundamental volume field, forms the "nucleus" of fundamental body. According to the "combination principle of the least intensity of fundamental body", there exists a kind of fundamental body which only carries fundamental matter mass, it could be dark matter particle. According to the absoluteness of volume motion of volume field and the condition that volume-field-like fundamental body exists, there exist volume-field-like quark and neutrino which carry moving (or pulsating) fundamental volume field. Based on these concepts, this article further proposes a model of complex structure of hadron (or model of atom-like structure of hadron) which is composed of hadronic nucleus (the so-called "hadron" in particle model) and extranuclear quarks, the hadronic nucleus is further composed of particle-like quarks, the extranuclear quarks are all volume-field-like quarks. According to this model, different mechanisms of strong (or weak) interaction, the collision of high energy hadrons, black hole, and the state of universe before Big Bang are given.

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