

Group meeting 1-21-2022



Agenda

- Accomplishments from 2021
 - Presentations
 - Graduations and awards
 - CORE
- Recent
 - TPOL presentation
- Goals for 2022
- Open discussion

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Grad student presentations:

- Sebastian Cole:
 - Presentation at the GlueX Vector-Pseudoscalar meeting

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Awards:

- Patrick Walker: ASU Department of Physics Research Award



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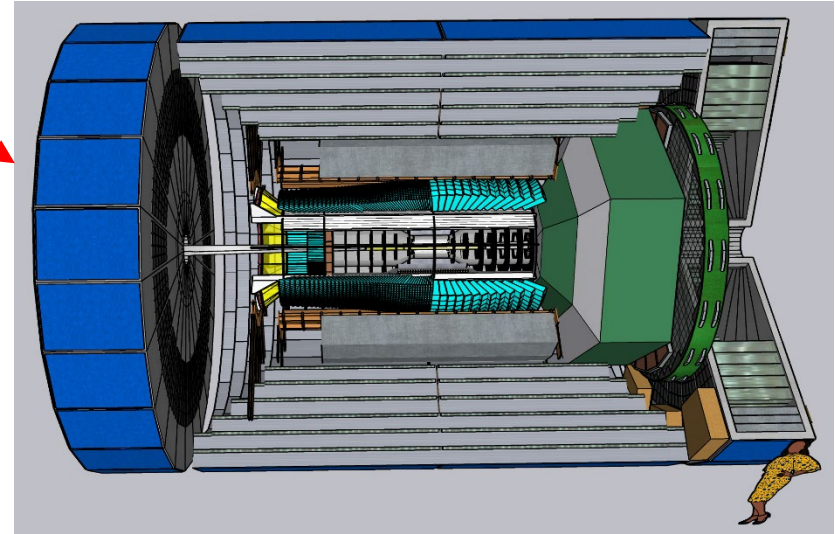
Awards:

- Patrick Walker: ASU Department of Physics Research Award
- Anna Costelle: ASU Women in Physics Award for Undergraduate Research



Accomplishments from 2021 (CORE)

- We have joined CORE (COmpact detectoR for the Electron ion collider) →
- We are designing a Pair Spectrometer (PS) for Core
- Joshua Grumski has been writing the PS simulation
- We submitted our portion of the CORE detector proposal in December and recently provided addition feedback to the reviewers.



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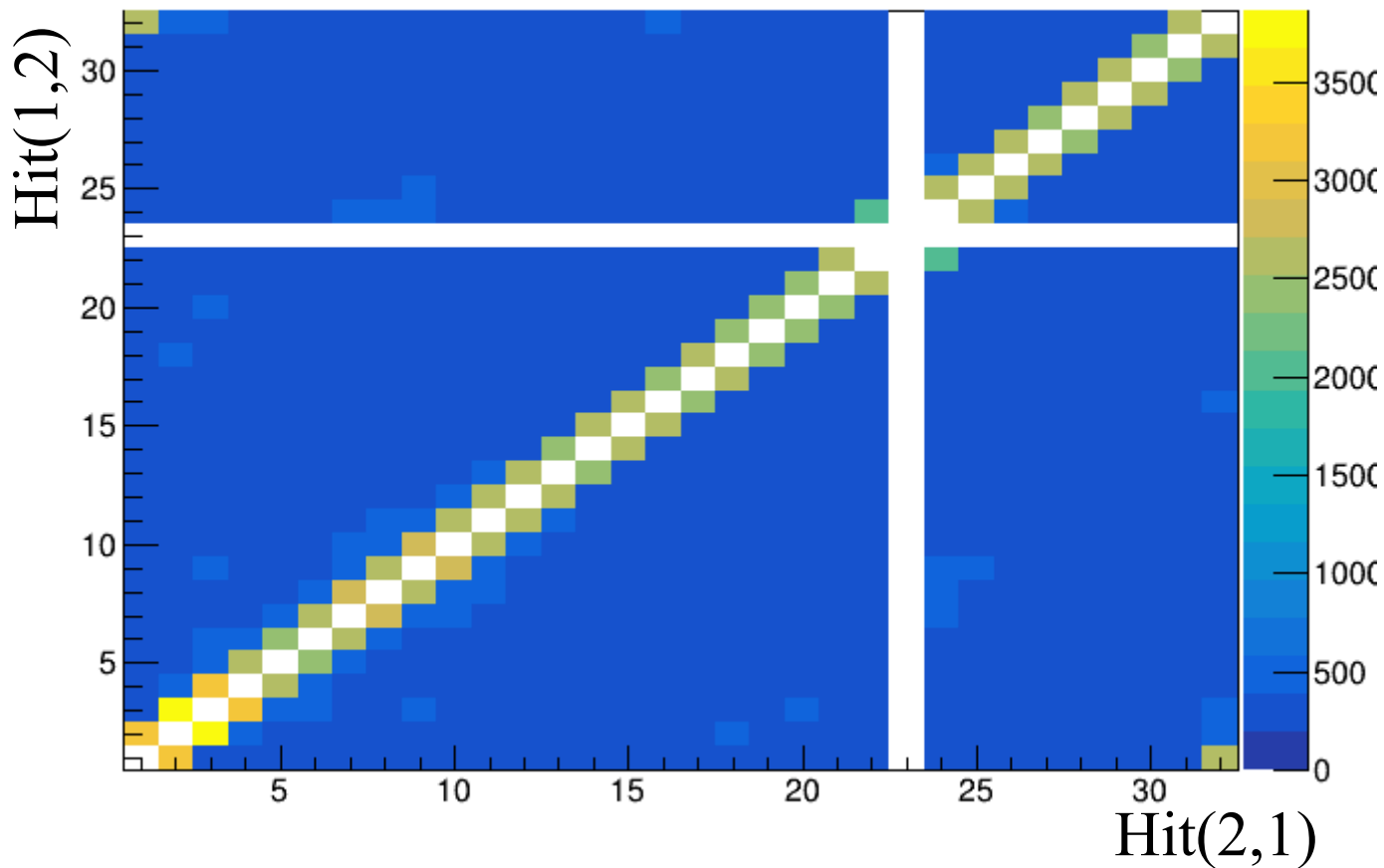
Preliminary polarization values for 2020

Run range analyzed

Runperiod	Version	Batch	CCDB timestamp	Min Run	Max Run	# Runs	# REST Files (succeeded)	Computing Site	Completed	Details
2019-11	01	01	2020-07-24-00-00-01	71350	71591	113	13710 (XXX)	NERSC + IU	2020-XX-XX	71350 - 71405 71406 - 71470 71471 - 71588
2019-11	01	02	2020-08-20-00-00-01	71592	71727	89	16227 (15933 / 98.18%)	PSC + NERSC	2020-XX-XX	71592 - 71700 71701 - 71727
2019-11	01	03	2020-09-28-00-00-01	71728	71855	93	20465 (20449)	JLab	2020-10-27	link
2019-11	01	04	2020-10-29-00-00-01	71863	71942	64	16530 (16522)	JLab	2020-11-21	link
2019-11	01	05	2020-11-22-00-00-01	71943	72067	75	16933 (16920)	JLab	2021-01-06	link
2019-11	01	06	2021-01-06-00-00-01	72068	72163	77	18024 (18015)	PSC2 IU NERSC	2021-05-05	72160/72068-72078 72080-72101 72079/72102-72112/72135-72145 72113-72134 / 72146-72163
2019-11	01	07	2021-01-06-00-00-01	72164	72325	70	14515 (14498)	JLab	2021-03-05	link
2019-11	01	08	2021-01-06-00-00-01	72362	72435	60	15382 (15375)	JLab	2021-01-21	link
Break										
2019-11	01	09	2021-04-23-00-00-01	72645	72760	82	16898 (16898)	NERSC	2021-11-22	link
2019-11	01	10	2021-07-03-00-00-01	72761	72857	72	16890 (16886)	PSC2 + JLab	2021-09-22	link link 72831-72857 (JLab)
2019-11	01	11	2021-07-03-00-00-01	72858	73065	73	15608 (15593)	JLab	2021-07-18	link
2019-11	01	12	2021-07-23-00-00-01	73066	73266	116 (59+57)	14235 (14225) 14542 (14538)	JLab NERSC	2021-08-10 2021-11-11	73066-73151 (JLab) link



Check of sector definitions after change in fADC modules (from 2 to 4 modules)

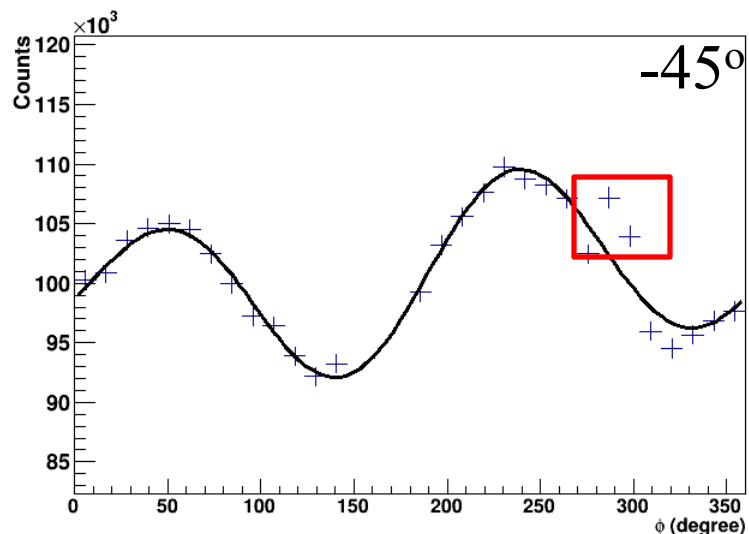
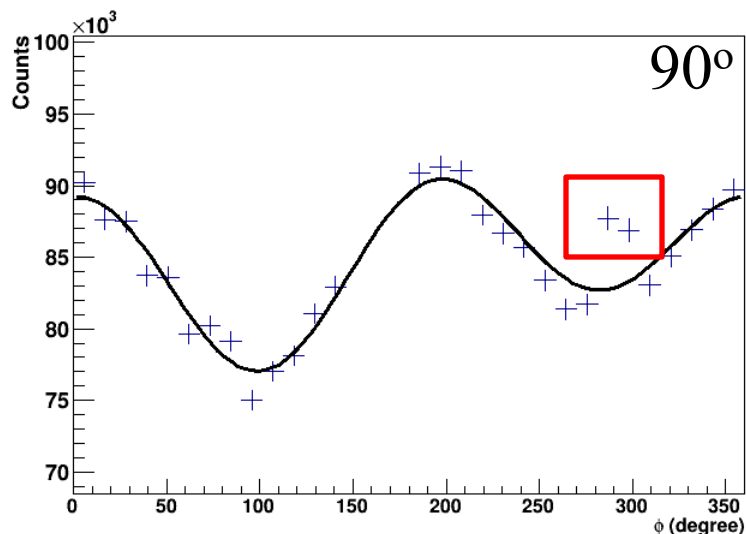
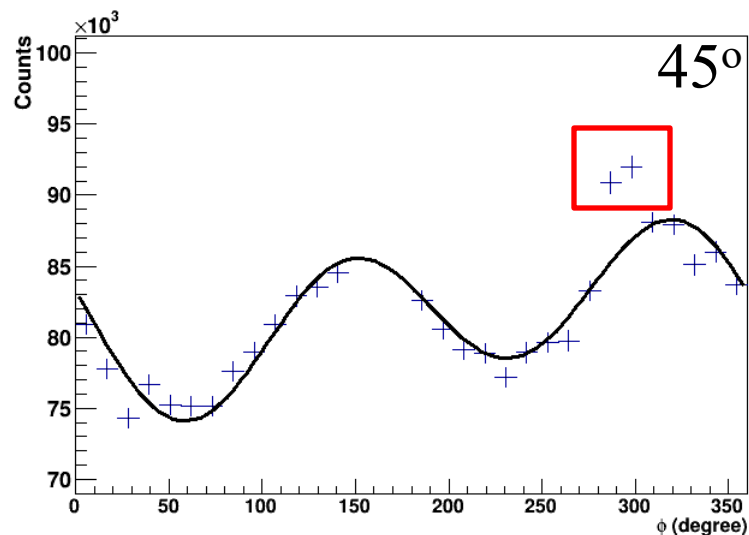
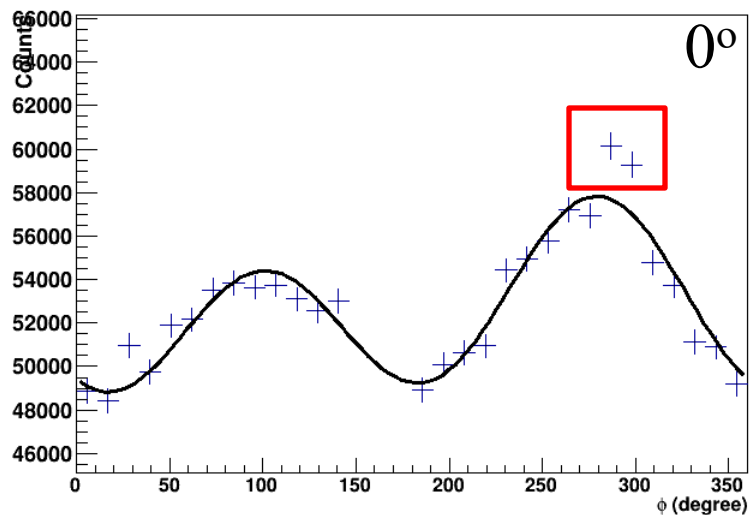


- Events with 2 hits in TPOL
- Sector 23 is known dead sector

Sector issues

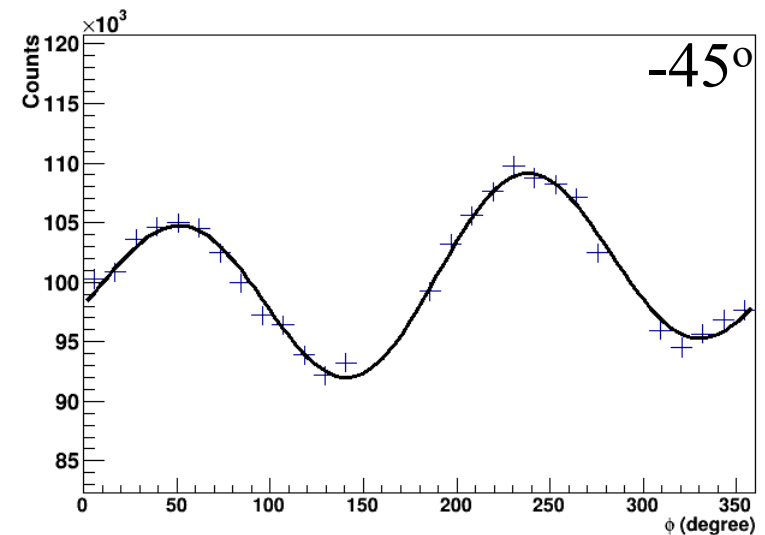
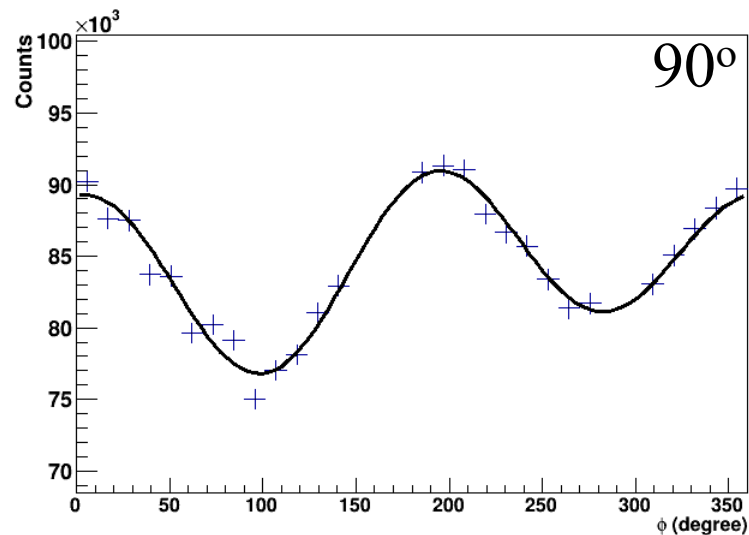
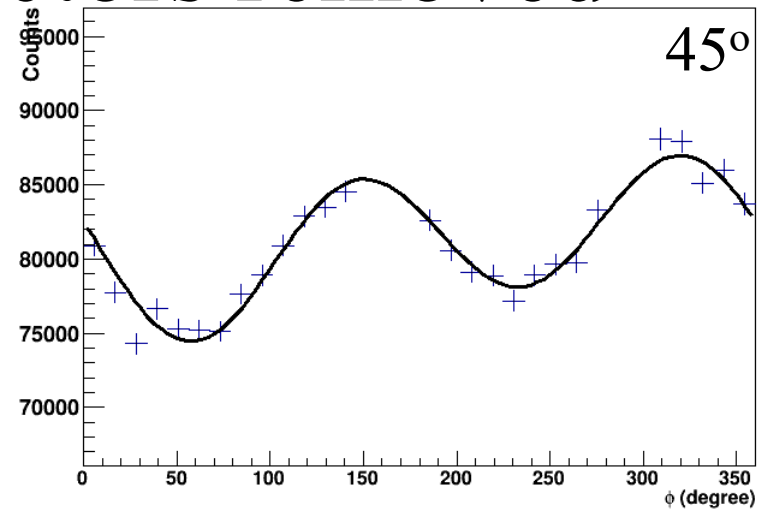
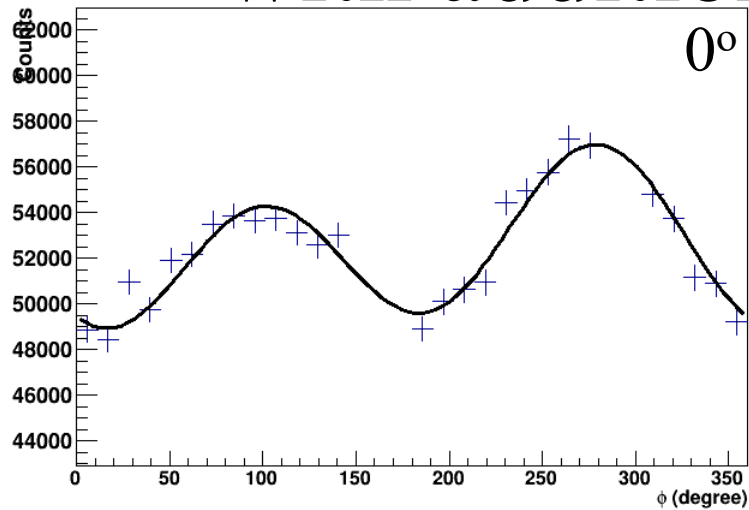
- Previously we removed sectors 22, 23, 24 from the TPOL analysis
- There are now two more sectors that are causing issues ☹️

Fits for E_γ between 8.2 and 8.8 GeV

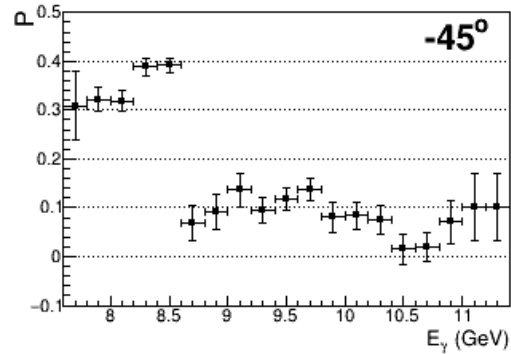
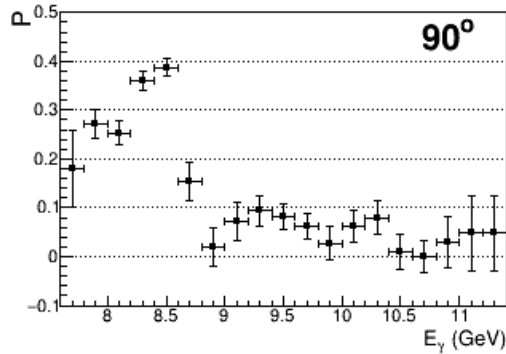
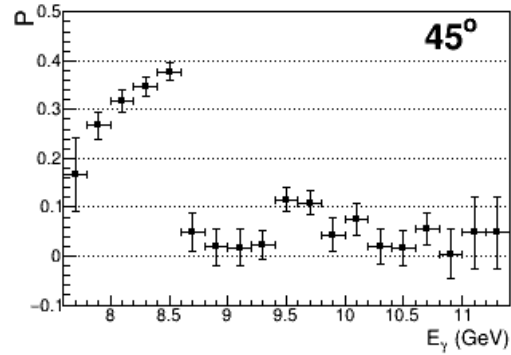
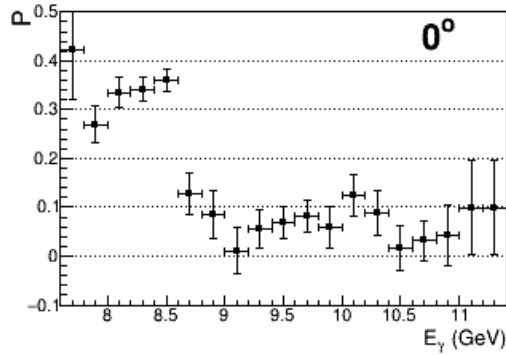


- Sectors in red box need to be removed from the analysis 34

Fits for E_γ between 8.2 and 8.8 GeV with additional sectors removed



Polarizations



Polarization values for E_gamma between 8.2 and 8.8 GeV

Beam orientation	Polarization
0 degrees:	0.3142 +/- 0.0153
45 degrees:	0.3168 +/- 0.0123
90 degrees:	0.3427 +/- 0.0124
135 degrees:	0.3443 +/- 0.0112

0 ,90 average = 0.328(8)

45,-45 average = 0.33(1)



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