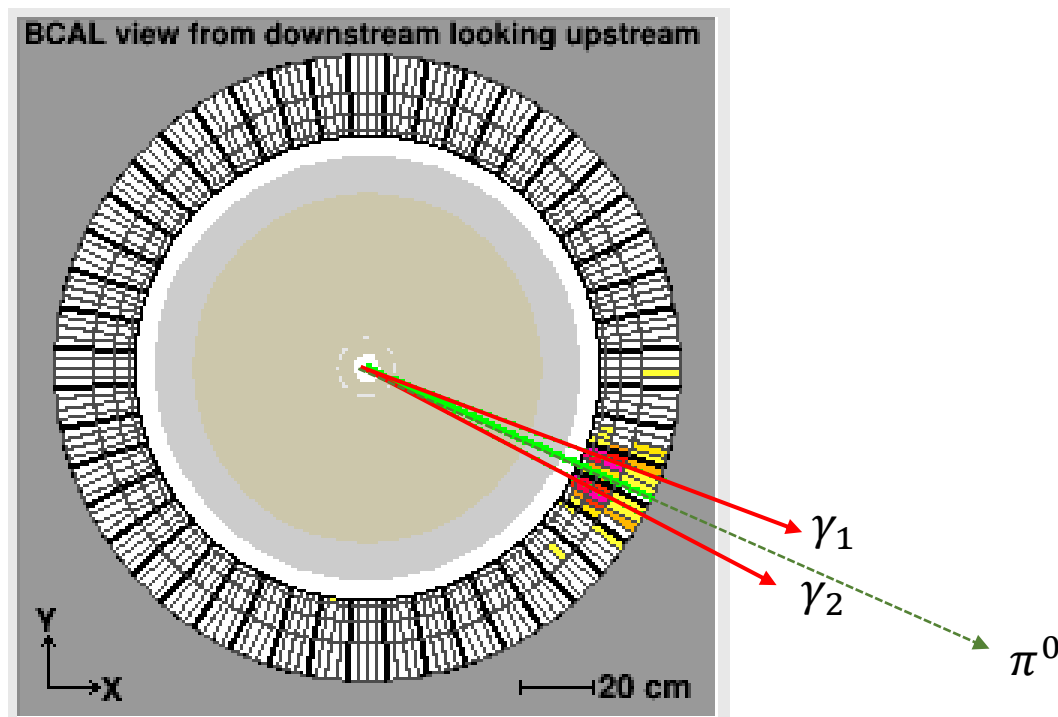


Introduction to Problem

- Sometime photons that hit BCAL lie nearly right on top of one another
 - Here: a π^0 particle decays to two photons (γ_1 and γ_2)
 - Both about at 4 O'Clock





First Approach

- Maybe the BCAL showers contain enough info to guess already?

Public Attributes

float	E
float	E_raw
float	E_preshower
float	E_L2
float	E_L3
float	E_L4
float	x
float	y
float	z
float	t
float	sigLong
float	sigTrans
float	sigTheta
float	rmsTime
int	N_cell
int	Q

} Energy by layer

} position

} How big, in a few directions (space+time)

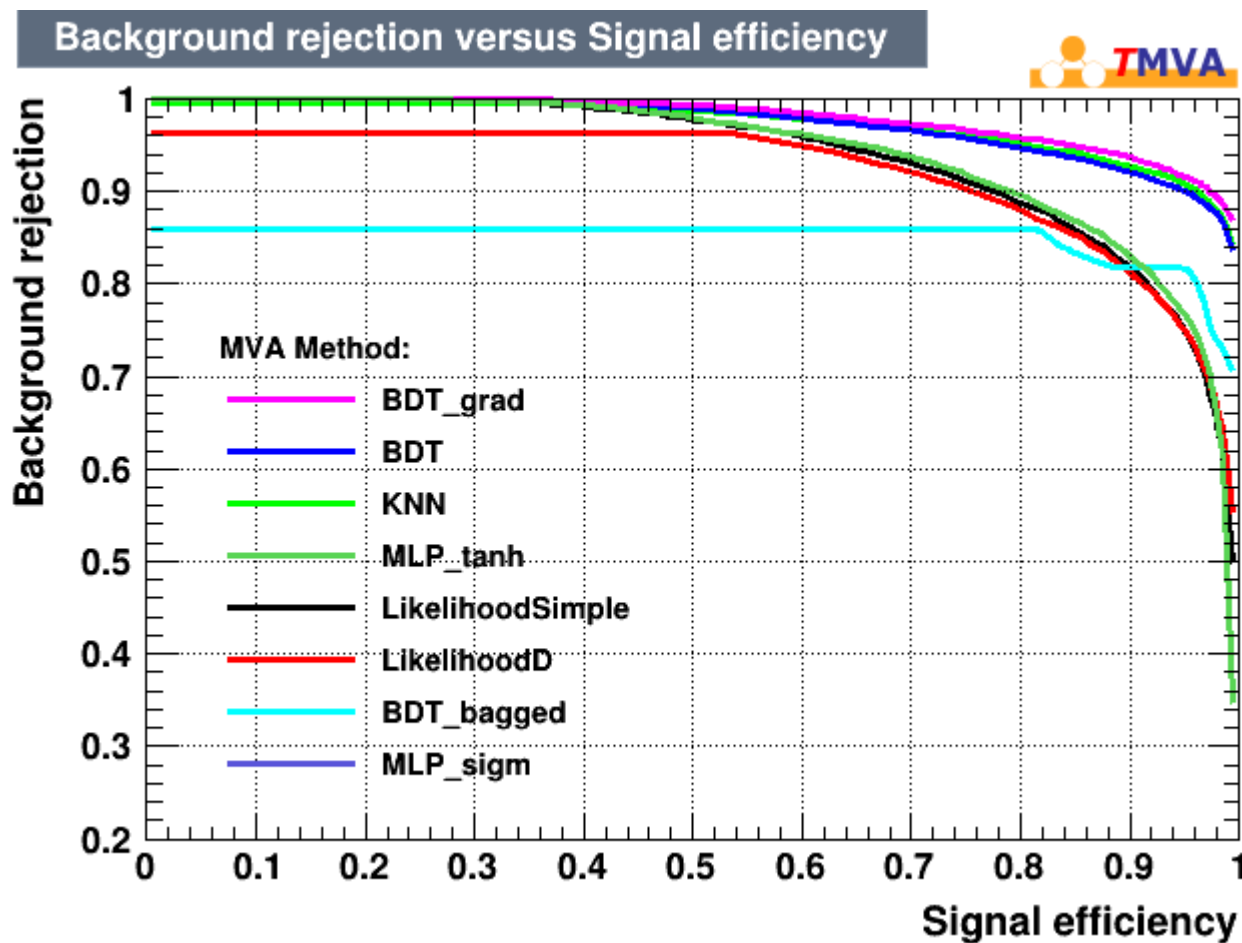


MC Sample

- π^0 gun:
 - 1-7 GeV
 - 15-35° in θ
- γ gun
 - 13-38° in θ
 - 0-8 GeV
- Require no upstream pair conversion



ROC Curve From TMVA





Next Steps

- Switch to FCAL, study:
 - $\eta \rightarrow 3\pi^0$ (first in MC)
- If results promising, worth pursuing?
- Considerations:
 - Calibration sensitivity?
 - Other topologies?
 - Trainable from data, then verify on MC?