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# Separating Dijet Resonances using the Coloron Discriminant Variable at LHC

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An exciting possibility for the upcoming 14 TeV run of the LHC is that a new strongly-coupled resonance decaying to dijets could be discovered. Once the resonance is detected, the immediate questions will be about the nature of the particle: is it colored? is it a vector, fermion, or scalar? This talk reviews the LHC discovery reach for a variety of dijet resonances and discusses a strategy for measuring the newly discovered state's properties. The method relies on the color discriminant variable, which can be readily be determined at the LHC from the measurements of the di-jet signal cross section, the resonance mass and the resonance width. We discuss the ability of this method to distinguish between a  $q\bar{q}$  excited quark resonance, a  $q\bar{q}$  coloron, a  $q\bar{q}$   $Z'$ , and a  $g\bar{g}$  color-octet scalar.

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