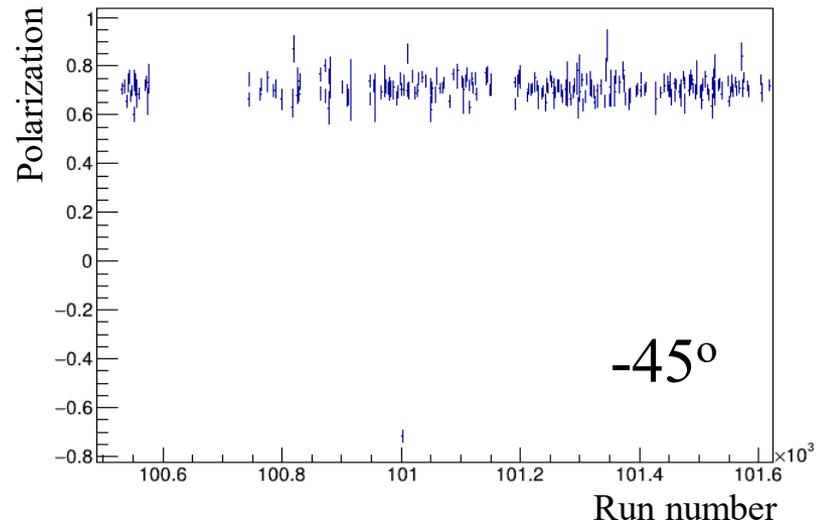
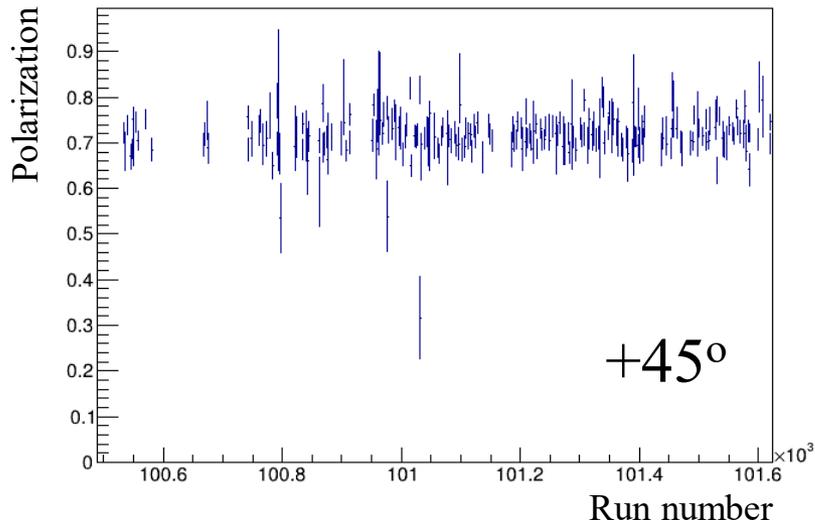


TPOL dataset: 2022-05

Run check

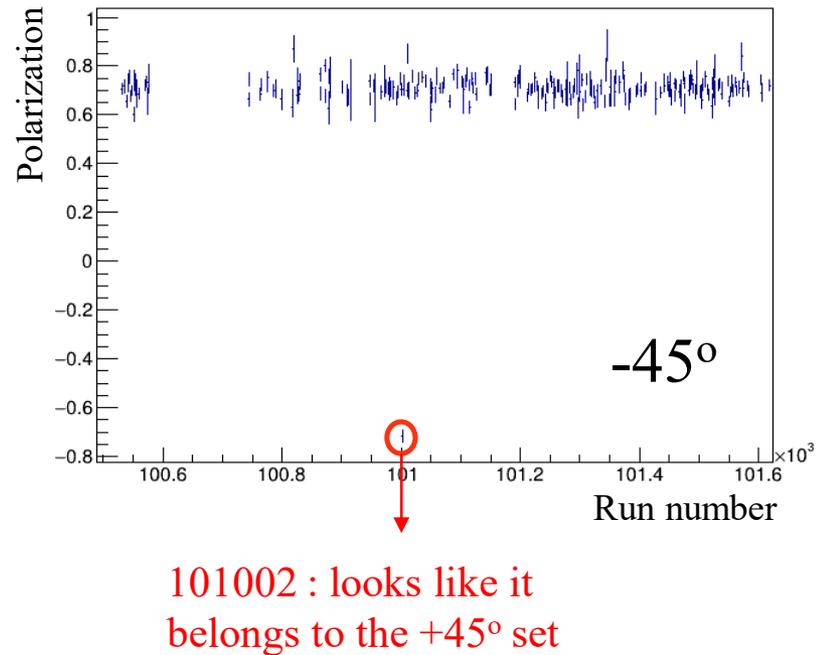
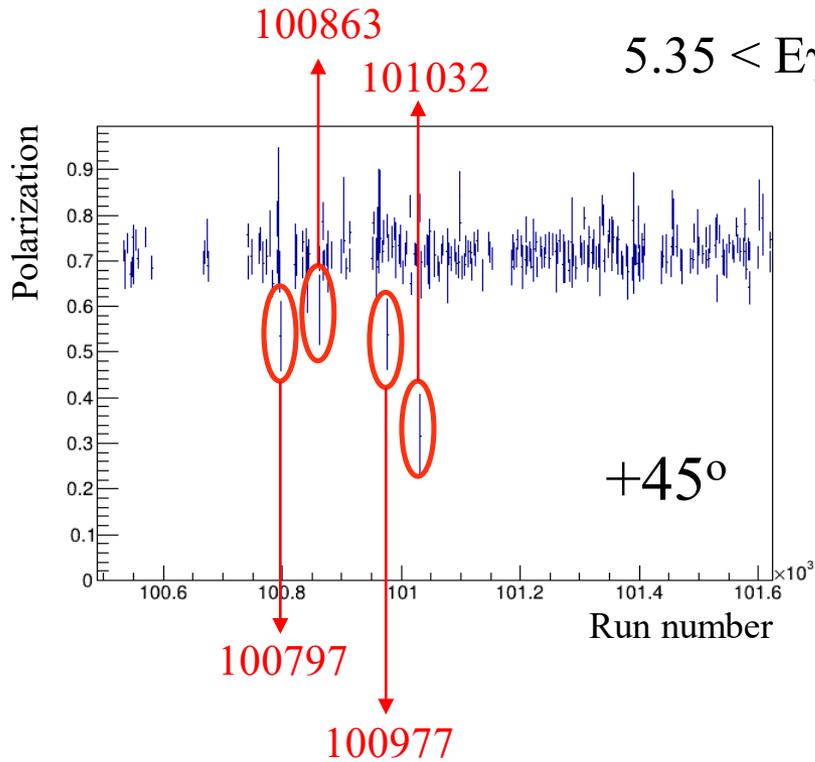
- Looking at polarization per run as a check

$$5.35 < E_\gamma < 5.75 \text{ GeV}$$



Run check

- Found polarization per run as a check

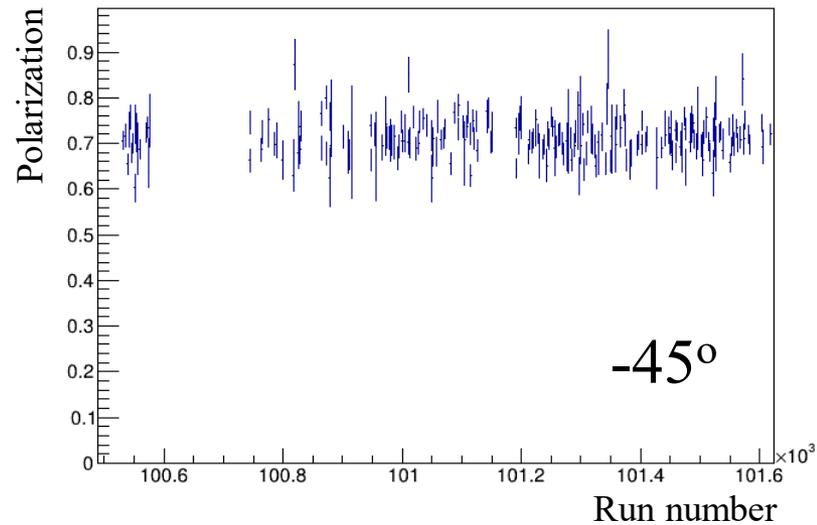
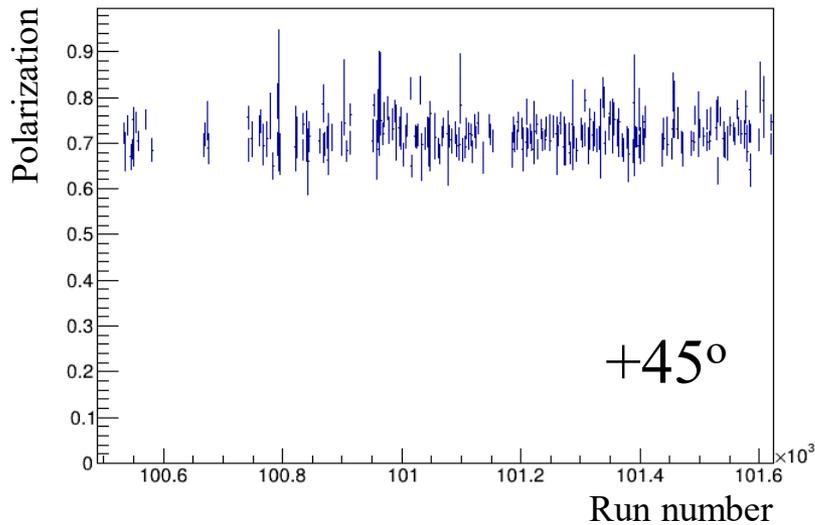


- Low outliers are in **RED**

Run check

- Found polarization per run as a check

$$5.35 < E_\gamma < 5.75 \text{ GeV}$$



- Low outliers: **Removed from run lists**

Obtain and run code

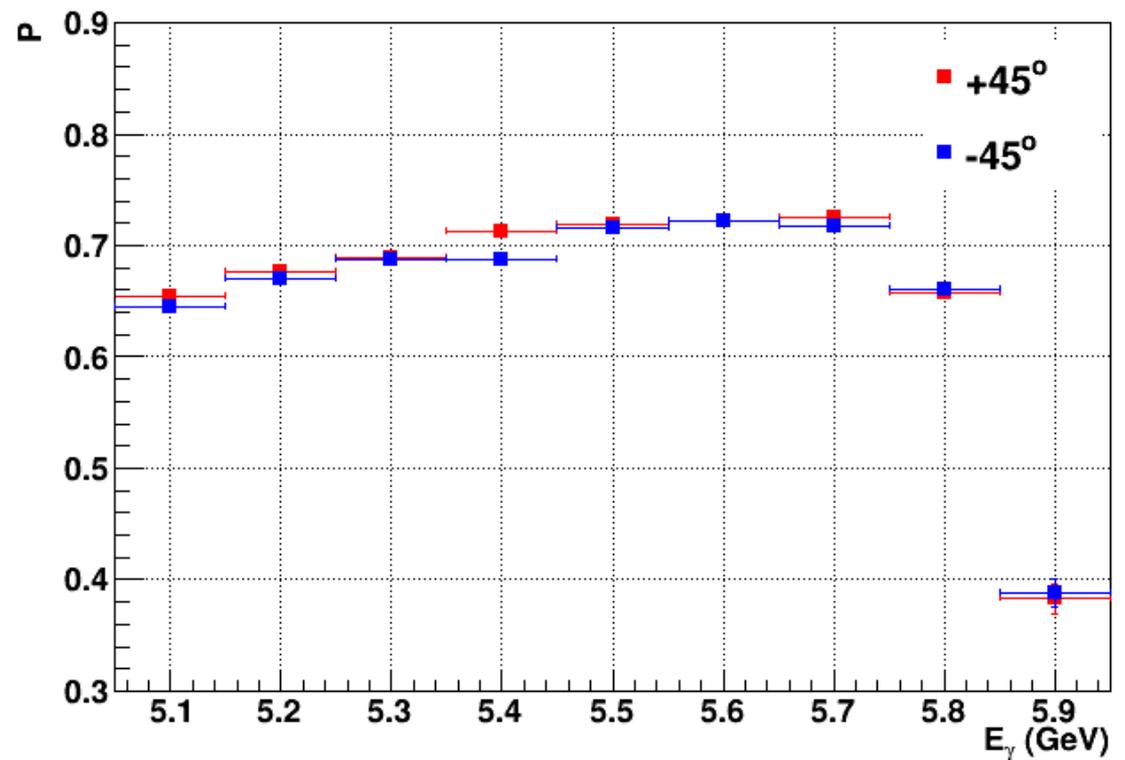
```
> wget https://userweb.jlab.org/~dugger/triPol/makePolVals2022_05-V1.tar  
> tar xf makePolVals2022_05-V1.tar  
> cd makePolVals2022_05-V1  
> cat README
```

Follow the directions in the README file

The following slides show what you should see when running



Option = 0 Full run set



```
dugger@dMachine:makePolVals2022_05-V1
File Edit View Search Terminal Help
Run lists 2022-05
-----
Beam orientation      File
45 degrees:          ./outFiles/runList2022-05_45.txt
135 degrees:         ./outFiles/runList2022-05_135.txt
*****
Polarization values for E_gamma between 5.05 and 5.75 GeV
-----
Beam orientation      Polarization
45 degrees:           0.7084 +/- 0.0014
135 degrees:          0.7019 +/- 0.0014
*****
NOTE: Run set = All data
NOTE: Histograms written to ./outFiles/TPOL2022-05.root
*****
```



Option = 1

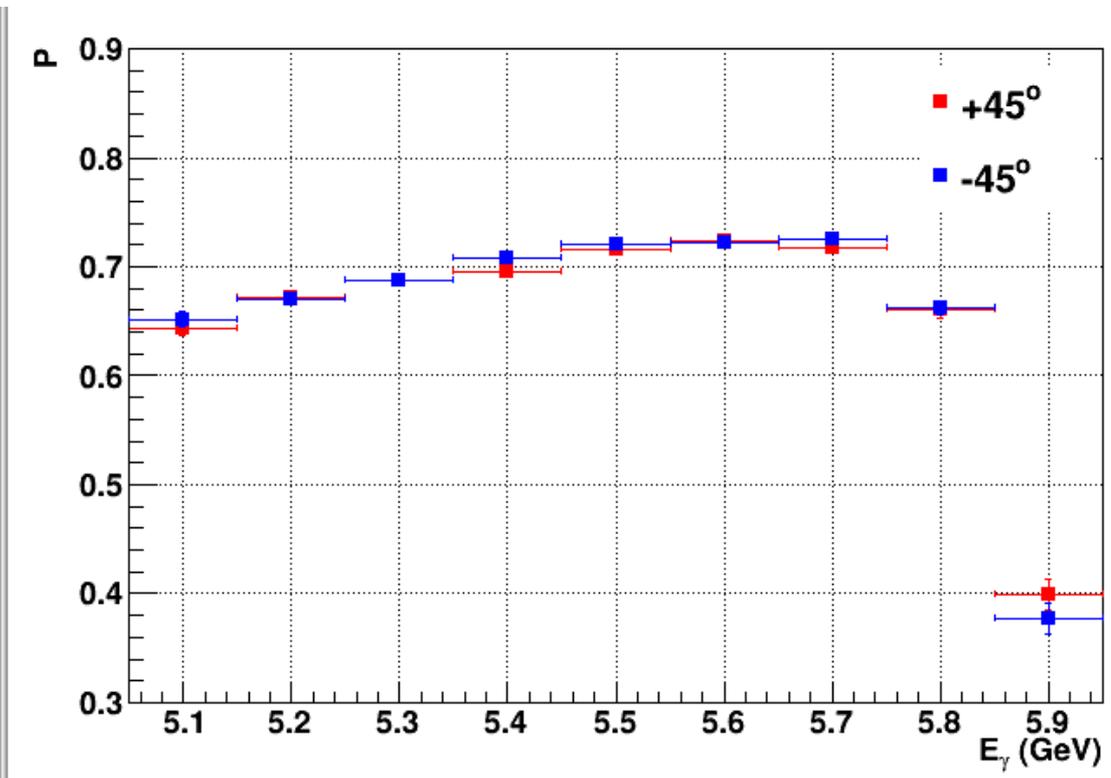
- Option = 1 is for the user to supply the run set in `./inFiles/userSet.txt`

Option = 2 and option = 3

These options are used as a test to see if restricting runs could improve the agreement between +45 and -45 sets

- Option = 2: Tight run-by-run restriction for energy = 5.4 GeV (any run with $E_\gamma = 5.4$ GeV polarization outside the range 0.6 to 0.8 excluded)
- Option = 3: Very tight run-by-run restriction for energy = 5.4 GeV (any run with $E_\gamma = 5.4$ GeV polarization outside the range 0.68 to 0.74 excluded)

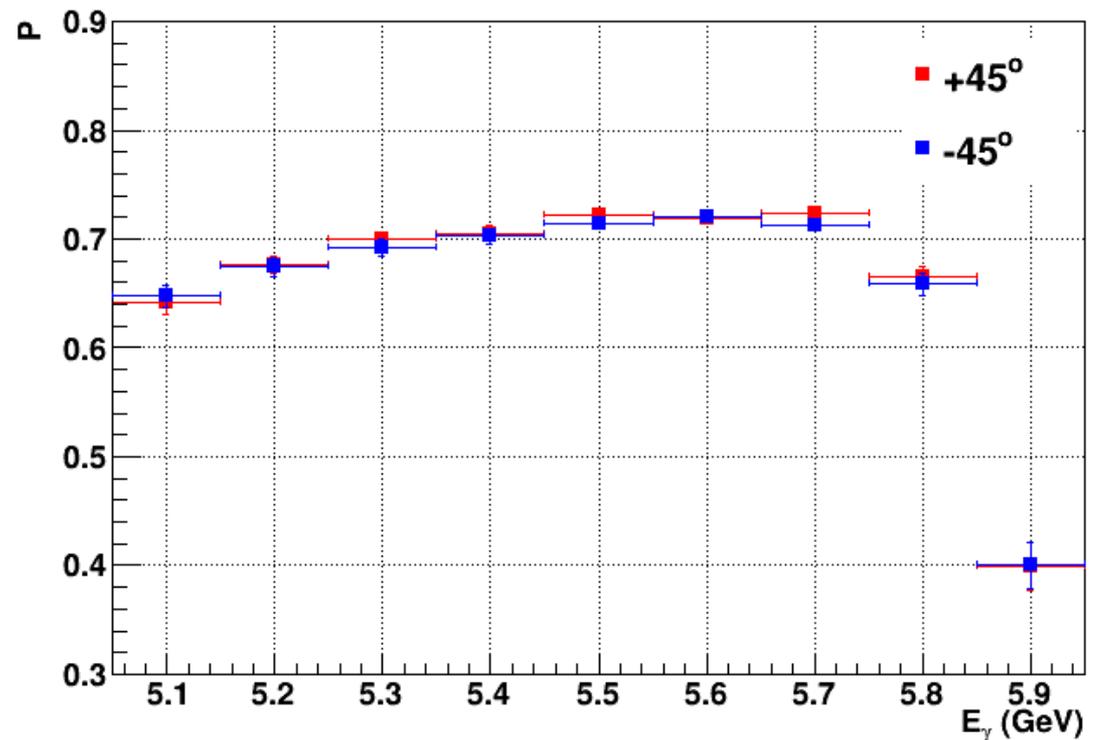
Option = 2 Restricted



```
dugger@dMachine:makePolVals2022_05-V1
File Edit View Search Terminal Help
*****
Run lists 2022-05
-----
Beam orientation      File
45 degrees:          ./outFiles/runList2022-05_45.txt
135 degrees:         ./outFiles/runList2022-05_135.txt
*****
Polarization values for E_gamma between 5.05 and 5.75 GeV
-----
Beam orientation      Polarization
45 degrees:          -0.7030 +/- 0.0016
135 degrees:         -0.7072 +/- 0.0016
*****
NOTE: Run set = Tight restriction
NOTE: Histograms written to ./outFiles/TPOL2022-05.root
*****
```



Option = 3
Very
restricted



```
dugger@dMachine:makePolVals2022_05-V1
File Edit View Search Terminal Help
*****
Run lists 2022-05
-----
Beam orientation      File
45 degrees:          ./outFiles/runList2022-05_45.txt
135 degrees:         ./outFiles/runList2022-05_135.txt
*****
Polarization values for E_gamma between 5.05 and 5.75 GeV
-----
Beam orientation      Polarization
45 degrees:           0.7075 +/- 0.0023
135 degrees:          0.7026 +/- 0.0024
*****
NOTE: Run set = Very tight restriction
NOTE: Histograms written to ./outFiles/TPOL2022-05.root
*****
```



Comments

- Everything seems to be fine
- There is strong polarization (integrated polarization $> 70\%$) for E_γ between 5.05 to 7.75 GeV, so that is the range I have used for the coherent peak
- The disagreement between $+45^\circ$ and -45° is due to run-by-run variations that were not localized to a single range of runs or any other easily defined run differences