Cut efficiencies and optimal cut value Signal purity Signal efficiency Signal efficiency*purity **Background efficiency** S/\S+B 1.1 Efficiency (Purity) 0.9 20 8.0 15 0.7 10 0.6 For 1000 signal and 1000 background 0.5 events the maximum S/VS+B is 28.74 when cutting at 0.47 0.4 0.2 0.4 0.6 0.8 Cut value applied on KNN output