

Tetraquarks, Pentaquarks and the Oscillating Proton

The dawn of the 21st Century has been witness to the creation of the Large Hadron Collider, it is the largest and most complex machine ever built by Mankind. It is being used to study the tiniest components of matter that exist inside the atomic nucleus, among other mysteries of nature.

Detection of [1] [four](#) and [five](#) particle hadrons, [2] "[Tetra](#)" and [3] [Pentaquarks](#)", have been conformed at the LHC.

Are these 4 and 5 quark entities a new species of hadrons or are they merely a residual high energy amplification and confirmation of the basic four to five, back to four particles, found inside the oscillating proton model?

Below is a link to a four particle, Classical oscillating mechanism that describes the proton, its components and their mechanics. It can accurately describe the workings of the atomic nucleus and explain why tetraquarks and pentaquarks appear in high energy collisions.

[4] [Proton Cosmology](#): A Basic Oscillating Proton Model.

In brief [4] [Proton Cosmology](#), is a Classical physics model based on computer generated and analyzed linear accelerator data, the known laws of [electrodynamics](#) and its positively charged compliment, along with Einstein's energy-mass formula and the forward progression of time. It would be best to review the oscillating proton hypothesis at the link provided above, to be able to fully understand the relationship and field mechanics of the proton and the actions of their internal components.

Electronics:

Electronics is the cornerstone of all our cutting edge technologies. From everyday electrical appliances and computers, from which you read these words, to space satellites, robotic planetary rovers and the LHC, none of it, not even you, would be possible without employing the basic laws of electricity and electrodynamics. There is no reason why these Classical Hamiltonian Laws should not be valid for charged particles inside the nucleus of an atom.

In brief, the oscillating proton mechanics are based on these [charge patterns](#) from the film, "[The Hunting of the Quark](#)". The charge patterns were confirmed in 2003 by the work of [5] [Gerald A. Miller](#) et al. The similarities can be observed in this charge [comparison](#). Such charge patterns, (inner) would result in the various proton morphologies, (outer) being observed, as polarized electrons deflected off them. The linear accelerator technique used by Professor Miller is known as elastic scattering where neither the projectile nor target particles are destroyed.

Professor Miller ascribes these various proton morphologies as being due to the various 3 quarks orbital velocities, some almost attaining the speed of light, and their varying rotational trajectories.

These same shapes would also be observed, as polarized electron projectiles deflect off the surface charges of an oscillating proton, as described in the “Proton Cosmology”, [model](#). These various shapes are caused by electrodynamic-like, symmetrical, positive charge fields that do move at the speed of light. These dynamic positive charges are momentarily stored on the surface of an oscillating, internally driven externally charge dynamic, charge [morphology varying, proton](#). The collapse of the rings and arcs as described in [4] [Proton Cosmology](#) and the difference in velocity between the oscillating sub-luminary, four quadron mass particles and the speed of light charge fields that they radiate within the geometry of the proton spheroid, maintains a perpetual oscillating motion.

When a proton to proton collision occurs at higher energies seen at the LHC, the wave functions of all internal components within the target proton, collapse. If at the instant of collision, the quadrons are located at or near the furthest point away from the proton center in their oscillation paths, they will be amplified, enhanced and yield a [2] Tetraquark. If collision occurs when the four quadrons are all gathered inward near the proton center, at the time of charge ring collapse and shortly thereafter, a [3] Pentaquark will be observed, with a charge varying 5th particle, depending on quadron proximity to the proton center.

Journal References:

- (1) <http://journals.aps.org/prl/abstract/10.1103/PhysRevLett.104.162001>
- (2) <http://arxiv.org/abs/1404.1903>
- (3) <http://arxiv.org/abs/1507.03414>
- (4) <http://vixra.org/abs/1311.0086>
- (5) <http://arxiv.org/abs/0802.3731v1>,