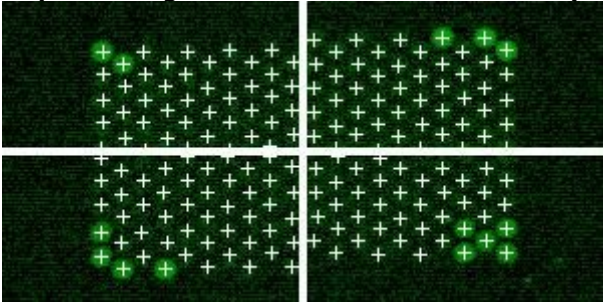


QC Report - Agilent Technologies : 1 Color Gene Expression

Date	Friday, March 04, 2011 - 15:54	Grid	027516_D_F_20100501
Image	US81603235_252751610049_S01 [1_3]	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

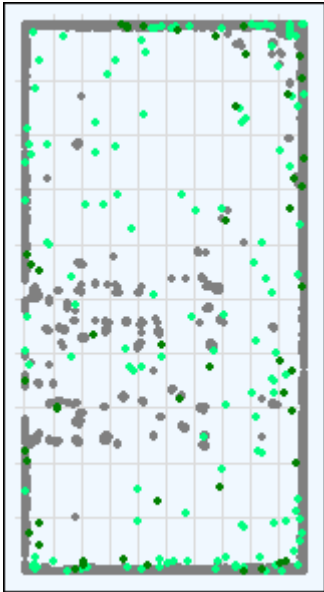


Grid Normal

Feature	Local Background	
	Green	Green
Non Uniform	49	0
Population	144	5089

Spatial Distribution of All Outliers on the Array

1064 rows x 170 columns



# FeatureNonUnif (Green) = 49(0.03%)

# GeneNonUnif (Green) = 44 (0.025 %)

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

Net Signal Statistics

Agilent SpikeIns:

Green

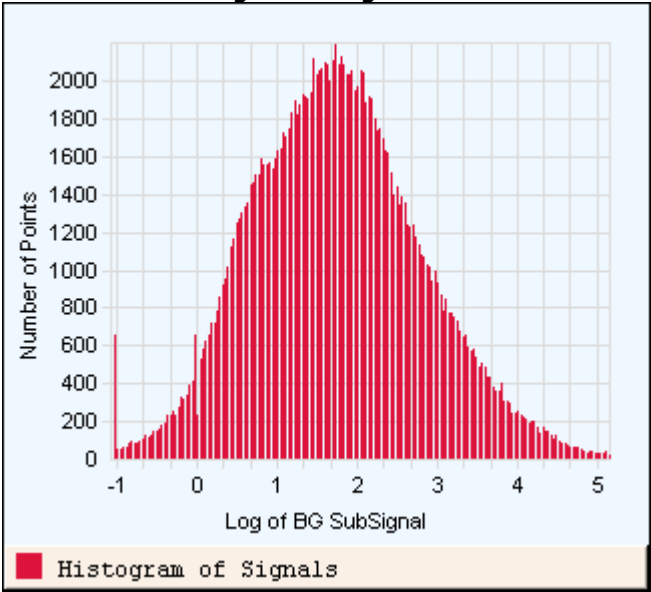
# Saturated Features	0
99% of Sig. Distrib.	224521
50% of Sig. Distrib.	457
1% of Sig. Distrib.	24

Non-Control probes:

Green

# Saturated Features	0
99% of Sig. Distrib.	15509
50% of Sig. Distrib.	59
1% of Sig. Distrib.	22

Histogram of Signals Plot



# Features (NonCtrl) with BGSubSignal < 0: 17814 (Green)

### Negative Control Stats

Green

Average Net Signals	23.91
StdDev Net Signals	2.11
Average BG Sub Signal	-2.63
StdDev BG Sub Signal	1.89

### Local Bkg (inliers)

Green

Number	175791
Avg	20.85
SD	1.16

### Foreground Surface Fit

Green

RMS_Fit	1.05
RMS_Resid	2.11
Avg_Fit	31.46

### Multiplicative Surface Fit

Green

RMS_Fit	0.22
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### Reproducibility: %CV for Replicated Probes

Median %CV Signal (inliers)

Non-Control  
probes

Agilent SpikeIns

Green

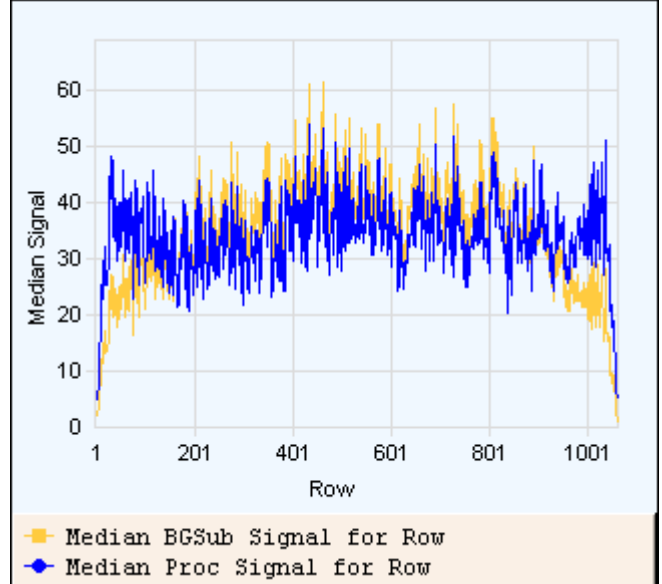
Green

BGSubSignal	25.06	27.10
ProcessedSignal	16.58	20.18

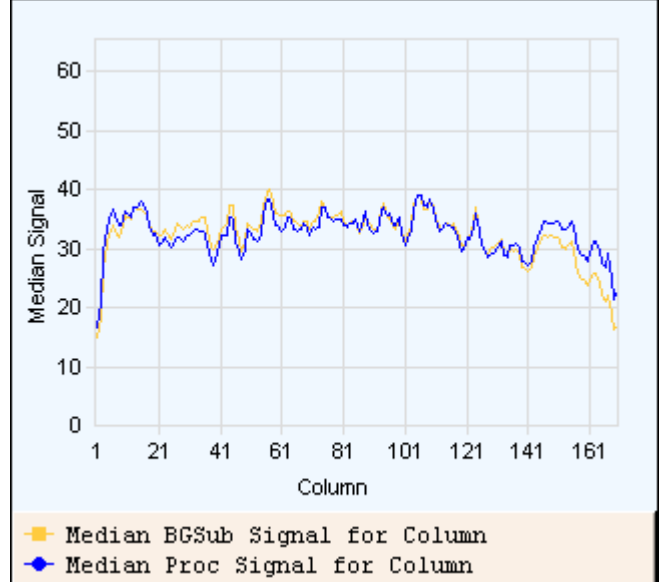
### Agilent SpikeIns Signal Statistics

Probe Name	Log (Relative Conc.)	Median (Log Proc. Sig.)	% CV	StdDev
(+)E1A_r60_3	0.30	1.05	32.14	0.19
(+)E1A_r60_a104	1.30	0.42	57.14	0.19
(+)E1A_r60_a107	2.30	1.42	25.06	0.19
(+)E1A_r60_a135	3.30	2.24	19.48	0.20
(+)E1A_r60_a20	3.83	2.55	18.24	0.13
(+)E1A_r60_a22	4.30	3.20	20.18	0.17
(+)E1A_r60_a97	4.82	3.85	20.71	0.42
(+)E1A_r60_n11	5.30	4.43	15.97	0.16
(+)E1A_r60_n9	5.82	4.71	29.09	0.36
(+)E1A_r60_1	6.30	5.27	27.26	0.26

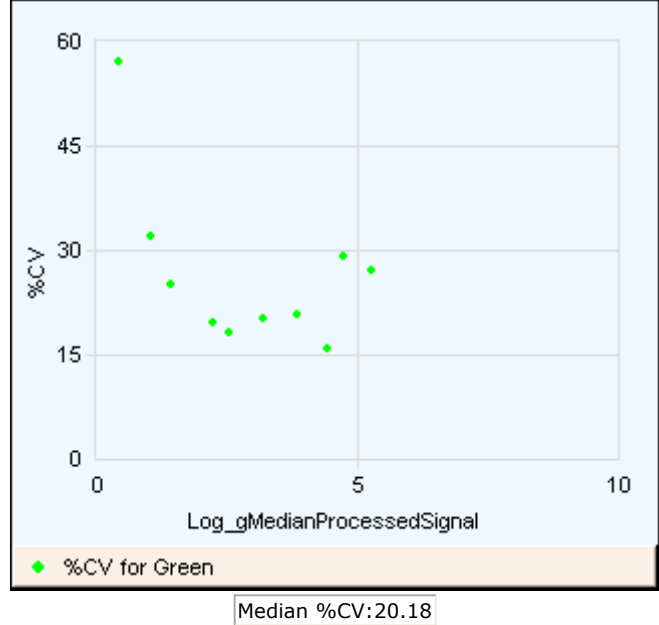
### Spatial Distribution of Median Signals for each Row



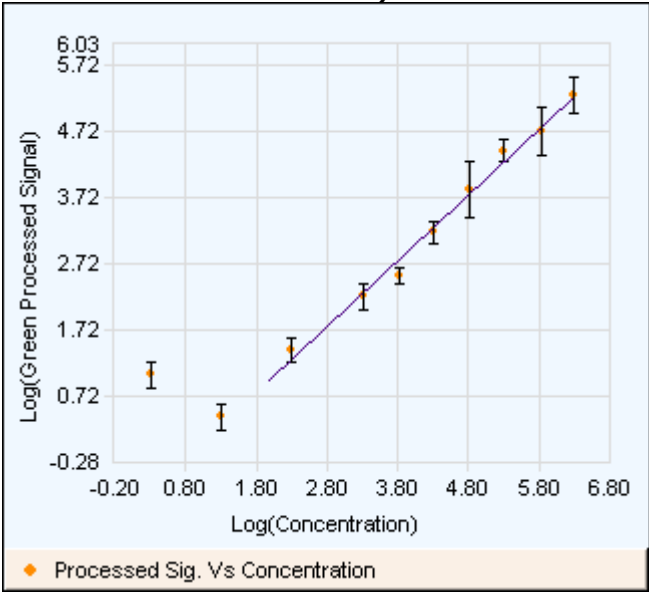
### Spatial Distribution of Median Signals for each Column



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...	0.03		<1	>1
gNegCtrlAveNetSig	23.91		<40	>40
gNegCtrlAveBGSubSig	-2.63		-10 to 5	<-10 or >5
gNegCtrlSDevBGSubSig	1.89		<10	>10
gSpatialDetrendRMSFilt...	2.11		<15	>15
gNonCtrlMedCVPProcSign...	16.58		0 to 8	<0 or >8
gE1aMedCVPProcSignal	20.18		0 to 8	<0 or >8
absGE1E1aSlope	0.99		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	0.96
High Signal	5.73
Low Relative Concentration	1.99
High Relative Concentration	6.78
Slope	0.99
R^2 Value	0.99

#### Signal Detection Limit Statistics

Saturation Point	5.89
Low Threshold	0.62
Low Threshold Error	0.27
Spike-In Detection Limit	1.19