## **CMS** Simulation Preliminary

 $\sqrt{s}$  = 14 TeV PU200 tt events p<sub>T</sub> > 0.9GeV

- pre-DNN (82% sig eff, 43.9% bkg eff)
- 1-layer DNN (AUC = 0.86)
- 1-layer DNN 82% signal eff. (24.8% bkg. eff.)
- --- 2-layer DNN (AUC = 0.89)
- 2-layer DNN 82% signal eff. (20.0% bkg. eff.)
- ---- 3-layer DNN (AUC = 0.91)
- 3-layer DNN 82% signal eff. (17.5% bkg. eff.)
- 4-layer DNN (AUC = 0.91)
  - 4-layer DNN 82% signal eff. (16.5% bkg. eff.)

Background efficiency