

The Realistic Structure of Quarks in Proton-Proton Collide

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The powerful machine LHC accelerates and steers billions of protons to collide with billions of other protons. The goal of this work is to answer fundamental questions to understand Nature of the proton and for each collision, the physicist's want to count, track and characterize all the different particles that were produced in order to reconstruct the process in full and they study the main parts that are produced from this collision.

In this paper, we present a study of particle production in proton-proton collisions. Furthermore, we present a new structure for proton similar to a cherry or to the sun with two layers; the Core and the mantle. The core is almost spherical and fortified and its radius is about one-third of the entire protons radius, but its density is about 15 times more than the mantle and the mantle is a brawny layer, which includes about $2/3$ of the total radius, and completely encircles the core by a much lower density than it. When two protons collide the mantle part splits into two large fragments and some tiny particles but the smash is not enough to split the dense core. So the heavy dense particle which is called down quark is not anything other than the proton's core, the two parts of the mantle that are larger, lighter and less dense than core, are not something other than the up quarks, and the other small parts are photons and rays.

By this definition: 1. We no longer need to define the strong nuclear force 2. The existence of a structure like this in the nature

Biography

Prof. **Gh. Saleh** is an Independent researcher, responsible and main theoretician of Saleh Research Group. He was educated at the Sharif University of Technology. He has more than 20 articles and participated in several conferences in Europe, America and Asia as an honorable speaker, organizing committee member, leadership, etc.

