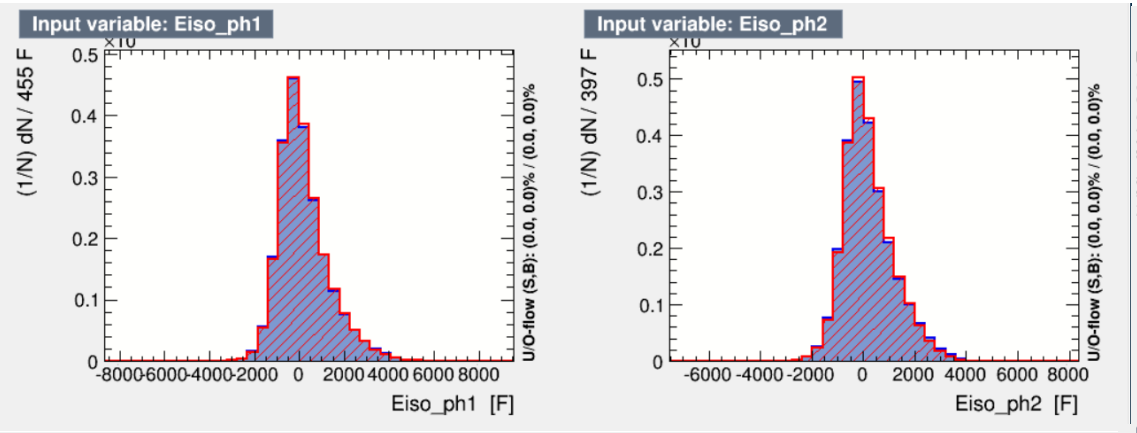
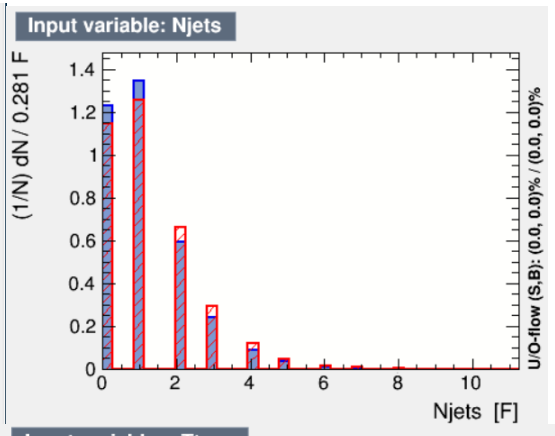
The study

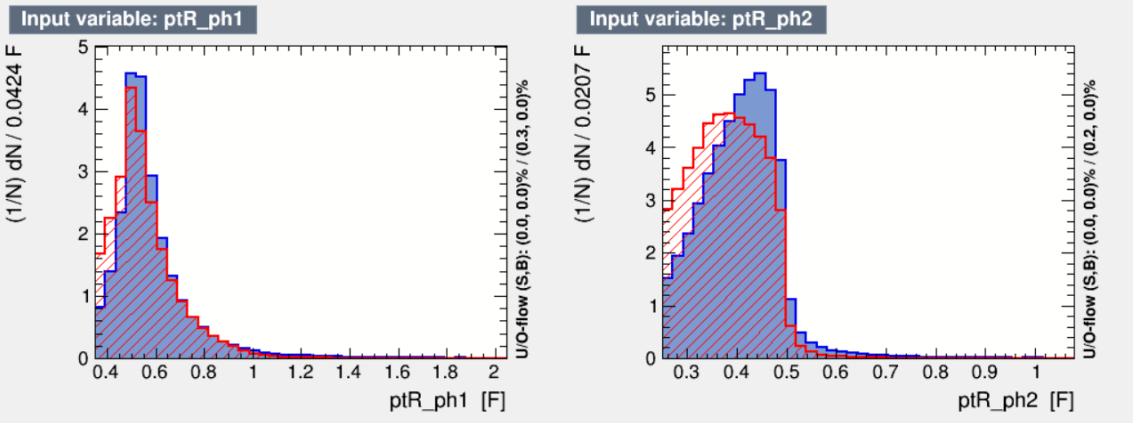
BDT study on ggH rest category

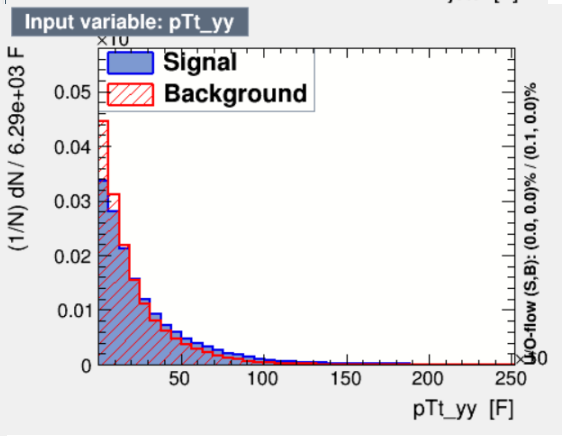
- Sample using:
  - Signal ggH_125
  - BKG: yy+yj scaled by data composition
- Pre-cuts:
  - Veto all other categories
  - Split the events with jet number

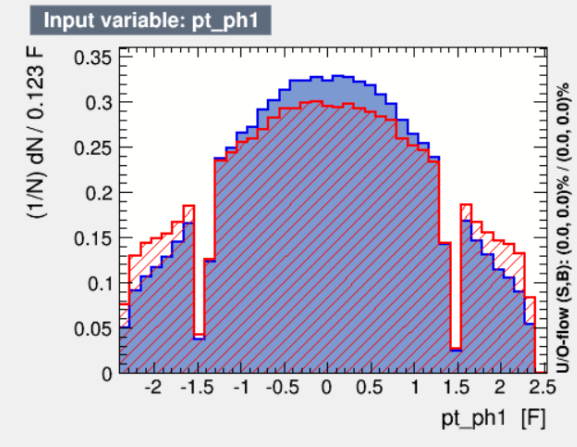
	γγ [%]	γ+jet [%]	jet+jet [%]
inclusive	78±3	20±3	3±1
$N_{jets} = 0$	74±4	23±4	3±1
$N_{jets} = 1$	81±3	17±2	3±1
$N_{jets} = 2$	80±3	18±3	2±1
$N_{jets} \geq 3$	80±4	19±5	1±1

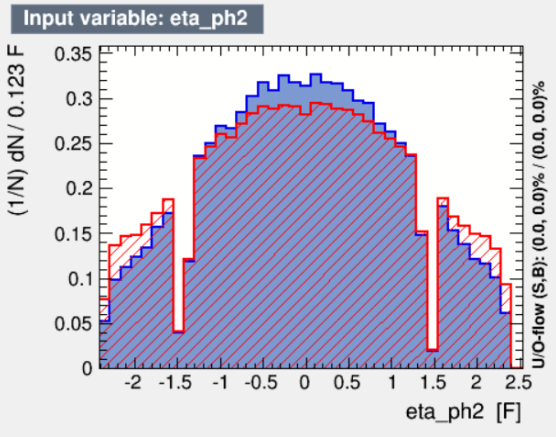






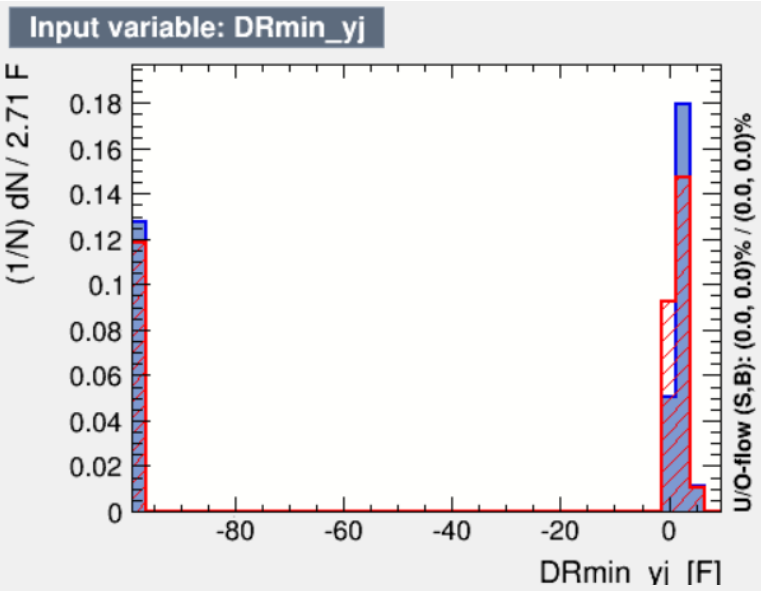


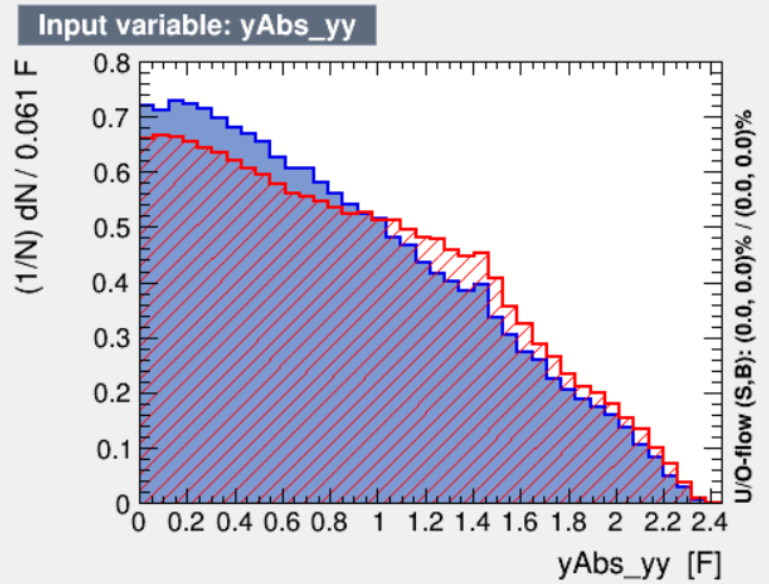


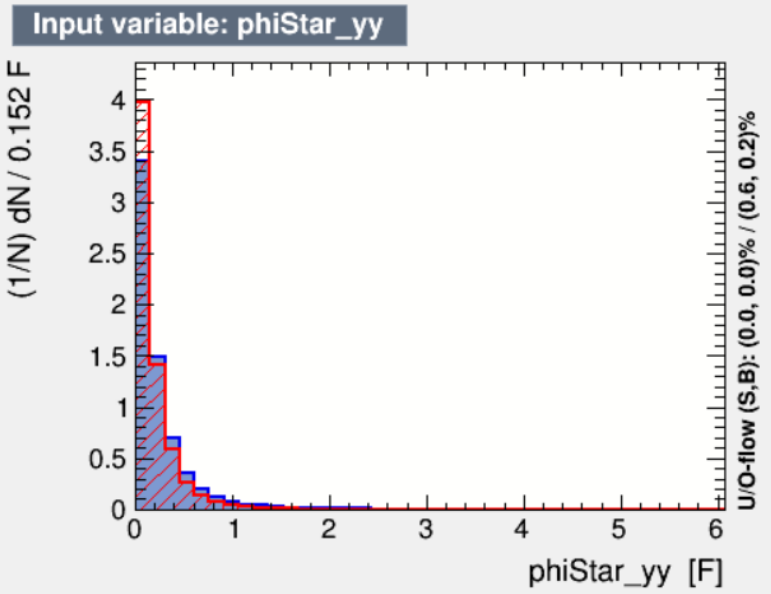


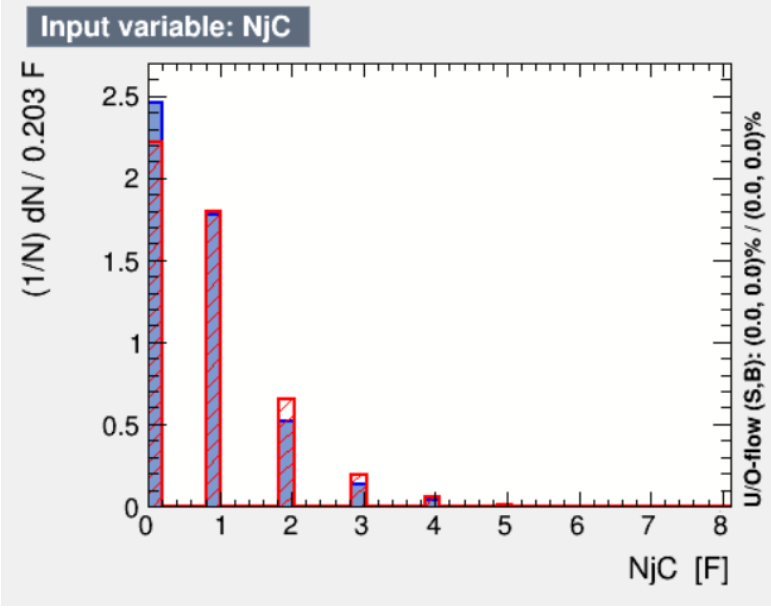
- The 8 variables used in run1

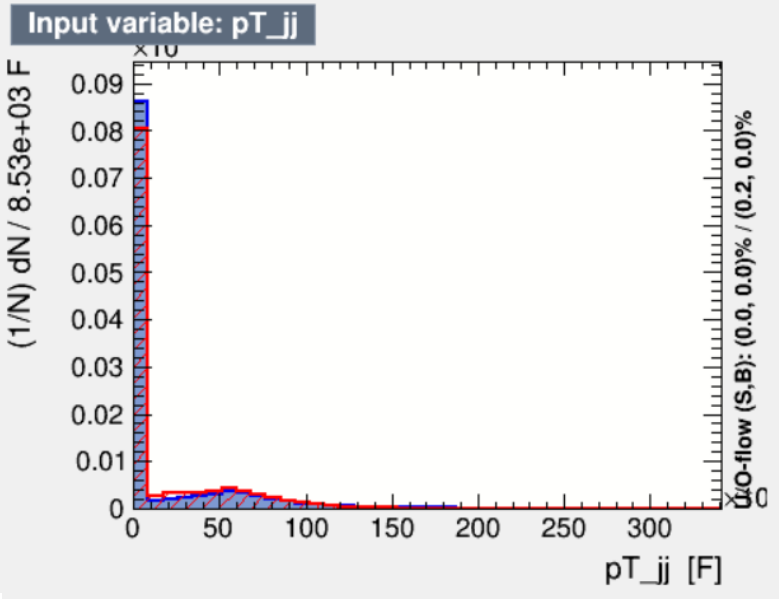
Some more interesting variables



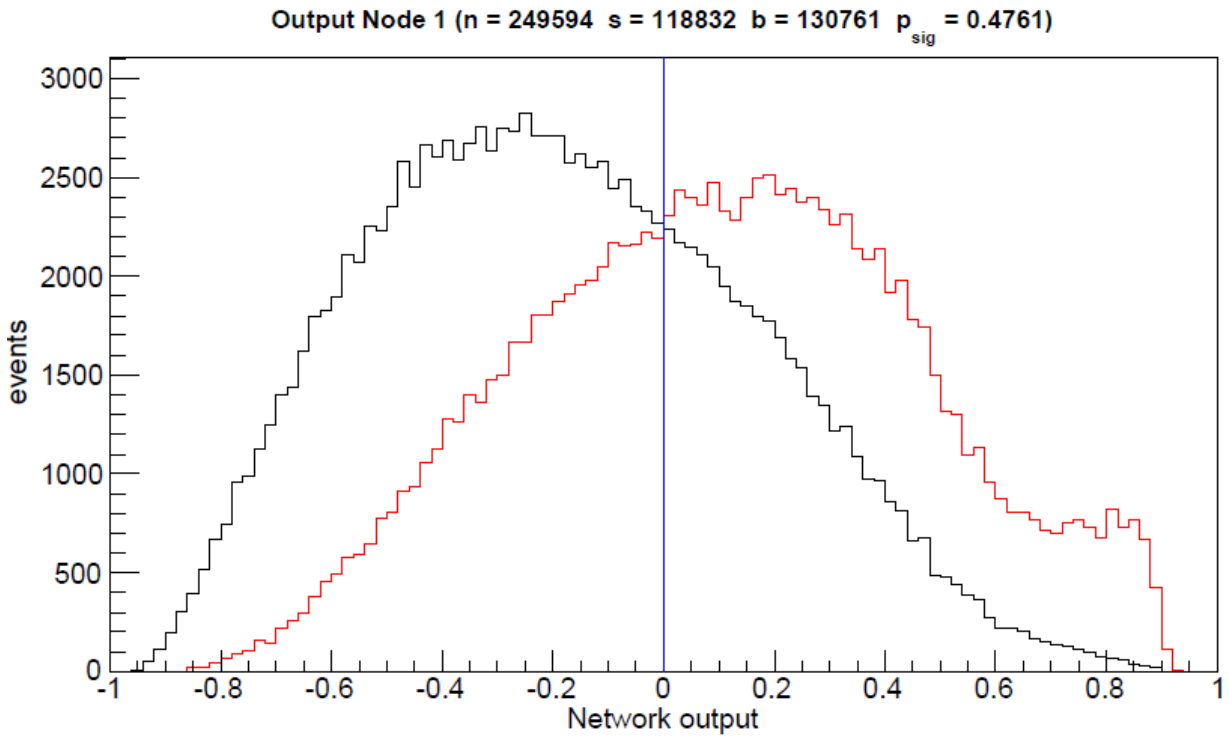


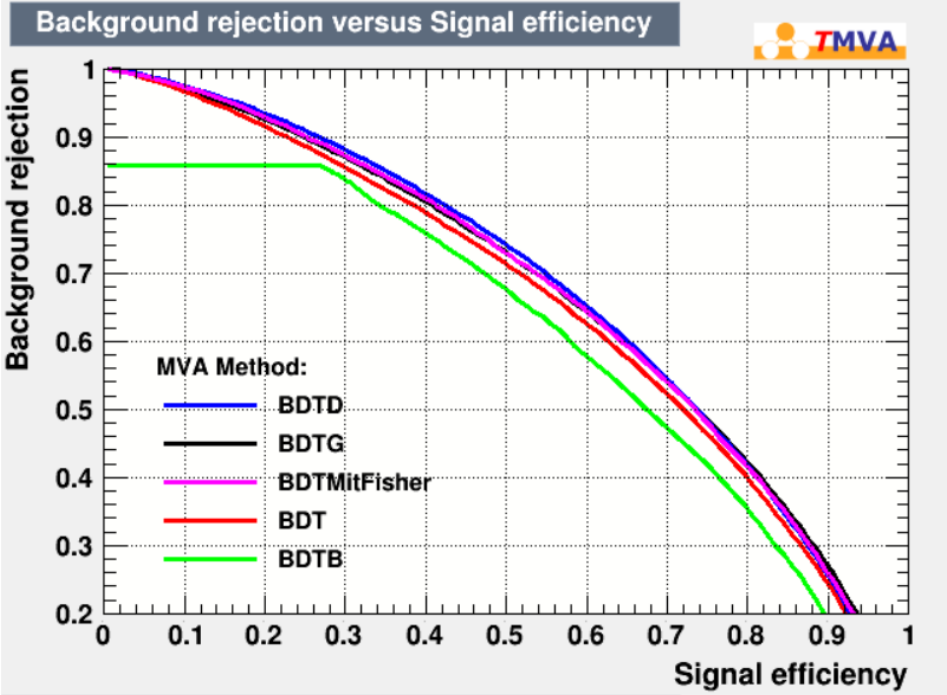


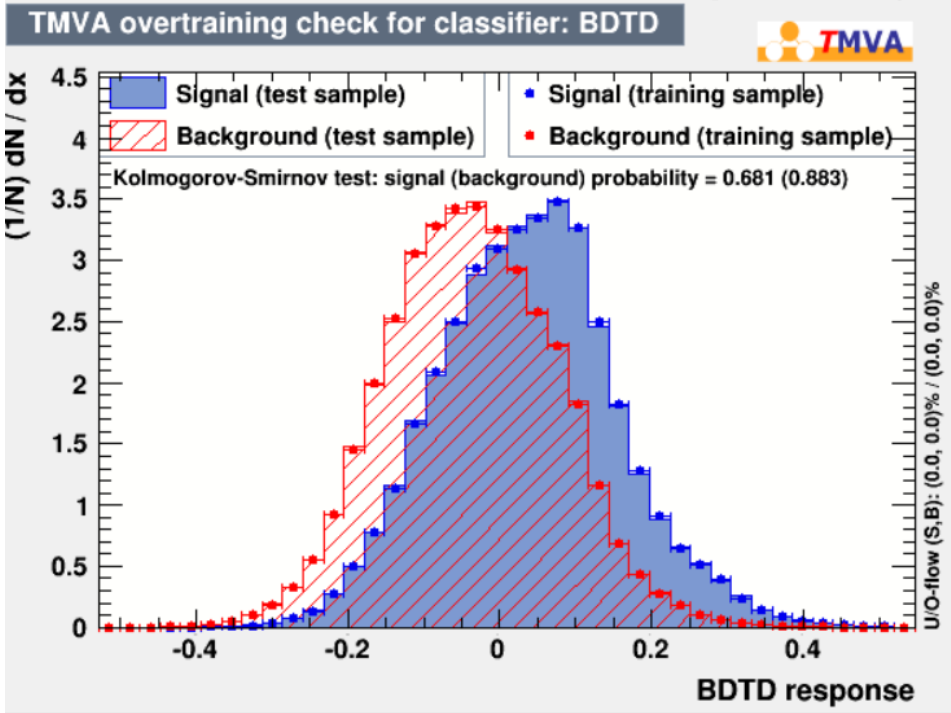




Training result(2 jets)







summary

- The improvements is quite small for splitting ggH category, both by cut based ~4% and MVA.
- The tuning of BDT and NeuroNet is ongoing.