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Single production of vector-like quarks

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We discuss a complete setup for simulations, relevant for the production of a single vector-like quark at hadron colliders, including finite width effects, signal-background interference effects and next-to-leading order QCD corrections. This procedure can be extended to include additional interactions with exotic particles. We provide quantitative results for representative benchmark scenarios for a vector-like top-partner, and we determine the role of the interference terms for a range of masses and widths of phenomenological significance.

In-person participation

Yes

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