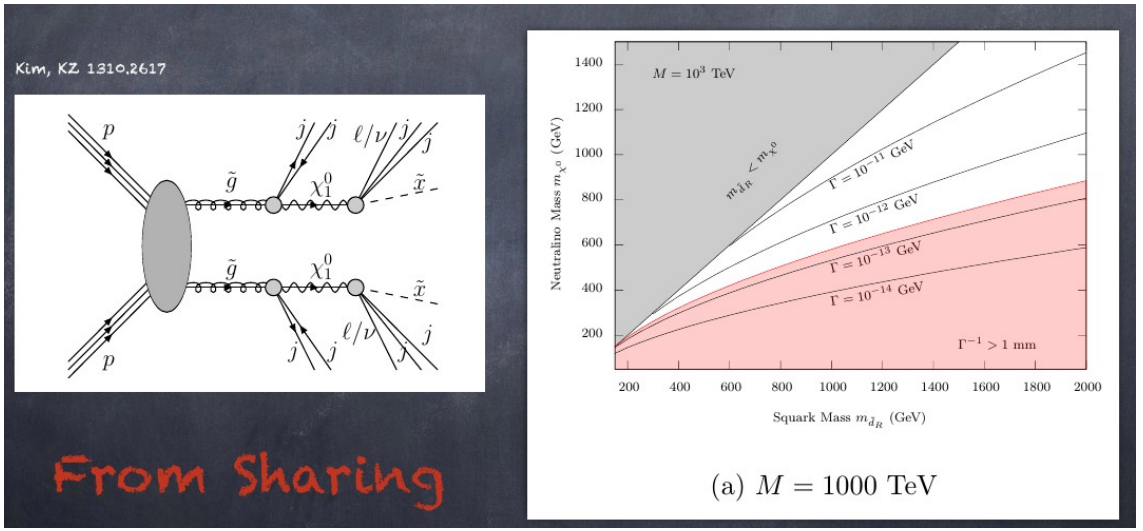
DM ↔ LLP

- strong connection between long-lived and dark-matter signatures
  - many models, many signatures
    - now also tackle with simplified models
    - we heard a lot about low-mass signatures → lumi is key
  - this is a challenging experimental playground
    - very coupled to detector characteristics
    - dependent on specific simulations, reconstructions, etc.
    - case by case problems, coverage not bad, but a lot of uncharted territory
- LLP future at LHC is tough, but also with new opportunities
  - track trigger, precise timing, etc opens interesting prospects
  - currently LHC collaborations are studying benchmarks for upcoming yellow report and beyond
- LLP white paper in preparation; LLP workshop 16-18 May @ CERN

Search coverage

- example of HS/Asym DM: several of the LHC searches are sensitive, but not necessarily optimized
  - eg. multijet hadronic SUSY search not optimized for displaced vertices



- approaches
  - map such cases to LL simplified models?
  - prioritize what we are missing out on, systematize analysis extensions
- needs theory ↔ experimental interplay
  - also links to recasting discussion