

Introduction to the Theory Session

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w. Benjamin Fuks

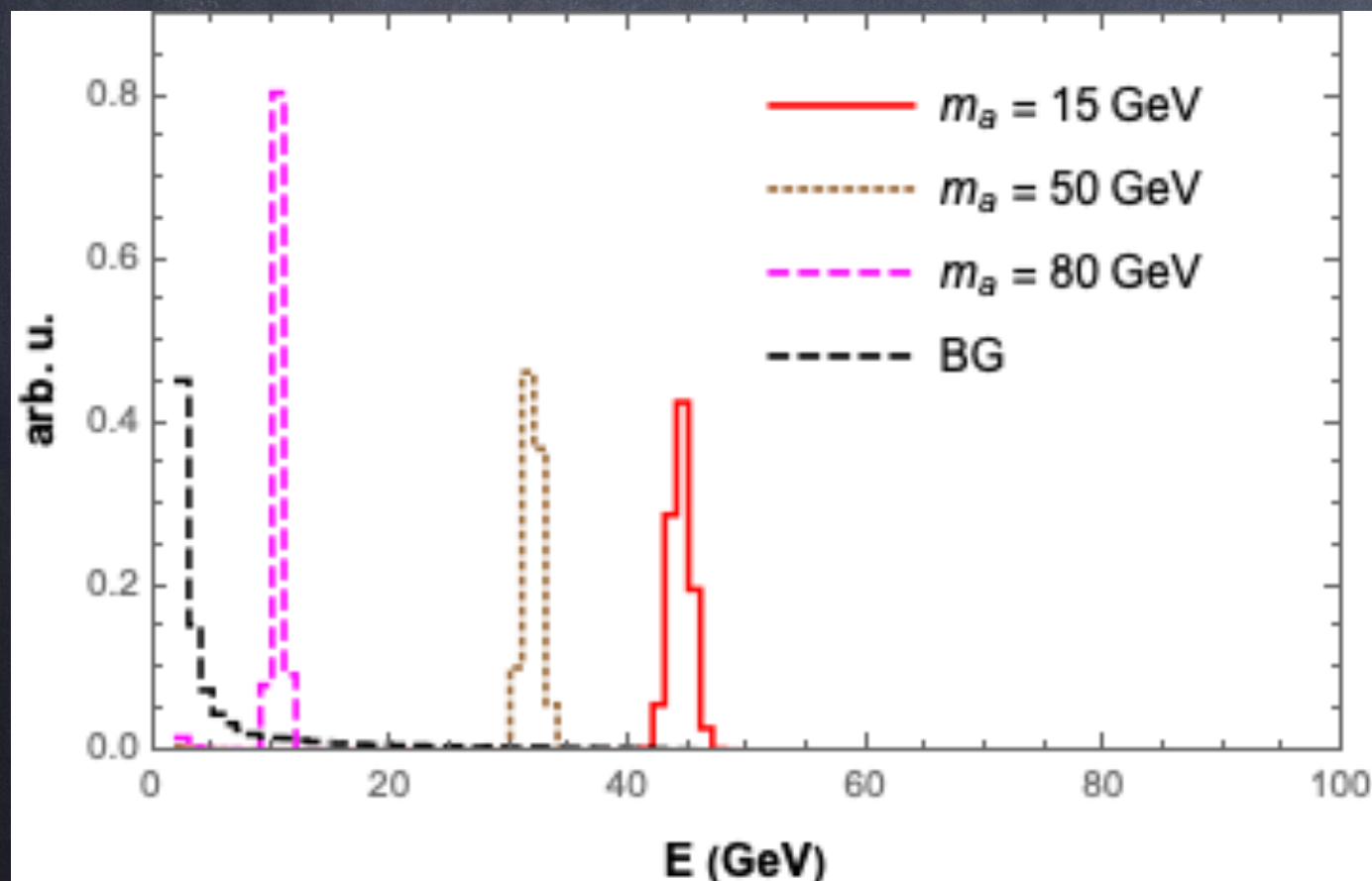
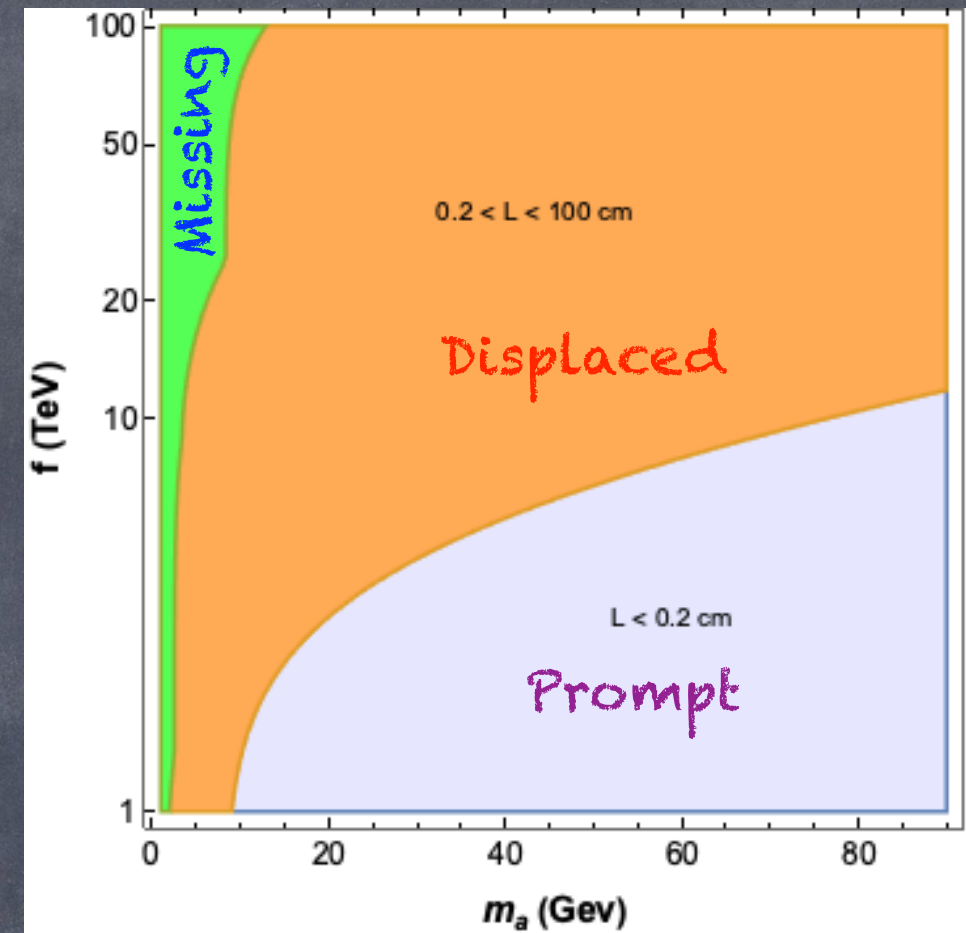
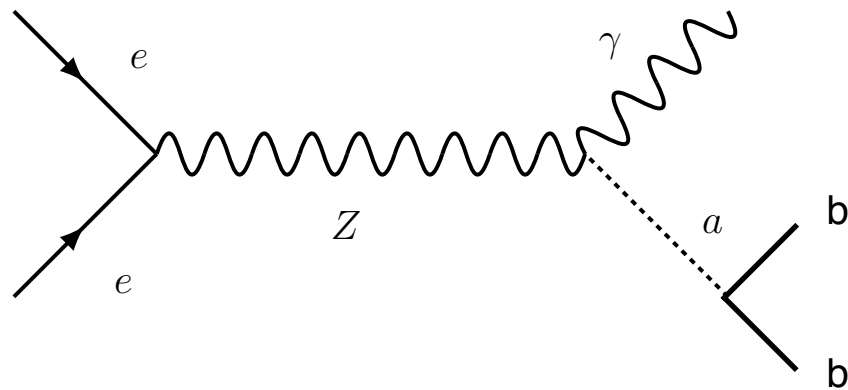
- The FCC-ee is an opportunity and a challenge for the experimental community...
- but also for the theory community.
- Many physics opportunities and complementarity with the LHC results.

See C.Grojean's talk at 2nd FCC-France Workshop

- The French community is fully engaged, international collaborations are (as usual) crucial.

Photo-phobic Light ALP @ TeraZ

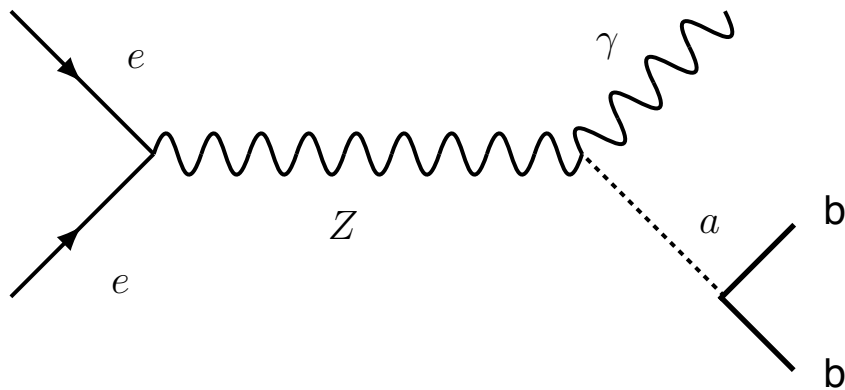
G.Cacciapaglia, A.Deandrea, A.Iyer, K.Sridhar, 2104.11064



- One isolated photon
- At least one b-tagged jet

Discriminating variable:
photon energy

Photo-phobic Light ALP @ TeraZ

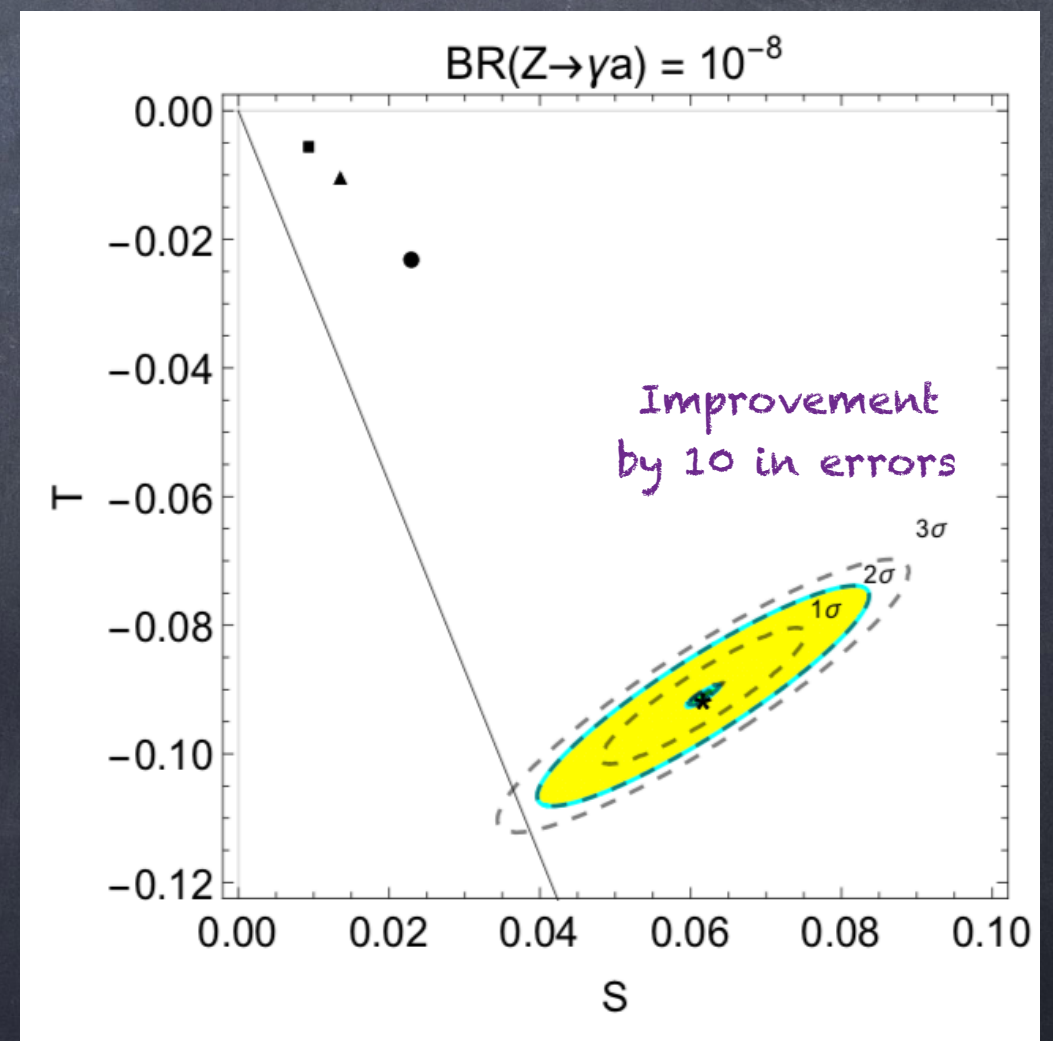


- The EWPTs at FCC-ee can discriminate between composite of elementary origin.

- Points: composite scenarios
- Line: elementary case

Results from the internship of
Andrés Pinto (financed by FCC-France)

Publication in preparation



Theory @ FCC(ee) and (hh)

Convener: Giacomo Cacciapaglia (IP2I Lyon)

09:00

Introduction to the theory session

Speaker: Giacomo Cacciapaglia (IP2I Lyon)

09:10

MadGraph5_aMC@NLO for ee colliders

Speaker: Olivier Mattelaer (FNRS - CP3)



21_11_30_eecolide...

09:30

Determination of Dark Matter Properties at e⁺e⁻ colliders

Speaker: Alexander Belyaev (Southampton University)

09:50

A Z-portal to the dark sector at FCC-ee

Speaker: Ennio Salvioni (CERN)

10:10

Neutrino physics in high-energy proton-proton collisions

Speaker: Richard Ruiz (Institute of Nuclear Physics (IFJ) PAN)

10:30

Testing new-physics models with global comparisons to collider measurements

Speaker: Mohammad Mahdi AlTakach

10:50

Testing charge-radius coupling of the composite Higgs boson at hadron colliders

Speaker: Antoine LESAUVAGE