

Polarimetry

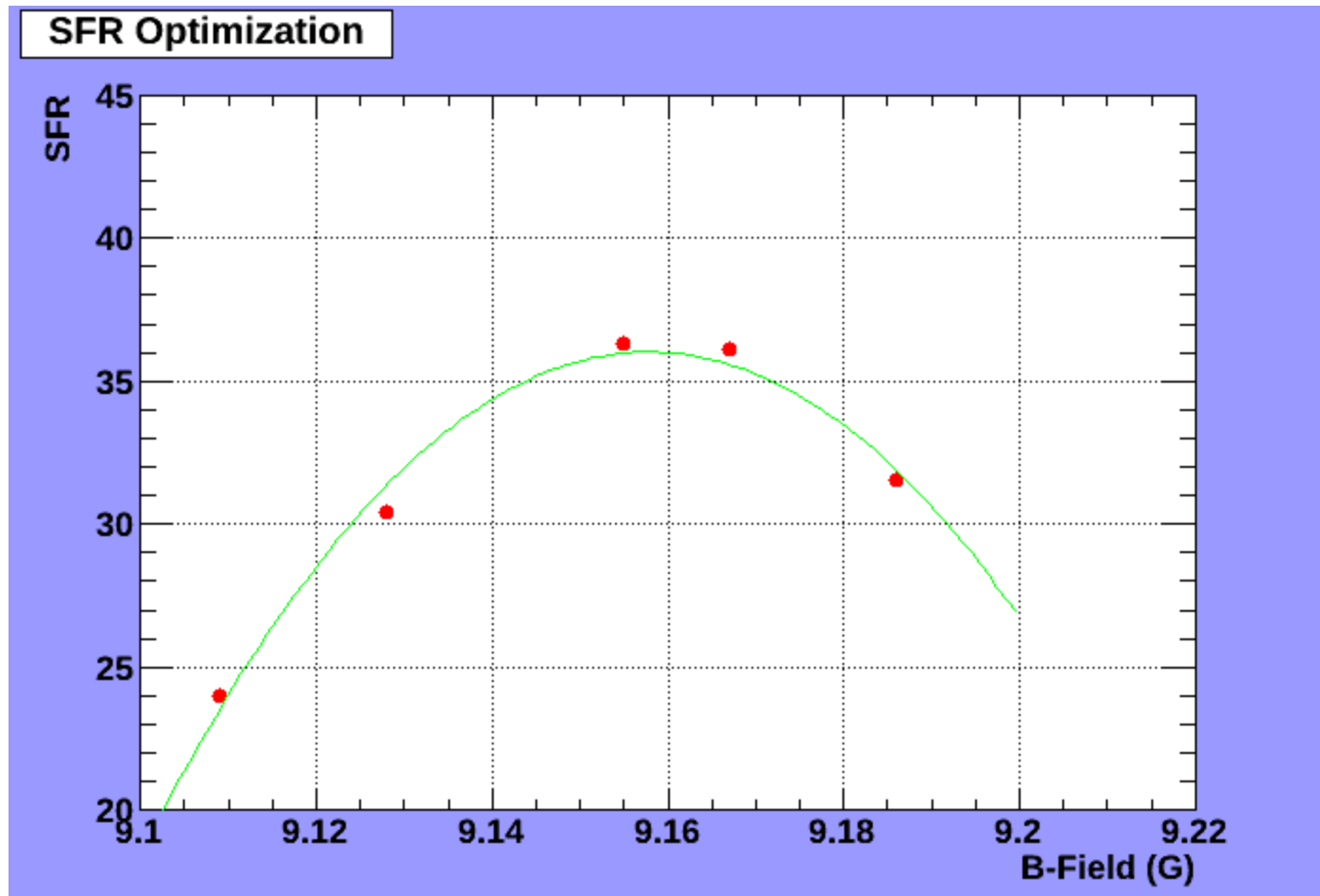
8-17-2015

n³He Experiment

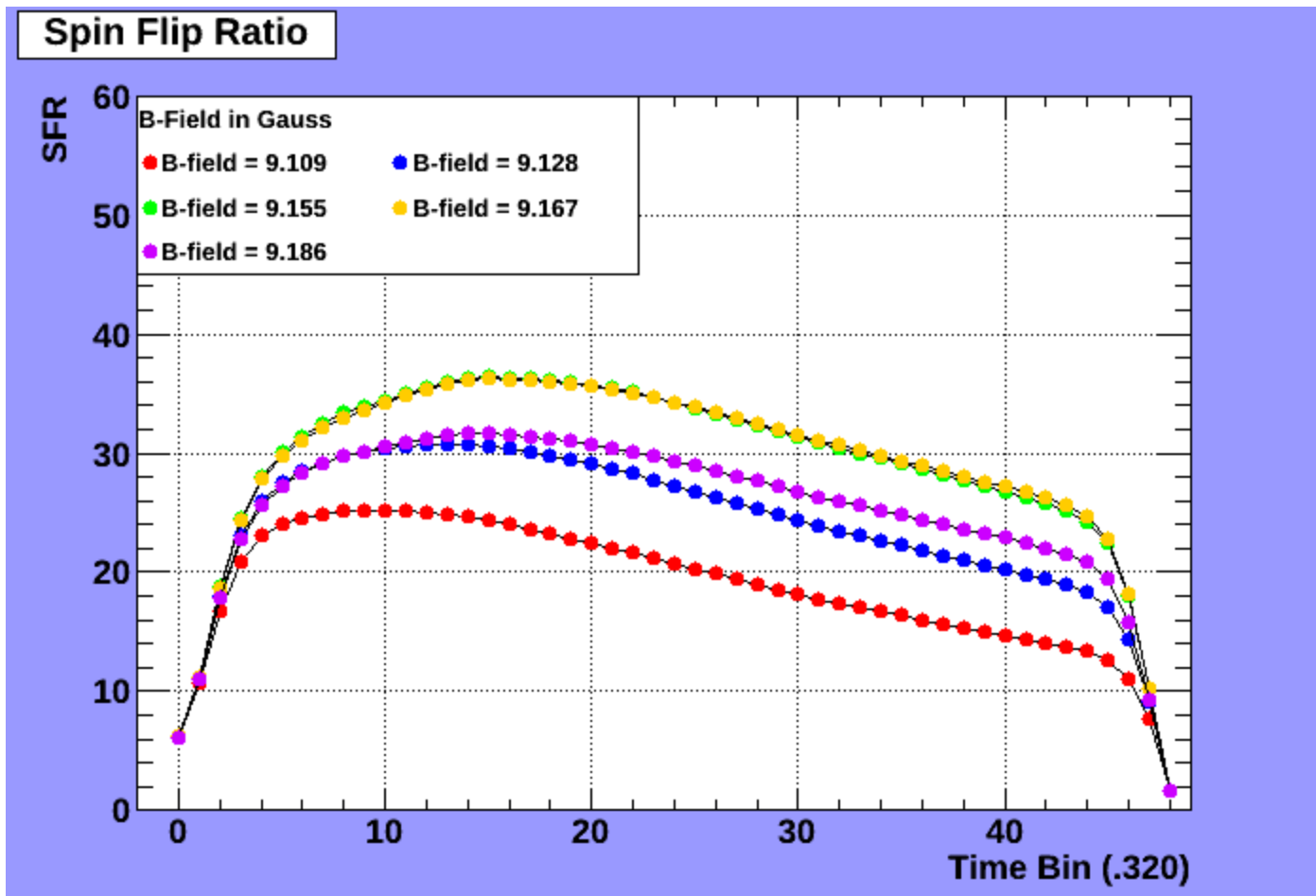
Data Runs

<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	9.155		39263-39270	Pedestal	up		Secondary Sutter Closed 4j collimator set
2	486	9.155		39271-39273	Polarized Cell	up		
3	486	9.128		39274-39276	Polarized Cell	up		Data in blue optimize SFR vs changes in guide field
4	486	9.109		39277-39279	Polarized Cell	up		
5	486	9.167		39280-39283	Polarized Cell	up		
	486	9.186		39284-39286				
6	486	9.159		39287-39289	Polarized Cell	up		Data in yellow include AFP flips fo SF effiency
7	486	9.159		39290-39292	Polarized Cell	dn		AFP Flip
8	486	9.159		39293-39295	Polarized Cell	up		2nd AFP Flip
9	486	9.143		39296-39298	De-polarized Cell	n/a		

Optimization of SFR



Optimization of SFR



Optimization Data

39277	9.109	23.9917
39274	9.128	30.4063
39271	9.155	36.3022
39280	9.167	36.1229
39284	9.186	31.5143

Minimizer is Minuit / Migrad

Chi2 = 1.64231

NDf = 2

Edm = 2.75876e-10

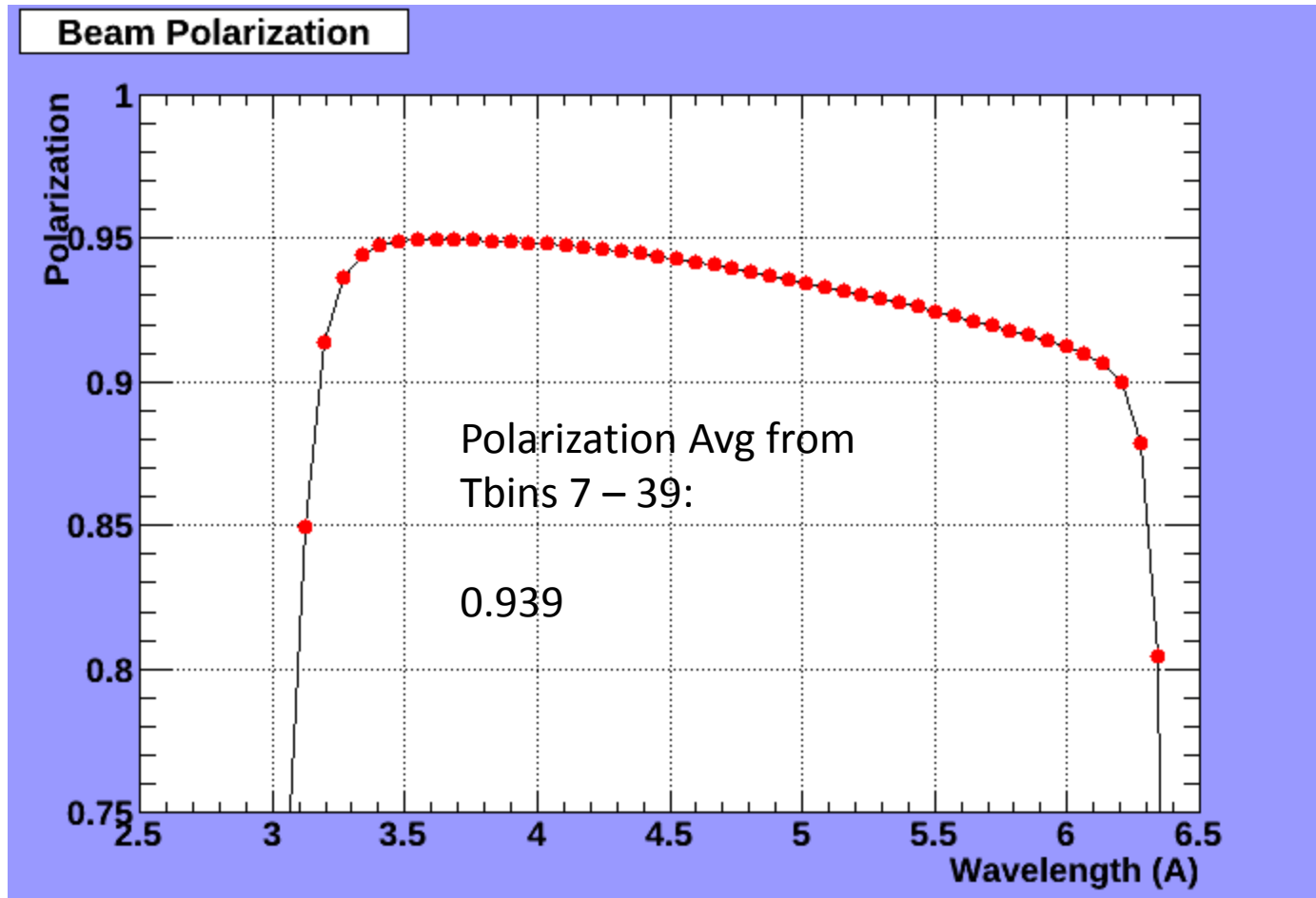
NCalls = 221

coefficient = 5233.24 +/- 672.151

best_fit = 9.15785 +/- 0.00200087

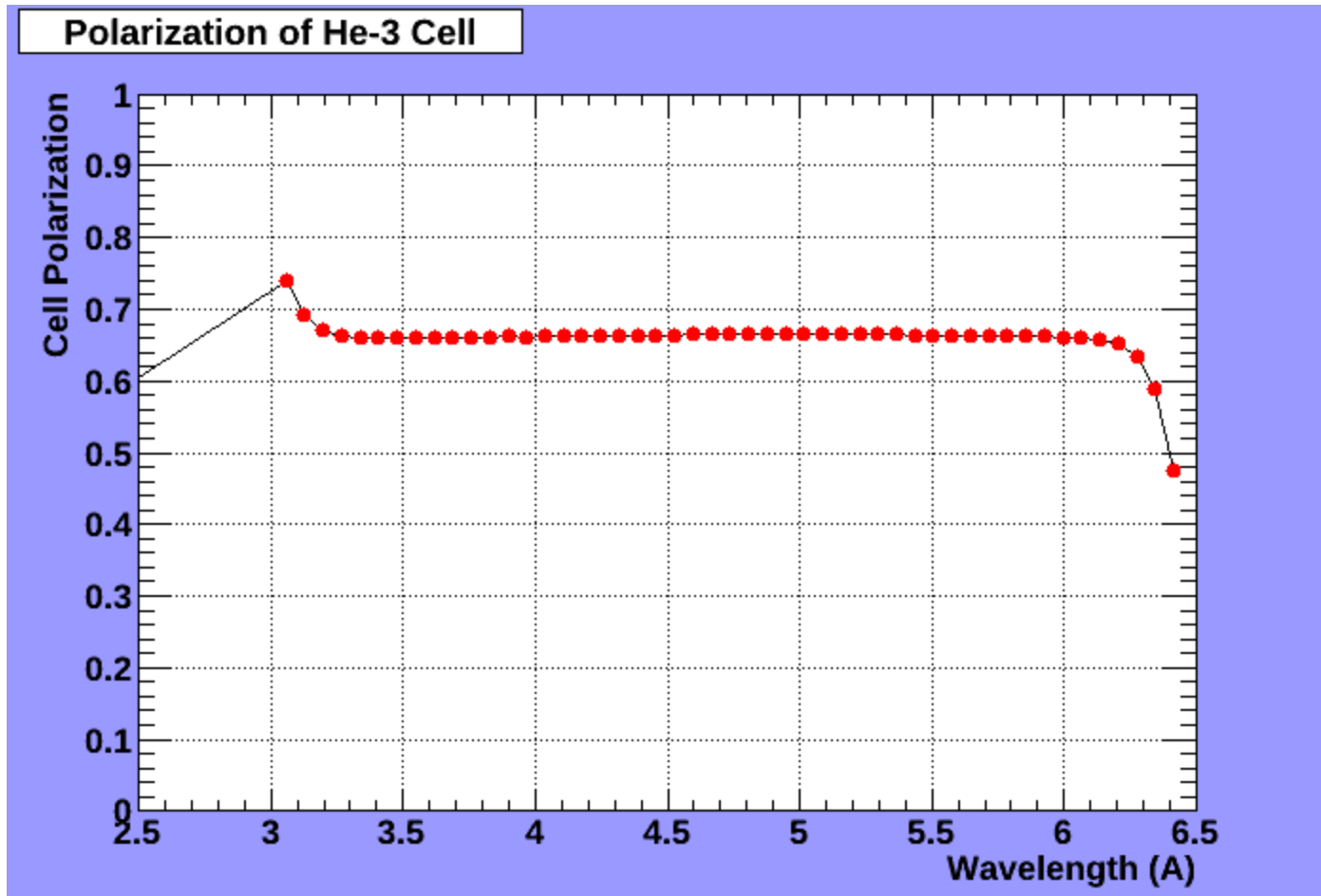
best_sfr = 36.0232 +/- 0.603668

Beam Polarization



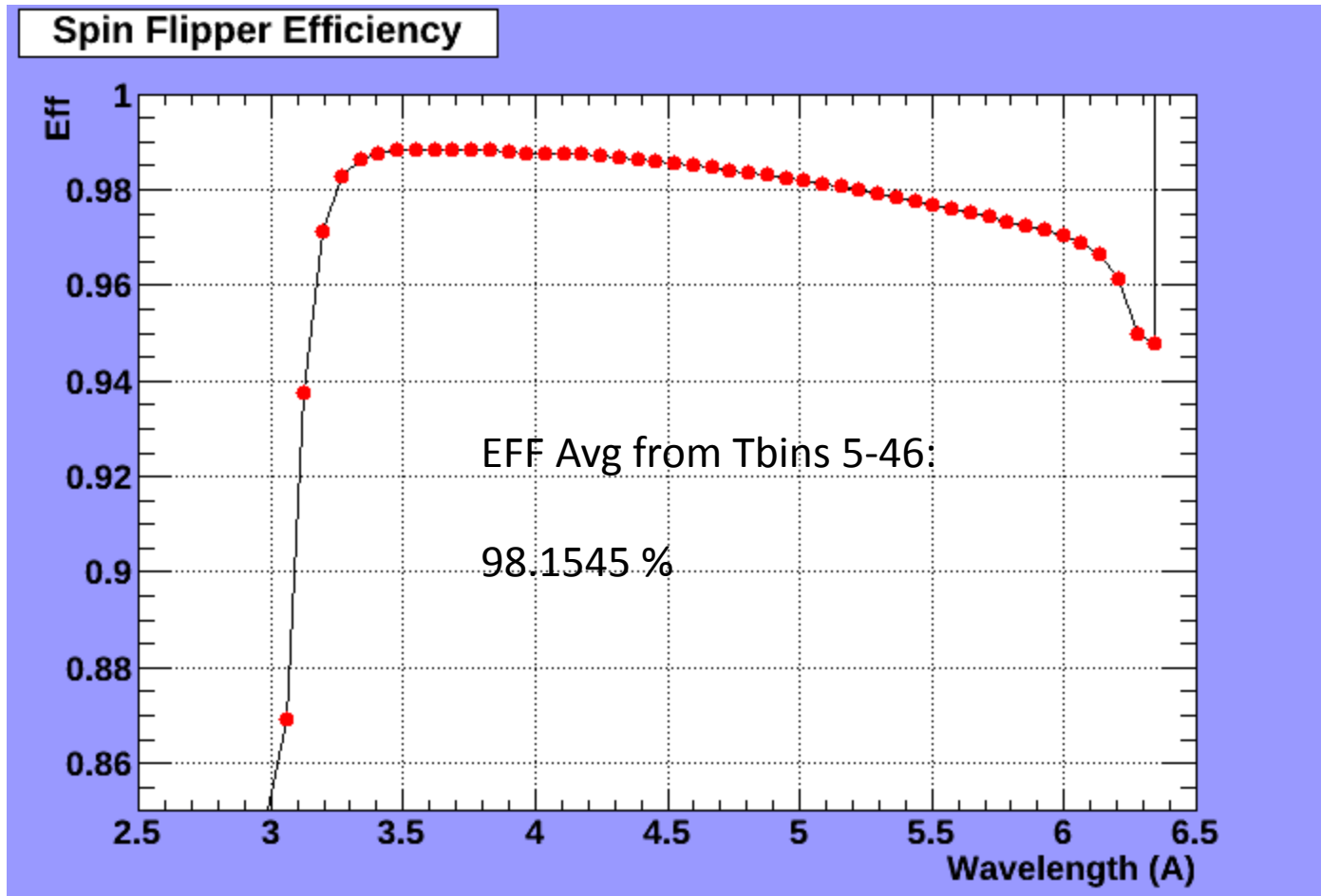
dipol.cc(39287, 39296, 39270)

Cell Polarization



dihep.cc(39287, 39296, 39270)

Spin Flipper Efficiency



Dirfsf.cc(39288, 39291, 39294, 39270)