

coil	<i>gain</i>	<i>au</i>	<i>ff</i>
1	212.80	9641.5	0.963644
2	212.09	8589.3	1.057387
3	211.33	7124.8	0.944615
4	213.19	9624.3	1.031158
5	—	—	—
6	209.10	3286.8	1.005831
7	213.33	9682.1	1.004949
8	212.18	7793.2	0.997561
9	211.61	8133.2	1.008771
10	211.63	9188.7	1.00531

Table 1: Calibration constants for the calculation of the polarization value.

coil	p0	p1 (1/hours)	p2 (%)
1	$3.63753 \pm 3.82008 \times 10^{-3}$	$-1.90216 \times 10^{-2} \pm 1.92210 \times 10^{-4}$	$-52.2997 \pm 0.098069$
2	$3.64477 \pm 3.78366 \times 10^{-3}$	$-1.86937 \times 10^{-2} \pm 1.89897 \times 10^{-4}$	$-52.9329 \pm 0.100780$
3	$3.56378 \pm 4.08889 \times 10^{-3}$	$-1.81209 \times 10^{-2} \pm 1.98436 \times 10^{-4}$	$-48.3883 \pm 0.103482$
4	$3.64387 \pm 3.76600 \times 10^{-3}$	$-1.73905 \times 10^{-2} \pm 1.80151 \times 10^{-4}$	$-53.2771 \pm 0.109924$
5	—	—	—
6	$3.72318 \pm 3.56992 \times 10^{-3}$	$-2.06932 \times 10^{-2} \pm 1.78610 \times 10^{-4}$	$55.0213 \pm 0.085124$
7	$3.70204 \pm 3.65858 \times 10^{-3}$	$-2.12655 \times 10^{-2} \pm 1.88932 \times 10^{-4}$	$53.7157 \pm 0.083611$
8	$3.76678 \pm 2.38972 \times 10^{-3}$	$-2.02087 \times 10^{-2} \pm 1.68746 \times 10^{-4}$	$57.0940 \pm 0.088014$
9	$3.73887 \pm 2.53142 \times 10^{-3}$	$-2.13952 \times 10^{-2} \pm 1.83219 \times 10^{-4}$	$55.3763 \pm 0.083076$
10	$3.73905 \pm 2.54560 \times 10^{-3}$	$-2.17378 \times 10^{-2} \pm 1.86345 \times 10^{-4}$	$56.1515 \pm 0.081832$

Table 2: Polarization build-up exponential fits for 2003 May 13<sup>th</sup>-23<sup>rd</sup> data. Exponential functions are:  $p2+\exp(p0+p1.x)$  for coils 1 to 4, and  $p2-\exp(p0+p1.x)$  for coils 6 to 10.

coil	Pol. Build-up time (hours)	Pol. Build-up time (days)
1	$52.57 \pm 0.53$	$2.190 \pm 0.022$
2	$53.49 \pm 0.54$	$2.229 \pm 0.023$
3	$55.18 \pm 0.60$	$2.299 \pm 0.025$
4	$57.50 \pm 0.60$	$2.396 \pm 0.025$
5	—	—
6	$48.33 \pm 0.42$	$2.014 \pm 0.017$
7	$47.02 \pm 0.42$	$1.959 \pm 0.017$
8	$49.48 \pm 0.41$	$2.062 \pm 0.017$
9	$46.74 \pm 0.40$	$1.947 \pm 0.017$
10	$46.00 \pm 0.39$	$1.917 \pm 0.016$

Table 3: Polarization build-up time calculated from exponential fits on May 2003 data (13<sup>th</sup> to 23<sup>rd</sup> of May). Note that negative polarization has a shorter build-up time than positive polarization.

coil	p0	p1 (1/hours)	p2 (%)
1	$3.61427 \pm 2.87313 \times 10^{-3}$	$-2.21590 \times 10^{-2} \pm 2.01749 \times 10^{-4}$	$59.1618 \pm 0.103194$
2	$3.63385 \pm 2.76651 \times 10^{-3}$	$-2.38983 \times 10^{-2} \pm 2.05143 \times 10^{-4}$	$60.3477 \pm 0.0925154$
3	$3.50796 \pm 3.17489 \times 10^{-3}$	$-2.26046 \times 10^{-2} \pm 2.28449 \times 10^{-4}$	$52.6328 \pm 0.100997$
4	$3.63481 \pm 2.78138 \times 10^{-3}$	$-2.30553 \times 10^{-2} \pm 2.00738 \times 10^{-4}$	$60.7239 \pm 0.0971762$
5	—	—	—
6	$3.35323 \pm 3.86364 \times 10^{-3}$	$-3.10843 \times 10^{-2} \pm 3.46656 \times 10^{-4}$	$-45.3493 \pm 0.0686781$
7	$3.54722 \pm 3.01108 \times 10^{-3}$	$-2.43814 \times 10^{-2} \pm 2.22850 \times 10^{-4}$	$-49.4958 \pm 0.0888702$
8	$3.57656 \pm 2.93550 \times 10^{-3}$	$-2.35325 \times 10^{-2} \pm 2.08760 \times 10^{-4}$	$-51.8158 \pm 0.0921031$
9	$3.57030 \pm 2.94853 \times 10^{-3}$	$-2.38311 \times 10^{-2} \pm 2.09883 \times 10^{-4}$	$-51.1158 \pm 0.0899290$
10	$3.58711 \pm 2.89598 \times 10^{-3}$	$-2.39440 \times 10^{-2} \pm 2.05994 \times 10^{-4}$	$-51.8490 \pm 0.0890584$

Table 4: Polarization build-up exponential fits from June 2003 data. Exponential functions are:  $p2 - \exp(p0 + p1.x)$  for coils 1 to 4, and  $p2 + \exp(p0 + p1.x)$  for coils 6 to 10.

coil	Pol. Build-up time (hours)	Pol. Build-up time (days)
1	$45.13 \pm 0.41$	$1.880 \pm 0.017$
2	$45.84 \pm 0.36$	$1.743 \pm 0.015$
3	$44.24 \pm 0.45$	$1.843 \pm 0.019$
4	$43.37 \pm 0.38$	$1.807 \pm 0.016$
5	—	—
6	$32.17 \pm 0.36$	$1.340 \pm 0.015$
7	$41.01 \pm 0.37$	$1.709 \pm 0.016$
8	$42.49 \pm 0.38$	$1.771 \pm 0.016$
9	$41.96 \pm 0.37$	$1.748 \pm 0.015$
10	$41.76 \pm 0.36$	$1.740 \pm 0.015$

Table 5: Polarization build-up time calculated from exponential fits on June 2003 data. It can be seen that the negative polarization builds-up faster than the positive one, and both of them faster than that corresponding to May 2003 polarization build-up.

COIL NO.	p0	p1 (1/hours)
1	$4.05037 \pm 1.15455 \times 10^{-3}$	$-3.15341 \times 10^{-5} \pm 4.30006 \times 10^{-6}$
	$4.05151 \pm 1.53277 \times 10^{-3}$	$-3.24151 \times 10^{-5} \pm 5.35159 \times 10^{-6}$
	$4.04931 \pm 1.77228 \times 10^{-3}$	$-3.29775 \times 10^{-5} \pm 7.41075 \times 10^{-6}$
2	$4.07533 \pm 1.12578 \times 10^{-3}$	$-2.90111 \times 10^{-5} \pm 4.19127 \times 10^{-6}$
	$4.07610 \pm 1.49505 \times 10^{-3}$	$-2.97891 \times 10^{-5} \pm 5.21778 \times 10^{-6}$
	$4.07455 \pm 1.72774 \times 10^{-3}$	$-2.95662 \times 10^{-5} \pm 7.22161 \times 10^{-6}$
3	$3.93789 \pm 1.29168 \times 10^{-3}$	$-2.96252 \times 10^{-5} \pm 4.80932 \times 10^{-6}$
	$3.93903 \pm 1.71490 \times 10^{-3}$	$-3.07095 \times 10^{-5} \pm 5.98605 \times 10^{-6}$
	$3.93680 \pm 1.98264 \times 10^{-3}$	$-3.05063 \times 10^{-5} \pm 8.28721 \times 10^{-6}$
4	$4.07902 \pm 1.12222 \times 10^{-3}$	$-3.36501 \times 10^{-5} \pm 4.18113 \times 10^{-6}$
	$4.07967 \pm 1.49029 \times 10^{-3}$	$-3.34201 \times 10^{-5} \pm 5.20415 \times 10^{-6}$
	$4.07852 \pm 1.72246 \times 10^{-3}$	$-3.65010 \times 10^{-5} \pm 7.20689 \times 10^{-6}$
5	—	—
6	$3.81249 \pm 1.47077 \times 10^{-3}$	$-7.56358 \times 10^{-5} \pm 5.51365 \times 10^{-6}$
	$3.81269 \pm 1.95372 \times 10^{-3}$	$-7.76763 \times 10^{-5} \pm 6.86803 \times 10^{-6}$
	$3.81176 \pm 2.25469 \times 10^{-3}$	$-7.15673 \times 10^{-5} \pm 9.48478 \times 10^{-6}$
7	$3.87261 \pm 1.38253 \times 10^{-3}$	$-5.87064 \times 10^{-5} \pm 5.16953 \times 10^{-6}$
	$3.87153 \pm 1.83876 \times 10^{-3}$	$-5.90048 \times 10^{-5} \pm 6.44514 \times 10^{-6}$
	$3.87319 \pm 2.11899 \times 10^{-3}$	$-5.52213 \times 10^{-5} \pm 8.88842 \times 10^{-6}$
8	$3.91371 \pm 1.32662 \times 10^{-3}$	$-5.74322 \times 10^{-5} \pm 4.95943 \times 10^{-6}$
	$3.91119 \pm 1.76681 \times 10^{-3}$	$-5.60867 \times 10^{-5} \pm 6.19021 \times 10^{-6}$
	$3.91567 \pm 2.03073 \times 10^{-3}$	$-5.39270 \times 10^{-5} \pm 8.51694 \times 10^{-6}$
9	$3.90080 \pm 1.34338 \times 10^{-3}$	$-5.28130 \times 10^{-5} \pm 5.01883 \times 10^{-6}$
	$3.90245 \pm 1.78232 \times 10^{-3}$	$-5.59833 \times 10^{-5} \pm 6.24445 \times 10^{-6}$
	$3.89885 \pm 2.06362 \times 10^{-3}$	$-4.99223 \times 10^{-5} \pm 8.64879 \times 10^{-6}$
10	$3.91261 \pm 1.32867 \times 10^{-3}$	$-6.14218 \times 10^{-5} \pm 4.97012 \times 10^{-6}$
	$3.91253 \pm 1.76517 \times 10^{-3}$	$-6.17522 \times 10^{-5} \pm 6.18954 \times 10^{-6}$
	$3.91247 \pm 2.03841 \times 10^{-3}$	$-6.08571 \times 10^{-5} \pm 8.55678 \times 10^{-6}$

Table 6: Polarization decay exponential fits. Exponential functions are:  $\exp(p_0+p_1.x)$  for coils 1 to 4, and  $-\exp(p_0+p_1.x)$  for coils 6 to 10. First fit for each coil is made from both positive and negative magnetic field data. Second and third fits are made only from positive or negative field data respectively.

Coil no.	Pol. Decay time (hours)	Pol. Decay time (years)
1	$3.17 \times 10^4 \pm 0.43 \times 10^4$	$3.62 \pm 0.49$
	$3.08 \times 10^4 \pm 0.51 \times 10^4$	$3.52 \pm 0.58$
	$3.03 \times 10^4 \pm 0.68 \times 10^4$	$3.46 \pm 0.78$
2	$3.45 \times 10^4 \pm 0.50 \times 10^4$	$3.93 \pm 0.57$
	$3.36 \times 10^4 \pm 0.59 \times 10^4$	$3.83 \pm 0.67$
	$3.38 \times 10^4 \pm 0.83 \times 10^4$	$3.86 \pm 0.94$
3	$3.38 \times 10^4 \pm 0.55 \times 10^4$	$3.85 \pm 0.63$
	$3.26 \times 10^4 \pm 0.63 \times 10^4$	$3.71 \pm 0.72$
	$3.28 \times 10^4 \pm 0.89 \times 10^4$	$3.74 \pm 0.99$
4	$2.97 \times 10^4 \pm 0.37 \times 10^4$	$3.39 \pm 0.42$
	$2.99 \times 10^4 \pm 0.47 \times 10^4$	$3.41 \pm 0.53$
	$2.74 \times 10^4 \pm 0.54 \times 10^4$	$3.12 \pm 0.62$
5	—	—
6	$1.32 \times 10^4 \pm 0.10 \times 10^4$	$1.50 \pm 0.11$
	$1.29 \times 10^4 \pm 0.11 \times 10^4$	$1.47 \pm 0.13$
	$1.40 \times 10^4 \pm 0.19 \times 10^4$	$1.59 \pm 0.21$
7	$1.70 \times 10^4 \pm 0.15 \times 10^4$	$1.94 \pm 0.17$
	$1.69 \times 10^4 \pm 0.19 \times 10^4$	$1.93 \pm 0.21$
	$1.81 \times 10^4 \pm 0.29 \times 10^4$	$2.06 \pm 0.33$
8	$1.74 \times 10^4 \pm 0.15 \times 10^4$	$1.98 \pm 0.17$
	$1.78 \times 10^4 \pm 0.20 \times 10^4$	$2.03 \pm 0.22$
	$1.85 \times 10^4 \pm 0.29 \times 10^4$	$2.11 \pm 0.33$
9	$1.89 \times 10^4 \pm 0.18 \times 10^4$	$2.16 \pm 0.21$
	$1.79 \times 10^4 \pm 0.20 \times 10^4$	$2.03 \pm 0.23$
	$2.00 \times 10^4 \pm 0.35 \times 10^4$	$2.28 \pm 0.40$
10	$1.63 \times 10^4 \pm 0.13 \times 10^4$	$1.85 \pm 0.15$
	$1.62 \times 10^4 \pm 0.16 \times 10^4$	$1.84 \pm 0.19$
	$1.64 \times 10^4 \pm 0.23 \times 10^4$	$1.87 \pm 0.26$

Table 7: Polarization decay time. First value for each coil refers to calculation from both positive and negative magnetic field data. Second and third values for each coil refer to calculation only from positive or negative field data respectively. Note that for coil 6 the decay time is shorter than for the rest of the negative coils.