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A Theoretical Study of Quark Fusion[1] AJIT HIRA, JOSE PACHECO, RUBEN RIVERA, MAKAYLA DURAN, JAMES MCKEOUGH, Northern New Mexico College, TOMMY CATHEY, Lockheed Martin Corporation — We continue our interest in the study of fundamental particles by presenting our computational results for Quark Fusion. This field of research is likely to attract increasing attention in view of the recent reports on the work of the physicists M. Karliner and J. L. Rosner. They have investigated the possibility of the phenomena of quark fusion reactions, parallel to nuclear fusion, between doubly heavy baryons. Our computational methods are based on similar computational methods used for the study of baryons and mesons which contain only u, d, s and charm quarks. Our computer codes utilize C++ and MATLAB languages, and combine the formalisms of Feynman Path Integrals (FPI) and Monte-Carlo Theory (CMT). This research is expected to have implications for the development of Quark fusion as an energy source in the future.

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