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## Zooming in on compositeness at the TeraZ

*Monday 15 March 2021 22:50 (20 minutes)*

We explore composite models with different manifestations of the Global symmetry (G) and its subgroup (H) it breaks into. One feature common to all is the possibility for the presence of one (or more) CP-odd scalar singlet states (" $\eta$ ") which are Goldstones of the breaking of the global symmetry. There exist possibilities where the corresponding mass corrections for the  $\eta$  are highly suppressed thereby making it arbitrarily light and will be the focus of our analysis. In such a scenario, the couplings of the  $\eta$  to the fermions are loop induced and are driven by the anomalous WZW interactions. Depending on the mass and the pseudoscalar decay constant " $f$ ", we point out regions in the parameter space where it shows up as MET, leaving a displaced vertex or may decay promptly. Each of these regions is associated with signatures which has a low SM background which could either lead to a discovery or strong constraints on the scale " $f$ ".

### Time Zone

Europe/Africa/Middle East

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