XGBoost output, 2HDMa a250 H300 tb1 uu dataset, uscaled validation data Background Signal  $10^{6}$ 10<sup>5</sup>  $10^{4}$ Events 10<sup>3</sup> 10<sup>2</sup>  $10^{1}$ 10<sup>0</sup> 0.4 0.2

XGBoost output

0.6

8.0

1.0

0.0