

Component No 5962R9468002VGA		Component Designation: OP27AJQMLR	Irradiation Spec. No.: ESCC 22900 Issue 4
Gen. Spec.: MIL-PRF-38535 Det. Spec.: 5962-94680 Amend.: --		Evaluation: - Acceptance Wafer: - Acceptance Lot: X	Project/Programme: LDT (ESA) AO / 1-6172 / 09 / F / WE
Family: 08	Group: 50	Functional Assignment: Low Noise Precision Operational Amplifier	Package: CAN-8
Manuf.Name: ANALOG DEVICES Address: USA		Test House: ATN Address: MADRID (SPAIN)	Orig.house: ATN Address: SEVILLA (SPAIN)
Radiation Test Plan No.: ATGSP-RP-74 Iss1		Sample Size: 22 Irradiation Devices: 20 Control Devices: 2	Date Code: 0218A Wafer Lot: F45906
Radiation Source: Cobalt-60 Facility Name: ESA (ESTEC) Address: NOORDWIJK (HOLLAND)		Energy: 1.33/1.17 MeV Dose Rate: 35.4 & 323.7 rad(Si)/h	Interest level: 100krad(Si) Maximum Test Level: 100krad(Si)
Irradiation Conditions: Biased: X (10 samples) Unbiased: X (10 samples) Test Circuit: Figure 1		Irradiation Measurements Interval: Remote test: X In situ Test: --	Annealing Tests: 24h@25°C, 168h@100°C Biased: X (10 samples) Unbiased: X (10 samples) Test Circuit: Figure 1

Electrical Measurements. Parameters Tested:


V_{OS} , I_{OS} , I_{IB} , PSRR, $V_{OUT(1)}$, $V_{OUT(2)}$, I_S , SR, CMRR, $A_{VO(1)}$, $A_{VO(2)}$.

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Date: 2012/11/12
Signature:



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Date: 2012/11/12
Signature:

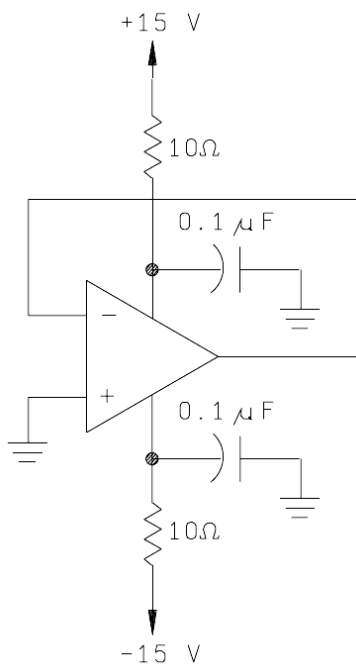


 ALTER TECHNOLOGY <i>Member of TÜV NORD</i>	TOTAL DOSE RADIATION TEST REPORT No. ATN-RR-006/2012	Issue: 2/Rev:	Page: 2/9
		Date: 2012/11/12	
		R.L: 2011902923 / 2011902924	

DOCUMENT CHANGE CONTROL

Edition / Revision	Date	Affected Edition / Revision	Affected Paragraph / Modification
ATN-RR-006/2012 Iss.1	2012/08/01	--	First edition of this document.
ATN-RR-006/2012 Iss.2	2012/11/12	ATN-RR-006/2012 Iss.1	Footer on the pages updated with new issue of document format. Company's logo updated. Test house name updated.

FIGURE 1.-RADIATION BIAS CIRCUITS



Notes:

1. Ten parts(5 ELDR+5 LDR) were irradiated biased ON, in accordance with the radiation bias circuit shown in Figure 1.
2. Ten parts(5 ELDR + 5 LDR) were irradiated biased OFF: the pins are short circuited and connected to ground.

SUMMARY

In order to evaluate the behaviour of the samples between ELDR, LDR, ON and OFF biased, a total dose steady-state irradiation test has been carried out on a Low Noise Precision Operational Amplifier, manufactured by ANALOG DEVICES, USA. The test was performed using two dose rate (35.4 rad(Si)/h and 323.7rad (Si)/h) until a total accumulated dose of 100krad(Si). The irradiated parts were labelled as follows:

Serial Number		Bias condition	Dose rate
R1	2435	Control device	ELDR
R2	2421	ON	
R3	2423		
R4	2437		
R5	2426		
R6	2428		
R7	2430	OFF	
R8	2431		
R9	2432		
R10	2434		
R11	2438		
R1	2410	Control device	LDR
R2	2411	ON	
R3	2413		
R4	2415		
R5	2416		
R6	2417		
R7	2412	OFF	
R8	2414		
R9	2418		
R10	2419		
R11	2420		

RESULTS

The next table shows a resume of the irradiation test results.

ELDR									
	0Krad	6Krad	13Krad	20Krad	30Krad	50Krad	100Krad	ANN24	ANN168
V _{IO}	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
I _{IB+}	PASS	PASS	PASS	PASS	(1)	(1)	(1)	(1)	PASS
I _{IB-}	PASS	PASS	PASS	(1)	(1)	(1)	(1)	(1)	PASS
I _{IO}	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
PSRR	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
V _{OUT+1}	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
V _{OUT-1}	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
V _{OUT+2}	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
V _{OUT-2}	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
I _{S+}	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
I _{S-}	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
SR+	PASS	PASS	(1)	(1)	(1)	(1)	(1)	(1)	(1)
SR-	PASS	PASS	PASS	(1)	(1)	(1)	(1)	(1)	PASS
CMRR	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
A _{V01}	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
A _{V02}	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
LDR									
	0Krad	6Krad	13Krad	20Krad	30Krad	50Krad	100Krad	ANN24	ANN168
V _{IO}	PASS	PASS	PASS	PASS	PASS	PASS	(1)	(1)	PASS
I _{IB+}	PASS	PASS	PASS	(1)	(1)	(1)	(1)	(1)	PASS
I _{IB-}	PASS	PASS	PASS	(1)	(1)	(1)	(1)	(1)	PASS
I _{IO}	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
PSRR	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
V _{OUT+1}	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
V _{OUT-1}	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
V _{OUT+2}	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
V _{OUT-2}	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
I _{S+}	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
I _{S-}	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
SR+	PASS	PASS	(1)	(1)	(1)	(1)	(1)	(1)	(1)
SR-	PASS	PASS	PASS	(1)	(1)	(1)	(1)	(1)	PASS
CMRR	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
A _{V01}	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
A _{V02}	PASS	PASS	PASS	PASS	PASS	PASS	(1)	(1)	PASS

(1) Parameter out of limits.

The values measured and graphs with the evolution of the previous parameters during the irradiation test and annealing sequence are available in ANNEX I.

CONCLUSION

The results obtained during the irradiation test, show that this lot is sensitive to the cumulative radiation dose when tested at dose rates of 35.4 rad(Si)/h and 323.7 rad(Si)/h up to a cumulative dose of 100krad(Si).

The most affected parameters are the V_{IO} , I_B 's, V_{OUT} 's, I_S , SR and A_{VO} 's parameters.

- V_{IO} : starts to be out of limits at 100krad step in the LDR test. The results show that the samples biased OFF in the LDR test are the samples with the highest degradation.

- I_B : starts to be out of limits at 20krad step in the samples biased OFF. The results show that the samples biased OFF have a higher degradation than the samples biased ON. The samples submitted to the LDR test have a higher degradation than the samples submitted to the ELDR test.

- V_{OUT} 's: although the results obtained in this parameter show that it is sensitive to the cumulative radiation dose rate all the V_{out} parameters are within limits during all irradiation steps. In general, the samples biased OFF have a higher degradation than the samples biased ON.

- I_S : although the results obtained in this parameter show that it is sensitive to the cumulative radiation dose rate, the I_S parameter is within limits during all irradiation steps. In general, the samples biased OFF have a higher degradation than the samples biased ON.

-SR: starts to be out of limits at 13 krad step in the samples biased OFF. The samples biased OFF have a higher degradation than the samples biased ON.

- A_{VO} 's: the serial numbers R7 and R8 start to be out of limits in the AVO (2) parameter in the LDR test at 100krad step. Along the lines of the other parameters, the samples biased OFF show a higher degradation than the samples biased ON.

All parameters tend to recover its initial values during the annealing process.

For the rest of the parameters, clearly different behaviours between ELDR, LDR, On and Off biased parts are not observed.

SCHEDULE

ELDR Average Dose Rate (1)	LDR Average Dose Rate (2)	Cummulative ELDR Total Dose	ELDR Measurement date	Cummulative LDR Total Dose	LDR Measurement date	Step Deviation ELDR vs LDR (%)
rad(Si)/h	rad(Si)/h	krad(Si)	--	krad(Si)	--	
--	--	0	2012/02/15	0	2012/06/04	--
35.41	323.7	5240	2012/02/21	5707	2012/06/05	8.9
		12168	2012/02/29	13362	2012/06/06	9.8
		19201	2012/03/08	20644	2012/06/07	7.5
		28612	2012/03/19	28167	2012/06/08	-1.5
		48417	2012/04/11	48498	2012/06/11	0.1
		106074	2012/06/18	102360	2012/06/18	-3.7
Annealing						
ann24h @25°C	24	--	2012/06/19	--	2012/06/19	
ann168h @100°C	168	--	2012/06/26	--	2012/06/26	

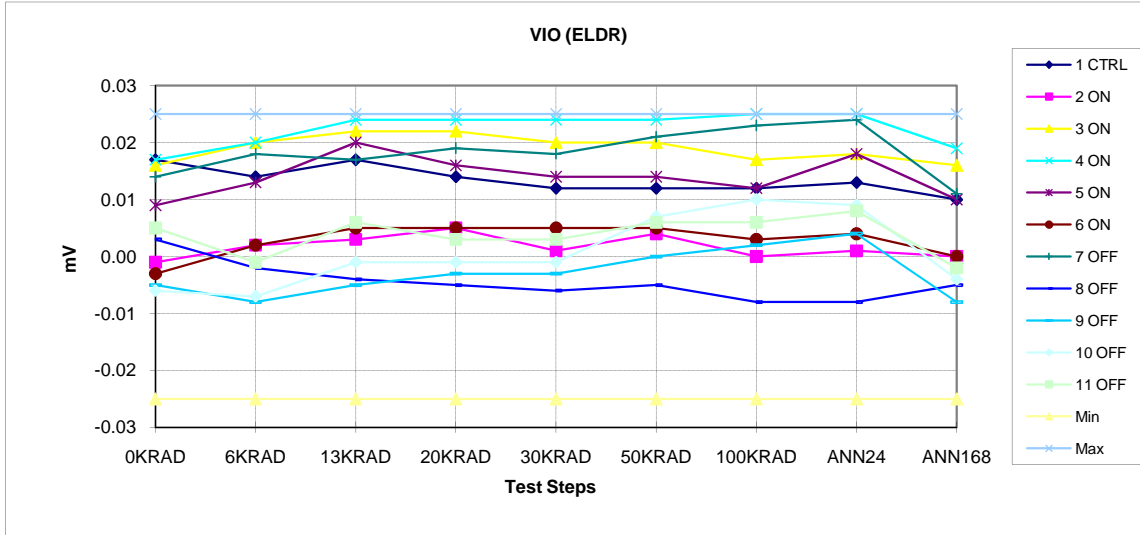
(1) The minimum and maximum dose rate registered were 18.6rad (Si)/h and 38.9rad (Si)/h respectively.

(2) The minimum and maximum dose rate registered were 271.2 rad(Si)/h and 360.6 rad(Si)/h respectively.

ELECTRICAL MEASUREMENTS EQUIPMENT LIST

REF INVENT	DESCRIPTION	MFR	MODEL	CALIBRATION DUE	USAGE
LE0304.000	UNIVERSAL TEST SYSTEM	SZ	M-3000	2012/08/15	0,6,13,20,35,50,100Krad, ANN24, ANN168
LE0393.003	TEST ADAPTER	SZ	UNIVERSAL FRONT ADAPTER	--	0,6,13,20,35,50,100Krad, ANN24, ANN168
LE0389.010	TEST ADAPTER	SZ	TA09B	--	0,6,13,20,35,50,100Krad, ANN24, ANN168

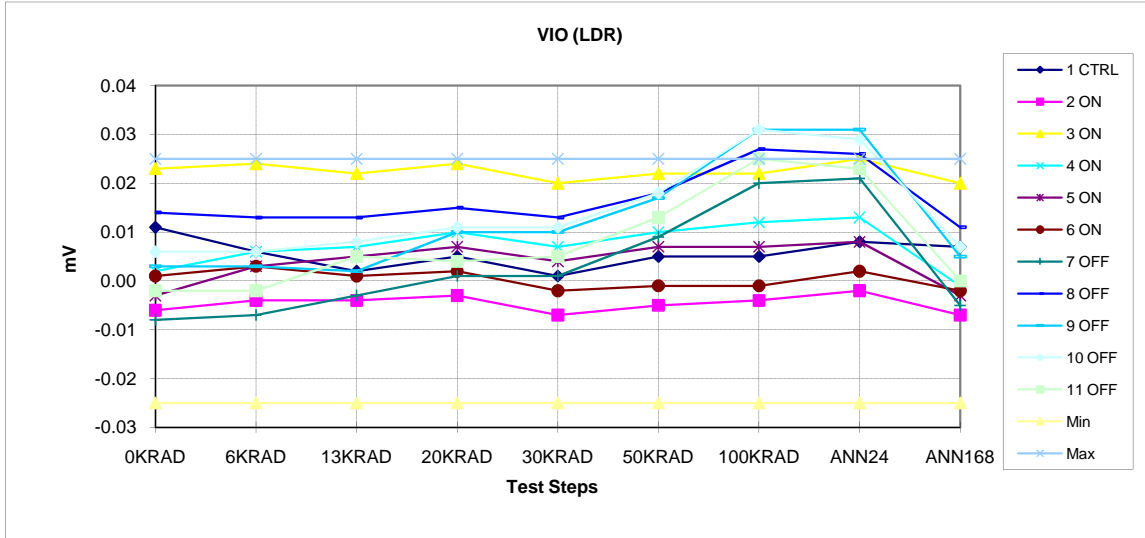
ANNEX I ELECTRICAL MEASUREMENTS GRAPHS



VIO (ELDR)	0KRAD	6KRAD	13KRAD	20KRAD	30KRAD	50KRAD	100KRAD	ANN24	ANN168
Min	-0.025	-0.025	-0.025	-0.025	-0.025	-0.025	-0.025	-0.025	-0.025
Max	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025
Unit	mV	mV	mV	mV	mV	mV	mV	mV	mV
Control Results									
1 CTRL	0.017	0.014	0.017	0.014	0.012	0.012	0.012	0.013	0.010

Bias on results									
2 ON	-0.001	0.002	0.003	0.005	0.001	0.004	0.000	0.001	0.000
3 ON	0.016	0.020	0.022	0.022	0.020	0.020	0.017	0.018	0.016
4 ON	0.017	0.020	0.024	0.024	0.024	0.024	0.025	0.025	0.019
5 ON	0.009	0.013	0.020	0.016	0.014	0.014	0.012	0.018	0.010
6 ON	-0.003	0.002	0.005	0.005	0.005	0.005	0.003	0.004	0.000
Statistics bias on									
min result	-0.003	0.002	0.003	0.005	0.001	0.004	0.000	0.001	0.000
max result	0.017	0.020	0.024	0.024	0.024	0.024	0.025	0.025	0.019
average	0.008	0.011	0.015	0.014	0.013	0.013	0.011	0.013	0.009
sigma	0.009	0.009	0.010	0.009	0.010	0.009	0.010	0.010	0.009

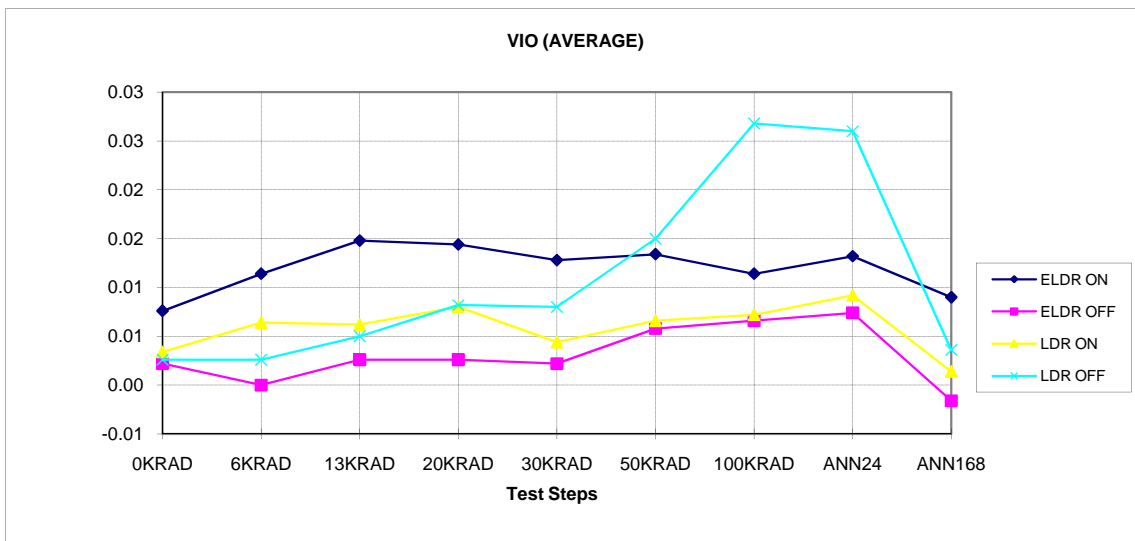
Bias off results									
7 OFF	0.014	0.018	0.017	0.019	0.018	0.021	0.023	0.024	0.011
8 OFF	0.003	-0.002	-0.004	-0.005	-0.006	-0.005	-0.008	-0.008	-0.005
9 OFF	-0.005	-0.008	-0.005	-0.003	-0.003	0.000	0.002	0.004	-0.008
10 OFF	-0.006	-0.007	-0.001	-0.001	-0.001	0.007	0.010	0.009	-0.004
11 OFF	0.005	-0.001	0.006	0.003	0.003	0.006	0.006	0.008	-0.002
Statistics bias off									
min result	-0.006	-0.008	-0.005	-0.005	-0.006	-0.005	-0.008	-0.008	-0.008
max result	0.014	0.018	0.017	0.019	0.018	0.021	0.023	0.024	0.011
average	0.002	0.000	0.003	0.003	0.002	0.006	0.007	0.007	-0.002
sigma	0.008	0.011	0.009	0.010	0.009	0.010	0.011	0.011	0.007



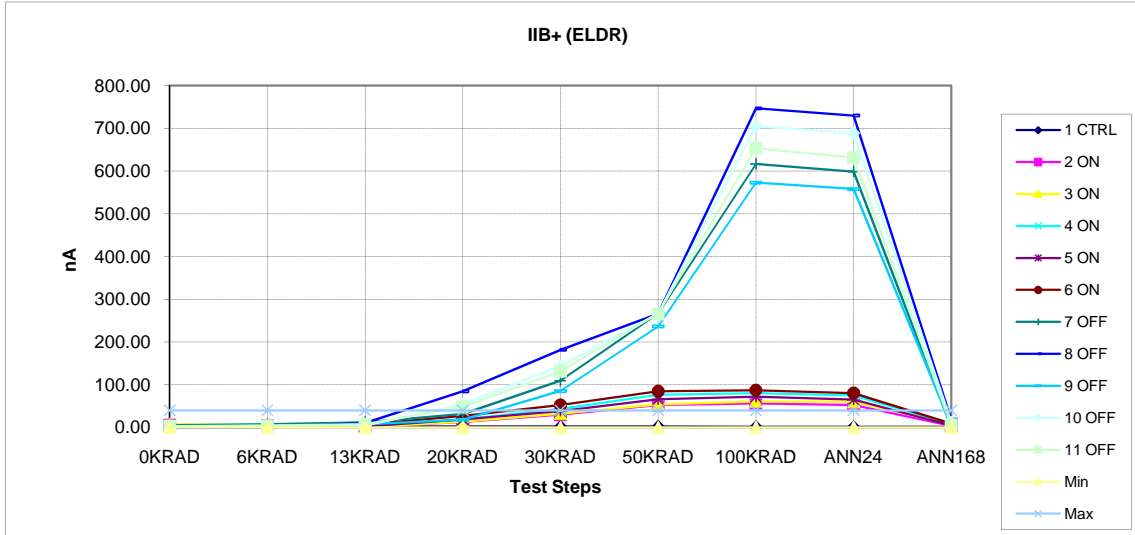
VIO (LDR)	0KRAD	6KRAD	13KRAD	20KRAD	30KRAD	50KRAD	100KRAD	ANN24	ANN168
Min	-0.025	-0.025	-0.025	-0.025	-0.025	-0.025	-0.025	-0.025	-0.025
Max	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025
Unit	mV	mV	mV	mV	mV	mV	mV	mV	mV
Control Results									
1 CTRL	0.011	0.006	0.002	0.005	0.001	0.005	0.005	0.008	0.007

Bias on results									
2 ON	-0.006	-0.004	-0.004	-0.003	-0.007	-0.005	-0.004	-0.002	-0.007
3 ON	0.023	0.024	0.022	0.024	0.020	0.022	0.022	0.025	0.020
4 ON	0.002	0.006	0.007	0.010	0.007	0.010	0.012	0.013	-0.001
5 ON	-0.003	0.003	0.005	0.007	0.004	0.007	0.007	0.008	-0.003
6 ON	0.001	0.003	0.001	0.002	-0.002	-0.001	-0.001	0.002	-0.002
Statistics bias on									
min result	-0.006	-0.004	-0.004	-0.003	-0.007	-0.005	-0.004	-0.002	-0.007
max result	0.023	0.024	0.022	0.024	0.020	0.022	0.022	0.025	0.020
average	0.003	0.006	0.006	0.008	0.004	0.007	0.007	0.009	0.001
sigma	0.011	0.011	0.010	0.010	0.010	0.011	0.010	0.011	0.011

Bias off results									
7 OFF	-0.008	-0.007	-0.003	0.001	0.001	0.009	0.020	0.021	-0.005
8 OFF	0.014	0.013	0.013	0.015	0.013	0.018	0.027	0.026	0.011
9 OFF	0.003	0.003	0.002	0.010	0.010	0.017	0.031	0.031	0.005
10 OFF	0.006	0.006	0.008	0.011	0.011	0.018	0.031	0.029	0.007
11 OFF	-0.002	-0.002	0.005	0.004	0.005	0.013	0.025	0.023	0.000
Statistics bias off									
min result	-0.008	-0.007	-0.003	0.001	0.001	0.009	0.020	0.021	-0.005
max result	0.014	0.013	0.013	0.015	0.013	0.018	0.031	0.031	0.011
average	0.003	0.003	0.005	0.008	0.008	0.015	0.027	0.026	0.004
sigma	0.008	0.008	0.006	0.006	0.005	0.004	0.005	0.004	0.006



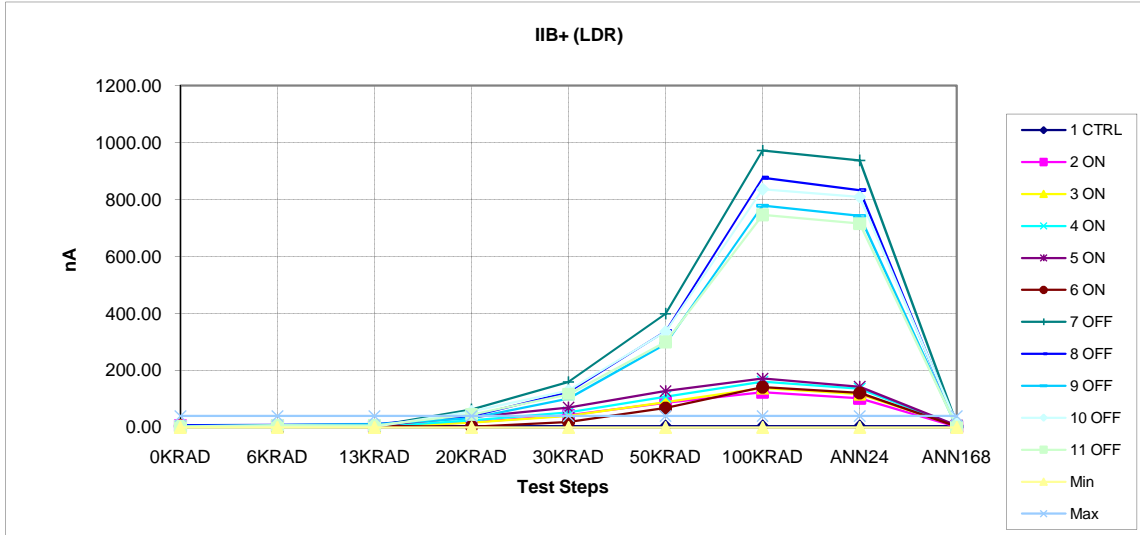
VIO (AVERAGE)	0KRAD	6KRAD	13KRAD	20KRAD	30KRAD	50KRAD	100KRAD	ANN24	ANN168
ELDR ON	0.008	0.011	0.015	0.014	0.013	0.013	0.011	0.013	0.009
ELDR OFF	0.002	0.000	0.003	0.003	0.002	0.006	0.007	0.007	-0.002
LDR ON	0.003	0.006	0.006	0.008	0.004	0.007	0.007	0.009	0.001
LDR OFF	0.003	0.003	0.005	0.008	0.008	0.015	0.027	0.026	0.004



IIB+ (ELDR)	0KRAD	6KRAD	13KRAD	20KRAD	30KRAD	50KRAD	100KRAD	ANN24	ANN168
Min	0	0	0	0	0	0	0	0	0
Max	40	40	40	40	40	40	40	40	40
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control Results									
1 CTRL	2.19	2.16	2.11	2.02	2.10	2.11	1.44	1.25	1.30

Bias on results									
2 ON	5.26	5.09	1.30	12.46	29.95	52.46	56.49	52.43	3.60
3 ON	7.33	5.47	1.11	13.57	32.42	53.80	60.91	59.62	7.62
4 ON	2.28	1.91	2.48	19.06	43.33	76.34	80.51	75.30	8.13
5 ON	4.41	5.03	1.96	18.40	38.48	65.89	71.67	65.28	4.79
6 ON	1.71	1.40	6.48	26.99	52.37	84.93	87.27	80.55	8.83
Statistics bias on									
min result	1.71	1.40	1.11	12.46	29.95	52.46	56.49	52.43	3.60
max result	7.33	5.47	6.48	26.99	52.37	84.93	87.27	80.55	8.83
average	4.20	3.78	2.67	18.10	39.31	66.68	71.37	66.63	6.59
sigma	2.28	1.96	2.20	5.75	8.98	14.10	12.92	11.42	2.27

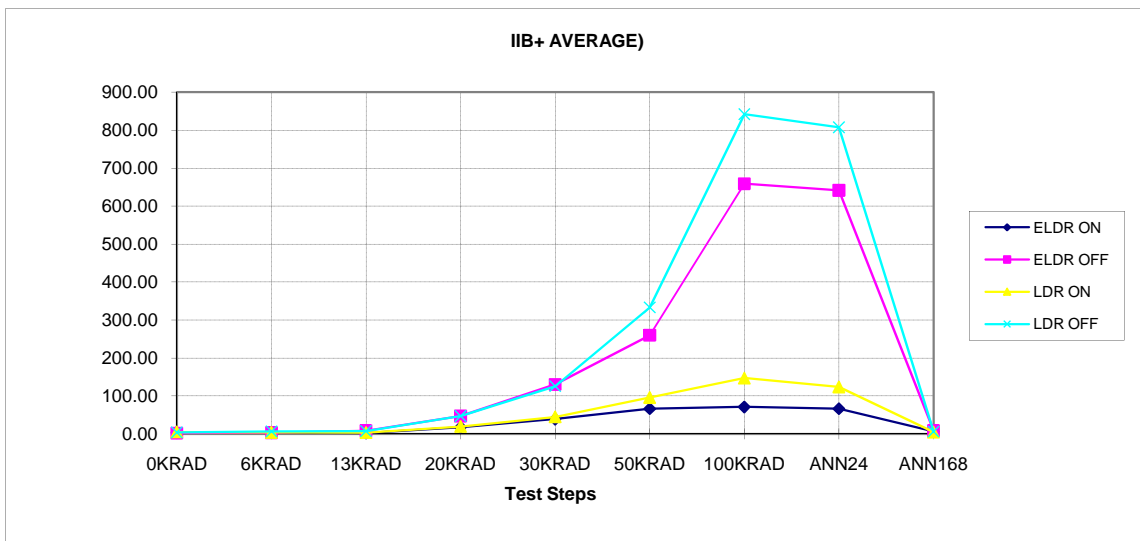
Bias off results									
7 OFF	5.64	7.40	11.99	31.40	109.06	265.82	616.50	598.93	1.73
8 OFF	0.11	0.28	10.59	84.63	181.67	265.78	746.83	730.06	18.04
9 OFF	0.64	0.65	7.56	17.95	85.07	236.18	572.85	558.08	4.17
10 OFF	2.27	3.78	4.45	54.22	144.85	265.74	704.90	688.23	12.08
11 OFF	3.10	4.30	7.70	47.98	131.34	265.74	653.59	631.43	6.02
Statistics bias off									
min result	0.11	0.28	4.45	17.95	85.07	236.18	572.85	558.08	1.73
max result	5.64	7.40	11.99	84.63	181.67	265.82	746.83	730.06	18.04
average	2.35	3.28	8.46	47.24	130.40	259.85	658.93	641.35	8.41
sigma	2.20	2.92	2.94	25.28	36.57	13.24	69.06	68.74	6.60



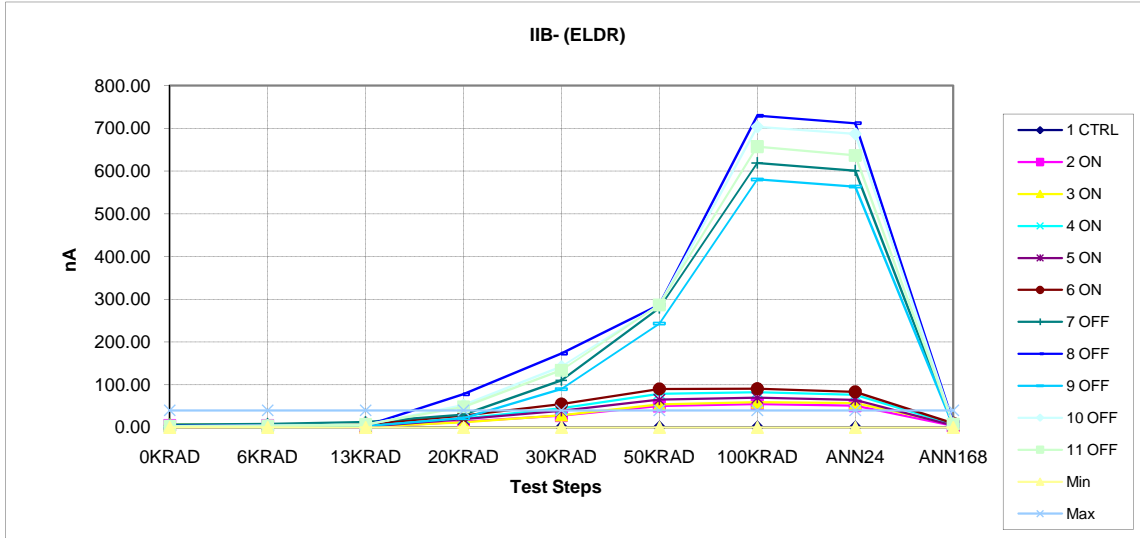
IIB+ (LDR)	0KRAD	6KRAD	13KRAD	20KRAD	30KRAD	50KRAD	100KRAD	ANN24	ANN168
Min	0	0	0	0	0	0	0	0	0
Max	40	40	40	40	40	40	40	40	40
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control Results									
1 CTRL	5.41	5.46	5.51	4.67	4.81	4.67	4.70	4.76	4.63

Bias on results									
2 ON	6.18	5.59	2.70	17.95	42.46	86.64	123.64	102.06	2.37
3 ON	6.93	4.40	0.64	17.09	41.00	89.35	137.88	117.13	5.52
4 ON	4.26	2.25	2.78	24.87	53.34	108.10	161.19	135.79	5.27
5 ON	2.74	2.50	6.81	36.17	69.79	127.84	171.65	143.06	6.93
6 ON	5.22	5.57	5.59	2.28	18.99	68.24	141.27	121.08	3.48
Statistics bias on									
min result	2.74	2.25	0.64	2.28	18.99	68.24	123.64	102.06	2.37
max result	6.93	5.59	6.81	36.17	69.79	127.84	171.65	143.06	6.93
average	5.07	4.06	3.70	19.67	45.11	96.03	147.13	123.82	4.71
sigma	1.64	1.62	2.47	12.36	18.59	22.71	19.17	16.12	1.80

Bias off results									
7 OFF	5.87	8.01	4.80	63.26	159.07	398.76	971.76	937.19	12.59
8 OFF	7.52	9.49	11.67	39.15	123.45	338.44	876.57	832.82	3.00
9 OFF	4.12	7.44	11.53	32.21	101.33	293.01	778.58	742.73	1.29
10 OFF	0.88	1.50	2.49	56.07	129.79	336.27	836.53	809.43	13.05
11 OFF	3.66	7.62	7.22	45.23	116.17	300.07	746.45	715.45	1.73
Statistics bias off									
min result	0.88	1.50	2.49	32.21	101.33	293.01	746.45	715.45	1.29
max result	7.52	9.49	11.67	63.26	159.07	398.76	971.76	937.19	13.05
average	4.41	6.81	7.54	47.18	125.96	333.31	841.98	807.53	6.33
sigma	2.49	3.08	4.06	12.55	21.33	41.97	88.34	86.79	5.96



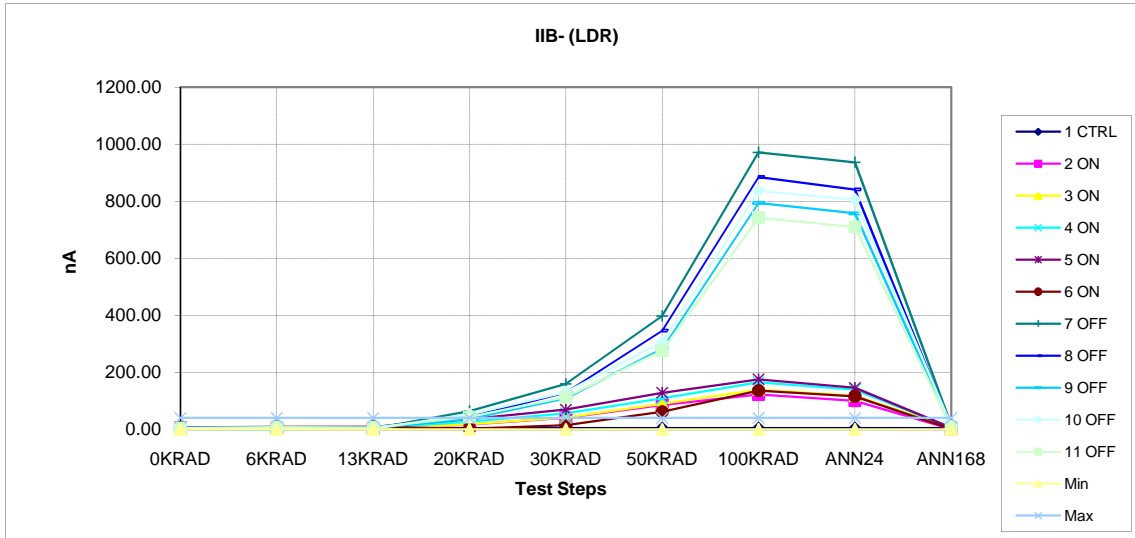
IIB+ AVERAGE)	0KRAD	6KRAD	13KRAD	20KRAD	30KRAD	50KRAD	100KRAD	ANN24	ANN168
ELDR ON	4.20	3.78	2.67	18.10	39.31	66.68	71.37	66.63	6.59
ELDR OFF	2.35	3.28	8.46	47.24	130.40	259.85	658.93	641.35	8.41
LDR ON	5.07	4.06	3.70	19.67	45.11	96.03	147.13	123.82	4.71
LDR OFF	4.41	6.81	7.54	47.18	125.96	333.31	841.98	807.53	6.33



IIB- (ELDR)	0KRAD	6KRAD	13KRAD	20KRAD	30KRAD	50KRAD	100KRAD	ANN24	ANN168
Min	0	0	0	0	0	0	0	0	0
Max	40	40	40	40	40	40	40	40	40
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control Results									
1 CTRL	0.98	0.89	0.87	0.85	0.86	0.82	0.63	0.71	0.62

Bias on results									
2 ON	4.76	4.95	0.06	13.30	27.82	49.93	54.73	50.61	3.58
3 ON	6.78	5.66	1.44	11.65	28.86	53.71	58.88	56.93	8.21
4 ON	1.89	1.03	4.24	21.18	44.64	78.87	82.19	76.59	7.49
5 ON	3.04	3.70	1.41	19.33	38.71	65.05	69.52	64.35	4.52
6 ON	0.42	0.49	7.81	27.83	54.84	90.13	90.62	83.41	9.70
Statistics bias on									
min result	0.42	0.49	0.06	11.65	27.82	49.93	54.73	50.61	3.58
max result	6.78	5.66	7.81	27.83	54.84	90.13	90.62	83.41	9.70
average	3.38	3.17	2.99	18.66	38.97	67.54	71.19	66.38	6.70
sigma	2.48	2.32	3.09	6.50	11.30	16.93	15.20	13.57	2.57

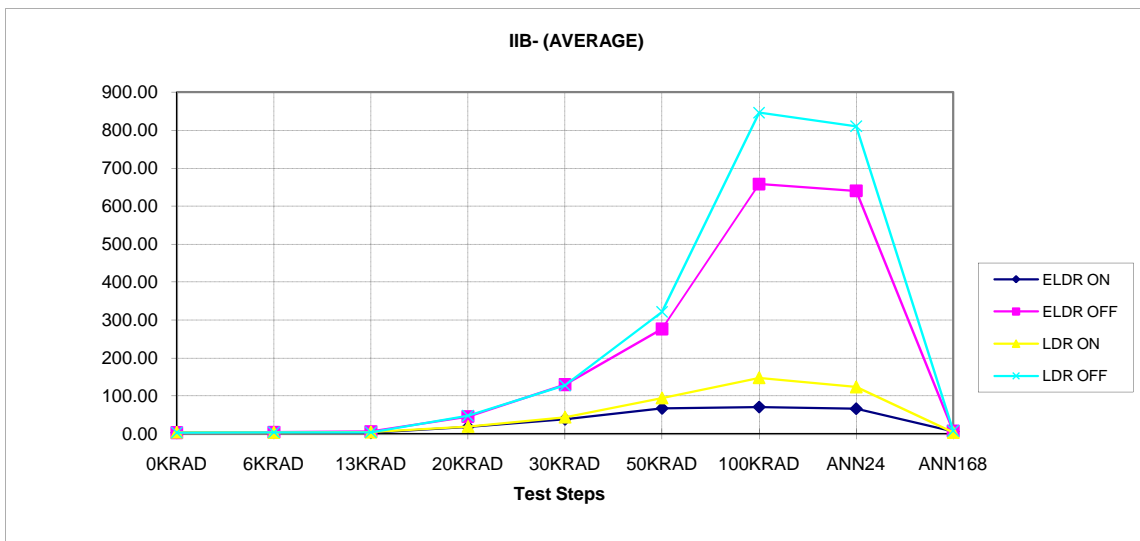
Bias off results									
7 OFF	6.62	8.58	12.91	29.67	110.50	279.20	618.91	601.04	5.57
8 OFF	3.59	4.73	3.74	77.89	172.75	286.63	729.54	712.13	12.01
9 OFF	0.71	2.88	3.17	21.67	89.73	242.89	580.47	563.64	4.10
10 OFF	3.04	4.43	6.10	52.31	142.22	286.66	703.36	686.86	9.37
11 OFF	3.09	3.75	6.92	48.27	133.80	286.67	657.12	636.59	7.79
Statistics bias off									
min result	0.71	2.88	3.17	21.67	89.73	242.89	580.47	563.64	4.10
max result	6.62	8.58	12.91	77.89	172.75	286.67	729.54	712.13	12.01
average	3.41	4.87	6.57	45.96	129.80	276.41	657.88	640.05	7.77
sigma	2.11	2.19	3.88	21.91	31.59	19.01	60.65	60.74	3.12



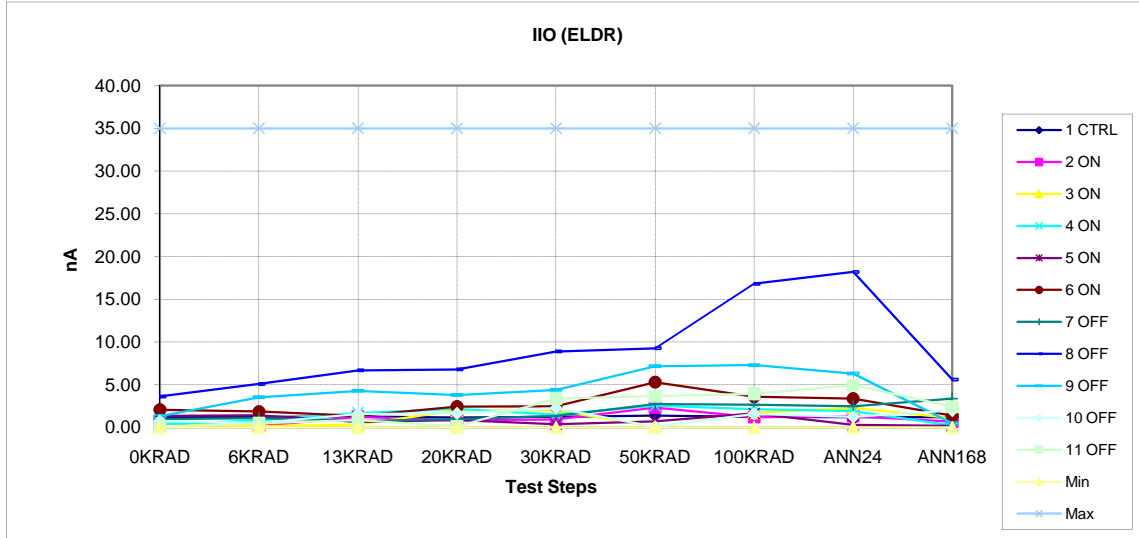
IIB- (LDR)	0KRAD	6KRAD	13KRAD	20KRAD	30KRAD	50KRAD	100KRAD	ANN24	ANN168
Min	0	0	0	0	0	0	0	0	0
Max	40	40	40	40	40	40	40	40	40
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control Results									
1 CTRL	4.67	4.66	4.60	4.31	4.21	4.30	4.38	4.47	4.39

Bias on results									
2 ON	5.50	6.48	2.07	16.63	40.49	85.55	121.72	100.07	0.78
3 ON	5.38	3.32	1.23	17.76	41.45	89.85	139.34	118.16	5.94
4 ON	2.21	0.23	4.33	26.31	55.82	108.24	164.72	139.52	6.34
5 ON	2.84	2.62	7.47	35.82	68.89	128.13	175.54	145.26	5.60
6 ON	6.99	8.34	9.13	1.67	13.97	61.47	135.84	115.40	1.09
Statistics bias on									
min result	2.21	0.23	1.23	1.67	13.97	61.47	121.72	100.07	0.78
max result	6.99	8.34	9.13	35.82	68.89	128.13	175.54	145.26	6.34
average	4.58	4.20	4.85	19.64	44.12	94.65	147.43	123.68	3.95
sigma	2.00	3.22	3.40	12.67	20.49	25.06	22.08	18.53	2.77

Bias off results									
7 OFF	4.80	5.51	2.14	64.10	158.97	397.57	971.24	936.73	14.42
8 OFF	6.25	8.09	7.18	44.10	128.71	345.96	885.00	841.24	5.37
9 OFF	1.41	0.59	4.44	36.55	108.40	282.10	794.19	757.48	6.66
10 OFF	0.99	1.59	1.96	52.51	129.95	306.00	836.52	805.57	11.80
11 OFF	5.12	7.34	6.51	43.18	112.73	275.26	742.61	710.15	3.74
Statistics bias off									
min result	0.99	0.59	1.96	36.55	108.40	275.26	742.61	710.15	3.74
max result	6.25	8.09	7.18	64.10	158.97	397.57	971.24	936.73	14.42
average	3.71	4.63	4.45	48.09	127.75	321.38	845.91	810.23	8.40
sigma	2.36	3.38	2.41	10.60	19.88	50.78	87.56	86.29	4.52



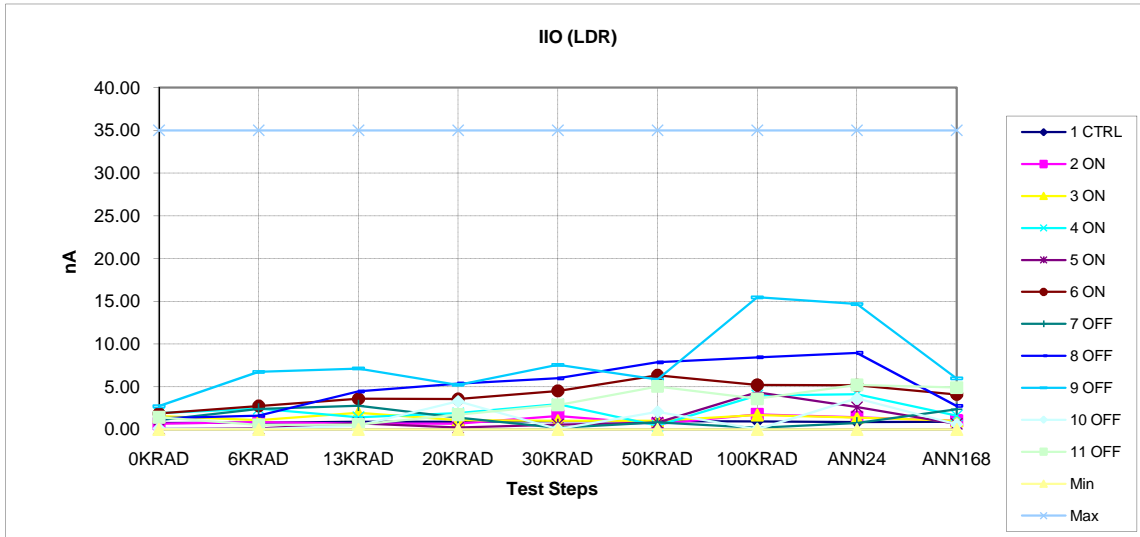
IIB- (AVERAGE)	0KRAD	6KRAD	13KRAD	20KRAD	30KRAD	50KRAD	100KRAD	ANN24	ANN168
ELDR ON	3.38	3.17	2.99	18.66	38.97	67.54	71.19	66.38	6.70
ELDR OFF	3.41	4.87	6.57	45.96	129.80	276.41	657.88	640.05	7.77
LDR ON	4.58	4.20	4.85	19.64	44.12	94.65	147.43	123.68	3.95
LDR OFF	3.71	4.63	4.45	48.09	127.75	321.38	845.91	810.23	8.40



IIO (ELDR)	0KRAD	6KRAD	13KRAD	20KRAD	30KRAD	50KRAD	100KRAD	ANN24	ANN168
Min	0	0	0	0	0	0	0	0	0
Max	35	35	35	35	35	35	35	35	35
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control Results									
1 CTRL	1.25	1.25	1.26	1.18	1.24	1.37	1.25	1.21	1.22

Bias on results									
2 ON	0.48	0.14	1.23	0.83	0.93	2.34	1.21	1.32	0.69
3 ON	0.54	0.17	0.34	1.98	2.03	0.05	1.71	2.27	1.09
4 ON	0.37	0.83	1.69	2.16	1.51	2.54	2.15	1.92	0.23
5 ON	1.35	1.41	0.63	0.86	0.38	0.72	1.63	0.30	0.20
6 ON	2.08	1.86	1.35	2.43	2.48	5.29	3.59	3.37	1.38
Statistics bias on									
min result	0.37	0.14	0.34	0.83	0.38	0.05	1.21	0.30	0.20
max result	2.08	1.86	1.69	2.43	2.48	5.29	3.59	3.37	1.38
average	0.96	0.88	1.05	1.65	1.46	2.19	2.06	1.84	0.72
sigma	0.74	0.76	0.55	0.75	0.84	2.03	0.92	1.14	0.52

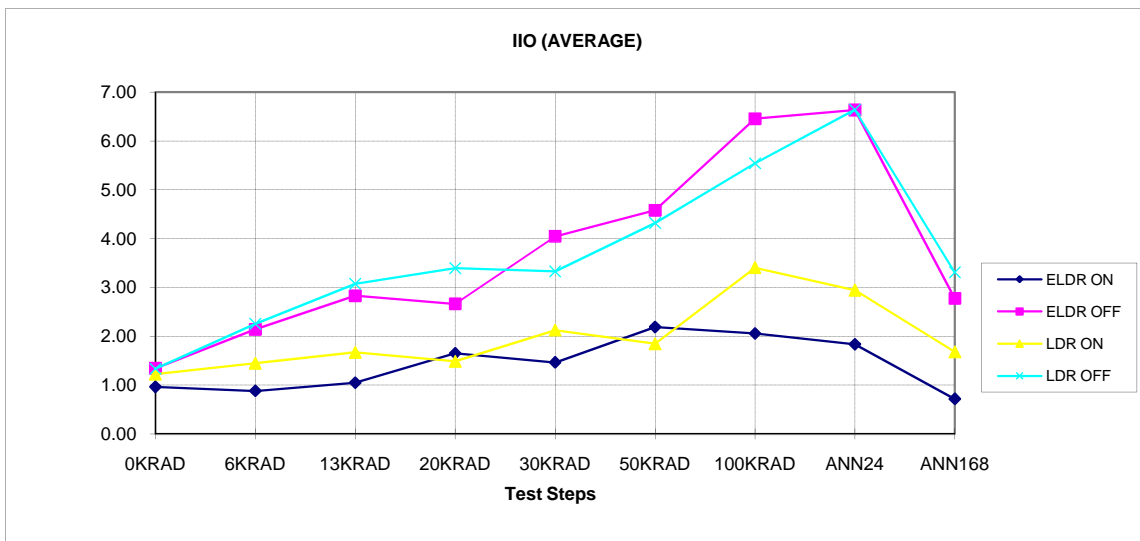
Bias off results									
7 OFF	0.98	1.09	0.75	0.96	1.33	2.74	2.65	2.49	3.38
8 OFF	3.63	5.08	6.68	6.80	8.89	9.27	16.80	18.20	5.61
9 OFF	1.31	3.52	4.28	3.79	4.40	7.16	7.29	6.31	0.48
10 OFF	0.76	0.53	1.58	1.64	2.25	0.08	1.59	1.24	1.99
11 OFF	0.05	0.48	0.86	0.13	3.37	3.66	3.93	4.94	2.42
Statistics bias off									
min result	0.05	0.48	0.75	0.13	1.33	0.08	1.59	1.24	0.48
max result	3.63	5.08	6.68	6.80	8.89	9.27	16.80	18.20	5.61
average	1.35	2.14	2.83	2.66	4.05	4.58	6.45	6.63	2.77
sigma	1.36	2.06	2.59	2.68	2.94	3.65	6.17	6.76	1.90



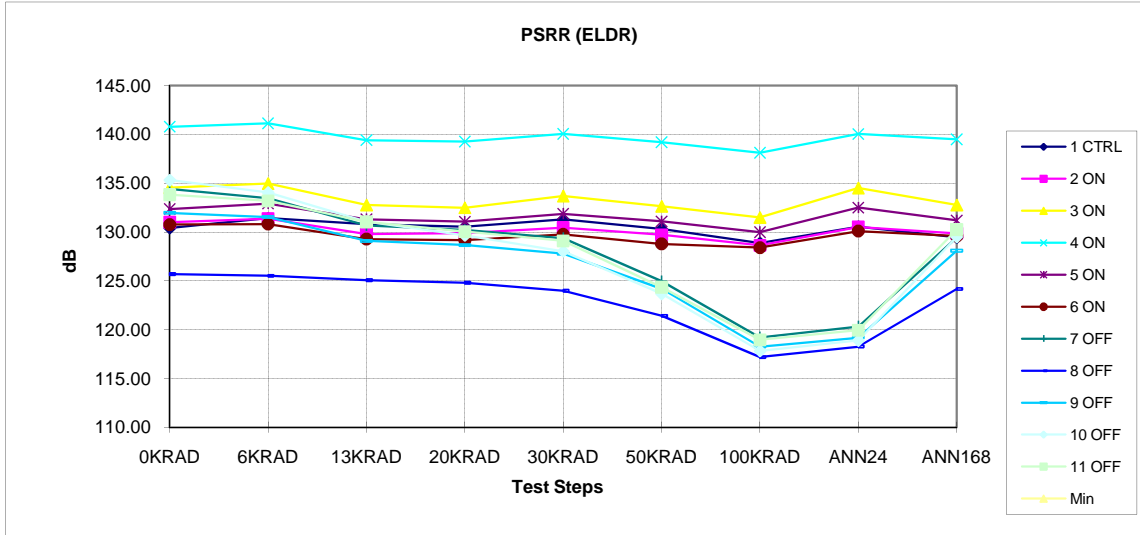
IIO (LDR)	0KRAD	6KRAD	13KRAD	20KRAD	30KRAD	50KRAD	100KRAD	ANN24	ANN168
Min	0	0	0	0	0	0	0	0	0
Max	35	35	35	35	35	35	35	35	35
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control Results									
1 CTRL	0.75	0.78	0.92	0.90	0.97	0.99	0.95	0.86	0.90

Bias on results									
2 ON	0.68	0.88	0.66	0.69	1.58	0.64	1.77	1.42	1.01
3 ON	1.59	1.08	1.96	1.09	1.03	1.02	1.70	1.40	1.02
4 ON	1.92	2.43	1.43	1.90	2.94	0.44	3.97	4.11	1.62
5 ON	0.08	0.10	0.72	0.21	0.57	0.79	4.36	2.61	0.65
6 ON	1.87	2.75	3.58	3.55	4.51	6.35	5.21	5.18	4.10
Statistics bias on									
min result	0.08	0.10	0.66	0.21	0.57	0.44	1.70	1.40	0.65
max result	1.92	2.75	3.58	3.55	4.51	6.35	5.21	5.18	4.10
average	1.23	1.45	1.67	1.49	2.13	1.85	3.40	2.94	1.68
sigma	0.81	1.11	1.20	1.31	1.60	2.53	1.59	1.67	1.40

Bias off results									
7 OFF	1.10	2.39	2.78	1.40	0.20	0.81	0.20	0.75	2.37
8 OFF	1.30	1.61	4.46	5.36	5.99	7.86	8.44	8.95	2.75
9 OFF	2.73	6.73	7.13	5.23	7.56	5.83	15.46	14.67	5.96
10 OFF	0.11	0.03	0.44	3.29	0.06	2.07	0.02	3.62	0.59
11 OFF	1.43	0.53	0.56	1.72	2.86	5.03	3.58	5.21	4.89
Statistics bias off									
min result	0.11	0.03	0.44	1.40	0.06	0.81	0.02	0.75	0.59
max result	2.73	6.73	7.13	5.36	7.56	7.86	15.46	14.67	5.96
average	1.34	2.26	3.07	3.40	3.33	4.32	5.54	6.64	3.31
sigma	0.94	2.66	2.81	1.87	3.38	2.86	6.51	5.38	2.13



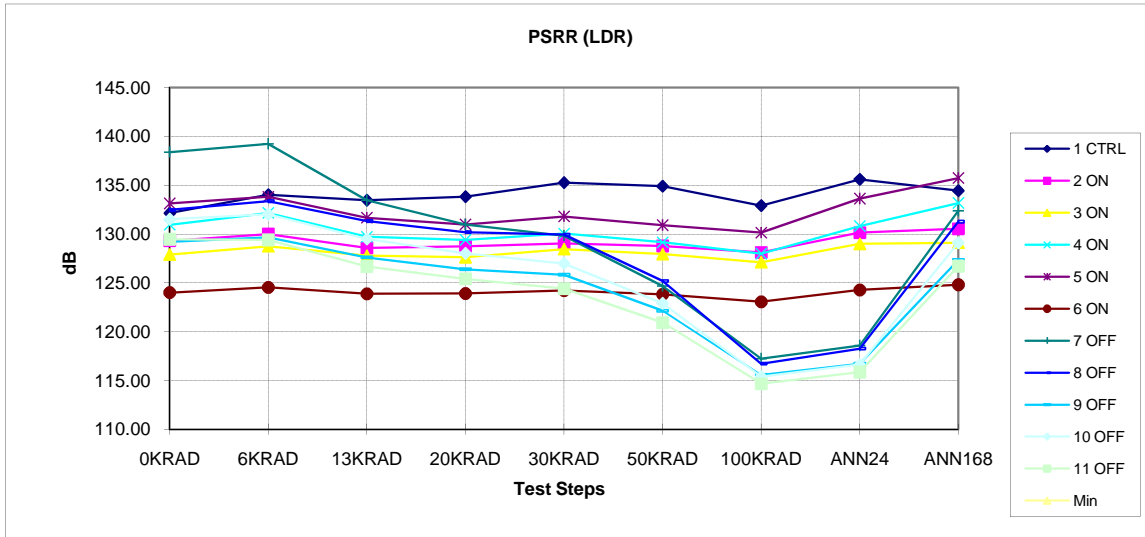
IIO (AVERAGE)	0KRAD	6KRAD	13KRAD	20KRAD	30KRAD	50KRAD	100KRAD	ANN24	ANN168
ELDR ON	0.96	0.88	1.05	1.65	1.46	2.19	2.06	1.84	0.72
ELDR OFF	1.35	2.14	2.83	2.66	4.05	4.58	6.45	6.63	2.77
LDR ON	1.23	1.45	1.67	1.49	2.13	1.85	3.40	2.94	1.68
LDR OFF	1.34	2.26	3.07	3.40	3.33	4.32	5.54	6.64	3.31



PSRR (ELDR)	0KRAD	6KRAD	13KRAD	20KRAD	30KRAD	50KRAD	100KRAD	ANN24	ANN168
Min	100	100	100	100	100	100	100	100	100
Max	--	--	--	--	--	--	--	--	--
Unit	dB	dB	dB	dB	dB	dB	dB	dB	dB
Control Results									
1 CTRL	130.42	131.43	130.81	130.54	131.30	130.33	128.88	130.56	129.46

Bias on results									
2 ON	131.01	131.38	129.81	129.90	130.45	129.72	128.64	130.52	129.88
3 ON	134.56	134.96	132.77	132.49	133.69	132.64	131.49	134.51	132.77
4 ON	140.79	141.14	139.41	139.27	140.06	139.21	138.12	140.05	139.50
5 ON	132.36	132.92	131.31	131.06	131.88	131.10	129.99	132.51	131.20
6 ON	130.77	130.83	129.29	129.18	129.77	128.79	128.41	130.11	129.60
Statistics bias on									
min result	130.77	130.83	129.29	129.18	129.77	128.79	128.41	130.11	129.60
max result	140.79	141.14	139.41	139.27	140.06	139.21	138.12	140.05	139.50
average	133.90	134.25	132.52	132.38	133.17	132.29	131.33	133.54	132.59
sigma	4.14	4.17	4.09	4.05	4.14	4.13	3.99	4.04	4.06

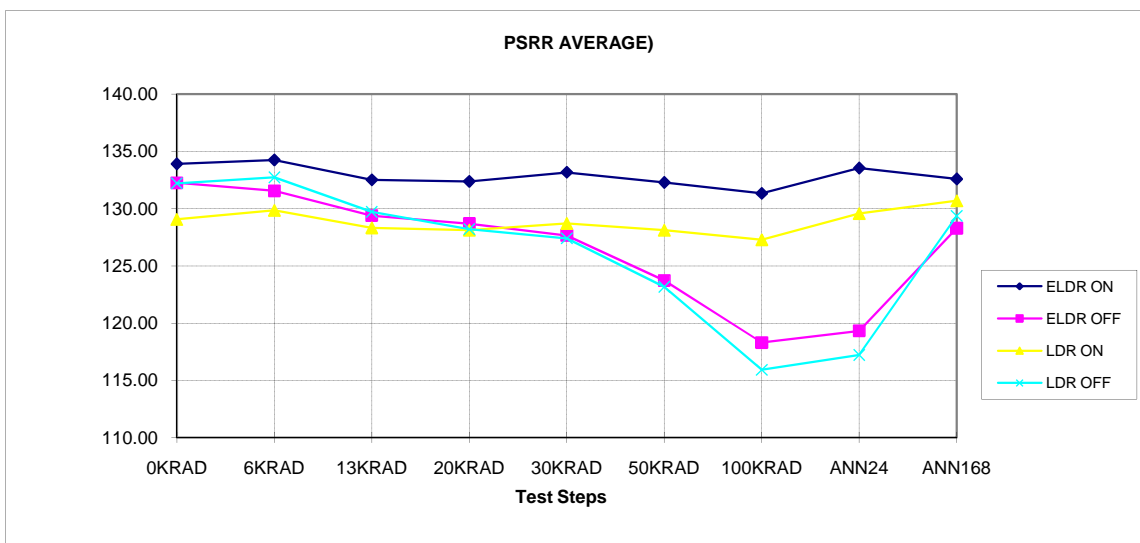
Bias off results									
7 OFF	134.42	133.46	130.67	130.21	129.37	124.97	119.22	120.33	129.44
8 OFF	125.70	125.52	125.08	124.82	124.00	121.44	117.20	118.27	124.17
9 OFF	131.97	131.54	129.10	128.68	127.79	124.19	118.27	119.18	128.10
10 OFF	135.33	134.06	131.09	129.67	128.04	123.69	117.83	118.91	129.52
11 OFF	133.83	133.20	131.05	130.05	129.10	124.35	118.97	119.95	130.25
Statistics bias off									
min result	125.70	125.52	125.08	124.82	124.00	121.44	117.20	118.27	124.17
max result	135.33	134.06	131.09	130.21	129.37	124.97	119.22	120.33	130.25
average	132.25	131.56	129.40	128.68	127.66	123.73	118.30	119.33	128.29
sigma	3.86	3.50	2.55	2.24	2.15	1.36	0.82	0.82	2.43



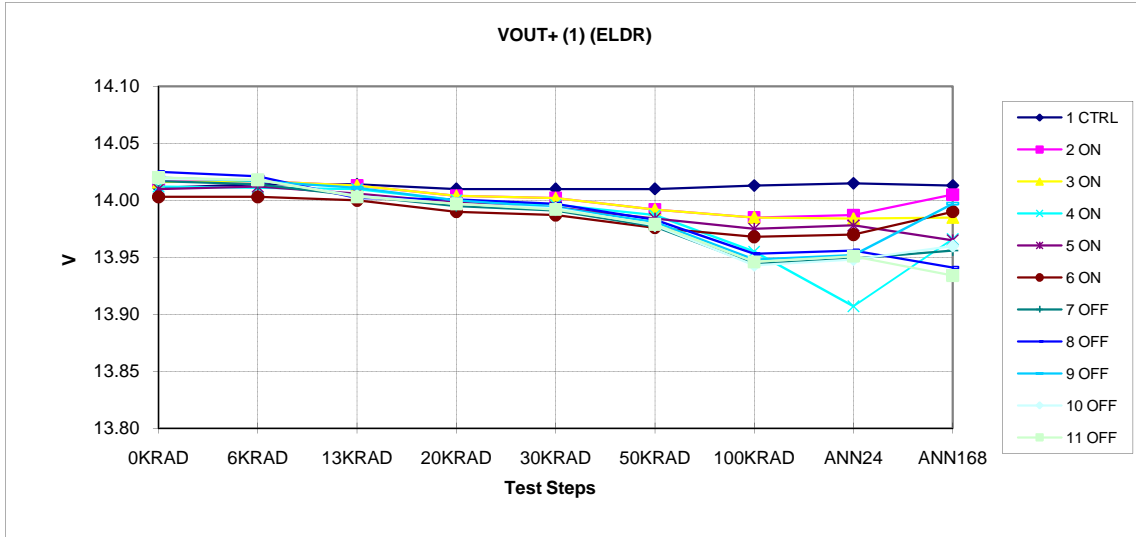
PSRR (LDR)	0KRAD	6KRAD	13KRAD	20KRAD	30KRAD	50KRAD	100KRAD	ANN24	ANN168
Min	100	100	100	100	100	100	100	100	100
Max	--	--	--	--	--	--	--	--	--
Unit	dB	dB	dB	dB	dB	dB	dB	dB	dB
Control Results									
1 CTRL	132.16	134.04	133.47	133.83	135.27	134.90	132.92	135.61	134.44

Bias on results									
2 ON	129.32	130.01	128.58	128.74	129.05	128.78	128.12	130.15	130.54
3 ON	127.91	128.75	127.79	127.63	128.46	127.95	127.12	129.00	129.13
4 ON	130.96	132.17	129.72	129.40	130.05	129.16	127.99	130.83	133.19
5 ON	133.14	133.82	131.68	130.99	131.81	130.91	130.15	133.63	135.75
6 ON	124.01	124.54	123.89	123.92	124.23	123.83	123.07	124.28	124.82
Statistics bias on									
min result	124.01	124.54	123.89	123.92	124.23	123.83	123.07	124.28	124.82
max result	133.14	133.82	131.68	130.99	131.81	130.91	130.15	133.63	135.75
average	129.07	129.86	128.33	128.14	128.72	128.13	127.29	129.58	130.68
sigma	3.43	3.56	2.88	2.65	2.81	2.63	2.61	3.42	4.15

Bias off results									
7 OFF	138.40	139.24	133.47	130.98	129.84	124.68	117.25	118.59	132.38
8 OFF	132.48	133.37	131.34	130.20	129.95	125.20	116.73	118.26	131.27
9 OFF	129.20	129.66	127.60	126.40	125.84	122.16	115.58	116.73	127.35
10 OFF	131.53	132.02	129.49	128.02	126.99	122.92	115.41	116.64	129.12
11 OFF	129.47	129.40	126.68	125.42	124.42	120.94	114.67	115.87	126.71
Statistics bias off									
min result	129.20	129.40	126.68	125.42	124.42	120.94	114.67	115.87	126.71
max result	138.40	139.24	133.47	130.98	129.95	125.20	117.25	118.59	132.38
average	132.21	132.74	129.72	128.20	127.41	123.18	115.93	117.22	129.37
sigma	3.72	3.99	2.76	2.38	2.45	1.76	1.04	1.16	2.44



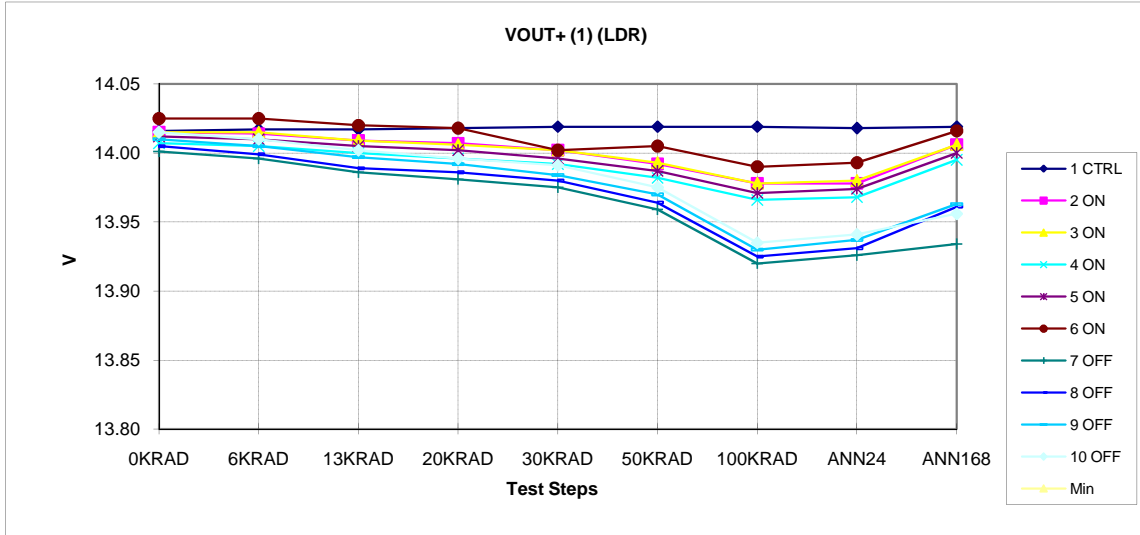
PSRR AVERAGE	0KRAD	6KRAD	13KRAD	20KRAD	30KRAD	50KRAD	100KRAD	ANN24	ANN168
ELDR ON	133.90	134.25	132.52	132.38	133.17	132.29	131.33	133.54	132.59
ELDR OFF	132.25	131.56	129.40	128.68	127.66	123.73	118.30	119.33	128.29
LDR ON	129.07	129.86	128.33	128.14	128.72	128.13	127.29	129.58	130.68
LDR OFF	132.21	132.74	129.72	128.20	127.41	123.18	115.93	117.22	129.37



VOUT+ (1) (ELDR)	0KRAD	6KRAD	13KRAD	20KRAD	30KRAD	50KRAD	100KRAD	ANN24	ANN168
Min	12	12	12	12	12	12	12	12	12
Max	--	--	--	--	--	--	--	--	--
Unit	V	V	V	V	V	V	V	V	V
Control Results									
1 CTRL	14.01	14.01	14.01	14.01	14.01	14.01	14.01	14.02	14.01

Bias on results									
2 ON	14.02	14.02	14.01	14.00	14.00	13.99	13.99	13.99	14.01
3 ON	14.02	14.02	14.01	14.00	14.00	13.99	13.99	13.98	13.99
4 ON	14.01	14.01	14.01	14.00	14.00	13.99	13.96	13.91	13.97
5 ON	14.01	14.01	14.01	14.00	13.99	13.98	13.98	13.98	13.97
6 ON	14.00	14.00	14.00	13.99	13.99	13.98	13.97	13.97	13.99
Statistics bias on									
min result	14.00	14.00	14.00	13.99	13.99	13.98	13.96	13.91	13.97
max result	14.02	14.02	14.01	14.00	14.00	13.99	13.99	13.99	14.01
average	14.01	14.01	14.01	14.00	14.00	13.99	13.97	13.97	13.98
sigma	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.03	0.02

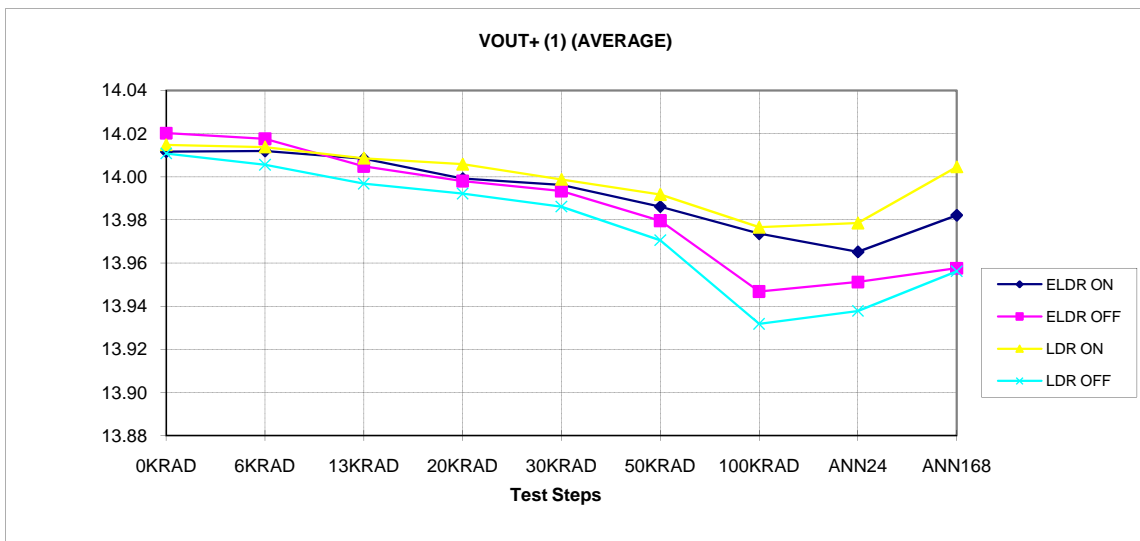
Bias off results									
7 OFF	14.02	14.01	14.00	14.00	13.99	13.98	13.94	13.95	13.96
8 OFF	14.03	14.02	14.00	14.00	14.00	13.98	13.95	13.96	13.94
9 OFF	14.02	14.02	14.01	14.00	13.99	13.98	13.95	13.95	14.00
10 OFF	14.02	14.02	14.00	14.00	13.99	13.98	13.94	13.95	13.96
11 OFF	14.02	14.02	14.00	14.00	13.99	13.98	13.95	13.95	13.93
Statistics bias off									
min result	14.02	14.01	14.00	14.00	13.99	13.98	13.94	13.95	13.93
max result	14.03	14.02	14.01	14.00	14.00	13.98	13.95	13.96	14.00
average	14.02	14.02	14.00	14.00	13.99	13.98	13.95	13.95	13.96
sigma	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02



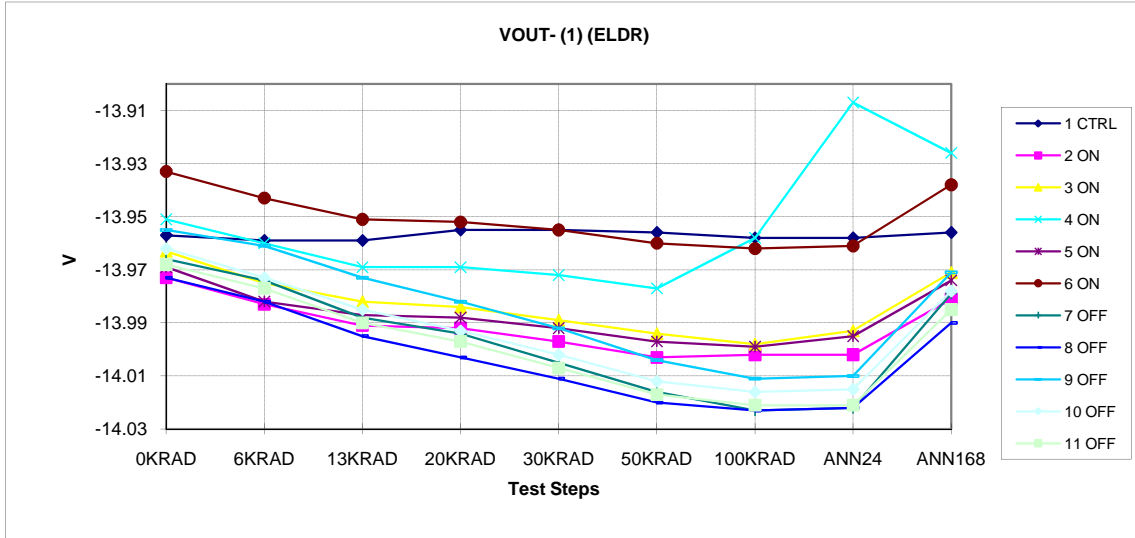
VOUT+ (1) (LDR)	0KRAD	6KRAD	13KRAD	20KRAD	30KRAD	50KRAD	100KRAD	ANN24	ANN168
Min	12	12	12	12	12	12	12	12	12
Max	--	--	--	--	--	--	--	--	--
Unit	V	V	V	V	V	V	V	V	V
Control Results									
1 CTRL	14.02	14.02	14.02	14.02	14.02	14.02	14.02	14.02	14.02

Bias on results									
2 ON	14.02	14.01	14.01	14.01	14.00	13.99	13.98	13.98	14.01
3 ON	14.02	14.02	14.01	14.01	14.00	13.99	13.98	13.98	14.01
4 ON	14.01	14.01	14.00	14.00	13.99	13.98	13.97	13.97	14.00
5 ON	14.01	14.01	14.01	14.00	14.00	13.99	13.97	13.97	14.00
6 ON	14.03	14.03	14.02	14.02	14.00	14.01	13.99	13.99	14.02
Statistics bias on									
min result	14.01	14.01	14.00	14.00	13.99	13.98	13.97	13.97	14.00
max result	14.03	14.03	14.02	14.02	14.00	14.01	13.99	13.99	14.02
average	14.01	14.01	14.01	14.01	14.00	13.99	13.98	13.98	14.00
sigma	0.01	0.01	0.01	0.01	0.00	0.01	0.01	0.01	0.01

Bias off results									
7 OFF	14.00	14.00	13.99	13.98	13.98	13.96	13.92	13.93	13.93
8 OFF	14.01	14.00	13.99	13.99	13.98	13.96	13.93	13.93	13.96
9 OFF	14.01	14.01	14.00	13.99	13.98	13.97	13.93	13.94	13.96
10 OFF	14.02	14.01	14.00	14.00	13.99	13.98	13.94	13.94	13.96
11 OFF	14.02	14.02	14.01	14.01	14.00	13.99	13.95	13.95	13.97
Statistics bias off									
min result	14.00	14.00	13.99	13.98	13.98	13.96	13.92	13.93	13.93
max result	14.02	14.02	14.01	14.01	14.00	13.99	13.95	13.95	13.97
average	14.01	14.01	14.00	13.99	13.99	13.97	13.93	13.94	13.96
sigma	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01



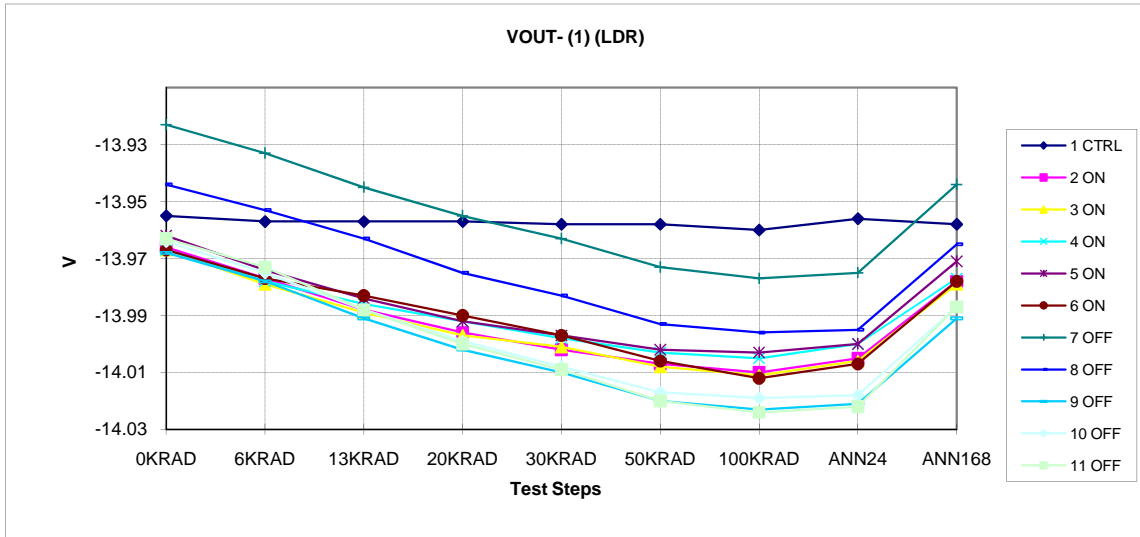
UT+ (1) (AVERA	0KRAD	6KRAD	13KRAD	20KRAD	30KRAD	50KRAD	100KRAD	ANN24	ANN168
ELDR ON	14.01	14.01	14.01	14.00	14.00	13.99	13.97	13.97	13.98
ELDR OFF	14.02	14.02	14.00	14.00	13.99	13.98	13.95	13.95	13.96
LDR ON	14.01	14.01	14.01	14.01	14.00	13.99	13.98	13.98	14.00
LDR OFF	14.01	14.01	14.00	13.99	13.99	13.97	13.93	13.94	13.96



VOUT- (1) (ELDR)	0KRAD	6KRAD	13KRAD	20KRAD	30KRAD	50KRAD	100KRAD	ANN24	ANN168
Min	--	--	--	--	--	--	--	--	--
Max	-12	-12	-12	-12	-12	-12	-12	-12	-12
Unit	V	V	V	V	V	V	V	V	V
Control Results									
1 CTRL	-13.96	-13.96	-13.96	-13.96	-13.96	-13.96	-13.96	-13.96	-13.96

Bias on results									
2 ON	-13.97	-13.98	-13.99	-13.99	-14.00	-14.00	-14.00	-14.00	-13.98
3 ON	-13.96	-13.98	-13.98	-13.98	-13.99	-13.99	-14.00	-13.99	-13.97
4 ON	-13.95	-13.96	-13.97	-13.97	-13.97	-13.98	-13.96	-13.91	-13.93
5 ON	-13.97	-13.98	-13.99	-13.99	-13.99	-14.00	-14.00	-14.00	-13.97
6 ON	-13.93	-13.94	-13.95	-13.95	-13.96	-13.96	-13.96	-13.96	-13.94
Statistics bias on									
min result	-13.97	-13.98	-13.99	-13.99	-14.00	-14.00	-14.00	-14.00	-13.98
max result	-13.93	-13.94	-13.95	-13.95	-13.96	-13.96	-13.96	-13.91	-13.93
average	-13.96	-13.97	-13.98	-13.98	-13.98	-13.99	-13.98	-13.97	-13.96
sigma	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.04	0.02

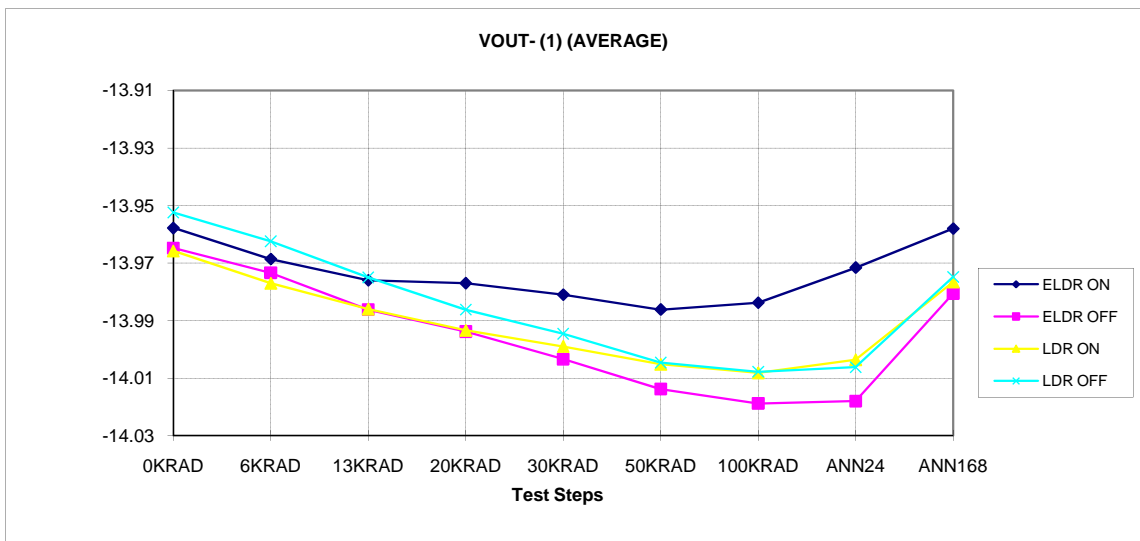
Bias off results									
7 OFF	-13.97	-13.97	-13.99	-13.99	-14.01	-14.02	-14.02	-14.02	-13.98
8 OFF	-13.97	-13.98	-14.00	-14.00	-14.01	-14.02	-14.02	-14.02	-13.99
9 OFF	-13.96	-13.96	-13.97	-13.98	-13.99	-14.00	-14.01	-14.01	-13.97
10 OFF	-13.96	-13.97	-13.99	-13.99	-14.00	-14.01	-14.02	-14.02	-13.98
11 OFF	-13.97	-13.98	-13.99	-14.00	-14.01	-14.02	-14.02	-14.02	-13.99
Statistics bias off									
min result	-13.97	-13.98	-14.00	-14.00	-14.01	-14.02	-14.02	-14.02	-13.99
max result	-13.96	-13.96	-13.97	-13.98	-13.99	-14.00	-14.01	-14.01	-13.97
average	-13.96	-13.97	-13.99	-13.99	-14.00	-14.01	-14.02	-14.02	-13.98
sigma	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01



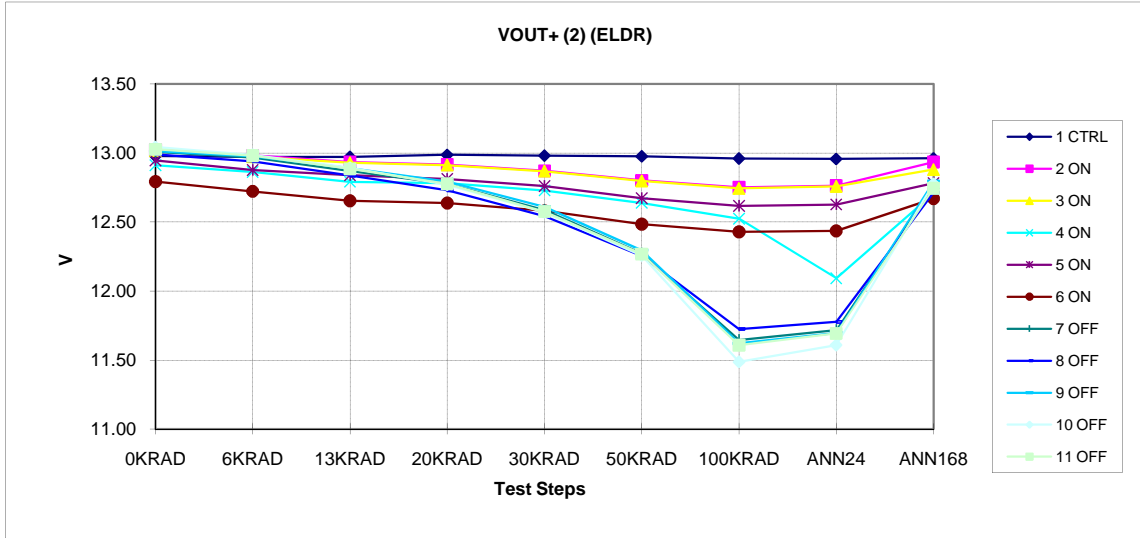
VOUT- (1) (LDR)	0KRAD	6KRAD	13KRAD	20KRAD	30KRAD	50KRAD	100KRAD	ANN24	ANN168
Min	--	--	--	--	--	--	--	--	--
Max	-12	-12	-12	-12	-12	-12	-12	-12	-12
Unit	V	V	V	V	V	V	V	V	V
Control Results									
1 CTRL	-13.96	-13.96	-13.96	-13.96	-13.96	-13.96	-13.96	-13.96	-13.96

Bias on results									
2 ON	-13.97	-13.98	-13.99	-14.00	-14.00	-14.01	-14.01	-14.01	-13.98
3 ON	-13.97	-13.98	-13.99	-14.00	-14.00	-14.01	-14.01	-14.01	-13.98
4 ON	-13.97	-13.98	-13.99	-13.99	-14.00	-14.00	-14.01	-14.00	-13.98
5 ON	-13.96	-13.97	-13.98	-13.99	-14.00	-14.00	-14.00	-14.00	-13.97
6 ON	-13.97	-13.98	-13.98	-13.99	-14.00	-14.01	-14.01	-14.01	-13.98
Statistics bias on									
min result	-13.97	-13.98	-13.99	-14.00	-14.00	-14.01	-14.01	-14.01	-13.98
max result	-13.96	-13.97	-13.98	-13.99	-14.00	-14.00	-14.00	-14.00	-13.97
average	-13.97	-13.98	-13.99	-13.99	-14.00	-14.01	-14.01	-14.00	-13.98
sigma	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Bias off results									
7 OFF	-13.92	-13.93	-13.95	-13.96	-13.96	-13.97	-13.98	-13.98	-13.94
8 OFF	-13.94	-13.95	-13.96	-13.98	-13.98	-13.99	-14.00	-14.00	-13.97
9 OFF	-13.97	-13.98	-13.99	-14.00	-14.01	-14.02	-14.02	-14.02	-13.99
10 OFF	-13.96	-13.98	-13.99	-14.00	-14.01	-14.02	-14.02	-14.02	-13.99
11 OFF	-13.96	-13.97	-13.99	-14.00	-14.01	-14.02	-14.02	-14.02	-13.99
Statistics bias off									
min result	-13.97	-13.98	-13.99	-14.00	-14.01	-14.02	-14.02	-14.02	-13.99
max result	-13.92	-13.93	-13.95	-13.96	-13.96	-13.97	-13.98	-13.98	-13.94
average	-13.95	-13.96	-13.98	-13.99	-13.99	-14.00	-14.01	-14.01	-13.97
sigma	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02



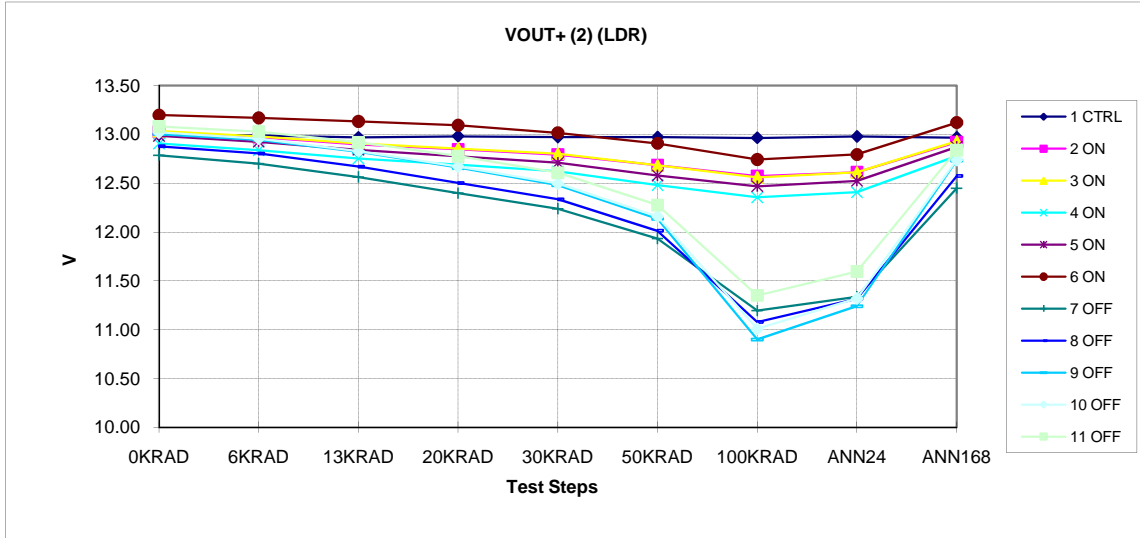
UT- (1) (AVERAGE)	0KRAD	6KRAD	13KRAD	20KRAD	30KRAD	50KRAD	100KRAD	ANN24	ANN168
ELDR ON	-13.96	-13.97	-13.98	-13.98	-13.98	-13.99	-13.98	-13.97	-13.96
ELDR OFF	-13.96	-13.97	-13.99	-13.99	-14.00	-14.01	-14.02	-14.02	-13.98
LDR ON	-13.97	-13.98	-13.99	-13.99	-14.00	-14.01	-14.01	-14.00	-13.98
LDR OFF	-13.95	-13.96	-13.98	-13.99	-13.99	-14.00	-14.01	-14.01	-13.97



VOUT+ (2) (ELDR)	0KRAD	6KRAD	13KRAD	20KRAD	30KRAD	50KRAD	100KRAD	ANN24	ANN168
Min	10	10	10	10	10	10	10	10	10
Max	--	--	--	--	--	--	--	--	--
Unit	V	V	V	V	V	V	V	V	V
Control Results									
1 CTRL	12.98	12.97	12.97	12.99	12.98	12.98	12.96	12.96	12.96

Bias on results									
2 ON	13.02	12.98	12.94	12.92	12.87	12.80	12.75	12.76	12.93
3 ON	13.02	12.97	12.93	12.91	12.87	12.80	12.74	12.76	12.88
4 ON	12.91	12.86	12.79	12.78	12.73	12.64	12.52	12.09	12.71
5 ON	12.95	12.88	12.84	12.81	12.76	12.67	12.62	12.63	12.78
6 ON	12.79	12.72	12.65	12.64	12.58	12.48	12.43	12.44	12.67
Statistics bias on									
min result	12.79	12.72	12.65	12.64	12.58	12.48	12.43	12.09	12.67
max result	13.02	12.98	12.94	12.92	12.87	12.80	12.75	12.76	12.93
average	12.94	12.88	12.83	12.81	12.76	12.68	12.61	12.54	12.79
sigma	0.09	0.11	0.12	0.11	0.12	0.13	0.14	0.28	0.11

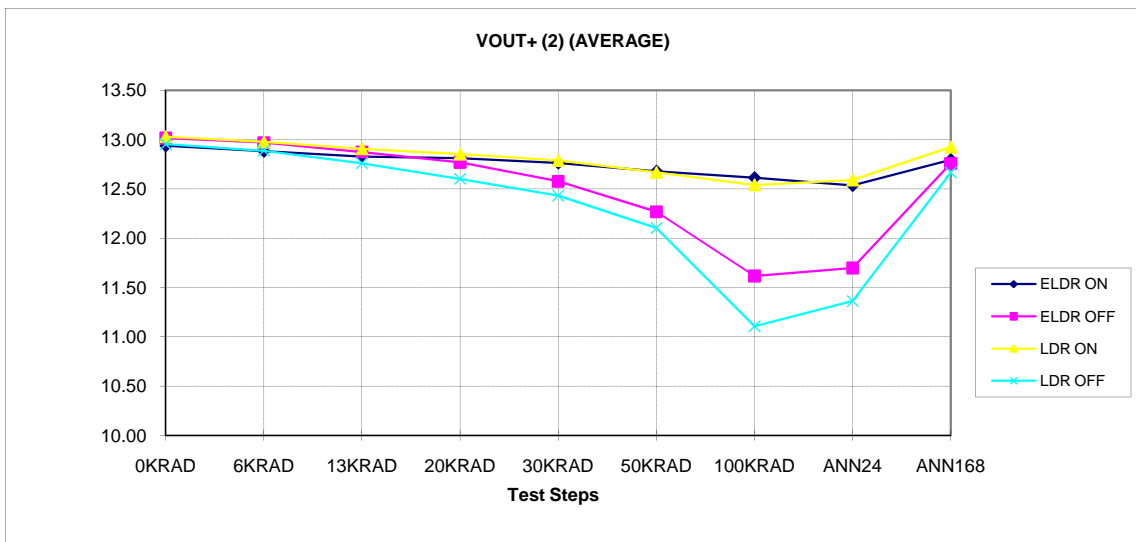
Bias off results									
7 OFF	13.01	12.97	12.87	12.78	12.59	12.27	11.65	11.72	12.77
8 OFF	12.99	12.94	12.84	12.73	12.54	12.25	11.73	11.78	12.71
9 OFF	13.01	12.98	12.89	12.79	12.61	12.30	11.62	11.70	12.79
10 OFF	13.04	12.99	12.89	12.77	12.57	12.26	11.49	11.61	12.78
11 OFF	13.03	12.98	12.89	12.78	12.58	12.27	11.61	11.69	12.74
Statistics bias off									
min result	12.99	12.94	12.84	12.73	12.54	12.25	11.49	11.61	12.71
max result	13.04	12.99	12.89	12.79	12.61	12.30	11.73	11.78	12.79
average	13.02	12.97	12.87	12.77	12.58	12.27	11.62	11.70	12.76
sigma	0.02	0.02	0.02	0.02	0.02	0.02	0.09	0.06	0.03



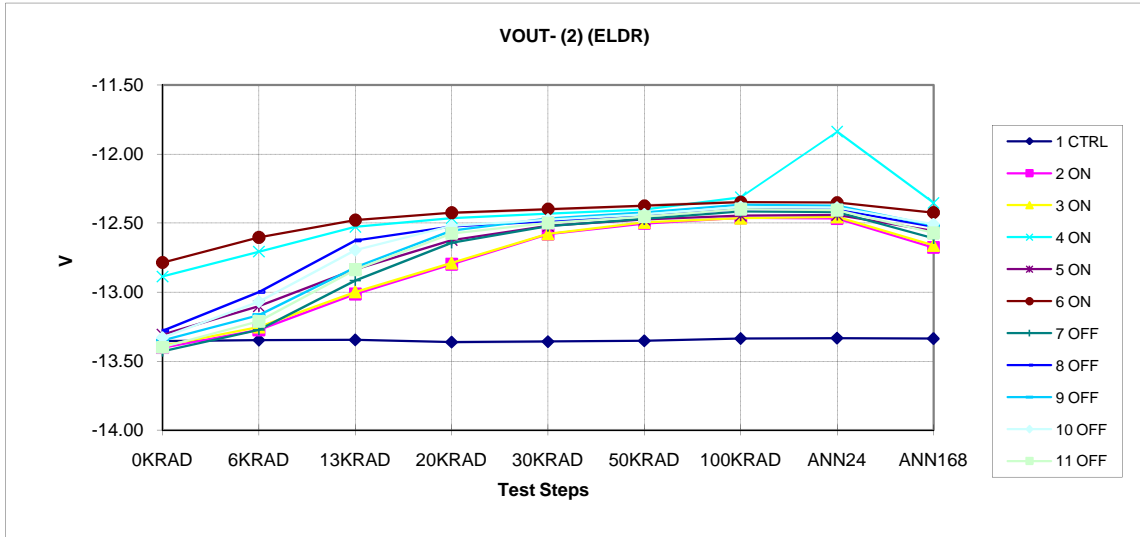
VOUT+ (2) (LDR)	0KRAD	6KRAD	13KRAD	20KRAD	30KRAD	50KRAD	100KRAD	ANN24	ANN168
Min	10	10	10	10	10	10	10	10	10
Max	--	--	--	--	--	--	--	--	--
Unit	V	V	V	V	V	V	V	V	V
Control Results									
1 CTRL	13.00	12.99	12.97	12.98	12.97	12.97	12.96	12.98	12.97

Bias on results									
2 ON	13.03	12.97	12.90	12.85	12.79	12.69	12.57	12.61	12.92
3 ON	13.03	12.98	12.91	12.86	12.80	12.68	12.56	12.61	12.93
4 ON	12.91	12.84	12.75	12.69	12.62	12.48	12.36	12.41	12.78
5 ON	12.99	12.93	12.84	12.78	12.71	12.58	12.47	12.53	12.87
6 ON	13.20	13.17	13.13	13.09	13.02	12.91	12.74	12.80	13.12
Statistics bias on									
min result	12.91	12.84	12.75	12.69	12.62	12.48	12.36	12.41	12.78
max result	13.20	13.17	13.13	13.09	13.02	12.91	12.74	12.80	13.12
average	13.03	12.98	12.91	12.85	12.79	12.67	12.54	12.59	12.92
sigma	0.11	0.12	0.14	0.15	0.15	0.16	0.14	0.14	0.13

Bias off results									
7 OFF	12.79	12.70	12.56	12.40	12.24	11.93	11.20	11.34	12.45
8 OFF	12.88	12.81	12.67	12.50	12.34	12.01	11.08	11.32	12.57
9 OFF	13.00	12.94	12.82	12.66	12.48	12.14	10.90	11.24	12.73
10 OFF	13.02	12.96	12.83	12.67	12.50	12.16	11.01	11.32	12.74
11 OFF	13.08	13.03	12.92	12.78	12.61	12.28	11.35	11.60	12.84
Statistics bias off									
min result	12.79	12.70	12.56	12.40	12.24	11.93	10.90	11.24	12.45
max result	13.08	13.03	12.92	12.78	12.61	12.28	11.35	11.60	12.84
average	12.95	12.89	12.76	12.60	12.43	12.10	11.11	11.36	12.67
sigma	0.12	0.13	0.14	0.15	0.14	0.13	0.17	0.14	0.15



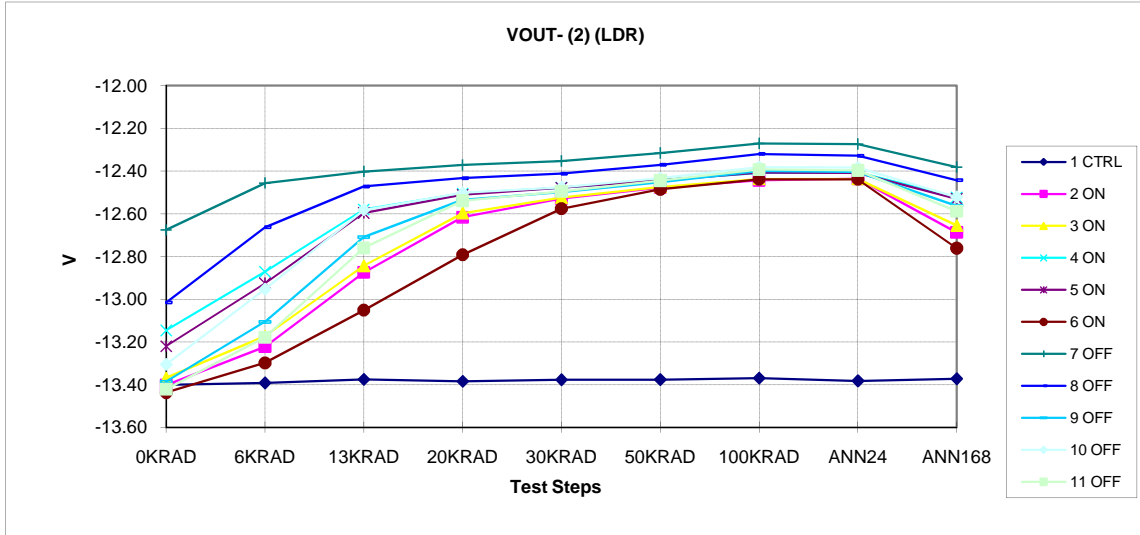
UT+ (2) (AVERA	0KRAD	6KRAD	13KRAD	20KRAD	30KRAD	50KRAD	100KRAD	ANN24	ANN168
ELDR ON	12.94	12.88	12.83	12.81	12.76	12.68	12.61	12.54	12.79
ELDR OFF	13.02	12.97	12.87	12.77	12.58	12.27	11.62	11.70	12.76
LDR ON	13.03	12.98	12.91	12.85	12.79	12.67	12.54	12.59	12.92
LDR OFF	12.95	12.89	12.76	12.60	12.43	12.10	11.11	11.36	12.67



VOUT- (2) (ELDR)	0KRAD	6KRAD	13KRAD	20KRAD	30KRAD	50KRAD	100KRAD	ANN24	ANN168
Min	--	--	--	--	--	--	--	--	--
Max	-10	-10	-10	-10	-10	-10	-10	-10	-10
Unit	V	V	V	V	V	V	V	V	V
Control Results									
1 CTRL	-13.35	-13.35	-13.35	-13.36	-13.36	-13.35	-13.34	-13.33	-13.34

Bias on results									
2 ON	-13.40	-13.27	-13.01	-12.80	-12.58	-12.50	-12.46	-12.47	-12.68
3 ON	-13.39	-13.25	-13.00	-12.79	-12.58	-12.50	-12.46	-12.46	-12.66
4 ON	-12.89	-12.71	-12.53	-12.47	-12.43	-12.40	-12.31	-11.84	-12.35
5 ON	-13.31	-13.10	-12.84	-12.62	-12.52	-12.47	-12.45	-12.44	-12.56
6 ON	-12.79	-12.60	-12.48	-12.43	-12.40	-12.38	-12.35	-12.35	-12.42
Statistics bias on									
min result	-13.40	-13.27	-13.01	-12.80	-12.58	-12.50	-12.46	-12.47	-12.68
max result	-12.79	-12.60	-12.48	-12.43	-12.40	-12.38	-12.31	-11.84	-12.35
average	-13.15	-12.99	-12.77	-12.62	-12.50	-12.45	-12.41	-12.31	-12.53
sigma	0.30	0.31	0.26	0.18	0.08	0.06	0.07	0.27	0.14

Bias off results									
7 OFF	-13.43	-13.27	-12.92	-12.64	-12.52	-12.47	-12.42	-12.42	-12.61
8 OFF	-13.28	-13.00	-12.63	-12.53	-12.49	-12.45	-12.40	-12.40	-12.53
9 OFF	-13.35	-13.17	-12.82	-12.56	-12.47	-12.42	-12.37	-12.37	-12.52
10 OFF	-13.33	-13.07	-12.70	-12.52	-12.48	-12.44	-12.38	-12.39	-12.51
11 OFF	-13.40	-13.21	-12.84	-12.58	-12.50	-12.45	-12.40	-12.41	-12.57
Statistics bias off									
min result	-13.43	-13.27	-12.92	-12.64	-12.52	-12.47	-12.42	-12.42	-12.61
max result	-13.28	-13.00	-12.63	-12.52	-12.47	-12.42	-12.37	-12.37	-12.51
average	-13.36	-13.14	-12.78	-12.56	-12.49	-12.45	-12.39	-12.40	-12.55
sigma	0.06	0.11	0.12	0.05	0.02	0.02	0.02	0.02	0.04



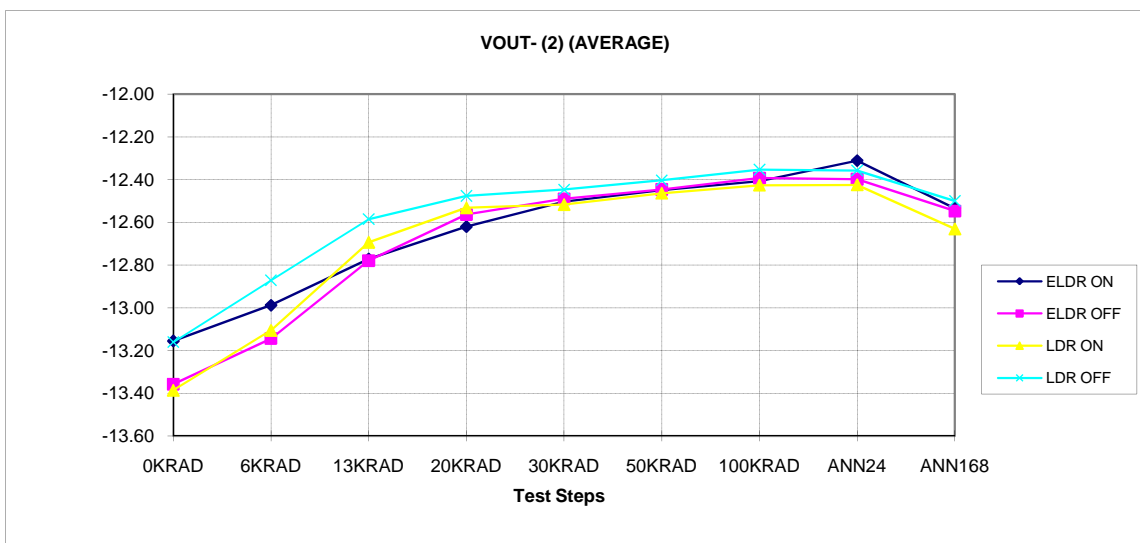
VOUT- (2) (LDR)	0KRAD	6KRAD	13KRAD	20KRAD	30KRAD	50KRAD	100KRAD	ANN24	ANN168
Min	--	--	--	--	--	--	--	--	--
Max	-10	-10	-10	-10	-10	-10	-10	-10	-10
Unit	V	V	V	V	V	V	V	V	V
Control Results									
1 CTRL	-13.40	-13.39	-13.38	-13.38	-13.38	-13.38	-13.37	-13.38	-13.37

Bias on results									
2 ON	-13.40	-13.22	-12.87	-12.62	-12.53	-12.48	-12.44	-12.44	-12.69
3 ON	-13.37	-13.17	-12.84	-12.60	-12.52	-12.47	-12.44	-12.44	-12.66
4 ON	-13.15	-12.87	-12.58	-12.51	-12.48	-12.44	-12.41	-12.41	-12.52
5 ON	-13.22	-12.93	-12.60	-12.51	-12.48	-12.44	-12.41	-12.41	-12.53
6 ON	-13.44	-13.30	-13.05	-12.79	-12.58	-12.49	-12.44	-12.44	-12.76

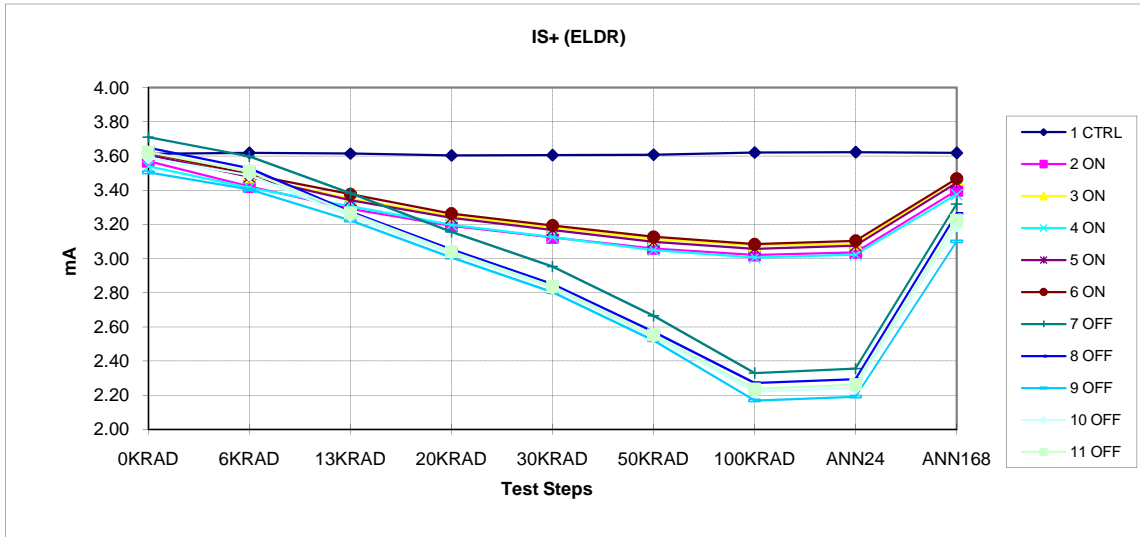
Statistics bias on									
min result	-12.68	-12.46	-12.40	-12.37	-12.58	-12.49	-12.44	-12.44	-12.76
max result	-13.02	-12.66	-12.47	-12.43	-12.48	-12.44	-12.41	-12.41	-12.52
average	-13.39	-13.11	-12.69	-12.53	-12.52	-12.46	-12.43	-12.43	-12.63
sigma	-13.31	-12.95	-12.58	-12.50	0.04	0.02	0.02	0.02	0.10
	-13.42	-13.18	-12.75	-12.53					

Bias off results									
7 OFF	-12.68	-12.46	-12.40	-12.37	-12.35	-12.32	-12.27	-12.27	-12.38
8 OFF	-13.02	-12.66	-12.47	-12.43	-12.41	-12.37	-12.32	-12.33	-12.44
9 OFF	-13.39	-13.11	-12.71	-12.53	-12.50	-12.45	-12.40	-12.40	-12.56
10 OFF	-13.31	-12.95	-12.58	-12.50	-12.48	-12.43	-12.38	-12.38	-12.52
11 OFF	-13.42	-13.18	-12.76	-12.54	-12.50	-12.45	-12.39	-12.40	-12.59

Statistics bias off									
min result	-13.42	-13.18	-12.76	-12.54	-12.50	-12.45	-12.40	-12.40	-12.59
max result	-12.68	-12.46	-12.40	-12.37	-12.35	-12.32	-12.27	-12.27	-12.38
average	-13.16	-12.87	-12.59	-12.48	-12.45	-12.40	-12.35	-12.36	-12.50
sigma	0.31	0.30	0.15	0.07	0.06	0.06	0.06	0.06	0.09



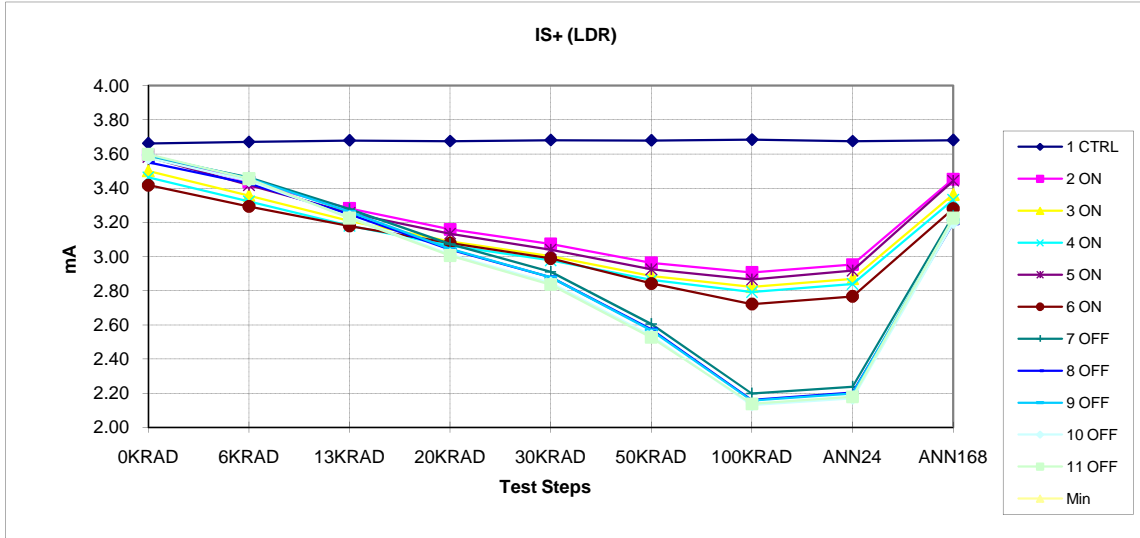
UT- (2) (AVERAGE)	0KRAD	6KRAD	13KRAD	20KRAD	30KRAD	50KRAD	100KRAD	ANN24	ANN168
ELDR ON	-13.15	-12.99	-12.77	-12.62	-12.50	-12.45	-12.41	-12.31	-12.53
ELDR OFF	-13.36	-13.14	-12.78	-12.56	-12.49	-12.45	-12.39	-12.40	-12.55
LDR ON	-13.39	-13.11	-12.69	-12.53	-12.52	-12.46	-12.43	-12.43	-12.63
LDR OFF	-13.16	-12.87	-12.59	-12.48	-12.45	-12.40	-12.35	-12.36	-12.50



IS+ (ELDR)	0KRAD	6KRAD	13KRAD	20KRAD	30KRAD	50KRAD	100KRAD	ANN24	ANN168
Min	--	--	--	--	--	--	--	--	--
Max	4.67	4.67	4.67	4.67	4.67	4.67	4.67	4.67	4.67
Unit	mA	mA	mA	mA	mA	mA	mA	mA	mA
Control Results									
1 CTRL	3.61	3.62	3.61	3.60	3.61	3.61	3.62	3.62	3.62

Bias on results									
2 ON	3.57	3.42	3.29	3.19	3.12	3.06	3.02	3.04	3.40
3 ON	3.62	3.48	3.35	3.25	3.18	3.11	3.08	3.09	3.46
4 ON	3.54	3.42	3.31	3.20	3.13	3.05	3.01	3.02	3.37
5 ON	3.61	3.48	3.34	3.24	3.17	3.10	3.06	3.08	3.44
6 ON	3.62	3.49	3.38	3.26	3.19	3.13	3.08	3.10	3.47
Statistics bias on									
min result	3.54	3.42	3.29	3.19	3.12	3.05	3.01	3.02	3.37
max result	3.62	3.49	3.38	3.26	3.19	3.13	3.08	3.10	3.47
average	3.59	3.46	3.33	3.23	3.16	3.09	3.05	3.06	3.43
sigma	0.04	0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.04

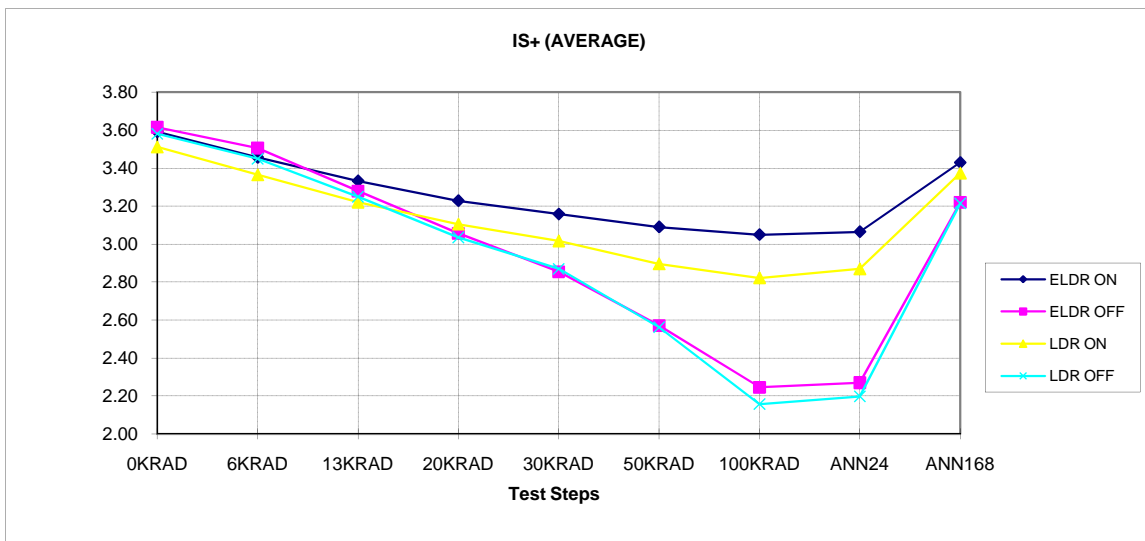
Bias off results									
7 OFF	3.71	3.60	3.38	3.16	2.95	2.67	2.33	2.36	3.32
8 OFF	3.65	3.53	3.27	3.05	2.85	2.57	2.27	2.30	3.26
9 OFF	3.50	3.40	3.22	3.01	2.80	2.52	2.17	2.19	3.10
10 OFF	3.59	3.49	3.25	3.03	2.83	2.54	2.22	2.24	3.19
11 OFF	3.62	3.51	3.27	3.04	2.84	2.55	2.24	2.26	3.22
Statistics bias off									
min result	3.50	3.40	3.22	3.01	2.80	2.52	2.17	2.19	3.10
max result	3.71	3.60	3.38	3.16	2.95	2.67	2.33	2.36	3.32
average	3.61	3.51	3.28	3.06	2.85	2.57	2.25	2.27	3.22
sigma	0.08	0.07	0.06	0.06	0.06	0.06	0.06	0.06	0.08



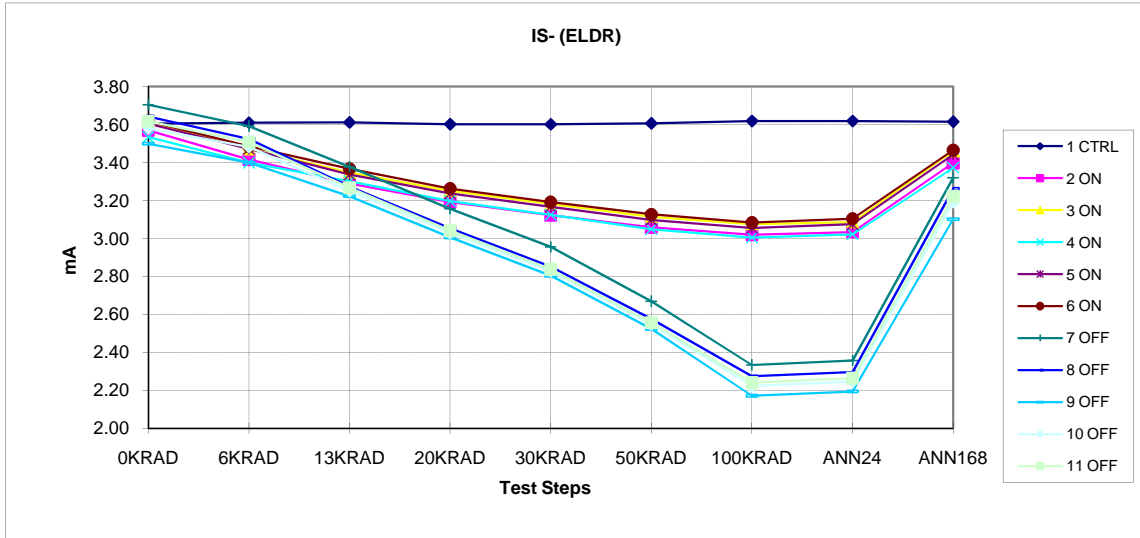
IS+ (LDR)	0KRAD	6KRAD	13KRAD	20KRAD	30KRAD	50KRAD	100KRAD	ANN24	ANN168
Min	--	--	--	--	--	--	--	--	--
Max	4.67	4.67	4.67	4.67	4.67	4.67	4.67	4.67	4.67
Unit	mA	mA	mA	mA	mA	mA	mA	mA	mA
Control Results									
1 CTRL	3.66	3.67	3.68	3.68	3.68	3.68	3.68	3.68	3.68

Bias on results									
2 ON	3.60	3.44	3.28	3.16	3.07	2.96	2.91	2.95	3.45
3 ON	3.50	3.36	3.21	3.09	3.00	2.89	2.82	2.87	3.36
4 ON	3.46	3.32	3.18	3.06	2.98	2.86	2.79	2.84	3.33
5 ON	3.58	3.42	3.26	3.13	3.04	2.93	2.87	2.92	3.44
6 ON	3.42	3.29	3.18	3.08	2.99	2.84	2.72	2.77	3.28
Statistics bias on									
min result	3.42	3.29	3.18	3.06	2.98	2.84	2.72	2.77	3.28
max result	3.60	3.44	3.28	3.16	3.07	2.96	2.91	2.95	3.45
average	3.51	3.37	3.22	3.10	3.02	2.90	2.82	2.87	3.37
sigma	0.08	0.06	0.05	0.04	0.04	0.05	0.07	0.07	0.07

Bias off results									
7 OFF	3.58	3.46	3.28	3.07	2.91	2.61	2.20	2.24	3.24
8 OFF	3.55	3.43	3.25	3.04	2.88	2.57	2.16	2.21	3.19
9 OFF	3.59	3.46	3.26	3.05	2.88	2.57	2.16	2.20	3.22
10 OFF	3.58	3.44	3.23	3.01	2.84	2.54	2.13	2.17	3.20
11 OFF	3.60	3.46	3.23	3.01	2.84	2.53	2.14	2.18	3.23
Statistics bias off									
min result	3.55	3.43	3.23	3.01	2.84	2.53	2.13	2.17	3.19
max result	3.60	3.46	3.28	3.07	2.91	2.61	2.20	2.24	3.24
average	3.58	3.45	3.25	3.04	2.87	2.56	2.16	2.20	3.21
sigma	0.02	0.01	0.02	0.03	0.03	0.03	0.03	0.03	0.02



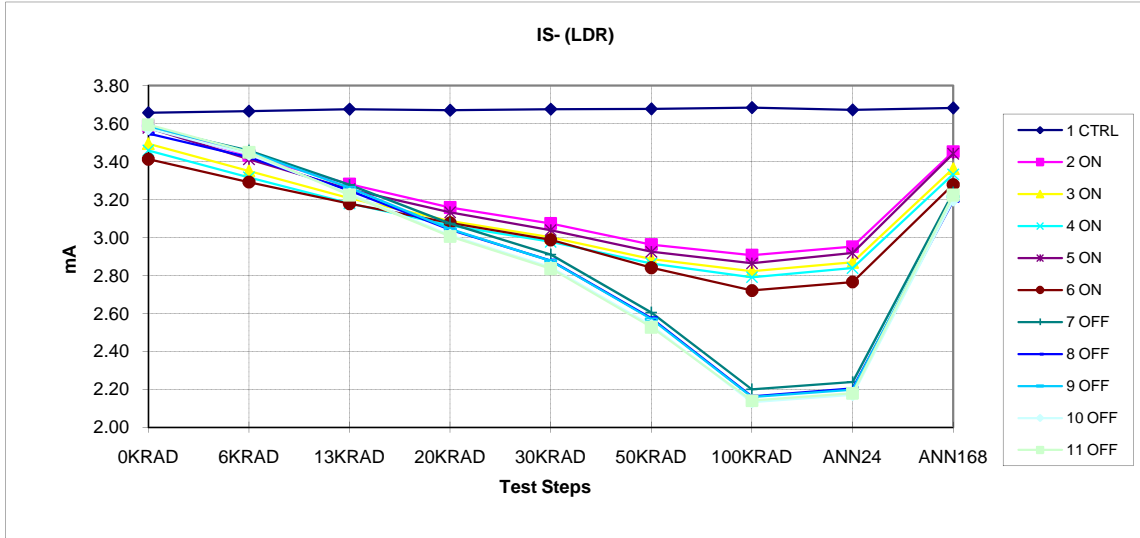
IS+ (AVERAGE)	0KRAD	6KRAD	13KRAD	20KRAD	30KRAD	50KRAD	100KRAD	ANN24	ANN168
ELDR ON	3.59	3.46	3.33	3.23	3.16	3.09	3.05	3.06	3.43
ELDR OFF	3.61	3.51	3.28	3.06	2.85	2.57	2.25	2.27	3.22
LDR ON	3.51	3.37	3.22	3.10	3.02	2.90	2.82	2.87	3.37
LDR OFF	3.58	3.45	3.25	3.04	2.87	2.56	2.16	2.20	3.21



IS- (ELDR)	0KRAD	6KRAD	13KRAD	20KRAD	30KRAD	50KRAD	100KRAD	ANN24	ANN168
Min	--	--	--	--	--	--	--	--	--
Max	4.67	4.67	4.67	4.67	4.67	4.67	4.67	4.67	4.67
Unit	mA	mA	mA	mA	mA	mA	mA	mA	mA
Control Results									
1 CTRL	3.61	3.61	3.61	3.60	3.60	3.61	3.62	3.62	3.62

Bias on results									
2 ON	3.57	3.42	3.29	3.19	3.12	3.06	3.02	3.03	3.40
3 ON	3.62	3.47	3.35	3.25	3.18	3.11	3.08	3.09	3.46
4 ON	3.53	3.40	3.30	3.20	3.13	3.05	3.01	3.02	3.37
5 ON	3.60	3.47	3.34	3.24	3.17	3.10	3.06	3.08	3.44
6 ON	3.62	3.49	3.37	3.26	3.19	3.13	3.08	3.10	3.47
Statistics bias on									
min result	3.53	3.40	3.29	3.19	3.12	3.05	3.01	3.02	3.37
max result	3.62	3.49	3.37	3.26	3.19	3.13	3.08	3.10	3.47
average	3.59	3.45	3.33	3.23	3.16	3.09	3.05	3.06	3.43
sigma	0.04	0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.04

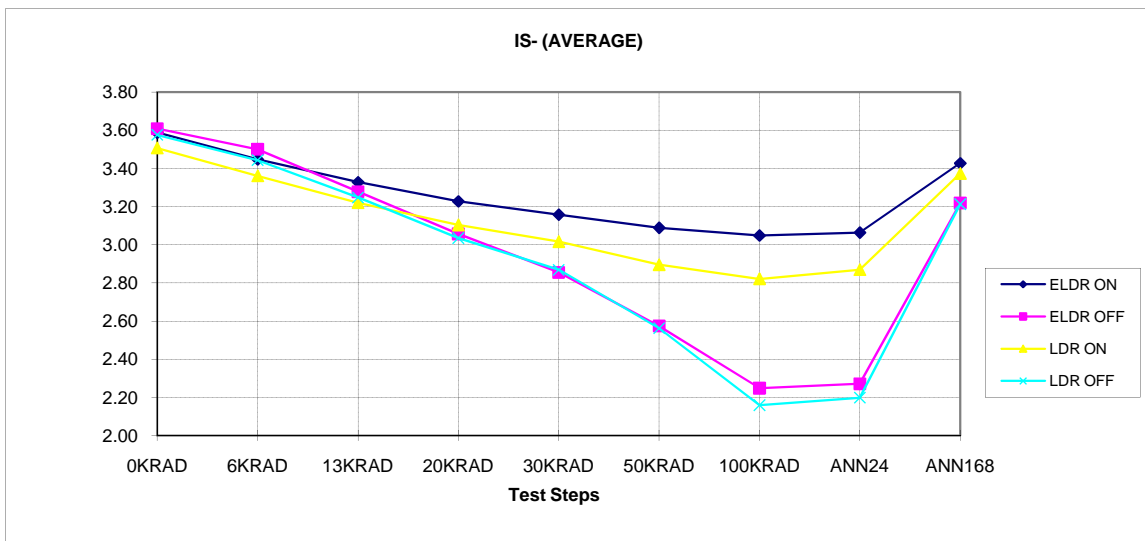
Bias off results									
7 OFF	3.70	3.59	3.38	3.16	2.96	2.67	2.33	2.36	3.32
8 OFF	3.64	3.52	3.27	3.05	2.85	2.58	2.27	2.30	3.26
9 OFF	3.50	3.40	3.22	3.01	2.80	2.52	2.17	2.19	3.10
10 OFF	3.58	3.48	3.25	3.03	2.83	2.55	2.22	2.25	3.19
11 OFF	3.62	3.51	3.27	3.04	2.84	2.56	2.24	2.27	3.22
Statistics bias off									
min result	3.50	3.40	3.22	3.01	2.80	2.52	2.17	2.19	3.10
max result	3.70	3.59	3.38	3.16	2.96	2.67	2.33	2.36	3.32
average	3.61	3.50	3.28	3.06	2.86	2.57	2.25	2.27	3.22
sigma	0.08	0.07	0.06	0.06	0.06	0.06	0.06	0.06	0.08



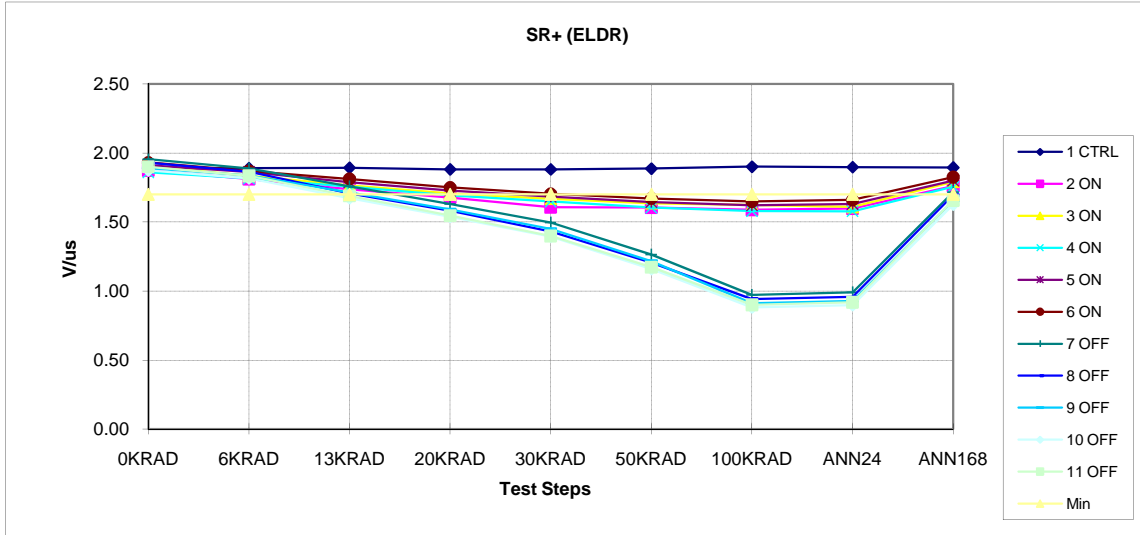
IS- (LDR)	0KRAD	6KRAD	13KRAD	20KRAD	30KRAD	50KRAD	100KRAD	ANN24	ANN168
Min	--	--	--	--	--	--	--	--	--
Max	4.67	4.67	4.67	4.67	4.67	4.67	4.67	4.67	4.67
Unit	mA	mA	mA	mA	mA	mA	mA	mA	mA
Control Results									
1 CTRL	3.66	3.67	3.68	3.67	3.68	3.68	3.68	3.67	3.68

Bias on results									
2 ON	3.59	3.43	3.28	3.16	3.07	2.96	2.91	2.95	3.45
3 ON	3.49	3.35	3.21	3.09	3.00	2.89	2.82	2.87	3.36
4 ON	3.46	3.32	3.18	3.06	2.98	2.86	2.79	2.84	3.33
5 ON	3.58	3.41	3.25	3.13	3.04	2.93	2.86	2.92	3.44
6 ON	3.41	3.29	3.18	3.08	2.99	2.84	2.72	2.77	3.28
Statistics bias on									
min result	3.41	3.29	3.18	3.06	2.98	2.84	2.72	2.77	3.28
max result	3.59	3.43	3.28	3.16	3.07	2.96	2.91	2.95	3.45
average	3.51	3.36	3.22	3.10	3.02	2.90	2.82	2.87	3.37
sigma	0.08	0.06	0.05	0.04	0.04	0.05	0.07	0.07	0.07

Bias off results									
7 OFF	3.58	3.46	3.28	3.07	2.91	2.61	2.20	2.24	3.24
8 OFF	3.55	3.42	3.25	3.04	2.88	2.58	2.16	2.21	3.19
9 OFF	3.59	3.45	3.26	3.05	2.88	2.57	2.16	2.20	3.21
10 OFF	3.57	3.44	3.23	3.01	2.84	2.54	2.13	2.17	3.20
11 OFF	3.59	3.45	3.22	3.01	2.84	2.53	2.14	2.18	3.22
Statistics bias off									
min result	3.55	3.42	3.22	3.01	2.84	2.53	2.13	2.17	3.19
max result	3.59	3.46	3.28	3.07	2.91	2.61	2.20	2.24	3.24
average	3.58	3.44	3.25	3.04	2.87	2.56	2.16	2.20	3.21
sigma	0.02	0.01	0.02	0.03	0.03	0.03	0.03	0.03	0.02



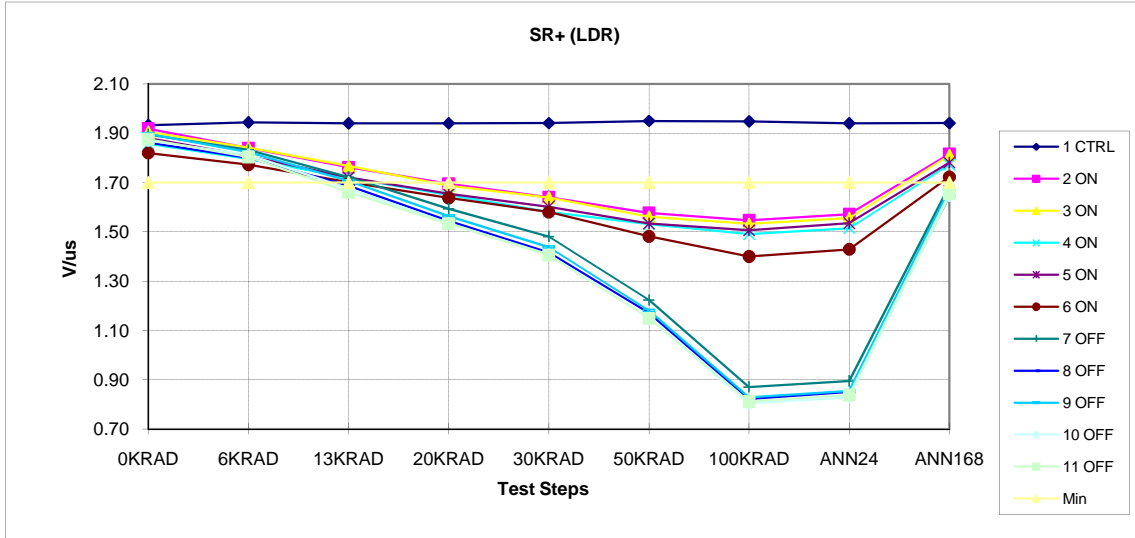
IS- (AVERAGE)	0KRAD	6KRAD	13KRAD	20KRAD	30KRAD	50KRAD	100KRAD	ANN24	ANN168
ELDR ON	3.59	3.45	3.33	3.23	3.16	3.09	3.05	3.06	3.43
ELDR OFF	3.61	3.50	3.28	3.06	2.86	2.57	2.25	2.27	3.22
LDR ON	3.51	3.36	3.22	3.10	3.02	2.90	2.82	2.87	3.37
LDR OFF	3.58	3.44	3.25	3.04	2.87	2.56	2.16	2.20	3.21



SR+ (ELDR)	0KRAD	6KRAD	13KRAD	20KRAD	30KRAD	50KRAD	100KRAD	ANN24	ANN168
Min	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
Max	--	--	--	--	--	--	--	--	--
Unit	V/us	V/us	V/us	V/us	V/us	V/us	V/us	V/us	V/us
Control Results									
1 CTRL	1.89	1.89	1.89	1.88	1.88	1.89	1.90	1.90	1.90

Bias on results									
2 ON	1.87	1.81	1.74	1.68	1.61	1.60	1.59	1.60	1.76
3 ON	1.90	1.83	1.77	1.71	1.67	1.64	1.62	1.61	1.79
4 ON	1.86	1.82	1.76	1.69	1.65	1.60	1.58	1.58	1.76
5 ON	1.91	1.86	1.79	1.73	1.68	1.64	1.62	1.63	1.80
6 ON	1.93	1.87	1.81	1.75	1.70	1.67	1.65	1.66	1.83
Statistics bias on									
min result	1.86	1.81	1.74	1.68	1.61	1.60	1.58	1.58	1.76
max result	1.93	1.87	1.81	1.75	1.70	1.67	1.65	1.66	1.83
average	1.90	1.84	1.77	1.71	1.66	1.63	1.61	1.62	1.79
sigma	0.03	0.03	0.03	0.03	0.04	0.03	0.03	0.03	0.03

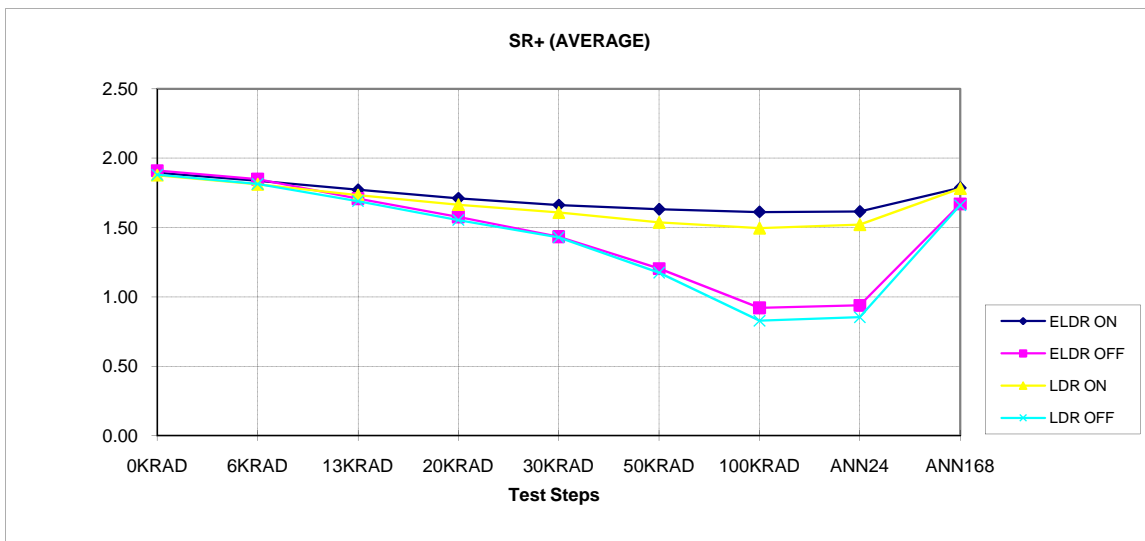
Bias off results									
7 OFF	1.95	1.89	1.76	1.63	1.50	1.27	0.97	0.99	1.72
8 OFF	1.93	1.87	1.71	1.58	1.43	1.21	0.94	0.96	1.70
9 OFF	1.89	1.84	1.71	1.59	1.45	1.22	0.91	0.93	1.65
10 OFF	1.88	1.82	1.67	1.54	1.39	1.16	0.88	0.90	1.63
11 OFF	1.90	1.84	1.69	1.55	1.40	1.17	0.90	0.92	1.66
Statistics bias off									
min result	1.88	1.82	1.67	1.54	1.39	1.16	0.88	0.90	1.63
max result	1.95	1.89	1.76	1.63	1.50	1.27	0.97	0.99	1.72
average	1.91	1.85	1.71	1.58	1.43	1.20	0.92	0.94	1.67
sigma	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.04



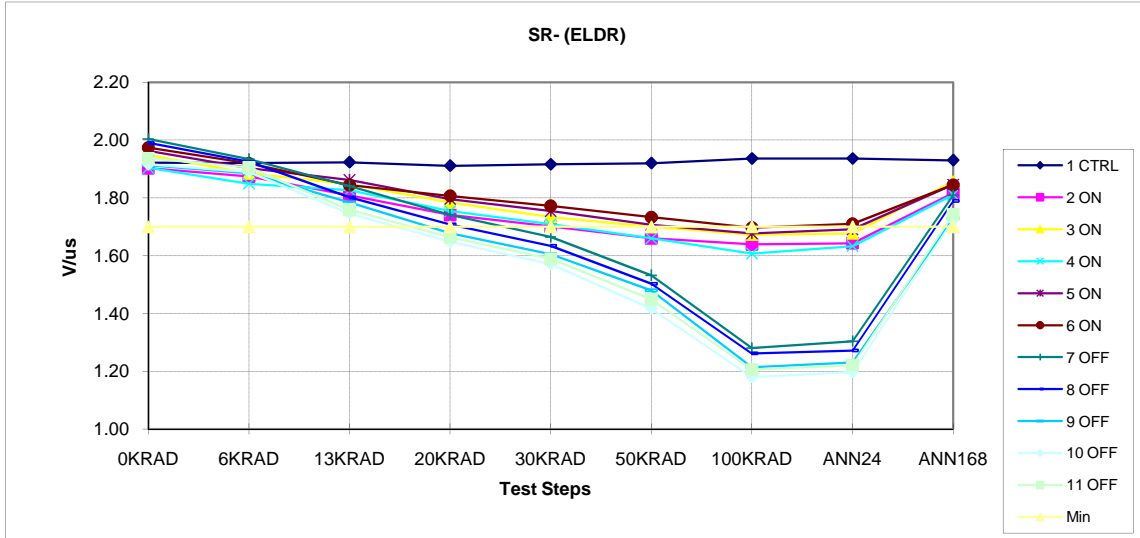
SR+ (LDR)	0KRAD	6KRAD	13KRAD	20KRAD	30KRAD	50KRAD	100KRAD	ANN24	ANN168
Min	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
Max	--	--	--	--	--	--	--	--	--
Unit	V/us	V/us	V/us	V/us	V/us	V/us	V/us	V/us	V/us
Control Results									
1 CTRL	1.93	1.94	1.94	1.94	1.94	1.95	1.95	1.94	1.94

Bias on results									
2 ON	1.92	1.84	1.76	1.70	1.64	1.58	1.55	1.57	1.82
3 ON	1.91	1.84	1.77	1.69	1.64	1.56	1.53	1.56	1.81
4 ON	1.86	1.80	1.72	1.65	1.58	1.53	1.49	1.52	1.77
5 ON	1.88	1.81	1.72	1.65	1.60	1.53	1.51	1.54	1.78
6 ON	1.82	1.77	1.70	1.64	1.58	1.48	1.40	1.43	1.72
Statistics bias on									
min result	1.82	1.77	1.70	1.64	1.58	1.48	1.40	1.43	1.72
max result	1.92	1.84	1.77	1.70	1.64	1.58	1.55	1.57	1.82
average	1.88	1.81	1.73	1.66	1.61	1.54	1.50	1.52	1.78
sigma	0.04	0.03	0.03	0.02	0.03	0.04	0.06	0.06	0.04

Bias off results									
7 OFF	1.90	1.83	1.72	1.59	1.48	1.22	0.87	0.90	1.69
8 OFF	1.86	1.80	1.69	1.54	1.42	1.17	0.82	0.85	1.65
9 OFF	1.90	1.82	1.71	1.56	1.44	1.18	0.83	0.86	1.67
10 OFF	1.87	1.81	1.68	1.54	1.41	1.15	0.80	0.83	1.65
11 OFF	1.88	1.80	1.66	1.53	1.41	1.15	0.81	0.84	1.66
Statistics bias off									
min result	1.86	1.80	1.66	1.53	1.41	1.15	0.80	0.83	1.65
max result	1.90	1.83	1.72	1.59	1.48	1.22	0.87	0.90	1.69
average	1.88	1.81	1.69	1.55	1.43	1.17	0.83	0.85	1.66
sigma	0.02	0.01	0.02	0.03	0.03	0.03	0.03	0.03	0.02



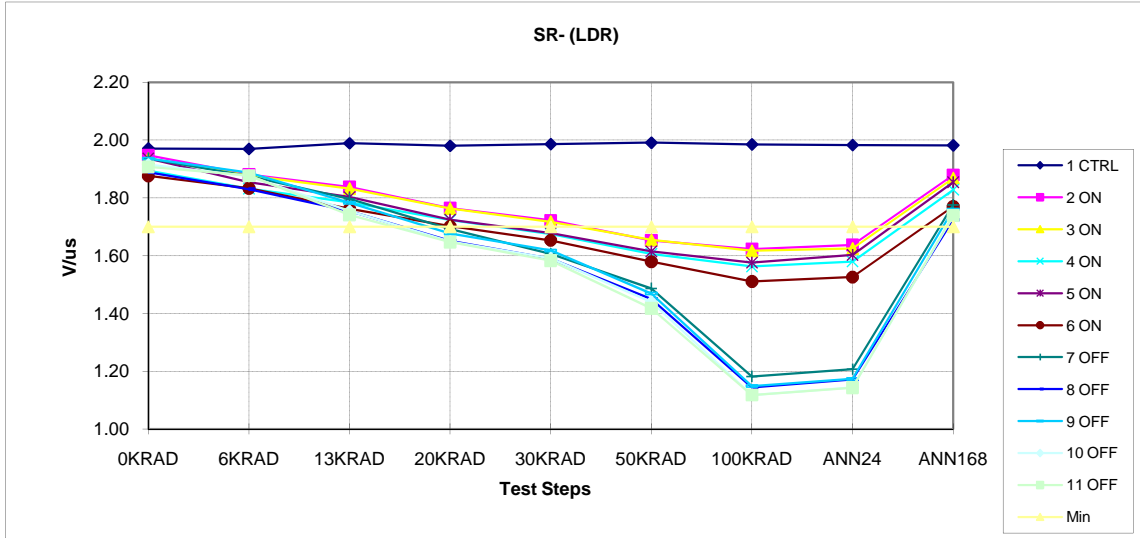
SR+ (AVERAGE)	0KRAD	6KRAD	13KRAD	20KRAD	30KRAD	50KRAD	100KRAD	ANN24	ANN168
ELDR ON	1.90	1.84	1.77	1.71	1.66	1.63	1.61	1.62	1.79
ELDR OFF	1.91	1.85	1.71	1.58	1.43	1.20	0.92	0.94	1.67
LDR ON	1.88	1.81	1.73	1.66	1.61	1.54	1.50	1.52	1.78
LDR OFF	1.88	1.81	1.69	1.55	1.43	1.17	0.83	0.85	1.66



SR- (ELDR)	0KRAD	6KRAD	13KRAD	20KRAD	30KRAD	50KRAD	100KRAD	ANN24	ANN168
Min	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
Max	50	50	50	50	50	50	50	50	50
Unit	V/us	V/us	V/us	V/us	V/us	V/us	V/us	V/us	V/us
Control Results									
1 CTRL	1.92	1.92	1.92	1.91	1.92	1.92	1.94	1.94	1.93

Bias on results									
2 ON	1.90	1.87	1.81	1.74	1.70	1.66	1.64	1.64	1.82
3 ON	1.95	1.89	1.85	1.78	1.73	1.70	1.67	1.68	1.86
4 ON	1.90	1.85	1.83	1.75	1.71	1.66	1.61	1.63	1.81
5 ON	1.96	1.90	1.86	1.80	1.75	1.71	1.68	1.69	1.85
6 ON	1.97	1.92	1.84	1.81	1.77	1.73	1.70	1.71	1.85
Statistics bias on									
min result	1.90	1.85	1.81	1.74	1.70	1.66	1.61	1.63	1.81
max result	1.97	1.92	1.86	1.81	1.77	1.73	1.70	1.71	1.86
average	1.94	1.89	1.84	1.78	1.73	1.69	1.66	1.67	1.84
sigma	0.03	0.03	0.02	0.03	0.03	0.03	0.04	0.03	0.02

Bias off results									
7 OFF	2.00	1.93	1.84	1.74	1.67	1.53	1.28	1.30	1.81
8 OFF	1.99	1.93	1.80	1.71	1.63	1.50	1.26	1.27	1.79
9 OFF	1.91	1.89	1.78	1.68	1.61	1.48	1.21	1.23	1.73
10 OFF	1.92	1.89	1.75	1.65	1.57	1.42	1.18	1.20	1.72
11 OFF	1.94	1.91	1.76	1.66	1.59	1.45	1.21	1.22	1.74
Statistics bias off									
min result	1.91	1.89	1.75	1.65	1.57	1.42	1.18	1.20	1.72
max result	2.00	1.93	1.84	1.74	1.67	1.53	1.28	1.30	1.81
average	1.95	1.91	1.79	1.69	1.61	1.48	1.23	1.25	1.76
sigma	0.04	0.02	0.04	0.04	0.04	0.04	0.04	0.04	0.04



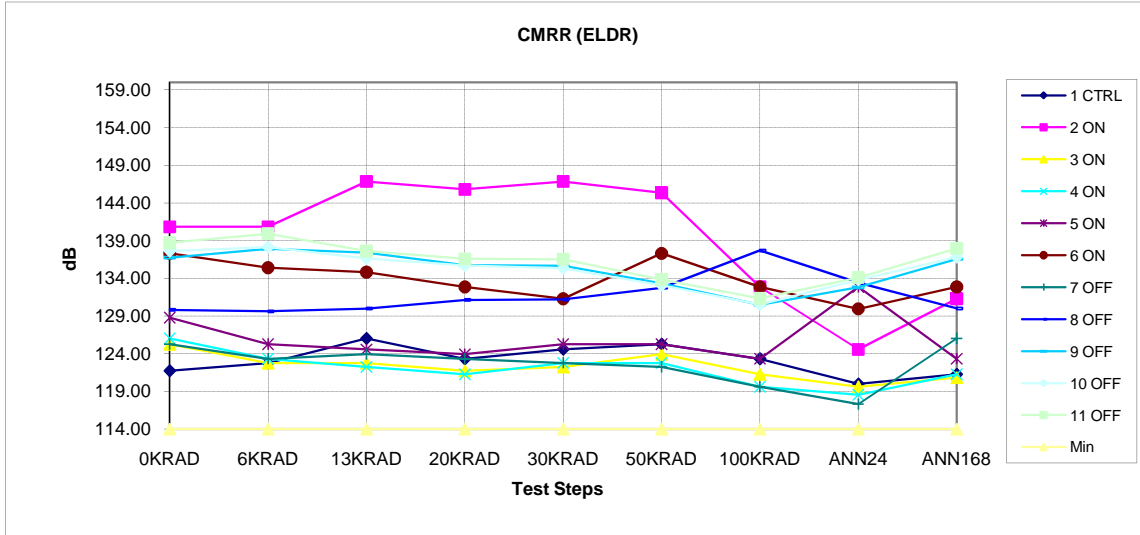
SR- (LDR)	0KRAD	6KRAD	13KRAD	20KRAD	30KRAD	50KRAD	100KRAD	ANN24	ANN168
Min	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
Max	--	--	--	--	--	--	--	--	--
Unit	V/us	V/us	V/us	V/us	V/us	V/us	V/us	V/us	V/us
Control Results									
1 CTRL	1.97	1.97	1.99	1.98	1.99	1.99	1.99	1.98	1.98

Bias on results									
2 ON	1.95	1.88	1.84	1.77	1.72	1.65	1.62	1.64	1.88
3 ON	1.94	1.88	1.83	1.76	1.72	1.66	1.62	1.63	1.87
4 ON	1.89	1.83	1.78	1.72	1.68	1.61	1.56	1.58	1.83
5 ON	1.94	1.85	1.80	1.73	1.68	1.62	1.58	1.60	1.85
6 ON	1.88	1.83	1.76	1.70	1.65	1.58	1.51	1.53	1.77
Statistics bias on									
min result	1.88	1.83	1.76	1.70	1.65	1.58	1.51	1.53	1.77
max result	1.95	1.88	1.84	1.77	1.72	1.66	1.62	1.64	1.88
average	1.92	1.86	1.80	1.74	1.69	1.62	1.58	1.59	1.84
sigma	0.03	0.02	0.03	0.03	0.03	0.03	0.05	0.04	0.04

Bias off results									
7 OFF	1.94	1.88	1.80	1.69	1.61	1.49	1.18	1.21	1.78
8 OFF	1.89	1.83	1.75	1.65	1.59	1.45	1.14	1.17	1.72
9 OFF	1.94	1.89	1.78	1.68	1.62	1.47	1.15	1.17	1.76
10 OFF	1.92	1.88	1.75	1.65	1.59	1.44	1.12	1.14	1.74
11 OFF	1.91	1.88	1.74	1.65	1.58	1.42	1.12	1.14	1.74
Statistics bias off									
min result	1.89	1.83	1.74	1.65	1.58	1.42	1.12	1.14	1.72
max result	1.94	1.89	1.80	1.69	1.62	1.49	1.18	1.21	1.78
average	1.92	1.87	1.77	1.66	1.60	1.45	1.14	1.17	1.75
sigma	0.02	0.02	0.02	0.02	0.01	0.03	0.03	0.03	0.02



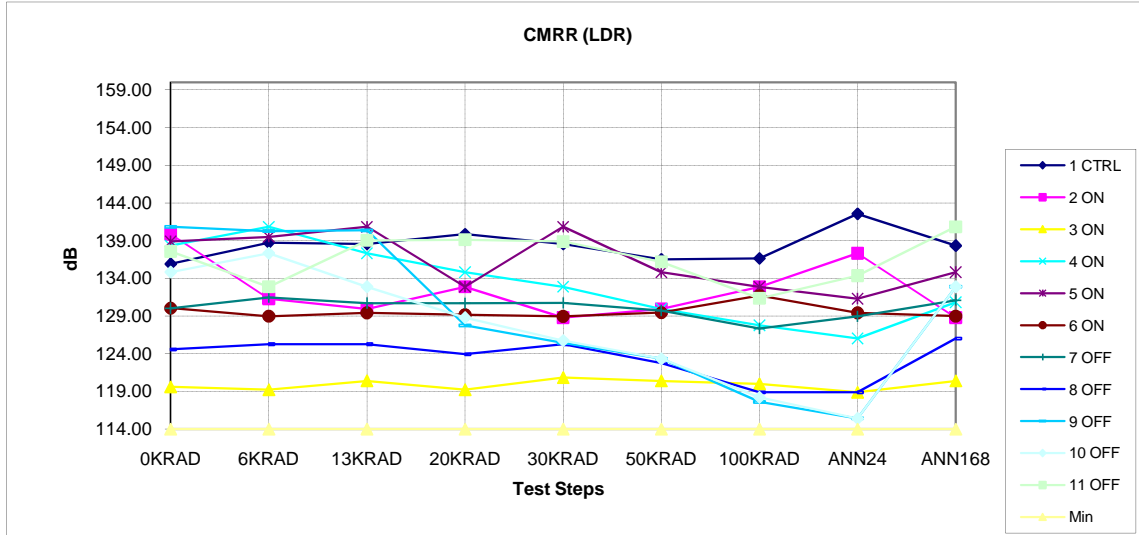
SR- (AVERAGE)	0KRAD	6KRAD	13KRAD	20KRAD	30KRAD	50KRAD	100KRAD	ANN24	ANN168
ELDR ON	1.94	1.89	1.84	1.78	1.73	1.69	1.66	1.67	1.84
ELDR OFF	1.95	1.91	1.79	1.69	1.61	1.48	1.23	1.25	1.76
LDR ON	1.92	1.86	1.80	1.74	1.69	1.62	1.58	1.59	1.84
LDR OFF	1.92	1.87	1.77	1.66	1.60	1.45	1.14	1.17	1.75



CMRR (ELDR)	0KRAD	6KRAD	13KRAD	20KRAD	30KRAD	50KRAD	100KRAD	ANN24	ANN168
Min	114	114	114	114	114	114	114	114	114
Max	--	--	--	--	--	--	--	--	--
Unit	dB	dB	dB	dB	dB	dB	dB	dB	dB
Control Results									
1 CTRL	121.74	122.77	126.02	123.33	124.57	125.26	123.33	120.00	121.27

Bias on results									
2 ON	140.83	140.83	146.85	145.80	146.85	145.35	132.87	124.57	131.29
3 ON	125.26	122.77	122.77	121.74	122.24	123.93	121.27	119.61	120.83
4 ON	126.02	123.33	122.24	121.27	122.77	122.77	119.61	118.55	121.27
5 ON	128.79	125.26	124.57	123.93	125.26	125.26	123.33	132.87	123.33
6 ON	137.31	135.40	134.81	132.87	131.29	137.31	132.87	129.95	132.87
Statistics bias on									
min result	125.26	122.77	122.24	121.27	122.24	122.77	119.61	118.55	120.83
max result	140.83	140.83	146.85	145.80	146.85	145.35	132.87	132.87	132.87
average	131.64	129.52	130.25	129.12	129.68	130.92	125.99	125.11	125.92
sigma	7.02	8.13	10.59	10.43	10.25	9.95	6.42	6.27	5.73

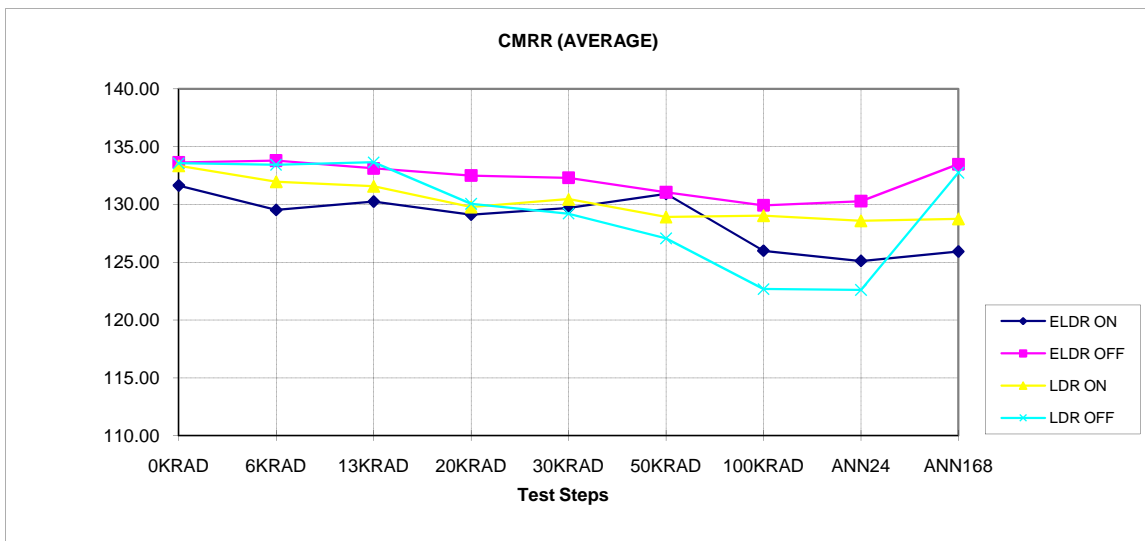
Bias off results									
7 OFF	125.26	123.33	123.93	123.33	122.77	122.24	119.61	117.31	126.02
8 OFF	129.82	129.63	129.99	131.14	131.19	132.74	137.68	133.40	130.00
9 OFF	136.73	137.92	137.42	135.76	135.68	133.33	130.49	132.82	136.56
10 OFF	137.62	138.14	136.63	135.69	135.34	133.09	130.53	133.79	136.82
11 OFF	138.73	139.92	137.62	136.58	136.53	133.83	131.33	134.10	137.97
Statistics bias off									
min result	125.26	123.33	123.93	123.33	122.77	122.24	119.61	117.31	126.02
max result	138.73	139.92	137.62	136.58	136.53	133.83	137.68	134.10	137.97
average	133.63	133.79	133.12	132.50	132.30	131.05	129.93	130.28	133.47
sigma	5.83	7.08	6.03	5.56	5.72	4.94	6.50	7.27	5.21



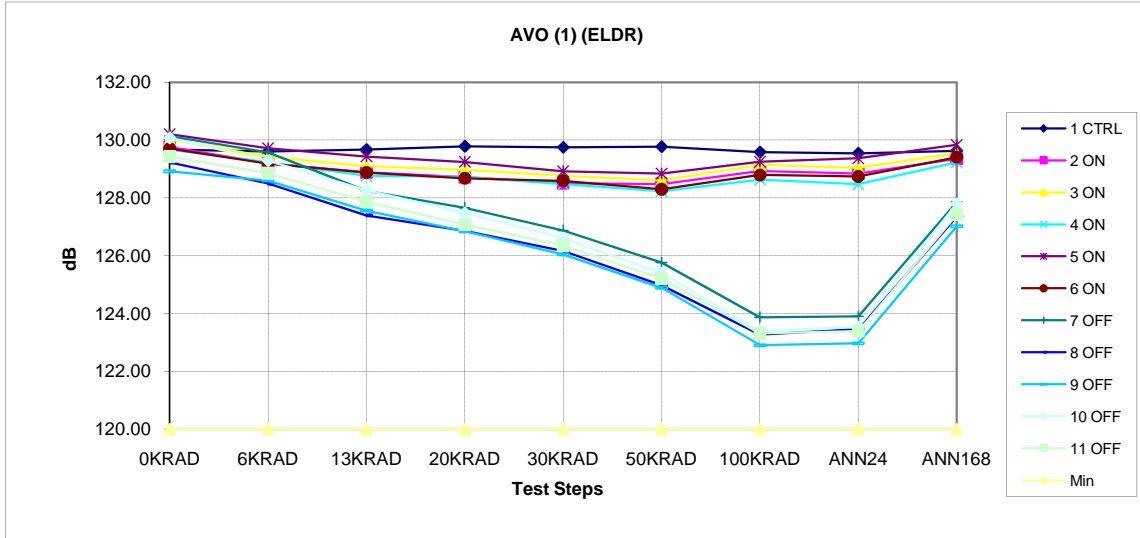
CMRR (LDR)	0KRAD	6KRAD	13KRAD	20KRAD	30KRAD	50KRAD	100KRAD	ANN24	ANN168
Min	114	114	114	114	114	114	114	114	114
Max	--	--	--	--	--	--	--	--	--
Unit	dB	dB	dB	dB	dB	dB	dB	dB	dB
Control Results									
1 CTRL	135.90	138.73	138.57	139.85	138.54	136.50	136.65	142.56	138.32

Bias on results									
2 ON	139.85	131.29	129.95	132.87	128.79	129.95	132.87	137.31	128.79
3 ON	119.61	119.24	120.40	119.24	120.83	120.40	120.00	118.89	120.40
4 ON	138.32	140.83	137.31	134.81	132.87	129.95	127.76	126.02	130.83
5 ON	138.89	139.50	140.83	132.87	140.83	134.81	132.87	131.29	134.81
6 ON	130.05	128.97	129.42	129.16	128.96	129.46	131.70	129.42	128.98
Statistics bias on									
min result	119.61	119.24	120.40	119.24	120.83	120.40	120.00	118.89	120.40
max result	139.85	140.83	140.83	134.81	140.83	134.81	132.87	137.31	134.81
average	133.34	131.97	131.58	129.79	130.46	128.91	129.04	128.59	128.76
sigma	8.62	8.76	7.92	6.24	7.27	5.24	5.47	6.80	5.26

Bias off results									
7 OFF	130.02	131.48	130.70	130.68	130.72	129.72	127.34	128.94	131.09
8 OFF	124.57	125.26	125.26	123.93	125.26	122.77	118.89	118.89	126.02
9 OFF	140.83	140.25	140.36	127.76	125.45	123.33	117.60	115.42	132.87
10 OFF	134.81	137.31	132.87	128.79	125.74	123.33	118.22	115.42	132.87
11 OFF	137.58	132.87	139.03	139.12	138.87	136.19	131.34	134.34	140.83
Statistics bias off									
min result	124.57	125.26	125.26	123.93	125.26	122.77	117.60	115.42	126.02
max result	140.83	140.25	140.36	139.12	138.87	136.19	131.34	134.34	140.83
average	133.56	133.43	133.64	130.06	129.21	127.07	122.68	122.60	132.74
sigma	6.40	5.75	6.20	5.63	5.86	5.85	6.26	8.59	5.32



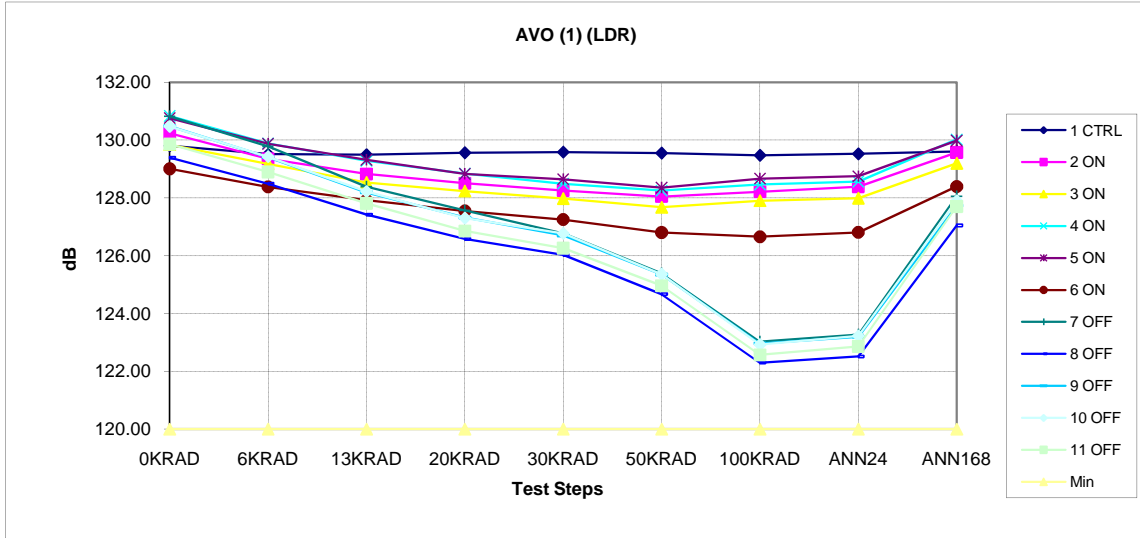
MRR (AVERAGE)	0KRAD	6KRAD	13KRAD	20KRAD	30KRAD	50KRAD	100KRAD	ANN24	ANN168
ELDR ON	131.64	129.52	130.25	129.12	129.68	130.92	125.99	125.11	125.92
ELDR OFF	133.63	133.79	133.12	132.50	132.30	131.05	129.93	130.28	133.47
LDR ON	133.34	131.97	131.58	129.79	130.46	128.91	129.04	128.59	128.76
LDR OFF	133.56	133.43	133.64	130.06	129.21	127.07	122.68	122.60	132.74



AVO (1) (ELDR)	0KRAD	6KRAD	13KRAD	20KRAD	30KRAD	50KRAD	100KRAD	ANN24	ANN168
Min	120	120	120	120	120	120	120	120	120
Max	--	--	--	--	--	--	--	--	--
Unit	dB	dB	dB	dB	dB	dB	dB	dB	dB
Control Results									
1 CTRL	129.67	129.61	129.67	129.78	129.75	129.77	129.58	129.54	129.62

Bias on results									
2 ON	129.76	129.19	128.88	128.72	128.51	128.48	128.93	128.84	129.36
3 ON	130.02	129.42	129.09	128.97	128.76	128.61	129.14	129.04	129.54
4 ON	129.68	129.23	128.76	128.73	128.47	128.23	128.63	128.47	129.23
5 ON	130.20	129.72	129.43	129.24	128.92	128.84	129.25	129.37	129.84
6 ON	129.71	129.19	128.88	128.68	128.59	128.30	128.79	128.74	129.41
Statistics bias on									
min result	129.68	129.19	128.76	128.68	128.47	128.23	128.63	128.47	129.23
max result	130.20	129.72	129.43	129.24	128.92	128.84	129.25	129.37	129.84
average	129.87	129.35	129.01	128.87	128.65	128.49	128.95	128.89	129.47
sigma	0.23	0.23	0.27	0.24	0.19	0.25	0.25	0.34	0.23

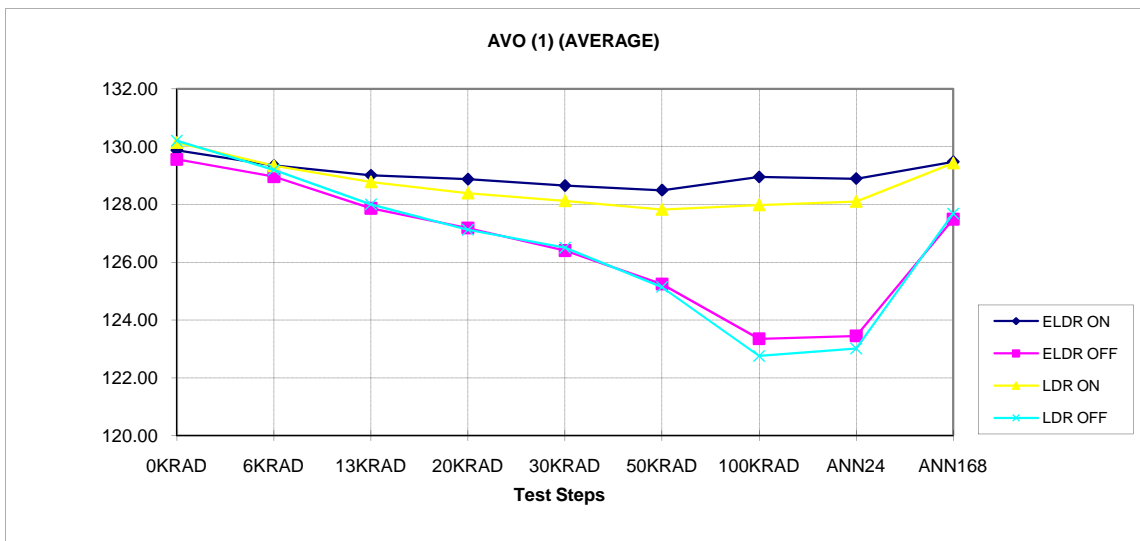
Bias off results									
7 OFF	130.14	129.58	128.25	127.66	126.87	125.76	123.87	123.90	127.86
8 OFF	129.23	128.50	127.40	126.86	126.16	124.98	123.28	123.46	127.35
9 OFF	128.92	128.60	127.56	126.84	126.04	124.89	122.90	122.97	127.02
10 OFF	130.07	129.28	128.26	127.48	126.61	125.40	123.39	123.54	127.80
11 OFF	129.43	128.85	127.87	127.08	126.35	125.21	123.31	123.40	127.42
Statistics bias off									
min result	128.92	128.50	127.40	126.84	126.04	124.89	122.90	122.97	127.02
max result	130.14	129.58	128.26	127.66	126.87	125.76	123.87	123.90	127.86
average	129.56	128.96	127.87	127.18	126.41	125.25	123.35	123.45	127.49
sigma	0.53	0.46	0.39	0.37	0.34	0.35	0.35	0.33	0.35



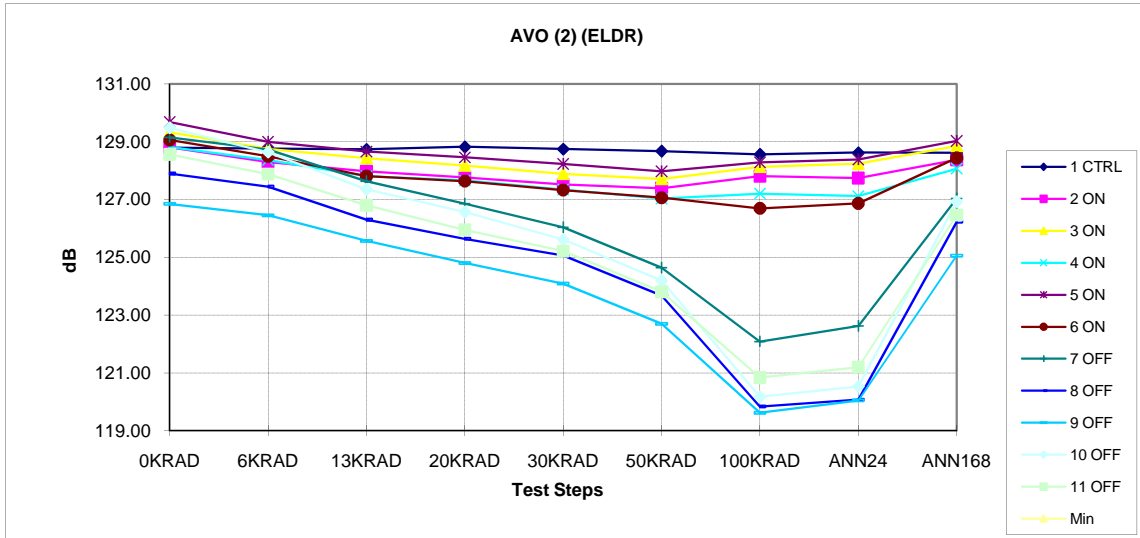
AVO (1) (LDR)	0KRAD	6KRAD	13KRAD	20KRAD	30KRAD	50KRAD	100KRAD	ANN24	ANN168
Min	120	120	120	120	120	120	120	120	120
Max	--	--	--	--	--	--	--	--	--
Unit	dB	dB	dB	dB	dB	dB	dB	dB	dB
Control Results									
1 CTRL	129.81	129.51	129.49	129.56	129.59	129.55	129.47	129.53	129.61

Bias on results									
2 ON	130.23	129.35	128.83	128.51	128.25	128.05	128.21	128.39	129.57
3 ON	129.84	129.18	128.53	128.23	127.98	127.67	127.90	127.99	129.19
4 ON	130.84	129.89	129.28	128.84	128.49	128.25	128.46	128.56	130.02
5 ON	130.76	129.87	129.32	128.83	128.65	128.35	128.67	128.75	129.98
6 ON	129.01	128.38	127.92	127.55	127.25	126.80	126.66	126.81	128.39
Statistics bias on									
min result	129.01	128.38	127.92	127.55	127.25	126.80	126.66	126.81	128.39
max result	130.84	129.89	129.32	128.84	128.65	128.35	128.67	128.75	130.02
average	130.13	129.33	128.77	128.39	128.12	127.83	127.98	128.10	129.43
sigma	0.75	0.62	0.58	0.53	0.55	0.63	0.79	0.78	0.67

Bias off results									
7 OFF	130.83	129.78	128.39	127.56	126.77	125.39	123.03	123.28	128.05
8 OFF	129.39	128.49	127.42	126.58	126.03	124.67	122.30	122.51	127.05
9 OFF	130.48	129.41	128.19	127.32	126.70	125.35	122.96	123.20	127.73
10 OFF	130.47	129.42	128.22	127.30	126.77	125.36	122.92	123.23	127.89
11 OFF	129.86	128.90	127.81	126.86	126.26	124.96	122.57	122.86	127.70
Statistics bias off									
min result	129.39	128.49	127.42	126.58	126.03	124.67	122.30	122.51	127.05
max result	130.83	129.78	128.39	127.56	126.77	125.39	123.03	123.28	128.05
average	130.21	129.20	128.00	127.12	126.50	125.15	122.76	123.01	127.68
sigma	0.57	0.51	0.39	0.40	0.34	0.32	0.31	0.32	0.38



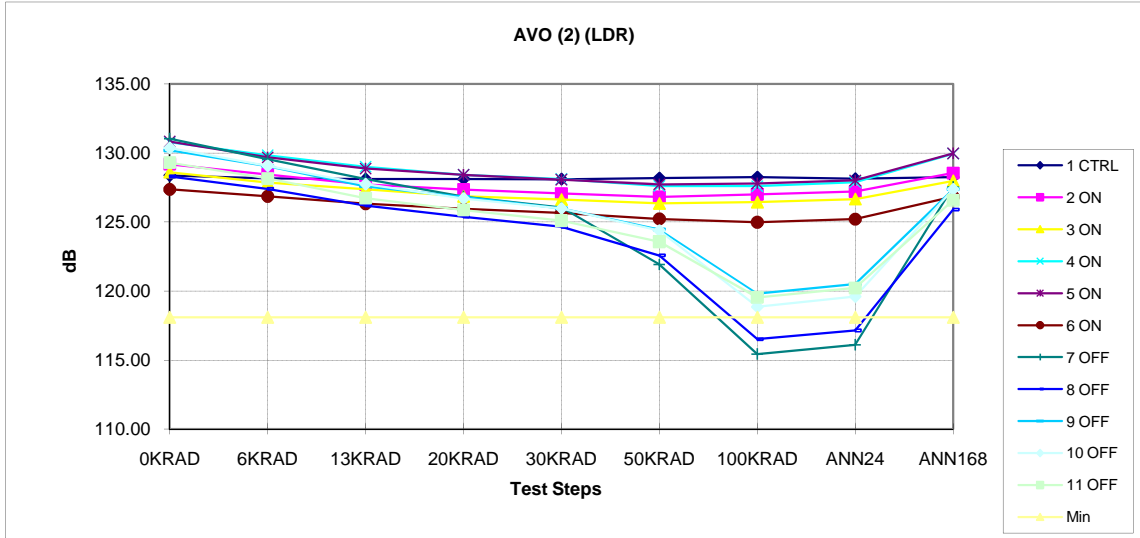
VO (1) (AVERAG	0KRAD	6KRAD	13KRAD	20KRAD	30KRAD	50KRAD	100KRAD	ANN24	ANN168
ELDR ON	129.87	129.35	129.01	128.87	128.65	128.49	128.95	128.89	129.47
ELDR OFF	129.56	128.96	127.87	127.18	126.41	125.25	123.35	123.45	127.49
LDR ON	130.13	129.33	128.77	128.39	128.12	127.83	127.98	128.10	129.43
LDR OFF	130.21	129.20	128.00	127.12	126.50	125.15	122.76	123.01	127.68



AVO (2) (ELDR)	0KRAD	6KRAD	13KRAD	20KRAD	30KRAD	50KRAD	100KRAD	ANN24	ANN168
Min	118.1	118.1	118.1	118.1	118.1	118.1	118.1	118.1	118.1
Max	--	--	--	--	--	--	--	--	--
Unit	dB	dB	dB	dB	dB	dB	dB	dB	dB
Control Results									
1 CTRL	128.79	128.76	128.73	128.82	128.75	128.68	128.56	128.62	128.62

Bias on results									
2 ON	128.80	128.29	127.97	127.76	127.52	127.39	127.81	127.74	128.37
3 ON	129.32	128.75	128.43	128.17	127.88	127.71	128.13	128.24	128.85
4 ON	128.82	128.36	127.81	127.66	127.34	127.03	127.20	127.12	128.07
5 ON	129.68	129.00	128.66	128.46	128.23	127.98	128.29	128.38	129.03
6 ON	129.06	128.49	127.81	127.64	127.33	127.06	126.69	126.86	128.44
Statistics bias on									
min result	128.80	128.29	127.81	127.64	127.33	127.03	126.69	126.86	128.07
max result	129.68	129.00	128.66	128.46	128.23	127.98	128.29	128.38	129.03
average	129.14	128.58	128.13	127.94	127.66	127.43	127.62	127.67	128.55
sigma	0.37	0.29	0.39	0.36	0.39	0.41	0.66	0.67	0.39

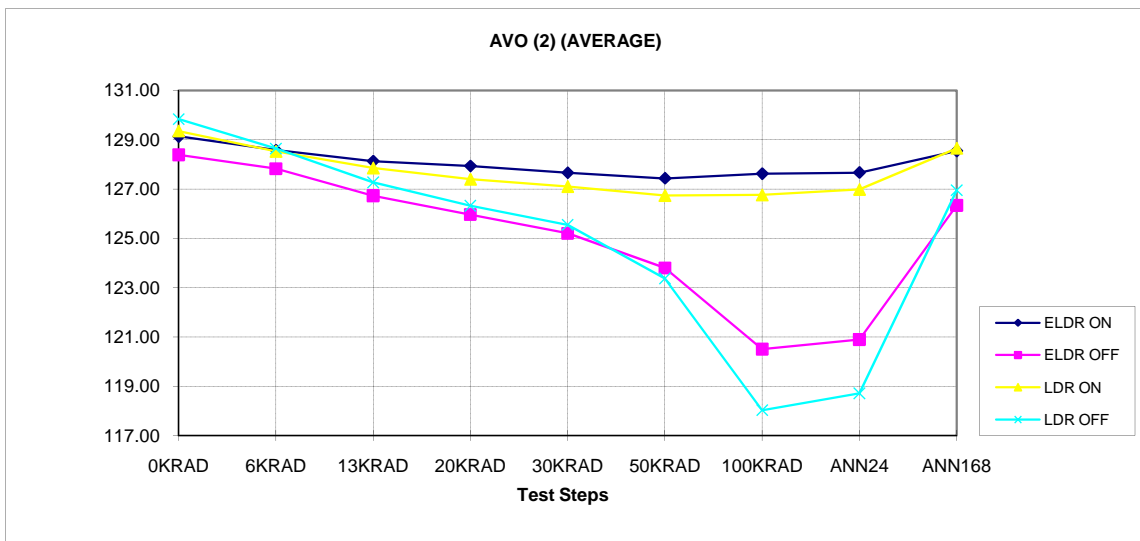
Bias off results									
7 OFF	129.15	128.72	127.63	126.86	126.04	124.64	122.09	122.62	127.03
8 OFF	127.90	127.45	126.30	125.64	125.07	123.68	119.84	120.08	126.23
9 OFF	126.85	126.46	125.57	124.80	124.09	122.70	119.62	120.05	125.06
10 OFF	129.48	128.63	127.36	126.57	125.62	124.19	120.17	120.53	126.93
11 OFF	128.56	127.88	126.80	125.95	125.21	123.81	120.84	121.20	126.46
Statistics bias off									
min result	126.85	126.46	125.57	124.80	124.09	122.70	119.62	120.05	125.06
max result	129.48	128.72	127.63	126.86	126.04	124.64	122.09	122.62	127.03
average	128.39	127.83	126.73	125.97	125.20	123.80	120.51	120.90	126.34
sigma	1.05	0.93	0.83	0.81	0.73	0.72	0.99	1.07	0.79



AVO (2) (LDR)	0KRAD	6KRAD	13KRAD	20KRAD	30KRAD	50KRAD	100KRAD	ANN24	ANN168
Min	118.1	118.1	118.1	118.1	118.1	118.1	118.1	118.1	118.1
Max	--	--	--	--	--	--	--	--	--
Unit	dB	dB	dB	dB	dB	dB	dB	dB	dB
Control Results									
1 CTRL	128.37	128.17	128.11	128.12	128.10	128.19	128.26	128.14	128.24

Bias on results									
2 ON	129.19	128.43	127.72	127.35	127.06	126.81	127.00	127.20	128.54
3 ON	128.61	127.86	127.38	126.86	126.63	126.34	126.44	126.66	127.99
4 ON	130.78	129.83	129.00	128.42	128.12	127.61	127.60	127.89	129.96
5 ON	130.83	129.68	128.87	128.41	128.07	127.73	127.80	128.01	129.96
6 ON	127.36	126.86	126.33	125.95	125.66	125.23	124.99	125.21	126.83
Statistics bias on									
min result	127.36	126.86	126.33	125.95	125.66	125.23	124.99	125.21	126.83
max result	130.83	129.83	129.00	128.42	128.12	127.73	127.80	128.01	129.96
average	129.35	128.53	127.86	127.40	127.11	126.74	126.76	126.99	128.66
sigma	1.48	1.25	1.11	1.06	1.03	1.02	1.13	1.14	1.34

Bias off results									
7 OFF	131.04	129.56	128.11	126.84	126.04	121.91	115.44	116.10	127.54
8 OFF	128.30	127.40	126.19	125.39	124.65	122.58	116.51	117.15	125.90
9 OFF	130.20	129.05	127.59	126.82	125.99	124.46	119.82	120.51	127.38
10 OFF	130.37	129.07	127.74	126.70	125.98	124.38	118.86	119.61	127.37
11 OFF	129.30	128.15	126.73	125.87	125.10	123.57	119.55	120.22	126.58
Statistics bias off									
min result	128.30	127.40	126.19	125.39	124.65	121.91	115.44	116.10	125.90
max result	131.04	129.56	128.11	126.84	126.04	124.46	119.82	120.51	127.54
average	129.84	128.65	127.27	126.32	125.55	123.38	118.03	118.72	126.95
sigma	1.06	0.86	0.79	0.66	0.64	1.12	1.95	1.97	0.70



VO (2) (AVERAG	0KRAD	6KRAD	13KRAD	20KRAD	30KRAD	50KRAD	100KRAD	ANN24	ANN168
ELDR ON	129.14	128.58	128.13	127.94	127.66	127.43	127.62	127.67	128.55
ELDR OFF	128.39	127.83	126.73	125.97	125.20	123.80	120.51	120.90	126.34
LDR ON	129.35	128.53	127.86	127.40	127.11	126.74	126.76	126.99	128.66
LDR OFF	129.84	128.65	127.27	126.32	125.55	123.38	118.03	118.72	126.95

ANNEX II DOSIMETRY

5	17/02/2012 13:33	17/02/2012 15:33	0.82	0.41
6	17/02/2012 15:42	20/02/2012 09:08	27.02	0.41
7	20/02/2012 09:18	20/02/2012 11:11	0.78	0.41
8	20/02/2012 11:23	20/02/2012 13:49	1.00	0.41
9	20/02/2012 13:55	20/02/2012 15:16	0.55	0.41
10	20/02/2012 15:21	21/02/2012 09:36	7.47	0.41
11	21/02/2012 09:43	21/02/2012 10:58	0.52	0.41
12	21/02/2012 11:02	21/02/2012 14:00	1.22	0.41
13	21/02/2012 14:16	21/02/2012 16:14		
14	21/02/2012 16:35	22/02/2012 13:18	8.54	0.41
15	22/02/2012 13:28	22/02/2012 15:09	0.69	0.41
16	22/02/2012 15:17	23/02/2012 09:18	7.43	0.41
17	23/02/2012 09:25	23/02/2012 10:20	0.38	0.41
18	23/02/2012 11:09	24/02/2012 18:31	12.94	0.41
19	24/02/2012 18:33	27/02/2012 08:33	25.58	0.41
20	27/02/2012 08:47	27/02/2012 10:06	0.49	0.37
21	27/02/2012 10:12	27/02/2012 11:09	0.36	0.38
22	27/02/2012 11:11	27/02/2012 13:07	0.73	0.38
23	27/02/2012 13:10	27/02/2012 15:12	0.77	0.38
24	27/02/2012 15:16	27/02/2012 16:28	0.46	0.38
25	27/02/2012 16:31	28/02/2012 13:00	8.44	0.41
26	28/02/2012 13:10	28/02/2012 16:33	1.33	0.39
27	28/02/2012 16:36	28/02/2012 19:40	1.21	0.39
28	28/02/2012 19:42	29/02/2012 08:44	5.13	0.39
29	29/02/2012 08:48	29/02/2012 13:16	1.83	0.41
30	29/02/2012 13:18	29/02/2012 14:53	0.65	0.41
31	29/02/2012 15:06	29/02/2012 16:50		
32	29/02/2012 17:10	01/03/2012 08:36	6.30	0.41
33	01/03/2012 09:08	01/03/2012 14:03	2.01	0.41
34	01/03/2012 14:15	01/03/2012 16:29	0.92	0.41
35	01/03/2012 16:32	02/03/2012 08:50	6.70	0.41
36	02/03/2012 08:58	02/03/2012 17:29	3.53	0.41
37	02/03/2012 17:47	06/03/2012 09:02	37.75	0.43
38	06/03/2012 09:14	06/03/2012 09:15	0.00	0.31
39	06/03/2012 09:18	06/03/2012 10:36	0.51	0.39
40	06/03/2012 10:39	06/03/2012 11:44	0.43	0.40
41	06/03/2012 11:47	06/03/2012 13:56	0.85	0.39
42	06/03/2012 13:59	06/03/2012 14:49	0.33	0.39

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43	06/03/2012 14:52	06/03/2012 16:29	0.64	0.39
44	06/03/2012 16:35	06/03/2012 18:30	0.76	0.40
45	06/03/2012 18:33	07/03/2012 08:57	5.68	0.39
46	07/03/2012 09:01	07/03/2012 10:16	0.51	0.41
47	07/03/2012 10:23	08/03/2012 08:56	9.23	0.41
48	08/03/2012 09:06	08/03/2012 14:16	2.00	0.39
49	08/03/2012 14:29	08/03/2012 16:10		
50	08/03/2012 16:27	09/03/2012 09:19	6.90	0.41
51	09/03/2012 09:22	09/03/2012 11:40	0.94	0.41
52	09/03/2012 11:42	12/03/2012 13:22	30.14	0.41
53	12/03/2012 13:25	12/03/2012 15:53	1.01	0.41
54	12/03/2012 15:55	13/03/2012 09:04	7.00	0.41
55	13/03/2012 09:14	14/03/2012 08:49	9.23	0.39
56	14/03/2012 08:56	14/03/2012 11:37	1.05	0.39
57	14/03/2012 11:43	14/03/2012 17:04	2.09	0.39
58	14/03/2012 17:09	15/03/2012 09:02	6.48	0.41
59	15/03/2012 09:08	15/03/2012 09:37	0.19	0.39
60	15/03/2012 09:42	15/03/2012 15:00	2.07	0.39
61	15/03/2012 15:05	15/03/2012 17:14	0.88	0.41
62	15/03/2012 17:21	16/03/2012 10:24	6.68	0.39
63	16/03/2012 10:31	16/03/2012 16:01	2.15	0.39
64	16/03/2012 16:15	19/03/2012 09:08	26.46	0.41
65	19/03/2012 09:33	19/03/2012 09:35	0.01	0.40
66	19/03/2012 09:37	19/03/2012 10:23	0.31	0.41
67*	19/03/2012 11:22	19/03/2012 13:44	0.96	0.41
68	19/03/2012 14:02	19/03/2012 15:39		
69	19/03/2012 15:58	20/03/2012 10:19	7.32	0.41
70	20/03/2012 10:27	20/03/2012 10:47	0.14	0.40
71	20/03/2012 10:50	20/03/2012 11:09	0.13	0.41
72	20/03/2012 11:12	20/03/2012 12:45	0.62	0.40
73	20/03/2012 12:47	20/03/2012 13:39	0.35	0.41
74	20/03/2012 13:42	20/03/2012 16:29	1.10	0.40
75	20/03/2012 16:31	20/03/2012 17:40	0.47	0.41
76	20/03/2012 17:43	21/03/2012 09:08	6.13	0.40
77	21/03/2012 09:11	21/03/2012 10:22	0.49	0.41
78	21/03/2012 10:28	21/03/2012 10:45	0.12	0.40
79	21/03/2012 10:47	21/03/2012 11:27	0.27	0.41
80	21/03/2012 11:30	21/03/2012 11:52	0.15	0.40

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81	21/03/2012 11:54	21/03/2012 12:44	0.34	0.41
82	21/03/2012 12:47	21/03/2012 13:40	0.35	0.40
83	21/03/2012 13:42	21/03/2012 14:36	0.37	0.41
84	21/03/2012 14:38	21/03/2012 15:42	0.42	0.40
85	21/03/2012 15:44	21/03/2012 16:19	0.24	0.41
86	21/03/2012 16:21	21/03/2012 17:01	0.26	0.40
87	21/03/2012 17:05	30/03/2012 09:14	84.22	0.41
88	30/03/2012 09:24	30/03/2012 11:16	0.76	0.41
89	30/03/2012 11:20	30/03/2012 11:22	0.01	0.40
90	30/03/2012 11:26	30/03/2012 14:01	1.05	0.41
91	30/03/2012 14:05	30/03/2012 15:52	0.72	0.41
92	30/03/2012 15:56	30/03/2012 19:24	1.42	0.41
93	30/03/2012 20:03	30/03/2012 20:06	0.02	0.39
94	30/03/2012 20:09	30/03/2012 20:24	0.11	0.41
95	30/03/2012 20:27	30/03/2012 20:30	0.03	0.40
96	30/03/2012 20:32	30/03/2012 20:45	0.09	0.41
97	30/03/2012 20:49	30/03/2012 20:57	0.05	0.40
98	30/03/2012 21:21	02/04/2012 08:58	24.41	0.41
99	02/04/2012 09:01	03/04/2012 14:04	11.87	0.41
100	03/04/2012 14:22	03/04/2012 19:59	2.30	0.41
101	03/04/2012 20:05	03/04/2012 20:51	0.32	0.41
102	03/04/2012 20:57	04/04/2012 11:04	5.77	0.41
103	04/04/2012 11:07	04/04/2012 11:57	0.34	0.41
104	04/04/2012 12:02	05/04/2012 10:31	9.19	0.41
105	05/04/2012 10:37	05/04/2012 13:51	1.32	0.41
106	05/04/2012 14:11	05/04/2012 16:02	0.76	0.41
107	05/04/2012 16:04	10/04/2012 16:04	48.96	0.41
108	10/04/2012 17:38	11/04/2012 11:00	7.08	0.41
109	11/04/2012 13:32	11/04/2012 15:31	0.81	0.41
110	11/04/2012 15:34	12/04/2012 09:45	7.40	0.41
111	12/04/2012 11:06	12/04/2012 13:07	0.82	0.41
112	12/04/2012 13:35	12/04/2012 15:36	0.82	0.41
113	12/04/2012 15:52	12/04/2012 17:53	0.82	0.41
114	12/04/2012 18:08	13/04/2012 08:30	5.84	0.41
115	13/04/2012 08:45	13/04/2012 10:45	0.81	0.41
116	13/04/2012 10:57	13/04/2012 12:57	0.81	0.41
117	13/04/2012 13:10	13/04/2012 15:10	0.81	0.41
118	13/04/2012 15:24	13/04/2012 17:27	0.83	0.41

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119	13/04/2012 17:40	16/04/2012 08:39	25.59	0.41
120	16/04/2012 08:50	17/04/2012 15:26	12.41	0.41
121	17/04/2012 15:45	20/04/2012 10:10	26.90	0.40
122	20/04/2012 10:23	20/04/2012 10:24	0.01	0.38
123	20/04/2012 10:27	20/04/2012 10:37	0.07	0.39
124	20/04/2012 10:40	20/04/2012 10:41	0.01	0.39
125	20/04/2012 10:45	24/04/2012 11:20	39.04	0.40
126	24/04/2012 11:41	24/04/2012 13:39	0.80	0.40
127	24/04/2012 13:42	27/04/2012 11:00	28.03	0.40
128	27/04/2012 11:06	03/05/2012 11:36	58.37	0.40
129	03/05/2012 11:56	03/05/2012 13:20	0.55	0.40
130	03/05/2012 13:27	04/05/2012 10:15	8.38	0.40
131	04/05/2012 10:24	07/05/2012 13:22	30.16	0.40
132	07/05/2012 13:35	07/05/2012 17:30	1.57	0.40
133	07/05/2012 17:53	07/05/2012 18:50	0.38	0.40
134	07/05/2012 18:53	08/05/2012 10:58	6.46	0.40
135	08/05/2012 11:26	08/05/2012 12:46	0.54	0.40
136	08/05/2012 12:50	08/05/2012 17:00	1.67	0.40
137	08/05/2012 17:19	08/05/2012 18:25	0.44	0.40
138	08/05/2012 18:47	09/05/2012 10:51	6.47	0.40
139	09/05/2012 10:53	09/05/2012 12:02	0.46	0.40
140	09/05/2012 12:07	10/05/2012 14:36	10.62	0.40
141	10/05/2012 14:41	10/05/2012 16:12	0.60	0.40
142	10/05/2012 16:15	11/05/2012 14:19	8.86	0.40
143	11/05/2012 14:46	14/05/2012 15:41	29.25	0.40
144	14/05/2012 15:51	14/05/2012 16:15	0.16	0.40
145	14/05/2012 16:19	21/05/2012 12:34	65.65	0.40
146	21/05/2012 12:37	21/05/2012 15:36	1.20	0.40
147*	21/05/2012 16:11	21/05/2012 18:34	0.96	0.40
148	21/05/2012 19:39	23/05/2012 16:53	18.15	0.40
149	23/05/2012 17:14	25/05/2012 11:55	17.18	0.40
150	25/05/2012 11:57	29/05/2012 10:35	38.04	0.40
151	29/05/2012 10:38	29/05/2012 13:27	1.13	0.40
152	29/05/2012 13:34	29/05/2012 14:32	0.39	0.40
153	29/05/2012 14:35	31/05/2012 08:20	16.77	0.40
154	31/05/2012 08:23	04/06/2012 10:18	40.48	0.41
155	04/06/2012 10:31	04/06/2012 11:05	0.19	0.33
156	04/06/2012 11:08	04/06/2012 13:43	2.87	0.40

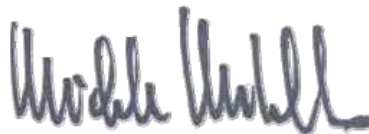
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157	04/06/2012 13:48	04/06/2012 15:27	1.14	0.33
158	04/06/2012 17:08	05/06/2012 08:58	6.04	0.40
159	05/06/2012 09:12	05/06/2012 11:04	0.41	0.40
160	05/06/2012 11:23	05/06/2012 13:45	0.54	0.33
161	05/06/2012 13:47	05/06/2012 17:24	1.04	0.29
162	05/06/2012 17:30	06/06/2012 08:45	3.83	0.25
163	06/06/2012 09:00	06/06/2012 10:06	0.24	0.22
164	06/06/2012 10:09	06/06/2012 11:12	0.24	0.23
165	06/06/2012 11:34	06/06/2012 14:16	0.59	0.22
166	06/06/2012 14:26	07/06/2012 08:44	3.73	0.21
167	07/06/2012 09:01	07/06/2012 11:04	0.78	0.38
168	07/06/2012 11:28	07/06/2012 16:33	1.93	0.38
169	07/06/2012 16:43	07/06/2012 18:23	0.70	0.42
170	07/06/2012 18:29	08/06/2012 11:03	6.40	0.39
171	08/06/2012 11:16	08/06/2012 13:01	0.67	0.38
172	08/06/2012 13:23	08/06/2012 17:54	1.72	0.38
173	08/06/2012 17:59	11/06/2012 08:54	27.18	0.43
174	11/06/2012 09:10	11/06/2012 11:09	0.80	0.40
175	11/06/2012 11:31	11/06/2012 13:21	0.73	0.40
176	11/06/2012 13:24	11/06/2012 14:21	0.38	0.40
177	11/06/2012 14:30	11/06/2012 14:55	0.15	0.37
178	11/06/2012 14:58	12/06/2012 08:45	6.70	0.38
179	12/06/2012 08:49	12/06/2012 09:30	0.25	0.37
180	12/06/2012 09:32	12/06/2012 11:11	0.62	0.38
181	12/06/2012 11:13	12/06/2012 11:53	0.25	0.37
182	12/06/2012 11:55	12/06/2012 13:50	0.72	0.38
183	12/06/2012 13:53	12/06/2012 14:51	0.37	0.38
184	12/06/2012 14:54	12/06/2012 16:40	0.67	0.38
185	12/06/2012 16:43	12/06/2012 17:32	0.32	0.39
186	12/06/2012 17:37	13/06/2012 13:55	8.06	0.40
187	13/06/2012 14:28	14/06/2012 10:15	7.89	0.40
188	14/06/2012 10:23	14/06/2012 11:20	0.38	0.40
189	14/06/2012 11:38	15/06/2012 09:55	8.89	0.40
190	15/06/2012 10:03	15/06/2012 10:53	0.33	0.40
191	15/06/2012 11:06	18/06/2012 09:24	28.04	0.40

Note: The uncertainty budgets (according to TEC-QEC/PR001 section 12) are: 4.2 % ($k=2$) for absorbed dose to water and 4.4% ($k=2$) for absorbed dose rate to water

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Notes: * Runs 67 & 147 without dosimetry. Dose rate taken from previous run with dosimetry.
Runs 13,31,49 & 68 – no dosimetry – devices out for measurements



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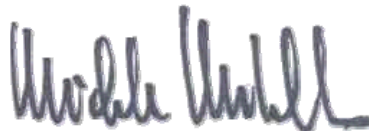
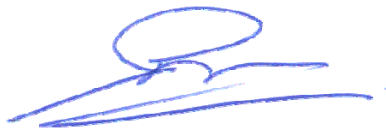
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5	05/06/2012 17:30	06/06/2012 08:45	61.25	4.02
6	06/06/2012 09:00	06/06/2012 10:06		
7	06/06/2012 10:09	06/06/2012 11:12		
8	06/06/2012 11:34	06/06/2012 14:16	9.51	3.52
9	06/06/2012 14:26	07/06/2012 08:44	71.58	3.97
10	07/06/2012 09:01	07/06/2012 11:04		
11	07/06/2012 11:28	07/06/2012 16:33	18.63	3.67
12	07/06/2012 16:43	07/06/2012 18:23	6.15	3.68
13	07/06/2012 18:29	08/06/2012 11:03	59.00	3.56
14	08/06/2012 11:16	08/06/2012 13:01		
15	08/06/2012 13:23	08/06/2012 17:54	13.66	3.02
16	08/06/2012 17:59	11/06/2012 08:54	212.74	3.38
17	11/06/2012 09:10	11/06/2012 11:09		
18	11/06/2012 11:31	11/06/2012 13:21	6.15	3.35
19	11/06/2012 13:24	11/06/2012 14:21	3.42	3.63
20	11/06/2012 14:30	11/06/2012 14:55	1.35	3.29
21	11/06/2012 14:58	12/06/2012 08:45	64.80	3.64
22	12/06/2012 08:49	12/06/2012 09:30	2.27	3.35
23	12/06/2012 09:32	12/06/2012 11:11	5.96	3.64
24	12/06/2012 11:13	12/06/2012 11:53	2.12	3.24
25	12/06/2012 11:55	12/06/2012 13:50	6.95	3.64
26	12/06/2012 13:53	12/06/2012 14:51	3.23	3.33
27	12/06/2012 14:54	12/06/2012 16:40	6.40	3.64
28	12/06/2012 16:43	12/06/2012 17:32	2.74	3.34
29	12/06/2012 17:37	13/06/2012 13:55	73.87	3.64
30	13/06/2012 14:28	14/06/2012 10:15	72.86	3.68
31	14/06/2012 10:23	14/06/2012 11:20	3.48	3.66
32	14/06/2012 11:38	15/06/2012 09:55	81.99	3.68
33	15/06/2012 10:03	15/06/2012 10:53	3.07	3.66
34	15/06/2012 11:06	18/06/2012 09:24	259.13	3.69

Note: The uncertainty budgets (according to TEC-QEC/PR001 section 12) are: 4.2 % (k=2) for absorbed dose to water and 4.4% (k=2) for absorbed dose rate to water

Notes: Runs 2,6,7,10,14 & 17 – no dosimetry – devices out for measurements

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