## Cut efficiencies and optimal cut value Signal purity Signal efficiency Signal efficiency\*purity **Background efficiency** S/√S+B 1 8.0 0.6 8 0.4 0.2 For 333 signal and 1000 background events the maximum S/VS+B is 14.1774 when cutting at 0.6207 0 0.2 0.3 0.5 0.9 0.1 0.4 0.6 0.7 8.0

Efficiency (Purity)

Cut value applied on MLPBNN output