HIGGS SELF-COUPLING ANALYSIS WITH H→WW*

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# STUDYING JET PROPERTIES

- dE/dx – pending
- Shower profile – going on
  - Adjust the fit function to the shower shape →extract variables
  - Compare the variables between Isolated leptons and soft&fake leptons

  - Fit function to shower shape:
    - $f(xl, xt) = \dfrac{a(xl-xl_0)^{b-1}\exp(-c(xl-xl_0))\exp(-d \cdot xt)}{\Gamma(a)}$
      - Shower max: (b-1)/c
      - Expected shower max when electron: $1.0(\ln\dfrac{Emax}{Ec} - 0.5)$
      - Absorption length: 1/d

SOME VARIABLES

○ Electron type
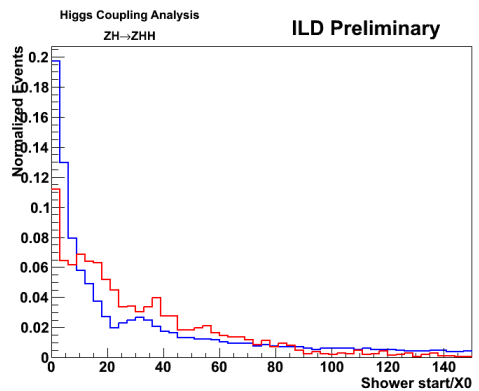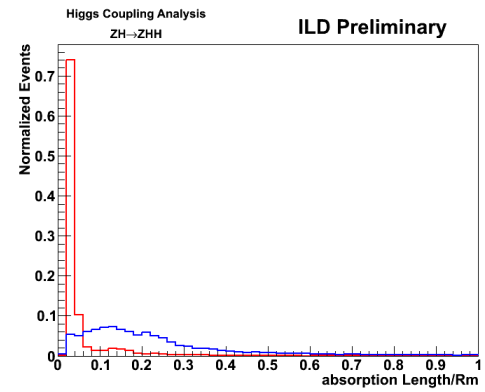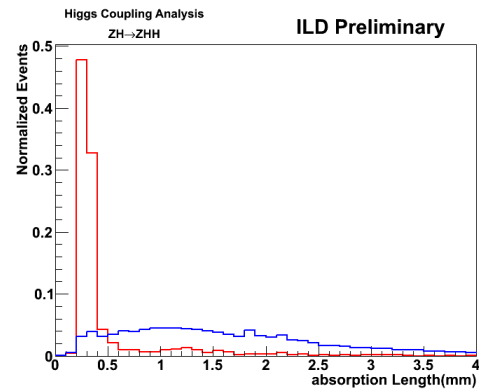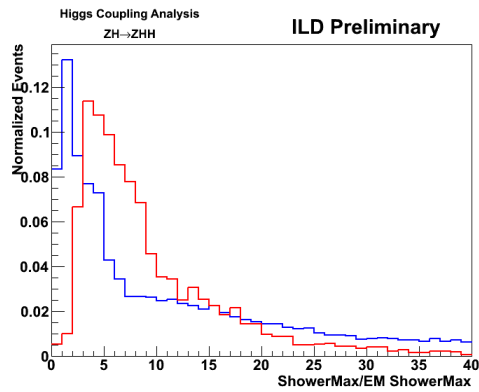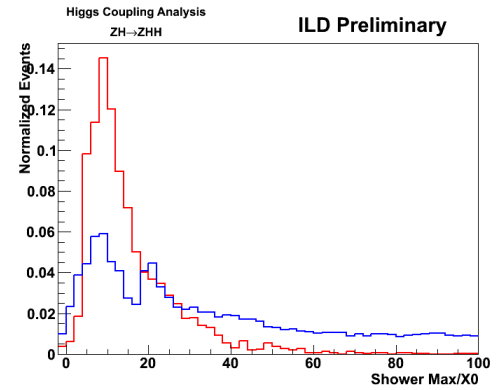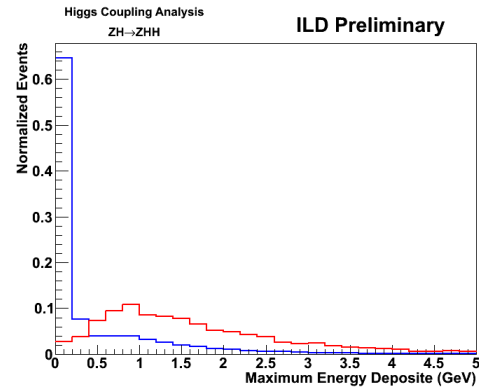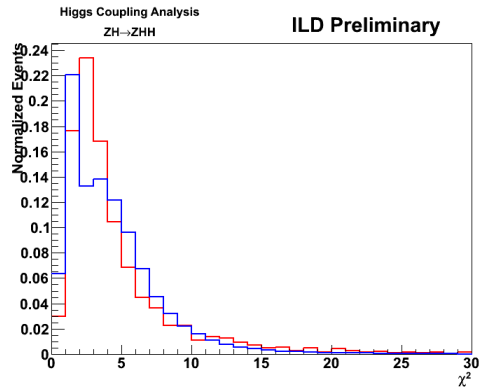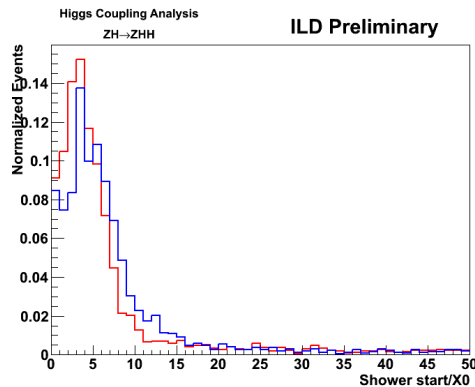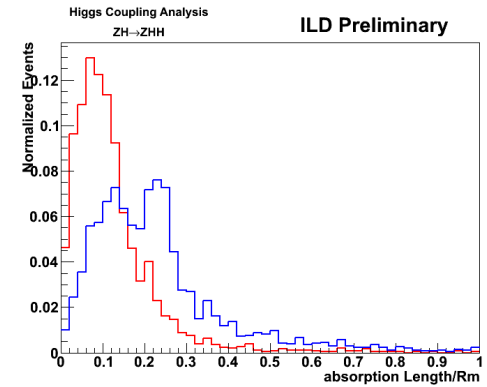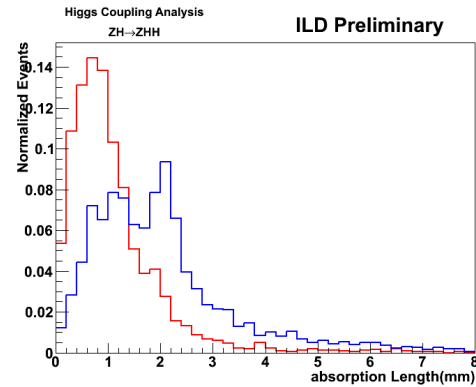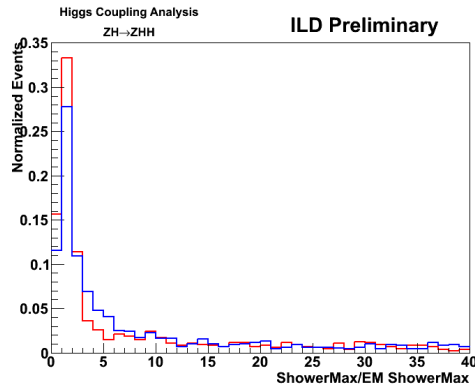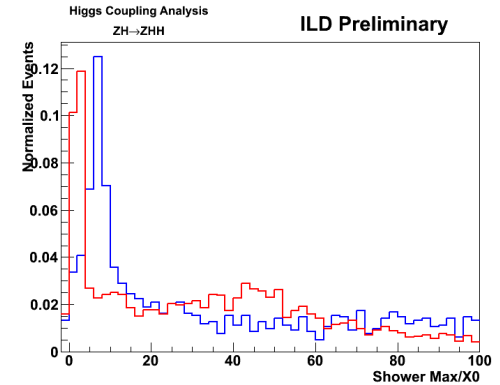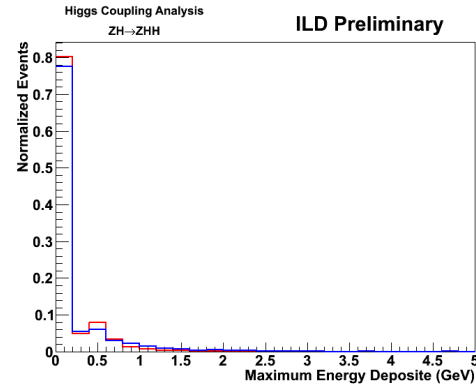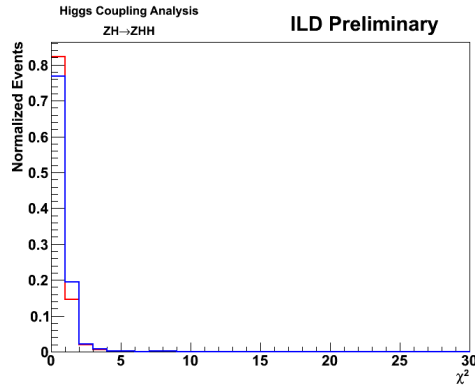

Isolated lepton
Soft & fake lepton

SOME VARIABLES

Muon type (fit results)

Absorption length will be good(as expected)

Isolated lepton
Soft & fake lepton

CONCERNS

- Rad. Length & Moliere length
  - Precise values – so far gear file parameter is used as input
  - Seems small?

- Need to the analysis of EM or HAD independently?

- Good variables for lepton ID?
  - Can try soon

- Checking shower shape cluster-by-cluster