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Checker Board Model THEODORE LACH, none — The Checker Board Model (CBM) is a 2D model of the nucleus that proposes that the synchronization of the 2 outer orbiting quarks in the proton and neutron accounts for magnetic moment of the nucleons and that the magnetic flux from the nucleons couples (weaves) in the third dimension to form a flat 2D nucleus. The 2D symmetry of the He nucleus helps explain why this structure is so stable. This model explain the mass of the proton and neutron, along with their magnetic moments and their absolute and relative sizes in terms of the above structure and predict the masses of two newly proposed quarks¹: the "up" and the "dn" quarks. Since the masses of the "up" and "dn" quark determined by the CBM (237.31 MeV and 42.392 MeV respectively). These masses do not fit within the standard model as candidates for u and d quarks, so a new model (New Physics) had to be invented. This new particle physics $model^2$ predicts that nature has 5 generations not 3. One independent check of this model is that the wavelength of the up quark orbiting inside the proton turns out to be exactly one DeBroglie wavelength. Details of this model can be found on the web at: http://checkerboard.dnsalias.net/

¹T.M. Lach, Checkerboard Structure of the Nucleus, Infinite Energy, Vol. 5, issue 30, (2000).

²T.M. Lach, Masses of the Sub-Nuclear Particles, nucl-th/0008026, @http://xxx.lanl.gov/

Theodore Lach none

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