WREB Functional Test Report

Board ID: 0x123b55b6
Board Type: b
Link Version: 020
Front-end FPGA Code Version: 0020
Test Performed: 2016-07-14 17:10:20

Status	Test	Results
N/A	Idle Current	N/A
PASS	Channel Comms	0/36 channels missing.
PASS	ASPIC Comms	1/1 ASPICS communicating.
N/A	CS Gate Test	N/A
N/A	PCK Rails	N/A
PASS	SCK Rails	LV Gain: 0.992905. UV Gain: 0.880312. 50/50 values okay.
FAIL	RG Rails	LV Gain: 0.998570. UV Gain: 0.800441. 49/50 values okay.
PASS	Diverging SCK Rails, 0V	LV Gain: 0.731881. UV Gain: 0.655376. 38/38 values okay.
FAIL	Diverging SCK Rails, 3V	LV Gain: 0.898301. UV Gain: 0.341698. 35/38 values okay.
PASS	Diverging SCK Rails, -3V	LV Gain: 0.374716. UV Gain: 0.809144. 38/38 values okay.
PASS	Diverging RG Rails, 0V	LV Gain: 0.963162. UV Gain: 0.942345. 38/38 values okay.
PASS	Diverging RG Rails, 3V	LV Gain: 0.855863. UV Gain: 0.563721. 38/38 values okay.
PASS	Diverging RG Rails, -3V	LV Gain: 0.664357. UV Gain: 0.769680. 38/38 values okay.
PASS	OG Bias Test	Gain: 0.991647. 21/21 values okay.
PASS	OD Bias Test	Gain: 0.980253. 14/16 values okay.
PASS	GD Bias Test	Gain: 0.995784. 15/16 values okay.
PASS	RD Bias Test	Gain: 0.996845. 15/16 values okay.
N/A	Board Temperature	N/A
N/A	ASPIC Noise Tests	31/48 channels within sigma<5.5.

WREB Test: 2016-07-14 17:10

Idle Current Test

Channel	Voltage	Channel	Current
DigPS_V	4.925	DigPS_I	642.75
AnaPS_V	6.975	AnaPS_I	283.75
ODPS_V	26.0045	ODPS_I	15.8183
ClkHPS_V	9.0	ClkHPS_I	36.75
DphiPS_V	0.0	DphiPS_I	0.0
HtrPS_V	8.025	HtrPS_I	1.5

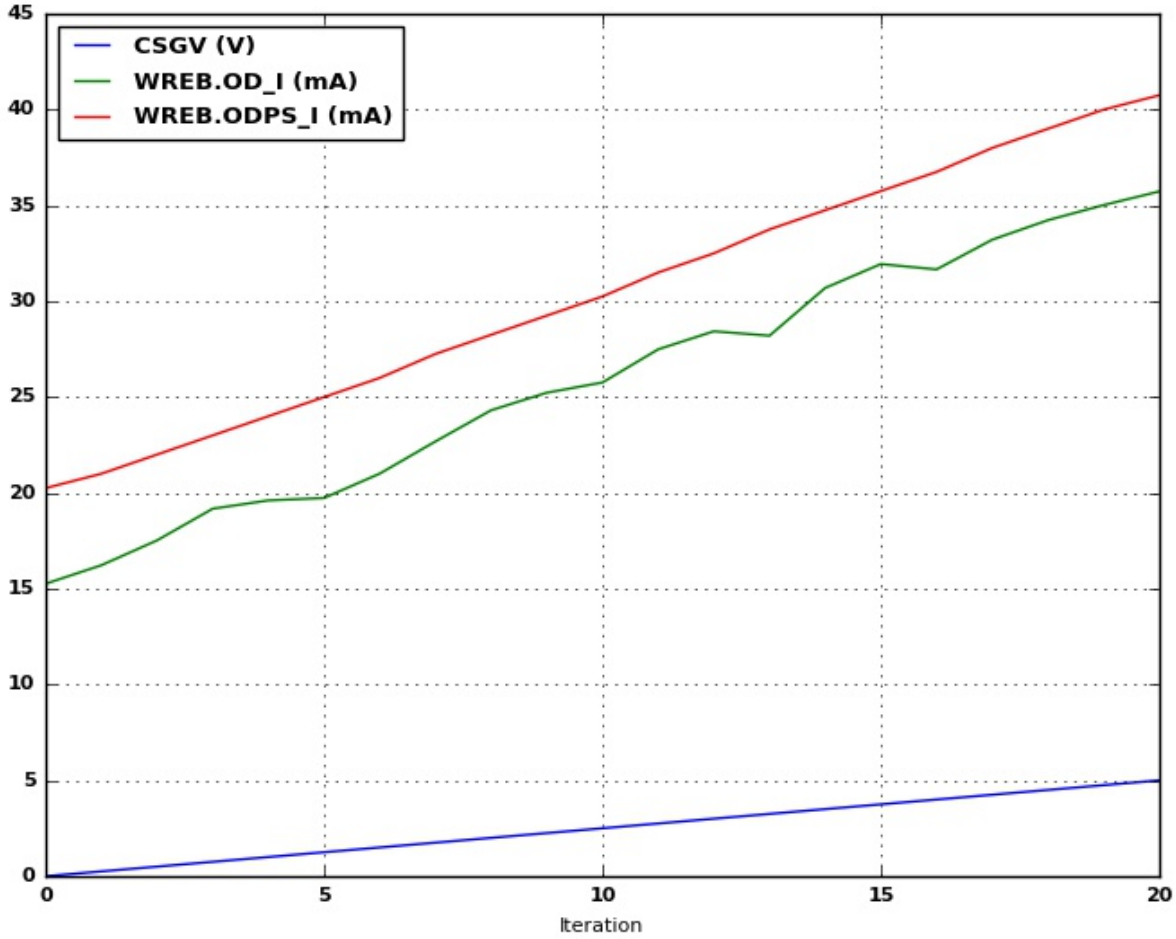
Channel Communications Test	
Channel	Value
WREB.Temp1	38.25
WREB.Temp2	40.125
WREB.Temp3	34.0
WREB.Temp4	39.5625
WREB.Temp5	37.25
WREB.Temp6	37.125
WREB.Atemp0U	-128.5058
WREB.Atemp0L	-128.3219
WREB.CCDtemp	2857.1427
WREB.RTDtemp	2857.1427
WREB.DigPS_V	4.925
WREB.DigPS_I	643.0
WREB.AnaPS_V	6.975
WREB.AnaPS_I	283.5
WREB.ODPS_V	31.05
WREB.ODPS_I	20.25
WREB.ClkHPS_V	9.0
WREB.ClkHPS_I	85.5
WREB.DphiPS_V	0.0
WREB.DphiPS_I	0.0
WREB.HtrPS_V	8.025
WREB.HtrPS_I	1.5
WREB.VREF25	2.4945
WREB.OD_V	26.0062
WREB.OD_I	16.1235
WREB.OG_V	-2.4287
WREB.RD_V	11.5613
WREB.GD_V	25.8635
WREB.CKP_V	-8.0449
WREB.CKPSH_V	-8.0269
WREB.CKS_V	-0.005
WREB.SCKU_V	-0.0061
WREB.SCKL_V	-0.0069
WREB.RG_V	7.877
WREB.RGU_V	7.8674
WREB.RGL_V	-1.9348

ASPIC Communications Test

Test PASS. 1/1 ASPICS communicating.

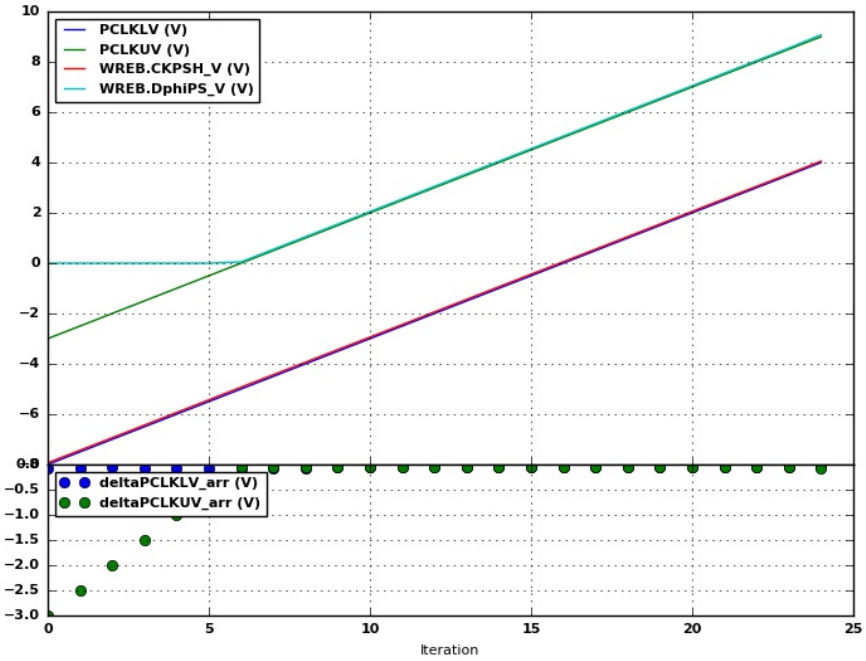
ccs-cr.checkAsics result: [0]

CSGate Test



CSGV (V)	WREB.OD_I (mA)	WREB.ODPS_I (mA)
0	15.2588	20.25
0.25	16.2252	21.0
0.5	17.5222	22.0
0.75	19.1752	23.0
1.0	19.6075	24.0
1.25	19.7347	25.0
1.5	21.0063	26.0
1.75	22.6847	27.25
2.0	24.3123	28.25
2.25	25.2279	29.25
2.5	25.7619	30.25
2.75	27.4913	31.5
3.0	28.4322	32.5
3.25	28.2033	33.75
3.5	30.6956	34.75
3.75	31.9417	35.75
4.0	31.662	36.75
4.25	33.2133	38.0
4.5	34.2306	39.0
4.75	35.0189	40.0
5.0	35.731	40.75

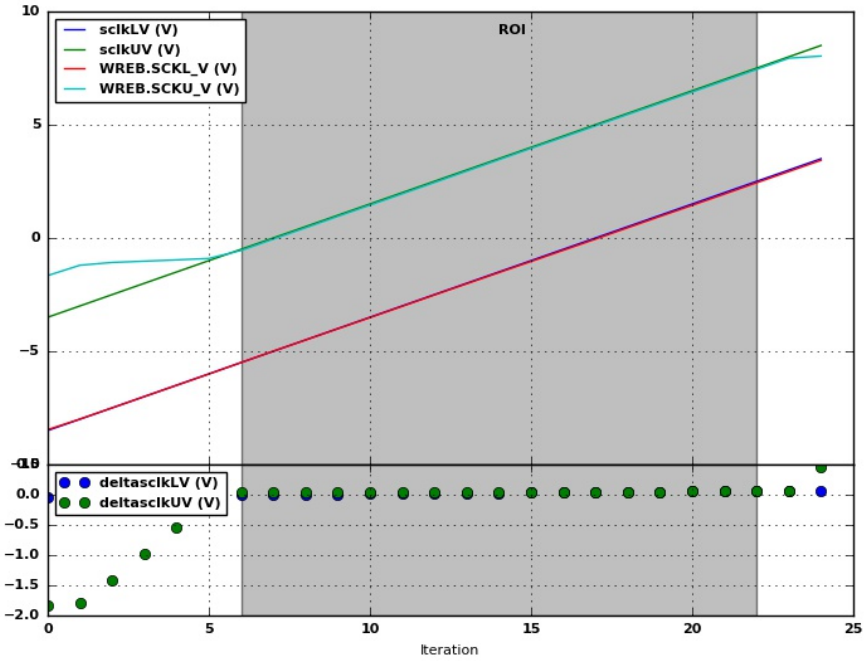
PCK Rails Test



N/A

PCLKLV (V)	PCLKUV (V)	WREB.CKPSH_V (V)	WREB.DphiPS_V (V)	deltaPCLKLV_arr (V)	deltaPCLKUV_arr (V)
-8.0	-3.0	-7.9338	0.0	-0.0662	-3.0
-7.5	-2.5	-7.4356	0.0	-0.0644	-2.5
-7.0	-2.0	-6.9382	0.0	-0.0618	-2.0
-6.5	-1.5	-6.4369	0.0	-0.0631	-1.5
-6.0	-1.0	-5.9341	0.0	-0.0659	-1.0
-5.5	-0.5	-5.4329	0.0	-0.0671	-0.5
-5.0	0.0	-4.9278	0.05	-0.0722	-0.05
-4.5	0.5	-4.4342	0.55	-0.0658	-0.05
-4.0	1.0	-3.936	1.05	-0.064	-0.05
-3.5	1.5	-3.4378	1.55	-0.0622	-0.05
-3.0	2.0	-2.9388	2.05	-0.0612	-0.05
-2.5	2.5	-2.4422	2.55	-0.0578	-0.05
-2.0	3.0	-1.9394	3.05	-0.0606	-0.05
-1.5	3.5	-1.4397	3.55	-0.0603	-0.05
-1.0	4.0	-0.9399	4.05	-0.0601	-0.05
-0.5	4.5	-0.4395	4.55	-0.0605	-0.05
0.0	5.0	0.0542	5.05	-0.0542	-0.05
0.5	5.5	0.5539	5.55	-0.0539	-0.05
1.0	6.0	1.0536	6.05	-0.0536	-0.05
1.5	6.5	1.5518	6.55	-0.0518	-0.05
2.0	7.0	2.0569	7.05	-0.0569	-0.05
2.5	7.5	2.5574	7.55	-0.0574	-0.05
3.0	8.0	3.0518	8.05	-0.0518	-0.05
3.5	8.5	3.5492	8.55	-0.0492	-0.05
4.0	9.0	4.0543	9.075	-0.0543	-0.075

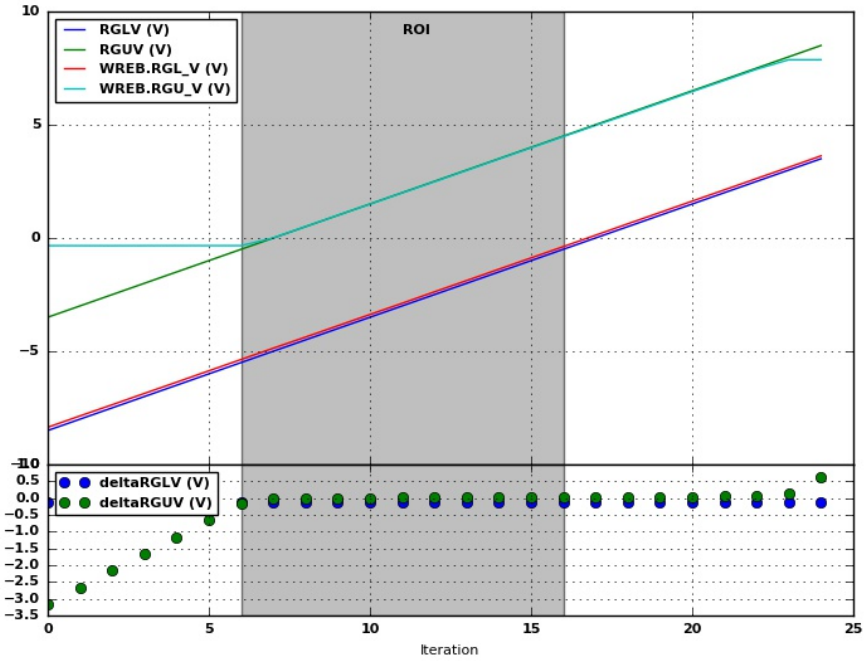
SCK Rails Test



LV Gain: 0.992905. UV Gain: 0.880312. 50/50 values okay.
Test PASSED.

sclkLV (V)	sclkUV (V)	WREB.SCKL_V (V)	WREB.SCKU_V (V)	deltasclkLV (V)	deltasclkUV (V)
-8.5	-3.5	-8.4618	-1.6594	-0.0382	-1.8406
-8.0	-3.0	-7.9956	-1.2024	-0.0044	-1.7976
-7.5	-2.5	-7.4997	-1.0796	-0.0003	-1.4204
-7.0	-2.0	-7.0007	-1.0239	0.0007	-0.9761
-6.5	-1.5	-6.5041	-0.9666	0.0041	-0.5334
-6.0	-1.0	-6.0074	-0.9033	0.0074	-0.0967
-5.5	-0.5	-5.4977	-0.5516	-0.0023	0.0516
-5.0	0.0	-4.998	-0.0473	-0.002	0.0473
-4.5	0.5	-4.5052	0.4494	0.0052	0.0506
-4.0	1.0	-4.0092	0.9552	0.0092	0.0448
-3.5	1.5	-3.5133	1.4526	0.0133	0.0474
-3.0	2.0	-3.0159	1.9508	0.0159	0.0492
-2.5	2.5	-2.5146	2.4513	0.0146	0.0487
-2.0	3.0	-2.0203	2.9541	0.0203	0.0459
-1.5	3.5	-1.5266	3.4576	0.0266	0.0424
-1.0	4.0	-1.0353	3.9604	0.0353	0.0396
-0.5	4.5	-0.5409	4.4548	0.0409	0.0452
0.0	5.0	-0.0473	4.9538	0.0473	0.0462
0.5	5.5	0.4539	5.4573	0.0461	0.0427
1.0	6.0	0.9521	5.9517	0.0479	0.0483
1.5	6.5	1.4442	6.4468	0.0558	0.0532
2.0	7.0	1.9402	6.9466	0.0598	0.0534
2.5	7.5	2.4414	7.4432	0.0586	0.0568
3.0	8.0	2.9358	7.9384	0.0642	0.0616
3.5	8.5	3.434	8.0315	0.066	0.4685

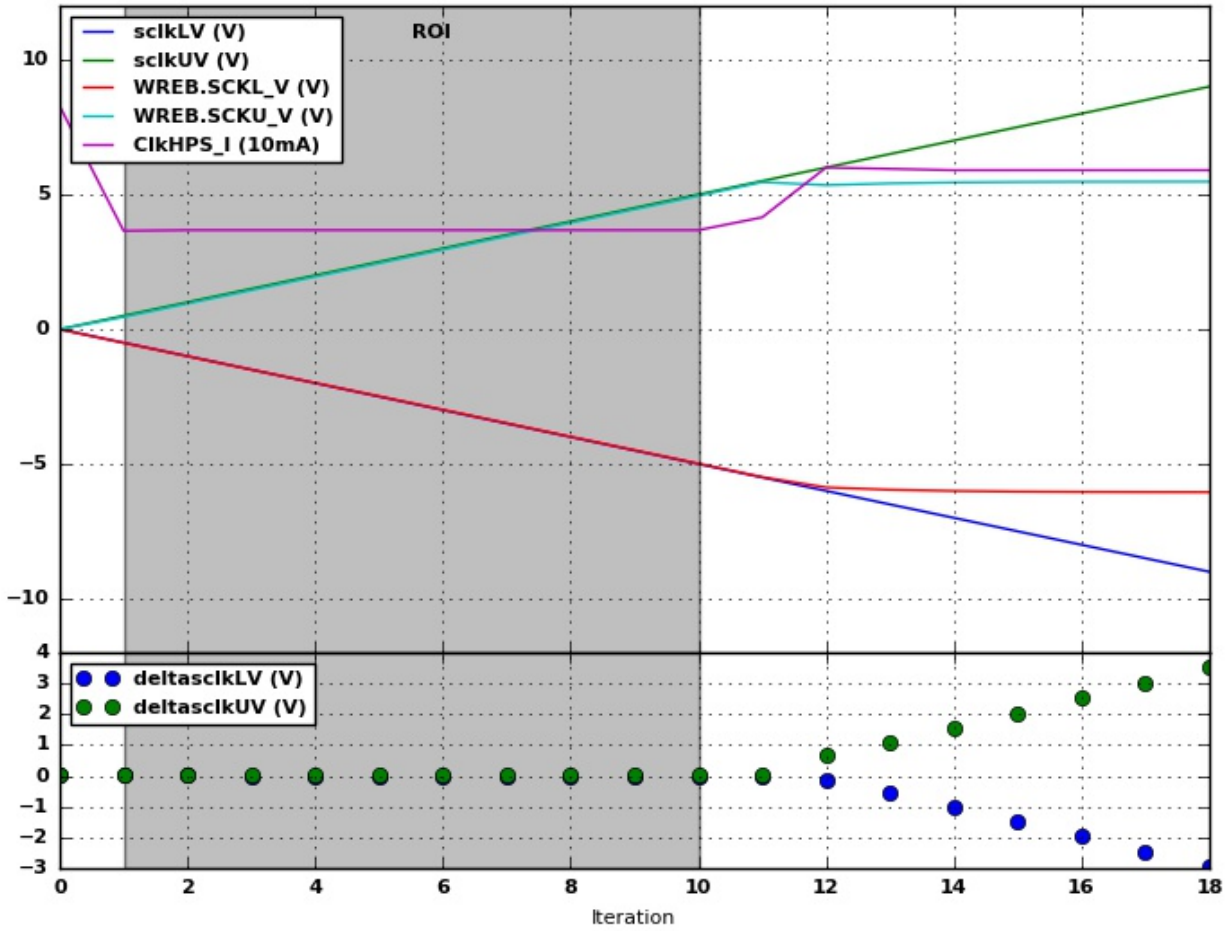
RG Rails Test



LV Gain: 0.998570. UV Gain: 0.800441. 49/50 values okay.
Test FAILED.

RGLV (V)	RGUV (V)	WREB.RGL_V (V)	WREB.RGU_V (V)	deltaRGLV (V)	deltaRGUV (V)
-8.5	-3.5	-8.3572	-0.3387	-0.1428	-3.1613
-8.0	-3.0	-7.8575	-0.3395	-0.1425	-2.6605
-7.5	-2.5	-7.3631	-0.3403	-0.1369	-2.1597
-7.0	-2.0	-6.8634	-0.338	-0.1366	-1.662
-6.5	-1.5	-6.366	-0.3372	-0.134	-1.1628
-6.0	-1.0	-5.8655	-0.3365	-0.1345	-0.6635
-5.5	-0.5	-5.3642	-0.3365	-0.1358	-0.1635
-5.0	0.0	-4.8653	0.0031	-0.1347	-0.0031
-4.5	0.5	-4.3747	0.5058	-0.1253	-0.0058
-4.0	1.0	-3.8765	1.0033	-0.1235	-0.0033
-3.5	1.5	-3.3783	1.4938	-0.1217	0.0062
-3.0	2.0	-2.8824	1.9905	-0.1176	0.0095
-2.5	2.5	-2.3781	2.4841	-0.1219	0.0159
-2.0	3.0	-1.8791	2.9823	-0.1209	0.0177
-1.5	3.5	-1.3779	3.4859	-0.1221	0.0141
-1.0	4.0	-0.8789	3.981	-0.1211	0.019
-0.5	4.5	-0.3807	4.4769	-0.1193	0.0231
0.0	5.0	0.1213	4.969	-0.1213	0.031
0.5	5.5	0.6256	5.4626	-0.1256	0.0374
1.0	6.0	1.1246	5.9624	-0.1246	0.0376
1.5	6.5	1.6266	6.4629	-0.1266	0.0371
2.0	7.0	2.124	6.955	-0.124	0.045
2.5	7.5	2.6253	7.4516	-0.1253	0.0484
3.0	8.0	3.1227	7.8705	-0.1227	0.1295
3.5	8.5	3.6263	7.8705	-0.1263	0.6295

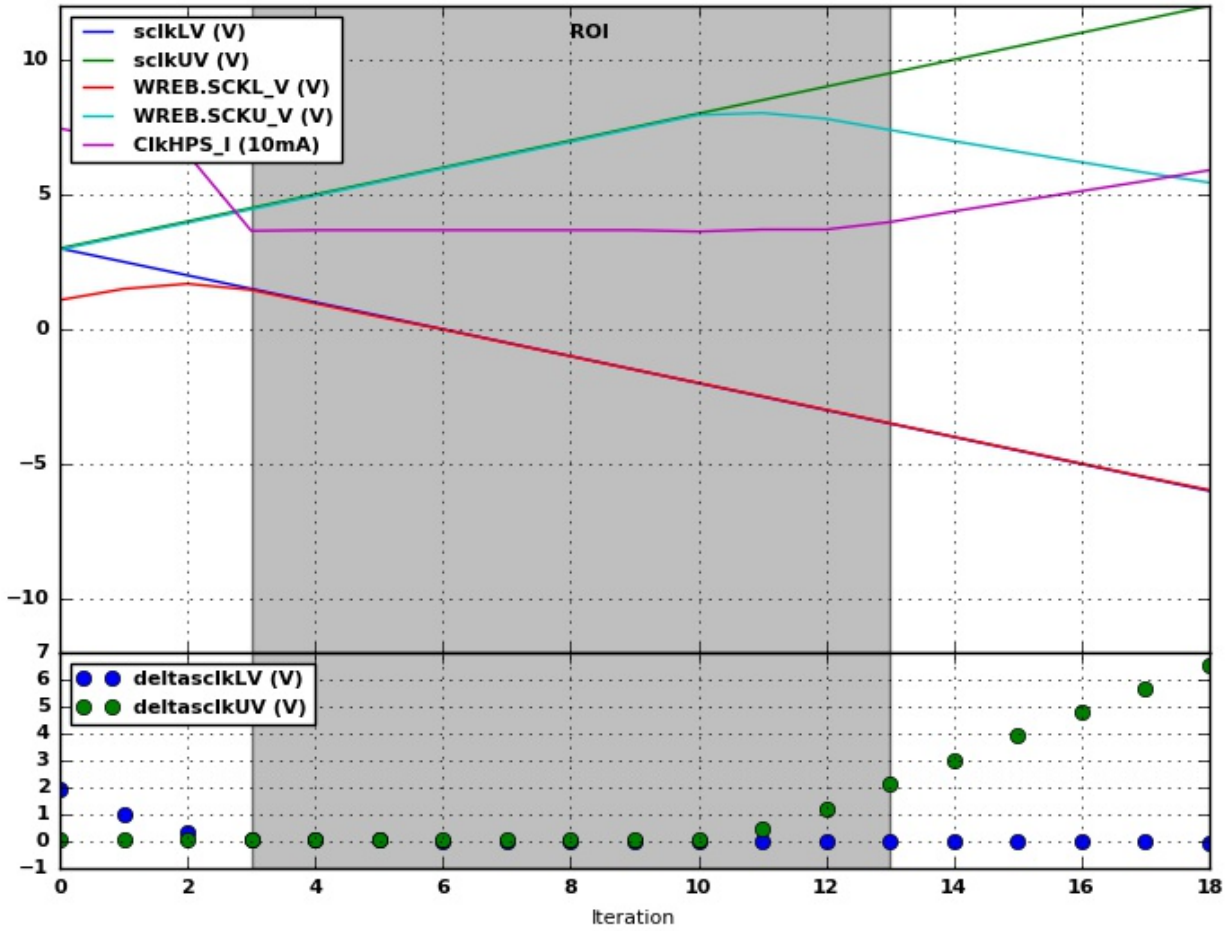
Diverging SCKRails Test 0 V



LV Gain: 0.731881. UV Gain: 0.655376. 38/38 values okay.
Test PASSED.

sclkLV (V)	sclkUV (V)	WREB.SCKL_V (V)	WREB.SCKU_V (V)	ClkHPS_I (10mA)	deltasclkLV (V)	deltasclkUV (V)
0.0	0.0	-0.0061	-0.0069	8.275	0.0061	0.0069
-0.5	0.5	-0.5096	0.4509	3.65	0.0096	0.0491
-1.0	1.0	-1.0056	0.9491	3.675	0.0056	0.0509
-1.5	1.5	-1.5015	1.445	3.675	0.0015	0.055
-2.0	2.0	-1.9943	1.9485	3.675	-0.0057	0.0515
-2.5	2.5	-2.4872	2.4452	3.675	-0.0128	0.0548
-3.0	3.0	-2.9884	2.951	3.675	-0.0116	0.049
-3.5	3.5	-3.4882	3.4485	3.675	-0.0118	0.0515
-4.0	4.0	-3.9909	3.9474	3.675	-0.0091	0.0526
-4.5	4.5	-4.4876	4.4464	3.675	-0.0124	0.0536
-5.0	5.0	-4.9866	4.95	3.675	-0.0134	0.05
-5.5	5.5	-5.4871	5.4558	4.15	-0.0129	0.0442
-6.0	6.0	-5.8701	5.3452	6.0	-0.1299	0.6548
-6.5	6.5	-5.9578	5.41	5.95	-0.5422	1.09
-7.0	7.0	-6.002	5.4443	5.9	-0.998	1.5557
-7.5	7.5	-6.0265	5.4604	5.9	-1.4735	2.0396
-8.0	8.0	-6.0379	5.4695	5.9	-1.9621	2.5305
-8.5	8.5	-6.044	5.4718	5.9	-2.456	3.0282
-9.0	9.0	-6.0478	5.4756	5.9	-2.9522	3.5244

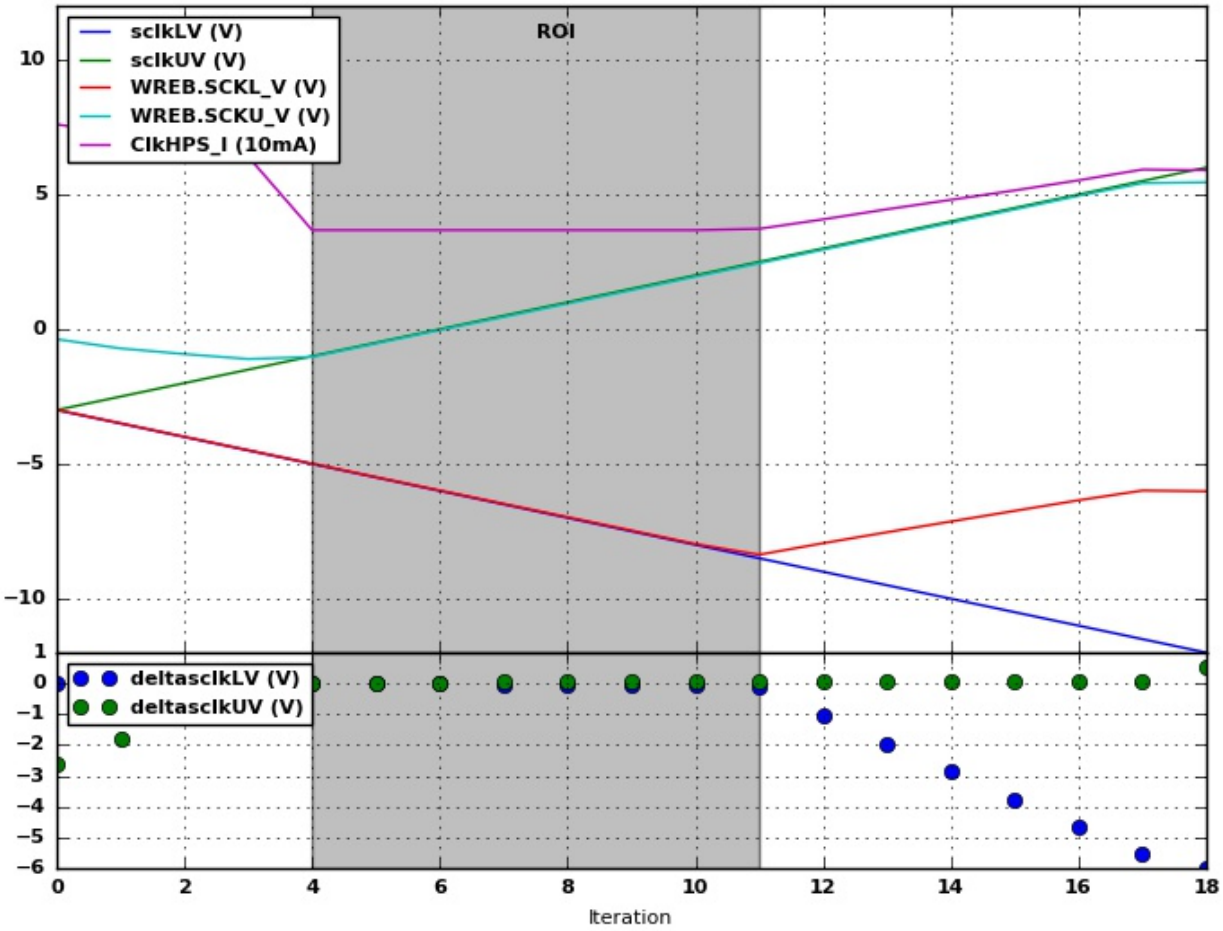
Diverging SCKRails Test 3 V



LV Gain: 0.898301. UV Gain: 0.341698. 35/38 values okay.
Test FAILED.

sclkLV (V)	sclkUV (V)	WREB.SCKL_V (V)	WREB.SCKU_V (V)	ClkHPS_I (10mA)	deltasclkLV (V)	deltasclkUV (V)
3.0	3.0	1.0811	2.9526	7.45	1.9189	0.0474
2.5	3.5	1.4938	3.45	6.975	1.0062	0.05
2.0	4.0	1.6869	3.9482	6.5	0.3131	0.0518
1.5	4.5	1.4557	4.4472	3.65	0.0443	0.0528
1.0	5.0	0.9567	4.9507	3.675	0.0433	0.0493
0.5	5.5	0.4616	5.455	3.675	0.0384	0.045
0.0	6.0	-0.0061	5.9586	3.675	0.0061	0.0414
-0.5	6.5	-0.5089	6.4514	3.675	0.0089	0.0486
-1.0	7.0	-1.004	6.9496	3.675	0.004	0.0504
-1.5	7.5	-1.5022	7.4532	3.675	0.0022	0.0468
-2.0	8.0	-1.9943	7.9483	3.625	-0.0057	0.0517
-2.5	8.5	-2.4864	8.0238	3.7	-0.0136	0.4762
-3.0	9.0	-2.9892	7.8079	3.7	-0.0108	1.1921
-3.5	9.5	-3.4874	7.3936	3.975	-0.0126	2.1064
-4.0	10.0	-3.9917	6.9801	4.375	-0.0083	3.0199
-4.5	10.5	-4.4868	6.5857	4.75	-0.0132	3.9143
-5.0	11.0	-4.9858	6.1951	5.125	-0.0142	4.8049
-5.5	11.5	-5.4855	5.8067	5.5	-0.0145	5.6933
-6.0	12.0	-5.9616	5.439	5.9	-0.0384	6.561

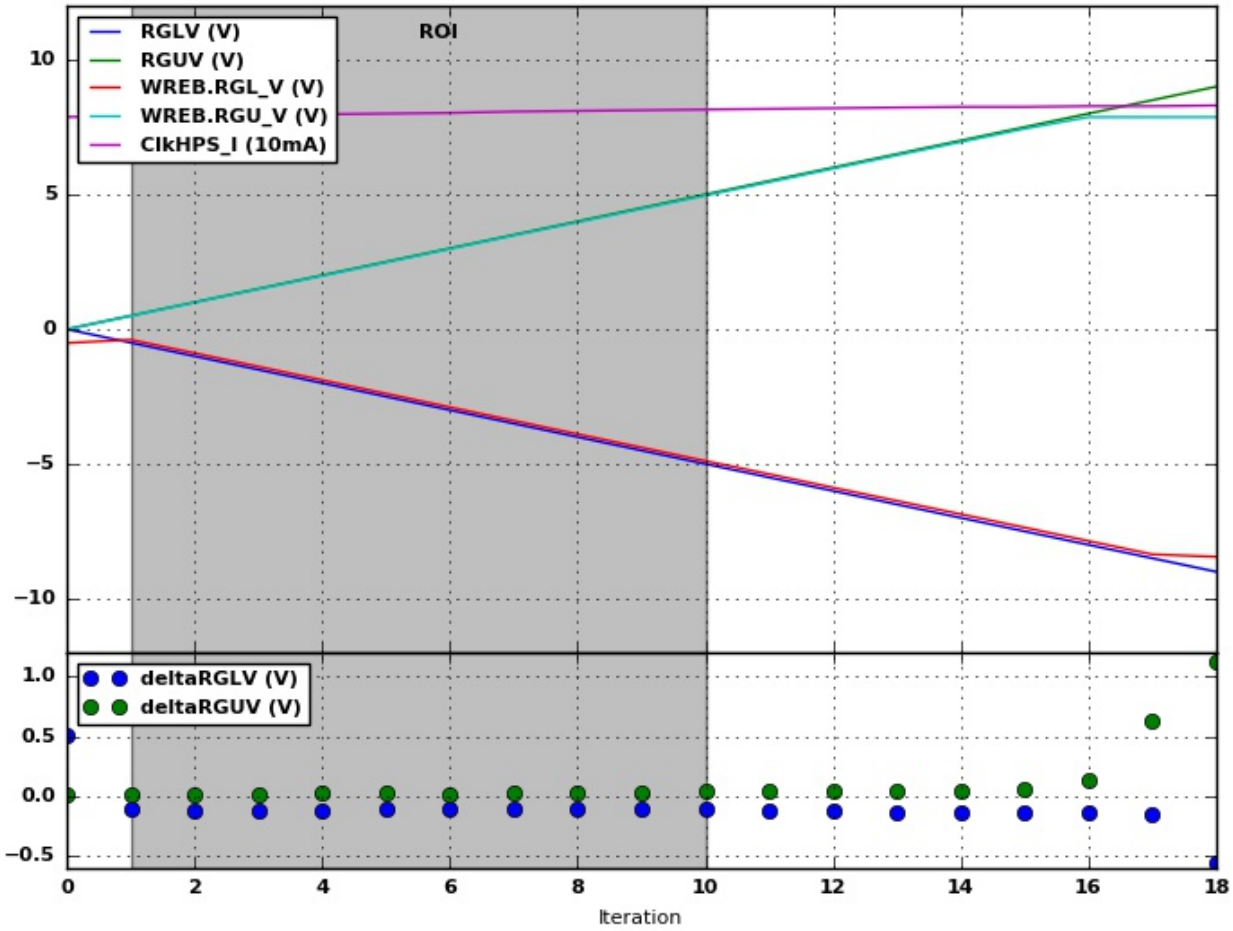
Diverging SCKRails Test -3 V



LV Gain: 0.374716. UV Gain: 0.809144. 38/38 values okay.
Test PASSED.

sclkLV (V)	sclkUV (V)	WREB.SCKL_V (V)	WREB.SCKU_V (V)	ClkHPS_I (10mA)	deltasclkLV (V)	deltasclkUV (V)
-3.0	-3.0	-2.9907	-0.3716	7.6	-0.0093	-2.6284
-3.5	-2.5	-3.4882	-0.7133	7.25	-0.0118	-1.7867
-4.0	-2.0	-3.9909	-0.9224	6.85	-0.0091	-1.0776
-4.5	-1.5	-4.4884	-1.1063	6.4	-0.0116	-0.3937
-5.0	-1.0	-4.9873	-1.03	3.675	-0.0127	0.03
-5.5	-0.5	-5.4871	-0.5325	3.675	-0.0129	0.0325
-6.0	0.0	-5.983	-0.0298	3.675	-0.017	0.0298
-6.5	0.5	-6.4789	0.4509	3.675	-0.0211	0.0491
-7.0	1.0	-6.9717	0.9499	3.675	-0.0283	0.0501
-7.5	1.5	-7.4677	1.4465	3.675	-0.0323	0.0535
-8.0	2.0	-7.9681	1.9493	3.675	-0.0319	0.0507
-8.5	2.5	-8.3664	2.4445	3.725	-0.1336	0.0555
-9.0	3.0	-7.9414	2.9495	4.075	-1.0586	0.0505
-9.5	3.5	-7.534	3.4492	4.45	-1.966	0.0508
-10.0	4.0	-7.1358	3.9467	4.8	-2.8642	0.0533
-10.5	4.5	-6.7406	4.4472	5.15	-3.7594	0.0528
-11.0	5.0	-6.3477	4.95	5.525	-4.6523	0.05
-11.5	5.5	-5.9875	5.4192	5.925	-5.5125	0.0808
-12.0	6.0	-6.0143	5.4489	5.9	-5.9857	0.5511

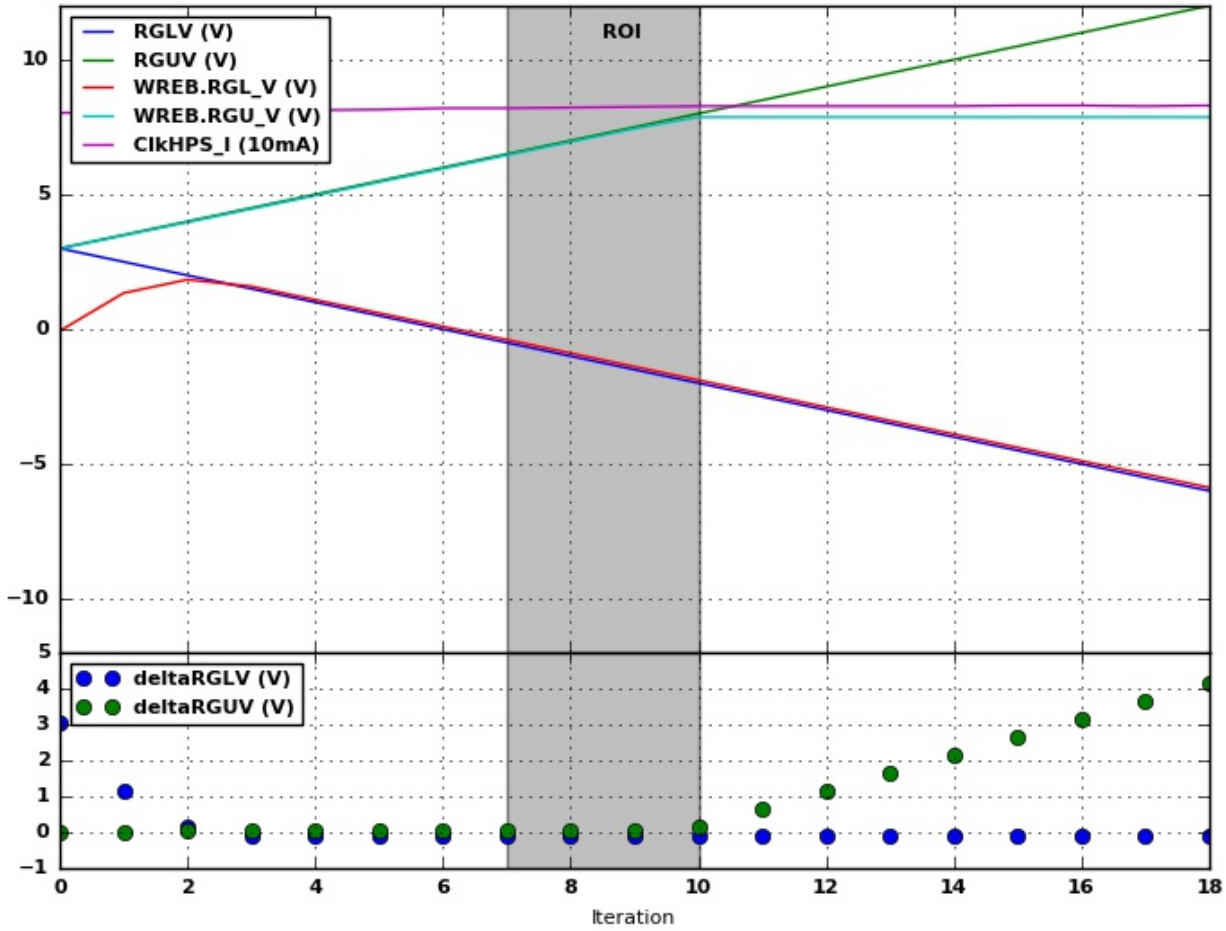
Diverging RGRails Test 0 V



LV Gain: 0.963162. UV Gain: 0.942345. 38/38 values okay.
Test PASSED.

RGLV (V)	RGUV (V)	WREB.RGL_V (V)	WREB.RGU_V (V)	ClkHPS_I (10mA)	deltaRGLV (V)	deltaRGUV (V)
0.0	0.0	-0.5142	-0.0114	7.875	0.5142	0.0114
-0.5	0.5	-0.3899	0.4898	7.9	-0.1101	0.0102
-1.0	1.0	-0.8865	0.9865	7.925	-0.1135	0.0135
-1.5	1.5	-1.387	1.4832	7.925	-0.113	0.0168
-2.0	2.0	-1.8867	1.9768	7.975	-0.1133	0.0232
-2.5	2.5	-2.3911	2.475	8.0	-0.1089	0.025
-3.0	3.0	-2.8938	2.9778	8.025	-0.1062	0.0222
-3.5	3.5	-3.3943	3.4767	8.075	-0.1057	0.0233
-4.0	4.0	-3.8925	3.9665	8.1	-0.1075	0.0335
-4.5	4.5	-4.39	4.464	8.125	-0.11	0.036
-5.0	5.0	-4.8882	4.9568	8.15	-0.1118	0.0432
-5.5	5.5	-5.3795	5.4558	8.175	-0.1205	0.0442
-6.0	6.0	-5.8792	5.9578	8.2	-0.1208	0.0422
-6.5	6.5	-6.3713	6.4552	8.225	-0.1287	0.0448
-7.0	7.0	-6.8657	6.9481	8.25	-0.1343	0.0519
-7.5	7.5	-7.3616	7.4394	8.25	-0.1384	0.0606
-8.0	8.0	-7.8598	7.8705	8.275	-0.1402	0.1295
-8.5	8.5	-8.3565	7.8697	8.275	-0.1435	0.6303
-9.0	9.0	-8.4442	7.8705	8.3	-0.5558	1.1295

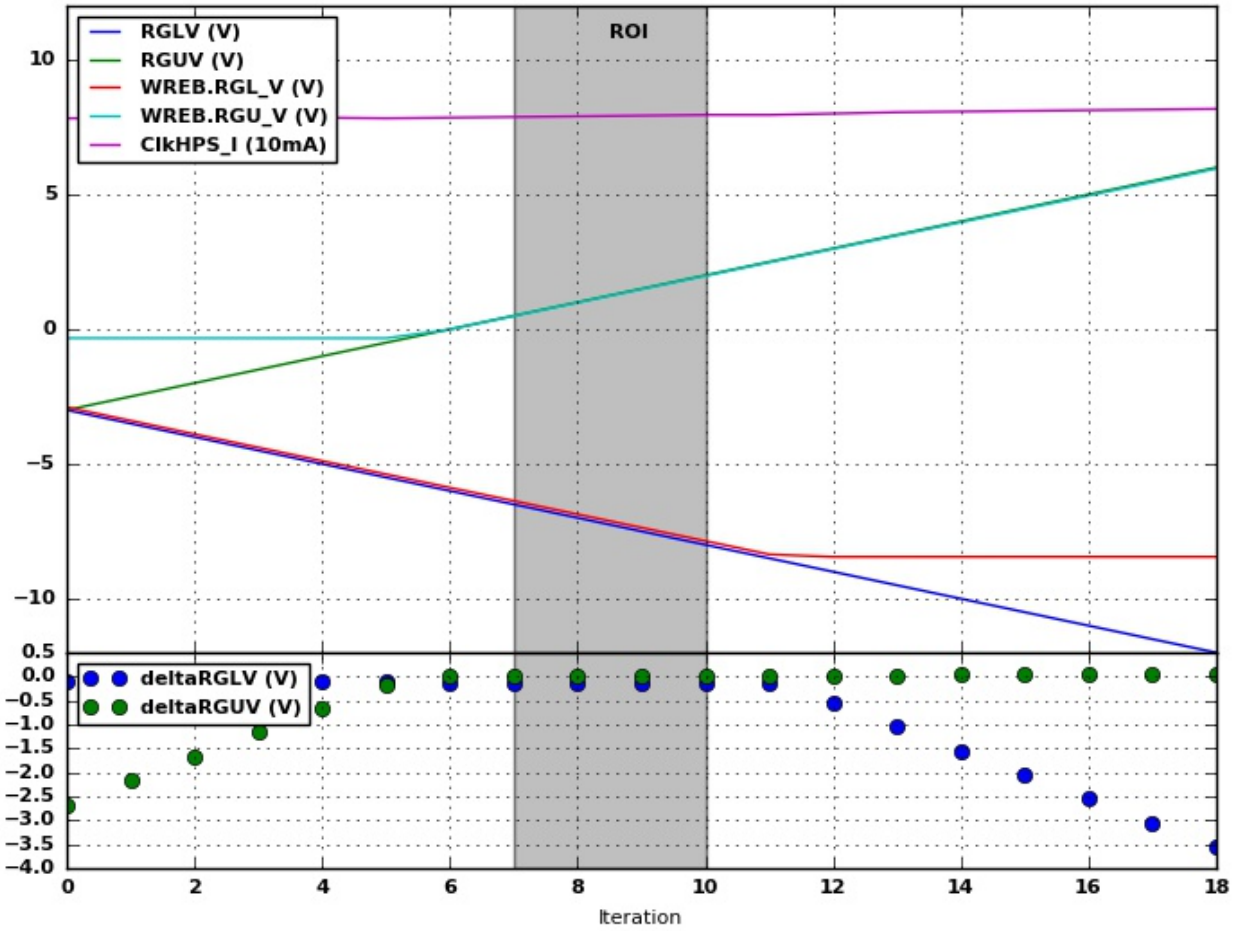
Diverging RGRails Test 3 V



LV Gain: 0.855863. UV Gain: 0.563721. 38/38 values okay.
Test PASSED.

RGLV (V)	RGUV (V)	WREB.RGL_V (V)	WREB.RGU_V (V)	ClkHPS_I (10mA)	deltaRGLV (V)	deltaRGUV (V)
3.0	3.0	-0.0664	2.9793	8.025	3.0664	0.0207
2.5	3.5	1.3397	3.4767	8.05	1.1603	0.0233
2.0	4.0	1.8379	3.9673	8.075	0.1621	0.0327
1.5	4.5	1.5915	4.4632	8.1	-0.0915	0.0368
1.0	5.0	1.0918	4.9561	8.125	-0.0918	0.0439
0.5	5.5	0.5989	5.4565	8.15	-0.0989	0.0435
0.0	6.0	0.0999	5.9578	8.2	-0.0999	0.0422
-0.5	6.5	-0.3899	6.4545	8.2	-0.1101	0.0455
-1.0	7.0	-0.8881	6.9481	8.225	-0.1119	0.0519
-1.5	7.5	-1.3885	7.4409	8.25	-0.1115	0.0591
-2.0	8.0	-1.8875	7.8712	8.275	-0.1125	0.1288
-2.5	8.5	-2.3911	7.8705	8.275	-0.1089	0.6295
-3.0	9.0	-2.8938	7.8705	8.275	-0.1062	1.1295
-3.5	9.5	-3.3943	7.8712	8.275	-0.1057	1.6288
-4.0	10.0	-3.8933	7.8705	8.275	-0.1067	2.1295
-4.5	10.5	-4.39	7.8705	8.3	-0.11	2.6295
-5.0	11.0	-4.8889	7.8705	8.3	-0.1111	3.1295
-5.5	11.5	-5.3787	7.8712	8.275	-0.1213	3.6288
-6.0	12.0	-5.8792	7.8697	8.3	-0.1208	4.1303

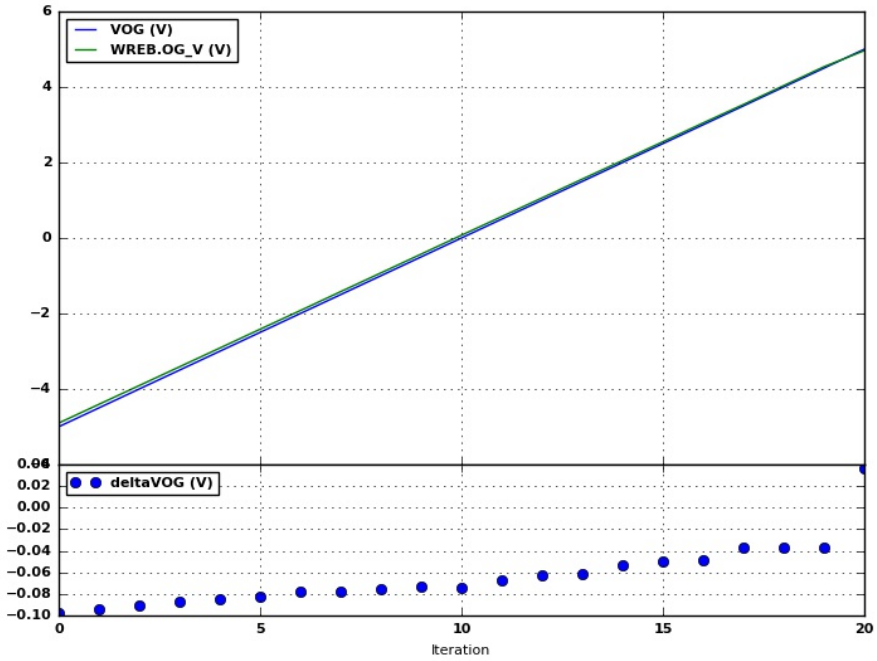
Diverging RGRails Test -3 V



LV Gain: 0.664357. UV Gain: 0.769680. 38/38 values okay.
Test PASSED.

RGLV (V)	RGUV (V)	WREB.RGL_V (V)	WREB.RGU_V (V)	ClkHPS_I (10mA)	deltaRGLV (V)	deltaRGUV (V)
-3.0	-3.0	-2.8946	-0.3311	7.825	-0.1054	-2.6689
-3.5	-2.5	-3.3928	-0.3311	7.825	-0.1072	-2.1689
-4.0	-2.0	-3.8933	-0.3319	7.85	-0.1067	-1.6681
-4.5	-1.5	-4.3892	-0.3319	7.85	-0.1108	-1.1681
-5.0	-1.0	-4.8882	-0.3334	7.85	-0.1118	-0.6666
-5.5	-0.5	-5.3818	-0.3326	7.825	-0.1182	-0.1674
-6.0	0.0	-5.88	-0.0114	7.85	-0.12	0.0114
-6.5	0.5	-6.3705	0.489	7.875	-0.1295	0.011
-7.0	1.0	-6.868	0.9857	7.9	-0.132	0.0143
-7.5	1.5	-7.3631	1.4839	7.925	-0.1369	0.0161
-8.0	2.0	-7.859	1.9783	7.95	-0.141	0.0217
-8.5	2.5	-8.358	2.4773	7.95	-0.142	0.0227
-9.0	3.0	-8.4488	2.9785	8.0	-0.5512	0.0215
-9.5	3.5	-8.448	3.476	8.05	-1.052	0.024
-10.0	4.0	-8.4473	3.9665	8.075	-1.5527	0.0335
-10.5	4.5	-8.4457	4.4632	8.1	-2.0543	0.0368
-11.0	5.0	-8.4465	4.9576	8.125	-2.5535	0.0424
-11.5	5.5	-8.4465	5.455	8.15	-3.0535	0.045
-12.0	6.0	-8.4465	5.9578	8.175	-3.5535	0.0422

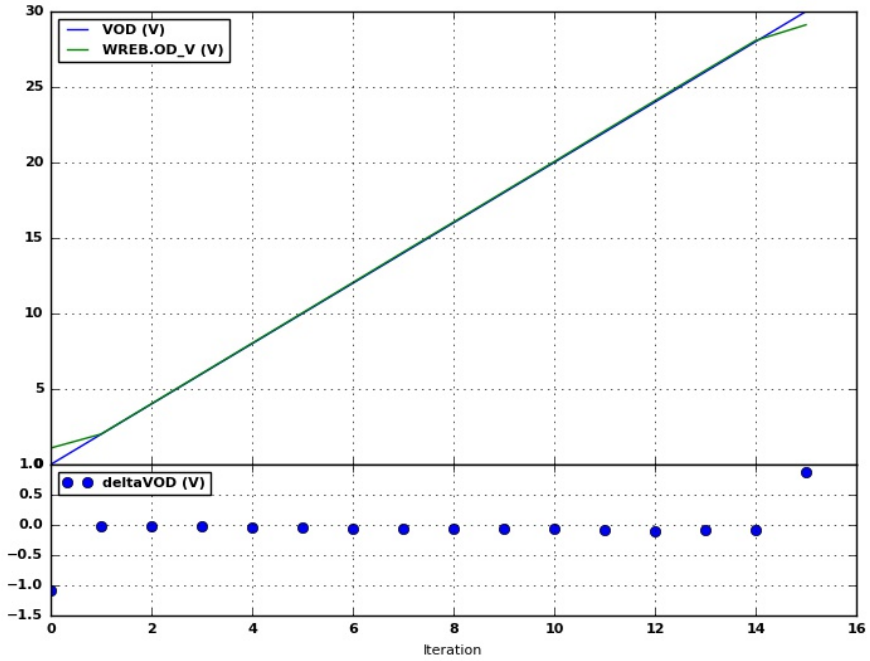
OG Bias Test



Gain: 0.991647. 21/21 values okay.
Test PASSED.

VOG (V)	WREB.OG_V (V)	deltaVOG (V)
-5.0	-4.9028	-0.0972
-4.5	-4.406	-0.094
-4.0	-3.9091	-0.0909
-3.5	-3.4123	-0.0877
-3.0	-2.9155	-0.0845
-2.5	-2.417	-0.083
-2.0	-1.9218	-0.0782
-1.5	-1.4217	-0.0783
-1.0	-0.9248	-0.0752
-0.5	-0.4263	-0.0737
0.0	0.0739	-0.0739
0.5	0.5673	-0.0673
1.0	1.0625	-0.0625
1.5	1.561	-0.061
2.0	2.0528	-0.0528
2.5	2.5496	-0.0496
3.0	3.0481	-0.0481
3.5	3.5365	-0.0365
4.0	4.0367	-0.0367
4.5	4.5369	-0.0369
5.0	4.9632	0.0368

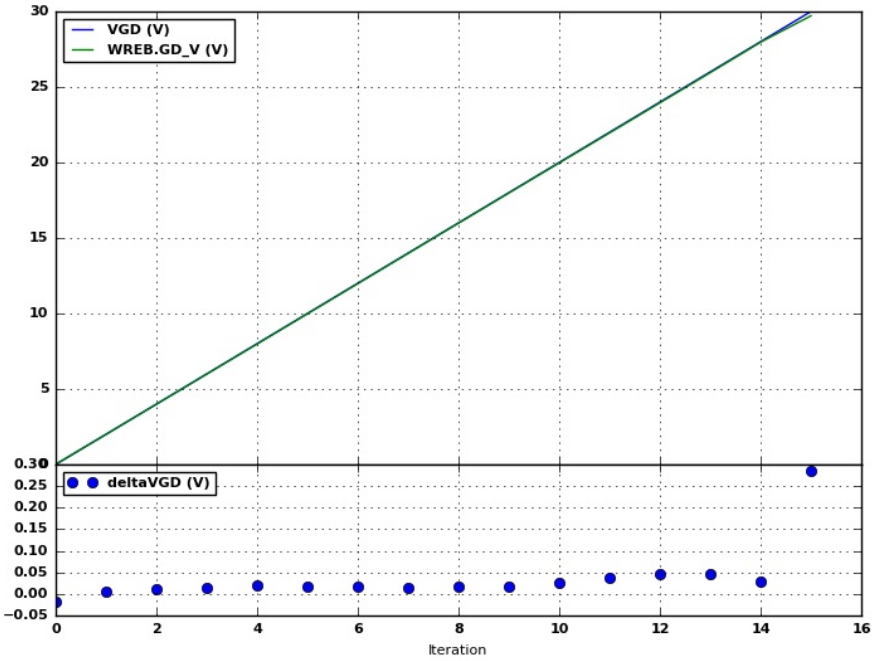
OD Bias Test



Gain: 0.980253. 14/16 values okay.
Test PASSED.

VOD (V)	WREB.OD_V (V)	deltaVOD (V)
0	1.0893	-1.0893
2	2.0125	-0.0125
4	4.0233	-0.0233
6	6.0291	-0.0291
8	8.0348	-0.0348
10	10.0406	-0.0406
12	12.0531	-0.0531
14	14.0639	-0.0639
16	16.0562	-0.0562
18	18.0603	-0.0603
20	20.0594	-0.0594
22	22.0869	-0.0869
24	24.0961	-0.0961
26	26.0934	-0.0934
28	28.0791	-0.0791
30	29.118	0.882

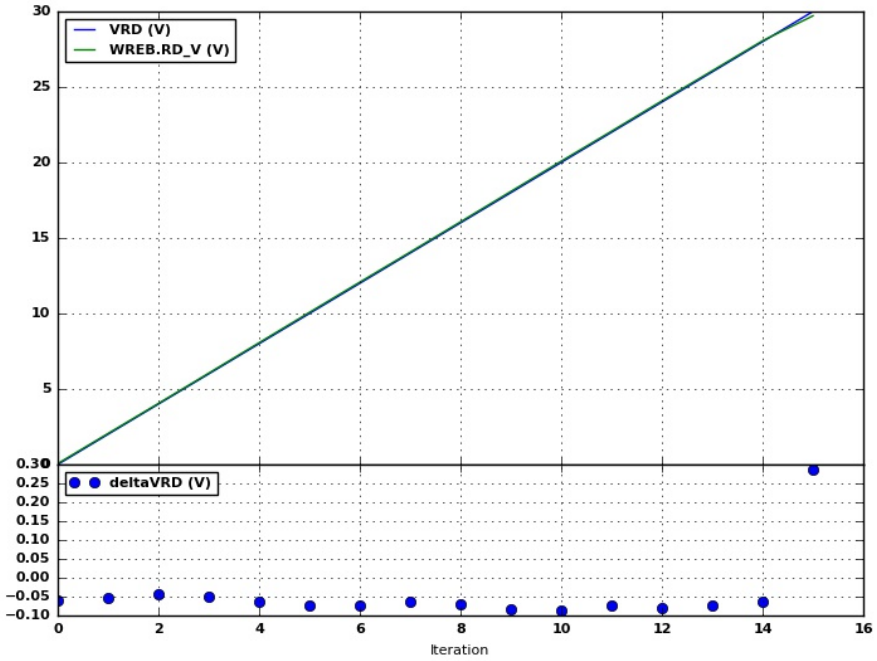
GD Bias Test



Gain: 0.995784. 15/16 values okay.
Test PASSED.

VGD (V)	WREB.GD_V (V)	deltaVGD (V)
0	0.0185	-0.0185
2	1.9957	0.0043
4	3.9897	0.0103
6	5.9871	0.0129
8	7.9811	0.0189
10	9.9835	0.0165
12	11.9826	0.0174
14	13.985	0.015
16	15.984	0.016
18	17.9831	0.0169
20	19.9738	0.0262
22	21.9627	0.0373
24	23.9551	0.0449
26	25.9541	0.0459
28	27.97	0.03
30	29.7156	0.2844

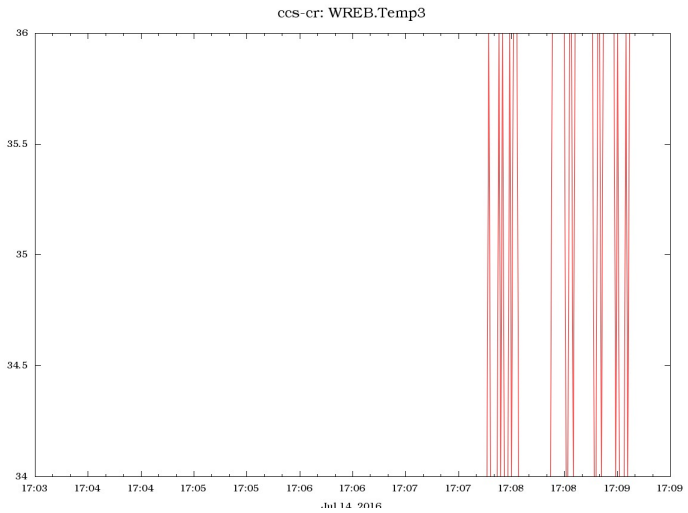
RD Bias Test

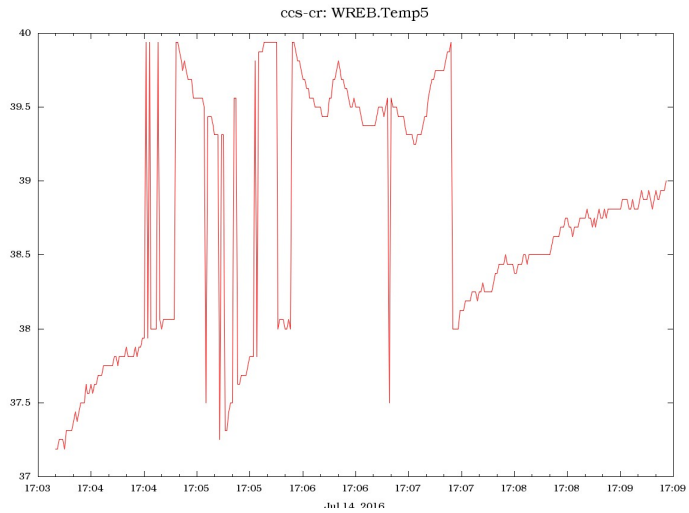


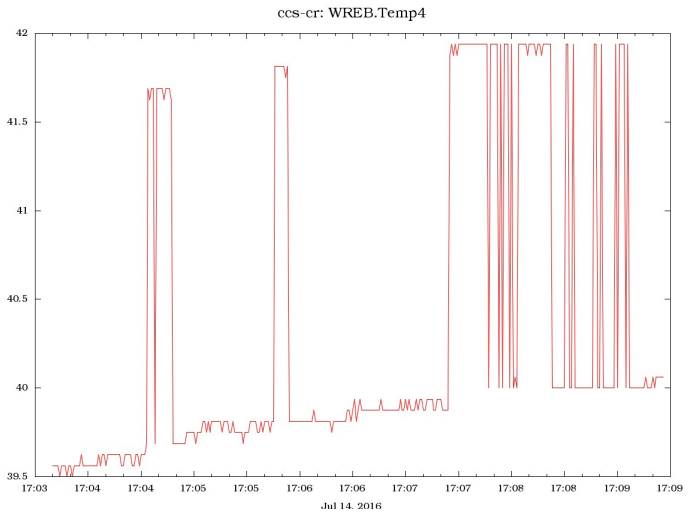
Gain: 0.996845. 15/16 values okay.
Test PASSED.

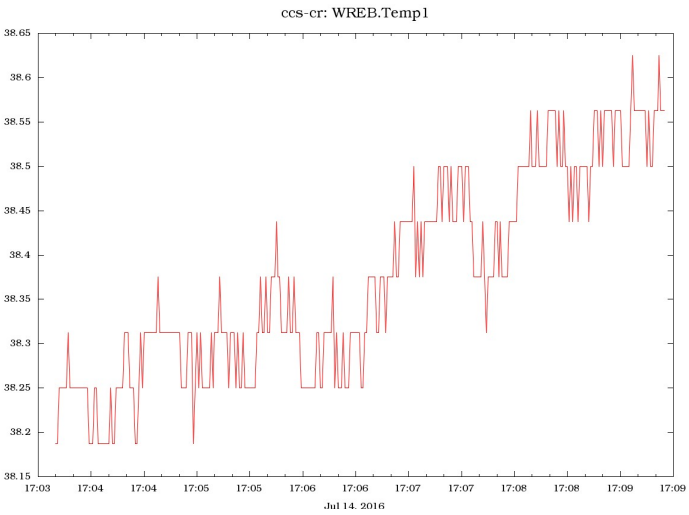
VRD (V)	WREB.RD_V (V)	deltaVRD (V)
0	0.0587	-0.0587
2	2.0544	-0.0544
4	4.0417	-0.0417
6	6.0492	-0.0492
8	8.0634	-0.0634
10	10.0742	-0.0742
12	12.0749	-0.0749
14	14.0639	-0.0639
16	16.0696	-0.0696
18	18.0821	-0.0821
20	20.0862	-0.0862
22	22.0718	-0.0718
24	24.081	-0.081
26	26.0733	-0.0733
28	28.0623	-0.0623
30	29.7139	0.2861

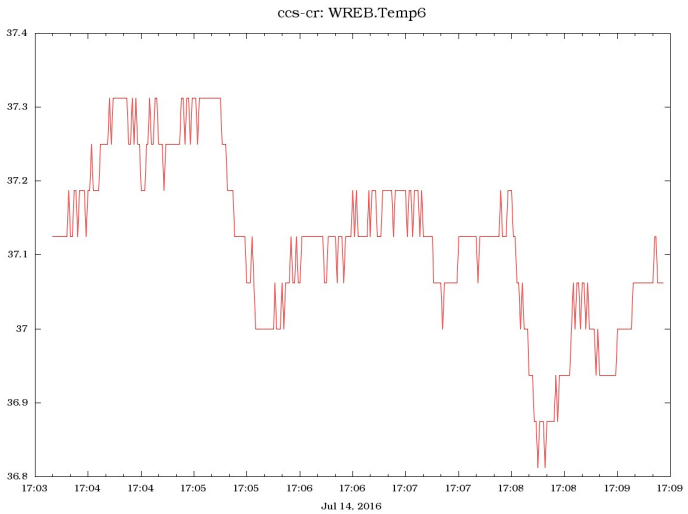
Board temperature test

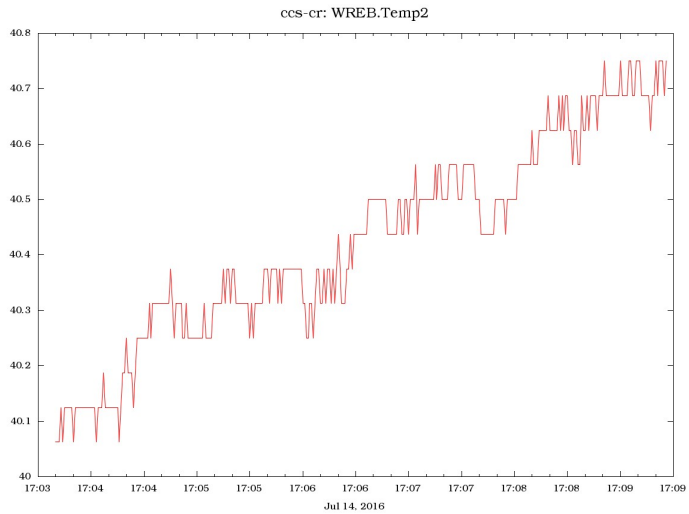




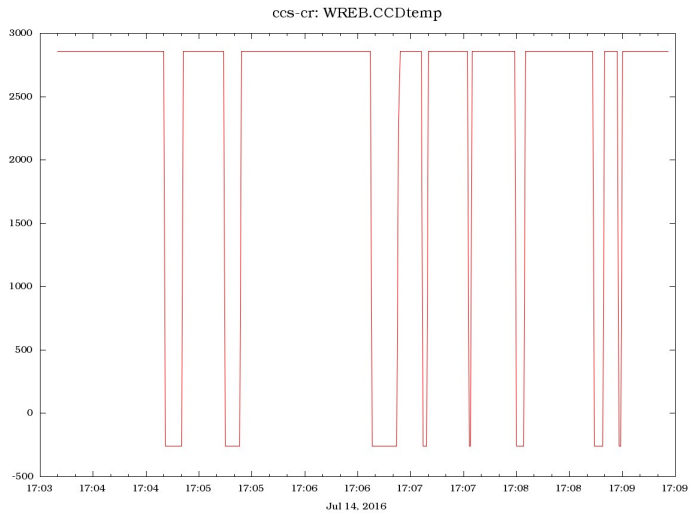


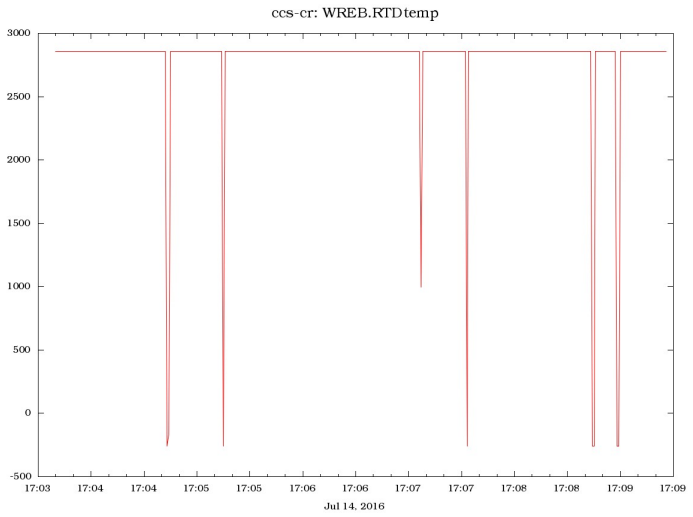




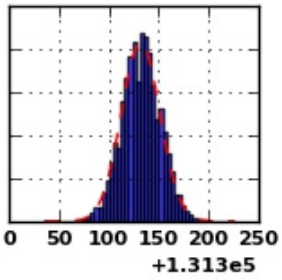


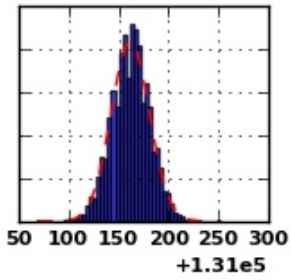
CCD temperature test

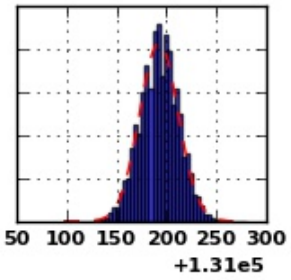


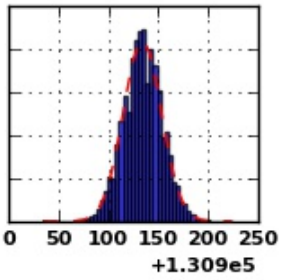


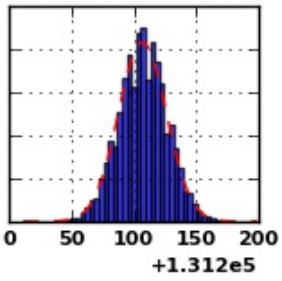
Unclamped ASPIC Noise Test

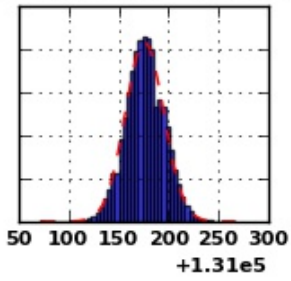
Channel 1
$\mu = 1.3e+05, \sigma = 1.9e+01$


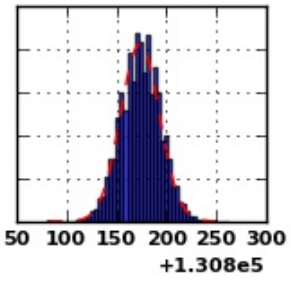
Channel 2
$\mu = 1.3e+05, \sigma = 1.9e+01$


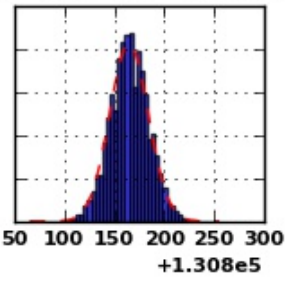
Channel 3
$\mu = 1.3e+05, \sigma = 1.9e+01$


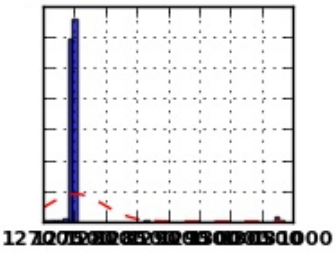
Channel 4
$\mu = 1.3e+05, \sigma = 1.9e+01$


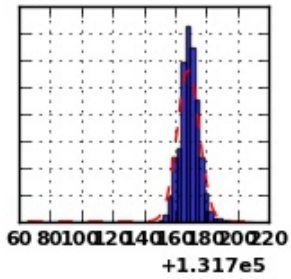
Channel 5
$\mu = 1.3e+05, \sigma = 1.9e+01$


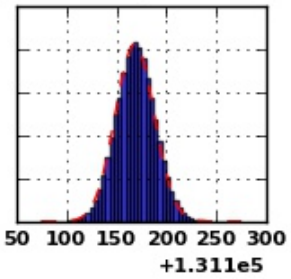
Channel 6
$\mu = 1.3e+05, \sigma = 1.9e+01$


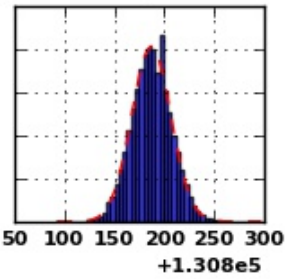
Channel 7
$\mu = 1.3e+05, \sigma = 1.9e+01$


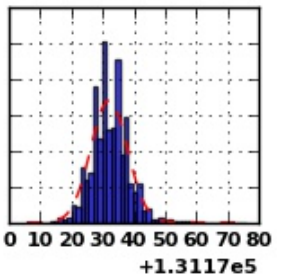
Channel 8
$\mu = 1.3e+05, \sigma = 1.9e+01$


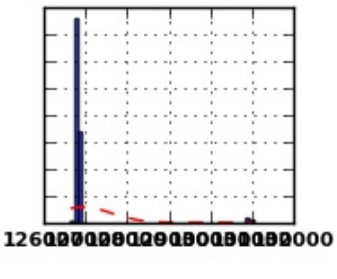
Channel 9
$\mu = 1.3e+05, \sigma = 4.5e+02$


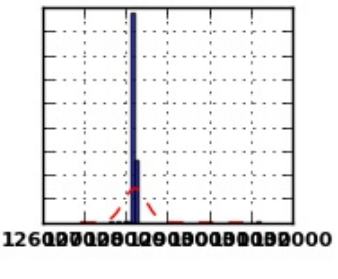
Channel 10
$\mu = 1.3e+05, \sigma = 7.0$


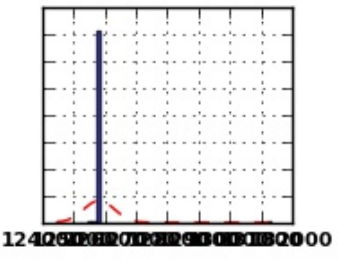
Channel 11
$\mu = 1.3e+05, \sigma = 1.9e+01$


Channel 12
$\mu = 1.3e+05, \sigma = 2e+01$


Channel 13
$\mu = 1.3e+05, \sigma = 5.8$


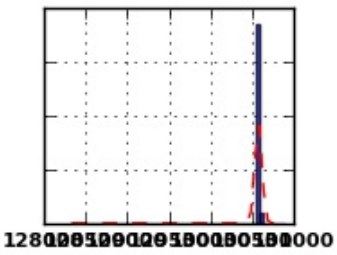
Channel 14
$\mu = 1.3e+05, \sigma = 7e+02$


Channel 15
$\mu = 1.3e+05, \sigma = 2.8e+02$


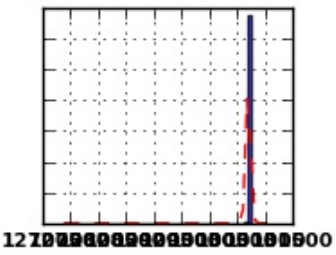
Channel 16
$\mu = 1.3e+05, \sigma = 4.9e+02$


Clamped ASPIC Noise Test

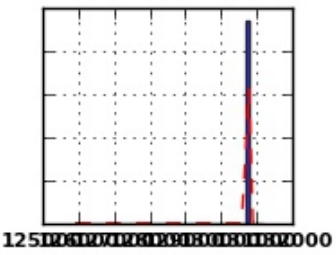
Channel 1
$\mu = 1.3e+05, \sigma = 4.2e+01$



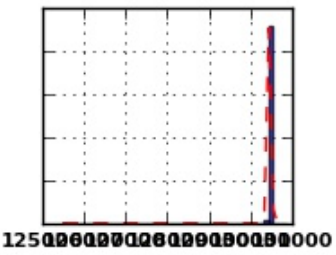
Channel 2
$\mu = 1.3e+05, \sigma = 4.4e+01$



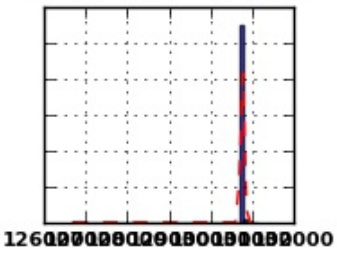
Channel 3
$\mu = 1.3e+05, \sigma = 4.5e+01$



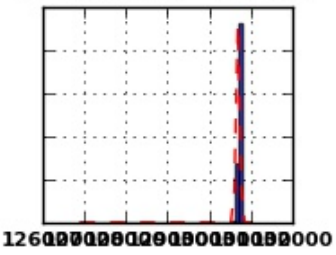
Channel 4
$\mu = 1.3e+05, \sigma = 4.3e+01$



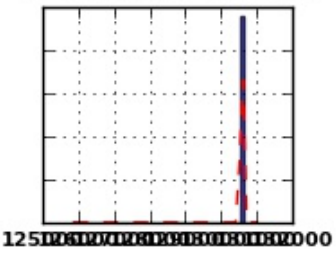
Channel 5
$\mu = 1.3e+05, \sigma = 4.6e+01$



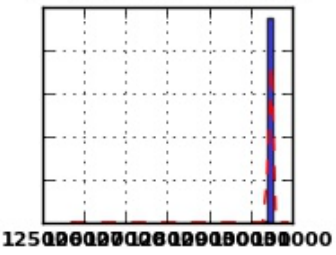
Channel 6
$\mu = 1.3e+05, \sigma = 4.3e+01$



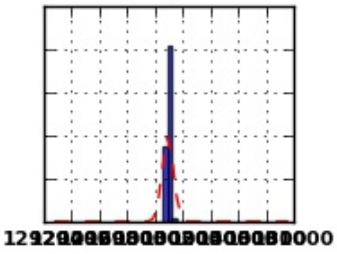
Channel 7
$\mu = 1.3e+05, \sigma = 4.4e+01$



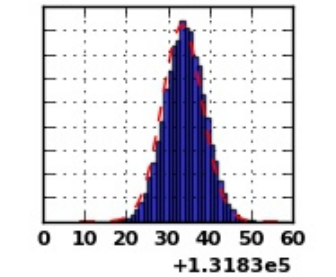
Channel 8
$\mu = 1.3e+05, \sigma = 4.4e+01$



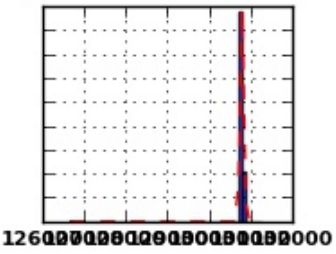
Channel 9
$\mu = 1.3e+05, \sigma = 4e+01$



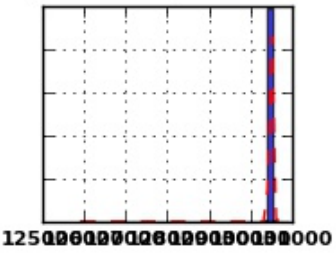
Channel 10
$\mu = 1.3e+05, \sigma = 4.9$



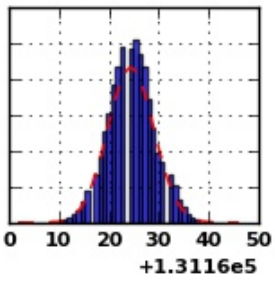
Channel 11
$\mu = 1.3e+05, \sigma = 4.5e+01$



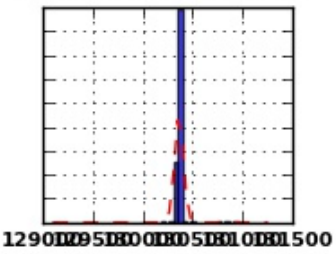
Channel 12
$\mu = 1.3e+05, \sigma = 4e+01$



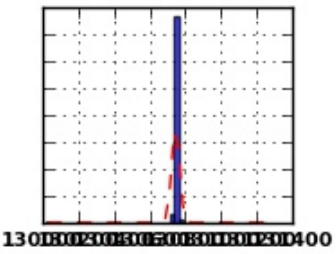
Channel 13
$\mu = 1.3e+05, \sigma = 4.6$



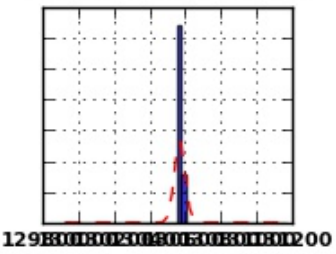
Channel 14
$\mu = 1.3e+05, \sigma = 4.5e+01$



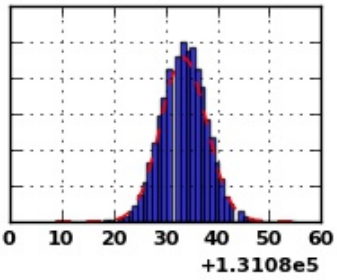
Channel 15
$\mu = 1.3e+05, \sigma = 2.2e+01$

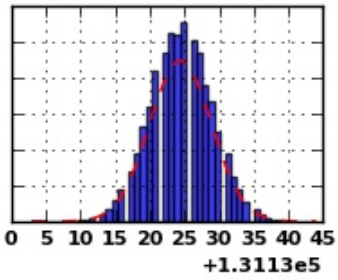


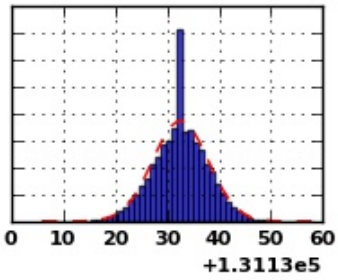
Channel 16
$\mu = 1.3e+05, \sigma = 3e+01$

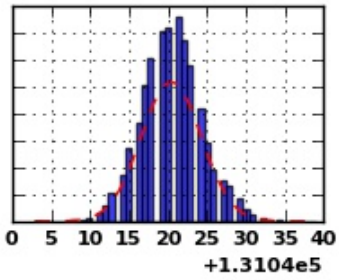


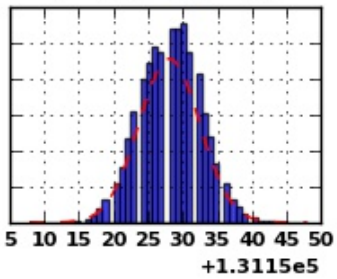
Reset ASPIC Noise Test

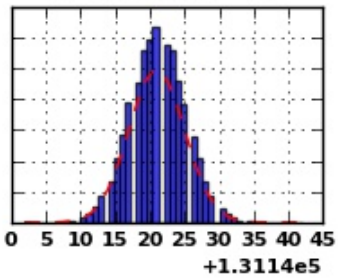
Channel 1
$\mu = 1.3e+05, \sigma = 4.4$


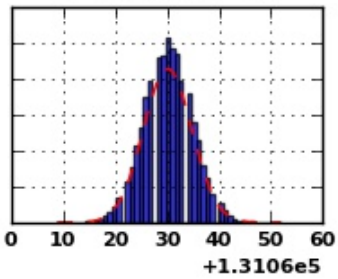
Channel 2
$\mu = 1.3e+05, \sigma = 4.5$


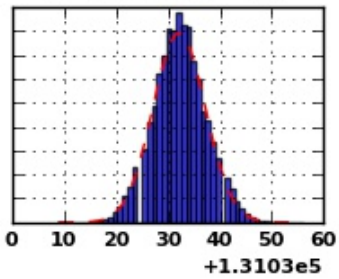
Channel 3
$\mu = 1.3e+05, \sigma = 5.4$


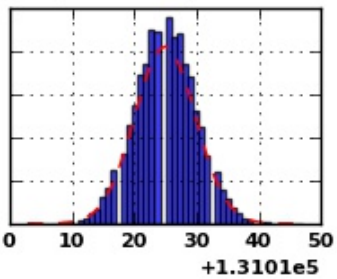
Channel 4
$\mu = 1.3e+05, \sigma = 3.9$


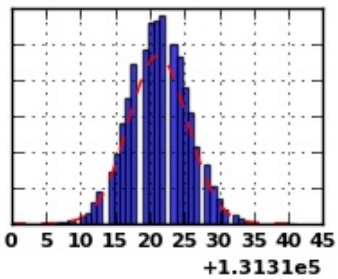
Channel 5
$\mu = 1.3e+05, \sigma = 4.4$


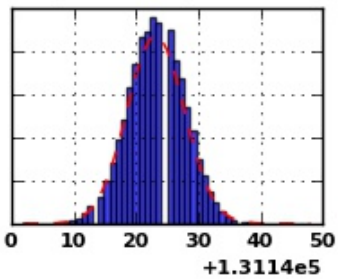
Channel 6
$\mu = 1.3e+05, \sigma = 4.0$


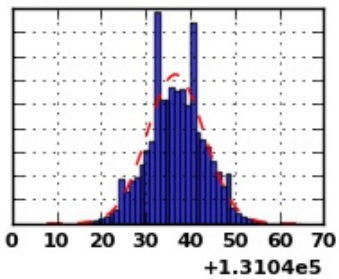
Channel 7
$\mu = 1.3e+05, \sigma = 4.7$


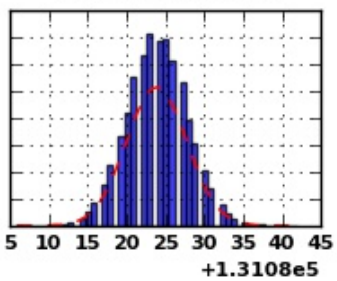
Channel 8
$\mu = 1.3e+05, \sigma = 5.0$


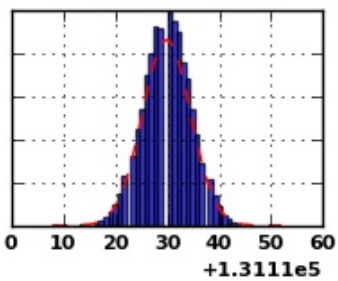
Channel 9
$\mu = 1.3e+05, \sigma = 4.9$


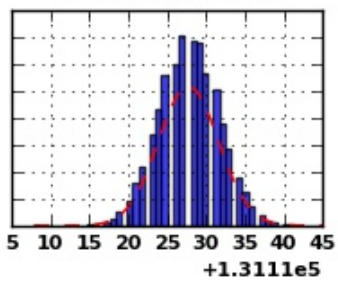
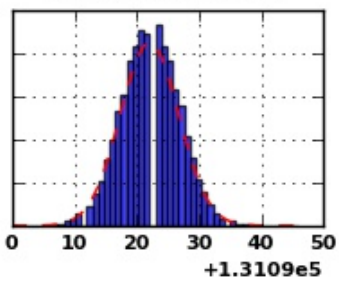
Channel 10
$\mu = 1.3e+05, \sigma = 4.3$


Channel 11
$\mu = 1.3e+05, \sigma = 4.6$


Channel 12
$\mu = 1.3e+05, \sigma = 6.4$


Channel 13
$\mu = 1.3e+05, \sigma = 3.9$


Channel 14
$\mu = 1.3e+05, \sigma = 4.6$


Channel 15
$\mu = 1.3e+05, \sigma = 3.9$


Channel 16
$\mu = 1.3e+05, \sigma = 4.7$