

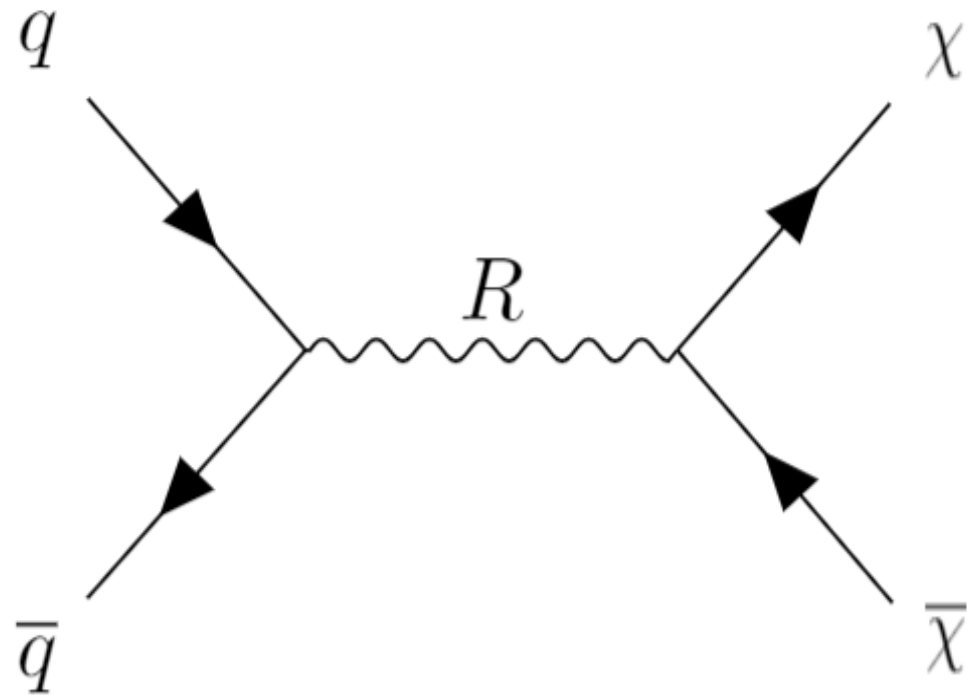
Trigger Level Analysis at ATLAS

STELLA WERMUTH

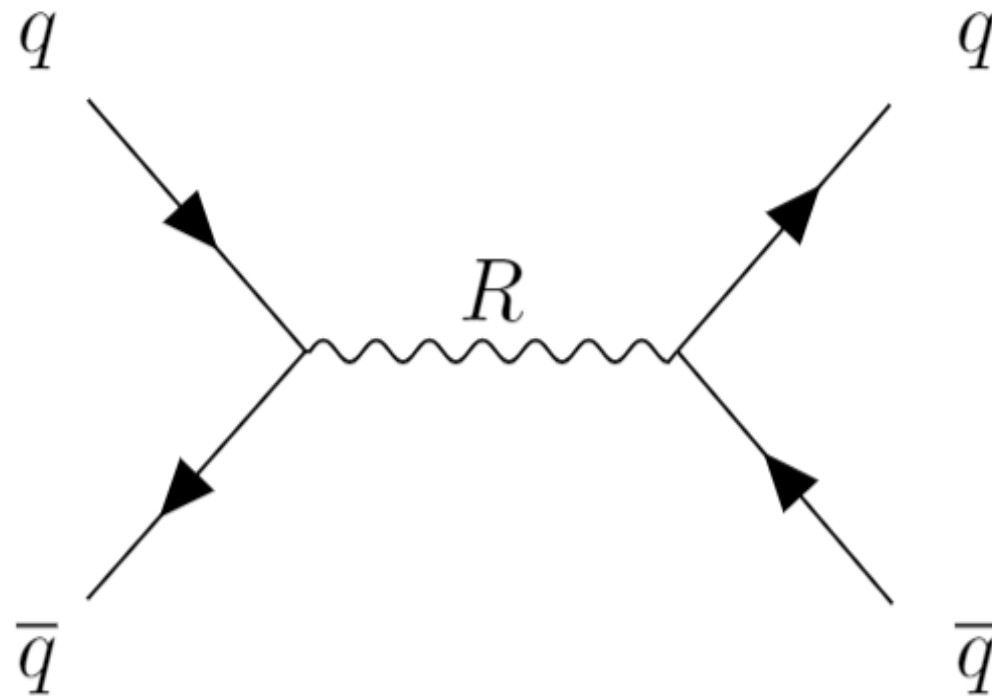
TEILCHENPHYSIK UND DER LARGE HADRON COLLIDER

12.07.2019

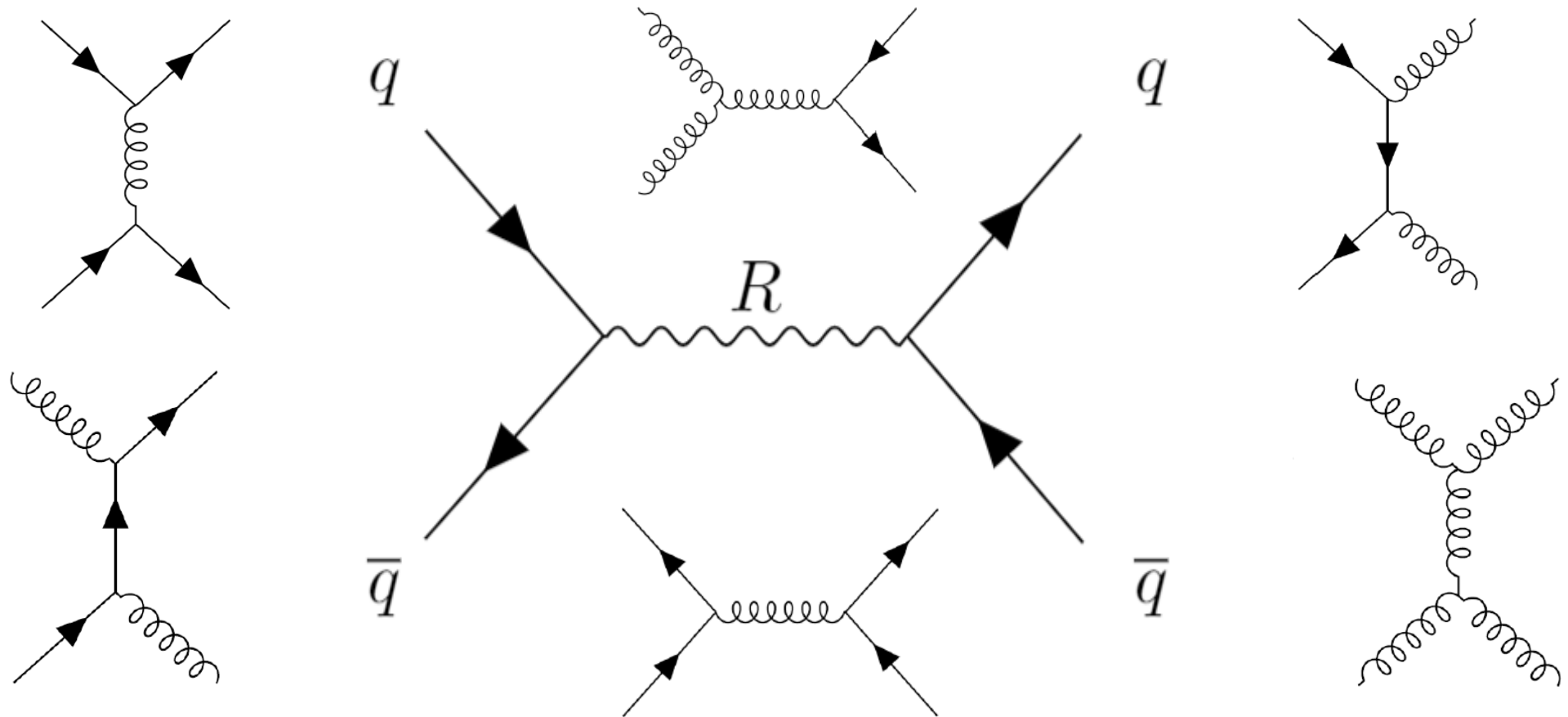
Dark Matter Search



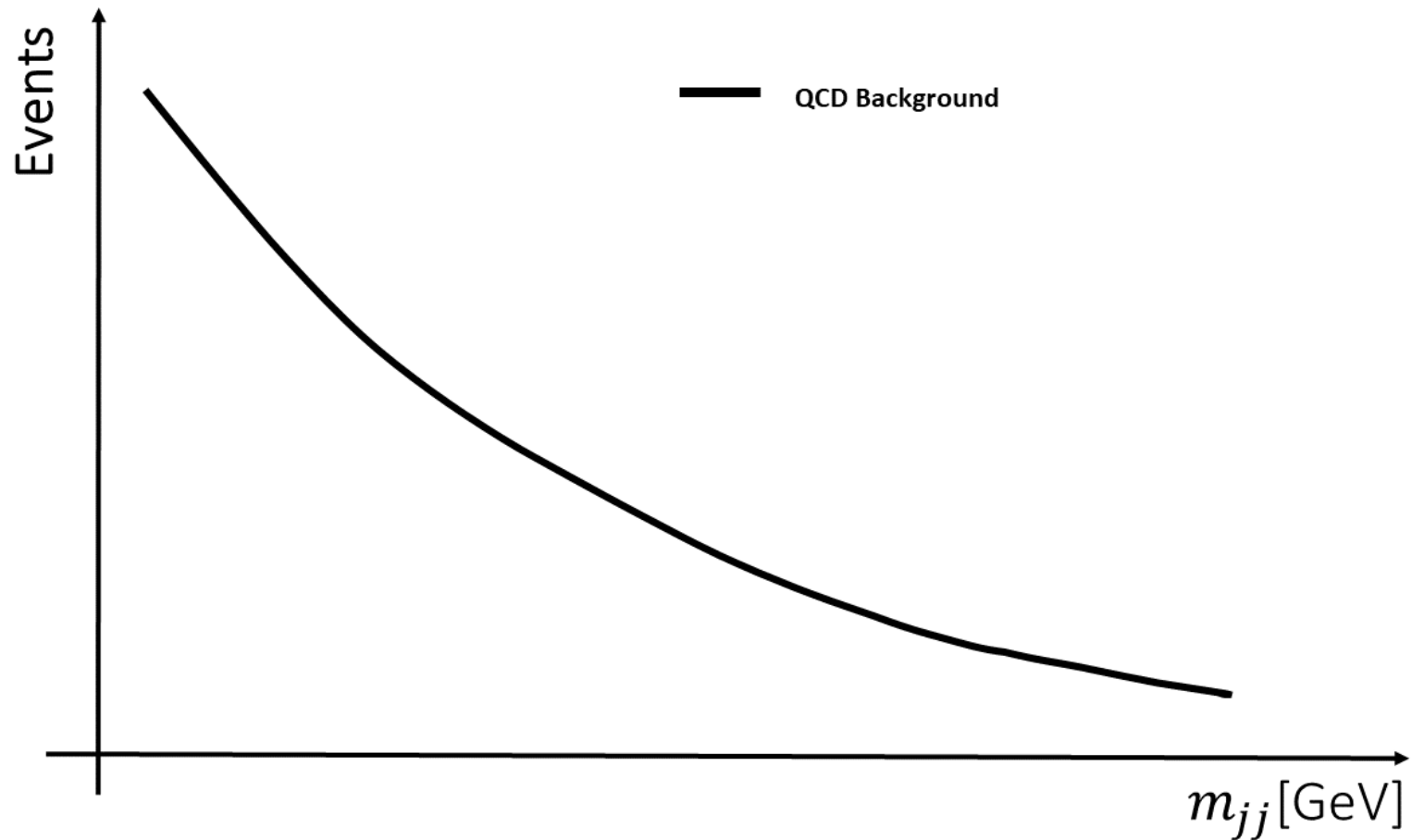
Dark Matter Search



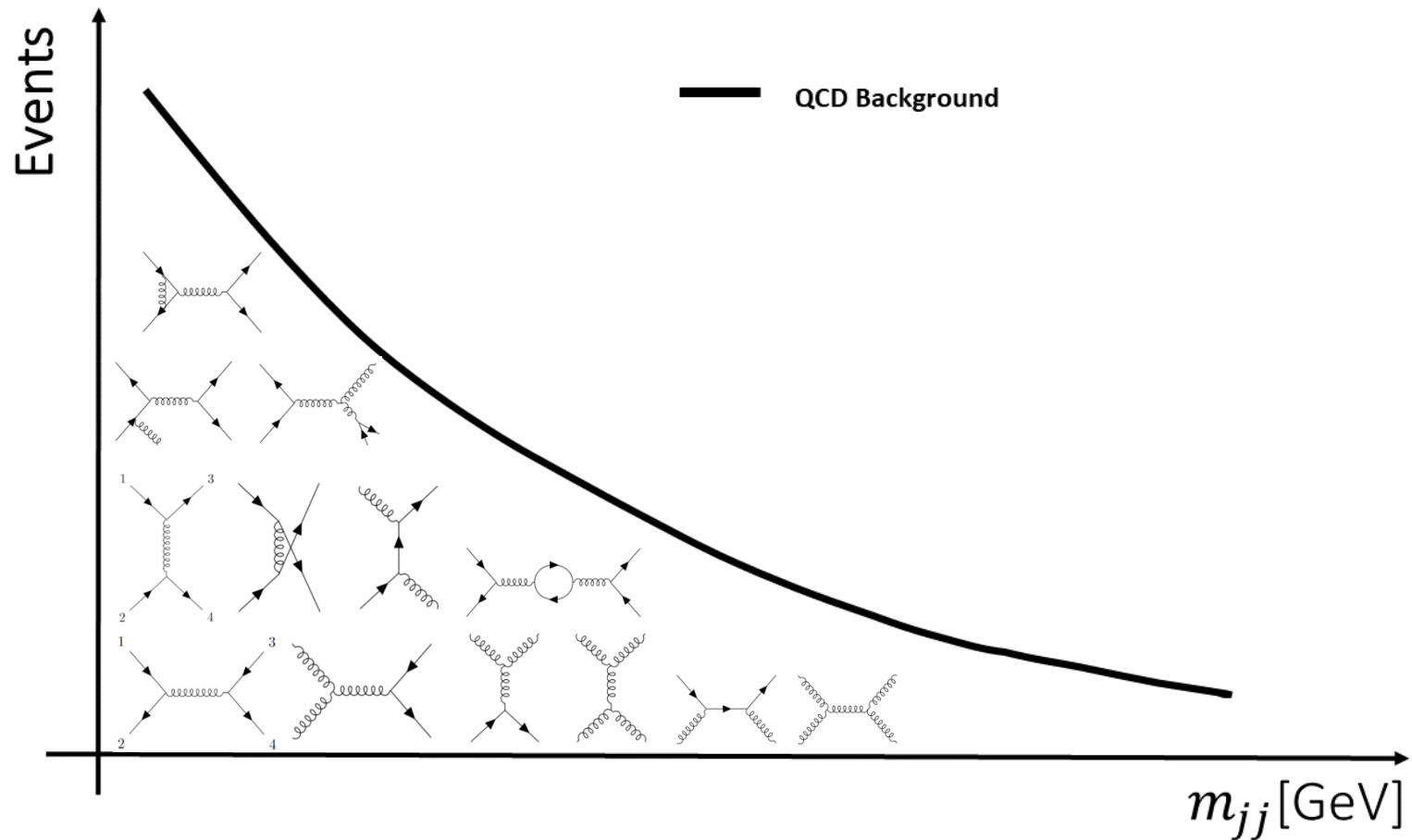
Dark Matter Search



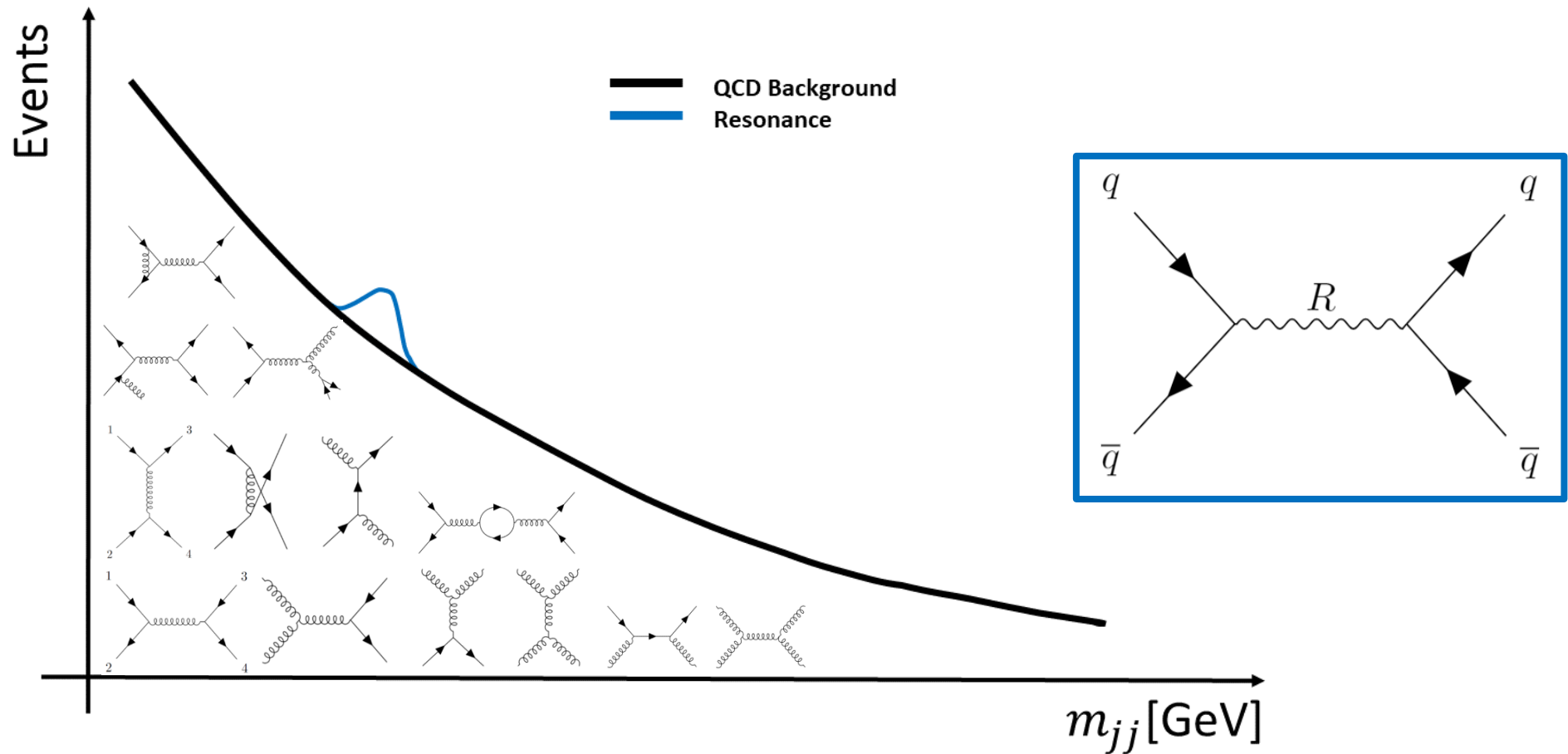
Dijet Mass Spectrum



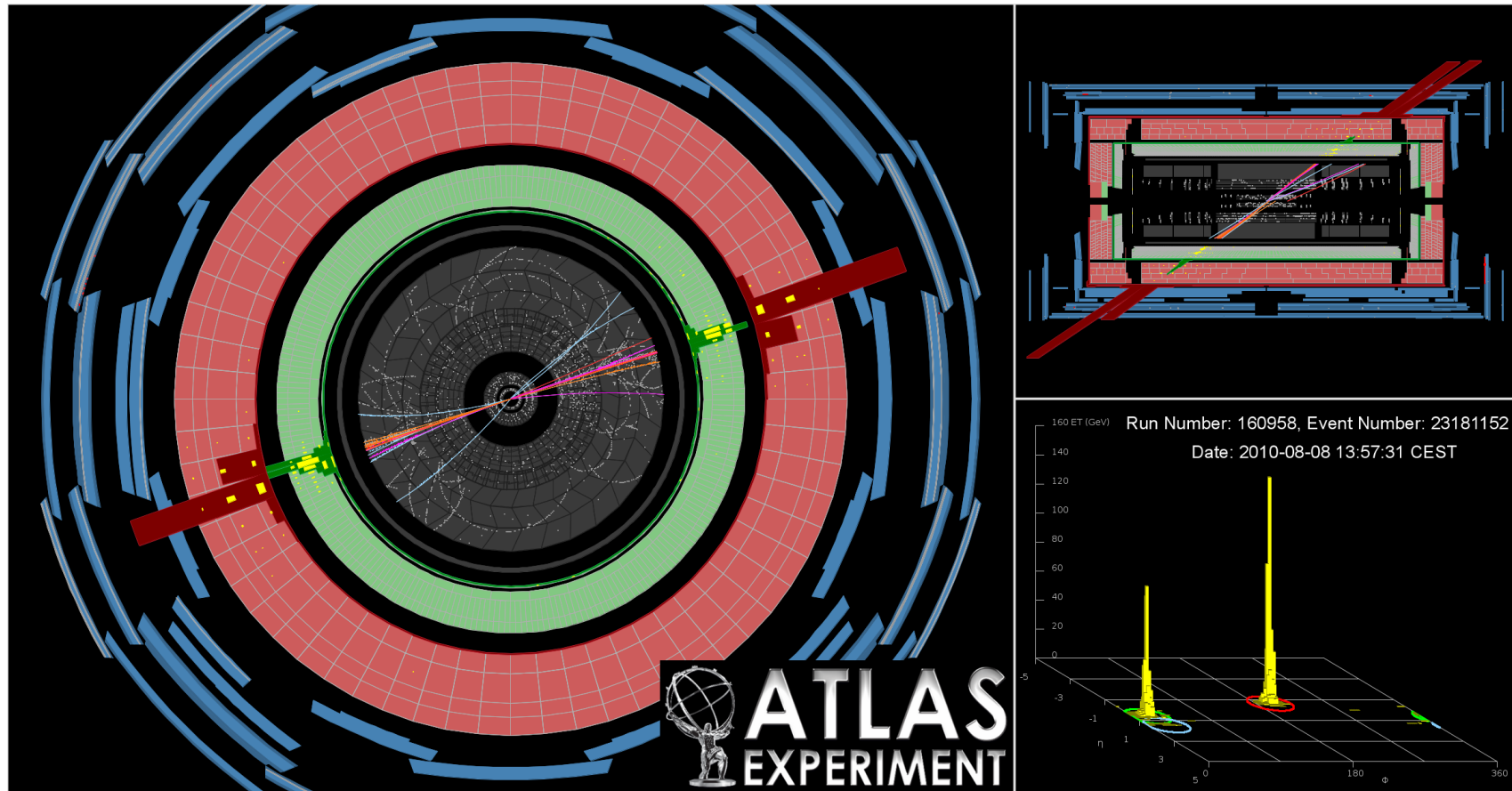
Dijet Mass Spectrum



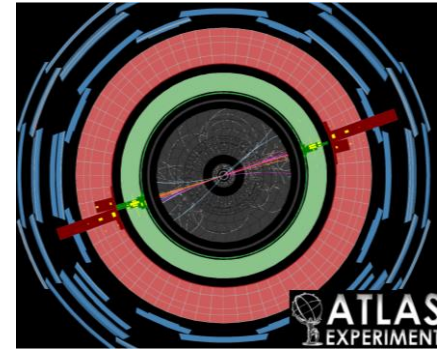
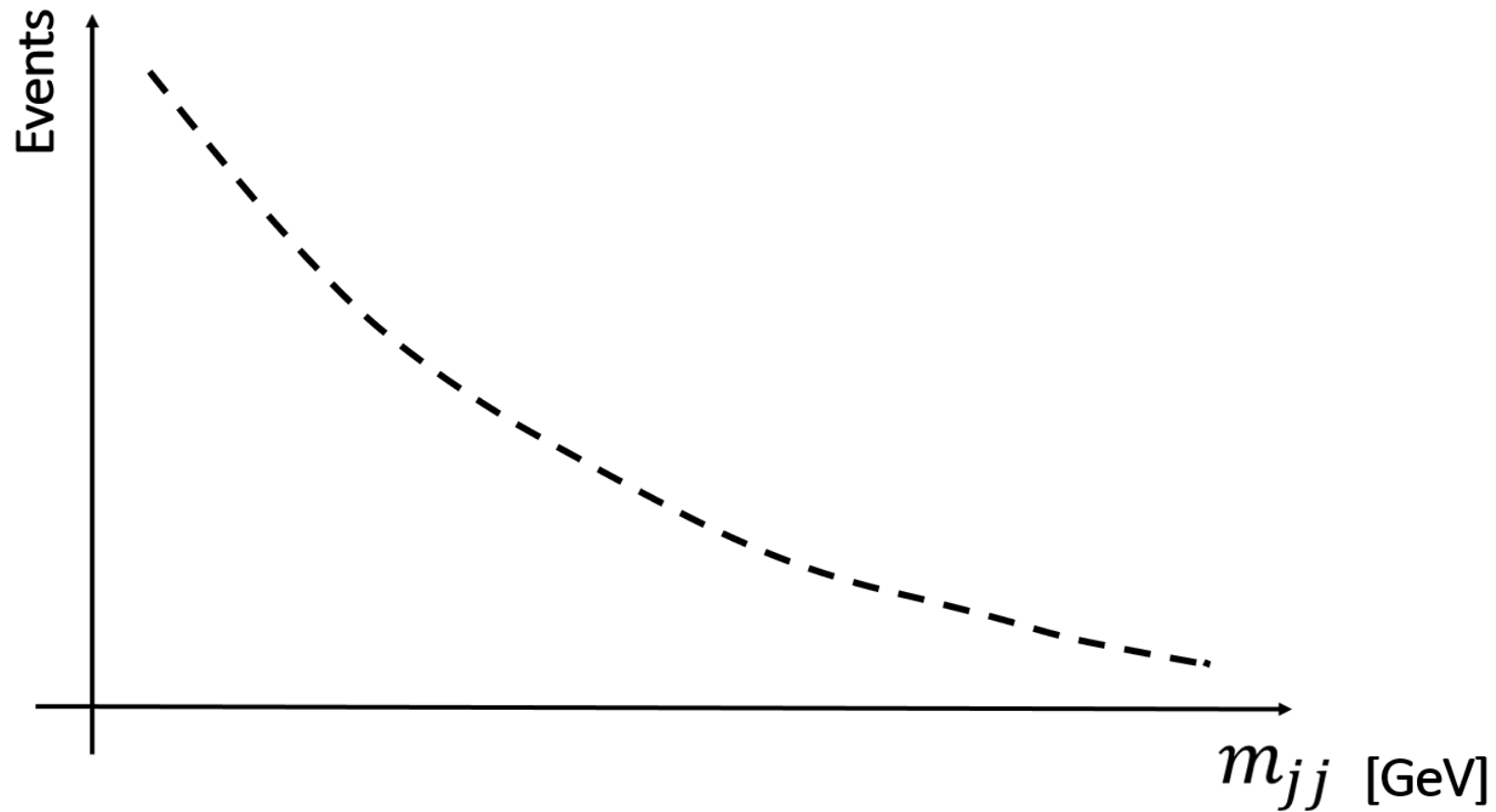
Dijet Mass Spectrum



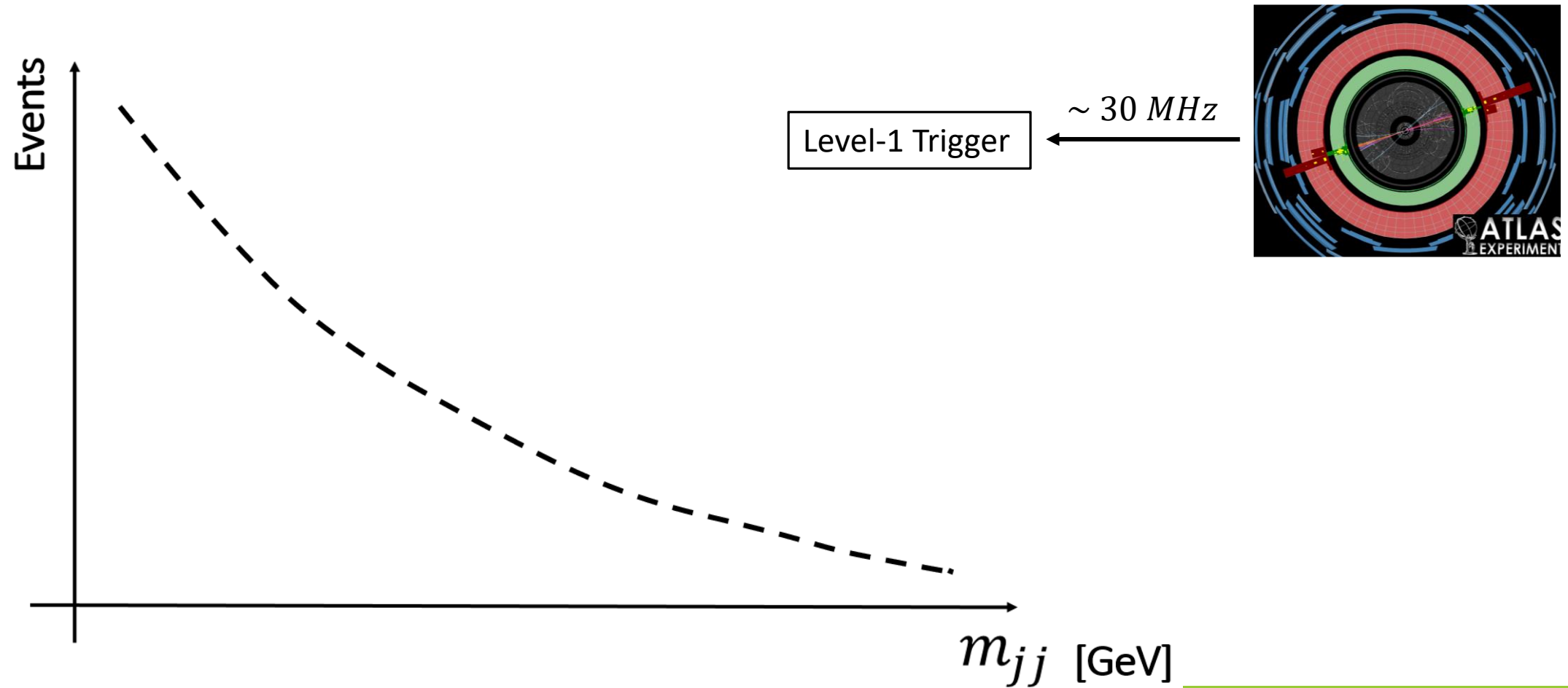
Dijet Event Display



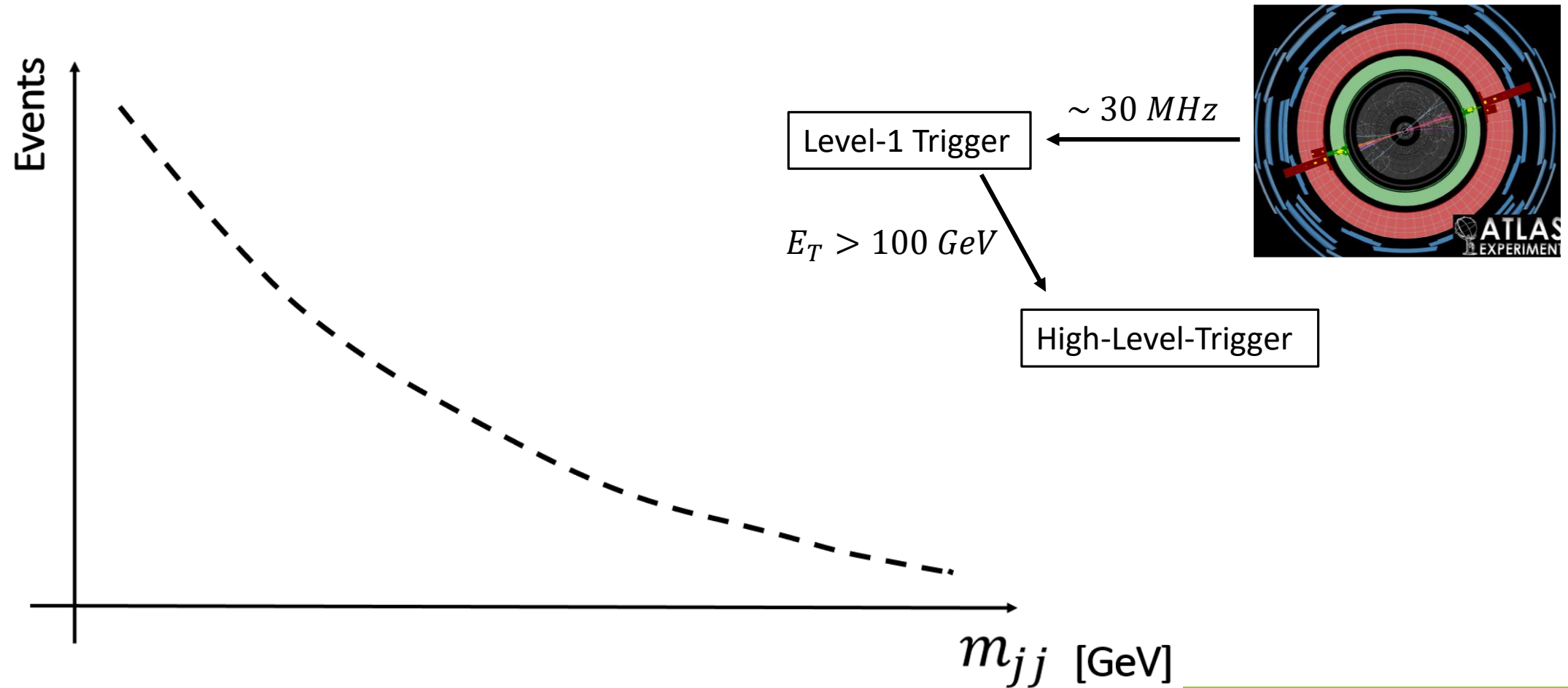
Dijet Mass Spectrum



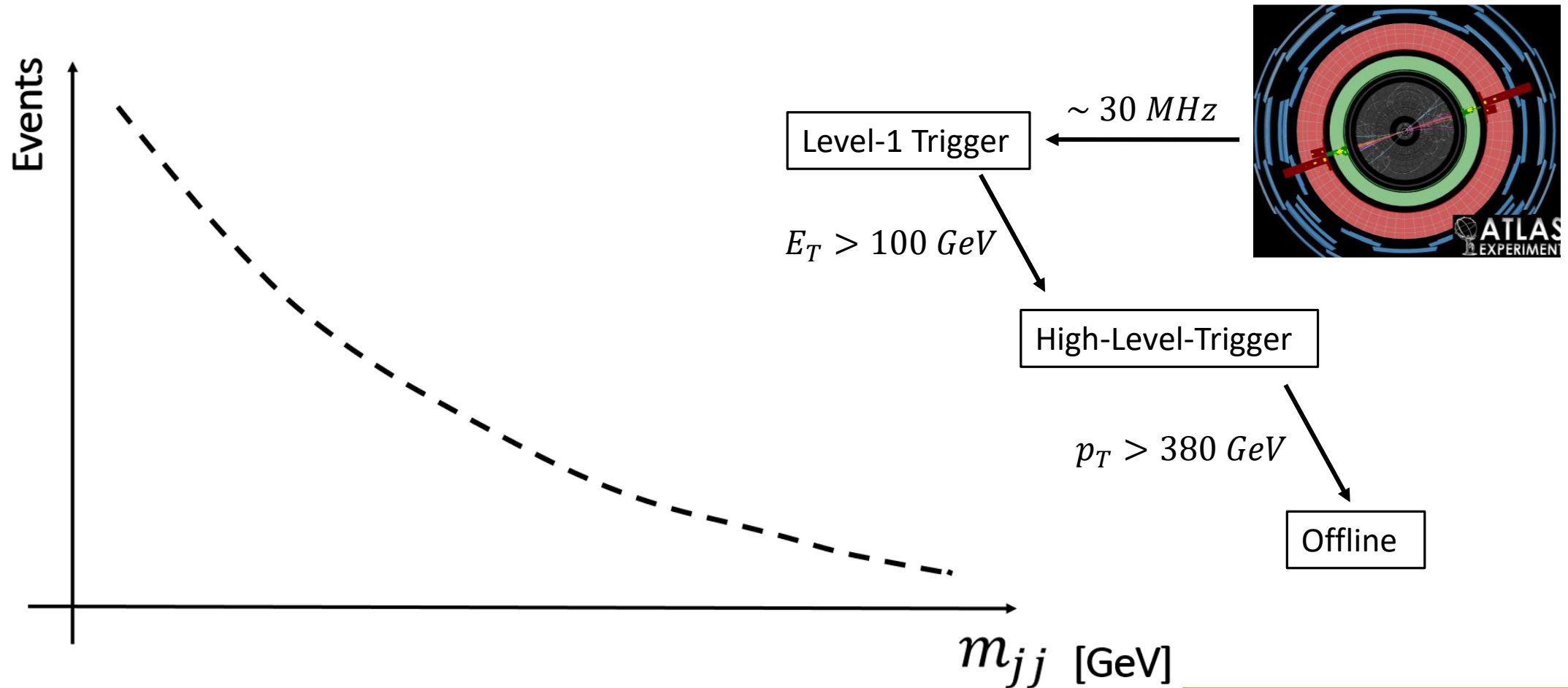
Dijet Mass Spectrum



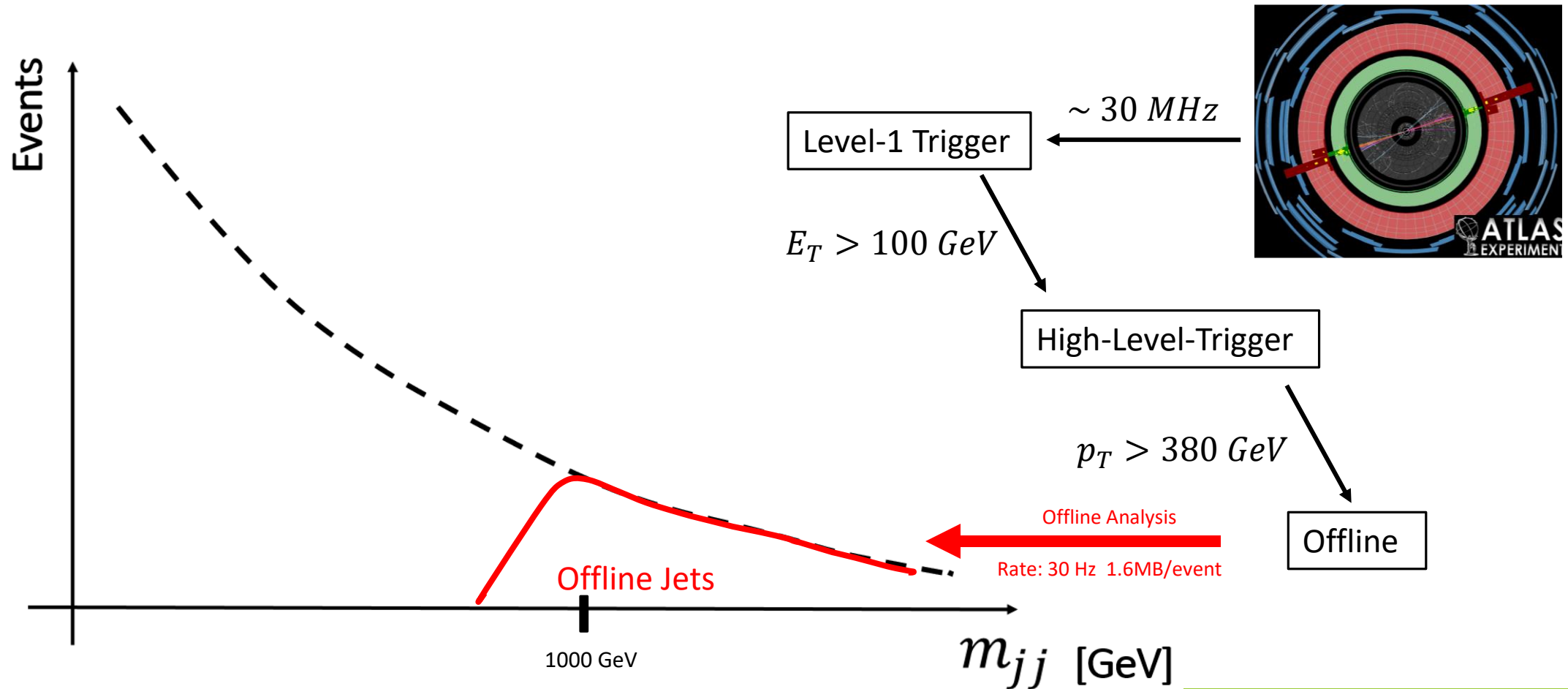
Dijet Mass Spectrum



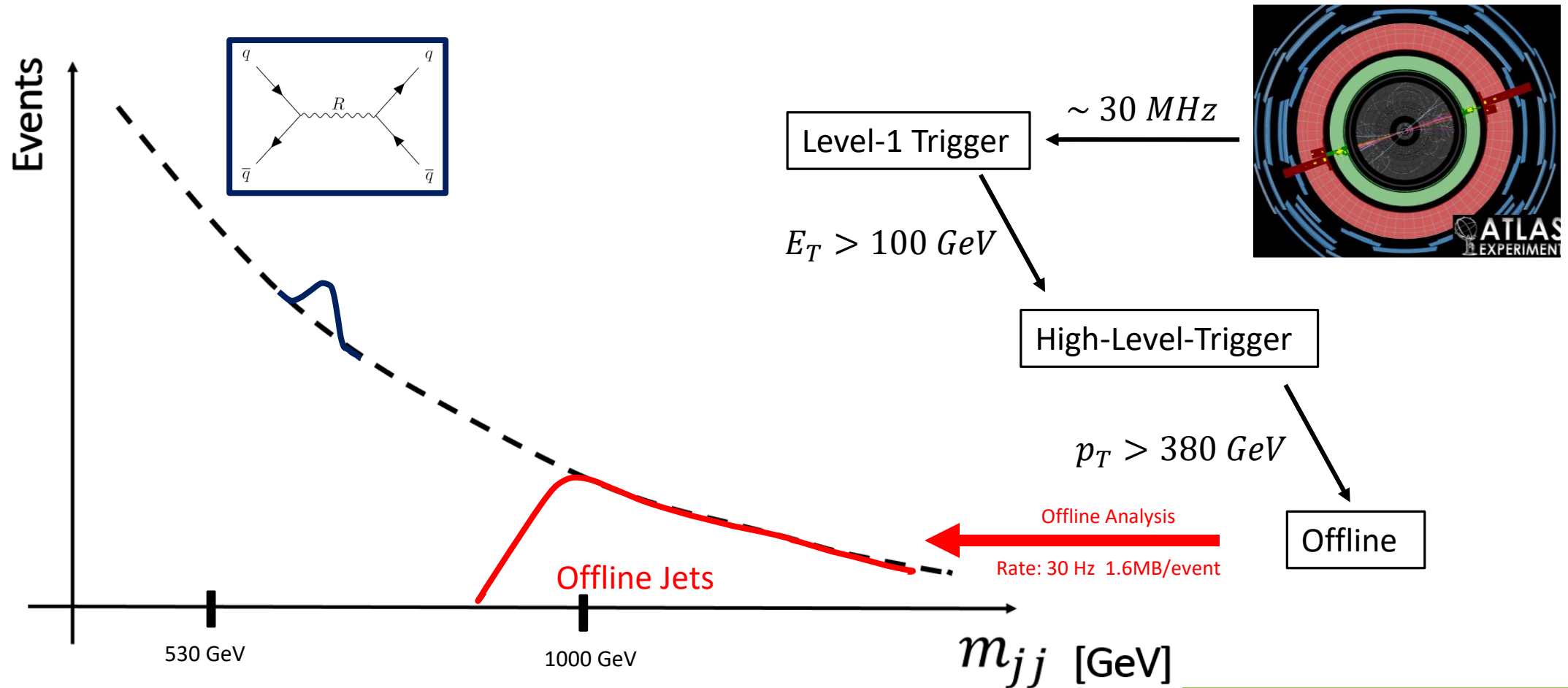
Dijet Mass Spectrum



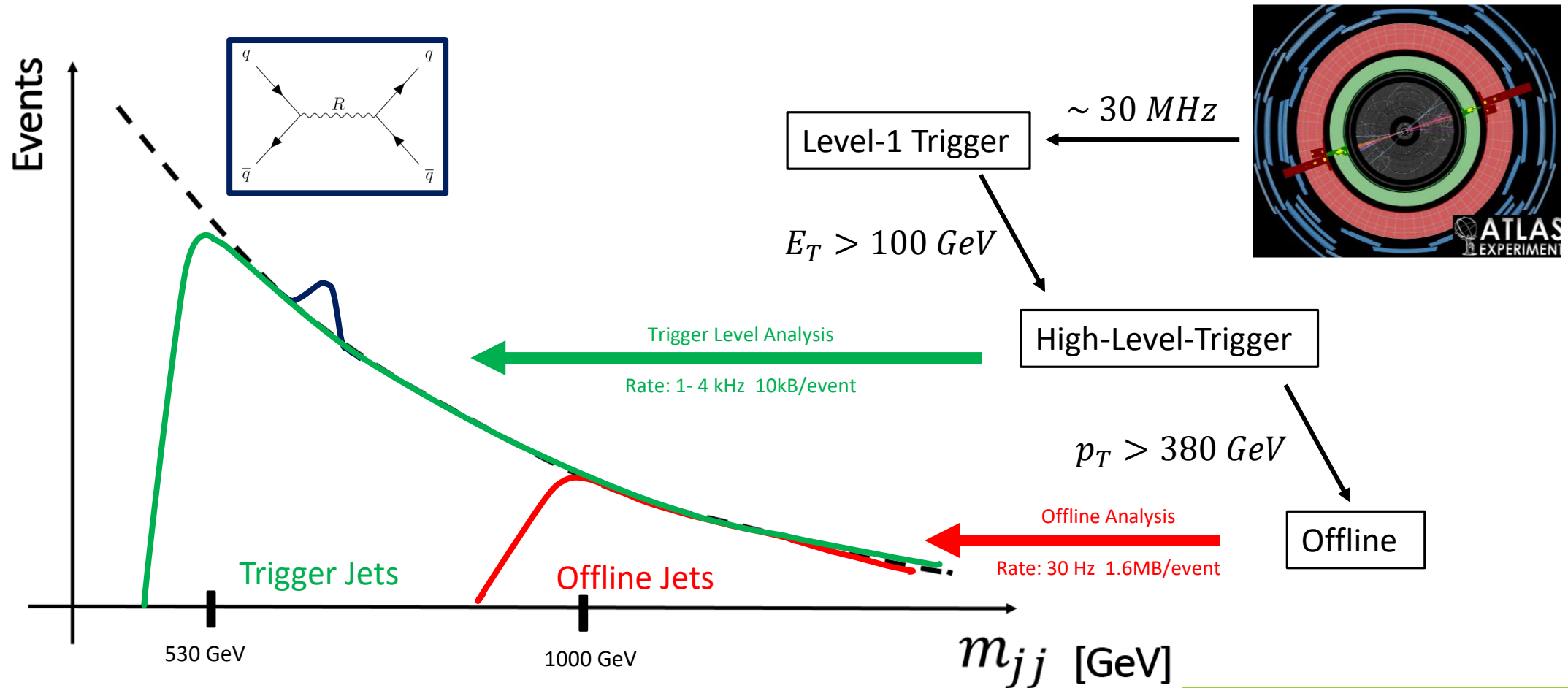
Dijet Mass Spectrum



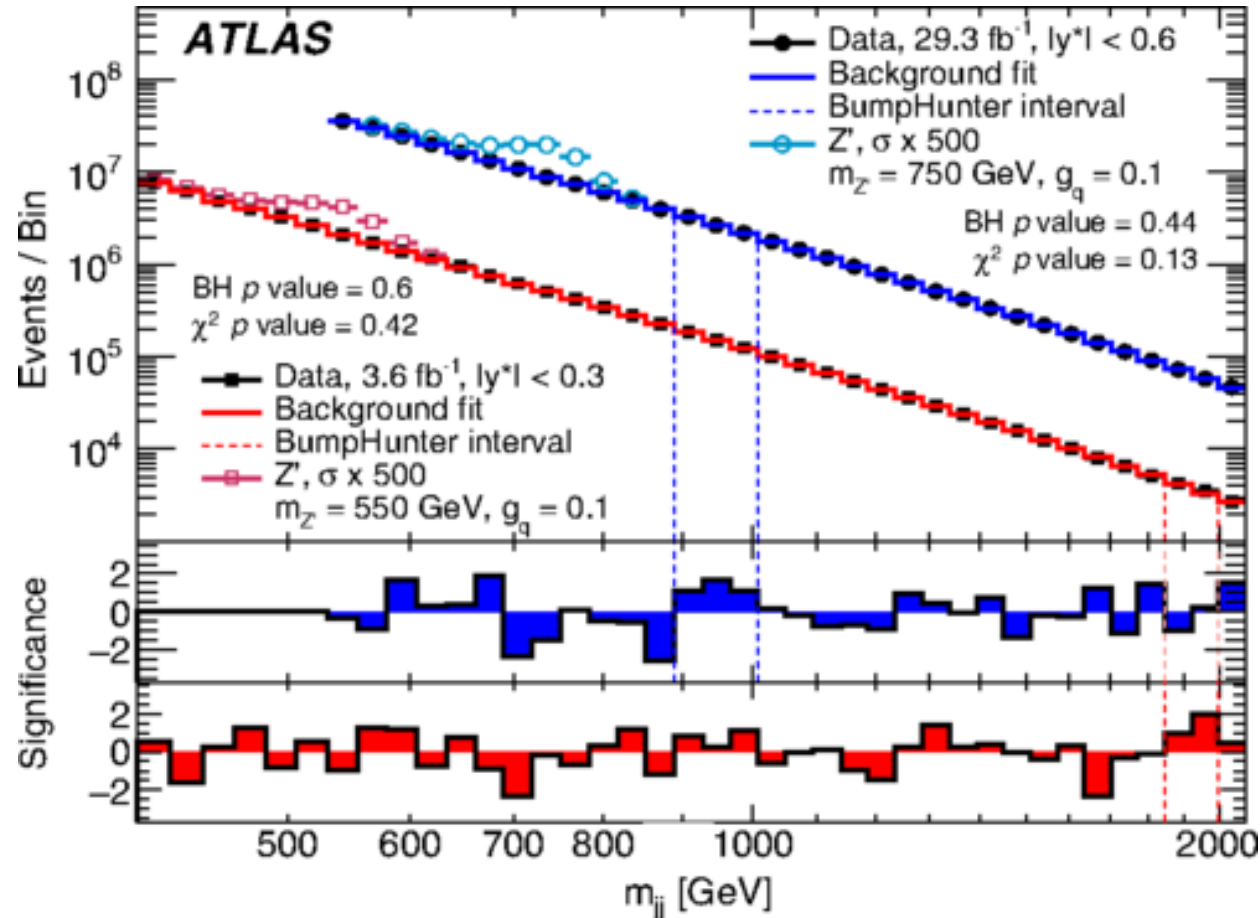
Dijet Mass Spectrum



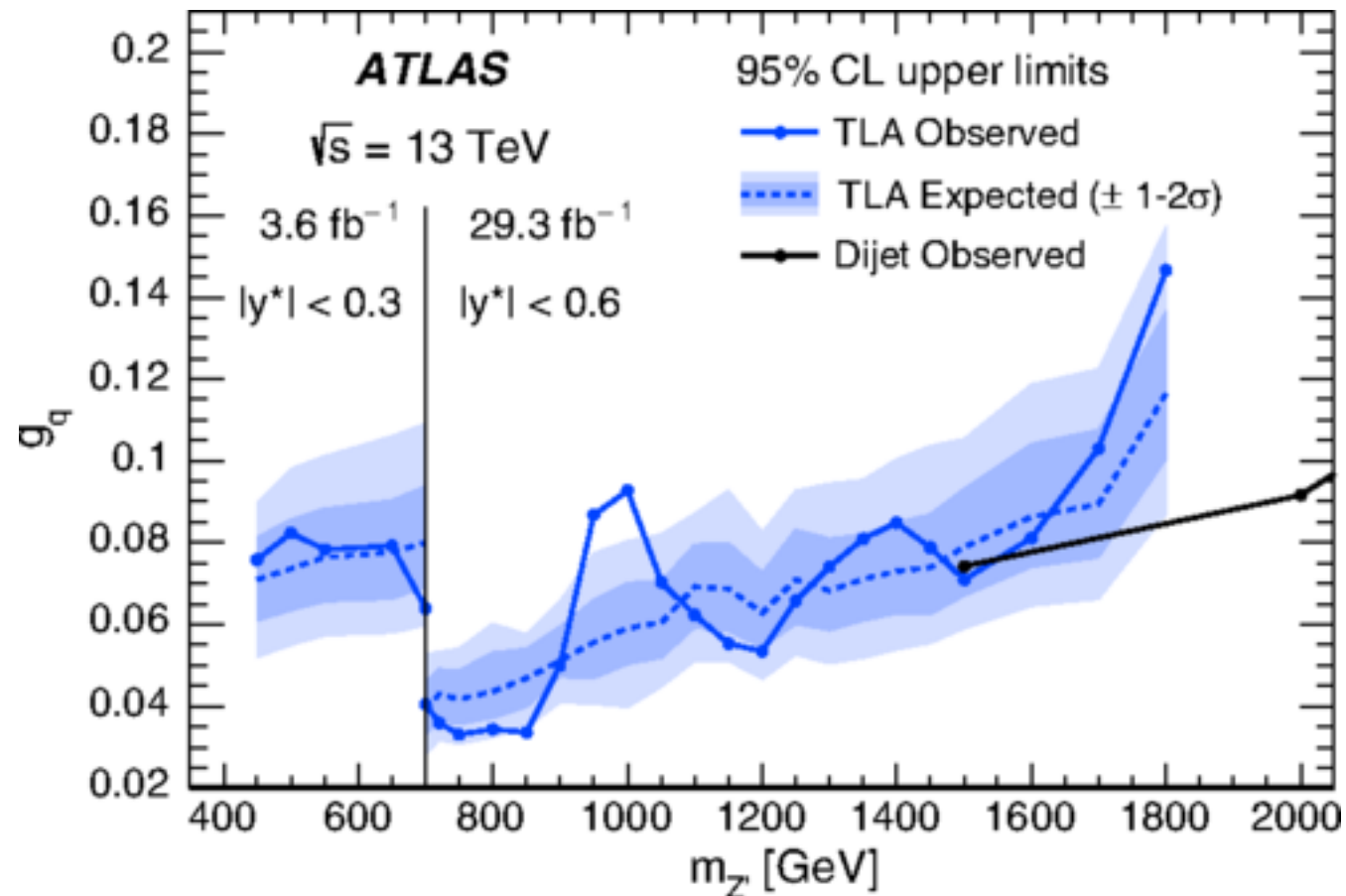
Dijet Mass Spectrum



Results 2018 – Dijet Spectrum



Results 2018 – Limit Plot

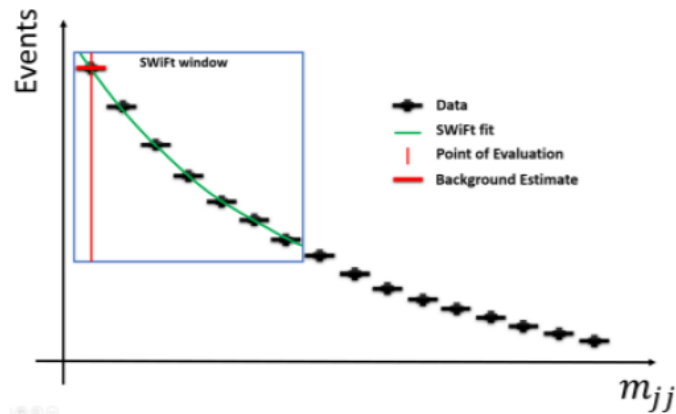


Summary

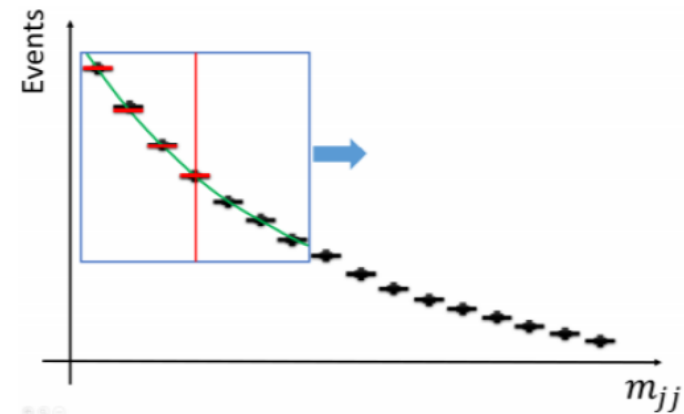
- Massive mediator search
 - Resonance in dijet spectrum
- Traditional search: limited in statistical uncertainty
- TLA: use jets reconstructed by HLT
 - Decrease size, increase rate and statistical uncertainty
- 2018 data: no excess found

Back-Up

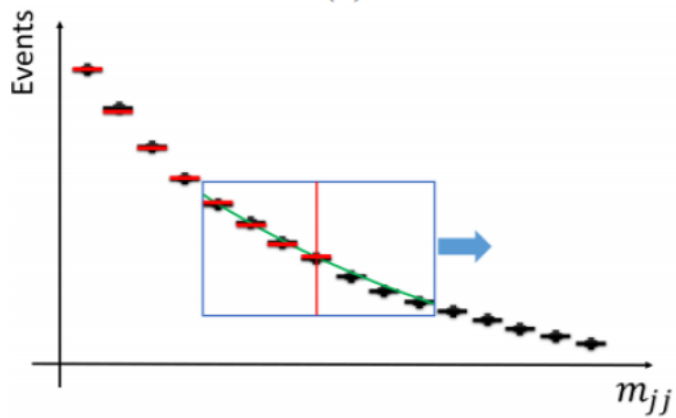
Background Estimation



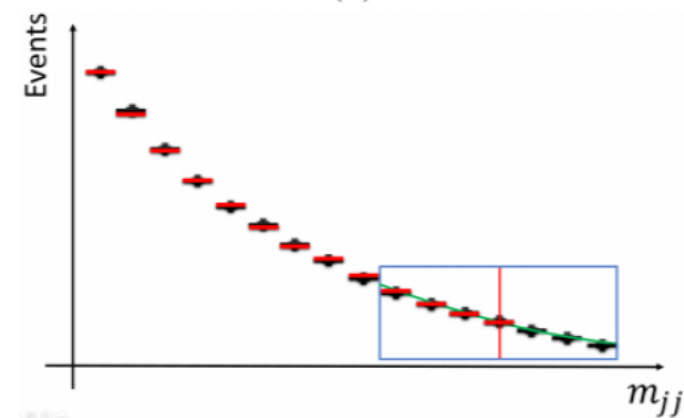
(a)



(b)

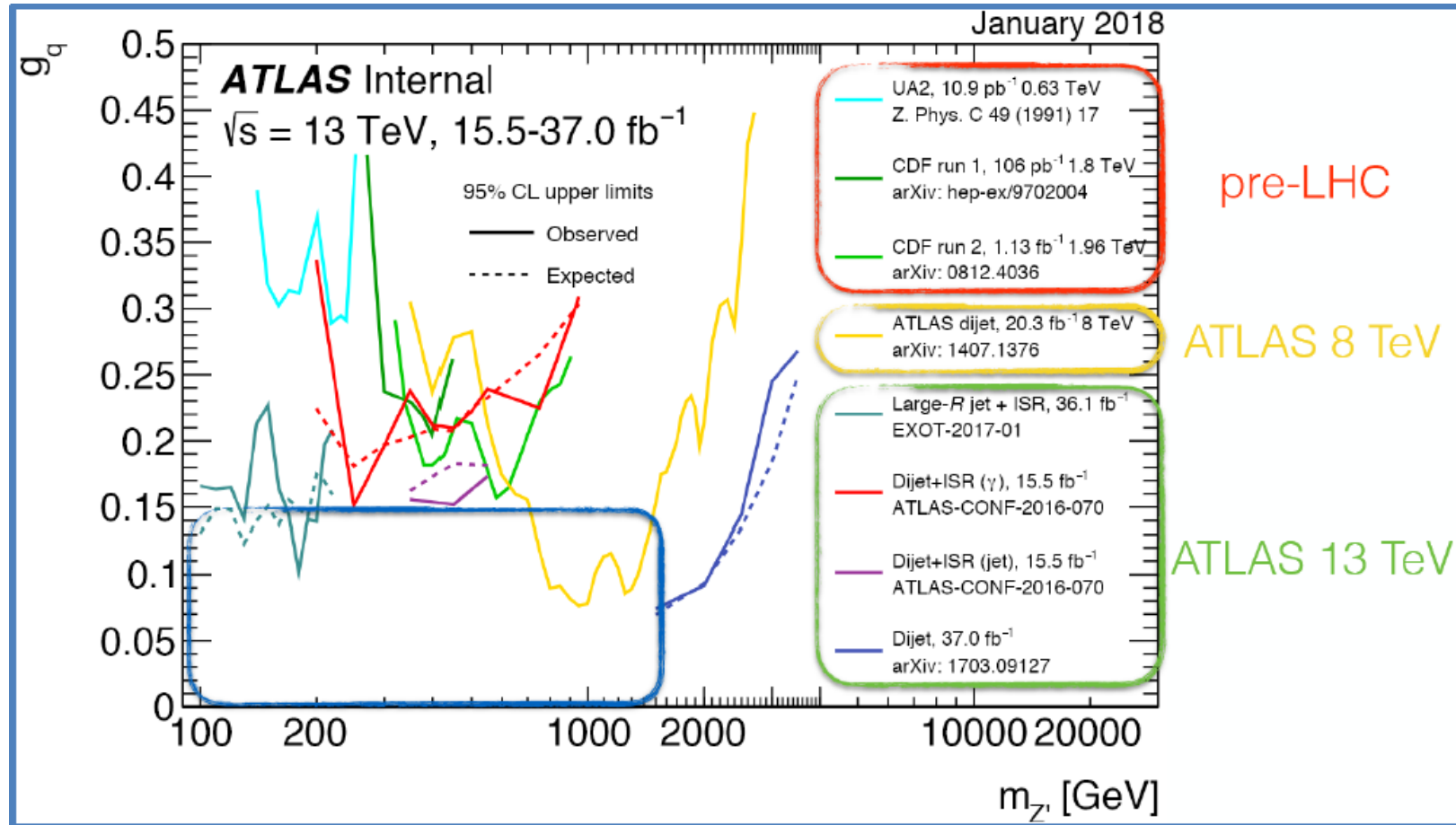


(c)

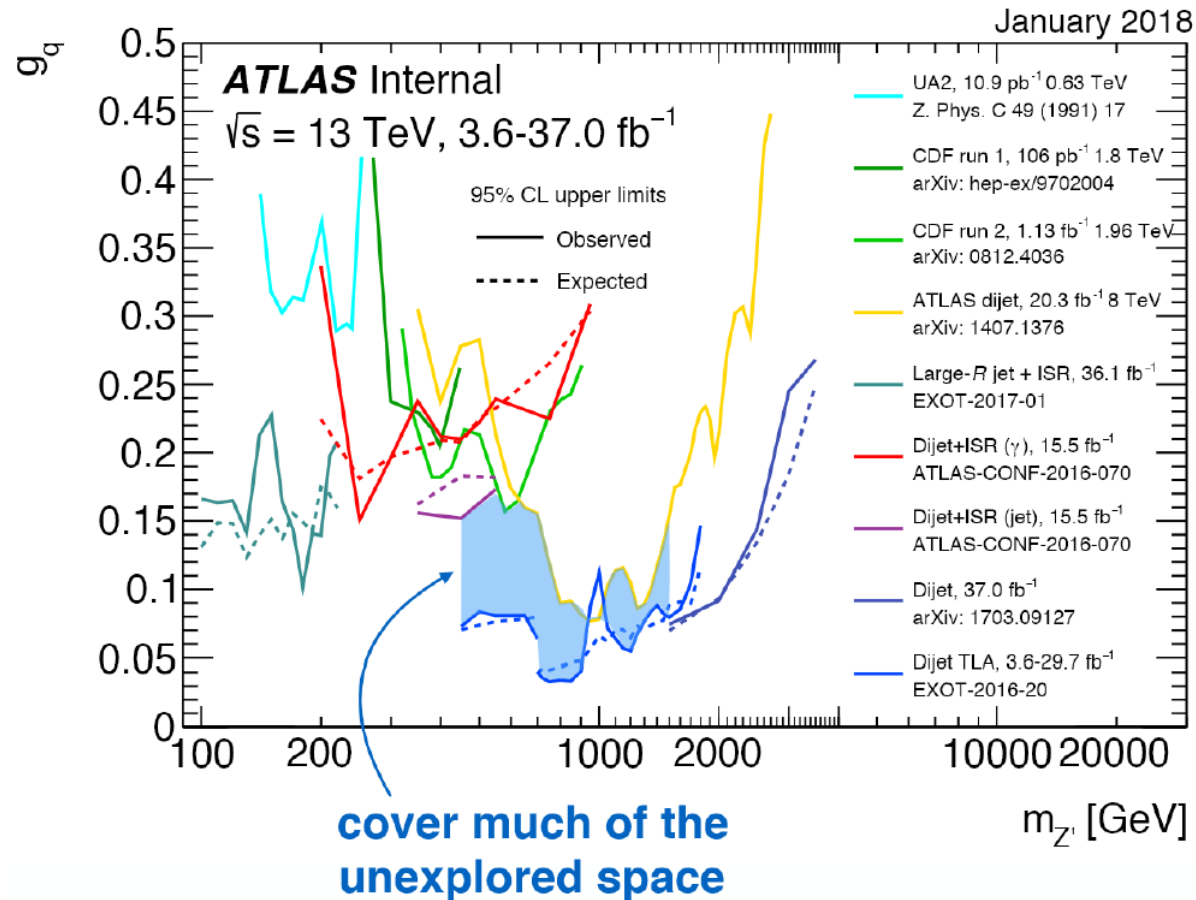


(d)

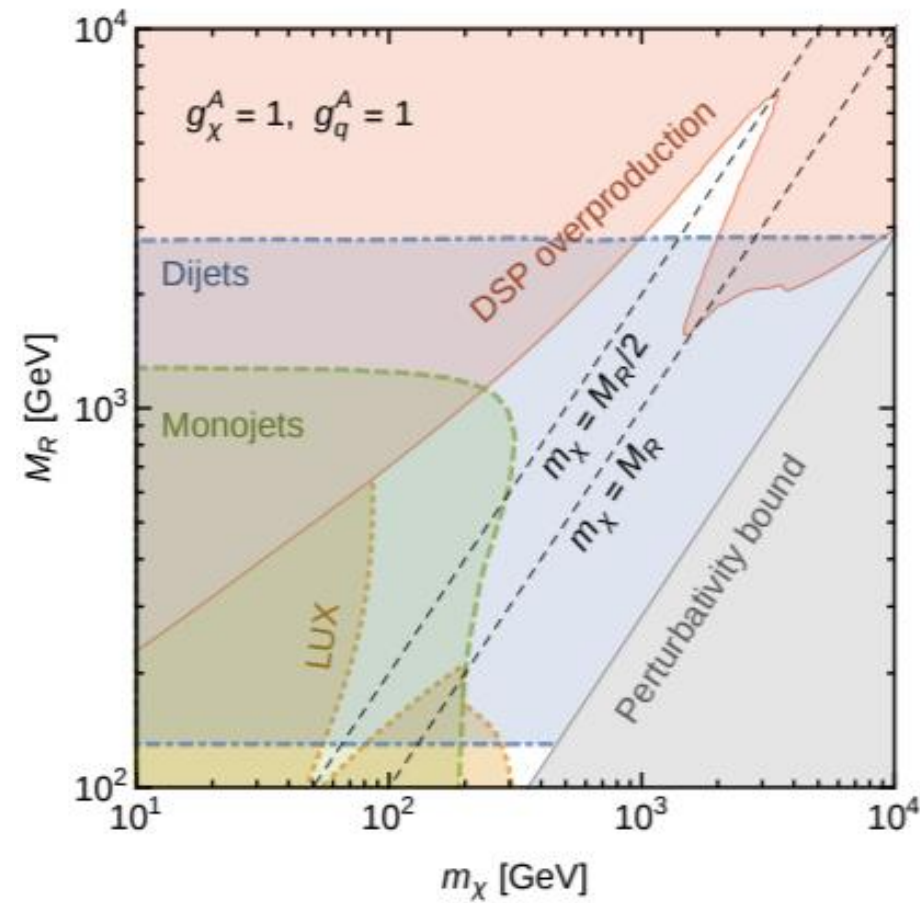
Dark Matter Limits



Dark Matter Limits with TLA



Dark Matter Limits



Results 2018

