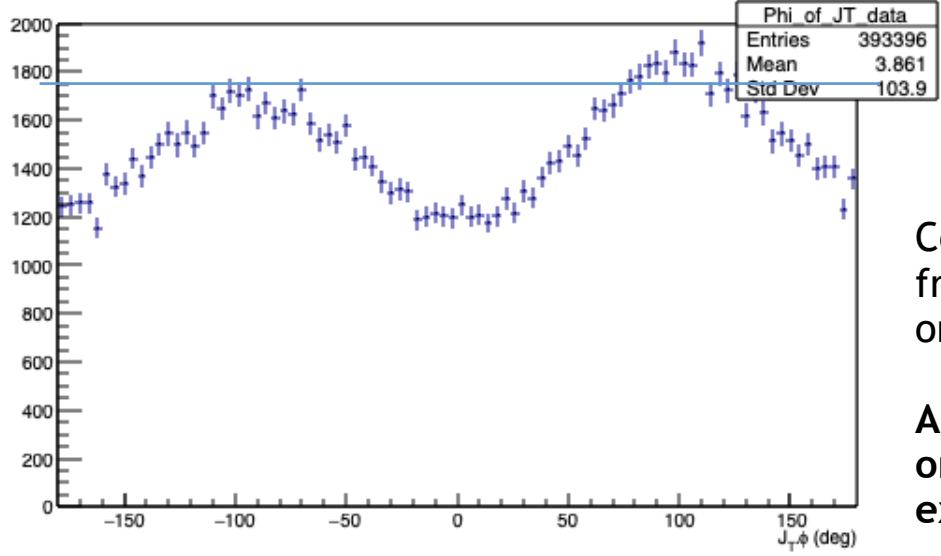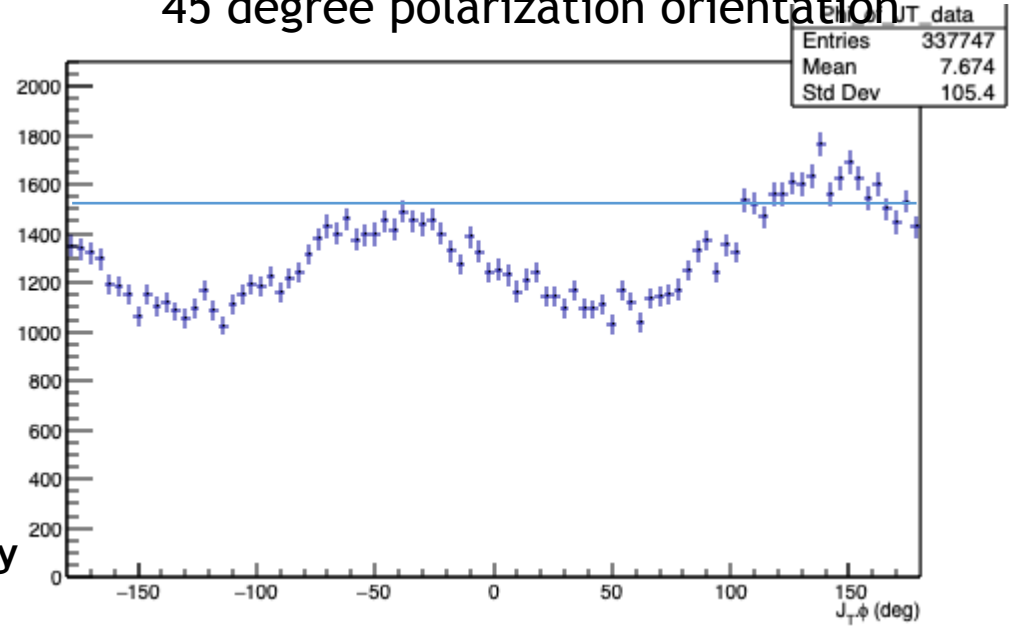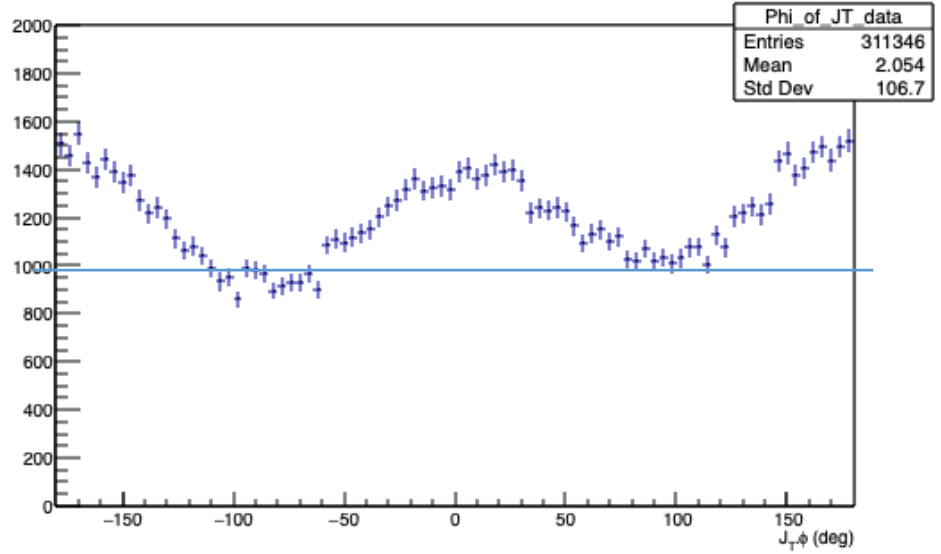# 0 degree polarization orientation
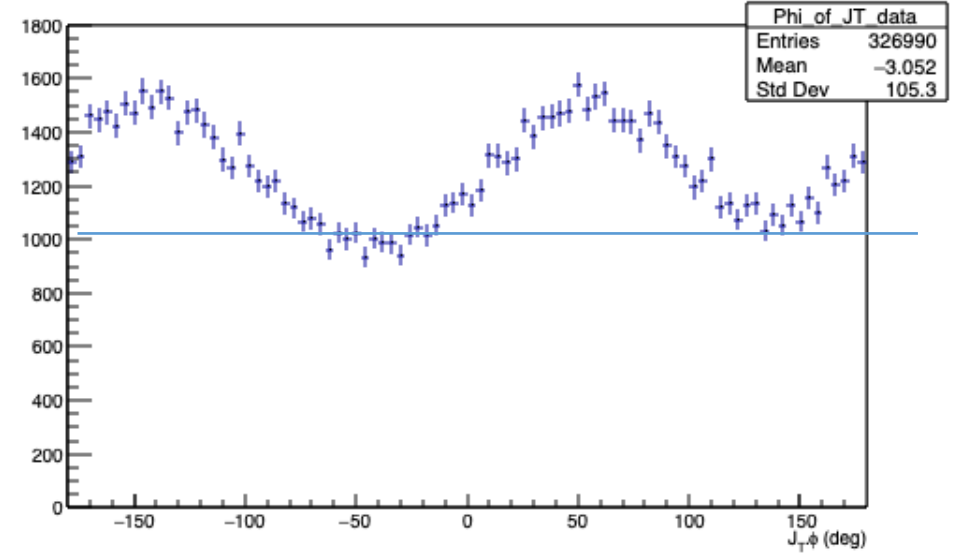

45 degree polarization orientation

Comparing data from separate pol. orientation runs:

All 2018-01 orientations exhibit asymmetry

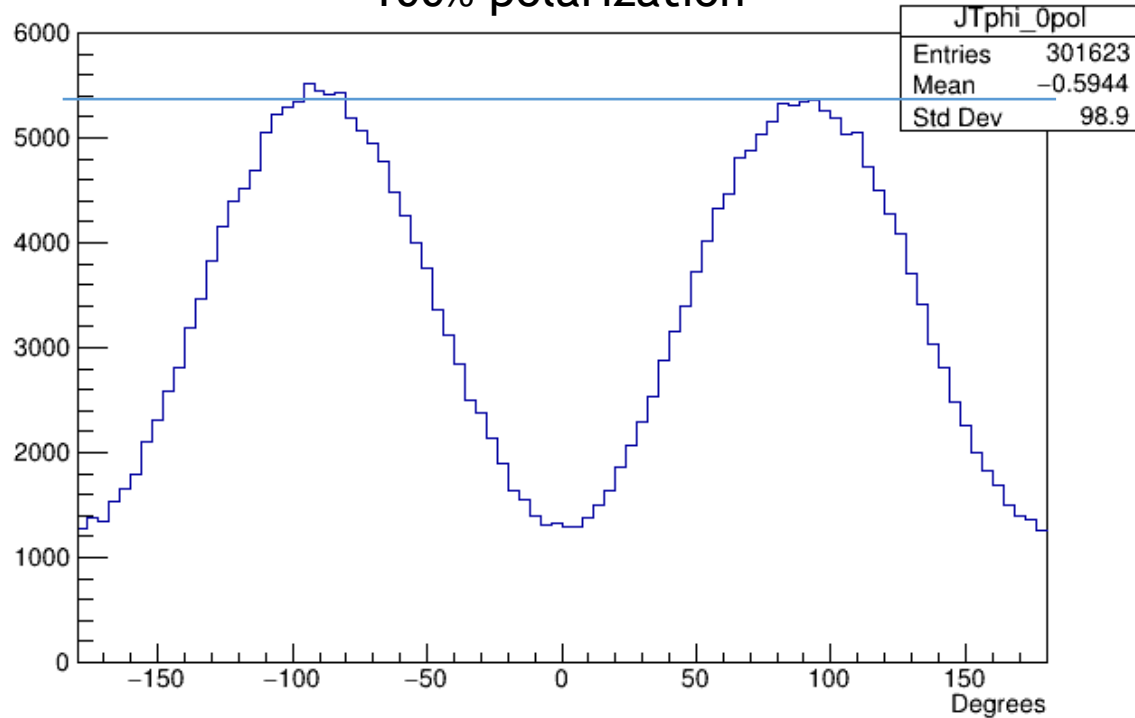# 90 degree polarization orientation
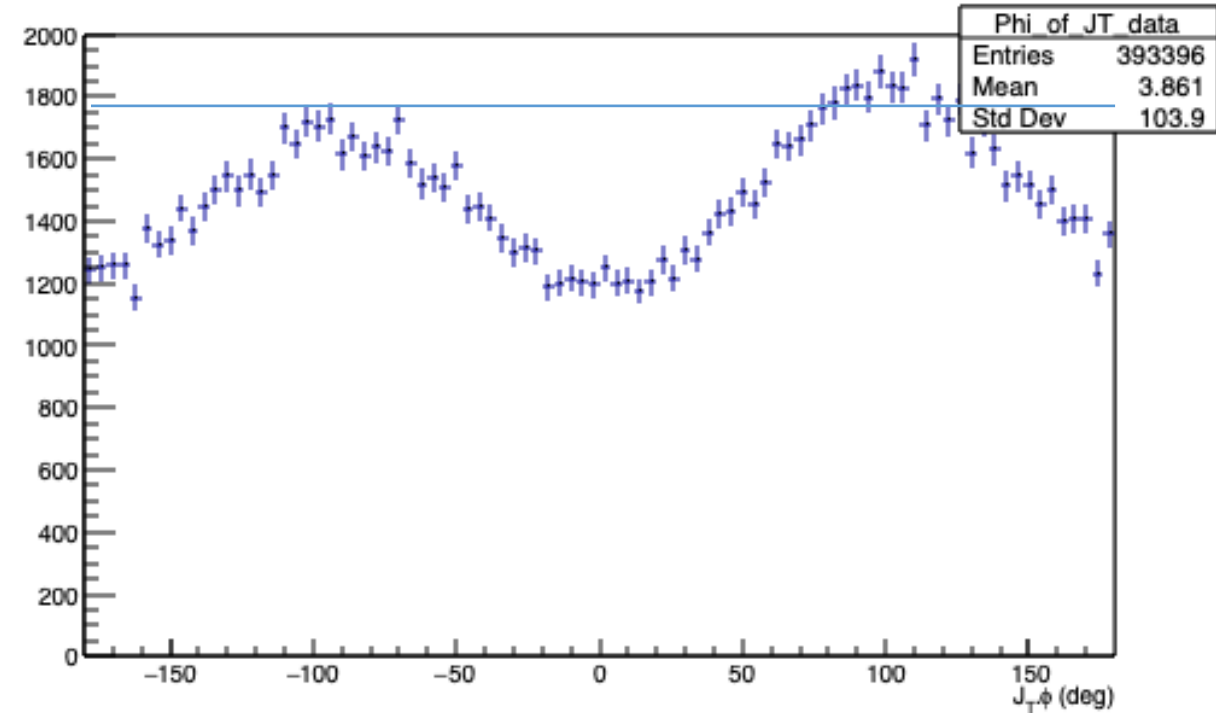

135 degree polarization orientation

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$\gamma p \to e^+ e^- (p)$ reaction filter.

SIMULATION WITH ELECTRON BEAM OFFSET
ON COLLIMATOR 1mm along 45 deg
100% polarization

2018-01 DATA
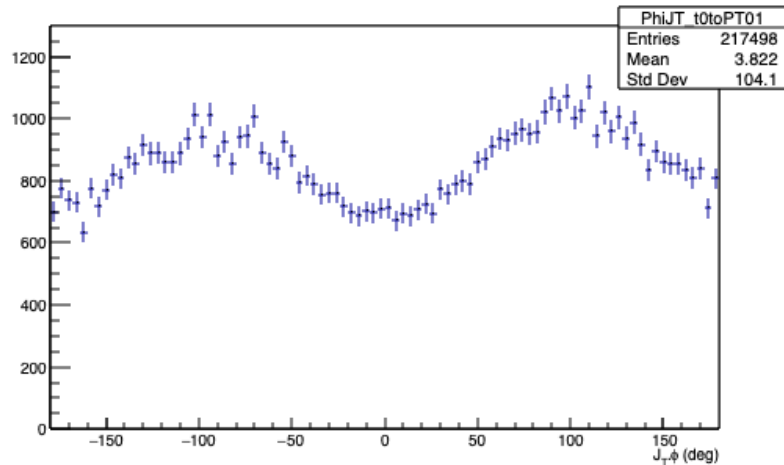0 deg orientation runs

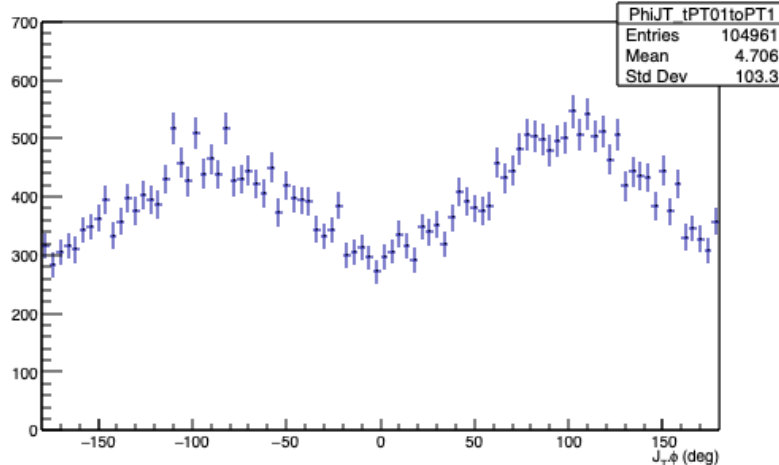| JTphi_0pol	
Entries	301623
Mean	−0.5944
Std Dev	98.9

Phi_of_JT_data	
Entries	393396
Mean	3.861
Std Dev	103.9

Offset from collimator is probably along 135 deg (or maybe 225?), not 45 deg.
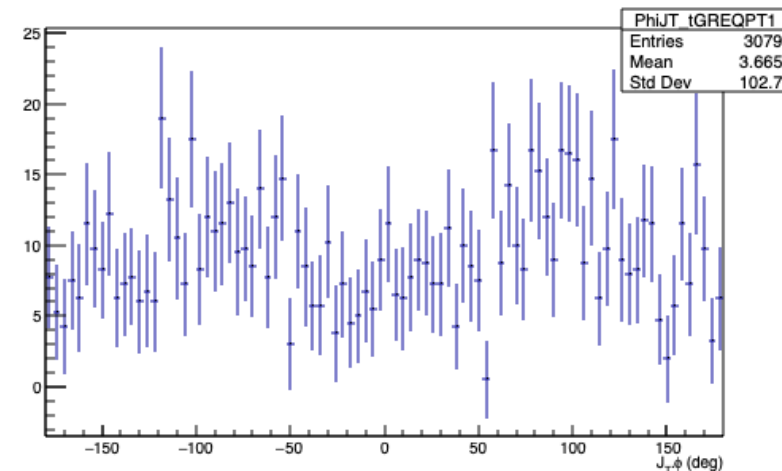The ebeam collimator offset is likely larger than 1mm!

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A. Schick, March 10 2021

2

Phi of JT in bins of -t

-t < 0.01

0.01 < -t < 0.1

0.1 < -t
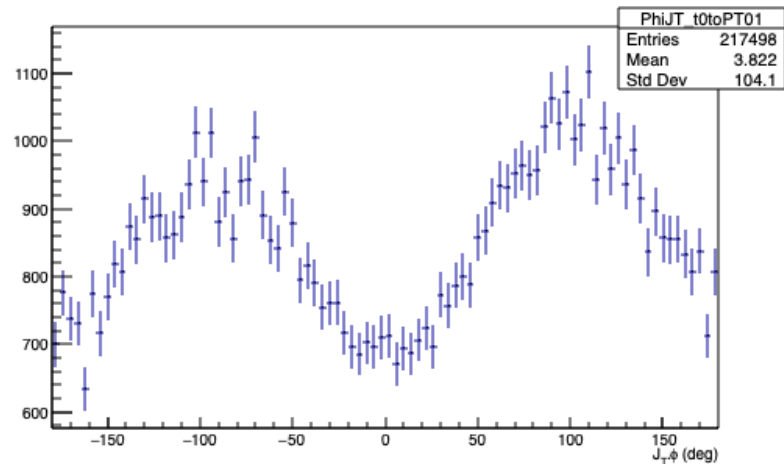
Very few events in this region of -t

Same as above, zoomed

Same as above, zoomed

0.06 < -t

-t < 0.005

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Phi of JT Integral Right/Left
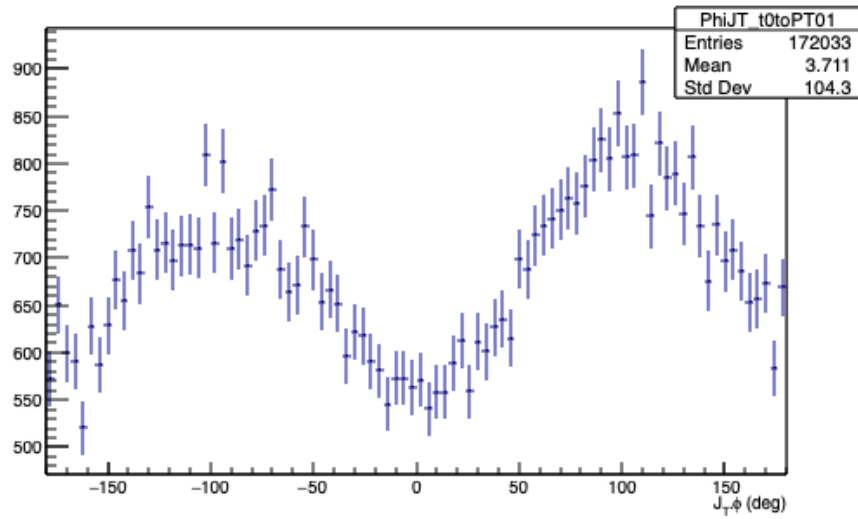
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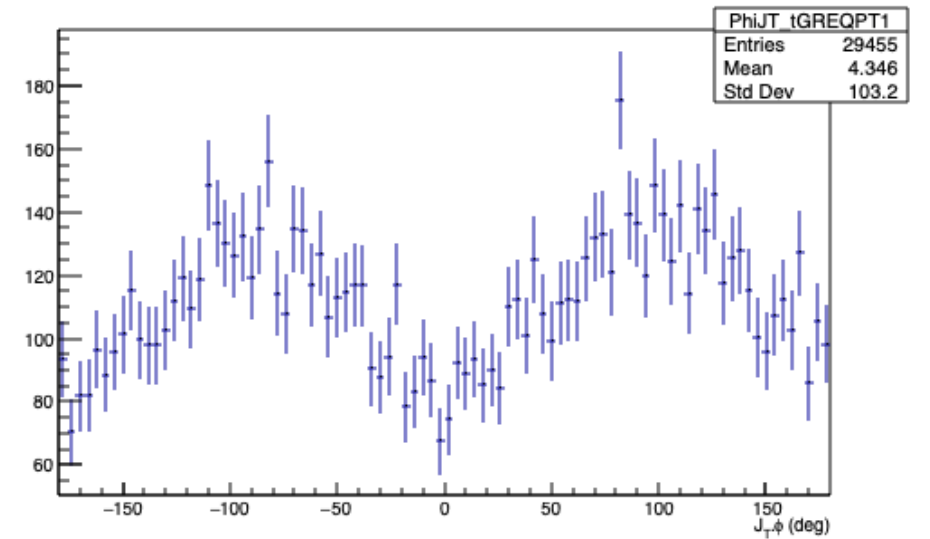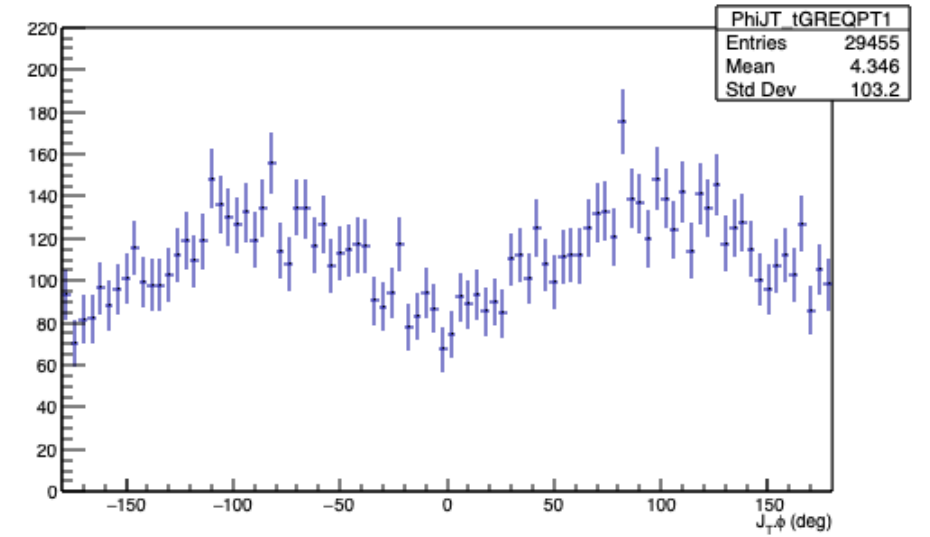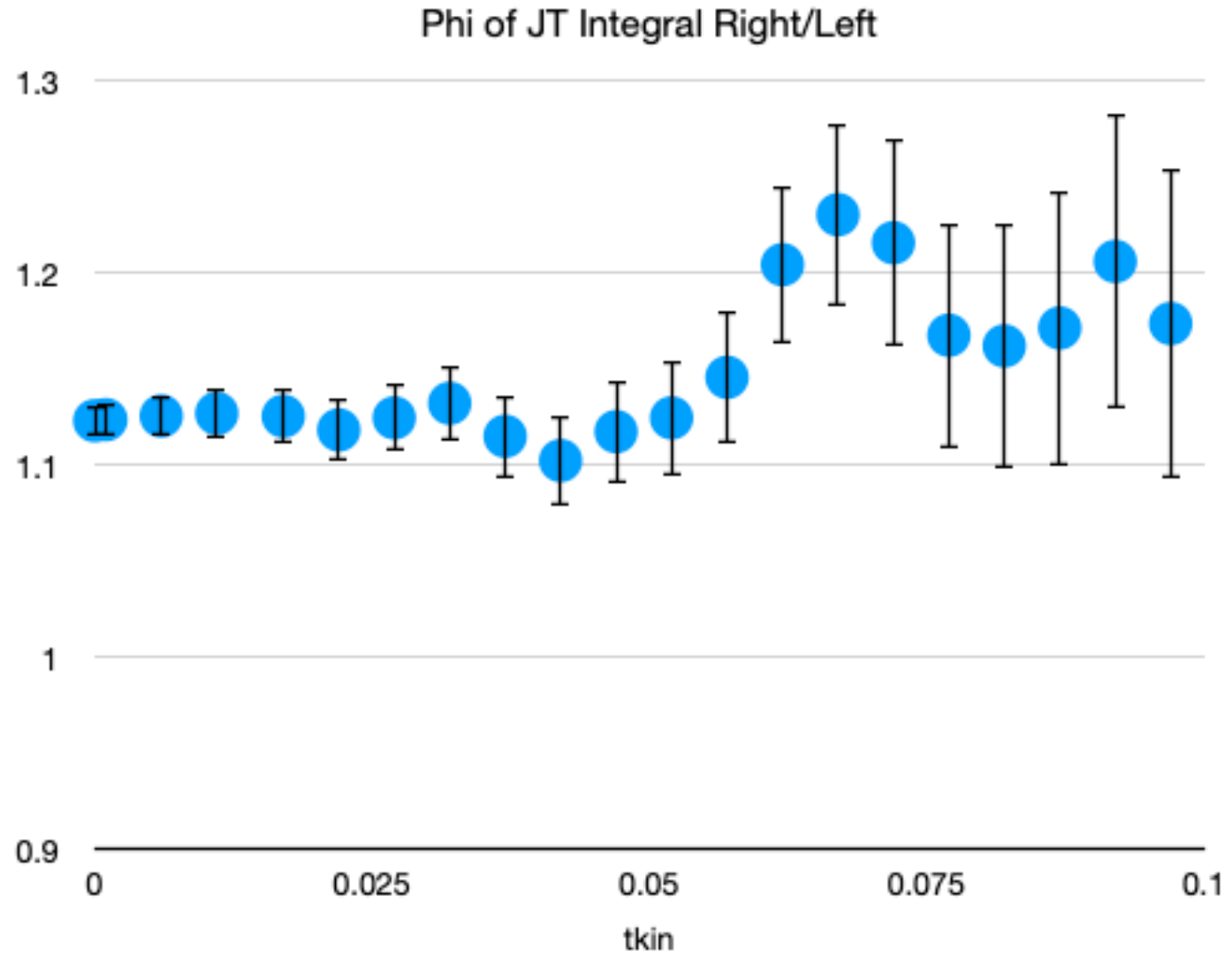
Greater than and Less Than

Statistics limited

Old plot w/o errors

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