XGBoost output, 2HDMa a500 H800 tb1 ee dataset, uscaled validation data Background Signal  $10^{6}$ 10<sup>5</sup>  $10^{4}$ Events 10<sup>3</sup>  $10^{2}$  $10^{1}$  $10^{0}$ 0.2 0.4 0.0 0.6 8.0 1.0 XGBoost output