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Resonant Hadronic Form Factors[1] KEEGAN SHERMAN, RAUL BRICENO, ANDREW JACKURA, Old Dominion University, FELIPE ORTEGA-GAMA, William & Mary — One of the primary goals of modern day hadronic physics is to understand how quarks and gluons align themselves to form the states of quantum chromodynamics (QCD). However, due to confinement, quarks and gluons cannot be observed directly. Thus, we are forced to study the structure of the states they form, hadrons. The simplest structural information we can obtain are form factors, for example elastic electromagnetic form factors which give us access to information about the shape of these states, like the radius. For stable hadrons, like the proton, measuring form factors is a well understood process. However, most hadrons are unstable states called resonances which decay on the order of 10^{-23} seconds. Therefore, if we wish to measure form factors of these states, we must also consider their short lifetime. Here we introduce a new amplitude from which it would be possible to extract resonant hadronic form factors.

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