Cut efficiencies and optimal cut value Signal purity Signal efficiency Signal efficiency*purity Background efficiency $S/\#sqrt\{S+B\}$ Efficiency (Purity) 8.0 0.6 0.4 0.2 For 33 signal and 20484 background events the maximum S/\subseteq S+B is 2.4258 when cutting at 0.1242 0 0.2 -0.5-0.4-0.3 -0.2-0.10.1 -0.6 0 Cut value applied on BDT output