

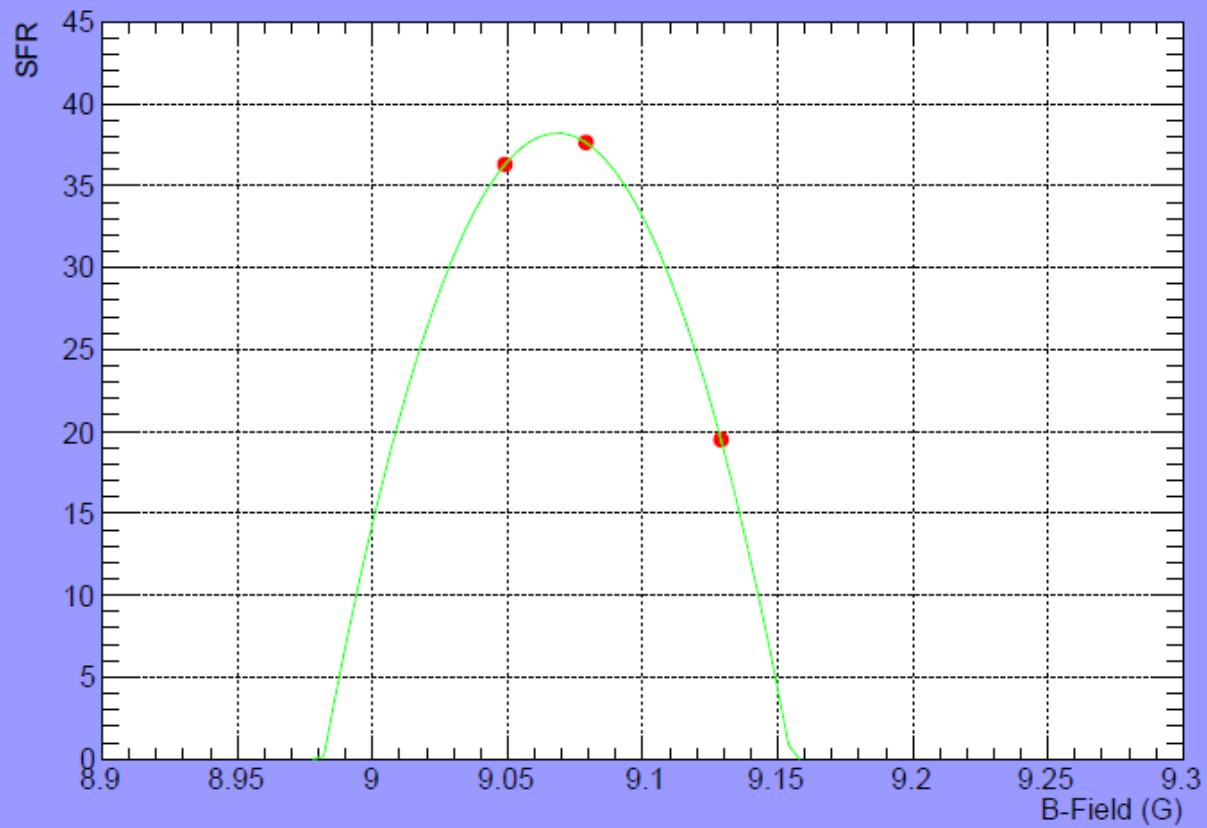
Polarimetry

2-17-2015

Data Runs for Polarimetry

<i>Date</i>	<i>Item</i>	<i>By2</i>	<i>Run Numbers</i>	<i>Description</i>	<i>Spin</i>	<i>SFR</i>	<i>FGV</i>	<i>Notes</i>
2/17/2015	1	9.079	16083-16084	Polarized Cell	up			SF delay @ 15.67 ms
2/17/2015	2	9.079	16085	Polarized Cell	up		485	installed new 1/t curve thru USB: a/b =2.33
2/17/2015	3	9.079	16086-16087	Polarized Cell	up	12.14	400	Trigger delay set to 14.667 ms with new 1/t curve
2/17/2015	4	9.079	16088	Polarized Cell	up	19.41	425	
2/17/2015	5	9.079	16089	Polarized Cell	up	29.68	450	
2/17/2015	6	9.079	16090	Polarized Cell	up	34.83	475	
2/17/2015	7	9.079	16091	Polarized Cell	up	31.04	490	
2/17/2015	8	9.079	16092	Polarized Cell	up	34.94	470	
2/17/2015	9	9.079	16093	Polarized Cell	up	34.59	470	trigger delay: 14.867 ms
2/17/2015	10	9.079	16094	Polarized Cell	up	33.88		15.067
2/17/2015	11	9.079	16095	Polarized Cell	up	34.57		14.467
2/17/2015	12	9.079	16096	Polarized Cell	up	33.3		14.267
2/17/2015	13	9.079	16097	Polarized Cell	up	32.16		14.067
2/17/2015	14	9.079	16098	Polarized Cell	up	33.42	475	14.067
2/17/2015	15	9.079	16099	Polarized Cell	up	35.75	480	
2/17/2015	16	9.079	16100	Polarized Cell	up	35.86	485	
2/17/2015	17	9.079	16101	Polarized Cell	up	35.16	490	
2/17/2015	18	9.079	16102	Polarized Cell	up	34.63	487	
2/17/2015	19	9.079	16103-16104	Polarized Cell	up	35.03	485	
2/17/2015	20	9.079	16105	Polarized Cell	down	38.25		AFP flip
2/17/2015	21	9.079	16106	Polarized Cell	down	38.19		
2/17/2015	22	9.079	16107	Polarized Cell	up			AFP Flip ---bad run
2/17/2015	23	9.079	16108	Polarized Cell	up			bad run
2/17/2015	24	9.079	16109	Polarized Cell	up	37.29		
2/17/2015	25	9.079	16110	Polarized Cell	up	37.64		
2/17/2015	26	9.049	16111	Polarized Cell	up	36.29		current changed from 21.98 - > 21.92
2/17/2015	27	9.129	16112	Polarized Cell	up			I = 22.12
2/17/2015	28		16113	De-polarized Cell		1.05		
2/17/2015	29		16114-16115	x	x	x	x	fundamentally flawed pedestal runs
2/17/2015	30		16116	????				
2/18/2015	31		16117-16120	Pedestal Runs				Taken next day with shutter closed

SFR Optimization



Data for Optimization

16110	9.049	37.6405
16111	9.079	36.2955
16112	9.129	19.4945

Minimizer is Minuit / Migrad

Chi2 = 8.92231e-08

NDf = 0

Edm = 1.78251e-07

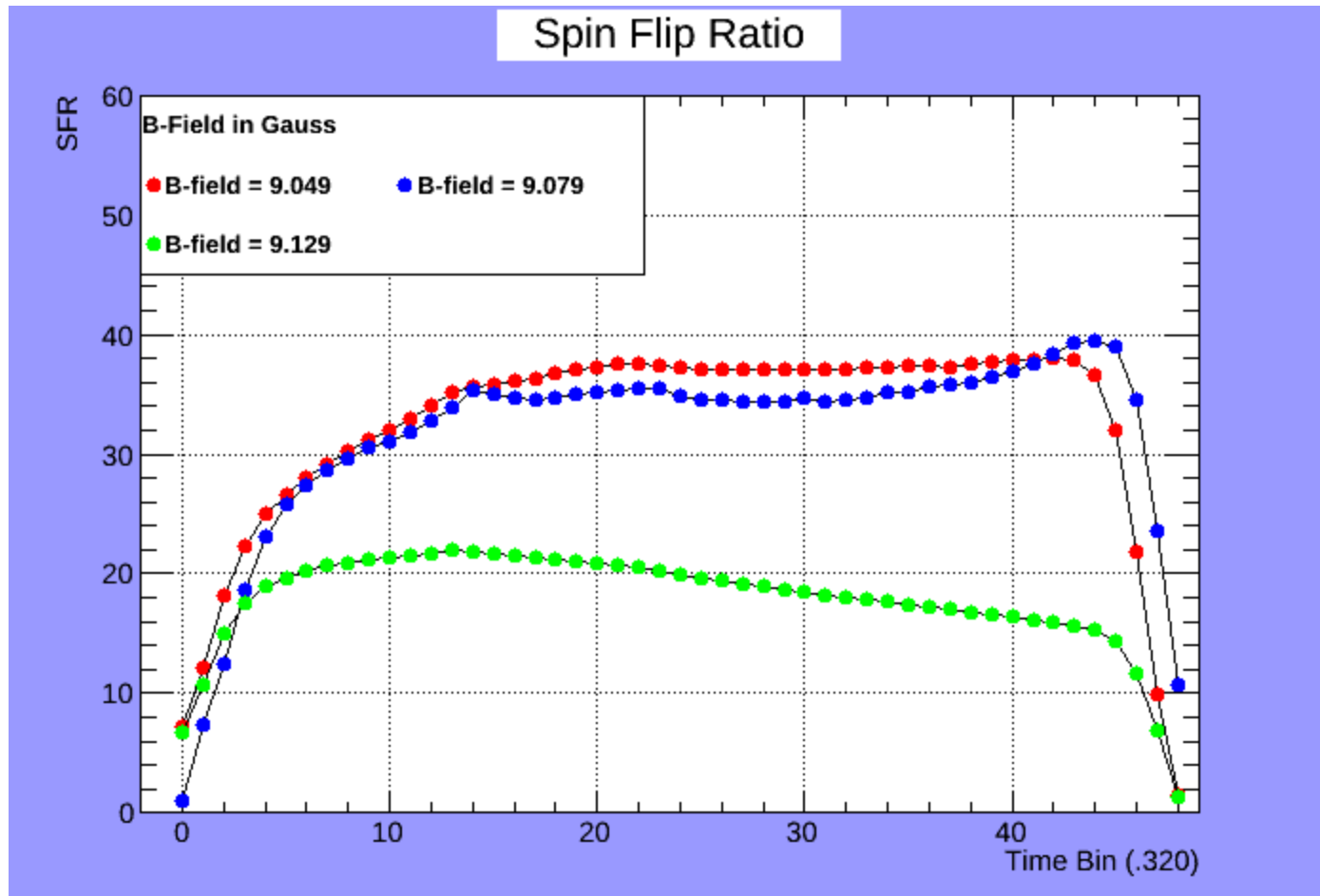
NCalls = 220

coefficient = 3639.76 +/- 823.02

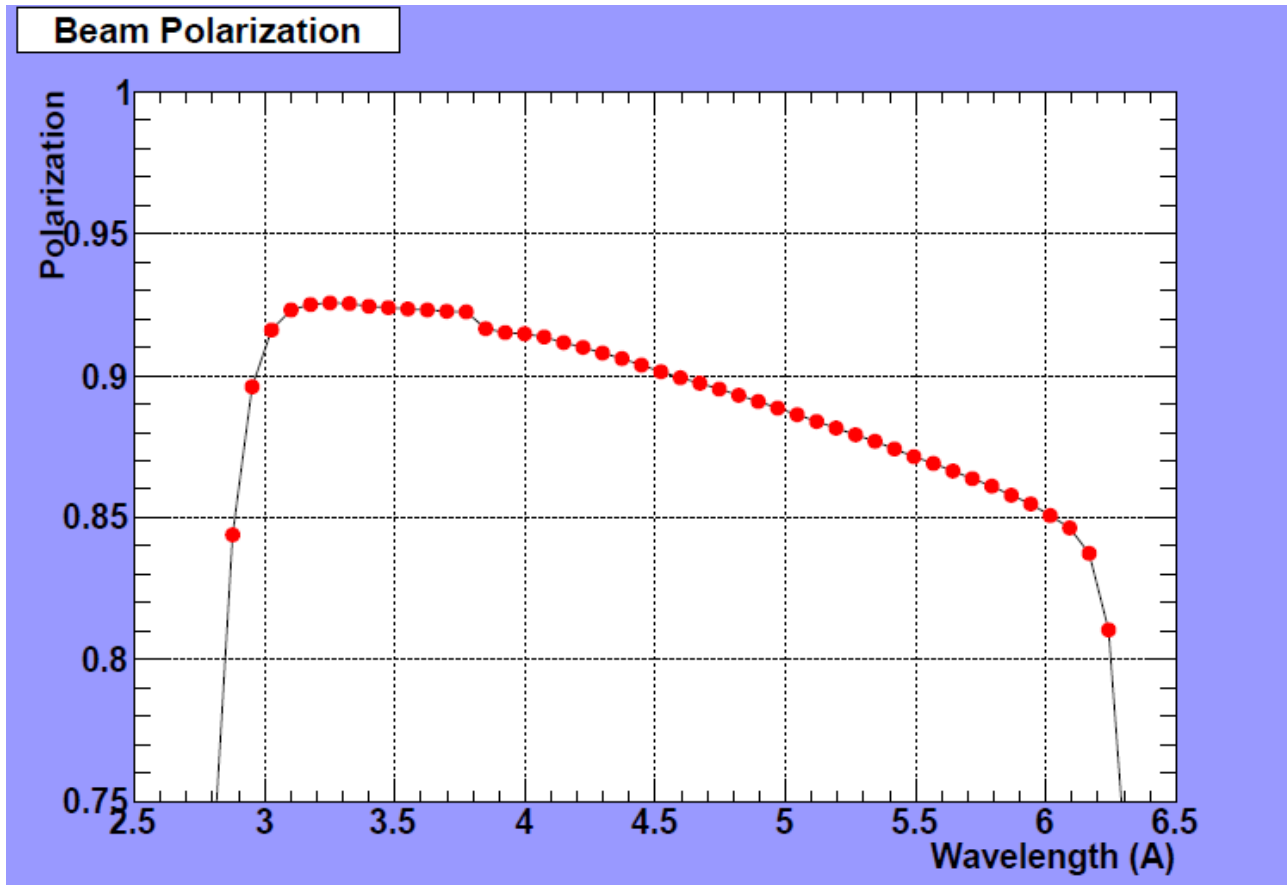
best_fit = 9.05784 +/- 0.00777047

best_sfr = 37.9249 +/- 0.756071

SFR versus Time bin

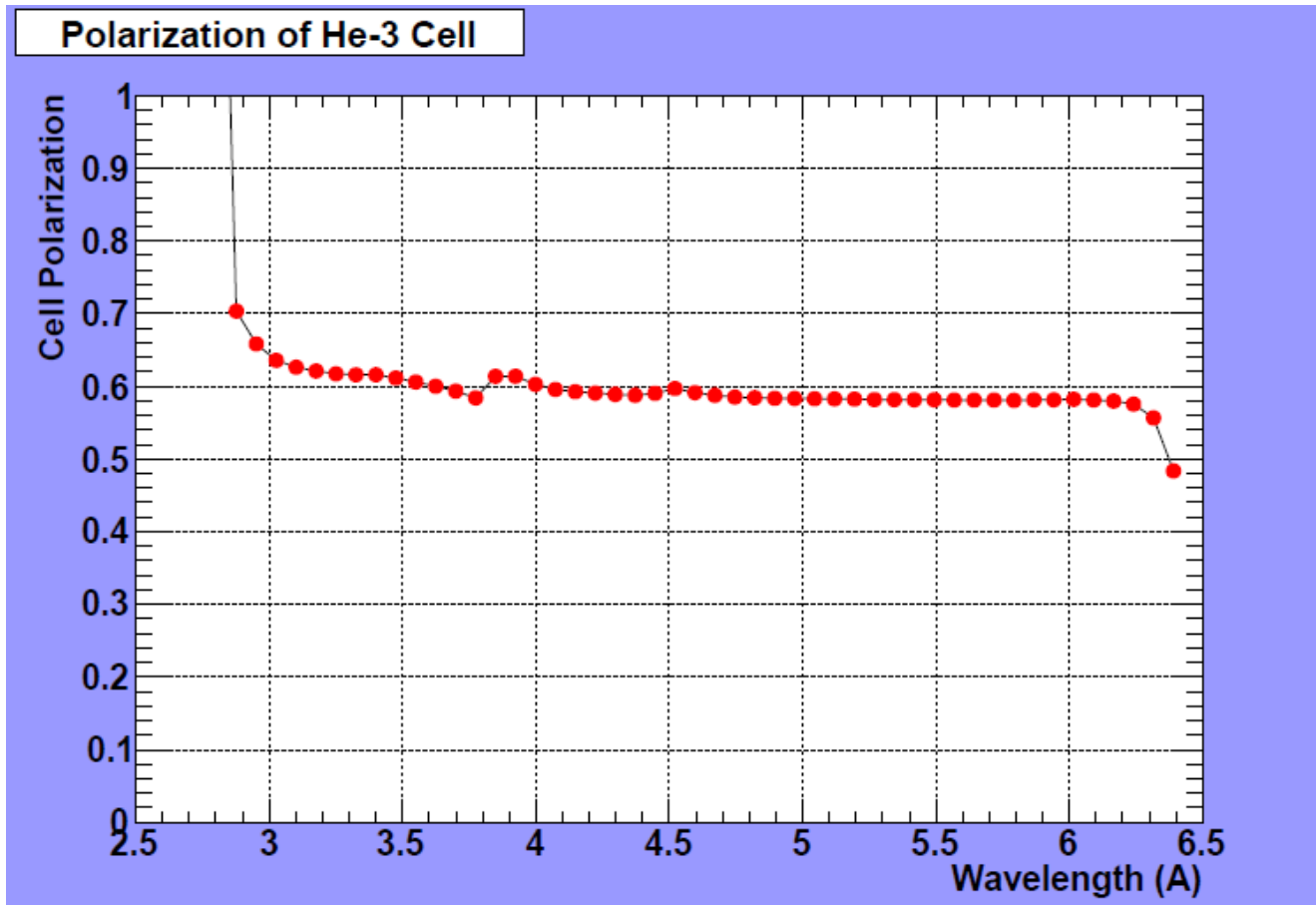


Beam Polarization



Slope of polarization curve is too steep. Problem here can be traced to pedestal runs which were taken next day with 4-Jaw collimator opened. See 2-25-2015 polarimetry for a better plot.

He-3 Cell Polarization



Spin Flipper Efficiency

