Abstract Submitted
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An alternate view of nuclear structure ARAN DAVID STUBBS — This is a brief description of an alternate theory of the structure of atomic nuclei. It derives from the alternate theory of fundamental particles (also at this conference), but is separate from it. In this theory, atomic nuclei are comprised of up/down diquarks plus individual up quarks and down quarks (monoquarks). The count of monoquarks and diquarks is identical. Each diquark binds to 1 to 6 monoquarks, and each monoquark binds to 1 to 6 diquarks, in the standard body-centered-cubic structure. The surface is typically octahedral (which is the minimum surface for the bcc structure), except that some small nuclei have simpler structures - such as the cube of the Helium 4 nucleus. All interior monoquarks are downs, as are a few surface monoquarks. Analysis of minimum surface and statistical comparisons to actual nuclei are included, as are many illustrations.

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