

Abstract Submitted
for the APR11 Meeting of
The American Physical Society

The 5th Generation model of Particle Physics THEODORE LACH

— Recent discoveries of the excited states of the B meson along with the discovery of the omega-b-minus have brought into popular acceptance the concept of orbiting quarks predicted by the Checker Board Model (CBM) 14 years ago. Back then the concept of orbiting quarks was not fashionable, the bag model was the dominate theory. Recent estimates of velocities of these quarks inside the proton and neutron are in excess of 90% the speed of light also in agreement with the CBM prediction. Still a 2D structure of the nucleus has not been accepted. The CBM predicts masses of the up and dn quarks (which make up the proton and neutron) of 237.31 MeV and 42.392 MeV respectively and suggests that a lighter generation of quarks u and d make up a different generation of quarks that make up light mesons. The CBM also predicts that the T' and B' quarks do exist and are not as massive as might be expected.

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Date submitted: 11 Feb 2011

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