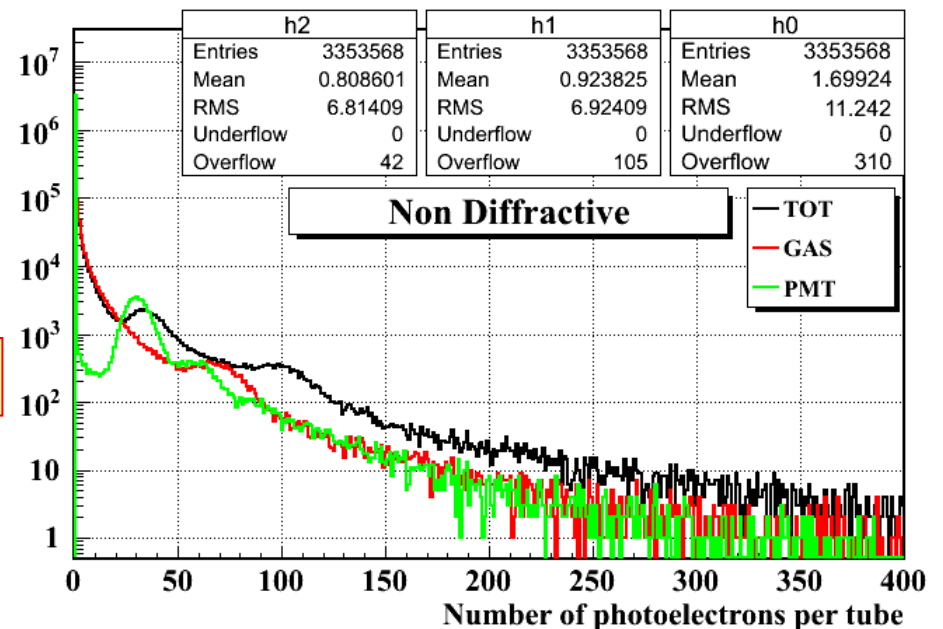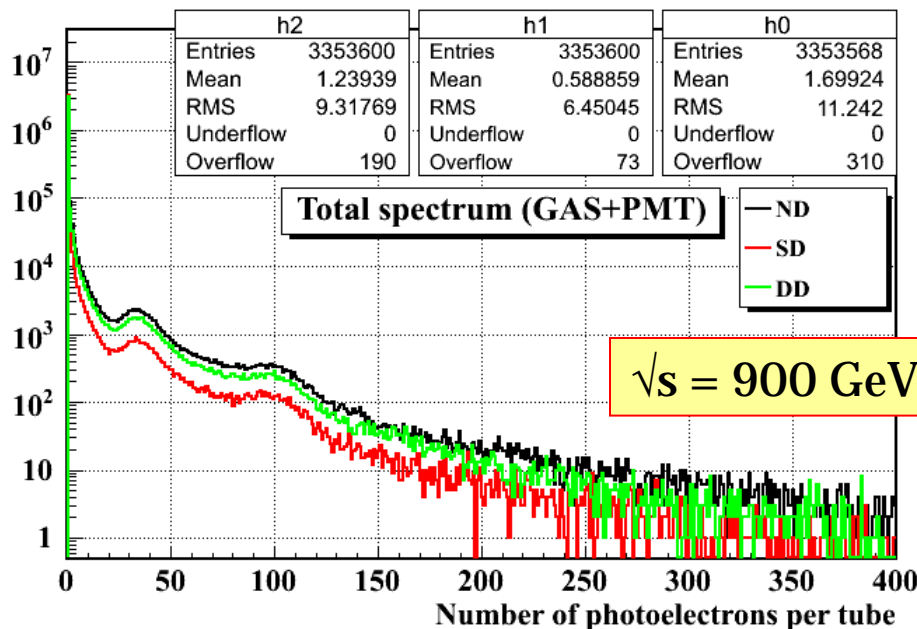# LUCID
W.Bell sample at 900 GeV

A.Sbrizzi

Photoelectron spectrum from HITS

https://twiki.cern.ch/twiki/bin/view/AtlasProtected/MbPrivate900GeV_rel15_5_1

user.williambell.mc09.095001.pythia_minbias.simul.HITS.v15.5.X.Y
user.williambell.mc09.095003.pythia_sdiff.simul.HITS.v15.5.X.Y
user.williambell.mc09.095004.pythia_ddiff.simul.HITS.v15.5.X.Y

Photoelectron peaks are at the correct position.

Trigger Efficiency

Trigger efficiency is calculated just by setting a threshold on the photoelectron spectrum.
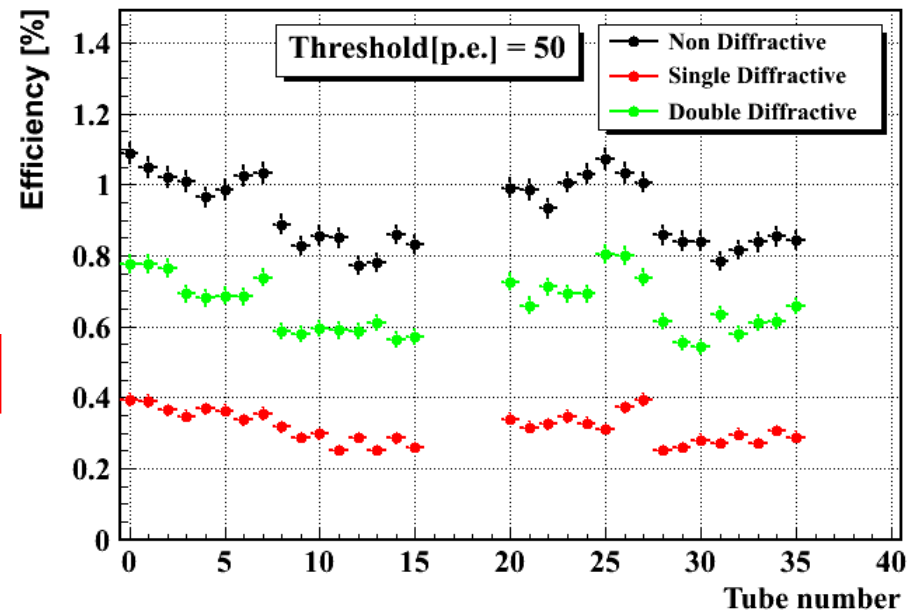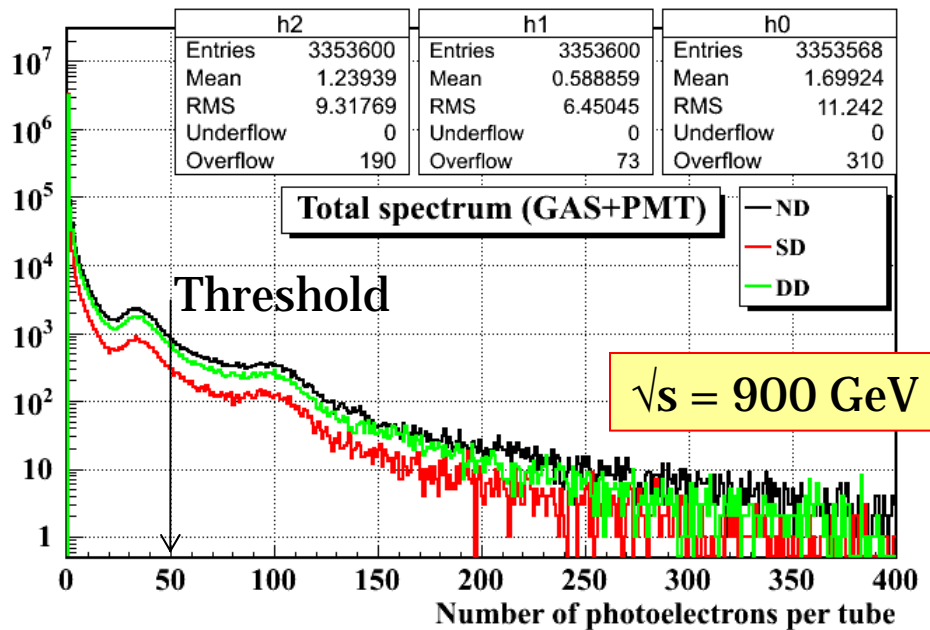
Inner tubes have a higher efficiency.
The average tube efficiency is 0.9% for ND, 0.3% for SD and 0.7% for DD.

Comparison between 0.9 and 10 TeV

Efficiencies for the 10 TeV sample provided by Jacob. Have a look at his presentation:
http://indico.cern.ch/conferenceDisplay.py?confId=67585

CoM Energy [TeV]	Process	ε^{Sing}	ε^{A}	ε^{C}	ε^{Coin}
10	ND	0.616			0.170
0.9	ND	0.240	0.129	0.128	0.017
10	SD	0.144			0.0042
0.9	SD	0.091	0.0463	0.0449	0.000172
10	DD	0.201			0.0092
0.9	DD	0.178	0.0938	0.094	0.00935

Efficiency for ND decreases of about 1 order of magnitude in coincidence mode.
For SD and DD is about the same.