

Polarimetry

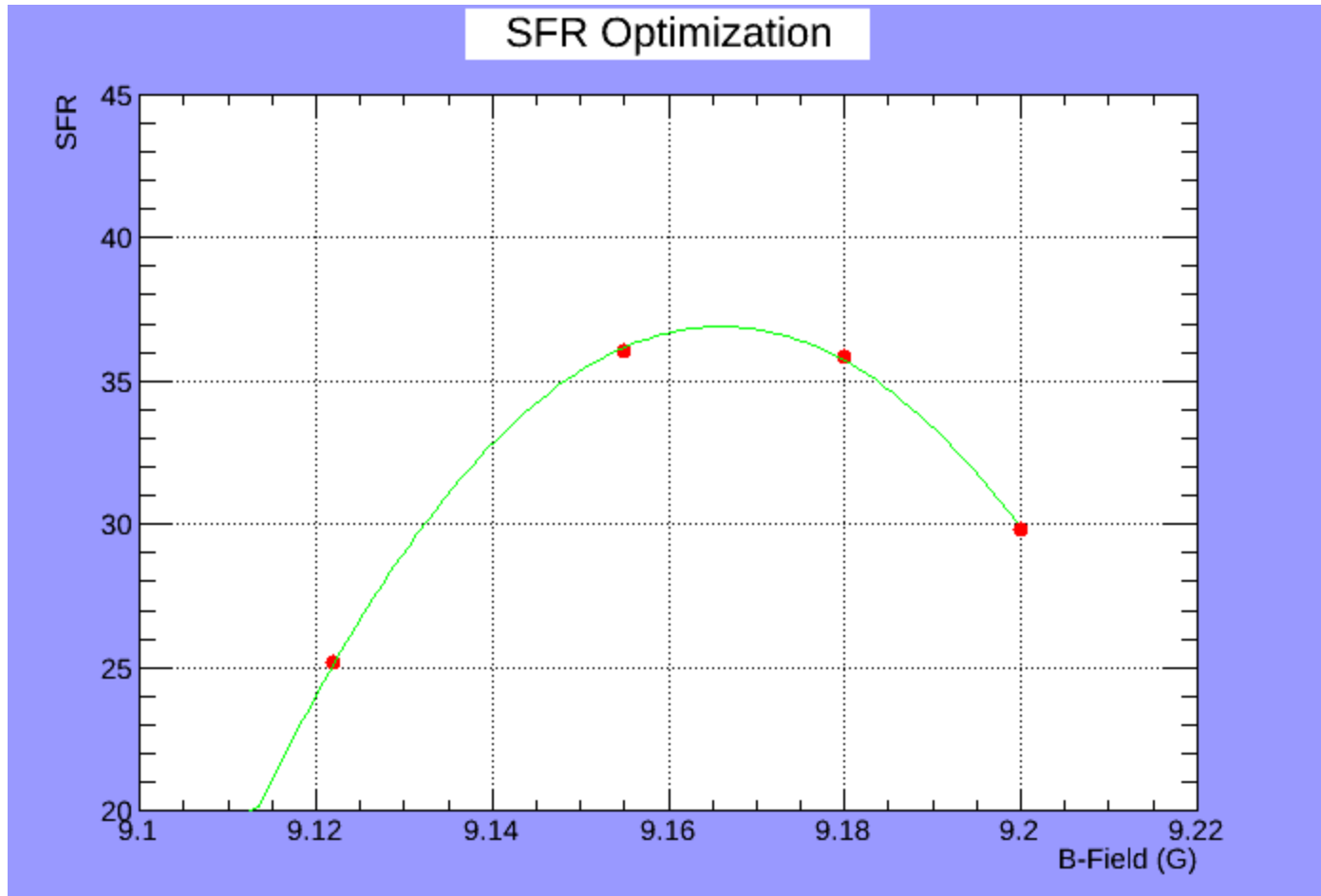
10-22-2015

n³He Experiment

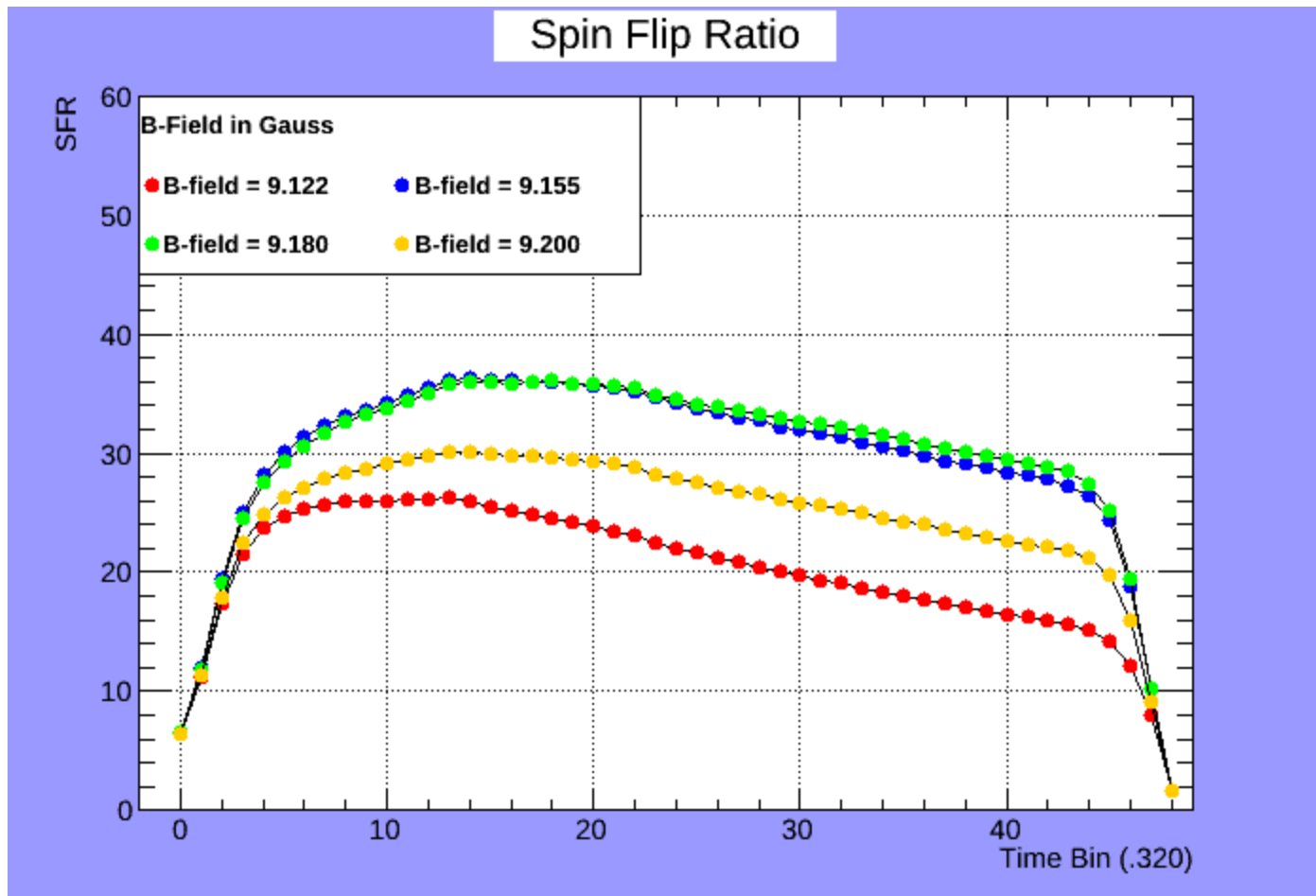
Data Runs

<i>Item</i>	<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>
1	486	9.180		50053 - 50055				pedestal
4	486	9.180		50056 - 50058	Polarized Cell	up		
5	486	9.200		50059 - 50061	Polarized Cell	up		
6	486	9.155		50062 - 50064	Polarized Cell	up		Data in blue optimize SFR vs changes in guide field
7	486	9.122		50068 - 50070	Polarized Cell	up		
8	486	9.167		50071 - 50073	Polarized Cell	up		Run at optimal B
9	486	9.167		50074 - 50076	Polarized Cell	dn		AFP1
10	486	9.167		50077 - 50079	Polarized Cell	up		AFP2
11	486	9.167		50080 - 50082				de-polarized cell

Optimization of SFR



Optimization of SFR



Optimization Data

50068	9.122	25.1546
50062	9.155	36.0649
50056	9.180	35.8371
50059	9.200	29.8058

Minimizer is Minuit / Migrad

Chi2 = 0.0312945

NDf = 1

Edm = 1.25722e-06

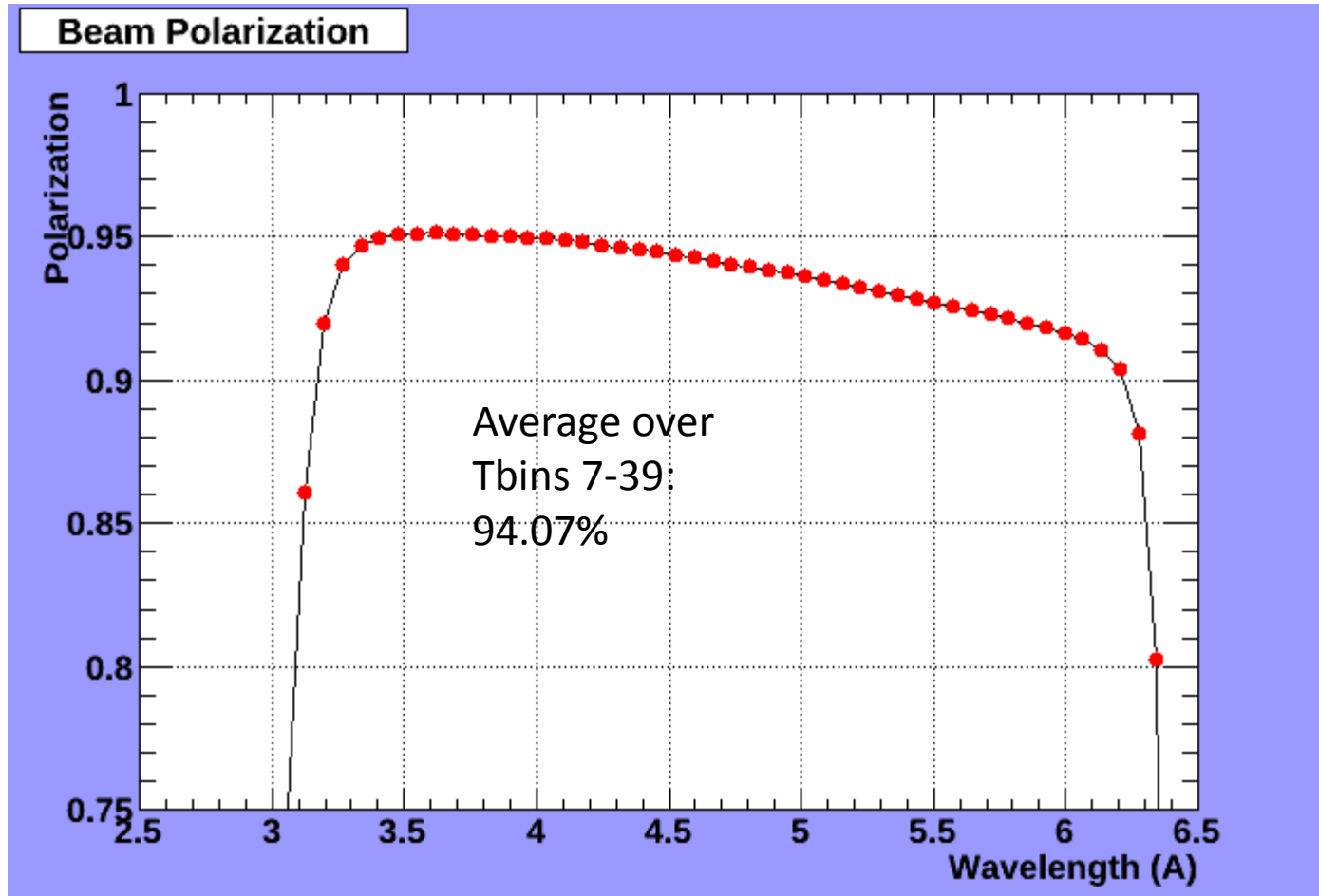
NCalls = 219

coefficient = 6084.89 +/- 132.039

best_fit = 9.16598 +/- 0.000277984

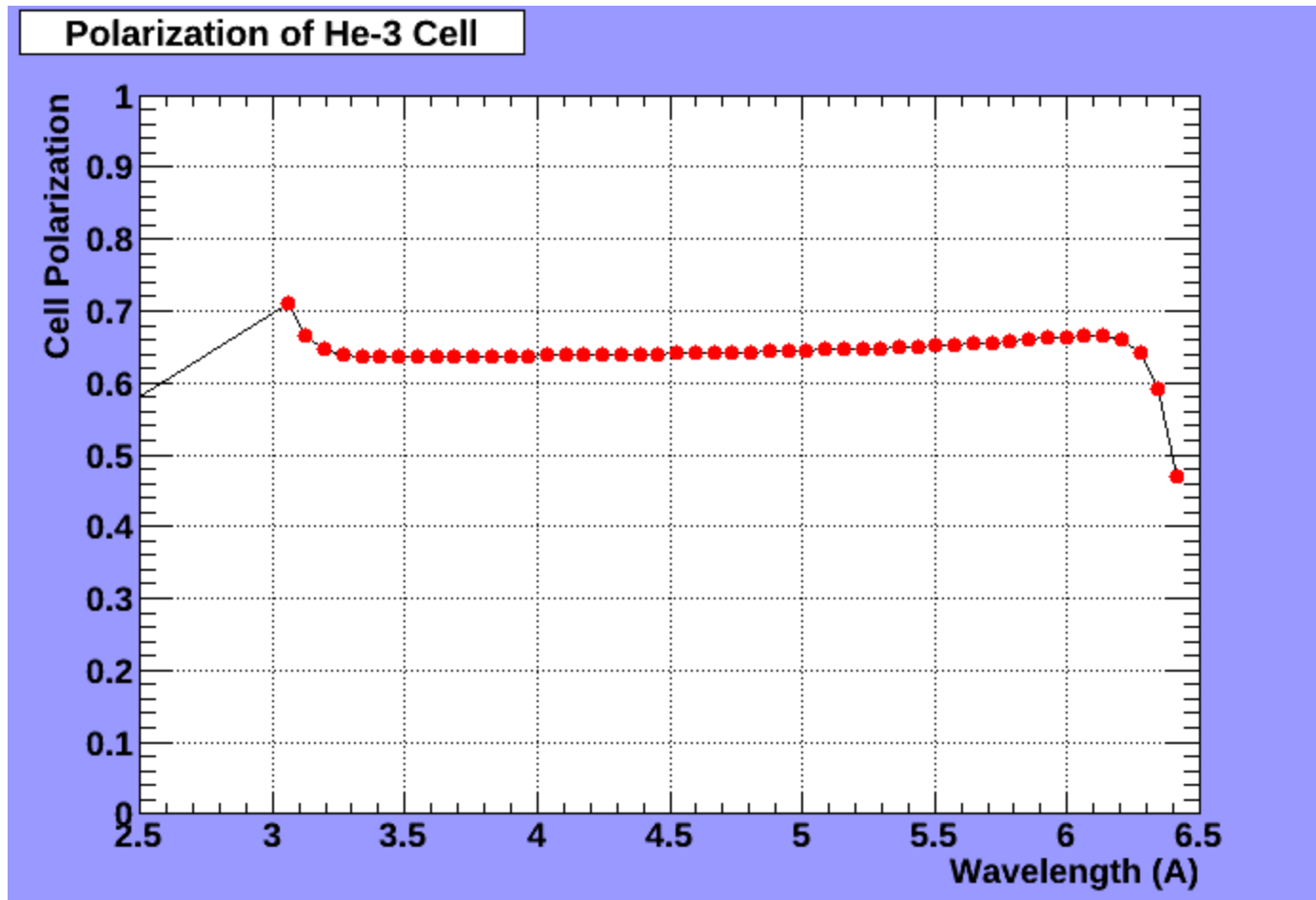
best_sfr = 36.9014 +/- 0.141195

Beam Polarization



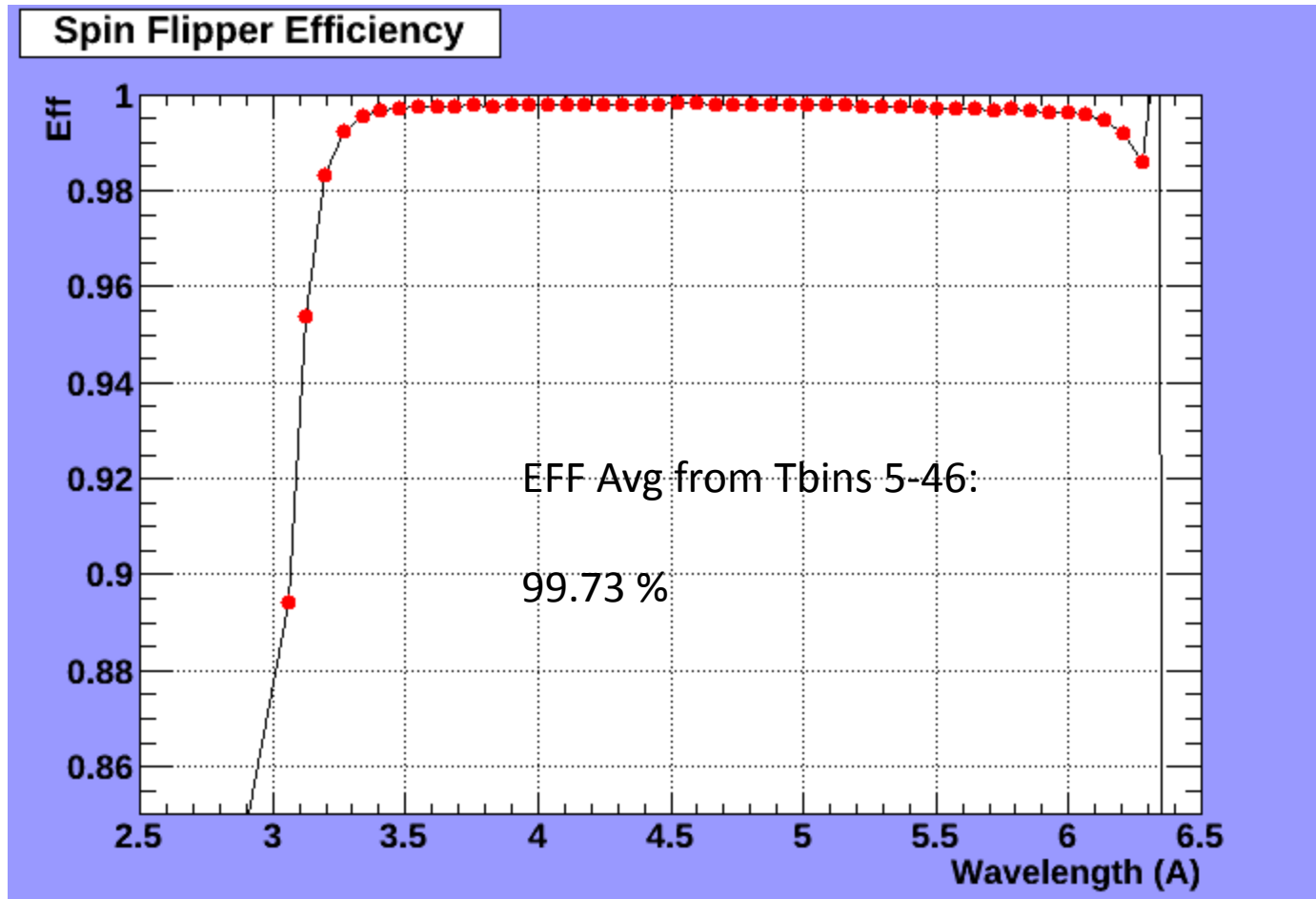
dipol.cc(50071, 50082, 50053)

Cell Polarization



dihep.cc(50071, 50082, 50053)

Spin Flipper Efficiency



Dirfsf.cc(50071, 50074, 50078, 50053)