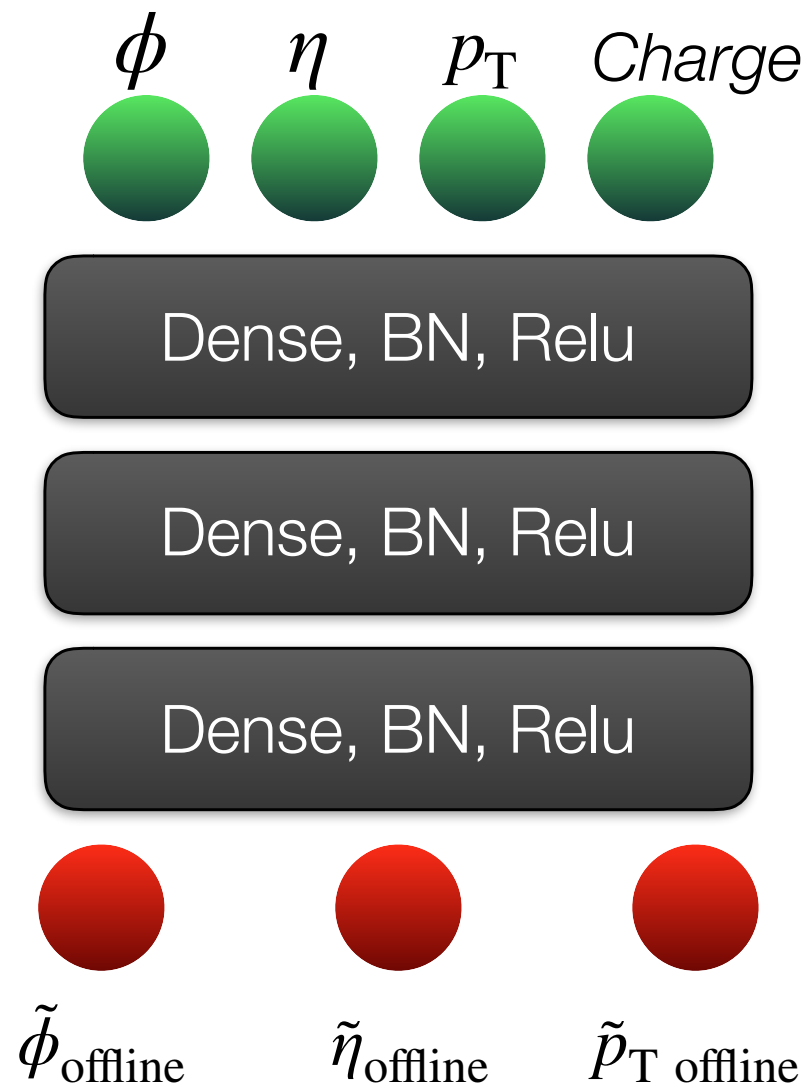
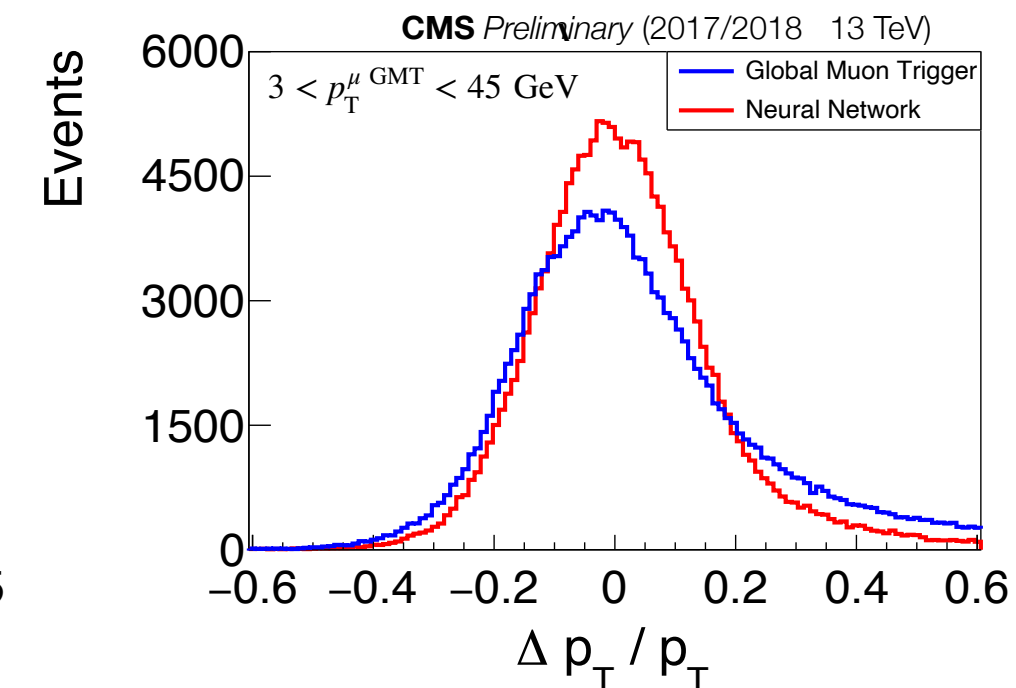
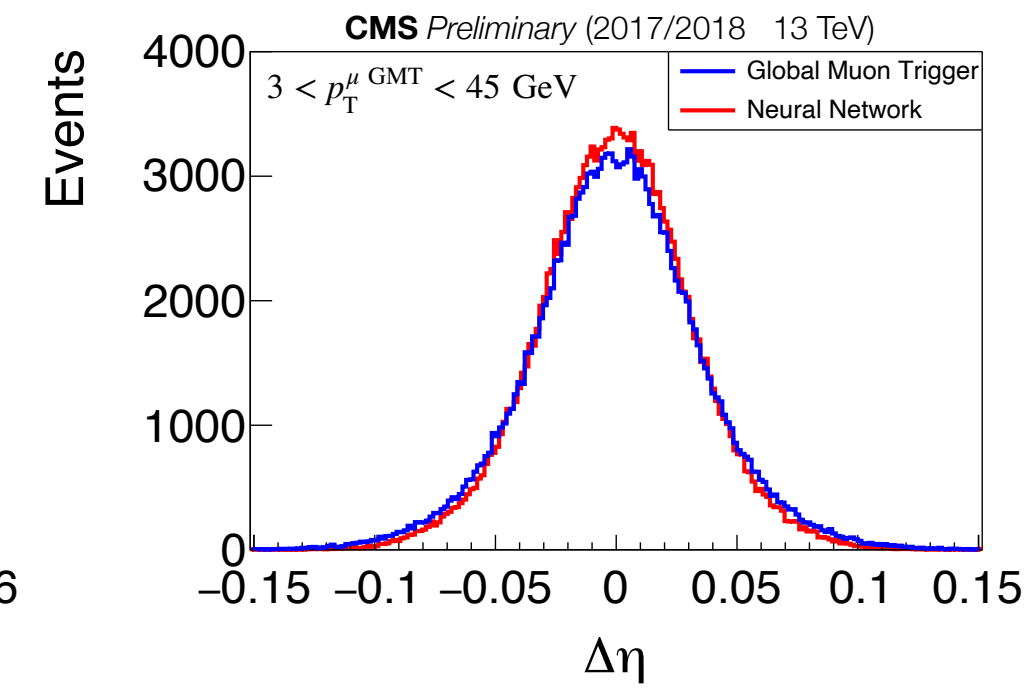
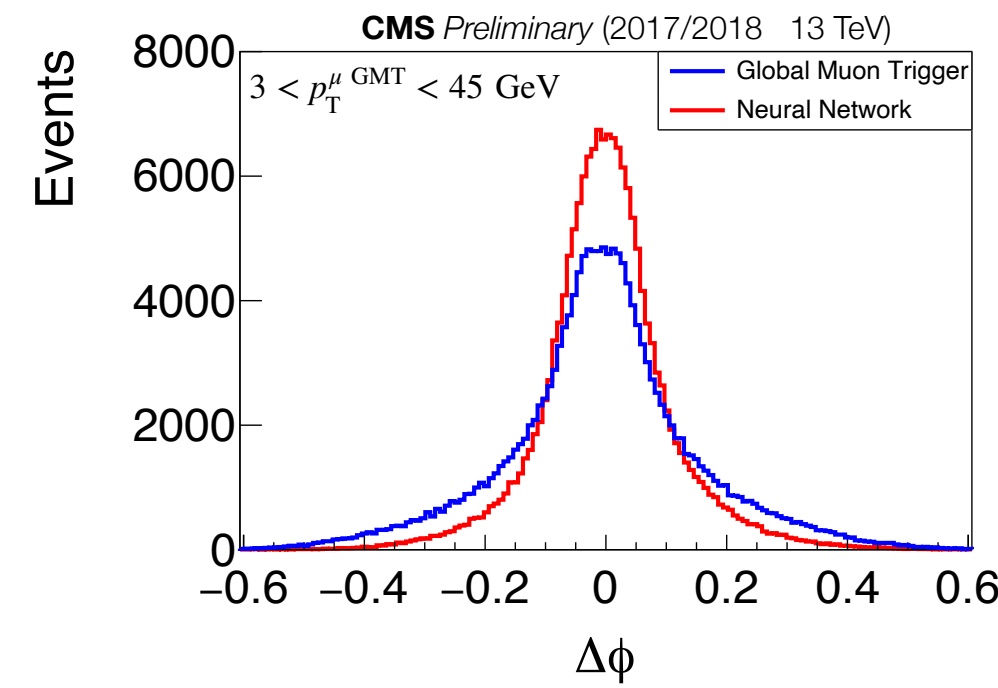
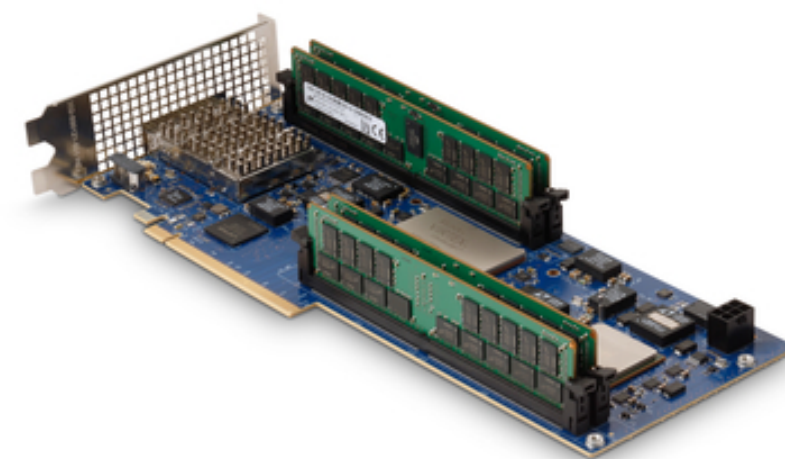
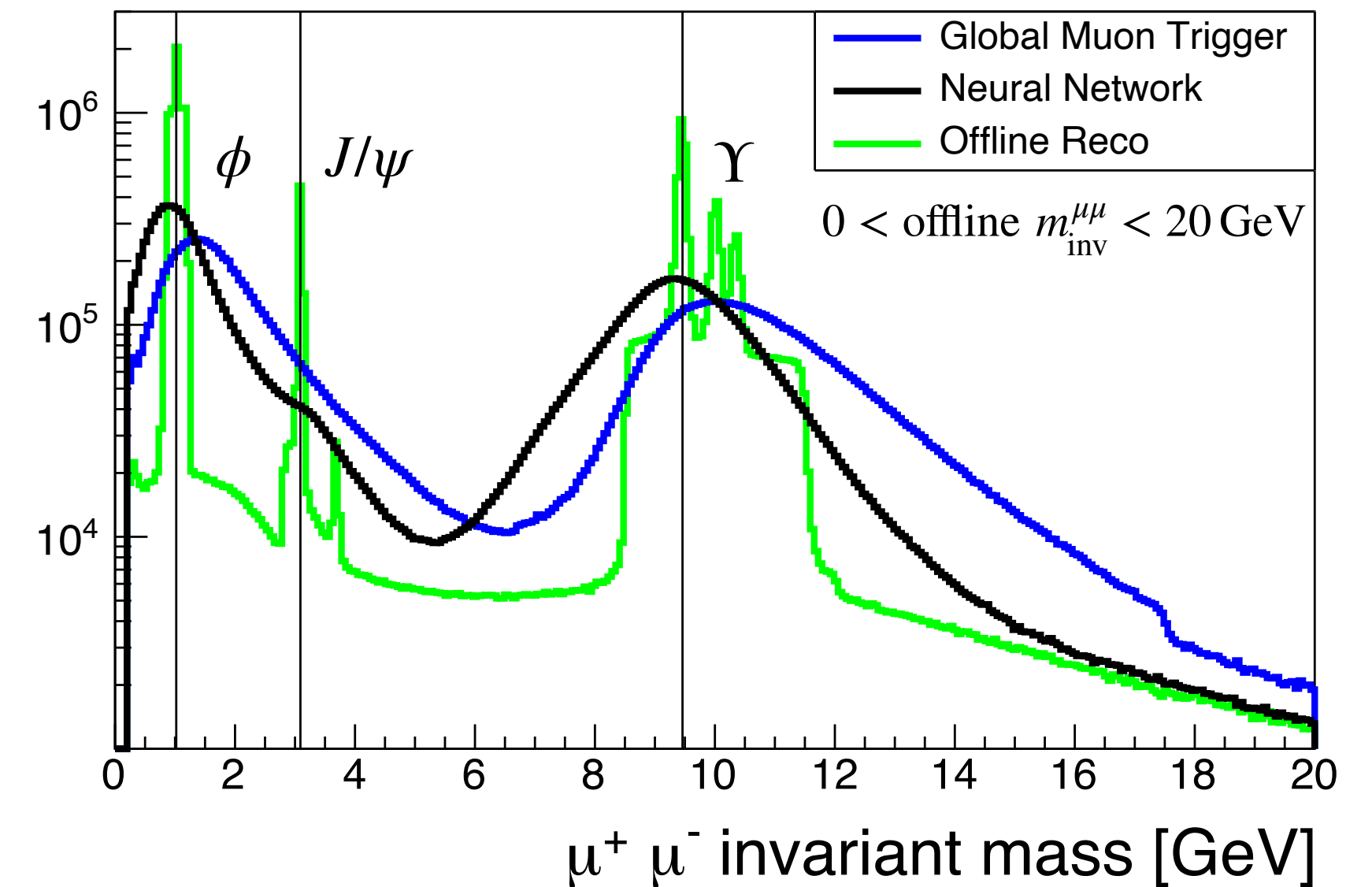


# 40 MHz Scouting with Deep Learning in CMS

- Scouting allows for analysing **partial events at much higher rate** than possible when reading out full event
- Use deep learning to correct muon parameters to be as close as possible to offline reconstructed values
- Train on ZeroBias datasets
- Evaluate on MuOnia dataset
- Run models on FPGA-based hardware



CMS Preliminary (2018 13 TeV)



	Throughput [inf/s]
AC-510, SB-852 - 1 cluster	> 1.3 M
AC-510 - 2 clusters	> 2.7 M
<b>Required</b>	<b>1 M</b>