

Updates

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for the GlueX Collaboration

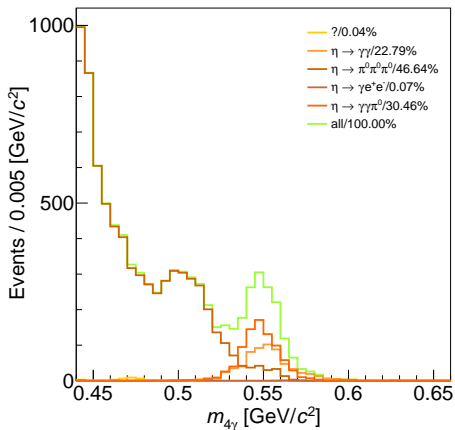
08.04.2022



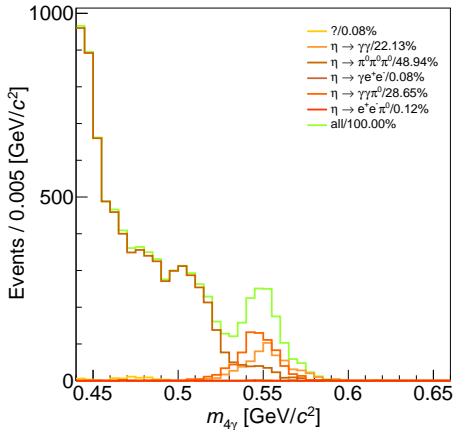
Previous v. newer Island algorithm

Same selection criteria applied in both cases

● Old version



● New version

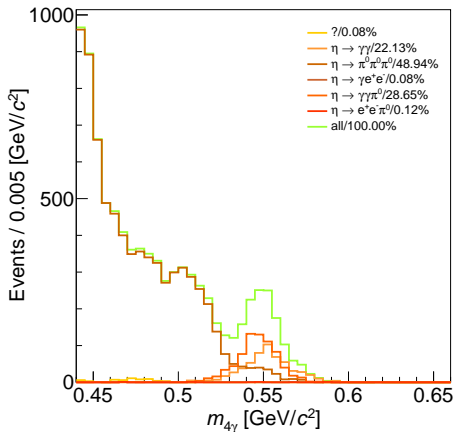


Version	$\eta \rightarrow \gamma\gamma\pi^0$	$\eta \rightarrow \gamma\gamma$	$\eta \rightarrow \pi^0\pi^0\pi^0$
Old	830	621	1271
New	717	554	1225

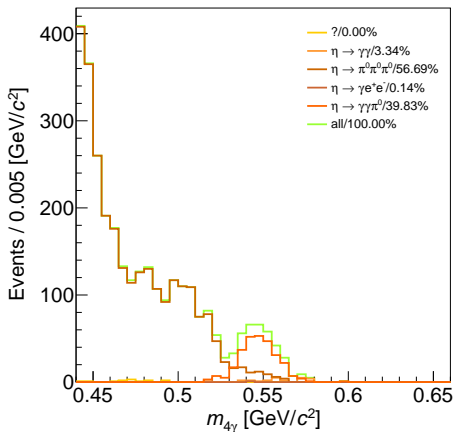
TOF veto

Applied, $|\Delta x/y| \leq 5$ cm

● Default



● TOF veto



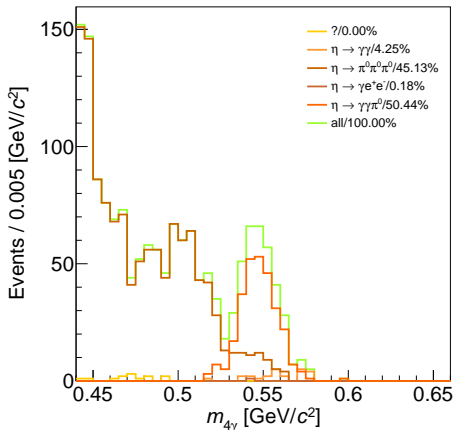
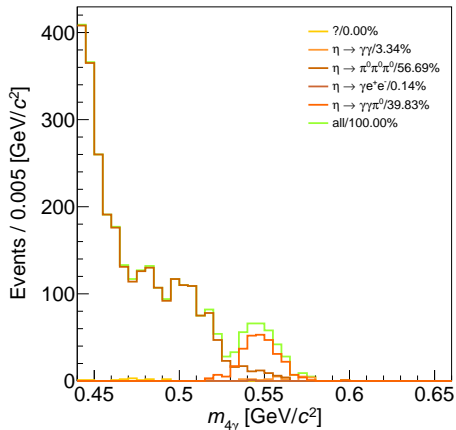
Version	$\eta \rightarrow \gamma\gamma\pi^0$	$\eta \rightarrow \gamma\gamma$	$\eta \rightarrow \pi^0\pi^0\pi^0$
Default	717	554	1225
TOF veto	286	24	407

TOF veto + BCAL veto

Applied, $|\Delta x/y| \leq 5$ cm and limit to one BCAL cluster

● TOF veto

● TOF veto + BCAL veto



Version	$\eta \rightarrow \gamma\gamma\pi^0$	$\eta \rightarrow \gamma\gamma$	$\eta \rightarrow \pi^0\pi^0\pi^0$
TOF veto	286	24	407
TOF veto + BCAL veto	285	24	255