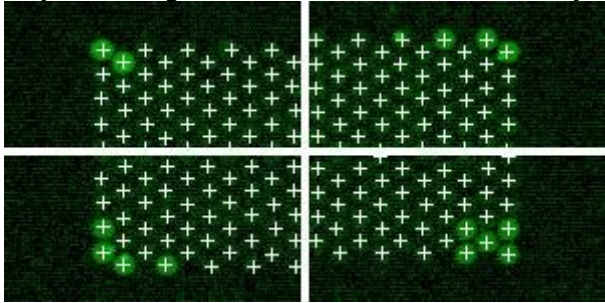


QC Report - Agilent Technologies : 1 Color Gene Expression

Date	Friday, March 04, 2011 - 15:54	Grid	027516_D_F_20100501
Image	US81603235_252751610049_S01 [1_4]	BG Method	No Background
Protocol	GE1_107_Sep09 (Read Only)	Background Detrend	On(FeatNCRRange, LoPass)
User Name	rockstro	Multiplicative Detrend	True
FE Version	10.7.3.1	Additive Error	2(Green)
Sample(red/green)		Saturation Value	778045 (g)

Spot Finding of the Four Corners of the Array

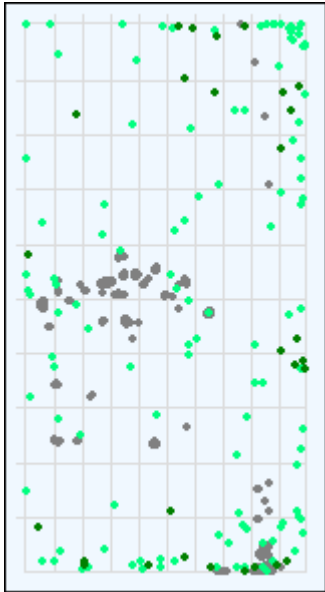


Grid Normal

Feature	Local Background	
	Green	Green
Non Uniform	28	0
Population	122	405

Spatial Distribution of All Outliers on the Array

1064 rows x 170 columns



# FeatureNonUnif (Green) = 28(0.02%)

# GeneNonUnif (Green) = 25 (0.014 %)

- BG NonUniform      ● BG Population  
● Green FeaturePopulation ● Green Feature NonUniform

Net Signal Statistics

Agilent SpikeIns:

Green

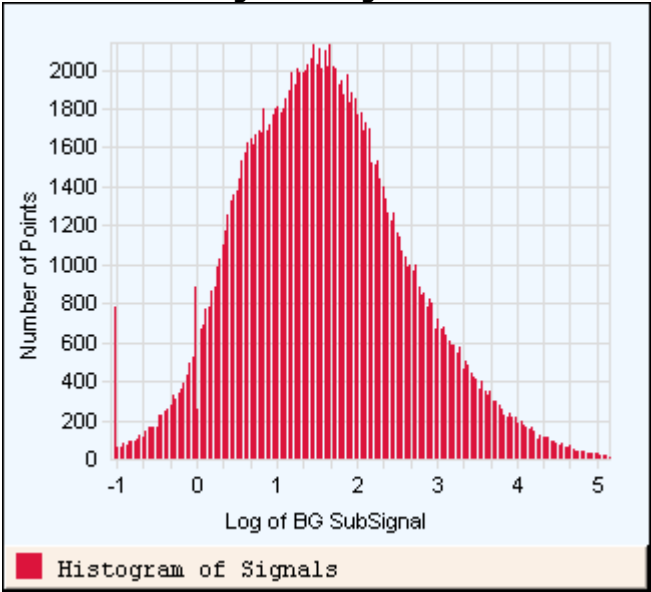
# Saturated Features	0
99% of Sig. Distrib.	246982
50% of Sig. Distrib.	566
1% of Sig. Distrib.	24

Non-Control probes:

Green

# Saturated Features	0
99% of Sig. Distrib.	11711
50% of Sig. Distrib.	47
1% of Sig. Distrib.	22

Histogram of Signals Plot



# Features (NonCtrl) with BGSubSignal < 0: 23187 (Green)

### Negative Control Stats

Green

Average Net Signals	24.43
StdDev Net Signals	2.22
Average BG Sub Signal	-2.64
StdDev BG Sub Signal	2.00

### Local Bkg (inliers)

Green

Number	180475
Avg	17.93
SD	1.37

### Foreground Surface Fit

Green

RMS_Fit	1.29
RMS_Resid	2.21
Avg_Fit	31.99

### Multiplicative Surface Fit

Green

RMS_Fit	0.30
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### Reproducibility: %CV for Replicated Probes

Median %CV Signal (inliers)

Non-Control  
probes

Agilent SpikeIns

Green

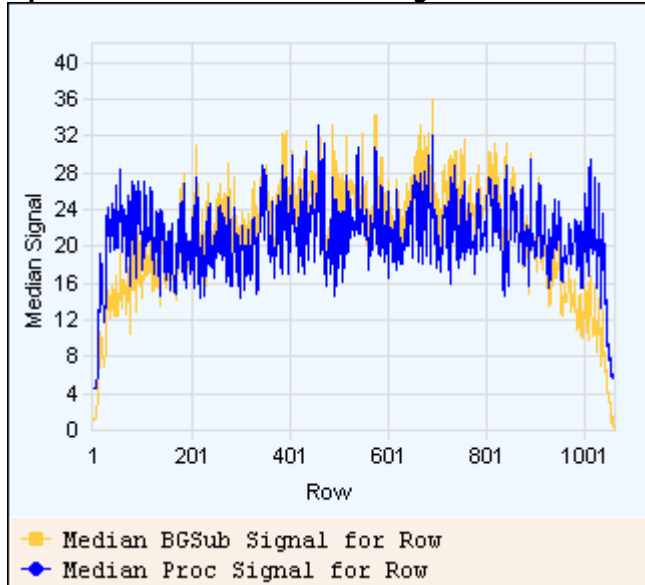
Green

BGSubSignal	31.87	32.11
ProcessedSignal	17.68	20.33

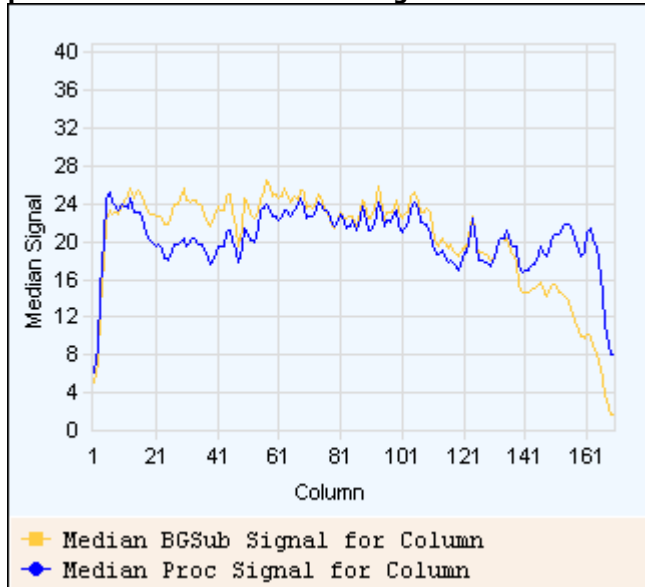
### Agilent SpikeIns Signal Statistics

Probe Name	Log (Relative Conc.)	Median (Log Proc. Sig.)	% CV	StdDev
(+)E1A_r60_3	0.30	1.02	38.23	0.21
(+)E1A_r60_a104	1.30	0.63	56.84	0.21
(+)E1A_r60_a107	2.30	1.56	22.25	0.12
(+)E1A_r60_a135	3.30	2.34	22.50	0.19
(+)E1A_r60_a20	3.83	2.61	20.33	0.18
(+)E1A_r60_a22	4.30	3.30	20.25	0.12
(+)E1A_r60_a97	4.82	3.92	20.17	0.25
(+)E1A_r60_n11	5.30	4.50	16.92	0.21
(+)E1A_r60_n9	5.82	4.69	38.71	0.39
(+)E1A_r60_1	6.30	5.25	32.43	0.32

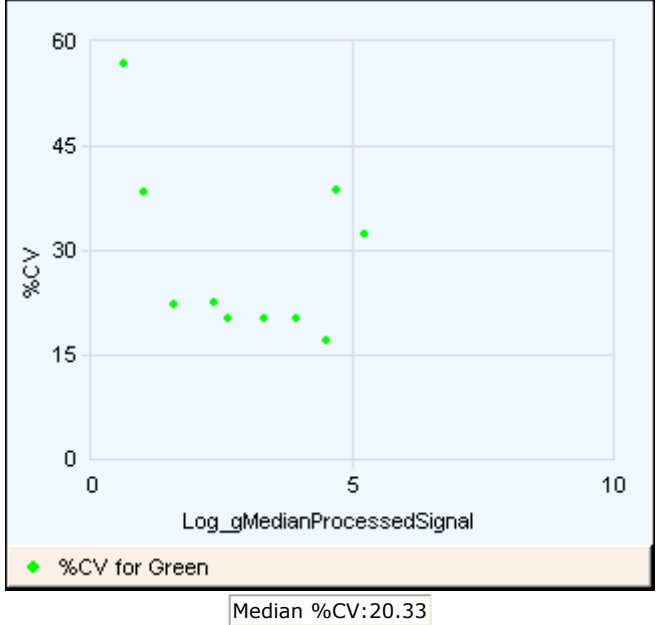
### Spatial Distribution of Median Signals for each Row



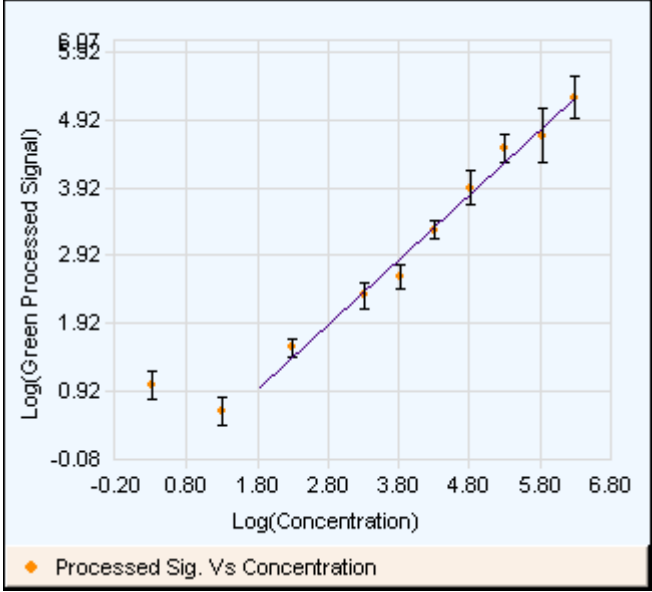
### Spatial Distribution of Median Signals for each Column



Agilent SpikeIns: %CV of Avg. Processed Signal Plot



Agilent SpikeIns: Log(Signal) vs. Log(Relative concentration) Plot



Evaluation Metrics for GE1\_QCMT\_Sep09 :

Good (8) ; Evaluate (2)

Metric Name	Value	Excellent	Good	Evaluate
IsGoodGrid	1.00		>1	<1
AnyColorPrcntFeatNonUn...	0.02		<1	>1
gNegCtrlAveNetSig	24.43		<40	>40
gNegCtrlAveBGSubSig	-2.64		-10 to 5	<-10 or >5
gNegCtrlSDevBGSubSig	2.00		<10	>10
gSpatialDetrendRMSFilt...	2.21		<15	>15
gNonCtrlMedCVProcSign...	17.68		0 to 8	<0 or >8
gE1aMedCVProcSignal	20.33		0 to 8	<0 or >8
absGE1E1aSlope	0.96		0.90 to 1.20	<0.90 or >1.20
DetectionLimit	1.19		0.01 to 2	<0.01 or >2

◆ Excellent ◆ Good ◆ Evaluate

Agilent Spike-In Concentration-Response Statistics

Linear Range Statistics:

Low Signal	0.97
High Signal	5.75
Low Relative Concentration	1.83
High Relative Concentration	6.83
Slope	0.96
R^2 Value	0.99

Signal Detection Limit Statistics

Saturation Point	5.89
Low Threshold	0.66
Low Threshold Error	0.30
Spike-In Detection Limit	1.19