

Why support theory

- This is a point of view of an experimentalist
 - of searches / exotica persuasion (working vacation to help discover the higgs notwithstanding)
 - (dark sectors, hidden valleys, quirks, stealth SUSY, extra dimensions, “regular” SUSY...)
- Working closely with theorists changes the way an experimentalist thinks
 - not all the places where we look for signal get published – there’s a lot of overhead, especially if the motivation seems crazy
 - But it’s important that people look in unlikely places
- Having theory postdocs across the corridor from your office can make all the difference in the world

Why support theory

- LHC has been a tremendous investment and is an awesome tool for investigating EWK scale
 - Now that we have discovered a fundamental scalar field the necessity for the full exploration of it and explanation of the low mass of the Higgs is paramount
- The “convenient” SUSY that solves fine-tuning, DM, and grand unification did not show up yet
 - A lot of NP that solves naturalness problem looks very different
- It takes a lot of resources and grunt work to understand where the blind spots in searches are
 - And if the NP events make it on tape at all!
 - LHC rejects most of the collisions – if the events are not triggered, they are gone
 - Development of dedicated triggers has long lead time
- There’s been a lot of progress in making the theory-experiment ties closer since Run I of the Tevatron, but more effort is needed here
 - and reducing the number of students / postdocs is moving in the wrong direction