

QUARKS IN QCD VACUUM

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The framework is QCD instanton vacuum, which provide correct description of the spontaneous breaking of the chiral symmetry (SBCS), responsible for properties of most light hadrons. SBCS is due to the delocalization of single-instanton quark zero modes in the instanton medium.

There are only two parameters:

average instanton size and average inter-instanton distance:

- suggested phenomenologically;
- derived variationally;
- confirmed by lattice measurements.

The model provided a consistent description of the light quark physics.

Here I report the first steps of our study of heavy-light quark systems within QCD instanton vacuum model.