

Abstract Submitted
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Signatures of Fourth Generation Quarks in Mesons MARTIN MCHUGH, ERIN DE PREE, St. Mary's College of Maryland — It is possible that we will see fourth generation particles produced at the Large Hadron Collider. We extend the standard model to include a sequential fourth generation of quarks, the most straight-forward approach. If the mass difference between the two heavy quarks is less than the mass of the W^\pm -boson, then the heavier quark cannot decay directly into one the lighter fourth generation quark. Unitarity requires the V_{34} mixing angle remain small. This surpresses the heavy quark decay rates and may allow both heavy quarks to live long enough to hadronize. We consider signatures of the fourth generation quark (or anti-quark) forming a meson with a Standard Model anti-quark (quark).

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