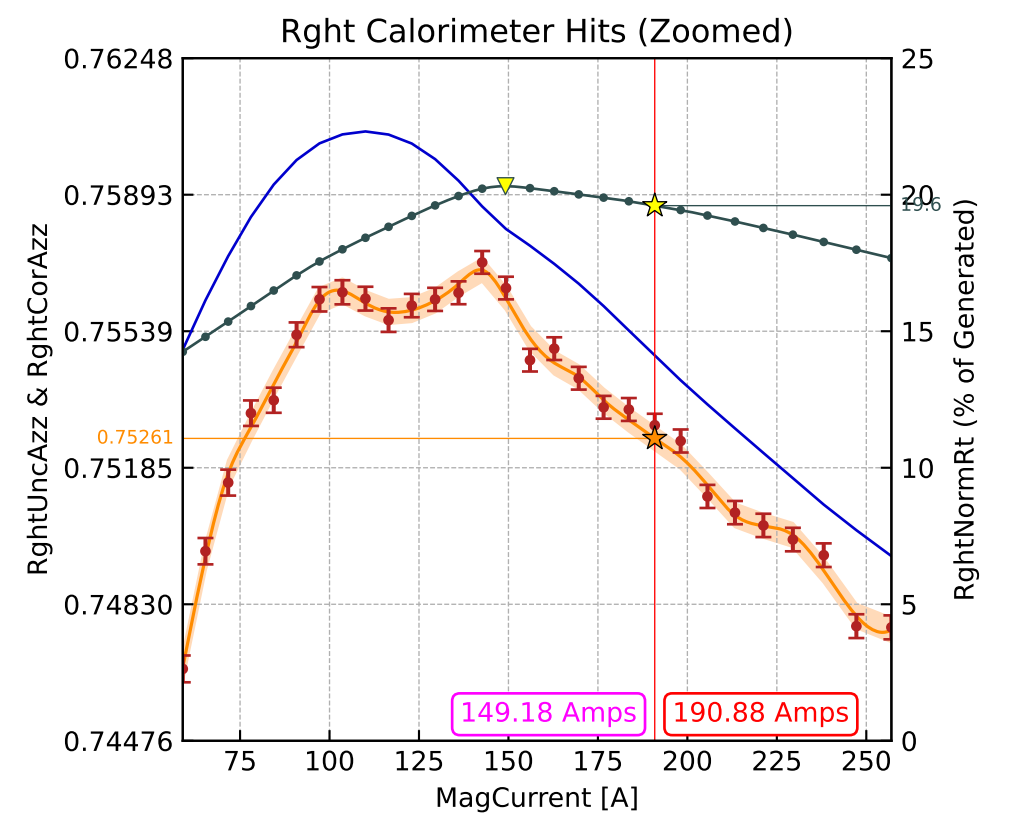
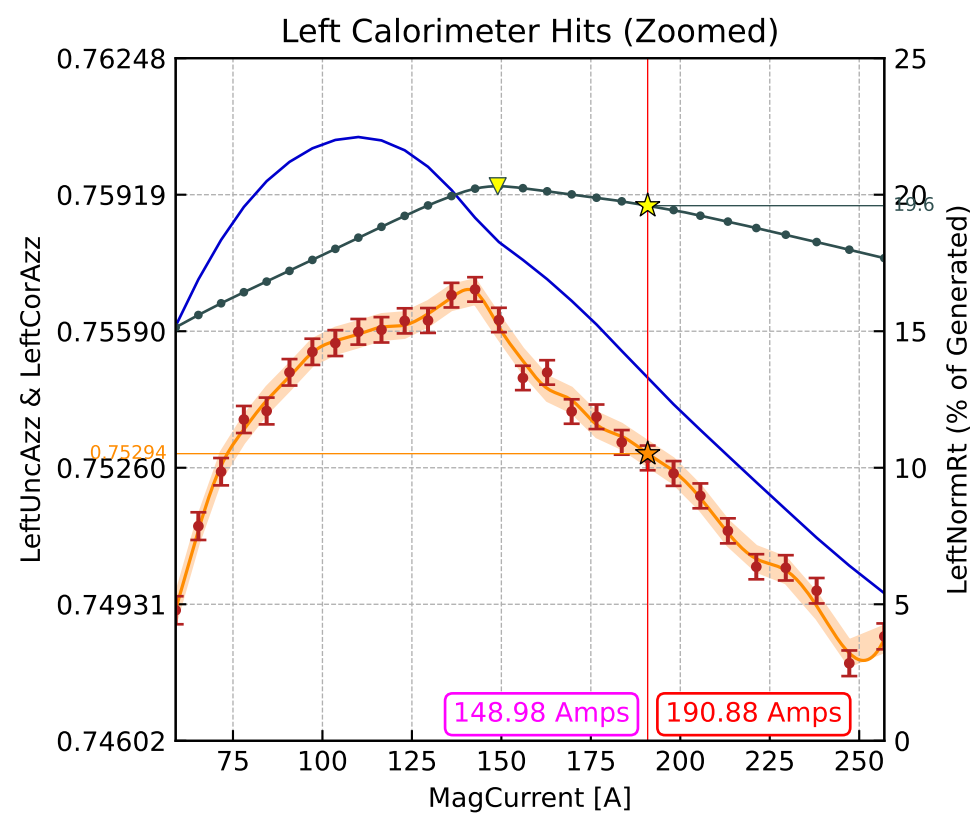
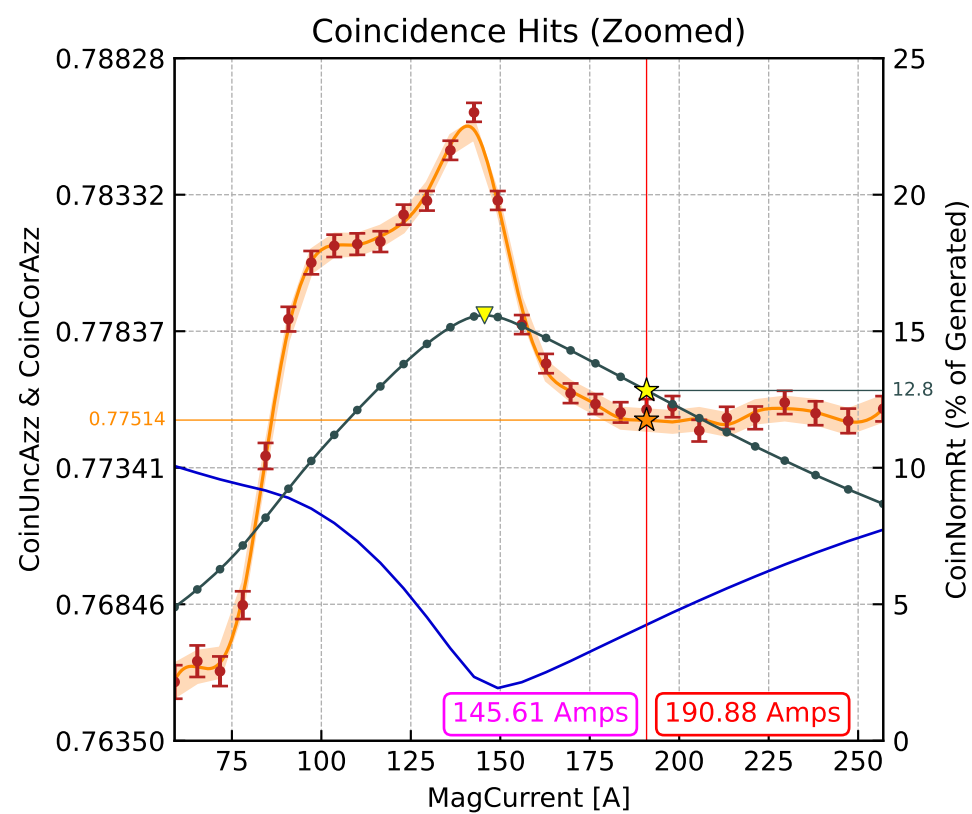
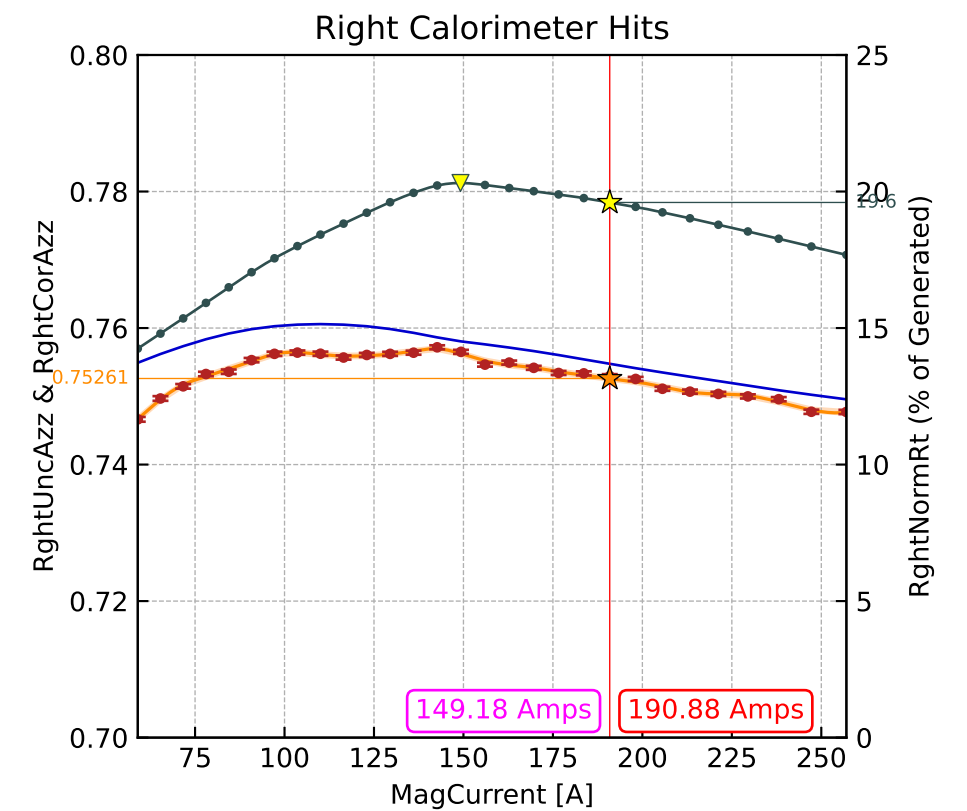
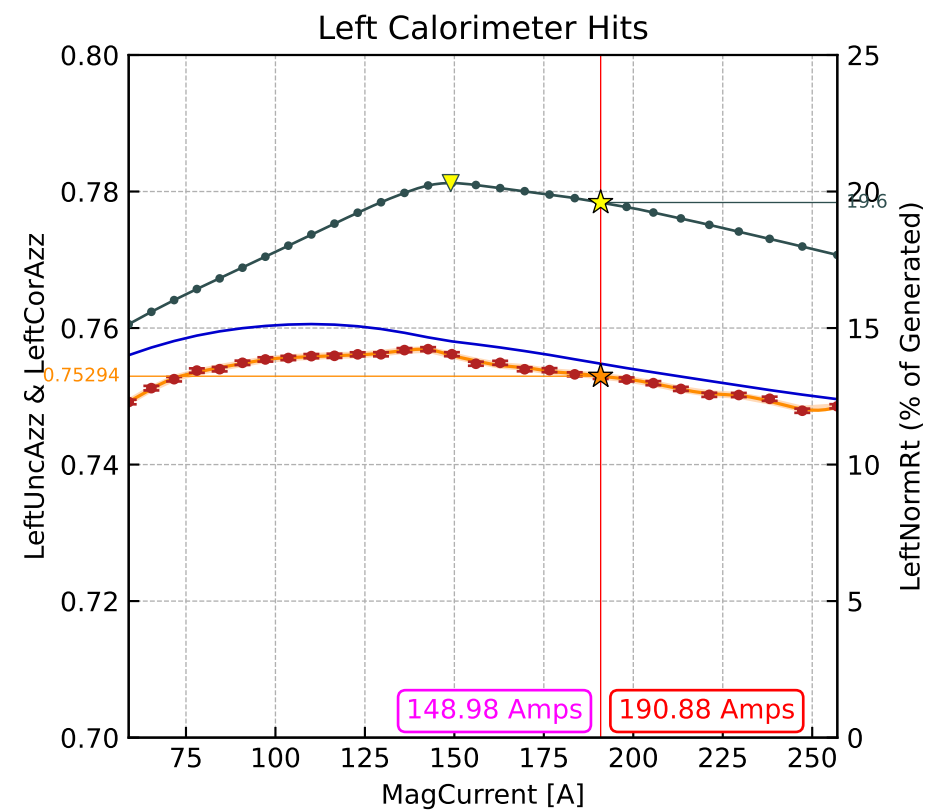
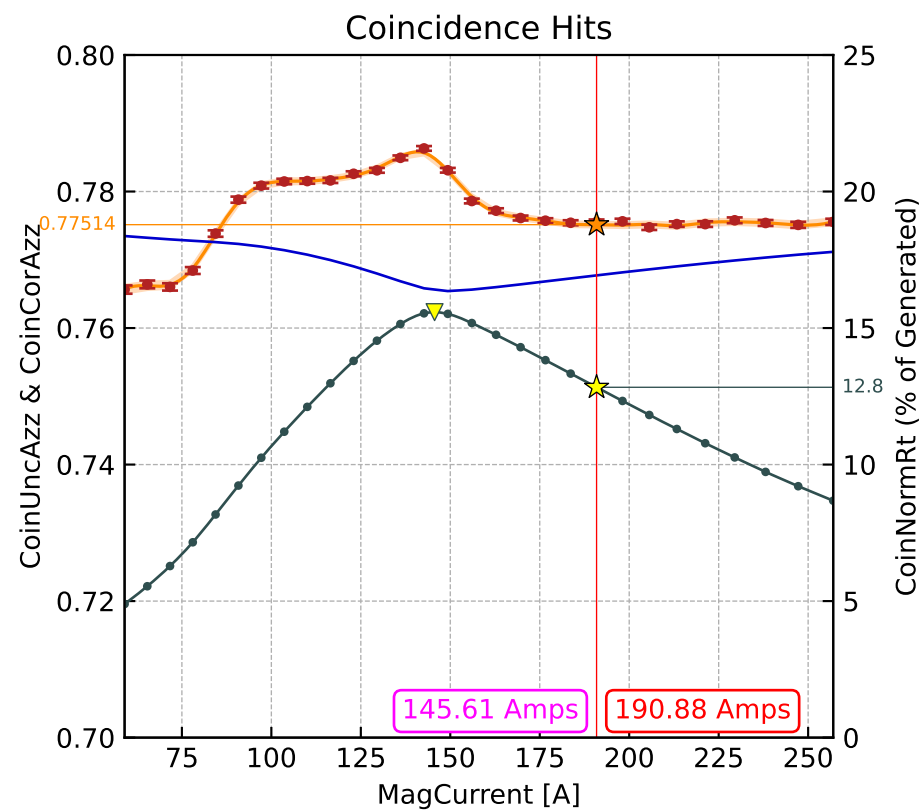


# 8.59 GeV | Quad3 Scan | 2025-02-28

Q1: -0.45 T (-183.290 A), Q2: -0.45 T (-223.732 A), Q4: 0.44 T (187.387 A), Q5: 1.13 T (417.742 A), Q6: 4 T



# 4PASS\_ERIC\_Q3, 8.59GeV, Magnet: Quad3 Scan

Q1: -0.45 T (-183.290 A), Q2: -0.45 T (-223.732 A), Q4: 0.44 T (187.387 A), Q5: 1.13 T (417.742 A), Q6: 4 T

## Coin Data Table

Simulation Data							Fit Data & Calc			
MagPoleTip	MagCurrent	UncAzz	CorAzz	CorAzzSmooth	CorErr	NormRt	AzzSlope <sup>1</sup>	AzzSlopeE <sup>2</sup>	AzzSlopeX2 <sup>3</sup>	Sensitivity *
0.140	58.989	0.773476	0.765637	0.765689	0.000609	4.89	*****	*****	*****	0.010186
0.155	65.332	0.773227	0.766391	0.766184	0.000573	5.54	*****	*****	*****	0.006670
0.170	71.682	0.772990	0.766026	0.766337	0.000538	6.28	0.000315	0.000027	15.30	0.026255
0.185	78.041	0.772783	0.768425	0.768744	0.000504	7.15	0.000539	0.000025	17.80	0.075770
0.200	84.410	0.772587	0.773841	0.773755	0.000473	8.17	0.000625	0.000024	5.59	0.098582
0.215	90.792	0.772322	0.778808	0.778470	0.000447	9.23	0.000496	0.000022	19.43	0.071957
0.230	97.189	0.771930	0.780858	0.780908	0.000424	10.25	0.000264	0.000021	16.77	0.030300
0.245	103.603	0.771406	0.781469	0.781496	0.000406	11.20	0.000092	0.000020	3.10	0.005989
0.260	110.038	0.770750	0.781532	0.781508	0.000390	12.11	0.000057	0.000019	0.57	0.003135
0.275	116.497	0.769960	0.781623	0.781813	0.000377	12.98	0.000069	0.000019	0.72	0.008106
0.290	122.983	0.769035	0.782600	0.782329	0.000365	13.80	0.000130	0.000018	2.01	0.015678
0.305	129.502	0.767987	0.783104	0.783411	0.000356	14.54	0.000181	0.000017	1.29	0.027375
0.320	136.059	0.766855	0.784936	0.785137	0.000348	15.15	0.000061	0.000017	22.37	0.022052
0.335	142.659	0.765822	0.786315	0.785681	0.000344	15.54	-0.000168	0.000017	60.70	-0.020108
0.350	149.309	0.765415	0.783116	0.783019	0.000343	15.52	-0.000348	0.000016	25.60	-0.061649
0.365	156.017	0.765629	0.778610	0.779223	0.000346	15.18	-0.000392	0.000016	13.82	-0.058112
0.380	162.792	0.765992	0.777195	0.776929	0.000351	14.75	-0.000256	0.000016	16.78	-0.028740
0.395	169.645	0.766398	0.776117	0.776198	0.000357	14.30	-0.000115	0.000016	1.72	-0.011367
0.410	176.589	0.766832	0.775725	0.775715	0.000363	13.82	-0.000058	0.000016	1.19	-0.009087
0.425	183.637	0.767268	0.775423	0.775212	0.000370	13.33	-0.000017	0.000016	0.37	-0.005265
<b>0.440</b>	<b>190.880</b>	<b>0.767713</b>	<b>0.775527</b>	<b>0.775144</b>	<b>0.000378</b>	<b>12.83</b>	<b>-0.000023</b>	<b>0.000016</b>	<b>0.64</b>	<b>-0.001204</b>
0.455	198.123	0.768157	0.775632	0.775076	0.000385	12.33	-0.000016	0.000016	0.74	0.000269
0.470	205.609	0.768595	0.774759	0.775180	0.000393	11.82	-0.000014	0.000016	0.79	-0.000733
0.485	213.299	0.769034	0.775224	0.774982	0.000402	11.30	0.000009	0.000016	1.24	0.001987
0.500	221.237	0.769467	0.775225	0.775442	0.000412	10.78	0.000023	0.000016	0.41	0.004732
0.515	229.480	0.769899	0.775783	0.775563	0.000422	10.26	-0.000000	0.000016	0.51	0.000003
0.530	238.105	0.770325	0.775391	0.775431	0.000434	9.73	-0.000000	0.000015	0.51	-0.003371
0.545	247.225	0.770749	0.775114	0.775088	0.000446	9.21	*****	*****	*****	0.000502
0.560	257.012	0.771165	0.775555	0.775562	0.000459	8.68	*****	*****	*****	0.006245

<sup>1</sup> dAzz/dA slope derived from linear fit over data point +/- 2 points of CorAzzSmooth.

<sup>2</sup> Error on the first-order parameter from the linear fit.

<sup>3</sup> Chi2/NDF value of the linear fit for quality assessment.

\* Relative sensitivity calculated using SciPy interp1d of CorAzzSmooth to MagCurrent

# 4PASS\_ERIC\_Q3, 8.59GeV, Magnet: Quad3 Scan

Q1: -0.45 T (-183.290 A), Q2: -0.45 T (-223.732 A), Q4: 0.44 T (187.387 A), Q5: 1.13 T (417.742 A), Q6: 4 T

## Left Data Table

Simulation Data							Fit Data & Calc			
MagPoleTip	MagCurrent	UncAzz	CorAzz	CorAzzSmooth	CorErr	NormRt	AzzSlope <sup>1</sup>	AzzSlopeE <sup>2</sup>	AzzSlopeX2 <sup>3</sup>	Sensitivity *
0.140	58.989	0.756024	0.749167	0.749191	0.000338	15.14	*****	*****	*****	0.040199
0.155	65.332	0.757146	0.751196	0.751101	0.000334	15.59	*****	*****	*****	0.036304
0.170	71.682	0.758099	0.752509	0.752651	0.000330	16.02	0.000190	0.000016	3.18	0.025398
0.185	78.041	0.758894	0.753768	0.753530	0.000326	16.43	0.000139	0.000016	1.27	0.016417
0.200	84.410	0.759516	0.753973	0.754226	0.000323	16.82	0.000108	0.000016	0.66	0.013136
0.215	90.792	0.759981	0.754906	0.754793	0.000319	17.21	0.000080	0.000016	0.46	0.012006
0.230	97.189	0.760308	0.755400	0.755384	0.000316	17.61	0.000070	0.000016	0.70	0.009023
0.245	103.603	0.760510	0.755611	0.755665	0.000312	18.02	0.000039	0.000015	0.19	0.004547
0.260	110.038	0.760581	0.755883	0.755825	0.000309	18.43	0.000028	0.000015	0.04	0.003405
0.275	116.497	0.760499	0.755931	0.755997	0.000306	18.82	0.000021	0.000015	0.06	0.002259
0.290	122.983	0.760261	0.756147	0.756046	0.000303	19.22	0.000031	0.000015	0.36	0.003251
0.305	129.502	0.759863	0.756156	0.756317	0.000300	19.61	0.000039	0.000015	0.26	0.006706
0.320	136.059	0.759304	0.756767	0.756709	0.000297	19.95	0.000012	0.000014	1.91	0.005388
0.335	142.659	0.758633	0.756905	0.756852	0.000295	20.22	-0.000052	0.000014	6.49	-0.007013
0.350	149.309	0.758048	0.756168	0.755998	0.000294	20.31	-0.000088	0.000014	2.55	-0.016549
0.365	156.017	0.757617	0.754770	0.755181	0.000294	20.24	-0.000106	0.000014	1.71	-0.014561
0.380	162.792	0.757152	0.754903	0.754517	0.000295	20.12	-0.000080	0.000014	1.94	-0.009255
0.395	169.645	0.756629	0.753960	0.754234	0.000295	20.01	-0.000061	0.000014	0.81	-0.008367
0.410	176.589	0.756059	0.753833	0.753643	0.000296	19.89	-0.000069	0.000013	0.49	-0.008320
0.425	183.637	0.755422	0.753216	0.753362	0.000297	19.76	-0.000056	0.000013	0.15	-0.006461
<b>0.440</b>	<b>190.880</b>	<b>0.754778</b>	<b>0.752841</b>	<b>0.752944</b>	<b>0.000298</b>	<b>19.60</b>	<b>-0.000063</b>	<b>0.000013</b>	<b>0.07</b>	<b>-0.007662</b>
0.455	198.123	0.754134	0.752466	0.752526	0.000299	19.44	-0.000070	0.000013	0.31	-0.009583
0.470	205.609	0.753516	0.751926	0.751874	0.000300	19.23	-0.000088	0.000013	0.37	-0.013049
0.485	213.299	0.752893	0.751082	0.751032	0.000302	19.02	-0.000080	0.000012	0.84	-0.012567
0.500	221.237	0.752254	0.750216	0.750407	0.000303	18.78	-0.000067	0.000012	0.99	-0.007540
0.515	229.480	0.751598	0.750190	0.750131	0.000305	18.53	-0.000083	0.000011	2.56	-0.008770
0.530	238.105	0.750916	0.749638	0.749272	0.000307	18.27	-0.000063	0.000011	3.98	-0.014936
0.545	247.225	0.750243	0.747888	0.748132	0.000309	17.99	*****	*****	*****	-0.006383
0.560	257.012	0.749578	0.748537	0.748476	0.000312	17.68	*****	*****	*****	0.004697

<sup>1</sup> dAzz/dA slope derived from linear fit over data point +/- 2 points of CorAzzSmooth.

<sup>2</sup> Error on the first-order parameter from the linear fit.

<sup>3</sup> Chi2/NDF value of the linear fit for quality assessment.

\* Relative sensitivity calculated using SciPy interp1d of CorAzzSmooth to MagCurrent

# 4PASS\_ERIC\_Q3, 8.59GeV, Magnet: Quad3 Scan

Q1: -0.45 T (-183.290 A), Q2: -0.45 T (-223.732 A), Q4: 0.44 T (187.387 A), Q5: 1.13 T (417.742 A), Q6: 4 T

## Rght Data Table

Simulation Data							Fit Data & Calc			
MagPoleTip	MagCurrent	UncAzz	CorAzz	CorAzzSmooth	CorErr	NormRt	AzzSlope <sup>1</sup>	AzzSlopeE <sup>2</sup>	AzzSlopeX2 <sup>3</sup>	Sensitivity *
0.140	58.989	0.754911	0.746627	0.746667	0.000348	14.25	*****	*****	*****	0.060305
0.155	65.332	0.756195	0.749682	0.749523	0.000342	14.80	*****	*****	*****	0.052920
0.170	71.682	0.757341	0.751462	0.751701	0.000337	15.35	0.000273	0.000017	6.55	0.035301
0.185	78.041	0.758357	0.753264	0.752894	0.000331	15.92	0.000209	0.000016	1.94	0.024264
0.200	84.410	0.759198	0.753600	0.754026	0.000326	16.49	0.000181	0.000016	1.27	0.023075
0.215	90.792	0.759835	0.755299	0.755112	0.000321	17.04	0.000139	0.000016	1.94	0.022430
0.230	97.189	0.760267	0.756221	0.756190	0.000317	17.55	0.000098	0.000016	4.79	0.013725
0.245	103.603	0.760500	0.756402	0.756440	0.000313	18.00	0.000011	0.000015	2.69	-0.000714
0.260	110.038	0.760577	0.756237	0.756119	0.000309	18.42	-0.000016	0.000015	0.67	-0.005626
0.275	116.497	0.760496	0.755679	0.755892	0.000306	18.82	-0.000008	0.000015	0.97	-0.001855
0.290	122.983	0.760263	0.756057	0.755939	0.000303	19.22	0.000013	0.000015	0.79	0.002976
0.305	129.502	0.759859	0.756218	0.756185	0.000300	19.61	0.000051	0.000015	0.45	0.006868
0.320	136.059	0.759298	0.756389	0.756619	0.000297	19.95	0.000028	0.000014	1.52	0.007978
0.335	142.659	0.758631	0.757178	0.756979	0.000295	20.22	-0.000047	0.000014	9.91	-0.003655
0.350	149.309	0.758045	0.756512	0.756244	0.000294	20.31	-0.000082	0.000014	6.85	-0.017515
0.365	156.017	0.757611	0.754640	0.755207	0.000294	20.24	-0.000112	0.000014	3.54	-0.016490
0.380	162.792	0.757140	0.754939	0.754569	0.000295	20.13	-0.000098	0.000014	3.23	-0.009774
0.395	169.645	0.756625	0.754171	0.754205	0.000295	20.01	-0.000059	0.000014	1.32	-0.009254
0.410	176.589	0.756045	0.753417	0.753603	0.000296	19.89	-0.000068	0.000013	0.80	-0.010589
0.425	183.637	0.755411	0.753360	0.753090	0.000297	19.76	-0.000052	0.000013	0.33	-0.009245
<b>0.440</b>	<b>190.880</b>	<b>0.754765</b>	<b>0.752951</b>	<b>0.752609</b>	<b>0.000298</b>	<b>19.60</b>	<b>-0.000075</b>	<b>0.000013</b>	<b>2.21</b>	<b>-0.008822</b>
0.455	198.123	0.754118	0.752542	0.752128	0.000299	19.44	-0.000097	0.000013	1.13	-0.010883
0.470	205.609	0.753492	0.751103	0.751396	0.000300	19.24	-0.000093	0.000013	1.39	-0.013274
0.485	213.299	0.752869	0.750683	0.750614	0.000302	19.02	-0.000075	0.000012	1.91	-0.009136
0.500	221.237	0.752233	0.750351	0.750341	0.000303	18.78	-0.000046	0.000012	0.01	-0.004218
0.515	229.480	0.751578	0.749984	0.750103	0.000305	18.54	-0.000079	0.000011	2.82	-0.008938
0.530	238.105	0.750891	0.749578	0.749180	0.000307	18.27	-0.000084	0.000011	2.37	-0.015729
0.545	247.225	0.750227	0.747736	0.748001	0.000309	17.99	*****	*****	*****	-0.011333
0.560	257.012	0.749555	0.747705	0.747639	0.000311	17.68	*****	*****	*****	-0.004957

<sup>1</sup> dAzz/dA slope derived from linear fit over data point +/- 2 points of CorAzzSmooth.

<sup>2</sup> Error on the first-order parameter from the linear fit.

<sup>3</sup> Chi2/NDF value of the linear fit for quality assessment.

\* Relative sensitivity calculated using SciPy interp1d of CorAzzSmooth to MagCurrent