XGBoost output, 2HDMa a200 H300 tb1 ee dataset, uscaled validation data Background Signal  $10^{6}$ 10<sup>5</sup>  $10^{4}$ Events 10<sup>3</sup> 10<sup>2</sup> 10<sup>1</sup>  $10^{0}$ 0.2 0.0 0.4 0.6 8.0 1.0

XGBoost output