

Polarimetry

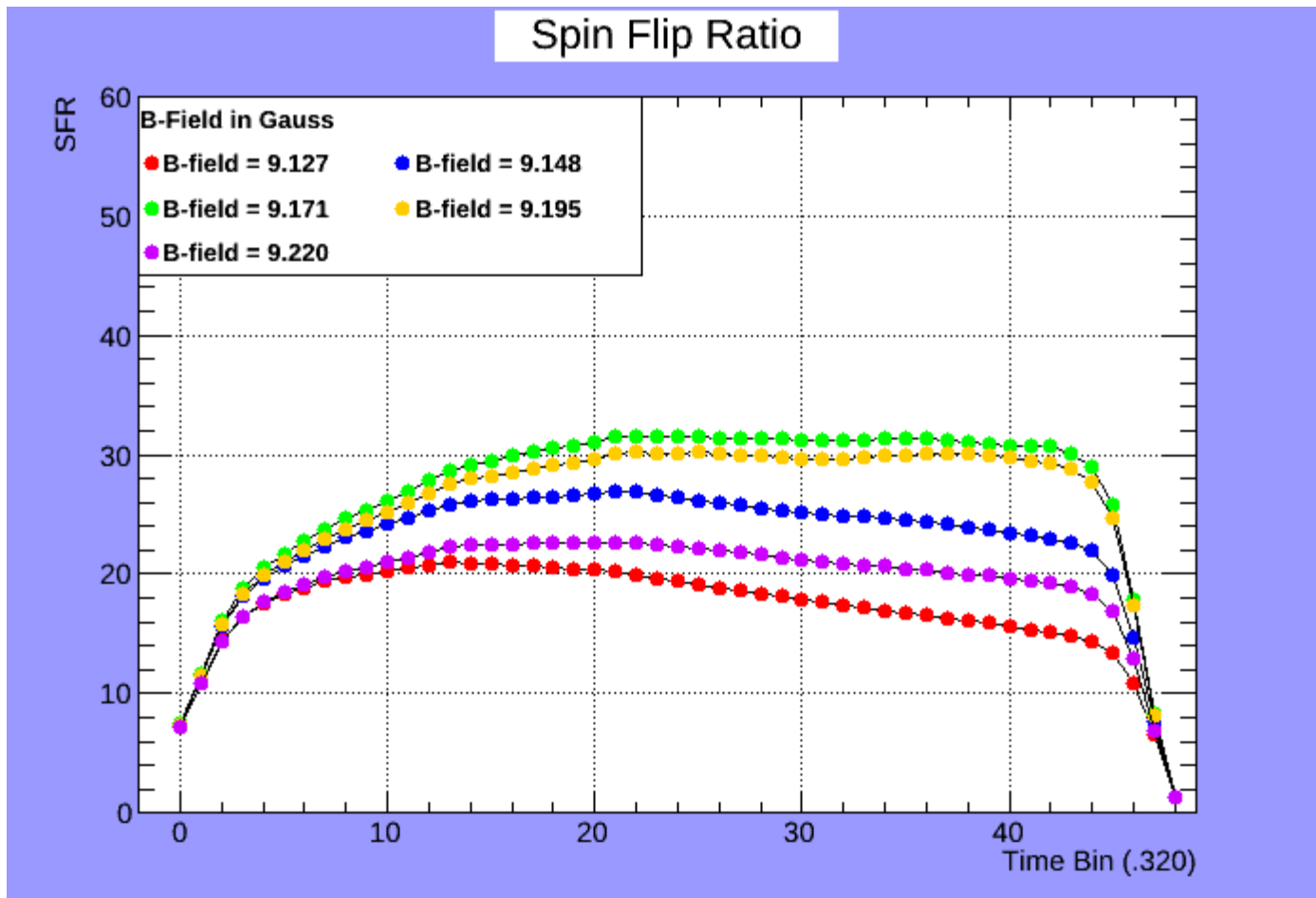
11-30-2015

n³He Experiment

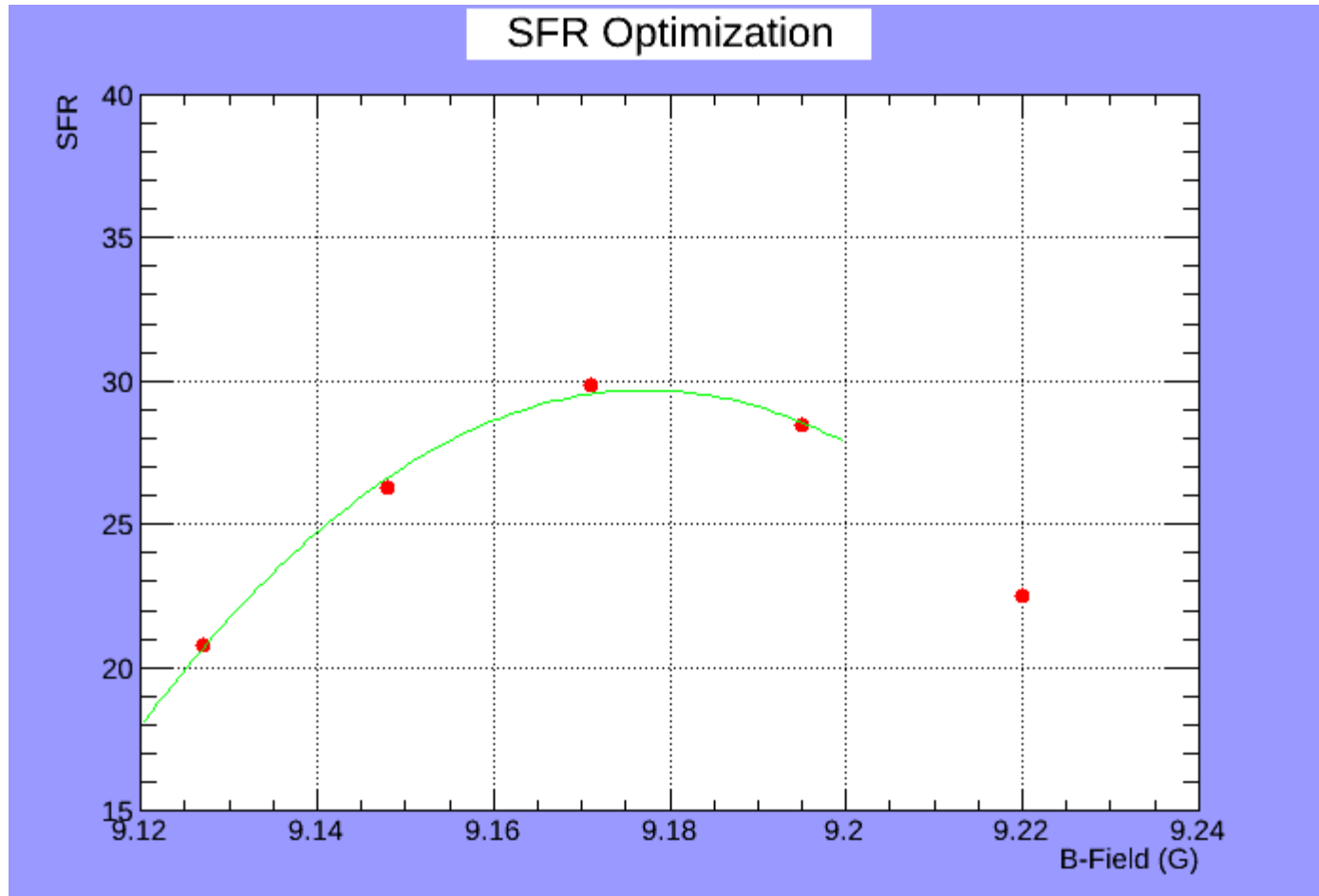
Data Runs

<i>FGV</i>	<i>By1</i>	<i>By2</i>	<i>Run Numbers</i>	<i>Description</i>	<i>Spin</i>	<i>SFR</i>	<i>Notes</i>
486	9.171		57123 - 57126				pedestal 57123 is bad)
486	9.171		57127-57129	Polarized Cell	up		
486	9.195		57130 - 57132	Polarized Cell	up		(57130 is bad)
486	9.148		57133 - 57135	Polarized Cell	up		Data in blue optimize SFR vs changes in guide field
486	9.127		57136 - 57138	Polarized Cell	up		
486	9.220		57139 -57141	Polarized Cell	up		
486	9.177		57142 - 57144	Polarized Cell	up		Run at optimal B
486	9.177		57145 - 57147	Polarized Cell	dn		AFP1
486	9.177		57148 - 57150	Polarized Cell	up		AFP2
486	9.177		57151 - 57153				de-polarized cell

Optimization of SFR



Optimization of SFR



Optimization Data

57137	9.127	20.7742
57134	9.148	26.2766
57128	9.171	29.8575
57132	9.195	28.4655
57140	9.22	22.509

Minimizer is Minuit / Migrad

Chi2 = 0.241738

NDf = 1

Edm = 5.83956e-07

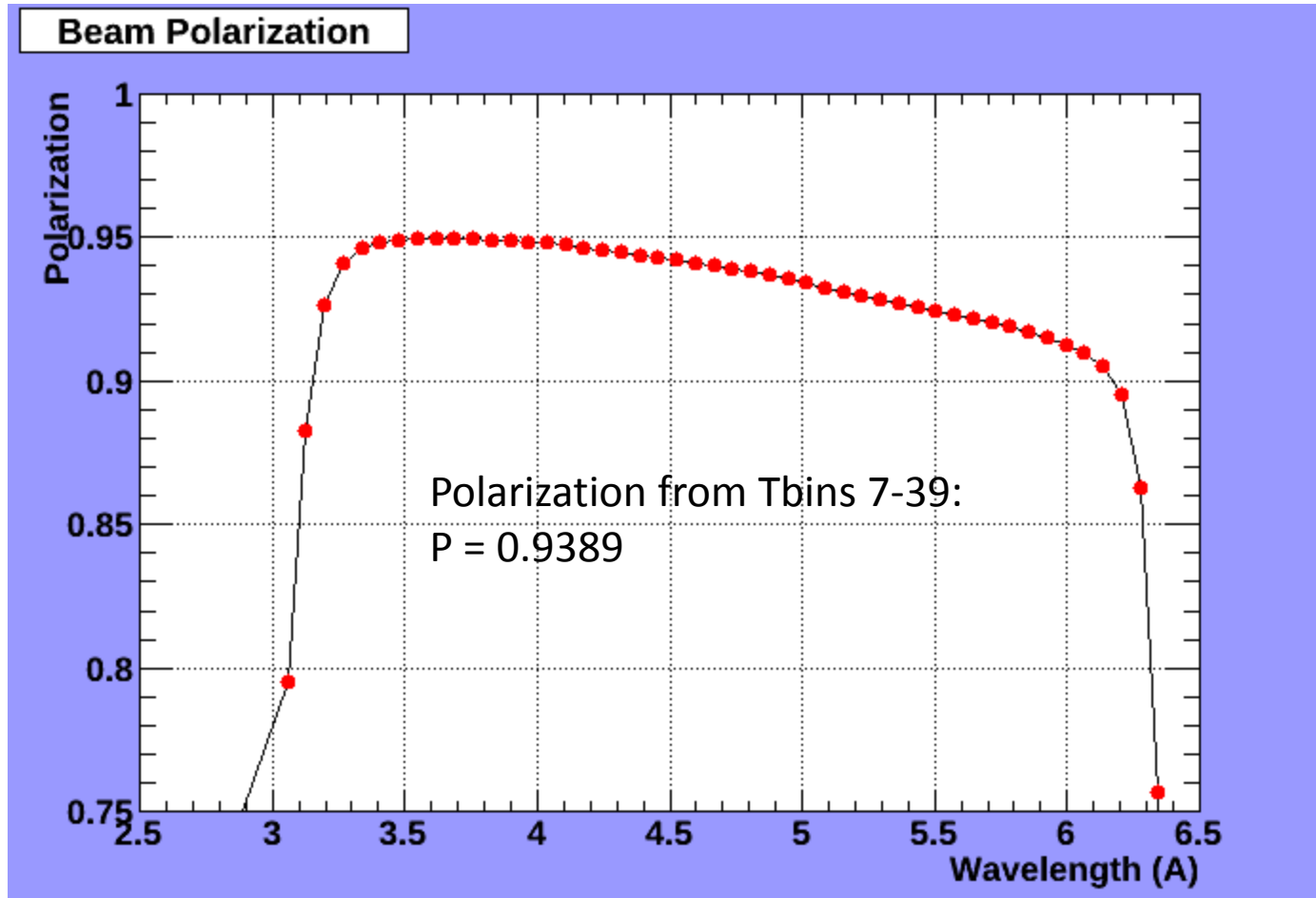
NCalls = 246

coefficient = 3567.34 +/- 481.385

best_fit = 9.17731 +/- 0.00257049

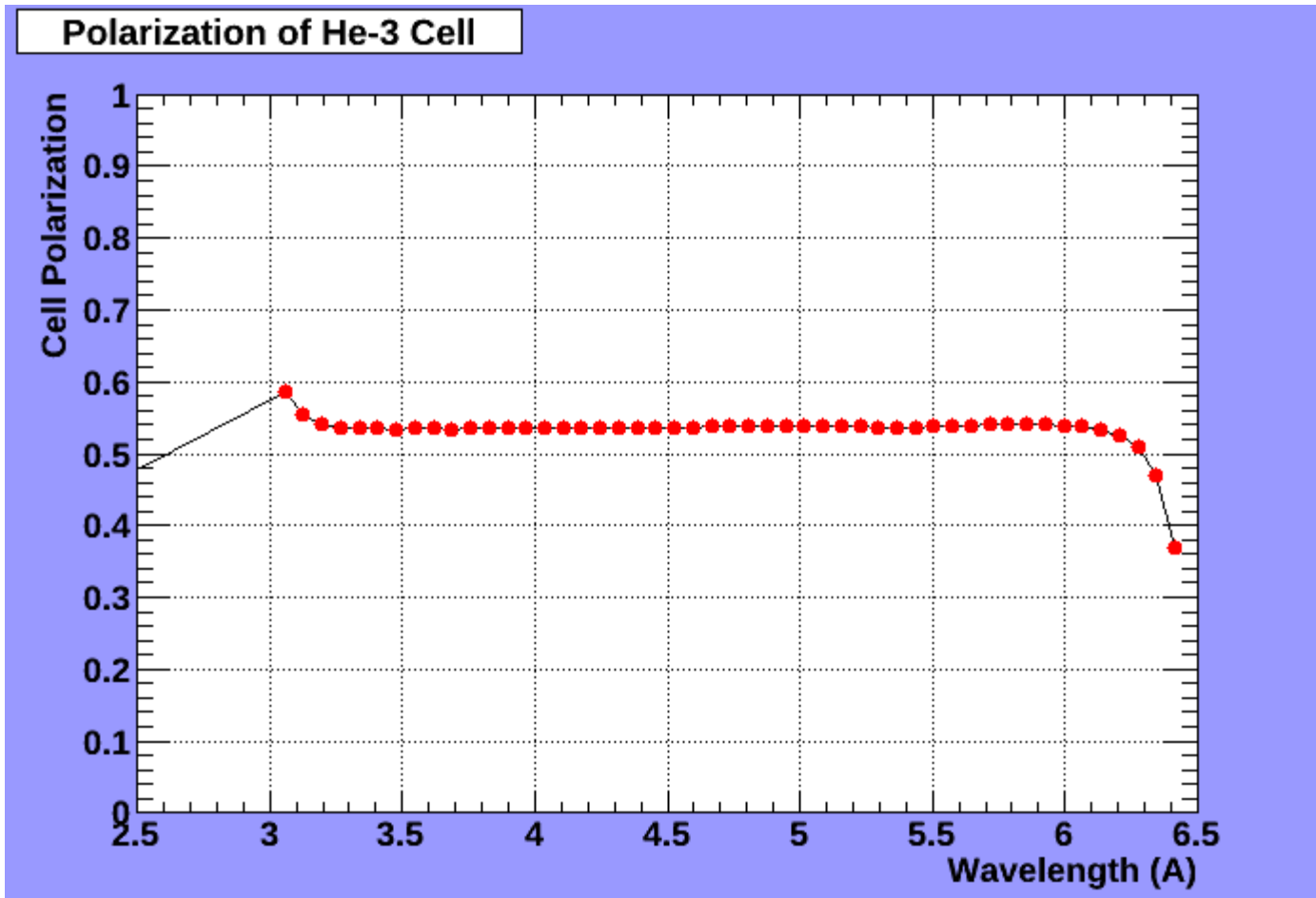
best_sfr = 29.6819 +/- 0.349071

Beam Polarization



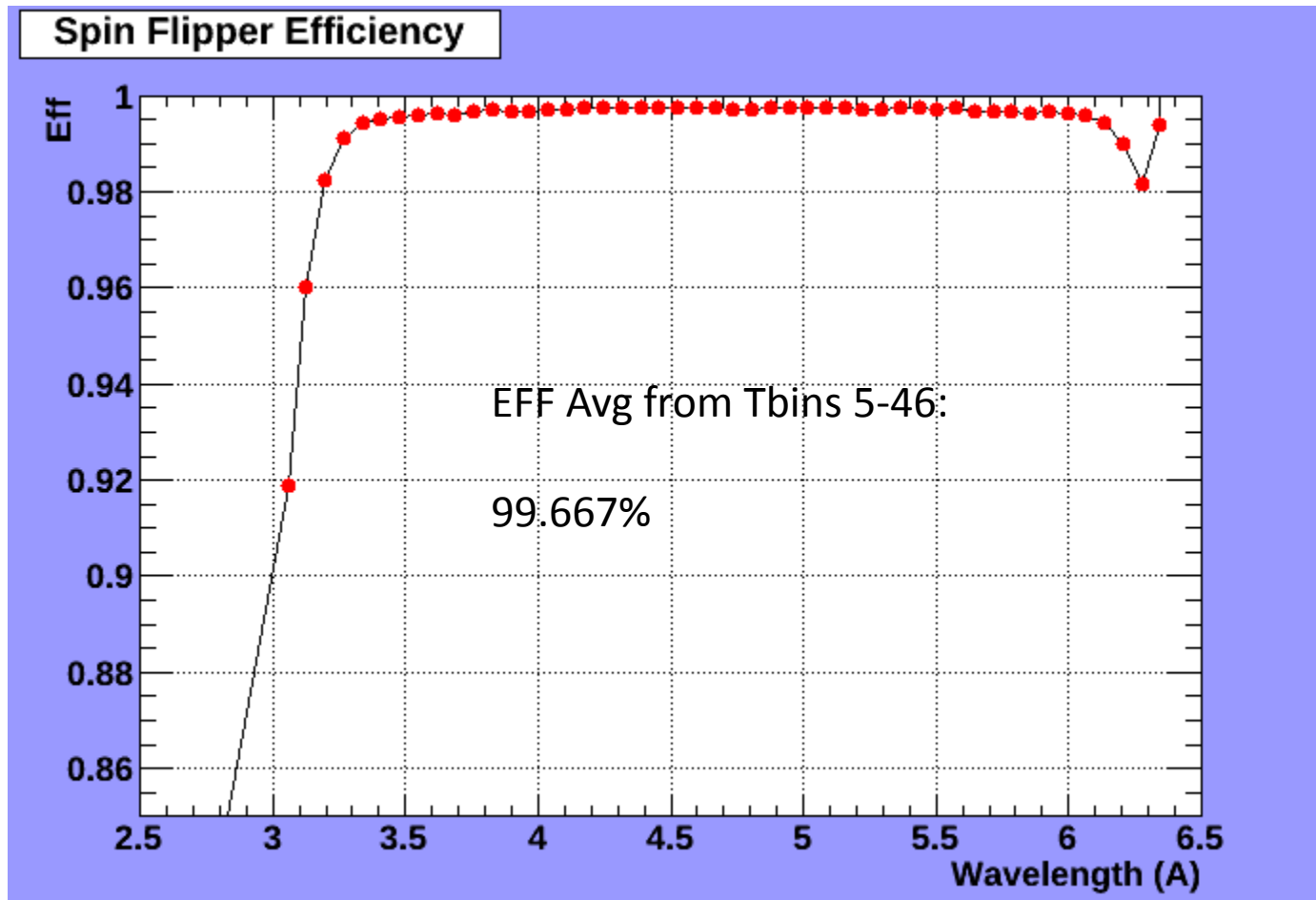
.x dipol.cc(57144, 57153, 57126)

Cell Polarization



dihep.cc(57144, 57153, 57126)

Spin Flipper Efficiency



dirfsf.cc(57143, 57146, 57149, 57126)