



# HIGGS SELF-COUPPLING ANALYSIS WITH $H \rightarrow WW^*$

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# STATUS

- Start to analyze self-coupling
  - Analyze lep+6jets, dilepton+6jets, trilepton+4jets
  - Just ongoing...

- Writing slides

# PLAN FOR THE TALKS @AWLC

## ○ @simulation session

- Talk about shower profile and  $dE/dx$
- Shower profile: variables for longitudinal & transverse information
  - difference between EM shower and hadron shower
- $dE/dx$ : check the fluctuation to meet TDR goal
  - performance for Particle ID
- Application: lepton ID improvement
- **Particle ID**: I don't know how much I can talk
  - at least, I'll talk very simple particle ID performance
  - no time to construct the strategy well...

# PLAN FOR THE TALKS @AWLC

## ○ @Higgs/EWSB session

- Self-coupling with  $H \rightarrow WW$ 
  - Include the lepton ID using shower profile &  $dE/dx$
  - Include the Bayesian approach jet pairing (only  $H \rightarrow WW \rightarrow jjjj$  case)
  - Re-train the discriminants
  
- The results of lepton+jets, dilepton+jets, and trilepton+jets
  - Comparison them with old results