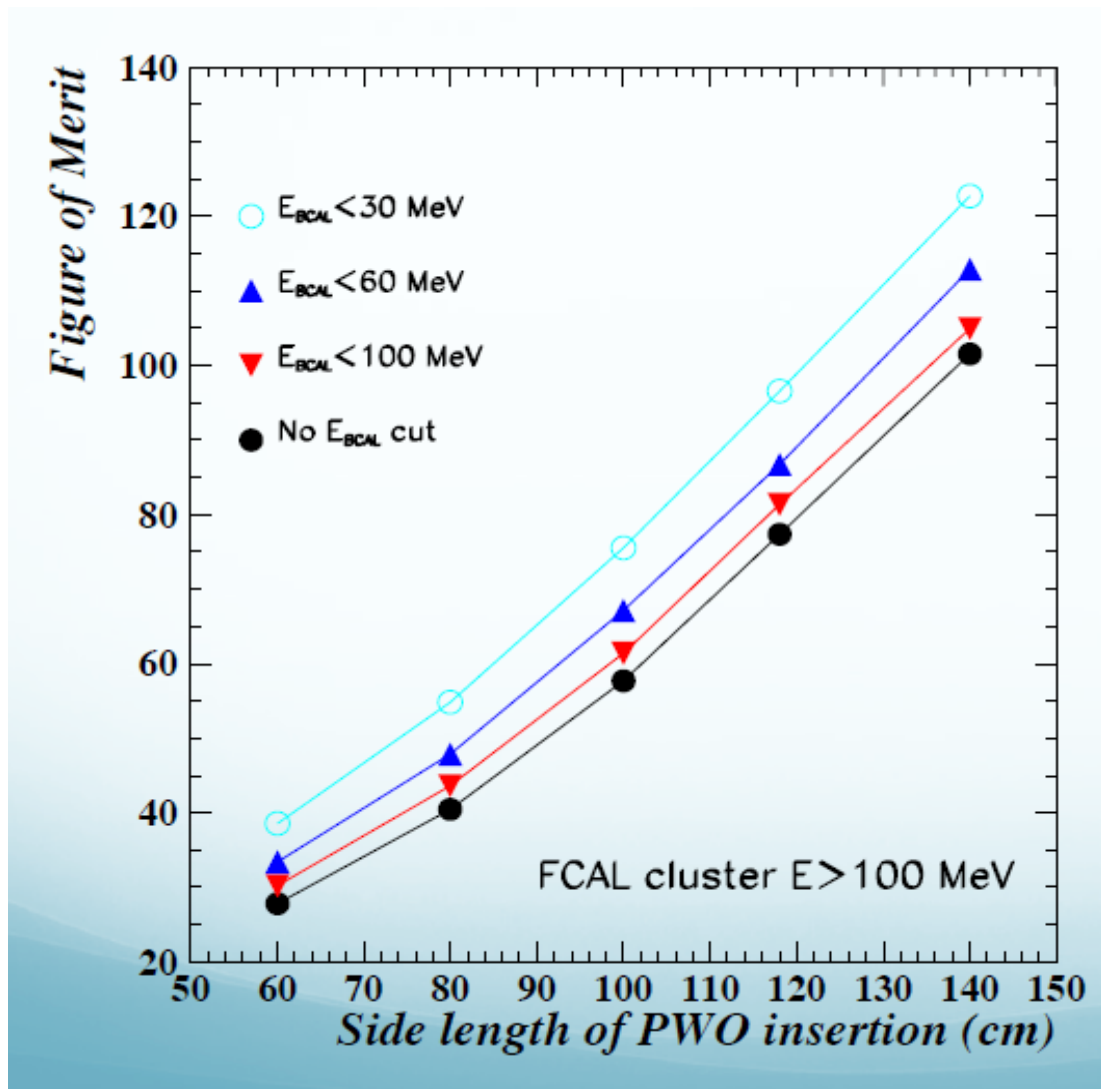


# Size of PWO Insertion in FCAL-II

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# Figure of Merit



$$FOM = \frac{N(\eta \rightarrow \pi^0 \gamma \gamma)}{\sqrt{N(\eta \rightarrow 3\pi^0)}}$$

1. BCAL Acceptance for  $\theta$ : 12-120 Deg
2. FCAL  $r=118$  cm and hole is  $12 \times 12$  cm<sup>2</sup>
3. Beam  $E$ : 8.4-11.7 GeV

# Unit Price of PWO Detector

Item	Cost per channel
PWO Crystal (2cmx2cmx18cm)	\$790
PMT	\$350
HV divider	\$50
PMT housing	\$30
Flash ADC	\$378
HV	\$300
<b>Total</b>	<b>\$1898</b>

# Cost vs. Size of PWO Insertion

Size of Insertion (cm <sup>2</sup> )	Total channels	Cost
60x60	900	\$1.71 M
80x80	1600	\$3.04 M
100x100	2500	\$4.75 M
118x118	3481	\$6.61 M