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A new paradigm about strong interaction and weak interaction

RONGWU LIU, None — The paradigm of modern physics can be stated as three aspects: (1) Particle is the form of material existence in point space, fundamental particle is the smallest unit of nature, it is usually abstracted as point-like particle with mass, electricity, flavor, and color. (2) Particle takes classical relative displacement motion or quantum motion of duality of wave-particle in the form of continuity. (3) Particles have interaction between them by means of classical fields or quantum fields. This paradigm of physics can be called the particle model of modern physics. This author assumes that, fundamental matter flavor and color don't exist in the form of particle, instead, they exist in the form of volume field. Such that, a new paradigm of strong and weak interaction is proposed: (a) Volume field is the form of material existence in plane space, fundamental body (such as quark) is composed of fundamental particle (fundamental matter mass and electricity) and fundamental volume field (fundamental matter flavor and color) which exists in the form of limited volume. (b) Volume field takes absolute volume motion. (c) Volume fields have strong or weak interaction between them by means of overlapping volume fields. With these concepts under the new paradigm, this author further formulates a classic-like formula of color field force as classical static electric force, and by introducing deformation force of volume field, the author reinterprets the mechanism of "asymptotic freedom" and "quark confinement" in hadron.

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