

خود کا تعارف

# **Biographical info**



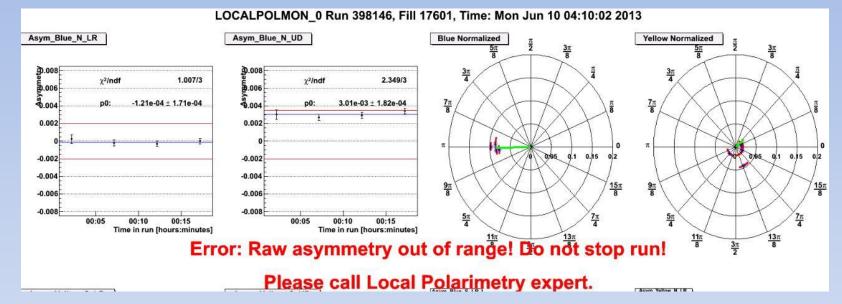
- Journey of study from Bucharest to Bremen to Stony Brook
- Joined PHENIX in 2010 (the year of the HBD)

#### Things I have broken since I started with PHENIX





- One of the two global detectors for PHENIX
- During spin running it's the Local Polarimetry detector



- Local Polarimetry now has an online component through it's Online monitoring module
- We can monitor the spin direction and transverse components in real time

- Over the years I have filled, QAed and messed around with the crossingshift calibration
- Out of all the variables here the most important is: runnumber

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[phn;	<pre>clpol@va</pre>	a002	~]\$	psql	spin
psql	(8.4.1)			S 859	8
Type	"help"	for	help	ο.	

spin=> \d spin

Column	Туре	Modifiers
cunnumber	integer	+
Fillnumber	integer	1
adrunga	integer	i
crossingshift	integer	î
polarblue	real[]	i .
polarblueerror	real[]	i
polaryellow	real[]	i
oolaryellowerror	real[]	Î
spinpatternblue	integer[]	Î
spinpatternyellow	integer[]	i i
bovertexcut	bigint[]	Î.
bcwithoutcut	bigint[]	Î
dcnarrow	bigint[]	i .
dcwide	bigint[]	I
badbunchga	integer[]	Î
ransversxblue	real	Ì
ransversxblueerr	real	Î
ransversyblue	real	1
ransversyblueerr	real	1
ransversxyellow	real	1
ransversxyellowerr	real	1
ransversyvellow	real	1
ransversyyellowerr	real	1
qa_level	integer	not null default
imestamp	timestamp without time zone	1
oolarblueerrorsys	real[]	1
olaryellowerrorsys	real[]	1
idexes:		

- Over the years I have filled, QAed and messed around with the crossingshift calibration
- Out of all the variables here the most important is: runnumber .. and qa\_level

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[phnxlpol@va002 ~]\$ psql spin psql (8.4.1) Type "help" for help.

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Column	Туре	Modifiers
runnumber	integer	not null
fillnumber	integer	1
oadrunga	integer	1
crossingshift	integer	Î
polarblue	real[]	i .
oolarblueerror	real[]	i
polarvellow	real[]	i
oolaryellowerror	real[]	Î
spinpatternblue	integer[]	Î
spinpatternyellow	integer[]	i i i i i i i i i i i i i i i i i i i
bcvertexcut	bigint[]	i
obcwithoutcut	bigint[]	Î
dcnarrow	bigint[]	i
zdcwide	bigint[]	i
oadbunchga	integer[]	i
ransversxblue	real	Î
ransversxblueerr	real	Î
transversyblue	real	1
ransversyblueerr	real	i
transversxyellow	real	í
ransversxyellowerr	real	i
ransversyvellow	real	i
ransversyyellowerr	real	i
ja level	integer	not null default
timestamp	timestamp without time zone	i
oolarblueerrorsys	real[]	1
oolaryellowerrorsys	real[]	i
ndexes:	57 (77.75.75.75.49.8) /	

- Over the years I have filled, QAed and messed around with the crossingshift calibration
- Out of all the variables here the two most important are: runnumber and qa\_level

File	Edit	View	Search	Terminal	Help	

[phnxlpol@va002 ~]\$ psql spin psql (8.4.1) Type "help" for help.

spin=> \d spin

Column	Туре	Modifiers	
runnumber	integer	not null	
fillnumber	integer	1	
padrunga	integer	1	
crossingshift	integer	Î	
polarblue	real[]	i .	
polarblueerror	real[]	i.	
polaryellow	real[]	i	
polaryellowerror	real[]	Î	
spinpatternblue	integer[]	Î	
spinpatternyellow	integer[]	i i	
obcvertexcut	bigint[]	Î.	
obcwithoutcut	bigint[]	Î	
dcnarrow	bigint[]	i .	
zdcwide	bigint[]	1	
oadbunchga	integer[]	1	
transversxblue	real	Ì	
transversxblueerr	real	Î	
transversyblue	real	1	
transversyblueerr	real	1	
ransversxyellow	real	1	
transversxyellowerr	real	1	
ransversyyellow	real	1	
transversyyellowerr	real		
qa_level	integer	not null default	
timestamp	timestamp without time zone	1	
polarblueerrorsys	real[]	1	
polaryellowerrorsys	real[]	1	
ndexes:			

- Over the years I have filled, QAed and messed around with the crossingshift calibration
- Out of all the variables here the two most important are: runnumber and qa\_level .. and spinpattern

<u>F</u> ile	<u>E</u> dit	<u>V</u> iew	<u>S</u> earch	<u>T</u> erminal	<u>H</u> elp	
psql	(8.	4.1)	002 ~]: for he	\$ psql lp.	spin	
spin	1=> /	d sp.	in		Table	"publ

Column	Table "public.spin" Type	Modifiers
runnumber   fillnumber   badrunqa   crossingshift   polarblueerror   polaryellow   polaryellowerror   spinpatternblue   spinpatternyellow   bbcvertexcut   bbcwithoutcut   zdcnarrow   zdcwide	<pre>integer integer integer real[] real[] real[] integer[] bigint[] bigint[] bigint[] bigint[]</pre>	not null
badbunchqa   transversxblue   transversyblueerr   transversyblueerr   transversxyblueerr   transversxyellow	integer[] real real real real real	
transversyyellow   transversyyellowerr   qa_level   timestamp   polarblueerrorsys   polaryellowerrorsys   Indexes:	real real integer timestamp without time zone real[] real[]	   not null default 0   

- Over the years I have filled, QAed and messed around with the crossingshift calibration
- Out of all the variables here the three most important are: runnumber and qa\_level and spinpattern

[phnxlpol@va002 ~]\$ psql spin psql (8.4.1) Type "help" for help.

spin=> \d spin

Column	Table "public.spin" Type	Modifiers	
runnumber fillnumber badrunga crossingshift polarblue polarblueerror polaryellow polaryellowerror spinpatternblue spinpatternyellow bbcvertexcut bbcwithoutcut zdcnarrow	<pre>integer integer integer real[] real[] real[] integer[] integer[] bigint[] bigint[] bigint[]</pre>	not null	
zdcwide badbunchqa transversxblue transversyblue transversyblue transversyblueerr transversxyellow transversyyellow transversyyellowerr qa_level	bigint[] integer[] real real real real real real real integer	           not null default 0	
timestamp polarblueerrorsys polaryellowerrorsys ndexes: "spin_pkey" PRIMAN	timestamp without time zone   real[]   real[] RY KEY, btree (runnumber, qa_1-	     evel)	

- Over the years I have filled, QAed and messed around with the crossingshift calibration
- Out of all the variables here the three most important are: runnumber and qa\_level and spinpattern .. and polization

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[phn:	xlpc	10va	a002	~]\$	psql	spin	
psql	(8.	4.1)	)				
Type	"he	lp"	for	hel	p.		

spin=> \d spin

Column	Туре	Modifiers	
runnumber fillnumber badrunga crossingshift polarblue polarblueerror polaryellow polaryellowerror spinpatternblue spinpatternyellow bbcvertexcut bbcwithoutcut zdcnarrow zdcwide badbunchga transversxblueerr transversyblue transversyblueerr transversyblueerr transversyblueerr	<pre>integer integer integer real[] real[] real[] integer[] bigint[] bigint[] bigint[] bigint[] real real real real real real real real</pre>	not null	
transversyyellow transversyyellowerr qa_level timestamp	real real integer timestamp without time zone	     not null default ( 	
polarblueerrorsys polaryellowerrorsys ndexes: "spin pkey" PRIMAN	real[]   real[] RY KEY, btree (runnumber, ga_1;	   evel)	

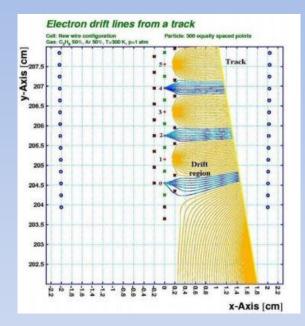
- Over the years I have filled, QAed and messed around with the crossingshift calibration
- Amongst these variables are such elements as runnumber, qa\_level, spinpattern ...

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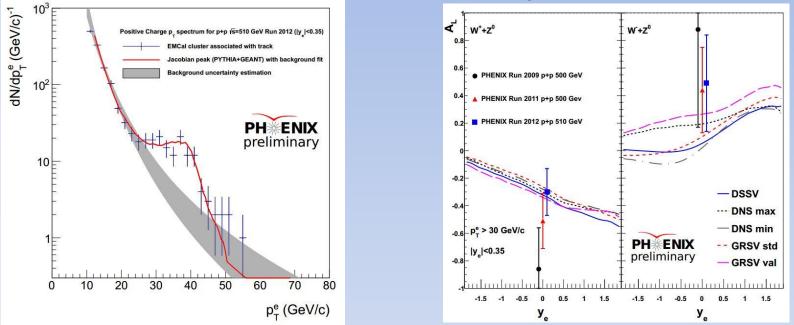
Column	Туре	Modifiers	
runnumber fillnumber badrunga crossingshift polarblue polarblueerror polaryellow polaryellow polaryellowerror spinpatternblue spinpatternyellow bbcvertexcut bbcwithoutcut zdcnarrow zdcwide badbunchga transversxblueerr transversyblue transversyblueerr transversyblueerr transversyellow	<pre>integer integer integer real[] real[] real[] integer[] bigint[] bigint[] bigint[] bigint[] real real real real real real real real</pre>	not null	
transversyyellowerr qa_level timestamp polarblueerrorsys	real integer timestamp without time zone real[] real[]	not null default ( 	





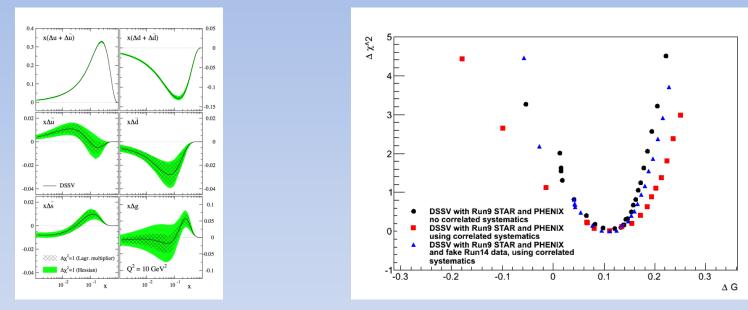
- EMCal/DC are the two main central arm detectors
- I "completed" the Run12 EMCal energy calibration and some work on the Run11 510 DC beam offset

# Things I am trying to break now -> W2e Analysis



- Selecting for the W to electron decay we can get a very distinctive Jacobian peak (if we can get the background to leave us alone)
- For a high level signal to background region we can calculate single spin asymmetries which constrain theoretical predictions on the Parton Distribution Functions of the ubar and dbar anti-quarks

#### Things I am trying to break now -> Global Analysis



- Improve the analysis framework developed by DSSV by adding proper handling of the systematic uncertainties
- Use it to help us gauge the impact of further data on the world knowledge of  $\Delta G$  and PDFs