XGBoost output, 2HDMa a250 H1250 tb5 D10 uu dataset, uscaled validation data Background Signal  $10^{4}$ 10<sup>3</sup> Events  $10^{2}$  $10^1$ 10<sup>0</sup> 0.4 0.2 0.8 0.0 0.6 1.0 XGBoost output