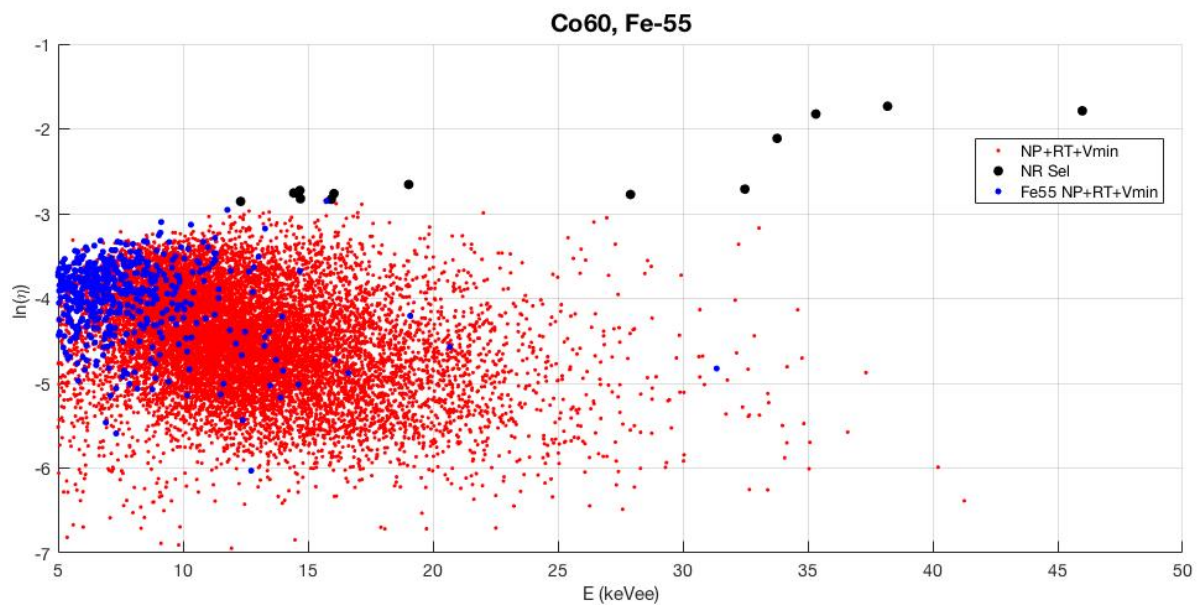


## UNM Update, 18<sup>th</sup> April 2018

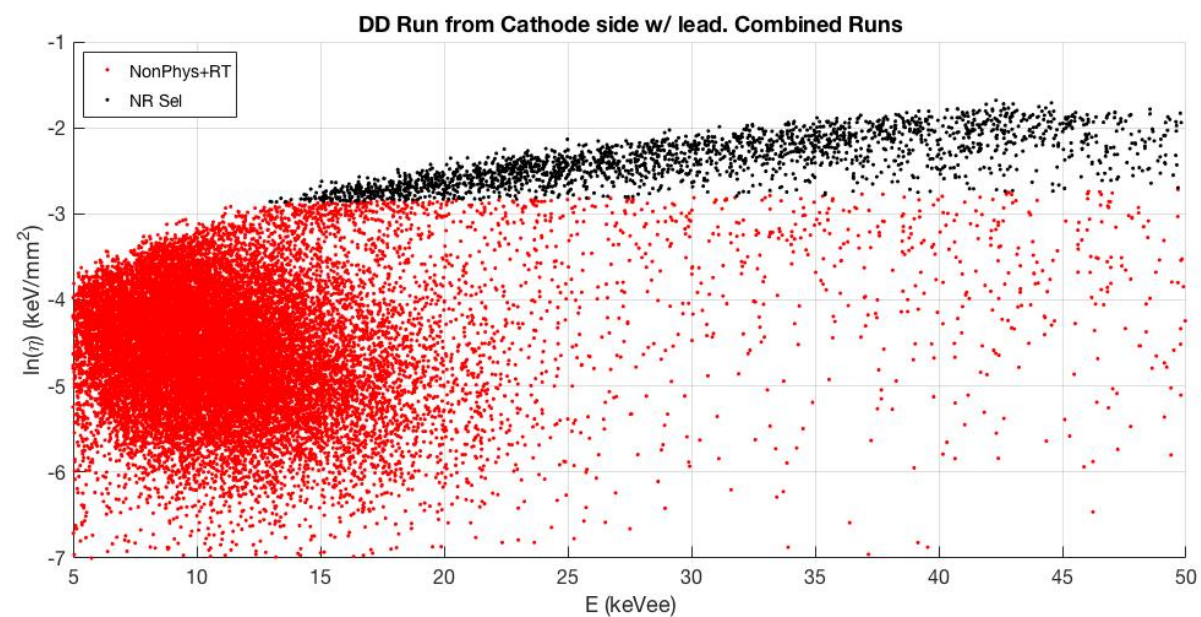
### 1) Update on Randy's CF<sub>4</sub>/SF<sub>6</sub> measurements continued from UNM\_UpdateDec6\_2017 memo:

Background discrimination with the 1D detector (60 cm acrylic vessel, with 1 THGEM):

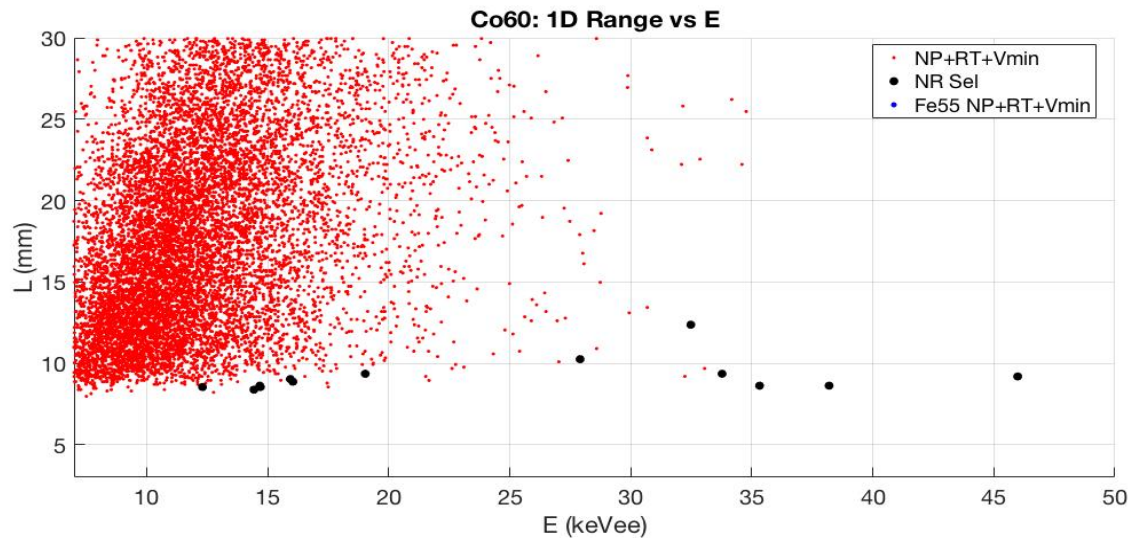
Co-60 + Fe-55 Runs:



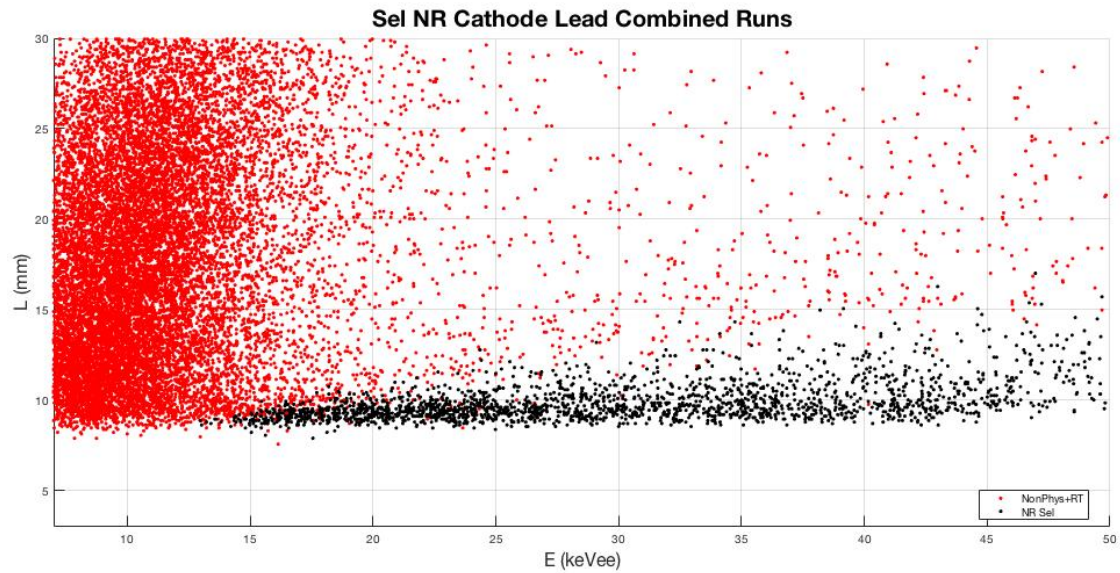
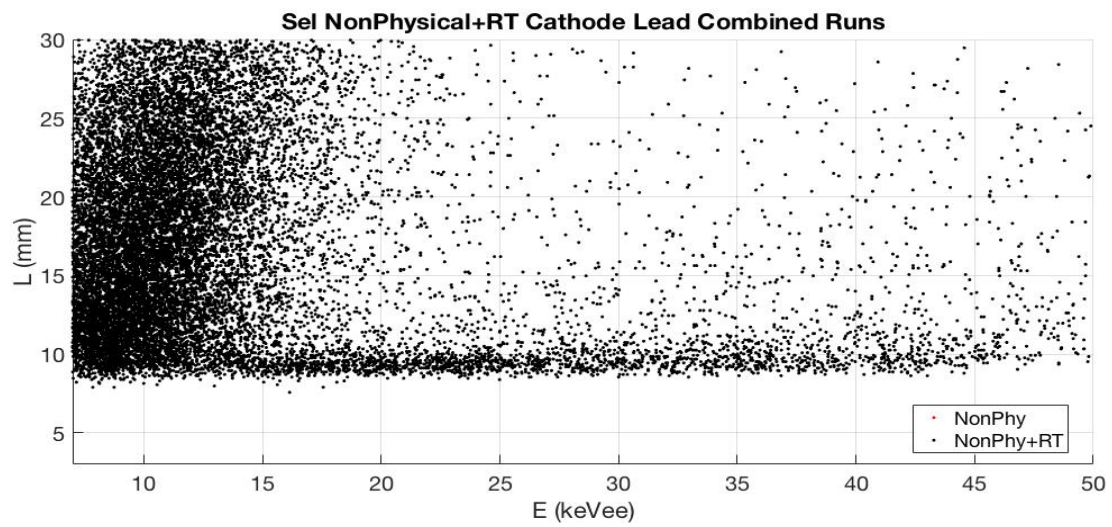
DD Runs:



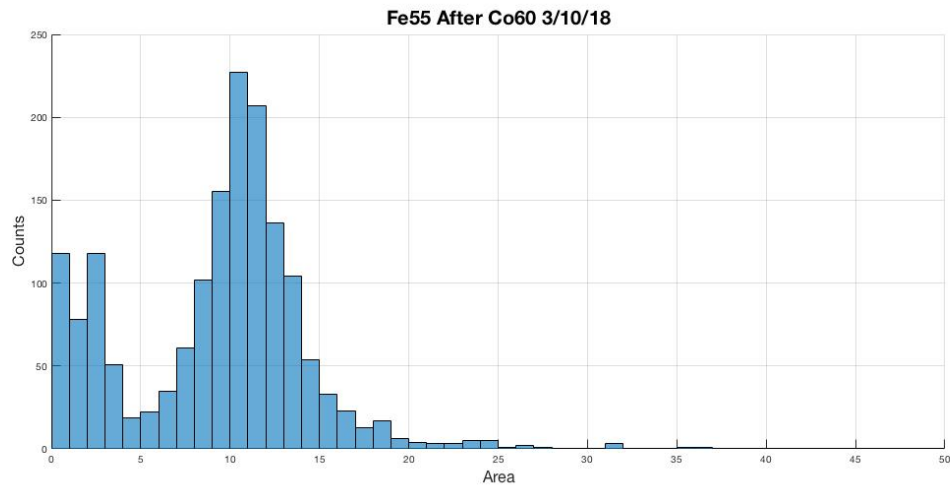
Co-60 Runs, 1D Range vs E:



DD Runs, 1D Range vs E:



Fe-55 data:



## 2) Update on Negative Ion Gas TPC from last memo

Last memo showed results of 150 Torr CF<sub>4</sub> plus upto 5 Torr CS<sub>2</sub>. Light yields, alphas and Fe-55 data were shown.

With a triple thin GEM detector in a 150 Torr CF<sub>4</sub> + few torr SF<sub>6</sub> we now see alpha tracks but cannot quantify the light yield (no Fe-55). We are beginning the next phase of this R&D with THGEMs.